

2000 Series



Security Systems

EN

Program Entry Guide
Control Panels

BOSCH

About This Manual

This guide describes the programming parameters available to the 2000 Series Control Panels (except D2012/D2012U). This guide follows the organization of the D2212 Product Handler in the D5200 Programmer.

The table of contents lists each programming section, program item, and its page number.

Throughout this manual, programming prompts are shown in bold italic letters (such as ***Phone 1***).

Use the *Program Record Sheet* (P/N: 35113) to record your program entries. Installation instructions can be found in the panel's *Installation Guide*. The *Keypad Diagnostics Sheet* provides specific diagnostic and testing information. A *Security System User Guide* comes with the keypad.

E Version Control Panels

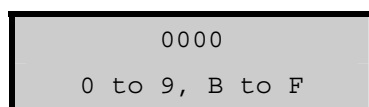
The E versions of the 2000 Series Control Panels (for example, the D2412UE) do not include point expansion. They are limited to the on-board points.

Any programming for point expanders does not apply to E version control panels.

Using this Guide for Keypad Programming

Keypad programming requires a text keypad. For an explanation, refer to *Section 18.0 Keypad Programming* of this manual.

Display text and keypad programming appear as shown:



Default entries and selections for keypad programming also appear in shaded boxes.

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1.0 System Configuration

The System Configuration Group contains the **Account Number**, **Swinger Count**, **Keyswitch**, **Custom Idle Text**, and **Custom Service Text** prompts.

1 Account Number

Default: 0000

Selection: 0 to 9, B to F

Enter four characters for the **Account Number** to transmit to the receiver. Enter leading zeroes (0) for account numbers with fewer than four digits. For example: Enter 0123 for account number 123.

2 Swinger Count

Default: 4

Selection: 1, 2, 3, 4

The **Swinger Count** prompt sets the swinger count for the Swinger Bypass point option. When the number of alarms or troubles reaches the swinger count, the system automatically bypasses points programmed for Swinger Bypass. Turning the system off clears the bypass. If a 24-hour point swinger bypasses while the system is off, turning the system on (starting exit delay) and then turning it off (pressing [CLEAR] during exit delay) clears the bypass. Swinger bypass is a point trouble and activates the Point Trouble Relay function.

When a point is Swinger Bypassed, the Point Trouble Relay function activates. Refer to *Section 13.2 Relay Functions*.



SIA recommends the swinger count be set to 1.

Using Digit 2 of the point code assigns the Swinger Bypass feature to a point.

3 Keyswitch

Default: Momentary

Selection: Easikey, Momentary

0 Easikey

1 Momentary

Refer to the *Installation Guide* for instructions on connecting a momentary keyswitch to a point.



This control panel is not compatible with maintained contact keyswitches.

Operating the keyswitch (shorting the point) turns the system All On with delays if the system is off. Any faulted controlled points (Point Code Digit 1 = 6, 7, 8, 9, B, or C) are automatically bypassed.

If the system is All On or Part On, with or without delays, operating the keyswitch (shorting the point) turns the system off.

Leave the **Keyswitch** prompt set to Momentary if you are not using a keyswitch on your system.

Setting the **Keyswitch** prompt to Easikey allows a properly connected Easikey system to disarm the system. It cannot be used to arm the system. If the system is All On or Part On, with or without delays, presenting the electronic key to the Easikey reader (the Easikey shorts the point) turns the system off. If the system is off, presenting the electronic key to the Easikey reader (the Easikey shorts the point) has no effect.

4 Custom Idle Text1

5 Custom Idle Text2

Default: Bosch Security Systems

Selection: A to Z, 0 to 9,
! # , . - / : < >

The system displays at all text keypads the two lines of custom text you enter here whenever the system is off and idle. Each line contains a maximum of sixteen characters.



It can take up to 15 seconds for the custom text you program here to appear in all text keypads connected to the system.

6 Custom Service Text**Default:** Blank**Selection:** A to Z, 0 to 9,
! # , . - / : < >

The system displays the text you enter here in the second line of the keypad display when ever the first line reads, CALL FOR SERVICE. You can enter the phone number for your service department as the *Custom Service Text*.

Up to 15 Seconds for Text to Load: It can take up to 15 seconds for the custom text you program here to appear in all text keypads connected to the system.

2.0 Phone

The Phone Group contains prompts that configure the system for dialing and sending reports on the telephone line.

1 DTMF Dialing

Default:	Yes
Selection:	Yes, No
0	No
1	Yes

When **DTMF Dialing** is set to Yes, the control panel dials in the Dual Tone Multi-Frequency (DTMF) format for all dialing attempts.

When **DTMF Dialing** is set to No, the control panel pulse dials for all dialing attempts.

2 Phone 1

3 Phone 2

Default:	Blank
Selection:	0 to 9, C, D, #, *, Blank

Leaving both Phone 1 and Phone 2 “Blank” creates a local system with no reports transmitted.

Enter up to nineteen characters for each phone number. The # and * characters only work when the control panel is DTMF dialing. The control panel dials these characters just as if you pressed them on a telephone keypad. Enter C for a 3-second delay. Enter D for a 7-second dial tone wait.

If you program a # or * to disable call waiting, warn your customer that eliminating their call waiting service requires a change to their security system.

4 Phone Routing

Default:	No
Selection:	Yes, No
0	No
1	Yes

2.1 Phone Routing Set to No

When this prompt is set to the default, No, the control panel dials as shown in *Table 1*. The control panel only sends reports to **Phone 2** after two failed attempts sending to **Phone 1**.

Table 1: Phone Routing Set to No

Attempt	Phone Number
1	Phone Number 1
2	Phone Number 1
3	Phone Number 2
4	Phone Number 2
5	Phone Number 1
6	Phone Number 2
7	Phone Number 1
8	Phone Number 2
9	Phone Number 1
10	Phone Number 2
11	Communication Fail event

If **Phone 2** is left blank, five attempts are made to **Phone 1**.



If you set the **Phone Routing** prompt to No, skip to *Section 4.2 Pulse Report Groups*. The prompts in the remainder of this group set the routing groups.

2.2 Phone Routing Set to Yes

Set this prompt to Yes to route reports to Phone 1 or Phone 2. Reports are routed by group. A description of each routing group follows. The control panel makes five attempts to each routing destination.

Reports routed to Phone 1 have a higher priority than reports routed to Phone 2. When the control panel has reports to send to Phone 1 and Phone 2, it sends all reports for Phone 1, then sends the reports for Phone 2. If the control panel fails to send an event to Phone 1, it creates a Communication Fail event for Phone 1 and begins the Phone 2 Reports.

If the control panel works on Phone 2 Reports and there is a new event for Phone 1, the control panel continues with the Phone 2 Reports until the Phone 2 buffer is empty, and then continues to the Phone 1 event.

5 Fire Route

Default:	Local
Selection:	Local, Phone 1 only, Phone 2 only, Both
Local	0
Phone 1 only	1
Phone 2 only	2
Both	3

Reports: Fire Alarm Reports from points or ABC keys.

6 Non-Fire Route

Default:	Local
Selection:	Local, Phone 1 only, Phone 2 only, Both
Local	0
Phone 1 only	1
Phone 2 only	2
Both	3

Reports:

- Non-Fire Alarm Reports from points or ABC keys
- Point Tamper Alarms
- Point Missing Alarms.

7 Pt Trbl Route

Default:	Local
Selection:	Local, Phone 1 only, Phone 2 only, Both
Local	0
Phone 1 only	1
Phone 2 only	2
Both	3

Reports:

- Trouble, Missing, Missing RF, Low Battery RF, Bypass, or Swinger Bypass Reports from, Fire and Non-fire points combined.
- Point Tamper Troubles.

8 Restoral Route

Default:	Local
Selection:	Local, Phone 1 only, Phone 2 only, Both
Local	0
Phone 1 only	1
Phone 2 only	2
Both	3

Reports:

- Restoral Reports from Fire and Non-Fire points combined
- RF Battery Restorals
- Point Tamper Restorals.

9 Closing Route

Default:	Local
Selection:	Local, Phone 1 only, Phone 2 only, Both
Local	0
Phone 1 only	1
Phone 2 only	2
Both	3

Reports: Closing Reports**10 Opening Route**

Default:	Local
Selection:	Local, Phone 1 only, Phone 2 only, Both
Local	0
Phone 1 only	1
Phone 2 only	2
Both	3

Reports: Opening Reports

11 Cancel Route

Default:	Local
Selection:	Local, Phone 1 only, Phone 2 only, Both
Local	0
Phone 1 only	1
Phone 2 only	2
Both	3

Reports: Cancel Reports

12 Sys Trbl Route

Default:	Local
Selection:	Local, Phone 1 only, Phone 2 only, Both
Local	0
Phone 1 only	1
Phone 2 only	2
Both	3

Reports:

- RAM Access Fail Reports (unsuccessful attempt to connect a remote programmer)
- Comm Fail Reports (Communication Failure event) for Phone 1 and Phone 2
- Watchdog Reset Reports (system automatically reset)
- Battery Missing Reports
- Battery Low Reports
- AC Fail Reports
- RF Receiver Trouble (Address 7, Address 8)
- RF Receiver Tamper (Address 7, Address 8)13 Sys Res Route

13 Sys Trbl Route

Default:	Local
Selection:	Local, Phone 1 only, Phone 2 only, Both
Local	0
Phone 1 only	1
Phone 2 only	2
Both	3

Reports:

- RAM Access OK Reports (successful connection to a remote programmer)
- Comm Restoral Reports (successful communication after a Communication Failure event)
- Re-Boot Reports (control panel reset with the stand-by switch or a remote programmer)
- Battery Restoral Reports (missing or low battery restored)
- AC Restore Reports
- RF Receiver Trouble Restoral (Address 7, Address 8)
- RF Receiver Tamper Restoral (Address 7, Address 8)

14 Duress Route

Default:	Local
Selection:	Local, Phone 1 only, Phone 2 only, Both
Local	0
Phone 1 only	1
Phone 2 only	2
Both	3

Reports:

- Duress Reports
- User Tamper (six attempts with bad passcode).

15 Test Route

Default:	Local
Selection:	Local, Phone 1 only, Phone 2 only, Both
Local	0
Phone 1 only	1
Phone 2 only	2
Both	3

Reports:

- Test Reports
- Service Start (stand-by pin locked down, installer code entered.)
- Service Stop (standby-by pin unlocked. The control panel only sends a Service Stop Report if a Service Start Report was transmitted).

3.0 Reports

1 O/C Rpts – All On

Default:	No
Selection:	Yes, No
0	No
1	Yes

If you set the **O/C Rpts-All On** prompt to Yes, the system transmits Closing Reports to the receiver when users turn the system All On. If any points are bypassed, Bypass Reports are also sent. The control panel transmits Opening Reports when users turn the system off from the All On state.

If the user turns the system off after an alarm, the system attaches an AFTER ALARM message to the Modem II Opening Report. Refer to *Section 4.0 Receiver* for a description of the Modem II Report Format.

If you set the **O/C Rpts-All On** prompt to No, the system does not send Closing Reports to the receiver when users turn the system All On.

2 O/C Rpts – Part On

Default:	No
Selection:	Yes, No
0	No
1	Yes

If you set the **O/C Rpts-Part On** prompt to Yes, the system transmits Closing Reports to the receiver when users turn the system Part On with the [0] key. If any points are bypassed, Bypass Reports are also sent. It transmits Opening Reports when users turn the system off from the Part On state.

If the user turns the system off after an alarm, the system attaches an AFTER ALARM message to the Modem II Opening Report. Refer to *Section 4.0 Receiver* for a description of the Modem II Report Format.

If you set the **O/C Rpts-Part On** prompt to No, the system does not send Closing Reports to the receiver when users turn the system Part On with the [0] key.

3 Restricted O/C

Default:	No
Selection:	Yes, No
0	No
1	Yes

Set the **Restricted O/C** prompt to Yes. The system only sends Opening Reports when the user turns the system off after an alarm. The system attaches an AFTER ALARM message to the Modem II Opening Report. Refer to *Section 4.0 Receiver* for a description of the Modem II Report Format.

With the **Restricted O/C** prompt set to Yes, the system only sends Closing Reports when a point is bypassed.

Set the **Restricted O/C** prompt to No to send unrestricted opening and Closing Reports.

4 Delay Alarm Rpt

Default:	0
Selection:	0 to 255

Delay Alarm Rpt helps prevent False Alarm Reports. Reporting characteristics for individual points are programmed in Digit 2 of the point code.



Special Voice Verification function when you set the Delay Alarm Rpt prompt to 255: Refer to 255 = Voice Verification in this section.

