



radtel | **DMR**
DIGITAL MOBILE RADIO ASSOCIATION

USER'S MANUAL

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WARNING

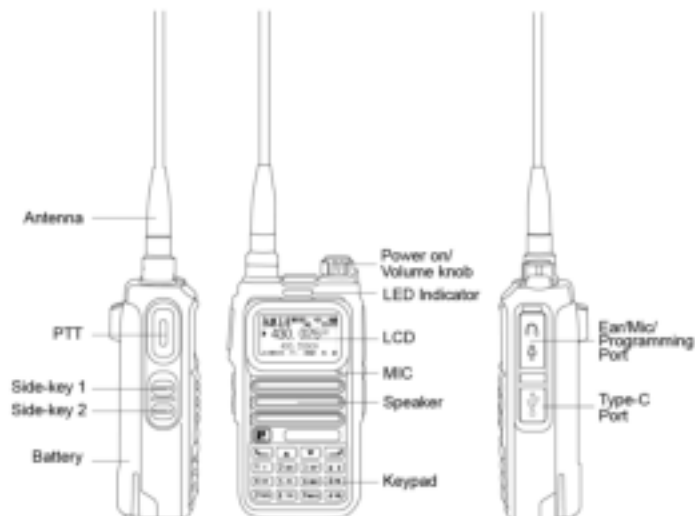
Product safety and RF Exposure for two way radio:



ATTENTION!

Before using this two way radio, please read the manual which contains important operating instructions for safe usage, RF Energy Awareness, control information and operational instructions for compliance with RF Energy Exposure limits in applicable national and international standards, and also read the operational instructions for safe use.

1. Radio Buttons & Knobs



Keypad Function

ICOM	FUNCTION
PTT	Transmit the RF signal or exit the current operation interface.
Side key 1	Define as PTT function Customize long-press and short-press functions
Side key 2	Customize long-press and short-press functions
[Menu Icon]	Menu, Confirm or DTMF: A
[Left Arrow]	Analog mode: DTMF input mode or DTMF: B Digital Mode: Dial-call mode
[Right Arrow]	Cancel or exit menu Switch A/B channel DTMF or Dial-call mode: Deleted characters
[Up Arrow]	Adjust Up frequencies, channels or menus. DTMF: C
[Down Arrow]	Adjust Down frequencies, channels or menus. DTMF: D
0	long press for defined function or DTMF code: 0 short press: number 0 or blank
1	long press: defined function. DTMF code: 1 Text input: number 1/Chinese or English characters
2-9	short press: number 2-9 long press: defined function. DTMF code: 2-9 Text input: number 2-9/Chinese or English characters
*	Short press: switch channel number/channel+frequency/channel name Long press: lock keypad DTMF code: * Text input: delete text
#	Long press: switch channel mode/frequency mode/zone mode DTMF code: # Text input: Turn text input on or off, switch text input methods.

LCD Display



- 1.VFO MODE/CH MODE/Zone-XXX mode, XXX is current working zone.
- 2.▶ meaning the main working band
- 3.D-XXXX is digital channel, A-XXXX is analog channel, XXXX is channel number
- 4.T1/T2 is digital channel time slot, AM/FM is modulation in analog channel
- 5.CXX is digital channel color code; CTC/DCS is analog channel subtone; ENC is analog channel Encrypted subtone, MUT is analog channel decoded subtone
- 6.H is high power; L is low power
- 7.W is wide band; N is narrow band
- 8.Sub channel information
- 9.Main channel information
- 10.HD is Digital call hold status
- 11.System Time
- 12.Battery level
- 13.Alert voice
- 14.Dual frequency standby
- 15.Unread SMS
- 16.Scanning
- 17.R is Reverse Frequency; T is Talk Around
- 18.Keypad locked
- 19.Signal icon

Settings

The settings include Basic Set, Key Define, Analog Set, Digital Set, Channel Set, Zone Set, Message, FM Radio, Time Manage

