System Release M2021.01
MOTOTRBO™ PCR

MOTOTRBO Customer Programming Software (CPS) 2.0 Online Help

JULY 2021

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Document History

Version	Description	Date
MN006055A01-AA	Original release of the *MOTOTRBO™ Customer Programming Software (CPS) 2.0 Online Help for PCR 2.10.5*	July 2019
MN006055A01-AB	Added a new field under Network Settings. See Device Discovery Server Name on page 439.	July 2019
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Contents

Intellectual Property and Regulatory Notices..... 2
Contact Us..... 3
Document History..... 4
List of Figures..... 50
List of Tables..... 51
List of Procedures..... 54
Helpful Background Information..... 55
Chapter 1: Introduction to Customer Programming Software (CPS) 2.0..... 56
1.1 CPS 2.0 Overview..... 56
1.1.1 CPS 2.0 Menu and Actions Bars..... 58
1.1.1.1 CPS 2.0 File Selections..... 60
1.1.1.2 CPS 2.0 Device Selections..... 62
1.1.1.3 CPS 2.0 Licenses Selections..... 69
1.1.1.4 CPS 2.0 Tools Selections..... 73
1.1.1.5 CPS 2.0 Help Selections..... 77
1.1.2 Set Categories..... 77
1.1.3 Programming Pane in CPS 2.0..... 78
1.1.4 Information Windows in CPS 2.0..... 80
1.1.4.1 Validation Results Window..... 80
1.1.4.2 Warning Messages Window..... 81
1.1.4.3 Search Results Window..... 81
1.1.4.4 Help Window..... 82
1.2 CPS 2.0 Concepts..... 82
1.2.1 Sets and Configurations in CPS 2.0..... 82
1.2.1.1 What are Sets and Configuration?..... 82
1.2.1.2 Copy and Paste Operation..... 82
1.2.2 Radio Identity Parameters..... 83
1.2.3 Codeplug Version Support..... 83
1.2.4 CPS 2.0 Archive File Support..... 84
1.2.5 Licensing Radio and Application Features..... 85
1.2.6 Application Log..... 85
1.3 Common Tasks in Customer Programming Software (CPS) 2.0..... 86
1.3.1 Using Clone to Deploy a New Fleet of Radios..... 86
1.3.2 Using Clone Express to Modify Shared Parameters in a Deployed Fleet..... 86
1.3.3 Retrieving Firmware and Codeplug Update Package..... 87

1.4 Differences between CPS 2.0 and CPS 1.0 87
1.4.1 Features Not Supported in CPS 2.0 88
1.4.2 Multiple Document Support 89
1.4.3 Configuring Voice Announcements and Language Packs 89
1.4.3.1 Loading a Language Pack 89
1.4.3.2 Deleting a Language Pack 90
1.4.3.3 Loading Voice Announcement Files 90
1.4.3.4 Deleting a Voice Announcement 91
1.4.3.5 Removing Imported Voice Announcements 91
1.5 Troubleshooting in Customer Programming Software (CPS) 2.0 91
1.5.1 Unable to Read or Write Codeplug to the Radio 92
1.5.2 Unable to Recover a Radio 92
1.5.3 Installing MOTOTRBO Driver Windows 7 and Later 92
1.5.4 Installing FlashZap Driver on Windows Windows 7 and Later 93
1.5.5 Communication Issues Due to Ethernet Properties 93
Chapter 2: Customer Programming Software (CPS) 2.0 Sets 95
2.1 Device Information 95
2.1.1 Model Number 95
2.1.2 Tanapa Number 95
2.1.3 Region 95
2.1.4 Serial Number 95
2.1.5 Physical Serial Number 96
2.1.6 Firmware ID 96
2.1.7 Frequency Range (MHz) 96
2.1.8 Power Range (W) 96
2.1.9 Power Range (W) 96
2.1.10 12V Power Range (W) 96
2.1.11 24V Power Range (W) 96
2.1.12 Firmware Type 96
2.1.13 Firmware Type 97
2.1.14 Firmware Version 97
2.1.15 Codeplug Version 97
2.1.16 Bootloader Version 97
2.1.17 Netmask 97
2.1.18 Last Programmed Date and Time 97
2.1.19 MAC Address 97
2.1.20 Wi-Fi MAC Address 98
2.1.21 Controller FPGA Version 98
2.1.22 Wireline FPGA Version 98

2.1.23 RX Frequency Range (MHz)....98
2.1.24 RX Frequency Range (MHz)....98
2.1.25 RX Frequency Range (MHz) (SL Series 800/900 MHz Radios)....98
2.1.26 TX Frequency Range (MHz)....99
2.1.27 TX Frequency Range (MHz)....99
2.1.28 TX Frequency Range (MHz) (SL Series 800/900 MHz radios)....99
2.2 Welcome Bitmap Set....99
2.2.1 General (Welcome Bitmap)....99
2.2.1.1 Welcome Image....99
2.3 Language Packs Set....100
2.3.1 Language....100
2.3.2 Locale....100
2.4 General Settings Set....100
2.4.1 General (General Settings)....100
2.4.1.1 Subscriber Inactivity Timer (SIT) (ms)....101
2.4.1.2 Radio Alias....101
2.4.1.3 Radio ID....102
2.4.1.4 GNSS....102
2.4.1.5 GNSS....102
2.4.1.6 Private Calls....103
2.4.1.7 Site Search Timer (sec)....103
2.4.1.8 ARS Initialization Delay (min)....103
2.4.1.9 TX Preamble Duration (ms)....104
2.4.1.10 Voice Pretime Duration....104
2.4.1.11 TX Inhibit Quick Key Override....105
2.4.1.12 Monitor Type....106
2.4.1.13 Min Speaker Volume Level (dB)....106
2.4.1.14 Min Speaker Volume Muted....106
2.4.1.15 Unlink Monitor....106
2.4.1.16 Off-Hook Disables PL....107
2.4.1.17 Group Call Hang Time (ms)....107
2.4.1.18 Private Call Hang Time (ms)....107
2.4.1.19 Emergency Call Hang Time (ms)....108
2.4.1.20 Talkaround Group Call Hang Time (ms)....108
2.4.1.21 Talkaround Private Call Hang Time (ms)....108
2.4.1.22 Call Hang Time (sec)....109
2.4.1.23 Repeat Gain (dB)....109
2.4.1.24 Antenna Relay Delay Timer (ms)....109
2.4.1.25 Digital/Band 1 TX Low Power (W)....110

2.4.1.26 Digital/Band 1 TX High Power (W)....110
2.4.1.27 Analog/Band 2 TX Low Power (W)....110
2.4.1.28 Analog/Band 2 TX High Power (W)....111
2.4.1.29 Digital TX Low Power (W) (SL Series Mid-Tier)....111
2.4.1.30 Digital TX High Power (W) (SL Series Mid-Tier) Note....111
2.4.1.31 Digital TX High Power (W) (SL Series Mid-Tier)....111
2.4.1.32 Analog TX Low Power (W) (SL Series Mid-Tier)....111
2.4.1.33 Analog TX High Power (W) (SL Series Mid-Tier)....112
2.4.1.34 Band 1 DC TX Power (W)....112
2.4.1.35 Band 2 DC TX Power (W)....112
2.4.1.36 12V DC TX Power (W)....112
2.4.1.37 24V DC TX Power (W)....112
2.4.1.38 Disable All LEDs....112
2.4.1.39 Backup Repeater Connected....113
2.4.1.40 Sign In/Sign Out....113
2.4.1.41 Secure Sign In ID....113
2.4.1.42 TX Caller Alias....113
2.4.1.43 Caller Alias....113
2.4.1.44 Edit Caller Alias....114
2.4.1.45 Test Mode....114
2.4.1.46 Scrambling Frequency....114
2.4.1.47 Battery Type....114
2.4.1.48 Home Channel Zone....115
2.4.1.49 Home Channel....115
2.4.1.50 Home Channel Reminder Interval (min)....115
2.4.1.51 Antenna Selection....115
2.4.1.52 Illegal Carrier Timer....116
2.4.1.53 Illegal Carrier RSSI Threshold....116
2.4.1.54 Illegal Carrier Feature Enable....116
2.4.1.55 Radio Keep Alive....116
2.4.1.56 Codeplug Password....116
2.4.1.57 Check for Password....118
2.4.1.58 Maximum Check for Password Attempts....118
2.4.1.59 Radio Certification Type....118
2.4.1.60 Respond Caller....118
2.4.1.61 Radio Language Display....119
2.4.1.62 Digital or Analog BSI....119
2.4.1.63 Mute Timer (hour)....119
2.4.1.64 Face Down Mute Enable....119

2.4.1.65 Radio On Indicator..... 119
2.4.1.66 Remote Radio Control.....120
2.4.1.67 Virtual Channel Stop..... 120
2.4.2 Battery (General Settings)..... 120
2.4.2.1 Battery.....120
2.4.2.2 DC System Nominal.....120
2.4.2.3 DC Operation Only.....120
2.4.2.4 DC Primary Source..... 120
2.4.2.5 Battery Charging..... 121
2.4.2.6 Output Charger Voltage (V)..... 121
2.4.2.7 Output Charger Voltage 12V (V).....121
2.4.2.8 Output Charger Voltage 24V (V).....121
2.4.3 Alarm Type (General Settings)..... 121
2.4.3.1 Reference Clock Source Type..... 121
2.4.3.2 External Clock Frequency.....122
2.4.3.3 RF Power Control Alarm..... 122
2.4.3.4 Power Unleveled Alarm.....122
2.4.3.5 Modem PA Alarm.....122
2.4.3.6 Temperature Alarm..... 122
2.4.3.7 Power Roll-back Alarm (2dB).....123
2.4.3.8 Power Roll-back Alarm (3dB).....123
2.4.3.9 VSWR Minor Alarm.....123
2.4.3.10 VSWR Major Alarm.....124
2.4.3.11 PA Temp Alarm.....124
2.4.3.12 PA Fan Alarm.....124
2.4.3.13 Power Supply Fan Alarm..... 124
2.4.3.14 Power Supply Over Temperature Alarm..... 125
2.4.3.15 AC Power Alarm.....125
2.4.3.16 Bad Battery Alarm.....125
2.4.3.17 Low Battery Alarm.....125
2.4.3.18 Battery Disconnected Alarm.....126
2.4.3.19 Modem Fan Alarm.....126
2.4.3.20 Illegal Carrier Alarm 126
2.4.4 CWID (General Settings)..... 126
2.4.4.1 ID.....126
2.4.4.2 Tone Frequency (Hz)..... 127
2.4.4.3 TX Interval (min).....127
2.4.4.4 Configuration Bits.....128
2.4.4.5 Mix Mode Timer (min)..... 128

2.4.4.6 Rate (WPM)..... 129
2.4.4.7 Strip PL..... 129
2.4.5 Voting (General Settings).....129
2.4.5.1 Operation Mode..... 129
2.4.5.2 Digital Voter Peer ID..... 130
2.4.5.3 Digital Voting Stability Factor..... 130
2.4.6 Audio Profile (General Settings)..... 131
2.4.6.1 User Selectable Audio Profiles.....131
2.4.6.2 Intelligent Audio Response..... 131
2.4.6.3 Language..... 132
2.4.6.4 Environment.....132
2.4.6.5 Preference.....132
2.4.6.6 AF Suppressor..... 133
2.4.6.7 Noise Suppressor.....133
2.4.6.8 Fast Noise Suppressor Training Period (sec)..... 133
2.4.6.9 Trill Enhancement..... 134
2.4.6.10 Analog RX Audio Leveling..... 134
2.4.6.11 Digital RX Audio Leveling.....134
2.4.7 Microphone (General Settings).....135
2.4.7.1 Mic Selection Rule..... 135
2.4.7.2 Mic Distortion Control.....135
2.4.7.3 Analog Mic AGC.....135
2.4.7.4 Mic AGC.....135
2.4.7.5 Analog Mic Gain (dB).....136
2.4.7.6 Digital Mic Gain (dB)..... 137
2.4.7.7 VOX Sensitivity..... 137
2.4.7.8 Hot Mic Source.....138
2.4.8 Back Light (General Settings).....138
2.4.8.1 On Receiving Over-the-Air Event.....138
2.4.8.2 On User Event.....138
2.4.8.3 Timeout Timer (Sec)..... 139
2.4.9 Battery Saver (General Settings).....139
2.4.9.1 Preamble.....139
2.4.9.2 Receive..... 139
2.4.9.3 Backlight (Battery Saver)..... 139
2.4.10 Alerts (General Settings).....140
2.4.10.1 Disable All Tones..... 140
2.4.10.2 Escalert Tone.....140
2.4.10.3 Channel Free Indication Tone.....140

2.4.10.4 Self-Test Pass Tone....141
2.4.10.5 Prohibit Tone On Interrupt....141
2.4.10.6 Talk Permit Tone....141
2.4.10.7 Volume Offset (dB)....141
2.4.10.8 Fixed Volume....141
2.4.10.9 RX Low Battery Interval (sec)....142
2.4.10.10 Emergency Search Tone....142
2.4.10.11 Emergency Search Tone Volume....142
2.4.10.12 Emergency Search Tone Speaker....143
2.4.10.13 Emergency Alert Tone Duration (min)....143
2.4.10.14 Call Alert Tone Duration (sec)....143
2.4.10.15 Text Message Alert Tone Duration (min)....144
2.4.10.16 ARTS Tone....144
2.4.10.17 Visual Indication....144
2.4.10.18 Clear Call Received....144
2.4.10.19 Channel Knob Tone....145
2.4.11 Persistent LRRP Requests (General Settings)....145
2.4.11.1 Save....145
2.4.11.2 Delete....145
2.4.12 Lone Worker (General Settings)....145
2.4.12.1 Response Timer (min)....145
2.4.12.2 Reminder Timer (sec)....146
2.4.12.3 Smart PTT Periodic Time (sec)....146
2.4.12.4 Carrier Gone Timer (sec)....146
2.4.13 Power Up (General Settings)....146
2.4.13.1 MDC Status....146
2.4.13.2 Desired Channel Zone....147
2.4.13.3 Desired Channel....147
2.4.14 Password and Lock (General Settings)....147
2.4.14.1 Enable (Password and Lock)....147
2.4.14.2 Password....147
2.4.15 Front Programming Password (General Settings)....148
2.4.15.1 Mode....148
2.4.15.2 Password....150
2.4.16 Delete All (General Settings)....150
2.4.16.1 Text Messages....150
2.4.16.2 Job Tickets....150
2.4.16.3 Call Log....150
2.4.16.4 User Contacts....150

2.4.17 Rental Timer (General Settings)..... 150
2.4.17.1 Rental Period (Hours)..... 151
2.4.17.2 Rental Extension Time (Hours)..... 151
2.4.17.3 Rental Expiry Reminder (Hours)..... 151
2.4.17.4 Rental Extension Status..... 151
2.4.18 5 Tone Radio ID (General Settings)..... 151
2.4.18.1 U1..... 152
2.4.18.2 U2..... 152
2.4.18.3 U3..... 152
2.4.18.4 U4..... 152
2.4.18.5 U5..... 152
2.4.18.6 U6..... 152
2.4.18.7 U7..... 153
2.4.18.8 U8..... 153
2.5 Accessories Set..... 153
2.5.1 General (Accessories)..... 153
2.5.1.1 Hook Type..... 153
2.5.1.2 Volume Control..... 153
2.5.1.3 Ignition Sense..... 154
2.5.1.4 Ignition Sense Auto Power Down Timer (min)..... 154
2.5.1.5 Handset..... 154
2.5.1.6 Analog Accessory Mic Gain (dB)..... 155
2.5.1.7 Digital Accessory Mic Gain (dB)..... 155
2.5.1.8 Max Extra Loud Accessories Volume Level Attenuation (db)..... 156
2.5.1.9 Rx Audio Type..... 157
2.5.1.10 Data Revert Channel Zone..... 158
2.5.1.11 Data Revert Channel..... 158
2.5.1.12 Analog Accessory Emphasis..... 158
2.5.1.13 Audio Type..... 159
2.5.1.14 Audio Priority..... 160
2.5.1.15 TX Audio Priority..... 160
2.5.1.16 Wireline TX Audio Priority..... 160
2.5.1.17 FP TX Audio Priority..... 161
2.5.1.18 Repeater Audio Priority..... 161
2.5.1.19 Disable Repeat Path..... 161
2.5.1.20 Debounce Duration (ms)..... 162
2.5.1.21 Cable Type..... 162
2.5.1.22 Rear Emergency Pin Prior to Power Up..... 163
2.5.2 Bluetooth® (Accessories)..... 163

2.5.2.1 Analog Mic Gain (dB) (Bluetooth)..... 163
2.5.2.2 Digital Mic Gain (dB) (Bluetooth).....163
2.5.3 Digital Audio (Accessories).....164
2.5.3.1 Speaker Slot.....164
2.5.3.2 Microphone Slot..... 164
2.5.3.3 Microphone Call Type..... 164
2.5.3.4 Microphone Call Target ID..... 165
2.5.3.5 Repeat Audio Priority..... 165
2.5.3.6 Emergency Repeat Audio Priority.....165
2.5.3.7 Local Priority Audio..... 166
2.5.4 GPIO Physical Pins (Accessories).....166
2.5.4.1 GPIO1 Feature.....166
2.5.4.2 GPIO1 Active Level.....166
2.5.4.3 GPIO1 Debounce.....167
2.5.4.4 GPIO1 GNSS Report..... 167
2.5.4.5 GPIO2 Feature.....167
2.5.4.6 GPIO2 Active Level.....167
2.5.4.7 GPIO2 Debounce.....168
2.5.4.8 GPIO2 GNSS Report..... 168
2.5.4.9 GPIO3 Feature.....168
2.5.4.10 GPIO3 Active Level.....168
2.5.4.11 GPIO3 Debounce.....169
2.5.4.12 GPIO3 GNSS Report..... 169
2.5.4.13 GPIO4 Feature.....169
2.5.4.14 GPIO4 Active Level.....169
2.5.4.15 GPIO4 Debounce.....169
2.5.4.16 GPIO4 GNSS Report..... 170
2.5.4.17 GPIO5 Feature.....170
2.5.4.18 GPIO5 Active Level.....170
2.5.4.19 GPIO5 Debounce.....170
2.5.4.20 GPIO5 GNSS Report..... 170
2.5.4.21 GPIO6 Feature.....171
2.5.4.22 GPIO6 Active Level.....171
2.5.4.23 GPIO6 Debounce.....171
2.5.4.24 GPIO6 GNSS Report..... 171
2.5.4.25 GPIO7 Feature.....171
2.5.4.26 GPIO7 Active Level.....172
2.5.4.27 GPIO7 Debounce.....172
2.5.4.28 GPIO7 GNSS Report..... 172

2.5.4.29 GPIO8 Feature....172
2.5.4.30 GPIO8 Active Level....173
2.5.4.31 GPIO8 Debounce....173
2.5.4.32 GPIO8 GNSS Report....173
2.5.4.33 GPIO9 Feature....173
2.5.4.34 GPIO9 Active Level....174
2.5.4.35 GPIO9 Debounce....174
2.5.4.36 GPIO10 Feature....174
2.5.4.37 GPIO10 Active Level....174
2.5.4.38 GPIO10 Debounce....174
2.5.4.39 GPIO10 GNSS Report....174
2.5.4.40 GPIO11 Feature....175
2.5.4.41 GPIO11 Active Level....175
2.5.4.42 GPIO11 Debounce....175
2.5.4.43 GPIO12 Feature....175
2.5.4.44 GPIO 12 Active Level....176
2.5.4.45 GPIO12 Debounce....176
2.5.4.46 GPIO Function Selections....176
2.5.4.47 GNSS Report....183
2.5.5 Horns and Lights (Accessories)....183
2.5.5.1 Alarm....184
2.5.5.2 Duration (sec)....184
2.5.5.3 Delay Time (sec)....184
2.5.6 Wireline (Accessories)....184
2.5.6.1 Remote Control Mode....185
2.5.6.2 Wire Mode....185
2.5.6.3 Line Impedance....185
2.5.6.4 TX Guard Tone....186
2.5.6.5 PTT Dropout Timer (ms)....186
2.5.6.6 Revert Channel Zone....187
2.5.6.7 Revert Channel....187
2.5.6.8 Monitor Mode....187
2.5.6.9 Squelch Hysteresis (dB)....187
2.5.6.10 HLGT ALC Mode....187
2.5.6.11 Status Tone....188
2.5.6.12 RX Guard Tone....188
2.5.6.13 Repeater Fallback Timer (ms)....188
2.5.6.14 RX Squelch Mode....188
2.5.6.15 Scan Mode....189

2.5.7 Wireline 2 (Accessories)..... 189
2.5.7.1 Remote Control Mode..... 189
2.5.7.2 Wire Mode..... 190
2.5.7.3 Line Impedance..... 190
2.5.7.4 TX Guard Tone..... 191
2.5.7.5 PTT Dropout Timer (ms)..... 191
2.5.7.6 Monitor Mode..... 191
2.5.7.7 Squelch Hysteresis (dB)..... 192
2.5.7.8 HLGT ALC Mode..... 192
2.5.7.9 Status Tone..... 192
2.5.7.10 RX Guard Tone..... 192
2.5.7.11 Repeater Fallback Timer (ms)..... 192
2.5.7.12 RX Squelch Mode..... 193
2.5.7.13 TX Guard Tone Notch..... 193
2.5.7.14 RX Status Tone Notch..... 193
2.5.8 Multi-Button PTT (Accessories)..... 193
2.5.8.1 Index 1 Zone (Multi-Button PTT)..... 194
2.5.8.2 Index 1 (Multi-Button PTT)..... 194
2.5.8.3 Index 2 Zone (Multi-Button PTT)..... 194
2.5.8.4 Index 2 (Multi-Button PTT)..... 194
2.5.8.5 Index 3 Zone (Multi-Button PTT)..... 194
2.5.8.6 Index 3 (Multi-Button PTT)..... 194
2.5.8.7 Index 4 Zone (Multi-Button PTT)..... 195
2.5.8.8 Index 4 (Multi-Button PTT)..... 195
2.5.8.9 Index 5 Zone (Multi-Button PTT)..... 195
2.5.8.10 Index 5 (Multi-Button PTT)..... 195
2.5.8.11 Index 6 Zone (Multi-Button PTT)..... 195
2.5.8.12 Index 6 (Multi-Button PTT)..... 196
2.5.8.13 Index 7 (Multi-Button PTT)..... 196
2.5.8.14 Index 7 Zone (Multi-Button PTT)..... 196
2.5.9 Wireline TRC (Accessories)..... 196
2.5.9.1 TX Guard Tone Notch..... 196
2.5.9.2 RX Status Tone Notch..... 196
2.5.9.3 Antenna Relay..... 196
2.5.10 Wireline TRC Function Selection (Accessories)..... 197
2.5.10.1 TRC7 Frequency 1..... 197
2.5.10.2 TRC7 Frequency 2..... 197
2.5.10.3 TRC7 Frequency 3..... 198
2.5.10.4 TRC7 Frequency 4..... 198

2.5.10.5 TRC7 Frequency 5....199
2.5.10.6 TRC7 Frequency 6....199
2.5.10.7 TRC7 Frequency 7....200
2.5.10.8 TRC7 Frequency 8....200
2.5.10.9 TRC7 Frequency 9....201
2.5.10.10 TRC7 Frequency 10....201
2.5.10.11 TRC7 Frequency 11....202
2.5.10.12 TRC7 Frequency 12....202
2.5.10.13 TRC7 Frequency 13....203
2.5.10.14 TRC7 Frequency 14....203
2.5.10.15 TRC7 Frequency 15....204
2.5.10.16 TRC7 Frequency 16....204
2.5.10.17 TRC15 Frequency 1....205
2.5.10.18 TRC15 Frequency 2....205
2.5.10.19 TRC15 Frequency 3....205
2.5.10.20 TRC15 Frequency 4....205
2.5.10.21 TRC15 Frequency 5....206
2.5.10.22 TRC15 Frequency 6....206
2.5.10.23 TRC15 Frequency 7....206
2.5.10.24 TRC15 Frequency 8....206
2.5.10.25 TRC15 Frequency 9....206
2.5.10.26 TRC15 Frequency 10....207
2.5.10.27 TRC15 Frequency 11....207
2.5.10.28 TRC15 Frequency 12....207
2.5.10.29 TRC15 Frequency 13....207
2.5.10.30 TRC15 Frequency 14....208
2.5.10.31 TRC15 Frequency 15....208
2.5.10.32 TRC15 Frequency 16....208
2.6 Control Buttons Set....208
2.6.1 General (Control Buttons)....208
2.6.1.1 Numeric Keypad....209
2.6.1.2 Emergency Short Press Duration (ms)....209
2.6.1.3 Long Press Duration (ms)....209
2.6.1.4 Dual Knob Press Duration (ms)....209
2.6.1.5 Channel Up/Down via Knob....210
2.6.1.6 Keypad Lock Options....210
2.6.2 Conventional Radio Buttons Portable (Control Buttons)....210
2.6.2.1 Orange Button Short Press (Portable)....210
2.6.2.2 Orange Button Long Press (Portable)....215

2.6.2.3 Side Button 1 Short Press (Portable)....220
2.6.2.4 Side Button 1 Long Press (Portable)....226
2.6.2.5 Side Button 2 Short Press (Portable)....231
2.6.2.6 Side Button 2 Long Press (Portable)....236
2.6.2.7 Side Button 3 Short Press (Portable)....241
2.6.2.8 Side Button 3 Long Press (Portable)....246
2.6.2.9 P1 Button Short Press (Portable)....251
2.6.2.10 P1 Button Long Press (Portable)....256
2.6.2.11 P2 Button Short Press (Portable)....261
2.6.2.12 P2 Button Long Press (Portable)....266
2.6.3 Conventional Radio Buttons Mobile (Control Buttons)....271
2.6.3.1 Front Button 1 Short Press (Mobile)....271
2.6.3.2 Front Button 1 Long Press (Mobile)....276
2.6.3.3 Front Button 2 Short Press (Mobile)....281
2.6.3.4 Front Button 2 Long Press (Mobile)....286
2.6.3.5 Front Button 3 Short Press (Mobile)....291
2.6.3.6 Front Button 3 Long Press (Mobile)....295
2.6.3.7 Front Button 4 Short Press (Mobile)....300
2.6.3.8 Front Button 4 Long Press (Mobile)....305
2.6.4 Conventional Accessory Buttons Portable (Control Buttons)....310
2.6.4.1 Orange Button Short Press (Portable) (Accessory Button)....310
2.6.4.2 Orange Button Long Press (Portable) (Accessory Button)....315
2.6.4.3 No Dot Button Short Press (Portable) (Accessory Button)....320
2.6.4.4 No Dot / A Button Long Press (Portable) (Accessory Button)....325
2.6.4.5 1-Dot Button Long Press (Portable) (Accessory Button)....330
2.6.4.6 1-Dot Button Short Press (Portable) (Accessory Button)....335
2.6.4.7 2-Dot Button Short Press (Portable) (Accessory Button)....340
2.6.4.8 2-Dot Button Long Press (Portable) (Accessory Button)....345
2.6.5 Conventional Accessory Buttons Mobile (Control Buttons)....351
2.6.5.1 No Dot Button Short Press (Mobile) (Accessory Button)....351
2.6.5.2 No Dot / A Button Long Press (Mobile) (Accessory Button)....355
2.6.5.3 1-Dot / B Button Short Press (Mobile) (Accessory Button)....360
2.6.5.4 1-Dot / B Button Long Press (Mobile) (Accessory Button)....365
2.6.5.5 2-Dot / C Button Short Press (Mobile) (Accessory Button)....370
2.6.5.6 2-Dot / C Button Long Press (Mobile) (Accessory Button)....375
2.6.6 One Touch Access (Control Buttons)....380
2.6.6.1 One Touch Access....380
2.6.6.2 Mode (One Touch Access)....380
2.6.6.3 Channel Zone....380

2.6.6.4 Channel....381
2.6.6.5 Call (One Touch Access)....381
2.6.6.6 Call Type (One Touch Access)....381
2.6.6.7 5 Tone Call (One Touch Access)....382
2.6.6.8 MDC Status/Message Index (One Touch Access)....382
2.6.6.9 Text Message (One Touch Access)....382
2.6.7 Number Key Quick Contact Access (Control Buttons)....382
2.6.7.1 Number Key (Number Key Quick Contact Access)....382
2.6.7.2 Mode (Number Key Quick Contact Access)....383
2.6.7.3 Call (Number Key Quick Contact Access)....383
2.6.8 Actions List (Control Buttons)....383
2.6.8.1 Index (Actions List)....384
2.6.8.2 Feature (Action List)....384
2.7 Text Messages Set....387
2.7.1 General (Text Messages)....388
2.7.1.1 Max Length of Message Sent....388
2.7.1.2 Message....388
2.8 Telemetry Set....388
2.8.1 General (Telemetry)....388
2.8.1.1 Feature....388
2.8.1.2 Description....389
2.8.1.3 Action....389
2.8.1.4 Pulse Time....390
2.8.1.5 Mode....390
2.8.1.6 Channel Zone....390
2.8.1.7 Channel....390
2.8.1.8 Call....391
2.8.1.9 Target VIO....391
2.8.1.10 Text Message....392
2.9 Menu Set....392
2.9.1 General (Menu)....392
2.9.1.1 Editor Hang Time (sec)....392
2.9.1.2 Menu Hang Time (sec)....392
2.9.1.3 Text Message (Menu)....392
2.9.1.4 Job Tickets Main Name....393
2.9.1.5 Job Tickets Short Name....393
2.9.1.6 Job Ticket Delete....393
2.9.1.7 Message (Menu)....393
2.9.1.8 Wi-Fi....393

2.9.2 Contact (Menu)..... 393
2.9.2.1 Call Alert (Menu)..... 393
2.9.2.2 Edit (Menu)..... 394
2.9.2.3 Ring Style (Menu)..... 394
2.9.2.4 Text Message Alert (Menu)..... 394
2.9.2.5 Manual Dial (Menu)..... 394
2.9.2.6 Phone Manual Dial (Menu)..... 395
2.9.2.7 Radio Check (Menu)..... 395
2.9.2.8 Remote Monitor (Menu)..... 395
2.9.2.9 Radio Enable (Menu)..... 395
2.9.2.10 Radio Disable (Menu)..... 395
2.9.2.11 Program Key (Menu)..... 396
2.9.3 Scan (Menu)..... 396
2.9.3.1 Scan (Menu)..... 396
2.9.3.2 Edit List (Menu)..... 396
2.9.3.3 Select New List (Menu)..... 397
2.9.4 TMS (Menu)..... 397
2.9.5 Flexible RX List (Menu)..... 397
2.9.5.1 Flexible RX Group List (Menu)..... 397
2.9.6 Status (Menu)..... 397
2.9.6.1 Manual Dial (Menu)..... 397
2.9.6.2 Edit (Menu)..... 397
2.9.7 Call Log (Menu)..... 397
2.9.7.1 Answered (Menu)..... 398
2.9.7.2 Missed (Menu)..... 398
2.9.7.3 Outgoing Radio (Menu)..... 398
2.9.8 Utilities (Menu)..... 398
2.9.8.1 Talkaround (Menu)..... 398
2.9.8.2 Tones/Alerts (Menu)..... 398
2.9.8.3 Horn/Lights (Menu)..... 399
2.9.8.4 Power (Menu)..... 399
2.9.8.5 Backlight (Menu)..... 399
2.9.8.6 Backlight Timer (Menu)..... 399
2.9.8.7 Trill Enhancement (Menu)..... 399
2.9.8.8 Intro Screen (Menu)..... 399
2.9.8.9 Keypad Lock (Menu)..... 399
2.9.8.10 LED Indicator (Menu)..... 400
2.9.8.11 Squelch (Menu)..... 400
2.9.8.12 Privacy (Menu)..... 400

2.9.8.13 VOX (Menu)..... 400
2.9.8.14 Cable Type (Menu)..... 400
2.9.8.15 Manual Site Roam (Menu)..... 400
2.9.8.16 Site Lock (Menu)..... 401
2.9.8.17 Password and Lock (Menu)..... 401
2.9.8.18 Call Forward (Menu)..... 401
2.9.8.19 Mic Distortion Control (Menu)..... 402
2.9.8.20 AF Suppressor (Menu)..... 402
2.9.8.21 Mic Gain (Menu)..... 402
2.9.8.22 Edit 5 Tone SUID (Menu)..... 402
2.9.8.23 Signaling System (Menu)..... 402
2.9.8.24 Edit Zone (Menu)..... 402
2.9.8.25 Edit Channel (Menu)..... 402
2.9.8.26 Radio Button (Menu)..... 402
2.9.8.27 Accessory Button (Menu)..... 403
2.9.8.28 Home Channel..... 403
2.9.8.29 GNSS (Menu)..... 403
2.9.8.30 Scrambling..... 403
2.9.8.31 Indoor Location..... 403
2.10 Security Set..... 403
2.10.1 Fixed Privacy Key Decryption..... 403
2.10.2 Ignore Rx Clear Voice/Packet Data..... 403
2.10.3 Privacy (Security)..... 403
2.10.3.1 Privacy Type..... 404
2.10.3.2 Basic Privacy Key..... 404
2.10.3.3 Adding Enhanced Privacy Keys..... 405
2.10.3.4 Deleting Enhanced Privacy Keys..... 405
2.10.3.5 Key ID..... 405
2.10.3.6 Key Alias..... 406
2.10.3.7 Key Value..... 406
2.10.4 AES (Security)..... 407
2.10.4.1 Symmetric Keys..... 407
2.10.4.2 Adding Symmetric Keys..... 407
2.10.4.3 Deleting Symmetric Keys..... 408
2.10.4.4 Key ID..... 408
2.10.4.5 Key Alias..... 408
2.10.4.6 Key Value..... 409
2.10.5 Restricted Access to System (Security)..... 409
2.10.5.1 Authentication (RAS)..... 410

2.10.5.2 Add (RAS Alias)..... 410
2.10.5.3 Delete (Restricted Access to System)..... 410
2.10.5.4 Authentication Key Alias..... 410
2.10.5.5 Key Alias..... 411
2.10.5.6 Key Value..... 411
2.10.5.7 Authentication Key (RAS)..... 411
2.10.5.8 Radio ID Range Check..... 412
2.10.5.9 Add (Radio ID Range)..... 412
2.10.5.10 Delete (Radio ID Range)..... 413
2.10.5.11 Min Radio ID..... 413
2.10.5.12 Max Radio ID..... 413
2.10.5.13 Allow..... 414
2.10.6 Over-the-Air Programming (Security)..... 414
2.10.6.1 Authentication Key ID..... 414
2.10.6.2 Authentication Key Value..... 414
2.10.6.3 Authentication Key Alias..... 414
2.10.7 TLS-PSK Authentication (Security)..... 414
2.10.7.1 Security Mode..... 414
2.10.7.2 Pre-Shared Key Value..... 415
2.10.7.3 Pre-Shared Key Alias..... 415
2.11 Network Set..... 415
2.11.1 General (Network)..... 415
2.11.1.1 Radio IP..... 415
2.11.1.2 Accessory IP..... 416
2.11.1.3 USB DNS-SD Interval..... 416
2.11.2 Radio Network (Network)..... 416
2.11.2.1 CAI Group Network..... 416
2.11.2.2 CAI Network..... 417
2.11.2.3 Max TX PDU Size (bytes)..... 417
2.11.2.4 Telemetry UDP Port..... 418
2.11.2.5 Forward to PC..... 418
2.11.3 Services (Network)..... 419
2.11.3.1 ARS Radio ID..... 419
2.11.3.2 ARS IP..... 419
2.11.3.3 ARS UDP Port..... 419
2.11.3.4 TMS Radio ID..... 420
2.11.3.5 TMS IP..... 420
2.11.3.6 TMS UDP Port..... 420
2.11.3.7 User Defined UDP Port 1..... 420

2.11.3.8 User Defined UDP Port 2....421
2.11.3.9 User Defined UDP Port 3....421
2.11.3.10 XCMP Server ID....422
2.11.3.11 XCMP Server IP....422
2.11.3.12 Battery Management Server ID....422
2.11.3.13 Battery Management Server IP....423
2.11.4 Control Station (Network)....423
2.11.4.1 Fixed Installation....423
2.11.4.2 Voice Only....423
2.11.4.3 Data Modem System Type....423
2.11.4.4 Data Modem Window Size....424
2.11.4.5 Repeater Latitude (Degree)....424
2.11.4.6 Repeater Longitude (Degree)....424
2.11.4.7 ARS Monitoring ID....425
2.11.4.8 ARS Monitoring IP....425
2.11.4.9 Location Server UDP Port....425
2.11.4.10 XCMP Server UDP Port....426
2.11.4.11 Battery Management Server UDP Port....426
2.11.5 Network Setting (Network)....426
2.11.5.1 DHCP....427
2.11.5.2 Ethernet IP....427
2.11.5.3 Gateway IP....427
2.11.5.4 Gateway Netmask....427
2.11.5.5 Link Speed....428
2.11.5.6 DNCP....428
2.11.5.7 Ethernet IP....428
2.11.5.8 Gateway IP....428
2.11.5.9 Gateway Netmask....428
2.11.5.10 Primary DNS Server IP....428
2.11.5.11 Secondary DNS Server IP....428
2.11.6 IP Site Connect (Network)....429
2.11.6.1 Beacon Interval (sec)....429
2.11.7 IP Repeater Programming (Network)....429
2.11.7.1 Enable (IP Repeater Programming)....429
2.11.8 Bluetooth (Network)....429
2.11.8.1 Enable (Bluetooth)....429
2.11.8.2 Reconnect TOT (min)....429
2.11.8.3 Off-Hook....430
2.11.8.4 Rear PTT Audio Routing....430

2.11.8.5 Remote HSP Address....430
2.11.8.6 Remote SPP Address....430
2.11.8.7 POD PTT Device Address....431
2.11.8.8 HSP Fixed Pin....431
2.11.8.9 SPP Fixed Pin....431
2.11.8.10 Permanent Discoverable....431
2.11.8.11 Device Database Erase on Power Up....432
2.11.8.12 DNS-SD Interval....432
2.11.9 Bluetooth Serial Port Profile Data Routing (Network)....432
2.11.9.1 Destination (Bluetooth Serial Port)....432
2.11.9.2 Destination Network Type (Bluetooth)....432
2.11.9.3 Destination Radio ID (Bluetooth)....433
2.11.9.4 Destination IP (Bluetooth)....433
2.11.9.5 Destination UDP Port (Bluetooth)....433
2.11.10 USB HID Data Routing (Network)....434
2.11.10.1 Destination (USB)....434
2.11.10.2 Destination Network Type (USB)....434
2.11.10.3 USB Destination Radio ID (USB)....434
2.11.10.4 Destination IP (USB)....435
2.11.10.5 Destination UDP Port (USB)....435
2.11.11 Time Zone (Network)....435
2.11.11.1 Daylight Saving Time....435
2.11.11.2 Directional Offset....435
2.11.11.3 Hour Offset....435
2.11.11.4 Fractional Hours....435
2.11.12 NTP Settings (Network)....436
2.11.12.1 DHCP....436
2.11.12.2 DNS....436
2.11.12.3 NTP Server IP....436
2.11.12.4 NTP DNS Address....436
2.11.12.5 RTC Refresh Interval (hr)....436
2.11.13 DNS Address (Network)....437
2.11.13.1 Hostname....437
2.11.14 General (WiFi Network)....437
2.11.14.1 Enable....437
2.11.14.2 802.11D....437
2.11.14.3 Regulatory Region....437
2.11.14.4 DHCP....438
2.11.14.5 IP Address....438

2.11.14.6 Gateway IP....438
2.11.14.7 Gateway Netmask....438
2.11.14.8 Primary DNS Server IP....438
2.11.14.9 Secondary DNS Server IP....438
2.11.14.10 DNS-SD Interval....439
2.11.14.11 Device Discovery Server Name....439
2.11.14.12 Network SSID....439
2.11.14.13 Security Type....439
2.11.14.14 Encrypted Network Password....440
2.11.14.15 Roaming Aggressiveness....440
2.11.14.16 Boost Tx Power....440
2.11.15 WAVE 5000 (Network)....440
2.11.15.1 WAVE Server Type....440
2.11.15.2 Server Name....441
2.11.15.3 Share Location....441
2.11.15.4 Jitter Voice Buffer (sec)....441
2.11.15.5 WAVE 5000 Username....441
2.11.15.6 WAVE 5000 Password....441
2.11.15.7 WAVE OnCloud....441
2.11.16 WAVE OnCloud (Network)....441
2.11.16.1 WAVE OnCloud URL....441
2.11.16.2 Share Location....442
2.11.16.3 VOX State....442
2.12 WiFi Network Set....442
2.12.1 General (WiFi Network)....442
2.12.1.1 Enable....442
2.12.1.2 802.11D....443
2.12.1.3 Regulatory Region....443
2.12.1.4 DHCP....443
2.12.1.5 IP Address....443
2.12.1.6 Gateway IP....443
2.12.1.7 Gateway Netmask....443
2.12.1.8 Primary DNS Server IP....444
2.12.1.9 Secondary DNS Server IP....444
2.12.1.10 DNS-SD Interval....444
2.12.1.11 Device Discovery Server Name....444
2.12.1.12 Network SSID....444
2.12.1.13 Security Type....445
2.12.1.14 Encrypted Network Password....445

2.12.1.15 EAP Methods..... 445
2.12.1.16 Phase 2 Authentication..... 445
2.12.1.17 Identity..... 446
2.12.1.18 Identity Password..... 446
2.12.1.19 Anonymous Id..... 446
2.12.1.20 Certificate..... 446
2.12.1.21 Validate Server Certificate..... 446
2.12.1.22 Roaming Aggressiveness..... 446
2.12.1.23 Boost Tx Power..... 447
2.12.1.24 MSI Wi-Fi Certificate..... 447
2.12.1.25 DNS-SD Listening Port..... 447
2.12.2 Wifi Enterprise Certificates (WiFi Network)..... 448
2.12.2.1 Friendly Name (Common Certificate)..... 448
2.12.2.2 CA Identifier (Common Certificate)..... 448
2.12.2.3 URL of SCEP (Common Certificate)..... 448
2.12.2.4 Renewal Percentage (Common Certificate)..... 448
2.12.2.5 Finger Print (Common Certificate)..... 449
2.12.2.6 GUID (Common Certificate)..... 449
2.12.2.7 Friendly Name (Device Certificate)..... 449
2.12.2.8 CA Identifier (Device Certificate)..... 449
2.12.2.9 URL of SCEP (Device Certificate)..... 449
2.12.2.10 Challenge Password (Device Certificate)..... 449
2.12.2.11 Country Name (Device Certificate)..... 449
2.12.2.12 State (Device Certificate)..... 449
2.12.2.13 Locality (Device Certificate)..... 449
2.12.2.14 Organization (Device Certificate)..... 450
2.12.2.15 Organization Unit (Device Certificate)..... 450
2.12.2.16 Common Name (Device Certificate)..... 450
2.12.2.17 Email (Device Certificate)..... 450
2.12.2.18 Signature Hash Algorithm (Device Certificate)..... 450
2.12.2.19 RSA Key Size (Device Certificate)..... 451
2.12.2.20 Renew Strategy (Device Certificate)..... 451
2.12.2.21 Renewal Period (Device Certificate)..... 451
2.12.2.22 Finger Print (Device Certificate)..... 451
2.12.2.23 GUID (Device Certificate)..... 451
2.12.3 NTP Server (WiFi Network)..... 451
2.12.3.1 NTP Server..... 451
2.13 Link Establishment Set..... 452
2.13.1 Network Setting (Link Establishment)..... 452

2.13.1.1 Link Type....452
2.13.1.2 Authentication Key....452
2.13.1.3 DNS....453
2.13.1.4 Master IP....453
2.13.1.5 DNS....453
2.13.1.6 Master UDP Port....453
2.13.1.7 UDP Port....454
2.13.1.8 Peer Firewall Open Timer (sec)....454
2.13.2 IP Site Connect (Link Establishment)....454
2.13.2.1 Beacon Duration (ms)....455
2.13.2.2 Beacon Interval (sec)....455
2.13.3 Capacity Plus (Link Establishment)....455
2.13.3.1 Site ID (Repeater)....455
2.13.3.2 Site Alias (Repeater)....456
2.13.3.3 Beacon Duration (ms)....456
2.13.3.4 Beacon Interval (ms)....456
2.13.3.5 Rest Channel/Site IP....457
2.13.3.6 Rest Channel/Site UDP Port....457
2.13.3.7 Rest Channel Time-Out-Timer (Min)....458
2.14 MOTOTRBO Link Set....459
2.14.1 Link Mode....459
2.14.2 Site Type....459
2.14.3 Repeater Type....460
2.14.4 GPIO Slot Timing Master....460
2.14.5 Maximum Number of Links....461
2.14.6 Link Beacon Interval (sec)....461
2.14.7 IP Site Connect MOTOTRBO Link Site....461
2.15 Phone System Set....461
2.15.1 General (Phone System)....461
2.15.1.1 Deaccess Code....462
2.15.1.2 Busy TOT (sec)....462
2.15.1.3 Response TOT (sec)....462
2.15.1.4 TX Tone Duration (ms)....462
2.15.1.5 TX Tone Interval (ms)....463
2.15.1.6 Ring Tone Level (dB)....463
2.15.1.7 Busy Tone Level (dB)....464
2.15.1.8 Enable All Call....464
2.15.1.9 Response Required....464
2.15.2 Target ID (Phone System)....464

2.15.2.1 Length 464
2.15.2.2 Entry Time (sec) 465
2.15.2.3 Validation Attempts 465
2.15.2.4 Request Tone Level (dB) 465
2.15.3 Preconfigured Call (Phone System) 465
2.15.3.1 Enable (Preconfigured Call) 465
2.15.3.2 Call Type (Preconfigured Call) 466
2.15.3.3 Call ID (Preconfigured Call) 466
2.16 Sites Set 466
2.16.1 General (Sites) 466
2.16.1.1 Max Number of Sites 467
2.16.1.2 Max Number of Trunked Repeaters per Site 467
2.16.1.3 Site ID (Neighboring Site) 467
2.16.1.4 Reserved Wide Area Channels 467
2.16.1.5 Neighbor 1 468
2.16.1.6 Neighbor 2 468
2.16.1.7 Neighbor 3 468
2.16.1.8 Neighbor 4 469
2.16.1.9 Neighbor 5 469
2.16.1.10 Neighbor 6 469
2.17 Talkgroups Set 469
2.17.1 General (Talkgroups) 470
2.17.1.1 All Wide Area Talkgroups 470
2.17.1.2 Call ID (Wide Area Talkgroups) 470
2.17.1.3 Site 1 470
2.17.1.4 Site 2 471
2.17.1.5 Site 3 471
2.17.1.6 Site 4 471
2.17.1.7 Site 5 471
2.17.1.8 Site 6 472
2.17.1.9 Site 7 472
2.17.1.10 Site 8 472
2.17.1.11 Site 9 472
2.17.1.12 Site 10 473
2.17.1.13 Site 11 473
2.17.1.14 Site 12 473
2.17.1.15 Site 13 473
2.17.1.16 Site 14 474
2.17.1.17 Site 15 474

2.17.1.18 Site 16....474
2.17.1.19 Site 17....474
2.17.1.20 Site 18....475
2.17.1.21 Site 19....475
2.17.1.22 Site 20....475
2.18 Voice Announcement Set....475
2.18.1 General (Voice Announcement)....476
2.18.1.1 Announcement Type....476
2.18.1.2 Priority....476
2.18.2 File List (Voice Announcement)....476
2.18.2.1 Select and All....476
2.18.2.2 Select and None....476
2.18.2.3 Selected....477
2.18.2.4 File Name....477
2.18.3 Voice Announcement File Selection (Voice Announcement)....477
2.18.3.1 Set Voice Files....477
2.18.3.2 Clear Voice Files....477
2.18.3.3 Intelligent Audio On....477
2.18.3.4 Intelligent Audio Off....477
2.18.3.5 All Alert Tones On....477
2.18.3.6 All Alert Tones Off....478
2.18.3.7 Backlight Auto On....478
2.18.3.8 Backlight Auto Off....478
2.18.3.9 Battery Low....478
2.18.3.10 Battery Medium....478
2.18.3.11 Battery High....478
2.18.3.12 Brightness....479
2.18.3.13 Brightness level 1....479
2.18.3.14 Brightness level 2....479
2.18.3.15 Brightness level 3....479
2.18.3.16 Brightness level 4....479
2.18.3.17 Bluetooth Connect....479
2.18.3.18 Bluetooth Disconnect....480
2.18.3.19 Route Audio to Bluetooth....480
2.18.3.20 Route Audio to Speaker....480
2.18.3.21 Call Forwarding Set....480
2.18.3.22 Call Forwarding Clear....480
2.18.3.23 Call Alert....480
2.18.3.24 Call Log....481

2.18.3.25 Contacts....481
2.18.3.26 Day Mode....481
2.18.3.27 Night Mode....481
2.18.3.28 Emergency Off....481
2.18.3.29 Emergency On....481
2.18.3.30 External Public Address On....482
2.18.3.31 External Public Address Off....482
2.18.3.32 High Power....482
2.18.3.33 Low Power....482
2.18.3.34 Horn & Lights On....482
2.18.3.35 Horn & Lights Off....482
2.18.3.36 Internal Public Address On....483
2.18.3.37 Internal Public Address Off....483
2.18.3.38 Locked....483
2.18.3.39 Unlocked....483
2.18.3.40 Manual Dial Private Call....483
2.18.3.41 Manual Site Roaming....483
2.18.3.42 Microphone AGC On....484
2.18.3.43 Microphone AGC Off....484
2.18.3.44 Monitor....484
2.18.3.45 Nuisance Delete....484
2.18.3.46 Permanent Monitor On....484
2.18.3.47 Permanent Monitor Off....484
2.18.3.48 Privacy On....485
2.18.3.49 Privacy Off....485
2.18.3.50 Radio Check....485
2.18.3.51 Radio Disable....485
2.18.3.52 Radio Enable....485
2.18.3.53 Remote Monitor....485
2.18.3.54 Repeater Mode....486
2.18.3.55 Talkaround Mode....486
2.18.3.56 Scan On....486
2.18.3.57 Scan Off....486
2.18.3.58 Site Locked....486
2.18.3.59 Site Unlocked....486
2.18.3.60 Messages....487
2.18.3.61 Tight Squelch....487
2.18.3.62 Normal Squelch....487
2.18.3.63 Status....487

2.18.3.64 Remote Dekey..... 487
2.18.3.65 VOX On.....487
2.18.3.66 VOX Off.....488
2.18.3.67 Voice Announcement On..... 488
2.18.3.68 Voice Announcement Off..... 488
2.18.3.69 One Touch Home Revert..... 488
2.18.3.70 One Touch Private Call..... 488
2.18.3.71 One Touch Group Call..... 488
2.18.3.72 One Touch Call Alert Sending.....489
2.18.3.73 One Touch Text Message Sending.....489
2.18.3.74 One Touch Status Sending.....489
2.18.3.75 One Touch Message Sending.....489
2.18.3.76 One Touch Telegram Sending.....489
2.18.3.77 One Touch Phone Call.....489
2.18.3.78 Telemetry Button 1.....490
2.18.3.79 Telemetry Button 2.....490
2.18.3.80 Telemetry Button 3.....490
2.18.3.81 Option Board Feature 1.....490
2.18.3.82 Option Board Feature 2.....490
2.18.3.83 Option Board Feature 3.....490
2.18.3.84 Option Board Feature 4.....491
2.18.3.85 Option Board Feature 5.....491
2.18.3.86 Option Board Feature 6.....491
2.18.3.87 Option Board Feature 7.....491
2.18.3.88 Option Board Feature 8.....491
2.18.3.89 Option Board Feature 9.....491
2.18.3.90 Option Board Feature 10.....492
2.18.3.91 Option Board Feature 11.....492
2.18.3.92 Option Board Feature 12.....492
2.18.3.93 Option Board Feature 13.....492
2.18.3.94 Option Board Feature 14.....492
2.18.3.95 Option Board Feature 15.....492
2.18.3.96 Display Radio Name..... 493
2.18.3.97 GNSS On..... 493
2.18.3.98 GNSS Off..... 493
2.18.3.99 Job Tickets.....493
2.18.3.100 Action List.....493
2.18.3.101 Phone Call.....493
2.18.3.102 Phone Manual Dial.....494

2.18.3.103 Phone Exit....494
2.18.3.104 Bluetooth Discoverable On.... 494
2.18.3.105 Bluetooth Discoverable Off.... 494
2.18.3.106 Ring Alert Type.... 494
2.18.3.107 Notifications....495
2.18.3.108 Mandown On....495
2.18.3.109 Mandown Off....495
2.18.3.110 Mic Distortion On....495
2.18.3.111 Mic Distortion Off....495
2.18.3.112 AF Suppressor On.... 495
2.18.3.113 AF Suppressor Off.... 496
2.18.3.114 Scrambling On.... 496
2.18.3.115 Scrambling Off.... 496
2.18.3.116 Scrambling 3.29 kHz....496
2.18.3.117 Scrambling 3.39 kHz....496
2.18.3.118 Scrambling 3.5 kHz....497
2.18.3.119 Flexible Rx List On....497
2.18.3.120 Flexible Rx List Off....497
2.18.3.121 Battery Li-Ion Selected....497
2.18.3.122 Battery NiMH Selected....497
2.18.3.123 Invalid Battery and Charger.... 498
2.18.3.124 Invalid Battery.... 498
2.18.3.125 Charging Error....498
2.18.3.126 Invalid Charger....498
2.18.3.127 Cancel....498
2.18.3.128 Accessory Speaker Selected.... 498
2.18.3.129 Radio Speaker Selected.... 499
2.18.3.130 Trill Enhancement On.... 499
2.18.3.131 Trill Enhancement Off.... 499
2.18.3.132 Home Channel Reminder Silenced....499
2.18.3.133 New Home Channel....499
2.18.3.134 Non-Home Channel.... 499
2.18.3.135 Wrong Battery.... 500
2.18.3.136 WAVE Channel List....500
2.18.3.137 WAVE Channel 1.... 500
2.18.3.138 WAVE Channel 2.... 500
2.18.3.139 WAVE Channel 3.... 500
2.18.3.140 WAVE Channel 4.... 500
2.18.3.141 WAVE Channel 5.... 500

2.18.3.142 WAVE Channel 6 500
2.18.3.143 WAVE Channel 7 501
2.18.3.144 WAVE Channel 8 501
2.18.3.145 Switching to Radio 501
2.18.3.146 Switching to Wave 501
2.18.3.147 Wi-Fi On 501
2.18.3.148 Wi-Fi Off 501
2.18.3.149 Wi-Fi Enabled 501
2.18.3.150 Wi-Fi Disabled 502
2.18.3.151 Wi-Fi Connected 502
2.18.3.152 Vibrate Style 502
2.18.3.153 Wrong Battery 502
2.18.3.154 Indoor Location On 502
2.18.3.155 Indoor Location Off 502
2.18.3.156 Transmit Inhibit On 502
2.18.3.157 Transmit Inhibit Off 503
2.18.3.158 Ring Alert Type Silent 503
2.18.3.159 OTAR Rekey Request 503
2.18.3.160 Response Inhibit On 503
2.18.3.161 Response Inhibit Off 503
2.18.3.162 Glove Mode On 503
2.18.3.163 Glove Mode Off 504
2.18.4 Text to Speech (Voice Announcement) 504
2.18.4.1 Dictionary Entry 504
2.18.4.2 Pronunciation 504
2.18.4.3 Voice Pack 504
2.18.4.4 Speech Rate 505
2.18.4.5 Channels (Text to Speech) 505
2.18.4.6 Zones (Text to Speech) 505
2.18.4.7 Buttons (Text to Speech) 505
2.18.4.8 Text Messages (Text to Speech) 505
2.18.4.9 Job Tickets (Text to Speech) 505
2.19 Indoor Location Set 505
2.19.1 General (Indoor Location) 505
2.19.1.1 Indoor Location 505
2.19.1.2 Scan Interval on Time (ms) 506
2.19.1.3 Scan Interval off Time (ms) 506
2.19.1.4 Show Beacon Alias 506
2.19.2 Beacon List (Indoor Location) 506

2.19.2.1 Beacon Alias..... 506
2.19.2.2 Beacon UUID..... 506
2.20 Job Tickets Set..... 506
2.20.1 General (Job Tickets)..... 507
2.20.1.1 Job Ticket Server ID..... 507
2.20.1.2 Job Ticket Server IP..... 507
2.20.1.3 Job Ticket Server UDP Port..... 507
2.20.1.4 Index (Job Tickets)..... 508
2.20.1.5 Action/Response..... 508
2.20.1.6 Status Folder..... 508
2.20.1.7 Last State Flag..... 508
2.21 Job Tickets Options Set..... 508
2.21.1 General (Job Tickets Options)..... 509
2.21.1.1 Option List Name..... 509
2.21.1.2 Position..... 509
2.21.1.3 Index..... 509
2.21.1.4 Name..... 509
2.22 Job Tickets Templates Set..... 509
2.22.1 General (Job Tickets Templates)..... 510
2.22.1.1 Template Name..... 510
2.22.1.2 Tag..... 510
2.22.1.3 Position..... 510
2.22.1.4 Name..... 510
2.22.1.5 Tag..... 510
2.22.1.6 Type..... 511
2.22.1.7 Option List..... 511
2.22.1.8 Length..... 511
2.22.1.9 Original Text..... 511
2.23 Mandown Set..... 512
2.23.1 General (Mandown)..... 512
2.23.1.1 Allow User Control..... 512
2.24 Mandown Profiles Set..... 512
2.24.1 General (Mandown Profiles)..... 512
2.24.1.1 Name..... 512
2.24.1.2 Type..... 512
2.24.1.3 Sensor Sensitivity..... 513
2.24.1.4 Volume (dB)..... 513
2.24.1.5 Alert Repeat Period (sec)..... 513
2.24.1.6 Disabled Alert Repeat Period (sec)..... 514

2.24.2 Angle (Mandown Profiles)....514
2.24.2.1 Activation Angle (degree)....514
2.24.2.2 Angle Pre-Alarm Duration (sec)....514
2.24.2.3 Angle Alarm Duration (sec)....514
2.24.3 No-Movement (Mandown Profiles)....514
2.24.3.1 No-Movement Pre-Alarm Duration (sec)....515
2.24.3.2 Alarm Duration (sec)....515
2.24.4 Movement (Mandown Profiles)....515
2.24.4.1 Alert Tone....515
2.24.4.2 Pre-Alarm Duration (sec)....515
2.24.4.3 Alarm Duration (sec)....515
2.25 Signaling Systems Set....516
2.25.1 General (Signaling Systems)....516
2.25.1.1 Emergency On/Off Switch....516
2.25.2 Digital (Signaling Systems)....516
2.25.2.1 Radio Disable Decode....516
2.25.2.2 Authenticated Radio Inhibit/Uninhibit....516
2.25.2.3 Authenticated Passphrase....517
2.25.2.4 Authenticated Remote Monitor....517
2.25.2.5 Remote Monitor Decode....517
2.25.2.6 Emergency Remote Monitor Decode....518
2.25.2.7 Remote Monitor Duration (sec)....518
2.25.2.8 TX Sync Wakeup TOT (ms)....518
2.25.2.9 Tx Wakeup Message Limit....518
2.25.3 Analog (Signaling Systems)....519
2.25.3.1 Call Alert Encode....519
2.25.3.2 Sel Call Encode....519
2.25.3.3 Sel Call Tone....519
2.25.3.4 Sel Call Tone/ID....520
2.25.3.5 Sel Call Hang Time (ms)....520
2.25.3.6 Auto Reset Timer (sec)....520
2.25.3.7 5 Tone Call Answer Timer (sec)....520
2.25.3.8 5 Tone Authorization Request Monitor Time (sec)....521
2.25.3.9 5 Tone Authorization Request Button Function....521
2.25.3.10 5 Tone Emergency Alarm Type....521
2.25.3.11 5 Tone Emergency Revert Channel Zone....522
2.25.3.12 5 Tone Emergency Revert Channel....522
2.25.3.13 5 Tone Emergency Cycles....522
2.25.3.14 5 Tone Emergency TX Tone....522

2.25.3.15 5 Tone Emergency TX Cycle Time (sec)..... 523
2.25.3.16 5 Tone Emergency RX Cycle Time (sec)..... 523
2.25.3.17 5 Tone Emergency Encoder Telegram..... 523
2.25.3.18 Position (MDC Status List)..... 523
2.25.3.19 MDC Status List Name..... 524
2.25.3.20 MDC Status List MDC System..... 524
2.25.3.21 MDC Status List Revert Channel Zone..... 524
2.25.3.22 MDC Status List Revert Channel..... 524
2.25.3.23 MDC Status List Strip TPL/DPL 524
2.25.3.24 Position (MDC Message List)..... 524
2.25.3.25 MDC Message List Name (MDC Message List)..... 525
2.25.3.26 MDC Message List MDC System (MDC Message List)..... 525
2.25.3.27 MDC Message List Revert Channel Zone (MDC Message List)..... 525
2.25.3.28 MDC Message List Revert Channel (MDC Message List)..... 525
2.25.3.29 MDC Message List Strip TPL/DPL (MDC Message List)..... 525
2.26 User Defined 5 Tone Set..... 525
2.26.1 General (User Defined 5 Tone)..... 525
2.26.1.1 Encoder Tone Duration (ms)..... 526
2.26.1.2 Decoder Minimum Tone Duration (ms)..... 526
2.26.1.3 Decoder Maximum Tone Duration (ms)..... 526
2.26.1.4 Tone 0 Freq (Hz)..... 526
2.26.1.5 Tone 1 Freq (Hz)..... 527
2.26.1.6 Tone 2 Freq (Hz)..... 527
2.26.1.7 Tone 3 Freq (Hz)..... 527
2.26.1.8 Tone 4 Freq (Hz)..... 528
2.26.1.9 Tone 5 Freq (Hz)..... 528
2.26.1.10 Tone 6 Freq (Hz)..... 528
2.26.1.11 Tone 7 Freq (Hz)..... 529
2.26.1.12 Tone 8 Freq (Hz)..... 529
2.26.1.13 Tone 9 Freq (Hz)..... 529
2.26.1.14 Tone A Freq (Hz)..... 530
2.26.1.15 Tone B Freq (Hz)..... 530
2.26.1.16 Tone C Freq (Hz)..... 530
2.26.1.17 Tone D Freq (Hz)..... 531
2.26.1.18 Tone E Freq (Hz)..... 531
2.26.1.19 Tone F Freq (Hz)..... 531
2.27 5 Tone Systems Set..... 532
2.27.1 General (5 Tone Systems)..... 532
2.27.1.1 System Name (5 Tone System)..... 532

2.27.1.2 Signaling System..... 532
2.27.1.3 Group Tone..... 533
2.27.1.4 Repeat Tone..... 533
2.27.2 Encoder Single Tone (5 Tone Systems)..... 533
2.27.2.1 Single Tone 1 Frequency (Hz) (Encoder)..... 533
2.27.2.2 Single Tone 1 Duration (ms)..... 533
2.27.2.3 Single Tone 2 Frequency (Hz) (Encoder)..... 534
2.27.2.4 Single Tone 2 Duration (ms)..... 534
2.27.3 Decoder Single Tone (5 Tone Systems)..... 534
2.27.3.1 Enable Tone 1..... 534
2.27.3.2 Single Tone 1 Frequency (Hz) (Decoder)..... 534
2.27.3.3 Single Tone 1 Minimum Duration (ms)..... 535
2.27.3.4 Single Tone 1 Maximum Duration (ms)..... 535
2.27.3.5 Enable Tone 2..... 535
2.27.3.6 Single Tone 2 Frequency (Hz) (Decoder)..... 535
2.27.3.7 Single Tone 2 Minimum Duration (ms)..... 536
2.27.3.8 Single Tone 2 Maximum Duration (ms)..... 536
2.28 MDC Systems Set..... 536
2.28.1 General (MDC Systems)..... 537
2.28.1.1 System Name (MDC System)..... 537
2.28.1.2 Primary ID (Hex)..... 537
2.28.1.3 PTT ID Type..... 537
2.28.1.4 PTT Sidetone..... 537
2.28.1.5 Group ID (Hex)..... 538
2.28.1.6 Pretime (ms) (MDC System)..... 538
2.28.1.7 Preamble Bit Sync..... 539
2.28.1.8 Call Alert Type (MDC System)..... 539
2.28.1.9 Radio Check Decode..... 539
2.28.1.10 Sel Call Decode..... 539
2.28.1.11 Auto Reset Timer Type (MDC System)..... 539
2.28.1.12 Remote Monitor Decode (MDC System)..... 540
2.28.1.13 Emergency Remote Monitor Decode (MDC System)..... 540
2.28.1.14 Remote Monitor Duration (sec) (MDC System)..... 540
2.28.1.15 Emergency Remote Monitor Duration (sec) (MDC System)..... 541
2.28.1.16 Repeater Access Type..... 541
2.28.1.17 Repeater Access Pretime (ms)..... 541
2.28.2 DOS (MDC Systems)..... 541
2.28.2.1 Criteria Type..... 542
2.28.2.2 Coast Duration (ms)..... 542

2.28.2.3 Auto Mute Duration (ms)..... 542
2.28.2.4 Fixed Retry Wait Time (sec)..... 542
2.28.3 Emergency (MDC Systems)..... 543
2.28.3.1 Alarm Type (MDC Emergency System)..... 543
2.28.3.2 Mode (MDC Emergency System)..... 543
2.28.3.3 Revert Channel Zone (MDC Emergency System)..... 544
2.28.3.4 Revert Channel (MDC Emergency System)..... 544
2.28.3.5 Sticky Revert..... 544
2.28.3.6 Sticky Revert Alert..... 545
2.28.3.7 Impolite Retries (MDC Emergency System)..... 545
2.28.3.8 Polite Retries (MDC Emergency System)..... 545
2.28.3.9 Cycles (MDC Emergency System)..... 546
2.28.3.10 TX Cycle Time (sec) (MDC Emergency System)..... 546
2.28.3.11 RX Cycle Time (sec) (MDC Emergency System)..... 547
2.28.3.12 PTT Sidetone (MDC Emergency System)..... 547
2.29 Quik-Call II Systems Set..... 547
2.29.1 General (Quick-Call II Systems)..... 547
2.29.1.1 System Name (Quik-Call II System)..... 547
2.29.1.2 Call Type (Quik-Call II System)..... 547
2.29.1.3 Call Format..... 548
2.29.1.4 Tone A Freq (Hz)..... 549
2.29.1.5 Tone B Freq (Hz)..... 549
2.29.1.6 Tone C Freq (Hz)..... 549
2.29.1.7 Tone D Freq (Hz)..... 550
2.29.1.8 Tone A Code 550
2.29.1.9 Tone B Code 550
2.29.1.10 Tone C Code 550
2.29.1.11 Tone D Code 550
2.29.1.12 Auto Reset Timer Type (Quik-Call II System)..... 551
2.29.1.13 Sidetone (Quik-Call II System) 551
2.29.1.14 Pretime (ms) (Quik-Call II)..... 551
2.29.1.15 Long Tone Duration (sec)..... 552
2.29.1.16 Limited Patience Timer (sec)..... 552
2.30 Digital Emergency Systems Set..... 552
2.30.1 General (Digital Emergency Systems)..... 552
2.30.1.1 System Name (Digital Emergency System)..... 553
2.30.1.2 Alarm Type (Digital Emergency System)..... 553
2.30.1.3 Mode (Digital Emergency System)..... 553
2.30.1.4 Revert Channel Zone (Digital Emergency System)..... 554

2.30.1.5 Revert Channel (Digital Emergency System)....554
2.30.1.6 Contact (Digital Emergency System)....554
2.30.1.7 Ack Required (Digital Emergency System)....554
2.30.1.8 Impolite Retries (Digital Emergency System)....555
2.30.1.9 Polite Retries (Digital Emergency System)....555
2.30.1.10 Cycles (Digital Emergency System)....556
2.30.1.11 Hot Mic Duration (sec) (Digital Emergency System)....556
2.30.1.12 TX Cycle Time (sec) (Digital Emergency System)....557
2.30.1.13 RX Cycle Time (sec) (Digital Emergency System)....557
2.30.1.14 TX Interrupt (Digital Emergency System)....557
2.30.1.15 Preamble (Digital Emergency System)....558
2.31 Capacity Plus Emergency Systems Set....558
2.31.1 General (Capacity Plus Emergency Systems)....558
2.31.1.1 System Name....558
2.31.1.2 Alarm Types....558
2.31.1.3 Mode....559
2.31.1.4 Contact....559
2.31.1.5 Number of Retries....560
2.31.1.6 Cycles....560
2.31.1.7 Hot Mic Duration....560
2.31.1.8 TX Cycle Time....561
2.31.1.9 RX Cycle Time....561
2.31.1.10 TX Interrupt....562
2.32 Phone Systems Set....562
2.32.1 General (Phone Systems)....562
2.32.1.1 System Name (Phone System)....562
2.32.1.2 Gateway ID....562
2.32.1.3 Access Code....562
2.32.1.4 Deaccess Code....563
2.32.2 DTMF (Phone Systems)....563
2.32.2.1 Pretime (ms) (Phone System)....564
2.32.2.2 TX Tone Duration (ms)....564
2.32.2.3 TX Tone Interval (ms)....564
2.32.2.4 Pause Duration (ms)....565
2.32.2.5 Pause Duration (ms)....565
2.33 Encoder Set....566
2.33.1 General (Encoder)....566
2.33.1.1 Multicall Advanced User Mode....566
2.33.2 Multicall Address (Encoder)....567

2.33.2.1 General Lockout Digit (Multicall Address)..... 567
2.33.2.2 Position Lockout Digit (Multicall Address)..... 568
2.33.2.3 Position for Position Lockout Digit (Multicall Address)..... 568
2.33.2.4 Position for Group Lockout Digit (Multicall Address)..... 568
2.33.2.5 Address Range 1..... 568
2.33.2.6 Address Range 2..... 568
2.33.2.7 Address Range 3..... 569
2.33.2.8 Minimum (Address Range 1)..... 569
2.33.2.9 Minimum (Address Range 2)..... 569
2.33.2.10 Minimum (Address Range 3)..... 569
2.33.2.11 Maximum (Address Range 1)..... 570
2.33.2.12 Maximum (Address Range 2)..... 570
2.33.2.13 Maximum (Address Range 2)..... 570
2.33.2.14 Maximum (Address Range 3)..... 571
2.33.3 Multicall Status (Encoder)..... 571
2.33.3.1 General Lockout Digit (Multicall Status)..... 571
2.33.3.2 Position Lockout Digit (Multicall Status)..... 571
2.33.3.3 Position for Position Lockout Digit (Multicall Status)..... 571
2.33.3.4 Position for Group Lockout Digit (Multicall Status)..... 572
2.33.3.5 Status Range 1..... 572
2.33.3.6 Status Range 2..... 572
2.33.3.7 Status Range 3..... 572
2.33.3.8 Minimum (Status Range 1)..... 572
2.33.3.9 Minimum (Status Range 2)..... 573
2.33.3.10 Minimum (Status Range 3)..... 573
2.33.3.11 Maximum (Status Range 1)..... 573
2.33.3.12 Maximum (Status Range 2)..... 574
2.33.3.13 Maximum (Status Range 3)..... 574
2.34 Encoder Sequences Set..... 574
2.34.1 General (Encoder Sequences)..... 574
2.34.1.1 Sequence Name..... 574
2.34.1.2 Signaling System (Sequences)..... 574
2.34.1.3 Sequence..... 575
2.34.1.4 Pretime (ms) (Sequences)..... 575
2.34.1.5 Extended 1st Tone Duration and Telegram 1st Tone Duration (ms)..... 576
2.35 Encoder Status Set..... 577
2.35.1 General (Encoder Status)..... 577
2.35.1.1 Only Use Decoder Status List..... 577
2.35.1.2 Name (Encoder)..... 577

2.35.1.3 Status (Encoder)..... 577
2.36 Telegrams Set..... 578
2.36.1 General (Telegrams)..... 578
2.36.1.1 Repeat Counter..... 578
2.36.1.2 Periodic Repeat Time (sec)..... 578
2.36.1.3 Minimum Keyup for Repeat (sec)..... 579
2.36.1.4 Power Up Auto Telegram..... 579
2.36.1.5 Power Down Auto Telegram..... 579
2.36.1.6 Power Up Auto Telegram Revert Channel..... 579
2.36.1.7 Power Up Auto Telegram Revert Channel Zone..... 580
2.36.1.8 Power Down Auto Telegram Revert Channel..... 580
2.36.1.9 Power Down Auto Telegram Revert Channel Zone..... 580
2.36.1.10 Telegram Name..... 580
2.36.1.11 Sequence 1..... 580
2.36.1.12 Sequence 2..... 580
2.36.1.13 Sequence 3..... 581
2.36.1.14 Acknowledge Expected..... 581
2.36.1.15 Telegram Repeat..... 581
2.37 Decoder Set..... 581
2.37.1 General (Decoder)..... 582
2.37.1.1 Acknowledge Expected Duration (sec)..... 582
2.37.1.2 Sequence TOT (ms)..... 582
2.38 Decoder Status List Items..... 582
2.38.1 General (Decoder Status List Items)..... 582
2.38.1.1 Name (Decoder)..... 582
2.38.1.2 Status (Decoder)..... 583
2.39 Decoder Definitions Set..... 583
2.39.1 General (Decoder Definitions)..... 583
2.39.1.1 Definition Name..... 583
2.39.1.2 5 Tone Signaling System..... 583
2.39.1.3 Decoder Type..... 584
2.39.1.4 Group Type..... 585
2.39.1.5 Decoder Sequence 1..... 585
2.39.1.6 Group Sequence 1..... 585
2.39.1.7 Decoder Sequence 2..... 586
2.39.1.8 Group Sequence 2..... 586
2.39.1.9 Decoder Sequence 3..... 586
2.39.1.10 Group Sequence 3..... 587
2.39.1.11 Call Forwarding Acknowledge..... 587

2.39.1.12 Telegram 1st Tone Duration (ms)..... 587
2.39.1.13 External Alarm.....587
2.39.1.14 Decoder Output Control..... 588
2.39.1.15 Auto Reset Start.....588
2.39.1.16 Call Answer Timer.....588
2.39.1.17 Call Back..... 589
2.39.1.18 Auto Acknowledge..... 589
2.39.1.19 Matching Encode Telegram..... 589
2.39.1.20 Private Call Tone.....589
2.39.1.21 Group Call Tone.....589
2.40 Auto Acknowledgement Set.....590
2.40.1 General (Auto Acknowledgement)..... 590
2.40.1.1 Acknowledge Name..... 590
2.40.1.2 Telegram (Auto Acknowledges)..... 590
2.40.1.3 Channel Free..... 590
2.40.1.4 Sidetone (Auto Acknowledges)..... 590
2.40.1.5 Acknowledge Delay (ms)..... 591
2.40.1.6 Revert Channel Zone..... 591
2.40.1.7 Revert Channel..... 591
2.40.1.8 Revert Channel Zone..... 591
2.41 Contacts Set..... 591
2.41.1 Contact.....591
2.41.2 Five Tone (Contacts)..... 592
2.41.2.1 Contact Name (5 Tone Call)..... 592
2.41.2.2 Telegram (5 Tone Call)..... 592
2.41.2.3 Address (5 Tone Call)..... 592
2.41.3 MDC (Contacts)..... 593
2.41.3.1 Call Type (MDC Call)..... 593
2.41.3.2 Contact Name (MDC Call)..... 593
2.41.3.3 Call ID (MDC Call).....593
2.41.3.4 MDC System (MDC Call)..... 593
2.41.3.5 Revert Channel Zone (MDC Call)..... 594
2.41.3.6 Revert Channel (MDC Call)..... 594
2.41.3.7 Strip TPL/DPL (MDC Call)..... 594
2.41.4 Quik-Call II (Contacts).....594
2.41.4.1 Contact Name (Quik-Call II)..... 594
2.41.4.2 Quik-Call II System..... 594
2.41.4.3 Revert Channel Zone..... 594
2.41.4.4 Revert Channel (Quik-Call II Call).....595

2.41.4.5 Call Format....595
2.41.4.6 Tone A Freq (Hz)....595
2.41.4.7 Tone A Code....595
2.41.4.8 Tone B Freq (Hz)....595
2.41.4.9 Tone B Code....596
2.41.4.10 Strip TPL/DPL (Quik-Call II Call)....596
2.41.5 Digital (Contacts)....596
2.41.5.1 Call Type (Digital Call)....596
2.41.5.2 Contact Name (Digital Call)....597
2.41.5.3 Call ID (Digital Call)....597
2.41.5.4 OVCM TX (Digital Call)....598
2.41.5.5 OVCM RX (Digital Call)....598
2.41.5.6 Route Type (Digital Call)....598
2.41.5.7 Connection Type (Digital Call)....599
2.41.5.8 Call Receive Tone (Digital Call)....599
2.41.5.9 Ring Style (Digital Call)....599
2.41.5.10 Text Message Alert Tone (Digital Call)....599
2.41.6 Capacity Plus (Contacts)....600
2.41.6.1 Call Type (Capacity Plus)....600
2.41.6.2 Contact Name (Capacity Plus)....600
2.41.6.3 Call ID (Capacity Plus)....600
2.41.6.4 Route Type (Capacity Plus)....600
2.41.6.5 Connection Type (Capacity Plus)....601
2.41.6.6 Call Receive Tone (Capacity Plus)....601
2.41.6.7 Ring Style (Capacity Plus)....601
2.41.6.8 Text Message Alert Tone (Capacity Plus)....601
2.41.7 Phone (Contacts)....602
2.41.7.1 Name (Phone Call)....602
2.41.7.2 Number....602
2.42 Digital RX Group List Set....602
2.42.1 General (Digital RX Group List)....602
2.42.1.1 Digital Name....602
2.42.1.2 Available and Members....603
2.42.1.3 Adding Digital Groups....603
2.42.1.4 Removing Digital Groups....603
2.42.1.5 Talkback....603
2.42.1.6 Set/Clear Priority 1....603
2.42.1.7 Set/Clear Priority 2....604
2.42.1.8 Set/Clear Affiliation....604

2.43 Capacity Plus RX Group List Set....604
2.43.1 General (Capacity Plus RX Group List).... 604
2.43.1.1 Capacity Plus Name....605
2.43.1.2 Available and Members....605
2.43.1.3 Add....605
2.43.1.4 Remove....605
2.44 Flexible Capacity Plus RX Group List Set.... 605
2.44.1 General (Flexible Capacity Plus RX Group List)....605
2.44.1.1 Flexible Capacity Plus Name.... 606
2.44.1.2 Available and Members....606
2.44.1.3 Add....606
2.44.1.4 Remove....606
2.45 Personality Set....607
2.45.1 General (Conventional Personality).... 607
2.45.1.1 Channel Type (Conventional Personality)....607
2.45.1.2 Channel Name.... 608
2.45.1.3 Voice Announcement File (Conventional Channel).... 608
2.45.1.4 Channel Bandwidth (KHz)....608
2.45.1.5 Scan/Roam List....608
2.45.1.6 Auto Scan (Conventional Channel)....609
2.45.1.7 RF AGC (Conventional Channel)....609
2.45.1.8 Color Code (Conventional Channel).... 609
2.45.1.9 Inbound Color Code....610
2.45.1.10 Outbound Color Code.... 610
2.45.1.11 Extended Range Direct Mode....610
2.45.1.12 Compatibility Mode....611
2.45.1.13 Extended Range Direct....611
2.45.1.14 Phone System....611
2.45.1.15 Squelch.... 611
2.45.1.16 Squelch Level....612
2.45.1.17 Wireline Mute Pin....612
2.45.1.18 Voice Emphasis.... 612
2.45.1.19 ARTS....613
2.45.1.20 Mandown Profile.... 613
2.45.1.21 Option Board....613
2.45.1.22 Lone Worker....614
2.45.1.23 Allow Talkaround....614
2.45.1.24 IF Filter Type....615
2.45.1.25 Compressed UDP Data Header....615

2.45.1.26 Over-The-Air Battery Management....615
2.45.1.27 Voice List....615
2.45.1.28 Site List....615
2.45.1.29 Data List....616
2.45.1.30 Audio Enhancement....616
2.45.1.31 MPT1327....617
2.45.1.32 Channel Inhibit....617
2.45.1.33 Telemetry VIO 1 GPO Level....618
2.45.1.34 Telemetry VIO 2 GPO Level....618
2.45.1.35 Telemetry VIO 3 GPO Level....618
2.45.1.36 Telemetry VIO 4 GPO Level....618
2.45.1.37 Telemetry VIO 5 GPO Level....618
2.45.1.38 Scrambling Enable....618
2.45.1.39 Fist Microphone Disable....618
2.45.1.40 RX Only (Conventional Channel)....618
2.45.1.41 Privacy....619
2.45.1.42 Network Application Interface Phone....619
2.45.1.43 Window Size....620
2.45.1.44 Messaging Delay (ms)....620
2.45.1.45 Compressed UDP Data Header....620
2.45.1.46 Dual Capacity Direct Mode (DCDM)....621
2.45.1.47 Timing Leader Preference....621
2.45.1.48 Repeater/Time Slot....621
2.45.1.49 Phone System....622
2.45.1.50 ARS....622
2.45.1.51 Enhanced GNSS....623
2.45.1.52 Window Size....623
2.45.1.53 Privacy Alias....623
2.45.1.54 Symmetric....624
2.45.1.55 Option Board Trunking....624
2.45.1.56 Phone Gateway....624
2.45.1.57 IP Site Connect....625
2.45.1.58 System Controller Mode....625
2.45.1.59 Messaging Delay (ms)....625
2.45.1.60 Text Message Type....625
2.45.1.61 Beacon Interval (ms)....626
2.45.1.62 Rest Channel Acquisition TOT (min)....626
2.45.1.63 Repeater RSSI Threshold (dBm)....626
2.45.1.64 Auto Roam....627

2.45.1.65 Preference Level....627
2.45.1.66 Slot 1 Channel ID....628
2.45.1.67 Slot 2 Channel ID....628
2.45.1.68 IP Site Connect Repeater....628
2.45.1.69 Per-Site RSSI Threshold (dBm)....629
2.45.1.70 Signaling Pre-emphasis/De-emphasis....629
2.45.1.71 Wide Area....629
2.45.1.72 RAS Alias....629
2.45.1.73 BSI Mode....630
2.45.1.74 Fixed Privacy Key Decryption....630
2.45.1.75 Ignore Rx Clear Voice/Packet Data....630
2.45.2 Enhanced GNSS (Conventional Personality)....630
2.45.2.1 Enable (Slot 1)....630
2.45.2.2 Enable (Slot 2)....630
2.45.2.3 Enhanced GNSS Window Size (Slot 1)....630
2.45.2.4 Enhanced GNSS Window Size (Slot 2)....631
2.45.2.5 Periodic Window Reservation (Slot 1)....632
2.45.2.6 Periodic Window Reservation (Slot 2)....632
2.45.2.7 Shared Channel Frequency (Slot 1)....633
2.45.2.8 Shared Channel Frequency (Slot 2)....633
2.45.3 RX/TX (Conventional Personality)....633
2.45.3.1 RX Frequency (MHz) (Conventional Channel)....634
2.45.3.2 RX Squelch Type....634
2.45.3.3 RX DPL Code (Octal)....634
2.45.3.4 RX DPL Invert....635
2.45.3.5 RX TPL Frequency (Hz)....635
2.45.3.6 RX TPL Code....635
2.45.3.7 RX Signaling System....636
2.45.3.8 RX Ref Frequency....636
2.45.3.9 Signaling Squelch....636
2.45.3.10 Unmute Rule....637
2.45.3.11 Emergency Alarm Indication....637
2.45.3.12 Emergency Alarm Ack....637
2.45.3.13 Emergency Call Indication....637
2.45.3.14 Emergency Call Decode Tone....638
2.45.3.15 PL for Data....638
2.45.3.16 Group List....638
2.45.3.17 Squelch Mode....638
2.45.3.18 PL Override....639

2.45.3.19 Auto Reset Mode..... 639
2.45.3.20 Offset (MHz).....639
2.45.3.21 Copy.....640
2.45.3.22 TX Frequency (MHz) (Conventional Channel)..... 641
2.45.3.23 TX Squelch Type.....641
2.45.3.24 TX DPL Code (Octal)..... 641
2.45.3.25 TX DPL Invert.....642
2.45.3.26 TX TPL Frequency (Hz)..... 642
2.45.3.27 TX TPL Code..... 642
2.45.3.28 TX Signaling System.....643
2.45.3.29 TX Ref Frequency (MHz)..... 643
2.45.3.30 DPL Turn-Off Code..... 643
2.45.3.31 VOX (Conventional Channel).....644
2.45.3.32 TPL Reverse Burst.....644
2.45.3.33 Power Level..... 645
2.45.3.34 TOT (sec).....645
2.45.3.35 TOT Rekey Delay (sec).....646
2.45.3.36 Admit Criteria..... 646
2.45.3.37 Admit Criteria Not Applied in Auto Reset Mode..... 647
2.45.3.38 Repeater Access and Radio ID Telegram.....648
2.45.3.39 ARTS Interval (sec).....648
2.45.3.40 Location Data Delivery Mode.....648
2.45.3.41 Contact Name (Conventional Channel)..... 649
2.45.3.42 Emergency System.....649
2.45.3.43 Allow Interruption..... 649
2.45.3.44 TX Interruptible Frequencies.....649
2.45.3.45 In Call Criteria..... 650
2.45.3.46 RSSI Threshold (dBm).....650
2.45.3.47 Dual Slot Data Operation..... 651
2.45.3.48 Data Call Confirmed.....651
2.45.3.49 Enhanced Channel Access.....651
2.45.3.50 Enhanced Channel Access.....652
2.45.3.51 CSBK Data.....652
2.45.3.52 TOT Type.....652
2.45.3.53 Cumulative TOT Reset Duration (sec).....653
2.45.3.54 PTT Keyup Mode..... 653
2.45.3.55 PTT Keyup Encode.....653
2.45.3.56 PTT Dekey Encode.....654
2.45.3.57 Radio ID Telegram.....654

2.45.3.58 Encoder Hold Time (ms)..... 654
2.45.3.59 Admit Criteria Not Applied in Auto Reset Mode..... 655
2.45.3.60 GNSS/Data Revert Zone.....655
2.45.3.61 GNSS/Data Revert Channel..... 655
2.45.3.62 Private Call Confirmed..... 656
2.45.3.63 Repeater Access ID..... 656
2.45.4 5 Tone Encode (Conventional Personality)..... 656
2.45.4.1 Call 1.....656
2.45.4.2 Call 2.....656
2.45.4.3 Call 3.....656
2.45.4.4 Call 4.....657
2.45.4.5 Call 5.....657
2.45.4.6 Call 6.....657
2.45.4.7 Disconnect Telegram..... 657
2.45.4.8 Sidetone (5 Tone Channel).....657
2.45.5 5 Tone Decode (Conventional Personality)..... 658
2.45.5.1 Available and Decode Telegrams..... 658
2.45.5.2 Adding Decode Telegrams.....658
2.45.5.3 Removing Decode Telegrams.....658
2.45.5.4 Authorization..... 658
2.45.5.5 Auto Reset Deauthorization..... 659
2.45.6 Selecting the Right Antenna for the Channel Frequency.....659
2.46 Zone Set..... 661
2.46.1 Zone Name..... 661
2.46.2 Voice Announcement File Selection..... 661
2.47 Scan Set..... 661
2.47.1 General (Scan).....661
2.47.1.1 Digital Hang Time (ms)..... 661
2.47.1.2 Analog Hang Time (ms)..... 662
2.47.1.3 Priority Alert.....663
2.47.1.4 Off-Hook Suspends.....663
2.47.1.5 Vote Scan Hang Time (sec)..... 663
2.47.1.6 Fast Vote RSSI Threshold (dB).....663
2.47.1.7 Start Vote RSSI Threshold (dB)..... 664
2.47.1.8 Scan Sweep Time (sec)..... 664
2.47.1.9 Talkgroup Scan Hang Time (ms)..... 664
2.48 Scan Items Set..... 664
2.48.1 General (Scan Items).....665
2.48.1.1 Scan List Name.....665

2.48.1.2 Available and Members....665
2.48.1.3 Adding Scan Members....665
2.48.1.4 Removing Scan Members....665
2.48.1.5 Set/Clear Priority 1....666
2.48.1.6 Set/Clear Priority 2....666
2.48.1.7 Rx Unconf Grp Data All Scan Members....667
2.48.1.8 Talkback....667
2.48.1.9 PL Type....667
2.48.1.10 Channel Marker....667
2.48.1.11 TX Designated Channel Zone....668
2.48.1.12 TX Designated Channel....668
2.48.1.13 Signaling Hold Time (ms)....669
2.48.1.14 Priority Sample Time (ms)....669
2.48.1.15 Auto Acknowledgement....670
2.48.1.16 Voice Scan Hang Time....670
2.48.1.17 Pre-time Delay (ms)....670
2.48.1.18 Early Unmute....670
2.48.1.19 Display Voted Channel on RX....671
2.48.1.20 Display on TX Channel....671
2.49 Roam Set....671
2.49.1 Active Site Search....671
2.50 Roam List Set....671
2.50.1 General (Roam List)....671
2.50.1.1 Roam List Name....671
2.50.1.2 Available and Members (Roam List)....672
2.50.1.3 Adding Roam Members....672
2.50.1.4 Removing Roam Members....672
2.50.1.5 Use Per-Site RSSI Threshold....672
2.50.1.6 RSSI Threshold (dBm) (Roam List)....673
2.51 Capacity Plus Voice List Set....673
2.51.1 General (Capacity Plus Voice List)....673
2.51.1.1 Voice Name....673
2.51.1.2 Available and Members....673
2.51.1.3 Adding Capacity Plus Voice Channel Members....674
2.51.1.4 Removing Capacity Plus Voice Channel Members....674
2.52 Capacity Plus Data List Set....674
2.52.1 General (Capacity Plus Data List)....674
2.52.1.1 Data Name....674
2.52.1.2 Available and Members....675

2.52.1.3 Adding Capacity Plus Data Channel Members....675
2.52.1.4 Removing Capacity Plus Voice Channel Members....675
2.52.1.5 Enhanced GNSS Window Size....675
2.52.1.6 Enhanced Channel Access....676
2.53 Capacity Plus Site List Set....676
2.53.1 General (Capacity Plus Site List)....676
2.53.1.1 Site Name....676
2.53.1.2 GNSS/Data on Revert Channel....676
2.53.1.3 Use Per-Site RSSI Threshold....676
2.53.1.4 RSSI Threshold (dBm)....677
2.53.1.5 Site ID (Subscriber)....677
2.53.1.6 Site Alias....677
2.53.1.7 Voice Announcement File....677
2.53.1.8 Voice List....677
2.53.1.9 Data List....678
2.53.1.10 RX Group List....678
2.53.1.11 RSSI Threshold (dBm)....678

List of Figures

Figure 1: CPS 2.0 User Interface 56
Figure 2: CPS 2.0 Menu Bar 57
Figure 3: CPS 2.0 Action Bar 57
Figure 4: CPS 2.0 Set Categories 57
Figure 5: CPS 2.0 Navigation Path 58
Figure 6: CPS 2.0 Programming Pane 58
Figure 7: CPS 2.0 Information Windows 58
Figure 8: CPS 2.0 Set Categories 78
Figure 9: Example of Selected Row 79

List of Tables

Table 1: CPS 2.0 Main Menu Functions 58
Table 2: Actions Bar 59
Table 3: CPS 2.0 File Menu Selections 60
Table 4: CPS 2.0 Device Menu Selections 62
Table 5: CPS 2.0 Licenses Menu Selections 69
Table 6: File Menu Selections 74
Table 7: Settings Window Selections 74
Table 8: Operational Buttons in CPS 2.0 79
Table 9: MOTOTRBO Archive File Types 84
Table 10: Range 101
Table 11: Range 103
Table 12: Range 104
Table 13: Range 104
Table 14: Recommended Voice Pretime Duration 105
Table 15: Range 105
Table 16: MOTOTRBO 2.0 Range: 106
Table 17: Range 108
Table 18: Range 109
Table 19: Applicable Radio and Repeater Models 117
Table 20: Range 119
Table 21: Range 136
Table 22: Range 136
Table 23: Range 136
Table 24: Range 137
Table 25: Range 137
Table 26: Range 137
Table 27: Range 138
Table 28: Range 141
Table 29: Range 142
Table 30: Range 142
Table 31: Range 143
Table 32: Range 144
Table 33: Range 145
Table 34: Range 146
Table 35: Range 151
Table 36: Range 151

Table 37: Range 151
Table 38: Range 156
Table 39: Range 163
Table 40: Range 164
Table 41: GPIO Function Selections 176
Table 42: Range 209
Table 43: Range 209
Table 44: Range 405
Table 45: Range 406
Table 46: Range 407
Table 47: Range 417
Table 48: Range 419
Table 49: Range 420
Table 50: Range 421
Table 51: Range 421
Table 52: Range 422
Table 53: Range 425
Table 54: Range 426
Table 55: Range 426
Table 56: Range 429
Table 57: Selections 440
Table 58: Selections 447
Table 59: Range 448
Table 60: Range: 513
Table 61: Range: 513
Table 62: Range: 514
Table 63: Range: 514
Table 64: Range: 514
Table 65: Range: 515
Table 66: Range: 515
Table 67: Range: 515
Table 68: Range: 516
Table 69: Options 517
Table 70: Range: 518
Table 71: Range: 519
Table 72: Range: 520
Table 73: Range: 520
Table 74: Primary ID (Hex) Range 537
Table 75: Range: 538

Table 76: Range: 538
Table 77: Range: 539
Table 78: Range 542
Table 79: Range 542
Table 80: Range 543
Table 81: Range 545
Table 82: Range 545
Table 83: Range 546
Table 84: Range 546
Table 85: Range 547
Table 86: Range 555
Table 87: Range 555
Table 88: Range 556
Table 89: Range 557
Table 90: Range 557
Table 91: Range 560
Table 92: Range 560
Table 93: Range 561
Table 94: RX Cycle Time Range 561
Table 95: Range 593
Table 96: Range 598
Table 97: Range 600
Table 98: Range 610
Table 99: Range 620
Table 100: Range 623
Table 101: Range 625
Table 102: Range 629
Table 103: Range 646
Table 104: Range 646
Table 105: Range 650
Table 106: Range 662
Table 107: Range 662
Table 108: Range 664
Table 109: Options for MOTOTRBO Conventional Radios 668
Table 110: Range 669
Table 111: Range 670
Table 112: Range 673
Table 113: Range 677
Table 114: RSSI Threshold Range 678

List of Procedures

Opening a CPS 2.0 File 61
Saving a CPS 2.0 File 61
Closing a CPS 2.0 File 62
Generating a CPS 2.0 Report 62
Reading Data from a Radio 63
Writing Data to a Radio 64
Cloning a Radio 65
Express Cloning a Radio 66
Updating a Radio 67
Recovering a Radio 68
Registering Device License 70
Activating Device Licenses 71
Viewing Registered Device Licenses 72
Recovering Device Licenses 72
Registering Application Licenses 73
Viewing Application Licenses 73
Recovering Application Licenses 73
Importing Voice Announcement Files 75
Adding Pre-Shared Keys 76
Editing Pre-Shared Keys 76
Deleting Pre-Shared Keys 77
Using Clone to Deploy a New Fleet of Radios 86
Using Clone Express to Modify Shared Parameters in a Deployed Fleet 86
Retrieving Firmware and Codeplug Update Package 87
Loading a Language Pack 89
Deleting a Language Pack 90
Loading Voice Announcement Files 90
Deleting a Voice Announcement 91
Removing Imported Voice Announcements 91
Unable to Read or Write Codeplug to the Radio 92
Unable to Recover a Radio 92
Installing MOTOTRBO Driver Windows 7 and Later 92
Installing FlashZap Driver on Windows Windows 7 and Later 93
Communication Issues Due to Ethernet Properties 93
Selecting the Right Antenna for the Channel Frequency 659

Helpful Background Information

Motorola Solutions offers various courses designed to assist in learning about the system. For information, go to https://learning.motorolasolutions.com to view the current course offerings and technology paths.

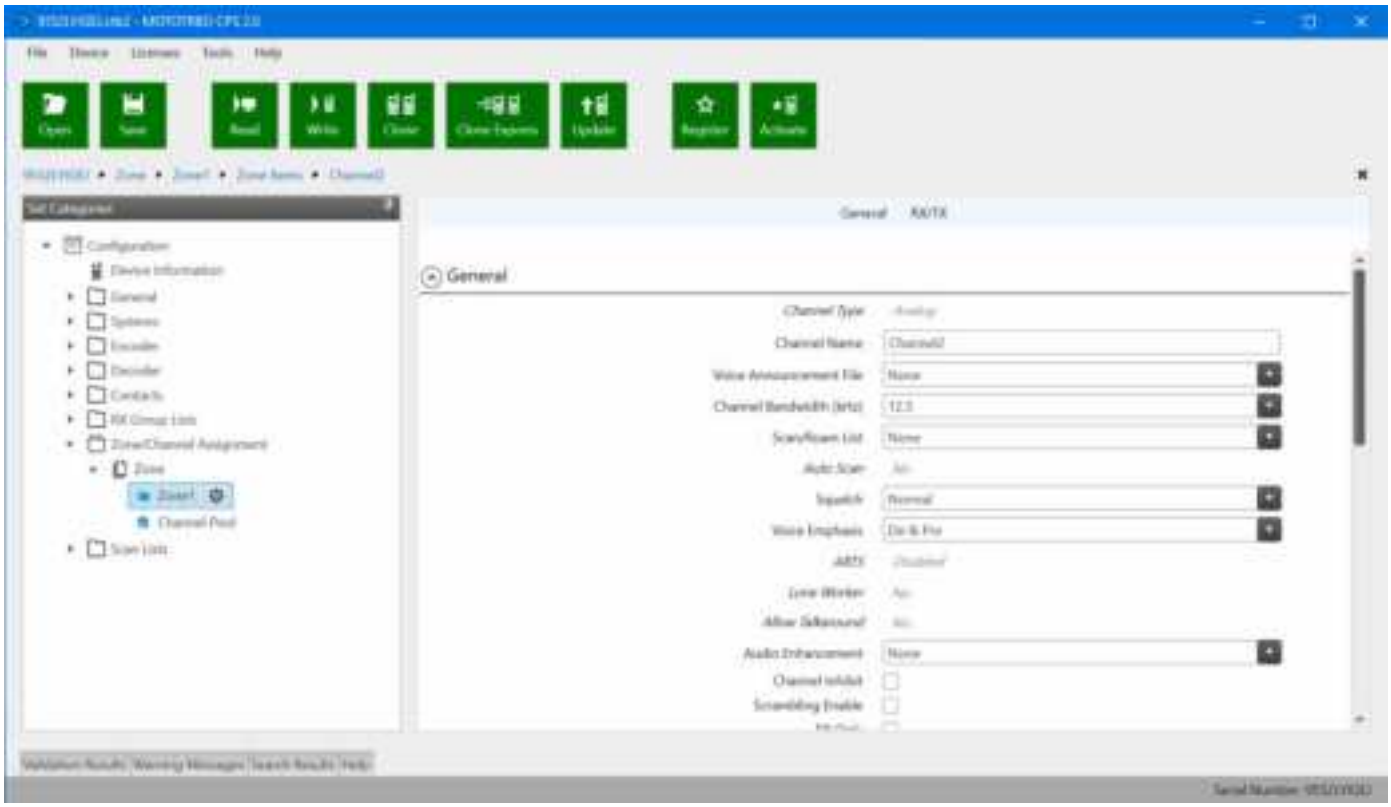
Related Information	Purpose
Radio Management Deployment Guide	Distributed on the MOTOTRBO CPS 2.0 and tools CD.
MOTOTRBO CPS 2.0, Tuner, AirTracer, and RDAC Applications Installation Guide	Provides installation, operations, and troubleshooting information for the CPS 2.0 and its tools. Distributed on the CPS 2.0 and tools CD.
MOTOTRBO CPS 2.0 and AirTracer Applications Installation Guide	Provides installation, operations, and troubleshooting information for the CPS 2.0 and its tools. Only for selected region. Distributed on the CPS 2.0 and tools CD.
MOTOTRBO Tuner Application Installation Guide	Provides installation, operations, and troubleshooting information for the Tuner application. Only for selected region. Distributed on the CPS 2.0 and tools CD.
MOTOTRBO RDAC Application Installation Guide	Provides installation, operations, and troubleshooting information for the RDAC application. Only for selected region. Distributed on the CPS 2.0 and tools CD.
MOTOTRBBO Radio Management User Guide	Provides introduction, common tasks, and description on each feature in Radio Management Configuration Mode. Also available in online help version.
MOTOTRBBO CPS Radio Management User Guide	Provides introduction, common tasks, and description on each feature in CPS 2.0 and Radio Management Template Mode. Also available in online help version.
MOTOTRBBO Tuner Online Help	Provides introduction, common tasks, and description on each feature in Tuner.
MOTOTRBBO RDAC User Guide	Provides introduction, common tasks, and description on each feature in RDAC. Also available in online help version.