If a point with 2, 3, 7, or 8 in Digit 2 creates an Alarm event, the system waits the number of seconds entered at the **Delay Alarm Rpt** prompt before transmitting reports to the receiver.

If a user enters a passcode to silence an alarm or turns the system off before **Delay Alarm Rpt** expires:

- No Alarm, Cancel, or Restoral Reports are sent to the receiver for these points.
- All other reports, including Alarm Reports for points programmed with a 1, 4, 5, 6, or 9 in Digit 2 are sent. If programmed for Cancel Report, a Cancel Report sends for points with a 1, 4, 5, 6, or 9 for Digit 2.
- Missing alarms are sent as missing troubles.
- Tamper alarms are sent as tamper troubles.

If no passcode is entered before **Delay Alarm Rpt** expires, all reports are sent.

If the system is on with No Delay, alarm output at Terminals 4 and 5 follows the alarm delay programmed here. The alarm sounds at the keypad without delay.

When mixing Delay Alarm points (Digit 2 set for 7 or 8), with No Delay Alarm points (Digit 2 set for 5, 6, or 9), the alarm output follows the programmed alarm delay if Delay Alarm points are faulted first.

255 = Voice Verification: Only set the **Delay Alrm Rpt** prompt to 255 when using an optional two-way voice verification module. When the **Delay Alrm Rpt** prompt is set to 255, an Alarm event on a point with 2, 3, 7, or 8 in Digit 2 sends an Alarm Report and begins the two-way voice verification process. Do not set the **Delay Alrm Rpt** prompt to 255 if a voice verification module is not connected to the control panel, because unexpected control panel operation results.



Duress Reports and A, B, C Key Reports are affected by Alarm Report Delay. These reports are sent immediately in all cases.



The Security Industry Association (SIA) recommends the Delay Alarm Report feature be enabled with the delay set to 15 seconds. Enter 15 at this prompt to comply with the SIA recommendation.

Press the [0] key to disable the **Delay Alrm Rpt** prompt for all points.

5 Cancel Rpt

Default:	Yes
Selection:	Yes, No
0	No
1	Yes

Set the **Cancel Rpt** prompt to Yes to enable Cancel Report. If a user turns the system off after an alarm, but before bell time expires, a Cancel Report follows the Alarm Report.

If the user turns the system off before **Delay Alrm Rpt** prompt time expires, the control panel sends no Alarm, Cancel, or Restoral Report for points programmed with a 2, 3, 7, or 8 in Digit 2 of the point code.

If you set the **Cancel Rpt** prompt to No, the control panel does not send Cancel Reports.

6 Restoral Rpts

Default:	No
Selection:	No, Yes, Delay
0	No
1	Yes
2	Delay

Set the **Restoral Rpts** prompt to Yes to send Restoral Reports to the receiver for **all** points. The system sends Restoral Reports when points return to normal (not faulted) after an Alarm or Trouble Report.

Set the **Restoral Rpts** prompt to No to prevent the system from sending Restoral Reports for any point.

Set the **Restoral Rpts** prompt to Delay to delay sending Restoral Reports until bell time expires.

7 AC Fail Buzz/Rpt

Default:	No Buzz, No Report
Selection:	No Buzz, No Report Buzz, No Report Buzz, Report Buzz, Tag-Along Rpt No Buzz, Report No Buzz, Tag-Along Rpt
No Buzz No Report	0
Buzz, No Report	1
Buzz, Report	2
Buzz, Tag-Along Rpt	3
No Buzz Report	4
No Buzz, Tag-Along Rpt	5

The control panel monitors AC power. When AC power to terminals 1 and 2 is interrupted, the control panel waits 60 seconds. If AC power is not restored within 60 seconds, it provides the response programmed in **AC Fail Buzz/Rpt**.

When set to **No Buzz, No Report** the system only flashes the OK light at the keypad to indicate a system trouble. It does not sound the trouble tone or send a report to the receiver.

When set to **Buzz, No Report** the system flashes the OK light at the keypad to indicate a system trouble and sounds the trouble tone. No report is sent to the receiver.

When set to **Buzz, Report** the system flashes the OK light at the keypad, sounds the trouble tone, and sends an AC Fail Report to the receiver.

When set to **Buzz, Tag-Along Rpt** the system flashes the OK light and sounds the trouble tone at the keypad after 60 seconds. It sends an AC Fail Report to the receiver as a tag along with all reports sent to the receiver until AC restores.

When set to **No Buzz, Report** the system flashes the OK light at the keypad and sends an AC Fail Report to the receiver.

When set to **No Buzz, Tag-Along Rpt** the system flashes the OK light. It sends an AC Fail Report to the receiver as a tag along with all reports sent to the receiver until AC restores.

8 Point User Flag

Default: No

Selection: Yes, No

0	No
1	Yes

Set this prompt to Yes to send a flag with each Modem II Report that tells the D6500 to convert point numbers to Bosch Security System's D8112 style Zonex Format, and User ID numbers to D8112 type COMEX Format.

Notes:

4.0 Receiver

4.1 Modem Reports

1 Rcvr Format

Default:	Modem
Selection:	Modem, Pulse
0	Pulse
1	Modem

Set **Rcvr Format** to Modem to transmit reports in Modem II format with its advanced reporting capabilities.



You need firmware revision 8.00 or greater installed in your D6500 Receiver.

Table 2 shows the reports available.

The D6500 line card ack tone table must contain “Modem II for D9112.” Refer to the *6500: Line Program Entry Guide*.

Set **Rcvr Format** to Pulse to transmit in 4x2 Pulse Format. Be sure to program codes for each report group. Refer to the *Section 4.2 Pulse Report Groups*.

Table 2: Modem II Reports Chart

Modem II Report	Description
AC FAILURE	No AC power to system. Control panel runs on battery.
AC RESTORE	AC Power is restored to normal.
ALARM REPORT POINT 001 (-099)	Alarm Report from Points 1 to 24 or from an A, B, C, key. Refer to <i>Section 7.0 ABC Keys</i> for instructions on setting reports from the keys.
ALARM REPORT RECENT CLOSING ID=001 POINT=001 (24)	If an alarm occurs within 2 minutes of a Closing event, the system sends an Alarm Recent Close Report.
ALARM CROSS POINT 001 (-099)	Alarm Report from Points 1 to 24 with point code for Cross or Partner point. The ALARM RECENT CLOSE message overrides the ALARM CROSS POINT message. The ALARM EXIT ERROR message does not apply to Cross, Partner, Double Knock, or Alarm Verification points
BATTERY LOW	System battery is low.
BATTERY MISSING	System battery is disconnected. Battery must be missing for 60 seconds.
BATTERY RESTORE	Missing or low battery is restored.
CANCEL REPORT	Cancel Report from keyswitch.
CANCEL REPORT ID 001 (-008)	Cancel Report with user ID for users 1 to 8.

Table 2: continued

Modem II Report	Description
CLOSING REPORT	Closing Report when passcode is not used. Refer to the Passcode Required prompt in <i>Section 15.0 Passcodes</i> . Using a Keyswitch or a remote programmer also sends this Closing Report with no user ID.
CLOSING REPORT ID 001 (-008)	Closing Report with user ID for users 1 to 8.
COMM FAIL PHONE (1-2)	Communication Failure event. Refer to <i>Phone 1, Phone 2</i> in <i>Section 2.0 Phone</i> .
COMM RESTORAL PHONE (1-2)	Successful communication after a Communication Failure event. Refer to <i>Phone 1, Phone 2</i> in the <i>Section 2.0 Phone</i> .
DURESS ID 008	Passcode 8 used to turn the system on, turn the system off, or to silence an alarm. Refer to the Code 8 = Duress prompt in <i>Section 15.0 Passcodes</i> .
EXIT ERROR 001 (-024)	When a point is faulted at the end of exit delay it generates an Exit Alarm. Exit Alarm Report from Points 1 to 24.
FIRE ALARM POINT 001 (-099)	Fire Alarm Report from Points 1 to 24.
FIRE ALARM CROSS POINT 001 (-024)	Cross Point Fire Alarm Report from Points 1 to 24.
MISSING ALARM POINT 001 (-024)	Missing Non-fire Controlled point, point is on (armed). Alarm response locally.
MISSING TROUBLE POINT 001 (-024)	Missing Non-fire Controlled point, point is off (disarmed), or 24-hour Non-fire point. Trouble response locally.
OPENING REPORT	Turning the system off with a keyswitch or a remote programmer sends this Opening Report with no User ID.
OPENING REPORT ID 001 (-008)	Opening Report with User ID for users 1 to 8.
OPEN FROM ALARM	Turning the system off after an alarm with a Keyswitch point or a remote programmer sends this Opening Report with no User ID.
OPEN FROM ALARM ID 001 (-008)	Opening Report after an alarm with User ID for users 1 to 8.
PERM INST ARMED	Remote programmer used to turn the system Part On with No Delays, or user turned the system Part On with No Delays and no passcode required. Refer to the Passcode Required prompt in <i>Section 15.0 Passcodes</i> .
PERM INST ARMED ID 001 (-008)	User with ID shown (1 to 8) turned the system Part On with No Delays.
PERM DLAY ARMED	Remote programmer used to turn the system Part On (with Delays), or user turned the system Part On with Delays and no passcode required. Refer to the Passcode Required prompt in <i>Section 15.0 Passcodes</i> .
PERM DLAY ARMED ID 001 (-008)	User with ID shown (1 to 8) turned the system Part On (with Delays).

Table 2: continued

Modem II Report	Description
POINT BYPASS POINT 001 (-024)	Point 1 to 24 bypassed. Points can be bypassed from the keypad or from a remote programmer. Bypass Reports are only sent when Opening and Closing Reports are enabled in <i>Section 6.0 Open/Close</i> .
RAM ACCESS OK	Normal remote programmer session termination.
RAM ACCESS FAIL	Remote programmer made connection with control panel, but passcode was incorrect, or call was not terminated with a Good-bye or Reset-Bye.
RESTORAL REPORT POINT 001 (-024)	Restoral Report from Points 1 to 24.
RE-BOOT	Control panel reset with the standby pin (Refer to <i>Installation Manual</i>) or a remote programmer.
RF BATTERY LOW POINT 001 (-024)	Low battery in RF sensor, keypad, or arming device.
RF BATT RESTORE POINT 001 (-024)	Restored battery in RF sensor, keypad, or arming device.
RF Rcvr Tamper SDI 7 (8)	Enclosure tamper from premises RF receiver (D208RF, D216RF). SDI number is the device address (7 or 8). Refer to <i>Section 10.0 Address Configuration</i> .
RF Rcvr Tamper Restoral SDI 7 (8)	Enclosure tamper restoral from premises RF receiver (D208RF, D216RF). SDI number is the device address (7 or 8). Refer to <i>Section 10.0 Address Configuration</i> .
RF Rcvr Trouble Device 7 (8)	Trouble from premises RF receiver (D208RF, D216RF) SDI number is the device address (7 or 8). Refer to <i>Section 10.0 Address Configuration</i> .
RF Rcvr Trbl Restoral Device 7 (8)	Restoral from premises RF receiver (D208RF, D216RF) SDI number is the device address (7 or 8). Refer to <i>Section 10.0 Address Configuration</i> .
RF TAMPER TROUBLE	Tamper RF point, Controlled point, system off.
RF TAMPER RESTORAL	Tamper restoral, RF point.
SERVICE START	Installer mode entered (Stand-by locked down, installer passcode entered).
SERVICE STOP	Installer mode exited.
SWINGER BYPASS POINT 001 (-024)	Points 1 to 24 bypassed automatically by the system after four alarms or troubles in one armed or disarmed period. You can program the Swinger Bypass feature to activate after less than four alarms or troubles. Refer to Swinger Count prompt in <i>Section 1.0 System Configuration</i> . Use the point code to program this feature by point. Refer to <i>Section 11.0 Point Codes</i> .
TEST REPORT	Automatic Test Timer Report.
TROUBLE REPORT POINT 001 (-024)	Trouble on Points 1 to 24, Fire and Non-fire combined.
USR CODE TAMPER	This report transmitted after six attempts to enter an invalid passcode.
WATCHDOG RESET	System automatically reset. Call Bosch Security Systems if reports persist.



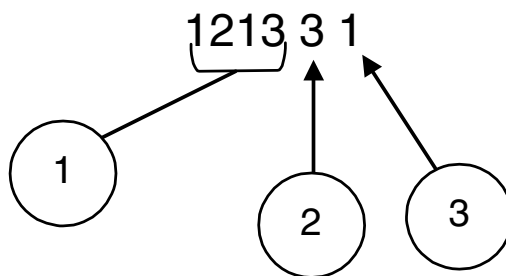
If you choose Modem Format, go to *Section 5.0 Remote Programming*. The prompts in the remainder of the Receiver Group have no meaning for the Modem Format.