Menu	Sub Menu	Function
01 Radio Name	Edit name	Set radio name or callsign, Press * to delete input, press # to select input method.
02 Voice Prompt	On off	Turn on/off voice prompt.
03 Key Beep	On off	Turn on/off keypad beep.
04 Lock Timer	Off, 5s-600s	The time to lock keypad.
05 Backlight	On off	Turn on/off display backlight.
06 Light Timer	Off, 5s-600s	The time to Turn off the backlight.
07 Brightness	0-4 level	Choose the brightness level of the background light.
08 Menu Exit	Off, 5s-600s	The time to exit menu.
09 State Timer	Off, 5s-600s	Show voltage,time,date.
10 Dual Standby	On off	Select dual standby or single standby.
11 TX priority	Edit	Always transmit at main band.
	Busy	Switch to busy channel as the main band.
12 Freq Step	0.25,1.25,2.5,5,6.25,10,12.5,20,25,50,100,500,1M,5M	Set the frequency or scan step
13 Talk Around	Off, Talk Around, Invert Freq	Set repeater mode or normal mode
14 Save Mode	Off, 1:1-1:3	Set the power saving ratio, dual frequency standby mode without entering power-saving mode.
15 Scan Mode	CO	The walkie talkie stops scanning and remains at the same frequency when it detects a signal,Until the signal disappears. There is a 2-second delay between signal disappearance and scan recovery

Menu	Sub Menu	Function
15 Scan Mode	TO	When the walkie talkie detects a signal, it stops scanning and remains at the same frequency. After preset time, the walkie talkie will continue scanning even if the signal is still present.
	SE	Upon detecting a signal, the walkie talkie exits the scan and remains at this frequency
16 Scan Direction	UP, DOWN	Set the scanning direction
17 Scan Dwell	0-30	Set the scan stop time for TO scan mode
18 Scan Return	Original CH Current CH	Set the current channel after scanning
19 Alarm Type	Local	Radio emit the alarm sound
	Remote	Radio emit the alarm sound and other radio will receive the alarm tone.
	Local+Remote	Both radios emit alarm sound
20 Main PTT TX	Area A Main Area	Transmit in main area or always transmit in A area
21 Area A Mode	CH mode Zone mode Freq mode	Set the Channel mode, Frequency mode or zone mode
22 Area A Show	Show CH No Show Freq Show Alias	Set the display way in the selected mode
23 Area A Zone	Zone1-Zone256	Set the zone numbers
24 Area B Mode	CH mode Zone mode Freq mode	Set the Channel mode, Frequency mode or zone mode.
25 Area A Show	Show CH No	Set the display way in the selected mode

Menu	Sub Menu	Function
25 Area A Show	Show Freq Show Alias	Set the display way in the selected mode
26 Area B Zone	Zone1-Zone256	Set the zone numbers
27 Save CH	CH-0001- CH-1024	Save the frequency and tone into channels
28 Delete CH	CH-0001- CH-1024	Delete the frequency and tone in this channel
29 Instruction	barcode	Scan barcode to get user manual
30 Version	Version info.	Show the version information
31 LCD Contrast	Display contrast	Display contrast, the higher the value, the deeper the contrast. After setting, a restart is required
32 Initialization	Cancel Ensure	Confirm or cancel the initialization

Key Define

Menu	Sub Menu	Function
Slaver PTT	On, off	Set the side key 1 as the PTT button
Side key 1 S	None,	Set the side key 1, side key 2, Num0-9 short press or long press
Side key 1 L	Monitor(Ana)	
Side key 2 S	Hi/L Power	
Side key 2 L	Dual standby	
0 Press Long	Tx priority,	
1 Press Long	Scanning,	
2 Press Long	Backlight on/off	
3 Press Long	Roger beep	
4 Press Long	FM radio,	
5 Press Long	Talkaround	
6 Press Long	Alarm,	
7 Press Long	Freq Detect	
8 Press Long	CTC/DCS scan	
9 Press Long	Single tone	
	Status query	
	Remote Monit	
	Color code scan	
	Remote Stun	
	Remote kill	
	Rmt Wake up	
	Online check	
	LCD brightness	
	Noaa mode	