Chapter 1

Introduction to Customer Programming Software (CPS) 2.0

The MOTOTRBO Customer Programming Software (CPS) 2.0 contains some unique features that users may not be familiar with. For example, MOTOTRBO devices communicate through a universal serial bus internet protocol (USB IP)-based connection to the PC as compared to previous products that relied on serial ports and radio interface boxes (RIB).
The following figure shows the graphical user interface of CPS 2.0.

Figure 1: CPS 2.0 User Interface



1.1 CPS 2.0 Overview

The Customer Programming Software (CPS) 2.0 interface is broken down into the following components:

- Menu and Action bars
- Set Categories

- Navigation Path
- Programming Pane
- Information Windows

Menu and Actions Bars

The Menu bar provides access to all CPS operations.

Figure 2: CPS 2.0 Menu Bar

The Actions bar provides quick buttons to the most used CPS 2.0 operations.

Figure 3: CPS 2.0 Action Bar

See section CPS 2.0 Menu and Actions Bars on page 58 for more information on the Menu and Actions bars.

Set Categories

Set Categories is used for navigating the user configurable radio parameters within a CPS 2.0 archive file. Radio parameters are organized into folders called Sets. See Sets and Configurations for more information on Sets.

Figure 4: CPS 2.0 Set Categories

Navigation Path

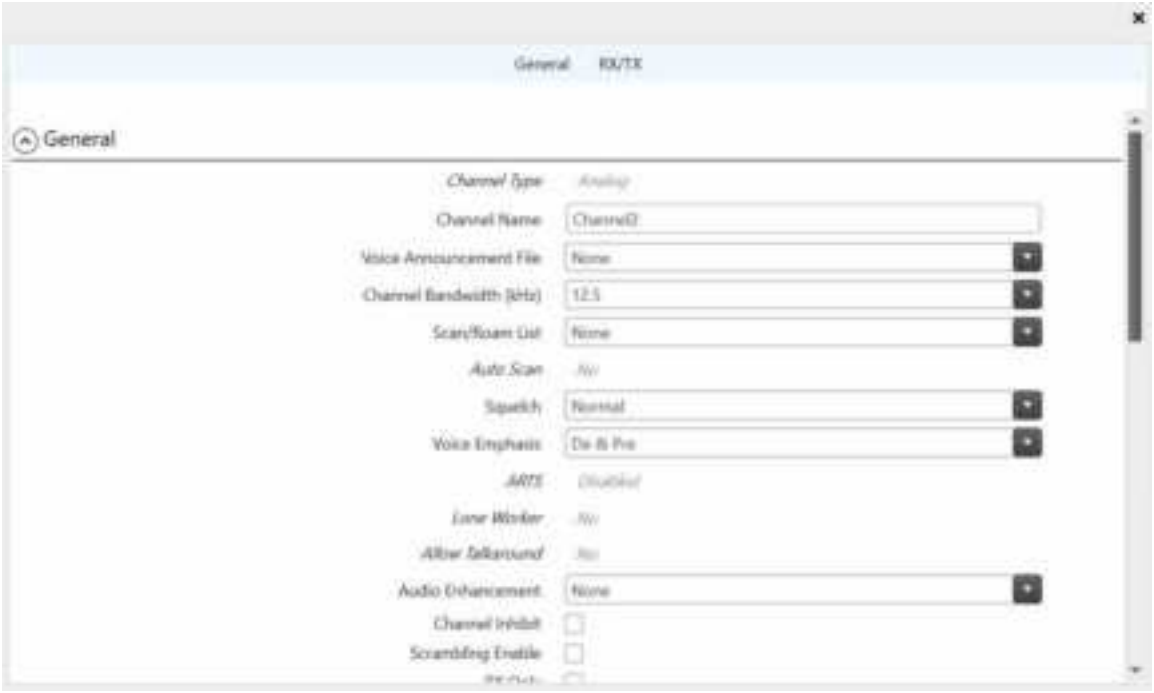
As the user clicks through Sets and navigates to a radio parameter, the navigation path (located above Set Categories) is updated to show the user where in the Configuration the field is located. The user can quickly navigate back through the navigation path by clicking an individual link in the path.

Figure 5: CPS 2.0 Navigation Path

Programming Pane

After navigating to a particular Set, the Programming Pane shows the available radio parameters. See Programming Pane in CPS 2.0 on page 78 for more information on the Programming Pane.

Figure 6: CPS 2.0 Programming Pane



Information Windows

As the user edits parameters, within a configuration, the information windows provide validation, warning, search, and help details. See Information Windows in CPS 2.0 on page 80 for more details on the information windows.

Figure 7: CPS 2.0 Information Windows

1.1.1 CPS 2.0 Menu and Actions Bars

The user can access the main menu functions and action bar across the top of the Customer Programming Software (CPS) 2.0 software.

Table 1: CPS 2.0 Main Menu Functions

Main Menu	Functionality
File	Allows the user to perform radio codeplug configurations. See CPS 2.0 File Selections on page 60.

Main Menu	Functionality
Device	Allows the user to perform read, write, clone, clone express, update, and recover radio operations. See CPS 2.0 Device Selections on page 62. The user can perform the same actions through the Action Bar.
Licenses	Allows the user to to register and activate device licenses. See CPS 2.0 Licenses Selections on page 69.
Tools	Allows the user to access CPS 2.0 settings and to import voice announcements. See CPS 2.0 Tools Selections on page 73.
Help	Opens the full CPS 2.0 Online Help window. See Help Window on page 82.

Table 2: Actions Bar

Icon	Functionality
	Allows the user to retrieve and display an archived file. See Opening a CPS 2.0 File on page 61.
	Allows the user to store an archive file at a desired location. See Saving a CPS 2.0 File on page 61.
	Allows the user to read the data stored in a radio. See Reading Data from a Radio on page 63.
	Allows the user to write data to a radio. See Writing Data to a Radio on page 64.
	Allows the user to clone the configuration from an archive and modify radio identity parameters to a radio of the same model. See Cloning a Radio on page 65.

Icon	Functionality
	Allows the user to clone a radio while preserving the radio identity parameters of the target radio. See Express Cloning a Radio on page 66.
	Allows the user to write a new firmware to the radio. The tuning block of the radio is preserved before radio update is initiated. See Updating a Radio on page 67.
	Allows the user to associate a feature with a device serial number. See Registering Device License on page 70.
	Allows the user to activate a registered feature to a device. See Activating Device Licenses on page 71.

1.1.1.1
CPS 2.0 File Selections

The selections under the **File** menu allow the user to perform radio codeplug configurations.

The following options are available under the **File** menu.

Table 3: CPS 2.0 File Menu Selections

Selection	Keyboard Shortcut	Description
Open...	CTRL+O	Allows the user to retrieve and display an archive file. See Opening a CPS 2.0 File on page 61.
Save	CTRL+S	Allows the user to store an archive file in a desired location. See Saving a CPS 2.0 File on page 61.
Save As...	–	Allows the user to store an archive file with another file name or at another location. See Saving a CPS 2.0 File on page 61.
Reports...	–	Allows the user to generate different types of Customer Programming Software (CPS) 2.0 reports. See Generating a CPS 2.0 Report on page 62.
Close	–	Closes the open archive but will keep the CPS 2.0 application open. See Closing a CPS 2.0 File on page 62.

Selection	Keyboard Shortcut	Description
Recent Files	–	Allows the user to open a recently used archive file.
Exit	–	Allows the user to terminate the CPS 2.0 application.

1.1.1.1.1

Opening a CPS 2.0 File

Perform the following steps to retrieve and display an archived file.

Procedure:

1 Open file, by performing one of the following actions:

- Select **File→Open**.
- Press CTRL+O.

- Click button in Actions Bar.

2 A dialog box appears for the user to select the desired file.

3 Click **Open**.

CPS 2.0 archive opens in the Programming Pane.

NOTE: CPS 2.0 can only have one CPS 2.0 archive open at a time. To view multiple archives at the same time open a second CPS 2.0 application.

NOTE: If the open operation is performed while an archive is already open in the CPS 2.0 programming page, the open archive is closed and the newly selected archive is displayed in the programming pane.

1.1.1.1.2

Saving a CPS 2.0 File

Perform the following steps to store a file at a desired location.

Procedure:

1 Save file, by performing one of the following actions:

- Select **File→Save**.
- To save a document with another file name or at another location, select **File→Save As**.
- Press CTRL+S.

- Click on the button in the Actions Bar.

2 Browse to the file location.

3 Specify the file name.

4 Click **Save**.

If the currently selected document is a new document, the **Save As** dialog box appears instead.

1.1.1.1.3
Closing a CPS 2.0 File

Steps to close an open archive file.

Procedure:

To close an open archive file, perform one of the following steps.

- Select **File→Close**, or
- Click on the **Close archive** button (the small **x**) in the upper right-hand corner of the programming pane.

1.1.1.1.4
Generating a CPS 2.0 Report

The Customer Programming Software (CPS) 2.0 can generate the channel summary and customer handout reports.

Procedure:

1 Open a CPS 2.0 archive file or read a radio

2 Select **File→Report...**.

3 The **Reports** dialog box opens.

4 Under the **Report List**, click the desired report.

5 In the **Reports** dialog box the user can perform one of the following actions:

If…	Then…
If user wants to print a report	click **Print**.
If user wants to save a report	click **Save**.
If user wants to close the report	click **Close**.

NOTE: The report can include information about the customer or radio dealer. For more information, see Dealer Info on page 75.

1.1.1.2
CPS 2.0 Device Selections

The selections under the **Device** menu allow the user to perform read, write, clone, clone express, update, and recover radio operations.

Table 4: CPS 2.0 Device Menu Selections

Selection	Key-board Shortcut	Description
Read	CTRL+R	Allows the user to read the data stored in a radio. See Reading Data from a Radio on page 63.

Selection	Keyboard Shortcut	Description
Write	CTRL+W	Allows the user to write data to a radio. See Writing Data to a Radio on page 64.
Clone	CTRL+F3	Allows the user to clone the configuration from an archive and modify radio identity parameters to a radio of the same model. See Cloning a Radio on page 65.
Clone Express	CTRL+F4	Allows the user to clone a radio while preserving the radio identity parameters of the target radio. See Express Cloning a Radio on page 66.
Update	CTRL+U	Allows the user to write a new firmware to the radio. The tuning block of the radio is preserved before radio update is initiated. See Updating a Radio on page 67.
Recover	–	Allows the user to revive a failed radio due to data corruption by rewriting a good firmware into the radio. The CPS 2.0 preserves the tuning block of the radio before recovery is initiated. See Recovering a Radio on page 68.

1.1.1.2.1

Reading Data from a Radio

Perform the following steps to read the data stored in a radio.

Prerequisites:
Ensure that the target radio is powered off before attaching a programming cable.

When the radio is connected and the **Found New Hardware Wizard** window appears, the user must install the MOTOTRBO driver. See Installing MOTOTRBO Driver Windows 7 and Later on page 92.

Procedure:

1. Using a programming cable, connect the destination radio to the USB port of the PC.
2. Power on the target radio.
3. Wait a few seconds after connecting the radio to allow time for the PC to detect the radio.
4. Read the device, by performing one of the following actions:
   - From the menu, select **Device→Read**.
   - Press CTRL+R.

   - Click on the Read button in the Actions Bar. .

   If multiple radios are connected a dialog listing the connected devices will open. Select the target radio and click Ok. A progress bar appears as the radio is read. Upon a successful read, the progress bar disappears and the radio codeplug appears on the Customer Programming Software (CPS) 2.0 screen.

NOTE: If the radio has at least one language pack loaded, the language pack information is displayed in the Language Packs set under the General folder..

5 If the reading fails during the first try, repeat step step 4.

6 If unable to read the radio, see Unable to Read or Write Codeplug to the Radio on page 92.

NOTE: The following notes are for the different types of radios:

- For MOTOTRBO Conventional radios, when reading from multiple radios connected to the PC, one of the first 3 octets of the Radio IP for each radio must be unique.
- For Mobile radios, the front connector takes precedence over the rear connector.. If both the front and rear cables are connected after removing the front cable, a hard reset is required for the rear connector to become active.

NOTE: The following notes are about the "available for purchase" features:

- Different controls are displayed according to the available for purchase features that are enabled or disabled in the device.

NOTE: If there is an open archive in the CPS 2.0 programming pane when the read operation is performed, the open archive will be closed and the newly read radio archive will be displayed in the programming pane.

1.1.1.2.2

Writing Data to a Radio

Perform the following steps to write data to a radio. The radio serial number in the open archive must be the same as the serial number in the target device. If the serial number in the archive does not match the target radio and the target radio is the same model as the model in the archive perform a Clone or Clone Express operation.

Prerequisites:
It is recommended that a backup of the original archive file is saved (to revert to the original state if there is erroneous programming).

Ensure that the target radio is powered off.

When the radio is connected and the **Found New Hardware Wizard** window appears, the user must install the MOTOTRBO driver. See Installing MOTOTRBO Driver Windows 7 and Later on page 92.

Procedure:

1

In the Actions bar, click the button to open the source codeplug archive.

NOTE: The user can also read the data from a radio. See Reading Data from a Radio on page 63.

2 Connect the target radio to the USB port of the PC with a programming cable.

3 Power on the target radio by pressingthe **On/Off** button or turning on the volume (depending on radio model).

4 Wait for a few seconds after connecting the radio to allow time for the PC to detect the radio.

5 Write data to the device by performing one of the following actions:

- From the menu, select **Device→Write**.
- Pressing CTRL+W.

- Click the button in the Actions Bar.

Do not disconnect the programming cable until a confirmation dialog is shown.

A progress bar appears as data is written to the radio. If the write operation is successful, the progress bar disappears and a window appears to indicate that the write operation completed. The radio is reset. If the target radio was locked or disabled before performing the write operation, the radio is now enabled. For repeaters, The retries to zero for locking are also reset if the retries have reached its maximum limit. CPS 2.0 programs the first channel in the zone to be the default channel.

NOTE: The following notes are for the different types of radios:

- For MOTOTRBO Conventional radios, when reading from multiple radios connected to the PC, one of the first three octets of the Radio IP for each radio must be unique.
- For Mobile radios, the front connector takes precedence over the rear connector.. If both the front and rear cables are connected after removing the front cable, a hard reset is required for the rear connector to become active.

NOTE: The following notes are about the "available for purchase" features:

- When the source archive contains enabled "available for purchase" features that are not enabled in the radio, the user is unable to write to the target radio. Registered and activate the missing features and then retry write operation.
- Different controls are displayed according to the available for purchase features that are enabled or disabled in the device.

NOTE: The following notes are about codeplug version:

- If the codeplug version of the target device is less than the archive codeplug version, the Customer Programming Software (CPS) 2.0 downgrades the archive codeplug version and writes the downraged codeplug to radio. Any missing values are set to the default.
- If the codeplug version of the target device is greater than the archive codeplug version, CPS 2.0 upgrades the archive codeplug version and writes the upgraded codeplug to the radio. Any missing values are set to the default.

1.1.1.2.3
Cloning a Radio

Perform the following steps to copy the configuration of a radio to another radio of the same model. During the clone operation, a dialog is shown for the user to provide the Radio Identity Parameters of the target radio.

Prerequisites: Ensure that the target radio is turned off before attaching a programming cable.

When and where to use:

Procedure:

1

Open the source codeplug archive by clicking the button in the Actions bar.

NOTE: The user can also read the data from a radio. See Reading Data from a Radio on page 63.

2 Using a programming cable, connect the target radio to the USB port of the PC.

3 Power up the destination radio by pressing the **On/Off** button or turning the volume knob.

4 Wait a few seconds after connecting the radio to allow time for the PC to detect the radio.

5 Clone data to the device, by performing one of the following actions:

- On the menu, select **Device→Clone**.
- Pressing CTRL+F3.

- Click the button in the Actions Bar.

The **Connected Devices** dialog box appears for the user to select the target radio. The **Connected Devices** dialog box only lists connected radios that are of a different serial number than what is in the source archive file and are of a similar radio model.

6 Select the target radio to be cloned.

7 Click the **Clone** button at the bottom of the dialog.

The **Clone Radio** dialog box appears for the user to modify the radio identity parameters from the source archive file.

8 Click **OK**.

The radio identity parameters specified and the parameters in the source codeplug are combined and into the radio. A progress bar appears as data is cloned into the radio. If the clone operation is successful, the progress bar disappears and a window appears to indicate that the clone operation completed. The radio is cloned. If the radio is locked or disabled, the radio is now enabled. For repeaters, the retries to zero for locking are also reset if the retries have reached its maximum limit. Customer Programming Software (CPS) 2.0 programs the first channel in the zone to be the default channel.

1.1.1.2.4

Express Cloning a Radio

Express cloning allows you to copy the configuration of a radio to another radio of the same model. This operation takes the source codeplug parameters and combines them with the Radio Identity Parameters already programmed in the target device. The combined codeplug is then cloned into the target radio.

Prerequisites: Ensure that the target radio is turned off before attaching a programming cable.

Procedure:

1

Open the source codeplug archive by clicking the button in the Actions Bar.

NOTE: The user can also read the data from a radio. See Reading Data from a Radio on page 63.

2 Using a programming cable, connect the target radio to the USB port of the PC.

3 Power up the target radio by pressing the **On/Off** button or turning the volume knob.

4 Wait a few seconds after connecting the radio to allow time for the PC to detect the radio.

5 Clone data to the target device, by performing one of the following actions:

- On the menu, select **Device→Express Clone**.
- Pressing CTRL+F4.

- Clicking the button in the Actions Bar.

The **Connected Devices** dialog box appears for the user to select the target device. The **Connected Devices** dialog box lists only the connected devices that are of a different serial number than what is in the source archive file and devices that are of a similar model as the model of the source codeplug.

6 Select the target radio to be cloned.

7 Click the **Clone** button at the bottom of the dialog box.

A progress bar appears providing status as the Radio Identity Parameters are read out of the target device, merged with the source archive file and the merged codeplug is cloned into the target radio. If the clone operation is successful, the progress bar disappears and a window appears to indicate that the clone operation completed. The radio is cloned. If the radio is locked or disabled, the radio is now enabled. For repeaters, the retries to zero for locking are also reset if the retries have reached its maximum limit. Customer Programming Software (CPS) 2.0 programs the first channel in the zone to be the default channel.

1.1.1.2.5

Updating a Radio

Perform the following steps to upgrade the codeplug of a device and write new firmware to the device. The codeplug in the device is read out and upgraded before the new firmware files are written do the device is initiated.

Prerequisites: Ensure that the target radio is turned off before attaching a programming cable.

Procedure:

1 Using a programming cable, connect the target radio to the USB port of the PC.

2 Turn on the target radio by pressing the **On/Off** button or turning the volume.

3 Wait for a few seconds after connecting the radio to allow time for the PC to detect the radio.

4 Update the radio, by performing one of the following actions:

- On the menu, select **Device→Update**.
- Press CTRL+U.

- Clicking the button in the Actions Bar.

The **Update Firmware** dialog box appears, containing the list of the available firmware and codeplug packages. The user can filter the list of available firmware by the model, Tanapa number, and source codeplug of the connected devices. If a firmware does not appear in the list, the firmware is either not installed or the source codeplug of the connected device is missing from the update package.

5 Select the target device, select the target firmware version in the Firmware Version column, and select the target codeplug version in the Codeplug Version column.

6 Click **Update**.

A progress bar appears as codeplug data is upgraded and the firmware is written to the target device. If the radio is configured with any language packs they are also updated to the latest version included with MOTOTRBO CPS 2.0. Upon a successful update, the progress bar disappears and a window appears indicating that the update is successful.

NOTE: If you are not using a properly charged battery, you may get a failure that requires reprogramming of the units codeplug or configuration. Write or clone the radio if a failure occurs.

1.1.1.2.6

Recovering a Radio

Radio recovery allows the user to refresh the radio by writing the firmware files to the device along with the default codeplug. The user can use Recover to revive a failed radio because of data corruption or get the radio back to a default "out of box" state. Unlike Update, Recover allows the user to rewrite the same version of firmware that is already deployed in the target device. During the Recover operation, the Customer Programming Software (CPS) 2.0 preserves the tuning block of the radio before recovery is initiated but all user programmable fields are reset to their default values.

Prerequisites:
Ensure that the target radio is turned off.

When the radio is connected and the **Found New Hardware Wizard** window appears, the user must install the MOTOTRBO driver. See Installing MOTOTRBO Driver Windows 7 and Later on page 92.

If the user is using recovering a radio for the first time, the user may need to install the Motorola FlashZap driver. See Installing FlashZap Driver on Windows Windows 7 and Later on page 93.

Procedure:

1 Using a programming cable, connect the radio to the Universal Serial Bus (USB) port of the PC.

2 Turn on the radio using the **On/Off** button or turning the volume knob.

3 Wait a few seconds to allow time for the PC to detect the radio.

4 On the menu, select **Device→Recover**.

The **Recover Device** dialog box appears, containing the list of the available firmware and codeplug packages. The user can filter the list of available firmware by the model, Tanapa number, and source codeplug of the connected devices. If a firmware package does not appear in the list, the firmware package is either not installed or the source codeplug of the connected device is missing from the update package.

5 Select the target device, select the target firmware version in the Firmware Version column, and select the target codeplug version in the Codeplug column.

6 Click **Recover**.

A progress bar appears as the default codeplug and the firmware are written to the target device. All the language packs included with MOTOTRBO CPS 2.0 are written to the device. If the Recover operation is successful, the progress bar disappears and a window appears to indicate that the Recover operation has completed.

NOTE: If you are not using a properly charged battery, you may get a failure that requires reprogramming of the units codeplug or configuration. Write or clone the radio if a failure occurs.

1.1.1.3
CPS 2.0 Licenses Selections

The selections under the **Licenses** menu allow the user to register, view, recover, and activate device and application licenses.

The user can purchase device or application licenses through the Motorola Online (MOL) website. An entitlement identification (EID) is provided after the user has purchased the device or application license.

IMPORTANT: Do not lose the EID. The EID is used to identify and enable the purchased features.

The following selections under the **Licenses** menu are launched by selecting **Licenses** and then the relevant selection:

Table 5: CPS 2.0 Licenses Menu Selections

Selection	Description
Register Device Licenses...	Registering a device license allows the user to associate the purchased features within an EID to one or more device serial numbers. After registration is complete, the user can activate the purchased features to the devices with the registered serial numbers. See Registering Device License on page 70.
Activate Device Licenses...	Allows the user to activate a registered licensed feature to a device. After activation is complete, the feature is enabled. After activation the purchased feature can be configured and written/cloned into the device. See the following topics: • Activating Device Licenses on page 71 • Activating MOTOTRBO 2.0 Digital Feature
View Registered Devices	Allows the user to list all the serial numbers that have been registered to a specified EID. See Viewing Registered Device Licenses on page 72.

Selection	Description
Recover Device Licenses...	Allows the user to re-download all licenses registered to one or more serial numbers. See Recovering Device Licenses on page 72.
Register Application Licenses...	Allows the user to register and add MOTOTRBO CPS 2.0 application licensed features. See Registering Application Licenses on page 73.
View Application Licenses...	Displays to the user the licensed state of all MOTOTRBO CPS 2.0 application features. See Viewing Application Licenses on page 73.
Recover Application Licenses...	Allows the user to recover all MOTOTRBO CPS 2.0 application features that have been registered, to the PC the recover operation is performed on. See Recovering Application Licenses on page 73.

NOTE: Some radios have features enabled by default. For more information on the features available for purchase, refer to the **Device Information** window after reading the radio.

1.1.1.3.1
Registering Device License

Prerequisites: See Licensing Radio and Application Features on page 85 for more information on enabling device features on a radio.

Procedure:

1 Register the licensed device feature, by performing one of the following actions:

- On the menu bar, select **Licenses→ Register Device Licenses**.

- Click the button in the Actions Bar.

2 In the **Register Device Licenses** dialog box, enter the EID and click **Query**.

The feature name, applicable device region, available count, and original purchased count for each feature within the EID are listed. The user can search for contents within the results grid in the search bar.

3 Under the Select column, enable the check boxes for the licensed features that the user wants to register.

4 Click **Next**.

Enter Devices page appears.

5 Enter the serial numbers for the devices that the user wants to activate the features selected in step 3, by performing one of the following steps:

- Click the **Add** button. A row is added to the grid and the user can click the serial number cell and enter in a serial number.

- Click the **File to Grid** button to import the serial numbers from a comma-separated variable (`.csv`) file. The file must have one serial number per line. The serial numbers targeted for registration is displayed.
- Click the **Add all connected devices**. The serial numbers for all the connected devices will be added to the grid.

6 Click **Register**.

Registration Status page lists all serial numbers targeted for registration, the feature registered, and the registration status. If status is `Featured registered successfully`, the feature is now ready to be activated in the device.

Postrequisites: Contact the Network Administration if the PC is unable to communicate with the license server.

1.1.1.3.2
Activating Device Licenses

This procedure allows the user to transfer licensed features to a device. The user is guided through the process by a series of dialogs. When the Activation process has completed the licensed features are enabled in the device and ready to be configured via CPS 2.0.

Prerequisites: Use the same PC that was used to register or recover the device feature. See Registering Device License on page 70.

Procedure:

1 Connect a radio which has had features registered or recovered to this PC.

2 Activate a registered device license by performing one of the following actions:

- On the menu bar, select **Licenses→Activate Device Licenses...**.
- Click the

button in the Actions Bar.

3 If multiple devices are connected to the PC, select the target device and click **Read Features**. The selected device is read and the CPS 2.0 determines whether there are any registered device features ready to be activated. If only one device is connected to the PC, the CPS 2.0 reads the device automatically and determines if are any registered devices features ready to be activated.

4 On the **Available Features** page, select the features to activate in the connected device.

5 Click **Activate**.

CPS 2.0 activates the selected features in the device, the device resets, and the results of the activation process is displayed in the Activation Status screen.

6 Export the content of the status grid by clicking the **Grid to File** button.

7 Exit the **Activate Device Licenses** dialog box by clicking the **Close** button.

The device is now ready to be configured via CPS 2.0.

NOTE: To complete activation of the Digital and Digital Telephone Patch features new firmware must be written to the device. This can be done via the menu **Device→Update...**, clicking the **Update** button in the Actions bar, or clicking the **Update** button in the Activation Status screen

1.1.1.3.3
Viewing Registered Device Licenses

This procedure allows the user to view the devices that have been registered to the features within an EID. The user does not need to connect any devices to the PC during the View Registered Devices process. However, an Internet connection is required.

When and where to use: To view registered devices:

Procedure:

1. On the menu bar, select **Licenses→View Registered Devices...**.
2. In the **View Registered Devices** dialog, enter the EID given by Motorola Solutions and click **Query**.
3. Select a feature from the list and click **Next**.

   The **Registered Devices** page lists the serial numbers of the devices registered for the selected feature.
4. Export the list to a comma-separated variable (`.csv`) file by clicking the **Grid to File** button.
5. Exit the **View Registered Devices dialog** by clicking the **Close** button.

1.1.1.3.4
Recovering Device Licenses

The Recover Device Licenses process allows the user to download device licenses that were registered on another PC or download updated device licenses for the Software Update Management feature.

When and where to use: To recover device licenses:

Procedure:

1. On the menu bar, select **Licenses→Recover Device Licenses...**.
2. In the **Enter Devices** page, enter the serial numbers for the devices the user desires to recover licenses for. Enter the serial numbers in the following manners:
   - Click the **Add** button. A row is added to the grid. The user can click the serial number cell and enter in a serial number.
   - Click the **File to Grid** button to import the serial numbers from a comma-separated variable (`.csv`) file. The file must have one serial number per line.
   - Click the **Add all connected devices** button to add all the radios that are connected to the PC.
3. Click the **Recover** button.

   The CPS 2.0 contacts the Motorola Licensing Server and downloads all the licenses registered to the specified devices
4. The **Recover Device Licenses Status** page lists the serial number and features recovered for the specified devices.
5. Exported the list to a comma-separated variable (`.csv`) file by clicking the **Grid to File** button.
6. Exit the **Recover Device License** dialog box by clicking the **Close** button.

1.1.1.3.5

Registering Application Licenses

This procedure allows the user to register and activate CPS 2.0 application features. The user does not need to connect any devices to the PC during registration. However, an Internet connection is required.

Procedure:

1. On the menu bar, select **Licenses→Register Application Licenses...**
2. In the **Register Application Licenses** window, enter the entitlement ID (EID)
3. Click **Query**.
4. Select the feature to be registered.
5. Click **Register**.

   The **Registering Application Licenses** dialog box appears and provides status of the registration process. After registration completes the success message is shown. CPS 2.0 is now enabled to use the registered feature.
6. Exit the Register Application Licenses process by clicking **OK**.

1.1.1.3.6

Viewing Application Licenses

This procedure allows the user to view all the available application features and the statuses.

Procedure:

1. On the menu bar, select **Licenses→View Application Features.**.

   The **Application Licenses** dialog box appears. All application features, the applicable region, and status are listed.
2. Exit the **Application Licenses** by clicking the **Close** button or press the **ESC** key on the keyboard.

1.1.1.3.7

Recovering Application Licenses

This procedure allows the user to recover (re-download) all registered application licenses to this PC.

Procedure:

1. On the menu bar, select **Licenses→Recover Application Licenses**.

   The **Recover Application Licenses Status** dialog box appears and provides status of the recover operation. After the licenses have been recovered, the success message appears.
2. Exit the Recover Application Licenses process by clicking **OK**.

1.1.1.4

CPS 2.0 Tools Selections

The selections under the **Tools** menu allow the user to quickly access the Customer Programming Software (CPS) 2.0 settings and to import voice announcements.

The following selections under the **Tools** menu are launched by selecting **Tools** and then the relevant selection:

Table 6: File Menu Selections

Selection	Description
Import Voice Announcement...	Opens the **Import Voice Announcement Files** dialog box. By default the English Voice Announcements, provided with the CPS 2.0, are already imported. The user must import custom voice announcements or voice announcements for other languages. See Importing Voice Announcement Files on page 75
Managed Pre-Shared Keys...	The **Manage Pre-Shared Keys** feature allows the user to view the pre-shared keys stored in the CPS 2.0. Key alias is the name to identify a pre-shared key. Key value is an encryption value used to scramble and unscramble codeplug data transmissions on a secure-enabled mode. The key value must be in hexadecimal number (0–9 and A–F). See Adding Pre-Shared Keys, Editing Pre-Shared Keys on page 76, and Deleting Pre-Shared Keys.
Settings...	Opens the **Settings** window.

Table 7: Settings Window Selections

Selection	Description
Language	Specifies the language used by CPS 2.0. When a different language is selected, the CPS 2.0 application must be restarted to display text in the newly selected language. See Language on page 74.
Button Bar	Allows the user to select Icon mode or Text mode for the Actions bar. Text mode displays an icon and text explaining the button behavior, whereas Icon mode only displays an icon.
Notifications	All notification messages the user has selected "Don't show again" appear in this settings page. Un-checking a message re-enables the notification message.
Dealer Info	Allows the user to enter dealer-specific information that is included in any CPS 2.0 Customer Handout report. See Generating a CPS 2.0 Report on page 62. The **Dealer Information** window provides three sections containing a template of text that the user can modify. See Dealer Info on page 75.
Log	Allows the user to enable or disable upload of the CPS 2.0 application log to Motorola Solutions servers. The log allows Motorola Solutions to better categorize and resolve application issues. See Application Log on page 85 for more information on the application log.

1.1.1.4.1
Language

The **Language Settings** window allows the user to select the language used by the application.

The supported languages are **English**, **German**, **Spanish (Latin)**, **Spanish (Spain) French (France)**, **Italian (Italy)**, **Polish (Poland) Portuguese (Brazil)**, **Russian (Russia)**, **Turkish (Turkey)**, and **Chinese (Simplified)**

The supported languages are **English**, **German**, **Spanish (Latin)**, **Spanish (Spain) French (France)**, **Italian (Italy)**, **Polish (Poland) Portuguese (Brazil)**, **Russian (Russia)**, **Turkish (Turkey)**, and **Chinese (Simplified)**

The supported language is **English**.

NOTE:
When a new language is selected, the CPS 2.0RadioCentral must be restarted before the new language takes effect.

The input language depends on the keyboard selection configured for the operating system of the computer, and not this language selection; however, numbers entered into text field are always shown in the form 0-9, regardless of the language selection.

1.1.1.4.2
Button Bar

The **Button Bar** window allows the user to select how the Action bar is displayed: text mode or button mode.

1.1.1.4.3
Notifications

The **Notifications** window notifies the user that if notifications are set to "Don't show again", the **Settings** window appears.

1.1.1.4.4
Dealer Info

The **Dealer Info Settings** window allows the user to enter dealer specific information that will be included in MOTOTRBO customer handout reports.

The **Dealer Information** window provides three sections containing a template of text that can be modified by the user. The default template contains:

contact name
dealer name
dealer address
dealer city, state, zip
dealer mission statement
phone (xxx)xxx-xxxx
fax (xxx)xxx-xxxx
email user@domain
website www.dealername.com

1.1.1.4.5
Log

CPS 2.0 creates a log of operations peformed, errors that occurred, and performance issues. Enable the checkbox in the **Log** window to upload application log to remote server.

1.1.1.4.6
Importing Voice Announcement Files

By default the English Voice Announcement Import files included with the CPS 2.0 installation are imported automatically. If the user would like to import custom voice announcements or voice announcements for other languages the Import Voice Announcement procedure must be performed. Imported voice announcements can be selected in the Voice Announcement Set, within a

CPS 2.0 archive. Voice announcements within the Voice Announcement Set are written along with the device codeplug when the archive is written or cloned.

When and where to use:

Procedure:

1. From the **Tools** menu, select **Import Voice Announcement...**
2. From the **Import Voice Announcements** window, select the relevant **.mva or .wav** files.

   The duration of each `.wav` file must not exceed 20 seconds.
3. Click **Open**.
4. The **Import Status** dialog appears and shows progress of the import process for each file selected.
5. Once Import Voice Announcement Successful is shown all files have been imported.
6. Click on the **OK** button to close the **Import Status** dialog.

The voice announcement files can now be selected within the Voice Announcement Set in a CPS 2.0 archive. Imported voice announcements are stored within the CPS 2.0 application data folder. If the user desires to remove imported voice announcements see Removing Imported Voice Announcements on page 91. Any files that could not be imported are listed in the CPS Application Log on page 85

1.1.1.4.7
Adding Pre-Shared Keys

Add Pre-Shared Keys allows the user to add pre-shared keys to the Customer Programming Software (CPS) 2.0.

Procedure:

1. From the Actions bars, select **Tools→ Manage Pre-Shared Keys...** to open the **Manage Pre-Shared Keys** window.
2. Click the **Add** button.
3. From the **Add Pre-Shared Key** window, type in values for the **Key Alias** and **Key Value**.

   Key Alias is automatically filled with the PSK***<N>*** value, where ***<N>*** is an incremented value. For example, the first default key alias is **PSK1** and is followed by **PSK2**. The key alias can contain only the first 128 ASCII characters.

   Key Value is empty by default. The pre-shared key values must be 32 characters in `.hex` format.
4. Click **OK**.

The pre-shared key is imported to the CPS 2.0 and is displayed in the **Manage Pre-Shared Keys** window.

1.1.1.4.8
Editing Pre-Shared Keys

Edit Pre-Shared Keys allows the user to edit **Key Alias** and **Key Value** when these fields are not being used by any managed radios or sets.

Procedure:

1. From the Actions bars, select **Tools→ Manage Pre-Shared Keys...** to open the **Manage Pre-Shared Keys** window.

2 Select the desired row in the **Manage Pre-Shared Keys** window.

3 Type in the desired values in the text field to set the new pre-shared key fields.

4 Click the view area to set the new value.

1.1.1.4.9
Deleting Pre-Shared Keys

Delete Key(s) window allows the user to delete the rows that are not being used by any managed radios or sets.

Procedure:

1 From the Actions bars, select **Tools→ Manage Pre-Shared Keys...** to open the **Manage Pre-Shared Keys** window.

2 Click the **Delete** button.

The **Delete Key(s)** window appears.

3 Click **OK**.

The pre-shared key is deleted from the CPS 2.0.

1.1.1.5
CPS 2.0 Help Selections

Concept definition.

Selection	Description
Contents and Index...	Launches the CPS 2.0 help content. Help can also be launched using the F1 shortcut.
About...	Launches the **About CPS 2.0** dialog. The about dialog lists the CPS 2.0 version and copyright information.

1.1.2
Set Categories

Set categories is a navigation pane used to organize all the radio sets within a configuration.

The configuration node lists all the radio features available in the radio and the license status. The user can license the features with the "Available for Purchase" state. See Licensing Radio and Application Features on page 85.

Figure 8: CPS 2.0 Set Categories

Device Information

The Device Information on page 95 node displays unique device-specific information that was read out of the device.

Set Folders

Under the Device Information node all sets are organized under set folders. The user can expand the folders and click the desired set. The radio parameters within the set are available for editing in the Programming Pane.

1.1.3
Programming Pane in CPS 2.0

The programming pane in the Customer Programming Software (CPS) 2.0 is the primary area in the application where users select and configure radio features and properties. The programming pane consists of two areas: topic shortcuts followed by radio features organized under topics. The topic shortcuts allow the user to quickly navigate to the different feature topics in the programming pane.

Some of the radio parameters are organized into list item tables within the programming pane. The following sections describe operations that can be performed on a list item table within the programming pane:

- Operational Buttons in CPS 2.0 on page 79
- Row Selection in CPS 2.0 on page 79
- Search Feature in CPS 2.0 on page 79
- Arrange and Hide Columns in CPS 2.0 on page 79
- Fill Down on page 80

Operational Buttons in CPS 2.0

The operational buttons allows the user to manage the radio data. These buttons appear above List Item tables within a Set.

NOTE: If a button is not enabled for the selected row, then the requested operation is not supported. Some areas in the programming pane may only allow for a single operation, such as export.

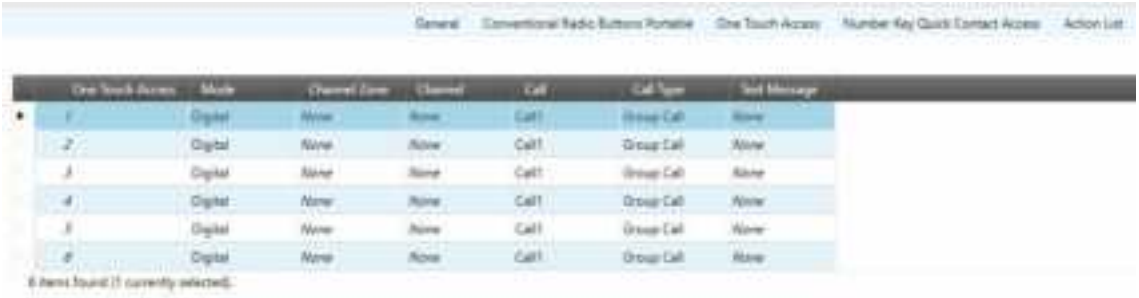
Table 8: Operational Buttons in CPS 2.0

Button	Description
	The Edit button is used to modify the properties for the selected row.
	The Add button is used to add items to the table.
	The Delete button is used to remove the selected item from the table.
	The 3-dot button provides more options. The options that are available from this button vary.

Row Selection in CPS 2.0

The selection of items is performed by hovering the pointer to the left of the relevant row and clicking the left mouse button. Hovering the pointer over the first column in a row changes the pointer from a standard pointer to a hand pointer. The SHIFT and CTRL keys are used to select a range of rows or selective rows. Selected rows are highlighted.

Figure 9: Example of Selected Row



Search Feature in CPS 2.0

The Search field in the programming pane allows the user to search for content within the table. The search feature searches through every cell in the table and only displays rows that contain some or all of the search criteria.

Arrange and Hide Columns in CPS 2.0

Columns in the programming pane can be arranged by dragging any column by the header section to a new location. Once a column is selected and dragged, arrows appear above and below the header section to indicate the new location.

The columns displayed in the programming pane can be hidden to show only those columns of data that are relevant. To hide columns, right any column in the header section to open the **Field Chooser** window and select only the relevant fields to display.

Fill Down

To quickly copy the value of a cell to the cells underneath it, select a source cell, hold down **Shift,** select the target cells under the source cells, right click on the selected cells, and select **Fill down** in the context menu. The contents of the source cell will be copied into the selected cells.

1.1.4

Information Windows in CPS 2.0

The CPS 2.0 provides information windows along the bottom of the application. By default, these information windows are hidden, where only the names are visible in tabs.

The following windows are supported:

- Validation Results Window on page 80
- Warning Messages Window on page 81
- Search Results Window on page 81
- Help Window on page 82

These information windows provide the user with important and helpful details about operations performed in the application.

NOTE: The tabs that appear are dependent on the current view of the application.

Expand and Auto Hide Information Windows

To expand information windows, click the relevant tab. The window automatically hides once the user clicks outside the window.

To pin the information window content to the application, select the horizontal **Auto Hide** pin icon in the upper right-hand corner of the window.

Dock or Float Information Windows

Once a window is pinned to the application, the user can dock the window to a dockable area of the application or allow the window to float anywhere on the screen. To dock a window, click and drag the window by the blue header section over a docking square and release. Docking squares appear in the application once the user drags a window.

To allow the window to float on the screen, simply drag, and drop the window to an area other than a docking square.

1.1.4.1

Validation Results Window

The **Validation Results** window displays error conditions within the configuration.

NOTE: The **Validation Results** window only appears when a Configuration is being edited.

NOTE: Help for error-related items can be launched by selecting the row with the error and pressing the F1 key.

The following columns are available from the Validation Results table:

Path
Path within the Configuration to the field containing the error.

Error Code
An internal error code that identifies the error within the system.

Description
A description that provides details to the user as to the cause of the error.

Actions
When a curly icon (Reset Value) is displayed in the **Actions** column, the validation error can be automatically resolved by clicking the icon. The user is taken to the Set associated with the error. The field with the error is highlighted in red.

The **Reset All (For Selected Top Set)** button allows the user to reset all validation errors that found in the currently selected Top Set.

1.1.4.2
Warning Messages Window

The **Warning Messages** window will display warnings that occur in configurations. For example, if CPS 2.0 cannot paste a value to a radio parameter, a warning will be added listing the parameter that could not be pasted.

NOTE: The **Warning Messages** window only appears when a Configuration is being edited.

1.1.4.3
Search Results Window

The **Search Results** window allows the user to search for fields and/or field values when editing Configurations. This search feature allows the user to quickly locate fields within a Configuration without having to know the Set.

NOTE:
The **Search Results** window only appears when a Configuration is being edited.

When editing a configuration, the user enters a word, phrase, or value in the **Search** field. The **x** to the right of the **Search** field is used to clear the search entry and the search results. The search icon ( ) is used to start the search. The drop-down arrow to the right of the **Search** field allows the user to select from the previous 10 searches.

The following options are used to refine the search:

Name
When selected, the text entered in the **Search** field is searched against the name of all fields.

Value
When selected, the number or text entered in the **Search** field is searched against the value of all fields.

Name and Value
When selected, both the field name and value are searched against the entry in the **Search** field.

Match whole word
When checked, the exact word, phrase, or value entered in the **Search** field is used to narrow the search results.

The following columns provide details of the search:

Path
The path to the field within the Configuration in Set Name\Field Name format.

Value
The current value for the field.

NOTE: Double-clicking any row in the search results opens the relevant Set and places the focus on the field.

1.1.4.4
Help Window

The **Help** window is used to display context-sensitive help for fields used within Configurations and Sets.

The **Help** window is used to display context-sensitive help for fields used within Configurations and Sets.

NOTE: The **Help** widow only appears when a Configuration is being edited.

When a user is editing a Configuration, help content is displayed in the **Help** window when a field is selected within the Set. Pressing the F1 key opens the full help system with the current selected field in focus.

Pressing the F1 key opens the full help system with the current selected field in focus.

1.2
CPS 2.0 Concepts

This section covers various key concepts employed by MOTOTRBO Customer Programming Software (CPS) 2.0.

Key concepts of CPS 2.0 are listed in the following sections:

1.2.1
Sets and Configurations in CPS 2.0

Customer Programming Software (CPS) 2.0 uses configurations and set to organize radio identity and radio parameters in a data structure that is saved into archives, read from radios, and written or cloned into radios.

The following sections describe the concepts and editing of Sets and Configurations within CPS 2.0:

1.2.1.1
What are Sets and Configuration?

Customer Programming Software (CPS) 2.0 introduces the concept of Sets and Configurations for programming and organizing radio fields.

Sets

A **Set** is a logical group of related radio fields. For example, the General Settings Set contains fields that are not specific to a given radio feature, but generally apply to a radio. The CPS 2.0 application is used to access and program radio fields within Sets.

Configurations

A **Configuration** is a collection of **Sets**. There are different types of Configurations, which are associated with radio models, versions and options.

A CPS 2.0 archive file consists of radio specific data (model, version, options) and a configuration.

1.2.1.2
Copy and Paste Operation

MOTOTRBO Customer Programming Software (CPS) 2.0 supports copying pasting radio set parameters across the following applications:

- MOTOTRBO CPS 2.0 to MOTOTRBO CPS 2.0.

- MOTOTRBO CPS 2.0 to MOTOTRBO Radio Management (RM) Configuration Client.

This feature allows the user to copy the editable data from one configuration (source) and paste the data on another configuration (target). The exchange of data between two configurations is performed at a Set level.

When the user performs the Copy operation on a set/configuration node within the Set Categories navigation page, the allowable files are copied to the Windows clipboard.

For example, a set/configuration is copied and contains fields A, B, C and D. For security reasons, field D is not allowed to be copied. Therefore the data copied to the clipboard are fields A, B, and C only.

The paste operation on the Set Categories navigation pane copies the data from the clipboard to the editable fields in the target set/configuration.

The **Warning Messages** tab displays an field that did not copy with the failure status/reason.

NOTE: Multi-select Copy/Paste is only supported when the user selects multiple sets of the same type and only pasting the data on the parent node of the same set type.

Named Sets and References

When pasting parameters that have a name or alias the parameters are matched in the source configuration using the user-defined name. For example, the user chooses to copy a personality that points to a transmit contact name “Call 1”, the value of the field is selected based on the available contacts in the target configuration. If the target configuration does not contain the “Call 1” contact, then contact name "Call 1" is set to NULL and is marked as invalid.

If the user pastes a set that has the same name as a set in the target configuration, CPS 2.0 overwrites the existing set with the source set. Single instance sets are always overwritten with the copied data

1.2.2 Radio Identity Parameters

Depending on the model and features, the fields that constitute the identity of the radio are as follows:

- Radio Alias
- Radio ID
- Radio IP
- CAI Network
- WAVE 5000 Username
- WAVE 5000 Password
- 5 Tone ID

When performing a clone operation, a dialog box is presented to the user that lists the target radio identity parameters. This prompt always reminds the user to provide values for the radio identity parameters without having to find the parameters across several Sets.

When performing a clone express operation, the radio identity parameters in the archive are ignored and the values in the target radio are preserved.

1.2.3 Codeplug Version Support

MOTOTRBO Customer Programming Software (CPS) 2.0 can perform the operations on the listed radio types for the specified codeplug versions.

If the user cannot perform an operation due to the codeplug version of the device, upgrade the device in MOTOTRBO Customer Programming Software (CPS) 1.0 to a codeplug version that is supported according to the following table.

Radio Type	Open Archive	Open CPS 1.0 Archive	Read	Write	Clone/ Clone Express	License Activation	Update	Recover
MOTOTRBO mobile/portable	13.02.00 (R2.4) or greater.						Not supported.	
MOTOTRBO repeater	14.00.00 (R2.4) or greater.							
MOTOTRBO 2.0 mobile/portable	07.07.00 (R2.4) or greater.						• From: 03.00.11 (R2.1) or greater. • To: 07.07.00 (R2.4) or greater.	
MOTOTRBO 2.0 repeater	01.00.00 (R2.4) or greater							
MOTOTRBO 2.0.5 mobile	07.07.00 (R2.4) or greater							
MOTOTRBO SL	07.07.00 (R2.4) or greater.						• From: 04.00.09 (R2.2) or greater. • To: 07.07.00 (R2.4) or greater.	
MOTOTRBO Light	07.07.00 (R2.4) or greater.							

1.2.4

CPS 2.0 Archive File Support

MOTOTRBO Customer Programming Software (CPS) 2.0 supports opening the following archive files:

Table 9: MOTOTRBO Archive File Types

File format	Description
`.ctb2`	MOTOTRBO CPS 2.0 archive. All archives saved in MOTOTRBO CPS 2.0 have the `.ctb2` file extension. MOTOTRBO CPS 2.0 can open the `.ctb2` files and the user can import `.ctb2` files as radios in the MOTOTRBO Radio Management Configuration (RMC) Client.

File format	Description
`.ctb`	MOTOTRBO CPS 1.0 file format. In order for MOTOTRBO CPS 2.0 to open `.ctb` files, the user must install a version of MOTOTRBO CPS 1.0. It is recommended that the MOTOTRBO CPS 16.0 or greater is used.
`.xpba`	MOTOTRBO RM archive, created by exporting a radio in the RMC Client. MOTOTRBO CPS 2.0 can open the `.xpba` files but cannot save files in the `.xpba` format.

1.2.5
Licensing Radio and Application Features

The user can purchase radio features through the Motorola Online (MOL) website. After the radio features are purchased, an Entitlement ID (EID) is provided. Keep the EID in a safe place because the EID is used to identify the licensed features and is necessary for enabling those features in the device.

A two-step process must be followed to enable a feature:

Registration

During Registration, the user associates the licensed features with all the devices on which they want to enable the feature.

NOTE: Internet connection is required. After Registration is complete, the licensed radio features are ready to be activated on the registered devices.

Activation

During Activation, connect the device to the same PC on which the device was registered or the license was downloaded using the Recovering Device Licenses on page 72 process.

IMPORTANT: If the device Serial Numbers are registered within an office, but the actual devices are in the field, it is necessary to use a computer that can be brought out to the devices in the field, such as a laptop.

After Activation is complete, the feature is enabled in the device and ready to be configured via CPS.

To determine which features are available for purchase, perform a read operation on the device and go to the top configuration node under Set Categories.

NOTE: When installing MOTOTRBO CPS 2.0 any device licenses registered using CPS 1.0 will be transferred to CPS 2.0. After installation of CPS 2.0 any device licenses registered in CPS 1.0 will not automatically be available in CPS 2.0. For those licenses to be available in CPS 2.0 use the Recovering Device Licenses on page 72 process.

1.2.6
Application Log

CPS 2.0 creates a log of operations peformed, errors that occurred, and performance issues.

The log is saved locally in `%programdata%\Motorola\MOTOTRBO CPS 2.0\Log`. The log contains errors such as failing to import a voice announcement file, failure during any device operation, or a failure with the application itself.

To help characterize and resolve issues, the user can enable upload of the log to a remote server for Customer Support and engineers to view. The log is uploaded for the following events:

- An error occurs.
- The application is launched.
- The application is closed.

The user is prompted at the launch of the CPS 2.0 to enable upload of the application log. The user can also enable or disable upload of the log in the menu bar by selecting **Tools→Settings**. Then select **Log**.

1.3 Common Tasks in Customer Programming Software (CPS) 2.0

This section covers various common scenarios for Customer Programming Software (CPS) 2.0.

The following sections contain helpful common tasks information:

1.3.1 Using Clone to Deploy a New Fleet of Radios

Out of the box, every radio is configured with the same radio identity parameters. To have an effective MOTOTRBO system each radio should have its own unique identity. The Clone operation can be used to quickly deploy a new fleet of radios or to add new radios to deployed fleet.

When and where to use: In MOTOTRBO CPS 1.0 to ease deployment of a fleet of radios the user would go to **Edit→Preferences** and would enable the **Clone Identity** feature. This allows the user to edit the Radio ID, Radio Alias, and any other unique parameters and then Clone the codeplug to the radio. To perform the same operation in CPS 2.0, follow these steps.

Procedure:

1. Open the source archive that will be cloned into the new fleet of radios.
2. Connect a similar model target radio that has a different serial number than what is in the source archive.
3. Click on the **Clone** button in the actions bar.
4. In the **Connected Devices** dialog select the target radio.

   The **Clone** dialog appears displaying all the Radio Identity Parameters on page 83 from the source archive file.
5. Fill in the desired values for the target radio.
6. Click the **Clone** button within the **Clone** dialog.
7. A progress bar appears detailing status of the clone operation.
8. Once the clone successful message appears: disconnect the radio, connect a new radio, and repeat steps 3-8.

All new radios is deployed with unique identity parameters. Unlike CPS 1.0, the user does not have to worry if the Clone Identity preference was set correctly.

1.3.2 Using Clone Express to Modify Shared Parameters in a Deployed Fleet

In a deployed fleet of radio, meticulous planning and programming was performed to ensure that each radio was configured with unique radio identity parameters. The user of CPS 2.0 wants to ensure that any further updates of shared parameters does not overwrite the radio identity parameters in the deployed fleet.

When and where to use: In MOTOTRBO CPS 1.0, the CPS user would go to **Edit→Preferences** amd would disable the **Clone Identity** feature. This would allow the user to overwrite the shared parameters

of a source archive without overwriting the Radio Identity Parameters on page 83 in the target radios. In order to perform the same operation in CPS 2.0 perform the following steps.

Procedure:

1. Open the source archive that will be cloned into the deployed fleet of radios.
2. Connect a similar model target radio that has a different serial number than what is in the source archive.
3. Click on the **Clone Express** button in the actions bar.
4. In the **Connect Devices** dialog select the target radio.
5. Unlike the clone operation, the **Clone** dialog will not appear. Instead a progress bar appears detailing status of the clone express operation. CPS 2.0 will read out the radio identity parameters of the target radio and merge them with the source codeplug. Then it will write the merged codeplug to the target devices.
6. Once the clone express successful message appears: disconnect the radio, connect a new radio, and repeat steps 3-5.

All radios programmed will now have the new shared parameters from the source archive but each radios' identity parameters will be retained. Unlike CPS 1.0, the user does not have to worry if the Clone Identity preference was set correctly.

1.3.3
Retrieving Firmware and Codeplug Update Package

In order to perform Update and Recover operations using MOTOTRBO CPS 2.0 the desired update package must be downloaded and installed on the PC performing the operations.

When and where to use: Previously installed System Release 2.4 and greater update packages, used with CPS 1.0, can be used with CPS 2.0. The below steps only need to be performed for update packages that are not already installed.

Procedure:

1. Launch the web browser.
2. Log on to the Motorola Solutions Online (MOL) website.
3. Click the *Resource Center* link.
4. In the search area, type **MOTOTRBO**.
5. From the **Available List** window, Select the update package.
6. Save the update package (compressed or zipped) onto the desktop.
7. Extract the compressed file.
8. Run the install executable extracted from the compressed update package.
9. After the install completes the update package is available for use in the Update and Recover operations.

1.4
Differences between CPS 2.0 and CPS 1.0

The below sections list key differences between MOTOTRBO CPS 1.0 and CPS 2.0.

1.4.1

Features Not Supported in CPS 2.0

Below is the list of features that were available in Customer Programming Software (CPS) 1.0 but are not supported in CPS 2.0.

Radios or Archives on System Releases Prior to 2.4.

CPS 2.0 and Radio Management (RM) Configuration Client cannot open archives or perform operations on radios that are on system release prior to 2.4. If you do not wish to upgrade these radios to system release 2.4 or higher please continue to use CPS 1.0 to configure them. See Codeplug Version Support on page 83 for the codeplug versions and radio types CPS 2.0 supports.

IP Repeater Programming

IP Repeater Programming is not supported in CPS 2.0. For users who have repeaters on system release 2.10 or greater, please use RM to perform IP Repeater Programming operations.

Bluetooth Programming

Bluetooth programming is not supported in CPS 2.0.

Undo/Redo

Undoing and redoing radio parameter changes is not supported in CPS 2.0.

Drag Drop

CPS 2.0 does not support the ability to drag a set or configuration from one application instance of CPS 2.0 and drop the set or configuration into another application instance of CPS 2.0. Using the copy and paste operations has the same effect as drag drop.

Expert/Basic/Custom Views

CPS 1.0 allowed the user to selectively choose Basic View where only a small set of radio parameters were visible in the CPS UI, Expert View where all radio parameters were visible in the UI, and Custom View where the user could define which parameters are visible in the UI. CPS 2.0 only supports the equivalent of Expert View, where all radio parameters are visible.

3600 Trunking Subscribers

CPS 2.0 does not support 3600 Trunking radios or archives. Continue to use CPS 1.0 to configure 3600 trunking radios.

Detailed and Customer Handout Expanded Reports

CPS 2.0 does not allow the user to generate detailed archive reports or customer handout expanded reports.

Multiple Selection

At this time CPS 2.0 does not support operations on more than one row element within a List Item Table at a time. Also, performing operations on multiple sets at time is not supported.

1.4.2
Multiple Document Support

MOTOTRBO CPS 1.0 allowed the user to open several archive documents in the same CPS 1.0 application instance. MOTOTRBO CPS 2.0 only allows the user to open one archive document at a time per CPS 2.0 application instance.

To view multiple CPS 2.0 archive documents at once, the user can launch multiple application instances of CPS 2.0 by performing one of the following operations:

- Right-click an open instance of CPS 2.0, in the Windows taskbar, and select MOTOTRBO CPS 2.0.
- Open the Windows start menu, navigate to the Motorola applications folder, and select **MOTOCPS 2.0**.
- Double click on the MOTOTRBO CPS 2.0 application shortcut on the desktop.

As CPS 2.0 can only have one archive open at a time there is a change in the read and open operations. If an archive is already open and the user tries to open a new archive or read a radio, the currently opened archive closes and is replaced with the newly opened/read archive. If the open archive had not been saved, the user is prompted to save or discard the archive before the new archive is opened.

1.4.3
Configuring Voice Announcements and Language Packs

In MOTOTRBO CPS 1.0, adding and removing language packs or voice announcements were individual operations that had to be performed on each radio. In MOTOTRBO CPS 2.0, adding and removing language packs and voice announcements are done inside the configuration and are added or removed as part of the Write/Clone/Clone Express operations.

See the following sections for more information.

1.4.3.1
Loading a Language Pack

Perform the following steps to load different language packs into the radio.

Prerequisites:

Procedure:

1. Open a source archive that will be written or cloned to the desired target radio.
2. From the **Set Categories** tab, select **General→Language Pack** set.

   The **Language Packs** set is displayed.
3. Click .
4. In the **Add Language Packs** window, select the desired language.

   Select multiple languages by pressing the CTRL key while clicking the desired languages.
5. Click **OK**.

6 Perform a Write/Clone/Clone Express operation on the target radio to load the added language packs.

NOTE: Even if the identification (ID) of the language pack in the source and the destination are the same, the Customer Programming Software (CPS) 2.0 always overwrites the language pack.
If the user selects multiple language packs that have the same language pack ID but with different version numbers, CPS loads the language packs with the higher version.

The archive opened must be for a display model.

This task does not apply to repeaters.

If the radio has at least one language pack loaded, the language pack information is displayed in the **Language Pack** set the next time the user reads the radio.

1.4.3.2
Deleting a Language Pack

Perform the following steps to remove unwanted language packs from the radio.

Prerequisites:

Procedure:

1 Open a source archive that will be written or cloned to the desired target radio

2 From the **Set Categories** tab, select **General→Language Pack** set.

The **Language Packs** set is displayed.

3 In the **Language Packs List** table, select the unwanted language.

Select multiple languages by pressing the CTRL key while clicking the desired language.

4 Right click and select **Delete**.

5 Perform a Write/Clone/Clone Express operation on the target radio to delete the language packs removed from the configuration.

NOTE:
The archive opened must be for a display model.

This task does not apply to repeaters.

1.4.3.3
Loading Voice Announcement Files

Perform the following steps to load voice announcement files to a radio.

When and where to use: Voice Announcement files must be imported into CPS 2.0 before they can be selected in a configuration. See Importing Voice Announcement Files on page 75.

Procedure:

1 Open a source archive that will be written or cloned to the desired target radio.

2 From the **Set Categories** tab, select **General→Voice Announcement** set.

3 Under the General topic set Announcement Type to Voice Announcement Files.

4 Above the **Files List** table, click

5 In the **Add Voice Announcement** dialog select the imported voice announcement files to add to the device.

6 Click **OK**.

7 Assign the added voice announcement files to the channels, zones, or features the user desires the radio to announce.

8 Perform a Write/Clone/Clone Express operation on the target radio to add the voice announcement files and to configure the announcement settings.

1.4.3.4
Deleting a Voice Announcement

Perform the following steps to remove voice announcement files from a radio

Procedure:

1 Open a source archive that will be written or cloned to the desired target radio.

2 From the **Set Categories** tab, select **General→Voice Announcement** set.

3 Navigate to the **File List** table.

4 Select the voice announcement files to be removed from the target device. Use **Shift** and **CTRL** keys to multiple select files.

5 Click

6 Fix any zones, channels, or features that were referencing the removed voice announcement files.

7 Perform a Write/Clone/Clone Express operation on the target radio. Any voice announcement file removed from the **File List** will be deleted from the device.

1.4.3.5
Removing Imported Voice Announcements

This procedure allows the user to remove imported voice announcements. Removed voice announcements will no longer be selectable in the File List within the Voice Announcement Set

Procedure:

1 In the File List within the Voice Announcement set, open a Windows Explorer dialog.

2 In the address bar type `%programdata%\Motorola\MOTOTRBO CPS 2.0\Voice Announcement`.

3 Select the files to be deleted.

4 Press the DEL on the keyboard or right-click the files and select **Delete**.

The deleted files are no longer selectable in the File List section of the Voice Announcement Set.

NOTE: If deleted files are referenced within the File List of the Voice Announcement Set in a CPS 2.0 archive, remove those files from the File List before any write or clone operations.

1.5
Troubleshooting in Customer Programming Software (CPS) 2.0

This section covers various troubleshooting scenarios for Customer Programming Software (CPS) 2.0.

WARNING: Only an experienced user should perform these troubleshooting activities.

The following sections contain helpful troubleshooting information:

1.5.1
Unable to Read or Write Codeplug to the Radio

If the user is unable to read the codeplug from the radio or write the codeplug to the radio, check the following:

When and where to use:

- The programming cable is connected to the USB port and the radio.
- Ensure that the radio is powered up.
- For portable radios, ensure that the battery level is not low.
- Ensure that the network connection is established by checking if the network connection icon for the MOTOTRBO radio appears in the Windows taskbar.
- If multiple MOTOTRBO devices are connected to the PC, ensure that the third octect of the Radio IP on page 415 is unique. For example, a valid configuration would radio 1's Radio IP is configured as 192.168.10.1 and radio 2's Radio IP is configured as 192.168.11.1. An invalid configuration would be, radio 1's Radio IP is configured as 192.168.10.1 and radio 2's Radio IP is configured as 192.168.10.2.
- During write operation for MOTOTRBO conventional radios and MOTOTRBO 2.0 radios, ensure the archive file met the following criterias:
  - **Check for Password** is applicable and set to **Read Only**.
  - **Read/Write** and **Codeplug Password** is set to blank.
- The model number in the device matches the supported devices.
- The user does not try to read a device that has a major codeplug version greater than the supported codeplug version of the Customer Programming Software (CPS) 2.0.
- Ensure that a replacement board serial number is not detected on the device. This applies to both boards on a dual board device.
- The MOTOTRBO driver is installed in the `My Computer\System Properties\Hardware\Device\Manager\Network Adapters`.
- If the driver is not installed, double-click the **Motorola LTD Devices** and update the driver from the **Driver** tab. See Installing MOTOTRBO Driver Windows 7 and Later on page 92.

1.5.2
Unable to Recover a Radio

If the user is unable to recover a radio, check the following:

When and where to use:

- Ensure that the programming cable is connected to the Universal Serial Bus (USB) port and the radio.
- Ensure that the radio is turned on.
- Ensure that a replacement board serial number is not detected on the device. This sentence applies to both boards on a dual board device.

1.5.3
Installing MOTOTRBO Driver Windows 7 and Later

The user is prompted to install the MOTOTRBO driver when the radio is connected to the PC for the first time. The isntallation of the driver establishes a connection between the radio and the PC. This procedure is for the Home and Business edition of Windows 7 and later.

Prerequisites: Exit all the MOTOTRBO programs running on the computer.

Procedure:

1. Connect one end of the programming cable to the radio and the other end to the universal serial bus (USB) port of the PC.
2. Turn on the radio.
3. Follow the prompts in the **Driver Software Installation** window to install the driver.
4. Once the **Driver Software Installation** completes close the install dialog.
5. Perform any operation under the **Device** menu.

The MOTOTRBO driver installation is complete.

1.5.4
Installing FlashZap Driver on Windows Windows 7 and Later

The user is prompted to install the FlashZap driver when the user triggers the device update or recover radio for the first time. This driver installation is required for the Customer Programming Software (CPS) 2.0 Device Update and Recover feature to communicate with the repeaters in FlashZap or Boot Mode. This procedure is for Windows 7 and later.

Prerequisites: Exit all the MOTOTRBO programs running on the computer.

Procedure:

1. Connect one end of the programming cable to the radio and the other end to the universal serial bus (USB) port of the PC.
2. Turn on the radio.
3. On the **Driver Software Installation** window, click **Close**.

The installation is complete.

Postrequisites: Restart to the update or recover operations. See Updating a Radio on page 67 or Recovering a Radio on page 68.

1.5.5
Communication Issues Due to Ethernet Properties

When a MOTOTRBO radio or repeater is connected to a PC it appears as a network interface. On some PCs the ethernet properties of the radio's network interface can cause issues with CPS Operations. When these problems occur it is recommended to disable unneeded ethernet properties.

Procedure:

1. Open configure the ethernet properties, by performing one of the following actions:
   - Click **Start→ Settings→ Network & Internet → Change adapter options**.
   - Click **Start→ Control Panel→Network and Sharing Center → Change adapter settings.**
2. Double-click the network connection named ***<Local Area Connection>*** that has the device name ***<MOTOTRBO Radio>***.

   User can have more than one local area connection active on their machine. Ensure that the right connection is selected.
3. In the **Local Area Connection Status** window, select **Properties**.
4. Under the **This connection uses the following items:**, uncheck all the check boxes except for **Internet Protocol (TCP/IPv4)**.

5 Click **OK**.

The setup for the MOTOTRBO local area connection is complete.

Postrequisites: The user must set up the MOTOTRBO LAN every time the MOTOTRBO driver installation is required. See Installing MOTOTRBO Driver Windows 7 and Later on page 92.

Chapter 2

Customer Programming Software (CPS) 2.0 Sets

The Customer Programming Software (CPS) 2.0 groups radio parameters into Sets. A Set is a collection of radio parameters that define a specific radio feature (For example, General Settings or Network). For MOTOTRBO, Sets are preselected and grouped into a Configuration for a specific product family, such as MOTOTRBO Subscribers. The Sets that are preselected for Configurations cannot be shared between other Configurations. For this reason, the configuration and modification of parameters within a preselected Set must be performed within the relevant Configuration.

The following Sets are supported for MOTOTRBO:

2.1 Device Information

This section displays unique device specific information that is stored in the Customer Programming Software (CPS) 2.0.

The following fields are supported:

2.1.1 Model Number

This read-only field displays a string of alphanumeric characters to represent the radio type.

Examples of model types include MOTOTRBO Non-Display Portable, MOTOTRBO Display Mobile with GNSS, and MOTOTRBO Repeater.

This paragraph is applicable to MOTOTRBO Conventional radios. By default, when creating an IP Site Connect system, the Model Number is blank and would always be blank unless it is programmed to be updated to reflect the programmed repeater's model number.

2.1.2 Tanapa Number

This field displays a string of alphanumeric characters that is used for factory or distribution center tracking and regional labeling.

2.1.3 Region

This field displays the codeplug region. CPS 2.0 can program radios from all regions.

2.1.4 Serial Number

This read-only field displays a string of unique alphanumeric characters to identify the radio.

This feature is applicable to MOTOTRBO Conventional radios.

By default when creating a Link Establishment system, the Serial Number is blank and would always be blank unless it is programmed to be updated to reflect the programmed model number for the repeater.

2.1.5
Physical Serial Number

This read-only field displays a string of unique alphanumeric characters to identify the radio.

2.1.6
Firmware ID

The field displays an ID that uniquely identifies the radio firmware. Firmware ID can be used to differentiate firmware for the same or different products.

2.1.7
Frequency Range (MHz)

This field displays the radio's frequency range.

The range is defined as being between, or equal to, the minimum and maximum frequencies, at which the radio is allowed to operate.

2.1.8
Power Range (W)

This read-only field displays the power range in watts of the radio.

2.1.9
Power Range (W)

This read-only field displays the power range in watts for the 800 MHz and 900 MHz band of the radio.

NOTE:
This feature is applicable for MOTOTRBO Conventional Mobile and Repeater 800/900 MHz.

2.1.10
12V Power Range (W)

This read-only field displays the 12V power range in watts of the radio.

2.1.11
24V Power Range (W)

This read-only field displays the 24V power range in watts of the radio.

2.1.12
Firmware Type

Displays the firmware type programmed in the radio.

The available firmware types are Analog and Digital.

- Analog: Analog only firmware
- Digital: Analog and digital firmware

2.1.13
Firmware Type

Displays the firmware type programmed in the radio.

The available firmware types are Analog and Digital.

- Analog: Analog only firmware
- Digital: Analog and digital firmware

2.1.14
Firmware Version

This field displays the firmware version programmed in the radio.

Firmware is the software that controls the internal hardware components of the radio.

2.1.15
Codeplug Version

This field displays the codeplug version programmed in the radio.

Codeplug is the information (data) that supports the firmware and hardware configuration.

2.1.16
Bootloader Version

This field displays the bootloader version programmed in the radio.

The bootloader is the software component used to upgrade the firmware and codeplug of the radio.

2.1.17
Netmask

Typical network configuration parameters include the subnet mask (netmask) in addition to the IP address.

Subnetting an IP network allows a single large network to be broken down into several logical smaller ones by allocating bits from the host portion as the network portion. The subnet mask tells how many bits identify the subnetwork, and how many bits provide room for the host addresses. The Netmask value is not editable.

NOTE:
For MOTOTRBO Conventional radios, this feature value is fixed at 255.255.255.0 irregardless of the Radio IP address configuration.

2.1.18
Last Programmed Date and Time

The field displays the last date and time at which the radio was programmed.

2.1.19
MAC Address

Displays the MAC address or physical address for the repeater and the MOTOTRBO SLR Series repeater.

This address serves as a unique device identifier.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.1.20
Wi-Fi MAC Address

Displays the Wi-Fi MAC address or physical address for the repeater and the MOTOTRBO SLR Series repeater.

This address serves as a unique device identifier.

NOTE:
If a unique WiFi MAC address is not encountered during a Read job (for example, FF-FF-FF-FF-FF-FF, 00-00-00-00-00-00), enable the WiFi feature on the radio and repeat the Read job. When successful, a unique WiFi MAC address (for example, 4C-CC-34-22-38-C6) is displayed.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.1.21
Controller FPGA Version

Displays the version of the Field Programmable Gate Array (FPGA) software image that is built in the controller board of a MTR3000 base radio/repeater.

2.1.22
Wireline FPGA Version

Displays the version of the Field Programmable Gate Array (FPGA) software image that is built in the wireline card for a MTR3000 base radio/repeater with the Wireline board installed.

2.1.23
RX Frequency Range (MHz)

Displays the RX frequency range for the radio.

The range is defined as being between, or equal to, the minimum and maximum frequencies, at which the radio is allowed to operate.

2.1.24
RX Frequency Range (MHz)

Displays the 800 MHz band and 900 MHz band RX frequency range for the MOTOTRBO Conventional Repeater.

The range is defined as being between, or equal to, the minimum and maximum frequencies, at which the radio is allowed to operate.

2.1.25
RX Frequency Range (MHz) (SL Series 800/900 MHz Radios)

Displays the RX frequency range for the radio.

The range is defined as being between, or equal to, the minimum and maximum frequencies, at which the radio is allowed to operate.

NOTE:
This feature is applicable for MOTOTRBO 2.0 SL Series 800/900 MHz radios.

2.1.26
TX Frequency Range (MHz)

Displays the TX frequency range for the radio.

The range is defined as being between, or equal to, the minimum and maximum frequencies, at which the radio is allowed to operate.

NOTE:
This feature is disabled when the Voting Mode feature is set to Analog Satellite Receiver or Digital Satellite Receiver. This feature is still disabled even though the user sets Voting Mode to Normal Repeater or Digital Voting Repeater until the user reads a device with Voting Mode set to those values.

2.1.27
TX Frequency Range (MHz)

Displays the 800 MHz band and 900 MHz band TX frequency range for the MOTOTRBO Conventional Repeater.

The range is defined as being between, or equal to, the minimum and maximum frequencies, at which the radio is allowed to operate.

NOTE: This feature is disabled when the Voting Mode feature is set to **Analog Satellite Receiver** or **Digital Satellite Receiver**. This feature remains disabled until the user sets Voting Mode to **Normal Repeater** or **Digital Voting Repeater** and reads a device.

2.1.28
TX Frequency Range (MHz) (SL Series 800/900 MHz radios)

Displays the TX frequency range for the radio.

The range is defined as being between, or equal to, the minimum and maximum frequencies, at which the radio is allowed to operate.

NOTE:
This feature is disabled when the Voting Mode feature is set to Analog Satellite Receiver or Digital Satellite Receiver. This feature is still disabled even though the user sets Voting Mode to Normal Repeater or Digital Voting Repeater until the user reads a device with Voting Mode set to those values.

This feature is applicable to MOTOTRBO 2.0 SL Series 800/900 MHz radios.

2.2
Welcome Bitmap Set

The **Welcome Bitmap** set is used to load an image that appears on the radio display when the radio is turned on.

The following section contains all supported fields:

2.2.1
General (Welcome Bitmap)

The **General** section of the Welcome Bitmap set contains the following fields:

2.2.1.1
Welcome Image

Allows the user to load an image (bitmap) that is used as a Welcome screen for the radio.

The **Select** button is used to select a bitmap image, while the **Remove** button is used to remove the current image from the radio display.

The resolution and color depth for the image are as follows:

- 160 pixel (width) * 72 pixel (height) and 256 color for Mobile
- 132 pixel (width) * 90 pixel (height) and 256 color for Portable Full Keypad model
- 132 pixel (width) * 72 pixel (height) and monochrome color for Portable Limited Keypad model
- 132 pixel (width) * 90 pixel (height) for Handheld Control Head (HCH) mode
- 320 pixel (width) * 240 pixel (height) and 16-bit (R5-G6-B5) color for SL Series radios

NOTE:
When the Welcome image is used, the Radio Name text is not displayed during the power up sequence.

If the mobile radio is in HCH mode, the user cannot customize the Welcome Bitmap for HCH. Therefore, the default Welcome image is used on the welcome screen regardless of the bitmap image selection.

2.3 Language Packs Set

The **Language Packs** set is used to create a list of language pack sets that are used to assign to radios. The user can add multiple sets of language packs by using the Language Pack List table.

The following fields are supported:

2.3.1 Language

Displays the language selected from a list of Language Packs.

Languages are added by selecting the **Add** icon. Once languages are selected from the **Add Language Packs** window, they are added to the list of languages packs and removed from the **Add Language Packs** window.

NOTE: Languages in the **Add Language Packs** window are listed in their native language.

2.3.2 Locale

Displays the 4 character language code (i.e., en-us) for the selected language pack.

2.4 General Settings Set

The **General Settings** set allows you to configure general parameters for the radio.

2.4.1 General (General Settings)

This section explains the general setting for **General** set.

2.4.1.1
Subscriber Inactivity Timer (SIT) (ms)

The Subscriber Inactivity Timer (SIT) controls how long the repeater will continue transmitting with absence of subscriber activity on the uplink.

If the repeater is operating on shared-use frequencies, it cannot remain keyed indefinitely for the benefit of broadcasting synchronization signals to subscriber units. The repeater will likely be de-keyed most of the time; thereby requiring subscriber units to first activate the repeater (via the uplink frequency) and acquire synchronization (via the downlink frequency) before completing the call setup request and subsequent first transmission. The net result of these extra procedures is increased access time; therefore, it is desirable to avoid these steps, whenever possible. There is a trade-off to minimizing access time by keeping the repeater keyed for as long as practically possible, while complying with the regulations regarding shared-use channels, which essentially require the repeater to dekey when the channel is not in use. This can be balanced with the use of the Subscriber Inactivity Timer.

The SIT timer starts when there is no inbound subscriber activity on either time slot (Slot 1 or 2) of a repeater. When the SIT timer expires, the repeater will stop transmitting until awoken again by a subscriber. To accommodate the reserved hang time after each transmission, the SIT timer should always be equal or greater than the Hang Time (group, private, or emergency hang time; whichever the longest) in the repeater. This will allow the reserved hang time and a short unreserved hang time after each transmission prior to the repeater dekeying. If shared use is not a concern, the SIT timer can be set to the maximum value. If shared use is a concern, the SIT timer should be set equal to or slightly longer than the configured call hang timers.

For Connect Plus, the SIT value that is programmed with Customer Programming Software (CPS) 2.0 will be overwritten by the XRC when it establishes its link with the repeater. The SIT value is not programmable in the Connect Plus Network Manager, but the XRC does consider other Network Manager-configurable values (the Call Hang Timers) when setting the SIT. The repeater will use the SIT value supplied by the XRC as long as it maintains connectivity to the controller. It is important to know that always displays the CPS 2.0-configured value, even when connected to the XRC. The repeater utilizes the CPS 2.0-configured value when it doesn't have a connection to the XRC (such as when the repeater is operating in Conventional Fallback mode).

For Capacity Plus–Single-Site and Capacity Plus–Multi-Site, the SIT should be set greater than the longest hang timer to avoid the possibility of missing the Capacity Plus–Single-Site Status CSBK transmitted at the end of a call. This ensures that the radio moves to either the rest channel or to another active call of interest in the most efficient way possible.

Table 10: Range

Maximum	Minimum	Increment
7000 ms	1000 ms	500 ms

NOTE:
This feature is disabled if Repeater Mode is set to Analog.

This feature is supported in Digital mode only.

2.4.1.2
Radio Alias

Sets an alias for the radio.

When the radio is turn on, this alias shows up as the welcome text, if the Welcome Image on page 99 is not used. The user may enter up to a maximum of 16 characters. Valid characters are alphanumerics, spaces and special characters. This is a radio-wide feature.

NOTE:
This feature is not applicable for SL Series Commercial radios.

To preserve the current value of this feature in the radio and ignore the archive identity feature value during cloning, see Express Cloning a Radio on page 66.

This feature is supported in Digital mode only.

2.4.1.3
Radio ID

Sets an individual ID that uniquely identifies the radio.

This ID is used by other calling radios when addressing the radio, for instance, when making a private call or sending a text message. In the IP Site Connect system, this ID is used to uniquely identify the IP Site peers and the IP Site masters. For a radio that is used as an IP data gateway control station, it is recommended that the Radio ID be set to 16448250 as this number translates to an easy-to-remember radio air interface network IP of 12.250.250.250. If multiple IP data gateway control stations are required in the system, they can be assigned alternative numbers so long as the numbers are unique to each of them. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
16776415 (for Non-Capacity Plus system), 65535 (for Capacity Plus - Single Site and Multi-Site System)	1	1

NOTE:
To preserve the current value of this feature in the radio and ignore the archive identity feature value during cloning, see Express Cloning a Radio on page 66.

This feature is supported in Digital mode only.

2.4.1.4
GNSS

Global Navigation Satellite System (GNSS) is a satellite navigation system that is used to determine a radio's precise location.

This feature allows the dispatcher to monitor a radio's current position. The required GNSS hardware is built into the radio on GNSS equipped models.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

This feature is available only for GNSS models.

2.4.1.5
GNSS

This drop-down list allows you to choose the global navigation satellite system for the radio.

The possible choices depend on the GNSS hardware available in the radio. The choices may be a combination of GNSS, GLONASS, Beidou, Galileo, and QZSS (in that order and separated by

slashes). If there are two chips in the radio that supports those combinations, you may have GNSS/GLONASS, Beidou/QZSS as the choices.

NOTE:
This feature is grayed out when GNSS is unchecked.

2.4.1.6 Private Calls

This field allows you to enable or disable the initiation of a Private Call on a digital channel.

When disabled, a prohibit tone will sound when the user tries to initiate a Private Call. You can continue to receive and respond to Private Calls, and is still able to initiate Call Alerts. This is a radio-wide feature.

NOTE:
This feature is supported in Digital mode only.

This feature is not applicable for Capacity Max system.

2.4.1.7 Site Search Timer (sec)

This field allows you to adjust the value of the Site Search Timer.

The timer begins immediately after an Active Site Search has identified the nearest available site, and allows a period of time for you to use the Site Lock feature, or to repeat the Active Site Search to find the next available site. When the timer expires, the radio reverts back to auto roam if the Site Lock feature is disabled. This is a radio-wide feature.

Table 11: Range

Maximum	Minimum	Increment
255 sec	0 sec	1 sec

NOTE:
This feature is supported in Digital mode only.

2.4.1.8 ARS Initialization Delay (min)

This field allows you to configure the duration of the random range delay before an Automatic Registration Service (ARS) registration.

When many radios, for instance a hundred radios, power up at the same time, channel collisions will happen and it will take a long time for all the radios to register successfully. The user can avoid this by configuring different delay durations for the radios. For example, setting the timer to 0 minute corresponds to the radio using a random timer from 5 to 15 seconds to send the ARS. Setting the timer to 30 minutes corresponds to the radio using a random timer from 5 seconds to 30 minutes to send the

ARS. Setting the timer to 60 minutes corresponds to the radio using a random timer from 5 seconds to 60 minutes to send the ARS, and so forth. This is a radio-wide feature.

Table 12: Range

Maximum	Minimum	Increment
240 min	0 min	30 min

NOTE:
This feature is supported in Digital Mode only.

ARS is not supported for CP100d, CP200d, CM200d, CM300d, DEP 250, and DEP 450 radio models.

2.4.1.9
TX Preamble Duration (ms)

Preamble is a string of bits added in front of a data message or control message (Text Messaging, Location Messaging, Registration, Radio Check, Private Call, and other data message or control message) before transmission.

This preamble prolongs the message in order to reduce the chances of the message being missed by the receiving radio. The Transmit (TX) Preamble Duration sets the duration of the preamble. This duration needs to be increased as the number of scan members increases on the target radio (refer to the *MOTOTRBO System Planner* for guidance on how to set the duration). This value can be increased in all the transmitting radios if scanning radios are often missing data messages. However, a larger preamble occupies the channel longer. Therefore, increasing the Transmit Preamble duration will increase the success rate of data received while other radios are scanning, but will decrease the amount of data that can be transmitted on the channel. This is a radio-wide feature.

Table 13: Range

Maximum	Minimum	Increment
8640 ms	0 ms	60 ms

NOTE:
The TX Preamble feature is disabled if the duration is set to 0.

If the Portable is configured in single site conventional repeat mode and Battery Saver is disabled, this feature should not be set to 0. This recommendation applies if MTR base radios/ repeaters are being used in single site conventional system.

This feature is supported in Digital mode only.

2.4.1.10
Voice Pretime Duration

This field allows you to configure call setup duration by allowing you to add a pretime burst transmission to the call.

This duration allows radios, with Scan enabled, enough time to connect to the channel before audio is transmitted.

The following table lists the recommended **Voice Pretime Duration** setting:

Table 14: Recommended Voice Pretime Duration

Radios with Scan Enabled	Voice PreTime Duration (ms)	
	TPT Disabled	Direct Mode/Repeater Mode (TPT Enabled)
1	n/a	n/a
2	120	60
3	240	180
4	300	240
5	420	360
6	540	480
7	660	600
8	720	660
9	840	780
10	960	900
11	1080	1020
12	1260	1200
13	1440	1380
14	1560	1500
15	1740	1680
16	1860	1800
16	2280	2220

NOTE:

- The Talk Permit Tone on page 141 (TPT) is delayed.
- Motorola Solutions recommends to get experts advise before configuring this field. The modification of this field impacts the performance of ongoing calls.

Table 15: Range

Maximum	Minimum	Increment
2400 ms	0 ms	60 ms

2.4.1.11

TX Inhibit Quick Key Override

This feature allows transmission to be sent on a busy channel.

If **TX Inhibit Quick Key Override** is enabled, double press the **PTT** button within 1 second to send transmission on a busy channel.

NOTE:
This feature is supported in Analog mode only.

2.4.1.12
Monitor Type

This field allows you to set the Monitor mode to either Open Squelch or Silent.

You can access the Monitor feature by assigning a short or long programmable button press (Monitor (Portable only) or Permanent Monitor) or assigning and asserting a GPIO pin (Monitor (Mobile only)) to its active level. This is a radio-wide feature.

Open Squelch
Radio unmutes regardless of whether there is any channel activity. If no activity is present, noise is heard through the speaker.

Silent
Radio unmutes only if there is channel activity.

NOTE:
If the Monitor feature is activated by pressing the button or triggering the pin assigned to the Monitor option, the PL Type feature in Scan will be overridden, if PL Type is enabled.

This feature is supported in Analog mode only.

2.4.1.13
Min Speaker Volume Level (dB)

This field allows you to set the minimum audio level that the radio produces regardless of the volume selector level on the radio.

The minimum level prevents you from turning the radio volume level too low and forgetting to turn it back up, thus missing calls. This is a radio-wide feature.

Table 16: MOTOTRBO 2.0 Range:

Maximum	Minimum	Increment
12 or Muted (Portable), 18 or Muted (Mobile) dB	-30 (Portable), -39 (Mobile) dB	1 dB

NOTE:
The maximum and minimum range showed in these tables vary by radio models. The range displayed for the model may be different than what is shown above.

Selecting Muted mutes the radio speaker when the audio level is adjusted to the minimum.

This feature overrides any value set in Volume Offset (dB) on page 141 if set to any value other than Muted.

2.4.1.14
Min Speaker Volume Muted

This field allows you to set the minimum audio level that the radio produces regardless of the volume selector level on the radio.

2.4.1.15
Unlink Monitor

This field allows you to set the Permanent Monitor feature to ignore the Admit Criteria setting.

If Admit Criteria is set to Channel Free, you must enable Unlink Monitor for Permanent Monitor to function. If Admit Criteria is set to Always, Unlink Monitor has no effect.

2.4.1.16

Off-Hook Disables PL

If enabled, the Mobile unmutes to all channel activity when the microphone is off the hook.

There will be no checking for Private Line (PL). This is a radio-wide feature.

NOTE:
Enabling this feature overrides the Admit Criteria feature when the microphone is off the hook, if the Admit Criteria is set to Always. Enabling this feature also overrides the PL Type feature in Scan when the microphone is off the hook, if PL Type is enabled.

This feature is supported in Analog mode only.

2.4.1.17

Group Call Hang Time (ms)

Sets the duration the repeater reserves the channel after the end of a group call transmission.

During this time, only members of the Group that the channel is reserved for can transmit. This produces smoother conversation.

Range:

Maximum	Minimum	Increment
7000 ms	0 ms	500 ms

NOTE:
Do not set this value to 0 ms for repeaters in Capacity Plus–Single-Site and Capacity Plus–Multi-Site systems.

This feature is disabled if Repeater Mode is set to Analog.

The value of this feature must be equal to or less than the Subscriber Inactivity Timer (SIT) (ms) on page 101 value.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.4.1.18

Private Call Hang Time (ms)

Sets the duration the repeater reserves the channel after the end of a private call transmission.

During this time, only the individuals involved in the call that the channel is reserved for can transmit. This produces smoother conversation. The user may want to set a longer hang time than the Group Call Hang Time as an individual tends to take a longer time to reply (talkback) in a Private Call.

Range:

Maximum	Minimum	Increment
7000 ms	0 ms	500 ms

NOTE:
Do not set this value to 0 ms for repeaters in Capacity Plus–Single-Site and Capacity Plus–Multi-Site systems.

This feature is disabled if Repeater Mode is set to Analog.

The value of this feature must be equal to or less than the Subscriber Inactivity Timer (SIT) (ms) on page 101 value.

This feature is supported in Digital mode only.

2.4.1.19
Emergency Call Hang Time (ms)

Sets the duration the repeater reserves the channel after the end of an emergency call transmission.

During this time, only members of the Group that the channel is reserved for can transmit. This produces smoother conversation. The user may want to set the longest hang time as compared to the Private and Group Call Hang Time to reserve the channel long enough to receive an emergency response.

Range:

Maximum	Minimum	Increment
7000 ms	0 ms	500 ms

NOTE:
Do not set this value to 0 ms for repeaters in Capacity Plus–Single-Site and Capacity Plus–Multi-Site systems.

This feature is disabled if Repeater Mode is set to Analog.

The value of this feature must be equal to or less than the Subscriber Inactivity Timer (SIT) (ms) on page 101 value.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.4.1.20
Talkaround Group Call Hang Time (ms)

This field allows you to set the duration during which a radio will talk back to a received call or continue a transmitted Talkaround Group Call using the previously received or previously transmitted digital group ID.

After expiration of the Talkaround Group Call Hang timer, the radio will transmit using the TX Contact Name (digital group) specified for this channel in CPS 2.0 .

Table 17: Range

Maximum	Minimum	Increment
7000 ms	0 ms	500 ms

NOTE:
This feature is supported in Digital mode only.

2.4.1.21
Talkaround Private Call Hang Time (ms)

This field allows you to set the Private Call Talkback Time for use during the talkaround operation.

This feature sets the duration the radio keeps the Talkaround Private Call setup after the user releases the Push-to-Talk (PTT) button. This is to avoid setting up the call again each time the user presses the PTT to transmit. During this time, other radios can still transmit since the channel is essentially idle.

After the hang timer expires, the radio transmits using the TX Contact Name specified for this channel in CPS 2.0 .

Table 18: Range

Maximum	Minimum	Increment
7000 ms	0 ms	500 ms

NOTE:
This feature is supported in Digital mode only.

2.4.1.22
Call Hang Time (sec)

Sets the duration the repeater will reserve the channel for after the end of an analog call transmission.

During this time, only members of the call that the channel is reserved for can transmit. This produces smoother conversation. As this hang timer is shared among all types of analog calls (Group, Private, Emergency etc.), the duration should be set following the call type that needs the longest hang time.

Range:

Maximum	Minimum	Increment
7 sec	0 sec	1 sec

NOTE:
This feature is enabled if Repeater Mode is set to Analog.

2.4.1.23
Repeat Gain (dB)

This feature is used to adjust a repeater's gain value in order to maintain uniform audio levels across channels in a multi-repeater system.

Uniform audio levels are necessary to keep the radio user from having to constantly adjust the volume levels when changing channels.

Range:

Maximum	Minimum	Increment
6.0	-6.0	0.5

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.4.1.24
Antenna Relay Delay Timer (ms)

When the repeater with a single antenna operates as a base station, this feature is used to adjust the duration it takes for switching to occur before the repeater can begin transmitting.

When the Repeater is initiated to begin a transmission, it asserts the GPIO pin (Antenna Relay) to its active level on the accessory port, and waits for this timer to expire before beginning to transmit. The repeater switches the antenna back to the RX port and sets the GPIO pin to its inactive state after it stops transmitting. The duration set depends on the type of accessory switch, or relay, being used to switch the antenna between ports. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
375 ms	0 ms	25 ms

NOTE:
The Antenna Relay pin selection is assigned to a MOTOTRBO Repeater programmable output pin (Pin #19, #20, #21, #22, or #24), or a MTR3000 base radio/repeater programmable output pin (Pin #4, #5, #15, #21, #24, #8 and #25 or #10 and #12), and is triggered by the base radio/repeater. The base radio/repeater transmits if this pin is active and after the Antenna Relay Delay Timer expires.

For MTR3000 base radio/repeater, the Antenna Relay pin selection (X371BA), which uses the P10 backplane connector (not the J7), still requires a J7 GPIO to be mapped to the antenna relay function in order for the X371BA option to become operational.

This feature is applicable to MOTOTRBO Conventional and MTR3000 base radio/repeater and SLR Series repeaters in Analog mode only.

2.4.1.25
Digital/Band 1 TX Low Power (W)

Sets the Band 1 Transmit (TX) Low Power value of a Mobile or Repeater.

This is a radio-wide feature.

NOTE:
This value must be lower than or equal to the Digital/Band 1 TX High Power (W) on page 110 value.

The range of power values is model dependent.

2.4.1.26
Digital/Band 1 TX High Power (W)

Sets the Band 1 Transmit (TX) High Power value of a Mobile or Repeater.

This is a radio-wide feature.

NOTE:
This value must be greater than or equal to the Digital/Band 1 TX Low Power (W) on page 110 value.

The range of power values is model dependent.

2.4.1.27
Analog/Band 2 TX Low Power (W)

Sets the 900 MHz radio transmit (TX) low power value of a mobile.

This is a radio-wide feature.

NOTE:
This value must be lower than or equal to the Analog/Band 2 TX High Power (W) on page 111 value.

The range of power values is model dependent.

This feature is applicable to MOTOTRBO conventional mobile and repeater 800/900 MHzonly.

2.4.1.28

Analog/Band 2 TX High Power (W)

Sets the 900 MHz radio transmit (TX) high power value of a mobile.

This is a radio-wide feature.

NOTE:
This value must be greater than or equal to the Analog/Band 2 TX Low Power (W) on page 110 value.

The range of power values is model dependent.

This feature is applicable to MOTOTRBO conventional mobile and repeater 800/900 MHz only.

2.4.1.29

Digital TX Low Power (W) (SL Series Mid-Tier)

Sets the Transmit (TX) Low Power value for SL Series Mid-Tier radios. This is a radio-wide feature.

NOTE:
This value must be greater than or equal to the Digital TX High Power (W) (SL Series Mid-Tier) on page 111 value.

The range of power values is model dependent.

2.4.1.30

Digital TX High Power (W) (SL Series Mid-Tier) Note

If the MOTOTRBO Tuner has been used to re-tune the TX High Power (W) (SL Series Mid-Tier) to 2.5W, then the 3.0* settings in the TX High Power (W) (SL Series Mid-Tier) corresponds to the 2.5W instead of 3.0W.

2.4.1.31

Digital TX High Power (W) (SL Series Mid-Tier)

Sets the Transmit (TX) High Power value for SL Series Mid-Tier radios. This is a radio-wide feature.

NOTE:
This value must be greater than or equal to the Digital TX Low Power (W) (SL Series Mid-Tier) on page 111.

The range of power values is model dependent.

In the factory default state, the power level 3.0* corresponds to 3.0W. If the MOTOTRBO Tuner is used to re-tune the High Power to 2.5W, then the 3.0* power level corresponds to 2.5W instead of 3.0W.

2.4.1.32

Analog TX Low Power (W) (SL Series Mid-Tier)

Sets the Transmit (TX) Low Power value for SL Series Mid-Tier radios. This is a radio-wide feature.

NOTE: This value must be lower than or equal to the Analog TX Low Power (W) (SL Series Mid-Tier) on page 111 value.

2.4.1.33
Analog TX High Power (W) (SL Series Mid-Tier)

Sets the Transmit (TX) High Power value for SL Series Mid-Tier radios. This is a radio-wide feature.

NOTE: This value must be greater than or equal to the Analog TX Low Power (W) (SL Series Mid-Tier) on page 111 value.

2.4.1.34
Band 1 DC TX Power (W)

Configures a repeater-wide Band 1 DC TX Power Level.

This feature allows the station to transmit at a different output power when operating from a DC source. When DC power is considered the backup power source, then the chosen value for DC TX Power is typically lower than the Digital/Band 1 TX Low Power (W) on page 110 and/or Digital/Band 1 TX High Power (W) on page 110 if longer runtimes are desired should the primary AC power source be interrupted.

NOTE:
This feature must always be less than or equal to the value in Band 1 TX High Power (W).

2.4.1.35
Band 2 DC TX Power (W)

Configures a repeater-wide DC Tx Power Level for the 900 MHz band.

This feature allows the station to transmit at a different output power when operating from a DC source. When DC power is considered the backup power source, then the entered value for DC TX Power is typically lower than the Analog/Band 2 TX Low Power (W) on page 110 and/or Analog/Band 2 TX High Power (W) on page 111 if longer runtimes are desired should the primary AC power source be interrupted.

NOTE:
This feature value must always be less than or equal to the value in Band 2 TX High Power (W).

2.4.1.36
12V DC TX Power (W)

This field allows the user to set the 12V DC transmit power in watts.

This is a radio wide feature.

NOTE: The range of power values is radio dependent.

2.4.1.37
24V DC TX Power (W)

This field allows the user to set the 24V DC transmit power in watts.

This is a radio wide feature.

NOTE: The range of power values is radio dependent.

2.4.1.38
Disable All LEDs

This field allows you to turn off all LEDs during radio power-up (except for repeater) and while radio is in use.

All LEDs are disabled including the backlight and power up LED, regardless of the backlight setting. This is a radio-wide feature.

NOTE:
For SL Series Mid-Tier and MOTOTRBO Ion, enabling this checkbox only disables all LEDs. It does not turn off the keypad backlight.

2.4.1.39
Backup Repeater Connected

When disabled, the Repeater is operating in the standalone mode.

This feature should be enabled when the Repeater is intentionally operating as the primary Repeater in a redundant Repeater setup. In this setup, the secondary Repeater is operating in the standalone mode. This is a radio-wide feature.

NOTE:
This feature is applicable to 32MB Repeaters only. Please refer to the MOTOTRBO Repeater Basic Service Manual for the Repeater model specification.

2.4.1.40
Sign In/Sign Out

This field allows you to sign in or sign out of a third-party server from the radio with the user's sign-in ID.

This feature shows an indication whether you has signed into the third-party server or not on the home screen of the radio. The sign-in information is kept until the radio powers down or you signs out manually. The Sign In/ Sign Out message follows the standard protocol of ARS User Register/ Deregister.

2.4.1.41
Secure Sign In ID

This check box allows you to specify whether or not the Sign In ID will be handled securely, like a password.

When this check box is checked, the Sign In ID will not be shown on the Home Screen and will be partially hidden when the entering the Sign In ID.

NOTE:
This feature is grayed out when **Sign In/Sign Out** is unchecked.

2.4.1.42
TX Caller Alias

On a radio-wide basis, the Customer Programming Software (CPS) 2.0 allows the user to select the coding format for the Caller Alias. The options are **No**, **With UTF-8** or **With UTF-16BE**. The default value is **No**.

2.4.1.43
Caller Alias

On a radio-wide basis, the Customer Programming Software (CPS) 2.0 allows the user to enter a Caller Alias. The maximum length of the radio name is 16 characters for UTF-8 format, and 13 characters for UTF-16BE format.

2.4.1.44
Edit Caller Alias

On a radio-wide basis, the Customer Programming Software (CPS) 2.0 allows the user to enable and disable the subscribers from sending Caller Alias as inband data service.