4.2 Pulse Report Groups

If you select the Pulse Format you need to set the report code for each report group. Pulse 4x2 reports consist of a four-digit account number, a one-digit report group code, and a one-digit point or User ID number.

For example, a control panel with the **Account Number** prompt set to 1213, the **Rcvr Format** prompt set to pulse, the **Fire Group** prompt set to 3, and Point 1 programmed as a Fire point would send the report shown in *Figure 1* for an alarm on Point 1.

Figure 1: Pulse Report Groups



1 - Account number

2 - Report group

3 - Point, user

The Pulse Format allows for only one digit in the Point, User position. If you install more than eight points and report in Pulse Format, the control panel combines reports as shown in *Table 3*.

Table 3: Pulse Format

Point Number reported in Pulse Format	1	2	3	4	5	6	7	8
Point Number displayed at keypad	1	2	3	4	5	6	7	8
	9	10	11	12	13	14	15	16
	17	18	19	20	21	22	23	24

Use the following Pulse Report Groups to designate Pulse Report Group codes for this installation.



Do not duplicate Pulse Report Group codes. You cannot distinguish reports from groups with duplicated codes.

The expanded reports available in Modem II format are not available in the Pulse Format.

2 Fire Group

Default: 0

Selection: 0 to 9, B to F

1 to 8	Fire alarm from Points 1 to 24.
9 or 0	Fire alarm from key A, B, or C. Refer to <i>Section 7.0 ABC Keys</i> . There is no Pulse Format version of the Modem II Alarm Cross Point Report. The Cross Point feature creates two point alarms. Refer to <i>Section 11.0 Point Codes</i> .

3 Non-Fire Group

Default:	0
Selection:	0 to 9, B to F
1 to 8	Non-Fire alarm from Points 1 to 24.
9 or 0	Non-Fire alarm from key A, B, or C. Refer to <i>Section 7.0 ABC Keys</i> . There are no Pulse Format versions of the Modem II Alarm recent Close, Alarm Cross Point, or Exit Alarm Reports. All occur as Alarm Reports. The Cross Point feature creates two point alarms. Refer to <i>Section 11.0 Point Codes</i> .

4 Pt Trbl Group

Default:	0
Selection:	0 to 9, B to F
1 to 8	Trouble, Missing, Bypass, or Swinger Bypass Reports from Fire and Non-Fire points combined. Multiple trouble conditions can create duplicate Trouble Reports. For example, a point can send a trouble for a open sensor loop, then a trouble for missing.

5 Restoral Group

Default:	0
Selection:	0 to 9, B to F
1 to 8	Restoral on points 1 to 24, Fire and Non-Fire combined.

6 Closing Group

Default:	0
Selection:	0 to 9, B to F
0	Closing Report when a passcode is not required to turn system on (refer to <i>Passcode Required</i> prompt in <i>Section 15.0 Passcodes</i>) or a keyswitch is used.
1 to 8	Closing Report with User ID for users 1 to 8.

7 Opening Group

Default:	0
Selection:	0 to 9, B to F
0	Opening Report when keyswitch is used, or Part On No Delay, or Part On with delay.
1 to 8	Opening Report with User ID for users 1 to 8.

8 Cancel Group

Default:	0
Selection:	0 to 9, B to F
0	Cancel Report when keyswitch is used.
1 to 8	Cancel Report with User ID for users 1 to 8.

9 Sys Trbl Group

Default:	0
Selection:	0 to 9, B to F
1	Reports an unsuccessful attempt to connect a remote programmer.
2	Reports an unsuccessful attempt to connect a remote programmer.
3	The system automatically reset. Call Bosch Security Systems if reports persist.
4	Not used.
5	Not used.
6	Reports missing battery.
7	Reports low battery.
8	No AC power to system. Control panel is running on battery.
9	Communication Failure event for Phone 1.
B	Communication Failure event for Phone 2.
C	RF tamper (points or receiver).
D	RF low battery.
E	RF receiver 7 trouble.
F	RF receiver 8 trouble.

10 Sys Res Group

Default: 0	
Selection: 0 to 9, B to F	
1	Successful connection to a remote programmer.
2	Not used.
3	Control panel reset with the stand-by switch (refer to the <i>Installation Guide</i>) or a remote programmer.
4	Not used.
5	Not used.
6	Not used.
7	Reports missing or low battery restored.
8	Restored AC power.
9	Communication Restoral event for Phone 1.
B	Communication Failure event for Phone 2.
C	RF tamper restore (points or receiver).
D	RF battery restore.
E	RF receiver 7 restoral.
F	RF receiver 8 restoral.

11 Duress Group

Default: 0	
Selection: 0 to 9, B to F	
1 to 3	Not used.
4	This report transmitted after six attempts to enter an invalid passcode.
5	Duress passcode entered at keypad. Refer to Code 8 = Duress in <i>Section 15.0 Passcodes</i> .
7, 8	Not used.

12 Test Group

Default: 0	
Selection: 0 to 9, B to F	
1 to 5	Not used.
6	Service stop.
7	Service start.
8	Test Report.

5.0 Remote Programming

Use the prompts in this group to configure your system for programming with a Bosch Security Systems remote programmer.

1 RAM Passcode

Default: 999999

Selection: 0 to 9, A to F

Six characters required. Remote programmers send this code to the control panel to gain access to the control panel.

2 RAM Phone

Default: Blank

Selection: 0 to 9, C, D, #, *, Blank

Enter up to nineteen characters for the control panel to dial to reach a remote programmer. The # and * characters are only dialed when the control panel is programmed for DTMF dialing. Refer to the **DTMF Dialing** prompt in *Section 2.0 Phone*. The control panel dials these characters just as if you pressed them on a telephone keypad.

If you program a # or * to disable call waiting, warn your customer that canceling call waiting service requires a change to their security system.

Programming C produces a 3-second dial delay.

Programming D produces a 7-second dial tone wait. If the control panel detects a dial tone before the 7-second delay expires, it continues dialing immediately.



Remote programming initiated from the keypad ([2] key)

RAM Phone is blank: After you press [2] key, the control panel seizes the phone line and waits for the remote programmer handshake.

RAM Phone is programmed with a phone number: After you press the [2] key, the control panel seizes the phone line, dials the RAM Phone number, and waits for the remote programmer handshake.

3 Answer Armed

Default: 0

Selection: 0 to 15

Set the number of rings you want the control panel to wait before seizing the phone line for a remote programming session when the system is All On (armed).

The control panel cannot seize the phone line when the system is All On (armed) if this prompt is set to 0 (zero).



When **Answer Machine** is programmed Yes, the entry in **Answer Armed** has no affect on the control panel's operation.

4 Answer Disarmed

Default: 0

Selection: 0 to 15

Set the number of rings you want the control panel to wait before seizing the phone line for a remote programming session when the system is off (disarmed), Part On, or On with No Delay.

If this prompt is set to 0 (zero), the control panel cannot seize the phone line when the system is off (disarmed), Part On, or On with No Delay.



When **Answer Machine** is programmed Yes, the entry in Answer Disarmed has no affect on the control panel's operation.

5 Answer Machine

Default: 0

Selection: 0 to 15

Set this prompt to Yes to enable the Answering Machine Bypass feature.

When **Answer Machine** is programmed Yes, you must set the answering machine to pick up the phone on four or more rings. This feature does not work if the answering machine picks up the phone after one ring.

When **Answer Machine** is programmed Yes, the control panel picks up the phone for a remote programming session if it detects the following events listed in *Table 4*.

Table 4: Answer Machine Programmed Yes

Events at the Control Panel	What you do from the Remote Programmer
1. Two rings.	Dial the control panel phone number. Listen for two rings. Hang up.
2. 30 seconds with no rings.	Wait 30 seconds.
3. Two rings.	Re-dial the control panel phone number. Listen for two rings. Hang up.
4. 30 seconds with no rings.	Wait 30 seconds.
5. Control panel picks up on first ring.	Re-dial the control panel phone number. When the control panel picks up the phone, begin remote programming. If you are using a text keypad, SYSTEM PROGRAM, USING PHONE LINE appears in the keypad display.

6.0 Open/Close

Use the prompts in this group to set entry and exit delays and other opening/closing options.

1 Entry Dly Time

Default: 30

Selection: 0 to 255

Users can turn the system off during entry delay. If the user fails to turn off the system before entry delay expires, an Alarm event occurs. Users must enter through a point programmed for entry delay to start the entry delay timer. All Controlled points are delayed once the timer starts. Refer to *Section 11.0 Point Codes*.

2 Exit Dly Time

Default: 60

Selection: 0 to 255

Users can exit the premises during exit delay. All Controlled points are delayed once the timer starts. Refer to *Section 11.0 Point Codes*.

Exiting through a protected point or moving through a protected area after exit delay expires causes an Alarm event to occur. The system sounds three long tones at the keypads at the end of exit delay.

3 Extended Dly

Default: 120

Selection: 0 to 255

Use Extended Delay for systems requiring extended entry and exit delays for some points. For example, you could use this feature to allow system users to enter and exit through an overhead garage door.

The system uses the Extended Delay for Controlled points programmed with B or C for Digit 1 of the point code. If a user starts exit delay and then faults an Extended point (such as opening the garage door), the system switches from Exit Delay Time to the Extended Delay. You can program this delay with enough time to allow the user to open the garage door, drive out, and close the door.



If you bypass an Extended Delay point, the system switches to the Extended Delay. The system makes the switch even if the point is not faulted when you bypass it.

If you bypass an Extended Delay point and the point is faulted and returns to normal within the extended exit delay, the point returns to the system. This allows users to turn the system on with the garage door open and still protect the door. Any other point type that is bypassed and returns to normal during exit delay does not automatically return to the system.

If the system is on and a user enters through an Extended point (such as opening the garage door) first, the system uses Extended Delay for entry delay. If the user enters through a point not programmed for extended delay (such as the front door) first, and then through an Extended Delay point (such as opening the garage door), the system **cannot** use Extended Delay for entry delay.

4 Exit Tone

Default: Yes

Selection: Yes, No

0	No
1	Yes

Use this prompt to turn off the keypad tone that annunciates Exit Delay, and the Excursion (Step Outside and Exit) feature.

Program **Exit Tone** Yes to enable the exit delay tone and excursion tone.

Program **Exit Tone** No to disable the exit delay tone and excursion tone.

5 No Delay

Default:	Part On
Selection:	Disabled, Part On, All On, All & Part
0	Disabled
1	Part On
2	All On
3	All & Part

The **No Delay** prompt allows users to turn their system on with No Entry or Exit Delay (instant arming). If this prompt is set to Part On, users can turn their system Part On with No Delay by pressing the [0] key twice.

If this prompt is set to All On, users can turn their system All On with No Delay by pressing the [9] key twice. If this prompt is set to All & Part, users can turn their system All or Part On with No Delay.

If this prompt is set to Disabled, users cannot turn their system on with No Delay. Entry and exit delay are always provided.

Selecting **Disabled** for the **No Delay** prompt also disables the Excursion feature. Refer to the **Excursion** prompt.

6 Excursion

Default: Disabled

Selection: Disabled
All Step
Part Step
All & Part Step
All Exit
Part Exit
All & Part Exit

0	Disabled
1	All Step
2	Part Step
3	All & Part Step
4	All Exit
5	Part Exit
6	All & Part Exit

Use the **Excursion** prompt to configure the system for either the Step Outside or Exit User features.

6.1 Step Outside

If you enable the Step Outside feature, pressing the [CLEAR] key at the keypad when the system is on with No Delay starts the exit delay tone (if **Exit Tone** is programmed Yes) and bypasses all points programmed for delay (Digit 1 of point code = 6 or 8). The rest of the system remains on.

The tone and bypass remain until the user presses the [CLEAR] key a second time, returning the system to its fully on state. If a point is faulted when the user presses the [CLEAR] key the second time, the tone and bypass continue. The user must either clear the fault (close the door) or turn the system off with a passcode.

The Step Outside feature allows users to pick up the morning paper or let the dog out without turning the system off.

All Step: Only allows users access to the Step Outside feature when the system is All On with No Delay (instant).

Part Step: Only allows users access to the Step Outside feature when the system is Part On with No Delay (instant).

All & Part Step: Allows users access to the Step Outside feature when either All or Part of the system is On with No Delay (instant).