Analog Set

Menu	Sub Menu	Function
01 SQ level	0-10	Setting the squelch to off will open up the squelch entirely. Squelch is silences the receiver when there is no signal. The lower level is easier to interfere, and in the higher level, the sensitivity is not as good as lower level, so it is best to set it to middle
02 TX Start Tone	On, off	The tone before transmitting
03 TX End Tone	Off, roger beep1	The tone end transmitting or send radio name
	Roger beep2	
	Radio name	
04 Single Tone	1750Hz	Edit the tone frequency in Key Define
05 Mic Gain	0-31	Adjusts the microphone sensitivity, the higher the value, the higher the sensitivity.
06 SPK Gain	0-63	Adjusts the speaker volume, the higher the value, the higher the volume.
07 Detect Range	Frequency range	Set the frequency range to detect frequency from other radios.
08 Repeater Delay	0-2000ms	Set the repeater delay time.
09 DTMF Delay	0-2000ms	Set DTMF delay time
10 DTMF Interval	30-200ms	Set DTMF interval time
11 DTMF Duration	30-200ms	Set DTMF Duration Time
12 DTMF Mode	Off, Tx start, Tx end, Both	Set transmit the DTMF code
13 DTMF Select	01-16	Select DTMF code 1-16
14 DTMF Display	On,off	Turn on off display DTMF decode
15 DTMF TX Gain	0-127	Set DTMF Transmit Gain
16 DTMF RX TH	0-127	Set DTMF Receive threshold
17 DTMF Control	On, off	Turn on off DTMF control
18 Time Calibrate	On, off	Remote Time Calibrate

Digital Set

Menu	Sub Menu	Function
01 Personal ID	00000001	Digital ID from 1-16776415
02 Call Tone	On off	Turn on off call tone
03 Call End Tone	On off	Turn on off call end tone
04 Group Hold	0000	Set group call holding time
05 Single Hold	0000	Set single call holding time
06 SQ level	0-15	Set digital squelch level
07 Mic Gain	0-15	Set Microphone Gain
08 SPK Gain	0-15	Set speaker gain
09 Contacts Set	Contact list, add contract	Used to add/delete/change the contact information of the phone. There is one and only one All Call contact and it cannot be changed or deleted. Contact ID can be set range:1-16776415.
10 Group List Set	Group list set	Used to add/delete/change the receiver group list information of the unit, when editing the members of the group call list, use the  key to select the members of the group call contact, the background of the selected member turns black, the  key to deselect.
11 Encryption Set	Key 1-256	[Encryption Key Setting] is used to change the DMR voice encryption information of this unit.

Channel Set

Menu	Sub Menu	Function
01 DMR Mode	Dual Slot off Dual Slot on	Current Channel Enable or Disable DMR Double Capacity Mode
02 DMR Slot	Slot 1 Slot 2	Select the DMR time slot for the current channel
03 Color Code	0 — 15	Select the color code of the current channel
04 Contacts	All Call	Setting the call contact for the current channel
05 RX Group	off	Set the receive group call list for the current channel
06 Encryption	Off Key1—256	Setting the current channel voice call key
07 TX Polity	Impolite	Transmits whether or not it is in the receive state
	Carrier Match	The current channel is prohibited from transmitting as long as there is a signal
	CC match	Prohibit transmitting only if the colour code matches
08 TX Power	Low High	Current channel high and low transmit power
09 Scan Add	Add, Remove	Add or remove to scan lists
10 TOT	Off, 5s-600s	Set the time out timer
11 CH Alias	Channel name	Edit the channel name
12 Offset Dir		Frequency difference direction of the current channel
13 Offset Freq	Offset freq	Set offset frequency

Zone Set

There are 256 zone for setting. You may edit each zone name and zone channels, there are 1024 channel in each zone.