When this feature is enabled, radios can accept or modify, update, or save the **Caller Alias** through front panel. The user can select one of the following choices to edit the caller alias: **Fixed**, **Radio Menu** or **Radio Menu and Power Up**. The default value is **Fixed**.

NOTE: Edit Caller Alias is enabled when TX Caller Alias on page 113 is enabled first.

2.4.1.45
Test Mode

When **Test Mode** is enabled, the radio enters into the normal Test Mode when pressing the **side button** or **programmable button two** for five times within 10 seconds of power-up.

For Portable only, the radio enters into the ART chamber Test Mode when the side button 1 is pressed for five times within 10 seconds of power-up.

2.4.1.46
Scrambling Frequency

This field allows you to select the required scrambling frequency.

The following are the available choices:

- 3.29 kHz
- 3.39 kHz
- 3.50 kHz

2.4.1.47
Battery Type

For XiR C1200, XiR C2620, and XiR C2660 radio models, battery type cannot be detected by the radio automatically.

The user will have to select the battery type via radio menu or, for non-display radio models, via programmable button. The radio comes with battery type programmable button pre-configured, as well as the Voice Announcement enabled and Motorola pre-recorded Li-Ion Battery Selected or NiMH Battery Selected voice file pre-mapped. Selected battery type is preserved by the radio through power cycle and firmware upgrades. Therefore, the user only needs to select the battery type when the user changes to a different battery type. Li-Ion is the default battery type. Li-Ion will remain the selected battery type if user does not select a new battery type. Selecting the wrong battery type affects the accuracy of the battery capacity indicator and the low battery status of the radio. This drop-down list allows the user to configure the battery type.

Li-Ion
If the user is using a Li-Ion battery, select this option to allow the radio to detect the battery type.

NiMH

If the user is using a NiMH battery, select this option to allow the radio to detect the battery type.

NOTE:

- If a R02.07.xx.xxxx firmware supports both the NNTN8560 and PMNN4489 batteries on MOTOTRBO 2.0 and MOTOTRBO 2.5 radios. Both batteries have been certified for use on both MOTOTRBO 2.0 and MOTOTRBO 2.5 radios.
- For R02.60.xx firmware, the NNTN8560 and PMNN4489 batteries were not cross-certified for MOTOTRBO 2.0 and MOTOTRBO 2.5 radios. Therefore, NNTN8560 is only compatible with MOTOTRBO 2.5 radios and PMNN4489 battery is only compatible with MOTOTRBO 2.0 radios.

2.4.1.48
Home Channel Zone

This drop-down list allows you to select the Zone from a list of Zone Sets that will be used for the Home Channel.

The available options are **None** or any of the available **Zone** Sets.

NOTE:
This feature is applicable to MOTOTRBO 2.0 radios only.

2.4.1.49
Home Channel

This drop-down list allows you to choose a channel as the Home Channel. The Home Channel is the channel that you use most of the time.

The radio plays a reminder when the user has been away from the Home Channel for too long, based on the Home Channel Reminder Interval (min). The radio emits a tone when playing the reminder. The radio then tells you that the current channel is a non-home channel by using the current selected announcement mechanism.

This feature cannot be used with inhibited or Option Board Trunking channels. The options for this feature are None and all personalities that are not in the Channel Pool grid.

NOTE:

- This feature is applicable to MOTOTRBO 2.0 radios only.

2.4.1.50
Home Channel Reminder Interval (min)

This field allows the user to set the length of the radio's waiting time after each reminder, before the radio plays another reminder telling the user that the current selected radio channel is not the Home Channel.

NOTE:

- This feature is applicable to MOTOTRBO 2.0 radios only.

2.4.1.51
Antenna Selection

This field allows the user to select the antenna type used by the radio.

The following antenna types are supported:

- **Stubby**
- **Whip 1 (136MHz-144MHz)**

- **Whip 2 (144MHz-156MHz)**
- **Whip 3 (156MHz-174MHz)**

NOTE:

- User must ensure that the antenna selected in this field must match with the antenna attached to the radio. If mismatched, user can expect a degraded TX/RX performance.
- This selection is only applicable for selected radios.

2.4.1.52
Illegal Carrier Timer

This feature is used to set the illegal carrier timer.

Range:

Maximum	Minimum	Increment
250 sec	1 sec	1 sec

2.4.1.53
Illegal Carrier RSSI Threshold

This field allows the user to set the illegal carrier RSSI (Received Signal Strength Indication) Threshold.

Range:

Maximum	Minimum	Increment
-40 dBm	-130 dBm	1 dBm

2.4.1.54
Illegal Carrier Feature Enable

This check box allows the user to enable the illegal carrier feature.

2.4.1.55
Radio Keep Alive

Allows the user to enable/disable the keep alive signal without interfering with voice communication. This is a radio-wide feature.

NOTE:
This feature is only applicable for Single Site mode.

This feature depends on the Digital feature.

2.4.1.56
Codeplug Password

This feature sets a password for the current codeplug.

The password prompt appears when users attempt to do any of these features: read, write, clone, or remote update. This is a radio-wide feature.

Codeplug Password Deprecation Notice

Starting M2021.01 release, Codeplug Password feature is deprecated for selected radio and repeater models. However, this feature is remained active for the archived file Codeplug Password.

You are recommended to use the TLS-PSK Authentication feature for these radios and repeaters. The Codeplug Password feature is remained to facilitate the transition to TLS-PSK Authentication, but Motorola Solutions is no longer providing support for Codeplug Password feature. Codeplug Password could be removed in a future release.

The deprecation affects you if you are using Codeplug Password to set password for the current radio or repeater codeplug.

TLS-PSK Authentication feature is introduced in R2.10.05 release. The feature is available for selected radio and repeater models. TLS-PSK Authentication ensures an enhanced security communication between radio or repeater and customer programming tool. For more information, refer to New Features for MOTOTRBO Release 2.10.5 training service.

Table 19: Applicable Radio and Repeater Models

Regions	Radios		Repeaters
NA	XPR 7000/7000e series	XPR 3000/3000e series	SLR 1000 series
	XPR 7000/7000e IS series	SL3500e	SLR 5700 series
	XPR 5000/5000e series	XPR 2500	SLR 8000 series
	SL 7000/7000e series		
LACR	DGP 8000/8000e/ 5000/5000e series	DEP 500/500e series	SLR 1000 series
		SL500e	SLR 5100 series
	DGM 8000/8000e/ 5000/5000e series	DEM 500	SLR 8000 series
	DGP 8050/8050e elite		
	SL 8000/8000e series		
EMEA	DP 4000/4000e series	SL2600	SLR 1000 series
	DM 4000/4000e series	DP2000/DP2000e	SLR 5500 series
	DP 3000/3000e series	DM2600	SLR 8000 series
	SL 4000/4000e series		
APAC	XiR P8000/8000i series and CP/GP derivatives	SL2M	SLR 1000 Series
		XiR P6000/6000i series	SLR 5300 series
	XiR M8000/8000i series and CM derivatives	XiR M6660	SLR 8000 series
	XiR E8600/E8600i series		
	SL1K and SL2K		

Setting Password for Codeplug

1 Enter up to a maximum of eight characters. Valid characters are alphanumerics, spaces, and special characters. Trailing spaces are ignored. The password is masked by solid dots.

2 Save the changes and close the codeplug file. In addition, if the user wants to set a password on the radio, write the file to the radio. The password prompt appears the next time the user tries to open this codeplug file or read/write from/to the radio.

Removing Previously Set Password from the Codeplug

1 Clear the Codeplug Password text box.

2 Save the changes. If the user wants to clear the password on the radio, write the file to the radio, at which time they will be prompted for their current password.

3 Close the archived file. The user will not be prompted the next time they try to open this file or read/write from/to the radio.

NOTE:

- There is no known method of retrieving a lost or forgotten password. The radio can only be recovered using the Device Recover feature to load the default codeplug into the radio.
- Password in the archive is validated while opening an archive.
- After the user has performed a read operation using a valid master password, this feature is set to the default value. This dependency is only applicable when Check for Password is visible.
- The user is not allowed to input all space as password.
- Password is case-sensitive.

2.4.1.57
Check for Password

This drop-down list allows the user to select the password policy for the codeplug password.

Choices are None, Read Only, and Read/Write.

NOTE:
This drop-down list is applicable for mobile and portable radios only.

This drop-down list is greyed out and set to None when Codeplug Password is blank.

The default value for this drop-down list is Read Only when Codeplug Password is not blank.

If the user selects Read/Write, password will be required during read, write, clone, recover, and convert operations.

2.4.1.58
Maximum Check for Password Attempts

This configuration allows the user to specify how many attempts to enter the codeplug password is allowed by the radio before the radio is locked.

NOTE:
This feature is greyed out and set to the default value when Check for Password is set to None or Read Only.

2.4.1.59
Radio Certification Type

This field allows you to choose the Radio Certification. The choices are **FM**, **None**, and **UL**.

2.4.1.60
Respond Caller

Choices are **0 (False)** and **1 (True)**.

If **1 (True)** is selected, the radio follows the MOTOTRBO radios behavior of responding with a private call.

If **0 (False)**, pressing the **PTT button** causes the radio goes back to home screen and start a UKP call.

2.4.1.61
Radio Language Display

Allow the user to select the default language for the radio display.

Applicable to full keypad and light keypad display models for MOTOTRBO 2.0 and MOTOTRBO 2.0 LIGHT radios.

2.4.1.62
Digital or Analog BSI

This field allows the user to configure the BSI transmission in either Digital or Analog format.

Select 0 for Analog BSI or 1 for Digital BSI. The default value is 0.

2.4.1.63
Mute Timer (hour)

This feature enables privacy when the user enters into a quiet environment (for example, an important meeting) and the user does not expect the radio to play out any audibles such as over the air (OTA) voice, tone, voice announcements, or Text to Speech announcements.

The mute mode feature provides the functionality to address such scenarios.

The following selections are supported:

Table 20: Range

Range	Increments
Minimum	0.5 hours
Maximum	6 hours
Increment	0.5 hours

2.4.1.64
Face Down Mute Enable

This feature determines if the face down detection function is enabled or not.

When the checkbox is enabled, the radio enters Mute Mode when radio is switched to face-down position and exit mute mode when radio leaves face-down position. This feature is for non-display radio models.

2.4.1.65
Radio On Indicator

This feature enables the radio to control the LED indicator.

When enabled, the green LED on the radio periodically blinks after power up to indicate that the radio is on.

2.4.1.66
Remote Radio Control

This feature enables an admin to turn the Wi-Fi on or off remotely through a supervisory radio.

NOTE: Only an admin can operate the supervisory radio.

2.4.1.67
Virtual Channel Stop

This field allows you to enable or disable **Virtual Channel Stop** feature.

If **Virtual Channel Stop** is enabled, the radio stops proceeding beyond the first or the last channel, and a tone is heard.

2.4.2
Battery (General Settings)

The **Battery** section of the General set contains the following fields:

2.4.2.1
Battery

This check box allows the user to indicate whether or not the battery is supposed to be connected.

NOTE:
If the user is operating under a single DC source, the user must check this box and DC Operation Only. This ensures theLow Battery Alarm to be displayed when the battery is nearing end of usefulness.

2.4.2.2
DC System Nominal

This field allows the user to choose the nominal voltage for the radio. The choices are 12V and 24 V.

2.4.2.3
DC Operation Only

This feature enables or disables the AC Power Alarm.

This feature should be enabled when the repeater is intentionally operating in DC (Direct Current) mode. This is a radio-wide setting.

NOTE:
When DC Operation Only is enabled, DC Primary Source, Battery Charging and Output Charger Voltage is disabled (grayed out).

This feature is applicable to MTR3000 and MOTOTRBO SLR Series repeater releases only.

2.4.2.4
DC Primary Source

This check box allows the user to set the DC port as the primary power source.

NOTE:
This check box is disabled if the user enables DC Operation Only.

To avoid the short battery charge cycle loop between 10.5 V and 11.0 V, the user cannot enable DC Primary Source and Battery Charging on page 121 at the same time.

2.4.2.5
Battery Charging

This check box allows the user to enable or disable battery charging.

The user can then set the Output Charger Voltage (V) accordingly. This feature is unchecked by default. In MOTOTRBO SLR Series repeaters, the charge type is trickle charge.

NOTE:
This check box is disabled if the user enables DC Operation Only.

To avoid the short battery charge cycle loop between 10.5 V and 11.0 V, the user cannot enable DC Primary Source and Battery Charging on page 121 at the same time.

2.4.2.6
Output Charger Voltage (V)

This configuration allows the user to configure the Output Charger Voltage (V) value.

Range:

Maximum	Minimum	Increment
15.5	0.0	0.1

NOTE:
This check box is disabled if the user enables DC Operation Only.

2.4.2.7
Output Charger Voltage 12V (V)

This configuration allows the user to configure the Output Charger Voltage 12V (V) value.

Range :

Maximun	Minimum	Increment
14.2	13.5	0.1

2.4.2.8
Output Charger Voltage 24V (V)

This configuration allows the user to configure the Output Charger Voltage 24V (V) value.

2.4.3
Alarm Type (General Settings)

The **Alarm Type** section of the General set contains the following fields:

2.4.3.1
Reference Clock Source Type

This drop-down list allows the user to select reference clock source type.

The choices are Internal Only, External Only and Internal Fallback.

NOTE:
This drop-down list is only available for MOTOTRBO SLR Series repeaters only.

2.4.3.2
External Clock Frequency

This drop-down list allows the user to select external clock frequency, the choices of 5MHz and 10MHz .

NOTE:
This drop-down list is enabled if Reference Clock Source Type is set to External Only or Internal Fallback.

This drop-down list is only available for MOTOTRBO SLR Series repeaters only.

2.4.3.3
RF Power Control Alarm

This drop-down list allows the user to select alarm type for PA power control alarm.

The choices are Major, Minor, and Informational. This alarm is triggered when transmit output power is higher than set output power or not zero when de-keyed.

NOTE:

- This drop-down list is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the *System Planner*.

2.4.3.4
Power Unleveled Alarm

This drop-down list allows the user to select alarm type for power unleveled alarm.

The choices are Major, Minor, and Informational. This alarm is triggered when PA output power is more than 3dB below the set output power and no Fan, Temperature, Voltage, or VSWR alarms are present.

NOTE:

- This drop-down list is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the *System Planner*.

2.4.3.5
Modem PA Alarm

This drop-down list allows the user to select alarm type for modem PA alarm.

The choices are Major, Minor, and Informational. This alarm is triggered when Current draw of modem board is outside of specification.

NOTE:

- This drop-down list is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the *System Planner*.

2.4.3.6
Temperature Alarm

This drop-down list allows the user to select alarm type for modem PA Temperature alarm.

The choices of Major, Minor, and Informational.

NOTE:

- This drop-down list is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the *System Planner*.

2.4.3.7
Power Roll-back Alarm (2dB)

This drop-down list allows the user to select alarm type for Power Roll-back Alarm (2dB).

The choices are Major, Minor, and Informational. This alarm is triggered when PA output power is between 2dB to 3dB below the set output power, at least one of the following "primary" alarms also present: any Fan Alarm, any Temp Alarm, Modem Voltage Alarm, VSWR Minor Alarm, or VSWR Major Alarm.

NOTE:

- This drop-down list is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the *System Planner*.

2.4.3.8
Power Roll-back Alarm (3dB)

This drop-down list allows the user to select alarm type for Power Roll-back Alarm (3dB).

The choices are Major, Minor, and Informational. This alarm is triggered when PA output power is more than 3dB below set output power, at least one of the following "primary" alarms is also present: any Fan Alarm, any Temp Alarm, PA Voltage Alarm, or VSWR Alarm.

NOTE:

- This drop-down list is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the *System Planner*.

2.4.3.9
VSWR Minor Alarm

This drop-down list allows the user to select alarm type for VSWR Minor alarm.

The choices are Major, Minor, and Informational. This alarm is triggered when the Voltage Standing Wave Ratio (VSWR) of the equipment the station is coupled to, is between a 3:1 to 5:1.

NOTE:

- This drop-down list is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the *System Planner*.

2.4.3.10
VSWR Major Alarm

This drop-down list allows the user to select alarm type for VSWR Major alarm.

The choices are Major, Minor, and Informational. This alarm is triggered when the Voltage Standing Wave Ratio (VSWR) of the equipment the station is coupled to, is greater than a 5:1.

NOTE:

- This drop-down list is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the *System Planner*.

2.4.3.11
PA Temp Alarm

This drop-down list allows the user to select alarm type for PA Temp alarm.

The choices are Major, Minor, and Informational. This alarm is triggered when PA temperature is outside specified limits.

NOTE:

- This drop-down list is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the *System Planner*.

2.4.3.12
PA Fan Alarm

This drop-down list allows the user to select alarm type for PA Fan alarm.

The choices are Major, Minor, and Informational. This alarm is triggered when PA fan failed.

NOTE:

- This drop-down list is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the *System Planner*.

2.4.3.13
Power Supply Fan Alarm

This drop-down list allows the user to select alarm type for Power Supply Fan alarm.

The choices are Major, Minor, and Informational. This alarm is triggered when Power Supply fan failed.

NOTE:

- This drop-down list is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the *System Planner*.

2.4.3.14
Power Supply Over Temperature Alarm

This drop-down list allows the user to select alarm type for Power Supply Over Temperature alarm.

The choices are Major, Minor, and Informational. This alarm is triggered when Power Supply temperature is outside specified limits which would allow rated power to be generated. Power supply will shut down until temperature returns to a usable level.

NOTE:

- This drop-down list is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the *System Planner*.

2.4.3.15
AC Power Alarm

This drop-down list allows the user to select alarm type for AC Power alarm.

The choices are Major, Minor, and Informational. This alarm is triggered when the AC power source has been interrupted and the station is operating on DC power.

NOTE:

- This drop-down list is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the *System Planner*.

2.4.3.16
Bad Battery Alarm

This drop-down list allows the user to select alarm type for Bad Battery alarm.

The choices are Major, Minor, and Informational. This alarm is triggered when Battery charger is unable to charge the battery.

NOTE:

- This drop-down list is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the *System Planner*.

2.4.3.17
Low Battery Alarm

This drop-down list allows the user to select alarm type for Low Battery alarm.

The choices are Major, Minor, and Informational. This alarm is triggered when battery is nearing end of usefulness. It will clear after the battery charges sufficiently.

NOTE:

- This drop-down list is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the *System Planner*.

2.4.3.18
Battery Disconnected Alarm

This drop-down list allows the user to select alarm type for Battery Disconnected alarm.

The choices are Major, Minor, and Informational. This alarm is triggered when battery is not connected properly. Will clear when battery is connected.

NOTE:

- This drop-down list is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the *System Planner*.

2.4.3.19
Modem Fan Alarm

This drop-down list allows the user to select alarm type for Modem Fan alarm.

The choices and Major, Minor, and Informational. This alarm is triggered when Modem fan failed.

NOTE:

- This drop-down list is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the *System Planner*.

2.4.3.20
Illegal Carrier Alarm

This fields allows the user to select the Illegal Carrier Alarm type.

The following types are supported:

- **Informational** (default)
- **Major**
- **Minor**

NOTE:

- This drop-down list is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the *System Planner*.

2.4.4
CWID (General Settings)

The **CWID** section of the General set contains the following fields:

2.4.4.1
ID

This ID consists of identification characters that are assigned by the local regulatory agency and are periodically transmitted in Morse Code over the air.

The user may enter up to a maximum of 44 characters. Trailing spaces are ignored. The ID's Character range is shown as below.

Name	Character
Number	0–9
Alphabet	A-Z
Space	
Quote	‘
Double Quote	“
Question Mark	?
Colon	:
Period	.
Forward Slash	/
Open parenthesis	(
Close parenthesis	)
Exclamation mark	!

NOTE:
If this feature is left blank, all the CWID features are disabled.

2.4.4.2
Tone Frequency (Hz)

Specifies the frequency at which the Continuous Wave Identification (CWID) is transmitted.

Range:

Maximum	Minimum	Increment
2000 Hz	400 Hz	200 Hz

NOTE:
This feature is disabled if the ID field is blank.

2.4.4.3
TX Interval (min)

The station will generate a Continuous Wave Identification (CWID) on certain conditions. The conditions are as follows:

- when the repeater has no other repeat audio requests (either analog or digital)
- analog or all digital hang time has finished, and
- the programmed transmission interval timer period has expired

This feature should be set to a period shorter than the Mix Mode Timer to allow the station the opportunity to send a CWID at the end of a set of user radio exchanges prior to having to send the ID mixed with analog repeat audio.

Range:

Maximum	Minimum	Increment
255 min	5 min	1 min

NOTE:
This feature is disabled if the value is set to 255.

This feature is disabled if the ID field is blank.

2.4.4.4
Configuration Bits

The configuration bits allows for future configuration requirements of the radio and to enhance the future operational capabilities of the radio if and when required.

The format of the options is a 2 digit hexadecimal number that is represented by a 8-bit binary image. For this feature, the last two bits of the configuration byte is used to tune the decode tone duration of the 5 Tone predefined signaling standards.

Option	Functionality
0	Bit 0: 0, Bit 1: 0. See Configuration byte.
1	Bit 0: 1, Bit 1: 0. See configuration byte.
2	Bit 0: 0, Bit 1: 1. See configuration byte.
3	Bit 0: 1, Bit 1: 1. See configuration byte.

NOTE:
This feature is supported in Analog mode only.

2.4.4.5
Mix Mode Timer (min)

The station will generate a Continuous Wave Identification (CWID) mixed with analog audio when the repeater is repeating analog signals or is in analog hang time and the programmed mix mode timer has expired.

This feature should be set to a period longer than the TX Interval to allow the station the opportunity to send a CWID by itself at the end of a set of user radio exchanges rather than having to send the ID mixed with analog repeat audio.

Range:

Maximum	Minimum	Increment
255 min	5 min	1 min

NOTE:
This feature is disabled by the repeater if the value is set to 255.

This feature is disabled if the ID field is blank.

This feature is not applicable to digital repeater operation as CWID will not be generated while digital repeat is in progress.

This feature is not applicable to Dynamic Mixed Mode.

2.4.4.6
Rate (WPM)

This feature is used to specify the Continuous Wave Identification (CWID) transmission rate, which is measured in words per minute.

The maximum transmission rate allowed varies across different countries and radio services. The repeater has more time to repeat audio signals when the CWID is transmitted at a higher rate.

Range:

Maximum	Minimum	Increment
30	15	5

NOTE:
This feature is disabled if the ID field is blank.

2.4.4.7
Strip PL

If enabled, Continuous Wave Identification (CWID) is transmitted without PL tone or DPL code.

NOTE:
This feature is disabled if Repeater Mode is set to Digital.

This feature is disabled if the ID field is blank.

2.4.5
Voting (General Settings)

The **Voting** section of the General set contains the following fields:

2.4.5.1
Operation Mode

This feature allows the user to configure the Operation Mode feature.

Normal Repeater
Allows the repeater to operate with both Transmitter and Receiver RF functionality without Digital Voting feature.

Analog Satellite Receiver
Limits the repeater's RF functionality to analog receive only in both voting and non-voting systems.

Digital Satellite Receiver
Limits the repeater's RF functionality to digital receive only in voting systems.

Digital Voting Repeater

Allows the repeater to operate with both transmitter and receiver RF functionality with the Digital Voting feature.

WARNING:
When changing from Analog Satellite Receiver or Digital Satellite Receiver to Normal Repeater, the MTR3000 Satellite Receiver will become disabled after power up.

The Analog Satellite Receiver option is only available for MTR3000 repeaters only.

The Digital Voting Repeater option is hidden when the Digital Voting feature is disabled.

When the user set this feature to Analog Satellite Receiver or Digital Satellite Receiver, all transmit parameters in the TX in all channels will be non-editable (greyed-out).

Setting this feature to Analog Satellite Receiver or Digital Satellite Receiver will also greyed-out the Offset (MHz), Dual Capacity Direct Mode (DCDM), and Copy buttons in all channels.

When the user sets this feature to Normal Repeater or Digital Voting Repeater, the application displays a dialog box warning the user to configure MTR3000 Satellite Receiver models as a Satellite Receiver in order to function. This dialog prompts out after the user modifies this feature only. This dependency applies to MTR3000 repeaters only.

2.4.5.2
Digital Voter Peer ID

This feature allows the user to set the Digital Voter Peer ID for a Voting Repeater (that the current satellite receiver belongs to).

This feature is used to store the Timer value at which point a call stream is selected by a Voting Repeater. The satellite receiver must be connected to a Voting Repeater via IP (either LAN or WAN). For the satellite receiver to operate correctly, this feature needs to know which voting repeater it is associate to. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
16776415	1	1

NOTE:
The value specified by this field is the distance to the corresponding voting repeater slot boundary.

This feature is not editable when Operation Mode feature is set to Normal Repeater, Analog Satellite Receiver, or Digital Voting Repeater.

2.4.5.3
Digital Voting Stability Factor

This feature allows the user to set the Digital Voting Stability factor to a satellite receiver. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
5.0	0.5	0.5

NOTE:
The default value of 0.5 only needs to be changed to a larger value when the timeslot swap occurs due to extreme environmental conditions (for example, congested network).

This feature is greyed-out when Operation Mode feature is set to Normal Repeater, Analog Satellite Receiver, or Digital Voting Repeater.

2.4.6
Audio Profile (General Settings)

The section explain the general settings of **Audio Profile**.

2.4.6.1
User Selectable Audio Profiles

User Selectable Audio Profiles (USAP) allows you to optimize the audio experience for specific environments.

You can select one environmental profile and one user preference profile at a given time. This feature is an RX-side feature. You can use audio preference profile to control an Rx-side filter. Audio Environment and audio Preference profile are both independent fields.

For Display models, you can select Environment or Preference through CPS 2.0 and Radio Menu. For Plain models, you can select Environment or Preference through CPS 2.0 only. This is a radio-wide feature and only available in Digital mode.

Interaction with Bluetooth

When bluetooth device is connected to the radio, Audio Ambience and Audio Profile menu on the radio are blocked and you are not allowed to access this feature. Audio profile and ambience will behave as default. For Plain models, you are able to select the audio ambience and audio profile and flash to radio. However, the audio profile and ambience will behave as default. Refer to the MOTOTRBO Experience #13: User Selectable Audio Profiles video to view the feature demonstration.

2.4.6.2
Intelligent Audio Response

The Intelligent Audio feature automatically adjusts the volume emitted from the radio speaker. This feature is supported in Digital mode only.

It depends on the noise in the surrounding environment, so that the radio transmission can be heard above the ambient noise. When this feature is enabled, the volume knob defines the volume floor (i.e the lowest allowable speaker volume level).

For system which utilizes the 13 W external speaker attached to a mobile radio, it may or may not be possible to place the external speaker for optimal performance of Intelligent Audio.

Disabled
Disables the Intelligent Audio Response feature. The audio volume will follow the volume knob position, but will not be automatically adjusted with ambient noise level.

Normal
The noise threshold of the intelligent audio follows the volume knob position. Once the ambient noise is above the noise threshold, the audio volume is boosted.

Refer to the MOTOTRBO Experience #1 Intelligent Audio video to view the feature demonstration.

2.4.6.3
Language

This field allows you to set the language for the audio profile.

The available selections are as follows:

- **Default**
- **Dutch**
- **Indonesian**
- **Italian**
- **Spanish**

2.4.6.4
Environment

This drop-down list allows the user to choose an audio ambience.

To use this feature, select the current environment profile for the working environment. Available choices are Default, Loud, and Work Group. For more information about USAP, refer to User Selectable Audio Profile.

Default
When this feature is set to Default, this feature is disabled. At the Rx side, when the user sets this feature as Default, the expected result is there are no difference on the audio heard. It is normal encode and decode activity.

Loud
When this feature is set to Loud, the receiver is in a high noise environment. The Noise Supressor is enabled (by default). Selecting this option boosts the Rx volume around 8dB.

Workgroup
When this feature is set to Workgroup, the receiver is in a Control Room. The AF Suppressor is enabled in the radio menu (the radio menu is disabled by default). Digital Mic AGC is disabled in the radio menu.

2.4.6.5
Preference

User preference profile allows you to optimize the receiving audio experience per user need.

The drop-down list allows you to choose the preferred audio profile. The audio profiles sound effects are distinctive from one another.

The available selections are as follows:

Default
Normal Tx and Rx audio is heard.

Level 1
DSP processes the audio with predefined filters for **Level 1**.

Level 2
DSP processes the audio with predefined filters for **Level 2**.

Level 3
DSP processes the audio with predefined filters for **Level 3**.

Treble Boost
DSP processes the audio with predefined filters for **Treble Boost**.

Mid Boost
DSP processes the audio with predefined filters for **Mid Boost**.

Bass Boost
DSP processes the audio with predefined filters for **Bass Boost**.

For more information on optimizing audio experience for specific environments refer to User Selectable Audio Profiles on page 131.

NOTE:
For acoustic safety, **Max Extra Loud Accessories Volume Level Attenuation (dB)** should be configured according to the preference audio profile setting used.

2.4.6.6
AF Suppressor

The AF Suppressor feature enables the radio to automatically suppress howling in the received audio when detected.

This gives you a better audio experience in potential acoustic feedback environment. This feature can be toggled between on and off via a short or long programmable button press (Toggle AF Suppressor).

Refer to the MOTOTRBO Experience #2: Acoustic Feedback Suppressor video to view the feature demonstration.

2.4.6.7
Noise Suppressor

The Noise Suppressor feature enables the transmitting radio to automatically suppress noise on the microphone when detected.

This gives you a better audio experience by reducing unwanted ambient sounds. It is recommended to always have this feature enabled in the transmitting radio.

The following selections are supported:

Disabled
Disables the Noise Suppressor feature.

Basic
Basic noise suppression is applied. Available to all radios.

Enhanced Auto
Advanced noise suppression is applied dynamically. In quiet environments, the noise suppression is relaxed so that the audio is more natural sounding. In noisy environments, maximum noise suppression is applied.

NOTE:
Languages that have guttural sound are impacted by noise suppression. To improve the audio quality, disable this feature.

In extremely noisy environments, noise suppressor may not effectively remove all ambient noise.

Maintaining a high S/N (speech to noise) ratio is important for the noise suppressor to be effective. You can achieve a good S/N by speaking loudly and clearly as well as by holding the radio or accessory microphone in a position that is recommended in the user manual.

2.4.6.8
Fast Noise Suppressor Training Period (sec)

The Noise Suppressor feature enables the transmitting radio to automatically suppress noise on the microphone when detected.

The following selections are supported:

- **Disabled** (This is the default value)
- **600 seconds**
- **300 seconds**
- **60 seconds**
- **30 seconds**
- **15 seconds**
- **10 seconds**
- **Continuous**

NOTE:
This feature is hidden if the Noise Suppressor for single microphone (SINC+) is not purchased.

This setting is grayed out without the value reset in Customer Programming Software (CPS) 2.0 if the Noise Suppressor for SINC+ is purchased but Noise Suppressor field is disabled.

2.4.6.9
Trill Enhancement

This check box allows you to enable or disable Trill Enhancement.

Trill Enhancement improves the voice quality for languages that have an alveolar trill sound (also known as a 'Rolling R'). Some examples of such as languages include Spanish, Italian, Finnish, Catalan, Swedish, Hungarian, Polish, Czech, Basque, Lithuanian, Arabic, and Tamil, among others. It is not recommended to enable this feature for languages that do not have an alveolar trill sound (for example, English), because it may decrease voice quality for those languages.

Refer to the MOTOTRBO Experience #14: Trill Enhancement video to view the feature demonstration.

2.4.6.10
Analog RX Audio Leveling

Rx Audio Leveling (RAL) allows a radio user to have a better audio experience when the received digital audio level is soft or too loud.

It enables the radio to automatically control the active speech level in the received audio once detected on an Rx radio. When the Analog RX Audio Leveling is enabled, the user can use the Rx Audio Leveling on the analog channels.

NOTE: This feature is supported in Analog mode only.

2.4.6.11
Digital RX Audio Leveling

Rx Audio Leveling (RAL) allows a radio user to have a better audio experience when the received digital audio level is soft or too loud.

It enables the radio to automatically control the active speech level in the received audio once detected on an Rx radio. When Digital RX Audio Leveling is enabled, the user can use the Rx Audio Leveling on the digital channels.

NOTE: This feature is supported in Digital mode only.

2.4.7
Microphone (General Settings)

The section explain the general settings of **Microphone**.

2.4.7.1
Mic Selection Rule

This field allows you to configure Mic Selection Rule.

Mic Selection Rule defines the transmit audio routing behavior when an external microphone is connected to the Portable.

Default
When an external accessory is connected to the Portable, the external microphone is always turned on. When there is no external accessory connected to the Portable, the internal microphone is always turned on. Do NOT select this option with receive only accessories.

External PTT Only
When an external accessory is connected to the Portable, the external microphone is turned on when the external microphone PTT is pressed. However, the Portable PTT button is disabled. When there is no external accessory connected to the Portable, the internal microphone is always turned on. Do NOT select this option with receive only accessories.

NOTE: This option is not applicable to some MOTOTRBO 1.0 radios operating in Connect Plus mode. Only the **Default** and **Mic Follow PTT** options are available.

Mic Follow PTT
When an external accessory is connected to the Portable, the microphone selection depends on the PTT press. The external microphone is turned on when the external microphone PTT is pressed. The internal microphone is turned on when the Portable PTT is pressed. When there is no external accessory connected to the Portable, the internal microphone is always turned on.

2.4.7.2
Mic Distortion Control

Allows the user to enable or disable the Mic Distortion Control feature.

NOTE:
This feature is applicable in Digital mode only.

2.4.7.3
Analog Mic AGC

This field allows you to configure the transmitting radio's microphone gain automatically.

AGC stands for Automatic Gain Control and is used to suppress loud audio (maximum suppression of 12 dB) or boost soft audio (maximum boost of 6 dB) to a nominal value.

NOTE:
Enabling this feature overrides the Analog Front Mic Gain feature.

It is recommended to turn this feature on.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only for all radio typesonly.

2.4.7.4
Mic AGC

This field allows you to control the transmitting radio's microphone gain automatically.

The AGC (Automatic Gain Control) is intended to provide consistent level audio for a wide range of voice levels input. AGC is used to suppress loud audio (maximum suppression of 12 dB) or boost soft audio (maximum boost of 3 dB) to a nominal value.

When the AGC is disabled, soft spoken users sound very soft to the receiving radios and naturally loud spoken users may be undesirably loud.

NOTE:
Enabling this feature overrides all the Analog or Digital Mic Gain feature

It is recommended to turn Mic AGC feature on.

On VOX-enabled channels, disabling Mic AGC and adjusting the Accessory Mic Gain (dB) (Portable) affects VOX Sensitivity.

2.4.7.5
Analog Mic Gain (dB)

This field defines the amplification of the Portable's microphone.

The audio level of the transmitting radio will be amplified by the following values. However, receiver can still adjust the speaker level. This is a radio-wide feature.

Table 21: Range

Maximum	Minimum	Increment
20 dB	-20 dB	1 dB

Table 22: Range

Maximum	Minimum	Increment
31 dB or 20 dB	0 dB or -20 dB	1 dB

Table 23: Range

Maximum	Minimum	Increment
20 dB	-18 dB	1 dB

NOTE:
Depending on the MOTOTRBO 2.0 portable radio model, the maximum value for Analog Mic Gain (dB) can be 31 or 20.

Depending on the MOTOTRBO 2.0 portable radio model, the minimum value for Analog Mic Gain (dB) can be 0 or -20.

When configuring the mic gain for MOTOTRBO Conventional radios' Intelligent Audio, the workable range is +/-3dB of default mic gain.

If the mic gain is set higher than 3dB of default mic gain, the speaker volume is higher than normal.

If mic gain is set lower than 3dB of default mic gain, the speaker volume is lower than normal.

If the mic gain is low enough (20 dB lower than default mic gain), the volume does not increase even if middle noise environment (98dB spl).

This gain value has no effect after the user enables the Analog Mic AGC feature.

2.4.7.6

Digital Mic Gain (dB)

This field defines the amplification of the Portable's microphone.

The audio level of the transmitting radio will be amplified by the following values. However, receiver can still adjust the speaker level. This is a radio-wide feature.

Table 24: Range

Maximum	Minimum	Increment
20 dB	-20 dB	1 dB

Table 25: Range

Maximum	Minimum	Increment
31 dB or 20 dB	0 dB or -20 dB	1 dB

Table 26: Range

Maximum	Minimum	Increment
20 dB	-18 dB	1 dB

NOTE:
Depending on the MOTOTRBO 2.0 portable radio model, the maximum Digital Mic Gain (dB) can be 31 or 20.

Depending on the MOTOTRBO 2.0 portable radio model, the minimum value for Digital Mic Gain (dB) can be 0 or -20.

This gain value has no effect and resets to the default value after the user enables the Digital Mic AGC feature.

When configuring the mic gain for MOTOTRBO Conventional radios' Intelligent Audio, the workable range is +/-3dB of default mic gain.

If the mic gain is set higher than 3dB of default mic gain, the speaker volume is higher than normal.

If mic gain is set lower than 3dB of default mic gain, the speaker volume is lower than normal

If the mic gain is low enough (20 dB lower than default mic gain), the volume does not increase even if middle noise environment (98dB spl).

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.4.7.7

VOX Sensitivity

This field allows you to adjust the VOX sensitivity level.

Of the six available levels, Level 1 is the most sensitive level, while level 6 is the least sensitive level. VOX sensitivity should be configured properly to avoid situations where VOX is frequently triggered unintentionally or where it is difficult to trigger VOX. Several factors should be considered when configuring this feature, such as the type of accessory used, the environment in which the radio performs, the radio user's regular speech volume, etc. Depending on the environment in which the radio is used, the VOX sensitivity level needs to be adjusted for optimal performance. Level 2 is recommended for most accessories. It is recommended that the VOX sensitivity for Lightweight

D-Style Earsets be set to Level 3 for quiet environments and Level 5 for noisy environments. This is a radio-wide feature.

Table 27: Range

Maximum	Minimum	Increment
Level 6	Level 1	1

2.4.7.8
Hot Mic Source

The Hot Microphone (Hot Mic) feature causes the radio to key up automatically for a predetermined amount of time during Remote Monitor and Emergency Alarm followed by Voice.

The Hot Mic Source feature identifies which microphone should become active (hot) during this predetermined transmission period.

Rear Accessory
Radio uses the rear accessory microphone as the source of audio for the duration of the Hot Microphone (applicable to Mobile configuration only).

Front Accessory
Radio uses the front accessory microphone as the source of audio for the duration of the Hot Microphone (applicable to Mobile configuration only).

Accessory
Hot Mic feature uses the attached accessory microphone (portable radio).

Internal
Hot Mic feature uses the internal microphone (portable radio).

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Digital mode .

2.4.8
Back Light (General Settings)

The **Back Light** section of the General set contains the following fields:

2.4.8.1
On Receiving Over-the-Air Event

This check box allows the user to enable or disable the On Receiving Over-the-Air Event feature.

When the user enables this check box, the backlight automatically turns on when the radio receives a voice call alert, text message, job ticket, missed call, or emergency alarm. When the user disables this check box, the backlight does not turn on automatically in those cases, but may still be turned on in other ways.

2.4.8.2
On User Event

This check box allows the user to enable or disable the On User Event feature.

When the user enables this check box, the backlight automatically turns on when the user changes the channel, volume, or press a keypad or programmable button on the radio. When the user disables this check box, the backlight does not turn on automatically in those cases, but may still be turned on in other ways.

2.4.8.3
Timeout Timer (Sec)

This drop-down list allows the user to choose the amount of time that the backlight remains on before being automatically turned off.

Choices are Infinity (∞), 5, 10, 15, 20, 25, 30, 40, 50, and 60 seconds.

2.4.9
Battery Saver (General Settings)

The **Battery Saver** section of the General set contains the following fields:

2.4.9.1
Preamble

This feature enables or disables the battery saver preamble.

The radio sends a preamble before each transmission to enhance the ability of receiving radios in battery saver mode to synchronize in preparation for transmissions; reducing the occurrence of late-entry. To avoid interoperability issues, it is recommended that all radios in a system share the same setting for this field. The value of this field does not affect Capacity Plus–Single-Site channels. This is a radio-wide feature.

NOTE: The Receive feature is disabled if this feature is disabled (unchecked).

2.4.9.2
Receive

Enabling this feature causes an idle radio to automatically enter battery saver mode where it places certain radio functions on standby.

After a certain duration or when there is any user button action, the radio returns to normal operation and checks the channel for incoming calls. If no calls are detected, it returns to the battery saver mode. While results vary across battery chemistry and user conditions, battery saver can deliver about a 10% improvement in battery life, but also causes a delay in response time. When this feature is enabled, it is important to note that for the transmitting radios, there will be a slight delay in call setup (in the range of milliseconds) when pressing the Push-to-Talk (PTT) button. For the receiving radios, there may be an increase in late entry due to radios in battery saver mode having less opportunity to properly synchronize. This may cause the radios to miss the initial second of some audio transmissions in poor radio frequency (RF) conditions. This, however, will not be experienced in good RF coverage. Although they are important to note, these delays are considered minor versus the 10% improved battery life, therefore it is recommended to enable battery saver mode for all radios. This is a radio-wide feature.

NOTE:
This feature is disabled if Preamble is disabled (unchecked).

This feature is disabled if Option Board Trunking is enabled (checked).

2.4.9.3
Backlight (Battery Saver)

When enabled, the Portable screen will not be displayed in any receive operation (incoming call) until any user operation is invoked (key press).

This is to save the battery energy.

NOTE:
This feature only applies when an audio accessory (wired or Bluetooth) is attached.

This feature is exited when an emergency call or alarm is triggered.

This feature is supported in Digital mode only.

This feature is applicable to SL Series radios.

2.4.10
Alerts (General Settings)

The **Alerts** section of the General set contains the following fields:

2.4.10.1
Disable All Tones

This feature you to disable all alert tones (Keypad tones, Call Ringers, Escalert, Talk Permit Tone and Channel Free Indication) except for the incoming Emergency alert tone.

This feature can be toggled on/off via a short or long programmable button press (All Alert Tones On/Off) or Tones/Alerts (Utilities Menu) feature. This is a radio-wide feature.

2.4.10.2
Escalert Tone

The radio gradually increases the volume of a repetitive alert tone (for example, a repetitive tone on an incoming call).

The alert tone volume starts from a predefined minimum volume in the radio and increases, by a constant step size, until the volume level reaches the maximum volume. This is a radio-wide feature.

NOTE:
The Disable All Tones feature must be disabled.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

For MOTOTRBO Conventional radios, this feature is available only when the Digital feature is enabled in the device.

2.4.10.3
Channel Free Indication Tone

This feature sounds an alert tone when a voice call ends.

It also sounds when the voice call is interrupted on the current channel, for example, by interruptions caused by a third radio making an impolite call or sending an emergency alarm. However, this tone does not sound if the interruption is caused by a corrupted radio signal. Voice calls include Group Call, Private Call, All Call, and Emergency Call. A voice call ends when the user of the calling radio releases the Push-To-Talk (PTT) button, regardless of hang time. This feature alerts the receiving radio that the channel is available for him/her to respond producing a smoother flow of conversation. This alert tone does not sound at the end of a Remote Monitor transmission, or during Priority Scan when the voice call ends while the radio is sampling one or more priority channels. This is a radio-wide feature.

NOTE:
The Disable All Tones feature must be disabled.

This feature is supported in Digital mode only.

2.4.10.4
Self-Test Pass Tone

This field allows you to enable or disable Self-Test Pass Alert Tone.

This is the tone that the radio sounds after it is successfully powered up. This is a radio-wide feature.

2.4.10.5
Prohibit Tone On Interrupt

This field allows you to change the behavior when a call is preempted by a priority transmission.

If this field is disabled, the prohibit tone will not be played and the transmission will be played immediately without waiting for the receiver to release the Push-to-Talk button.

2.4.10.6
Talk Permit Tone

This alert tone sounds after the Push-to-Talk (PTT) button is pressed and the radio is able to transmit on the channel.

This is to prompt you to begin speaking. This is a radio-wide feature.

Analog
This alert tone is enabled only for analog channels.

Digital
This alert tone is enabled only for digital channels.

Analog & Digital
This alert tone is enabled for both analog and digital channels.

None
This alert tone is disabled for both analog and digital channels.

NOTE:
The Disable All Tones feature must be disabled.

It is recommended to disable this feature when VOX is being used.

Disabling this feature for analog channels does not disable other tones, i.e. PTT Sidetone on MDC systems will still be heard by the user.

2.4.10.7
Volume Offset (dB)

Sets an offset level for the alert tone volume.

Setting this causes the alert tone volume level to be constantly higher, lower, or equal to the audio volume level controlled by the radio's volume knob. This is a radio-wide feature.

Table 28: Range

Maximum	Minimum	Increment
25 dB	-25 dB	1 dB

2.4.10.8
Fixed Volume

This feature allows the Alert Tones to play at half the full rated volume, regardless of the volume knob position.

Use the Volume Offset (dB) option to apply additional offsets.

2.4.10.9
RX Low Battery Interval (sec)

The Receive (RX) Low Battery tone is an alert tone that sounds when the radio's low battery threshold is reached while a call is being received, or while the radio is in idle mode.

The RX Low Battery Interval sets the interval for the generation of this tone. This is a radio-wide feature.

Table 29: Range

Maximum	Minimum	Increment
635 sec	0 sec	5 sec

NOTE:
This feature is disabled if the duration is set to 0.

2.4.10.10
Emergency Search Tone

This check box allows you to enable or disable the Emergency Search Tone.

When enabled, the radio emits a loud and distinct tone that allows other people to locate the person holding the radio. When enabled, the radio is able to specify the route of the Emergency Search Tone/incoming voice; whether to the internal speaker or the accessory speaker.

When you enable the Emergency Search Tone and the Emergency Alarm is activated, the radio emits a loud and distinct tone that allows other people to locate the person holding the radio. After the Emergency Alarm is sent successfully, the Emergency Search Tone will stop.

When you enable the Emergency Search Tone and the Emergency Alarm with Call is activated, the Emergency Search Tone will continue because the radio is still in an emergency state.

If this feature is not enabled, this routing option will not take effect by the radio and the emergency initiating subscriber will follow all the legacy emergency ergonomics indications.

NOTE:

- This feature is supported in Direct Mode, Talkaround mode, 6.25e direct mode, and repeater mode in Conventional Single Site, IP Site Connect, Capacity Plus–Single-Site, and Capacity Plus–Multi-Site.
- This feature is hidden when the user disables the Digital feature.

2.4.10.11
Emergency Search Tone Volume

This field allows you to choose the volume of the Emergency Search Tone.

Table 30: Range

Maximum	Minimum	Increment
10	1	1

NOTE:

- This feature is hidden when you disable the Digital feature.

2.4.10.12

Emergency Search Tone Speaker

This drop-down list allows you to choose whether to use the internal speaker (Radio) or the external speaker (Accessory) to play the Emergency Search Tone.

Select **Radio** if you want the internal speaker to play the Emergency Search Tone. Select **Accessory** if you want the external speaker to play the Emergency Search Tone. If you select **Accessory**, but there are no accessories attached, the radio ignores the CPS 2.0 configuration and plays out the tone/incoming voice to the internal speaker. The external speaker can be a Bluetooth speaker or another type of external speaker. When the search tone speaker is set to **Accessory** and there is more than one accessory speaker connected, the radio simply follows the existing priority rules among these different accessory speakers to route the search/incoming voice to the external speaker with the highest priority.

NOTE:

- This feature is supported in Direct Mode, Talkaround mode, 6.25e direct mode, and repeater mode in Conventional Single Site, IP Site Connect, Capacity Plus–Single-Site, and Capacity Plus–Multi-Site.
- This feature is hidden when you disable the Digital feature.
- This feature is only applicable when the Emergency Search Tone is enabled.

2.4.10.13

Emergency Alert Tone Duration (min)

This spin edit allows you to choose the sound duration of the Emergency Alert Tone before this tone is automatically silenced.

NOTE:

- This feature is hidden when you disables the Digital feature.
- This feature is applicable for MOTOTRBO 2.0 radios only.

2.4.10.14

Call Alert Tone Duration (sec)

Configures the call alert tone sound duration for the radio decoding of the digital/MDC/QCII selective call alert.

This is a radio-wide feature.

Table 31: Range

Maximum	Minimum	Increment
∞ sec	5 sec	5 sec

NOTE:
The Disable All Tones feature must be disabled.

If the Infinity (∞) option is selected, the call alert tone will continuously sound until the user cancels the call alert indication. For the 3- and 4- button radio models, you must not select the Infinity (∞) because the front buttons of the 3 and 4-button radio models cannot cancel the call alert indication.

2.4.10.15
Text Message Alert Tone Duration (min)

Sets the duration the alert tone is played when the Text Message Alert Tone (Digital Call) or Text Message Alert Tone (Capacity Plus–Single-Site) is set to Repetitive. This is a radio-wide feature.

Table 32: Range

Maximum	Minimum	Increment
∞ sec	1 min	1 min

NOTE:
The Disable All Tones feature must be disabled.

If the Infinity(∞) option is selected, the text message alert tone will continuously sound until you cancel the alert indication. For the 3- and 4- button radio models, you must not select the Infinity (∞) because the front buttons of the 3 and 4-button radio models cannot cancel the call alert indication.

This feature is supported in Digital mode only.

2.4.10.16
ARTS Tone

Indicates whether the radio sounds audible indications when a valid transmission is received.

Disabled
The radio does not sound audible indications when a valid transmission is received.

Once
The radio sounds audible indications when range status changes.

Always
The radio sounds audible indications when range status changes or radio, which is in range, receives valid transmissions.

NOTE:
This feature is disabled when Disable All Tones is enabled.

This feature is supported in Analog mode only.

2.4.10.17
Visual Indication

Displays the ARTS visual indications when range status changes or the radio is out of range.

If disabled, the radio does not display any visual indications.

NOTE:
This feature is supported in Analog mode only.

2.4.10.18
Clear Call Received

Enable this check box to use the clear call receive tone on an encrypted channel.

2.4.10.19
Channel Knob Tone

This alert tone indicates that the knob has successfully changed the channel.

NOTE:
This feature is disabled if the Disable All Tones is enabled.

2.4.11
Persistent LRRP Requests (General Settings)

The **Persistent LRRP Requests** section of the General set contains the following fields:

2.4.11.1
Save

This field allows the user to enable or disable the Save Persistent LRRP (Location Request and Response Protocol) Requests.

When enabled, all persistent LRRP requests are kept in the radio's memory. This is a radio-wide feature.

NOTE:
This feature is also available for GNSS model.

2.4.11.2
Delete

This field allows you to enable or disable the Delete Persistent LRRP (Location Request and Response Protocol) Requests.

When enabled, all persistent LRRP requests are cleared from the radio's memory, and the radio will only transmit location updates upon receiving the next persistent LRRP request. Otherwise, all the saved LRRP requests in the radio are preserved. This is a radio-wide feature.

NOTE:
This feature is also available for GNSS model.

2.4.12
Lone Worker (General Settings)

The **Lone Worker** section of the General set contains the following fields:

2.4.12.1
Response Timer (min)

This timer is part of the Lone Worker feature.

It determines how long the radio waits since the last user activity before it begins sending reminders. User activity is defined as activation of any radio button, or activation of the channel selector. This is a radio-wide feature.

Table 33: Range

Maximum	Minimum	Increment
255 min	1 min	1 min

2.4.12.2
Reminder Timer (sec)

This timer is part of the Lone Worker feature.

It determines how long the radio waits since the Response Time has expired before raising the emergency. User activity is defined as activation of any radio button, or activation of the channel selector. This is a radio-wide feature.

Table 34: Range

Maximum	Minimum	Increment
255 sec	1 sec	1 sec

2.4.12.3
Smart PTT Periodic Time (sec)

Specifies the time interval that telegrams will be sent when the PTT Keyup Mode feature is set to Smart PTT.

Range:

Maximum	Minimum	Increment
60 sec	20 sec	5 sec

NOTE:
This feature is supported in Analog mode only.

2.4.12.4
Carrier Gone Timer (sec)

Specifies the duration that the radio is not allowed to transmit after carrier is gone.

This feature is used to prevent operators currently not involved in calls from transmitting over other users who may be active on the channel, but are de-keyed with their auto-reset timers running.

Range:

Maximum	Minimum	Increment
60 sec	0 sec	1 sec

NOTE:
This feature is supported in Analog mode only.

2.4.13
Power Up (General Settings)

The **Power Up** section of the General set contains the following fields:

2.4.13.1
MDC Status

When enabled, upon powering up, the radio automatically displays the Status list menu and the selected entry is the last status acknowledged.

Else, the radio displays the home screen after powering up.

NOTE:
This feature is supported in Analog mode only.

2.4.13.2
Desired Channel Zone

Allows you to configure a desired power up channel.

2.4.13.3
Desired Channel

Specifies the channel that the radio will power up on.

The choices are Last Selected Channel and all available channels. If the Last Selected Channel option is selected, the radio will always power up on the last used channel prior to power down.

NOTE:
The value of this feature is set to the Last Selected Channel if the selected channel is deleted or the pasted value does not exist in the available choices.

2.4.14
Password and Lock (General Settings)

The **Password and Lock** section of the General set contains the following fields:

2.4.14.1
Enable (Password and Lock)

Allows the user to enable or disable the Password and Lock feature.

This feature protects the radio from unauthorized usage via a password. When enabled, the user is prompted to enter a password at radio power up. The radio will be locked for 15 minutes if three incorrect passwords are entered consecutively. After 15 minutes, the user will be prompted to enter the password again. The radio will remain locked until the correct password is entered. This is a radio-wide feature.

2.4.14.2
Password

Sets the password that the user must enter in order to use the radio functionality when the Password and Lock Enable feature is enabled.

The length of the password must be 4 characters long. The first character in the password must be a number between 0 to 9. The range for the subsequent digits is 0 to 9 for Mobile and Portable Display models. For Non-Display portable models, the user must still input the first password character (between 0 to 9) via the channel knob position, but the user must input the subsequent password characters via the side buttons (between 1 to 3). For 3- and 4-button portable radio models, the user must input all passwords via the side buttons (between 1 to 3). In general, the password range depends on the number of side buttons available on the radio. For example, if there are 3 side buttons in the portable radio model, the length of the password is 1 to 3 characters long. If there are 2 side buttons in the portable radio model, the length of the password is 1 to 2 characters long. This is a radio-wide feature.

NOTE:
This feature is available when the Enable feature is checked.

This feature filters any invalid characters and if it still has more characters than the maximum, it truncates to the maximum length allowed.

2.4.15
Front Programming Password (General Settings)

The **Front Programming Password** section of the General Settings set contains the following fields:

2.4.15.1
Mode

Configures the level of access for the Front Panel Programming (FPP) operation.

The FPP feature lets the user change certain codeplug settings directly from the radio when the CPS 2.0 is not available, e.g. when the user is on the field.

Disabled
The Front Panel Programming feature is disabled. Under this setting certain features are disabled (see Note) or assigned to a radio programmable button.

User
The user can access all options in the Menu tree as well as options assigned to the radio programmable buttons.

Dealer

The user can access the menu options from the radio once the Front Panel Programming password in entered.

NOTE:
Features disabled when Mode Option is set to **Disabled** and features enabled when Mode option is set to **User**:

- Scrambling
- Enable/Disable Power Up Tone
- Enable/Disable VOX
- Scan–Add Scan List Member
- Scan – Delete Scan List Member
- Scan – Set / Clear Priority 1.2
- Scan – Scan List Selection
- Alert Tones – Volume
- Alert Tones – Disable / Enable All Tones
- Alert Tones – Disable / Enable Talk Permit Tone
- Alert Tones – Disable / Enable Escalert
- Alert Tones – Disable / Enable Keypad Tones
- Alert Tones – Set Call Ringer per Call Type
- Toggle LED Indicators
- Backlight
- RF Power Level
- Menu Timer
- Disable / Enable Introduction Screen
- Toggle Repeater, Talk Around Mode
- Language Selection
- Analog Mic AGC
- Digital Mic AGC
- Squelch Level
- Digital UCL – Add Contact
- Digital UCL – Update Contact
- Flexible RX List

Additional features available for edit when Mode Option is set to "Dealer" once the Front Panel Programming password is entered:

- Mic Gain
- Signaling Systems
- Edit Zone
- Edit Channel
- Radio button
- Accessories button

2.4.15.2
Password

Prevents unauthorized access to programming the “Protected" codeplug parameters in Dealer Mode.

The user enters this password when accessing the “Protected" codeplug parameters. This password must always be exactly eight characters and cannot be empty. This password is not configurable from the radio and can only be changed from CPS 2.0 .

NOTE:
This feature is enabled if the Mode feature is set to Dealer.

This feature value is set to the original value when the changes that is committed is blank or invalid, i.e. the user only inputs one digit and then tabs out to commit the changes.

This feature filters any invalid characters, e.g. if the user tries to copy "101 12 1aa3bg4", it will be pasted as "10112134".

2.4.16
Delete All (General Settings)

The **Delete All** section of the General set contains the following fields:

2.4.16.1
Text Messages

The feature allows you to configure the radio to delete all Text Messages.

NOTE:
This feature is hidden when the Digital feature is disabled.

2.4.16.2
Job Tickets

Allows the user to set the radio to delete all job tickets.

NOTE:
This feature is supported in Digital mode only.

2.4.16.3
Call Log

This field allows the user to set the radio to delete all items in the call log items.

2.4.16.4
User Contacts

This field allows you to set the radio to delete all user contacts.

2.4.17
Rental Timer (General Settings)

Rental Timer feature allows the user to automatically disable a radio beyond the specified period on the timer.

The **Rental Timer** section of the General set contains the following fields:

2.4.17.1
Rental Period (Hours)

The Rental Period feature allows the user to set a desired rental timer in the radio. At the end of the expiry, the radio ceases to function until the dealer performs normal write operation with the Customer Programming Software (CPS) 2.0 to reset the rental timer.

Table 35: Range

Maximum	Minimum	Increment
999 hr	0 hr	1 hr

2.4.17.2
Rental Extension Time (Hours)

The Rental Extension Time feature allows the user to program a configurable extension period of up to 99 hours.

Table 36: Range

Maximum	Minimum	Increment
99 hr	0 hr	1 hr

The user can trigger the extension period through a specific keypad sequence on the radio.

NOTE: Each radio is permitted with only one extension.

2.4.17.3
Rental Expiry Reminder (Hours)

Rental Expiry Reminder feature allows the user to set a reminder when the rental timer is about to expire. The radio provides an audio reminder of the timer expiry. This feature triggers the reminder 9 hours before expiry and hourly reminder.

Table 37: Range

Maximum	Minimum	Increment
9 hr	0 hr	1 hr

2.4.17.4
Rental Extension Status

This feature displays whether the user requested for rental extension.

If rental extension was requested, the status displays as `Yes`. Otherwise, the status displays as `No`. The extension status is displayed in the Customer Programming Software (CPS) 2.0 after the read operation.

2.4.18
5 Tone Radio ID (General Settings)

The **5 Tone Radio ID** section of the General set contains the following fields:

2.4.18.1
U1

Configures the first digit of the 5 Tone Radio ID variable. Valid digits are 0-9, A-F.

NOTE:
This feature must not be empty.

This feature is supported in Analog mode only.

2.4.18.2
U2

Configures the second digit of the 5 Tone Radio ID variable. Valid digits are 0-9, A-F.

NOTE:
This feature is enabled when the U1 feature is set to a value.

This feature is supported in Analog mode only.

2.4.18.3
U3

Configures the third digit of the 5 Tone Radio ID variable. Valid digits are 0-9, A-F.

NOTE:
This feature is enabled when the U2 feature is set to a value.

This feature is supported in Analog mode only.

2.4.18.4
U4

Configures the fourth digit of the 5 Tone Radio ID variable. Valid digits are 0-9, A-F.

NOTE:
This feature is enabled when the U3 feature is set to a value.

This feature is supported in Analog mode only.

2.4.18.5
U5

Configures the fifth digit of the 5 Tone Radio ID variable. Valid digits are 0-9, A-F.

NOTE:
This feature is enabled when the U4 feature is set to a value.

This feature is supported in Analog mode only.

2.4.18.6
U6

Configures the sixth digit of the 5 Tone Radio ID variable. Valid digits are 0-9, A-F.

NOTE:
This feature is enabled when the U5 feature is set to a value.

This feature is supported in Analog mode only.

2.4.18.7
U7

Configures the seventh digit of the 5 Tone Radio ID variable. Valid digits are 0-9, A-F.

NOTE:
This feature is enabled when the U6 feature is set to a value.

This feature is supported in Analog mode only.

2.4.18.8
U8

Configures the eight digit of the 5 Tone Radio ID variable. Valid digits are 0-9, A-F.

NOTE:
This feature is enabled when the U7 feature is set to a value.

This feature is supported in Analog mode only.

2.5
Accessories Set

The **Accessories** set contains features related to the connector (GPIO pins) on portable or mobile radios.

The following sections contain all the supported fields:

2.5.1
General (Accessories)

The **General** section of the Accessories set contains the following fields:

2.5.1.1
Hook Type

Defines the interaction between the Auto Reset Timer and hook state change for the Mobile.

This field allows the user to take manual control of the radio when on channel, but not actively making or receiving a call. Specifically, it takes the radio into auto-reset squelch mode and overrides the auto-reset timer.

Disabled
The Hook feature is completely inactive.

Timed
The Auto Reset Timer will be started when the radio goes Off Hook (Used when the microphone is left Off Hook, e.g. on the seat beside them.)

Permanent
The Auto Reset Timer is disabled while the radio is Off Hook.

NOTE:
This feature is supported in Analog mode only.

2.5.1.2
Volume Control

If enabled, allows the volume to be controlled from both the radio and the IMPRES™ accessory (if the IMPRES accessory is attached to the radio).

Otherwise, volume is controlled only from the accessory, if the accessory supports volume control. This is a radio-wide feature.

2.5.1.3
Ignition Sense

Allows the Mobile to sense the car ignition status for the radio's power On/Off control.

This can prevent the vehicle's battery from being discharged due to possible continuous use of the radio when the engine is not running. This is a radio-wide feature.

Disable Ignition Off
The radio powers on by following the ignition sense or power button. The radio will power off by power button or Ignition Sense Auto Power Down Timer (min).

Follow Ignition Only
The radio powers on or off by following the ignition sense on/off. The radio’s power button will be ignored.

On/Off Or Ignition
The radio powers on or off by following either the power On/Off button or ignition sense.

PTT Disabled
Loss of ignition sense disables the radio's Push-to-Talk (PTT) button.

Disable Ignition Off
The radio powers on by following the ignition sense or power button. The radio will power off only by power button.

Follow Ignition Only
The radio powers on or off by following the ignition sense on/off. The radio’s power button will be ignored.

On/Off Or Ignition
The radio powers on or off by following either the power On/Off button or ignition sense.

TX Inhibit
Activates the TX Inhibit feature when the radio senses that the ignition is off. The TX Inhibit feature prevents the radio from transmitting.

2.5.1.4
Ignition Sense Auto Power Down Timer (min)

Sets the amount of minutes that the radio waits before automatically powering off. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
840 min	-0 min	1 min

2.5.1.5
Handset

Allows the user to communicate via a telephone-style handset connected to a radio's accessory port.

When the handset is lifted (i.e. 'off hook'), the radio routes the received audio to the handset. Audio can only be heard through the handset until it is placed back on the cradle. This is a radio-wide feature.

NOTE:
This feature is not applicable to MOTOTRBO conventional radios and MOTOTRBO 2.0 radios.

2.5.1.6

Analog Accessory Mic Gain (dB)

Defines the amplification of the accessory microphone of a Portable.

The audio level of the transmitting radio will be amplified by this value. The user on the receiving radio can still adjust the speaker level. This is a radio-wide feature.

MOTOTRBO Conventional Range:

Maximum	Minimum	Increment
45 dB	-30 dB	1 dB

MOTOTRBO 2.0 Range:

Maximum	Minimum	Increment
31 dB or 45 dB	0 dB or -24 dB	1 dB

MOTOTRBO Light Range:

Maximum	Minimum	Increment
20 dB	-18 dB	1 dB

NOTE:
Depending on the MOTOTRBO 2.0 portable radio model, the maximum value for Analog Accessory Mic Gain (dB) can be 31 or 45.

Depending on the MOTOTRBO 2.0 portable radio model, the minimum value for Analog Accessory Mic Gain (dB) can be 0 or -24.

This feature is disabled and resets to the default value after the user enables Analog Mic AGC.

When configuring the mic gain for MOTOTRBO Conventional radios' Intelligent Audio, the workable range is +/-3dB of default mic gain. If the mic gain is set higher than 3dB of default mic gain, user will notice that the speaker volume is higher than normal. If mic gain is set lower than 3dB of default mic gain, user will notice the speaker volume is lower than normal, and if the mic gain is low enough (20 dB lower than default mic gain), user will notice the volume does not increase even if middle noise environment (98dB spl).

For MOTOTRBO Conventional radios, the effective VOX Sensitivity level increases with higher Analog Accessory Mic Gain values and decreases with lower Analog Accessory Mic Gain values.

This feature is supported in Analog Mode only.

2.5.1.7

Digital Accessory Mic Gain (dB)

Defines the amplification of the accessory microphone of a Portable.

The audio level of the transmitting radio will be amplified by this value. The user on the receiving radio can still adjust the speaker level. This is a radio-wide feature.

MOTOTRBO Range:

Maximum	Minimum	Increment
45 dB	-30 dB	1 dB

MOTOTRBO 2.0 Range:

Maximum	Minimum	Increment
31 dB or 45 dB	0 dB or -24 dB	1 dB

MOTOTRBO Light Range:

Maximum	Minimum	Increment
20 dB	-18 dB	1 dB

NOTE:
Depending on the MOTOTRBO 2.0 portable radio model, the maximum value for Digital Accessory Mic Gain (dB) can be 31 or 45.

Depending on the MOTOTRBO 2.0 portable radio model, the minimum value for Digital Accessory Mic Gain (dB) can be 0 or -24.

This feature is disabled and resets to the default value after the user enables Digital Mic AGC.

When configuring the mic gain for MOTOTRBO Conventional radios' Intelligent Audio, the workable range is +/-3dB of default mic gain. If the mic gain is set higher than 3dB of default mic gain, user will notice that the speaker volume is higher than normal. If mic gain is set lower than 3dB of default mic gain, user will notice the speaker volume is lower than normal, and if the mic gain is low enough (20 dB lower than default mic gain), user will notice the volume does not increase even if middle noise environment (98dB spl).

The effective VOX Sensitivity level increases with higher Digital Accessory Mic Gain values and decreases with lower Digital Accessory Mic Gain values.

This feature is supported in Digital mode only.

2.5.1.8

Max Extra Loud Accessories Volume Level Attenuation (db)

This drop-down list allows you to configure the maximum volume when accessory is attached. Maximum audio level of the receiving radio will be reduced by the value of **Max Extra Loud Accessories Volume Level Attenuation (db)**.

Table 38: Range

Maximum	Minimum	Increment
0 dB	-20 dB	1 dB

Acoustic Safety

Exposure to loud noises from any source for extended periods of time may temporarily or permanently affect your hearing. The louder the radio’s volume, the less time is required before your hearing could be affected. Hearing damage from loud noise is sometimes undetectable at first and can have a cumulative effect.

To protect your hearing:

- Use the lowest volume necessary to do your job.
- Turn up the volume only if you are in noisy surroundings.
- Turn down the volume before adding headset or earpiece.
- Limit the amount of time you use headsets or earpiece at high volume.
- When using the radio without a headset or earpiece, DO NOT place the radio’s speaker directly to your ear.

- If you experience hearing discomfort, ringing in your ears, or muffled speech, you should stop listening to the radio through headset or earpiece and have your hearing checked by your doctor.

Accessories Recommended Configuration

Refer to Audio Preference setting and set Max Extra Loud Accessories Volume Level Attenuation according to the following table.

Accessories		Max Extra Loud Accessories Volume Level Attenuation (db)	
		Audio Preference (Default)	Audio Preference (Others)
PMLN8082A	1-Wire xL Clear Tube Earpiece, GCAI Mini	Less than -7 dB	Less than -20 dB
PMLN8083A	2-Wire xL Clear Tube Earpiece, GCAI Mini	Less than -7 dB	Less than -20 dB
PMLN8084A	3-Wire xL Clear Tube Earpiece, GCAI Mini	Less than -7 dB	Less than -20 dB
PMLN8120A	Rx only xL Clear Tube Earpiece, 3.5 mm Jack	Less than -8 dB	Less than -20 dB
PMLN8085A	Behind-the-Head Headset, GCAI Mini	Less than 0 dB	Less than -14 dB
PMLN8086A	Over-the-Head Headset, GCAI Mini	Less than 0 dB	Less than -14 dB

2.5.1.9

Rx Audio Type

Selects the configuration of the audio output line.

This allows the user to determine the type of audio that is passed to the accessory connector from a Mobile. Different accessories such as modems or public address (PA) systems require different RX Audio types.

Filtered Squelch
Passes audio that meets the unmute rule governed by Squelch Type (e.g. CSQ, TPL, DPL).

Filtered Unsquelch
Passes audio all the time regardless of the Squelch Type.

Flat Unsquelch
Passes audio all the time regardless of the Squelch Type and will also pass any low speed signaling tones (e.g. TPL) that are normally filtered out.

Flat Squelch

Passes audio that meets the unmute rule governed by Squelch Type (e.g. CSQ, TPL, DPL) and will also pass any low speed signaling tones (e.g. TPL) that are normally filtered out.

NOTE:
Filtered audio only allows audio in the voice range to pass. This gives better voice audio quality compared to flat (unfiltered) audio. Therefore, for voice communication, set the RX Audio Type to a filtered audio option. For data communication, set the RX Audio Type to the Flat Unsquelch option.

For MOTOTRBO conventional radios, Companding and Hear Clear are not supported in Audio Enhancement if this feature is set to Flat Unsquelch.

Starting from MOTOTRBO 2.0 radios, Audio Enhancement is disabled if this feature is set to Flat Unsquelch.

This feature is supported in Analog mode only.

2.5.1.10
Data Revert Channel Zone

Allows the user to select the Zone that is used to transmit and receive data on a designated channel.

NOTE:
This feature does not influence internal MOTOTRBO data applications (e.g. text messages and location updates). It only applies to accessories.

This feature is supported in Analog mode only.

2.5.1.11
Data Revert Channel

Allows the user to transmit and receive data on a designated channel.

This channel is activated from an external data device connected through the radio’s Accessory Connector. Any analog or 5 Tone channel can be the revert channel. The Selected option can be chosen if the user wishes to transmit data on the channel indicated by the radio's channel selector. This is a radio-wide feature.

NOTE:
The Data Revert pin selection must be assigned to a programmable input pin (Pin #17, #19, #21, #20, #22 or #24).

This feature does not influence internal MOTOTRBO data applications (e.g. text messages and location updates). It only applies to accessories.

This feature is supported in Analog mode only.

2.5.1.12
Analog Accessory Emphasis

Emphasis enhances audio clarity for higher frequencies by applying an audio filter to reduce noise in the radio signal.

If None is selected, no filter is applied to the transmit and receive signals. Pre-emphasis (Pre) indicates the filtering of the transmit signal while De-emphasis (De) indicates the filtering of the receive signal.

None

Audio filtering is not applied to the transmit and receive signals.

De & Pre
Audio filtering is applied to both the transmit and receive signals.

NOTE:
This feature is set to None and is unavailable if Audio Type is set to Flat Unsquelch in MOTOTRBO Repeaters/MOTOTRBO SLR Series repeaters or RX & TX Flat in MTR3000 base radio/repeater/MOTOTRBO SLR Series repeaters.

This feature is disabled if Repeater Mode is set to Digital.

This feature is applicable to MOTOTRBO Conventional radios, MOTOTRBO SLR Series repeaters, and MTR3000 base radio/repeater in Analog mode only.

2.5.1.13
Audio Type

This feature selects the configuration of the audio output line.

This is used to determine the type of audio that is passed through.

Filtered Squelch
Passes audio that meets the unmute rule governed by Squelch Type (e.g. CSQ, TPL, DPL). For transmit signals, this is used for external mic data. For receive signals, this is required for console operators.

Flat Unsquelch
Passes audio all the time regardless of the Squelch Type, hence repeater is constantly unmuted. For transmit signals, this is used for low speed signal tones (e.g. PL data) that are normally filtered out. For receive signals, this is required for trunking controllers.

RX & TX Filtered Squelch
Passes audio that meets the unmute rule governed by Squelch Type (e.g. CSQ, TPL, DPL). For transmit signals, this is used for external mic data. For receive signals, this is required for console operators.

RX & TX Flat
Passes audio all the time regardless of the Squelch Type, hence repeater is constantly unmuted. For transmit signals, this is used for low speed signal tones (e.g. PL data) that are normally filtered out. For receive signals, this is required for trunking controllers.

RX Flat Only
Passes RX audio all the time regardless of the Squelch Type but filters the TX audio according to the unmute rule.

TX Flat Only
Passes TX audio all the time regardless of the Squelch Type but filters the RX audio according to the unmute rule.

NOTE:
Filtered audio only allows audio in the voice range to pass. This gives better voice audio quality compared to flat (unfiltered) audio. Therefore, for voice communication, set the Audio Type to the Filtered Squelch option. For data communication, set the Audio Type to the Flat Unsquelch option.

The values for Analog Accessory Emphasis and Emphasis are set to None, and are both disabled when Audio Type is set to Flat Unsquelch.

This feature is disabled if Repeater Mode is set to Digital.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only and MTR3000 base radio/repeater.

2.5.1.14

Audio Priority

This feature determines which audio source has higher priority on the repeater when the Disable Repeat Path feature is disabled, and when GPIO Pins programmed with the Repeater Knockdown option is inactive.

The repeater transmits the audio source identified as having higher priority when both a console and a radio key-up simultaneously.

External PTT
Transmissions from the console have higher priority than transmissions from the radio.

Repeat Path
Transmissions from the radio have higher priority than transmissions from the console.

None
Priority is on a first come first served basis.

NOTE:
This feature is disabled if the Disable Repeat Path feature is enabled.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

This feature is not supported for digital transmission in Dynamic Mixed Mode. Priority is on a first come first served basis.

2.5.1.15

TX Audio Priority

This drop-down list allows the user to configure the preempt priority of transmitting.

Available values are 0 and 3. The higher value means the higher the priority.

Range:

Maximum	Minimum	Increment
3	0	1

NOTE:
This feature is disabled if the Disable Repeat Path feature is enabled.

This feature is applicable to MOTOTRBO SLR Series repeaters in Analog mode only.

2.5.1.16

Wireline TX Audio Priority

This drop-down list allows the user to configure the wireline priority of transmitting.

Available values are 0 and 3. The higher value means the higher the priority.

Range:

Maximum	Minimum	Increment
3	0	1

NOTE:
This feature is disabled if the Disable Repeat Path feature is enabled.

This feature is applicable to MOTOTRBO SLR Series repeaters in Analog mode only.

2.5.1.17

FP TX Audio Priority

This drop-down list allows the user to configure the FP priority of transmitting.

Available values are 0 and 3. The higher value means the higher the priority.

Range:

Maximum	Minimum	Increment
3	0	1

NOTE:
This feature is disabled if the Disable Repeat Path feature is enabled.

This feature is applicable to MOTOTRBO SLR Series repeaters in Analog mode only.

2.5.1.18

Repeater Audio Priority

This drop-down list allows the user to configure the preempt priority for repeating.

The higher value means the higher the priority.

Range:

Maximum	Minimum	Increment
1	0	1

NOTE:
This feature is applicable to MOTOTRBO SLR Series repeaters in Analog mode only.

This feature is disabled if the **Disable Repeat Path** feature is enabled.

2.5.1.19

Disable Repeat Path

This feature enables or disables the repeat functionality of the repeater.

When this feature is enabled, a console or an external device controls when the repeater keys-up, hence turning the repeater into a base station. As a base station, the console operator then decides when to key-up the repeater's transmitter. This allows the console operator full control over the repeater's outbound traffic.

NOTE:
The Repeater Knockdown pin selection is assigned to a programmable input pin (Pin #17, #19, #20, #21, or #22), and only disables the repeat path when the Disable Repeat Path feature is disabled.

The Audio Priority feature is disabled when this feature is enabled.

This feature is disabled when Repeater Mode is set to Digital.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only.

This feature is not supported for digital transmission in Dynamic Mixed Mode.

The Repeater Fallback Timer feature can override this feature. For example, if both Disable Repeat Path and Repeater Fallback Timer feature are enabled, the repeater will repeat when fallback occurs eventhough Disable Repeat Path is turned on.

2.5.1.20
Debounce Duration (ms)

Defines how long a pin is asserted before the radio recognizes the press as a valid action prior to activating a feature.

This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
375 ms	0 ms	25 ms

2.5.1.21
Cable Type

The radio automatically detects an IMPRES™ cable type.

If there are specialty applications which need to connect to a radio to perform a specific function, this feature allows the user to configure the connection type according to the cable used.

Motorola Solutions
The cable attached is an IMPRES™ cable (e.g. the cable used for programming the radio). This is the default setting.

Generic
When a cable is attached, the connector is configured to operate for external device (e.g. Option Board) to access the three programmable GPIO pins. The microphone and speaker will be muted. (applicable to Portable configuration only).

Multi-Button PTT
When a cable is attached, the MB_PTT (active) causes the radio to change to a specified channel and assert the PTT. In other words, one button press on the accessory triggers a Channel Change and PTT. This choice is hidden when the Multi-Button PTT feature is disabled.

PC & Audio
When a cable is attached, the radio connection is configured to operate as a USB Device for IP and audio communications. (applicable to Portable configuration only).

Data Accessory
When a cable is attached, the radio connection is configured to operate as a USB Device for Non-IP communications. The microphone and speaker will be muted. (applicable to Portable configuration only).

Telemetry
When a cable is attached, the connector is configured to operate for Telemetry function. The microphone and speaker will be muted. (applicable to Portable configuration only).

Front PC & Audio
When a cable is attached, the front radio connection is configured to operate as a USB Device for IP and audio communications. (applicable to Mobile configuration only).

Rear PC & Audio
When a cable is attached, the rear radio connection is configured to operate as a USB Device for IP and audio communications. (applicable to Mobile configuration only).

Front Data Accessory
When a cable is attached, the front radio connection is configured to operate as a USB Device for Non-IP communication. The microphone and speaker will be muted. (applicable to Mobile configuration only).

Rear Data Accessory

When a cable is attached, the rear radio connection is configured to operate as a USB Device for Non-IP communication. The microphone and speaker will be muted. (applicable to Mobile configuration only).

NOTE:
This feature must be configured correctly before connecting to the radio with a cable type other than an IMPRES™ cable. If there is a mismatch between this feature setting and the actual cable type used, damage to the attached hardware may occur.

2.5.1.22
Rear Emergency Pin Prior to Power Up

If enabled, when your radio is in power off state and you toggle the Rear Emergency pin, your radio boots up and sends the emergency alarm.

Otherwise, nothing happen when your radio is in power off state.

NOTE: This setting does not affect the behavior if your radio is in power on state.

2.5.2
Bluetooth® (Accessories)

The **Bluetooth** section of the Accessories set contains the following fields:

2.5.2.1
Analog Mic Gain (dB) (Bluetooth)

Allows you to configure the Bluetooth Analog Mic Gain.

This feature defines the amplification of the Bluetooth microphone. The audio level of the transmitting radio will be amplified by this value. However, the user on the receiving radio can still adjust the speaker level.

Table 39: Range

Maximum	Minimum	Increment
20 dB	-20 dB	1 dB

NOTE:
This feature is supported in Analog mode only.

This feature is greyed-out when Permanent Discoverable is enabled.

2.5.2.2
Digital Mic Gain (dB) (Bluetooth)

Allows you to configure the Bluetooth Digital Mic Gain.

This feature defines the amplification of the Bluetooth microphone. The audio level of the transmitting radio will be amplified by this value. However, the user on the receiving radio can still adjust the speaker level.

Table 40: Range

Maximum	Minimum	Increment
20 dB	-20 dB	1 dB

NOTE:
This feature is supported in Digital mode only.

This feature is greyed-out when Permanent Discoverable is enabled.

2.5.3
Digital Audio (Accessories)

The **Digital Audio** section of the Accessories set contains the following fields:

2.5.3.1
Speaker Slot

This drop-down list defines the speaker slot that receives audio.

The following options are supported:

- Audio received on slot #1
- Audio received on slot #2
- Mix of audio received on slot #1 and #2
- None

NOTE:
This feature is applicable to MOTOTRBO SLR 8000 repeaters when the digital audio feature is purchased.

2.5.3.2
Microphone Slot

This drop-down list defines that microphone audio will be transmitted OTA on **Slot #1** or **Slot #2**.

NOTE:
This feature is applicable to MOTOTRBO SLR 8000 repeaters when the digital audio feature is purchased.

2.5.3.3
Microphone Call Type

This drop-down list defines the voice call type when microphone audio is transmitted Over The Air (OTA).

The following call types are supported:

- All Call
- Group Call

- Individual Call

NOTE:
This feature is applicable to MOTOTRBO SLR 8000 repeaters when the digital audio feature is purchased.

2.5.3.4
Microphone Call Target ID

This feature sets an ID for a digital call member when microphone audio is transmitted Over The Air (OTA).

This ID is used to identify and communicate with a target radio or group of radios depending on the call type.

Range:

Maximum	Minimum	Increment
16776415	1	1

When call type is All call, this ID is fixed at 16777215 (value is not editable).

NOTE:
This feature is applicable to MOTOTRBO SLR 8000 repeaters when the digital audio feature is purchased.

2.5.3.5
Repeat Audio Priority

This drop-down list allows the user to configure the preempt priority of repeating non-emergency voice calls.

Available values are 0, 2 and 1. The higher the value, the higher the priority.

Range:

Maximum	Minimum	Increment
2	0	1

NOTE:
This feature is applicable to MOTOTRBO SLR 8000 repeaters when the digital audio feature is purchased.

2.5.3.6
Emergency Repeat Audio Priority

This drop-down list allows the user to configure the preempt priority of repeating emergency voice calls.

Available values are 0 , 2 and 1. The higher the value, the higher the priority.

Range:

Maximum	Minimum	Increment
2	0	1

NOTE:
This feature is applicable to MOTOTRBO SLR 8000 repeaters when the digital audio feature is purchased.

2.5.3.7
Local Priority Audio

This drop-down list allows the user to configure the preempt priority of local microphone audio.

Available values are 0, 2 and 1. The higher the value, the higher the priority.

Range:

Maximum	Minimum	Increment
2	0	1

NOTE:
This feature is applicable to MOTOTRBO SLR 8000 repeaters when the digital audio feature is purchased.

2.5.4
GPIO Physical Pins (Accessories)

The **GPIO Physical Pins** section of the Accessories set contains the following fields:

2.5.4.1
GPIO1 Feature

This selection allows the user to assign a function to a General Programmable Input Output (GPIO) pin for the device currently being configured.

The following devices support the GPIO1 function selection:

- SLR5000 and SLR8000 repeater - Pin #2

  NOTE: Data direction for the pin is input and output.

- MOTOTRBO and MTR 3000 Repeaters - Pin #2 and Pin #11
- MOTOTRBO Light Subscribers - Pin #3

  NOTE: Data direction for the pin is input only.

- MOTOTRBO Portable - Pin #4
- MOTOTRBO Mobile - Pin #17

For a complete listing of supported functions and descriptions, see GPIO Function Selections on page 176.

NOTE:
There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

2.5.4.2
GPIO1 Active Level

This drop-down selection allows the user to set the trigger voltage level to **High** or **Low** in order to trigger the feature set for GPIO1.

2.5.4.3
GPIO1 Debounce

When enabled, the relevant pin must remain active for the time set in the Debounce Duration field in order for the feature set for GPIO1 to activate.

The Debounce Duration (ms) on page 162 is set under the General section of the Accessories Set.

2.5.4.4
GPIO1 GNSS Report

This check box allows the user to enable or disable the GNSS Report feature for GPIO1.

See GNSS Report on page 183 for a description of the feature.

The following device pins support this feature:

- MOTOTRBO Mobile - Pin #17
- MOTOTRBO Portable - Pin #4

NOTE:
This feature is available when the value of the corresponding feature field is set to **Telemetry VIO 1** to **Telemetry VIO 5** or **Generic Input 1** to **Generic Input 6**.

2.5.4.5
GPIO2 Feature

This selection allows the user to assign a function to a General Programmable Input Output (GPIO) pin for the device currently being configured.

The following devices support the GPIO2 function selection:

- SLR5000 and SLR8000 series repeater - Pin #4
- MOTOTRBO and MTR 3000 Repeaters - Pin #4
- MOTOTRBO Light Subscribers - Pin #4
- MOTOTRBO Portable - Pin #5
- MOTOTRBO Mobile - Pin #19

For a complete listing of supported functions and descriptions, see GPIO Function Selections on page 176.

NOTE:
There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

2.5.4.6
GPIO2 Active Level

This drop-down selection allows the user to set the trigger voltage level to **High** or **Low** in order to trigger the feature set for GPIO2.

2.5.4.7
GPIO2 Debounce

When enabled, the relevant pin must remain active for the time set in the Debounce Duration field in order for the feature set for GPIO2 to activate.

The Debounce Duration (ms) on page 162 is set under the General section of the Accessories Set.

2.5.4.8
GPIO2 GNSS Report

This check box allows the user to enable or disable the GNSS Report feature for GPIO2.

See GNSS Report on page 183 for a description of the feature.

The following device pins support this feature:

- MOTOTRBO Mobile - Pin #19
- MOTOTRBO Portable - Pin #5

NOTE:
This feature is available when the value of the corresponding feature field is set to **Telemetry VIO 1** to **Telemetry VIO 5** or **Generic Input 1** to **Generic Input 6**.

2.5.4.9
GPIO3 Feature

This selection allows the user to assign a function to a General Programmable Input Output (GPIO) pin for the device currently being configured.

The following devices support the GPIO3 function selection:

- SLR5000 and SLR8000 series repeater - Pin #15
- MOTOTRBO and MTR 3000 Repeaters - Pin #15
- MOTOTRBO Light Subscribers - Pin #6
- MOTOTRBO Portable - Pin #9
- MOTOTRBO Mobile - Pin #21

For a complete listing of supported functions and descriptions, see GPIO Function Selections on page 176.

NOTE:
There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

2.5.4.10
GPIO3 Active Level

This drop-down selection allows the user to set the trigger voltage level to **High** or **Low** in order to trigger the feature set for GPIO3.

2.5.4.11
GPIO3 Debounce

When enabled, the relevant pin must remain active for the time set in the Debounce Duration field in order for the feature set for GPIO3 to activate.

The Debounce Duration (ms) on page 162 is set under the General section of the Accessories Set.

2.5.4.12
GPIO3 GNSS Report

This check box allows the user to enable or disable the GNSS Report feature for GPIO3.

See GNSS Report on page 183 for a description of the feature.

The following device pins support this feature:

- MOTOTRBO Mobile - Pin #21
- MOTOTRBO Portable - Pin #9

NOTE:
This feature is available when the value of the corresponding feature field is set to **Telemetry VIO 1** to **Telemetry VIO 5** or **Generic Input 1** to **Generic Input 6**.

2.5.4.13
GPIO4 Feature

This selection allows the user to assign a function to a General Programmable Input Output (GPIO) pin for the device currently being configured.

The following devices support the GPIO4 function selection:

- SLR1000 repeaters - Pin #4
- SLR5000 and SLR8000 repeaters - Pin#23
- MOTOTRBO Light Subscribers - Pin #8
- MOTOTRBO Portable - Pin #12
- MOTOTRBO Mobile - Pin N/A

For a complete listing of supported functions and descriptions, see GPIO Function Selections on page 176.

NOTE:
There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

2.5.4.14
GPIO4 Active Level

This drop-down selection allows the user to set the trigger voltage level to **High** or **Low** in order to trigger the feature set for GPIO4.

2.5.4.15
GPIO4 Debounce

When enabled, the relevant pin must remain active for the time set in the Debounce Duration field in order for the feature set for GPIO4 to activate.

The Debounce Duration (ms) on page 162 is set under the General section of the Accessories Set.

2.5.4.16
GPIO4 GNSS Report

This check box allows the user to enable or disable the GNSS Report feature for GPIO4.

See GNSS Report on page 183 for a description of the feature.

The following device pins support this feature:

- MOTOTRBO Mobile - Pin N/A
- MOTOTRBO Portable - Pin #12

NOTE:
This feature is available when the value of the corresponding feature field is set to **Telemetry VIO 1** to **Telemetry VIO 5** or **Generic Input 1** to **Generic Input 6**.

2.5.4.17
GPIO5 Feature

This selection allows the user to assign a function to a General Programmable Input Output (GPIO) pin for the device currently being configured.

The following devices support the GPIO5 function selection:

- SLR5000 and SLR8000 repeaters - Pin #24

For a complete listing of supported functions and descriptions, see GPIO Function Selections on page 176.

NOTE:
There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

2.5.4.18
GPIO5 Active Level

This drop-down selection allows the user to set the trigger voltage level to **High** or **Low** in order to trigger the feature set for GPIO5.

2.5.4.19
GPIO5 Debounce

When enabled, the relevant pin must remain active for the time set in the Debounce Duration field in order for the feature set for GPIO5 to activate.

The Debounce Duration (ms) on page 162 is set under the General section of the Accessories Set.

2.5.4.20
GPIO5 GNSS Report

This check box allows the user to enable or disable the GNSS Report feature for GPIO5.

See GNSS Report on page 183 for a description of the feature.

NOTE:
This feature is available when the value of the corresponding feature field is set to **Telemetry VIO 1** to **Telemetry VIO 5** or **Generic Input 1** to **Generic Input 6**.

2.5.4.21
GPIO6 Feature

This selection allows the user to assign a function to a General Programmable Input Output (GPIO) pin for the device currently being configured.

The following devices support the GPIO6 function selection:

- SLR1000 repeaters - Pin#2
- SLR5000 and SLR8000 repeaters - Pin #8
- MOTOTRBO and MTR 3000 Repeaters - Pin #8 and Pin #25
- MOTOTRBO Mobile - Pin #20

For a complete listing of supported functions and descriptions, see GPIO Function Selections on page 176.

NOTE:
There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

2.5.4.22
GPIO6 Active Level

This drop-down selection allows the user to set the trigger voltage level to **High** or **Low** in order to trigger the feature set for GPIO6.

2.5.4.23
GPIO6 Debounce

When enabled, the relevant pin must remain active for the time set in the Debounce Duration field in order for the feature set for GPIO6 to activate.

The Debounce Duration (ms) on page 162 is set under the General section of the Accessories Set.

2.5.4.24
GPIO6 GNSS Report

This check box allows the user to enable or disable the GNSS Report feature for GPIO6.

See GNSS Report on page 183 for a description of the feature.

The following device pin support this feature:

- MOTOTRBO Mobile - Pin #20

NOTE:
This feature is available when the value of the corresponding feature field is set to **Telemetry VIO 1** to **Telemetry VIO 5** or **Generic Input 1** to **Generic Input 6**.

2.5.4.25
GPIO7 Feature

This selection allows the user to assign a function to a General Programmable Input Output (GPIO) pin for the device currently being configured.

The following devices support the GPIO7 function selection:

- SLR1000 repeaters - Pin#5

- SLR5000 and SLR8000 repeaters - Pin #10
- MOTOTRBO and MTR 3000 Repeaters - Pin #10 and Pin #12
- MOTOTRBO Light Subscribers - Pin #12
- MOTOTRBO Mobile - Pin #22

For a complete listing of supported functions and descriptions, see GPIO Function Selections on page 176.

NOTE:
There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

2.5.4.26
GPIO7 Active Level

This drop-down selection allows the user to set the trigger voltage level to **High** or **Low** in order to trigger the feature set for GPIO7.

2.5.4.27
GPIO7 Debounce

When enabled, the relevant pin must remain active for the time set in the Debounce Duration field in order for the feature set for GPIO7 to activate.

The Debounce Duration (ms) on page 162 is set under the General section of the Accessories Set.

2.5.4.28
GPIO7 GNSS Report

This check box allows the user to enable or disable the GNSS Report feature for GPIO7.

See GNSS Report on page 183 for a description of the feature.

The following device pin support this feature:

- MOTOTRBO Mobile - Pin #22

NOTE:
This feature is available when the value of the corresponding feature field is set to **Telemetry VIO 1** to **Telemetry VIO 5** or **Generic Input 1** to **Generic Input 6**.

2.5.4.29
GPIO8 Feature

This selection allows the user to assign a function to a General Programmable Input Output (GPIO) pin for the device currently being configured.

The following devices support the GPIO8 function selection:

- SLR5000 and SLR8000 series repeater - Pin #21
- MOTOTRBO Light Subscribers - Pin #14
- MOTOTRBO Mobile - Pin #24

For a complete listing of supported functions and descriptions, see GPIO Function Selections on page 176.

NOTE:
There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

2.5.4.30
GPIO8 Active Level

This drop-down selection allows the user to set the trigger voltage level to **High** or **Low** in order to trigger the feature set for GPIO8.

2.5.4.31
GPIO8 Debounce

When enabled, the relevant pin must remain active for the time set in the Debounce Duration field in order for the feature set for GPIO8 to activate.

The Debounce Duration (ms) on page 162 is set under the General section of the Accessories Set.

2.5.4.32
GPIO8 GNSS Report

This check box allows the user to enable or disable the GNSS Report feature for GPIO8

See GNSS Report on page 183 for a description of the feature.

The following device pin support this feature:

- MOTOTRBO Mobile - Pin #24

NOTE:
This feature is available when the value of the corresponding feature field is set to **Telemetry VIO 1** to **Telemetry VIO 5** or **Generic Input 1** to **Generic Input 6**.

2.5.4.33
GPIO9 Feature

This selection allows the user to assign a function to a General Programmable Input Output (GPIO) pin for the device currently being configured.

The following device supports the GPIO9 function selection:

- SLR series repeater - Pin #6

For a complete listing of supported functions and descriptions, see GPIO Function Selections on page 176.

NOTE:
There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

2.5.4.34
GPIO9 Active Level

This drop-down selection allows the user to set the trigger voltage level to **High** or **Low** in order to trigger the feature set for GPIO9.

2.5.4.35
GPIO9 Debounce

When enabled, the relevant pin must remain active for the time set in the Debounce Duration field in order for the feature set for GPIO9 to activate.

The Debounce Duration (ms) on page 162 is set under the General section of the Accessories Set.

2.5.4.36
GPIO10 Feature

This selection allows the user to assign a function to a General Programmable Input Output (GPIO) pin for the device currently being configured.

The following device supports the GPIO10 function selection:

- SLR5000 and SLR8000 repeaters - Pin #5
- MOTOTRBO and MTR 3000 Repeaters - Pin #5
- MOTOTRBO Mobile - Pin #26

For a complete listing of supported functions and descriptions, see GPIO Function Selections on page 176.

NOTE:
There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

2.5.4.37
GPIO10 Active Level

This drop-down selection allows the user to set the trigger voltage level to **High** or **Low** in order to trigger the feature set for GPIO10.

2.5.4.38
GPIO10 Debounce

When enabled, the relevant pin must remain active for the time set in the Debounce Duration field in order for the feature set for GPIO10 to activate.

The Debounce Duration (ms) on page 162 is set under the General section of the Accessories Set.

2.5.4.39
GPIO10 GNSS Report

This check box allows the user to enable or disable the GNSS Report feature for GPIO10

See GNSS Report on page 183 for a description of the feature.

The following device pin support this feature:

- MOTOTRBO Mobile - Pin #26

NOTE:
This feature is available when the value of the corresponding feature field is set to **Telemetry VIO 1** to **Telemetry VIO 5** or **Generic Input 1** to **Generic Input 6**.

2.5.4.40
GPIO11 Feature

This selection allows the user to assign a function to a General Programmable Input Output (GPIO) pin for the device currently being configured.

The following device supports the GPIO11 function selection:

- SLR5000 and SLR8000 repeaters - Pin #11

For a complete listing of supported functions and descriptions, see GPIO Function Selections on page 176.

NOTE:
There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

2.5.4.41
GPIO11 Active Level

This drop-down selection allows the user to set the trigger voltage level to **High** or **Low** in order to trigger the feature set for GPIO11.

2.5.4.42
GPIO11 Debounce

When enabled, the relevant pin must remain active for the time set in the Debounce Duration field in order for the feature set for GPIO11 to activate.

The Debounce Duration (ms) on page 162 is set under the General section of the Accessories Set.

2.5.4.43
GPIO12 Feature

This selection allows the user to assign a function to a General Programmable Input Output (GPIO) pin for the device currently being configured.

The following device supports the GPIO12 function selection:

- SLR5000 and SLR8000 repeaters - Pin #12

For a complete listing of supported functions and descriptions, see GPIO Function Selections on page 176.

NOTE:
There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

2.5.4.44
GPIO 12 Active Level

This drop-down selection allows the user to set the trigger voltage level to **High** or **Low** in order to trigger the feature set for GPIO12.

2.5.4.45
GPIO12 Debounce

When enabled, the relevant pin must remain active for the time set in the Debounce Duration field in order for the feature set for GPIO12 to activate.

The Debounce Duration (ms) on page 162 is set under the General section of the Accessories Set.

2.5.4.46
GPIO Function Selections

The following table contains a list of all possible GPIO functions that can be assigned to GPIO physical pins.