6.2 Exit

If you enable the **Exit** feature, pressing the [CLEAR] key at the keypad when the system is On with No Delay starts exit delay. The system sounds the exit delay tone (if **Exit Tone** is programmed Yes) and bypasses all points programmed for exit delay (Digit 1 of point code is 6 or 8). **The rest of the system remains On with No Delay.** The tone and bypass remain until exit delay expires. The system returns to the **On with No Delay** state. The Exit feature allows one user to exit a system that is On with No Delay, leaving those left inside fully protected.

If the user presses [CLEAR] during the exit delay, the system returns to On with No Delay.

A faulted point (open door) at the end of exit delay creates an Exit Error alarm.

If an alarm occurs within 2 minutes of the end of exit delay, the system sends an Alarm Recent Close Report.

All Exit: Only allows users access to the Exit feature when the system is All On with No Delay (instant).

Part Exit: Only allows users access to the Exit feature when the system is Part On with No Delay (instant).

All & Part Exit: Allows users access to the Exit feature when either All or Part of the system is All On with No Delay (instant) or Part On with No Delay (instant).

Notes:

7.0 ABC Keys

Use the prompts in this group to set the report code, the custom text, and alarm output for the keypad's ABC keys.

You can program the relay outputs (Terminals 9 and 10) to respond to these keys in *Section 13.0 Relays*.



Users must press the [A], [B], [C] keys twice to activate them. This double action prevents accidental activation.

If using a four-button key chain keypad, its special (*) key performs the same functions as the C key.

1 A-Key Report

Default: 00

Selection: 0 to 9

Two digits required for Pulse Format

Enter the report the system transmits to the receiver when a user presses the [A] key, [B] key, or [C] key. The control panel does not send reports for the 00 default entry.

Review your entries for the prompts in *Section 4.0 Receiver* before you program this prompt.

Modem Format Example: If you enter 25 at the **A-Key Report** prompt, the system transmits ALARM REPORT POINT=025, when you press the [A] key.

Pulse Format Example: The first digit you program here sets the report group. The second digit sets the point number. If you enter 10 at the **A-Key Report** prompt, the system transmits an Alarm Report, Report Group 1, Point 0.



Do not enter a report that conflicts with other system or point reports. Refer to *Section 4.2 Pulse Report Groups* for all system and point reports. Test the A, B, C keys to make certain they transmit the expected reports.

2 A-Key Alarm Output

Default: No Output

Selection: No Output, Steady, Pulse

0 No Output

1 Steady

2 Pulse

These prompts set the system response to the key at the Alarm Output, Terminals 4 and 5. Set the prompt to Steady for steady output. A user must enter a passcode at the keypad to silence the output before bell time expires.

Set the prompt to Pulse for a pulsed (fire) output at the Alarm Output.



If the system is programmed for the Modem transmission format (refer to *Section 4.0 Receiver*), the control panel sends a fire alarm.

A user must enter a passcode at the keypad to silence the output before bell time expires.

3 A-Key Ack Tone

Default: No

Selection: Yes, No

0 No

1 Yes

When this prompt is set to Yes, the system sounds an acknowledgment tone at the keypad when the receiver acknowledges the report sent by the activation of the key.

If the key is not programmed to send reports (refer to **A-Key Report prompt**), no acknowledgment tone occurs.

4 A-Key Text

Default: A key
(B key, C key)

Selection: A to Z, 0 to 9,
! # , - / : < >

Enter up to sixteen characters of custom text. The system displays this text when the A key is active.

5 B-Key Alarm Report**6 B-Key Output****7 B-Key Ack Tone****8 B-Key Text**

Refer to the descriptions for the **A-Key** prompts above.

9 C-Key Alarm Report

[*] key for four-button keychain keypads

10 C-Key Output

[*] key for four-button keychain keypads

11 C-Key Ack Tone

[*] key for four-button keychain keypads

12 C-Key Text

[*] key for four-button keychain keypads

Refer to the descriptions for the **A-Key** prompts above.

8.0 Bell

The prompts in this group configure the Alarm Output (bell) at Terminals 4 and 5.

1 Bell Time

Default: 6
Selection: 0 to 255

The **Bell Time** prompt sets the minutes of alarm output at terminals 4 and 5. Both Fire Bell function (pulsed output) and the Burglary Bell function (steady output) follow the **Bell Time** duration.

Enter the number of minutes of alarm output at Terminals 4 and 5 for both Fire and Burglary (Non-Fire) functions. If you are using the **Alarm on 2 Fail** feature, program at least 3 minutes in **Bell Time**. Refer to below.



Check with your Authority Having Jurisdiction (AHJ) to determine the appropriate Bell Time for your installation. Many communities restrict bell time.

2 Bell Time

Default: No
Selection: Yes, No

0	No
1	Yes

If you set the **Bell Test** prompt to Yes, the system sounds the bell for 2 seconds when users turn the system All On by pressing the [9] key.

If the system sends Closing Reports, the bell sounds when the receiver acknowledges the Closing Report. If the system does not send Closing Reports, the bell sounds at the expiration of Exit Delay.

3 Single Ring

Default: No
Selection: Yes, No

0	No
1	Yes

Set the **Single Ring** prompt to Yes to limit the alarm output from the same Non-Fire point to one per arming cycle. Setting this prompt to No allows every alarm activation from a Non-Fire point to generate an alarm output during an arming cycle.

Fire points always provide alarm output for every alarm activation. **Single Ring** only affects the alarm output. It does not prevent reports from being sent.

4 Alarm on 2 Fail

Default: No
Selection: Yes, No

0	No
1	Yes

Setting the **Alarm on 2 Fail** prompt to Yes provides an alarm output after two failed attempts to transmit an Alarm Report from any point when the system is on. Alarm output is provided even if the point is not programmed for alarm output. **Bell Time** must be programmed with at least 3 minutes to use the **Alarm on 2 Fail** feature.

Set this prompt to No if you want to prevent an alarm output from Silent points even when the system fails to communicate with the receiver.

Refer to *Section 11.0 Point Codes* for information on programming points for alarm output.

Notes:

9.0 Test Timer

The prompts in this group configure the system's automatic test report timer.

1 Test Interval

Default:	No Report
Selection:	No Report, 1 Day, 7 Days, 28 Days
0	No Report
1	1 Day
2	7 Days
3	28 Days

Set **Test Interval** to **No Report** to disable the Test Report feature.

Set **Test Interval** to **1 Day** to transmit Test Reports every 24 hours.

Set **Test Interval** to **7 Days** to transmit Test Reports every 7 days.

Set **Test Interval** to **28 Days** to transmit Test Reports every 28 days.

2 Hours to Next

Default:	0
Selection:	0 to 23

Enter the number of hours until the next Test Report at this prompt.

The system adds the entries in the **Hours to Next** and **Minutes to Next** prompts and waits that period before it sends the next Test Report to the receiver. From that report on, the system sends reports at the interval set by the **Test Intrvl** prompt.

If both the hours and minutes are 0 (zero), the system sends the next report one interval from the end of your programming session.



If you use a remote programmer, the waiting period begins after you complete the programming session. If you did not send program changes to the control panel during the remote programming session you must end the programming session with a Reset Bye.

For D5200 Programmer or Keypad programming, the waiting period begins after you return the standby pin to normal operation.

3 Minutes to Next

Default:	0
Selection:	0 to 59

Enter the number of minutes until the next Test Report at this prompt.

The system adds the entries in the **Hours to Next** and **Minutes to Next** prompts and waits that period before it sends the next Test Report to the receiver. From that report on, the system sends reports at the interval set by the **Test Intrvl** prompt.

If both the hours and minutes are 0 (zero), the system sends the next report at the end of your programming session.



If you are using a remote programmer, the waiting period begins after you complete the programming session. You must end the programming session with a Reset Bye.

For D5200 Programmer or Keypad programming, the waiting period begins after you return the standby pin to normal operation.

4 Defer Test Rpt

Default:	No
Selection:	Yes, No
0	No
1	Yes

Set the **Defer Test Rpt** prompt to Yes to defer the Test Report one interval if another report is transmitting in the current interval.

The report defers one interval from the time of the last report. For example, if the ***Test Intrvl*** prompt is set to 1 Day, and the system transmits an Opening Report at 9:00 PM, the interval begins at 9:00 PM. If the system transmitted no other reports before 9:00 PM the following day, at 9:00 PM the system transmits the Test Report.

10.0 Address Configuration

Use the prompts in this group to configure the system for devices connected to the data terminal (Terminal 6).



Remember you can only connect four point expanders to the data terminal (terminal 6). Count Text Keypads with Points as point expanders.

1 Address 1

2 Address 2

3 Address 3

4 Address 4

5 Address 5

6 Address 6

7 Address 7

8 Address 8

Default: Text Keypad (Address 1)
Not Used (Addresses 2 to 8)

Selection: Not Used
LED Keypad
Text Keypad
Text Keypad with Points*
RF Point Expander, 8*
RF Point Expander, 16*
Point Expander*

0	Not Used
1	LED Keypad
2	Text Keypad
3	Text Keypad with Points*
4	RF Point Expander, 8*
5	RF Point Expander, 16*
6	Point Expander*

* These selections do not apply to E version control panels.
E version control panels interpret these selections as 0.

Enter the type of device connected to the system for each address.



You can only connect four point expanders to the system.

Do not connect more than one device with the same address to the control panel.

Although LED keypads cannot set an address, you must enter LED keypad for one address if you are going to connect one to the system. Use one address for all LED keypads.

If you are using one text keypad, you must set its address to **Address 1**. If you are using more than one text keypad, be sure one keypad has its address set to **Address 1**.



The system stores the master copy of the Custom Idle Text, Custom Service Text, and Point Text in the text keypad with its address set to 1.

Keypad programming requires a text keypad with its address set to 1. You can program from a text keypad with its address set to 1, even if you change the **Address 1** prompt from the default text keypad.

If you are using an RF Point Expander, its address must be set for Address 7 or Address 8. If you are using two RF Point Expanders, set one for Address 7 and the other for Address 8.

Notes:

11.0 Point Codes

Use the point code charts to set a five-digit point code for each point. The point code determines how the system responds to changes on the point sensor loops. Points respond to opens and shorts.



RF expansion points respond with short for faulted devices.

When an RF point trips, another trip of the same sensor is not detected for 5 or more seconds, depending upon sensor type. Refer to the *Installation Manual* for a complete description of point sensor loops.



First three digits for E version control panels: E version control panels (for example, D2412UE) only include the On-board points. Point Code Digits 4 and 5 tell the control panel where Off-board points are located. E version control panels ignores Point Code Digits 4 and 5.

The tables on the pages that follow show the defaults and selections for programming.

1 Point 1

Default: 2600A

Selection: Refer to *Table 5, Table 6, Table 7, Table 8, and Table 9* for selections for each digit in the point code.

2600A Fire point
Fire point with alarm verification. Reports and alarm output enabled.
Point 1 is powered for two-wire smoke detectors

PT1
FIRE/VERIFY

2 Point 2

Default: 8820A

Selection: Refer to *Table 5, Table 6, Table 7, Table 8, and Table 9* for selections for each digit in the point code.

8820A Delay Door
Delayed Part point. Point arms when user turns the system Part (or All) On. Point starts entry delay.
Reports and alarm output enabled.
Trouble on short when the system is off. Swinger bypass enabled.
Alarm Report delay enabled.

PT2
PART/DELAY

3 Point 3

Default: 8820A

Selection: Refer to *Table 5, Table 6, Table 7, Table 8, and Table 9* for selections for each digit in the point code.

8820A Delay Door
Same response as **Point 2**.

PT3
PART/DELAY

4 Point 4**Default:** 9820A**Selection:** Refer to *Table 5, Table 6, Table 7, Table 8, and Table 9* for selections for each digit in the point code.

9820A Door, No Delay
 No Delay Part point. Point arms when user turns the system Part (or All) On. Point does not start entry delay.
 Reports and alarm output enabled.
 Trouble on short when the system is off. Swinger bypass enabled.
 Alarm Report delay enabled.

PT4
 PART/NO DLY

5 Point 5**Default:** 7820A**Selection:** Refer to *Table 5, Table 6, Table 7, Table 8, and Table 9* for selections for each digit in the point code.

7820A Motion Detector
 No Delay All point. Point only arms when user turns the system All On. Point does not start entry delay and is ignored during entry and exit delays.
 Reports and alarm output enabled.
 Trouble on short when the system is off. Swinger bypass enabled.
 Alarm Report delay enabled.

PT5
 ALL/NO DELAY

6 Point 6**Default:** 7820A**Selection:** Refer to *Table 5, Table 6, Table 7, Table 8, and Table 9* for selections for each digit in the point code.

7820A Motion Detector
 Same response as **Point 5**.