Message

Menu	Sub Menu	Function
01 New SMS	Edit message	Edit SMS message
02 Inbox	Store SMS	Store SMS
03 Outbox	Send SMS	Send SMS
04 Drafts	Edit SMS draft	Edit SMS draft
05 Default SMS	Preset SMS	Preset SMS
06 Clear All SMS	Delete all SMS	Delete all SMS

FM Radio

Menu	Sub Menu	Function
01 Work Mode	CH mode, frequency	Set working mode
02 RX Standby	On off	Turn of off radio when rx mode
03 Scan Mode	One station, all range	Set the search mode
04 Area	FM radio zone	Set 16 channels in each zone
05 Channel	FM radio channels	Set 16 FM radio channels

Time Manage

Menu	Sub Menu	Function
01 APO	On , off	Set auto power on/off
02 APO Timer	Power off timer	Set power off timer
03 System Time	System time	Adjust system time
04 Clock 1 Type	Off,once,every day	Set clock 1 type
05 Clock 1 Timer	Clock 1 timer	Set clock 1 timer
06 Clock 2 Type	Off,once,every day	Set clock 2 type
07 Clock 2 Timer	Clock 2 timer	Set clock 2 timer
08 Clock 3 Type	Off,once,every day	Set clock 3 type
09 Clock 3 Timer	Clock 3 timer	Set clock 3 timer
10 Clock 4 Type	Off,once,every day	Set clock 4 type
11 Clock 4 Timer	Clock 4 timer	Set clock 4 timer
12 Schedule	List 1-128	Set the schedule

Function Description

1. Frequency Input

Press # to frequency(VFO) mode. Enter the frequency value through the numeric keypad and accumulate 8 digits to complete the input operation.

2.Repeater frequency Input

Go to menu Channel Setting Go to set offset direction +2 and offset frequency 10

3.DMR voice encryption

This machine provides three optional encryption methods of ARC4/AES128/AES256. Please note that if two devices with voice encryption need to talk, three conditions must be satisfied at the same time: ① the same encryption type; ② the same serial number of the encryption key; ③ the same key value of the encryption key

4.Dialing call

In digital channel, press **CALL** key into dial interface. Via **CALL** switch call type, input call ID via keypad, and press **CALL** to send the call.

5 DTMF

5.1 DTMF Inputting and Sending

- ① Press **CALL** to enter the DTMF inputting interface while under sending of send
- ② Input DTMF code via keypad, and delete via **DEL**;
- ③ Press **PTT** to call, the device will send DTMF code to receiver after appointed delay time

5.2 While the device enter into sending status, the display will show up the sender's DTMF code if turn on DTMF decoding

5.3 Press keypad to send relative DTMF code while under sending transmitting status.

5.4 DTMF Remote Monitor

- ① Set up a DTMF Monitor code and turn on **DTMF Control**
- ② After other side send DTMF code with same monitor code to it is radio
- ③ After decoding successfully, the radio will transmit for 60 seconds automatically to make remote monitor happen.

5.5 DTMF ShunKil/Arc4/Aes

- ① Set up a DTMF code for ShunKil/Arc4/Aes, and turn on **DTMF Control**

② Other radios will call ShunKil/Arc4/Aes to this radio when they send relative DTMF code

The radio cannot be use until receive activate code once it is in Kil status. The radio can receiving, but cannot input anything via keypad or transmitting once it is in Shun status

Note: should set up Activate code once ShunKil code is set up, or the device cannot be activated.

6 Text Input

6.1 Press # to switch inputting methods, press * to delete inputting when under text input status.

6.2 Press number keys to input numbers

6.3 English letter inputting **[AB] [abc]**

① Number 2-9 can input relative English letters, press Number 0 to input space, Number 1 to input English symbols.

② Press **SPACE** button to switch to different letters

7 Function of Definable keys

[Monitor/Analog] Only available at analog channels. Enter into receiving and playing status once trigger this key.

[Hi/L Power] To switch high/low power of current channel

[Dual Standby] To turn on/off dual standby. The power saving mode is invalid once the dual standby turns on.

[TX Priority] To switch priority RX to **[Edit]** or **[Busy]**. Once set up to Busy status, the main frequency will shift to the calling frequency automatically when the calling ends.

[Scanning] Press this button to enter into scanning status, and press arbitrary keys to exit.

[Backlight On-off] Press to turn on/off backlight

[Roger Beep] To switch the RX end tone types.

[FM Radio]

① Press button to enter into FM status, press **PTT** to exit

② Press **#** button to switch from FM to frequency mode or channel mode. Press number keys to input FM frequency while under frequency mode. Press number keys to input FM channels while under channel mode.