Table 41: GPIO Function Selections

Function	GPIO Supporting Function	Description
5 Tone Call 1 – 6	GPIO2, GPIO3, GPIO4, GPIO6, GPIO7, and GPIO8	These are output lines, that when activated, sends the telegram as configured for Call buttons (Call 1, Call 2, Call 3, Call 4, Call 5 and Call 6). The same telegram is sent when Call 1 button is pressed (available when the 5 Tone feature is enabled in the device).
5 Tone Decoder Output Control	GPIO2, GPIO3, GPIO4, GPIO6, GPIO7, and GPIO8	This is an output line that is asserted or deasserted based on the Decoder Output Control options programmed in the radio upon successful decoding of a telegram sequence (available when the 5 Tone feature is enabled in the device).
AC Power Failure	All GPIO	Allows the user to enable/disable the AC Power Failure. When enabled, the repeater shows the alarm related to the AC failure.
Antenna Relay	All GPIO	When the radio is operating as a base station (instead of as a repeater), an antenna relay may be used to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Re-

Function	GPIO Supporting Function	Description
		lay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition. The antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Carrier Operated Relay	All GPIO	This is an output line to the Analog Phone Patch box that is activated whenever the repeater starts transmission to the Analog Phone Patch box and deactivated whenever the repeater ends transmission to the Analog Phone Patch box (applicable to repeater configuration only).
Channel Select 1 – 6	All GPIO	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel (applicable to Mobile configuration only).
Clear To Send	GPIO2, GPIO3, GPIO4, GPIO6, GPIO7, and GPIO8	This is an output line used for indicating to an external modem that the radio has keyed up and data transmission may begin. This feature is useful because the line will not be asserted until audible transmission can really take place. MDC side-tones and Transmit Inhibit on Busy can result in delayed or blocked channel access.
CSQ Detect	All GPIO	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
Data PTT	GPIO1, GPIO2, GPIO3, GPIO4, GPIO6, GPIO7, and GPIO8	This is an input line used for data transmission from a device connected to a radio, another radio, or device. When

Function	GPIO Supporting Function	Description
		the device that is connected to the radio is set to send data over the air, for instance, MDC data or GNSS coordinates, it triggers the Data PTT before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Analog mode, Mobile configuration only). Overrides Voice
Data Revert	GPIO1, GPIO2, GPIO3, GPIO4, GPIO6, GPIO7, and GPIO8	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Analog mode, Mobile configuration only).
Disable	All GPIO	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Ext Alarm/Horn & Lights	GPIO2 and GPIO10	This is an output line used to inform the user using the horn or/and lights if there is an incoming call alert/private call when the user is not in their vehicle (applicable to Mobile configuration only). See also Alarm (Horn & Lights).
Ext Mic Off Hook	GPIO1, GPIO2, GPIO3, GPIO4, GPIO6, GPIO7, and GPIO8	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons (applicable to Mobile configuration only). This is an input line, that when activated, will key the repeater and cause the repeater to transmit audio any present on the Ext Mic input line. PTT priority is determined by the Audio Priority setting in CPS 2.0 (applicable to Analog mode, Repeater configuration only).
Ext Mic PTT	GPIO1, GPIO2, GPIO3, GPIO4, GPIO6, GPIO7, and GPIO8	This is an input line used for voice transmission through

Function	GPIO Supporting Function	Description
		an external microphone with Push-to-Talk (PTT) buttons.
External PTT	All GPIO	This is an input line, that when activated, keys the repeater and causes the repeater to transmit audio presence on the TX pins of the J7 back-plane connector. PTT priority is determined by the Audio Priority setting in CPS 2.0 (applicable to Analog mode).
FCC Type 2 Monitor	All GPIO	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment (applicable to Repeater configuration only).
Football Knockdown	All GPIO	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).
Generic Input 1 – 6	GPIO1, GPIO2, GPIO3, GPIO4, GPIO6, GPIO7, and GPIO8	These input lines allow for status indication to the option board and level switching from the option board (applicable to Mobile configuration only).
Generic Output 1– 3	GPIO1. GPIO2, GPIO3, GPIO4, GPIO6, GPIO7, GPIO8, and GPIO10.	These output lines allow for status indication to the option board and level switching from the option board (applicable to Mobile configuration only).
Generic Outputs 2 – 6	GPIO1, GPIO2, GPIO3, GPIO4 (until output 5 only), GPIO6, GPIO7, GPIO8, and GPIO10.	These output lines allow for status indication to the option board and level switching from the option board (applicable to Mobile configuration only).
Major Alarm	ALL GPIO	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	ALL GPIO	This is an output line, that is activated by a repeater when it

Function	GPIO Supporting Function	Description
		is reporting an alarm triggered by minor hardware failure.
Monitor	ALL GPIO	This is an input line that allows the user to monitor a channel. In analog mode, the user is able to listen to the traffic, in other words, the radio will unmute to the actual voice or data traffic in process. In digital mode, the user can only check if activity is present before transmitting, in other words, the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to Always. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Multi-Button PTT	GPIO1, GPIO2, GPIO3, and GPIO4.	When a cable is attached, the MB_PTT (active) causes the radio to change to a specified channel and assert the PTT. In other words, one button press on the accessory triggers a Channel Change and PTT. This choice is hidden when the Multi-Button PTT feature is disabled.
PL/Talkgroup Detect	ALL GPIO	For radio configuration, this is an output line used for permitting an output to be activated when the radio is receiving carrier and the Unmute Rule for the radio is satisfied on the channel. For repeater configuration, this is an output line that is activated when RX signal contains Private Line (PL) code (applicable to Analog mode only).
Repeater Knockdown	ALL GPIO	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can

Function	GPIO Supporting Function	Description
		then control when the repeater keys-up (applicable to Analog mode, Repeater configuration only).
Request to Send	GPIO1, GPIO2, GPIO3, GPIO4, GPIO6, GPIO7, and GPIO8.	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, in other words. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Analog mode).
Reset	ALL GPIO	This is an input line, that when activated, resets the repeater.
Response Inhibit	GPIO8	This is an input line where it allows user to place the radio in a state (through a button press) whereby the radio will not generate any outgoing transmissions in response to unsolicited incoming transmissions. This includes not transmitting back to Radio Check", Radio Monitor , Radio Disable, Confirmed Private Calls, Confirmed Text Message, and so forth. In this state, the user is still be able to initiate outgoing transmissions manually (for example, voice transmissions and text messages).
RX Audio Mute	GPIO1, GPIO2, GPIO3, GPIO4, GPIO6, GPIO7, and GPIO8.	This is an input line, that when activated, mutes the audio for the receiving radio even though the radio meets all the unmuting conditions (applicable to Analog mode).
Site Slot Sync Output	ALL GPIO	This is an output line, that when activated, relays master timing signals to slot sync slave repeaters in a MOTOTRBO Link system. This function is used with the GPIO Slot Timing Master on page 460 field.
Site Slot Sync Input	ALL GPIO	This is an input line, that when activated, receives master timing signals from the slot sync master repeater in a MO-

Function	GPIO Supporting Function	Description
		TOTRBO Link system. This function is used with the GPIO Slot Timing Master on page 460 field.
Telemetry VIO 1 – 3	GPIO1	These lines can be an input or an output line depending on the configuration in the radio. Setting the input or output capability on this line allows the user to control and monitor its own pin or another radio pin, which in turn can control and monitor any external hardware that is attached to the radio.
Telemetry VIO 1 – 5	GPIO1, GPIO2, GPIO3, GPIO4, GPIO6, GPIO7, and GPIO8.	These lines can be an input or an output line depending on the configuration in the radio. Setting the input or output capability on this line allows the user to control and monitor its own pin or another radio pin, which in turn can control and monitor any external hardware that is attached to the radio.
TOC/Reverse Burst Disable	GPIO1, GPIO2, GPIO3, GPIO4, GPIO6, GPIO7, and GPIO8.	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Analog mode, Mobile configuration only).
Transmit Inhibit	GPIO2, GPIO3, GPIO6, GPIO7, and GPIO8.	This is an input line used to prevent the station from being keyed through any PTT (external or internal). The station remains functional in every other regard.
TX PL Inhibit	ALL GPIO	This is an input line, that when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode, Mobile and Repeater configuration only).
TX Power Level High	ALL GPIO	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the

Function	GPIO Supporting Function	Description
		low power level for TX transmission. **NOTE:** The repeater resets before changing its TX power level (applicable to Repeater configuration only).
Unassigned	ALL GPIO	No functionality is assigned to the pin.
Wireline External COR	ALL GPIO	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
Wireline External PTT	ALL GPIO	This is an input line, that allows the audio present on the TX Wireline to be transmitted.
Wireline Mute Input	ALL GPIO	This is an input line, that when activated, indicates if a particular personality (channel) is actively transmitting.
Wireline Mute Ouput	ALL GPIO	This is an output line, that when activated, indicates if a particular personality (channel) is actively transmitting.

2.5.4.47
GNSS Report

The application allows the user to enable or disable triggering a GNSS Report for each GPIO line.

If the radio receives an LRRP request for GPIO pin status change condition, an LRRP report is sent to the originator of the LRRP request if the GNSS Report check box is enabled and the active level is triggered. To enable GNSS report, the GPIO pin must be set as Generic Input or Telemetry VIO and the telemetry action is set as an output command (output command indicates that the Telemetry VIO is an input pin). For portable radios, the user can only enable the GNSS Report when the cable type is set as Generic Cable or Telemetry Cable or Motorola Solutions Cable for Telemetry.

NOTE:
This feature is available when the value of the corresponding feature field is set to **Telemetry VIO 1** to **Telemetry VIO 5** or **Generic Input 1** to **Generic Input 6**.

2.5.5
Horns and Lights (Accessories)

The **Horns & Lights** section of the Accessories set contains the following fields:

2.5.5.1
Alarm

Allows the user to be alerted to an incoming call when away from the vehicle.

The vehicle's Horn or Lights or both are used depending on which option is connected to the accessory port. When the radio receives a call alert, there will be a delay before activating the Horn and/or Lights. The delay is programmable using the Horn & Lights Delay Time feature. Once activated, the Horn and/or Lights remains active for the duration specified by the Horn & Lights Duration feature. The user may turn the Horn and/or Lights off by pressing any keypad or button except the backlight button and volume knob. The Horn & Lights feature can be toggled between on or off, via a short or long programmable button press (Horn & Lights On/Off) or Horn/Lights (Utilities Menu) feature. This is a radio-wide feature.

Alarm Re-Arm
Upon power up, the Horn and Lights feature is enabled or disabled depending on its status at last power down.

Non-Permanent Manual Re-Arm
The Horn and Lights feature needs to always be manually enabled (i.e. by toggling the programmable button or menu assigned to this feature).

Permanent External Alarm
The radio always power up with the Horn and Lights feature on, regardless of its status at last power down.

2.5.5.2
Duration (sec)

Sets the amount of time the vehicle's horn and/or lights are active.

This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
∞ sec	5 sec	5 sec

NOTE:
The vehicle's horn and/or lights will be permanently active if the Infinity option is selected.

2.5.5.3
Delay Time (sec)

Specifies the delay duration before the vehicle's horn and/or lights are activated.

This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
15 sec	0 sec	1 sec

2.5.6
Wireline (Accessories)

The **Wireline** section of the Accessories set contains the following fields:

2.5.6.1
Remote Control Mode

Sets the type of remote control method that the wireline uses to decode the function signals from the console.

This is a radio-wide feature.

TRC7
Allows seven different channels to be selected, as well as the monitor function and three wild card GPIOs. This option also causes the Revert Channel list to contain only None and the first seven channels sorted by position.

TRC15
Allows 15 different channels to be selected, as well as the monitor function. This option also causes the Revert Channel list to contain only None and the first 15 channels sorted by position.

DC
Allows five different channels to selected, as well as the monitor function. This option also causes the Revert Channel list to contain only None and the first five channels sorted by position.

None
Disables all remote control functions, though the transmit and receive audio paths are still supported via the wireline.

NOTE:
The HLGT ALC Mode, TX Guard Tone, Monitor Mode, PTT Dropout Timer (ms), and Revert Channel features are disabled when this feature is set to None.

The HLGT ALC Mode and TX Guard Tone features are disabled when this feature is set to DC.

This feature is applicable to MTR3000 base radio/repeater only.

2.5.6.2
Wire Mode

Sets the wireline interface for either a 2-wire mode or 4-wire mode operation.

This is a radio-wide feature.

2 Wire
The console audio to and from the radio shares a single pair of conductors which interface to the radio at Line 2 of the J6 backplane connector.

4 Wire
The console sends transmitter audio to the radio via a dedicated pair of conductors to Line 1 of the radio, while receive audio from Line 2 of the radio will be sent to the console on a separate dedicated pair of conductors.

NOTE: The RX Squelch Mode, Status Tone, RX Guard Tone, and Repeater Fallback Timer features are disabled when this feature is set to 2 Wire.

2.5.6.3
Line Impedance

Sets the wireline RX audio (output) and TX audio (input) impedance of the wireline board.

The impedance of the wireline board must be set to match that of the backhaul interface. The Line Impedance is based on the country or region. This is a radio-wide feature.

600 Ohm
For Argentina, Canada, Chile, Columbia, Ecuador, El Salvador, Guam, Hong Kong, India, Indonesia, Japan, Jordan, Kazakhstan, Kuwait, Macao, Malaysia, Mexico, Oman, Pakistan, Peru,

Philippines, Russia, Saudi Arabia, Singapore, South Korea, Taiwan, Thailand, UAE, USA and Yemen.

270 Ohm + (150 nF || 750 Ohm)
For Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Bahrain, Croatia, Cyprus, Czech Republic, Egypt, Hungary, Israel, Latvia, Lebanon, Malta, Morocco, Nigeria, Poland, Romania, Slovakia and Slovenia.

220 Ohm + (115 nF || 820 Ohm)
For Australia, Bulgaria and South Africa.

370 Ohm + (310 nF || 620 Ohm)
For New Zealand.

900 Ohm
For Brazil.

320 Ohm + (230 nF || 1050 Ohm)
For United Kingdom.

200 Ohm + (100 nF || 680 Ohm)
For China.

900 Ohm || 30 nF
For legacy MTR2000.

NOTE:
This feature is applicable to MTR3000 base radio/repeater only.

2.5.6.4 TX Guard Tone

Sets the guard tone frequency detector and notch on the transmit path of the wireline to either Disabled, 2100 Hz, 2175 Hz or 2325 Hz.

When 2-wire or 4-wire tone remote control is desired (TRC7 or TRC15), the wireline guard tone frequency must be set to the same guard tone frequency as generated by the console or deskset. If the tone remote control is not used, it is recommended to set the guard tone frequency to Disabled for full spectrum audio. This is a radio-wide feature.

NOTE:
This feature is disabled if the Remote Control Mode feature is set to None or DC.

This feature is applicable to MTR3000 base radio/repeater and SLR Series repeaters only.

2.5.6.5 PTT Dropout Timer (ms)

Specifies the allowed hold over time after the loss of low level guard tone (LLGT) or DC current before the station dekeys.

This timer allows for momentary LLGT or DC current loss without dekeying the station. LLGT is a tone generated by the console or deskset which signals the wireline to issue a push to talk (PTT) to the station. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
2000 ms	20 ms	1 ms

NOTE:
This feature is disabled if the Remote Control Mode feature is set to None.

2.5.6.6
Revert Channel Zone

Allows the user to select the Revert Channel from the list.

The user can select “None” or all the other available channels in the list.

2.5.6.7
Revert Channel

Selects the revert channel of the radio from the list of all the available channels or none.

The revert channel is the channel that the radio will return to after a call is completed. If None is selected, after a call is completed, the radio remains on the channel of the completed call. This is a radio-wide feature.

NOTE: This feature is disabled if the Remote Control Mode feature is set to None.

2.5.6.8
Monitor Mode

Defines the behavior of the Monitor function as either latching or momentary.

This is a radio-wide feature.

Latching
The monitor function is asserted until the next remote control sequence is sent via the console or deskset.

Momentary
The monitor function is asserted for four seconds.

NOTE: This feature is disabled if the Remote Control Mode feature is set to None.

2.5.6.9
Squelch Hysteresis (dB)

Determines how much the level of the transmitter audio must drop below the squelch threshold before the squelch closes.

This parameter aids in minimizing squelch chatter. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
6 dB	0 dB	1 dB

2.5.6.10
HLGT ALC Mode

Allows the user to enable or disable the High Level Guard Tone Automatic Level Control (HLGT ALC) Mode.

If enabled, the radio automatically adjusts the transmit audio up to -4/+6dB to compensate for changes in the line levels. This adjustment is made when HLGT is detected. This is a radio-wide feature.

NOTE: This feature is disabled if the Remote Control Mode feature is set to None or DC.

2.5.6.11
Status Tone

Allows the user to enable or disable the Wireline Status Tone.

When enabled, a Status Tone of 2175Hz will be sent to the voting comparator to indicate that the receiver is squelched. When the receiver unsquelches, the audio which is absent of Status Tone, is sent to the voting comparator to be voted. This is a radio-wide feature.

NOTE:
This feature is disabled if the Wire Mode feature is set to 2 Wire.

This feature is applicable to MTR3000 base radio/repeater and SLR Series repeaters only.

2.5.6.12
RX Guard Tone

Allows the user to enable or disable the Wireline Receive Guard Tone.

When enabled, a Guard Tone of 1950Hz, along with the audio, is supplied to the voting comparator once the receive qualifier has been met. The RX Guard Tone is a configurable parameter that is used by some makes of comparators. This is a radio-wide feature.

NOTE:
This feature is disabled if the Wire Mode feature is set to 2 Wire.

This feature is applicable to MTR3000 base radio/repeater and SLR Series repeaters only.

2.5.6.13
Repeater Fallback Timer (ms)

Specifies the allowed time delay from CSQ (Carrier Squelch Qualifier) to PTT before the wireline board enters repeater fallback mode.

When this timer expires, the station is forced into the repeater mode if a PTT is not received from the voting comparator within the selected time of a valid receive qualifier. This is a failsafe if the link between the comparator and the transmitting radio has been compromised. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
10000 ms	0 ms (Disabled)	10 ms

NOTE:
This feature is disabled if the Wire Mode feature is set to 2 Wire.

This feature can override the Disable Repeat Path feature. For example, when this feature is enabled and fallback occurs, the repeater will repeat eventhough the Disable Repeat Path is enabled.

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2.5.6.14
RX Squelch Mode

Determines the receive qualifier(s) that must be met in order to interrupt the generation of the Status Tone and the allowance of the RX Guard Tone generation.

This is a radio-wide feature.

Always
No checking of the radio receiver squelch is done and the comparator will always interrupt the generation of Status Tone and allowance of RX guard tone generation of the radio.

Carrier
Checks if the radio receiver squelch is Carrier squelch type in order to interrupt the generation of the Status Tone and the allowance of the RX Guard Tone generation of the radio.

Carrier or PL/DPL
Checks if the radio receiver squelch is Carrier, PL or DPL squelch type in order to interrupt the generation of the Status Tone and the allowance of the RX Guard Tone generation of the radio.

Carrier and PL/DPL
Checks if the radio receiver squelch must be Carrier and PL or Carrier and DPL squelch type in order to interrupt the generation of the Status Tone and the allowance of the RX Guard Tone generation of the radio.

NOTE:
This features is disabled if the Wire Mode feature is set to 2 Wire.

This feature is applicable to MTR3000 base radio/repeater and SLR Series repeaters only.

2.5.6.15
Scan Mode

This list allows you to set the scan rate for the Bluetooth Low Energy (BLE).

If you select **Aggressive**, the radio performs BLE scan at a five seconds rate. If you select **Normal**, the radio performs BLE scan at a 15 seconds rate which provides an exchange between scan frequency and power consumption.

2.5.7
Wireline 2 (Accessories)

The **Wireline 2** section of the Accessories set contains the following fields:

2.5.7.1
Remote Control Mode

Sets the type of remote control method that the wireline uses to decode the function signals from the console.

This is a radio-wide feature.

TRC7
Allows seven different channels to be selected, as well as the monitor function and three wild card GPIOs. This option also causes the Revert Channel list to contain only None and the first seven channels sorted by position.

TRC15
Allows 15 different channels to be selected, as well as the monitor function. This option also causes the Revert Channel list to contain only None and the first 15 channels sorted by position.

DC
Allows five different channels to selected, as well as the monitor function. This option also causes the Revert Channel list to contain only None and the first five channels sorted by position.

None
Disables all remote control functions, though the transmit and receive audio paths are still supported via the wireline.

NOTE:
The HLGT ALC Mode, TX Guard Tone, Monitor Mode, PTT Dropout Timer (ms), and Revert Channel features are disabled when this feature is set to None.

The HLGT ALC Mode and TX Guard Tone features are disabled when this feature is set to DC.

This feature is applicable to MTR3000 base radio/repeater only.

2.5.7.2 Wire Mode

Sets the wireline interface for either a 2-wire mode or 4-wire mode operation.

This is a radio-wide feature.

2 Wire
The console audio to and from the radio shares a single pair of conductors which interface to the radio at Line 2 of the J6 backplane connector.

4 Wire
The console sends transmitter audio to the radio via a dedicated pair of conductors to Line 1 of the radio, while receive audio from Line 2 of the radio will be sent to the console on a separate dedicated pair of conductors.

NOTE: The RX Squelch Mode, Status Tone, RX Guard Tone, and Repeater Fallback Timer features are disabled when this feature is set to 2 Wire.

2.5.7.3 Line Impedance

Sets the wireline RX audio (output) and TX audio (input) impedance of the wireline board.

The impedance of the wireline board must be set to match that of the backhaul interface. The Line Impedance is based on the country or region. This is a radio-wide feature.

600 Ohm
For Argentina, Canada, Chile, Columbia, Ecuador, El Salvador, Guam, Hong Kong, India, Indonesia, Japan, Jordan, Kazakhstan, Kuwait, Macao, Malaysia, Mexico, Oman, Pakistan, Peru, Philippines, Russia, Saudi Arabia, Singapore, South Korea, Taiwan, Thailand, UAE, USA and Yemen.

270 Ohm + (150 nF || 750 Ohm)
For Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Bahrain, Croatia, Cyprus, Czech Republic, Egypt, Hungary, Israel, Latvia, Lebanon, Malta, Morocco, Nigeria, Poland, Romania, Slovakia and Slovenia.

220 Ohm + (115 nF || 820 Ohm)
For Australia, Bulgaria and South Africa.

370 Ohm + (310 nF || 620 Ohm)
For New Zealand.

900 Ohm
For Brazil.

320 Ohm + (230 nF || 1050 Ohm)
For United Kingdom.

200 Ohm + (100 nF || 680 Ohm)
For China.

900 Ohm || 30 nF
For legacy MTR2000.

NOTE:
This feature is applicable to MTR3000 base radio/repeater only.

2.5.7.4
TX Guard Tone

Sets the guard tone frequency detector and notch on the transmit path of the wireline to either Disabled, 2100 Hz, 2175 Hz or 2325 Hz.

When 2-wire or 4-wire tone remote control is desired (TRC7 or TRC15), the wireline guard tone frequency must be set to the same guard tone frequency as generated by the console or deskset. If the tone remote control is not used, it is recommended to set the guard tone frequency to Disabled for full spectrum audio. This is a radio-wide feature.

NOTE:
This feature is disabled if the Remote Control Mode feature is set to None or DC.

This feature is applicable to MTR3000 base radio/repeater and SLR Series repeaters only.

2.5.7.5
PTT Dropout Timer (ms)

Specifies the allowed hold over time after the loss of low level guard tone (LLGT) or DC current before the station dekeys.

This timer allows for momentary LLGT or DC current loss without dekeying the station. LLGT is a tone generated by the console or deskset which signals the wireline to issue a push to talk (PTT) to the station. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
2000 ms	20 ms	1 ms

NOTE:
This feature is disabled if the Remote Control Mode feature is set to None.

2.5.7.6
Monitor Mode

Defines the behavior of the Monitor function as either latching or momentary.

This is a radio-wide feature.

Latching
The monitor function is asserted until the next remote control sequence is sent via the console or deskset.

Momentary
The monitor function is asserted for four seconds.

NOTE: This feature is disabled if the Remote Control Mode feature is set to None.

2.5.7.7
Squelch Hysteresis (dB)

Determines how much the level of the transmitter audio must drop below the squelch threshold before the squelch closes.

This parameter aids in minimizing squelch chatter. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
6 dB	0 dB	1 dB

2.5.7.8
HLGT ALC Mode

Allows the user to enable or disable the High Level Guard Tone Automatic Level Control (HLGT ALC) Mode.

If enabled, the radio automatically adjusts the transmit audio up to -4/+6dB to compensate for changes in the line levels. This adjustment is made when HLGT is detected. This is a radio-wide feature.

NOTE: This feature is disabled if the Remote Control Mode feature is set to None or DC.

2.5.7.9
Status Tone

Allows the user to enable or disable the Wireline Status Tone.

When enabled, a Status Tone of 2175Hz will be sent to the voting comparator to indicate that the receiver is squelched. When the receiver unsquelches, the audio which is absent of Status Tone, is sent to the voting comparator to be voted. This is a radio-wide feature.

NOTE:
This feature is disabled if the Wire Mode feature is set to 2 Wire.

This feature is applicable to MTR3000 base radio/repeater and SLR Series repeaters only.

2.5.7.10
RX Guard Tone

Allows the user to enable or disable the Wireline Receive Guard Tone.

When enabled, a Guard Tone of 1950Hz, along with the audio, is supplied to the voting comparator once the receive qualifier has been met. The RX Guard Tone is a configurable parameter that is used by some makes of comparators. This is a radio-wide feature.

NOTE:
This feature is disabled if the Wire Mode feature is set to 2 Wire.

This feature is applicable to MTR3000 base radio/repeater and SLR Series repeaters only.

2.5.7.11
Repeater Fallback Timer (ms)

Specifies the allowed time delay from CSQ (Carrier Squelch Qualifier) to PTT before the wireline board enters repeater fallback mode.

When this timer expires, the station is forced into the repeater mode if a PTT is not received from the voting comparator within the selected time of a valid receive qualifier. This is a failsafe if the

link between the comparator and the transmitting radio has been compromised. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
10000 ms	0 ms (Disabled)	10 ms

NOTE:
This feature is disabled if the Wire Mode feature is set to 2 Wire.

This feature can override the Disable Repeat Path feature. For example, when this feature is enabled and fallback occurs, the repeater will repeat eventhough the Disable Repeat Path is enabled.

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2.5.7.12
RX Squelch Mode

Determines the receive qualifier(s) that must be met in order to interrupt the generation of the Status Tone and the allowance of the RX Guard Tone generation.

This is a radio-wide feature.

Always
No checking of the radio receiver squelch is done and the comparator will always interrupt the generation of Status Tone and allowance of RX guard tone generation of the radio.

Carrier
Checks if the radio receiver squelch is Carrier squelch type in order to interrupt the generation of the Status Tone and the allowance of the RX Guard Tone generation of the radio.

Carrier or PL/DPL
Checks if the radio receiver squelch is Carrier, PL or DPL squelch type in order to interrupt the generation of the Status Tone and the allowance of the RX Guard Tone generation of the radio.

Carrier and PL/DPL
Checks if the radio receiver squelch must be Carrier and PL or Carrier and DPL squelch type in order to interrupt the generation of the Status Tone and the allowance of the RX Guard Tone generation of the radio.

NOTE:
This features is disabled if the Wire Mode feature is set to 2 Wire.

This feature is applicable to MTR3000 base radio/repeater and SLR Series repeaters only.

2.5.7.13
TX Guard Tone Notch

This check box enables the notch filter at TX Guard tone frequency.

2.5.7.14
RX Status Tone Notch

This check box enables the notch filter at Rx Status tone frequency.

2.5.8
Multi-Button PTT (Accessories)

The **Multi-Button PTT** section of the Accessories set contains the following fields:

2.5.8.1
Index 1 Zone (Multi-Button PTT)

Allows the user to specify which personality to be used when the Multi-Button PTT GPIO pin combination corresponding to Index 1 is triggered.

2.5.8.2
Index 1 (Multi-Button PTT)

This drop-down list allows the user to specify which personality to use when the Multi-Button PTT GPIO pin combination corresponding to Index 1 is triggered.

Valid choices are None and all digital personalities that are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

NOTE:
This drop-down list is hidden when the Multi-Button PTT feature is disabled.

Digital personalities are only valid choices if they are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

2.5.8.3
Index 2 Zone (Multi-Button PTT)

Allows the user to specify which personality to be used when the Multi-Button PTT GPIO pin combination corresponding to Index 2 is triggered

2.5.8.4
Index 2 (Multi-Button PTT)

This drop-down list allows the user to specify which personality to use when the Multi-Button PTT GPIO pin combination corresponding to Index 2 is triggered.

Valid choices are None and all digital personalities that are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

NOTE:
This drop-down list is hidden when the Multi-Button PTT feature is disabled.

Digital personalities are only valid choices if they are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

2.5.8.5
Index 3 Zone (Multi-Button PTT)

Allows the user to specify which personality to be used when the Multi-Button PTT GPIO pin combination corresponding to Index 3 is triggered.

2.5.8.6
Index 3 (Multi-Button PTT)

This drop-down list allows the user to specify which personality to use when the Multi-Button PTT GPIO pin combination corresponding to Index 3 is triggered.

Valid choices are None and all digital personalities that are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

NOTE:
This drop-down list is hidden when the Multi-Button PTT feature is disabled.

Digital personalities are only valid choices if they are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

2.5.8.7
Index 4 Zone (Multi-Button PTT)

Allows the user to specify which personality to be used when the Multi-Button PTT GPIO pin combination corresponding to Index 4 is triggered.

2.5.8.8
Index 4 (Multi-Button PTT)

This drop-down list allows the user to specify which personality to use when the Multi-Button PTT GPIO pin combination corresponding to Index 4 is triggered.

Valid choices are None and all digital personalities that are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

NOTE:
This drop-down list is hidden when the Multi-Button PTT feature is disabled.

Digital personalities are only valid choices if they are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

2.5.8.9
Index 5 Zone (Multi-Button PTT)

Allows the user to specify which personality to be used when the Multi-Button PTT GPIO pin combination corresponding to Index 5 is triggered.

2.5.8.10
Index 5 (Multi-Button PTT)

This drop-down list allows the user to specify which personality to use when the Multi-Button PTT GPIO pin combination corresponding to Index 5 is triggered.

Valid choices are None and all digital personalities that are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

NOTE:
This drop-down list is hidden when the Multi-Button PTT feature is disabled.

Digital personalities are only valid choices if they are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

2.5.8.11
Index 6 Zone (Multi-Button PTT)

Allows the user to specify which personality to be used when the Multi-Button PTT GPIO pin combination corresponding to Index 6 is triggered.

2.5.8.12
Index 6 (Multi-Button PTT)

This drop-down list allows the user to specify which personality to use when the Multi-Button PTT GPIO pin combination corresponding to Index 6 is triggered.

Valid choices are None and all digital personalities that are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

NOTE:
This drop-down list is hidden when the Multi-Button PTT feature is disabled.

Digital personalities are only valid choices if they are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

2.5.8.13
Index 7 (Multi-Button PTT)

This drop-down list allows the user to specify which personality to use when the Multi-Button PTT GPIO pin combination corresponding to Index 7 is triggered.

Valid choices are None and all digital personalities that are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

NOTE:
This drop-down list is hidden when the Multi-Button PTT feature is disabled.

Digital personalities are only valid choices if they are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

2.5.8.14
Index 7 Zone (Multi-Button PTT)

Allows the user to specify which personality to be used when the Multi-Button PTT GPIO pin combination corresponding to Index 7 is triggered.

2.5.9
Wireline TRC (Accessories)

The **Wireline TRC** section of the Accessories set contains the following fields:

2.5.9.1
TX Guard Tone Notch

This check box enables the notch filter at TX Guard tone frequency.

2.5.9.2
RX Status Tone Notch

This check box enables the notch filter at Rx Status tone frequency.

2.5.9.3
Antenna Relay

This check box enables the optional antenna relay.

2.5.10
Wireline TRC Function Selection (Accessories)

The **Wireline TRC Function Selection** section of the Accessories set contains the following fields:

2.5.10.1
TRC7 Frequency 1

This drop-down list allows the user to assign a function tone to the selected TRC7 frequency.

The following function tone selections are supported:

- Activate Repeater Disable
- Activate Repeater Knockdown
- Activate TX PL Inhibit
- Activate TX Power Level High
- Deactivate Repeater Disable
- Deactivate Repeater Knockdown
- Deactivate TX PL Inhibit
- Deactivate TX Power Level High
- Monitor
- Not Used
- Reset
- Select Channel 1 – 7

NOTE:
The TRC7 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC7**.

2.5.10.2
TRC7 Frequency 2

This drop-down list allows the user to assign a function tone to the selected TRC7 frequency.

The following function tone selections are supported:

- Activate Repeater Disable
- Activate Repeater Knockdown
- Activate TX PL Inhibit
- Activate TX Power Level High
- Deactivate Repeater Disable
- Deactivate Repeater Knockdown
- Deactivate TX PL Inhibit
- Deactivate TX Power Level High
- Monitor
- Not Used
- Reset

- Select Channel 1 – 7

NOTE:
The TRC7 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC7**.

2.5.10.3
TRC7 Frequency 3

This drop-down list allows the user to assign a function tone to the selected TRC7 frequency.

The following function tone selections are supported:

- Activate Repeater Disable
- Activate Repeater Knockdown
- Activate TX PL Inhibit
- Activate TX Power Level High
- Deactivate Repeater Disable
- Deactivate Repeater Knockdown
- Deactivate TX PL Inhibit
- Deactivate TX Power Level High
- Monitor
- Not Used
- Reset
- Select Channel 1 – 7

NOTE:
The TRC7 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC7**.

2.5.10.4
TRC7 Frequency 4

This drop-down list allows the user to assign a function tone to the selected TRC7 frequency.

The following function tone selections are supported:

- Activate Repeater Disable
- Activate Repeater Knockdown
- Activate TX PL Inhibit
- Activate TX Power Level High
- Deactivate Repeater Disable
- Deactivate Repeater Knockdown
- Deactivate TX PL Inhibit
- Deactivate TX Power Level High
- Monitor
- Not Used
- Reset

- Select Channel 1 – 7

NOTE:
The TRC7 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC7**.

2.5.10.5 TRC7 Frequency 5

This drop-down list allows the user to assign a function tone to the selected TRC7 frequency.

The following function tone selections are supported:

- Activate Repeater Disable
- Activate Repeater Knockdown
- Activate TX PL Inhibit
- Activate TX Power Level High
- Deactivate Repeater Disable
- Deactivate Repeater Knockdown
- Deactivate TX PL Inhibit
- Deactivate TX Power Level High
- Monitor
- Not Used
- Reset
- Select Channel 1 – 7

NOTE:
The TRC7 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC7**.

2.5.10.6 TRC7 Frequency 6

This drop-down list allows the user to assign a function tone to the selected TRC7 frequency.

The following function tone selections are supported:

- Activate Repeater Disable
- Activate Repeater Knockdown
- Activate TX PL Inhibit
- Activate TX Power Level High
- Deactivate Repeater Disable
- Deactivate Repeater Knockdown
- Deactivate TX PL Inhibit
- Deactivate TX Power Level High
- Monitor
- Not Used
- Reset

- Select Channel 1 – 7

NOTE:
The TRC7 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC7**.

2.5.10.7 TRC7 Frequency 7

This drop-down list allows the user to assign a function tone to the selected TRC7 frequency.

The following function tone selections are supported:

- Activate Repeater Disable
- Activate Repeater Knockdown
- Activate TX PL Inhibit
- Activate TX Power Level High
- Deactivate Repeater Disable
- Deactivate Repeater Knockdown
- Deactivate TX PL Inhibit
- Deactivate TX Power Level High
- Monitor
- Not Used
- Reset
- Select Channel 1 – 7

NOTE:
The TRC7 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC7**.

2.5.10.8 TRC7 Frequency 8

This drop-down list allows the user to assign a function tone to the selected TRC7 frequency.

The following function tone selections are supported:

- Activate Repeater Disable
- Activate Repeater Knockdown
- Activate TX PL Inhibit
- Activate TX Power Level High
- Deactivate Repeater Disable
- Deactivate Repeater Knockdown
- Deactivate TX PL Inhibit
- Deactivate TX Power Level High
- Monitor
- Not Used
- Reset

- Select Channel 1 – 7

NOTE:
The TRC7 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC7**.

2.5.10.9
TRC7 Frequency 9

This drop-down list allows the user to assign a function tone to the selected TRC7 frequency.

The following function tone selections are supported:

- Activate Repeater Disable
- Activate Repeater Knockdown
- Activate TX PL Inhibit
- Activate TX Power Level High
- Deactivate Repeater Disable
- Deactivate Repeater Knockdown
- Deactivate TX PL Inhibit
- Deactivate TX Power Level High
- Monitor
- Not Used
- Reset
- Select Channel 1 – 7

NOTE:
The TRC7 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC7**.

2.5.10.10
TRC7 Frequency 10

This drop-down list allows the user to assign a function tone to the selected TRC7 frequency.

The following function tone selections are supported:

- Activate Repeater Disable
- Activate Repeater Knockdown
- Activate TX PL Inhibit
- Activate TX Power Level High
- Deactivate Repeater Disable
- Deactivate Repeater Knockdown
- Deactivate TX PL Inhibit
- Deactivate TX Power Level High
- Monitor
- Not Used
- Reset

- Select Channel 1 – 7

NOTE:
The TRC7 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC7**.

2.5.10.11
TRC7 Frequency 11

This drop-down list allows the user to assign a function tone to the selected TRC7 frequency.

The following function tone selections are supported:

- Activate Repeater Disable
- Activate Repeater Knockdown
- Activate TX PL Inhibit
- Activate TX Power Level High
- Deactivate Repeater Disable
- Deactivate Repeater Knockdown
- Deactivate TX PL Inhibit
- Deactivate TX Power Level High
- Monitor
- Not Used
- Reset
- Select Channel 1 – 7

NOTE:
The TRC7 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC7**.

2.5.10.12
TRC7 Frequency 12

This drop-down list allows the user to assign a function tone to the selected TRC7 frequency.

The following function tone selections are supported:

- Activate Repeater Disable
- Activate Repeater Knockdown
- Activate TX PL Inhibit
- Activate TX Power Level High
- Deactivate Repeater Disable
- Deactivate Repeater Knockdown
- Deactivate TX PL Inhibit
- Deactivate TX Power Level High
- Monitor
- Not Used
- Reset

- Select Channel 1 – 7

NOTE:
The TRC7 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC7**.

2.5.10.13
TRC7 Frequency 13

This drop-down list allows the user to assign a function tone to the selected TRC7 frequency.

The following function tone selections are supported:

- Activate Repeater Disable
- Activate Repeater Knockdown
- Activate TX PL Inhibit
- Activate TX Power Level High
- Deactivate Repeater Disable
- Deactivate Repeater Knockdown
- Deactivate TX PL Inhibit
- Deactivate TX Power Level High
- Monitor
- Not Used
- Reset
- Select Channel 1 – 7

NOTE:
The TRC7 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC7**.

2.5.10.14
TRC7 Frequency 14

This drop-down list allows the user to assign a function tone to the selected TRC7 frequency.

The following function tone selections are supported:

- Activate Repeater Disable
- Activate Repeater Knockdown
- Activate TX PL Inhibit
- Activate TX Power Level High
- Deactivate Repeater Disable
- Deactivate Repeater Knockdown
- Deactivate TX PL Inhibit
- Deactivate TX Power Level High
- Monitor
- Not Used
- Reset

- Select Channel 1 – 7

NOTE:
The TRC7 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC7**.

2.5.10.15
TRC7 Frequency 15

This drop-down list allows the user to assign a function tone to the selected TRC7 frequency.

The following function tone selections are supported:

- Activate Repeater Disable
- Activate Repeater Knockdown
- Activate TX PL Inhibit
- Activate TX Power Level High
- Deactivate Repeater Disable
- Deactivate Repeater Knockdown
- Deactivate TX PL Inhibit
- Deactivate TX Power Level High
- Monitor
- Not Used
- Reset
- Select Channel 1 – 7

NOTE:
The TRC7 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC7**.

2.5.10.16
TRC7 Frequency 16

This drop-down list allows the user to assign a function tone to the selected TRC7 frequency.

The following function tone selections are supported:

- Activate Repeater Disable
- Activate Repeater Knockdown
- Activate TX PL Inhibit
- Activate TX Power Level High
- Deactivate Repeater Disable
- Deactivate Repeater Knockdown
- Deactivate TX PL Inhibit
- Deactivate TX Power Level High
- Monitor
- Not Used
- Reset

- Select Channel 1 – 7

NOTE:
The TRC7 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC7**.

2.5.10.17
TRC15 Frequency 1

This drop-down list allows the user to assign a function tone to the selected TRC15 frequency.

The following function tone selections are supported:

- Monitor
- Select Channel 1 - 15

NOTE:
The TRC15 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC15**.

2.5.10.18
TRC15 Frequency 2

This drop-down list allows the user to assign a function tone to the selected TRC15 frequency.

The following function tone selections are supported:

- Monitor
- Select Channel 1 - 15

NOTE:
The TRC15 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC15**.

2.5.10.19
TRC15 Frequency 3

This drop-down list allows the user to assign a function tone to the selected TRC15 frequency.

The following function tone selections are supported:

- Monitor
- Select Channel 1 - 15

NOTE:
The TRC15 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC15**.

2.5.10.20
TRC15 Frequency 4

This drop-down list allows the user to assign a function tone to the selected TRC15 frequency.

The following function tone selections are supported:

- Monitor
- Select Channel 1 - 15

NOTE:
The TRC15 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC15**.

2.5.10.21

TRC15 Frequency 5

This drop-down list allows the user to assign a function tone to the selected TRC15 frequency.

The following function tone selections are supported:

- Monitor
- Select Channel 1 - 15

NOTE:
The TRC15 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC15**.

2.5.10.22

TRC15 Frequency 6

This drop-down list allows the user to assign a function tone to the selected TRC15 frequency.

The following function tone selections are supported:

- Monitor
- Select Channel 1 - 15

NOTE:
The TRC15 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC15**.

2.5.10.23

TRC15 Frequency 7

This drop-down list allows the user to assign a function tone to the selected TRC15 frequency.

The following function tone selections are supported:

- Monitor
- Select Channel 1 - 15

NOTE:
The TRC15 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC15**.

2.5.10.24

TRC15 Frequency 8

This drop-down list allows the user to assign a function tone to the selected TRC15 frequency.

The following function tone selections are supported:

- Monitor
- Select Channel 1 - 15

NOTE:
The TRC15 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC15**.

2.5.10.25

TRC15 Frequency 9

This drop-down list allows the user to assign a function tone to the selected TRC15 frequency.

The following function tone selections are supported:

- Monitor
- Select Channel 1 - 15

NOTE:
The TRC15 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC15**.

2.5.10.26
TRC15 Frequency 10

This drop-down list allows the user to assign a function tone to the selected TRC15 frequency.

The following function tone selections are supported:

- Monitor
- Select Channel 1 - 15

NOTE:
The TRC15 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC15**.

2.5.10.27
TRC15 Frequency 11

This drop-down list allows the user to assign a function tone to the selected TRC15 frequency.

The following function tone selections are supported:

- Monitor
- Select Channel 1 - 15

NOTE:
The TRC15 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC15**.

2.5.10.28
TRC15 Frequency 12

This drop-down list allows the user to assign a function tone to the selected TRC15 frequency.

The following function tone selections are supported:

- Monitor
- Select Channel 1 - 15

NOTE:
The TRC15 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC15**.

2.5.10.29
TRC15 Frequency 13

This drop-down list allows the user to assign a function tone to the selected TRC15 frequency.

The following function tone selections are supported:

- Monitor

- Select Channel 1 - 15

NOTE:
The TRC15 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC15**.

2.5.10.30
TRC15 Frequency 14

This drop-down list allows the user to assign a function tone to the selected TRC15 frequency.

The following function tone selections are supported:

- Monitor
- Select Channel 1 - 15

NOTE:
The TRC15 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC15**.

2.5.10.31
TRC15 Frequency 15

This drop-down list allows the user to assign a function tone to the selected TRC15 frequency.

The following function tone selections are supported:

- Monitor
- Select Channel 1 - 15

NOTE:
The TRC15 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC15**.

2.5.10.32
TRC15 Frequency 16

This drop-down list allows the user to assign a function tone to the selected TRC15 frequency.

The following function tone selections are supported:

- Monitor
- Select Channel 1 - 15

NOTE:
The TRC15 Frequency function selections are available when Remote Control Mode on page 185 is set to **TRC15**.

2.6
Control Buttons Set

The **Control Buttons** set contains features related to the programming buttons on portable or mobile radios.

The following sections contain all the supported fields:

2.6.1
General (Control Buttons)

The **General** section of the Control Buttons set contains the following fields:

2.6.1.1

Numeric Keypad

Configures the keypad modes.

Address
Allows direct entry of Address digits when the radio is in the idle state and is showing the default display.

Channel in All Zones
Allows channel selection in all the zones by entering the channel number via the keypad. This can only be done when the radio is in the idle condition.

Channel in Home Zone
Allows channel selection in current zone by entering the channel number via the keypad. This can only be done when the radio is in the idle condition.

Disabled
No direct entry of channel number, Address or Status digits are allowed when the radio is in the idle state.

Status
Allows direct entry of Status digits when the radio is in the idle state and is showing the default display.

2.6.1.2

Emergency Short Press Duration (ms)

Sets the duration a button assigned to the Emergency feature is required to be pressed (and held down) to activate the radio's Emergency mode operation.

This is a radio-wide feature.

Table 42: Range

Maximum	Minimum	Increment
750 ms	50 ms	50 ms

2.6.1.3

Long Press Duration (ms)

Sets the duration a button is required to be pressed (and held down), for it to be interpreted as a long press.

This duration also controls the long press operation of the button assigned to the Emergency feature. This is a radio-wide feature.

Table 43: Range

Maximum	Minimum	Increment
3750 ms	1000 ms	250 ms

2.6.1.4

Dual Knob Press Duration (ms)

Sets the duration of the knob press before changing the dual knob functionality in milliseconds (ms).

This duration can help to avoid accidental changing of the dual knob functionality. The user needs to press the knob longer than this timer to change the knob functionality.

Range:

Maximum	Minimum	Increment
3750 ms	500 ms	250 ms

2.6.1.5
Channel Up/Down via Knob

Dual knob is the Mobile combined volume and channel knob.

The user can switch between these two functionality by pressing the knob in alternation. Upon power up, the dual knob works as a volume knob. The user can push the knob to change the functionality to a channel selector. When the Channel Up/Down via Knob feature is disabled, the user can only use the knob for volume adjustment. Therefore, ensure that the Channel Up/Channel Down option is assigned to a programmable button.

2.6.1.6
Keypad Lock Options

This feature allows the user to choose ways to lock or unlock the keypad, channel selector knob, or both; depending on the settings.

Lock Keypad
Allows the user to lock the radio keypad or channel selector knob (applicable to Display model only).

Lock Channel Selector Knob
Allows the user to lock the channel selector knob (applicable to Display model only).

Lock Keypad and Channel Selector Knob
Allows the user to lock the radio keypad and channel selector knob (applicable to Display model only).

2.6.2
Conventional Radio Buttons Portable (Control Buttons)

The **Conventional Radio Buttons Portable** section of the Control Buttons set contains the following fields:

2.6.2.1
Orange Button Short Press (Portable)

This field allows you to change the short press functionality of the Orange Button.

NOTE: The selections that are available depend on the site type and radio model.

Action List
Allow the user to launch the action list and then start the feature or function from the action list.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.

Emergency On
Allows the user to set up an emergency call.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.2.2
Orange Button Long Press (Portable)

This field allows you to change the long press functionality of the Orange Button.

NOTE: The selections that are available depend on the site type and radio model.

Action List
Allow the user to launch the action list and then start the feature or function from the action list.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.

Emergency On
Allows the user to set up an emergency call.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 -One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 -Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.2.3
Side Button 1 Short Press (Portable)

This field allows you to change the short press functionality of the Side Button 1.

NOTE: The selections that are available depend on the site type and radio model.

Action List
Allow the user to launch the action list and then start the feature or function from the action list.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Battery Type
Allows the user to manually configure the battery type for XiR C1200, XiR C2620, and XiR C2660 radio models.

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.

Emergency On
Allows the user to set up an emergency call.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel

to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.2.4

Side Button 1 Long Press (Portable)

This field allows you to change the long press functionality of the Side Button 1.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Battery Type
Allows the user to manually configure the battery type for XiR C1200, XiR C2620, and XiR C2660 radio models.

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.

Emergency On
Allows the user to set up an emergency call.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will

unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.2.5
Side Button 2 Short Press (Portable)

This field allows you to change the short press functionality of the Side Button 2.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Battery Type
Allows the user to manually configure the battery type for XiR C1200, XiR C2620, and XiR C2660 radio models.

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.

Emergency On
Allows the user to set up an emergency call.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.2.6
Side Button 2 Long Press (Portable)

This field allows you to change the long press functionality of the Side Button 2.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Battery Type
Allows the user to manually configure the battery type for XiR C1200, XiR C2620, and XiR C2660 radio models.

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.

Emergency On
Allows the user to set up an emergency call.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.2.7
Side Button 3 Short Press (Portable)

This field allows you to change the short press functionality of the Side Button 3.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Flexible RX Group List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX Group List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.2.8
Side Button 3 Long Press (Portable)

This field allows you to change the long press functionality of the Side Button 3.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.2.9
P1 Button Short Press (Portable)

Allows the user to change the short press functionality of the programmable P1 Button.

NOTE: The selections that are available depend on the site type and radio model.

Action List
Allow the user to launch the action list and then start the feature or function from the action list.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Battery Type
Allows the user to manually configure the battery type for XiR C1200, XiR C2620, and XiR C2660 radio models.

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.

Emergency On
Allows the user to set up an emergency call.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.2.10
P1 Button Long Press (Portable)

Allows the user to change the long press functionality of the programmable P1 button.

NOTE: The selections that are available depend on the site type and radio model.

Action List
Allow the user to launch the action list and then start the feature or function from the action list.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Battery Type
Allows the user to manually configure the battery type for XiR C1200, XiR C2620, and XiR C2660 radio models.

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.

Emergency On
Allows the user to set up an emergency call.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.2.11
P2 Button Short Press (Portable)

Allows the user to change the short press functionality of the programmable P2 button.

NOTE: The selections that are available depend on the site type and radio model.

Action List
Allow the user to launch the action list and then start the feature or function from the action list.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Battery Type
Allows the user to manually configure the battery type for XiR C1200, XiR C2620, and XiR C2660 radio models.

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.

Emergency On
Allows the user to set up an emergency call.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.2.12

P2 Button Long Press (Portable)

Allows the user to change the long press functionality of the programmable P2 button.

NOTE: The selections that are available depend on the site type and radio model.

Action List
Allow the user to launch the action list and then start the feature or function from the action list.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Battery Type
Allows the user to manually configure the battery type for XiR C1200, XiR C2620, and XiR C2660 radio models.

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.

Emergency On
Allows the user to set up an emergency call.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.3 Conventional Radio Buttons Mobile (Control Buttons)

The **Conventional Radio Buttons Mobile** section of the Control Buttons set contains the following fields:

2.6.3.1 Front Button 1 Short Press (Mobile)

Allows the user to change the short press functionality of the programmable Front Button 1.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Channel Down
Allows the user to navigate to the previous channel.

Channel Up
Allows the user to navigate to the next channel.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call.

Emergency On
Allows the user to set up an emergency call.

Ext PA On/Off
Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Horn & Lights On/Off
Allows the user to toggle the Horn and Lights feature between on or off.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

PA On/Off
Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle External PA On/Off
Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.

Toggle Internal PA On/Off
Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhance On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

2.6.3.2
Front Button 1 Long Press (Mobile)

Allows the user to change the long press functionality of the programmable Front Button 1.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Channel Down
Allows the user to navigate to the previous channel.

Channel Up
Allows the user to navigate to the next channel.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call.

Emergency On
Allows the user to set up an emergency call.

Ext PA On/Off
Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Horn & Lights On/Off
Allows the user to toggle the Horn and Lights feature between on or off.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

PA On/Off
Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle External PA On/Off
Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.

Toggle Internal PA On/Off
Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.

Toggle PA for Voice Announcement
Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

Trill Enhance On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

2.6.3.3
Front Button 2 Short Press (Mobile)

Allows the user to change the short press functionality of the programmable Front Button 2.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Channel Down
Allows the user to navigate to the previous channel.

Channel Up
Allows the user to navigate to the next channel.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call.

Emergency On
Allows the user to set up an emergency call.

Ext PA On/Off
Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Horn & Lights On/Off
Allows the user to toggle the Horn and Lights feature between on or off.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

PA On/Off
Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle External PA On/Off
Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.

Toggle Internal PA On/Off
Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhance On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

2.6.3.4
Front Button 2 Long Press (Mobile)

Allows the user to change the long press functionality of the programmable Front Button 2.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Channel Down
Allows the user to navigate to the previous channel.

Channel Up
Allows the user to navigate to the next channel.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call.

Emergency On
Allows the user to set up an emergency call.

Ext PA On/Off
Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Horn & Lights On/Off
Allows the user to toggle the Horn and Lights feature between on or off.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

PA On/Off
Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle External PA On/Off
Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.

Toggle Internal PA On/Off
Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.

Toggle PA for Voice Announcement
Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

Trill Enhance On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

2.6.3.5

Front Button 3 Short Press (Mobile)

Allows the user to change the short press functionality of the programmable Front Button 3.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Channel Down
Allows the user to navigate to the previous channel.

Channel Up
Allows the user to navigate to the next channel.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call.

Emergency On
Allows the user to set up an emergency call.

Ext PA On/Off
Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Horn & Lights On/Off
Allows the user to toggle the Horn and Lights feature between on or off.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

PA On/Off
Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle External PA On/Off
Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.

Toggle Internal PA On/Off
Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhance On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

2.6.3.6
Front Button 3 Long Press (Mobile)

Allows the user to change the long press functionality of the programmable Front Button 3.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Channel Down
Allows the user to navigate to the previous channel.

Channel Up
Allows the user to navigate to the next channel.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call.

Emergency On
Allows the user to set up an emergency call.

Ext PA On/Off
Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Horn & Lights On/Off
Allows the user to toggle the Horn and Lights feature between on or off.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

PA On/Off
Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle External PA On/Off
Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.

Toggle Internal PA On/Off
Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.

Toggle PA for Voice Announcement
Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

Trill Enhance On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

2.6.3.7
Front Button 4 Short Press (Mobile)

Allows the user to change the short press functionality of the programmable Front Button 4.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Channel Down
Allows the user to navigate to the previous channel.

Channel Up
Allows the user to navigate to the next channel.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call.

Emergency On
Allows the user to set up an emergency call.

Ext PA On/Off
Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Horn & Lights On/Off
Allows the user to toggle the Horn and Lights feature between on or off.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

PA On/Off
Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle External PA On/Off
Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.

Toggle Internal PA On/Off
Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhance On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

2.6.3.8
Front Button 4 Long Press (Mobile)

Allows the user to change the long press functionality of the programmable Front Button 4.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Channel Down
Allows the user to navigate to the previous channel.

Channel Up
Allows the user to navigate to the next channel.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call.

Emergency On
Allows the user to set up an emergency call.

Ext PA On/Off
Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Horn & Lights On/Off
Allows the user to toggle the Horn and Lights feature between on or off.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

PA On/Off
Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle External PA On/Off
Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.

Toggle Internal PA On/Off
Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.

Toggle PA for Voice Announcement
Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

Trill Enhance On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE: For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

2.6.4
Conventional Accessory Buttons Portable (Control Buttons)

The **Conventional Accessory Buttons Portable** section of the Control Buttons set contains the following fields:

2.6.4.1
Orange Button Short Press (Portable) (Accessory Button)

This field allows you to change the short press functionality of the programmable Accessory Orange Button.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.

Emergency On
Allows the user to set up an emergency call.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.4.2
Orange Button Long Press (Portable) (Accessory Button)

This field allows you to change the long press functionality of the programmable Accessory Orange Button.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.

Emergency On
Allows the user to set up an emergency call.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

OTAR Rekey Request
Allows the user to request, from the KMF (Key Management Facility), the latest encryption keys for the radio. The radio sends a "Hello" message to the KMF. This message signals the KMF to send a rekey command to the radio with the latest encryption keys.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.4.3
No Dot Button Short Press (Portable) (Accessory Button)

This field allows you to change the short press functionality of the programmable Accessory No Dot Button.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.

Emergency On
Allows the user to set up an emergency call.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.4.4
No Dot / A Button Long Press (Portable) (Accessory Button)

This field allows you to change the long press functionality of the programmable Accessory No Dot / A Button.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.

Emergency On
Allows the user to set up an emergency call.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.4.5
1-Dot Button Long Press (Portable) (Accessory Button)

This field allows you to change the long press functionality of the programmable Accessory 1-Dot Button.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.

Emergency On
Allows the user to set up an emergency call.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.4.6
1-Dot Button Short Press (Portable) (Accessory Button)

This field allows you to change the short press functionality of the programmable Accessory 1-Dot Button.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.

Emergency On
Allows the user to set up an emergency call.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.4.7
2-Dot Button Short Press (Portable) (Accessory Button)

This field allows you to change the short press functionality of the programmable Accessory 2-Dot Button.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.

Emergency On
Allows the user to set up an emergency call.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.4.8
2-Dot Button Long Press (Portable) (Accessory Button)

This field allows you to change the long press functionality of the programmable Accessory 2-Dot Button.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator
Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level, and Flashing Red indicates low battery level (applicable to Non-Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.

Emergency On
Allows the user to set up an emergency call.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Mandown
Allows the user to toggle the Mandown feature between on or off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker
Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Mic Distortion Control
Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Inhibit
Activates the Tx Inhibit feature when the radio senses that the ignition is off. The Tx Inhibit feature prevents the radio from transmitting.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.6.5
Conventional Accessory Buttons Mobile (Control Buttons)

The **Conventional Accessory Buttons Mobile** section of the Control Buttons set contains the following fields:

2.6.5.1
No Dot Button Short Press (Mobile) (Accessory Button)

Allows the user to change the short press functionality of the programmable Accessory No Dot Button.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Channel Down
Allows the user to navigate to the previous channel.

Channel Up
Allows the user to navigate to the next channel.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call.

Emergency On
Allows the user to set up an emergency call.

Ext PA On/Off
Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Horn & Lights On/Off
Allows the user to toggle the Horn and Lights feature between on or off.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

PA On/Off
Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle External PA On/Off
Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.

Toggle Internal PA On/Off
Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhance On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

2.6.5.2
No Dot / A Button Long Press (Mobile) (Accessory Button)

Allows the user to change the long press functionality of the programmable Accessory No Dot / A Button.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Channel Down
Allows the user to navigate to the previous channel.

Channel Up
Allows the user to navigate to the next channel.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call.

Emergency On
Allows the user to set up an emergency call.

Ext PA On/Off
Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Horn & Lights On/Off
Allows the user to toggle the Horn and Lights feature between on or off.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

PA On/Off
Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle External PA On/Off
Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.

Toggle Internal PA On/Off
Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.

Toggle PA for Voice Announcement
Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

Trill Enhance On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

2.6.5.3
1-Dot / B Button Short Press (Mobile) (Accessory Button)

Allows the user to change the short press functionality of the programmable Accessory 1-Dot / B Button.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Channel Down
Allows the user to navigate to the previous channel.

Channel Up
Allows the user to navigate to the next channel.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call.

Emergency On
Allows the user to set up an emergency call.

Ext PA On/Off
Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Horn & Lights On/Off
Allows the user to toggle the Horn and Lights feature between on or off.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

PA On/Off
Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for

Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle External PA On/Off
Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.

Toggle Internal PA On/Off
Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhance On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

2.6.5.4
1-Dot / B Button Long Press (Mobile) (Accessory Button)

Allows the user to change the long press functionality of the programmable Accessory 1-Dot / B Button.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Channel Down
Allows the user to navigate to the previous channel.

Channel Up
Allows the user to navigate to the next channel.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call.

Emergency On
Allows the user to set up an emergency call.

Ext PA On/Off
Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Horn & Lights On/Off
Allows the user to toggle the Horn and Lights feature between on or off.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

OTAR Rekey Request
Allows the user to request, from the KMF (Key Management Facility), the latest encryption keys for the radio. The radio sends a "Hello" message to the KMF. This message signals the KMF to send a rekey command to the radio with the latest encryption keys.

PA On/Off
Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle External PA On/Off
Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.

Toggle Internal PA On/Off
Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.

Toggle PA for Voice Announcement
Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

Trill Enhance On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE: For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

2.6.5.5
2-Dot / C Button Short Press (Mobile) (Accessory Button)

Allows the user to change the short press functionality of the programmable Accessory 2-Dot / C Button.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Channel Down
Allows the user to navigate to the previous channel.

Channel Up
Allows the user to navigate to the next channel.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call.

Emergency On
Allows the user to set up an emergency call.

Ext PA On/Off
Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Horn & Lights On/Off
Allows the user to toggle the Horn and Lights feature between on or off.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

PA On/Off
Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle External PA On/Off
Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.

Toggle Internal PA On/Off
Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhance On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

2.6.5.6
2-Dot / C Button Long Press (Mobile) (Accessory Button)

Allows the user to change the long press functionality of the programmable Accessory 2-Dot / C Button.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Bluetooth Connect
Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect
Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off
Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch
Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear
Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Channel Down
Allows the user to navigate to the previous channel.

Channel Up
Allows the user to navigate to the next channel.

Confirm
Allows the user to confirm a feature.

Contacts
Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off
Allows the user to terminate an outgoing emergency call.

Emergency On
Allows the user to set up an emergency call.

Ext PA On/Off
Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

GNSS On/Off
Allows the user to toggle the GNSS feature between on and off.

High/Low Power
Allows the user to toggle between high and low power.

Horn & Lights On/Off
Allows the user to toggle the Horn and Lights feature between on or off.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Notifications
Provides the user direct access to the Notifications list.

Nuisance Delete
Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Predefined Talkgroup Call
Allows the user to make a one touch predefined talkgroup call.

Option Board Feature 1 - Option Board Feature 6
Allows the user to toggle a feature offered by the option board between on and off for the channel.

PA On/Off
Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone
Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit
Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status
Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Text Message
Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle External PA On/Off
Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.

Toggle Internal PA On/Off
Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.

Toggle PA for Voice Announcement
Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.

Toggle Mute On/Off
Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends setting this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

Trill Enhance On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Wi-Fi Status Announcement
Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

2.6.6
One Touch Access (Control Buttons)

The **One Touch Access** section of the Control Buttons set contains the following fields:

2.6.6.1
One Touch Access

This field allows you to configure one touch access.

There are 6 rows that can be used to configure one touch access. Each row contains the parameters for a one touch access. Each row can then be assigned to a short or long programmable button press (One Touch Access).

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Digital mode.

2.6.6.2
Mode (One Touch Access)

Allows you to select the operation mode for the call members.

The call members are selected in the Call column, select the MDC status or message in the Call Type column, or set the Home Revert feature.

NOTE:
The Call, Call Type, and Text Message features are disabled if this feature is set to None or Home Revert.

The 5 Tone Call features are disabled if this feature is set to Home Revert.

The 5 Tone Call in One Touch Access is triggered when the current channel in the radio is a 5 Tone channel. The 5 Tone Call does not depend on any signaling type defined in Mode.

The Channel feature is enabled if this feature is set to Home Revert.

The options for Call are digital calls and None if this feature is set to Digital.

The options for Call are Capacity Plus calls and None if this feature is set to Capacity Plus–Single-Site.

The options for Call are Phone calls and None if this feature is set to Phone Call.

The options for Call Type are Message and Status if this feature is set to MDC.

In older codeplugs, this feature was known as Call Mode.

2.6.6.3
Channel Zone

Allows you to select the Home Revert channel for the Mobile from the list of all available Analog and Digital channels.

NOTE:
This feature is enabled if Mode is set to Home Revert.

2.6.6.4
Channel

Allows you to select the Home Revert channel for the Mobile from the list of all available Analog and Digital channels.

NOTE:
This feature is enabled if Mode is set to Home Revert.

2.6.6.5
Call (One Touch Access)

This paragraph is applicable to MOTOTRBO Conventional radios.

This column allows you to select a call member from all types of digital calls available in the Digital or Capacity Plus set under Contacts, i.e. Private Calls, Group Calls, PC calls, Dispatch Calls, or Phone Calls except All Call.

NOTE:
For MOTOTRBO Conventional radios, the user chooses the call member first from the Call column and then decides the call member type from the Call Type column.

For MOTOTRBO Conventional radios, if the user selects a call of Group type in the Call column, Group Call and Text Message will appear as valid choices in the Call Type column. If a call of Private type is chosen, the user can select Call Alert, Private Call and Text Message in the Call Type column. If a call of PC or Dispatch type is chosen, the user can only select Text Message in the Call Type column.

If a call of Phone type is chosen, the user can select Phone Call in the Call column. The Phone Call option is available only when the Digital feature is enabled in the device.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode.

2.6.6.6
Call Type (One Touch Access)

For MOTOTRBO Conventional radios, this feature allows you to select a call type for the call member that was selected in the Call column.

NOTE:
For MOTOTRBO Conventional radios, if the user selects a call of Group type in the Call column, Group Call and Text Message will appear as valid choices in the Call Type column. If a call of Private type is chosen, the user can select Call Alert, Private Call and Text Message in the Call Type column. If a call of PC or Dispatch type is chosen, the user can only select Text Message in the Call Type column. If a call of Phone type is chosen, the user can select Phone Call in the Call column.

For MOTOTRBO Conventional radios, the selection for Text Message comes from Text Messages. At least one text message needs to be created in Text Messages to enable the PC or Dispatch Call option in this feature.

For MOTOTRBO Conventional radios, Message comes from MDC Message List and Status comes from MDC Status List.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.6.6.7
5 Tone Call (One Touch Access)

This column allows the user to configure a 5 Tone call member from the choices of Call 1, Call 2, Call 3, Call 4, Call 5, Call 6, and None for One Touch Access.

NOTE:
This feature is disabled if Mode is set to Home Revert.

This feature is supported in Analog mode only.

2.6.6.8
MDC Status/Message Index (One Touch Access)

Selects a status or message index from the available index.

This index is associated to the MDC Status List (16 entries) or MDC Message List list (16 entries).

NOTE:
This feature is enabled only when Call Type is selected as Status or Message.

This feature is supported in Analog mode only.

2.6.6.9
Text Message (One Touch Access)

Allows you to select a Quick Text. The selection for these messages comes from Text Messages.

NOTE:
This feature is available only when Call Type is set to Text Message.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.6.7
Number Key Quick Contact Access (Control Buttons)

The **Number Key Quick Access** section of the Control Buttons set contains the following fields:

2.6.7.1
Number Key (Number Key Quick Contact Access)

This column represents the keys from "0" to "9" on the numeric keypad.

NOTE:
This feature is supported in Digital mode only.

2.6.7.2
Mode (Number Key Quick Contact Access)

Allows the user to select the operation mode for the call member selected in the Call column.

NOTE:
This feature is disabled on the respective Number Key row if set to None.

The Call feature is disabled if this feature is set to None (disabled).

The options for Call are digital calls and None if this feature is set to Digital.

The options for Call are Capacity Plus calls and None if this feature is set to Capacity Plus–Single-Site.

The options for Call are phone calls and None if this feature is set to Phone Call.

The Capacity Plus option is available only when the Capacity Plus–Single-Site feature is enabled in the device.

This feature is supported in Digital mode only.

2.6.7.3
Call (Number Key Quick Contact Access)

This column allows the user to select a call member.

Call member is selected from all types of digital calls available in the Digital or Capacity Plus Set under Contacts (Private Calls, Group Calls, or All Call).

NOTE:
This feature is hidden when the Digital feature is disabled.

This feature is disabled and set to None if the Mode feature is set to None

This field allows the user to only select all available Digital private calls, group calls, all call, None, and User Defined if the Mode feature is set to Digital.

This field allows the user to only select all available Capacity Plus private calls, group calls, all call, None, and User Defined if the Mode feature is set to Capacity Plus.

This feature is set to None if the Mode feature is changed to a different mode.

This field allows the user to only select all available Phone calls, None, and User Defined if the Mode feature is set to Phone Call.

Notwithstanding Note 3, 4, and #6, the User Defined choice is only applicable when the existing value in the radio on reading is a User Contact type (User Digital, User Capacity Plus, or User Phone Call).

The User Defined choice is removed from the list of choices if the user chooses another choice and then commits the change by moving the focus to another field.

This feature is supported in Digital mode only.

2.6.8
Actions List (Control Buttons)

The **Actions List** section of the Control Buttons set contains the following fields:

2.6.8.1

Index (Actions List)

Displays the number of the job ticket action entries.

NOTE:
This feature is supported in Digital mode only.

This feature is applicable for SL Series radios.

2.6.8.2

Feature (Action List)

Allows the user to configure a feature from a list of features.

NOTE: The selections that are available depend on the site type and radio model.

All Alert Tones On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Backlight Auto On/Off
Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Brightness
Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert
Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Log Access
Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).

Cancel
Allows the user to cancel an ongoing call, if call type is Group Call, then only call initiator can use this button to cancel an ongoing call; if call type is Private Call, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).

Channel Announcement
Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.

Contacts
Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).

Day/Night Display Toggle
Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Flexible RX List
Allows the user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.

High/Low Power
Allows the user to toggle between high and low power.

Indoor Location On/Off
Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off
Allows the user to toggle the Intelligent Audio feature between on and off.

Job Tickets
Allows the user to access the Job Tickets menu to respond to the job tickets.

Lock
Allows the user to lock/unlock the radio keypad and/or channel selector knob based on keypad locks setting (applicable to Display model only).

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam
Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message
Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off
Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Notifications
Provides the user direct access to the Notifications list.

One Touch Access 1 - One Touch Access 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

Option Board
Allows the user to toggle a feature offered by the option board between on and off for the channel.

Permanent Monitor
Permanent Monitor has the same function as Monitor (Portable only), which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for Permanent Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone Call
Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Manual Dial
Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off
Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).

Radio Check
Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable
Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).

Radio Enable
Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).

Radio Name
Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Remote Monitor
Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround
Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message
Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Reset Home Channel
Allows the user to reset the Home Channel. This option can be assigned to a short or long button press.

Response Inhibit On/Off
Allows the user to toggle the Response Inhibit feature between on or off.

Ring Alert Type
Provides the user direct access to the Ring Alert Type menu.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Scrambling Code Toggle
Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).

Scrambling On/Off
Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).

Silence Home Channel Reminder
Allows the user to silence the Home Channel Reminder. The user can assign this option to a short or long button press.

Site Alias
Displays the current site that the subscriber radio is on (available when the Capacity Plus–Multi-Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off
Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Switch Speaker
Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1 - Telemetry Button 3
Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor
Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Wi-Fi On/Off
Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Transmit Inhibit On/Off
Prevents the portable from transmitting when enabled. This feature is primarily used while in hazardous environments.

Trill Enhancement On/Off
Allows the user to toggle the Trill Enhance feature between on and off.

TX Interrupt Remote Dekey
Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned
No feature is assigned to the programmable button.

Vibrate Style
Allow the user to toggle radio vibrate style setting cyclically in short, medium or long style.

Voice Announcement On/Off
Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List
Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)

WAVE/Radio Toggle
Allows the user to toggle between WAVE Mode and Radio Mode. This feature is not applicable if the Wi-Fi feature is disabled or if radio model does not support WAVE OnCloud feature.

Zone Selection
Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle
Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

NOTE:
For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Flexible RX List is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.7 Text Messages Set

The **Text Messages** set is used to configure the Text Messaging Services. MOTOTRBO's advanced digital technology supports data applications, including Text Messaging Services, which enables text-format communication between radios and dispatch systems, between radios and email-addressable devices, and to remote PC clients attached to radios.

The following section contains all the supported fields:

2.7.1
General (Text Messages)

The **General** section of the Text Messages set contains the following fields:

2.7.1.1
Max Length of Message Sent

Allows you to select the maximum length of message sent..

Choices are 140 and 280.

2.7.1.2
Message

This feature allows a you to enter a message up to a certain number of characters, for example, 140 or 280 depending on the radio models.

Valid characters are alphanumeric, spaces, and special characters. You can send the text message by assigning a short or long programmable button press (Text Message) or access the Text Messages feature via the Text Messages Menu feature.

NOTE:
You can copy and paste text from any other rows. The user can also copy and paste rows. If the selected rows to be copied exceed the rows to be pasted, CPS 2.0 automatically inserts additional rows at the end of the table.

This feature is supported in Digital mode only.

2.8
Telemetry Set

The **Telemetry** set is used to configure auxiliary control.

The following section contains all the supported fields:

2.8.1
General (Telemetry)

The **General** section of the Telemetry set contains the following fields:

2.8.1.1
Feature

Telemetry functions can be triggered by physical button presses, GPIO lines going active or by receiving Telemetry Commands from other radios.

The Feature column identifies which virtual Telemetry Button or VIO is mapped to a particular Telemetry Command. After setting up a Telemetry Feature, it is important to map any virtual Telemetry Buttons to physical Buttons under the Button folder or any Telemetry VIO to physical GPIO lines under the Accessories folder.

NOTE:
Telemetry VIO 4 and 5 are applicable for Mobiles only.

2.8.1.2
Description

Allows the user to enter a short, 16 character description to help remember the purpose of the particular Telemetry function.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios only.

2.8.1.3
Action

Telemetry functions can either 'send' Commands to other radios or perform functions 'on' receipt of Commands from other radios.

Send Status
This is an Output Command that sends the status of the radio's triggered VIO line (which is the status of the device connected to it) to another radio. The receiving radio will receive the status of triggered VIO line and pass the binary information to the device connected to it. The status will only be sent when the VIO line changes from inactive to active.

Send Status w/ Text
This is an Output Command that is similar to Send Status. In addition, it sends a Text Message which will appear on the receiving radio's screen (applicable to Telemetry VIO only).

None
No output or input function is assigned.

Send Pulse Command
This is an Output Command that sends a Pulse instruction to another radio. It is up to the receiving radio to trap this message and generate the actual Pulse.

On Pulse Command
This is an Input Command, which on receipt of a Pulse instruction from another radio will create a Pulse of the width specified in the Pulse Time column on the specified Telemetry VIO (applicable to Telemetry VIO only).

Send Query Status Command
This is an Output Command that is sent out to request for the status of the VIO lines of another radio (applicable to Telemetry Button only).

Send Toggle Voltage Command
This is an Output Command that sends a Toggle instruction to another radio. It is up to the receiving radio to trap this command and to Toggle the line.

On Toggle Voltage Command
This is an Input Command, which on receipt of an On Toggle Voltage instruction will toggle the pin's voltage control (applicable to Telemetry VIO only).

Send Voltage High Command
This is an Output Command. The radio sends a Voltage High instruction to another radio. It is up to the receiving radio to trap and set the line high.

Send Voltage Low Command
This is an Output Command. The radio sends a Voltage Low instruction to another radio. It is up to the receiving radio to trap and set the line low.

On Voltage High/Low Command
This is an Input Command that traps a Voltage Low or Voltage High instruction from another radio and sets the line to the active state (applicable to Telemetry VIO only).

NOTE:
This feature is applicable to MOTOTRBO Conventional radios only.

2.8.1.4
Pulse Time

Defines the duration of a pulse on the Virtual Input Output (VIO) pin.

If an On Pulse command is received, the radio generates a pulse of the duration specified.

Range:

Maximum	Minimum	Increment
50000 ms	200 ms	200 ms

NOTE:
This feature is enabled when the Action is set to On Pulse Command.

2.8.1.5
Mode

Allows the user to select a call mode for the call member selected in the Call column.

NOTE:
The Call and Text Message features are disabled if this feature is set to None. The Channel feature is disabled also if this feature is set to None.

This feature is supported in Digital mode only.

2.8.1.6
Channel Zone

Configures a revert channel zone for One Touch Telemetry.

The choices are Selected and all available Digital channels. If Selected is configured, the telemetry data messages are sent on the home channel (Digital mode) or voice channel (Capacity Plus–Single-Site mode). Otherwise, the telemetry data messages are sent on the revert channel configured. It is recommended that this revert channel should be a channel from the channel pool instead of a zone.

NOTE:
The configured channel must not be an Option Board Trunking enabled channel.

This feature is disabled when the Mode feature is set to None.

This feature does not list a channel with RX Only enabled.

This feature is disabled on the Telemetry VIO feature, only applicable to the Telemetry Button feature.

This feature is supported in Digital mode only.

2.8.1.7
Channel

Configures a revert channel for One Touch Telemetry.

The choices are Selected and all available Digital channels. If Selected is configured, the telemetry data messages are sent on the home channel (Digital mode) or voice channel (Capacity Plus–Single-

Site mode). Otherwise, the telemetry data messages are sent on the revert channel configured. It is recommended that this revert channel should be a channel from the channel pool instead of a zone.

NOTE:
The configured channel must not be an Option Board Trunking enabled channel.

This feature is disabled when the Mode feature is set to None.

This feature does not list a channel with RX Only enabled.

This feature is disabled on the Telemetry VIO feature, only applicable to the Telemetry Button feature.

This feature is supported in Digital mode only.

2.8.1.8
Call

Allows the user to select only PC, Group and Private calls from the Digital or Capacity Plus contacts to send the telemetry command.

The None option may also be selected if no call to another radio is required.

NOTE:
This feature is disabled when the Action is set to None or in addition for Telemetry VIO pin, when On Pulse Command, On Toggle Voltage Command or On Voltage High/Low Command is selected.

When Action is set to Send Query Status Command, only Private Call from the Digital contact list can be selected as a Digital Call.

This feature is supported in Digital mode only.

2.8.1.9
Target VIO

Defines the Virtual Input Output (VIO) of the target radio for each Command.

On the target radio, the VIO is paired with a physical GPIO pin. The purpose of having this virtual layer is to isolate any dependencies between the initiating radio and target radio so that at any time when the GPIO pins on the target radio are changed, e.g. rewired to a different device, the initiating radio does not have to reprogram its Telemetry configuration to reflect the change. Additionally, the initiating radio will not know what the Target VIO is mapped to on the target radio. Any VIOs may be chosen for each Command. The initiating radio will only control one VIO of each target radio at a time. The None option may also be selected if no target VIO is required.

NOTE:
This feature is disabled when the Action is set to None or for the case of Telemetry VIO pins, when Action is set to Send Status, Send Status w/ Text, On Pulse Command, On Toggle Voltage Command or On Voltage High/Low Command or for the case of Telemetry Buttons, when Action is set to Send Query Status Command.

2.8.1.10
Text Message

Allows the user to attach a Quick Text message to the Telemetry Send Status with Text command.

NOTE:
This feature is enabled when the Action is set to Send Status with Text.

The text message will appear if there is at least one Quick Text message in the Text Message table.

Send Status w/ Text is capable of sending 127 characters in one Text Message. Any Quick Text message used with this feature that is longer than 127 characters will be truncated.

This feature is supported in Digital mode only.

2.9
Menu Set

The **Menu** set is used to configure the menu settings for portables and mobiles display models.

The following sections contain all the supported fields:

2.9.1
General (Menu)

The **General** section of the Menu set contains the following fields:

2.9.1.1
Editor Hang Time (sec)

Configures the Editor Hang Time from the choices of **Infinite**, **5**, **10**,**15**,**20**,**25**,**30**,**60**, and **120**.

2.9.1.2
Menu Hang Time (sec)

Sets the amount of time that the radio remains in the menu mode, after which the radio reverts back to the Home screen.

The available choices are 5, 10, 15, 20, 25, 30, 60, 120 sec, and Infinite. If the duration is set to Infinite, the radio remains infinitely in this mode until the user exits the menu manually by pressing the back or home button. This is a radio-wide feature.

NOTE:
The scan operation is stopped when the radio is in a menu screen.

This feature is supported in MOTOTRBO 2.0 radios.

This feature is available when the radio is a Display model.

2.9.1.3
Text Message (Menu)

Allows the user to access the Text Message feature via the menu.

The user has the ability to check the Inbox, edit messages, send messages or Quick Text.

NOTE:
This feature is available when the radio is a Display model.

This feature is supported in Digital mode only.

2.9.1.4
Job Tickets Main Name

Sets the title to appear in the job ticket menu in the Portable.

This name will also appear in the radio prompt message when the user long presses the programmable front buttons for the Job Ticket feature. The user may enter up to a maximum of 16 characters. Valid characters are alphanumerics, spaces and special characters.

NOTE:
This feature is supported in Digital mode only.

2.9.1.5
Job Tickets Short Name

Sets a short alias to appear in the programmable front buttons for the Job Ticket feature.

The user may enter up to a maximum of five characters. Valid characters are alphanumerics, spaces and special characters.

NOTE:
This feature is supported in Digital mode only.

2.9.1.6
Job Ticket Delete

Enable this check box to allow the user to delete or cancel job tickets with job ticket IDs.

When the user deletes job tickets, the radio is not required to sync the ticket state with the server. The canceled tickets are moved to a folder through the Job Ticket Modify Service.

2.9.1.7
Message (Menu)

Allows you to access the Message feature via the menu.

Using this menu, you can view the inbox, sent items, or drafts and send a custom or Quick Text message in Digital mode. In Analog mode, you can send the Quick Text using the items configured in the MDC Message List and view sent items.

NOTE:
This feature is available when the radio is a Display model.

2.9.1.8
Wi-Fi

This check box allows the user to enable the WiFi feature for the menu.

2.9.2
Contact (Menu)

The **Contact** section of the Menu set contains the following fields:

2.9.2.1
Call Alert (Menu)

Allows you to initiate Call Alert via the menu.

Call Alert allows you to alert another user, requesting that they call back the user (call initiator) when they (recipient) become available. Call Alert can only be received when the channel is free. This

paragraph is applicable to MOTOTRBO Conventional radios. In Digital Mode, you can only initiate a Call Alert to an individual radio. In Analog mode, the destination ID can be a Private, Group or All Call ID.

NOTE:
For MOTOTRBO Conventional radios, the Contacts consists of all MDC and Quik-Call II call entries when it is accessed in Analog mode and digital Private Call entries when it is accessed in Digital mode.

This feature is available when the radio is a Display model.

2.9.2.2
Edit (Menu)

Allows you to edit the status number and entry alias of a 5 Tone Status list entry via the menu.

NOTE:
This feature is supported in Analog mode for Display model only.

2.9.2.3
Ring Style (Menu)

Allows the user to enable or disable the Ring Style sub menu in the radio.

The Ring Style feature allow the user to change the ring tone for a received Private Call, Dispatch Call, or PC Call.

NOTE:
This feature is supported in Digital mode only.

2.9.2.4
Text Message Alert (Menu)

Allows you to enable or disable the Text Message Alert sub menu in the radio.

The Text Message Alert feature allows you to configure the type of alert tone to be sounded when a text message is received from a specific contact in the Contacts list.

NOTE:
This feature is supported in Digital mode only.

2.9.2.5
Manual Dial (Menu)

Allows you to access the Manual Dial capability of the radio via the menu.

Manual Dial allows you to initiate a call (e.g. Private Call, Call Alert) or request (e.g. Remote Monitor, Radio Check, Radio Disable, Radio Enable) or send Text Messages by keying in the destination ID using the keypad, even if the destination ID is not listed in the Contacts.

NOTE:
This feature is available when the radio is a Display model.

This feature is supported in Digital mode only.

2.9.2.6
Phone Manual Dial (Menu)

Allows the user to enable or disable the capability of manually dialing a phone number via the radio menu.

NOTE:
This feature is supported in Digital mode only.

2.9.2.7
Radio Check (Menu)

Allows you to initiate a Radio Check request from the menu.

Radio check allows you to determine if a radio is active in a system without showing any indication to the radio's user.

NOTE:
Disabling this feature prevents user initiation of this feature from the radio's user interface. It does not prevent the radio from responding to a Radio Check command.

This feature is applicable for Display models only.

2.9.2.8
Remote Monitor (Menu)

Allows the user to initiate a Remote Monitor request to the target radio via the menu.

Upon a successful request, the target radio's microphone and transmitter will be activated to be remotely monitored.

NOTE:
The destination radio must have Remote Monitor Encode/Decode or Remote Monitor Encode/Decode (MDC System) enabled in the signaling systems folder.

Disabling this feature prevents user initiation of this feature from the radio's user interface. It does not prevent the radio from responding to a Remote Monitor command.

This feature is available for Display models only.

2.9.2.9
Radio Enable (Menu)

Allows you to initiate the Radio Enable command to the target radio via the menu.

Radio Enable is used to enable a target radio that is disabled (inhibited).

NOTE:
Disabling this feature prevents user initiation of this feature from the radio's user interface. It does not prevent the radio from responding to a Radio Enable command.

This feature is available for Display models only.

Encode feature is available in Digital mode only.

2.9.2.10
Radio Disable (Menu)

Allows you to initiate a Radio Disable command to the target radio via the menu.

Upon a successful request, the target radio will disable all its user interfaces (e.g. all LED indicators including Backlight, alert tones, user inputs including PTT except for Volume/On/Off knob on Portable and Power On/Off button on Mobile), ignore Emergency alarms and received data to radio or external

devices, mute received voice to radio or external device and disallow transmission of data or command from the radio or external device. This disables the radio if it is lost or stolen. However, the radio continues to monitor the air interface to enable it to receive the Radio Enable command.

NOTE:
The target radio must have Radio Disable Encode/Decode enabled in the signaling systems folder.

Disabling this feature prevents user initiation of this feature from the radio's user interface. It does not prevent the radio from responding to a Radio Disable command.

This feature is available for Display models only.

Encode feature is available in Digital mode only.

2.9.2.11
Program Key (Menu)

Allows the user to enable or disable the Program Key menu in the radio.

The Program Key feature allows the user to associate a call to the number buttons on the radio keypad (1-9 and 0). When the user long presses these buttons in the home screen, the associated call entry will be prompted. The supported call types are Group, Private, or All Call calls in Digital or Capacity Plus–Single-Site mode. This is a radio-wide feature.

NOTE:
This feature is supported in Digital mode only.

This feature is applicable to Display model only.

2.9.3
Scan (Menu)

The **Scan** section of the Menu set contains the following fields:

2.9.3.1
Scan (Menu)

Allows the user to toggle Scan on or off via the menu for the current conventional channel/trunking personality.

Scan allows the radio to search the scan list that is attached to the current channel/personality for an eligible channel/personaliity to receive or unmute.

NOTE:
During radio operation, if no Scan List is attached to the current channel/personality, the user will not be able to enter the Scan menu.

This feature is available when the radio is a Display model.

2.9.3.2
Edit List (Menu)

Allows you to edit the Scan List via the menu.

The Edit List allows the user to perform certain actions on the scan list, e.g. view the scan list, change the scan member's priority level, add new scan members to the scan list or delete members from the scan list. Creating a new or deleting an existing scan list is not allowed on the radio.

NOTE:
This feature is available when the radio is a Display model.

2.9.3.3
Select New List (Menu)

Allows you to change Scan List or disable the current Scan List via the menu.

2.9.4
TMS (Menu)

The **TMS** section of the Menu set contains the following fields:

2.9.5
Flexible RX List (Menu)

The **Flexible RX List** section of the Menu set contains the following fields:

2.9.5.1
Flexible RX Group List (Menu)

Allows you to enable or disable the capability of configuring the Flexible RX Group List through menu.

NOTE: This feature is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.9.6
Status (Menu)

The **Status** section of the Menu set contains the following fields:

2.9.6.1
Manual Dial (Menu)

Allows the user to access the Manual Dial capability of the radio via the menu when in the 5 Tone Status list.

The user can initiate a 5 Tone call (e.g. Private Call, Call Alert) or request (e.g. Remote Monitor, Radio Check, Radio Disable, Radio Enable) or send Text Messages by keying in the destination ID using the keypad, even if the destination ID is not listed in the Status list.

NOTE:
This feature is supported in Analog mode for Display model only.

2.9.6.2
Edit (Menu)

Allows the user to edit the alphanumeric characters on the edit screen.

The user has the ability to add a new entry to the Contacts list or edit an entry within the Contacts list.

NOTE:
This feature is available when the radio is a Display model.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.9.7
Call Log (Menu)

The **Call Log** section of the Menu set contains the following fields:

2.9.7.1
Answered (Menu)

Allows the user to track the last ten incoming private calls that the user answered.

The user accesses the call log via the menu. This log also provides a quick way for the user to initiate a private call.

NOTE:
This feature is applicable to Display model only.

This feature is supported in Digital mode only.

2.9.7.2
Missed (Menu)

Allows the user to track the last ten incoming private calls that the user missed or failed to respond.

The user accesses the call log via the menu. This log also provides a quick way for the user to initiate a private call.

NOTE:
This feature is applicable to Display model only.

This feature is supported in Digital mode only.

2.9.7.3
Outgoing Radio (Menu)

This paragraph is applicable to MOTOTRBO Conventional radios.

This field allows the user to track the last private call and call alert numbers that the user initiated and provides easy redial access. The maximum stored number is ten for both type of calls combined. The user accesses the call log via the menu. This log also provides a quick way for the user to initiate a private call.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.9.8
Utilities (Menu)

The **Utilities** section of the Menu set contains the following fields:

2.9.8.1
Talkaround (Menu)

Allows you to set the radio in Talkaround mode via the menu.

Talkaround mode is required in the absence of a repeater.

NOTE:
This feature is available when the radio is a Display model.

2.9.8.2
Tones/Alerts (Menu)

Allows the user to toggle all the tones and alerts on or off via the menu.

NOTE:
This feature is available when the radio is a Display model.

2.9.8.3
Horn/Lights (Menu)

Allows the user to toggle the horn and lights on or off via the menu.

NOTE:
This feature is available when the radio is a Display model.

2.9.8.4
Power (Menu)

Allows you to adjust the radio's transmission power level via the menu.

NOTE:
This feature is available when the radio is a Display model.

2.9.8.5
Backlight (Menu)

Allows the user to change the Backlight setting via the menu.

NOTE:
This feature is available when the radio is a Display model.

2.9.8.6
Backlight Timer (Menu)

This check box allows the user to enable or disable the Backlight Timer menu.

When the user enables this check box, the user can set the timer for the Timeout Timer feature in the radio via the menu.

2.9.8.7
Trill Enhancement (Menu)

This check box allows the user to enable or disable the Trill Enhancement sub menu.

The Trill Enhancement filter provides improved encoding of the Alveolar Trill found in some foreign languages.Refer to the MOTOTRBO Experience #14: Trill Enhancement video to view the feature demonstration.

2.9.8.8
Intro Screen (Menu)

Allows the user to enable or disable the Introduction Screen upon radio power up via the menu.

When enabled via the menu, the Radio Name shows as the welcome text when the radio powers up.

NOTE:
This feature is available when the radio is a Display model.

2.9.8.9
Keypad Lock (Menu)

Allows you to toggle the keypad lock on or off via the menu.

NOTE:
This feature is available when the radio is a Display model.

2.9.8.10
LED Indicator (Menu)

Allows the user to toggle the radio's LED indicator on or off via the menu.

NOTE:
This feature is available when the radio is a Display model.

2.9.8.11
Squelch (Menu)

Allows the user to access the Squelch feature to select between Normal or Tight Squelch via the menu.

NOTE:
This feature is available when the radio is a Display model.

This feature is supported in Analog mode only.

2.9.8.12
Privacy (Menu)

This field allows you to toggle the Privacy feature between on and off for the current channel via the menu.

This feature is not available on certain radio models.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Digital mode for Display model only.

2.9.8.13
VOX (Menu)

Allows you to toggle the VOX (Voice Activated Transmit) feature between on and off for the current channel via the menu.

VOX enables the radio to automatically transmit whenever its microphone on the VOX-capable accessory detects voice. This is a channel-wide feature.

NOTE:
It is recommended to disable the Talk Permit tone.

This feature is applicable to MOTOTRBO Conventional radios for Display model.

2.9.8.14
Cable Type (Menu)

Allows the user to access the Cable Type feature if they need to select between different connection modes via the menu.

NOTE:
The options listed in Customer Programming Software (CPS) 2.0for Cable Type may differ slightly from those listed in the radio due to screen ergonomics.

This feature is applicable to MOTOTRBO Conventional radios for Display model.

2.9.8.15
Manual Site Roam (Menu)

This field allows you to manually roam to the next available site via the menu.

When this feature is used, the radio is triggered to look for the nearest available site by waking up each repeater in the roam list until an available site is found. The Site Search Timer is triggered each time the nearest available site is found. This feature can also be triggered via a short or long programmable button press (Manual Site Roam). The next available site is not necessarily the site with the strongest RSSI value among the members of the Roam List. This is a radio-wide feature.

NOTE:
For 1.5a+ releases, this feature is hidden when the IP Site Connect and Capacity Plus–Multi-Site features are disabled.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode for Display model only.

2.9.8.16
Site Lock (Menu)

This paragraph is applicable to MOTOTRBO Conventional radios.

This field allows you to toggle the Site Lock between on and off via the menu. When enabled via the menu, this feature "locks" to the current channel and stops auto-roaming. When disabled, the radio continuously auto-roams to the site with the strongest RSSI value among the members of the Roam List. This is a radio-wide feature. This is a radio-wide feature.

NOTE:
This feature is available when the radio is a Display model.

For 1.5a+ releases, this feature is hidden when the IP Site Connect and Capacity Plus–Multi-Site features are disabled.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.9.8.17
Password and Lock (Menu)

Allows the user to enable or disable the Password Lock menu in the radio.

When this feature is enabled, the user has the ability to toggle the Password and Lock feature between on and off, or update the Password through the radio menu. This is a radio-wide feature.

NOTE:
This feature is available when the radio is a Display model only.

2.9.8.18
Call Forward (Menu)

Allows the user to enable or disable the Call Forward feature via the menu.

The Call Forward feature allows calls to be forwarded to another radio. When enabled, the call forwarding telegram will be sent for the matched decoder. This feature is used more on mobile radios and it allows the user to leave the vehicle. If the vehicle receives an individual call, it will transmit a telegram to the forwarding radio. This radio will open and assuming both radios have the same PL the call will take place. A radio can also call forward to a pager and alert the user to the call.

NOTE:
This feature is supported in Analog mode only.

2.9.8.19
Mic Distortion Control (Menu)

Allows the user to enable or disable the Mic Distortion Control feature via the menu.

NOTE:
This feature is applicable in Digital mode only.

2.9.8.20
AF Suppressor (Menu)

Allows you to enable or disable the AF Suppressor feature through the menu.

Refer to the MOTOTRBO Experience #2: Acoustic Feedback Suppressor video to view the feature demonstration.

2.9.8.21
Mic Gain (Menu)

Allows the user to access the various radio mic gains to change their settings via the menu.

Mic gain defines the amplification of the radio microphone.

2.9.8.22
Edit 5 Tone SUID (Menu)

Allows the user to edit the 5 Tone Radio ID via the menu.

NOTE:
This feature is supported in Analog mode only.

2.9.8.23
Signaling System (Menu)

Allows the user to modify certain signaling system parameters like Sel Call Encode, Sel Call Decode and PTT ID Type via the menu.

NOTE:
This feature is supported in Analog mode only.

2.9.8.24
Edit Zone (Menu)

Allows the user to create new zones via the menu.

2.9.8.25
Edit Channel (Menu)

Allows the user to modify certain channel/personality parameters and create new channels via the menu.

2.9.8.26
Radio Button (Menu)

Allows the user to change the assignment of button options to radio buttons via the menu.

2.9.8.27
Accessory Button (Menu)

Allows the user to change the assignment of button options to accessory buttons via the menu.

2.9.8.28
Home Channel

This field allows the user to enable or disable the Home Channel sub menu in the radio.

2.9.8.29
GNSS (Menu)

Allows the user to enable or disable the GNSS feature via the menu.

NOTE:
This feature is disabled if the GNSS feature is disabled.

This feature is applicable in Digital mode only.

2.9.8.30
Scrambling

Allows the user to enable or disable the Scrambling sub menu.

2.9.8.31
Indoor Location

This field allows the user to detect the location of the radio by communicating with Beacon.

2.10
Security Set

The **Security** set is used to specify Privacy, AES, Restricted Access to System (RAS), and Over-the-Air Programming (OTAP) keys.

The following sections contain all the supported fields:

2.10.1
Fixed Privacy Key Decryption

When this feature is enabled, the privacy key decryption feature in all channels will not be greyed out; allowing the users to enable the fixed Privacy Key Decryption feature in the desired channels.

2.10.2
Ignore Rx Clear Voice/Packet Data

When enabled, all clear signal field on personality will be ignored. automatically.

2.10.3
Privacy (Security)

The **Privacy** section of the Security set contains the following fields:

2.10.3.1
Privacy Type

This feature allows privacy on selected digital channels.

Privacy is a software-based scrambling solution that is not robust, and is only meant to prevent eavesdropping. The signaling and user identification portions of a transmission are not scrambled. Receiving radio(s) must have the same Basic Privacy Key (for Basic Privacy) or the same Key Value and Key ID (for Enhanced Privacy) as the transmitting radio in order to unscramble the privacy-enabled voice call or to receive the privacy-enabled data transmission. Channels may have their privacy enabled or disabled via a short or long programmable button press (Privacy On/Off) or Privacy (Utilities Menu). A radio must have privacy enabled on the channel to transmit a privacy-enabled transmission, but this is not necessary for receiving radio(s). Privacy-enabled channels are still able to receive clear (unscrambled) transmissions. A visual indication appears on all display radios if the channel is privacy-enabled. The radio LED lights up green when transmitting and blinks rapidly when receiving an ongoing privacy-enabled transmission. The same behavior will be observed during scan operations. This is a radio-wide feature. This feature is not available on certain radio models.

None
Radio will not support any privacy feature.

Basic
Basic Privacy is allowed on selected digital channels. Each radio must have one Basic Privacy Key selected from a pre-defined list. Garbled voice is heard on receiving radios with Basic Privacy Keys which do not match that of the radio transmitting a privacy-enabled voice transmission.

Enhanced
Enhanced Privacy is allowed on selected digital channels. Each privacy-enabled channel must have a securely-configured Key Value associated with it. Garbled voice is heard on receiving radios with Key Values which do not match that of the radio transmitting a privacy-enabled voice transmission. Nothing is heard on the receiving radio if the Key ID of the transmitting radio does not match with all the Key IDs in the list of receiving radios.

NOTE:
The Privacy, Basic Privacy Key, Privacy Alias, Key Alias, Key ID, Key Value, and Privacy (Utilities Menu) features are disabled if this feature is set to None.

The Privacy Alias, Key Alias, Key ID, and Key Value features are disabled if this feature is set to Basic.

The Basic Privacy Key feature is disabled if this feature is set to Enhanced.

This feature is supported in Digital mode only.

2.10.3.2
Basic Privacy Key

The Basic Privacy Key is the index key that is mapped to a particular encryption value used to scramble and unscramble voice calls and data transmissions on privacy-enabled channels when Privacy Type is set to Basic.

A radio can only have one Basic Privacy Key. Select the Basic Privacy Key from the list of 255 index keys. The values mapped to each index key provide strong scrambling protection. For security reasons, if the codeplug is read from a radio, its Basic Privacy Key is shown as blank. Receiving radio(s) must have the same Basic Privacy Key as the transmitting radio in order to unscramble the

privacy-enabled voice call or to receive the privacy-enabled data transmission. This is a radio-wide feature. This feature is not available on certain radio models.

Table 44: Range

Maximum	Minimum	Increment
225	1	1

NOTE:
This feature is disabled if Privacy Type is set to None or Enhanced.

For security reasons when reading a radio, Basic Privacy Key is shown as blank. Basic Privacy Key needs to be set prior to cloning if the destination radio key needs to be changed.

This feature is supported in Digital mode only.

2.10.3.3
Adding Enhanced Privacy Keys

This feature allows the addition of up to 16 rows that hold the three components that make up an Enhanced Privacy key.

The three components are Key ID, Key Alias, and Key Value. Click on each individual cell to adjust the values.

1 Click the Add button OR right-click a row header and select Add from the drop-down list.

2 A new row will be inserted at the end of the table.

NOTE:
This feature is disabled if Privacy Type is set to None or Basic.

This feature is supported in Digital mode only.

2.10.3.4
Deleting Enhanced Privacy Keys

Enhanced Privacy Keys may be deleted if they are no longer needed.

1 Click the row header to select the text message to be deleted.

2 Click the Delete button. The highlighted row will be removed from the table.

NOTE:
This feature is disabled if Privacy Type is set to None or Basic.

This feature is supported in Digital mode only.

2.10.3.5
Key ID

This feature allows a Key ID to be assigned to each Key Value when Privacy Type is set to Enhanced.

The Key ID is an index key that is mapped to the encryption key used for scrambling. Every Key Value can only have one Key ID. Each Key ID must be unique and cannot be a duplicate of another. The Key

ID is preserved during cloning a device when Clone Radio Identity is disabled. If the Key ID is out of range, the first available ID will be used. This is a radio-wide feature.

Table 45: Range

Maximum	Minimum	Increment
225	1	1

NOTE:
This feature is disabled if Privacy Type is set to None or Basic.

This feature is supported in Digital mode only.

2.10.3.6
Key Alias

This feature provides a 16-character Key Alias to be assigned to a Key ID when Privacy Type is set to Enhanced.

Every Key ID can only have one Key Alias. Each Key Alias must be unique and cannot be a duplicate of another. If duplicate Alias is entered, the value shall be updated to be the previous value and display a message. The Key Alias is preserved during cloning of the device when Clone Radio Identity is disabled.

NOTE:
This feature is hidden when the Symmetric Keys is disabled.

This feature is supported Digital mode only.

2.10.3.7
Key Value

The Key Value is the encryption value used to scramble and unscramble voice calls and data transmissions on privacy-enabled channels when Privacy Type is set to Enhanced.

Selecting a larger, multiple-digit value provides stronger scrambling protection. Each Key Value can be assigned a Key ID and Key Alias for easier recognition. A radio that has Privacy Type set to Enhanced supports a minimum of 1 to a maximum of 16 Keys. For security reasons, if the codeplug is read from a radio, the Key Value is shown as Ø. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
FFFFFFFFFE	1	1

Table 46: Range

Maximum	Minimum	Increment
FFFFFFFFFE	1	1

NOTE:
This feature is disabled if Privacy Type is set to None or Basic.

For security reasons when reading a radio, Key Value is shown as Ø. Key Value needs to be set prior to cloning if the destination radio key needs to be changed.

When a Report is generated based on a saved archive file, the Key Value will be displayed. It is recommended to set a password on the archive to ensure that only authorized users can view the Key Value within the archive file as well as while generating the Reports.

This feature is supported in Digital mode only.

2.10.4
AES (Security)

The **AES** section of the Security set contains the following fields:

2.10.4.1
Symmetric Keys

This is the container control that displays Key ID, Key Alias, and Key Value fields in the table format.

It allows the user to configure Symmetric Keys.

NOTE:
User is allowed to add or delete row(s).