PT6
 ALL/NO DELAY

7 to 24 Points 7 to 24**Default:** 0000A**Selection:** Refer to *Table 5, Table 6, Table 7, Table 8, and Table 9* for selections for each digit in the point code.

0000A Point Disabled
 The system does not monitor disabled points.

PT##
 PT DISABLED

11.1 Digit 1, Point Type

For Digit 1 selections 3, 4, 5, 6, 7, 8, 9, B, C: If an alarm occurs on these points within 2 minutes of a closing (exit time expired, Excursion/Exit included), the system sends a RECENT CLOSING message with the Alarm Report.

For Digit 1 selections 6, 7, 8, 9, B, C: If these points are faulted at the end of exit delay, the system waits a period equal to entry delay before sending an Alarm Report. If the system is not turned off, it sends an EXIT ERROR message with the Alarm Report.

Set Digit 1 to 0 (zero) for points used for RF keypads and arming devices: If you want to use an RF keypad or other arming device, you must assign each device to a point number in order to learn the device into the system. Set Digit 1 to 0 for RF keypad and arming device points.

Table 5: Digit 1 Selections

Display	Selection	Description
0	Disabled	Point does not respond to opens or shorts. Set Digit 1 to 0 if you are using this point number for an RF Keypad or arming device.
1	Fire	Short on sensor loop starts fire alarm response. Open on sensor loop causes trouble response. Fire points are not bypassable. Single Ring programming option does not apply to Fire points. Missing Fire points generate a trouble response when the system is on or off.
2	Fire with Alarm Verification (use Fire with Alarm Verification for Point 1 only)	Short on sensor loop starts verification process: 1. Control panel removes power to Point 1 for 4 seconds to reset smoke detectors. 2. Short on loop within 120 seconds of reset starts alarm response. If the point remains normal or open for the 120-second verification window no alarm response occurs. 3. Verification is not recommended for RF points. 4. Missing Fire points generate a trouble response when the system is on or off. 5. RF Tamper for Fire points generates a trouble response when the system is on or off. 6. Do not use Fire Alarm Verification points as Cross or Partner points. Refer to <i>Section 11.3 Digit 3, Point Options</i>.

Table 5: continued

Display	Selection	Description
3	Buzz on Fault (Voice Active)	When the control panel is off, a short or open buzzes the keypad. When the control panel is All or Part On (armed), a short or open causes an alarm response. Buzz on Fault points are not bypassable. Single Ring programming option applies. Refer to the Single Ring prompt in <i>Section 8.0 Bell</i>. Note: <i>Buzz on Fault points do not generate Trouble Reports even if you program Digit 3 to send them. Refer to Section 11.3 Digit 3, Point Options.</i> When you program Digit 3 for Trouble Reports text keypads display a trouble condition for faults on Buzz on Fault points, otherwise they sound the trouble tone only with no display. Note: <i>Missing Buzz on Fault points generate an alarm response when on, a trouble response when off.</i> <i>RF Tamper for a Buzz on Fault point generates an alarm response when on, a trouble response when off.</i> Voice Active Function: When the Delay Alarm Rpt prompt is set to 255, the Buzz on Fault point type works differently for On-board points (refer to the Delay Alarm Rpt prompt in <i>Section 3.0 Reports</i>). The Delay Alarm Rpt prompt is only set to 255 when a two-way voice verification module is connected to the control panel. The voice verification module shorts a Buzz on Fault (voice active) point to tell the control panel a two-way voice verification session is active.
4	24-hour, visible	Short or open causes alarm response if no Trouble option. Refer to <i>Section 11.3 Digit 3, Point Options</i>. 24-hour points are not bypassable. Single Ring programming option applies. Refer to the Single Ring prompt in <i>Section 8.0 Bell</i>. Note: <i>Missing 24-hour points generate a trouble response when the system is on or off.</i> <i>RF Tamper for a 24-hour point generates a trouble response when the system is on or off.</i>
5	24-hour, invisible	Short or open causes alarm response if no Trouble option. Refer to <i>Section 11.3 Digit 3, Point Options</i>. No alarm tones at keypad, except when point is programmed for alarm output. If point is programmed for alarm output, keypad sounds alarm tones for point alarms. Point lights do not light for alarms. 24-hour points are not bypassable. Single Ring programming option applies. Refer to the Single Ring prompt in <i>Section 8.0 Bell</i>. Note: <i>Missing 24-hour points generate a trouble response when the system is on or off.</i> <i>RF Tamper for a 24-hour point generates a trouble response when the system is on or off.</i>

Table 5: continued

Display	Selection	Description
6	Controlled, All, Delay	When control panel is All On (armed), short or open starts entry delay if no Trouble option. Refer to <i>Section 11.3 Digit 3, Point Options</i>. All points must be normal (not faulted) or bypassed before control panel can be All armed. If an alarm occurs on these points within 2 minutes of a closing (exit time expired, Excursion/Exit included), the system sends a RECENT CLOSING message with the Alarm Report. If these points are faulted at the end of exit delay, the system waits a period equal to entry delay before sending an Alarm Report. If the system is not turned off, it sends an EXIT ERROR message with the Alarm Report. Missing Controlled points generate an alarm response when on, a trouble response when off. RF Tamper for a Controlled point generates an alarm response when on, a trouble response when off.
7	Controlled, All, No Delay (Follower)	When the control panel is All On (armed), and entry or exit delay times expire, a short or open causes an alarm response. These points follow the entry and exit delay and are ignored when faulted during these time periods. All points must be normal (not faulted) or bypassed before the control panel can be All armed. If an alarm occurs on these points within 2 minutes of a closing (exit time expired, Excursion/Exit included), the system sends a RECENT CLOSING message with the Alarm Report. If these points are faulted at the end of exit delay, the system waits a period equal to entry delay before sending an Alarm Report. If the system is not turned off, it sends an EXIT ERROR message with the Alarm Report. Missing Controlled points generate an alarm response when on, a trouble response when off. RF Tamper for a Controlled point generates an alarm response when on, a trouble response when off.
8	Controlled, Part, Delay	When control panel is All or Part On (armed) short or open starts entry delay if no Trouble option. Refer to <i>Section 11.3 Digit 3, Point Options</i>. Part points must be normal (not faulted) or bypassed before control panel can be Part armed. If an alarm occurs on these points within 2 minutes of a closing (exit time expired, Excursion/Exit included), the system sends a RECENT CLOSING message with the Alarm Report. If these points are faulted at the end of exit delay, the system waits a period equal to entry delay before sending an Alarm Report. If the system is not turned off, it sends an EXIT ERROR message with the Alarm Report. Missing Controlled points generate an alarm response when on, a trouble response when off. RF Tamper for a Controlled point generates an alarm response when on, a trouble response when off.

Table 5: continued

Display	Selection	Description
9	Controlled, Part, No Delay	When control panel is All or Part On (armed), short or open causes alarm response. Part points must be normal (not faulted) or bypassed before control panel can be Part armed. If an alarm occurs on these points within 2 minutes of a closing (exit time expired, Excursion/Exit included), the system sends a RECENT CLOSING message with the Alarm Report. If these points are faulted at the end of exit delay, the system waits a period equal to entry delay before sending an Alarm Report. If the system is not turned off, it sends an EXIT ERROR message with the Alarm Report. Missing Controlled points generate an alarm response when on, a trouble response when off. RF Tamper for a Controlled point generates an alarm response when on, a trouble response when off.
A	Keyswitch	Shorting then restoring Keyswitch points toggles the control panel from All (or Part) On to off, off to All On. The trouble option (refer to <i>Section 11.3 Digit 3, Point Options</i>) determines how Keyswitch points respond to opens when the system is off. When the system is All or Part On, an open produces an alarm response. A keyswitch always causes a trouble condition if it is opened in the off state, regardless of the value programmed in Digit 3. If an alarm occurs on these points within 2 minutes of a closing (exit time expired, Excursion/Exit included), the system sends a RECENT CLOSING message with the Alarm Report. Missing Keyswitch points generate an alarm response when on, a trouble response when off. RF Tamper for Keyswitch points generates an alarm response when on, a trouble response when off.

Table 5: continued

Display	Selection	Description
B	Extended Delay, All	When control panel is All On (armed) short or open starts Extended Delay if no Trouble option. <i>Section 11.3 Digit 3, Point Options</i>. You must fault the Extended Delay point first. If a Non-Extended Delay point is faulted first, extended delay is not used. Faulting an Extended Delay point when the system is in exit delay extends exit delay to the value programmed in the Extended Delay prompt. Refer to the Extended Delay prompt in <i>Section 6.0 Open/Close</i> for a detailed explanation of the Extended Delay feature. Extended Delay points must be normal (not faulted) or bypassed before the system can be All armed. Note: <i>If you bypass an Extended Delay Point the system switches to the Extended Delay. The system makes the switch even if the point is not faulted when you bypass it.</i> <i>Extended Delay points that are bypassed and restored during exit delay are automatically unbypassed and returned to the system.</i> If an alarm occurs on these points within 2 minutes of a closing (exit time expired, Excursion/Exit included), the system sends a RECENT CLOSING message with the Alarm Report. If these points are faulted at the end of exit delay, the system waits a period equal to entry delay before sending an Alarm Report. If the system is not turned off, it sends an EXIT ERROR message with the Alarm Report. Missing Extended Delay points generate an alarm response when on, a trouble response when off. RF tamper for an Extended Delay point generates an alarm response when on, a trouble response when off.

Table 5: continued

Display	Selection	Description
C	Extended Delay, Part	When control panel is Part or All On (armed), short or open starts Extended Delay if no Trouble option. Refer to <i>Section 11.3 Digit 3, Point Options</i>. You must fault the Extended Delay point first. If a Non-Extended Delay point is faulted first, extended delay is not used. Faulting an Extended Delay point when the system is in exit delay extends exit delay to the value programmed in the Extended Delay prompt. Refer to the Extended Delay prompt in <i>Section 6.0 Open/Close</i> for a detailed explanation of the Extended Delay feature. Extended Delay points must be normal (not faulted) or bypassed before the system can be Part or All armed. If you bypass an Extended Delay point, the system switches to the Extended Delay. The system makes the switch even if the point is not faulted when you bypass it. Extended Delay points that are bypassed and then restore during exit delay are automatically unbypassed and returned to the system. If an alarm occurs on these points within 2 minutes of a closing (exit time expired, Excursion/Exit included), the system sends a RECENT CLOSING message with the Alarm Report. If these points are faulted at the end of exit delay, the system waits a period equal to entry delay before sending an Alarm Report. If the system is not turned off, it sends an EXIT ERROR message with the Alarm Report. Missing Extended Delay points generate an alarm response when on, a trouble response when off. RF tamper for Extended Delay points generates an alarm response when on, a trouble response when off.

11.2 Digit 2, Alarm Responses

Table 6: Digit 2 Selections

	0	1	2	3	4	5	6	7	8	9
No Alarm Response: Set Digit 2 to 0 (zero) only if you want no alarm response for this point. Note: <i>Set Digit 2 to 0 if you are using this point number for an RF Keypad or arming device.</i>	X									
Reports: Points send Alarm, Cancel, Trouble, Bypass, Swinger Bypass, and Restoral Reports as programmed. Bypass Reports are only sent with Closing Reports.		X	X	X	X		X	X	X	X
Alarm Report Delay: If a user enters their passcode to silence an alarm before the programmed Alarm Report Delay time expires, the alarm is canceled. No Alarm, Cancel, or Restoral Report is sent. Program Delay Alarm Rpt in <i>Section 3.0 Reports</i> to determine the duration of the delay. Voice Active Function: When the Delay Alarm Rpt prompt is set to 255, Alarm Report Delay points (Digit 2 = 2, 3, 7, or 8) begin the 2-way Voice Verification process. Refer to Delay Alarm Rpt in <i>Section 3.0 Reports</i>. - Duress Reports and A, B, C Key Reports are not affected by the Alarm Report Delay. These reports are sent immediately in all cases.			X	X				X	X	
Swinger Bypass: The Swinger Count prompt in the System Configuration Group sets the swinger count for this Swinger Bypass point option. When the number of alarms or troubles in an armed or disarmed period reaches the swinger count, the system automatically bypasses points programmed for Swinger Bypass. Turning the system off clears the bypass. If a 24-hour point swinger bypasses while the system is off, turning the system on (starting exit delay) and then turning the system off (pressing [CLEAR]) clears the bypass. Swinger bypass is a point trouble and activates the Point Trouble Relay function. When a point is swinger bypassed, the Point Trouble Relay is activated.				X	X				X	X
Alarm Output: Points programmed for alarm output provide output at Terminals 4 and 5 as part of the alarm response. Fire points provide a pulsed output. Non-Fire points provide a steady output. Output lasts for the duration programmed in Bell Time . Fire output always takes precedence over non-fire output.						X	X	X	X	X

11.3 Digit 3, Point Options

If Digit 1 is set to 1 (Fire point) and Digit 3 is set to 9, the point functions as a Cross Fire point. If Digit 1 is set to 1 and Digit 3 is set to D, the point functions as a Partner Fire point. Programming Digit 3 to other than 9, 0, or D (when Digit 1 = 1, Fire point) causes inappropriate point behavior.