③ Press ***** button to switch from FM searching to Single Channel or Full Band mode. Long press UP or DOWN keys to search channels. Stop searching when receive channel while under single channel searching mode. To search for 16 channels and store them while under full band searching mode.

[Talkaround] To switch between frequency to Talk-Around or Frequency Repeater

To transmit at RX frequency under Talk Around status. To interchange frequency of RX and TX under frequency reverse mode.

[Alarm] Press the button to enter into emergency alarm status and make an alarm sound, press any keys to exit.

[Freq Detect] / [Remote CTC/DCS Scan]

① press this button to enter into frequency detecting or remote sub-tone decoding mode, and the device will scan the RX signal receive.

② press * button to switch from frequency detecting mode and remote sub-tone decoding mode.

③ press → or FTT to exit during frequency detecting, press # to switch detecting bands.

④ Press → to re-detect after decoding done. Press ← to save detecting results to VFO channels and return to standby mode. Press PTT to give up detecting results and exit detecting mode.

[Send Single Tone] Available only at analog channels. Press this button to transmit a single frequency signal at current frequency.

[Status Query] Press this button to check time, battery power etc.

[Remote Monitor] Available for digital channels and Individual Call Contact. Press this button to make a 5-second call to monitor the scanning sounds.

[Color Code Scan] Available for digital channels only. Press this button to enter into Color Code Scanning mode to scan color codes from same digital frequencies.

[Remote Stun/Kill/Wake Up] Available for digital channels and Individual Call only. Press this button to Stun/Kill/Awake appointed radios. The stun radio can receive signals and do nothing. The killed radios cannot be used only do not wake them to remove from Stun and Kill status.

[Online Check] Available for digital channels and Individual Call only. Press this button to check the online function and all kinds of access status.

[LCD Brightness] Press this button to change the brightness of backlight. Level 3 is the most brightness, and level 4 is the brightest.

[NOAA Mode] press this button to enter into NOAA scanning mode, and switch NOAA channels via up/down button. The radio will start to scan NOAA automatically when not any operation for 5S. The following are NOAA frequencies.

1	162.99000M	2	162.40000M	3	162.17900M
4	162.42500M	5	162.45000M	6	162.50000M
7	162.52500M	8	161.85000M	9	161.77500M
10	161.75000M	11	162.00000M		

Menu Specifications

8 Radio Setting

[Radio Name] To change the name of this radio, set up as the name's name or calling number. When set up as [Send Radio Name] in menu let [Analog Set] → [TX End Tone], the alias of this radio will be sent out to receiver's after analog ending tone.

[Lock Timer] The keypad will lock automatically when there is not any operation of the radio within the appointed time while under standby status. Long press * button to unlock the keypad.

[Light Timer] To set up the shutdown time of backlight. Set up as [OFF] then the radio will turn off the inner the backlight no longer turn on automatically.

[Menu Exit] The radio will exit menu interface automatically once there is no any operation within appointed time.

[Save Mode] To save power consumption while set up the Power Saving function. But there is delay for RX, emitting or missing messages under power saving status. Otherwise, the radio cannot set up as power saving while under dual standby status.

[Scan Mode] Set up as [UC], the radio will resume scanning once the received signals ends. Set up as [TC], the radio will resume scanning after it receives signal and stay for a while. Set up as [SE], the radio stops scanning once it receives signals.

[Scan Direction] Scanning upwards and downwards.

[Scan Dwell] To set up the signal stay time while under [UC] status.

[Scan Return] Set up as [Original CH], the return to original status after scanning done. Set up as [Current CH] to stay at current channel after scanning done.

[Alarm Type] Set up as [Local Alarm] to make an alarm sound once trigger alarm. Set up as [Remote Alarm] to send alarm signals to remote radio and this radio doesn't make any sound itself. Set up as [Local + Remote] this radio makes an alarm sound and send alarm signals to remote radios while trigger this function.

[Main PTT TX] Set up as [Area A], press PTT to transmit at Area1. Set up as [Main Area], press PTT to transmit at main band.

[Save CH] Copy current channel to appointed channel and save it.

[Delete CH] Delete the data of selected channel.

[LCD Contrast] The higher the value, the deeper the contrast. And need to restart the radio to complete the setting.