This feature is hidden when the Symmetric Keys is disabled.

2.10.4.2
Adding Symmetric Keys

This feature allows the addition of up to 16 rows that hold the three components that make up a Symmetric Key.

The three components are Key ID, Key Alias, and Key Value. Click on each individual cell to adjust the values.

Range:

Maximum	Minimum	Increment
16	0	1

1 Click the Add button OR right-click a row header and select Add from the drop-down list.

2 A new row will be inserted at the end of the table.

NOTE:
Only applicable to the archives and radios which have the Symmetric Key supported.

When the keys are programmed to the radio, the actual key value shall be un-retrievable from the radio via the application. Key ID and Alias can be read from the radio and displayed in the application.

User can perform Write and Clone operations only if the Key values are not blank.

Key ID, Key Alias, and Key Value are stored in the CPS 2.0 archive.

This feature is supported in Digital mode only.

2.10.4.3
Deleting Symmetric Keys

Allows the user to delete Symmetric Key.

This application shall have at least one key left and this key cannot be deleted.

1 Click the row that contains the key to be deleted.

2 Click the Delete button or right-click and select Add from the drop-down list.

NOTE:
This feature is supported in Digital mode only.

2.10.4.4
Key ID

This feature allows the user to select a Key ID for Symmetric Keys in decimal format.

The Key ID is an index key that is mapped to the encryption key used for scrambling. Every Key Value can only have one Key ID. Each Key ID must be unique and cannot be a duplicate of another. The Key ID is preserved during cloning a device when Clone Radio Identity is disabled. If the Key ID is out of range, the first available ID will be used. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
255	1	1

NOTE:
Duplicate IDs shall not be allowed. If duplicate ID is entered, the value shall be updated to be the previous value and display a message.

If the ID is out of range, it shall update the value to be the first available ID.

This feature shall be hidden when the Symmetric Keys is disabled.

This feature is disabled if Privacy Type is set to None or Basic.

This feature is supported in Digital mode only.

2.10.4.5
Key Alias

This field allows the user to select Key Alias for Symmetric Keys.

It provides a 16-character Key Alias to be assigned to a Key ID when Privacy Type is set to Enhanced. Every Key ID can only have one Key Alias. Each Key Alias must be unique and cannot be a duplicate

of another. The Key Alias is preserved during cloning of the device when Clone Radio Identity is disabled.

NOTE:
Duplicate key alias is not allowed. If duplicate key alias is entered, the value shall be updated to be the previous value and display a message.

This feature shall be hidden when the Symmetric Keys is disabled.

This feature is disabled if Privacy Type is set to None or Basic.

This feature is supported Digital mode only.

2.10.4.6
Key Value

This feature allows the user to select Key Value for Symmetric Keys in hexadecimal format.

The Key Value is the encryption value used to scramble and unscramble voice calls and data transmissions on privacy-enabled channels when Privacy Type is set to Enhanced. Selecting a larger, multiple-digit value provides stronger scrambling protection. Each Key Value can be assigned a Key ID and Key Alias for easier recognition. A radio that has Privacy Type set to Enhanced supports a minimum of 1 to a maximum of 16 Keys. For security reasons, if the codeplug is read from a radio, the Key Value is shown as Ø. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
0xF(63)E	1	1

NOTE:
The field value shall display 0x20e0 symbol when the radio is read.

If the user enters 64F's and leaves this field, the value shall be put to the minimum value. This dependency is only applicable when the existing value is not 0x20e0 symbol.

If this field has a value of 0x20e0 symbol, an error message shall be prompted and the user shall not be allowed to write or clone. If Security Node is not selected in the treeview, it shall go to this node so the user can change the value.

When copy/paste/drag/drop operation is performed on the Security Node, if the value in the source is 0x20e0 symbol, it shall change the value to be 1 in the target archive.

This feature shall be hidden when the Symmetric Keys is disabled.

This feature is disabled if Privacy Type is set to None or Basic.

For security reasons when reading a radio, Key Value is shown as Ø. Key Value needs to be set prior to cloning if the destination radio key needs to be changed.

When a Report is generated based on a saved archive file, the Key Value will be displayed. It is recommended to set a password on the archive to ensure that only authorized users can view the Key Value within the archive file as well as while generating the Reports.

This feature is supported in Digital mode only.

2.10.5
Restricted Access to System (Security)

The **Restricted Access to System** (RAS) section of the Security set contains the following fields:

2.10.5.1

Authentication (RAS)

Configures the Restricted Access to System (RAS) mode that the system will operate on. RAS is disabled in Connect Plus mode.

Disabled
In this mode, the system only support RAS disabled subscriber radios including the legacy ones.

Enabled
In this mode, the system only supports RAS enabled subscriber radios that use the same RAS ID as the repeaters. RAS is enabled by default.

Migration
In this mode, the system support both RAS enabled subscriber radios and RAS disabled subscriber radios including legacy ones. This mode is recommended to be used only during the migration.

NOTE:
This feature is only applicable if the Link Type is set to None or Master.

This feature is supported in Digital mode only.

2.10.5.2

Add (RAS Alias)

The Restricted Access to System (RAS) feature provides the capability of preventing invalid subscriber users from using the repeater to transmit in a system.

This includes all the voice, data and signaling transmissions of repeater mode in any system configurations (i.e. Conventional Single Site, IP Site Connect, Capacity Plus–Single-Site, and Capacity Plus–Multi-Site). The first level of protection is via a password-like protection using RAS ID. This button allows the user to add Key Alias and Key Value (i.e. RAS ID) on subscribers. Up to a maximum of 16 RAS IDs can be added.

NOTE:
Each system uses only one RAS ID.

This feature is supported in Digital mode only.

2.10.5.3

Delete (Restricted Access to System)

Key Alias and Key Value may be deleted if they are no longer in use.

NOTE:
This feature is supported in Digital mode only.

2.10.5.4

Authentication Key Alias

This feature allows the user to choose the alias that will be used in the application for the RAS Key for this repeater.

Range:

Maximum	Minimum	Increment
1	1	1

NOTE:
This feature is hidden when the Restricted Access to System feature is disabled.

This feature is only applicable if the Authentication is set to Enabled or Migration.

This feature is only applicable if the Link Type is set to None or Master.

This If the user enters a blank value and leaves this field, the value will be changed to the default value.

This feature is only available for conventional single-site repeaters and intermediary repeaters.

2.10.5.5
Key Alias

Configures an alias for the respective Restricted Access to System (RAS) ID to easily identify the ID.

All radios and repeaters have default RAS Key Alias and Key Value. All digital channels (both initial and added channels) are defaulted to the default keys. The default key is 000000.

NOTE:
Duplicate Alias is not allowed.

This feature is supported in Digital mode only.

2.10.5.6
Key Value

Configures a Restricted Access to System (RAS) ID on subscribers.

RAS ID is 6-24 unicode characters including 0-9, A-Z, a-z, hyphen'-', underscore'_', dollar '$' and pound '#'.

All radios and repeaters have default RAS Key Alias and Key Value. All digital channels (both initial and added channels) are defaulted to the default keys. The default key is 000000.

NOTE:
This feature value is reset to the default value if less than six characters are entered.

This feature is supported in Digital mode only.

2.10.5.7
Authentication Key (RAS)

Configures the Restricted Access System (RAS) ID on repeater.

RAS ID is 6-24 unicode characters including 0-9, A-Z, a-z, hyphen'-', underscore'_', dollar '$' and pound '#'.

NOTE:
This feature is hidden when the Restricted Access to System feature is disabled.

This feature is enabled if Authentication is set to Enabled or Migration.

When Authentication is set to Disabled, the value of this feature changes to default value.

This feature is only applicable if the Link Type is set to None or Master.

This feature is supported in Digital mode only.

This feature displays 0x20e0 symbol when the radio is read.

If the user types a value that is less than six characters and leave this feature, the value changes to the default value.

If this feature displays 0x20e0 symbol, an error message is prompted and the user is not allowed to write or clone. If the Security Node is not selected in the tree view, the field brings the user to this node to enable the user to change the value.

When the user operates copy, paste, drag or drop on the Security Node, and if the source value displays 0x20e0 symbol, the value changes to the default value in the target archive.

When this feature becomes editable and no longer grayed-out, and the previous value is 0x20e0 symbol, the value of this feature changes to the default value.

When writing backward, this feature resets to 0x20e0 symbol.

2.10.5.8
Radio ID Range Check

The Restricted Access to System (RAS) feature provides the capability of preventing invalid subscriber users from using the repeater to transmit in a system.

This includes all the voice, data and signaling transmissions of repeater mode in any system configurations (i.e. Conventional Single Site, IP Site Connect, Capacity Plus–Single-Site, and Capacity Plus–Multi-Site). Besides a password-like protection using RAS ID, the Radio ID Range Check provides additional protection for system access. It allows CPS 2.0 user to configure whether a subscriber radio can use the system's repeaters as specified in the subscriber ID ranges.

NOTE:
This feature is hidden when the Restricted Access to System feature is disabled.

This feature is only applicable if the Link Type is set to None or Master.

This feature is supported in Digital mode only.

2.10.5.9
Add (Radio ID Range)

Adds a Radio ID range and choose whether or not to allow access to that range.

Up to a maximum of 64 ranges can be added.

NOTE:
This feature is hidden when the Restricted Access to System feature is disabled.

This feature is enabled when Radio ID Range Check is enabled.

This feature is only applicable if the Link Type is set to None or Master.

This feature is supported in Digital mode only.

2.10.5.10

Delete (Radio ID Range)

Radio ID Ranges may be deleted if they are no longer needed.

NOTE:
This feature is hidden when the Restricted Access to System feature is disabled.

This feature is enabled when Radio ID Range Check is enabled.

This feature is only applicable if the Link Type is set to None or Master.

This feature is supported in Digital mode only.

2.10.5.11

Min Radio ID

Defines the start value of a range of Radio IDs to be used in the Radio ID Range Check method of system access protection.

Range:

Maximum	Minimum	Increment
16776415	1	1

NOTE:
This feature is hidden when the Restricted Access to System feature is disabled.

This feature is enabled when Radio ID Range Check is enabled.

This feature is only applicable if the Link Type is set to None or Master.

This feature is supported in Digital mode only.

2.10.5.12

Max Radio ID

Defines the end value of a range of Radio IDs to be used in the Radio ID Range Check method of system access protection.

Range:

Maximum	Minimum	Increment
16776415	1	1

NOTE:
This feature is hidden when the Restricted Access to System feature is disabled.

This feature is enabled when Radio ID Range Check is enabled.

This feature is only applicable if the Link Type is set to None or Master.

This feature is supported in Digital mode only.

2.10.5.13
Allow

Configures whether or not to allow the given range of Radio IDs to access the system, if the ID checking is enabled.

NOTE:
This feature is hidden when the Restricted Access to System feature is disabled.

This feature is enabled when Radio ID Range Check is enabled.

This feature is only applicable if the Link Type is set to None or Master.

This feature is supported in Digital mode only.

2.10.6
Over-the-Air Programming (Security)

The Over-the-Air Programming (OTAP) section of the Security set contains the following fields:

2.10.6.1
Authentication Key ID

This field allows the user to select Key ID for Over-the-air Programming.

NOTE: If the ID is out of range, it the value updates to the first available ID.

2.10.6.2
Authentication Key Value

This field allows the user to select Key Value for Over-the-air Programming.

NOTE:

- The field value displays a hidden symbol (represented by the symbol 0x20e0) when the radio is read.
- If the user enters 10F's and leaves this field, the value chnages to the 0x20e0 symbol as if is an inavlid value.

2.10.6.3
Authentication Key Alias

This field allows the user to select Key Alias for Over-the-air Programming.

2.10.7
TLS-PSK Authentication (Security)

The transport layer security pre-shared key (TLS-PSK) encryption. Authentication section of the Security set contains the following fields:

2.10.7.1
Security Mode

This field allows you to select the security mode for a radio as either **Standard** or **Enhanced**. The default value is **Standard**.

When this field is enabled, you can only read or write the radio codeplug using the TLS-PSK Authentication (Security) on page 414 key alias-key value pair.

When the device is in enhanced mode, the CPS 2.0 server and the device must have the same key alias-key value pair. When an authentication error occurs, an error message appears in the Job View. The reason for the failure is described in the Reason column.

IMPORTANT: After the radio is configured as an enhanced radio, the user cannot use any other applications to read or write the radio without proper key alias-key value pair. It is important not to lose the key.

IMPORTANT: Motorola Solutions recommendsIt is recommended to validate the Pre-Shared Keys in both the configuration and radio before performing a write job.

2.10.7.2
Pre-Shared Key Value

Displays the Pre-Shared Key (PSK) value for the transport layer security pre-shared key (TLS-PSK) Authentication displayed.

A PSK value has 32 hex characters. Authentication key is used with TLS-PSK secure communication.

2.10.7.3
Pre-Shared Key Alias

This field allows the user to select Pre-Shared Key (PSK) Alias for the transport layer security pre-shared key (TLS-PSK) Authentication.

The PSK key alias can contain only the first 128 ASCII characters. Use PSK Alias while security communication initializes.

2.11
Network Set

The **Network** set is used to configure features for interaction with data applications and the MOTOTRBO radio connection.

The following sections contain all the supported fields:

2.11.1
General (Network)

The **General** section of the Network set contains the following fields:

2.11.1.1
Radio IP

The Internet Protocol (IP) is a data-oriented protocol used to communicate data across a packet-switched network. IP enables communication between devices (in this case, MOTOTRBO radios and PC) via a unique global address.

The Radio IP is the IP address used by the radio to communicate with a PC (for example, mobile client), and the address provided to the PC as the default gateway on a wired network. The MOTOTRBO radio acts like a Dynamic Host Configuration Protocol (DHCP) server providing the PC with an IP (Accessory IP) and setting its own IP as the default gateway. The format and range for the address are (001-223).(000-255).(000-255).(001-253).

The user is able to use any address except 127.x.x.x within the range of 1.x.x.x to 223.x.x.x. It is recommended that the default value of 192.168.10.1 is used (in the above gateway configuration), unless there are conflicts with other network interfaces on the PC; the IP should then be changed.

NOTE:
For MOTOTRBO Conventional radios, when programming multiple radios connected to the PC, one of the first 3 octets of the Radio IP for each radio must be unique.

The range for the third octet is 0 to 254 when the Bluetooth feature is enabled in the radio. If in a source archive the third octet is configured to 255 and the archive is cloned/written to a radio that supports Bluetooth the third octet in the target radio will be reset to the default value of 10.

When multiple control stations are connected to an applications server, each control station will need a unique Radio IP address (i.e. the default value cannot be shared by the control stations of a given applications server). Users are recommended to assign the Radio IPs of radios acting as control stations to be 192.168.11.1, 192.168.12.1, 192.168.13.1 and 192.168.14.1. Refer to the MOTOTRBO system planner for details.

To preserve the current value of this feature in the radio and ignore the archive identity feature value during cloning, see Express Cloning a Radio on page 66.

2.11.1.2
Accessory IP

The Accessory IP refers to the IP address that is given to the PC by the radio that is connected to it on a wired network.

The Accessory IP value is not editable. It is derived based on the Radio IP. The first 3 octets of the network bits follow the first 3 octets of the Radio IP. The last octet will be the Radio IP's last octet value + 1. For example, if the Radio IP is 192.168.5.7, the Accessory IP will be updated to 192.168.5.8. It is recommended that the default value of 192.168.10.2 is used.

NOTE:
For radios acting as control stations, when the recommended Radio IPs of 192.168.11.1, 192.168.12.1, 192.168.13.1 and 192.168.14.1 are used, the Accessory IP values are automatically set to 192.168.11.2, 192.168.12.2, 192.168.13.2 and 192.168.14.2. Refer to the MOTOTRBO system planner for details.

To preserve the current value of this feature in the radio and ignore the archive identity feature value during cloning, see Express Cloning a Radio on page 66.

2.11.1.3
USB DNS-SD Interval

This feature list allows you to enable and disable DNS-SD for the USB interface of the radio. Valid choices include “**Disabled**” and “**90 sec**”.

2.11.2
Radio Network (Network)

The **Radio Network** section of the Network set contains the following fields:

2.11.2.1
CAI Group Network

The Common Air Interface (CAI) standard specifies the type and content of signals transmitted by compliant radios.

A radio based on the CAI standard should be able to communicate with any other CAI radio, regardless of the manufacturer. The CAI Group Network is a value that is combined with the Group

ID to produce the group's air interface network IP address. The CAI Group Network ID forms the first or most significant byte of each group's network IP address. All radios must use the same CAI Group Network ID to be able to exchange data. For example, with a Group ID of 2 and a CAI Group Network of 225, the group's air interface network IP address is derived as 225.0.0.2. This feature is primarily used to send data to a group of radios connected to a PC on a wired network. All text messages received by the radios will be passed to the PC if Forward to PC is enabled. The Group Network uniquely identifies the group. Therefore, this IP must match the Group Network IP address of the group that the user intends to communicate with.

Table 47: Range

Maximum	Minimum	Increment
239	225	1

NOTE:
This feature is supported in Digital mode only.

2.11.2.2
CAI Network

The Common Air Interface (CAI) standard specifies the type and content of signals transmitted by compliant radios.

A radio based on the CAI standard should be able to communicate with any other CAI radio, regardless of the manufacturer. The CAI Network is a value that is combined with the Radio ID to produce the individual radio's air interface network IP address. The CAI Network ID forms the first or most significant byte of each radio's network IP address. All radios must use the same CAI Network ID to be able to exchange data. It is recommended that the default value of 12 is used. For example, with the recommended Radio ID of 16448250 for a control station and a CAI Network of 12, the control station's radio network IP address is derived as 12.250.250.250 (refer to the MOTOTRBO system planner for details on how the radio network IP address is constructed). This IP must match the IP of the target radio that is connected to a PC that the user intends to communicate with. All text messages received by the target radio will be passed to the PC if Forward to PC is enabled. The CAI network address is set as Class A as the radio ID can be 3 bytes long.

Range:

Maximum	Minimum	Increment
126	1	1

NOTE:
A PC connected to a radio will automatically have a radio network IP address of the radio's first byte +1. Continuing with the control station's example, with the radio's network IP address set as 12.250.250.250, the PC connected to it will have an address of 13.250.250.250. If the maximum number has been reached, the number will automatically wrap around.

This feature is supported in Digital mode only.

2.11.2.3
Max TX PDU Size (bytes)

Allows you to control the size of packet data units (PDU) sent over-the-air (OTA).

Generally, you would like a message sent with the least possible data packets, as there is overhead associated with any packet. However, if the data packet is too long and there is interference that causes too many retries that it bogs down the system, the user can try to decrease the packet size.

The predefined packet sizes are 300, 500, 750 and 1500 bytes. However, it is recommended that the default value is used.

NOTE:
The size value should be set greater than the data application's packet size. This is required when the radio is in Capacity Plus–Single-Site mode.

Same size value needs to be set for all radios in the system.

This feature is supported in Digital mode only.

2.11.2.4
Telemetry UDP Port

The User Datagram Protocol (UDP) is one of the core Internet protocol for sending short messages (datagram) between devices.

UDP enables communication between these devices via a unique port number. The Telemetry UDP Port specifies a dedicated port number for the target destination (e.g. computer or radio) to support the Telemetry service. The internal radio Telemetry receive UDP port is always 4008.

Range:

Maximum	Minimum	Increment
65535	1024	1

NOTE:
The port numbers for the Network Services, e.g. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.

This feature is supported in Digital mode only.

2.11.2.5
Forward to PC

This set allows you to configure Forward to PC feature. When Forward to PC is enabled, the text messages received from the target radio are passed to the connected PC.

This feature is for radios that are configured as control stations attached to application servers, which resides in PC, or to mobile PC clients.

Disabled
The standard IP routing is used. Packets targeted to unconnected networks will be dropped.

Via USB
The Forward to PC routing rules to the USB connection is used.

Via Bluetooth
The Forward to PC routing rules to the Bluetooth connection is used. Only available when the Bluetooth feature is enabled in the radio.

Via Non-IP Peripheral
The Forward to PC routing rules to the non-IP Peripheral connection is used.

NOTE:
When this feature is enabled, your radio does not display any received text messages, but forwards the messages to the PC.

This feature is supported in MOTOTRBO 2.0 radios.

This feature is supported in Digital mode only.

2.11.3
Services (Network)

The **Services** section of the Network set contains the following fields:

2.11.3.1
ARS Radio ID

The Automatic Registration Service (ARS or also known as Presence Notifier) Radio ID is the ID of the radio that is connected to the ARS server that the user intends to communicate with for data services.

When the radio powers up, it announces its presence by communicating with the ARS server. The server then checks if the radio user is valid and grants access accordingly.

NOTE:
You are recommended to assign the ARS Radio IDs of radios acting as control stations to be 16448250 with a Common Air Interface (CAI) Network setting of 12. This allows the air interface network IP of the ARS server to be derived as 13.250.250.250.

This feature is supported in Digital mode only.

2.11.3.2
ARS IP

The Automatic Registration Service (ARS) IP (also known as Presence Notifier IP) is the air interface network IP address of the registration server, that the user intends to communicate with for data services.

When a radio powers up, it announces its presence by communicating with the ARS server. The server will then check if the radio user is valid and grants access accordingly. The ARS IP value is not editable. It is derived from the ARS Radio ID and CAI Network.

NOTE:
This feature value is set to 0.0.0.0 when the value of ARS Radio ID is blank.

This feature is supported in Digital mode only.

2.11.3.3
ARS UDP Port

The User Datagram Protocol (UDP) is one of the core Internet protocol for sending short messages (datagram) between devices.

UDP enables communication between these devices via a unique port number. The Automatic Registration Service (ARS) UDP Port specifies a dedicated port number for the target destination (e.g. computer or radio) to enable communication between the ARS client and ARS server. It is used to support the radio's automated registration service with the server. The internal radio ARS UDP receive port is always 4005. The configurable ARS UDP port is for destination server receive port only.

Table 48: Range

Maximum	Minimum	Increment
65535	1024	1

NOTE:
The port numbers for the Network Services, e.g. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.

This feature is supported in Digital mode only.

2.11.3.4
TMS Radio ID

The Text Messaging Service (TMS) Radio ID is the ID of the radio that is connected to the TMS server.

It is recommended that the TMS server application be installed on the same server as the Automatic Registration Service (ARS) server application.

NOTE:
You are recommended to assign the TMS Radio IDs of radios acting as control stations to be 16448250 with a Common Air Interface (CAI) Network setting of 12. This allows the air interface network IP of the TMS server to be derived as 13.250.250.250. The TMS IP value of any radio that has to communicate with that particular TMS server should then be set to 13.250.250.250.

This feature is supported in Digital mode only.

2.11.3.5
TMS IP

The Text Messaging Service (TMS) IP refers to the air interface network IP address of the TMS server.

It is recommended that the TMS server application be installed on the same server as the Automatic Registration Service (ARS) server application. The TMS IP value is not editable. It is derived from the TMS Radio ID and CAI Network.

NOTE:
This feature value is set to 0.0.0.0 when the value of TMS Radio ID is blank.

This feature is supported in Digital mode only.

2.11.3.6
TMS UDP Port

The User Datagram Protocol (UDP) is one of the core Internet protocol for sending short messages (datagram) between devices.

UDP enables communication between these devices via a unique port number. The TMS UDP Port specifies a dedicated port number for the target destination (e.g. computer or radio) to support the text messaging service (TMS). The internal radio TMS receive UDP port is always 4007.

Table 49: Range

Maximum	Minimum	Increment
65535	1024	1

NOTE:
The port numbers for the Network Services, e.g. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.

This feature is supported in Digital mode only.

2.11.3.7
User Defined UDP Port 1

This allows the specification of three user-defined UDP ports for use of applications (other than the standard internal applications) that transmit data through the radio.

Radios that have Compressed UDP Data Header enabled can compress the 28 byte UDP/IP header down to 4 bytes if the port number and applications are configured to match among the radios in the system (i.e. all User Defined UDP 1 uses the same port number and accessed by the same

application) to improve data transfer throughput. It is recommended to keep the value of this field unique from User Defined UDP 2 and User Defined UDP 3. This is a radio-wide feature.

Table 50: Range

Maximum	Minimum	Increment	Disabled
65535	1	1	0

NOTE:
It is not recommended to use the port numbers reserved for internal applications (4001, 4004, 4005, 4007, 4008, 4061, 4062, 4063, 4066, 4067, 4068, 4069).

The port numbers for the Network Services, e.g. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.

This feature is disabled if the Disabled option is selected.

This feature is supported in Digital mode only.

2.11.3.8 User Defined UDP Port 2

This allows the specification of three user-defined UDP ports for use of applications (other than the standard internal applications) that transmit data through the radio.

Radios that have Compressed UDP Data Header enabled can compress the 28 byte UDP/IP header down to 4 bytes if the port number and applications are configured to match among the radios in the system (i.e. all User Defined UDP 2 uses the same port number and accessed by the same application) to improve data transfer throughput. It is recommended to keep the value of this field unique from User Defined UDP 1 and User Defined UDP 3. This is a radio-wide feature. u

Table 51: Range

Maximum	Minimum	Increment	Disabled
65535	1	1	0

NOTE:
It is not recommended to use the port numbers reserved for internal applications (4001, 4004, 4005, 4007, 4008, 4061, 4062, 4063, 4066, 4067, 4068, 4069).

The port numbers for the Network Services, e.g. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.

This feature is disabled if the Disabled option is selected.

This feature is supported in Digital mode only.

2.11.3.9 User Defined UDP Port 3

This allows the specification of three user-defined UDP ports for use of applications (other than the standard internal applications) that transmit data through the radio.

Radios that have Compressed UDP Data Header enabled can compress the 28 byte UDP/IP header down to 4 bytes if the port number and applications are configured to match among the radios in the system (i.e. all User Defined UDP 3 uses the same port number and accessed by the same

application) to improve data transfer throughput. It is recommended to keep the value of this field unique from User Defined UDP 1 and User Defined UDP 2. This is a radio-wide feature.

Table 52: Range

Maximum	Minimum	Increment	Disabled
65535	1	1	0

NOTE:
It is not recommended to use the port numbers reserved for internal applications (4001, 4004, 4005, 4007, 4008, 4061, 4062, 4063, 4066, 4067, 4068, 4069).

The port numbers for the Network Services, e.g. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.

This feature is disabled if the Disabled option is selected.

This feature is supported in Digital mode only.

2.11.3.10
XCMP Server ID

This feature allows you to configure the XCMP server ID. This is a radio-wide feature.

NOTE:
Blank value is a valid choice for this control.

This feature is supported in Digital, Capacity Plus–Single-Site and Capacity Plus–Multi-Site mode.

2.11.3.11
XCMP Server IP

This feature allows you to view the IP address of the XCMP server.

The XCMP server IP Address refers to the air interface network IP address of the XCMP server. This feature is not editable. It is derived from the XCMP Radio ID and CAI Network. This feature defines the XCMP Raw Data destined Server IP Address. This is a radio-wide feature.

NOTE:
The default value for this feature is set to 0.0.0.0 when the value of XCMP Server ID is blank.

The value in the first octet is always 1+ the value in CAI Network.

The value in the last three octets correspond to the value in XCMP Server ID.

This feature is supported in Digital, Capacity Plus–Single-Site and Capacity Plus–Multi-Site mode.

2.11.3.12
Battery Management Server ID

This configuration allows the user to set the Battery Management server ID.

Range:

Maximum	Minimum	Increment
16776415	1	1

NOTE:
Blank value is a valid choice for this spin edit.

2.11.3.13
Battery Management Server IP

This edit box allows the user to see the IP address of the Battery Management server.

NOTE:
This feature is not editable.

The value in this feature must be 0.0.0.0 when the value of Battery Management Server ID is blank.

The value in the first octet shall always be 1 + the value in CAI Network.

The value in the last three octets correspond to the value in Battery Management Server ID.

2.11.4
Control Station (Network)

The **Control Station** section of the Network set contains the following fields:

2.11.4.1
Fixed Installation

Allows the user to increase the power of the control station beyond the normal limits for subscriber radios.

Fixed Installation should be checked if the mobile is deployed as part of a 'Fixed Installation' in an R&TTE country.

NOTE:
This feature is only applicable to certain MOTOTRBO mobile models and in countries that require R&TTE certification.

2.11.4.2
Voice Only

The Voice Only feature, when selected, disables data calls in the radio.

The radio will no longer be able to receive or send Location, Text, Telemetry, etc. The user must NOT select this feature in a radio that is not used as a control station. Even when the radio is used as a control station, the applicability of the feature is limited to certain use case relating to migration of data applications from control station to the MNIS data gateway. For more information on the usage of this feature, refer to the System Planner.

2.11.4.3
Data Modem System Type

The feature allows you to Enable/Disable Data Modem as it defines which system the Data Modem is.

There are three available options: **None**, **Digital**, and **Capacity Plus**. When **None** is enabled, the radio is not a data modem. If data revert is expected, set this field to **None**. When **Capacity Plus** is enabled,

the radio is a Data Revert Control Station working at Capacity Plus mode, when **Digital** is enabled, the radio is a conventional Control Station. This is a radio-wide feature.

NOTE:
Field radio cannot enable data modem.

If this field is set to **Digital** for subscriber, the radio functions as a control station. To avoid this instance, set this field to **None**.

The Capacity Plus option is only applicable if the Capacity Plus–Single-Site or Capacity Plus–Multi-Site features are enabled.

This feature is supported in IP Site Connect, Digital, Capacity Plus–Single-Site and Capacity Plus–Multi-Site mode.

2.11.4.4
Data Modem Window Size

The feature allows you to choose the window size for the data modem.

The choices are 2, 5, 6, 7, 8, 9, and 10. This is a radio-wide feature.

NOTE:
This feature is grayed-out if Data Modem System Type is set to None.

This feature is supported in IP Site Connect, Digital, Capacity Plus–Single-Site and Capacity Plus–Multi-Site mode.

2.11.4.5
Repeater Latitude (Degree)

This feature defines the latitude of local repeater or control station (direct mode).

Positive means north. Negative means south. This is a radio-wide configuration.

Range:

Maximum	Minimum	Increment
90 degrees	-90 degrees	0.01 degrees

NOTE:
If the Data Modem System Type is set to None, this field is not editable.

This feature allows blank as a valid value. Therefore, user can leave these values as blanks if the user does not want to use the feature.

2.11.4.6
Repeater Longitude (Degree)

This feature defines the longitude of local repeater or control station (direct mode).

Positive means east. Negative means west. This is a radio-wide configuration.

Range:

Maximum	Minimum	Increment
180 degrees	-180 degrees	0.01 degrees

NOTE:
If the Data Modem System Type is set to None, this field is not editable.

This feature allows blank as a valid value. Therefore, user can leave these values as blanks if the user does not want to use the feature.

2.11.4.7
ARS Monitoring ID

The Automatic Registration Service (ARS or also known as Presence Notifier) Monitoring ID is the ID of the radio that is connected to the ARS server.

User intends to communicate with the Over-the-Air Programming (OTAP) services through the ARS server. When the radio powers up, it announces its presence by communicating with the ARS server. The server then checks if the radio user is valid and grants access accordingly. The Monitoring ID must not be the same ID as the ARS Radio ID.

Table 53: Range

Maximum	Minimum	Increment
16776415	1	1

NOTE:
Blank value is a valid choice for this feature when not using OTAP in conjunction with ARS.

2.11.4.8
ARS Monitoring IP

The Automatic Registration Service (ARS) IP (also known as Presence Notifier IP) is the air interface network IP address of the registration server.

The registration server is used by the user to communicate with for Over-the-Air Programming (OTAP) services. When a radio powers up, it announces its presence by communicating with the ARS server. The server will then check if the radio user is valid and grants access accordingly. This value is not editable. It is derived from the ARS Monitoring ID and CAI Network.

NOTE:
The value in the first octet is always 1+ the value in CAI Network.

The value in the last three octets is set based on the value in ARS Monitoring ID.

This feature value is set to 0.0.0.0 when the value of ARS Monitoring ID is blank.

2.11.4.9
Location Server UDP Port

This feature allows you to configure the User Datagram Protocol (UDP) port of the location server.

When the location packet data decompressed from location CSBK and forward to the PC via USB, the destination UDP port will be set. This is a radio-wide feature.

Table 54: Range

Maximum	Minimum	Increment
65535	1024	1

NOTE:
The port numbers for the Network Services, e.g. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.

2.11.4.10
XCMP Server UDP Port

This feature allows you to configure the XCMP Server User Datagram Protocol (UDP) port.

When the XCMP raw data is decompressed from the XCMP device to server CSBK and forwarded to the PC via USB, the destination UDP port will be set.

Table 55: Range

Maximum	Minimum	Increment
65535	1024	1

NOTE:
The port numbers for the Network Services, e.g. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.

This feature is supported in Digital, Capacity Plus–Single-Site, IP Site Connect, and Capacity Plus–Multi-Site mode.

2.11.4.11
Battery Management Server UDP Port

This configuration allows the user to set the UDP port of the Battery Management

Range:

Maximum	Minimum	Increment
65535	1024	1

NOTE:
The port numbers for the Network Services, e.g. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.

2.11.5
Network Setting (Network)

The **Network Setting** section of the Network set contains the following fields:

2.11.5.1
DHCP

Dynamic Host Configuration Protocol (DHCP) allows the user to select if the IP address for the multisite repeater is static or dynamic.

This is a radio-wide feature.

NOTE:
This feature is disabled (unchecked) when Link Type is set to Master.

The Ethernet IP, Gateway IP, and Gateway Netmask features are disabled if this feature is enabled (checked).

The value of this feature is not preserved during cloning and is disabled (unchecked) after any clone operation.

The feature is hidden when the IP Site Connect and the Capacity Plus–Single-Site features are disabled or when the IP Site Connect and the Capacity Plus–Multi-Site features are disabled.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.11.5.2
Ethernet IP

This feature assigns an Ethernet IP Address for a repeater using Link Establishment.

The format and range for the address are (000-255).(000-255).(000-255).(000-255). When DHCP is disabled for the Master, the Master's Ethernet IP is set as the Peer's Master IP in the Link Establishment system. This is a radio-wide feature.

NOTE:
This feature is disabled when Link Type is set to None.

This feature is disabled when DHCP is enabled (checked).

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.11.5.3
Gateway IP

This feature assigns a Gateway IP Address for a repeater using Link Establishment.

The format and range for the address are (000-255).(000-255).(000-255).(000-255). This is a radio-wide feature.

NOTE:
This feature is disabled when Link Type is set to None.

This feature is disabled when DHCP is enabled (checked).

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.11.5.4
Gateway Netmask

This feature assigns a Gateway Netmask Address for a repeater using Link Establishment.

This is a radio-wide feature.

NOTE:
This feature is disabled when Link Type is set to None.

This feature is disabled when DHCP is enabled (checked).

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.11.5.5
Link Speed

This drop-down list allows the user to configure the Ethernet Speed.

The choices are 10 Mbps Full Duplex, 100 Mbps Full Duplex, and Auto Negotiation.

2.11.5.6
DNCP

This check box allows the user to select whether the IP address for this repeater's Ethernet Port is static or dynamic assigned IPv4 address.

When IPv4 address is configured to be static for peers, Radio IP will be used in this case.

2.11.5.7
Ethernet IP

This IP Address allows the user to specify the Ethernet IP Address for the repeater Ethernet Port.

NOTE: This feature is disabled if DHCP is checked.

2.11.5.8
Gateway IP

This IP Address allows the user to configure the Gateway IP Address for the repeater Ethernet Port.

Gateway IP address is the IP address used for by the repeater over the IP network. This feature is disabled if DHCP is checked.

2.11.5.9
Gateway Netmask

This IP Address allows the user to configure the Gateway Netmask for the repeater Ethernet Port 2. Gateway Netmask is the Gateway IP Netmask used by the repeater over the IP Network.

NOTE:

- This feature is disabled if DHCP is checked.

2.11.5.10
Primary DNS Server IP

This field allows the user to specify the IP address of the primary DNS Server for Wi-Fi

NOTE:

- This feature is hidden when the DHCP check box is checked.
- This feature is hidden when the Wi-Fi feature is disabled.

2.11.5.11
Secondary DNS Server IP

This IP Address allows the user to specify the IP address of secondary DNS Server for the repeater Ethernet Port 1.

Secondary DNS Server IP is the IP address used for by the repeater over the IP network.

NOTE:
The field is disabled if DHCP is checked.

2.11.6
IP Site Connect (Network)

The **IP Site Connect** section of the Network set contains the following fields:

2.11.6.1
Beacon Interval (sec)

This feature configures how often the repeater will send the beacon signal. This is a radio-wide feature.

Table 56: Range

Maximum	Minimum	Increment
600 sec	10 sec	10 sec

NOTE:
The Beacon Duration (ms) feature is disabled for repeaters when this feature is set to 0.

This feature is disabled when Link Type is set to None.

For 1.5a+ and MOTOTRBO SLR Series repeaters, this feature is hidden when the IP Site Connect and the Satellite Receiver features are disabled.

This feature is the Network Node for subscriber and Link Establishment node for repeater.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

2.11.7
IP Repeater Programming (Network)

The **IP Repeater Programming** section of the Network set contains the following fields:

2.11.7.1
Enable (IP Repeater Programming)

Allows the user to enable or disable the IP Repeater Programming feature on a Repeater.

2.11.8
Bluetooth (Network)

The **Bluetooth** section of the Network set contains the following fields:

2.11.8.1
Enable (Bluetooth)

This check box allows the user to enable or disable the Bluetooth feature.

2.11.8.2
Reconnect TOT (min)

Sets the duration that the radio waits while attempting to reconnect to the same device.

The reconnection to the same device is performed via Bluetooth Headset or a serial Bluetooth device after the device is disconnected perhaps due to out or range or power off from the radio. The Mobile may want to use a longer time out because it does not have any battery life concern.

Range:

Maximum	Minimum	Increment
30 (Portable), 30 and ∞ (Mobile) min	0 min	1 min

NOTE:
This feature automatically sets the value to infinity (∞) or Disabled (for Portable) if the user input is greater than 30.

This feature automatically sets the value to Disabled if the user input is less than 1.

2.11.8.3
Off-Hook

Defines the Mobile audio routing when the Bluetooth microphone is off the hook.

Disconnect Bluetooth Audio
Regardless of whether the Bluetooth Headset is connected to the radio or not, and whether the Bluetooth or internal radio audio path is active or not if the Bluetooth Headset is connected to the radio, the radio utilizes the internal radio audio path.

None
When the Bluetooth Headset is not connected to the radio, the radio utilizes the internal radio audio path. When the Bluetooth Headset is connected to the radio, the radio utilizes the Bluetooth audio path if the Bluetooth audio path is active and utilizes the internal radio audio path if the internal radio audio path is active. This path can be switched via the programmable button press (Buttons - Bluetooth Headset Audio Switch).

2.11.8.4
Rear PTT Audio Routing

Defines the Mobile rear PTT audio routing for Bluetooth transmission.

It is possible to meet Hands-Free operation regulation, by configuring the rear PTT as Foot-Switch for Bluetooth Mic transmission. Also, the user may use the rear PTT for data transmission or preconfigured microphone audio (i.e. Visor Mic).

Headset Mic Audio Follows Rear PTT
If the rear PTT is pressed, then the transmission audio is taken from the Bluetooth Headset microphone.

Rear Mic Audio Follows Rear PTT
If the rear PTT is pressed, then the transmission audio is taken from the radio rear microphone.

2.11.8.5
Remote HSP Address

Configures a remote Bluetooth Headset (HSP) device hardware address for pairing in a Non-Display or Numeric Display model radios.

The range is "00:00:00:00:00:00:00" to "FF:FF:FF:FF:FF:FF". Example of an address is "00:21:3c:2d:1F:5c".

2.11.8.6
Remote SPP Address

Configures a remote Bluetooth data (SPP) device hardware address for pairing in a Non-Display or Numeric Display model radios.

The range is "00:00:00:00:00:00:00" to "FF:FF:FF:FF:FF:FF". Example of an address is "00:21:3c:2d:1F:5c".

2.11.8.7

POD PTT Device Address

This preprogrammed address is used to connect to the PTT pod device on a preprogrammed button.

The format and range for the address are (00-FF):(00-FF):(00-FF):(00-FF):(00-FF):(00-FF).

NOTE:
This feature is applicable to Non Display models only.

2.11.8.8

HSP Fixed Pin

Configures a fixed pin for the Bluetooth Headset pairing authentication.

During the pairing process, if pin authentication is requested by the remote device, the radio which is also the Bluetooth Host will use this pin to authenticate. The user can enter a maximum of six numeric digits. For example, "000" and "00000". They are different pins.

Range:

Maximum	Minimum	Increment
999999	0	1

NOTE:
For the 3- and 4- button radio models, pairing password pin must be configured with the Customer Programming Software (CPS) 2.0.

This feature value cannot be empty.

2.11.8.9

SPP Fixed Pin

Configures a fixed pin for the Bluetooth data device (i.e. Scanner) pairing authentication.

During the pairing process, if pin authentication is requested by the remote device, the radio which is also the Bluetooth Host will use this pin to authenticate. The user can enter a maximum of six numeric digits. For example, "000" and "00000". They are different pins.

Range:

Maximum	Minimum	Increment
999999	0	1

NOTE:
For the 3- and 4- button radio models, pairing password pin must be configured with the Customer Programming Software (CPS) 2.0.

This feature value cannot be empty.

2.11.8.10

Permanent Discoverable

This check box allows the user to enable or disable Bluetooth Permanent Discoverable.

NOTE:
This feature is supported only on portable with Bluetooth feature enabled.

This feature is hidden when the Bluetooth Permanent Discoverable feature is not purchased.

2.11.8.11
Device Database Erase on Power Up

Allows the user to enable and disable the Device Database Erase On Power Up.

NOTE:
This feature is supported in Digital mode only.

This feature is greyed-out when Permanent Discoverable is enabled.

2.11.8.12
DNS-SD Interval

This drop list allows the user to enable and disable DNS-SD for the Bluetooth interface of the radio. Valid choices include “**Disabled**” and “**90 sec**”.

2.11.9
Bluetooth Serial Port Profile Data Routing (Network)

The **Bluetooth Serial Port Profile Data Routing** section of the Network set contains the following fields:

2.11.9.1
Destination (Bluetooth Serial Port)

Configures the destination for data routing in a Bluetooth connection.

Only one destination route is configured at any given time.

None
No Bluetooth data routing.

IP
Data is routed from the Bluetooth device to a server IP address (applicable to Digital mode only).

Option Board
Data is routed from the Bluetooth device to the option board.

Data Accessory
Data is routed from the Bluetooth device to the data accessory device.

NOTE:
The feature is greyed-out when Permanent Discoverable is enabled.

2.11.9.2
Destination Network Type (Bluetooth)

Configures the network type used for data routing in a Bluetooth connection.

The available choices are CAI, PC Bluetooth or PC USB.

Channel Select 1
This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.

Channel Select 2
Refer to Channel Select 1 functionality.

Channel Select 3
Refer to Channel Select 1 functionality.

Channel Select 4

Refer to Channel Select 1 functionality.

NOTE:
This feature is greyed-out if Destination (Bluetooth) is set to a value other than IP.

The feature is greyed-out when Permanent Discoverable is enabled.

This feature is supported in Digital mode only.

2.11.9.3 Destination Radio ID (Bluetooth)

Configures the radio ID for sending generic Bluetooth Serial Port Profile (SPP) data (e.g. Bluetooth Scanner data) to the remote radio via the network as specified in Destination Network Type.

This ID and the Destination Network Type value are used to derive the Destination IP for the remote radio.

Range:

Maximum	Minimum	Increment
16776415	1	1

NOTE:
This feature is greyed-out if Destination (Bluetooth) is set to a value other than IP.

The feature is greyed-out when Permanent Discoverable is enabled.

This feature is supported in Digital mode only.

2.11.9.4 Destination IP (Bluetooth)

This is the IP Address used for data routing in a Bluetooth connection.

The format and range for the address are(000-255).(000-255).(000-255).(000-255).

NOTE:
This feature is non-editable.

The first octet of this feature is set to the same value of CAI Network when Destination Network Type is set to CAI.

The first octet of this feature is set to the value of of CAI Network when Destination Network Type is set to PC USB.

The first octet of this feature is set to the value of of CAI Network when Destination Network Type is set to PC Bluetooth.

The value in the last three octets correspond to the value in Destination Radio ID.

This feature is supported in Digital mode only.

2.11.9.5 Destination UDP Port (Bluetooth)

Configures the UDP Port used for routing the Serial Port Profile (SPP) data to the remote radio's IP application.

Range:

Maximum	Minimum	Increment
65535	0	1

NOTE:
This feature is greyed-out if Destination (Bluetooth) is set to a value other than IP.

The feature is greyed-out when Permanent Discoverable is enabled.

This feature is supported in Digital mode only.

2.11.10
USB HID Data Routing (Network)

The **USB HID Data Routing** section of the Network set contains the following fields:

2.11.10.1
Destination (USB)

Configure the destination for data routing in a Universal Serial Bus (USB) connection.

Only one destination route is configured at any given time.

None
No USB data routing.

IP
Data is routed from the USB device to a server IP address (applicable to Digital mode only).

Option Board
Data is routed from the USB device to the option board.

2.11.10.2
Destination Network Type (USB)

Configure the network type used for data routing in a Universal Serial Bus (USB) connection.

The available choices are CAI, PC Bluetooth or PC USB.

NOTE:
This feature is enabled if Destination (USB) is set to IP.

This feature is supported in Digital mode only.

2.11.10.3
USB Destination Radio ID (USB)

Configures the radio ID for sending generic Universal Serial Bus (USB) Human Input Device (HID) data (e.g. Scanner data) to the remote radio via the network as specified in Destination Network Type.

This ID and the Destination Network Type value are used to derive the Destination IP for the remote radio.

Range:

Maximum	Minimum	Increment
16776415	1	1

NOTE:
This feature is enabled if Destination (USB) is set to IP.

This feature is supported in Digital mode only.

2.11.10.4
Destination IP (USB)

This is the IP Address used for data routing in a Universal Serial Bus (USB) connection.

The format and range for the address are (000-255).(000-255).(000-255).(000-255).

NOTE:
This feature is enabled if the Destination (USB) feature is set to IP.

This feature is supported in Digital mode only.

2.11.10.5
Destination UDP Port (USB)

Configures the UDP Port used for data routing in a Universal Serial Bus (USB) connection.

Range:

Maximum	Minimum	Increment
65535	0	1

NOTE:
This feature is enabled if the Destination (USB) feature is set to IP.

This feature is supported in Digital mode only.

2.11.11
Time Zone (Network)

The **Time Zone** section of the Network set contains the following fields:

2.11.11.1
Daylight Saving Time

This check box allows the user to set daylight savings time for the for the network.

2.11.11.2
Directional Offset

This field allows the user to selected a directional time zone offset.

The available options are as follows:

- **Add TZ Offset**
- **Subtract TZ Offset**

2.11.11.3
Hour Offset

This fields allows the user to set an hour offset to the time zone of the server.

The hour offset is applied to the time zone setting in Directional Offset on page 435.

The allowable range is 0 to 15, in one hour increments.

2.11.11.4
Fractional Hours

This fields allows the user to set a fractional hour offset that is applied to time zone of the server.

The fractional hour offset is applied to the time zone setting in Directional Offset on page 435.

The available selections are as follows:

- 00
- 15
- 30
- 45

2.11.12
NTP Settings (Network)

The **NTP Settings** section of the Network set contains the following fields:

2.11.12.1
DHCP

This check box allows the user to select whether the IP address for this repeater's Ethernet Port is static or dynamic assigned IPv4 address.

When IPv4 address is configured to be static for peers, Radio IP will be used in this case.

2.11.12.2
DNS

This check box allows the user to configure DNS Server for the repeater Ethernet Port 1.

The repeater Ethernet Port 1 is used by the repeater over the IP network.

2.11.12.3
NTP Server IP

This IP address allows the user to configure the NTP Server statical IP address for the repeater Ethernet Port 1.

The repeater Ehternet Port 1 is used by the repeater over the IP network.

NOTE:
The field is enabled if NTP is checked.

2.11.12.4
NTP DNS Address

This field displays the DNS Server name for the repeater.

The choices are **None** or browse for a DNS Server from the list of available DNS Servers.

2.11.12.5
RTC Refresh Interval (hr)

This field allows the user to set the Real Time Clock refresh rate in hours.

Range:

Maximum	Minimum	Increment
25	1	1

2.11.13
DNS Address (Network)

The **DNS Address** section of the Network set contains the following fields:

2.11.13.1
Hostname

This edit box allows the user to configure the DNS hostname. The valid inputting characters includes a through z, A through Z, digits 0 to 9, and the hyphen.

NOTE:

- If the user enters an invalid DNS Hostname, the value will change to the last valid DNS Hostname.
- This column is not editable.
- This feature is applicable to Next Generation Repeater only.

2.11.14
General (WiFi Network)

The **General** section of the WiFi Network set contains the following fields:

2.11.14.1
Enable

This check box allows the user to enable or disable Wi-Fi connection on the radio.

NOTE:

- User must enable this feature to use the share the location of the radio through WAVE feature.
- This feature is hidden when the Wi-Fi feature is disabled.

2.11.14.2
802.11D

This check box allows the user to enable or disable 802.11D support. 802.11D is a standard that automatically sets the available Wi-Fi channels based on information provided by the Wi-Fi access point.

NOTE:

- This feature is hidden when the Wi-Fi feature is disabled.

2.11.14.3
Regulatory Region

This field allows the user to choose the regulatory region for the radio. The regulatory region indicates the area where this radio is uses and allows the radio to restrict the Wi-Fi channels only to those which are permitted by the appropriate regulations. Valid choices include “FCC”, “IC”, “ETSI”, “Japan”, and “China”.

NOTE:

- This feature is hidden when the Wi-Fi feature is disabled.

2.11.14.4
DHCP

This check box allows the user to select between static or dynamic Wi-Fi IP address.

NOTE:

- This feature is hidden when the Wi-Fi feature is disabled.

2.11.14.5
IP Address

This field allows the user to specify the Wi-Fi IP Address.

NOTE:

- This feature is hidden when the DHCP check box is checked.
- This feature is hidden when the Wi-Fi feature is disabled.

2.11.14.6
Gateway IP

This field allows the user to configure the Gateway IP Address for Wi-Fi.

NOTE:

- This feature is hidden when the DHCP check box is checked.
- This feature is hidden when the Wi-Fi feature is disabled.

2.11.14.7
Gateway Netmask

This feature assigns a Gateway Netmask Address for a repeater using Wi-Fi.

This is a radio-wide feature.

2.11.14.8
Primary DNS Server IP

This field allows the user to specify the IP address of the primary DNS Server used for Wi-Fi.

NOTE:

- This feature is hidden when the DHCP check box is checked.
- This feature is hidden when the Wi-Fi feature is disabled.

2.11.14.9
Secondary DNS Server IP

This field allows the user to specify the IP address of the secondary DNS Server for Wi-Fi.

NOTE:

- This feature is hidden when the DHCP check box is checked.
- This feature is hidden when the Wi-Fi feature is disabled.

2.11.14.10

DNS-SD Interval

This feature list allows the user to enable and disable DNS-SD for the Wi-Fi interface of the radio. Valid choices include “**Disabled**” and “**90 sec**”.

NOTE:

- This feature is hidden when the Wi-Fi feature is disabled.

2.11.14.11

Device Discovery Server Name

This feature is to establish a connection between the MOTOTRBO radio and the Device Programmer.

If the MOTOTRBO radio and the Device Programmer are on the same network setting, then the user can use the same broadcast setting. If the MOTOTRBO radio and the Device Programmer are not on the same network setting, then the user must configure the fully qualified domain name (FQDN) or IP address of the Device Programmer in the MOTOTRBO radio.

NOTE: Ensure the firewall on the Device Programmer host is properly configured. Refer to *Windows Ports used by Radio Management* in System Planner.

2.11.14.12

Network SSID

This field allows the user to specify the SSID to be used for the Wi-Fi access point.

NOTE:

- This feature is hidden when the Wi-Fi feature is disabled.
- If the user enters a value that is more than 32 bytes when encoded in UTF —8 format, the value will reset to the previous value.
- Duplicated SSID is not allowed. When a duplicated SSID is entered, the value is automatically updated to the previous value and a message displays.
- If the user enters a blank value and leaves this field, the value changes to the previous value.

2.11.14.13

Security Type

This field allows the user to set the encryption protocol for the configured Network SSID.

The following selections are supported:

- Open
- WEP
- WPA/WPA2 Enterprise
- WPA-Personal/WPA2-Personal

NOTE:

- Opportunistic Key Caching (OKC) is only applicable for WPA Enterprise security type only.
- The field is hidden when the Wi-Fi feature is disabled.
- If the user sets the value to a selection other than **Open**, the user must reset the Encrypted Network Password on page 440 value according to the new security type.

2.11.14.14
Encrypted Network Password

This field allows the user to specify the password to use for the Wi-Fi access point.

NOTE:

- This feature is hidden when the Wi-Fi feature is disabled.
- The characters entered in this field are not visible.
- If Security Type is set to “None”, this field will be greyed out.
- If Security Type is set “WEP”, the value in this field must be one of the following : 10 hexadecimal digits, 26 hexadecimal digits, 5 printable ASCII characters, or 13 printable ASCII characters.
- If the user enters an invalid value which is not specified in note 3 and 4, the value will reset to the default value. If this field is left blank, the value will not reset.

2.11.14.15
Roaming Aggressiveness

This feature allows the user to adjust the level of roaming aggressiveness. Boosting the roaming aggressiveness increases the rate of the network card seeking out an access point with a stronger signal.

Level range from Lowest (1), Medium-Low (2), Medium (3), Medium-High (4) to Highest (5). The level range determines how often the radio scans for new access points to roam to.

Table 57: Selections

Selections	Description
1	Radio scans for new access points to roam at every 60 seconds.
2	Radio scans for new access points to roam at every 30 seconds.
3	Radio scans for new access points to roam at every 10 seconds.
4	Radio scans for new access points to roam at every 5 seconds.
5	Radio scans for new access points to roam at every 3 seconds.

2.11.14.16
Boost Tx Power

Boost Tx Power allows the user to increase transmit power and reliability. Enable this feature to allow 802.11b 11 Mbps as the transmit rate when the Wi-Fi signal is weak.

2.11.15
WAVE 5000 (Network)

The **WAVE 5000** ™ section of the Network set contains the following fields:

2.11.15.1
WAVE Server Type

This read-only field displays the WAVE™ Server type as **Enterprise WAVE Server** for all connected radios.

2.11.15.2
Server Name

This field allows the user to enter the WAVE™ server name.

This is a radio-wide feature.

2.11.15.3
Share Location

This field allows the user to share the location of the radio. This is a radio-wide feature.

When enabled and if GNSS is fixed, the radio sends the location to the WAVE™ server every 7.5 seconds. This allows smart phones with the WAVE application to view the radio's position.

NOTE: Users can only share the location when in Wi-Fi mode.

2.11.15.4
Jitter Voice Buffer (sec)

A jitter buffer is a temporary storage buffer used to capture incoming data packets. It is used in packet-based networks to ensure the continuity of audio streams by smoothing out packet arrival times during periods of network congestion.

Range:

Maximum	Minimum	Increment
2000 ms	200 ms	20 ms

2.11.15.5
WAVE 5000 Username

This field allows the user to enter the WAVE 5000™ user ID. This is a radio-wide feature.

2.11.15.6
WAVE 5000 Password

This field allows the user to enter the WAVE 5000™ password. This is a radio-wide feature.

2.11.15.7
WAVE OnCloud

2.11.16
WAVE OnCloud (Network)

WAVE OnCloud is a broadband Push-to-Talk (PTT) solution.

WAVE OnCloud provides rapid and seamless group or one-to-one communication over LTE/4G, 3G, and WiFi networks for MOTOTRBO ™ radios.

2.11.16.1
WAVE OnCloud URL

WAVE OnCloud URL allows the user to enter the URL for the WAVE OnCloud.

The default WAVE OnCloud URL is http://wgp.poc01.waveoncloud.com:443/cas/activation.

2.11.16.2
Share Location

This field allows you to share the location of the radio. Share Location is a radio-wide feature.

When GNSS is fixed and Share Location is enabled, the radio broadcasts its location to the WAVE OnCloud server every 7.5 seconds. This allows smartphones with the WAVE OnCloud application to view the position of the radio.

NOTE: Users can only share the location when Wi-Fi mode is enabled.

2.11.16.3
VOX State

This feature enables the VOX (Voice Operated Transmit) feature on a selected channel.

VOX provides a convenient means of hands-free voice activated communication, removing the need to press the Push-to-Talk (PTT) button. This feature enables the radio to automatically assume the Push-to-Talk (PTT) button is pressed whenever its microphone on the VOX-capable accessory detects voice. To avoid truncation at the beginning of the VOX call, Talk Permit tone (TPT) should be disabled. If TPT is enabled, the radio user shall use a trigger word to key-up the radio. This trigger word will not, in most cases, be transmitted. After uttering the trigger word, the radio user should begin speaking only after the TPT is heard. Channels may have their VOX feature toggled on/off via a short or long programmable button press (VOX On/Off) or VOX (Utilities Menu). This is a radio-wide feature.

NOTE:

This feature is disabled if RX Only, Option Board Trunking or Allow Interruption is enabled.

Disable the Talk Permit tone.

VOX operates with a “Channel Free” admit criteria regardless of the selected channel Admit Criteria.

2.12
WiFi Network Set

The **WiFi Network** set is used to configure the wireless capabilities of the supported subscriber radio.

The following sections contain all the supported fields:

2.12.1
General (WiFi Network)

The **General** section of the WiFi Network set contains the following fields:

2.12.1.1
Enable

This check box allows the user to enable or disable Wi-Fi connection on the radio.

NOTE:

- User must enable this feature to use the share the location of the radio through WAVE feature.
- This feature is hidden when the Wi-Fi feature is disabled.

2.12.1.2
802.11D

This check box allows the user to enable or disable 802.11D support. 802.11D is a standard that automatically sets the available Wi-Fi channels based on information provided by the Wi-Fi access point.

NOTE:

- This feature is hidden when the Wi-Fi feature is disabled.

2.12.1.3
Regulatory Region

This field allows the user to choose the regulatory region for the radio. The regulatory region indicates the area where this radio is uses and allows the radio to restrict the Wi-Fi channels only to those which are permitted by the appropriate regulations. Valid choices include “FCC”, “IC”, “ETSI”, “Japan”, and “China”.

NOTE:

- This feature is hidden when the Wi-Fi feature is disabled.

2.12.1.4
DHCP

This check box allows the user to select between static or dynamic Wi-Fi IP address.

NOTE:

- This feature is hidden when the Wi-Fi feature is disabled.

2.12.1.5
IP Address

This field allows the user to specify the Wi-Fi IP Address.

NOTE:

- This feature is hidden when the DHCP check box is checked.
- This feature is hidden when the Wi-Fi feature is disabled.

2.12.1.6
Gateway IP

This field allows the user to configure the Gateway IP Address for Wi-Fi.

NOTE:

- This feature is hidden when the DHCP check box is checked.
- This feature is hidden when the Wi-Fi feature is disabled.

2.12.1.7
Gateway Netmask

This feature assigns a Gateway Netmask Address for a repeater using Wi-Fi.

This is a radio-wide feature.

2.12.1.8
Primary DNS Server IP

This field allows the user to specify the IP address of the primary DNS Server used for Wi-Fi.

NOTE:

- This feature is hidden when the DHCP check box is checked.
- This feature is hidden when the Wi-Fi feature is disabled.

2.12.1.9
Secondary DNS Server IP

This field allows the user to specify the IP address of the secondary DNS Server for Wi-Fi.

NOTE:

- This feature is hidden when the DHCP check box is checked.
- This feature is hidden when the Wi-Fi feature is disabled.

2.12.1.10
DNS-SD Interval

This feature list allows the user to enable and disable DNS-SD for the Wi-Fi interface of the radio. Valid choices include “**Disabled**” and “**90 sec**”.

NOTE:

- This feature is hidden when the Wi-Fi feature is disabled.

2.12.1.11
Device Discovery Server Name

This feature is to establish a connection between the MOTOTRBO radio and the Device Programmer.

If the MOTOTRBO radio and the Device Programmer are on the same network setting, then the user can use the same broadcast setting. If the MOTOTRBO radio and the Device Programmer are not on the same network setting, then the user must configure the fully qualified domain name (FQDN) or IP address of the Device Programmer in the MOTOTRBO radio.

NOTE: Ensure the firewall on the Device Programmer host is properly configured. Refer to *Windows Ports used by Radio Management* in System Planner.

2.12.1.12
Network SSID

This field allows the user to specify the SSID to be used for the Wi-Fi access point.

NOTE:

- This feature is hidden when the Wi-Fi feature is disabled.
- If the user enters a value that is more than 32 bytes when encoded in UTF —8 format, the value will reset to the previous value.
- Duplicated SSID is not allowed. When a duplicated SSID is entered, the value is automatically updated to the previous value and a message displays.
- If the user enters a blank value and leaves this field, the value changes to the previous value.

2.12.1.13

Security Type

This field allows the user to set the encryption protocol for the configured Network SSID.

The following selections are supported:

- Open
- WEP
- WPA/WPA2 Enterprise
- WPA-Personal/WPA2-Personal

NOTE:

- Opportunistic Key Caching (OKC) is only applicable for WPA Enterprise security type only.
- The field is hidden when the Wi-Fi feature is disabled.
- If the user sets the value to a selection other than **Open**, the user must reset the Encrypted Network Password on page 440 value according to the new security type.

2.12.1.14

Encrypted Network Password

This field allows the user to specify the password to use for the Wi-Fi access point.

NOTE:

- This feature is hidden when the Wi-Fi feature is disabled.
- The characters entered in this field are not visible.
- If Security Type is set to “None”, this field will be greyed out.
- If Security Type is set “WEP”, the value in this field must be one of the following : 10 hexadecimal digits, 26 hexadecimal digits, 5 printable ASCII characters, or 13 printable ASCII characters.
- If the user enters an invalid value which is not specified in note 3 and 4, the value will reset to the default value. If this field is left blank, the value will not reset.

2.12.1.15

EAP Methods

This field allows the user to select the Extensible Authentication Protocol (EAP) method that is used as the authentication framework for wireless networks and Point-to-Point connections.

The following selections are supported:

- **None**
- **PEAP** (Protected Extensible Authentication Protocol)
- **TLS** (Transport Layer Security)
- **TTLS** (Tunneled Transport Layer Security)

NOTE: This field is accessible when Security Type on page 439 is set to **WPA/WPA2 Enterprise**.

2.12.1.16

Phase 2 Authentication

This field allows the user to set the Phase 2 Authentication for the selected EAP Method after the security tunnel is created at phase one.

The following selections are supported:

- **None**
- **CHAP** (Challenge-Handshake Authentication Protocol)
- **MSCHAP** (Microsoft Challenge-Handshake Authentication Protocol)
- **MSCHAPV2** (Version 2 of MSCHAP)
- **PAP** (Password Authentication Protocol)
- **TLS** (Transport Layer Security)

NOTE:
When the Phase 2 Authentication is **TLS**, the device certificate is required.

2.12.1.17
Identity

This field allows the user to enter the identity for the subscriber.

The identity is set as the MAC address of the Wi-Fi network adapter by default.

2.12.1.18
Identity Password

This field contains the preshared identity password for the subscriber using EAP authentication.

2.12.1.19
Anonymous Id

This optional field allows the user to use an anonymous identity to hide the true identity being sent to the authentication server.

2.12.1.20
Certificate

This field allows the user to select the Wi-Fi Enterprise Certificate for either a common certificate or a device certificate.

Wi-Fi Enterprise Certificates are configured from the Common Certificate List Items or the Device Certificate List Items.

2.12.1.21
Validate Server Certificate

This checkbox allows the user to enable the server validation flag.

2.12.1.22
Roaming Aggressiveness

This feature allows the user to adjust the level of roaming aggressiveness. Boosting the roaming aggressiveness increases the rate of the network card seeking out an access point with a stronger signal.

Level range from Lowest (1), Medium-Low (2), Medium (3), Medium-High (4) to Highest (5). The level range determines how often the radio scans for new access points to roam to.

Table 58: Selections

Selections	Description
1	Radio scans for new access points to roam at every 60 seconds.
2	Radio scans for new access points to roam at every 30 seconds.
3	Radio scans for new access points to roam at every 10 seconds.
4	Radio scans for new access points to roam at every 5 seconds.
5	Radio scans for new access points to roam at every 3 seconds.

2.12.1.23
Boost Tx Power

Boost Tx Power allows the user to increase transmit power and reliability. Enable this feature to allow 802.11b 11 Mbps as the transmit rate when the Wi-Fi signal is weak.

2.12.1.24
MSI Wi-Fi Certificate

This feature is to apply MSI Wi-Fi Certificate to authenticate the subscriber and applicable only when Security Type on page 439 is WPA/WPA2 Enterprise.

2.12.1.25
DNS-SD Listening Port

Your radio sends out Zero Configuration DNS-SD messages to enable Device Programmer (DP) to detect the radio and determine programming job availability of the radio.

The DP and radio setting of this field must be set to the same value. If there is a value mismatch, the DP cannot detect the radio and perform any Read and Write jobs.

NOTE: Only change the default value of `5353` when necessary to accommodate specific network deployment requirements.

2.12.2
Wifi Enterprise Certificates (WiFi Network)

The **Wifi Enterprise Certificates** section of the WiFi Network set allows for the configuration of Common Certificates and Device Certificates.

NOTE:
Common certificates are manually re-enrolled by right-clicking a common certificate in the list item table and selecting **Regenerate certificate**. Device certifications are re-enrolled in Radio View. Select the radio with the relevant device certificate, right-click the Certificate column, and select **Regenerate certificate**.

Common and device certificates are automatically re-enrolled when any of the following fields are modified:

- Challenge Password
- Country Name
- State
- Locality
- Organization
- Organization Unit
- Common Name
- Email

The following fields are supported:

2.12.2.1
Friendly Name (Common Certificate)

This field allows the user to enter a friendly name to indicate a chain of the CA certificates for the common certificate.

2.12.2.2
CA Identifier (Common Certificate)

This field allows the user to enter a string to be used as the certification authority issuer identifier.

This CA Identifier is skipped by most of the Simple Certificate Enrollment Protocol (SCEP) servers.

2.12.2.3
URL of SCEP (Common Certificate)

This field allows the user to enter the URL for the Simple Certificate Enrollment Protocol (SCEP) server for the common certificates.

2.12.2.4
Renewal Percentage (Common Certificate)

This field allows the user to set the percentage for when the certificate is triggered for renewal.

Table 59: Range

Maximum	Minimum	Increment
100	0	1

2.12.2.5
Finger Print (Common Certificate)

This field allows the user to enter the MD5 finger print of the root certificate authority.

2.12.2.6
GUID (Common Certificate)

This read-only field displays the system generate globally unique identifier for the common certificate.

2.12.2.7
Friendly Name (Device Certificate)

This field allows the user to enter a friendly name to indicate a chain of the client and CA certificates for the device certificate.

2.12.2.8
CA Identifier (Device Certificate)

This field allows the user to enter a string to be used as the certification authority issuer identifier.

This CA Identifier is skipped by most of the Simple Certificate Enrollment Protocol (SCEP) servers.

2.12.2.9
URL of SCEP (Device Certificate)

This field allows the user to enter the URL for the Simple Certificate Enrollment Protocol (SCEP) server for the device certificates.

2.12.2.10
Challenge Password (Device Certificate)

The Challenge Password is provided by the SCEP server and provided to the Certificate Signing Request (CSR) by the subscriber.

This is done so that the SCEP server can authenticate the subscriber as a valid client.

2.12.2.11
Country Name (Device Certificate)

This field allows the user to enter the country code required by the Certificate Signing Request (CSR).

NOTE: Country Name is one of the standard attribute types in issuer and subject field of a certificate compliance with ISO 3166-1 Alpha 2 (for example, US).

2.12.2.12
State (Device Certificate)

This field allows the user to enter the state required by the Certificate Signing Request (CSR).

2.12.2.13
Locality (Device Certificate)

This field allows the user to enter the locality required by the Certificate Signing Request (CSR).

2.12.2.14
Organization (Device Certificate)

This field allows the user to enter the organization required by the Certificate Signing Request (CSR).

2.12.2.15
Organization Unit (Device Certificate)

This field allows the user to enter the organization unit required by the Certificate Signing Request (CSR).

2.12.2.16
Common Name (Device Certificate)

This field allows the user to enter the common name required by the Certificate Signing Request (CSR).

2.12.2.17
Email (Device Certificate)

This field allows the user to enter the email address required by the Certificate Signing Request (CSR).

The email address is reused to support the Subject Alternative Name (SAN), email, Domain Name System (DNS), and User Principal Name (UPN). The user can enter one SAN only.

The following examples show the SAN formats:

Example:
SAN with Email

```
subjectAltName=email:johnsmith@motorolasolutions.com
```

Example:
SAN with DNS

```
subjectAltName=DNS:su.motorolasolutions.com
```

Example:
SAN with User Principal Name

```
subjectAltName=UPN:johnsmith@motorolasolutions.com
```

2.12.2.18
Signature Hash Algorithm (Device Certificate)

This field allows the user to select the algorithm for producing a hash value for signature required by the Certificate Signing Request (CSR).

The supported selections are as follows:

- **MD5**
- **SHA-1**
- **SHA-256**
- **SHA-384**

- **SHA-512**

2.12.2.19
RSA Key Size (Device Certificate)

This field allows the user to select the encryption key size using RSA.

The following selections are supported:

- **1024**
- **2048**
- **4096**

2.12.2.20
Renew Strategy (Device Certificate)

The field is used to define whether the public key pair is updated.

The following selection are supported:

Rekey
Keep the public key pair and extend its validity range

Renew
Update the public key pair and extend its validity range

2.12.2.21
Renewal Period (Device Certificate)

This field allows the user to set the date and time for when the certificate is triggered for auto renewal.

The auto renewal is triggered when the current date and time is greater than or equal to the **Valid To** of the certificate minus Renewal Period.

2.12.2.22
Finger Print (Device Certificate)

This field allows the user to enter the MD5 finger print of the root certificate authority.

2.12.2.23
GUID (Device Certificate)

This read-only field displays the system generate globally unique identifier for the device certificate.

2.12.3
NTP Server (WiFi Network)

The **NTP Server** section of the WiFi Network set contains the following field:

2.12.3.1
NTP Server

This field allows the user to enter the domain name or IP address of the Network Time Protocol (NTP) server.

2.13 Link Establishment Set

The **Link Establishment** set is used to configure multiple repeaters in different geographical locations through a network (IP Site Connect, Capacity Plus–Single-Site, etc.) so that voice/data calls can be made across multiple sites. Each site has multiple Repeaters known as Peers which are controlled by a single Master.

The following sections contain all the supported fields:

2.13.1 Network Setting (Link Establishment)

The **Network Setting** section of the Link Establishment set contains the following fields:

2.13.1.1 Link Type

This feature configures the repeater type.

This available choices are Single Site, IP Site Master, and IP Site Peer in MOTOTRBO 1.7+ releases. The Authentication Key, DHCP, Ethernet IP, Peer Firewall Open Timer (sec), Gateway IP, Gateway Netmask, UDP Port, IP Site Connect, IP Site Connect, Messaging Delay, Beacon Duration (ms) and Beacon Interval (sec) features are disabled if this feature is set to None. The Master Archive File and Master UDP Port features are disabled if this feature is set to None or Master. This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

None
The repeater performs in Local Mode and does not support any of the Link Establishment system functionality.

Master
The master functions as the central point for a Repeater/RDAC-IP PC to find other Repeaters/ RDAC-IP PCs in the same Link Establishment system.

Peer
The peer is a repeater, or a PC running the RDAC application, that is connected to and able to perform as part of a Link Establishment system.

NOTE:
The feature is only applicable for MOTOTRBO 1.4+ releases.

This feature is hidden when the IP Site Connect and the Capacity Plus–Single-Site features are disabled or when the IP Site Connect and the Capacity Plus–Multi-Site features are disabled. (Not applicable for 32 MB repeater starting in MOTOTRBO 1.7+ releases).

This feature is available under Link Establishment in MOTOTRBO 1.7+ releases.

This available choices are None, Master, and Peer in MOTOTRBO releases prior to 1.7+.

When the IP Site Connect and Capacity Plus–Single-Site features are disabled, only None and Master options are available.

Notwithstanding Note 4 and Note 5, when Voting Mode is set to Digital Satellite Receiver, this feature is greyed-out and set to Peer.

2.13.1.2 Authentication Key

This field allows the user to specify the private key value in a repeater using Link Establishment.

All repeaters within the same Link Establishment system must share the same Authentication Key. The user may enter up to a maximum of 40 characters. Valid characters are 0-9 and A-F. Setting this value to blank indicates that the Authentication is disabled. Setting this key value as forty "F", or Ø indicates that the current value on the targeted repeater is to be preserved during write/clone operations. For security reasons, if the codeplug is read from a radio or opened from archive, its Authentication Key value is shown as blank. This is a radio-wide feature.

NOTE:
This feature is disabled when Link Type is set to None.

This feature is disabled when Link Type is set Peer and Master Archive File is specified.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

2.13.1.3
DNS

This check box enables the DNS feature within the Link Establishment system.

2.13.1.4
Master IP

This feature specifies the IP Address of the Master within the Link Establishment system.

The format and range for the address are (000-255).(000-255).(000-255).(000-255). This is a radio-wide feature.

NOTE:
This feature is enabled when Link Type is set to Peer.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

2.13.1.5
DNS

This field allows the user to browse and select a master DNS address from a list of Network Sets within the Link Establishment system.

The available options are **None** and any **Network** Set.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

2.13.1.6
Master UDP Port

This feature specifies the User Datagram Protocol (UDP) port number of the Master within the Link Establishment system.

UDP is a protocol used for peer-to-peer services within the Link Establishment system. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
65535	1024	1

NOTE:
This feature is enabled when Link Type is set Peer and Master Archive File is left blank.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

2.13.1.7
UDP Port

This feature specifies the User Datagram Protocol (UDP) port number of the Peer within the Link Establishment system.

UDP is a protocol used for peer-to-peer services within the Link Establishment system. The Master's UDP is set as the Peer's Master UDP Port in the Link Establishment system. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
65535	1024	1

NOTE:
This feature is disabled when Link Type is set to None.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

2.13.1.8
Peer Firewall Open Timer (sec)

This feature displays and allows the user to select a firewall open message timer for Peer to Peer Protocol (P2P) messages.

This timer is used to keep the connection alive between the application and its peer by having a periodic message sent between them at an interval as defined here. This timer is only applicable to Peers. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
60 sec	5 sec	1 sec

NOTE:
This feature is disabled when Link Type is set to None.

This feature is disabled when Master Archive File is specified.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

2.13.2
IP Site Connect (Link Establishment)

The **IP Site Connect** section of the Link Establishment set contains the following fields:

2.13.2.1
Beacon Duration (ms)

This feature configures the length of the beacon signal. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
18000 ms	480 ms	120 ms

NOTE:
This feature is disabled when Link Type on page 452 is set to **None** or when the **Beacon Duration** field is set to **360**.

For 1.5a+ and MOTOTRBO SLR Series repeaters, this feature is hidden when the IP Site Connect and the Satellite Receiver features are disabled.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters only in Digital mode only.

2.13.2.2
Beacon Interval (sec)

This feature configures how often the repeater will send the beacon signal. This is a radio-wide feature.

NOTE:
The Beacon Duration (ms) feature is disabled for repeaters when this feature is set to 360.

This feature is disabled when Link Type is set to None.

For 1.5a+ and MOTOTRBO SLR Series repeaters, this feature is hidden when the IP Site Connect and the Satellite Receiver features are disabled.

This feature is the Network Node for subscriber and Link Establishment node for repeater.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR 5000 repeaters in Digital mode only.

Range:

Maximum	Minimum	Increment
600 sec	10 sec	10 sec

2.13.3
Capacity Plus (Link Establishment)

The **Capacity Plus** section of the Link Establishment set contains the following fields:

2.13.3.1
Site ID (Repeater)

Enters the ID of the site that the Repeater is on.

Range:

Maximum	Minimum	Increment
20	1	1

NOTE:
All the Repeaters on the same site must have the same ID.

The Site ID of the subscriber radio connecting to the Repeater of this site must have the same ID as this feature.

This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

When the user enables the Capacity Plus–Multi-Site Extend feature, a maximum of 20 sites are available.

This feature is disabled when Link Type is set to None.

This feature is supported in Digital mode only.

2.13.3.2
Site Alias (Repeater)

Configures a name for the site that the Repeater is on.

NOTE:
This feature is displayed when the Capacity Plus–Multi-Site or Satellite Receiver features are enabled.

This feature is disabled when Link Type is set to None.

This feature is supported in Digital mode only.

2.13.3.3
Beacon Duration (ms)

This feature configures the length of the Beacon Duration for Capacity Plus.

The minimum recommended Beacon Duration for 2, 4, 6, or 8 channels is 180 ms. The minimum recommended Beacon Duration for 10 or 12 channels is 240 ms. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
600 ms	180 ms	60 ms

NOTE:
This feature is displayed when the Capacity Plus–Single-Site, Capacity Plus–Multi-Site, or Satellite Receiver feature is enabled.

This feature is disabled when Link Type is set to None. This dependency is only applicable for MOTOTRBO SLR Series repeaters.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

2.13.3.4
Beacon Interval (ms)

This feature specifies how often the radio sends out the beacon signal for Capacity Plus.

In a Capacity Plus–Single-Site system, this feature value should be higher in the subscriber than the repeater. In a Capacity Plus–Multi-Site system, this feature value should be the same in both the subscriber and repeater. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
4800 ms	960 ms	480 ms

NOTE:
This feature is displayed when the Capacity Plus–Single-Site, Capacity Plus–Multi-Site, or Satellite Receiver feature is enabled.

This feature is disabled when Link Type is set to None. This dependency is only applicable for MOTOTRBO SLR Series repeaters.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

2.13.3.5
Rest Channel/Site IP

The Rest Channel IP Address is a virtual IP address that is required for correct intra-site and inter-site operation of a Capacity Plus–Single-Site or Capacity Plus–Multi-Site system.

As the Rest Channel rotates through the channel pool of a site, this virtual IP address is associated with a different physical repeater only for the duration for which one of its slots is the Rest Channel. This IP address MUST be the same for all repeaters residing at the same site.The format and range for the address are (000-255).(000-255).(000-255).(000-255). This is a radio-wide feature.

NOTE:
This feature is disabled when Link Type is set to None.

This feature is displayed when the Capacity Plus–Single-Site, Capacity Plus–Multi-Site, or Satellite Receiver feature is enabled.

This IP cannot be the same as the Ethernet IP if DHCP is disabled.

This feature is applicable in Digital mode only.

2.13.3.6
Rest Channel/Site UDP Port

In a Capacity Plus–Single-Site system, this feature allows the user to configure the UDP port of the Repeater rest channel for communication with third party applications connected within a Capacity Plus–Single-Site system.

In a Capacity Plus–Multi-Site system, this feature allows the user to configure the UDP port of site for communication with other sites connected within a Capacity Plus–Multi-Site system.This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
65535	1024	1

NOTE:
This feature is disabled when Link Type is set to None.

This feature is displayed when the Capacity Plus–Single-Site, Capacity Plus–Multi-Site, or Satellite Receiver feature is enabled.

This port cannot be the same as the UDP Port.

This feature is applicable in Digital mode only.

2.13.3.7

Rest Channel Time-Out-Timer (Min)

The Rest Channel Time-out-Timer controls how long a repeater keeps its rest channel role in the absence of a new call activity before moving the role to another repeater in multi channel Capacity Plus–Single-Site and Capacity Plus–Multi-Site System.

The Rest Channel Time-out-Timer starts as soon as a repeater assumes the rest channel role. In most call scenarios, the rest channel will move to another channel before the Rest Channel TOT expires. However, during a low call volume scenario (e.g. during off hours and holidays) the Rest Channel TOT will time out more often and it will normally keep rotating the rest channel from one channel to another. The Rest Channel TOT will be most effective during idle or low call volume condition. For a site where the repeaters have different channel preference level, it is suggested to use larger Rest Channel TOT value (10 minutes), so that high-preference channels are more frequently utilized even during low call volume conditions. Note that the Rest Channel TOT mechanism steers the rest channel through all preference level repeaters in round-robin manner, whereas the incoming calls mechanism selects higher preference channels more often than lower preference channels. Shorter Rest Channel TOT (2 minutes) will lead to faster Rest Channel rotation and better resilience to failure and interference, however may have minor impact to battery life, because radios will receive new rest channel assignment information more often.

The Rest channel rotation may cause minor delay in call access time during force rest channel switching period. The Faster the rotation, the more frequent will be such access time delays. Note the impact of such delays should be unnoticeable to radio users. If necessary, the Adaptive Rest Channel Rotation functionality can also be disabled completely by disabling Rest Channel TOT value. This drop-down list allows the user to configure the Time Out Timer of the rest channel for the trunked Capacity Plus repeater. Whenever the rest channel is not in use, the repeater switches to a different rest channel after the time is specified by this field. The purpose of this function is to increase the system's resilience to RF interference. The valid choices available are Disabled, 2, 4, 6, 8, and 10.

Range:

Maximum	Minimum	Increment
65535	1024	1

NOTE:
This feature is disabled when Link Type is set to None.

This feature is displayed when the Capacity Plus–Single-Site or Capacity Plus–Multi-Site feature is enabled.

This feature is applicable in Digital mode only.

This feature is not applicable for Satellite Receivers.

2.14 MOTOTRBO Link Set

The **MOTOTRBO Link** set is used to configure the dedicated link backhaul feature for SLR repeaters and subscribers that support IP Site Connect channels.

A MOTOTRBO Link configuration uses the Land Mobile Radio (LMR) channel to carry typical voice and data call features out to a remote site where no wireline connectivity exists. This feature is performed by using LMR channels to daisy chain repeaters together into a linear RF network topology. Each node of the network is referred to as a site. The sites are linked or chained together using LMR channels that are dedicated for the sole purpose of linking the sites together. Each site must contain at least two repeaters. The origin/terminating site must have one link repeater and one standard repeater. The Interim site must have two link repeaters and an optional one standard repeater.

NOTE:
MOTOTRBO Link is disabled by default and only editable when the IP Site Connect on page 625 option is enabled.

When MOTOTRBO Link is enabled, the Admit Criteria on page 646 feature is impacted as follows:

- The **Always** option is not available.
- **In Call Criteria** is defaulted to **Follow Admit Criteria** and disabled. Therefore, **Follow Admit Criteria** and **TX Interrupt** are not allowed.

The MOTOTRBO Link feature does not support and disables fields related to the Transmit Interrupt feature such as Allow Interruption on page 649 and TX Interruptible Frequencies on page 649.

Messaging Delay (ms) on page 620, GNSS/Data Revert Channel on page 655, Enhanced Channel Access on page 651, Enhanced GNSS (Conventional Personality) on page 630, and Dual Capacity Direct Mode (DCDM) on page 621 are disabled.

Backhaul Channel Access and Enhanced Channel Access are mutually exclusive configurable options.

The following fields are supported:

2.14.1 Link Mode

This field indicates whether the repeater is configured as a Dedicated Link in a MOTOTRBO Link system.

The following selections are supported:

- **None**
- **Dedicated Link**

Dedicated Link Backhaul
A backhaul type where a set of repeaters perform the link functionalities by only communicating with other repeaters along a backhaul chain and never with subscribers. Since these repeaters never communicate with subscribers, they have their own dedicated frequency pairs that can optionally be a unique frequency band that is different from the subscribers.

2.14.2 Site Type

This field indicates the site type in a backhaul configuration.

The following selections are supported:

- **Origin Site**
- **Interim Site**
- **Terminating Site**

Origin Site
The first site in the backhaul chain of repeaters. Only one origin site is supported. Beacons flow towards the origin site so that they can be aggregated by the proxy repeater, at the origin site. In dedicated link configurations, the origin site must contain at least one link repeater and one standard repeater.

Interim Site
Interim sites are the sites located between the origin site and the terminating sites in a backhaul chain of repeaters. Many interim sites are supported. In dedicated link configurations, the interim sites must contain at least two link repeaters and an optional standard repeater.

Terminating Site
A terminating site is the site at the end of a backhaul chain. The backhaul chain supports only one terminating site. Forks are not supported. The main fork that starts at the origin site of the backhaul chain is considered the first fork. A terminating site must have a standard repeater.

2.14.3
Repeater Type

This field indicates the type of backhaul repeater as either drop or link.

The following selections are supported:

- **Standard repeater**
- **Link Repeater**

Standard repeater
A repeater that is connected to other repeaters at the same site through a LAN. The other repeaters at the site are Link Repeaters. standard repeaters transmit calls that are heard by subscribers.

Link Repeater
A repeater that only communicates with other repeaters through the LMR channel. They are also connected to other Drop and Link Repeaters at the same site through a LAN.

2.14.4
GPIO Slot Timing Master

This check box is used to enable the repeater as a slot sync master or a slot sync slave in a MOTOTRBO Link system.

When enabled (checked), this repeater is configured as the slot sync master and relays master timing signals to slot sync slave repeaters. The slot sync master repeater and slave repeaters are physically connected through a GPIO pin on the DB25 accessory connector, configured as a **Site Slot Sync Output**.

When disabled (default), this repeater is configured as a slot sync slave and receives master timing signals from the slot sync master repeater. The slot sync slave repeaters and the master repeater are physically connected through a GPIO pin on the DB25 accessory connector, configured as a **Site Slot Sync Input**.

NOTE: This feature is only applicable if Repeater Type on page 460 is set to **Link Repeater**. GPIO pins are configured in the Accessories Set on page 153 under the GPIO Physical Pins (Accessories) on page 166 section.

2.14.5
Maximum Number of Links

This field represents the maximum number of links (hops) between the origin site and the terminating site in the backhaul chain.

Range:

Maximum	Minimum	Increment
8	1	1

2.14.6
Link Beacon Interval (sec)

This field sets the interval between Beacon Transmissions on the Link Repeaters.

The link beacon interval on the standard repeater must have the same value as the link beacon interval configured on the link repeater.

Range:

Maximum	Minimum	Increment
300	60	60

2.14.7
IP Site Connect MOTOTRBO Link Site

The check box is used to enable IP Site Connect (IPSC) mode on the repeater.

It allows the repeater to be used as a Normal IPSC repeater connected to the backhaul system over IP.

NOTE:
This feature is accessible when Link Mode on page 459 is set to **None**.

Or, when **Link Mode** is set to **Dedicated Link** and Site Type on page 459 is set to **Origin Site** and Repeater Type on page 460 is set to **standard repeater**.

2.15
Phone System Set

The **Phone System** set allows the user to initiate a Phone call to and receive a Phone Call from a PSTN phone user on all system configurations (i.e. Conventional Single Site, IP Site Connect, and Capacity Plus–Single-Site). The Phone user can select a wide area channel as the target channel of a Phone Call. The Phone system is based on the Digital Phone Patch system. The Digital Phone Patch system is activated when phone users try to dial to target radio where the target can be radios in specific talk group (talkgroup call), the specific radio (private call) or all call if the Enable All Call is enabled. The system can also be setup when radio users try to dial the specific phone. In Digital Phone Patch system, phone user can trigger talkgroup or private call to radio user while radio user is allowed to trigger private call to phone user. A maximum of 16 phone systems can be created.

The following sections contain all the supported fields:

2.15.1
General (Phone System)

The **General** section of the Phone System set contains the following fields:

2.15.1.1
Deaccess Code

This field allows the user to configure the phone system deaccess code on the subscriber radio.

For MOTOTRBO Conventional radios, the deaccess code is sent to the phone patch when attempting to disconnect the phone call. The user can enter up to ten characters. Valid characters are DTMF digits 0-9, *, #, and the pause character "P".

NOTE:
This feature have a maximum of 10 characters.

This feature is hidden when the Digital Phone Patch feature is disabled.

For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.

This feature is applicable to MOTOTRBO Conventional radios.

For radios that operate under Capacity Max Open Radio mode, if the code is not required, the value must be empty (for display model) or set to a single pause character "P" (display and non-display model).

2.15.1.2
Busy TOT (sec)

Sets the duration that the Repeater waits (after a phone call is initiated) for the busy channel to become available before ending the phone call setup.

Range:

Maximum	Minimum	Increment
30 sec	1 sec	1 sec

NOTE:
This feature is supported in Digital mode only.

2.15.1.3
Response TOT (sec)

Sets the duration that the Repeater waits for a subscriber to answer a phone call before ending the phone call setup.

This applies to both the private and talkgroup phone calls (when ringing response is required).

Range:

Maximum	Minimum	Increment
60 sec	6 sec	6 sec

NOTE:
This feature is supported in Digital mode only.

2.15.1.4
TX Tone Duration (ms)

Configures the duration of the DTMF tone digits in milliseconds (ms) for a given subscriber phone system.

This applies to the access code, de-access code, phone number and over-dial digits which are generated by the subscriber as DTMF tones.

Range:

Maximum	Minimum	Increment
6400 ms	40 ms	20 ms

Range:

Maximum	Minimum	Increment
6375 ms	25 ms	25 ms

NOTE:
For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.

This feature is applicable to MOTOTRBO Conventional radios.

2.15.1.5
TX Tone Interval (ms)

Configures the duration of the intervals between the DTMF tone digits in a transmission sequence in milliseconds (ms) for a given subscriber phone system.

This applies to the access code, de-access code, phone number and over-dial digits which are generated by the subscriber as DTMF tones.

Range:

Maximum	Minimum	Increment
6400 ms	40 ms	20 ms

Range:

Maximum	Minimum	Increment
6375 ms	25 ms	25 ms

NOTE:
For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.

This feature is applicable to MOTOTRBO Conventional radios.

2.15.1.6
Ring Tone Level (dB)

Configures the level of tone in dB that alerts the radio user to accept a Phone Call and informs the user that the Phone Patch channel is available and the radio is being ringed.

Range:

Maximum	Minimum
-3 dB	-35 dB

NOTE:
This feature is supported in Digital mode only.

2.15.1.7
Busy Tone Level (dB)

Configures the level of tone in dB that is sounded to the phone user to signal that the system is currently busy.

Range:

Maximum	Minimum	Increment
-6 dB	-22 dB	1 dB

NOTE:
This feature is supported in Digital mode only.

2.15.1.8
Enable All Call

When enabled, the landline phone user can initiate a phone call to target radio; where the target radio can be any radios in the All Call Group type.

NOTE:
This feature is supported in Digital mode only.

2.15.1.9
Response Required

Allows the user to enable or disable the need for an incoming talkgroup call to require a radio response before allowing access.

NOTE:
This feature is supported in Digital mode only.

2.15.2
Target ID (Phone System)

The **Target ID** section of the Phone System set contains the following fields:

2.15.2.1
Length

Sets the expected length of the Target ID.

The target ID are the call type (private, talkgroup or all call), timeslot (Slot Number), and radio/talkgroup ID entered by the Phone User when initiating a phone call. So, the Target ID Length includes the length of the radio ID/talkgroup ID plus 2 more digits (one for the timeslot and one for the call type).

Range:

Maximum	Minimum	Increment
10	3	1

NOTE:
This feature is supported in Digital mode only.

2.15.2.2
Entry Time (sec)

Sets the duration that the Repeater waits for the Target ID validation during a landline-to-radio phone call before sending the Deaccess Code to end the call.

Range:

Maximum	Minimum	Increment
60 sec	10 sec	1 sec

NOTE:
This feature is supported in Digital mode only.

2.15.2.3
Validation Attempts

Defines the number of invalid attempts the repeater will accept during landline-to-radio phone call initiation, after which the repeater will end the call initiation.

Range:

Maximum	Minimum	Increment
3	1	1

NOTE:
This feature is supported in Digital mode only.

2.15.2.4
Request Tone Level (dB)

Configures the level of tone in dB that is sounded to notify the phone user to begin entering the Target ID via DTMF.

Range:

Maximum	Minimum	Increment
-6 dB	-22 dB	1 dB

NOTE:
This feature is supported in Digital mode only.

2.15.3
Preconfigured Call (Phone System)

The **Preconfigured Call** section of the Phone System set contains the following fields:

2.15.3.1
Enable (Preconfigured Call)

This check box allows the user to choose whether or not to enable the preconfigured phone call capability of the repeater.

If the preconfigured phone call capability is enabled, the repeater will wait for three seconds after the target ID request tone is played for the user. If the user does not dial any DTMF digit using the phone patch within the three seconds, the repeater will automatically place a preconfigured phone call to the radio or group of radios that are set in Call Type (Preconfigured) and Call ID (Preconfigured). If the

user dials an invalid call ID within the three seconds, the target ID request tone will be replayed to indicate a Retry, where the user can select to re-dial the correct call ID or not to dial any digit. If the user chooses not to re-dial, the repeater will automatically place a preconfigured phone call. If the preconfigured phone call capability is disabled, the repeater will wait indefinitely for the phone user to enter the Call ID using the phone patch.

NOTE:
This feature is hidden when the Digital or Digital Phone Patch feature is disabled.

2.15.3.2
Call Type (Preconfigured Call)

This drop-down list allows the user to choose which call type to use for the preconfigured phone call.

The available choices are Private Call, Group Call, and All Call.

NOTE:
This feature is hidden when the Digital or Digital Phone Patch feature is disabled.

This feature is only applicable when Enable (Preconfigured Call) is checked.

The choice All Call is only applicable when Enable All Call is checked.

2.15.3.3
Call ID (Preconfigured Call)

This configuration allows the user to choose which call ID to use for the preconfigured phone call.

NOTE:
This feature is hidden when the Digital or Digital Phone Patch feature is disabled.

This Group Call ID in a Capacity Plus–Single-Site system, the maximum value is 254 or the Call ID must not allow the user to exceed 254.

This Private Call ID in a Capacity Plus–Single-Site system, the maximum value is 65535 or the Call ID must not allow the user to exceed 65535.

This feature is only applicable when Enable (Preconfigured Call) is checked and Call Type (Preconfigured Call) is set to a value other than All Call.

2.16
Sites Set

The **Sites** set is used to associate neighboring site with the primary site.

The following section contains all the supported fields:

2.16.1
General (Sites)

The **General** section of the Sites set contains the following fields:

2.16.1.1
Max Number of Sites

Selects the maximum number of sites.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver feature are disabled.

For MOTOTRBO SLR Series repeaters models, this feature is hidden and the only value and choice is 15.

This feature is supported in Digital mode only.

2.16.1.2
Max Number of Trunked Repeaters per Site

Displays the maximum number of repeaters per site. This feature is not editable.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site feature is disabled.

This feature must be set to 6 when the value for Max Number of Sites is set to 3.

For MOTOTRBO SLR Series repeater models, this feature is hidden and the value is 8.

This feature is supported in Digital mode only.

2.16.1.3
Site ID (Neighboring Site)

Enters the ID of the site to associate it with neighbor sites.

NOTE:
This feature is enabled only when Link Type is set to Master.

This ID must match the respective Repeater Site ID (Repeater).

This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver feature are enabled.

This feature is supported in Digital mode only.

2.16.1.4
Reserved Wide Area Channels

Configures the number of channels in a Repeater provisioned for wide area transmissions for the site.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

For MOTOTRBO SLR Series repeater models, this feature has a range from 0 to 16.

This feature is supported in Digital mode only.

2.16.1.5
Neighbor 1

Selects this Neighbor from the list of Site ID's.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

The value of this feature must be in the range of 1 and the maximum of all of Site ID fields in all rows.

This feature must not be set as the value of Site ID in current row.

This feature is supported in Digital mode only.

2.16.1.6
Neighbor 2

Selects this Neighbor from the list of Site ID's.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

The value of this feature must be in the range of 1 and the maximum of all of Site ID fields in all rows.

This feature must not be set as the value of Site ID in current row.

This feature is supported in Digital mode only.

2.16.1.7
Neighbor 3

Selects this Neighbor from the list of Site ID's.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

The value of this feature must be in the range of 1 and the maximum of all of Site ID fields in all rows.

This feature must not be set as the value of Site ID in current row.

This feature is supported in Digital mode only.

2.16.1.8
Neighbor 4

Selects this Neighbor from the list of Site ID's.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

The value of this feature must be in the range of 1 and the maximum of all of Site ID fields in all rows.

This feature must not be set as the value of Site ID in current row.

This feature is supported in Digital mode only.

2.16.1.9
Neighbor 5

Selects this Neighbor from the list of Site ID's.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

The value of this feature must be in the range of 1 and the maximum of all of Site ID fields in all rows.

This feature must not be set as the value of Site ID in current row.

This feature is supported in Digital mode only.

2.16.1.10
Neighbor 6

Selects this Neighbor from the list of Site ID's.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

The value of this feature must be in the range of 1 and the maximum of all of Site ID fields in all rows.

This feature must not be set as the value of Site ID in current row.

This feature is supported in Digital mode only.

2.17
Talkgroups Set

The **Talkgroups** set associates any available RX Group list to the channel for reception. The user can listen to any Group in this list when there is any activity on it and talk back within the Group Call hang time. This is also known as a Group Scan.

The following section contains all the supported fields:

2.17.1
General (Talkgroups)

The **General** section of the Talkgroups set contains the following fields:

2.17.1.1
All Wide Area Talkgroups

Allows the user to enable or disable all the wide area calls listed in the Wide Area Talkgroups table.

When enabled, all the Group Calls listed in the table will be wide area on all the sites.

NOTE:
This feature is enabled only when Link Type is set to Master.

This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is supported in Digital mode only.

2.17.1.2
Call ID (Wide Area Talkgroups)

Enters the ID of the Group Call to be configured as wide area call for the selected site(s).

Only Wide Area Talkgroups should be configured in this Talkgroups table.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

This feature is disabled when All Wide Area Talkgroups is enabled.

This ID must match the respective subscriber radio Group ID.

the user does not need to configure the Local Area Talkgroups. The system assumes that all talkgroups that are not configured in the Talkgroups table, will be Local Area Talkgroups.

The Local Area Talkgroup ID can be re-used at different sites of the system, since they will not be transmitted across sites.

This feature is supported in Digital mode only.

2.17.1.3
Site 1

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master. This dependency is not available for Next Generation Repeaters.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.4
Site 2

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.5
Site 3

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.6
Site 4

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.7
Site 5

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.8
Site 6

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.9
Site 7

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.10
Site 8

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.11
Site 9

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.12
Site 10

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.13
Site 11

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.14
Site 12

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.15
Site 13

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.16
Site 14

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master. This dependency is not available for Next Generation Repeaters.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.17
Site 15

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master. This dependency is not available for Next Generation Repeaters.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.18
Site 16

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master. This dependency is not available for Next Generation Repeaters.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.19
Site 17

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master. This dependency is not available for Next Generation Repeaters.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.20
Site 18

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master. This dependency is not available for Next Generation Repeaters.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.21
Site 19

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master. This dependency is not available for Next Generation Repeaters.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.17.1.22
Site 20

Configures this Site to be associated with the Call ID.

NOTE:
This feature is hidden when the Capacity Plus–Multi-Site and Satellite Receiver features are disabled.

This feature is enabled only when Link Type is set to Master. This dependency is not available for Next Generation Repeaters.

This feature is disabled when All Wide Area Talkgroups is enabled.

This feature is supported in Digital mode only.

2.18
Voice Announcement Set

The **Voice Announcement** set allows you to map Motorola pre-recorded voice files to operation items (for example: zone, channel, zone list, and programmable buttons), configure the voice announcement parameters, and load the voice file from CPS 2.0 into the radio. The recorded content is available in multiple languages and played when the user triggers the relevant operation item or a certain operation occurs such as channel announcement during the radio power-up.

The application only accepts voice announcement files in the following format:

- 16 Bits, 8K, mono sample, pulse-code modulation (PCM) audio.
- 8 Bits, 8K, mono sample, Mu-law.

The following sections contain all the supported fields:

2.18.1
General (Voice Announcement)

The **General** section of the Voice Announcement set contains the following fields:

2.18.1.1
Announcement Type

This drop-down list allows the user to configure the Announcement Type. The options are None, Voice Announcement Files, and Text to Speech.