Table 7: Digit 3 Selections

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
No Point Options: Set Digit 3 to 0 (zero) for no point options. Note: <i>Set Digit 3 to 0 if you are using this point for an RF Keypad or arming device.</i>	X															
Trouble on Open: An open on the sensor loop for 24-hour points (Digit 1 = 4, 5, or A) causes a trouble response when the control panel is Off, All, or Part On . When the system is on, Controlled, Delay points (Digit 1 = 6 or 8) start entry delay on short only. An open causes an instant alarm. When the system is off, an open causes a trouble response. When the system is not disarmed, an open on a keyswitch (Digit 1 = A) causes an instant alarm.		X				X				X				X		
Trouble on Short: A short on the sensor loop for 24-hour points (Digit 1 = 4 or 5) causes a trouble response when the control panel is Off, All, or Part On . When the system is on, Controlled, Delay points (Digit 1 = 6 or 8) start entry delay on an open only. A short causes an instant alarm.			X				X				X				X	
Trouble on Open or Short: An open or short on the sensor loop for 24-hour points (Digit 1 = 4 or 5) causes a trouble response when the control panel is Off, All, or Part On . When the system is on, Controlled, Delay points (Digit 1 = 6 or 8) create instant alarms on an open or short.				X				X				X				X
Double Knock: Points programmed for double knock require two alarm activations within 120 seconds (open and/or short on the sensor loop) before the system begins an alarm response. If the point returns to and remains in a normal or trouble condition for the duration of the 120 second double knock window, there is no alarm response. Do not use double knock with the Keyswitch point type.					X	X	X	X								
Cross Point: Cross points are paired with a Partner point. The Partner point is always the next highest point number. For example, if Point 1 is a Cross point, Point 2 must be its Partner point. Cross and Partner points require an alarm activation on their paired point within 120 seconds (open and/or short on the sensor loop) before the system begins an alarm response. If a Cross (or Partner) point returns to the normal state in the 120-second Cross Point window and there is no Alarm event on the point it is paired with, there is no alarm response. If the point remains in alarm for the duration of the 120-second Cross Point window, the control panel generates an alarm response, even if the point it is paired with does not go into alarm. If you Bypass a Cross or Partner point, it swinger bypasses or is in a trouble condition (point trouble, RF trouble, missing). Its paired point generates alarm responses on its own. Alarm Reports do not include the CROSS POINT message unless the alarm response is generated by both points of the pair. If a Cross (or Partner) point is not paired with a Partner (or Cross) point, it generates alarm responses on its own. Note: <i>Do not pair different point types for the Cross/Partner function.</i>									X	X	X	X				
Partner point - Refer to <i>Cross Point</i> in this table.														X	X	X

11.4 Digit 4, Device Address

Digit 4 is not required for E version control panels. E version control panels only include the On-board points, and they ignore Point Code Digit 4.

Digit 4 tells the system what device a point is connected to. Digit 5 tells the system the sensor loop on the device. The control panel's On-board points are numbered 1 to 6. Leave Digits 4 and 5 at their default setting ("0" for Digit 4, "A" for Digit 5) for on-board sensor loops. If you program a point number less than 6 to a point expander, the system ignores the control panel's on-board sensor loop for that point.

For example, to make Point 5 a motion detector connected to loop D of a D222 Text Keypad with Address 7, set the **Address 7** prompt in the Address Configuration Group and Digits 4 and 5 of the point code as follows:

- Address 7 = Text Keypad with points
- Digit 4 = 7
- Digit 5 = D (motion detector wired to loop D of the D222 Text Keypad)

The control panel ignores the on-board sensor loop for Point 5.



Although eight addresses are available, you can only connect four devices with point expansion to the control panel's data terminal.



Points with Digit 4 set to an address not programmed for a point expander do not generate Alarm, Trouble, or Missing reports. Refer to *Section 10.0 Address Configuration* to be certain that any address programmed in Digit 4 of a point code is programmed for a point expander.

Table 8: Digit 4 Selections

	0	1	2	3	4	5	6	7	8
On-Board: Detection devices for this point are connected to one of the control panel's on-board sensor loops.	X								
Address 1: Detection devices for this point are connected to an expansion device with Address 1. Note: <i>If you are connecting a text keypad to the system, you must use Address 1.</i> <i>If you connect more than one text keypad, make sure one of the keypads is set for Address 1.</i>		X							
Address 2: Detection devices for this point are connected to an expansion device with Address 2.			X						
Address 3: Detection devices for this point are connected to an expansion device with Address 3.				X					
Address 4: Detection devices for this point are connected to an expansion device with Address 4.					X				
Address 5: Detection devices for this point are connected to an expansion device with Address 5.						X			
Address 6: Detection devices for this point are connected to an expansion device with Address 6.							X		
Address 7: Detection devices for this point are connected to an expansion device with Address 7. Note: <i>If you are connecting a RF Point Expander to the system, it can only use Address 7 or Address 8.</i>								X	
Address 8: Detection devices for this point are connected to an expansion device with Address 8. Note: <i>If you are connecting a RF Point Expander to the system, it can only use Address 7 or Address 8.</i>									X

11.5 Digit 5, Sensor Loop

Digit 5 is not required for E version control panels. E version control panels only include the On-board points and ignore Point Code Digit 5.

Digit 5 of the point code tells the control panel what sensor loop to use for the point. Sensor loops for Off-board points are lettered (A to P). Enter the letter of the sensor loop you are using for this point.

For example, to make Point 5 a motion detector connected to loop D of a D222 Text Keypad with Address 7, set Digits 4 and 5 of the point code as follows:

- Digit 4 = 7 (keypad set for **Address 7**)
- Digit 5 = D (motion detector wired to loop D of the D222 Text Keypad)

The control panel ignores the on-board sensor loop for Point 5.

If an RF point expander connects to the system and you use an RF keypad, you must assign the keypad a point number.

For example, you could include a D204RF Keypad in your system by following the steps below.

1. Connect a D208RF Point Expander Module to the control panel as shown in the module instructions.
2. Select a point number for the RF keypad. Low Battery Reports for the keypad includes this point number. You might want to assign RF keypads to the highest point numbers to avoid having the keypads appear in the middle of points assigned to detection devices.
3. Program the point code for the point selected in step 2. Digits 1, 2, and 3 should be set to 0. Digit 4 should be set to the address of the point expander you connected in step 1. RF point expanders can only use Addresses 7 or 8. Set Digit 5 to the sensor loop on the point expander you want to use for the RF keypad.
4. Learn the keypad into the system as the point number you selected in step 2. The *Keypad Diagnostics Sheet* contains complete instructions for learning RF points.

The control panel's on-board sensor loops are fixed to point numbers as labeled on the control panel, 1 to 6. If you are using an on-board sensor loop, you need to set Digit 4 to 0 (zero). You can leave Digit 5 at the default, A. The control panel actually ignores Digit 5 if Digit 4 is set to 0 (zero).

Table 9: Digit Selection Summary

Selection	Digit 1 Point Type	Digit 2 Alarm Response	Digit 3 Point Options	Digit 4 Device Address	Digit 5 Sensor Loop
0	Disabled Set to 0 for RF keypad.	No reports, No Swinger, No Output Set to 0 for RF keypad.	No Troubles, Not Cross Point, Not Partner Point Set Digit 3 to 0 for RF keypad.	On-Board	
1	Fire	Reports, No Report Delay, No Swinger, No Output	Trouble Open, No Trouble Short, No Double Knock, No Cross Point, No Partner Point.	Device Address 1	
2	Fire with Alarm Verify (use with Point 1 only)	Reports, Report Delay, No Swinger, No Output	No Trouble Open, Trouble Short, No Double Knock, No Cross Point, No Partner Point.	Device Address 2	
3	Buzz on Fault	Reports, Report Delay, Swinger, No Output	Trouble Open, Trouble Short, No Double Knock, No Cross Point, No Partner Point.	Device Address 3	
4	24-hour, Visible	Reports, No Report Delay, Swinger, No Output	No Trouble Open, No Trouble Short, Double Knock, No Cross Point, No Partner Point.	Device Address 4	
5	24-hour, Invisible	No Reports, No Report Delay, No Swinger, Output	Trouble Open, No Trouble Short, Double Knock, No Cross Point, No Partner Point.	Device Address 5	
6	Controlled, All, Delay	Reports, No Report Delay, No Swinger, Output	No Trouble Open, Trouble Short, Double Knock, No Cross Point, No Partner Point.	Device Address 6	
7	Controlled, All No Delay	Reports, Report Delay, No Swinger, Output	Trouble Open, Trouble Short, Double Knock, No Cross Point, No Partner Point	Device Address 7	
8	Controlled, Part, Delay	Reports, Report Delay, Swinger, Output	No Trouble Open, No Trouble Short, No Double Knock, Cross Point, No Partner Point.	Device Address 8	
9	Controlled, Part, No Delay	Reports, No Report Delay, Swinger, Output	Trouble Open, No Trouble Short, No Double Knock, Cross Point, No Partner Point.		
A	Keyswitch		No Trouble Open, Trouble Short, No Double Knock, Cross Point, No Partner Point.		A
B	Extended Delay, All		Trouble Open, Trouble Short, No Double Knock, Cross Point, No Partner Point		B
C	Extended Delay, Part		No Trouble Open, No Trouble Short, No Double Knock, No Cross Point, Partner Point.		C
D			Trouble Open, No Trouble Short, No Double Knock, No Cross Point, Partner Point.		D
E			No Trouble Open, Trouble Short, No Double Knock, No Cross Point, Partner Point.		E
F			Trouble Open, Trouble Short, No Double Knock, No Cross Point, Partner Point.		F
G to P					G to P

11.6 Recommended Point Codes

Table 10 through Table 16 show some recommended point codes. Many other point code options are available. You can create custom point functions using the many point features available. Be sure to thoroughly test any point code to be certain the system functions as you expect.

Table 10: Smoke Detector (trouble on open, alarm output)

	Reports	Local
Alarm verification (Pt 1 only)	260##	250##
No verification	160##	150##
Cross point	168##	158##
Partner point	16C##	15C##
RF point	160##	150##

Table 11: Door with Entry/Exit Delay (swinger bypass, alarm output, alarm report delay)

	Reports	Local
Delay on Open	882##	852##
Trouble on Short		
Delay on Short	881##	851##
Trouble on Open		
Delay on Open or Short	880##	850##
No Troubles		
RF point	880##	850##

Table 12: Door or Window with No Entry/Exit Delay (swinger bypass, alarm output, alarm report delay)

	Reports	Local
Trouble on Short	982##	952##
Trouble on Open	981##	951##
No Troubles	980##	950##
RF point	980##	950##

Table 13: Garage Door with Extended Entry/Exit Delay (swinger bypass, alarm output, alarm report delay)

	Reports	Local
Trouble on Short	B82##	B52##
Trouble on Open	B81##	B51##
No Troubles	B80##	B50##
RF point	B80##	B50##

Table 14: Motion Detector (swinger bypass, alarm output, alarm report delay)

	Reports	Local
Trouble on Short	782##	752##
Trouble on Open	781##	751##
No Troubles	780##	750##
Cross point	78A##	75A##
Trouble on Short		
Cross point	789##	759##
Trouble on Open		
Cross point	788##	758##
No Troubles		
Partner point	78E##	75E##
Trouble on Short		
Partner point	78D##	75D##
Trouble on Open		
Partner point	78C##	75C##
No Troubles		
RF point	780##	750##

Table 15: Tamper (swinger bypass, alarm output, alarm report delay)

	Reports	Local
Trouble on Short	782##	752##
Trouble on Open	781##	751##
No Troubles	780##	750##
RF point	780##	750##

RF Keyswitch or Other Arming Device (no alarm response)

RF arming devices do not create point alarms.

Program all points assigned to RF keypads or other RF arming devices to 000###.