[Initialization] The frequency data will return to the last programming status.

8.1 Distinctive Key

[Slaver PTT] Set up the side-key to be secondary PTT. The needed function will be invoked when press side key 1 to transmit at B band.

8.2 Analog Setting

This data is available only for analog channels.

[SQ Level] The higher the value, the more difficult to turn on receiving.

[TX Start Tone] To use to set up the individual call frequency.

[MIC Gain] To adjust the MIC receiving sensibility. The higher the value, the more sensibility the MIC.

[SPK Gain] To adjust the speaker's volume. The higher the value, the louder the speaker. To avoid audio distortion, please don't turn up the speaker highly.

[DTMF Delay] If DTMF is via needed, it will be send out at appointed time.

[DTMF Interval] To set up the interval of two DTMF codes.

[DTMF Duration] To set up the lasting time of individual DTMF code.

[DTMF Mode] To set up sending mode of DTMF code. The radio will not send DTMF code while transmitting when the radio set up as [Off] .

[DTMF Select] To send one of 15 preset DTMF codes while transmitting.

[DTMF Display] The received DTMF code will show up on the display once the radio set up as [On] .

[DTMF TX Gain] [DTMF RX TH] These two difficulties can be decoding DTMF codes of different brands radioes. By adjusting the value of these two options, the DTMF codes of different brand radioes can be compatible. Encode gain 54 and decode threshold 24 are recommended.

[DTMF Control] Other radioes can take charge of this radio by sending same DTMF code of monitor/Share/Kill/Activate when the radio set up as [On].

8.3 Digital Setting

This data is available only for digital channels.

[Personal ID] To set up numeric ID, ID ranges from 1-18776415.

[Group Hold(junitime)] This radio make calls within the appointed time after the end of group call, so that the receiving part will be the called one.

[Single Hold(junitime)] This radio make calls within the appointed time after the end of individual call, and the receiving part will be the called one.

[SQ Level] To set up the squelch of digital communication. The smaller the value, the easier to turn on the squelch. Note that the radio will not be in power saving mode once the squelch level is too small.

[Contact Set] To set up Add/Delete/Modify contact list. Note that there is only one all call contact and cannot be changed and deleted. Contact ID ranges from 1-18776415.

[Group List Set] To set up Add/Delete/Modify receiving group contact list. Press $\leftarrow$ to select group call members and the selected members will turn to black background. And press $\rightarrow$ to cancel.

[Encryption Set] To set up DMR encryption on this radio.

8.4 Channel Setting

8.4.1 Analog Channel Setting

[CTC/DCS] [RX CTC/DCS] [TX CTC/DCS] To set up sub-tone of current channel. To switch the types via $\uparrow$ key.

[DCS Encrypt] Set up as [Encrypt 1/2/3] to encrypt with standard DCS and only valid for DCS. Set up as [Mute Code] the sub-tone of current channel is mute and use [Mute Code 1/2/3] as sub-tone of current channel.

[Mute Code 1/2/3] To disable non-scheduled digital systems via receiving priority decode function.

[Scan Add] Set up as [Remove], the radio will not scan this channel while scanning.

[Offset Dir] Set up [Offset Freq] before setting up frequency difference. When selects [Upward], the TX frequency = RX frequency + frequency difference. When selects [Downward], the TX frequency = RX frequency - frequency difference.

[Offset Freq] Set up frequency difference as 0, it need to turn off the frequency difference of current channel.

8.4.2 Digital Channel Settings

[DMR Mode] There is no time slot difference when set up as [Dual Slot Off], and can communicate with each other once the frequency and time zone match same.

The radioes can communicate only with same time slot when set up as [Dual Slot On] .

[DMR Slot] The time slot of current channel is valid only when set up as [Dual Slot On] .

[TX Priority] The device can make calls when it is under called or not when set up as [Inhibit] . The device cannot make calls whether it is called or not when set up as [Carter March] and current frequency is occupied. The device cannot make calls while it is called by others, when set up as [CC Mode].

8.5 Zone Setting

It has 256 zones and can be edited. Use $\leftarrow$ key to choose the members of current zone, and press $\rightarrow$ key to delete.