The following selections are supported:

None
Select this option if the user does not want any announcement types in the configuration.

Voice Announcement Files
Select this option if the user wants to use Voice Announcement Files as the announcement type. When enabled, the user can map MOTOTRBO pre-recorded voice file to operation items (e.g. zone, channel, zone list and programmable button), configure the voice announcement parameters, and load the voice file from CPS 2.0 into the radio. The recorded content is available in multiple languages and played when the user triggers the associated operation item or certain operation occurs such as channel announcement during the radio power up. The voice file settings can be custom configured at the Manage Voice Announcement menu. See Button Features for the description of each feature functionality.

Text to Speech
Select this option if the user wants to use Voice Text to Speech as the announcement type. This option is hidden if the Text to Speech feature is disabled.

2.18.1.2
Priority

Configures the priority of voice announcement over voice call.

High
Voice announcement has a higher priority than voice call. For example, if the user joins an ongoing call, the user waits until the channel announcement is completed before hearing the call.

Low
Voice call has a higher priority than voice announcement. For example, if the user joins an ongoing call, the channel announcement is truncated to allow the audio from the call to be heard first.

2.18.2
File List (Voice Announcement)

The **File List** section of the Voice Announcement set contains the following fields:

2.18.2.1
Select and All

This button selects all the file names of the available Voice Announcement files.

2.18.2.2
Select and None

This button deselects all the file names of the available Voice Announcement files.

2.18.2.3
Selected

This button selects a file name of the available Voice Announcement files.

2.18.2.4
File Name

This field displays the file names of the available Voice Announcement files.

2.18.3
Voice Announcement File Selection (Voice Announcement)

The **Voice Announcement File Selection** section of the Voice Announcement set contains the following fields:

2.18.3.1
Set Voice Files

Automatically configures a voice file to each parameter under File Selection that is set to None, if the filename of the voice file matches the parameter name.

The -, _, and white space characters are ignored during the case-insensitive matching process.

NOTE:
This button is disabled if there is no voice file available.

2.18.3.2
Clear Voice Files

Automatically sets each parameter under File Selection to None.

NOTE:
This button is disabled if there is no voice file available.

2.18.3.3
Intelligent Audio On

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files. This feature is disabled if None is the only choice.

Refer to the MOTOTRBO Experience #1 Intelligent Audio video to view the feature demonstration.

2.18.3.4
Intelligent Audio Off

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files. This feature is disabled if None is the only choice.

Refer to the MOTOTRBO Experience #1 Intelligent Audio video to view the feature demonstration.

2.18.3.5
All Alert Tones On

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.6
All Alert Tones Off

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.7
Backlight Auto On

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.8
Backlight Auto Off

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.9
Battery Low

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is only applicable for SL Series Commercial radios.

2.18.3.10
Battery Medium

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is only applicable for SL Series Commercial radios.

2.18.3.11
Battery High

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is only applicable for SL Series Commercial radios.

2.18.3.12
Brightness

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.13
Brightness level 1

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is only applicable for SL Series Commercial radios.

2.18.3.14
Brightness level 2

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is only applicable for SL Series Commercial radios.

2.18.3.15
Brightness level 3

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is only applicable for SL Series Commercial radios.

2.18.3.16
Brightness level 4

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is only applicable for SL Series Commercial radios.

2.18.3.17
Bluetooth Connect

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.18
Bluetooth Disconnect

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.19
Route Audio to Bluetooth

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.20
Route Audio to Speaker

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.21
Call Forwarding Set

Allows the user to configure voice announcement for Call Forwarding Set button choice. The choices are "None" and all available Voice Announcement files..

NOTE:
This feature is disabled if None is the only choice.

2.18.3.22
Call Forwarding Clear

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.23
Call Alert

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.24
Call Log

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.25
Contacts

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.26
Day Mode

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.27
Night Mode

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.28
Emergency Off

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.29
Emergency On

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.30
External Public Address On

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.31
External Public Address Off

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.32
High Power

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.33
Low Power

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.34
Horn & Lights On

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.35
Horn & Lights Off

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.36
Internal Public Address On

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.37
Internal Public Address Off

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.38
Locked

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.39
Unlocked

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.40
Manual Dial Private Call

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.41
Manual Site Roaming

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is hidden if the IP Site Connect and Capacity Plus–Multi-Site features are disabled.

This feature is disabled if None is the only choice.

2.18.3.42
Microphone AGC On

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.43
Microphone AGC Off

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.44
Monitor

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.45
Nuisance Delete

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.46
Permanent Monitor On

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.47
Permanent Monitor Off

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.48
Privacy On

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.49
Privacy Off

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.50
Radio Check

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.51
Radio Disable

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.52
Radio Enable

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.53
Remote Monitor

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.54
Repeater Mode

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.55
Talkaround Mode

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.56
Scan On

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.57
Scan Off

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.58
Site Locked

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is hidden if the IP Site Connect and Capacity Plus–Multi-Site features are disabled.

This feature is disabled if None is the only choice.

2.18.3.59
Site Unlocked

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is hidden if the IP Site Connect and Capacity Plus–Multi-Site features are disabled.

This feature is disabled if None is the only choice.

2.18.3.60

Messages

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.61

Tight Squelch

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.62

Normal Squelch

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.63

Status

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.64

Remote Dekey

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.65

VOX On

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.66
VOX Off

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.67
Voice Announcement On

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.68
Voice Announcement Off

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.69
One Touch Home Revert

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.70
One Touch Private Call

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.71
One Touch Group Call

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.72

One Touch Call Alert Sending

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.73

One Touch Text Message Sending

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.74

One Touch Status Sending

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.75

One Touch Message Sending

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.76

One Touch Telegram Sending

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.77

One Touch Phone Call

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is supported in Digital mode only.

2.18.3.78
Telemetry Button 1

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.79
Telemetry Button 2

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.80
Telemetry Button 3

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.81
Option Board Feature 1

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.82
Option Board Feature 2

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.83
Option Board Feature 3

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.84

Option Board Feature 4

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.85

Option Board Feature 5

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.86

Option Board Feature 6

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.87

Option Board Feature 7

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.88

Option Board Feature 8

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.89

Option Board Feature 9

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.90
Option Board Feature 10

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.91
Option Board Feature 11

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.92
Option Board Feature 12

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.93
Option Board Feature 13

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.94
Option Board Feature 14

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.95
Option Board Feature 15

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.96
Display Radio Name

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.97
GNSS On

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.98
GNSS Off

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.99
Job Tickets

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is supported in Digital mode only.

2.18.3.100
Action List

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is supported in Digital mode only.

This feature is applicable to SL Series radios.

2.18.3.101
Phone Call

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is supported in Digital mode only.

2.18.3.102
Phone Manual Dial

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is supported in Digital mode only.

2.18.3.103
Phone Exit

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is supported in Digital mode only.

2.18.3.104
Bluetooth Discoverable On

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is supported in Digital mode only.

2.18.3.105
Bluetooth Discoverable Off

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is supported in Digital mode only.

2.18.3.106
Ring Alert Type

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is supported in Digital mode only.

This feature is applicable to SL Series radios.

2.18.3.107

Notifications

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is supported in Digital mode only.

This feature is applicable to SL Series radios.

2.18.3.108

Mandown On

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.109

Mandown Off

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.110

Mic Distortion On

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.111

Mic Distortion Off

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.112

AF Suppressor On

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files. This feature is disabled if None is the only choice.

Refer to the MOTOTRBO Experience #2: Acoustic Feedback Suppressor video to view the feature demonstration.

2.18.3.113
AF Suppressor Off

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files. This feature is disabled if None is the only choice.

Refer to the MOTOTRBO Experience #2: Acoustic Feedback Suppressor video to view the feature demonstration.

2.18.3.114
Scrambling On

Allows the user to configure voice announcement for the Scrambling On/Off button choice. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is not available for NA region.

2.18.3.115
Scrambling Off

Allows the user to configure voice announcement for the Scrambling On/Off button choice. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is not available for NA region.

2.18.3.116
Scrambling 3.29 kHz

Allows you to configure voice announcement for the Scrambling Code Toggle button choice when Scrambling Frequency is set to 3.29 kHz. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is not available for NA region.

2.18.3.117
Scrambling 3.39 kHz

Allows you to configure voice announcement for the Scrambling Code Toggle button choice when Scrambling Frequency is set to 3.39 kHz. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is not available for NA region.

2.18.3.118

Scrambling 3.5 kHz

Allows you to configure voice announcement for the Scrambling Code Toggle button choice when Scrambling Frequency is set to 3.5 kHz. The choices are None and all available voice announcement files.

NOTE: This feature is disabled if None is the only choice.

2.18.3.119

Flexible Rx List On

Allows the user to configure voice announcement for Flexible Rx List On button choice. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.18.3.120

Flexible Rx List Off

Allows the user to configure voice announcement for Flexible Rx List Off button choice. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is hidden when the Capacity Plus–Single-Site and Capacity Plus–Multi-Site features are disabled.

2.18.3.121

Battery Li-Ion Selected

Allows the user to configure voice announcement for Battery Li-Ion Selected choice. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.122

Battery NiMH Selected

Allows the user to configure voice announcement for Battery Ni-MH Selected choice. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.123

Invalid Battery and Charger

Allows the user to configure voice announcement for Invalid Battery and Charger. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is only applicable for SL Series Commercial radios.

2.18.3.124

Invalid Battery

Allows the user to configure voice announcement for Invalid Battery choice. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is only applicable for SL Series Commercial radios.

2.18.3.125

Charging Error

Allows the user to configure voice announcement for Charging Error choice. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is only applicable for SL Series Commercial radios.

2.18.3.126

Invalid Charger

Allows the user to configure voice announcement for Invalid Charger choice.

The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is only applicable for SL Series Commercial radios.

2.18.3.127

Cancel

Allows the user to configure voice announcement for Cancel button choice. The choices are "None" and all available Voice Announcement files.

2.18.3.128

Accessory Speaker Selected

This drop-down list allows the user to configure voice announcement for Switch Speaker (Accessory Speaker Selected) button choice. .

The choices are None and all available Voice Announcement files

NOTE:
This feature is disabled if None is the only choice.

2.18.3.129

Radio Speaker Selected

This drop-down list allows the user to configure voice announcement for Switch Speaker (Radio Speaker Selected) button choice.

NOTE:
This feature is disabled if None is the only choice.

2.18.3.130

Trill Enhancement On

This drop-down list allows the user to configure voice announcement for Trill Enhancement On button choice.

The choices are None and all available Voice Announcement files. This feature is disabled if None is the only choice.

Refer to the MOTOTRBO Experience #14: Trill Enhancement video to view the feature demonstration.

2.18.3.131

Trill Enhancement Off

This drop-down list allows the user to configure voice announcement for Trill Enhancement Off button choice.

The choices are "None" and all available Voice Announcement files. This feature is disabled if None is the only choice.

Refer to the MOTOTRBO Experience #14: Trill Enhancement video to view the feature demonstration.

2.18.3.132

Home Channel Reminder Silenced

This field allows the user to configure voice announcement for Silence Home Channel Reminder button choice.

NOTE: This feature is be not editable if "None" is the only choice

2.18.3.133

New Home Channel

This field allows the user to configure voice announcement for Reset Home Channel button choice.

NOTE: The choices are "None" and all available Voice Announcement files.

2.18.3.134

Non-Home Channel

This field allows the user to configure voice announcement that will be used when a Home Channel Reminder occurs.

NOTE: The choices are "None" and all available Voice Announcement files.

2.18.3.135
Wrong Battery

This drop-down list allows the user to configure voice announcement for Wrong Battery button choice. The choices are "None" and all available Voice Announcement files.

NOTE: This feature is disabled if None is the only choice.

2.18.3.136
WAVE Channel List

This drop-down list allows the user to associate a voice announcement file to the WAVE Channel List button.

The choices are "None" and all available Voice Announcement files.

2.18.3.137
WAVE Channel 1

This feature allows the user to configure voice announcements for the WAVE Channel 1.

The choices are "None" and all available Voice Announcement files.

2.18.3.138
WAVE Channel 2

This feature allows the user to configure voice announcements for the WAVE Channel 2.

The choices are "None" and all available Voice Announcement files.

2.18.3.139
WAVE Channel 3

This feature allows the user to configure voice announcements for the WAVE Channel 3.

The choices are "None" and all available Voice Announcement files.

2.18.3.140
WAVE Channel 4

This feature allows the user to configure voice announcements for the WAVE Channel 4.

The choices are "None" and all available Voice Announcement files.

2.18.3.141
WAVE Channel 5

This feature allows the user to configure voice announcements for the WAVE Channel 5.

The choices are "None" and all available Voice Announcement files.

2.18.3.142
WAVE Channel 6

This feature allows the user to configure voice announcements for the WAVE Channel 6.

The choices are "None" and all available Voice Announcement files.

2.18.3.143
WAVE Channel 7

This feature allows the user to configure voice announcements for the WAVE Channel 7.

The choices are "None" and all available Voice Announcement files.

2.18.3.144
WAVE Channel 8

This feature allows the user to configure voice announcements for the WAVE Channel 8.

The choices are "None" and all available Voice Announcement files.

2.18.3.145
Switching to Radio

This feature allows the user to configure voice announcements by toggling to radio mode.

The choices are "None" and all available Voice Announcement files.

2.18.3.146
Switching to Wave

This feature allows the user to configure voice announcements by toggling to WAVE mode.

The choices are "None" and all available Voice Announcement files.

2.18.3.147
Wi-Fi On

This drop-down ist allows the user to configure voice announcement for the Wi-Fi On button option. The options are "None" and all available Voice Announcement files.

NOTE:

- This feature is disabled if None is the only choice.
- This feature is hidden when the Wi-Fi feature is disabled.

2.18.3.148
Wi-Fi Off

This drop-down list allows the user to configure voice announcement for the Wi-Fi Off button option. The options are "None" and all available Voice Announcement files.

NOTE:

- This feature is disabled if None is the only choice.
- This feature is hidden when the Wi-Fi feature is disabled.

2.18.3.149
Wi-Fi Enabled

Allows the user to configure voice announcement for the Wi-Fi "Enabled" button option. The options are "None" and all available Voice Announcement files.

NOTE:

- This feature is disabled if None is the only choice.
- This feature is hidden when the Wi-Fi feature is disabled.

2.18.3.150
Wi-Fi Disabled

Allows the user to configure voice announcement for the Wi-Fi "Disabled" button option. The options are "None" and all available Voice Announcement files.

NOTE:

- This feature is disabled if None is the only choice.
- This feature is hidden when the Wi-Fi feature is disabled.

2.18.3.151
Wi-Fi Connected

Allows the user to configure voice announcement for the Wi-Fi "Connected" button option. The options are "None" and all available Voice Announcement files.

NOTE:

- This feature is disabled if None is the only choice.
- This feature is hidden when the Wi-Fi feature is disabled.

2.18.3.152
Vibrate Style

Allows the user to select vibrate style.

2.18.3.153
Wrong Battery

This drop-down list allows the user to configure voice announcement for Wrong Battery button choice. The choices are "None" and all available Voice Announcement files.

NOTE: This feature is disabled if None is the only choice.

2.18.3.154
Indoor Location On

Allows the user to configure voice announcement for Indoor Location On button choice. The choices are "None" and all available Voice Announcement files.

2.18.3.155
Indoor Location Off

Allows the user to configure voice announcement for Indoor Location On button choice. The choices are "None" and all available Voice Announcement files.

2.18.3.156
Transmit Inhibit On

Allows the user to configure voice announcement for Transmit Inhibit On button choice. The choices are "None" and all available Voice Announcement files.

NOTE:

- This feature is disabled if None is the only choice.
- This feature is hidden when the Transmit Inhibit feature is disabled.

2.18.3.157

Transmit Inhibit Off

Allows the user to configure voice announcement for Transmit Inhibit Off button choice. The choices are "None" and all available Voice Announcement files.

NOTE:

- This feature is disabled if None is the only choice.
- This feature is hidden when the Transmit Inhibit feature is disabled.

2.18.3.158

Ring Alert Type Silent

Allows the user to configure voice announcement for Ring Alert Type Silent button choice. The choices are "None" and all available Voice Announcement files.

NOTE:

- This feature is disabled if None is the only choice.

2.18.3.159

OTAR Rekey Request

Allows the user to configure voice announcement when a OTAR Rekey Request occurs. The choices are "None" and all available Voice Announcement files.

NOTE:

- This feature is disabled if None is the only choice.
- This feature ishidden when the OTAR feature is disabled.

2.18.3.160

Response Inhibit On

This list allows the user to configure the voice announcement for Response Inhibit On button choice. The choices are "None" and all available Voice Announcement files.

NOTE: This feature is disabled if None is the only choice.

2.18.3.161

Response Inhibit Off

This list allows the user to configure the voice announcement for Response Inhibit Off button choice. The choices are "None" and all available Voice Announcement files.

NOTE: This feature is disabled if None is the only choice.

2.18.3.162

Glove Mode On

This list allows the user to configure the voice announcement for Glove Mode On button choice.

The choices are "None" and all available Voice Announcement files.

NOTE: This feature is disabled if None is the only choice.

2.18.3.163
Glove Mode Off

This list allows the user to configure the voice announcement for Glove Mode Off button choice.

The choices are "None" and all available Voice Announcement files.

NOTE: This feature is disabled if None is the only choice.

2.18.4
Text to Speech (Voice Announcement)

The **Text to Speech** section of the Voice Announcement set contains the following fields:

2.18.4.1
Dictionary Entry

This edit box allows the user to type a word or phrase to modify the default Text to Speech pronunciation.

NOTE:

- If the value of this field is the same as another Dictionary Entry field, this edit box resets this field to the previous value. This dependency does not apply if the value of this field is blank.
- This field supports a maximum of 40 characters.

2.18.4.2
Pronunciation

This edit box allows the user to specify a custom pronunciation for a particular word or phrase.

NOTE:

- This field supports a maximum of 100 characters.

2.18.4.3
Voice Pack

This drop-down list allows the user to choose the voice pack to use for Text to Speech.

The choices are None, Do Not Change, and all voice packs that are installed on this computer.

NOTE:
This drop-down list shows each voice pack in the following format; Language (Locale): Speaker Name [Gender]. [Gender] is the Unicode for a Female Sign or a Male Sign character, depending on the speaker. For example, English (United States): Allison ♀.

When the user opens a .ctb file or read a radio, if the current value is a voice pack that is not installed on this computer, the user must change the value in the .ctb file to Do Not Change. the user must not change the underlying value in the .ctb file or radio. The option Do Not Change is not applicable in any other case. This dependency is not applicable for CPS 2.0.

The option None is only applicable when the user loads a no-voice pack into the radio or when Announcement Type is not set to Text to Speech.

This feature is greyed out and set to None when Announcement Type is not set to Text to Speech. The previous value of this field (if any) is preserved until the user saves the .ctb file.

The option Do Not Change is only applicable when the user loads a voice pack into the radio.

This feature depends on the Text to Speech feature.

2.18.4.4
Speech Rate

This drop-down list allows the user to set the speed of the Text to Speech engine. This determines how fast phrases are spoken.

2.18.4.5
Channels (Text to Speech)

This check box allows the user to enable or disable the reading of channel names using Text to Speech.

NOTE:
This feature is disabled if None is the only choice.

2.18.4.6
Zones (Text to Speech)

This check box allows the user to enable or disable the reading of zone names using Text to Speech.

2.18.4.7
Buttons (Text to Speech)

This check box allows the user to enable or disable the reading of button names using Text to Speech.

2.18.4.8
Text Messages (Text to Speech)

This check box allows the user to enable or disable the reading of text messages using Text to Speech.

2.18.4.9
Job Tickets (Text to Speech)

This check box allows the user to enable or disable the reading of job tickets using Text to Speech.

NOTE:
This feature depends on the Text to Speech feature.

2.19
Indoor Location Set

The **Indoor Location** set allows you to enable the Indoor Location feature, set scan interval times, and configure beacon list items.

The following sections contain all the supported fields:

2.19.1
General (Indoor Location)

The **General** section of the Indoor Location set contains the following fields:

2.19.1.1
Indoor Location

This feature allows the radio to detect its location by communicating with Beacons.

2.19.1.2
Scan Interval on Time (ms)

This feature sets the scanning on duration of the iBeacon device.

Range:

Maximum	Minimum	Increment
6553500 ms	100 ms	100 ms

2.19.1.3
Scan Interval off Time (ms)

This feature sets the scanning off duration for iBeacon device.

Range:

Maximum	Minimum	Increment
6553500 ms	100 ms	100 ms

NOTE: When the Scan Interval off time is set to 0, the subscriber performs a continuous scan. The battery consumption depends on the scanning rate.

2.19.1.4
Show Beacon Alias

This feature allows for the Beacon Alias to be displayed in the CPS 2.0 system.

2.19.2
Beacon List (Indoor Location)

The **Beacon List** section of the Indoor Location set contains the following fields:

2.19.2.1
Beacon Alias

This field allows you to enter a 16 character name that identifies the Beacon in the Indoor Location List Items.

2.19.2.2
Beacon UUID

The field is a 16-byte hex character string (32 alphanumeric characters) that is used as the Universally Unique IDentifier (UUID) for the Beacon.

2.20
Job Tickets Set

The **Job Tickets** set is used to configure job ticket status folders. A maximum of 12 job ticket status folders can be configured in CPS 2.0, allowing radio users to reply to up to 12 statuses.

Based on the MOTOTRBO Text Message feature, a work flow management system such as HotSOS can be set up between the controller and the subscriber units. The radio users are able to access job tickets assigned to them through the radio menu or a short/long programmable button press.

NOTE:

- When the radio write operation is in progress, the radio ignores any tickets received.
- This feature is supported in Digital mode only.

The following section contains all the supported fields:

2.20.1 General (Job Tickets)

The **General** section of the Job Tickets set contains the following fields:

2.20.1.1 Job Ticket Server ID

This feature allows the user to configure the Job Ticket server ID.

The range is 0 to 16776415.

This is a radio-wide feature.

NOTE:
Blank value is a valid choice for this control.

This feature is supported in Digital, Capacity Plus–Single-Site and Capacity Plus–Multi-Site mode.

2.20.1.2 Job Ticket Server IP

This feature is read-only and allows the user to view the IP address of the Job Ticket server.

The **Job Ticket Server IP Address** refers to the air interface network IP address of the Job Ticket server. It is derived from the Job Ticket Radio ID and CAI Network. This field defines the Job Ticket Raw Data destined Server IP Address.

This is a radio-wide feature.

NOTE:
The default value for this feature is set to 0.0.0.0 when the value of Job Ticket Server ID is blank.

The value in the first octet is always 1+ the value in CAI Network.

The value in the last three octets correspond to the value in XCMP Server ID.

This feature is supported in Digital, Capacity Plus–Single-Site and Capacity Plus–Multi-Site mode.

2.20.1.3 Job Ticket Server UDP Port

The **Job Ticket Server UDP Port** specifies a dedicated port number for the target destination (for example, computer or radio) to support the job ticket services.

The User Datagram Protocol (UDP) is one of the core Internet protocol for sending short messages (datagram) between devices. UDP enables communication between these devices though a unique port number. The internal radio job ticket server receive UDP port is always 4007.

Range:

Maximum	Minimum	Increment
65535	1024	1

NOTE:
The port numbers for the Network Services; for example, ARS, TMS, Telemetry, and so on, must always be different to avoid conflict.

This feature is supported in Digital mode only.

2.20.1.4
Index (Job Tickets)

Displays the number of the job ticket status folder.

NOTE:
When renaming, the value must be unique within the tree node.

If the user tries to set this field to blank, this feature resets to the previous value.

This feature is supported in Digital mode only.

2.20.1.5
Action/Response

Specifies a text for an action or a response of a job ticket, such as Start or Complete.

The user may enter up to a maximum of 16 characters. Valid characters are alphanumerics, spaces and special characters.

NOTE:
This feature is supported in Digital mode only.

2.20.1.6
Status Folder

Configures a name for the status folder.

The status folder provides information on the type and state of the action/response of a job ticket. The user may enter up to a maximum of 16 characters. Valid characters are alphanumerics, spaces and special characters.

NOTE:
This feature is supported in Digital mode only.

2.20.1.7
Last State Flag

Marks an entry to have the highest priority be removed from the job ticket list in the radio when the list is full.

NOTE:
This feature is supported in Digital mode only.

2.21
Job Tickets Options Set

The **Job Tickets Options** set allows the user to configure up to 40 job ticket option list items. Job ticket option list items are assigned to Job Ticket Templates.

The following section contains all supported fields:

2.21.1
General (Job Tickets Options)

The **General** section of the Job Tickets Options set contains the following fields:

2.21.1.1
Option List Name

Displays the title of the individual option list. User can add up to 40 lists. To add an option list, hover to the Option List tree node, right click, and select Add. The application also allows the user to configure an Alias consisting of 1 to 16 characters. To rename an option list, hover to the desired list, right click, and select Rename.

NOTE:
This feature is non-editable.

This feature is supported in Digital mode only.

2.21.1.2
Position

This edit box displays the position numbers of the Job Ticket Options in the radio.

This is the first column in the grid control for Job Ticket Option List.

NOTE:
Order of the position is in ascending order, starting from position 1 to maximum number of Job Ticket Options available.

This feature is not editable.

This feature is supported in Digital mode only.

2.21.1.3
Index

This edit box allows the user to set the option index.

For each Job Ticket Option List Option, the application allows the user to configure an Index consisting of 1 to 5 characters.

NOTE:
When renaming, this value of this field is unique within the tree node.

This feature is supported in Digital mode only.

2.21.1.4
Name

This edit box allows the user to set the option name.

For each option name, the application allows the user to configure a Name consisting of 1 to 16 characters.

NOTE:
When renaming, this value of this field is unique within the tree node.

This feature is supported in Digital mode only.

2.22
Job Tickets Templates Set

The **Job Tickets Templates** set allows the user to configure up to 5 job tickets templates.

The following section contains all supported fields:

2.22.1
General (Job Tickets Templates)

The **General** section of the Job Tickets Templates set contains the following fields:

2.22.1.1
Template Name

This field allows the user to enter a name that uniquely identifies the Job Ticket Template set.

2.22.1.2
Tag

The field allows the user to enter a Tag (name) consisting of 1-3 characters.

NOTE:
If the user tries to set this field to blank, this field is reset to the default value.

This feature is supported in Digital mode only.

2.22.1.3
Position

This edit box displays the position numbers of the Job Ticket Template Items in the radio.

This is the first column in the grid control for Job Ticket Template.

NOTE:
Order of the position is in ascending order, starting from position 1 to maximum number of Job Ticket Template Items available.

This feature is not editable.

This feature is supported in Digital mode only.

2.22.1.4
Name

This edit box allows the user to set the template item name.

The application allows the user to configure a name consisting of 1 to 16 characters.

NOTE:
When renaming, the value is unique within the tree node.

This feature is supported in Digital mode only.

2.22.1.5
Tag

The field allows the user to enter a template item tag consisting of 1-3 characters.

NOTE:
If the user tries to set this field to blank, this field is reset to the default value.

This feature is supported in Digital mode only.

2.22.1.6
Type

This drop-down list allows the user to select the input type for this template item.

Available choices are Text, Numeric, or Option List.

NOTE:
The choice Option List is only shown when there is at least one Option List under Options.

This feature is supported in Digital mode only.

2.22.1.7
Option List

This drop-down list allows the user to configure each of the Job Ticket Template Item to be connected to a specific Option List.

NOTE:
This feature is greyed out when Type is set to Text or Numeric.

The choice None is only shown when there are no Option Lists under Options.

When the choice None is not shown, the default value is the first Option List under Options.

This feature is supported in Digital mode only.

2.22.1.8
Length

This field allows the user to set the maximum length that can be entered for this Template Item.

This applies when entering data in the radio or as the Original Text.

NOTE:
This feature is greyed out when Type is set to Option List.

When editing, Original Text is reset to the default value if the length's new value is shorter than the length of Original Text.

When editing, this feature is set to the minimum value if the new value is blank.

When editing, if the new value is out of range, this feature is set to the closest value in the range (either the minimum or maximum value.

The maximum value for this feature is 15 when Type is set to Numeric.

The maximum value for this feature is 127 when Type is set to Option List or Text.

This feature is supported in Digital mode only.

2.22.1.9
Original Text

This edit box allows the user to specify an initial value for this template item.

The user can use this value as it is or changed the value on the radio.

NOTE:
This feature is greyed out when Type is set to Option List.

When editing, this feature is reset to the previous value if the new value exceeds the value of Length.

When editing, this feature is reset to the previous value if the new value has any characters other than digits (0-9) and Type is set to Numeric.

This feature is supported in Digital mode only.

2.23 Mandown Set

The **Mandown** set is used to enable or disable the radio mandown feature. Mandown is a channel-wide feature. It triggers an emergency procedure in situations where the radio is horizontal or left still for longer than the pre-programmed time.

The following section contains the supported field:

2.23.1 General (Mandown)

The **General** section of the Mandown set contains the following fields:

2.23.1.1 Allow User Control

Allows you to enable or disable the Radio Mandown feature.

If enabled, the Radio Mandown feature can be toggled via the radio menu or programmable buttons in the radio.

2.24 Mandown Profiles Set

The **Mandown Profiles** set is used to configure all fields related to the radio mandown feature.

The following sections contain all the supported fields:

2.24.1 General (Mandown Profiles)

The **General** section of the Mandown Profiles set contains the following fields:

2.24.1.1 Name

Configures a name for the Radio Mandown Profile that can connect to a conventional personality.

2.24.1.2 Type

Configures the type of radio behavior to trigger the Radio Mandown feature.

Angle
The radio is placed in an angle lower than the Activation Angle (degree) for the duration of Angle Pre-Alarm Duration (sec).

Movement
The radio is in a constant motion for the duration of Movement Pre-Alarm Duration (sec).

No-Movement
The radio is in a stationary position for the duration of No-Movement Pre-Alarm Duration (sec).

Angle or No-Movement
The radio is either in the Angle or No-Movement Mandown scenario.

2.24.1.3
Sensor Sensitivity

Configures the sensor sensitivity for the alarm trigger of the Radio Mandown feature.

Minimum
Requires four seconds to detect angle change and start the Angle Pre-Alarm Duration (sec) for Angle alarm, or a gravitational force of 1.8g onwards to start the Movement Pre-Alarm Duration (sec)/No-Movement Pre-Alarm Duration (sec) for Movement/No-Movement alarm.

Medium
Requires two seconds to detect angle change and start the Angle Pre-Alarm Duration (sec) for Angle alarm, or a gravitational force of 1.2g onwards to start the Movement Pre-Alarm Duration (sec)/No-Movement Pre-Alarm Duration (sec) for Movement/No-Movement alarm.

Maximum
Requires one second to detect angle change and start the Angle Pre-Alarm Duration (sec) for Angle alarm, or a gravitational force of 0.7g onwards to start the Movement Pre-Alarm Duration (sec)/No-Movement Pre-Alarm Duration (sec) for Movement/No-Movement alarm.

2.24.1.4
Volume (dB)

Configures the Radio Mandown volume to use when the Radio Mandown feature is triggered.

When the Radio Mandown feature is turned off, the radio uses back the current radio knob volume.

Table 60: Range:

Maximum	Minimum	Increment
10 dB	1 dB	1 dB

NOTE:
This feature value changes to **Auto** if **0** is entered.

2.24.1.5
Alert Repeat Period (sec)

Configures the interval at which the alert tone is sounded when the Mandown feature is triggered.

Table 61: Range:

Maximum	Minimum	Increment
10 sec	1 sec	1 sec

NOTE:
This feature value changes to **Disabled** if **0** is entered. A value of **0** results in the radio playing the tone only once.

2.24.1.6
Disabled Alert Repeat Period (sec)

Configures the interval at which the alert tone is sounded when the Radio Mandown feature is turned off.

Table 62: Range:

Maximum	Minimum	Increment
600 sec	10 sec	1 sec

NOTE: This feature value changes to **Disabled** if **9** is entered. The disable notification will not repeat at the specified interval.

2.24.2
Angle (Mandown Profiles)

The **Angle** section of the Mandown Profiles set contains the following fields:

2.24.2.1
Activation Angle (degree)

Configures the threshold angle to activate the Radio Mandown feature.

When the radio is detected to tilt below this threshold angle, the radio is monitored for the duration of Angle Pre-Alarm Duration (sec) before the Radio Mandown feature is triggered. The available choices are "30", "45", and "60".

2.24.2.2
Angle Pre-Alarm Duration (sec)

Sets the duration to wait before triggering the Radio Mandown feature.

Table 63: Range:

Maximum	Minimum	Increment
3600 sec	1 sec	1 sec

2.24.2.3
Angle Alarm Duration (sec)

Sets the duration that the Radio Mandown alert tone will sound after the Angle Pre-Alarm Duration (sec) has expired.

After this duration, the radio enters into the emergency mode.

Table 64: Range:

Maximum	Minimum	Increment
3600 sec	1 sec	1 sec

2.24.3
No-Movement (Mandown Profiles)

The **No-Movement** section of the Mandown Profiles set contains the following fields:

2.24.3.1
No-Movement Pre-Alarm Duration (sec)

Sets the duration to wait before triggering the Radio Mandown feature.

Table 65: Range:

Maximum	Minimum	Increment
3600 sec	1 sec	1 sec

2.24.3.2
Alarm Duration (sec)

Sets the duration that the Radio Mandown alarm will sound after the No-Movement Pre-Alarm Duration (sec) has expired.

After this duration, the radio enters into the emergency mode.

Table 66: Range:

Maximum	Minimum	Increment
3600 sec	1 sec	1 sec

2.24.4
Movement (Mandown Profiles)

The **Movement** section of the Mandown Profiles set contains the following fields:

2.24.4.1
Alert Tone

If enabled, alert tone will be sounded for the Movement alarm following the value as set in Alert Repeat Period (sec).

If disabled, the radio will ignore the Alert Repeat Period setting.

2.24.4.2
Pre-Alarm Duration (sec)

Sets the duration to wait before triggering the Radio Mandown feature.

Table 67: Range:

Maximum	Minimum	Increment
3600 sec	1 sec	1 sec

2.24.4.3
Alarm Duration (sec)

Sets the duration that the Radio Mandown alert tone will sound after the Pre-Alarm Duration expired.

After this duration, the radio enters into the emergency mode.

Table 68: Range:

Maximum	Minimum	Increment
3600 sec	1 sec	1 sec

2.25
Signaling Systems Set

The **Signaling Systems** set contains features for configuring the analog MDC system or digital emergency system. Once configured, these systems can then be assigned to a channel.

The following sections contain all the supported fields:

2.25.1
General (Signaling Systems)

The **General** section of the Signaling Systems set contains the following fields:

2.25.1.1
Emergency On/Off Switch

Allows you to enable or disable the radio power on/off switch during an emergency operation.

If disabled, the radio power on/off switch is non-operational during the emergency operation. If the switch is non-operational, then the radio battery needs to be physically removed from the radio.

2.25.2
Digital (Signaling Systems)

The **Digital** section of the Signaling Systems set contains the following fields:

2.25.2.1
Radio Disable Decode

Allows the radio to receive a Radio Disable command sent from another radio. The other radio is able to remotely disable the radio.

This feature helps to block usage of stolen or lost radios. This is a radio-wide feature.

NOTE:
Encode feature is available for Display models in Digital mode only.

Decode feature is available for Display and Non-Display models in both Analog and Digital modes only.

2.25.2.2
Authenticated Radio Inhibit/Uninhibit

This field allows you to enable or disable the **Authenticated Radio Inhibit/Uninhibit** feature. The valid choices are "Disabled", "Device Authentication" and "User Authentication".

- This feature is hidden when the **Authenticated Radio Disable** feature is disabled.
- This feature is greyed out when the **Radio Disable Decode** check box is checked.

NOTE: Authenticated Radio Inhibit/Uninhibit is not supported for Capacity Plus and Linked Capacity Plus.

2.25.2.3
Authenticated Passphrase

This field allows you to choose the passphrase for the **Authenticated Radio Inhibit/Uninhibit** or the **Authenticated Remote Monitor** feature.

NOTE:

- The characters typed are not visible to you.
- This feature is hidden when the **Authenticated Radio Disable Decode** feature is disabled.
- This feature is greyed out when the **Radio Disable Decode** check box is checked.
- This feature is greyed out when the **Authenticated Radio Inhibit/Uninhibit** or the **Authenticated Remote Monitor** feature is set to a value other than **User Authentication**.
- If you enter a value that is less than six characters and leaves this field, the value will change to the default value.

2.25.2.4
Authenticated Remote Monitor

This field allows the user to select whether or not to allow Remote Monitor to be authenticated against unauthorized monitoring, similar to the Authenticated Radio Inhibit/Uninhibit feature.

Authenticated Radio Monitor permits supervisory radio users to send an authenticated (but not encrypted) radio remote monitor command to a radio. In response to receiving a remote monitor request, a target radio sends an Authentication Challenge message to the initiating supervisory radio. The Authentication Challenge Response calculation is sent to the target radio for verification.

The following table lists the options for this feature.

Table 69: Options

Selections	Functionality
Disabled	This feature is disabled.
Device Authentication	The Authenticated Remote Monitor is not initiated by either the KMF or Console. Only initiated by a “supervisory” radio.
User Authentication	An Authentication Passphrase is provisioned into every radio that may need to be remotely monitored. The initiating-radio user supplies an Authentication Passphrase which is incorporated into an Authentication Challenge Response calculation. Authenticated Passphrase is enabled.

2.25.2.5
Remote Monitor Decode

Allows the radio to receive and process Remote Monitor command sent from another radio.

This command instructs the receiving radio to activate its microphone and transmitter for the duration specified in Remote Monitor Duration. A call is silently set up on this radio and its transmission controlled remotely without any indication given to the receiving radio user. This is a radio-wide feature.

NOTE:
Encode feature is available for Display models.

Decode feature is available for Display and Non-Display models.

This feature is supported in Digital mode only.

2.25.2.6
Emergency Remote Monitor Decode

After an emergency alarm is initiated, this feature allows the radio to receive and process Remote Monitor commands sent from another radio for the duration specified in Remote Monitor Duration.

This is an exceptional case of Remote Monitor Decode whereby the radio is able to decode Remote Monitor command even if the Remote Monitor Decode feature is disabled but only for the duration as specified in Remote Monitor Duration. This is a radio-wide feature.

NOTE:
This feature is supported in Digital mode only.

2.25.2.7
Remote Monitor Duration (sec)

Sets the duration that the target radio can be remotely monitored.

This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
120 sec	10 sec	10 sec

NOTE:
This feature is supported in Digital mode only.

2.25.2.8
TX Sync Wakeup TOT (ms)

This feature adjusts the value of the timer that begins immediately after a message is sent to wake up the repeater.

The timer is stopped when the radio receives a repeater sync signal. If the timer expires before receiving a repeater sync signal, the radio sends another message to wake up the repeater. The number of messages is determined by the TX Wakeup Message Limit, after the repeater is assumed to be out of range. This is a radio-wide feature.

Table 70: Range:

Maximum	Minimum	Increment
375	125	25

NOTE:
This feature is supported in Digital mode only.

2.25.2.9
Tx Wakeup Message Limit

This feature sets the number of messages sent to wake up the repeater.

Setting a higher number improves the success rate of waking up the repeater. This is a radio-wide feature.

Table 71: Range:

Maximum	Minimum	Increment
4	1	1

NOTE:
This feature is supported in Digital mode only.

2.25.3
Analog (Signaling Systems)

The **Analog** section of the Signaling Systems set contains the following fields:

2.25.3.1
Call Alert Encode

This feature enables the radio to be programmed to perform a Call Alert using the configured signaling system.

This is a radio-wide feature.

NOTE:
This feature is supported in Analog mode only.

2.25.3.2
Sel Call Encode

This feature enables the radio to initiate a Selective Call.

The Selective Call reduces the number of unwanted calls. The Selective Call is used when the majority of transmissions are between a dispatcher with either a single radio or a group radio users. This is a radio-wide feature.

NOTE:
The Sel Call Hang Time (ms) and Sel Call Tone features are disabled when this feature is disabled (unchecked).

This feature is supported in Analog mode only.

2.25.3.3
Sel Call Tone

This feature defines Radio ID transmission through the Push-to-Talk (PTT) button.

Always
Radio repeatedly transmits the Radio ID during a Selective Call.

Pre
Radio transmits the Radio ID at the start of every Selective Call.

NOTE:
This feature is disabled when the Sel Call Encode feature is disabled.

This feature is set to **Always** when the Sel Call Hang Time (ms) feature is set to **0** ms.

This feature is supported in Analog mode only.

2.25.3.4
Sel Call Tone/ID

Defines when the Radio ID, in association with the Push-to-Talk (PTT) button press, is sent.

Always
Radio will repeatedly transmits the Radio ID during a Selective Call.

Pre
Radio transmits the Radio ID at the start of every Selective Call.

NOTE:
This feature is disabled when the Sel Call Encode feature is disabled (unchecked).

This feature is set to Always when the Sel Call Hang Time (ms) feature is set to 0 ms.

This feature is supported in Analog mode only.

2.25.3.5
Sel Call Hang Time (ms)

This sets the duration that the radio reserves the channel after a Push-to-Talk (PTT) button is released for a Selective Call.

During this time, only the individuals involved in the Selective Call reserved for the channel can transmit. This is a radio-wide feature.

Table 72: Range:

Maximum	Minimum	Increment
7000 ms	0 ms	500 ms

NOTE:
This feature is disabled when the Sel Call Encode feature is disabled.

This feature is supported in Analog mode only.

2.25.3.6
Auto Reset Timer (sec)

Sets the duration that the radio waits before the radio requires the Signaling Squelch Unmuting Rules to be met again in order to unmute to a call.

Table 73: Range:

Maximum	Minimum	Increment
255 sec	1 sec	1 sec

NOTE:
This feature is supported in Analog mode only.

2.25.3.7
5 Tone Call Answer Timer (sec)

Specifies the duration that the radio waits for the call to be answered.

If the timer expires without radio user operation, the incoming radio address will be stored in the missed call list.

Range:

Maximum	Minimum	Increment
255 sec	1 sec	1 sec

NOTE:
This feature is supported in Analog mode only.

2.25.3.8
5 Tone Authorization Request Monitor Time (sec)

Specifies the duration that the radio waits after sending an authorization request.

An authorization request is initiated from a radio with receive only capabilities to request the controller for permission to transmit on a channel. The request is initiated by pressing the 5 Tone Authorization Request Button Function that is configured with this option telegram. If the correct telegram is received, the channel transmit capabilities are enabled. The default value is 0.

Range:

Maximum	Minimum	Increment
32 sec	0 sec	1 sec

NOTE:
If the value is set to 0, the squelch rule will not be changed after the authorization sending.

This feature is supported in Analog mode only.

2.25.3.9
5 Tone Authorization Request Button Function

Authorization prevents users from monitoring or talking on the channel until the radio is authorized by the infrastructure.

To enable users to request authorization, the radio must be programmed to send an authorization request telegram using the designated authorization request call button. For Display model, the choices are 5 Tone Call 1, 5 Tone Call 2, 5 Tone Call 3, 5 Tone Call 4, 5 Tone Call 5, 5 Tone Call 6, PTT, and Address Send. For Non-Display model, the choices are 5 Tone Call 1, 5 Tone Call 2, 5 Tone Call 3, 5 Tone Call 4, 5 Tone Call 5, 5 Tone Call 6, and PTT.

NOTE:
This feature is supported in Analog mode only.

2.25.3.10
5 Tone Emergency Alarm Type

An alarm is a non-voice signal that triggers an alert indication to another radio.

This feature specifies the behavior of the radio's alarm when the emergency button is pressed for 5 Tone channels.

Disabled
The radio is unable to transmit an alarm signal.

Regular
The radio transmits an alarm signal and provides audio and visual indication that it is in Emergency mode.

Silent
The radio transmits an alarm signal but gives no audio or visual indication that it is in Emergency mode. In addition, it will not unmute to any received audio.

Silent w/ Voice

The radio transmits an alarm signal but gives no audio or visual indication that it is in Emergency mode. The radio then unmutes to qualified channel activity.

NOTE:
This feature is supported in Analog mode only.

2.25.3.11

5 Tone Emergency Revert Channel Zone

This is the channel zone used for 5 Tone emergency alarm or voice.

Any 5 Tone channel, except if the channel is set as RX Only, may be set as the revert channel, including the channel indicated by the radio's channel selector.

NOTE:
The 5 Tone Emergency Alarm Type feature must not be set to Disabled.

This feature is supported in Analog mode only.

2.25.3.12

5 Tone Emergency Revert Channel

This is the channel used for 5 Tone emergency alarm or voice.

Any 5 Tone channel, except if the channel is set as RX Only, may be set as the revert channel, including the channel indicated by the radio's channel selector.

NOTE:
The 5 Tone Emergency Alarm Type feature must not be set to Disabled.

This feature is supported in Analog mode only.

2.25.3.13

5 Tone Emergency Cycles

Defines and displays the number of times the radio cycles between transmitting and receiving before going permanently into the receiving mode.

Range:

Maximum	Minimum	Increment
255	1	1

NOTE:
The 5 Tone Emergency Alarm Type feature must not be set to Disabled.

This feature is disabled if set to 0.

This feature is supported in Analog mode only.

2.25.3.14

5 Tone Emergency TX Tone

Allows the user to enable or disable the 5 Tone Emergency TX Tone.

When enabled, a low-level pulsating tone is transmitted whenever the radio transmits while in the Emergency mode. This 2800 Hz tone is on for 100 ms, off for 200 ms and is 10 dB below nominal 5 Tone deviation. This tone is low enough in volume that it would not interfere with any other audio

received while serving to let other users on the channel know that an emergency is in progress and refrain from transmitting on the channel until the emergency is canceled.

NOTE:
The 5 Tone Emergency Alarm Type feature must not be set to Disabled.

This feature is supported in Analog mode only.

2.25.3.15
5 Tone Emergency TX Cycle Time (sec)

Specifies the duration that the radio remains in the transmit mode within one emergency cycle.

Range:

Maximum	Minimum	Increment
255 sec	1 sec	1 sec

NOTE:
The 5 Tone Emergency Alarm Type feature must not be set to Disabled.

This feature is disabled if the 5 Tone Emergency Cycles feature is set to 0.

This feature is supported in Analog mode only.

2.25.3.16
5 Tone Emergency RX Cycle Time (sec)

Specifies the duration that the radio remains in the receive mode within one emergency cycle.

Range:

Maximum	Minimum	Increment
255 sec	1 sec	1 sec

NOTE:
The 5 Tone Emergency Alarm Type feature must not be set to Disabled.

This feature is disabled if the 5 Tone Emergency Cycles feature is set to 0.

This feature is supported in Analog mode only.

2.25.3.17
5 Tone Emergency Encoder Telegram

Specifies a telegram to be automatically encoded/sent when the radio transmits in an Emergency mode.

The choices are None and all available 5 Tone Telegrams.

NOTE:
The 5 Tone Emergency Alarm Type feature must not be set to Disabled.

This feature is supported in Analog mode only.

2.25.3.18
Position (MDC Status List)

Displays the index of a MDC Status List. This value corresponds to the Status/Message Index.

NOTE:
This feature is supported in Analog mode only.

2.25.3.19
MDC Status List Name

Configures the name for each MDC status list.

NOTE:
This feature is supported in Analog mode only.

2.25.3.20
MDC Status List MDC System

Allows the user to select one MDC system per MDC status list.

NOTE:
This feature is supported in Analog mode only.

2.25.3.21
MDC Status List Revert Channel Zone

Allows the user to select one revert channel zone per MDC status list.

The available choices are **Selected** and all available analog channels.

NOTE:
The RX Only feature must be disabled.

This feature is supported in Analog mode only.

2.25.3.22
MDC Status List Revert Channel

Allows the user to select one revert channel per MDC status list.

The available choices are Selected and all available analog channels.

NOTE:
The RX Only feature must be disabled.

This feature is supported in Analog mode only.

2.25.3.23
MDC Status List Strip TPL/DPL

Allows the user to enable/disable strip PL per MDC status list.

NOTE:
This feature is supported in Analog mode only.

2.25.3.24
Position (MDC Message List)

Displays the index of a MDC Message List. This value corresponds to the Status/Message Index.

NOTE:
This feature is supported in Analog mode only.

2.25.3.25
MDC Message List Name (MDC Message List)

Configures the name for each MDC message list.

NOTE:
This feature is supported in Analog mode only.

2.25.3.26
MDC Message List MDC System (MDC Message List)

Allows the user to select one MDC system per MDC message list.

NOTE:
This feature is supported in Analog mode only.

2.25.3.27
MDC Message List Revert Channel Zone (MDC Message List)

Allows the user to select one revert channel zone per MDC message list.

The available choices are **None** and all available analog channels.

NOTE:
The RX Only feature must be disabled.

This feature is supported in Analog mode only.

2.25.3.28
MDC Message List Revert Channel (MDC Message List)

Allows the user to select one revert channel per MDC message list.

The available choices are **Selected** and all available analog channels.

NOTE:
The RX Only feature must be disabled.

This feature is supported in Analog mode only.

2.25.3.29
MDC Message List Strip TPL/DPL (MDC Message List)

This check box allows the user to enable/disable strip PL per MDC message list.

NOTE:
This feature is supported in Analog mode only.

2.26
User Defined 5 Tone Set

The **User Defined 5 Tone** set is used to set encoder and decoder tone duration times in milliseconds, as well as set tone frequencies.

The following section contains all the supported fields:

2.26.1
General (User Defined 5 Tone)

The **General** section of the User Defined 5 Tone set contains the following fields:

2.26.1.1

Encoder Tone Duration (ms)

Specifies the duration to encode a user-defined 5 Tone signaling standard. The default value is 70 ms.

Range:

Maximum	Minimum	Increment
6000 ms	40 ms	10 ms

NOTE:
This feature is supported in Analog mode only.

2.26.1.2

Decoder Minimum Tone Duration (ms)

Specifies the minimum duration to decode a user-defined 5 Tone signaling standard. The default value is 40 ms.

Range:

Maximum	Minimum	Increment
6000 ms	10 ms	10 ms

NOTE:
The value of this feature must not be greater than Decoder Maximum Tone Duration (ms).

This feature is supported in Analog mode only.

2.26.1.3

Decoder Maximum Tone Duration (ms)

Specifies the maximum duration to decode a user-defined 5 Tone signaling standard. The default value is 100 ms.

Range:

Maximum	Minimum	Increment
6000 ms	40 ms	10 ms

NOTE:
The value of this feature must always be greater or equal to the value of Decoder Minimum Tone Duration (ms).

This feature is supported in Analog mode only.

2.26.1.4

Tone 0 Freq (Hz)

Specifies the frequency to encode the specified tone for the user-defined 5 Tone signaling standard.

The default frequency is the same with the predefined signaling standard ZVEI1.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
If the frequency of the user-defined tones are too close to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap of these tones is the “must-reject” bandwidth of the user-defined signaling standard. Refer to 5 Tone User-Defined Signaling Standards.

This feature is supported in Analog mode only.

2.26.1.5

Tone 1 Freq (Hz)

Specifies the frequency to encode the specified tone for the user-defined 5 Tone signaling standard.

The default frequency is the same with the predefined signaling standard ZVEI1.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
If the frequency of the user-defined tones are too close to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap of these tones is the “must-reject” bandwidth of the user-defined signaling standard. Refer to 5 Tone User-Defined Signaling Standards.

This feature is supported in Analog mode only.

2.26.1.6

Tone 2 Freq (Hz)

Specifies the frequency to encode the specified tone for the user-defined 5 Tone signaling standard.

The default frequency is the same with the predefined signaling standard ZVEI1.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
If the frequency of the user-defined tones are too close to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap of these tones is the “must-reject” bandwidth of the user-defined signaling standard. Refer to 5 Tone User-Defined Signaling Standards.

This feature is supported in Analog mode only.

2.26.1.7

Tone 3 Freq (Hz)

Specifies the frequency to encode the specified tone for the user-defined 5 Tone signaling standard.

The default frequency is the same with the predefined signaling standard ZVEI1.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
If the frequency of the user-defined tones are too close to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap of these tones is the “must-reject” bandwidth of the user-defined signaling standard. Refer to 5 Tone User-Defined Signaling Standards.

This feature is supported in Analog mode only.

2.26.1.8
Tone 4 Freq (Hz)

Specifies the frequency to encode the specified tone for the user-defined 5 Tone signaling standard.

The default frequency is the same with the predefined signaling standard ZVEI1.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
If the frequency of the user-defined tones are too close to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap of these tones is the “must-reject” bandwidth of the user-defined signaling standard. Refer to 5 Tone User-Defined Signaling Standards.

This feature is supported in Analog mode only.

2.26.1.9
Tone 5 Freq (Hz)

Specifies the frequency to encode the specified tone for the user-defined 5 Tone signaling standard.

The default frequency is the same with the predefined signaling standard ZVEI1.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
If the frequency of the user-defined tones are too close to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap of these tones is the “must-reject” bandwidth of the user-defined signaling standard. Refer to 5 Tone User-Defined Signaling Standards.

This feature is supported in Analog mode only.

2.26.1.10
Tone 6 Freq (Hz)

Specifies the frequency to encode the specified tone for the user-defined 5 Tone signaling standard.

The default frequency is the same with the predefined signaling standard ZVEI1.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
If the frequency of the user-defined tones are too close to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap of these tones is the “must-reject” bandwidth of the user-defined signaling standard. Refer to 5 Tone User-Defined Signaling Standards.

This feature is supported in Analog mode only.

2.26.1.11

Tone 7 Freq (Hz)

Specifies the frequency to encode the specified tone for the user-defined 5 Tone signaling standard.

The default frequency is the same with the predefined signaling standard ZVEI1.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
If the frequency of the user-defined tones are too close to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap of these tones is the “must-reject” bandwidth of the user-defined signaling standard. Refer to 5 Tone User-Defined Signaling Standards.

This feature is supported in Analog mode only.

2.26.1.12

Tone 8 Freq (Hz)

Specifies the frequency to encode the specified tone for the user-defined 5 Tone signaling standard.

The default frequency is the same with the predefined signaling standard ZVEI1.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
If the frequency of the user-defined tones are too close to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap of these tones is the “must-reject” bandwidth of the user-defined signaling standard. Refer to 5 Tone User-Defined Signaling Standards.

This feature is supported in Analog mode only.

2.26.1.13

Tone 9 Freq (Hz)

Specifies the frequency to encode the specified tone for the user-defined 5 Tone signaling standard.

The default frequency is the same with the predefined signaling standard ZVEI1.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
If the frequency of the user-defined tones are too close to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap of these tones is the “must-reject” bandwidth of the user-defined signaling standard. Refer to 5 Tone User-Defined Signaling Standards.

This feature is supported in Analog mode only.

2.26.1.14
Tone A Freq (Hz)

Specifies the frequency to encode the specified tone for the user-defined 5 Tone signaling standard.

The default frequency is the same with the predefined signaling standard ZVEI1.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
If the frequency of the user-defined tones are too close to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap of these tones is the “must-reject” bandwidth of the user-defined signaling standard. Refer to 5 Tone User-Defined Signaling Standards.

This feature is supported in Analog mode only.

2.26.1.15
Tone B Freq (Hz)

Specifies the frequency to encode the specified tone for the user-defined 5 Tone signaling standard.

The default frequency is the same with the predefined signaling standard ZVEI1.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
If the frequency of the user-defined tones are too close to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap of these tones is the “must-reject” bandwidth of the user-defined signaling standard. Refer to 5 Tone User-Defined Signaling Standards.

This feature is supported in Analog mode only.

2.26.1.16
Tone C Freq (Hz)

Specifies the frequency to encode the specified tone for the user-defined 5 Tone signaling standard.

The default frequency is the same with the predefined signaling standard ZVEI1.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
If the frequency of the user-defined tones are too close to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap of these tones is the “must-reject” bandwidth of the user-defined signaling standard. Refer to 5 Tone User-Defined Signaling Standards.

This feature is supported in Analog mode only.

2.26.1.17

Tone D Freq (Hz)

Specifies the frequency to encode the specified tone for the user-defined 5 Tone signaling standard.

The default frequency is the same with the predefined signaling standard ZVEI1.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
If the frequency of the user-defined tones are too close to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap of these tones is the “must-reject” bandwidth of the user-defined signaling standard. Refer to 5 Tone User-Defined Signaling Standards.

This feature is supported in Analog mode only.

2.26.1.18

Tone E Freq (Hz)

Specifies the frequency to encode the specified tone for the user-defined 5 Tone signaling standard.

The default frequency is the same with the predefined signaling standard ZVEI1.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
If the frequency of the user-defined tones are too close to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap of these tones is the “must-reject” bandwidth of the user-defined signaling standard. Refer to 5 Tone User-Defined Signaling Standards.

This feature is supported in Analog mode only.

2.26.1.19

Tone F Freq (Hz)

Specifies the frequency to encode the specified tone for the user-defined 5 Tone signaling standard.

The default frequency is the same with the predefined signaling standard ZVEI1.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
If the frequency of the user-defined tones are too close to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap of these tones is the “must-reject” bandwidth of the user-defined signaling standard. Refer to 5 Tone User-Defined Signaling Standards.

This feature is supported in Analog mode only.

2.27
5 Tone Systems Set

The **5 Tone Systems** set is used to configure up to a maximum of eight 5 Tone Systems. In a 5 Tone Signaling Systems, each radio has a unique numeric identity (e.g., 12345). To signal the number 12345, a sequence of 5 tones is sent. Sequences of audible tones, of short duration, are sent between radios. Most 5 tone sequences take less than half a second to send.

The following sections contain all the supported fields:

2.27.1
General (5 Tone Systems)

The **General** section of the 5 Tone Systems set contains the following fields:

2.27.1.1
System Name (5 Tone System)

Displays the name of the system.

NOTE:
This feature is supported in Analog mode only.

2.27.1.2
Signaling System

The radio supports the following predefined 5 Tone signaling standards: ZVEI1, ZVEI2, ZVEI3, CCIR 20ms, CCIR 70ms, CCIR 100ms and EEA.

The radio also supports two user-defined signaling standards: User Defined 1 and User Defined 2. The user-defined signaling standards can be configured under Signaling Systems->User Defined 5 Tone. The default selection is ZVEI1. A 5 Tone signaling standard defines 16 tones, namely 0-9 and A-F (refer to 5 Tone Predefined Signaling Standards for the specification of the predefined standard and 5 Tone User-Defined Signaling Standards for the specification of the user-defined standard) as well as two single tones, namely Single Tone 1 and Single Tone 2. The frequency and duration of the single tones are specified by the user under 5 Tone->Encoder Single Tone and 5 Tone->Decoder Single Tone.

NOTE:
This feature is supported in Analog mode only.

2.27.1.3
Group Tone

Specifies a Group Tone from the choices of 0-9 or A-F for a particular 5 Tone Signaling System. The default value is A.

NOTE:
This feature resets to the original value if the user tries to set it to the same value as the Repeat Tone feature.

This feature is supported in Analog mode only.

2.27.1.4
Repeat Tone

Specifies a Repeat Tone from the choices of 0-9 or A-F for a particular 5 Tone Signaling System. The default value is E.

NOTE:
This feature resets to the original value if the user tries to set it to the same value as the Group Tone feature.

This feature is supported in Analog mode only.

2.27.2
Encoder Single Tone (5 Tone Systems)

The **Encoder Single Tone** section of the 5 Tone Systems set contains the following fields:

2.27.2.1
Single Tone 1 Frequency (Hz) (Encoder)

Specifies the frequency to encode Single Tone 1. The default value is 885 Hz.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
If the frequency of a single tone is too close to the tones in the specified signaling standard or to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap is the “must reject” bandwidth of the specified signaling standard.

This feature is supported in Analog mode only.

2.27.2.2
Single Tone 1 Duration (ms)

Specifies the duration to encode Single Tone 1. The default value is 500 ms.

Range:

Maximum	Minimum	Increment
6000 ms	40 ms	10 ms

NOTE:
This feature is supported in Analog mode only.

2.27.2.3
Single Tone 2 Frequency (Hz) (Encoder)

Specifies the frequency to encode Single Tone 2. The default value is 885 Hz.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
If the frequency of a single tone is too close to the tones in the specified signaling standard or to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap is the “must reject” bandwidth of the specified signaling standard.

This feature is supported in Analog mode only.

2.27.2.4
Single Tone 2 Duration (ms)

Specifies the duration to encode Single Tone 2. The default value is 500 ms.

Range:

Maximum	Minimum	Increment
6000 ms	40 ms	10 ms

NOTE:
This feature is supported in Analog mode only.

2.27.3
Decoder Single Tone (5 Tone Systems)

The **Decoder Single Tone** section of the 5 Tone Systems set contains the following fields:

2.27.3.1
Enable Tone 1

Allows the user to enable or disable Single Tone 1 decode.

NOTE:
This feature is supported in Analog mode only.

2.27.3.2
Single Tone 1 Frequency (Hz) (Decoder)

Specifies the frequency to decode Single Tone 1. The default value is 885 Hz.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
This feature is enabled when the Enable Tone 1 feature is enabled.

If the frequency of a single tone is too close to the tones in the specified signaling standard or to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap is the “must reject” bandwidth of the specified signaling standard.

This feature is supported in Analog mode only.

2.27.3.3
Single Tone 1 Minimum Duration (ms)

Specifies the minimum duration to decode Single Tone 1. The default value is 400 ms.

Range:

Maximum	Minimum	Increment
6000 ms	10 ms	10 ms

NOTE:
This feature is enabled when the Enable Tone 1 feature is enabled.

The value of this feature must not be greater than Single Tone 1 Maximum Duration (ms).

This feature is supported in Analog mode only.

2.27.3.4
Single Tone 1 Maximum Duration (ms)

Specifies the maximum duration to decode Single Tone 1. The default value is 600 ms.

Range:

Maximum	Minimum	Increment
6000 ms	40 ms	10 ms

NOTE:
This feature is enabled when the Enable Tone 1 feature is enabled.

The value of this feature must always be greater or equal to the value of Single Tone 1 Minimum Duration (ms).

This feature is supported in Analog mode only.

2.27.3.5
Enable Tone 2

Allows the user to enable or disable Single Tone 2 decode.

NOTE:
This feature is supported in Analog mode only.

2.27.3.6
Single Tone 2 Frequency (Hz) (Decoder)

Specifies the frequency to decode Single Tone 2. The default value is 885 Hz.

Range:

Maximum	Minimum	Increment
3000 Hz	300 Hz	1 Hz

NOTE:
This feature is enabled when the Enable Tone 2 feature is enabled.

If the frequency of a single tone is too close to the tones in the specified signaling standard or to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap is the “must reject” bandwidth of the specified signaling standard.

This feature is supported in Analog mode only.

2.27.3.7 Single Tone 2 Minimum Duration (ms)

Specifies the minimum duration to decode Single Tone 2. The default value is 400 ms.

Range:

Maximum	Minimum	Increment
6000 ms	10 ms	10 ms

NOTE:
This feature is enabled when the Enable Tone 2 feature is enabled.

The value of this feature must not be greater than Single Tone 2 Maximum Duration (ms).

This feature is supported in Analog mode only.

2.27.3.8 Single Tone 2 Maximum Duration (ms)

Specifies the maximum duration to decode Single Tone 2. The default value is 600 ms.

Range:

Maximum	Minimum	Increment
6000 ms	40 ms	10 ms

NOTE:
This feature is enabled when the Enable Tone 2 feature is enabled.

The value of this feature must always be greater or equal to the value of Single Tone 2 Minimum Duration (ms).

This feature is supported in Analog mode only.

2.28 MDC Systems Set

The Motorola Data Communication (MDC) is a Motorola proprietary signaling system protocol used by the radio to communicate data in Analog Mode. The **MDC Systems** set is used to configure the MDC protocol.

A maximum of 32 MDC systems can be created.

2.28.1
General (MDC Systems)

This section explains the **General** settings of the MDC Systems.

2.28.1.1
System Name (MDC System)

This displays the name of the system.

2.28.1.2
Primary ID (Hex)

This is the ID used to identify MDC messages transmitted to a radio.

The ID is sent out to the target radio during Call Alert or emergency. You can enter a maximum of four hexadecimal digits in the text box.

Table 74: Primary ID (Hex) Range

Maximum	Minimum	Increment
DEEE	0001	1 (Hex)

NOTE:
The character F (Hex) is not allowed for any of the digits.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.28.1.3
PTT ID Type

This feature defines Radio ID (Primary ID) transmission through the Push-to-Talk (PTT) button.

None
When the user presses the PTT, no Primary ID is sent.

Pre Only
When the user presses the PTT, the radio transmits the Primary ID at the start of every voice transmission.

Post Only
After the voice transmission is over, the radio keeps the channel keyed and transmits the Primary ID.

Pre and Post
The Primary ID is transmitted once at the beginning of the voice transmission and again after the voice transmission.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.28.1.4
PTT Sidetone

Selects the type of tone played from the time the Push-to-Talk (PTT) button is pressed until the time the MDC Signaling System data packet is transmitted.

The purpose of this tone is to inform you when voice can be initiated.

Long
Causes the radio to sound a continuous alert tone for the duration the Signaling System data packet is transmitted.

None
No tone is transmitted when the PTT button is pressed.

Short
Causes the radio to sound a short alert tone immediately after the Signaling System data packet is transmitted.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Disabling this feature does not disable other tones.

2.28.1.5
Group ID (Hex)

This is the ID used to identify MDC messages transmitted to a group of radios.

The ID is sent out to the target group during Call Alert. You may enter up to a maximum of 3 hexadecimal digits in the text box.

Table 75: Range:

Maximum	Minimum	Increment
EEE	000	1 (Hex)

NOTE:
The character F(Hex) is not allowed for any of the digits.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.28.1.6
Pretime (ms) (MDC System)

Sets the duration that the radio waits, after a Push-to-Talk (PTT) button press, before it starts transmitting the MDC signaling system data packet (e.g. preamble bit sync) and data.

When communicating through a repeater system or console, this feature allows the repeater to stabilize before the radio starts transmitting the data. Additionally, this timer gives scanning radios time to land on the channel prior to the reception of MDC data.

Table 76: Range:

Maximum	Minimum	Increment
4500 ms	0 ms	25 ms

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.28.1.7

Preamble Bit Sync

Selects the number of synchronizing packet sent for the transmitting and receiving radios to synchronize prior to MDC signaling data transmission.

Table 77: Range:

Maximum	Minimum	Increment
96	0	1

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.28.1.8

Call Alert Type (MDC System)

Selects the type of call that can be received on the current MDC Signaling System.

Call Alert
Allows a transmitting radio to notify another user, requesting that they call back the user (call initiator) when they (recipient) become available. There is no voice communication involved.

Call Alert w/Voice
Combination of Call Alert and Selective Call. This allows the receiving radio to receive voice calls besides Call Alert.

None
Neither of the listed options can be performed on the current system.

2.28.1.9

Radio Check Decode

Allows the user/console operator to determine if a radio is active in a system without showing any indication to you.

NOTE:
Encode feature is available for Display models only.

Decode feature is available for both Display and Non-Display models.

2.28.1.10

Sel Call Decode

This feature enables the radio to receive and decode a MDC Selective Call.

The MDC Selective Call reduces the number of unwanted calls. The Selective Call is used when the majority of transmissions are between a dispatcher with either a single radio or a group of radio users,

NOTE:
This feature is supported in Analog mode only.

2.28.1.11

Auto Reset Timer Type (MDC System)

Configures the Auto Reset Timer Type to determine how the Auto Reset Timer (sec) is used during an MDC call.

The radio requires the Signaling Squelch Unmuting Rules to be met before it unmutes to a call and begins the timer. Note that while the timer is running, the radio is in the Release Squelch State.

None
The radio enters the Release Squelch State until the radio is muted. Timer is not used.

Manual
Radio user manually ends the Release Squelch State.

Auto-Reset w/ Carrier Overide
The timer begins on the receiving radio when the radio unmutes to the call and the radio is in Release Squelch State. The timer resets at each Push-to-Talk (PTT) button press and at each time the radio is muted. If the radio is muted when the timer expires, the Signaling Squelch Unmuting Rules must be met again in order to unmute to a call. If the radio is unmuted when the timer expires, the radio remains unmuted for the remainder of the call.

Auto-Reset w/o Carrier Overide
The timer begins on the receiving radio when the radio unmutes to the call and the radio is in Release Squelch State. The timer resets at each Push-to-Talk (PTT) button press. When the timer expires, the radio is muted, the Release Squelch State is ended, and the Signaling Squelch Unmuting Rules must be met again in order to unmute to a call.

2.28.1.12
Remote Monitor Decode (MDC System)

Allows the radio to receive and process Remote Monitor command sent from another radio.

This command instructs the receiving radio to activate its microphone and transmitter for the duration specified in Remote Monitor Duration. A call is silently set up on this radio and its transmission controlled remotely without any indication given to the receiving radio user.

NOTE:
Encode feature is available for Display models.

Decode feature is available for Display and Non-Display models.

This feature is supported in Analog mode only.

2.28.1.13
Emergency Remote Monitor Decode (MDC System)

After an emergency alarm is initiated, this feature allows the radio to receive and process Remote Monitor commands sent from another radio for the duration specified in Emergency Remote Monitor Duration.

NOTE:
This feature is disabled if the Remote Monitor Decode feature is enabled.

This feature is supported in Analog mode only.

2.28.1.14
Remote Monitor Duration (sec) (MDC System)

Sets the duration that the target radio can be remotely monitored.

Range:

Maximum	Minimum	Increment
120 sec	10 sec	10 sec

NOTE:
This feature is supported in Analog mode only.

2.28.1.15

Emergency Remote Monitor Duration (sec) (MDC System)

Sets the duration that the target radio can be remotely monitored during an emergency.

Range:

Maximum	Minimum	Increment
120 sec	10 sec	10 sec

NOTE:
This feature is supported in Analog mode only.

2.28.1.16

Repeater Access Type

Allows the user to configure the MDC repeater access type from the following choices.

None
The radio does not transmit the MDC Repeater Access ID prior to any other voice or data transmission.

Auto
The radio transmits the MDC Repeater Access ID prior to any other voice or data transmission.

NOTE:
The Repeater Access Pretime is enabled if this feature is set to Auto.

This feature is supported in Analog mode only.

2.28.1.17

Repeater Access Pretime (ms)

Sets the duration that the radio waits, after a Push-to-Talk (PTT) button press, before it starts transmitting the MDC signaling system data packet (e.g. preamble bit sync) and data.

When communicating via a repeater system or console, this feature allows the repeater to stabilize before the radio starts transmitting the data. Additionally, this timer gives scanning radios time to land on the channel prior to the reception of MDC data. This pretime is used while transmitting the MDC Repeater Access ID, instead of the general MDC Pretime.

Range:

Maximum	Minimum	Increment
4500 ms	0 ms	25 ms

NOTE:
This feature is enabled if Repeater Access Type is set to Auto.

This feature is supported in Analog mode only.

2.28.2

DOS (MDC Systems)

This section explains the **DOS** settings of the MDC Systems.

2.28.2.1
Criteria Type

Selects the frequency type used to determine Data Operated Squelch (DOS) activation.

The choices are 1200 Hz or 1800 Hz or 1200 Hz and 1800 Hz.

NOTE:
The option 1200Hz or 1800Hz is required for backward compatibility with earlier radios, and is therefore rarely used. The 1200 Hz and 1800 Hz is the commonly used value.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.28.2.2
Coast Duration (ms)

If the carrier signal is lost after MDC signaling data is detected, the radio stays muted for the duration of this timer or until the carrier signal is redetected.

Once the carrier signal is redetected, this timer is stopped, and the Data Operated Squelch (DOS) Auto Mute Duration timer begins again. This feature helps to prevent temporary loss of DOS in areas of poor signal strength or signal distortions.

Table 78: Range

Maximum	Minimum	Increment
500 ms	0 ms	25 ms

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.28.2.3
Auto Mute Duration (ms)

Sets the duration that the radio remains muted when the radio is receiving MDC signaling data to reduce noise from the data reception.

You need to know the size of the data to select a suitable duration. If the duration is too short then some unwanted noise will still be heard, and if the duration is too long, it might clip some voice audio. This is normally used on radios that support both voice and data on the same channel.

Table 79: Range

Maximum	Minimum	Increment
4500 ms	0 ms	25 ms

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.28.2.4
Fixed Retry Wait Time (sec)

Sets the duration that the radio waits before attempting another polite or impolite transmission to transmit signaling data.

Configuring the radios with different wait durations increases the probability of accessing the system and reduces the chances of data lost due to collisions.

Table 80: Range

Maximum	Minimum	Increment
17 sec	0 sec	0.1 sec

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.28.3
Emergency (MDC Systems)

This section explains the **Emergency** settings of the MDC Systems.

2.28.3.1
Alarm Type (MDC Emergency System)

An alarm is a non-voice signal that triggers an alert indication to another radio.

This feature specifies the behavior of the initiating radio alarm when the emergency button is pressed.

Disabled
The radio is unable to transmit an alarm signal.

Regular
The radio transmits an alarm signal and provides audio and visual indication that it is in Emergency mode.

Silent
The radio transmits an alarm signal but gives no audio or visual indication that it is in Emergency mode. In addition, it will not unmute to any received audio.

Silent w/ Voice
The radio transmits an alarm signal but gives no audio or visual indication that it is in Emergency mode. The radio then unmutes to qualified channel activity.

NOTE:
At least one analog channel must have the TX Signaling System feature set to the current MDC System for this feature to be enabled.

To send an MDC Emergency in TalkAround mode, the analog channel must have the RX Signaling System feature set to an MDC System.

The Mode, Revert Channel, Impolite Retries and Polite Retries features are disabled if this feature is set to Disabled.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.28.3.2
Mode (MDC Emergency System)

Defines the radio's behavior when the radio emergency button is pressed.

Emergency Alarm
The radio sends an emergency alarm and exits the emergency mode. This alarm is a non-voice signal that triggers an alert indication on another radio.

Emergency Alarm w/ Call

An emergency alarm is sent, after which an emergency call can be transmitted by pressing the Push-To-Talk (PTT) button.

Emergency Alarm w/ Voice to Follow

This option enables the Hot Mic feature, allowing for the programming of the Hot Mic Duration. An emergency alarm is sent and the microphone is activated for an emergency call. Voice is transmitted without the need to press the Push-To-Talk (PTT) button.

NOTE:
The Alarm Type feature must not be set to Disabled.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.28.3.3
Revert Channel Zone (MDC Emergency System)

This is the channel zone used for MDC emergency alarm or voice.

Any analog channel may be set as the Revert Channel, including the channel indicated by the radio's channel selector.

NOTE:
The Alarm Type feature must not be set to Disabled.

The Selected option is a valid choice when every analog channel has the TX Signaling System feature set to an MDC System.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.28.3.4
Revert Channel (MDC Emergency System)

This is the channel used for MDC emergency alarm or voice.

Any analog channel may be set as the Revert Channel, including the channel indicated by the radio's channel selector.

NOTE:
The Alarm Type feature must not be set to Disabled.

The Selected option is a valid choice when every analog channel has its TX Signaling System feature set to an MDC System.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.28.3.5
Sticky Revert

This field causes the radio to remain permanently on the emergency revert channel after the emergency transmission has been sent and acknowledged.

The radio must be powered off for it to return to the radio selected channel.

NOTE:
This feature is disabled if Alarm Type is set to Disabled.

This feature is disabled if Revert Channel is set to None.

This feature is supported in Analog mode only.

2.28.3.6
Sticky Revert Alert

This field sounds the emergency sticky revert talk permit tone when you press the PTT while the radio is on the emergency sticky revert channel.

If disabled, the talk permit tone is sounded instead.

NOTE:
This feature is disabled if Alarm Type is set to Disabled or Disable All Tones is enabled.

This feature is enabled if Sticky Revert is enabled.

This feature is supported in Analog mode only.

2.28.3.7
Impolite Retries (MDC Emergency System)

An impolite transmission is a transmission that occurs even when there is activity on the current channel.

The radio tries a number of impolite transmissions to get an acknowledgement and then goes on to try a number of polite transmissions. This feature sets the number of attempts to transmit an emergency alarm impolitely.

Table 81: Range

Maximum	Minimum	Increment
15	1	1

NOTE:
The Alarm Type feature must not be set to Disabled.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.28.3.8
Polite Retries (MDC Emergency System)

A polite transmission is a transmission that occurs only when the current channel is free of activity.

The radio tries a number of impolite transmissions to get an acknowledgement before trying a number of polite transmissions. This feature sets the number of attempts to transmit an emergency alarm politely.

Table 82: Range

Maximum	Minimum	Increment
∞	0	1

NOTE:
The Alarm Type feature must not be set to Disabled.

The radio will attempt to transmit indefinitely if the Infinity option is selected.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.28.3.9
Cycles (MDC Emergency System)

Defines and displays the number of times the radio cycles between transmitting and receiving before going permanently into the receiving mode in the MDC emergency system.

Table 83: Range

Maximum	Minimum	Increment
10	1	1

NOTE:
This feature is disabled if the Mode feature is set to other than Emergency Alarm w/ Voice To Follow.

For Emergency Alarm w/ Voice To Follow, the TX Cycle Time, RX Cycle Time, and Cycles parameters should be set so as not to exceed 50% transmit time.

The Alarm Type feature must not be set to Disabled.

This feature is supported in Analog mode only.

2.28.3.10
TX Cycle Time (sec) (MDC Emergency System)

Specifies the duration that the radio remains in the transmit mode within one cycle in the MDC emergency system.

Table 84: Range

Maximum	Minimum	Increment
120 sec	10 sec	10 sec

NOTE:
This feature is disabled if the Mode feature is set to other than Emergency Alarm w/ Voice To Follow.

For Emergency Alarm w/ Voice To Follow, the TX Cycle Time, RX Cycle Time, and Cycles parameters should be set so as not to exceed 50% transmit time.

The Alarm Type feature must not be set to Disabled.

This feature is disabled if the Cycles feature is set to 0.

This feature is supported in Analog mode only.

2.28.3.11
RX Cycle Time (sec) (MDC Emergency System)

Specifies the duration that the radio remains in the receive mode within one cycle in the MDC emergency system.

Table 85: Range

Maximum	Minimum	Increment
120 sec	10 sec	10 sec

NOTE:
This feature is disabled if the Mode feature is set to other than Emergency Alarm w/ Voice To Follow.

For Emergency Alarm w/ Voice To Follow, the TX Cycle Time, RX Cycle Time, and Cycles parameters should be set so as not to exceed 50% transmit time.

The Alarm Type feature must not be set to Disabled.

This feature is disabled if the Cycles feature is set to 0.

This feature is supported in Analog mode only.

2.28.3.12
PTT Sidetone (MDC Emergency System)

This feature sounds an alert tone from the time the Push-to-Talk (PTT) button is pressed until the time the MDC Signaling System data packet is transmitted during an emergency.

This feature alerts you that the channel is available for users. This is a radio-wide feature.

NOTE:
The Disable All feature must be disabled.

2.29
Quik-Call II Systems Set

The **Quik-Call II Systems** set is used to configure an analog mode signaling type by encoding either a single tone or a sequence of two tones. A maximum of 32 Quik-Call II systems can be created.

The following section contains all supported fields:

2.29.1
General (Quick-Call II Systems)

The **General** section of the Quick-Call II Systems set contains the following fields:

2.29.1.1
System Name (Quik-Call II System)

This displays the name of the system.

NOTE:
This feature is supported in Analog mode only.

2.29.1.2
Call Type (Quik-Call II System)

Selects the type of call that can be received on the current Quik-Call II Signaling System.

Call Alert
Allows a transmitting radio to notify another user, requesting that they call back the user (call initiator) when they (recipient) become available. There is no voice communication involved.

Call Alert w/Voice
Combination of Call Alert and Selective Call. This allows the receiving radio to receive voice calls besides Call Alert.

None
Neither of the listed options can be performed on the current system.

Sel Call
The Quik-Call II Selective Call reduces the number of calls not of interest from being heard. Typically, the Selective Call is used when the majority of transmissions are between a dispatcher with either a single radio or a group of radio users, where other users would not be interested in the call.

NOTE:
The Tone A Freq (Hz), Code , Tone B Freq (Hz), Code , Tone C Freq (Hz), Code , Tone D Freq (Hz), and Code features are disabled (grayed out) when this feature is set to None.

This feature is supported in Analog mode only.

2.29.1.3
Call Format

Selects the format the call used for the current Quik-Call II Signaling System.

A-B
Tone generated at frequency A followed by tone generated at frequency B.

A-B/A-C
Tone generated at frequency A followed by tone generated at frequency B. Or, tone generated at frequency A followed by tone generated at frequency C.

A-B/C-B
Tone generated at frequency A followed by tone generated at frequency B. Or, tone generated at frequency C followed by tone generated at frequency B.

A-B/Long B
Tone generated at frequency A followed by tone generated at frequency B. Or, a long tone generated at frequency B.

A-B/Long C
Tone generated at frequency A followed by tone generated at frequency B. Or, a long tone generated at frequency C.

A-B/A-C/Long C
Tone generated at frequency A followed by tone generated at frequency B. Or, tone generated at frequency A followed by tone generated at frequency C. Or, a long tone generated at frequency C.

A-B/Long B/Long C
Tone generated at frequency A followed by tone generated at frequency B. Or, a long tone generated at frequency B. Or, a long tone generated at frequency C.

A-B/A-C/Long B/Long C
Tone generated at frequency A followed by tone generated at frequency B. Or, tone generated at frequency A followed by tone generated at frequency C. Or, a long tone generated at frequency B. Or, a long tone generated at frequency C.

A-B/A-D/C-D
Tone generated at frequency A followed by tone generated at frequency B. Or, tone generated at frequency A followed by tone generated at frequency D. Or, tone generated at frequency C followed by tone generated at frequency D.

A-B/C-D

Tone generated at frequency A followed by tone generated at frequency B. Or, tone generated at frequency C followed by tone generated at frequency D.

NOTE:
This feature is supported in Analog mode only.

2.29.1.4

Tone A Freq (Hz)

Selects the frequency of Tone A to be transmitted for the Quik-Call II two-tone signaling system.

Selecting a value for this field automatically selects a correlating value for the Code <Tone A> field, and vice versa.

Range:

Maximum	Minimum	Increment
3086.0 Hz	288.5 Hz	0.1 Hz

NOTE:
This feature is supported in Analog mode only.

2.29.1.5

Tone B Freq (Hz)

Selects the frequency of Tone B to be transmitted for the Quik-Call II two-tone signaling system.

Selecting a value for this field automatically selects a correlating value for the Code field, and vice versa.

Range:

Maximum	Minimum	Increment
3086.0 Hz	288.5 Hz	0.1 Hz

NOTE:
This feature is supported in Analog mode only.

2.29.1.6

Tone C Freq (Hz)

Selects the frequency of Tone C to be transmitted for the Quik-Call II two-tone signaling system.

Selecting a value for this field automatically selects a correlating value for the Code field, and vice versa.

Range:

Maximum	Minimum	Increment
3086.0 Hz	288.5 Hz	0.1 Hz

NOTE:
This feature is supported in Analog mode only.

2.29.1.7

Tone D Freq (Hz)

Selects the frequency of Tone D to be transmitted for the Quik-Call II two-tone signaling system.

Selecting a value for this field automatically selects a correlating value for the Code field, and vice versa.

Range:

Maximum	Minimum	Increment
3086.0 Hz	288.5 Hz	0.1 Hz

NOTE:
This feature is supported in Analog mode only.

2.29.1.8

Tone A Code

Selects the code of Tone A to be transmitted for the Quik-Call II two-tone signaling system.

Selecting a value for this field automatically selects a correlating value for the Tone A Freq (Hz) field, and vice versa.

NOTE:
This feature is supported in Analog mode only.

2.29.1.9

Tone B Code

Selects the code of Tone B to be transmitted for the Quik-Call II two-tone signaling system.

Selecting a value for this field automatically selects a correlating value for the Tone B Freq (Hz) field, and vice versa.

NOTE:
This feature is supported in Analog mode only.

2.29.1.10

Tone C Code

Selects the code of Tone C to be transmitted for the Quik-Call II two-tone signaling system.

Selecting a value for this field automatically selects a correlating value for the Tone C Freq (Hz) field, and vice versa.

NOTE:
This feature is supported in Analog mode only.

2.29.1.11

Tone D Code

Selects the code of Tone D to be transmitted for the Quik-Call II two-tone signaling system.

Selecting a value for this field automatically selects a correlating value for the Tone D Freq (Hz) field, and vice versa.

NOTE:
This feature is supported in Analog mode only.

2.29.1.12

Auto Reset Timer Type (Quik-Call II System)

Configures the Auto Reset Timer Type to determine how the Auto Reset Timer (sec) is used during a Quik-Call II call.

The radio requires the Signaling Squelch Unmuting Rules to be met before it unmutes to a call and begins the timer. Note that while the timer is running, the radio is in the Release Squelch State.

None
The radio enters the Release Squelch State until the radio is muted. Timer is not used.

Manual
Radio user manually ends the Release Squelch State.

Auto-Reset w/ Carrier Overide
The timer begins on the receiving radio when the radio unmutes to the call and the radio is in Release Squelch State. The timer resets at each Push-to-Talk (PTT) button press and at each time the radio is muted. If the radio is muted when the timer expires, the Signaling Squelch Unmuting Rules must be met again in order to unmute to a call. If the radio is unmuted when the timer expires, the radio remains unmuted for the remainder of the call.

Auto-Reset w/o Carrier Overide
The timer begins on the receiving radio when the radio unmutes to the call and the radio is in Release Squelch State. The timer resets at each Push-to-Talk (PTT) button press. When the timer expires, the radio is muted, the Release Squelch State is ended, and the Signaling Squelch Unmuting Rules must be met again in order to unmute to a call.

NOTE:
This feature is supported in Analog mode only.

2.29.1.13

Sidetone (Quik-Call II System)

Selects the type of tone played when a Selective Call or Call Alert is triggered.

The purpose of this tone is to let the user know the end of the Quik-Call II data packet transmission.

Long
Causes the radio to sound a continuous alert tone for the duration the Signaling System data packet is transmitted. This is applicable to Selective Call only. No tone will be sounded for Call Alert.

None
No tone is transmitted when a Selective Call or Call Alert is triggered.

Short
Causes the radio to sound a short alert tone immediately after the Signaling System data packet is transmitted.

NOTE:
This feature is supported in Analog mode only.

2.29.1.14

Pretime (ms) (Quik-Call II)

Sets the duration that the radio waits in milliseconds (ms), after a Push-to-Talk (PTT) button press, before it starts transmitting the Quik-Call II signaling system data packet (e.g. preamble bit sync) and data.

When communicating via a repeater system or console, this feature allows the repeater to stabilize before the radio starts transmitting the data. Additionally, this timer gives scanning radios time to land on the channel prior to the reception of Quik-Call II data.

Range:

Maximum	Minimum	Increment
4500 ms	0 ms	25 ms

NOTE:
This feature is supported in Analog mode only.

2.29.1.15
Long Tone Duration (sec)

Selects the time amount used when transmitting (encode) a Quik-Call II Long Tone, for the current Quik-Call II Signaling System.

Range:

Maximum	Minimum	Increment
33 sec	3 sec	1 sec

NOTE:
This feature is supported in Analog mode only.

2.29.1.16
Limited Patience Timer (sec)

Sets the amount of time that the radio politely waits for the traffic on the current channel to clear before impolitely transmitting the Call Alert.

Range:

Maximum	Minimum	Increment
255 sec	1 sec	1 sec

NOTE:
This feature is supported in Analog mode only.

2.30
Digital Emergency Systems Set

The **Digital Emergency Systems** set is used to configure the signaling protocol used by the radio for communication during an emergency when the radio is in digital mode. A maximum of 32 Digital Emergency systems can be created.

The following section contains all the supported fields:

2.30.1
General (Digital Emergency Systems)

This section explains the **General** settings of the Digital Emergency Systems.

2.30.1.1

System Name (Digital Emergency System)

This displays the name of the system.

NOTE: This feature is supported in Digital mode only.

2.30.1.2

Alarm Type (Digital Emergency System)

An alarm is a non-voice signal that triggers an alert indication on another radio.

This feature specifies the behavior of the initiating radio's alarm when the emergency button is pressed.

Disabled
The radio is unable to transmit an alarm signal.

Regular
The radio transmits an alarm signal and provides audio and visual indication that it is in Emergency mode.

Silent
The radio transmits an alarm signal but gives no audio or visual indication that it is in Emergency mode. In addition, it will not unmute to any received audio.

Silent w/ Voice
The radio transmits an alarm signal but gives no audio or visual indication that it is in Emergency mode. The radio then unmutes to qualified channel activity.

NOTE:
The Mode, Hot Mic Duration, Revert Channel, Impolite Retries, Polite Retries, and TX Interrupt features are disabled if this feature is set to Disabled.

This feature is supported in Digital mode only and requires that each radio has a unique radio ID.

2.30.1.3

Mode (Digital Emergency System)

Defines the radio’s behavior when the radio's emergency button is pressed.

Emergency Alarm
The radio sends an emergency alarm and exits the emergency mode. This alarm is a non-voice signal that triggers an alert indication on another radio.

Emergency Alarm w/ Call
An emergency alarm is sent, after which an emergency call can be transmitted by pressing the Push-To-Talk (PTT) button.

Emergency Alarm w/ Voice to Follow
This option enables the Hot Mic feature, allowing for the programming of the Hot Mic related features, such as Hot Mic Duration. An emergency alarm is sent and the microphone is activated for an emergency call. Voice is transmitted without the need to press the PTT button.

NOTE:
The Alarm Type feature must not be set to Disabled.

This feature is supported in Digital mode only and requires that each radio has a unique radio ID.

2.30.1.4
Revert Channel Zone (Digital Emergency System)

This is the channel zone used for digital emergency alarm or voice.

Any single site digital channel may be set as the Revert Channel, including the channel indicated by the radio's channel selector.

NOTE:
The Alarm Type feature must not be set to Disabled.

At least one channel must have a Group Call as its Contact Name.

The Selected option is a valid choice when every digital channel has a Group Call as its Contact Name.

This feature is supported in Digital mode only and requires that each radio has a unique radio ID.

2.30.1.5
Revert Channel (Digital Emergency System)

This is the channel used for digital emergency alarm or voice.

Any single site digital channel may be set as the Revert Channel, including the channel indicated by the radio's channel selector.

NOTE:
The Alarm Type feature must not be set to Disabled.

At least one channel must have a Group Call as its Contact Name.

The Selected option is a valid choice when every digital channel has a Group Call as its Contact Name.

This feature is supported in Digital mode only and requires that each radio has a unique radio ID.

2.30.1.6
Contact (Digital Emergency System)

This field allows you to browse and select an existing Contact Set from the list of available Contacts Sets.

The options are **None** and all available **Contacts**.

NOTE: The Alarm Type feature must not be set to Disabled.

2.30.1.7
Ack Required (Digital Emergency System)

This feature allows you to disable the Acknowledgment (Ack) Required feature.

When enabled, the radio stops transmitting Emergency Alarms after receiving an Ack from a receiving radio or radios that the Alarm has been received. When disabled, the radio ignores Ack to Emergency Alarms and continues to sent Emergency Alarms until the configured number of attempts have been exhausted

NOTE:
This feature is available in Digital mode only in Direct Mode, Single Site and IPSC system (including Scan).

This feature is also available when Mode (Digital Emergency System) on page 553 is set to **Emergency Alarm** and **Emergency Alarm with Call**.

2.30.1.8

Impolite Retries (Digital Emergency System)

An impolite transmission is a transmission that occurs even when there is activity on the current channel.

The radio tries a number of impolite transmissions to get an acknowledgement and then goes on to try a number of polite transmissions. This feature sets the number of attempts to transmit an emergency alarm impolitely.

Table 86: Range

Maximum	Minimum	Increment
15	1	1

NOTE:
The Alarm Type feature must not be set to Disabled.

This feature is supported in Digital mode only and requires that each radio has a unique radio ID.

2.30.1.9

Polite Retries (Digital Emergency System)

A polite transmission is a transmission that occurs only when the current channel is free of activity.

The radio tries a number of impolite transmissions to get an acknowledgement before trying a number of polite transmissions. This feature sets the number of attempts to transmit an emergency alarm politely.

Table 87: Range

Maximum	Minimum	Increment
∞	0	1

NOTE:
The Alarm Type feature must not be set to Disabled.

The Mode option must not be set to Emergency Alarm with Voice to Follow.

The radio will attempt to transmit indefinitely if the Infinity option is selected.

This feature is supported in Digital mode only.

2.30.1.10
Cycles (Digital Emergency System)

Defines and displays the number of times the radio cycles between transmitting and receiving before going permanently into the receiving mode in the Digital emergency system.

Table 88: Range

Maximum	Minimum	Increment
10	1	1

NOTE:
This feature is disabled if the Mode feature is set to other than Emergency Alarm w/ Voice To Follow.

For Emergency Alarm w/ Voice To Follow, the TX Cycle Time, RX Cycle Time, and Cycles parameters should be set so as not to exceed 50% transmit time.

The Alarm Type feature must not be set to Disabled.

This feature is supported in Digital mode only and requires that each radio has a unique radio ID.

2.30.1.11
Hot Mic Duration (sec) (Digital Emergency System)

This field allows the user to set the Hot Mic Duration for Digital Emergency System.

If the Mode is selected as Emergency Alarm with Voice to Follow, after the radio transmits an emergency alarm, the Hot Mic feature is activated whereby the radio automatically begins transmitting voice for the duration indicated by the Hot Mic Duration. There is no need to press the Push-To-Talk (PTT) button during this time in order to transmit voice. Once this duration expires, the radio automatically dekeys. The call made during this duration is an emergency call.

Range:

Maximum	Minimum	Increment
120 sec	10 sec	10 sec

NOTE:
The Alarm Type feature must not be set to Disabled.

This feature is supported in Digital mode only.

2.30.1.12

TX Cycle Time (sec) (Digital Emergency System)

Specifies the duration that the radio remains in the transmit mode within one cycle in the Digital emergency system.

Table 89: Range

Maximum	Minimum	Increment
120 s	10 s	10 s

NOTE:
This feature is disabled if the Mode feature is set to other than Emergency Alarm w/ Voice To Follow.

For Emergency Alarm w/ Voice To Follow, the TX Cycle Time, RX Cycle Time, and Cycles parameters should be set so as not to exceed 50% transmit time.

The Alarm Type feature must not be set to Disabled.

This feature is disabled if the Cycles feature is set to 0.

This feature is supported in Digital mode only and requires that each radio has a unique radio ID.

2.30.1.13

RX Cycle Time (sec) (Digital Emergency System)

Specifies the duration that the radio remains in the receive mode within one cycle in the Digital emergency system.

Table 90: Range

Maximum	Minimum	Increment
120 s	10 s	10 s

NOTE:
This feature is disabled if the Mode feature is set to other than Emergency Alarm w/ Voice To Follow.

For Emergency Alarm w/ Voice To Follow, the TX Cycle Time, RX Cycle Time, and Cycles parameters should be set so as not to exceed 50% transmit time.

The Alarm Type feature must not be set to Disabled.

This feature is disabled if the Cycles feature is set to 0.

This feature is supported in Digital mode only and requires that each radio has a unique radio ID.

2.30.1.14

TX Interrupt (Digital Emergency System)

This feature enables the radio to remotely dekey any other radio that is currently transmitting a voice call, in order to place it's own emergency alarm transmission or emergency voice transmission.

The interruption automatically occurs upon a Push-to-Talk (PTT) button press during emergency mode, or an emergency button press.

NOTE: This feature is supported in Digital mode only and requires that each radio has a unique radio ID.

2.30.1.15
Preamble (Digital Emergency System)

This feature allows you to configure the preamble feature for emergency.

The following selections are supported:

- **Default** (existing)
- **Always**

When set to **Always**, the emergency alarm always uses the preamble configured in TX Preamble Duration (ms) on page 104 for every emergency transmission. This allows the scanning radio to land on Emergency on the first attempt.

This is a radio-wide and system-wide feature.

NOTE:
This feature is available in Digital mode only in Direct Mode, Single Site, and IPSC system (including Scan).

This feature is also available when Mode (Digital Emergency System) on page 553 is set to **Emergency Alarm**, **Emergency Alarm with Call**, and **Emergency Alarm with Voice to Follow**.

2.31
Capacity Plus Emergency Systems Set

The **Capacity Plus Emergency Systems** set is used by the radio for communication during emergencies when the radio is in Capacity Plus–Single-Site. A maximum of 32 digital emergency systems can be configured.

2.31.1
General (Capacity Plus Emergency Systems)

This section explains the **General** settings of the Capacity Plus Emergency Systems.

2.31.1.1
System Name

This displays the name of the system.

NOTE: This feature is supported in Digital mode only.

2.31.1.2
Alarm Types

An alarm is a non-voice signal that triggers an alert indication on another radio.

The radio initiates alarm signals when you press the emergency button.

Disabled
The radio is unable to transmit an alarm signal.

Regular
The radio transmits an alarm signal and provides audio and visual indication that it is in emergency mode.

Silent
The radio transmits an alarm signal, but gives no audio or visual indication that it is in emergency mode. It will not unmute to any received audio.

Silent with Voice
The radio transmits an alarm signal, but gives no audio or visual indication that it is in emergency mode. The radio unmutes to a qualified channel activity.

NOTE:
If the alarm is set to **Disabled**, the following features are disabled:

- Mode
- Hot Mic Duration
- Contact
- Number of Retries
- TX Interrupt

This feature is supported in Digital mode only.

2.31.1.3 Mode

This feature defines the radio behavior when you press the Emergency button.

Emergency Alarm
The radio sends an emergency alarm and exits the emergency mode. This alarm is a non-voice signal that triggers an alert indication on another radio.

Emergency Alarm with Call
An emergency alarm is sent, after which an emergency call can be transmitted by pressing the Push-To-Talk (PTT) button.

Emergency Alarm with Voice to Follow
This option enables the Hot Mic feature, allowing for the programming of the Hot Mic related features, such as Hot Mic Duration. An emergency alarm is sent and the microphone is activated for an emergency call. Voice is transmitted without the need to press the PTT button.

NOTE:
The Alarm Type feature must not be set to Disabled.

This feature is supported in Digital mode only.

2.31.1.4 Contact

This feature determines which Group receives the emergency alarm.

It is recommended that only a single radio on a Group be programmed to acknowledge emergency alarms.

NOTE:
The Alarm Type feature must not be set to Disabled.

This feature is supported in Digital mode only.

2.31.1.5
Number of Retries

A polite transmission is a transmission that occurs only when the current channel is free of activity.

The radio tries a number of impolite transmissions to get an acknowledgment before trying a number of polite transmissions. This feature sets the number of attempts to transmit an emergency alarm politely.

Table 91: Range

Maximum	Minimum	Increment
∞	0	1

NOTE:
The Alarm Type feature must not be set to Disabled.

The Mode option must not be set to Emergency Alarm with Voice to Follow.

The radio will attempt to transmit indefinitely if the Infinity option is selected.

This feature is supported Digital mode only.

2.31.1.6
Cycles

This feature defines and displays the number of times the radio cycles between transmitting and receiving before going permanently into the receiving mode in the Capacity Plus–Single-Site emergency system.

Table 92: Range

Maximum	Minimum	Increment
10	1	1

NOTE:
This feature is disabled if the Mode feature is set to other than Emergency Alarm w/ Voice To Follow.

For Emergency Alarm w/ Voice To Follow, the TX Cycle Time, RX Cycle Time, and Cycles parameters should be set so as not to exceed 50% transmit time.

The Alarm Type feature must not be set to Disabled.

This feature is supported in Digital mode only.

2.31.1.7
Hot Mic Duration

This field allows the user to configure the Hot Mic Duration.

If the Mode is selected as Emergency Alarm with Voice to Follow, after the radio transmits an emergency alarm, the Hot Mic feature is activated whereby the radio automatically begins transmitting voice for the duration indicated by the Hot Mic Duration. There is no need to press the Push-To-Talk (PTT) button during this time in order to transmit voice. Once this duration expires, the radio automatically dekeys. The call made during this duration is an emergency call.