Table 16: Panic Device (swinger bypass)

	Reports	Local
Silent, Invisible Alarm on Open Trouble on Short	542##	552##
Silent, Invisible Alarm on Short Trouble on Open	541##	551##
Silent, Invisible Alarm on Open or Short No Troubles	540##	550##
Alarm Output Alarm on Open Trouble on Short	592##	552##
Alarm Output Alarm on Short Trouble on Open	591##	551##
Alarm Output Alarm on Open or Short No Troubles	590##	550##
RF point Silent, Invisible	540##	550##
RF point Alarm Output	540##	550##

Table 17: Keyswitch (swinger bypass, alarm output)

	Reports	Local
Trouble on Open	A91##	A51##

Notes:

12.0 Point Text

1 to 24 Point Text

Default: Refer to *Section 11.0 Point Codes*

Selection: A to Z, 0 to 9

! # ' , - / : < >

Enter custom text to appear in text keypads for each point. The default text appears in *Section 11.0 Point Codes*.



It can take up to 15 seconds for the custom text you program here to appear in all text keypads connected to the system.

Notes:

13.0 Relays

A D133 or D134 Relay Module is required to use the system's external relay outputs (Terminals 9 and 10). One module is required for each output used. Refer to the *Installation Manual* for instructions.

You can program each of the system's two relay outputs with one or two functions. With the **Relay # Logic** prompts, you can configure the outputs so they activate when the condition for either function exists, or only activate when the conditions for both functions exist.

The D5200 Programmer displays an additional relay parameter prompt if the Relay function you selected requires you to program additional information.

For example, if you select the Follow Point function for **Relay 1, Func 1** and press [Enter], the D5200 displays the parameter prompts, **Point 1** (Yes, No), followed by **Point 2** (Yes, No), and so on until **Point 24** (Yes, No). The parameter prompts tell the system what points the relay is to follow.

If you select Reset for **Relay 1, Func 1** and press [Enter], the D5200 goes directly to **Relay 1, Func 2**. The Reset function does not require any parameters.

13.1 Relay Function Logic

The **Relay 1**, and **Relay 2, Logic** prompts allow you to further define the conditions under which the control panel activates the relay drivers.

1 Relay 1 Logic

2 Relay 2 Logic

Default:	Function 1 Only
Selection:	Function 1 Only Function 1 or 2 Function 1 and 2
0	Function 1 Only
1	Function 1 or 2
2	Function 1 and 2

When **Relay 1 Logic** or **Relay 2 Logic** is set to **Function 1 Only**, the system activates the relay output when Function 1 calls for activation. Function 2 is ignored.

When **Relay 1 Logic** or **Relay 2 Logic** is set to **Function 1 or 2**, the system activates the relay output when either Function 1 or Function 2 calls for activation, or when both do.

When **Relay 1 Logic** or **Relay 2 Logic** is set to **Function 1 and 2**, both Function 1 and Function 2 must call for activation before the system activates the relay output.

13.2 Relay Functions

3 Relay 1 Func 1

Default: No Output

Selection: Refer to *Table 18* (0 to 24)

The **Relay 1, Func 1** prompt sets Function 1 for Relay Output 1 (Terminal 9).

4 Relay 1 Func 2

Default: No Output

Selection: Refer to *Table 18* (0 to 24)

The **Relay 1, Func 2** prompt sets Function 2 for Relay Output 1 (Terminal 9).

5 Relay 2 Func 1

Default: No Output

Selection: Refer to *Table 18* (0 to 24)

The **Relay 2, Func 1** prompt sets Function 1 for Relay Output 2 (Terminal 10).

6 Relay 2 Func 2

Default: No Output

Selection: Refer to *Table 18* (0 to 24)

The **Relay 2, Func 6** prompt sets Function 6 for Relay Output 2 (Terminal 10).

Table 18: Relay Function Selections

Programmers	Keypad	Description
No Output	0	No output at the relay terminal.
Alarm	1	Provides a steady output when a point is in an alarm condition. The relay output follows Bell Time . Note: <i>This output does not occur for alarms caused by A, B, C Keys.</i> Entering a combination to acknowledge an alarm resets the relay. Select the points to monitor for alarms at the Parameter prompt.
Alarm Memory	2	Provides a steady output when a point shows alarm memory at the keypad. Turning the system on clears alarm memory and ends the output. This output does not occur for alarms caused by A, B, C Keys. Select the points to monitor for alarm memory at the Parameter prompt.
Point Trouble	3	Provides a steady output when selected points are in trouble. Select the points to monitor for troubles at the Parameter prompt. Swinger bypass is a point trouble and activates the Point Trouble Relay function.
Follow Point	4	Provides a steady output when selected points are faulted (including point trouble and alarm). Select the points to monitor for faults at the Parameter prompt.
Watch Tone	5	Activates the relay output in parallel to the watch tone for selected points. Refer to Key 7, Watch Tone in the <i>User's Guide</i> . If you set the watch tone to No Tone, the Watch Tone relay does not activate. Select the points for Watch Tone monitor at the Parameter prompt.
A,B,C Key, Steady	6	Activates the relay output when a user presses a selected function key. The relay output remains activated until a user performs a System Reset (presses [3] and enters a passcode). Select the function keys to monitor at the Parameter prompt.
A,B,C Key, Pulse	7	Activates the relay output when a user presses a selected function key. The relay output pulses until a user performs a System Reset (presses [3] and enters a passcode). Select the function keys to monitor at the Parameter prompt.

Table 18: continued

Programmers	Keypad	Description
A,B,C Key, Momentary	8	Activates the relay output when a user presses a selected function key. The relay output activates for 10 seconds. Do not program both relays for this function, doing so might cause inconsistent relay operation. Select the function keys to monitor at the <i>Parameter</i> prompt.
Off with Passcode	9	Activates the relay for 10 seconds when a selected user turns the system off with a passcode. Note: <i>Do not program both relays for this function, doing so can cause inconsistent relay operation.</i> Select the Users to monitor at the <i>Parameter</i> prompt.
Follow Alarm Output	10	Parallels activity at the alarm output (Terminals 4 and 5).
All On	11	Activates the relay at the start of exit delay when the system is All On. The output remains activated until the system is turned off.
Part On	12	Activates the relay at the start of exit delay when the system is Part On. The output remains activated until the system is turned off.
Reset	13	Activates the relay output when a user presses the [3] key to reset the system. The relay output activates for 4 seconds. Do not program both relays for this function, doing so might cause inconsistent relay operation.
AC Failure	14	Provides a steady output when the system detects a loss of power at Terminals 1 and 2. The driver remains activated until AC power restores.
Battery Trouble	15	Provides a steady output when the system detects a low or missing battery condition. The relay remains activated until the battery restores.
Communication Fail	16	Provides a steady output when the system fails to communicate with the receiver within ten dialing attempts when two phone numbers are programmed, or five dialing attempts when one phone number is programmed. The relay remains activated until the system successfully communicates a report to the receiver.
Communicating	17	Activates the relay output when the system seizes the phone line. The relay remains activated until the system releases the phone line.
Ground Start	18	Activates the relay output for 900 milliseconds after the system seizes the phone line. Use this function to generate dial tone on ground start systems. Note: <i>Do not program both relays for this function, doing so can cause inconsistent relay operation.</i>
Entry and Exit Delay	19	Relay provides a steady output during entry and exit delays.
Extended Delay	20	Relay provides a steady output during extended delay. The relay does not activate if you fault an Extended Delay point before you start exit delay, or if you bypass the Extended Delay point while you are in exit delay.
Pulsed Output	21	This function provides a continuous pulsed output. Do not assign this function to a relay without “anding” it to another function. Refer to the <i>Relay 1 Logic 1 and Relay 2 Logic 1</i> prompts in <i>Section 13.1 Relay Function Logic</i> . For example, “anding” this function to the <i>Alarm</i> function results in pulsed output for the duration of <i>Bell Time</i> . The Pulsed Output does not activate when alarms from A, B, C Keys occur.

Table 18: continued

Programmers	Keypad	Description
2-Second Output	22	Provides a 2-second output. “And” this function to another function for a 2-second output. Refer to the Relay 1 Logic 1 and Relay 2 Logic 1 prompts in <i>Section 13.1 Relay Function Logic</i>. For example “anding” this function to the Follow Point function results in a 2-second relay activation on a point fault. 2-Second Output does not activate when alarms from A, B, C keys occur. Note: <i>Do not “and” this function to the A,B,C Key, Momentary, A,B,C Key, Pulse, Ground Start, or Follow Alarm Output functions.</i> <i>Do not use this function for both Relay 1 and Relay 2.</i>
RF, Light Key	23	Pressing the [Light] key (light bulb graphic) on RF keypads toggles this relay off and on.
Voice Request	24	The Voice Request Relay function is intended for use with an optional two-way voice verification module. The Voice Request Relay activates for 2 seconds when the acknowledgment of an Alarm Report from an Alarm Report Delay point (Digit 2 = 2, 3, 7, or 8) is received at the control panel. Control panels with firmware revision 2.5 or earlier, Relay Function 24 does not provide the Voice Request Relay function. For those control panels, Relay Function 24 is RF Special Key.

13.3 Relay Parameters, for Keypad Programming Only

The parameter prompts shown in *Table 19* are for programming from the keypad.

If you did not program one of the Relay functions (the first four prompts in this group) with a Relay function from 1 to 9 (refer to *Table 18*) or you left the **Relays Group** prompts at their defaults, leave the prompts in *Table 19* at their defaults.

If you selected a Relay function from 1 to 9, you need to program a parameter for that function. Read the instructions carefully.

Each relay parameter has its own group. Each prompt in the group allows you to assign a point or user to the Relay function. For example, if you chose Alarm for Relay 1 Function 1, use the prompts in **Group 18, Relay 1, Func 1 Parameter** to tell the system which points you want to activate the relay.

Table 19: Relay Parameters

Group	Prompt	Default
18 Relay 1, Func 1 Parameter	1 Point 1 (or User 1)	No
	2 Point 2 (or User 2)	No
	to . . .	
	24 Point 24	No
19 Relay 1, Func 2 Parameter	1 Point 1 (or User 1)	No
	2 Point 2 (or User 2)	No
	to . . .	
	24 Point 24	No
20 Relay 2, Func 1 Parameter	1 Point 1 (or User 1)	No
	2 Point 2 (or User 2)	No
	to . . .	
	24 Point 24	No
21 Relay 2, Func 2 Parameter	1 Point 1 (or User 1)	No
	2 Point 2 (or User 2)	No
	to . . .	
	24 Point 24	No

14.0 User Test

If the user presses [1] at the keypad and then enters their passcode, the system performs a user test. Prompts 1 to 3 tell the system what functions to perform for the User Test.

1 User Tst, Bell

Default: No

Selection: Yes, No

0	No
---	----

1	Yes
---	-----

Setting the **Usr Tst, Bell** prompt to Yes makes a Bell Test part of the User Test. The system activates the Alarm Output (Terminals 4 and 5) for 3 seconds. Light 1 on the keypad flashes for the duration of the test.



Set this prompt to Yes for UL 1023, Household Fire systems.

2 User Tst, Battery

Default: No

Selection: Yes, No

0	No
---	----

1	Yes
---	-----

Setting the **Usr Tst, Battery** prompt to Yes makes a Battery Test part of the User Test. Pressing [1] causes the system to run solely on battery power for 4 minutes. Light 1 flashes while the control panel is on battery power. If the battery voltage falls below 12.1 VDC during that 4 minutes, the system restores AC power and displays a system trouble at the keypad by flashing the OK light. Refer to *System Troubles* in the *User Guide*.

The system sends a Low Battery Report to the receiver.

Users can end the test by pressing the [CLEAR] key.



Set this prompt to Yes for UL 1023, Household Fire systems.

3 User Tst, Comm

Default: No

Selection: Yes, No

0	No
---	----

1	Yes
---	-----

Setting the **Usr Tst, Comm** prompt to Yes makes a Communication Test part of the User Test. When the user presses [1] and enters a passcode, the system sends a Test Report to the receiver. Light 1 flashes during the test. If the system fails to communicate with the receiver, the system goes into communication failure and displays a system trouble at the keypad by flashing the OK light. Refer to *Check System* in the *User Guide*.

The system makes five attempts to send the report if only one phone number is programmed. It makes ten attempts if two numbers are programmed. Refer to **Phone 1, Phone 2**, in *Section 2.0 Phone*.

Notes:

15.0 Passcodes

If you are programming from the keypad, you must exit the Programming Mode to program passcodes. Use Show User ([6] key) and your installer passcode. Follow the instructions in the *Security System User Guide*.

1 Installer Code

Default: 654321
Selection: 0 to 9, Blank

Installers enter this passcode to perform keypad programming. They can also use it to perform tests and to change passcodes. You cannot use the installer's passcode to turn the system off.

The installer passcode always requires six digits. Even when the **Passcode Length** prompt is less than six, you must enter six digits for this prompt. If you enter less than six digits and increase the **Passcode Length** later, the installer code is disabled.