8.6 SMS

[New SMS] Can be added and press menu key to select [Send] or [Save]. SMS can be sent to the receiver via [Contacts] or [Dial No.] in selected ID and sending type. To switch call types to [Individual] or [Group Call] via $\leftarrow$ key while under [Dial No.] status. The editing SMS text will be save to [Drafts] when set up as [Save] .

[Inbox] To save the receiving SMS and up to 256 pieces of SMS. Each SMS includes following:

(1) Time receiving time.

② Type: Individual/group/all call;

③ ID: the sender ID

④ Name: the contacts in the contact list. If not in the list, this item is blank.

⑤ Text: SMS text. The number means the line number.

You can do the following operation after reading the SMS: **[Reply]** (Edit reply SMS and send to sender) - **[Forward]** (Forward the SMS to others) or **[Delete]** .

[Outbox] to save sent SMS, and up to 256 pieces of SMS. Each SMS includes followings

① Time: Sending Time

② Status: Sent or Fail;

③ Type: Private/Group/All Call

④ ID: Receiver ID

⑤ Name: the contacts in the contact list. If not in the list, this item is blank.

⑥ Text: SMS text. The number means the line number.

You can do the following operation after reading the SMS: **[Resend]** (Re-send the SMS) - **[Forward]** (Forward the SMS to others) or **[Delete]** .

[Drafts] Save unfinished SMS, and up to 256 pieces of SMS

[Default SMS] Pre-edited and programmed SMS via PC, and save up to 16 pieces.

[Clear All SMS] Delete all things of **[Inbox]** - **[Outbox]** **[Drafts]**

8.7 FM Radio

Set up **[Work Mode]** as **[Freq Mode]**, the inputting is FM radio frequency values when under FM radio status. Use channel knob to switch frequencies. Set up as **[CH Mode]**, the inputting is FM channel numbers, use channel knob to switch FM channels.

[RX Standby] Set up as **[On]**, the radio can standby the calling signals of main frequency while under FM radio status.

[Scan Mode] Set up as **[One Station]**, the FM radio will stop searching channels once it search available channel and save the channel frequency into current channel. Set up as **[All Range]**, the radio will stop searching channels once it search for 16 channels and save them to RM radio channels.

[Area] The radio has 16 FM radio zones, and 16 channels per zone. And zone name can be editable and set up as **[Set As Current]** .

[Channel] 16 channels of current FM zone, and the frequency value can be editable and set up as **[Set As Current]** .

8.9 Time Management

[APO] To **[On]** or **[Off]** the auto shutdown function.

[APO Timer] If not do any actions on the radio, the radio will shutdown automatically when activate this function.

Specification

General	
Frequency Range	Receiving ONLY: FM radio: 64-108MHz AM Aviation Frequency Band: 108-136MHz Analog Frequency: 136-520MHz Digital Frequency: 136-174MHz 400-470MHz Transmitting: 1) For USA Analog Frequency: 144-148MHz 420-450MHz Digital Frequency: 144-148MHz 420-450MHz 2) For European: Analog Frequency: 144-146MHz 430-440MHz Digital Frequency: 144-146MHz 430-440MHz For Other countries: Frequency may not same as above
Channel Capacity	1024 Channels +2*VFO Channels
Channel Spacing (W/N)	Analog: 25kHz/12.5kHz Digital: 12.5K
Voltage	7.4V DC
Working Mode	Same frequency simplex, different frequency simplex
Antenna	Removable Antenna
Frequency Stability	±2.5ppm
Working Temperature	-20°C ~ +60°C
Dimension	112 * 61 * 38 about 198g
Transmitting Part	
Modulation Mode	Analog: F3E Digital: 4FSK
Maximum Frequency deviation (W/N)	<5KHz/±2.5KHz
SNR (W/N)	-45dB/-40dB
TX Current	<1500mA
Receiving Part	
Sensitivity (W/N)	0.22μV/0.25μV 12dB SINAD
Inter modulation (W/N)	65dB/60dB
Audio Distortion	<5%
Audio Output Power	<1W (16Ω)
RX Current	<350mA
Standby current	<70mA

Note: The above parameters are subject to change without prior notice!