Range:

Maximum	Minimum	Increment
120 sec	10 sec	10 sec

NOTE:
The Alarm Type feature must not be set to Disabled.

This feature is supported in Digital mode only.

2.31.1.8

TX Cycle Time

This feature specifies the duration that the radio remains in the transmit mode within one cycle in the Capacity Plus–Single-Site emergency system.

Table 93: Range

Maximum	Minimum	Increment
120 s	10 s	10 ss

NOTE:
This feature is disabled if the Mode feature is set to other than Emergency Alarm w/ Voice To Follow.

For Emergency Alarm w/ Voice To Follow, the TX Cycle Time, RX Cycle Time, and Cycles parameters should be set so as not to exceed 50% transmit time.

The Alarm Type feature must not be set to Disabled.

This feature is disabled if the Cycles feature is set to 0.

This feature is supported in Digital mode only.

2.31.1.9

RX Cycle Time

RX Cycle Time is the duration of when the radio remains in the receive mode within one cycle in the Capacity Plus–Single-Site Emergency System.

Table 94: RX Cycle Time Range

Maximum	Minimum	Increment
120 s	10 s	10 s

NOTE:
This feature is disabled when the Mode feature is set to other than Emergency Alarm with Voice To Follow.

For Emergency Alarm with Voice To Follow, the TX Cycle Time, RX Cycle Time, and Cycles parameters should be set so as not to exceed 50% transmit time.

The Alarm Type feature must not be set to Disabled.

This feature is disabled if the Cycles feature is set to 0.

This feature is supported in Digital mode only.

2.31.1.10
TX Interrupt

This feature enables the radio to remotely dekey any other radio that is transmitting a voice call to place its own emergency alarm transmission or emergency voice transmission on a Capacity Plus–Single-Site system.

The interruption automatically occurs when you press the emergency button or the Push-to-Talk (PTT) button during an emergency mode.

NOTE: This feature is supported in Digital mode only.

2.32
Phone Systems Set

The **Phone Systems** set is used to configure the phone system to allow a radio to initiate and receive calls from a simplex phone user on all system configurations (such as Conventional Single Site, IP Site Connect, and Capacity Plus–Single-Site).

The following sections contain all the supported fields:

2.32.1
General (Phone Systems)

The **General** section of the Phone Systems set contains the following fields:

2.32.1.1
System Name (Phone System)

This displays the name of the system.

NOTE:
For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.

This feature is applicable to MOTOTRBO Conventional radios.

2.32.1.2
Gateway ID

Configures the ID of the Repeater that the Phone Patch is connected to.

This ID represents the landline phone user's identity in the subscriber radios.

Range:

Maximum	Minimum	Increment
65535	1	1

NOTE:
This feature is supported in Digital mode only.

2.32.1.3
Access Code

This field allows the user to configure the phone system access code.

NOTE: For Enhanced Telephony capable radios, special characters " **:** *, **#** " and **P** are not supported in the access code.

This is to grant access for the radio to perform certain call type (i.e. International, Long Distance, Toll, Local, 911, etc…) per the radio access code. For MOTOTRBO Conventional radios, the access code is made up of the access command and the multi-digit access prefix. The recommended access command is typically the * sign, but is programmable in most phone patches. It is used to wake-up the phone patch from the radio system. The multi-digit access prefix is used to limit the radio user access. It is commonly up to four digits long. Some phone patches allow each prefix to be configurable to allow or block calls starting with 0, 1, 9, etc. This then essentially allows a group of radio users to have access to local dialing, but not long distance, or toll numbers, etc. If provisioned, the radio will not prompt the user for it. If left empty, the radio will prompt the user after the phone number is entered. The user must enter both the multi-digit access prefix and the access command, for example (123*). The order (*123 or 123*) may be different depending on phone patch programming. It is important to note that if access restrictions are not required, the system still requires the access command be provided.

Without the access command, the phone patch will not be accessible. In most cases, the access command should be preprogrammed if no access restrictions are required. The user can enter up to ten characters. Valid characters are DTMF digits 0-9, *, #, and the pause character "P".

NOTE:
This feature have a maximum of 10 characters.

This feature is hidden when the Digital Phone Patch feature is disabled.

For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.

For non-display radio models, this feature must not be empty. If this feature is set to empty (by tabbing or moving out of this feature), the value is set to 0.

This feature is applicable to MOTOTRBO Conventional radios.

For radios that operate under Capacity Max Open Radio mode, if the code is not required, the value must be empty (for display model) or set to a single pause character "P" (display and non-display model).

2.32.1.4
Deaccess Code

This field allows the user to configure the phone system deaccess code on the subscriber radio.

For MOTOTRBO Conventional radios, the deaccess code is sent to the phone patch when attempting to disconnect the phone call. The user can enter up to ten characters. Valid characters are DTMF digits 0-9, *, #, and the pause character "P".

NOTE:
This feature have a maximum of 10 characters.

This feature is hidden when the Digital Phone Patch feature is disabled.

For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.

This feature is applicable to MOTOTRBO Conventional radios.

For radios that operate under Capacity Max Open Radio mode, if the code is not required, the value must be empty (for display model) or set to a single pause character "P" (display and non-display model).

2.32.2
DTMF (Phone Systems)

The **DTMF** section of the Phone Systems set contains the following fields:

2.32.2.1

Pretime (ms) (Phone System)

Configures the duration of silence milliseconds (ms) prior to sending the first DTMF tone of the Access Code.

Range:

Maximum	Minimum	Increment
4500 ms	0 ms	20 ms

Range:

Maximum	Minimum	Increment
6375 ms	25 ms	25 ms

NOTE:
For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.

This feature is applicable to MOTOTRBO Conventional radios.

2.32.2.2

TX Tone Duration (ms)

Configures the duration of the DTMF tone digits in milliseconds (ms) for a given subscriber phone system.

This applies to the access code, de-access code, phone number and over-dial digits which are generated by the subscriber as DTMF tones.

Range:

Maximum	Minimum	Increment
6400 ms	40 ms	20 ms

Range:

Maximum	Minimum	Increment
6375 ms	25 ms	25 ms

NOTE:
For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.

This feature is applicable to MOTOTRBO Conventional radios.

2.32.2.3

TX Tone Interval (ms)

Configures the duration of the intervals between the DTMF tone digits in a transmission sequence in milliseconds (ms) for a given subscriber phone system.

This applies to the access code, de-access code, phone number and over-dial digits which are generated by the subscriber as DTMF tones.

Range:

Maximum	Minimum	Increment
6400 ms	40 ms	20 ms

Range:

Maximum	Minimum	Increment
6375 ms	25 ms	25 ms

NOTE:
For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.

This feature is applicable to MOTOTRBO Conventional radios.

2.32.2.4
Pause Duration (ms)

Configures the duration of the silence in milliseconds (ms) between the Access Code and the dialing digits.

The pause is sometimes required after the phone system access (for a dial tone) or when automatically dialing a phone number with an extension number through a phone switchboard. If this duration is too short, the first dialing digits will not be received by the phone system.

Range:

Maximum	Minimum	Increment
10000 ms	500 ms	500 ms

Range:

Maximum	Minimum	Increment
4000 ms	500 ms	500 ms

NOTE:
For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.

This feature is applicable to MOTOTRBO Conventional radios.

2.32.2.5
Pause Duration (ms)

Configures the duration of the silence in milliseconds (ms) between the Access Code and the dialing digits.

The pause is sometimes required after the phone system access (for a dial tone) or when automatically dialing an a phone number with an extension number through a phone switchboard. If this duration is too short, the first dialing digits will not be received by the phone system.

Range:

Maximum	Minimum	Increment
10000 ms	500 ms	500 ms

Range:

Maximum	Minimum	Increment
4000 ms	500 ms	500 ms

NOTE:
For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.

This feature is applicable to MOTOTRBO Conventional radios.

2.33
Encoder Set

The **Encoder** set is used to enable or disable the Multicall Advanced User Mode and configure the settings for address range and status range.

The following sections contain all the supported fields:

2.33.1
General (Encoder)

The **General** section of the Encoder set contains the following fields:

2.33.1.1
Multicall Advanced User Mode

Sets the 5 Tone operating mode.

When enabled, the user mode is Advanced User. When disabled, the user mode is Basic User.

Basic User

Basic User 5 Tone Calls:In this mode, it is only possible to use a preprogrammed telegram button to transmit the telegram. A preprogrammed telegram can be assigned to any of the following buttons: Call 1, Call 2, Call 3, Call 4, Call 5, Call 6, or PTT button. The Address Send button is available for the Display model only. The variable digit positions of the CPS 2.0 programmed telegram must be substituted for the correct number of digits by the radio before transmission. The user needs to enter the variable called radio ID digits ("U1" - "U8") before selecting the preprogrammed telegram in manual dial. The radio will also substitute this user-entered digits into the telegram before transmission. The user is able to scroll through the Contacts list via the menu and select an entry. Pressing the preprogrammed telegram button causes the radio to substitute the Contact list entry into the preprogrammed telegram and transmit it. Basic User Telegram Decode:On decode of a received telegram sequence, the radio attempts to find an entry in the Contacts list where the decoded ID digits match the ID digits of an entry in the Contacts list. If Call Back is enabled, the current contents of the variable digits in the address buffer will be overwritten with the digits from the corresponding positions of the received telegram. Basic User Status Calls:The user must enter the required status digits ("S1" - "S3") and then select the preprogrammed telegram button. The preprogrammed telegram can be assigned to any of the following buttons: Call 1, Call 2, Call 3, Call 4, Call 5, Call 6, or PTT button. The radio will substitute the user-entered digits into the telegram and then send it. This mode has the following limitations:No Telegram parameter in the Missed Calls list. No Telegram used for Call Back. No Telegram parameter in the decoder (the matching Encode Telegram parameter in decoder setting is used by the Advanced user). Call Log only saves the call initiator ID or StatusThe user cannot enter a telegram by manual dial but only select a preprogrammed telegram.

Advanced User

Advanced User 5 Tone Calls:In this mode, the user can use either the preprogrammed telegram buttons or Address Send button (available for Display model only) to transmit the telegram. The user can also enter the telegram number (1 - 9) followed by the variable called radio ID digits ("U1" - "U8") in manual dial. The user then use either the Address Send button or a

preprogrammed telegram button to transmit. If the preprogrammed telegram button is used, the variable digits are substituted into the preprogrammed telegram before transmission. The user is also able to scroll through the Contacts list, select an entry and press the Address Send button to transmit the associated telegram for that entry. This allows the user more choices of selectable telegrams (including preprogrammed telegrams associated with the Call buttons). However, if a preprogrammed telegram button is pressed before transmission, then the entered telegram is ignored and the digits from its corresponding positions will be substituted into the variable digit positions of the preprogrammed telegram, assigned to that button and then transmitted.Example:Telegram number entered = 1 i.e. 45(A1)(A2)(A3))ID = 123Final telegram = 45123. (Press PTT or Address Send button to send the telegram.)If a preprogrammed call button has a value of 3 (3 = 78(A1)(A2)(A3)), pressing the button before the PTT or Address Send button may result in the following telegram being sent instead:78123 where the telegram has now changed from 1 to 3. If the telegram IDs are used to define some places, it may well mean that the calling radios position has been given as Gatwick instead of Heathrow. Advanced User Telegram Decode:A decode telegram format may match the format of a corresponding telegram which is used for alias display or Call Back, it identifies that telegram number, and is used as follows:On decode, the radio attempts to find an entry in the Contacts list where the decoded ID digits match the ID digits of an entry in the Contacts list (by identity, position and number). In addition, the decoders Matching Encode Telegram must also match the Contacts list entry telegram.Example:4123. Successfully checked against the Contacts list may cause the following to be displayed:‘John - Gatwick’ where 123 = John, the callers identity and 44 = his location (Gatwick)If there is no name, the telegram number and ID is displayed. On decode, if call back is enabled, the current contents of the address buffer will be overwritten with both the variable digit ids and the decoders Matching Encode Telegram. On completion of the call, the clear down sequence is sent to reset the system if required. Call set up and clear down telegrams/sequences may be assigned to buttons. Advanced User Status:Telegrams can be set up in several different ways with variable digits in different places. Example:1. A status telegram can include an address and have variable digits for the status number.2. It may have variable digits for both the address and status number.3. It may just have variable digits for the address.4. It may be a complete telegram with no variable digits. A programmed Status button can be used for direct entry into the menu’s Status list, or the user may enter the menu in the normal way. Once the Status list is entered, the last person contacted will be displayed and this could be from the Contacts list, Call Back or manual dial. A selected entry from the Status list may be sent (if it does not require direct entry of digits) by pressing the Address Send button.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

2.33.2
Multicall Address (Encoder)

The **Multicall Address** section of the Encoder set contains the following fields:

2.33.2.1
General Lockout Digit (Multicall Address)

Specifies the digits that are barred from use in any position in telegrams that have variable digit positions.

The choices are None and numbers from 0 to 9.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

2.33.2.2
Position Lockout Digit (Multicall Address)

Specifies a digit that will be barred from use in positions specified by the Position for Position Lockout Digit in telegrams that have variable digit positions.

The choices are None and numbers from 0 to 9.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

2.33.2.3
Position for Position Lockout Digit (Multicall Address)

Specifies the position in variable digit telegrams where Position Lockout Digit cannot be placed.

The choices are numbers from 1 to 8.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

2.33.2.4
Position for Group Lockout Digit (Multicall Address)

Specifies the position(s) in variable digit telegrams where Group Digits cannot be placed.

A user can choose one or multiple numbers from 1 to 8.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

2.33.2.5
Address Range 1

Allows the user to enable or disable the Multicall Address Range 1 Minimum and Maximum.

The Minimum and Maximum define the number entry range within the variable digit telegrams.

NOTE:
Minimum and Maximum must have the same number of digits.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

2.33.2.6
Address Range 2

Allows the user to enable or disable the Multicall Address Range 2 Minimum and Maximum.

The Minimum and Maximum define the number entry range within the variable digit telegrams.

NOTE:
Minimum and Maximum must have the same number of digits.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

2.33.2.7

Address Range 3

Allows the user to enable or disable the Multicall Address Range 3 Minimum and Maximum.

The Minimum and Maximum define the number entry range within the variable digit telegrams.

NOTE:
Minimum and Maximum must have the same number of digits.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

2.33.2.8

Minimum (Address Range 1)

Defines the minimum number entry within the variable digit telegrams for Address Range 1.

Range:

Maximum	Minimum	Increment
99999999	0	1

NOTE:
This feature is enabled if Address Range 1 is enabled.

The value of this feature must not be greater than the Maximum.

This feature is supported in Analog mode only.

2.33.2.9

Minimum (Address Range 2)

Defines the minimum number entry within the variable digit telegrams for Address Range 2.

Range:

Maximum	Minimum	Increment
99999999	0	1

NOTE:
This feature is enabled if Address Range 2 is enabled.

The value of this feature must not be greater than the Maximum.

This feature is supported in Analog mode only.

2.33.2.10

Minimum (Address Range 3)

Defines the minimum number entry within the variable digit telegrams for Address Range 3.

Range:

Maximum	Minimum	Increment
99999999	0	1

NOTE:
This feature is enabled if Address Range 3 is enabled.

The value of this feature must not be greater than the Maximum.

This feature is supported in Analog mode only.

2.33.2.11
Maximum (Address Range 1)

Defines the maximum number entry within the variable digit telegrams for Address Range 1.

Range:

Maximum	Minimum	Increment
99999999	0	1

NOTE:
This feature is enabled if Address Range 1 is enabled.

The value of this feature must always be greater or equal to the value of Minimum.

This feature is supported in Analog mode only.

2.33.2.12
Maximum (Address Range 2)

Defines the maximum number entry within the variable digit telegrams for Address Range 2.

Range:

Maximum	Minimum	Increment
99999999	0	1

NOTE:
This feature is enabled if Address Range 2 is enabled.

The value of this feature must always be greater or equal to the value of Minimum.

This feature is supported in Analog mode only.

2.33.2.13
Maximum (Address Range 2)

Defines the maximum number entry within the variable digit telegrams for Address Range 2.

Range:

Maximum	Minimum	Increment
99999999	0	1

NOTE:
This feature is enabled if Address Range 2 is enabled.

The value of this feature must always be greater or equal to the value of Minimum.

This feature is supported in Analog mode only.

2.33.2.14
Maximum (Address Range 3)

Defines the maximum number entry within the variable digit telegrams for Address Range 3.

Range:

Maximum	Minimum	Increment
99999999	0	1

NOTE:
This feature is enabled if Address Range 3 is enabled.

The value of this feature must always be greater or equal to the value of Minimum.

This feature is supported in Analog mode only.

2.33.3
Multicall Status (Encoder)

The **Multicall Status** section of the Encoder set contains the following fields:

2.33.3.1
General Lockout Digit (Multicall Status)

Specifies the digits that are barred from use in any position in telegrams that have variable digit positions.

The choices are None and numbers from 0 to 9.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

2.33.3.2
Position Lockout Digit (Multicall Status)

Specifies a digit that will be barred from use in positions specified by the Position for Position Lockout Digit in telegrams that have variable digit positions.

The choices are None and numbers from 0 to 9.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

2.33.3.3
Position for Position Lockout Digit (Multicall Status)

Specifies the position in variable digit telegrams where Position Lockout Digit cannot be placed.

The choices are numbers from 1 to 3.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

2.33.3.4

Position for Group Lockout Digit (Multicall Status)

Specifies the position(s) in variable digit telegrams where Group Digits cannot be placed.

A user can choose one or multiple numbers from 1 to 3.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

2.33.3.5

Status Range 1

Allows the user to enable or disable the Multicall Status Range 1 Minimum and Maximum.

The Minimum and Maximum define the number entry range within the variable digit telegrams.

NOTE:
Minimum and Maximum must have the same number of digits.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

2.33.3.6

Status Range 2

Allows the user to enable or disable the Multicall Status Range 2 Minimum and Maximum.

The Minimum and Maximum define the number entry range within the variable digit telegrams.

NOTE:
Minimum and Maximum must have the same number of digits.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

2.33.3.7

Status Range 3

Allows the user to enable or disable the Multicall Status Range 3 Minimum and Maximum.

The Minimum and Maximum define the number entry range within the variable digit telegrams.

NOTE:
Minimum and Maximum must have the same number of digits.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

2.33.3.8

Minimum (Status Range 1)

Defines the minimum number entry within the variable digit telegrams for Status Range 1.

Range:

Maximum	Minimum	Increment
999	0	1

NOTE:
This feature is enabled if Status Range 1 is enabled.

The value of this feature must not be greater than the Maximum.

This feature is supported in Analog mode only.

2.33.3.9
Minimum (Status Range 2)

Defines the minimum number entry within the variable digit telegrams for Status Range 2.

Range:

Maximum	Minimum	Increment
999	0	1

NOTE:
This feature is enabled if Status Range 2 is enabled.

The value of this feature must not be greater than the Maximum.

This feature is supported in Analog mode only.

2.33.3.10
Minimum (Status Range 3)

Defines the minimum number entry within the variable digit telegrams for Status Range 3.

Range:

Maximum	Minimum	Increment
999	0	1

NOTE:
This feature is enabled if Status Range 3 is enabled.

The value of this feature must not be greater than the Maximum.

This feature is supported in Analog mode only.

2.33.3.11
Maximum (Status Range 1)

Defines the maximum number entry within the variable digit telegrams for Status Range 1.

Range:

Maximum	Minimum	Increment
999	0	1

NOTE:
This feature is enabled if Status Range 1 is enabled.

The value of this feature must always be greater or equal to the value of Minimum.

This feature is supported in Analog mode only.

2.33.3.12
Maximum (Status Range 2)

Defines the maximum number entry within the variable digit telegrams for Status Range 2.

Range:

Maximum	Minimum	Increment
999	0	1

NOTE:
This feature is enabled if Status Range 2 is enabled.

The value of this feature must always be greater or equal to the value of Minimum.

This feature is supported in Analog mode only.

2.33.3.13
Maximum (Status Range 3)

Defines the maximum number entry within the variable digit telegrams for Status Range 3.

Range:

Maximum	Minimum	Increment
999	0	1

NOTE:
This feature is enabled if Status Range 3 is enabled.

The value of this feature must always be greater or equal to the value of Minimum.

This feature is supported in Analog mode only.

2.34
Encoder Sequences Set

The **Encoder Sequences** set is used to select and sequence a signaling system.

The following section contains all the supported fields:

2.34.1
General (Encoder Sequences)

The **General** section of the Encoder Sequences set contains the following fields:

2.34.1.1
Sequence Name

Displays the 5 Tone encoder sequence name.

NOTE:
This feature is supported in Analog mode only.

2.34.1.2
Signaling System (Sequences)

Associates a 5 Tone system to each 5 Tone encode tone sequence.

The choices are all available 5 Tone Signaling Systems.

NOTE:
The value of this feature is set to the first available choice if the selected choice is deleted or the pasted value does not exist in the available choices.

This feature is supported in Analog mode only.

2.34.1.3
Sequence

Specifies 1 to 12 sequence (for MOTOTRBO Light radios and MOTOTRBO 2.0).

Alphanumeric Display Mobile radios with DTP capability only) or 20 (for MOTOTRBO 2.0 radios except for Alphanumeric Display Mobile radios with DTP capability only) tones to make a 5 Tone encode tone sequence. The tone is a single frequency audible (300-3000 Hz) tone and the frequency and duration are specified by the sequence signaling standard. The user can input the following digit to represent a tone:

- a fixed number digit: 0 - 9
- a fixed character digit: "A"-"F"
- a variable address digit: "A1" - "A8"
- a variable status digit: "S1" - "S3"
- a variable radio ID digit: "U1" - "U8"
- a fixed single tone digit: "T1" - "T2"
- a fixed group tone digit: "G"

For Display model, each tone can be a fixed digit of 0-9 or A-F, a variable address digit of A1-A8, a variable status digit of S1-S3, a variable subscriber ID digit of U1-U8, a fixed single tone digit of T1-T2 and a fixed group tone digit.

For Non-Display model, each tone can be a fixed digit of 0-9 or A-F, a variable subscriber ID digit of U1-U8, a fixed single tone digit of T1-T2 and a fixed group tone digit.

The user then attaches the specified encoded tone sequence to a telegram in the Sequence 1-3 parameters.

NOTE:
This feature must not be empty.

The user must use "(" character as a prefix and ")" character as a suffix to specify an address variable, a status variable, a radio ID variable, and a single tone variable.

The value of this feature is reset to the original value if the user input is out of range or blank.

The value of this feature is automatically set to an upper case if the user input is lower case.

The value of this feature is automatically corrected if the user input is missing an opening bracket "(" or a closing bracket ")".

Variable digits in a telegram must be substituted for the correct number of digits before transmission.

This feature is supported in Analog mode only.

2.34.1.4
Pretime (ms) (Sequences)

Sets the duration in milliseconds (ms) that the radio waits for the repeater to reach its operating power output before the radio sends its encode sequences.

It is recommended to set this duration above 400ms when transmitting a telegram on a 5 Tone channel with Private Line (PL) or Digital Private Line (DPL), or when transmitting on a Repeater mode. To increase the scan landing rate of a 5 Tone telegram on the decoding radio, calculates the recommended Pretime setting on the encoding radio using the formula below. After that, configures the Signaling Hold Time as recommended by the formula in the Notes section of the topic.

CSQ and analog mode scan list
100 x (total number of scan member - 1)

CSQ and mixed mode scan list
50 + 200 x (total number of scan member - 1)

PL and analog mode scan list
50 + 100 x (total number of scan member - 1)

PL and mixed mode scan list
50 + 200 x (total number of scan member - 1)

Range:

Maximum	Minimum	Increment
2550 ms	0 ms	10 ms

NOTE:
This feature is disabled if set to 0.

The value of this feature must not be 0 (disabled) at the same time with the Extended 1st Tone Duration feature. If the value is the same, this value will automatically be incremented by the Increment value.

This feature is supported in Analog mode only.

2.34.1.5

Extended 1st Tone Duration and Telegram 1st Tone Duration (ms)

Specifies an extended first tone duration in milliseconds (ms) for each sequence.

If a transmitted sequence has an extended first tone, the receiver decoders must know what the duration of this extended first tone is, otherwise the sequence would be corrupted on decode. The length of the tone would not be of the correct duration for the standard used (CCIR, EEA, ZVEI etc). This may be used with the Telegram Repeat feature for multi-channel systems that use the scan feature.

For Telegram 1st Tone Duration (ms), total first tone duration for MOTOTRBO radios are extended 1st tone duration plus default tone duration. For Professional Conventional Series radios, the extended first tone duration field is the total length of the first tone duration. Because of the differences in the expected duration of the first tone, the Professional Series radios will trigger time out while decoding the first tone.

Range:

Maximum	Minimum	Increment
2550 ms	0 ms	10 ms

Telegram 1st Tone Duration (ms) Example: Professional Conventional Series Radios Setting

Extended First Tone	800 ms
5 tone Signalling Standard	CCIR 100 ms
Telegram 1st Tone Duration	Extended First Tone = 800 ms

Telegram 1st Tone Duration (ms) Example: MOTOTRBO Conventional Radios Setting

Extended First Tone	800 ms
5 Tone Signalling Standard	CCIR 100 ms
Telegram 1st Tone Duration	Extended First Tone (800 ms) + 5 Tone Signalling Standard (100 ms) = 900 ms

NOTE:
This feature is disabled if set to 0.

The value of this feature must not be 0 (disabled) at the same time with the Pretime feature. If the value is the same, this value will automatically be incremented by the Increment value.

This feature is supported in Analog mode only.

2.35
Encoder Status Set

The **Encoder Status** set is used to specify an alias for each encoder status list entry. The range for the alias is up to 16 UCS-2 characters.

NOTE: This feature is disabled if the Use Decoder Status List feature is enabled.
This feature is supported in Analog mode only.

The following section contains all the supported fields:

2.35.1
General (Encoder Status)

The **General** section of the Encoder Status set contains the following fields:

2.35.1.1
Only Use Decoder Status List

Allows the user to enable or disable the Only Use Decoder Status List feature.

If enabled, the encode Status list is disabled and decode Status list is used for both the encode and decode status.

NOTE:
This feature is supported in Analog mode only.

2.35.1.2
Name (Encoder)

Specifies an alias for each encoder status list entry.

The range for the alias is up to 16 UCS-2 characters.

NOTE:
This feature is disabled if the Use Decoder Status List feature is enabled.

This feature is supported in Analog mode only.

2.35.1.3
Status (Encoder)

Specifies a status value from 1 to 3 variables.

The user can use the following input to represent a variable:

- a fixed number digit: 0 - 9
- a fixed character digit: "A"-"F"
- a variable radio ID digit: "U1" - "U8"
- a fixed single tone digit: "T1" - "T2"
- a fixed group tone digit: "G"

NOTE:
This feature is disabled if the Use Decoder Status List feature is enabled.

The user must use "(" character as a prefix and ")" character as a suffix to specify a radio ID variable and a single tone variable.

The value of this feature is reset to the original value if the user input is out of range or blank.

The value of this feature is automatically set to an upper case if the user input is lower case.

The value of this feature is automatically corrected if the user input is missing an opening bracket "(" or a closing bracket ")".

This feature is supported in Analog mode only.

2.36 Telegrams Set

The **Telegrams** set is used to configure a 5 Tone telegram. A 5 Tone telegram is composed of one to three 5 Tone sequences. To make a selective call, the radio can be programmed to send up to three 5 Tone sequences in rapid succession. Each encode sequence can contain only one type of signaling or DTMF, but Telegrams can contain encode sequences with different signaling. For example, sequence 1 ZVEI sequence 2 DTMF. The 5 tone sequence opens a telephone interconnect, and the DTMF dials the phone number. Each radio can be programmed with up to 32 telegrams.

The following section contains all the supported fields:

2.36.1 General (Telegrams)

The **General** section of the Telegrams set contains the following fields:

2.36.1.1 Repeat Counter

Defines the number of times the encoder telegram is repeated.

Every valid receive decode will cancel this function.

Range:

Maximum	Minimum	Increment
255	1	1

NOTE:
This feature is supported in Analog mode only.

2.36.1.2 Periodic Repeat Time (sec)

Defines when the radio automatically sends out its PTT Keyup for Telegram Repeat.

Range:

Maximum	Minimum	Increment
255 sec	1 sec	1 sec

NOTE:
This feature is supported in Analog mode only.

2.36.1.3
Minimum Keyup for Repeat (sec)

Defines the minimum time interval between successive, automatic, telegram transmissions by the radio.

These transmissions will coincide with the pressing of the PTT button. The time before sending the first telegram after keyup is defined only by the Periodic Repeat Time.

Range:

Maximum	Minimum	Increment
255	0	1

NOTE:
This timer must be less than the Periodic Repeat Time.

This feature is supported in Analog mode only.

2.36.1.4
Power Up Auto Telegram

Configures a 5 Tone telegram that will be automatically sent after the radio has powered up.

The choices are None and all available telegrams.

NOTE:
This feature is set to None if the selected telegram is deleted.

This feature is supported in Analog mode only.

2.36.1.5
Power Down Auto Telegram

Configures a 5 Tone telegram that will be automatically sent after the radio has powered down.

The choices are None and all available telegrams.

NOTE:
This feature is set to None if the selected telegram is deleted.

This feature is supported in Analog mode only.

2.36.1.6
Power Up Auto Telegram Revert Channel

Specifies a channel for the 5 Tone Power Up Auto Telegram.

The choices are Selected and all available 5 Tone channels.

NOTE:
This feature is set to Selected if the selected channel is deleted or the pasted value does not exist in the available choices.

This feature is supported in Analog mode only.

2.36.1.7
Power Up Auto Telegram Revert Channel Zone

This field allows the user to specify a channel zone to encode the automatic sent telegram after the radio has powered up.

2.36.1.8
Power Down Auto Telegram Revert Channel

Specifies a channel for the 5 Tone Power Down Auto Telegram.

The choices are Selected and all available 5 Tone channels.

NOTE:
This feature is set to Selected if the selected channel is deleted or the pasted value does not exist in the available choices.

This feature is supported in Analog mode only.

2.36.1.9
Power Down Auto Telegram Revert Channel Zone

This field allows the user to specify a channel to encode the automatically sent telegram before the radio powers down

2.36.1.10
Telegram Name

Displays the 5 Tone encoder telegram name.

NOTE:
This feature is supported in Analog mode only.

2.36.1.11
Sequence 1

Specifies the 5 Tone encoder telegram Sequence 1. The choices are all available sequences.

NOTE:
The value of this feature is set to one of the available choices if the selected sequence is deleted or the pasted value does not exist in the available choices.

This feature is supported in Analog mode only.

2.36.1.12
Sequence 2

Specifies 5 Tone encoder telegram Sequence 2. The choices are None and all available sequences.

NOTE:
The value of this feature is set to one of the available choices if the selected sequence is deleted or the pasted value does not exist in the available choices.

This feature is supported in Analog mode only.

2.36.1.13

Sequence 3

Specifies 5 Tone encoder telegram Sequence 3. The choices are None and all available sequences.

NOTE:
This feature is enabled when Sequence 2 is not set to None.

The value of this feature is set to one of the available choices if the selected sequence is deleted or the pasted value does not exist in the available choices.

This feature is supported in Analog mode only.

2.36.1.14

Acknowledge Expected

Defines how the radio handles telegram encode acknowledgement before voice transmission is allowed on the calling radio.

None
The radio does not expect an acknowledgement before voice transmission is allowed on the calling radio.

ACK1
ACK1 is required to allow the calling radio to transmit voice.

ACK1 with Answer
ACK1 and voice transmission is required to allow the calling radio to transmit.

NOTE:
This feature is supported in Analog mode only.

2.36.1.15

Telegram Repeat

This feature allow the encoded telegram to be repeated.

When enabled, this feature allows the encoded telegram to be repeated when the following event happens:

- An acknowledgement is not received within the acknowledge expected duration, or
- The Tx Admit Criteria is not satisfied on the first attempt or any subsequent attempts. However, if the transmit attempt fails due to decode authorization or channel set as RX Only, the call attempt will fail.

The telegram may be repeated until it reaches the maximum number of retries specified in the Repeat Counter. This feature can be programmed for any of the Acknowledge Expected options (including No ACK).

NOTE:
This feature is supported in Analog mode only.

2.37

Decoder Set

The **Decoder** set is used to configure the expect acknowledgement duration and time-out value from the target radio after sending a 5 Tone encode telegram.

The following section contains all the supported fields:

2.37.1
General (Decoder)

The **General** section of the Decoder set contains the following fields:

2.37.1.1
Acknowledge Expected Duration (sec)

Specifies the duration to expect an acknowledgement from the target radio after sending a 5 Tone encode telegram with the Acknowledgement Expected feature not set to None.

Range:

Maximum	Minimum	Increment
255 sec	1 sec	1 sec

NOTE:
This feature is supported in Analog mode only.

2.37.1.2
Sequence TOT (ms)

Specifies the maximum delay between 2 successive 5 Tone decode sequences.

Range:

Maximum	Minimum	Increment
5100 ms	25 ms	25 ms

NOTE:
This feature is supported in Analog mode only.

2.38
Decoder Status List Items

The **Decoder Status List Items** set allows the user to add a decoder status.

The following section contains all the supported fields:

2.38.1
General (Decoder Status List Items)

The **General** section of the Decoder Status List Items set contains the following fields:

2.38.1.1
Name (Decoder)

Specifies an alias for each decoder status list entry.

The range for the alias is up to 16 UCS-2 characters.

NOTE:
This feature is supported in Analog mode only.

2.38.1.2
Status (Decoder)

Specifies a status value from 1 to 3 variables.

The user can use the following input to represent a variable:.

- a fixed number digit: 0 - 9
- a fixed character digit: "A"-"F"
- a variable radio ID digit: "U1" - "U8"
- a fixed single tone digit: "T1" - "T2"
- a fixed group tone digit: "G"

NOTE:
The user must use "(" character as a prefix and ")" character as a suffix to specify a radio ID variable and a single tone variable.

The value of this feature is reset to the original value if the user input is out of range or blank.

The value of this feature is automatically set to an upper case if the user input is lower case.

The value of this feature is automatically corrected if the user input is missing an opening bracket "(" or a closing bracket ")".

This feature is supported in Analog mode only.

2.39
Decoder Definitions Set

The **Decoder Definitions** set is used to configure up to 16 definitions, each of which can be enabled/disabled per personality. The same signaling system is used for each decode sequence within the telegram, hence signaling systems are assigned per decoder. This assignment is to avoid problems that arise from signaling systems that use tone frequencies, which overlap, with tone frequencies used by other signaling systems.

The following section contains all the supported fields:

2.39.1
General (Decoder Definitions)

The **General** section of the Decoder Definitions set contains the following fields:

2.39.1.1
Definition Name

Displays the 5 Tone decoder definition name.

NOTE:
This feature is supported in Analog mode only.

2.39.1.2
5 Tone Signaling System

Specifies one 5 Tone Signaling System.

The choices are all the available 5 Tone Signaling Systems.

NOTE:
This feature is supported in Analog mode only.

2.39.1.3

Decoder Type

Determines the type of action taken by the radio on receiving a valid telegram.

The type of action can be from lifting the squelch and opening the radios audio circuits for an individual call sequence, to instigating an emergency and displaying information if the radio has a display or giving alerts.

General

On decoding the sequence, the radio starts a 5 Tone call. The decoder assumes voice to follow the encode telegram.

Incoming Emergency

When an emergency decode is received, any further calls will not interrupt the emergency call, either during the call or while the call is waiting to be answered. The incoming emergency alert will be sounded. The radio emergency can be reset on successful decode of the appropriate emergency exit sequence. If Call Back is enabled, and non-emergency calls are received, the emergency call remains active for call back. It is possible to use status messaging for emergency calls. Reception of a decode telegram with the status digits matching an entry for emergency in the status list, will cause that entry, indicating emergency, to be displayed.

Priority

When a priority decode is received, any further non priority/priority calls will not interrupt the priority call, either during the call or while the call is waiting to be answered. The incoming priority alert will be sounded. It will be interrupted if an Emergency sequence is decoded.

Emergency Exit

When an emergency exit decode is received while in an emergency mode, the radio exits the emergency Mode.

Stun

On decoding the sequence, the radio is 'stunned'. All attempts at user activity, except powering on/off, are ignored. The radio display is blank and the only received signal action by the radio is the unstun decode sequence. This is similar to the MOTOTRBO Radio Disable feature.

Unstun

On decoding the sequence, the radio is 'unstunned'. The radio reverts to the normal radio operation. The radio may also be unstunned by reprogramming the radio. This is similar to the MOTOTRBO Radio Enable feature.

Clear Down

On decoding the sequence, the radio ends the current call session.

Silent Interrogate

On decoding the sequence, the radio is interrogated without the user knowing it. The radio transmits an ACK. This is similar to the MOTOTRBO Radio Check feature.

ACK1/Ringing

If ACK1 is received in response to the transmission of a telegram with the Acknowledge Expected feature set to ACK 1 with Answer, the transmitting radio waits for the receiving radio to answer before being allowed to transmit.

ACK1/Authorization

If ACK1 and authorization decode is received in response to the transmission of a telegram with the Acknowledge Expected feature set to ACK 1, the transmitting radio is allowed to transmit.

NOTE:
This feature is supported in Analog mode only.

2.39.1.4
Group Type

Specifies the group type for each 5 Tone decoder.

Two types of group calls are supported.

Standard

For standard group call, a group position will be a position(s) in the decode sequence at which the radio will accept either the group tone or the individual tone. After detection of a valid group tone, all subsequent tones of the sequence must also be group tones for the sequence to be recognized as a call for the radio. I.e. Group tones run consecutively in the sequence from the last tone towards the first tone. Note: Consecutive group tones will be subject to auto 'R' insertion. Example: Radio ID is: 1 2 3 4 5. Group digits: 1 2 3 G G. Radio will respond to:12345 (Individual Call). 123GG (Group of up to 100 radios). 1234G (Sub-Group of 10 radios).

Expanded

For expanded group call, a group position will be a position at which the radio will accept either the group tone or the individual tone. Group tones will not be accepted in positions other than group positions. Group positions can be random throughout the sequence. Example: Radio ID is: 1 2 3 4 5. Group digits: 1 G 3 4 G. Radio will respond to:12345 (Individual Call).1G34G (Group of up to 100 radios).1234G (Sub-Group of 10 radios).

NOTE:
This feature is supported in Analog mode only.

2.39.1.5
Decoder Sequence 1

Configures sequence from 1 to 12 or 20 depending on the type of radio.

Configures sequence from 1 to 12 or 20 depending on the type of radio. (for MOTOTRBO Light radios and MOTOTRBO 2.0 Alphanumeric Display Mobile radios with DTP capability only) or 20 (for MOTOTRBO 2.0 radios except for Alphanumeric Display Mobile radios with DTP capability only) tones for this decoder sequence.

NOTE:
This feature must not be empty.

The user must use "(" character as a prefix and ")" character as a suffix to specify an address variable, a status variable, a radio ID variable, and a single tone variable.

The value of this feature is reset to the original value if the user input is out of range or blank.

The value of this feature is automatically set to an upper case if the user input is lower case.

The value of this feature is automatically corrected if the user input is missing an opening bracket "(" or a closing bracket ")".

A decoder sequence composed of only address or status variable digits is fragile and subject to intervention. Such a definition should be avoided.

This feature is supported in Analog mode only.

2.39.1.6
Group Sequence 1

Configures this feature to enable each decode sequence position to match a group tone.

NOTE:
This feature is disabled if the Decoder Type feature is set to Silent Interrogate or ACK1/Ringing.

This feature is supported in Analog mode only.

2.39.1.7
Decoder Sequence 2

This feature configures from 1 to 12.

Configures from 1 to 12 (for MOTOTRBO Light radios and MOTOTRBO 2.0 Alphanumeric Display Mobile radios with DTP capability only) or 20 (for MOTOTRBO 2.0 radios except for Alphanumeric Display Mobile radios with DTP capability only) tones for this decoder sequence.

NOTE:
The user must use "(" character as a prefix and ")" character as a suffix to specify an address variable, a status variable, a radio ID variable, and a single tone variable.

The value of this feature is reset to the original value if the user input is out of range or blank.

The value of this feature is automatically set to an upper case if the user input is lower case.

The value of this feature is automatically corrected if the user input is missing an opening bracket "(" or a closing bracket ")".

A decoder sequence composed of only address or status variable digits is fragile and subject to intervention. Such a definition should be avoided.

This feature is supported in Analog mode only.

2.39.1.8
Group Sequence 2

Configures this feature to enable each decode sequence position to match a group tone.

NOTE:
This feature is disabled if the Decoder Type feature is set to Silent Interrogate or ACK1/Ringing.

This feature is enabled if only one Decoder Sequence 2 is not empty.

This feature is supported in Analog mode only.

2.39.1.9
Decoder Sequence 3

This feature configures from 1 to 12.

Configures from 1 to 12 (for MOTOTRBO Light radios and MOTOTRBO 2.0 Alphanumeric Display Mobile radios with DTP capability only) or 20 (for MOTOTRBO 2.0 radios except for Alphanumeric Display Mobile radios with DTP capability only) tones for this decoder sequence.

NOTE:
This feature must not be empty.

The user must use "(" character as a prefix and ")" character as a suffix to specify an address variable, a status variable, a radio ID variable, and a single tone variable.

The value of this feature is reset to the original value if the user input is out of range or blank.

The value of this feature is automatically set to an upper case if the user input is lower case.

The value of this feature is automatically corrected if the user input is missing an opening bracket "(" or a closing bracket ")".

A decoder sequence composed of only address or status variable digits is fragile and subject to intervention. Such a definition should be avoided.

This feature is supported in Analog mode only.

2.39.1.10

Group Sequence 3

Configures this feature to enable each decode sequence position to match a group tone.

NOTE:
This feature is disabled if the Decoder Type feature is set to Silent Interrogate or ACK1/Ringing.

This feature is enabled if only one Decoder Sequence 3 is not empty.

This feature is supported in Analog mode only.

2.39.1.11

Call Forwarding Acknowledge

Specifies an acknowledge for a 5 Tone decoder when it matches the incoming tones and the radio is in call forwarding mode, if the Call Forward feature is enabled.

The choices are None and all available acknowledges. In the radio, the user may enable or disable the sending of this telegram via a short or long programmable button press (Button Features - Call Forwarding Set/Clear).

NOTE:
The value of this feature is reset to None if the selected value is deleted or the pasted value does not exist in the available choices.

This feature is disabled if the Decoder Type feature is set to ACK1/Ringing or ACK1/Authorization.

This feature is supported in Analog mode only.

2.39.1.12

Telegram 1st Tone Duration (ms)

Specifies the duration in milliseconds (ms) of the first tone of the received sequence.

If a transmitted sequence has an extended first tone, the receiver's decoders must know what the duration is, otherwise the sequence would be corrupted on decode. The length of the tone would not be of the correct duration for the standard used (e.g. CCIR, EEA, ZVEI).

Range:

Maximum	Minimum	Increment
2550 ms	0 ms	10 ms

NOTE:
This feature is disabled if set to 0.

This feature is supported in Analog mode only.

2.39.1.13

External Alarm

When enabled, informs the user using the horn or/and lights alarm feature if there is an incoming call alert/private call when the user is not in their vehicle.

NOTE:
This feature is disabled if the Decoder Type feature is set to Stun, Silent Interrogate, ACK1/Ringing or ACK1/Authorization.

This feature is supported in Analog mode only.

2.39.1.14
Decoder Output Control

Specifies GPIO output for a 5 Tone decoder.

By programming a decoder for output control, the radio can, on successful decoding of a telegram sequence, assert or deassert the output of the GPIO Decode Output Control Line on the accessory connector.

Disabled
On successful decoding of a telegram sequence, no action is done on the output of the GPIO Decode Output Control Line on the accessory connector. .

Assert
On successful decoding of a telegram sequence, the radio asserts the output of the GPIO Decode Output Control Line on the accessory connector.

De-assert
On successful decoding of a telegram sequence, the radio de-asserts the output of the GPIO Decode Output Control Line on the accessory connector.

NOTE:
An output line (GPIO Pins - 5 Tone Decoder Output Control) is programmed to the Decoder Output Control.

This feature is supported in Analog mode only.

2.39.1.15
Auto Reset Start

A decoder may be programmed such that on receiving and decoding the correct sequence the radio will enter auto-reset, which activates the Auto Reset Timer.

NOTE:
This feature is disabled if the Decoder Type feature is set to Stun, Clear Down, Silent Interrogate, ACK1/Ringing or ACK1/Authorization.

The None option is not available if the Decoder Type feature is set to Silent Interrogate.

This feature is supported in Analog mode only.

2.39.1.16
Call Answer Timer

After the call answer timer expires due to no radio user operation, the incoming radio address will be stored in the missed call list.

NOTE:
This feature is disabled if the Decoder Type feature is set to Stun, Unstun, Clear Down, Silent Interrogate, ACK1/Ringing or ACK1/Authorization.

This feature is supported in Analog mode only.

2.39.1.17

Call Back

If enabled, the radio user will be able to talk back to the incoming radio address, otherwise a PTT press during an active call will initiate a new call.

NOTE:
This feature is disabled if the Decoder Type feature is set to Stun, Clear Down, Silent Interrogate, ACK1/Ringing or ACK1/Authorization.

This feature is supported in Analog mode only.

2.39.1.18

Auto Acknowledge

Selects an auto acknowledge to be sent in a telegram in response to a received and decoded individual call sequence.

The choices are None and all the available acknowledges. No acknowledgement is sent if None is selected. For display model, the name/digits will be displayed on the called radio.

NOTE:
The value of this feature is reset to None if the selected value is deleted or the pasted value does not exist in the available choices.

This feature is disabled if the Decoder Type feature is set to ACK1/Ringing or ACK1/Authorization.

The None option is not available if the Decoder Type feature is set to Silent Interrogate.

This feature is supported in Analog mode only.

2.39.1.19

Matching Encode Telegram

The specified telegram will be stored into call log list with the decoded radio address, and if the user initiates a call from call log list, the telegram will be encoded.

NOTE:
The value of this feature is reset to None if the selected value is deleted or the pasted value does not exist in the available choices.

This feature is disabled if the Decoder Type feature is set to Stun, Clear Down, Silent Interrogate, ACK1/Ringing, or ACK1/Authorization.

This feature is supported in Analog mode only.

2.39.1.20

Private Call Tone

Selects the alert tone for private calls on 5 Tone Systems.

The available choices are "None", "Ringer 1" to "Ringer 10", and "Repetitive".

2.39.1.21

Group Call Tone

Allows the user to select the alert tone for group calls 5 Tone Systems.

The available choices are "None", and "Ringer 1" to "Ringer 10".

2.40
Auto Acknowledgement Set

The **Auto Acknowledgement** set allows the user to enable or disable auto acknowledgements in a conventional scan list and a Vote Scan list. After transmission of a telegram, the radio may be programmed to expect various acknowledgements. Up to 16 auto acknowledges can be added.

The following section contains all the supported fields:

2.40.1
General (Auto Acknowledgement)

The **General** section of the Auto Acknowledgement set contains the following fields:

2.40.1.1
Acknowledge Name

Displays the 5 Tone decoder auto acknowledge name.

NOTE:
This feature is supported in Analog mode only.

2.40.1.2
Telegram (Auto Acknowledges)

Specifies a telegram to encode for a 5 Tone acknowledge configuration.

The choices are all available telegrams.

NOTE:
The value of this feature is reset to one of the valid choices if the selected value is deleted or the pasted value does not exist in the available choices.

This feature is supported in Analog mode only.

2.40.1.3
Channel Free

If enabled, the radio checks for channel free before sending an acknowledge telegram, otherwise the telegram will be sent anyway.

NOTE:
This feature is supported in Analog mode only.

2.40.1.4
Sidetone (Auto Acknowledges)

Allows the user to enable or disable the side tone for acknowledge telegram sending for a 5 Tone acknowledge configuration.

When disabled, no side tone indications are given when the radio performs Auto Acknowledgement or Call Forwarding Acknowledge.

NOTE:
This feature is supported in Analog mode only.

2.40.1.5

Acknowledge Delay (ms)

Specifies the delay duration in milliseconds (ms) before sending the acknowledge telegram for a 5 Tone acknowledge configuration.

Range:

Maximum	Minimum	Increment
6375 ms	0 ms	25 ms

NOTE:
If the duration is programmed as zero, the radio will reply to the call as fast as possible, but obviously not instantly.

This feature is supported in Analog mode only.

2.40.1.6

Revert Channel Zone

Allows the user to select a revert channel.

2.40.1.7

Revert Channel

Specifies the revert channel for sending the acknowledge telegram for a 5 Tone acknowledge configuration.

The choices are Selected and all available 5 Tone channels.

NOTE:
The value of this feature is reset to Selected if the selected value is deleted or the pasted value does not exist in the available choices.

This feature is supported in Analog mode only.

2.40.1.8

Revert Channel Zone

Allows the user to select a revert channel.

2.41

Contacts Set

The **Contacts** set contains features for the configuration of calls such as Group Call, Private Call, All Call, Dispatch Call, or PC Call. These calls can be attached to a channel.

2.41.1

Contact

This field allows you to enter an alias that uniquely identifies the set within a list of Contacts sets.

The range for the alias is up to 16 UCS-2 characters.

NOTE: This feature is supported in Analog mode for Display model only.

2.41.2
Five Tone (Contacts)

The **Five Tone** section of the Contacts set contains the following fields:

2.41.2.1
Contact Name (5 Tone Call)

Displays the name of this contact.

NOTE:
This feature is supported in Analog mode for Display model only.

2.41.2.2
Telegram (5 Tone Call)

Specifies an encode telegram to be used when making a call to this entry.

The choices are all available telegrams. If variable digit positions have been defined in the telegram, the entry will specify the variable digits to be encoded in those positions. For a given telegram the same number of variable digits must always be specified.

The user is able to specify up to three ranges of allowed variable digits. A validation check is made to ensure that the number of variable digits entered is a match for the selected telegram. The address entered by the user will be validated against range(s) that have the same number of digits.

Validation against the allowed variable digit entry is done on keypad entry. If an attempt is made to transmit a telegram where not enough Variable Digits are entered, transmission will fail and the button/keypad error alert is sounded.

NOTE:
The value of this feature is reset to one of the valid choices if the selected value is deleted or the pasted value does not exist in the available choices.

This feature is supported in Analog mode for Display model only.

2.41.2.3
Address (5 Tone Call)

Configures a radio address from one to eight variables.

The user can the following input to represent a variable:

- a fixed number digit: 0 - 9
- a fixed character digit: "A"-"F"
- a variable radio ID digit: "U1" - "U8"
- a fixed single tone digit: "T1" - "T2"

NOTE:
The user must use "(" character as a prefix and ")" character as a suffix to specify a radio ID variable and a single tone variable.

The value of this feature is reset to the original value if the user input is out of range or blank.

The value of this feature is automatically set to an upper case if the user input is lower case.

The value of this feature is automatically corrected if the user input is missing an opening bracket "(" or a closing bracket ")".

This feature is supported in Analog mode for Display model only.

2.41.3
MDC (Contacts)

The **MDC** section of the Contacts set contains the following fields:

2.41.3.1
Call Type (MDC Call)

This drop-down list allows you to choose which call type to use for the MDC phone call.

The available choices are as follows:

- Group Call
- Private Call
- All Call

2.41.3.2
Contact Name (MDC Call)

This displays the name of this contact.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.41.3.3
Call ID (MDC Call)

This feature sets an ID for an analog call member.

This ID is used to identify and communicate with a target radio or group of radios depending on the call type. There are three call types such as Group Call, Private Call, and All Call. Call ID for Private Call starts with a hexadecimal digit of 0 to D whereas Call ID for Group Call starts with a hexadecimal digit of E. An All Call has a fixed Call ID of FFFF.

Table 95: Range

Maximum	Minimum	Increment
Private Call: DFFF	Private Call: 1	1 (Hex)
Group Call: EFFF	Group Call: E000	

NOTE:
The "F" character is allowed and can be used as a wildcard (an all-inclusive digit) in the last three digits of the MDC Call ID. For example, if the Group Call ID is set as E00F, the user is able to communicate with any radios with Group Call IDs between E000 to E00E.

The Call ID of an All Call is not editable.

This feature is used only with the Call Alert and MDC Emergency feature.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.41.3.4
MDC System (MDC Call)

This feature sets the MDC Signaling System's configuration to be used by the current MDC call.

Any programmed MDC systems in the radio may be selected.

NOTE: This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.41.3.5
Revert Channel Zone (MDC Call)

This feature allows you to select a revert channel.

2.41.3.6
Revert Channel (MDC Call)

This feature allows you to transmit a call on an alternative channel as indicated by the Revert Channel, instead of the channel indicated by the radio's channel selector.

Once the call completes, the radio reverts back to the channel indicated by the radio's channel selector. The selected option is used when this call member is expected to be transmitted on the channel indicated by the radio's channel selector.

NOTE:
The RX Only feature must be disabled.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.41.3.7
Strip TPL/DPL (MDC Call)

When enabled (checked), this feature excludes TPL/DPL codes from the MDC transmissions.

NOTE: This feature is supported in Analog mode only.

2.41.4
Quik-Call II (Contacts)

The **Quik-Call II** section of the Contacts set contains the following fields:

2.41.4.1
Contact Name (Quik-Call II)

Displays the name of a contact.

NOTE:
This feature is supported in Analog mode only.

2.41.4.2
Quik-Call II System

Sets the Quik-Call II Signaling System's configuration to be used by the current Quik-Call II call.

Any programmed Quik-Call II system in the radio may be selected.

NOTE:
This feature is supported in Analog mode only.

2.41.4.3
Revert Channel Zone

Allows the user to select a revert channel.

2.41.4.4

Revert Channel (Quik-Call II Call)

Selects the revert channel on which the Quik-Call II calls are transmitted.

The radio performs this action by automatically switching to the revert channel for the duration of the call, and then switches back to the previously used channel when the call has ended.

NOTE:
This feature is supported in Analog mode only.

2.41.4.5

Call Format

Selects the QCII UCL Call Format from the available choices: Long Tone, Two Tone.

NOTE:
This feature is supported in Analog mode only.

2.41.4.6

Tone A Freq (Hz)

Selects the frequency of Tone A to be transmitted for the Quik-Call II two-tone signaling system.

Selecting a value for this field automatically selects a correlating value for the Code field, and vice versa.

Range:

Maximum	Minimum	Increment
3086.0 Hz	288.5 Hz	0.1 Hz

NOTE:
This feature is supported in Analog mode only.

2.41.4.7

Tone A Code

Selects the code of Tone A to be transmitted for the Quik-Call II two-tone signaling system.

Selecting a value for this field automatically selects a correlating value for the Tone A Freq (Hz) field, and vice versa.

NOTE:
This feature is supported in Analog mode only.

2.41.4.8

Tone B Freq (Hz)

Selects the frequency of Tone B to be transmitted for the Quik-Call II two-tone signaling system.

Selecting a value for this field automatically selects a correlating value for the Code field, and vice versa.

Range:

Maximum	Minimum	Increment
3086.0 Hz	288.5 Hz	0.1 Hz

NOTE:
This feature is supported in Analog mode only.

2.41.4.9
Tone B Code

Selects the code of Tone B to be transmitted for the Quik-Call II two-tone signaling system.

Selecting a value for this field automatically selects a correlating value for the Tone B Freq (Hz) field, and vice versa.

NOTE:
This feature is supported in Analog mode only.

2.41.4.10
Strip TPL/DPL (Quik-Call II Call)

When enabled (checked), this feature excludes TPL/DPL codes from the Quik-Call II transmissions.

NOTE:
This feature is supported in Analog mode only.

2.41.5
Digital (Contacts)

The **Digital** section of the Contacts set contains the following fields:

2.41.5.1
Call Type (Digital Call)

This drop-down list allows you to select the type of call in the Digital Unified Call List (UCL).

The available option are as follows:

- Group Call
- Off Air Call Set-Up (OACSU) Private Call
- Full Off Air Call Set-Up (FOACSU) Private Call
- All System Call
- Dispatcher
- PC
- Bluetooth PC Call
- Site All Call (DMR3 Trunking)

- Multi-Site All Call (DMR3 Trunking)

NOTE:
The Site All Call and Multi-Site All Call support Unified Knob Position (UKP) Call on a DMR3 channel but do not support UKP Call on a Non-DMR3 channel.

The All System Call supports Unified Knob Position (UKP) Call on a DMR3 channel and Non-DMR3 channel.

The Site All Call, Multi-Site All Call and All System Call support Number Key Quick Contact Access.

The Site All Call, Multi-Site All Call and All System Call do not support One Touch Call, Received Talkgroup list and Telemetry.

2.41.5.2
Contact Name (Digital Call)

This displays the name of this contact.

NOTE: This feature is supported in Digital mode only.

2.41.5.3
Call ID (Digital Call)

This feature sets an ID for a digital call member.

This ID is used to identify and communicate with a target radio or group of radios depending on the call type. There are seven call types and the meaning of the call type's ID is explained as follows:

Multi-Site All Call
This call enables you to make call to all sites. The ID is 16777056 to 16777183 and 16777214.

Group Call
This call enables you to make call to the ID of the Group that you wishes to subscribe to.

Private Call
This call enables you to make call to the Radio ID of the target radio.

All Call
This call has a fixed ID of 16777215 (value is not editable).

Dispatch Call
This call enables an individual radio to send a text message to a PC-based Dispatch client on the fixed network. The ID of the dispatch call must match the target dispatcher's ID programmed in the text message server.

PC Call
This call enables an individual radio to send a text message to a personal computer (PC) through a radio connected to the PC. The ID of this call must match the Radio ID of the radio connected to the PC.

Unaddressed Call
This call enables you to deliberately terminate a call. Unlike a normal group call, the radio does not show the call ID in the **call active** screen. Instead, the radio displays `Unaddressed Call` for all MOTOTRBO 2.0 and MOTOTRBO Light display models with the exception of the SL Series commercial radios. The SL Series commercial radio displays `UNAD` because of limited LED display space.

The ID that is chosen for a particular call type should be consistent with the ID of the target radio's call type.

Table 96: Range

Maximum	Minimum	Increment
16776415	1	1

NOTE: This feature is supported in Digital mode only.

2.41.5.4
OVCM TX (Digital Call)

This feature allows you to initiate an open voice channel mode (OVCM) call. The feature is cleared by default.

An OVCM call allows radios that are not configured to receive a group call or that are not the source or target of an individual call to participate in the call. To support the initiation of an OVCM call, all group, and individual contacts have a configurable enable or disable OVCM TX (transmit) option where the default is disabled. When OVCM TX is enabled for a group or individual contact, the Subscriber Unit indicates that the call is an OVCM call.

NOTE: This feature applies only to the Private Call and Group Call call types. For further information, see Call ID (Digital Call) on page 597.

2.41.5.5
OVCM RX (Digital Call)

This feature allows you to receive open voice channel mode (OVCM) calls on the personality.

To support participating in an OVCM call when not specifically configured to participate in the call, the Subscriber Unit has a configurable enable/disable OVCM RX (receive) option at the personality level where the default is disabled.

NOTE: When not specifically configured to RX, the target talk group ID is not in the personality RX group list or personality scan list for a group call. For an individual call, the target Subscriber Unit ID is different than the ID of the Subscriber Unit.A radio that is OVCM RX enabled unmutes to receive any call that indicates OVCM. When a radio is involved in an OVCM group call, all responses during the call indicate that the call is OVCM, whether due to target ID or OVCM indication.

2.41.5.6
Route Type (Digital Call)

This feature allows you to configure where the data message, including text message or telemetry, received in radio is routed to.

This feature is configured in the radio from which the data message transmits out. The data message will be routed to different target after peer radio received it.

Regular
The data message is to routed to the receiving radio itself.

Option Board
The data message is to routed to the option board device.

Non-IP Peripheral
The data message is to routed to the Non-IP peripheral device.

NOTE:
DMR Standard Text Message Type cannot be routed to Non-IP Peripheral or Option Board. Refer to Text Message Type for more information.

Non-IP Peripheral is not applicable for SL Series Radio.

2.41.5.7
Connection Type (Digital Call)

This field allows the user to configure the connection type for a PC call in a digital system.

The available options are as follows:

- **USB**
- **Bluetooth**

NOTE:
The **Bluetooth** option is available only when the Bluetooth feature is enabled for the radio.

This feature is supported in Digital mode only.

This field is only visible when Call Type is set to **PC**.

2.41.5.8
Call Receive Tone (Digital Call)

This alert tone sounds on the receiving radio prior to unmuting during a Private Call, Group Call, or All System Call.

This is to notify you that the radio is unmuting. This feature is set on a per-call basis.

NOTE:
The Disable All Tones feature must be disabled.

This feature is supported in Digital mode only.

2.41.5.9
Ring Style (Digital Call)

This feature configures the ring tone for a received Private Call, Dispatch Call, or PC Call.

The choices are No Style, Ringer 1 to Ringer 10. If set to No Style, the default tone is sounded.

NOTE: This feature is supported in Digital mode only.

2.41.5.10
Text Message Alert Tone (Digital Call)

This alert tone sounds when a text message is received from a specific contact in the Contacts list.

Momentary
The radio plays the alert tone once. The message alert screen is dismissed after 60 seconds.

Repetitive
The radio starts the Text Message Alert Tone Duration timer and plays the alert tone repeatedly until the user reads the message, the timer expires, the radio enters into the test mode, or the radio is turned off. The message alert screen is still dismissed after 60 seconds.

NOTE: This feature is supported in Digital mode only.

2.41.6
Capacity Plus (Contacts)

The **Capacity Plus** section of the Contacts set contains the following fields:

2.41.6.1
Call Type (Capacity Plus)

This drop-down list allows you to choose which call type to use for the Capacity Plus–Single-Site phone call.

The available choices are as follows:

- Group Call
- Private Call
- All Call
- Dispatch
- PC

2.41.6.2
Contact Name (Capacity Plus)

This displays the name of this contact.

NOTE: This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.41.6.3
Call ID (Capacity Plus)

This feature specifies the Capacity Plus–Single-Site call's group ID, private ID, or all system ID depending on the call type.

For Dispatch Call, this feature is only applicable to text messages, not voice calls. For more information about each call types, refer to Call Types. This is a radio-wide feature.

Table 97: Range

Maximum	Minimum	Increment
254	1	1
65535	1	1
255	255	0

NOTE: This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.41.6.4
Route Type (Capacity Plus)

Allowsyou to configure where the data message, including text message or telemetry, received in radio is routed to.

This feature is configured in the radio from which the data message transmits out. The data message will be routed to different target after peer radio received it.

Regular
The data message is to routed to the receiving radio itself.

Option Board
The data message is to routed to the option board device.

Non-IP Peripheral
The data message is to routed to the Non-IP peripheral device.

NOTE:
DMR Standard Text Message Type cannot be routed to Non-IP Peripheral or Option Board. Refer to Text Message Type for more information.

Non-IP Peripheral is not applicable for SL Series Radio.

2.41.6.5
Connection Type (Capacity Plus)

This field allows the user to configure the connection type for a PC call in a Capacity Plus system.

The available options are as follows:

- **USB**
- **Bluetooth**

NOTE:
The **Bluetooth** option is available only when the Bluetooth feature is enabled for the radio.

This field is only visible when Call Type is set to **PC**.

2.41.6.6
Call Receive Tone (Capacity Plus)

This alert tone sounds on the receiving radio prior to unmuting during a Private Call, Group Call, or All System Call.

This is to notify you that the radio is unmuting. This feature is set on a per-call basis.

NOTE:
The Disable All Tones feature must be disabled.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.41.6.7
Ring Style (Capacity Plus)

Configures the ring tone for a received Private Call, Dispatch Call, or PC Call.

The choices are No Style, Ringer 1 to Ringer 10. If set to No Style, the default tone is sounded.

NOTE: This feature is supported in Digital mode only.

2.41.6.8
Text Message Alert Tone (Capacity Plus)

This alert tone sounds when a text message is received from a specific contact in the Contacts list.

Momentary
The radio plays the alert tone once. The message alert screen is dismissed after 60 seconds.

Repetitive

The radio starts the Text Message Alert Tone Duration timer and plays the alert tone repeatedly until the user reads the message, the timer expires, the radio enters into the test mode, or the radio is turned off. The message alert screen is still dismissed after 60 seconds.

NOTE: This feature is supported in Digital mode only.

2.41.7
Phone (Contacts)

The **Phone** section of the Contacts set contains the following fields:

2.41.7.1
Name (Phone Call)

Configures the phone call alias in the Unicode format for each entry in the Phone Call list to identify the phone call.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Digital mode.

2.41.7.2
Number

Allows the user to enter a phone number.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Digital mode.

2.42
Digital RX Group List Set

The **Digital RX Group List** set contains features for you to create and manage lists of Digital Group Calls. The RX Group List specifies which Groups the radio is a member of (or subscribed to). When this list is attached to a digital channel, you can listen to any Group in this list when there is any activity on it and talk back within the Group Call hang time.

The following section contains all the supported fields:

2.42.1
General (Digital RX Group List)

The **General** section of the Digital RX Group List set contains the following fields:

2.42.1.1
Digital Name

This field allows you to enter an alias that uniquely identifies the set within a list of Digital RX Group List sets.

The range for the alias is up to 16 UCS-2 characters.

NOTE: This feature is supported in Digital mode only.

2.42.1.2
Available and Members

This feature allows you to select from a list of **Available** Digital Groups List Items and add them to the list of **Members**.

See Adding Digital Groups on page 603 and Removing Digital Groups on page 603.

When the channel selected has this list attached, if the radio receives a group call that is addressed to any one of its subscribed groups, the radio participates in that group call (for example, The radio unmutes for incoming transmissions and talks back when the PTT is pressed).

NOTE: This feature is supported in Digital mode only.

2.42.1.3
Adding Digital Groups

This feature adds the selected Digital Group(s) from the Available list into the Members list.

A maximum of 16 Digital Groups may be added to the Members list.

1 Select a Digital Group to be added from the Available list.

2 Click the Add button.

NOTE:
This feature is disabled if no Digital Group is selected in the Available list or if the list is empty.

This feature is supported in Digital mode only.

2.42.1.4
Removing Digital Groups

This feature removes the selected Digital Group(s) from the Members list.

1 Select the Digital Group to be removed from the Members list.

2 Click the Remove button.

NOTE:
This feature is disabled if no Digital Group is selected in the Members list or if the list is empty.

This feature is supported in Digital mode only.

2.42.1.5
Talkback

When the radio is in an ongoing talkgroup call, and if you presses the PTT button, if Talkback is disabled and the ongoing call is not a selected call, then a new call shall be launched. If Talkback is enabled, you can talkback on the ongoing group call.

2.42.1.6
Set/Clear Priority 1

This feature allows you to toggle the Priority 1 scanning status of the highlighted conventional channel or trunking personality in the Members list.

When the Priority 1 status is set to the highlighted channel or personality, the Priority 1 status on another channel or personality (if any) is cleared. During scan, 50% of a radio's scans are on the Priority 1 member. If a Priority 2 member exists, scans for the Priority 1 member are reduced from 50% to 25%. Even after landing on a non-priority or Priority 2 member, the radio continues to periodically

scan for transmission activity on a Priority 1 member. If the radio discovers activity on the Priority 1 member, it drops the current transmission, and unmutes to the Priority 1 member.

To set the priority:

1 Select a channel or personality from the **Members** list.

2 Click on the **Set/Clear Priority 1** button.

NOTE:
This feature is disabled if no channel/personality is selected in the Members list.

It is not recommended to assign any 5 Tone decodes to a priority channel as the decodes will most likely be missed because of the period between priority channel checks.

This feature is applicable to MOTOTRBO Conventional radios only.

2.42.1.7
Set/Clear Priority 2

This feature allows you to toggle the Priority 2 scanning status of the highlighted conventional channel or trunking personality in the Members list.

When the Priority 2 status is set to the highlighted channel or personality, the Priority 2 status on another channel or personality (if any) is cleared. During scan, 25% of a radio's scans are on the Priority 2 member. If a Priority 2 member exists, scans for the Priority 1 member are reduced from 50% to 25%. Even after landing on a non-priority channel, the radio continues to periodically scan for transmission activity on a Priority 2 member. If the radio discovers activity on the Priority 2 member, it drops the current transmission, and unmutes to the Priority 2 member. Activity on a Priority 2 member will be dropped in the event of any valid activity on a Priority 1 member.

To set the priority:

1 Select a channel/personality from the **Members** list.

2 Click on the **Set/Clear Priority 2** button.

NOTE:
This feature is disabled if no channel/personality is selected in the Members list.

This feature is enabled when there is a Priority 1 member in the Members list.

It is not recommended to assign any 5 Tone decodes to a priority channel as the decodes will most likely be missed because of the period between priority channel checks.

This feature is applicable to MOTOTRBO Conventional radios only.

2.42.1.8
Set/Clear Affiliation

This feature allows you to set or clear the affiliation on the calls.

2.43
Capacity Plus RX Group List Set

The **Capacity Plus RX Group List** set is used to define members from a list of available Capacity Plus Groups that the subscriber radio will use to make Group Calls when on the site.

The following section contains all the supported fields:

2.43.1
General (Capacity Plus RX Group List)

The **General** section of the Capacity Plus RX Group List set contains the following fields:

2.43.1.1
Capacity Plus Name

This field allows you to enter an alias that uniquely identifies the set within a list of Capacity Plus RX Group List sets.

The range for the alias is up to 16 UCS-2 characters.

NOTE: This feature is supported in Digital mode only.

2.43.1.2
Available and Members

This feature allows you to select from a list of **Available** Capacity Plus RX Group List and add them to the list of **Members**.

See Add on page 605 and Remove on page 605.

NOTE: This feature is supported in Digital mode only.

2.43.1.3
Add

This feature adds group(s) from the Available list into the Members list.

The group(s) added to the Members list will be removed from the Available list.

NOTE:
This feature is disabled if no channel is selected in the Available list or if the list is empty.

This feature is supported in Digital mode only.

2.43.1.4
Remove

This feature removes group(s) from the Members list to the Available list.

NOTE:
This feature is disabled if no channel is selected in the Members list or if the list is empty.

This feature is supported in Digital mode only.

2.44
Flexible Capacity Plus RX Group List Set

The **Flexible Capacity Plus RX Group List** set is a customizable Capacity Plus RX Group list used to define members from a list of available Flexible Capacity Plus Groups that the subscriber radio uses to make Group Calls when on the site.

The following section contains all the supported fields:

2.44.1
General (Flexible Capacity Plus RX Group List)

The **General** section of the Flexible Capacity Plus RX Group List set contains the following fields:

2.44.1.1
Flexible Capacity Plus Name

This field allows you to enter an alias that uniquely identifies the set within a list of Flexible Capacity Plus RX Group List sets.

The range for the alias is up to 16 UCS-2 characters.

NOTE: This feature is supported in Digital mode only.

2.44.1.2
Available and Members

This feature allows you to select from a list of **Available** Flexible Capacity Plus RX Group List and add them to the list of **Members**.

See Add on page 606 and Remove on page 606.

NOTE:
This feature is supported in Digital mode only.

Only Capacity Plus group calls must be part of the Available List.

This feature is enabled if the Capacity Plus–Single-Site or Capacity Plus–Multi-Site feature is enabled.

2.44.1.3
Add

This feature adds group(s) from the Available list into the Members list.

The group(s) added to the Members list will be removed from the Available list.

NOTE:
This feature is disabled if no Talk Group is selected in the Available or Members list, or the list is empty.

If you attempt to add more talkgroups than allowed, an error message will be prompted.

This feature shall be shown when the Capacity Plus–Single-Site or Capacity Plus–Multi-Site feature is enabled.

This feature is supported in Digital mode only.

2.44.1.4
Remove

This feature removes the highlighted selection from the Members List and adds them back into the Available List.

NOTE:
This button is disabled, if no selection is highlighted in the selected list or the list is empty.

This feature is disabled if Available or Members are not visible (if the control is removed through custom view).

This feature enabled if the user enabled the Capacity Plus–Single-Site or Capacity Plus–Multi-Site feature.

This feature is supported in Digital mode only.

2.45 Personality Set

The **Personality** set is a group of characteristics such as radio parameters, encryption encoding, and transmit/receive frequency pairs assigned to a channel. Configured personality sets are available for assignment to a zone.

The following personality types can be configured:

- Analog
- Digital
- Capacity Plus Personality
- Capacity Plus Voice
- Capacity Plus Data
- Capacity Plus Personality (Linked)
- Dynamic Mixed Mode
- Capacity Plus Voice (Linked)
- Capacity Plus Data (Linked)
- 5 Tone
-
- WAVE™

The following sections contain all the supported fields:

2.45.1 General (Conventional Personality)

The **General** section of the Conventional Personality set contains the following fields:

2.45.1.1 Channel Type (Conventional Personality)

This field allows you to choose the type of personality block.

The available options are as follows:

- Analog
- Digital
- Capacity Plus Personality
- Capacity Plus Voice
- Capacity Plus Data
- Capacity Plus Personality (Linked)
- Dynamic Mixed Mode
- Capacity Plus Voice (Linked)
- Capacity Plus Data (Linked)
- 5 Tone
- Capacity Max Trunking
- WAVE

- Trunked and Data Revert Channel.

NOTE:
This feature is only applicable when you enable the Conventional Capable feature.

The repeater only accepts one Capacity Plus Channel such as either Capacity Plus Voice or Capacity Plus Data. If there is one Capacity Plus Voice, there cannot be another Voice or Data Channel.

2.45.1.2
Channel Name

This displays the name of the channel.

2.45.1.3
Voice Announcement File (Conventional Channel)

Associates a voice announcement file to this channel. This is a channel-wide feature.

Voice announcement is played when the user switches to this channel. Up to 128 channels are supported.

2.45.1.4
Channel Bandwidth (KHz)

Sets the channel bandwidth for the Transmit and Receive frequencies to either 12.5, 12.5/15, 20, 25/30 or 25.

This is a channel-wide feature.

NOTE:
12.5/15, 25/30, and 20 KHz are only supported for selected models.

For UHF/VHF radios (NA region), radios with 20/25 KHz channel bandwidth will reset to 12.5 KHz.

In Digital mode, the channel bandwidth is fixed at 12.5 KHz and not CPS 2.0 configurable.

Programming of the radio to operate on 20/25 kHz channel spacing is not permitted and has been disabled in this application in compliance with the FCC Narrowbanding mandate for Part 90 VHF and UHF in the United States effective Jan. 01 2013. Please see readme file and Release Notes for more information.

This feature is applicable to MOTOTRBO Conventional radios, and MOTOTRBO SLR Series repeaters only.

2.45.1.5
Scan/Roam List

This feature associates a Scan/Roam List to this channel.

All the members on this list will be scanned during scan operation or roamed during roam operation. Any available Scan/Roam List can be selected. Selecting the None option disables scanning (including Auto Scan) and roaming (including Manual Site Roam) on this channel. For roaming, the list must consist of only IP Site Connect enabled channels. Each channel can only have either Scan or Roam

enabled, and not both. If the current digital channel is not an IP Site Connect enabled channel, or if it is an analog channel, only the Scan Lists are displayed. This is a channel-wide feature.

NOTE:
The Auto Scan feature is disabled if this feature is set to None.

The Auto Scan feature is disabled if the current digital channel is a IP Site Connect enabled channel and this feature associates Roam List(s) to this channel.

Only Scan List is available when the Dual Capacity Direct Mode (DCDM) feature is enabled.

2.45.1.6
Auto Scan (Conventional Channel)

This feature allows the radio to automatically begin scanning when you select the current conventional channel.

When disabled, you are still able to invoke the scan operation, via a short or long programmable button press (Scan On/Off) or Scan (Scan Menu) feature. This is a channel-wide feature.

NOTE:
This feature is disabled when the Scan List feature is set to None.

This feature is disabled when the Option Board Trunking feature is enabled (checked).

This feature is not available in the Capacity Plus–Single-Site system.

This feature is applicable to MOTOTRBO Conventional radios.

2.45.1.7
RF AGC (Conventional Channel)

Selects the type of Receive Frequency (RF) Automatic Gain Control (AGC) used for the channel.

This is a channel-wide feature.

Disabled
The radio will not enable any software RF AGC algorithms.

Standard
The radio enables the standard software RF AGC algorithm.

Enhanced
The radio enables the enhanced software RF AGC algorithm.

2.45.1.8
Color Code (Conventional Channel)

This feature allows a color code to be assigned to a given channel.

Channels may have the same or different color codes. A repeater can only have one color code. A color code is used to identify a system. Different color codes are used to identify different systems. This feature enables a radio to roam between multiple systems by switching between channels with different color codes. The radio will be able to scan across channels with different color codes. Radios will ignore any channel activity not containing the matching color code for that system. Repeaters using the same frequency may be associated with different color codes. On shared channels, spectrum

regulators may wish to assign different color codes to different licensees as part of their license agreement. This is a channel-wide feature.

Table 98: Range

Maximum	Minimum	Increment
15	0	1

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

This feature can be set per digital channel from MOTOTRBO 1.2 and MOTOTRBO SLR Series repeaters releases.

This feature is disabled when Repeater Mode is set to Analog.

The range is 0 to 14 when the Dual Capacity Direct Mode (DCDM) feature is enabled.

This feature is applicable in the repeater Dynamic Mixed Mode channel MOTOTRBO version 1.6a+ and MOTOTRBO SLR Series repeater releases.

2.45.1.9
Inbound Color Code

This feature allows a color code to be assigned to a given inbound channel. Channels may have the same or different color codes.

A color code is used to identify a system. Different color codes are used to identify different systems. This feature enables a radio to roam between multiple systems by switching between channels with different color codes.

The radio will be able to scan across channels with different color codes. The radio will ignore any channel activity not containing the matching color code for that system. Repeaters using the same frequency may be associated with different color codes. On shared channels, spectrum regulators may wish to assign different color codes to different licensees as part of their license agreement. This is a channel-wide feature.

2.45.1.10
Outbound Color Code

This feature allows a color code to be assigned to a given outbound channel. Channels may have the same or different color codes. A repeater can only have one color code.

A color code is used to identify a system. Different color codes are used to identify different systems. This feature enables a radio to roam between multiple systems by switching between channels with different color codes.

The radio will be able to scan across channels with different color codes. Radios will ignore any channel activity not containing the matching color code for that system. Repeaters using the same frequency may be associated with different color codes. On shared channels, spectrum regulators may wish to assign different color codes to different licensees as part of their license agreement. This is a channel-wide feature.

2.45.1.11
Extended Range Direct Mode

Extended Range Direct Mode is a conventional solution that extends the 12.5e direct mode range.

This feature is applicable for the repeater and allows you to enable Enhanced Channel Access on page 652 feature.

NOTE:

- This feature disables the Copy button (if this feature is checked).
- For more information about supported features in your radio, see *MOTOTRBO System Planner*.

2.45.1.12
Compatibility Mode

Compatibility Mode enables extended range direct mode for repeater.

This feature supports operation in First Generation MOTOTRBO radio, and mixed fleet radio.

2.45.1.13
Extended Range Direct

Extended Range Direct Mode is a conventional solution that extends the 12.5e direct mode range.

This field is only for SL Series repeaters.

2.45.1.14
Phone System

Associates any available Phone System to the channel for use when initiating or receiving a phone call on a conventional channel.

Selecting the None option disables the user from initiating or receiving phone calls on this channel. This is a channel-wide feature.

NOTE:
This feature is disabled when the Dual Capacity Direct Mode (DCDM) feature is enabled.

This feature is disabled and set to **None** if the Extended Range Direct Mode on page 610 is enabled.

This feature is supported in Digital mode only.

2.45.1.15
Squelch

Filters incoming signals that are not strong enough to produce a clear transmission, thereby eliminating unwanted noise.

This feature adjusts the squelch threshold of an incoming transmission. This feature can be toggled between tight or normal squelch, via a short or long programmable button press (Tight/Normal Squelch) or Squelch (Utilities Menu). This is a channel-wide feature.

Normal
Unmutes to incoming transmission with a normal signal strength.

Tight
Unmutes to incoming transmission with a tight signal strength.

Specific
Allows the Squelch Level value to be invoked as opposed to either the Tight or Normal setting (applicable to Repeater only).

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode, and MOTOTRBO SLR Series repeaters in Conventional mode only.

2.45.1.16
Squelch Level

Provides more resolution (15 settings) to set the desired carrier squelch level to - as opposed to the two settings afforded by the tight and normal settings.

Range:

Maximum	Minimum	Increment
14	0	1

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Analog mode, and MOTOTRBO SLR Series repeaters in Conventional mode only.

This feature is enabled when Squelch is set to Specific.

This feature is supported in Analog mode only.

2.45.1.17
Wireline Mute Pin

Configures the Wireline Mute Pin (GPIO Index) for the channel.

For MTR3000 models, the choices are "None", "Pin #4", "Pin #15", "Pin #24", "Pin #8, #25", "Pin #10, #12", "Pin #21", and "Pin #5". For MOTOTRBO Repeater models, the choices are "None", "Pin #19", "Pin #21", "Pin #20", and "Pin #22".

2.45.1.18
Voice Emphasis

Enhances audio clarity for higher frequencies by applying an audio shaping filter to reduce noise in the radio signal.

The type of filter used depends on the option selection. If None is selected, no filter is applied to the signal. Pre-emphasis (Pre) is used to filter the transmit signal and De-emphasis (De) is used to filter the receive signal. This is a channel-wide feature.

For MOTOTRBO conventional radios and MOTOTRBO SLR Series repeaters, the following options are supported:

None
Neither receive nor transmit audio filtering is applied.

De & Pre
Receive and transmit audio filtering are enabled.

For MOTOTRBO SLR Series repeaters, the following options are supported:

None
Neither receive nor transmit audio filtering is applied.

De & Pre
Receive and transmit audio filtering are enabled.

De Only
Receive audio filtering are enabled.

Pre Only
Transmit audio filtering are enabled.

NOTE:
This feature is set to None and is unavailable if Audio Type is set to Flat Unsquelch in MOTOTRBO Repeaters/MOTOTRBO SLR Series repeaters or RX & TX Flat in MTR3000 base radio/repeater/MOTOTRBO SLR Series repeaters.

This feature is hidden on a Dynamic Mixed Mode Channel when the Dynamic Mixed Mode Feature is disabled. This applies to MOTOTRBO radios 1.6A+ releases, MOTOTRBO SLR Series repeaters 1.0+ releases, and MOTOTRBO 2.0+ releases.

This feature is applicable to MOTOTRBO Conventional radios, MOTOTRBO SLR Series repeaters, and MTR3000 base radio/repeater in Conventional mode only.

2.45.1.19
ARTS

The Auto-Range Transpond System (ARTS) feature is used to inform users when a radio gets out of range from contact with another ARTS-equipped radio.

Disabled
The radio disables ARTS.

TX
The radio transmits polling signals only to connect with other radios. The radio cannot notify the user of its own range status.

RX
The radio receives polling signals only to be notified when in range or out of range. The radio can notify the user of its own range status.

RX & TX
The radio transmits and receives polling signals, connects with other radios and can be notified of its own range status.

NOTE:
The TX and RX & TX options are not supported if RX Only is enabled.

This feature is disabled if RX Squelch Type or TX Squelch Type is set to CSQ.

This feature is supported in Analog mode only.

2.45.1.20
Mandown Profile

This feature configures a conventional personality to be connected to a specific Mandown Profile.

NOTE:
This feature is disabled until a system is selected in Emergency System for the selected channel(s) in Digital or Capacity Plus channel(s).

This feature is enabled only when a MDC system is selected in TX Signaling System for the selected channel(s) in Analog channel(s).

This feature is disabled if 5 Tone Emergency Alarm Type is set to Disabled or RX Only is enabled.

2.45.1.21
Option Board

This feature enables or disables the option board capability on the channel.

When the option board capability on the channel is disabled, the option board itself may still function but may not interact with this channel's radio option board functionality. The option board must be installed in the radio else enabling this feature will be ineffective. The option board is connected through the MOTOTRBO Option Board interface to expand the capability of the radio. The option board interface is used by third party developers as part of the MOTOTRBO Application Developers Program to create a variety of applications, including enhancements on existing applications and also new applications other than those already available on the radio. Channels with the option board capability enabled can use up to six programmable buttons to toggle option board based functionalities on/off (Option Board Feature). This is a channel-wide feature.

2.45.1.22
Lone Worker

This feature enables Lone Worker on the radio.

The Lone Worker feature prompts an emergency to be raised if there has been no user activity for a predefined time. The Response Time resets with user activity. The Reminder Time begins when the Response Time expires. The Reminder Time determines how long it takes the radio waits before raising the emergency. User activity is defined as activation of any radio button or of the channel selector. This is a channel-wide feature.

NOTE:
This feature is disabled when CPC Emergency System has not been selected.

In a 5 Tone channel, this feature is disabled if the 5 Tone Emergency Alarm Type is set to Disabled or the channel is RX Only.

2.45.1.23
Allow Talkaround

Ensures that the Receive parameters are used in place of the Transmit parameters when transmitting.

This feature enables communication between radios in close proximity without the use of a repeater, and is, therefore, particularly useful when the radios are in close proximity and the repeater is out of range. This feature can be toggled between Repeater or Talkaround mode, via a short or long programmable button press (Repeater/Talkaround) or Talkaround (Utilities Menu) feature. This is a channel-wide feature.

NOTE:
For MOTOTRBO Conventional radios on a Digital channel, the Transmit and Receive frequencies must be different for this feature to be enabled.

To disable this feature, the RX Signaling System and TX Signaling System must have the same values.

This feature is not editable and is disabled if RX Only (Conventional Channel) is enabled.

For MOTOTRBO Conventional radios on an Analog channel, at least one of the following Transmit and Receive parameters must be different for this feature to be enabled: Frequency, Squelch Type, DPL Code, DPL Invert, TPL Frequency, TPL Code and Signaling System.

For MOTOTRBO Conventional radios on an Analog channel, the channel must have its RX Signaling System feature set to an MDC System to send an MDC Emergency in Talkaround mode.

This feature is not available in the Capacity Plus–Single-Site system.

This feature is disabled if Enhanced GNSS is enabled.

This feature is disabled when the Dual Capacity Direct Mode (DCDM) feature is enabled.

This feature is disabled if the Extended Range Direct Mode on page 610 is enabled.

This feature is applicable to MOTOTRBO Conventional radios in Conventional mode only.

2.45.1.24

IF Filter Type

IF Filter is required to reduce the interference from the adjacent channels.

This drop-down list allows the user to choose which type of IF Filter to use. Available choices are Wide (default) and Narrow. Select Narrow to improve the Adjacent Channel Selection (ACS) by 3-4 dB and degrade the sensitivity by 0.5 dB. It is recommended to select narrow IF filter if the adjacent channel separation is 12.5 KHz. This selection is applicable to digital channels only. Select Wide for most deployments (all analog and DMM channels use wide IF filter).

NOTE:
This feature is applicable for Capacity Plus Voice and Capacity Plus Data personalities in digital mode only.

The recommended frequency tuning when the mobile, portable, or repeater is older than 2 years and the user selects Narrow IF filter.

2.45.1.25

Compressed UDP Data Header

This feature selects the type of compression protocol used for the UDP Data Header.

Selecting Advantage reduces delays in over-the-air data transmissions. However, when working with legacy radios that do not have the capability to handle compressed UDP data packets, this feature should be set to None. This drop-down list allows you to select the compression to use for UDP data headers per channel.

2.45.1.26

Over-The-Air Battery Management

This check box allows the user to enable or disable the initial registration of Over-the-Air Battery Management data.

NOTE:
This feature is only applicable for Digital personalities.

2.45.1.27

Voice List

This field allows the user to select Capacity Plus Voice List from the choices of all existing Capacity Plus Voice Lists.

NOTE:

- This is only applicable for Paradise 1.5 release and above.
- This field is only applicable to a Capacity Plus System channel type.

2.45.1.28

Site List

This field allows the user to select Capacity Plus–Multi-Site Site List from all existing Capacity Plus–Multi-Site Site Lists.

NOTE: This field is only applicable to a Capacity Plus–Multi-Site System Personality.

2.45.1.29
Data List

This field allows the user to select Capacity Plus Data List from the choices of "None" and all existing Capacity Plus Data Lists.

NOTE:

- This is only applicable for 1.5 release and above.
- This field is only applicable to a Capacity Plus System channel type.

2.45.1.30
Audio Enhancement

Provides additional audio processing to reduce undesirable audio artifacts and improve audio quality.

This is a channel-wide feature.

Companding
The Companding algorithm reduces noise due to the channel characteristics by compressing the dynamic range of the audio at the transmitter and expanding the dynamic range of the audio at the receiver. This attenuates the low level additive channel noise since it is only expanded, not compressed.

Flutter Fighter
The Flutter-Fighter is an FM noise canceling algorithm which reduces noise due to the channel characteristics by eliminating audio pops caused by FM spikes during channel fading in high Signal to Noise ratio (S/N) conditions.

Hear Clear
Hear Clear is designed to provide the maximum level of audio quality by reducing low-level additive noise as well as the FM spikes due to channel fading. The use of this option enables both the Companding algorithm and the Flutter-Fighter algorithm. Hear Clear is most effective when used on 900 MHz channels or 800 MHz channels with 12.5 KHz channel bandwidth.

None
Additional audio processing is disabled.

NOTE:
For MOTOTRBO repeater models and MOTOTRBO SLR Series repeaters, the choice Companding is removed when Audio Type is set to RX & TX Flat for MTR3000 base radio/repeater/MOTOTRBO SLR Series repeaters or Flat Unsquelch for MOTOTRBO repeaters/MOTOTRBO SLR Series repeaters.

For MOTOTRBO subscriber models and MOTOTRBO 2.0 models, the choice Companding is removed when RX Audio Type is set to Flat Unsquelch.

For MOTOTRBO repeater models and MOTOTRBO SLR Series repeaters, the choice Hear Clear is removed when Audio Type is set to RX & TX Flat for MTR3000 base radio/repeater/MOTOTRBO SLR Series repeaters or Flat Unsquelch for MOTOTRBO repeaters/MOTOTRBO SLR Series repeaters.

This feature is set to a default value if the selected value becomes invalid because of Note 1-4.

This feature is greyed-out when the choice None is the only choice that is currently valid.

Similar audio enhancement settings should be used by all radios assigned to a Talkgroup. Specifically, if Hear Clear is enabled on the transmitting radio, it should also be enabled on all of the receiving radios.

Hear Clear can effectively inter-operate with legacy radios which only support Companding. On legacy radios which support multiple Companding algorithms, some trial-error may be needed to determine which legacy algorithm performs the best with Hear Clear.

The Flutter Fighter option can be used when the transmitting radio has no audio enhancements enabled (i.e. when the transmitting radio has Hear Clear and Companding disabled).

For MTR3000 base radio/repeater, the compressor function for Repeater Mic path in Companding cannot be supported if Audio Type is set to TX Flat Only.

For MTR3000 base radio/repeater, the expander function for Repeater Speaker path in Companding cannot be supported if Audio Type is set to RX Flat Only.

For MTR3000 base radio/repeater, Companding and Hear Clear is not supported if Audio Type is set to RX and TX Flat.

In 800/900 MHz MTR3000 base radio/repeater, Companding is only for the microphone/speaker path. Companding will not take effect in the repeat path.

Starting from MOTOTRBO 2.0 radios, this feature is disabled if Audio Type is set to Flat Unsquelch.

2.45.1.31
MPT1327

This check box allows the user to enable/disable the support of MPT1327 analog trunking feature on an analog conventional channel.

NOTE:
This feature is available in MOTOTRBO SLR Series repeaters only.

2.45.1.32
Channel Inhibit

Identifies if a channel is a valid or invalid channel.

If invalid, the channel must not be selected as a Revert Channel or added to a Scan List.

2.45.1.33
Telemetry VIO 1 GPO Level

This field allows the user to specify the pin level for Telemetry VIO 1.

When the user changes the channel, the radio automatically toggles the GPO pin according to the value set in this field. The available options are Default, High, and Low.

2.45.1.34
Telemetry VIO 2 GPO Level

This field allows the user to specify the pin level for Telemetry VIO 2.

When the user changes the channel, the radio automatically toggles the GPO pin according to the value set in this field. The available options are Default, High, and Low.

2.45.1.35
Telemetry VIO 3 GPO Level

This field allows the user to specify the pin level for Telemetry VIO 3.

When the user changes the channel, the radio automatically toggles the GPO pin according to the value set in this field. The available options are Default, High, and Low.

2.45.1.36
Telemetry VIO 4 GPO Level

This field allows the user to specify the pin level for Telemetry VIO 4.

When the user changes the channel, the radio automatically toggles the GPO pin according to the value set in this field. The available options are Default, High, and Low.

2.45.1.37
Telemetry VIO 5 GPO Level

This field allows the user to specify the pin level for Telemetry VIO 5.

When the user changes the channel, the radio automatically toggles the GPO pin according to the value set in this field. The available options are Default, High, and Low.

2.45.1.38
Scrambling Enable

Allows you to enable or disable the Scrambling feature.

NOTE: The following are the recommended configurations for MDC signaling to avoid false detection when scrambling is enabled:

- DOS Criteria Type = 1200 Hz and 1800 Hz
- DOS Auto Mute Duration (ms) = 0

2.45.1.39
Fist Microphone Disable

This check box allows the user to disable or enable the fist microphone feature.

2.45.1.40
RX Only (Conventional Channel)

Configures the channel to receive only without any transmission capability.

All Transmit features for the channel will also be disabled, except GNSS Revert. This is a channel-wide feature.

NOTE:
The channel must not be set as any Revert Channel (for example, Emergency Revert Channel) or TX Designated Channel (for example, Scan TX Designated Channel).

This feature is not available in the Capacity Plus–Single-Site system.

This feature sets the Allow Talkaround to unchecked and make it not editable (if this feature is checked).

This feature makes all (except GNSS Revert) the Transmit fields under TX not editable (if this feature is checked).

This feature sets the Admit Criteria selections to Channel Free (if this feature is checked).

This feature disables the Copy button (if this feature is checked).

This feature sets the TX Signaling System selections to None (if this field is checked).

This feature sets the Contact Name selection to None (if this field is checked).

This feature sets the Emergency System to None (if this field is checked).

This feature is applicable to MOTOTRBO Conventional radios, andMOTOTRBO SLR Series repeaters in Conventional mode only.

2.45.1.41
Privacy

This feature allows privacy on selected digital channels.

Privacy is a software-based scrambling solution that is not robust, and is only meant to prevent eavesdropping. The signaling and user identification portions of a transmission are not scrambled. Receiving radio(s) must have the same Basic Privacy Key as the transmitting radio in order to unscramble the privacy-enabled voice call or to receive the privacy-enabled data transmission.

Channels may have their privacy enabled or disabled via a short or long programmable button press (Privacy On/Off) or Privacy (Utilities Menu). A radio must have privacy enabled on the channel to transmit a privacy-enabled transmission, but this is not necessary for receiving radio(s). Privacy-enabled channels are still able to receive clear (unscrambled) transmissions. A visual indication appears on all display radios if the channel is privacy-enabled. The radio LED lights up green when transmitting and blinks rapidly when receiving an ongoing privacy-enabled transmission. The same behavior will be observed during scan operations. This is a channel-wide feature. This feature is not available on certain radio models.

NOTE:
This feature is disabled during mix-mode selection.

This feature is hidden when the Digital feature is disabled. This is only applicable for MOTOTRBO Conventional 1.5a+ and MOTOTRBO 2.0+ releases.

This feature is greyed out when Privacy Type is set to None.

This feature is unchecked when Symmetric Keys is set to a value other than None.

2.45.1.42
Network Application Interface Phone

This check box allows the user to enable or disable the Network Application Interface Phone feature.

When NAI Phone is enabled, the MOTOTRBO system will support the telephone calls over repeater NAI interface instead of the 4-wire phone patch.

10 (default)1

NOTE:
This feature is only applicable for Digital, Capacity Plus Voice and Capacity Plus Voice channels on MOTOTRBO repeaters and MOTOTRBO SLR Series repeaters.

This feature is hidden when the Network Application Interface Voice feature is disabled.

2.45.1.43
Window Size

This feature allows you to configure the Window Size for an Enhanced GNSS channel.

Table 99: Range

Maximum	Minimum	Increment
10	1	1

NOTE:
This feature is editable if Enhanced GNSS is editable and enabled.

This feature is disabled when the Dual Capacity Direct Mode (DCDM) feature is enabled.

This feature is disabled if the Extended Range Direct Mode on page 610 is enabled.

This feature is supported in Digital mode only.

2.45.1.44
Messaging Delay (ms)

This feature sets the inter-repeater messaging delay based on the IP network configuration. This is a channel-wide feature.

60
The inter-repeater messaging delay is 60 ms.

90
The inter-repeater messaging delay is 90 ms. This is for channel wide.

150
The inter-repeater messaging delay is 150 ms.

NOTE:
This feature is disabled when IP Site Connect is set to None.

This feature is only applicable for 1.4+ releases.

For Digital channels, this feature is hidden if the Satellite Receiver and IP Site Connect features are disabled. This is applicable for 1.5+ releases only.

This feature is greyed-out when the System Controller Mode is enabled.

2.45.1.45
Compressed UDP Data Header

This feature selects the type of compression protocol used for the UDP Data Header.

Selecting Advantage reduces delays in over-the-air data transmissions. However, when working with legacy radios that do not have the capability to handle compressed UDP data packets, this feature should be set to None. This drop-down list allows you to select the compression to use for UDP data headers per channel.

2.45.1.46

Dual Capacity Direct Mode (DCDM)

The Dual Capacity Direct Mode (DCDM) feature supports two simultaneous subscriber transmissions within a 12.5 kHz channel bandwidth for Direct Mode transmissions.

The radios within the same group must use the same timeslot so that the group using timeslot 1 does not interfere with the group using timeslot 2. For proper operation, the radios need to identify and track the timeslot structure. A unique radio is elected as a channel timing leader. The other radios adjust their clocks to synchronize as possible with the channel timing leader.

NOTE:
This feature is supported in Digital mode only.

This feature is disabled and set to unchecked if the Extended Range Direct Mode on page 610 is enabled.

2.45.1.47

Timing Leader Preference

In a Dual Capacity Direct Mode (DCDM) system, a unique radio needs to be elected as a channel timing leader.

The preferred channel timing leader should be a subscriber that has the following characteristics: always turned on, has large transmit coverage, always selected to Dual Capacity Direct Mode channel, and never scans. When possible, a Mobile should act as the preferred channel timing leader since synchronization beaconing may drain more battery current.

Preferred
Provision the radio as the preferred timing leader, such as control station.

Eligible
The radio is able to be the timing leader, but should yield leadership to higherpreference candidates.

Ineligible
Provision the radio to not be the leader, such as radio that roams frequently.

NOTE:
This feature is enabled when the Dual Capacity Direct Mode (DCDM) feature is enabled.

This feature is disabled if the Extended Range Direct Mode on page 610 is enabled.

This feature is supported in Digital mode only.

2.45.1.48

Repeater/Time Slot

MOTOTRBO utilizes digital Time Division Multiple Access (TDMA) technology to divide a 12.5 kHz channel into two alternating time slots, with each carrying an individual call when operating in Repeater mode.

As a result, both the assigned frequency and the assigned time slot must be specified in order to completely describe a digital repeater channel. Radios or Groups that need to talk together must be assigned to the same frequency and time slot. This is a channel-wide feature.

NOTE:
This feature is only applicable while operating in Repeater mode and Dual Capacity Direct Mode.

This feature is disabled if the Extended Range Direct Mode on page 610 is enabled.

A radio configured for repeater slot 1 or slot 2 operation will always hear a radio transmitting in Talkaround mode regardless of which slot the radio is configured to hear in repeater mode. A receiving radio in Talkaround mode will hear any Talkaround calls as well as repeated calls on the configured repeater slot.

This feature is supported in Digital mode only.

For Capacity Plus–Multi-Site channels, this feature needs to be set the same as the Repeater Channel Slot ID.

2.45.1.49
Phone System

Associates any available Phone System to the channel for use when initiating or receiving a phone call on a conventional channel.

Selecting the None option disables the user from initiating or receiving phone calls on this channel. This is a channel-wide feature.

NOTE:
This feature is disabled when the Dual Capacity Direct Mode (DCDM) feature is enabled.

This feature is disabled and set to **None** if the Extended Range Direct Mode on page 610 is enabled.

This feature is supported in Digital mode only.

2.45.1.50
ARS

The Automatic Registration Service (ARS) feature provides an automated data application registration for the radio.

When the radio powers up, the radio automatically registers with the server. This feature is used with data applications, such as any data traffic on this channel that is associated with an application server such as MOTOTRBO Text Messaging or MOTOTRBO Location Services.

Disabled
Disables the ARS feature.

On System Change
Enables the ARS feature for single site.

On System/Site Change
Enables the ARS feature for single site and when the radio roams from one site to another site (available when IP Site Connect or Auto Roam is enabled).

NOTE:
This feature is disabled when the Option Board Trunking feature is enabled.

This feature is supported in Digital mode only.

ARS is not supported for CP100d, CP200d, CM200d, CM300d, DEP 250, and DEP 450 radio models.

2.45.1.51
Enhanced GNSS

This feature allows you to enable the Enhanced GNSS feature on a channel for subscriber models.

This feature mainly helps to offload GNSS messages away from the selected channel with increased reliability and throughput compared to the standard GNSS revert feature by scheduling the GNSS transmissions of the radios. The Enhanced GNSS Revert channel supports ARS and GNSS data from radio internal application as well as GNSS data and Raw data from XCMP device. Voice and other data are not supported on a channel when this feature is enabled. This is a channel-wide feature.

NOTE:
This feature is applicable in repeater mode only.

This feature is disabled if the Option Board Trunking feature is enabled.

This feature is disabled and set to unchecked if the Extended Range Direct Mode on page 610 is enabled.

This feature is disabled when the Dual Capacity Direct Mode (DCDM) feature is enabled.

2.45.1.52
Window Size

This feature allows you to configure the Window Size for an Enhanced GNSS channel.

Table 100: Range

Maximum	Minimum	Increment
10	1	1

NOTE:
This feature is editable if Enhanced GNSS is editable and enabled.

This feature is disabled when the Dual Capacity Direct Mode (DCDM) feature is enabled.

This feature is disabled if the Extended Range Direct Mode on page 610 is enabled.

This feature is supported in Digital mode only.

2.45.1.53
Privacy Alias

The Privacy Alias feature allows you to assign the Enhanced Privacy Key/Alias for the channel.

This is a channel-wide feature.

NOTE:
This feature is greyed out if Privacy Type is set to a value other than Enhanced.

This feature is greyed out when Privacy is unchecked.

This feature is visible if Enhanced Privacy is supported by the radio.

This feature is hidden if the Digital feature is disabled. This is only applicable for 1.5a+ releases.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.45.1.54
Symmetric

Allows the user to assign the Symmetric Keys (AES) and Alias for the channel.

NOTE:
This feature is hidden if the Symmetric Keys (AES) is disabled.

This feature is greyed-out if Privacy Type is set to Basic.

This feature is greyed-out and set to None if Privacy (Conventional Channel) is enabled.

2.45.1.55
Option Board Trunking

This feature enables or disables the option board trunking capability on the channel.

This feature prevents non-supported conventional features from being used while the radio is using the option board trunking capability (i.e. Scan is disabled automatically). The option board must be installed in the radio; otherwise enabling this feature will be ineffective. The option board is connected through the MOTOTRBO Option Board interface to expand the capability of the radio. The option board interface is used by third party developers as part of the MOTOTRBO Application Developers Program to create a variety of applications, including enhancements on existing applications and also new applications other than those already available on the radio. Channels with the option board capability enabled can use up to six programmable buttons to toggle option board based functionalities on/off (Option Board Feature). This is a channel-wide feature.

NOTE:
This feature is disabled if Option Board is disabled (unchecked).

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.45.1.56
Phone Gateway

Defines whether the Repeater is used as a phone gateway for the configured timeslot.

Since this configuration is set on the timeslot (in Conventional Single Site and IPSC) through the digital personality and on per digital personality basis in Capacity Plus–Single-Site, the configuration is different for different digital channels/personalities. On the Capacity Plus–Single-Site Voice channel, the choices are None and Slot 1 & Slot 2. On the conventional digital channel, the choices are None, Slot 1, Slot 2, and Slot 1 & Slot 2, Slot 1 (Preconfigured) & Slot 2, Slot 1 & Slot 2 (Preconfigured).

NOTE:
For Digital personalities, the choice Slot 1 & Slot 2 is only applicable when Enable (Preconfigured Call) is unchecked or not applicable.

For Digital personalities, the choices Slot 1 (Preconfigured) & Slot 2 and Slot 1 & Slot 2 (Preconfigured) is only applicable when Enable (Preconfigured Call) is checked.

This feature is supported in Digital mode only.

This feature is disabled if the Extended Range Direct Mode on page 610 is enabled.

This feature is is hidden when Digital or Digital Phone Patch feature is disabled.

2.45.1.57

IP Site Connect

This feature assigns the selected channel as an IP Site Connect enabled channel.

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

This feature is disabled when the Dual Capacity Direct Mode (DCDM) feature is enabled.

2.45.1.58

System Controller Mode

This feature allows the user to enable or disable System Controller Mode.

NOTE:
This feature is applicable for Digital channels only.

This feature is should be unchecked and disabled when Link Type is set to None or Master.

This feature is disabled if theExtended Range Direct Mode on page 610 is enabled.

This feature is disabled when IP Site Connect is set to Slot 1, Slot 2, or Slot 1 & Slot 2.

2.45.1.59

Messaging Delay (ms)

This feature sets the inter-repeater messaging delay based on the IP network configuration. This is a channel-wide feature.

Table 101: Range

Maximum	Minimum	Increment
510 ms	60 ms	30 ms

NOTE:
This feature is disabled when IP Site Connect is disabled (unchecked) or when IP Site Connect is set to None.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

This feature is disabled when the Dual Capacity Direct Mode (DCDM) feature is enabled.

2.45.1.60

Text Message Type

When creating a new or forwarding a text message, user must choose to send the text message type as Advantage or DMR Tier2 Text (DMR Standard) message.

When replying or re-sending a text message, the text message type of the original message will be followed. This drop-down list allows the user to choose which type of text message to use. This is a personality-wide feature.

Advantage
MSI advantage TMS.

DMR Standard

DMR Tier2 Text Message. This option is only for individual or group radio-to-radio calls. Do not configure contacts as PC Call, Dispatch Call. For Private Call or Group Call, ensure that the Route Type is not configured as Non-IP Peripheral or Option Board.

NOTE: This feature is only applicable for Digital personalities.

2.45.1.61

Beacon Interval (ms)

This feature specifies how often the radio sends out the beacon signal for Capacity Plus.

In a Capacity Plus–Single-Site system, this feature value should be higher in the subscriber than the repeater. In a Capacity Plus–Multi-Site system, this feature value should be the same in both the subscriber and repeater. This is a channel-wide feature.

Range:

Maximum	Minimum	Increment
4800 ms	960 ms	480 ms

NOTE:
This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.45.1.62

Rest Channel Acquisition TOT (min)

This feature determines the interval for tone to sound to indicate to the radio user when a radio is "lost" or out of range from the Capacity Plus–Single-Site system.

A "lost" radio is unable to determine which is the rest channel it should be on. This is a radio-wide feature.

Range:

Maximum	Minimum	Increment
20 min	0 min	1 min

NOTE:
This feature is applicable for 1.5+ releases only.

This feature is applicable for Capacity Plus–Single-Site System and Capacity Plus–Multi-Site System Personalities only.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.45.1.63

Repeater RSSI Threshold (dBm)

This threshold defines a level at which the repeater will not transmit due to interference.

For a multi-repeater trunked system this threshold also determines the level at which a repeater will temporarily remove itself from the system due to interference.

IP Site Connect Systems

The threshold should be set according to any license restrictions (for example FCC), increasing the level will make the repeater increasingly impolite to other systems.

Capacity Plus–Single-Site Systems and Capacity Plus–Multi-Site Trunked Systems

When this threshold is exceeded by an unwanted RF signal then the repeater will be temporarily removed from the system. When the interference falls below this threshold the repeater will return. This happens very rapidly.

Dealers should estimate the level of interference and set this level accordingly; setting the level too high will result in wanted signals not being received when interference is present, whereas setting the level too low will result in a loss of channel capacity. This is a channel-wide feature.

Range:

Maximum	Minimum	Increment
-40 dBm	-130 dBm	1 dBm

NOTE:
This feature is disabled when IP Site Connect is set to None and System Controller Mode is unchecked.

This feature is applicable for 1.4+ releases only.

This feature must always be enabled for Capacity Plus–Single-Site system.

This feature is hidden on a Digital channel when the IP Site Connect or the Digital feature is disabled. This is ony applicable for 1.5+ releases.

When Capacity Plus–Single-Site or Capacity Plus–Multi-Site system is enabled, this field is displayed on a Capacity Plus–Single-Site Data and Voice channel.

2.45.1.64
Auto Roam

Configures the roaming capability in a Capacity Plus–Multi-Site system.

If disabled, the radio will not be able to roam to another Capacity Plus–Multi-Site site when moving from one site to another.

NOTE:
This feature is applicable for Capacity Plus–Multi-Site System Personality only.

This feature is supported in Digital mode only.

2.45.1.65
Preference Level

This feature adjusts the usage preference level for the repeaters of a Capacity Plus–Single-Site/ Capacity Plus–Multi-Site site.

1 identifies the highest preference level, or most preferred repeater to be used, while, 10 identifies the lowest preference level, or least preferred repeater to be used.

Range:

Maximum	Minimum	Increment
10	1	1

NOTE:
This feature is only applicable for Capacity Plus–Single-Site and Capacity Plus–Multi-Site Voice personalities in 1.5a+ releases only.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.45.1.66

Slot 1 Channel ID

This field displays the Slot 1 Channel ID value.

NOTE:

- This is only applicable for Paradise 1.5, Bahama 1.0 releases and above.
- This field is only applicable for Capacity Plus–Single-Site voice and Capacity Plus–Multi-Site voice & data channel types.

2.45.1.67

Slot 2 Channel ID

This field displays the Slot 2 Channel ID value.

NOTE:

- This is only applicable for Paradise 1.5, Bahama 1.0 releases and above.
- This field is not editable.
- The value in the field is must be 1 greater than the value of **Slot 1 Channel ID**.
- This field is only applicable for Capacity Plus–Single-Site Voice, Capacity Plus–Multi-Site Voice, and Capacity Plus–Multi-Site Data personalities.

2.45.1.68

IP Site Connect Repeater

This field allows the user to select the Multi-Site Channel Configuration from None, Slot 1, Slot 2, or Slot 1 & Slot 2 for repeaters. This is a channel-wide feature.

None
Both slot 1 and slot 2 function in single site mode.

Slot 1
Only slot 1 functions in IP Site Connect mode.

Slot 2
Only slot 2 functions in IP Site Connect mode.

Slot 1 & Slot 2
Both slot 1 and slot 2 function in IP Site Connect mode.

NOTE:
If Repeater Type is set to Single Site, this field should be set to None and greyed-out.

During cut, paste,drag, drop, write, or clone, if target archive does not support multi site, this feature should be set to None.

This feature is only applicable for digital channel.

For 1.5a+ releases, this feature is hidden when the IP Site Connect or the Satellite Receiver feature is disabled.

This feature is grey-out when System Controller Mode is enabled.

2.45.1.69

Per-Site RSSI Threshold (dBm)

This field allows you to specify the RSSI Threshold to be used for this channel when it is acting as a site in an IP Site Connect system.

Table 102: Range

Maximum	Minimum	Increment
-60 dBm	-120 dBm	-1 dBm

NOTE:
This field is only applicable for Digital channels.

This field is hidden when the IP Site Connect feature or the Digital feature is disabled.

This field is greyed out when IP Site Connect is unchecked.

This field is greyed out when Dual Capacity Direct Mode is checked.

2.45.1.70

Signaling Pre-emphasis/De-emphasis

When enabled, provides a filtering algorithm, used by the Audio Signaling Filter Integrated Circuit (ASFIC), to reduce the signal noise ratio in two-way radio RF systems.

Pre-emphasis is used to filter the transmit signal and De-emphasis is used to filter the receive signal.

NOTE:
This feature is supported in Analog mode only.

2.45.1.71

Wide Area

Configures a Capacity Plus–Multi-Site Data Revert channel to be wide area.

NOTE:
This feature is only applicable to Capacity Plus–Multi-Site Data personalities.

If a wide area data repeater requires IP connection with other site-wide area data repeaters in the Capacity Plus–Multi-Site system then it must have the same Slot 1 Channel ID .

Slot 1 Channel ID value must be unique for each data repeater at a site.

This feature is supported in Digital mode only.

2.45.1.72

RAS Alias

Thus feature configures a digital personality to be connected to a specific RAS ID (identified via Key Alias in CPS 2.0).

When a RAS ID is connected to a specific digital personality, that personality is considered to be RAS-enabled; otherwise, the personality is RAS-disabled.

All radios and repeaters have default RAS Key. All digital channels (both initial and added channels) are defaulted to the default keys. The default key is 000000. To disable RAS, go to Authentication (RAS) on page 410 and select **Disable**. For radios, select the channel in the Radio, and browse to **None**.

NOTE: This feature is supported in Digital mode only.

2.45.1.73
BSI Mode

This field allows the user to determine the BSI mode. Choices are "Analog" and "Digital BSI".

2.45.1.74
Fixed Privacy Key Decryption

When enabled, the privacy key for decode will be fixed, using the same privacy key as the current transmit (Tx) privacy settings.

2.45.1.75
Ignore Rx Clear Voice/Packet Data

When enabled, the clear voice call received in the personality channel will be muted.

2.45.2
Enhanced GNSS (Conventional Personality)

The **Enhanced GNSS** section of the Conventional Personality set contains the following fields:

2.45.2.1
Enable (Slot 1)

Configures the Enhanced GNSS feature on Repeater Slot 1.

When this feature is enabled on the Repeater slot, then the slot is responsible for scheduling the GNSS or other scheduled updates of all the subscribers. This is a slot-wide feature so each slot can be configured independently. In a Capacity Plus–Single-Site data channel, one slot can be used for GNSS and other scheduled data, and the other slot can be used for non-GNSS or other non-scheduled data. This also applies for Single Site and IP Site Connect modes.

NOTE:
This feature is supported in Digital mode only.

2.45.2.2
Enable (Slot 2)

Configures the Enhanced GNSS feature on Repeater Slot 2.

When this feature is enabled on the Repeater slot, then the slot is responsible for scheduling the GNSS or other scheduled updates of all the subscribers. This is a slot-wide feature so each slot can be configured independently. In a Capacity Plus–Single-Site data channel, one slot can be used for GNSS and other scheduled data, and the other slot can be used for non-GNSS or other non-scheduled data. This also applies for Single Site and IP Site Connect modes.

NOTE:
This feature is supported in Digital mode only.

2.45.2.3
Enhanced GNSS Window Size (Slot 1)

Configures the Window Size for the Repeater Slot 1. This is a slot-wide feature.

Range:

Maximum	Minimum	Increment
10	1	1

NOTE:
This feature can only be used by Location CSBK Data.

This feature is only be editable if Enable (Slot 1) is checked.

This feature is hidden when the Digital or Enhanced GNSS feature is disabled. This is only applicable to a digital channel.

This feature is hidden when the Digital, Capacity Plus–Single-Site, or Enhanced GNSS feature is disabled. This is only applicable to a Capacity Plus–Single-Site data channel.

This feature is hidden when the Digital, Capacity Plus–Multi-Site, or Enhanced feature is disabled. This is only applicable to a Capacity Plus–Multi-Site data channel.

If the Window Size is configured as 1 or 2, user can use the updated rate of 7.5s/15s/30s/1min/2min.

If the window size is configured as 5, 6, 7, 8, 9 or 10, user can use the updated rate of 30s/1min/2min/4min/8min.

Window Size option 1 can only be configured if the system are using the MOTOTRBO Network Interface Service (MNIS) wireline mode.

The Window Size of the subscriber units must be the same with the Repeater to avoid collision and loss of GNSS data transmission functionality.

This feature is supported in Digital mode only.

2.45.2.4
Enhanced GNSS Window Size (Slot 2)

Allows the user to configure the Window Size of repeater Slot 2 for an Enhanced GNSS channel.

User can configure Window Size option 1 and 2 if the CSBK Data feature is used. Window Size option 1 can only be configured if the system are using the MOTOTRBO Network Interface Service (MNIS) wireline mode. This feature is applicable for single-site and IP Site Connect modes in Digital conventional mode. This feature is applicable for Capacity Plus–Single-Site Data Channels in Capacity Plus–Single-Site mode and Capacity Plus–Multi-Site Data channels. It is not applicable for the repeater Dynamic Mixed Mode channel.

Range:

Maximum	Minimum	Increment
10	1	1

NOTE:
This feature is only be editable if Enable (Slot 2) is checked.

This feature is hidden when the Digital or Enhanced GNSS feature is disabled. This is only applicable to a digital channel.

This feature is hidden when the Digital, Capacity Plus–Single-Site, or Enhanced GNSS feature is disabled. This is only applicable to a Capacity Plus–Single-Site data channel.

This feature is hidden when the Digital, Capacity Plus–Multi-Site, or Enhanced GNSS feature is disabled. This is only applicable to a Capacity Plus–Multi-Site data channel.

The choices "1" and "2" shall be applicable only for 13.00.XX+ codeplug versions.

If the Window Size is configured as 1 or 2, user can use the updated rate of 7.5s/15s/30s/1min/2min.

If the Window Size is configured as 5, 6, 7, 8, 9 or 10, user can use the updated rate of 30s/1min/2min/4min/8min.

For codeplug version 13.00.XX+, this feature is enabled if Enable (Slot 2) is enabled.

For Capacity Plus–Single-Site channel, this feature is hidden when the Digital, Capacity Plus–Single-Site, or Enhanced GNSS feature is disabled.

For Capacity Plus–Multi-Site data channel, this feature is hidden when the Digital, Capacity Plus–Multi-Site, or Enhanced GNSS feature is disabled.

This feature is supported in Digital mode only.

2.45.2.5
Periodic Window Reservation (Slot 1)

Specifies the percentage of windows that can be reserved for periodic updates for the Enhanced GNSS Slot 1.

The available choices are None, 45%, 60%, 75% and 90%. If the user chooses 90%, it means that 90% of the total available windows are reserved for periodic updates and the remaining 10% are reserved for a one-time updates. If there is a high call volume on the selected channel, the user should not run at 90% capacity, instead use 60% or 45% capacity. This is a slot-wide feature.

NOTE:
This feature is enabled if Enable (Slot 1) is enabled.

The None choice is applicable only when IP Site Connect is set to Slot 1 or Slot 1 & Slot 2.

In IP Site Connect and Capacity Plus–Multi-Site modes, when this feature is set to 45%, 60%, 75%, or 90%, it will configure the slot as the Scheduler. When the feature is set to None, it will configure the slot as the Slave. There should be one Scheduler for the Enhanced GNSS feature in an IP Site Connect System.

This feature is supported in Digital mode only.

2.45.2.6
Periodic Window Reservation (Slot 2)

Specifies the percentage of windows that can be reserved for periodic updates for the Enhanced GNSS Slot 2.

The available choices are None, 45%, 60%, 75% and 90%. If the user chooses 90%, it means that 90% of the total available windows are reserved for periodic updates and the remaining 10% are

reserved for a one-time updates. If there is a high call volume on the selected channel, the user should not run at 90% capacity, instead use 60% or 45% capacity. This is a slot-wide feature.

NOTE:
This feature is enabled if Enable (Slot 2) is enabled.

The None choice is applicable only when IP Site Connect is set to Slot 2 or Slot 1 & Slot 2.

In IP Site Connect and Capacity Plus–Multi-Site modes, when this feature is set to 45%, 60%, 75%, or 90%, it will configure the slot as the Scheduler. When the feature is set to None, it will configure the slot as the Slave. There should be one Scheduler for the Enhanced GNSS feature in an IP Site Connect and Capacity Plus–Multi-Site Systems.

This feature is supported in Digital mode only.

2.45.2.7
Shared Channel Frequency (Slot 1)

Configures a repeater slot 1 to enable a shared channel frequency. This is a personality-wide feature.

NOTE:
This feature is enabled if repeater slot is configured for Enhanced GNSS.

This feature is hidden when the user disables the Digital or Enhanced GNSS feature. This dependency is only applicable to a Digital Channel.

This feature is hidden when the user disables the Digital, Capacity Plus–Single-Site, or Enhanced GNSS feature. This dependency is only applicable to a Capacity Plus–Single-Site Data Channel.

This feature is hidden when the user disables the Digital, Capacity Plus–Multi-Site, or Enhanced GNSS feature. This dependency is only applicable to a Capacity Plus–Multi-Site Data channel.

This feature is enabled if Periodic Window Reservation (Slot 1) is not set to None.

This feature is supported in Digital mode only.

2.45.2.8
Shared Channel Frequency (Slot 2)

Configures a repeater slot 2 to enable a shared channel frequency. This is a personality-wide feature.

NOTE:
This feature is enabled if repeater slot is configured for Enhanced GNSS.

This feature is hidden when the user disables the Digital or Enhanced GNSS feature. This dependency is only applicable to a Digital Channel.

This feature is hidden when the user disables the Digital, Capacity Plus–Single-Site, or Enhanced GNSS feature. This dependency is only applicable to a Capacity Plus–Single-Site Data Channel.

This feature is hidden when the user disables the Digital, Capacity Plus–Multi-Site, or Enhanced GNSS feature. This dependency is only applicable to a Capacity Plus–Multi-Site Data channel.

This feature is enabled if Periodic Window Reservation (Slot 2) is not set to None.

This feature is supported in Digital mode only.

2.45.3
RX/TX (Conventional Personality)

The **RX/TX** section of the Conventional Personality set contains the following fields:

2.45.3.1

RX Frequency (MHz) (Conventional Channel)

This feature sets a frequency (in MHz) on which the signal is received for the current channel. This is a channel-wide feature.

NOTE:
When the Spain Band Frequency Range feature is enabled in the application, this feature will not accept any values except for the frequencies in the bands that are permitted in Spain (146–174 MHz for BHF or 406.1–430 MHz and 440–470 MHz for UHF). When the Spain Band Frequency Range feature is disabled in the application, this feature accepts values that are outside of the Spain permitted bands.

The feature is not available in the Capacity Plus–Single-Site system Channel.

This feature is hidden on a Dynamic Mixed Mode Channel when the Dynamic Mixed Mode Feature is disabled. This applies for MOTOTRBO 1.6A+ and MOTOTRBO 2.0+ releases.

When adding a channel in MTR3000 repeaters, this feature's value is set to a minimum RX Frequency of the band.

The range of frequencies that can be set depends on the radio's band.

For Digital Mode, the MOTOTRBO radio does not support the configuration of a direct mode channel that has different TX and RX frequencies. When TX and RX frequencies are different, the channel is defined as a repeater channel and the MOTOTRBO radio expects to communicate with a repeater.

When the Canada Full Frequency Range feature is enabled in the application, this feature accepts all the values in the NPSPAC channels (for example 806–809 MHz, 821–824 MHz, 851–854 MHz, 866–869 MHz) for all radio models. When the Canada Full Frequency Range feature is disabled in the application, this feature will not accept any values in NPSPAC channel except for the mutual aid channel frequencies.

For the models except for MTR3000 repeaters, if Canada Full Frequency Range is disabled, the value in this feature does not accept the values in NPSPAC channel except the mutual aid channel frequencies.

This feature is applicable to MOTOTRBO Conventional radios, andMOTOTRBO SLR Series repeaters in Conventional mode only.

2.45.3.2

RX Squelch Type

Sets the type of decoding needed for the radio to receive a call on the channel.

The options are Carrier Squelch (CSQ), Tone Private Line (TPL) and Digital Private Line (DPL). This feature allows for more privacy on a frequency. This is a channel-wide feature.

NOTE:
CSQ based repeat is not supported in Dynamic Mixed Mode.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only.

2.45.3.3

RX DPL Code (Octal)

This is the designated digital code received when a Digital Private Line (DPL) coded transmission is received on the channel.

The DPL code is a three-digit octal number. This is a channel-wide feature.

Range:

Maximum	Minimum	Increment
777	000	1 (Octal)

NOTE:
The Receive Squelch Type feature must be set to DPL.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only.

2.45.3.4
RX DPL Invert

Causes the radio to invert the Digital Private Line (DPL) code upon receiving the signal. Inverted codes allow for compatibility with the equipment that requires it.

This is a channel-wide feature.

NOTE:
The Receive (RX) Squelch Type feature must be set to DPL.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only.

2.45.3.5
RX TPL Frequency (Hz)

This is the designated frequency received when a Tone Private Line (TPL) encoded transmission is received on this channel.

The TPL frequency is modulated into the carrier frequency. This is a channel-wide feature.

Range:

Maximum	Minimum	Increment
255.0 Hz	67.0 Hz	0.1 Hz

NOTE:
The Receive (RX) Squelch Type feature must be set to TPL.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only.

2.45.3.6
RX TPL Code

This is a code representing a specific tone.

This tone is received when a Tone Private Line (TPL) encoded transmission is received on this channel. The TPL codes are predefined in CPS 2.0 . When setting this field, the TPL Frequency is automatically set to the frequency corresponding to the selected code. This is a channel-wide feature.

NOTE:
The Receive (RX) Squelch Type feature must be set to TPL.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only.

2.45.3.7

RX Signaling System

Associates any available MDC signaling system and Quick Call II signaling system to be used during reception.

Any available MDC system and Quick Call II system may be associated with the channel. Selecting None disables the user from receiving any MDC signaling and Quick Call II signaling related data, and disables MDC and Quick Call II related features (such as MDC Emergency and Call Alert) on this channel. This is a channel-wide feature.

NOTE:
Configure the MDC Signaling System before selecting it or the default will be used.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.45.3.8

RX Ref Frequency

This feature selects the Reference Frequency used when receiving on the current channel.

The reference frequency can be shifted to allow the radio to operate on channel frequencies that would otherwise be blocked by internally generated spurious signals. Internally generated spurious signals would appear as silent carriers on certain channel frequencies. Shifting the reference frequency allows these permanent signal carrier to be shifted to unused frequencies so that the desired channel frequencies can still be used. The options are Default, 5.6 MHz, or 8.4 MHz for UHF band radios. As for VHF band radios, the options are Default, 3.36 MHz, or 4.2 MHz. For other bands radios, the option is set to Default and is not programmable. This is a channel-wide feature. The radio as it is shipped is compliant with all RTTE regulations. Changing the reference to these frequencies will impact the radio's performance specifications and could result in non-compliance with the RTTE requirements. Conformity to the local regulatory standards must be verified by the person/organization applying this change.

NOTE: This feature is applicable to MOTOTRBO Conventional radios only.

2.45.3.9

Signaling Squelch

Sets the rule determining when the radio unmutes to receive Signaling System data. This is a channel-wide feature.

And
Unmutes when the current channel's Private Line Unmute Rule is satisfied.

Or
Unmutes either when the current channel's Private Line Unmute Rule is satisfied or when a voice call is detected.

NOTE:
The Unmute Rule selected applies only to the detection of voice calls (audio), not data.

This feature is enabled only if the Receive Signaling System is set to Quik-Call II or MDC.

Starting from MOTOTRBO 2.0 radios, this feature is enabled only if the Receive Signaling System is not set to None.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.45.3.10

Unmute Rule

Sets the rule that determines when the radio unmutes its speaker to receive audio or data. This is a channel-wide feature.

Std Unmute, Mute
Unmutes when a proper Private Line (PL) code is detected, and mutes on the loss of the PL code.

And Unmute, Mute
Unmutes when a proper Private Line (PL) code and a Carrier Squelch is detected, and mutes on the loss of the PL code.

And Unmute, Or Mute
Unmutes when a proper Private Line (PL) code and a Carrier Squelch is detected, and mutes on the loss of the proper PL code, or the loss of the Carrier Squelch.

NOTE:
The Receive Squelch Type feature is not set to Carrier Squelch (CSQ).

This feature is applicable to MOTOTRBO Conventional radios in Analog modeonly.

2.45.3.11

Emergency Alarm Indication

This feature determines if audio and visual indication is given by the radio when an emergency alarm is received.

If the check box is unchecked, the radio displays nothing when it receives an emergency alarm. This is a channel-wide feature.

NOTE:
This feature is disabled when the Option Board Trunking feature is enabled (checked).

This feature is applicable to MOTOTRBO Conventional radios for Display model only.

2.45.3.12

Emergency Alarm Ack

This feature determines if the radio is allowed to acknowledge an emergency alarm. This is a channel-wide feature.

NOTE:
It is recommended that only a single radio on the group be programmed to acknowledge emergency alarms. This check box should typically only be checked on the dispatchers radio.

The Emergency Alarm Indication feature must be enabled.

This feature is applicable to MOTOTRBO Conventional radios for Display model only.

2.45.3.13

Emergency Call Indication

This feature determines if a visual indication is given by the radio when an emergency call is received. This is a channel-wide feature.

NOTE:
This feature is disabled when the Option Board Trunking feature is enabled (checked).

This feature is applicable for MOTOTRBO Conventional radios for Display model only.

2.45.3.14
Emergency Call Decode Tone

This field allows the user to enable or disable the Emergency Call Decode Tone.

NOTE:

- This feature is only applicable for Analog, Digital, Capacity Plus–Single-Site system, and Capacity Plus–Multi-Site system personalities.
- This feature is greyed out when Emergency Call Indication check box is unchecked.

2.45.3.15
PL for Data

This feature enables or disables the usage of Private Line (PL) code before signaling data can be received on the channel. This is a channel-wide feature.

NOTE:
The Receive Squelch Type feature is set to either Tone Private Line (TPL) or Digital Private Line (DPL).

The Receive Signaling System feature is not set to None.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.45.3.16
Group List

This feature associates any available RX Group List to the channel for reception.

You can listen to any Group in this list when there is any activity on it and talk back within the Group Call hang time. This is also known as a Group Scan. Selecting the None option disables you from receiving any Group Calls on this channel, except when the Call ID is the same as the Call ID of the transmit member. The Call ID from the Contact Name is automatically added to the RX Group List on this channel by default. This allows you to receive this call, even though this feature is set to None. This is a channel-wide feature.

NOTE:
This feature is disabled when the Option Board Trunking feature is enabled (checked).

This feature is applicable for Digital and Capacity Plus–Single-Site System Personalities only.

Configure the RX Group List under the RX Group Lists folder before selecting it or the default will be used.

This feature is useful if the user wants to receive calls from multiple groups.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.45.3.17
Squelch Mode

Configures the squelch mode which uses the 5 Tone tones to determine the radio un-muting requirement on a 5 Tone channel. This is a channel-wide feature.

CSQ
Unmutes to all incoming channel voice. (Available when the Squelch Type is set to CSQ)

Tone
Unmutes only when the 5 Tone tone matches. (Available when the Squelch Type is set to CSQ)

PL
Unmutes only when TPL/DPL code matches. (Available when the Squelch Type is set to DPL or TPL)

PL & Tone
Unmutes when TPL/DPL code matches, as well as 5 Tone tone matches. (Available when the Squelch Type is set to DPL or TPL)

NOTE:
This feature is supported in Analog mode only.

2.45.3.18
PL Override

When enabled, the radio ignores PL checking for un-muting in these scenarios:

- PL/Talkgroup Detect GPIO pin level setting
- Auto Reset Timer restart, and
- Squelch mode in monitor state

This is a channel-wide feature.

NOTE:
This feature is supported in Analog mode only.

2.45.3.19
Auto Reset Mode

On reception of a selective call or upon de-keying, the radio enters into the Auto Reset mode in which certain squelch requirements are defeated.

On entering into the Auto Reset mode, the auto reset timer will be started. The radio resets to the previous Squelch Mode on expiration of the auto reset timer. This feature determines how the radio resets in the Auto Reset mode. This is a channel-wide feature.

Disabled
The auto reset timer will not be started and auto reset mode will not be entered.

Carrier Override
The auto reset timer will be started and stopped by timer expiration or monitor button press. The timer will also be restarted if carrier is detected while the timer is still active.

Carrier Independent
The auto reset timer will be started and stopped by timer expiration or monitor button press.

Manual Override
The auto reset timer will not be started. The radio will stay in the auto reset mode until the monitor button is pressed.

NOTE:
This feature is supported in Analog mode only.

2.45.3.20
Offset (MHz)

This feature creates a Transmit Frequency from the Receive Frequency with an added Offset value.

This ensures that a radio's offset is consistent with the repeater's offset. A user may enter up to a maximum of 11 digits or characters, including the decimal point and negative sign (for example, -12.025). Clicking on the Copy button will populate the Transmit side. This is a channel-wide feature.

NOTE:
This feature is not available in the Capacity Plus–Single-Site system.

This feature is disabled when the Dual Capacity Direct Mode (DCDM) feature is enabled.

This feature is applicable to MOTOTRBO Conventional radios, and MOTOTRBO SLR Series repeaters only.

2.45.3.21
Copy

This feature adds the Offset to the Receive Frequency to generate the Transmit Frequency.

For an Analog channel, this feature also copies all the Receive parameters, for example like the features inside the RX box such as the Frequency (MHz), Squelch Type, Digital Private Line (DPL) Code (Octal), DPL Invert, Tone Private Line (TPL) Frequency (Hz), TPL Code and Signaling System to the Transmit side. For a Digital channel, the RX box has only the Receive Frequency (MHz) feature, therefore only this is copied to the Transmit side. This is a channel-wide feature.

NOTE:
This feature is disabled when the Dual Capacity Direct Mode (DCDM) feature is enabled.

This feature automatically adds the value from Offset (MHz) to RX Frequency (MHz) (Conventional Channel), when copying the value from RX Frequency (MHz) (Conventional Channel) to TX Frequency (MHz) (Conventional Channel).

This feature verifies that the resultant frequency value is within range, when copying the RX frequency to TX frequency, after applying the Offset (MHz).

This feature is not available in the Capacity Plus–Single-Site system Channel.

This feature is disabled for multiple selection. To enable multiple selection, change the value in RX Frequency (MHz) (Conventional Channel) from blank to a value. This is available for subscriber models only.

This feature is applicable to MOTOTRBO Conventional radios only.

2.45.3.22

TX Frequency (MHz) (Conventional Channel)

This feature sets a frequency (in MHz) on which a signal is transmitted for the current channel. This is a channel-wide feature.

NOTE:
When the Spain Band Frequency Range feature is enabled in the application, this feature will not accept any values except for the frequencies in the bands that are permitted in Spain (146–174 MHz for BHF or 406.1–430 MHz and 440–470 MHz for UHF). When the Spain Band Frequency Range feature is disabled in the application, this feature accepts values that are outside of the Spain permitted bands.

The feature is not available in the Capacity Plus–Single-Site system Channel.

When adding a channel in MTR3000 repeaters, this feature's value is set to a minimum TX Frequency of the band.

This feature is hidden on a Dynamic Mixed Mode Channel when the Dynamic Mixed Mode Feature is disabled. This applies for MOTOTRBO 1.6A+ and MOTOTRBO 2.0+ releases.

The range of frequencies that can be set depends on the radio's band.

For MOTOTRBO Conventional radios in Digital mode, MOTOTRBO does not support the configuration of a direct mode channel that has different TX and RX frequencies. When TX and RX frequencies are different, the channel is defined as a repeater channel and the MOTOTRBO radio expects to communicate with a repeater.

The RX Only feature must be disabled.

When the Canada Full Frequency Range feature is enabled in the application, this feature accepts all the values in the NPSPAC channels (for example, 806–809 MHz, 821–824 MHz, 851–854 MHz, 866–869 MHz) for all radio models. When the Canada Full Frequency Range feature is disabled in the application, this feature will not accept any values in NPSPAC channel except for the mutual aid channel frequencies.

This feature is disabled and its value is equal to the value of RX Frequency when the Dual Capacity Direct Mode (DCDM) feature is enabled.

This feature is disabled and set to the same value as the RX Frequency (Conventional Channel) if the Extended Range Direct Mode on page 610 is enabled.

This feature is applicable to MOTOTRBO Conventional radios, andMOTOTRBO SLR Series repeaters in Conventional mode only.

2.45.3.23

TX Squelch Type

Sets the type of encoding the radio transmits on this channel.

The options are Carrier Squelch (CSQ), Tone Private Line (TPL) and Digital Private Line (DPL). This feature allows for more privacy on a frequency. This is a channel-wide feature.

NOTE:
The RX Only feature must be disabled.

This feature is applicable to MOTOTRBO Conventional radios, andMOTOTRBO SLR Series repeaters in Conventional mode only.

2.45.3.24

TX DPL Code (Octal)

This is the designated digital code transmitted on a Digital Private Line (DPL) coded transmission for this channel.

The DPL code is a three-digit octal number. This is a channel-wide feature.

Range:

Maximum	Minimum	Increment
777	000	1 (Octal)

NOTE:
The Transmit Squelch Type feature must be set to DPL.

The RX Only feature must be disabled.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only.

2.45.3.25
TX DPL Invert

Causes the radio to invert the Digital Private Line (DPL) code before transmitting.

Inverted codes allow for compatibility with the equipment that requires it. This is a channel-wide feature.

NOTE:
The Transmit (TX) Squelch Type feature must be set to DPL.

The RX Only feature must be disabled.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only.

2.45.3.26
TX TPL Frequency (Hz)

This is the designated frequency encoded into the transmitted signal for this channel.

The Tone Private Line (TPL) frequency is modulated into the carrier frequency. This is a channel-wide feature.

Range:

Maximum	Minimum	Increment
255.0 Hz	67.0 Hz	0.1 Hz

NOTE:
The Transmit (TX) Squelch Type feature must be set to TPL.

The RX Only feature must be disabled.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only.

2.45.3.27
TX TPL Code

This is a code representing a specific tone.

This tone is encoded into transmissions on this channel. The Tone Private Line (TPL) codes are predefined in CPS 2.0 . When setting this field, the TPL Frequency automatically sets to the frequency corresponding to the selected code. This is a channel-wide feature.

NOTE:
The Transmit (TX) Squelch Type feature must be set to TPL.

The RX Only feature must be disabled.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only.

2.45.3.28
TX Signaling System

Associates any available MDC signaling system and Quick Call II signaling system to be used during transmission.

Any available MDC system and Quick Call II system may be associated with the channel. Selecting None limits the user to only be able to transmit a dispatch call upon a PTT (Push-to-Talk) button press. However, note that in this situation, an MDC or Quik-Call II call may be transmitted but only through the UCL (Unified Call List). This is a channel-wide feature.

NOTE:
Configure the MDC Signaling System before selecting it or the default will be used.

The RX Only feature must be disabled.

When the radio is transmitting in Talkaround mode, the RX settings including RX Signaling System will be used for the transmission. However, it still requires the TX Signaling System to be set to a valid signaling system to enable the emergency settings of that assigned signaling system.

This feature is applicable to MOTOTRBO Conventional radios only.

2.45.3.29
TX Ref Frequency (MHz)

This feature selects the Reference Frequency used when transmitting on the current channel.

The reference frequency can be shifted to allow the radio to operate on channel frequencies that would otherwise be blocked by internally generated spurious signals. Internally generated spurious signals would appear as silent carriers on certain channel frequencies. Shifting the reference frequency allows these permanent signal carrier to be shifted to unused frequencies so that the desired channel frequencies can still be used. The options are Default, 5.6 MHz, or 8.4 MHz for UHF band radios. As for VHF band radios, the options are Default, 3.36 MHz, or 4.2MHz. For other bands radios, the option is set to Default and is not programmable. This is a channel-wide feature. The radio as it is shipped is compliant with all RTTE regulations. Changing the reference to these frequencies will impact the radio's performance specifications and could result in non-compliance with the RTTE requirements. Conformity to the local regulatory standards must be verified by the person/organization applying this change.

NOTE:
The RX Only feature must be disabled.

This feature is disabled when Dual Capacity Direct Mode (DCDM) is enabled.

2.45.3.30
DPL Turn-Off Code

When a radio is programmed to transmit a Digital Private Line (DPL) code, it sends the digital code when the Push-to-talk(PTT) is keyed.

On PTT de-key, the tone signal is stopped, and a DPL Turn Off Code is sent to indicate the end of transmission to the receiving radio. This sub-audible code causes the receiving radio to mute its speaker before the loss of a carrier is detected to eliminate unwanted noise (squelch tail). This feature can be inhibited by assigning and asserting a GPIO pin (TOC/Reverse Burst Disable) to its active level. This is a channel-wide feature.

NOTE:
The Transmit Squelch Type feature must be set to DPL.

The RX Only feature must be disabled.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode in Conventional mode only.

2.45.3.31
VOX (Conventional Channel)

This feature enables the VOX (Voice Operated Transmit) feature on a selected channel.

VOX provides a convenient means of hands-free voice activated communication, removing the need to press the Push-to-Talk (PTT) button. This feature enables the radio to automatically assume the PTT button is pressed whenever its microphone on the VOX-capable accessory detects voice. To avoid truncation at the beginning of the VOX call, Talk Permit tone (TPT) should be disabled. If TPT is enabled, the radio user shall use a trigger word to key-up the radio. This trigger word will not, in most cases, be transmitted. After uttering the trigger word, the radio user should begin speaking only after the TPT is heard. Channels may have their VOX feature toggled on/off via a short or long programmable button press (VOX On/Off) or VOX (Utilities Menu). This is a radio-wide feature.

NOTE:
This feature is disabled if RX Only, Option Board Trunking or Allow Interruption is enabled.

It is recommended to disable the Talk Permit tone.

VOX operates with a “Channel Free” admit criteria regardless of the selected channel Admit Criteria.

2.45.3.32
TPL Reverse Burst

When the radio is programmed to transmit a Tone Private Line (TPL) code, it sends the tone code when Push-to-Talk (PTT) button is pressed.

On PTT dekey, the tone signal is stopped, and a Private Line (PL) 'reverse burst' is generated and sent to indicate the end of the transmission to the receiving radio. This sub-audible code causes the receiving radio to mute its speaker before the loss of a carrier is detected to eliminate unwanted noise (squelch tail). This feature can be inhibited by assigning and asserting a GPIO pin (TOC/Reverse Burst Disable) to its active level. This is a channel-wide feature.

None
No PL reverse burst sequence is transmitted at the end of a transmission.

Non-Standard
A non-standard reverse burst sequence is transmitted at the end of a transmission.

Standard

A standard reverse burst sequence is transmitted at the end of a transmission.

NOTE:
A standard reverse burst consists of a PL code with a 240-degree phase shift, whereas a non-standard reverse burst consists of a PL code with a 180-degree phase shift. For compatibility with other manufacturers, the non-standard reverse burst is also supported.

The Transmit (TX) Squelch Type feature is set to TPL.

The RX Only feature must be disabled.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.45.3.33
Power Level

This feature sets the radio's transmission power level for this channel.

This feature can be toggled between high or low, via a short or long programmable button press (High/Low Power) or Power (Utilities Menu) feature. In MOTOTRBO SLR Series repeater models, it can also select DC Cutback per channel (conventional)/personality (trunking). This is a channel-wide feature.

High

Used when a stronger signal is needed to extend transmission distances.

DC Cutback

This feature allows the station to transmit at a different output power when operating from a DC source. When running on DC, the high power or low power cannot be higher than the DC power. Only for MOTOTRBO SLR Series repeaters only.

Low

Used when communicating in close proximity, and to prevent transmissions into other geographical groups.

NOTE:
For UHF Portable, Low Power is equivalent to 1 W and High Power is equivalent to 4 W. For Mobile and Repeater, the High and Low values are configurable through the TX High Power (W) and TX Low Power (W) features under General Settings.

The RX Only feature must be disabled.

This feature is applicable to MOTOTRBO SLR Series repeaters , MOTOTRBO Conventional radios only.

This feature is applicable in the repeater Dynamic Mixed Mode channel MOTOTRBO version 1.6a+ and MOTOTRBO SLR Series repeater releases.

2.45.3.34
TOT (sec)

The Time-Out Timer (TOT) is the duration that the radio can continuously transmit before a transmission is automatically terminated.

This feature is used to ensure the channel is not monopolized by any one radio. You may set smaller time-outs for busier channels. This is a channel-wide feature.

Chassis may get warm to touch if Time-Out Timer for the current channel is set to infinity and continuous PTT for more than 15 minutes.

Table 103: Range

Maximum	Minimum	Increment
495 s **NOTE:** This is used for digital channels in Portables or Mobiles and analog channels in Portable CSA or ATEX model.	15 s	15 s
Infinity second **NOTE:** This is used for digital or analog channels in Repeaters and analog channels in Mobiles/Portables, excluding Portable CSA or ATEX model.		

NOTE:
Infinity is not a valid setting for Time-Out Timer (TOT) on digital TDMA channels in mobiles and portables because digital TDMA transmissions made by mobile and portables are susceptible to timing drift wherein the mobiles' and portables' transmissions may drift out of the intended timeslot and into the other timeslot when the radio has been keyed up continuously for an extended period of time. Timing drift affects radio transmission in digital channel and not in analog channels.

Time-out timer for this channel will be disabled if the infinity option is selected.

The RX Only feature must be disabled.

The range is 15 to 60 s when the Dual Capacity Direct Mode (DCDM) feature is enabled.

This feature is applicable to MOTOTRBO Conventional radios, and MOTOTRBO SLR Series repeaters.

2.45.3.35

TOT Rekey Delay (sec)

This feature sets the amount of time that the radio waits on a channel after the Time-Out Timer (TOT) expires (which stops the radio transmission) before allowing you to transmit again.

This is a channel-wide feature.

Table 104: Range

Maximum	Minimum	Increment
255 s, ∞ s	0 s	1 s

NOTE:
This feature is available when the TOT is not set to Infinity (∞).

The RX Only feature must be disabled.

2.45.3.36

Admit Criteria

This feature determines when voice or data is allowed to be transmitted on the channel.

This is used to prevent a radio from transmitting on channels that are already being used. If the radio has different transmit and receive frequencies, only the receive frequency is monitored for activity. If no activity is found on the receive frequency, the radio allows you to transmit on the transmit frequency even if it is being used. This is a channel-wide feature.

Always
The radio will always transmit when the Push-to-Talk (PTT) button is pressed. This option is also referred to as "Impolite" channel access (not available in a Capacity Plus–Single-Site Personality and Capacity Plus–Multi-Site Personality channel).

Channel Free
The radio will check for an idle channel prior to allowing a transmission. This option is also referred to as "Polite to All" channel access.

Correct PL
The radio will check for a PL match prior to allowing a transmission. This option is available only when Rx Squelch Type is set to TPL or DPL (for Analog channels only).

Color Code Free
The radio will check if the specified Color Code is not in use prior to allowing transmission (except for Group Calls that are already in progress). This option is also referred to as "Polite to Own Digital System" channel access (for Digital channels only).

Past TPL/DPL Lockout
Transmission is allowed when there is no carrier, or the correct PL has been detected since the latest carrier presence (for 5 Tone channels only).

TPL/DPL Lockout
Transmission is allowed when there is no carrier, or the correct PL has been detected (for 5 Tone channels only).

Carrier Gone Timer Expired
Transmission is allowed when there is no carrier and the Carrier Gone Timer has expired. (for 5 Tone channels only).

TPL/DPL Not Detected
Transmission is allowed if the correct PL is not detected. (for 5 Tone channels only).

No TPL/DPL or Past TPL/DPL
Transmission is allowed when there is no carrier, or the correct PL has not been detected since the latest carrier presence. (for 5 Tone channels only).

Channel Free or No TPL/DPL but Past TPL/DPL
Transmission is allowed when there is no carrier, or the correct PL has been detected since the latest carrier presence but not detected now (for 5 Tone channels only).

NOTE:
Not all transmission types utilize these settings. For example, emergency voice always operates impolitely whereas data and control messages always operates politely. An exceptional case is the emergency alarm that is sent with a mix of impolite and polite channel access.

The RX Only feature must be disabled.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.45.3.37
Admit Criteria Not Applied in Auto Reset Mode

When enabled, the radio is always allowed to transmit during the Auto Reset Mode, overriding the Admit Criteria feature.

This is a channel-wide feature.

NOTE:
The RX Only feature must be disabled.

This feature is supported in Analog mode only.

2.45.3.38
Repeater Access and Radio ID Telegram

Specifies the Repeater Access and Radio ID telegram when the PTT Keyup Mode is set to Smart PTT.

The choices are all available telegrams. This is a channel-wide feature.

NOTE:
The value of this feature is set to one of the available telegrams if the selected value is deleted or the pasted value does not exist in the available choices.

The RX Only feature must be disabled.

This feature is supported in Analog mode only.

2.45.3.39
ARTS Interval (sec)

Specifies the ARTS time interval for polling transmission in seconds (secs).

Range:

Maximum	Minimum	Increment
55 sec	22 sec	1 sec

NOTE:
This feature is disabled if RX Only is enabled.

This feature is enabled if ARTS is set to TX or RX & TX.

This feature is supported in Analog mode only.

2.45.3.40
Location Data Delivery Mode

This feature provides a separate way to configure delivery mode of location data as confirmed or unconfirmed data; while other data will follow the definition in the Data Call Confirmed field.

Location Data refers to the Location Request and Response Protocol (LRRP) answer and report from the radio's internal application or from Option Board and Non-IP Peripheral devices (refer to Route Type [Digital Call] or Route Type [Capacity Plus–Single-Site]). A confirmed data has higher reliability than unconfirmed data. However, the layer 2 retry may cause the radio to be away from home channel for a longer time and miss the home channel activities. Location Data are usually triggered periodically. Therefore, the data is sent over-the-air more often than other type of data. This drop-down list allows the user to select whether or not to confirm location data transmissions. Available choices are Unconfirmed, Confirmed, Follow Data Call Confirmed.

Unconfirmed
If set to Unconfirmed, the data delivery mode for Location Data will be sent as unconfirmed data.

Confirmed
If set to Confirmed, the data delivery mode of Location Data will be sent as confirmed data.

Follow Data Call Confirmed
If set to Follow Data Call Confirmed, the confirmed or unconfirmed data delivery mode of Location Data will follow the definition in the Data Call Confirmed field.

2.45.3.41

Contact Name (Conventional Channel)

This feature defines the call that may be initiated on the channel by pressing the Push-to-Talk (PTT) button.

However, if the channel is attached to a Group List with multiple Groups and there is an activity on one of the Groups, pressing PTT will initiate a talkback instead of a new call if it is within the hang time of the prior call. Selecting the None option prevents a call from being initiated on the channel. This is a channel-wide feature.

NOTE:
Create the Call member under the Contacts folder before selecting it or the default will be used.

The RX Only feature must be disabled.

The PC Call and Dispatch Call options cannot be set for this feature.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.45.3.42

Emergency System

This feature associates any available digital emergency system to this channel for use during an emergency.

Selecting the None option disables the user from transmitting an emergency call from this channel. This is a channel-wide feature.

NOTE:
The RX Only feature must be disabled.

This feature is set to None and grayed out when the Option Board Trunking feature is enabled (checked).

This feature is applicable for Digital, Capacity Plus–Single-Site System, and Capacity Plus–Multi-Site System Personalities only.

This feature is hidden on a Digital Channel when the Digital Emergency feature is disabled.

This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

2.45.3.43

Allow Interruption

This feature enables the radio to be interrupted during voice transmissions by radios that are Transmit Interrupt capable.

After the radio has been dekeyed, a voice, emergency, or data transmission can follow. In order to configure a radio to be Transmit Interrupt capable, see the TX Interrupt Remote Dekey programmable button option, the TX Interrupt option under In Call Criteria, and Emergency TX Interrupt.

NOTE: The RX Only feature must be disabled.

2.45.3.44

TX Interruptible Frequencies

This feature needs to be enabled if the frequency supports interruptible voice transmissions.

For frequencies supporting direct mode (talkaround) interruptible transmissions, there is no over the air definition of slotting. Therefore this is a frequency and not a channel (slot) consideration. Enabling this parameter adds a slight increase to channel access times in certain situations but reduces the

probability of collisions on the frequency. Since GNSS and Data Revert Channels do not support voice calls, this feature should not be enabled on those channels. This is a channel-wide feature.

NOTE:
The RX Only feature must be disabled.

This feature is supported in Digital mode only.

2.45.3.45
In Call Criteria

This feature dsetermines when voice is allowed to be transmitted on the channel while in a call.

This criteria is used to allow or prevent a radio from transmitting on the channel while it is currently in a call and unmuted. This is a channel-wide feature.

Always
The radio will be allowed to transmit impolitely while in a call.

Follow Admit Criteria
The radio will follow the polite Admit Criteria rules while in a call.

TX Interrupt
The radio will follow the Transmitter Interrupt rules while in a call. Radios which are Transmitter Interrupt capable are able to dekey another radio, which is currently transmitting a voice call, in order to place their own calls.

NOTE:
This feature must be disabled if RX Only feature is enabled.

This feature is supported in Digital mode only.

This feature is applicable for Digital, Capacity Plus–Single-Site System, and Capacity Plus–Multi-Site System Personalities only.

This feature supports the following choices in the Capacity Plus–Single-Site and Capacity Plus–Multi-Site personality: Follow Admit Criteria and TX Interrupt.

2.45.3.46
RSSI Threshold (dBm)

This field allows you to set the Received Signal Strength Indication (RSSI) Threshold.

The radio is allowed to initiate a call if the Received Signal Strength is less than the configured RSSI threshold. This is a channel-wide feature.

Table 105: Range

Maximum	Minimum	Increment
-80 dBm	-124 dBm	1 dBm

NOTE:
This feature is enabled when Admit Criteria is set to Channel Free or Correct PL.

It is recommended to increase the threshold in order to avoid channel busy as a result of RF interference.

The RX Only feature must be disabled.

2.45.3.47

Dual Slot Data Operation

This field allows the user to choose which Data Operation to use when using Dual Slot configuration. Choices are "None" and "GNSS".

NOTE:

- This field is only applicable for Digital channels.
- This field is hidden when the Priority GNSS over Voice or Digital feature is disabled.
- This field is set to "None" and greyed out when **Enhanced GNSS** is unchecked.
- This field is set to "None" and greyed out when **RX Only** is checked.
- This field is set to "None" and greyed out when **Dual Capacity Direct Mode** is checked.

2.45.3.48

Data Call Confirmed

This feature enables individual packets in data calls (ARS, GNSS, and Text Message) on the current digital channel or personality to be confirmed (such as acknowledged) on the current digital channel to be confirmed on the Data Link level.

The transmitting radio resends data packets in the data call if the receiving radio does not respond with Data Link level acknowledgements or confirmations upon receiving the data packets. By default, data calls are unconfirmed. This is a channel-wide feature. For Location Data Delivery Mode, when the GNSS revert channel is IPSC channel, the Location Data will be sent as unconfirmed data mandatorily. At Capacity Plus–Multi-Site trunked or data revert channel, the Location Data will be sent as unconfirmed data mandatorily.

NOTE: This feature is disabled if RX Only and Enhanced GNSS are enabled.

2.45.3.49

Enhanced Channel Access

This check box allows you to enable or disable the Enhanced Channel Access (ECA) feature for subscribers.

When enabled, the Enhanced Channel Access feature improves the reliability of transmissions by minimizing Over The Air (OTA) collisions when two or more radios initiate a call simultaneously. For effective operation, this feature needs to be enabled on all the radios accessing the channel. This is a channel-wide feature.

NOTE:
This feature is disabled if the Enhanced GNSS (Conventional Personality) on page 630 feature is enabled.

This feature is disabled if the Option Board Trunking feature is enabled.

This feature is not supported in the Dynamic Mixed Mode system configuration.

This feature is applicable in the Repeater mode of operation only. When this feature is enabled, all the radios under the same system must have different Radio ID.

This feature is disabled when the Dual Capacity Direct Mode (DCDM) feature is enabled.

This feature is grayed out if Admit Criteria on page 646 is set to **Always**.

This feature is applicable to digital channel (including Single Site, IP Site Connect, GNSS revert mode) and Capacity Plus–Single-Site data channel. Capacity Plus–Single-Site voice channel where this feature is inbuilt is not configurable by you.

2.45.3.50

Enhanced Channel Access

This check box allows you to enable or disable the Enhanced Channel Access (ECA) for Extended Range Direct Mode feature in repeaters.

When enabled, the ECA feature improves the reliability of transmissions by minimizing Over The Air (OTA) collisions when two or more radios initiate a call simultaneously. For effective operation, this feature must be enabled on the repeater and all the radios accessing the channel. ECA is a channel-wide feature.

NOTE:
For Subscribers, the ECA setting is available in digital mode only.

For Repeaters, the ECA setting is only applicable when Extended Range Direct Mode on page 610 is enabled.

The ECA feature is not supported in a MOTOTRBO Link configuration.

2.45.3.51

CSBK Data

The field defines whether or not the CSBK data feature is enabled.

When this field is enabled, the ARS, Location report without location information will be sent as CSBK. When this field is enabled and the LRRP request meets the requirement of Location CSBK, the location report with location information will be sent as CSBK. When this field is enabled and the XCMP command meets the requirement of XCMP device to server CSBK, the raw data from the XCMP device to server will be sent as CSBK. This is a channel-wide feature.

NOTE:
This feature is supported in Digital, Capacity Plus–Single-Site and Capacity Plus–Multi-Site mode.

This feature shall be disabled when the RX Only (Conventional Channel) is enabled.

2.45.3.52

TOT Type

Selects the type of timer per transmission on a 5 Tone channel. This is a channel-wide feature.

Non-cumulative
If the PTT is pressed continually for the time out timer (TOT) period, this option will then cause the radio to de-key after expiration of the timer and a button/keypad error alert will sound for the duration the PTT button remains pressed. The user is not able to re-key the radio until expiration of the transmitter TOT Rekey Delay.

Cumulative
A radio is not allowed to transmit after the cumulative total of transmissions has exceeded the time out timer (TOT) period unless reset by a receive period, with muted speaker, greater than the cumulative TOT reset duration. If the radio is PL squelched, the TOT will be reset if the radio is receiving carrier for longer than the cumulative reset duration time but does not detect its own PL in this period.

NOTE:
This feature is enabled if the TOT feature is not set to Infinity(∞).

The RX Only feature must be disabled.

This feature is supported in Analog mode only.

2.45.3.53

Cumulative TOT Reset Duration (sec)

This field allows the user to configure the Cumulative TOT Rest duration.

Specifies the duration after which a radio is not allowed to transmit after reaching this cumulative total for transmissions, unless reset by a receive period with muted speaker is greater than this duration. This is a channel-wide feature.

Range:

Maximum	Minimum	Increment
255 sec	1 sec	1 sec

NOTE:
This feature is enabled if the TOT Type feature is set to Cumulative.

The RX Only feature must be disabled.

This feature is supported in Analog mode only.

2.45.3.54

PTT Keyup Mode

Defines when, if at all, a telegram will be sent when the PTT is pressed. This is a channel-wide feature.

Disabled
No telegrams will be sent on PTT press.

Every PTT
A telegram will be sent out every time the radio is keyup with PTT pressed.

Once Only
A telegram will be sent when the radio starts a call.

Periodic
A telegram will be sent periodically when the radio is transmitting.

Smart PTT
Dedicated telegrams will be sent periodically when the radio is transmitting.

NOTE:
The RX Only feature must be disabled.

This feature is supported in Analog mode only.

2.45.3.55

PTT Keyup Encode

Selects what is transmitted when the PTT is pressed. It can be any available telegram or Address Send.

If any available telegram is selected, PTT is a fixed telegram button. If Address Send is selected, different types of telegram will be sent depending on the radio operation. For example, if the radio is

in the home screen, previously selected telegram will be sent. If the radio is In the Contacts list, the highlighted entry telegram will be sent. This is a channel-wide feature.

NOTE:
This feature is disabled if the PTT Keyup Mode is set to Disabled or Smart PTT.

The value of this feature is set to one of the available telegrams if the selected value is deleted or the pasted value does not exist in the available choices.

The RX Only feature must be disabled.

This feature is supported in Analog mode only.

2.45.3.56
PTT Dekey Encode

Specifies a telegram to encode upon PTT release.

The options are None and all available telegrams. No telegram is sent upon PTT release if the None option is selected. This is a channel-wide feature.

NOTE:
The value of this feature is reset to None if the selected value is deleted or the pasted value does not exist in the available choices.

The RX Only feature must be disabled.

This feature is supported in Analog mode only.

2.45.3.57
Radio ID Telegram

Specifies the Radio ID telegram when the PTT Keyup Mode is set to Smart PTT.

The choices are all available telegrams. This is a channel-wide feature.

NOTE:
The value of this feature is set to one of the available telegrams if the selected value is deleted or the pasted value does not exist in the available choices.

The RX Only feature must be disabled.

This feature is supported in Analog mode only.

2.45.3.58
Encoder Hold Time (ms)

Specifies the duration in milliseconds (ms) for which the radio remains keyed up after a telegram is sent. This is a channel-wide feature.

Range:

Maximum	Minimum	Increment
2550 ms	0 ms	10 ms

NOTE:
The RX Only feature must be disabled.

In Scan mode, this feature must be configured to more than twice of tone durations.

This feature is supported in Analog mode only.

2.45.3.59

Admit Criteria Not Applied in Auto Reset Mode

When enabled, the radio is always allowed to transmit during the Auto Reset Mode, overriding the Admit Criteria feature.

This is a channel-wide feature.

NOTE:
The RX Only feature must be disabled.

This feature is supported in Analog mode only.

2.45.3.60

GNSS/Data Revert Zone

This feature allows you to configure the Data revert channel when ARS is enabled.

2.45.3.61

GNSS/Data Revert Channel

This feature assigns an available single site digital channel as the Revert channel of Data for the current selected channel. A revert channel is the designated channel on which automatic Data updates are transmitted. The type of Data currently supported are GNSS, Indoor Location, and Sensor Data. This reduces traffic on a channel and allows the channel to accommodate more voice transmissions. The radio performs this action by automatically switching to the revert channel before transmitting an update, and switching back when the update is completed. By default, the revert channel is selected (Home) channel. An applicable digital channel can be used as Revert Channel for multiple channels. GNSS or Indoor Location updates are then sent on the Revert channel if the target address is a server (Network ID = CAI Network + 1); otherwise the updates are sent on the selected channel. Sensor Data updates are sent on the Revert Channel if it is not configured as Enhanced Revert Channel. Voice traffic is discouraged on revert channels. This is a channel-wide feature.

None
No revert channel or ARS is disabled.

Selected
Data updates transmitted on the current channel.

All
Select from a list of all applicable transmit digital channels.

NOTE:
This feature is disabled when ARS is disabled (unchecked).

This feature cannot be set to Selected and the channel cannot be a revert channel when Receive (RX) Only is enabled.

This feature is not available in Capacity Plus–Single-Site System channel.

This feature is set to None if the channel that is referenced as the GNSS Revert Channel has Dual Capacity Direct Mode (DCDM) enabled.

The value Selected is a choice if Dual Capacity Direct Mode (DCDM) is enabled for the current channel.

This feature is greyed out when the Dual Capacity Direct Mode (DCDM) is set to GNSS.

This feature is supported in Digital mode only.

2.45.3.62
Private Call Confirmed

This feature allows you to configure Polite Individual call as confirmed or unconfirmed for the current digital channel.

2.45.3.63
Repeater Access ID

This field allows the user to configure the MDC Repeater Access ID.

NOTE: This field is editable only when the **Signaling System** is set to a MDC Signaling System.

2.45.4
5 Tone Encode (Conventional Personality)

The **5 Tone Encode** section of the Conventional Personality set contains the following fields:

2.45.4.1
Call 1

Configures a Call button to be associated with a preprogrammed telegram. This is a channel-wide feature.

NOTE:
The value of this feature is reset to None if the selected value is deleted or the pasted value does not exist in the available choices.

This feature is supported in Analog mode only.

2.45.4.2
Call 2

Configures a Call button to be associated with a preprogrammed telegram. This is a channel-wide feature.

NOTE:
The value of this feature is reset to None if the selected value is deleted or the pasted value does not exist in the available choices.

This feature is supported in Analog mode only.

2.45.4.3
Call 3

Configures a Call button to be associated with a preprogrammed telegram. This is a channel-wide feature.

NOTE:
The value of this feature is reset to None if the selected value is deleted or the pasted value does not exist in the available choices.

This feature is supported in Analog mode only.

2.45.4.4
Call 4

Configures a Call button to be associated with a preprogrammed telegram. This is a channel-wide feature.

NOTE:
The value of this feature is reset to None if the selected value is deleted or the pasted value does not exist in the available choices.

This feature is supported in Analog mode only.

2.45.4.5
Call 5

Configures a Call button to be associated with a preprogrammed telegram. This is a channel-wide feature.

NOTE:
The value of this feature is reset to None if the selected value is deleted or the pasted value does not exist in the available choices.

This feature is supported in Analog mode only.

2.45.4.6
Call 6

Configures a Call button to be associated with a preprogrammed telegram. This is a channel-wide feature.

NOTE:
The value of this feature is reset to None if the selected value is deleted or the pasted value does not exist in the available choices.

This feature is supported in Analog mode only.

2.45.4.7
Disconnect Telegram

Specifies a telegram to be sent when the radio is going to exit the auto reset mode for any reasons, e,g mode change, Auto Reset Timer expired or clear down decoded.

The disconnect telegram is to indicate to the peer(s) of a call that a radio will no longer be in the session (i.e. no longer decoding any voice from the call). The choices are None and all available telegrams. No disconnect telegram is sent in the above scenario if None is selected. This is a channel-wide feature.

NOTE:
The value of this feature is reset to None if the selected value is deleted or the pasted value does not exist in the available choices.

This feature is supported in Analog mode only.

2.45.4.8
Sidetone (5 Tone Channel)

When enabled, this feature enables the transmitted 5 Tone telegram to be heard as a sidetone in the transmitting radio speaker.

This can act as a comfort feature to the user in knowing that the radio has transmitted. This is a channel-wide feature.

NOTE:
This feature is supported in Analog mode only.

2.45.5
5 Tone Decode (Conventional Personality)

The **5 Tone Decode** section of the Conventional Personality set contains the following fields:

2.45.5.1
Available and Decode Telegrams

The 5 Tone Decode section for a 5 Tone Personality set allows the user to select from a list of Available decoder definitions and add them to the list of Decode Telegrams.

NOTE:
This feature does not support multiple selection.

Only the definition that has the same 5 Tone Signaling System can be added here.

This feature is supported in Analog mode only.

2.45.5.2
Adding Decode Telegrams

Adds the highlighted decoder definitions from the Available list into the Decode Telegrams list. This is a channel-wide feature.

NOTE:
This feature is not supported in multiple selection.

This feature is disabled if the list is empty or no selection is highlighted in the Available list.

This feature is disabled if the Available list or the Decode Telegrams list are invisible.

This feature is supported in Analog mode only.

2.45.5.3
Removing Decode Telegrams

Removes the highlighted selection from the Decode Telegrams list to the Available list. This is a channel-wide feature.

NOTE:
This feature is not supported in multiple selection.

This feature is disabled if the list is empty or no selection is highlighted in the Decode Telegrams list.

This feature is disabled if the Available list or the Decode Telegrams list are invisible.

This feature is supported in Analog mode only.

2.45.5.4
Authorization

Prevents the user from monitoring or transmitting until authorized. This is a channel-wide feature.

Disabled
The radio has normal transmit capabilities.

Enabled
The radio will only have transmit capabilities when it is called and until the Auto Reset Timer expires, or it decodes a clear down sequence.

Enabled with Request
Allows the user to request a call. Initially, the only call allowed by this option, is a call telegram, sent to the controller from a pre-programmed button. The telegram contains the address (ID) of the sender and the transmit request sequence. If this is acknowledged and approved by the controller, the radio will decode the authorization sequence that enables transmission and all normal transmit timers will apply. When the request is sent, the authorization timer is started. This can be set from 0 to 32 seconds. This is the time the radio remains unsquelched while the user awaits confirmation. At time out, or if clear down is decoded, the radio reverts to normal operation and the user knows the request was not granted.

NOTE:
This feature is supported in Analog mode only.

2.45.5.5
Auto Reset Deauthorization

When enabled, the radio will revert to its programmed operation and authorization will be revoked when the Auto Reset Timer expires.

This is a channel-wide feature.

NOTE:
This feature is disabled if the Authorization feature is set to Disabled.

This feature is supported in Analog mode only.

2.45.6
Selecting the Right Antenna for the Channel Frequency

The correct stubby antenna must be selected and installed to meet the intended programmed frequencies.

NOTE: This procedure is only applicable for SL Series radios.

When and where to use:
This procedure is applicable for SL Series radios and SL Series Commercial radios.

For **SL Series radios**, perform steps step 1 through step 3.

For **SL Series Commercial** radios, perform steps step 4 through step 6.

Procedure:

1 **For SL Series Radios:** Select the correct antenna from the following list:

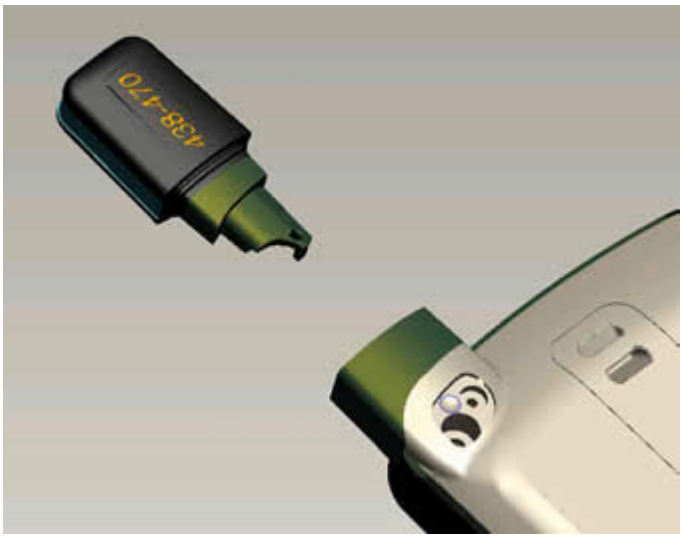
Part Number	Antenna Type
PMAE4078A	Stubby Antenna Kit (403-425 MHz)
PMAE4076A	Stubby Antenna Kit (420-445 MHz)
PMAE4077A	Stubby Antenna Kit (438-470 MHz)

2 **For SL Series Radios:** Remove the existing antenna. Perform the following actions:

a Remove the antenna screw plug from the back housing.

b Remove the antenna screw.

c Pull the antenna from the radio.



3 **For SL Series Radios:** Install the new SL Series antenna in the reverse order.

4 **For SL Series Commercial Radios:** Select the correct antenna from the following list:

Part Number	Antenna Type
PMAE4093A	UHF1 Stubby Antenna Kit (403-425 MHz)
PMAE4094A	UHF1 Stubby Antenna Kit (420-445 MHz)
PMAE4095A	UHF1 Stubby Antenna Kit (438-470 MHz)
PMAD4144A	VHF Stubby Antenna Kit (136-144 MHz)
PMAD4145A	VHF Stubby Antenna Kit (144-156 MHz)
PMAD4146A	VHF Stubby Antenna Kit (156-174 MHz)

5 **For SL Series Commercial Radios:** Unscrew the antenna from the radio.

6 **For SL Series Commercial Radios:** Install the new antenna.

2.46 Zone Set

The **Zone** set is used for the assignment of a voice announcement file, personality sets, and additional zone related properties.

The following fields are supported:

2.46.1 Zone Name

This field allows you to enter a unique alias for the zone.

2.46.2 Voice Announcement File Selection

This field allows the user to associate a voice announcement file to this zone.

Voice announcement is played when the user switches to this zone. Up to 20 zones are supported. This is a zone-wide feature.

2.47 Scan Set

The **Scan** set is used to set all time and threshold settings used by Scan list items.

The following section contains all the supported fields:

2.47.1 General (Scan)

The **General** section of the Scan set contains the following fields:

2.47.1.1 Digital Hang Time (ms)

This feature sets the time the radio will remain on a digital scan list member following the end of the channel activity.

The hang time prevents the radio from resuming scanning until the conclusion of the response to the initial call. The timer starts at the end of a transmission and resets whenever a valid activity is detected on the digital channel during the hang time.

Table 106: Range

Maximum	Minimum	Increment
10000 ms	500 ms	500 ms

NOTE:
For firmware R01.07.00 and above, the scan hang time timer starts after the Repeater Digital Call Hang Time has expired in the Digital Repeater Mode.

For firmware R01.07.00 and above, the scan hang time timer starts after the Talkaround Call Hang Time has expired in the Digital Direct Mode.

For firmware R01.07.00 and above, this feature value should be set to the minimum (non-zero) value if no additional scan hang is needed after the call has ended.

For firmware earlier than R01.07.00, the scan timer runs concurrently with the Repeater Digital Call Hang Time and should be set to a higher value than the longest Hang Time of any repeater in the scan list.

This feature is supported in Digital mode only.

2.47.1.2

Analog Hang Time (ms)

This feature sets the time the radio will remain on an analog scan list member following the end of the channel activity.

The hang time prevents the radio from resuming scanning until the conclusion of the response to the initial call. The timer starts at the end of a transmission and resets whenever a valid activity is detected on the analog channel during the hang time.

Table 107: Range

Maximum	Minimum	Increment
10000 ms	0 ms	500 ms

NOTE:
In Analog Repeater Mode, the scan hang time timer starts after the Repeater Analog Call Hang Time has expired.

In Analog Direct Mode, the scan hang time timer starts after the end of transmission since the Call Hang time is not applicable in this mode.

For analog features that use an Auto Reset Timer, the Auto Reset Timer serves as an additional Call Hang Time. Therefore, the Analog Hang Time will be started after the Auto Reset Timer expired plus any other Call Hang Time (depending on whether Repeater or Direct Mode is used).

This feature value should be set to the minimum (non-zero) value if no additional scan hang is needed after the call has ended.

2.47.1.3
Priority Alert

This is an alert tone that the radio emits when it unmutes to a priority channel during a scan operation.

NOTE:
This feature is disabled if there is no Priority 1 member set to a scan list.

This feature is disabled if the Disable All Tones feature is enabled.

This feature is applicable to MOTOTRBO Conventional radios only.

2.47.1.4
Off-Hook Suspends

Defines the radio's scan behavior when the microphone is off the hook.

Disabled
Scan is not affected.

Non-Priority
The radio only scans for priority channels.

All
All scanning is suspended.

2.47.1.5
Vote Scan Hang Time (sec)

Sets the duration that the radio remains on a Vote Scan list member following the end of the channel activity.

The hang time prevents the radio from resuming scanning until the conclusion of the response to the initial call. The timer starts at the end of a transmission and resets whenever a valid activity is detected on the channel during the hang time.

Range:

Maximum	Minimum	Increment
63.75 sec	0 sec	0.25 sec

NOTE:
It is recommended to increase the hang time value if the call hang timer in the radio increases.

2.47.1.6
Fast Vote RSSI Threshold (dB)

Sets the value in which the RSSI value of carrier present on a channel is measured to determine whether to qualify for Fast Vote or Start Vote scanning operation for all the available vote scan lists.

If the measured RSSI exceeds the provisioned Fast Vote RSSI Threshold value, the radio remains on the channel and attempt to further qualify the signal. If the measured RSSI does not exceed, the radio checks for the next vote scan member. If all the RSSI values of Vote Scan members do not exceed this threshold value, the radio performs the Start Vote operation.

Range:

Maximum	Minimum	Increment
-70 dB	-120 dB	1 dB

NOTE:
The value of this feature must be greater or equal to the value of Start Vote RSSI Threshold (dB).

2.47.1.7
Start Vote RSSI Threshold (dB)

Configures the start vote RSSI threshold for all the available Vote Scan lists.

Range:

Maximum	Minimum	Increment
-70 dB	-120 dB	1 dB

NOTE:
The value of this feature must be less than Fast Vote RSSI Threshold (dB).

2.47.1.8
Scan Sweep Time (sec)

Defines the duration that a radio takes to scan a list of channels during idle period.

This timer starts when a call is over and resume scan when this timer expires.

Range:

Maximum	Minimum	Increment
255 sec	0 sec	1 sec

2.47.1.9
Talkgroup Scan Hang Time (ms)

This feature sets the duration of the radio remains in a Talkgroup Scan list member following the end of the channel activity.

The hang time prevents the radio from resuming scanning until the conclusion of the response to the initial call. The timer starts at the end of a transmission and resets whenever a valid activity is detected on the channel during the hang time.

The following table lists the supported range.

Table 108: Range

Maximum	Minimum	Increment
10000	500	500

2.48
Scan Items Set

The **Scan Items** set is a grouping of conventional channel or trunking personality monitored for transmission activity. When the list is attached to a channel or personality, the radio searches the list for an eligible channel or personality to receive, or unmute during a scan operation.

2.48.1
General (Scan Items)

This section explains the **General** settings of the Scan Items.

2.48.1.1
Scan List Name

This field allows you to enter an alias that uniquely identifies the set within a list of Scan Items sets.

The range for the alias is up to 16 UCS-2 characters.

2.48.1.2
Available and Members

This feature allows you to select from a list of **Available** conventional channels or trunking personalities and add them to the list of **Members**

These channels or personalities will be scanned for transmission activity during a scan operation.

2.48.1.3
Adding Scan Members

This paragraph is applicable to MOTOTRBO Conventional radios.

This feature adds channel(s) from the Available list into the Members list. Channel(s) in the Members list will be scanned for transmission activity during a scan operation. Channel(s) added to the Members list will be removed from the Available list. A maximum of 16 channels (including the Selected channel) may be added to a Members list. The Scan List can contain both the Analog or Digital channels. During a scan operation, if the radio detects any activity on the scanned channel, the scanned channel configuration will be used.

To add a scan member:

1 Select a channel or personality to be added from the Available list.

2 Click the **Add** button.

NOTE:
This feature is disabled if no channel or personality is selected in the Available list or if the list is empty.

This feature is disabled when multiple scan lists are selected

For MOTOTRBO Conventional radios, Single site or Multisite channels or personalities can be members of the scan lists.

It is not recommended to assign select 5 decode to a priority channel. Any 5 tone decodes on the priority channel will most likely be missed because of the period between priority channel checks.

For Vote Scan list, if a channel to be added to a Vote Scan Members list is an Analog channel with Quik-Call II signaling system and Signaling Squelch set to And, or is a 5 Tone channel with Squelch Mode set to Tone, this channel cannot be added to the Vote Scan Members list as it may not work properly.

Channel(s) with Option Board Trunking enabled is removed from the scan list.

2.48.1.4
Removing Scan Members

This feature removes the selected conventional channel(s) or trunking personalities from the Members list.

The channel or personality will return to the Available list. The Selected channel is the channel indicated by the radio's channel selector and cannot be removed.

1 Select a channel or personality to be removed from the Members list.

2 Click the **Remove** button.

NOTE: This feature is disabled if no channel or personality is selected in the Members list.

2.48.1.5
Set/Clear Priority 1

This feature allows you to toggle the Priority 1 scanning status of the highlighted conventional channel/trunking personality in the Members list.

When the Priority 1 status is set to the highlighted channel/personality, the Priority 1 status on another channel or personality (if any) is cleared. During scan, 50% of a radio's scans are on the Priority 1 member. If a Priority 2 member exists, scans for the Priority 1 member are reduced from 50% to 25%. Even after landing on a non-priority or Priority 2 member, the radio continues to periodically scan for transmission activity on a Priority 1 member. If the radio discovers activity on the Priority 1 member, it drops the current transmission, and unmutes to the Priority 1 member.

To set the priority:

1 Select a channel or personality from the Members list.

2 Click on the **Set/Clear Priority 1** button.

NOTE:
This feature is disabled if no channel or personality is selected in the Members list.

It is not recommended to assign any 5 Tone decodes to a priority channel as the decodes will most likely be missed because of the period between priority channel checks.

This feature is applicable to MOTOTRBO Conventional radios only.

2.48.1.6
Set/Clear Priority 2

This feature allows you to toggle the Priority 2 scanning status of the highlighted conventional channel/trunking personality in the Members list.

When the Priority 2 status is set to the highlighted channel/personality, the Priority 2 status on another channel or personality (if any) is cleared. During scan, 25% of a radio's scans are on the Priority 2 member. If a Priority 2 member exists, scans for the Priority 1 member are reduced from 50% to 25%. Even after landing on a non-priority channel, the radio continues to periodically scan for transmission activity on a Priority 2 member. If the radio discovers activity on the Priority 2 member, it drops the current transmission, and unmutes to the Priority 2 member. Activity on a Priority 2 member will be dropped in the event of any valid activity on a Priority 1 member.

To set the priority:

1 Select a channel or personality from the Members list.

2 Click on the **Set/Clear Priority 2** button.

NOTE:
This feature is disabled if no channel or personality is selected in the Members list.

This feature is enabled when there is a Priority 1 member in the Members list.

It is not recommended to assign any 5 Tone decodes to a priority channel as the decodes will most likely be missed because of the period between priority channel checks.

This feature is applicable to MOTOTRBO Conventional radios only.

2.48.1.7

Rx Unconf Grp Data All Scan Members

When enabled, this field allows the radio to receive unconfirmed group data on other non-home channels in the Scan list.

Any reply or transmission of text messages or data occurs on the home channel.

NOTE:
If the current home channel is an analog channel, non-home digital channels cannot receive group data even though this field is enabled.

Motorola Solutions recommends getting expert advise before configuring this field. The modification of this field impacts the performance of ongoing calls.

2.48.1.8

Talkback

This feature determines if you are able to transmit on the channel it unmutes during scan.

If this feature is disabled, the radio transmits on the channel indicated by the TX Designated Channel feature.

2.48.1.9

PL Type

This feature indicates if Private Line (PL) decoding is required to unmute to a channel with activity during a scan operation.

Disabling the need for PL decoding increases the scanning speed.

Disabled
PL decoding not required.

Non-Priority Channel
PL decoding required on non-priority scan list member channels.

Priority Channel
PL decoding required only on a Priority 1 or a Priority 2 scan list member channel.

Priority and Non-Priority Channel
PL decoding required on all current scan list member channels.

NOTE:
Ensure that there are priority members on the scan list before selecting the Priority Channel option.

Enabling this feature overrides the PL associated with the scan list member channel.

This feature is applicable to MOTOTRBO Conventional radios only.

2.48.1.10

Channel Marker

During priority monitoring, the radio will sample higher priority members while unmuted to lower priority members.

As the radio is transmitting voice to you, leaving the current member to scan for higher priority members will cause audio holes in the transmission played out of the radio’s speaker. The Channel Marker feature can be used to reduce the audio holes experienced during priority monitoring. This feature assumes that if a transmission was recently identified as 'not of interest' (in Analog Mode, it is identified by matching the PL code, whereas in Digital mode, it is identified by matching the ID), there is no need to fully qualify it at every priority sampling interval. The radio only needs to identify the type

of transmission (for example DPL, TPL) taking place. If the type of transmission is the same as the transmission identified as 'not of interest', the radio will ignore the activity. This assumption is made for a predetermined number of times, after which, the scan member is fully qualified again. However, this assumption may not be correct every time.

The tradeoff is between the audio quality of non-priority scan members versus the reliability of detecting the activity of interest of priority members. If audio quality is very important, it is recommended to enable channel marking, but note that priority scanning reliability is decreased. This feature is also known as PL Lockout.

NOTE: For Vote Scan, if this feature is enabled, the channel(s) will be marked if there is no match PL when qualifying Vote Scan member.

2.48.1.11
TX Designated Channel Zone

This field allows you to select transmit designated personality for Trunking zone.

2.48.1.12
TX Designated Channel

This feature defines the conventional channel/trunking personality on which the radio will transmit if the user presses the Push-to-Talk (PTT) button while the radio is scanning.

This paragraph is applicable to MOTOTRBO Conventional radios. If the Talkback option is disabled, this feature also defines the channel or personality where the radio will transmit if the user presses the PTT when the radio has stopped scanning to unmute to an eligible scan list member. Any channel can be selected as the TX Designated Channel. Alternatively, Selected or Last Active Channel may be chosen.

This paragraph is applicable to 3600 Trunking capable radios. This feature is disabled if the Talkback feature is enabled. When enabled, any scan member or Selected may be chosen as the TX Designated Channel in Conventional scanning (Conventional mode). This feature is fixed at Selected and not configurable in Priority Monitor scanning (Trunked mode).

Table 109: Options for MOTOTRBO Conventional Radios

Option	Functionality
Selected	The channel indicated by the channel selector.
Last Free Channel	The channel where the radio detects no signal on it.
Last Active Channel	The last channel where the radio in scan mode stopped and unmuted to receive audio.

Option	Functionality
Voted	The last voted channel where the radio in scan mode stopped and unmuted to receive audio.

NOTE:
For MOTOTRBO Conventional radios, during a scan operation, if this feature is set to Last Active Channel, when the radio stops and unmutes to an eligible channel and you press the PTT, the radio talks back to the Group that initiated the transmission on the channel during the scan hang time. After the scan hang time expires and you press the PTT, you are now transmitting to the TX Contact Name specified for the last active channel. This is because the radio only remembers the last active channel, not the Group that it talked back. Therefore, during a scan operation, if you wish to always talk back to the same Group when this feature is set to Last Active Channel, it is suggested that the channel be attached to a RX Group List that has only one Group and that Group be set to the TX Contact Name of the channel. This essentially makes the last active channel the same as the last active Group.

For MOTOTRBO Conventional radios, the TX Designated Channel can be an Analog or a Digital channel.

For MOTOTRBO Conventional radios, when there are non-analog channels in the Scan List and the Tx Designated Channel is set to Last Free Channel, the radio will transmit on the current selected channel rather than the last free channel.

The TX Designated Channel must not be set to RX Only.

This feature is applicable to MOTOTRBO Conventional radios in Conventional mode only.

2.48.1.13
Signaling Hold Time (ms)

This feature sets the amount of time that the radio waits on an analog scan list channel when a carrier signal of sufficient amplitude is detected on the channel.

This pause allows the radio time to decode the analog system signaling data. If the decoded information is incorrect, the radio reverts to scan.

Table 110: Range

Maximum	Minimum	Increment
6375 ms	50 ms	25 ms

NOTE:
This feature must be equal to or greater than the amount of time it takes the radio to transmit the signaling data packet plus the channel's Signaling Systems Pretime.

For 5 Tone channel scanning, the recommended value of this feature is calculated as such: Pretime + N x tone duration, where N is five or greater. A greater value of N improves the landing rate.

This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

2.48.1.14
Priority Sample Time (ms)

This feature sets the duration that the radio waits, when in a call, before scanning the priority channels.

If the call is taking place on a Priority 1 Channel, no scanning will take place. When scanning priority channels, the radio briefly mutes the current transmission. Increasing this interval improves the audio

quality of the current transmission as fewer checks are done, but this also increases the chance of the radio missing out priority channel activity.

Table 111: Range

Maximum	Minimum	Increment
7750 ms	750 ms	250 ms

NOTE: A priority member must be present in the scan list.

2.48.1.15
Auto Acknowledgement

Allows the user to enable or disable "Auto Acknowledgement" in a conventional scan list and a Vote Scan list.

2.48.1.16
Voice Scan Hang Time

When enabled, the radio uses the programmed scan hang time for voice, data, and control signaling block (CSBK).

The radio remains active following the end of channel activity for the duration of the scan hang time. When disabled, Voice Scan Hang Time is disabled on the radio with no scan hang time for voice, data, and CSBK. The radio resumes scanning immediately after the end of channel activity.

NOTE:
For the full Scan Hang Time feature, see Scan Set on page 661.

Motorola Solutions recommends getting expert advise before configuring this field. The modification of this field impacts the performance of ongoing calls.

2.48.1.17
Pre-time Delay (ms)

Sets the duration that the radio waits when it detects carrier on Vote Scan list member before continuing the scan sequence.

Range:

Maximum	Minimum	Increment
1500 ms	0 ms	25 ms

2.48.1.18
Early Unmute

If enabled, the radio unmutes in Vote Scan mode before confirming the correct PL. If the PL has been qualified, the radio remains unmuted, or else the radio will mute and continue the scan sequence.

NOTE:
This is performed only when the radio is attempting on Fast Vote mode.

2.48.1.19
Display Voted Channel on RX

If enabled, when the radio has stopped scanning to unmute to an eligible Vote Scan list member, the Vote Scan channel is displayed on the radio. If disabled, the selected channel is displayed instead in that event.

2.48.1.20
Display on TX Channel

If enabled, during scanning or in Vote Scan hang time (if talkback is disabled), the TX Designated Channel is displayed on the radio when the user presses PTT to transmit; or the Vote Scan channel that the radio unmutes to is displayed on the radio (if talkback is enabled) when the user presses the PTT. If disabled, the selected channel is displayed instead in those events.

2.49
Roam Set

The **Roam** set is used to enable or disable the Active Site Search feature.

Active Site Search allows the radio to automatically look for the nearest available site by waking up each repeater in the roam list until an available site is found.

2.49.1
Active Site Search

This feature enables Active Site Search triggered by a transmission request.

When this feature is used, the radio automatically looks for the nearest available site by waking up each repeater in the roam list until an available site is found. The next available site is not necessarily the site with the strongest RSSI value among the members of the Roam List. This is a channel-wide feature.

NOTE: This feature is supported in Digital mode only.

2.50
Roam List Set

The **Roam List** set is used to define a grouping of channels to be monitored to locate the site with the strongest signal strength. When this list is attached to a channel, the radio searches the list during the roam operation to locate the site with the strongest RSSI value.

The following section contains all the supported fields:

2.50.1
General (Roam List)

The **General** section of the Roam List set contains the following fields:

2.50.1.1
Roam List Name

This field allows you to name the Roam List.

2.50.1.2
Available and Members (Roam List)

This feature allows you to select from a list of **Available** Roam Lists and add them to the list of **Members**, including priority settings.

See Adding Roam Members on page 672 and Removing Roam Members on page 672.

NOTE:
This feature is supported in Digital mode only.

This feature is disabled when multiple lists are selected.

This feature is hidden when the IP Site Connect feature is disabled.

2.50.1.3
Adding Roam Members

This feature adds channel(s) from the Available list into the Members list. Channel(s) in the Members list will be roamed during the roam operation to locate the site with the strongest RSSI value.

Site Lock should be toggled Off to enable this feature to run continuously in the background. Channel(s) added to the Members list will be removed from the Available list. A maximum of 16 channels (including the Selected channel) may be added to a Members list. The Roam List can contain only Digital channels with IP Site Connect enabled. This is a radio-wide feature.

To add a roam member:

1 Select a channel to be added from the Available list.

2 Click the **Add** button.

NOTE:
This feature is disabled if no channel is selected in the Available list or if the list is empty.

This feature is supported in Digital mode only.

2.50.1.4
Removing Roam Members

This feature removes the selected channel(s) from the Members list.

The channel will return to the Available list. The Selected channel is the channel indicated by the radio's channel selector and cannot be removed.

To remove a roam member:

1 Select a channel to be removed from the Members list.

2 Click the **Remove** button.

NOTE:
This feature is disabled if no channel is selected in the Members list.

This feature is supported in Digital mode only.

2.50.1.5
Use Per-Site RSSI Threshold

This field allows you to enable or disable use of the Per-Site RSSI Threshold.

NOTE: This field is hidden when the IP Site Connect feature is disabled.

2.50.1.6

RSSI Threshold (dBm) (Roam List)

This field allows you to set the Received Signal Strength Indication (RSSI) Threshold.

If the current site has an RSSI value that exceeds this threshold, the site is assumed to have good coverage and the radio suspends roaming. This is a channel-wide feature.

Table 112: Range

Maximum	Minimum	Increment
-60 dBm	-120 dBm	-1 dBm

NOTE:
This feature is supported in Digital mode only.

This feature is greyed out when Use Per-Site RSSI Threshold (Roam List) is checked.

2.51

Capacity Plus Voice List Set

The **Capacity Plus Voice List** set allows you to add a Capacity Plus–Single-Site Voice Channel. The set associates a Capacity Plus Voice List to a channel. While in Capacity Plus–Single-Site mode, rest channels, channels for voice calls, and channels for transmitting radio-to-radio Text Messaging Service (TMS) data calls are selected from the Members of this list. Any available Capacity Plus Voice List can be selected. Capacity Plus Voice List is a channel-wide feature.

The following section contains all the supported fields:

2.51.1

General (Capacity Plus Voice List)

This section explains the **General** settings of the Capacity Plus Voice List.

2.51.1.1

Voice Name

This field allows you to enter an alias that uniquely identifies the set within a list of Capacity Plus Voice List sets.

The range for the alias is up to 16 UCS-2 characters.

NOTE: This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

2.51.1.2

Available and Members

This feature allows you to select from a list of **Available** Capacity Plus voice channels and add them to the list of **Members**.

NOTE: This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

2.51.1.3
Adding Capacity Plus Voice Channel Members

This feature adds a channel from the Available list into the Members list. Channel(s) added to the Members list will be removed from the Available list.

As channels are added, frequency pair slots are sequentially assigned to each channel (for example if Ch1, Ch3, Ch2 are added in that order, the channel IDs would be 1–2, 3–4, 5–6 in that order.). While in Capacity Plus–Single-Site mode, rest channels, channels for voice calls, and channels for transmitting radio-to-radio Text Messaging Service (TMS) data calls are selected from channels on the Members list.

To add a Capacity Plus Voice Channel Member:

1 Select a channel to be added from the Available list.

2 Click the **Add** button.

NOTE:
This feature is disabled if no channel is selected in the Available list or if the list is empty.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

2.51.1.4
Removing Capacity Plus Voice Channel Members

This feature removes channel(s) from the Members list to the Available list.

To remove a Capacity Plus Voice Channel Member:

1 Select a channel to be removed from the Members list.

2 Click the **Remove** button.

NOTE:
This feature is disabled if no channel is selected in the Members list or if the list is empty.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

2.52
Capacity Plus Data List Set

The **Capacity Plus Data List** set allows you to add a Capacity Plus Data Channel. This set associates a Capacity Plus Data List to a channel. While in Capacity Plus–Single-Site mode, channels for data calls (except radio-to-radio Text Messaging Service data calls) are selected from the Members of this list. Any available Capacity Plus Data List is selected. Capacity Plus Data List is a channel-wide feature.

The following section contains all the supported fields:

2.52.1
General (Capacity Plus Data List)

This section explains the **General** settings of the Capacity Plus Data List.

2.52.1.1
Data Name

This field allows you to enter an alias that uniquely identifies the set within a list of Capacity Plus Data List sets.

The range for the alias is up to 16 UCS-2 characters.

NOTE: This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

2.52.1.2
Available and Members

This feature allows you to select from a list of **Available** Capacity Plus data channels and add them to the list of **Members**.

See Adding Capacity Plus Data Channel Members on page 675 and Removing Capacity Plus Voice Channel Members on page 675.

NOTE: This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

2.52.1.3
Adding Capacity Plus Data Channel Members

This feature adds channel(s) from the Available list into the Members list.

Channel(s) added to the Members list will be removed from the Available list. While in Capacity Plus–Single-Site mode, channels for data calls (except radio-to-radio Text Messaging Service (TMS) data calls) are selected from channels on the Members list.

To add a Capacity Plus Data Channel Member:

1 Select a channel to be added from the Available list.

2 Click the **Add** button.

NOTE:
This feature is disabled if no channel is selected in the Available list or if the list is empty.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

2.52.1.4
Removing Capacity Plus Voice Channel Members

This feature removes channel(s) from the Members list to the Available list.

1 Select a channel to be removed from the Members list.

2 Click the **Remove** button.

NOTE:
This feature is disabled if no channel is selected in the Members list or if the list is empty.

This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

2.52.1.5
Enhanced GNSS Window Size

This feature allows you to configure the Window Size for an Enhanced GNSS channel.

NOTE:
This feature is hidden when the Digital or Capacity Plus–Single-Site or Capacity Plus–Multi-Site or Enhanced GNSS is disabled.

For MOTOTRBO subscribers, the choices are 5, 6, 7, 8, 9, and 10.

2.52.1.6
Enhanced Channel Access

This field allows you to enable or disable the Enhanced Channel Access for Capacity Plus.

When enabled, the Enhanced Channel Access feature improves the reliability of transmissions by minimizing Over The Air (OTA) collisions when two or more radios initiate a call simultaneously. For effective operation, this feature needs to be enabled on all the radios accessing the channel. This is a channel-wide feature.

NOTE:
If this feature is enabled on a Capacity Plus Data List, members of the list cannot have Enhanced GNSS activated. This configuration is invalid.

This feature is supported in Digital mode only.

2.53
Capacity Plus Site List Set

The **Capacity Plus Site List** set is a grouping of sites within the Capacity Plus–Multi-Site system.

The Capacity Plus–Multi-Site system is a Trunked multi-site multi-channel configuration of MOTOTRBO, which combines the trunking feature of the Capacity Plus–Single-Site and the multi-site feature of the IP Site Connect configurations.

The following section contains all supported fields:

2.53.1
General (Capacity Plus Site List)

This section explains the **General** settings of the Capacity Plus Site List.

2.53.1.1
Site Name

This field allows you to enter an alias that uniquely identifies the set within a list of Capacity Plus Site List sets.

The range for the alias is up to 16 UCS-2 characters.

NOTE: This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

2.53.1.2
GNSS/Data on Revert Channel

This check box allows you to enable and disable background data to be sent on trunk channel in the absence of Data Revert. The Background Data is GNSS, Indoor Location, and Sensor Data.

2.53.1.3
Use Per-Site RSSI Threshold

This field allows you to enable or disable use of the Per-Site RSSI Threshold.

NOTE: This feature is hidden when the IP Site Connect feature is disabled.

2.53.1.4

RSSI Threshold (dBm)

This feature sets the Received Signal Strength Indication (RSSI) Threshold that triggers the radio to perform a search for the nearest strongest signal.

Table 113: Range

Maximum	Minimum	Increment
-60 dBm	-120 dBm	1 dBm

NOTE:
This feature is supported in Digital mode only.

This feature is greyed out when Use Per-Site RSSI Threshold (Capacity Plus–Multi-Site) is checked.

This feature is hidden when you disables Capacity Plus–Multi-Site.

2.53.1.5

Site ID (Subscriber)

This feature enters the ID of the site that the subscriber radio will connect to.

NOTE:
This ID must match the Site ID of the Repeater.

Duplicate IDs are not allowed.

This feature is supported in Digital mode only.

2.53.1.6

Site Alias

This feature configures a name for the site that the subscriber radio will connect to.

NOTE:
Duplicate name is not allowed.

This feature must not be empty.

This feature is supported in Digital mode only.

2.53.1.7

Voice Announcement File

Associates a voice announcement file to this feature. The choices are None and all available voice announcement files.

NOTE:
This feature is disabled if None is the only choice.

This feature is supported in Digital mode only.

2.53.1.8

Voice List

This feature associates a Capacity Plus Voice Channel List that the subscriber radio will use to make voice calls when on the site.

Any available Capacity Plus Voice Channel List can be selected. If the None option is selected, no Capacity Plus Voice Channel List is specified to be use when on the site.

NOTE: This feature is supported in Digital mode only.

2.53.1.9
Data List

This feature associates a Capacity Plus Data Channel List that the subscriber radio will use to make data calls when on the site.

Any available Capacity Plus Data Channel List can be selected. If the None option is selected, no Capacity Plus Data Channel List is specified to be used when on the site.

NOTE: This feature is supported in Digital mode only.

2.53.1.10
RX Group List

This feature associates a RX Group List that the subscriber radio will use to make Group Calls when on the site.

Any available Capacity Plus Group List can be selected. If the None option is selected, no RX Group List is specified to be use when on the site.

NOTE: This feature is supported in Digital mode only.

2.53.1.11
RSSI Threshold (dBm)

This feature sets the Received Signal Strength Indication (RSSI) Threshold that triggers the radio to perform a search for the nearest strongest signal.

Table 114: RSSI Threshold Range

Maximum	Minimum	Increment
-60 dBm	-120 dBm	1 dBm

NOTE: This feature is supported in Digital mode only.