The D5200 Programmer and remote programmers do not let you program the same passcode for the installer and a user. The system prevents users changing their own passcodes at the keypad from duplicating the installer code. However, the system does not prevent installers programming from the keypad, from programming the same passcode for the installer and a user.

Use the D5200 Programmer or remote programmer to fill this prompt with spaces to disable the installer passcode.

2 Passcode Length

Default: 3
Selection: 3 to 6

You can fix the length of user passcodes from three to six digits. All passcodes are the same length.



If you shorten the passcode length after entering passcodes, you could possibly create duplicate passcodes. For example, passcodes 1235 and 1236 both shorten to 123. If you lengthen passcodes you disable some. For example, if you add passcode 396 and then increase the passcode length to four digits, 396 becomes 396F. If you cannot enter an F from the keypad, passcode 396 is disabled.

3 Code 8 = Duress

Default: No
Selection: Yes, No

0	No
1	Yes

Setting this prompt to Yes makes the passcode for User 8 the duress passcode. The passcode operates the system normally and sends a Duress Report to the receiver.

4 Passcode Required

Default: No
Selection: Yes, No

0	No
1	Yes

Setting this prompt to Yes configures the system so that users must enter a passcode to turn the system on (press [9] and enter passcode).

Pressing [9] after entering the passcode turns the System All On with No Delay (press [9], enter passcode, press [9]).

To turn the system Part On users press [0] and then enter a passcode (press [0], enter passcode).

Pressing [0] after entering the passcode turns the System Part On with No Delay (press [0], enter passcode, press [0]).

5 Change Passcode

Default:	Owner & User
Selection:	Disabled, Owner, Owner & User
0	Disabled
1	Owner
2	Owner & User

- **Disabled:** Prevents any user from changing the user's passcode from the keypad.
- **Owner:** Only allows owner type passcodes to change passcodes from the keypad.
- **Owner & User:** Allows both owner and user types to change passcodes from the keypad.

The *Security System User's Guide* provided with each keypad contains complete instructions for changing passcodes from the keypad.



Prompts 6 through 21 allow you to choose the Passcode Type and to enter a unique passcode for up to eight users.

Passcode-# Type

Default:	Owner (User 1) Disabled (Users 2 to 8)
Selection:	Disabled, Owner, User, One-Time (Refer to the <i>Users Guide</i> for instructions on setting the passcode type from the keypad)

There are eight passcodes available. The “#” in **Passcode-# Type** represents passcodes 1 to 8.

- **Disabled:** Disables the passcode.
- **Owner:** Allows the user to change other users' passcodes and passcode types. Required for configuring the Watch Tone responses. All other user functions are also available.
- **User:** Allows a user to change only the user's own passcode. A User passcode type can not change passcode type. A User can not change other users' passcodes. A User can not adjust Watch Tone responses. All other user functions are available.
- **One-Time:** Allows the user to disarm the system one time. All other system functions are available. Owners can reactivate One-Time passcodes.

Passcode-#

Default:	123 (456) for Passcode 1 Blank for Passcodes 2 to 8
Selection:	0 to 9, Blank (Refer to the <i>Users Guide</i> for instructions on setting the User passcodes from the keypad)

There are eight passcodes available. The “#” in **Passcode-#** represents passcodes 1 to 8.

The **Passcode-#** prompt sets the passcode for each user.

The passcode length for all passcodes is set by the **Passcode Length** prompt. Enter the number of digits for the passcode set by the Passcode Length.

Note that Ustr 1 Passcode in the default program is 123456. Passcode Length in the default program is set at 3. The passcode for User 1 is 123.

- If you change Passcode Length to 4, Passcode 1 becomes 1234.
- If you change Passcode Length to 5, Passcode 1 becomes 12345.
- If you change Passcode Length to 6, Passcode 1 becomes 123456.

16.0 RF Parameters

Use the prompts in this group to configure the system for Premises RF devices. If you do not intend to use RF devices, there is no need to change these prompts from their defaults.

1 *Supervision Interval*

Default: 24 (hours)

Selection: 12, 24

0	12 hours
1	24 hours

The ***Supervision Interval*** is the number of hours the RF receiver waits to hear from an RF point before it sends a Missing Report to the receiver for that point.

Notes:

17.0 Program Lock



If you are programming from the keypad, you can lock yourself out of the control panel by changing prompts in this group from their defaults.

Use the prompts in this group to return all prompts to their factory defaults, lock out programming from the keypad, and disable the system.

1 Return to Default

Keypad programming only.

Default:	This prompt only appears when programming from the keypad.
Selection:	Yes, No
0	No
1	Yes

This prompt only appears during keypad programming. Entering [1] returns all prompts to their factory defaults. The change occurs when you press the [Modify] key after making your entry. Refer to *Section 18.0 Keypad Programming*. The DataLock code does not return to its default. DataLock codes can only be changed using the D5200 Programmer or a remote programmer.

2 Program Lock

Default:	No
Selection:	Yes, No
0	No
1	Yes

Set this prompt to Yes to prevent programming from the keypad. Use the D5200 Programmer or a remote programmer to re-activate keypad programming.



Programming from the Keypad? Do not accidentally lock yourself out of the control panel's keypad programming feature by changing the **Program Lock** prompt to 1. Changes to this program item take effect when you exit keypad programming.

3 Disable System

Default: No

Selection: Yes, No

0	No
1	Yes

Set this prompt to Yes to disable the system. Point processing stops and the keypad stops functioning when you unlock the standby pin at the conclusion of the programming session. Keypads indicate a system trouble. Text keypads display **DISABLE** and the text you programmed in

Custom Service Text.



You cannot enable the system from the keypad after setting this prompt to Yes. The system turns off all user and installer functions.

You must use the D5200 Programmer or a remote programmer to enable the system after using the **Disable System** prompt to disable it.

Notes:

18.0 Keypad Programming

18.1 Getting Started

Text Keypad Required: You need a text keypad with its address set to 1 connected to the control panel to use keypad programming. You cannot program from an LED keypad. You do not need to leave the text keypad connected to the system after the programming session.

You do not need to reserve an address for a text keypad to use keypad programming. When the standby switch is locked down, the system allows you to use a text keypad with its address set to 1 for keypad programming, even though address 1 can be programmed for another device.

To start keypad programming:

1. Lock the standby switch down. You must connect a text keypad (address set to 1) to the control panel to program. The text keypad can be removed after programming.
2. Press the [1] key on the text keypad.
3. Enter your installer passcode. The default installer passcode is 654321. The default passcode length is three characters, so if you did not change the default entries, press [6][5][4].
The keypad scrolls the installer menu.
4. Press the [8] key to enter keypad programming, View Mode. If you press the [CLEAR] key now, the keypad exits the Programming Mode and returns to the Installer Menu.

18.2 View Mode

In View Mode you can view each program prompt. You must enter the Modify Mode to make changes for any prompt. When you first enter View Mode, you are at Group 1, Prompt 1. *Figure 2* shows Group 1, Prompt 1, Account Number, with an entry of 1234.

Figure 2: View Mode

1.1 1234

The group and prompt number appear in line 1. For most prompts, the current entry for the prompt is in line 2. The exceptions are the prompts containing phone numbers, Phone 1, Phone 2, and RAM Phone. The first seven characters for these prompts appear on line 1 with the group and prompt numbers. The remaining characters appear on line 2.

Table 20: View Mode Keys

A-Key	Pressing the [A] key while in View Mode enters Modify Mode where you can change the entry for a prompt. Modify Mode is described in the <i>Section 18.3 Modify Mode</i> .
B-Key	Pressing the [B] key in View Mode moves you to the first prompt in the previous group. If you were at 3.2 (group 3, prompt 2), pressing the [B] key moves you to 2.1 (Group 2, Prompt 1).
C-Key	Pressing the [C] key in View Mode moves you to the first prompt in the next group. If you were at 3.2 (Group 3, Prompt 2), pressing the [C] key moves you to 4.1 (Group 4, Prompt 1).
-Key	Pressing the [] key in View Mode moves you to the next prompt in the group. If you are at the last prompt in the group when you press the [*] key the system returns to Prompt 1.
Clear	Pressing the [CLEAR] key in View Mode exits keypad programming.

18.3 Modify Mode

In Modify Mode you can modify the entry for any prompt. Pressing the [A] key in View Mode puts the system in Modify Mode. MOD (short for modify) appears to the right of the group and prompt numbers. Refer to *Figure 3*.

Figure 3: Modify Mode

1.1 MOD
B

The current entry for the prompt is cleared from line 2 of the display. The first character of the scroll list appears in the leftmost position of the display. Using the scroll list to complete the new entry is described in *Section 18.4 Scroll Lists*. Refer to *Table 21*.



Even though the current value of the prompt was cleared when you entered Modify Mode, you can leave Modify Mode and return to View Mode without changing the entry by pressing the [CLEAR] key.

Table 21: Modify Mode Keys

A-Key	Pressing the [A] key while in View Mode enters Modify Mode. Pressing the [A] key while in Modify Mode writes the displayed value to control panel memory and returns to View Mode. The display shows the new value. Because the system is no longer in Modify Mode, MOD no longer appears to the right of the group and prompt numbers.
B-Key	Pressing the [B] key in Modify Mode scrolls backward through the scroll list of characters. Refer to <i>Section 18.4 Scroll Lists</i> .
C-Key	Pressing the [C] key in Modify Mode scrolls forward through the scroll list of characters. Refer to <i>Section 18.4 Scroll Lists</i> .
-Key	Pressing the [] key in Modify Mode accepts the character displayed in the current character position and then moves one character position to the right. Do not press the [*] key unless you intend to enter another character to the right of the current character position. If your entry is complete, press the [A] key to accept your entry.
Clear	Pressing the [CLEAR] key in Modify Mode exits Modify Mode and returns to View Mode without changing the current value of the prompt.
0 to 9	Pressing the [0] to [9] keys in Modify Mode enters the corresponding digit in the display in the current character position. You must press the [*] key to move to the next character position.

18.4 Scroll Lists

Alphabetic characters are valid entries for many prompts. Scroll lists allow you to enter alphabetic and other special characters without entering numeric codes for these non-numeric characters.

When you press the [A] key to move to Modify Mode from View Mode, the system erases the current value of the prompt from the display, adds MOD to the right of the group and prompt numbers in the top line of the display, and displays the first character of the scroll list in the leftmost character position of the bottom line of the display.

Scroll lists display allowable alphabetic characters (A to Z) first, then the allowable numeric characters (0 to 9), then the special characters (! # ' , - / : < >), and finally the “space” character.

The [C] key moves forward through the scroll list. The [B] key moves backward through the scroll list.

18.5 Yes and No Entries

In View Mode the system spells out YES or NO for Yes/No prompts. When you enter Modify Mode the system always displays N for no. Pressing either the [B] key or [C] key toggles Y for yes into the display.

18.6 An Example, Entering Custom Text

There are four types of custom text you can program for the system. Idle Text, Service Text, ABC Key Text, and Point Text.

Table 22 describes the procedure for entering custom text at the keypad. You might find it helpful to set up the system and try entering the text as shown. Change the default point text for Point 2, PT2 PART/DELAY, to GARAGE.

The procedure starts from the first prompt in View Mode.

Table 22: Entering Custom Text at the Keypad

Procedure	Display
1. The first display in View Mode appears. The second line shows the factory default for the first prompt in the first group (1.1), 0000.	1.1 0000
2. Press the [C] key eleven times to scroll the display to the first prompt in Group 12.	12.1 PT1 FIRE/VERIFY
3. Press the [*] key to move to the second prompt in Group 12.	12.2 2 PART/DELAY
4. Press the [A] key to enter Modify Mode. MOD appears to the right of the group and prompt numbers. A replaces the default text in the second line. "A" is the first character in the scroll list.	12.2 MOD A
5. For this example, enter "GARAGE" for the Point 2 custom text. Press the [C] key to scroll forward through the scroll list. After the first press, the display shows B in the second line of the display.	12.2 MOD B
6. Press the [C] key five more times to scroll G into the display.	12.2 MOD G
7. Press the [*] key to accept G and move to the second character position in line 2. A appears in the second position.	12.2 MOD GA
8. Press the [*] key to accept the second letter, "A", and move to the third character position in line 2. A appears in the third position. Press the [*] key until R appears in the display, then press [*] to accept "R" and move to the fourth character position. A appears in the fourth position. Continue using the [C] key and the [*] key to enter GARAGE.	12.2 MOD GAA
Note: <i>Do not press the [*] key when E appears in the display.</i>	12.2 MOD GARAGEA
9. The display now looks like this: If your display looks correct (GARAGE appears in the second line), add the "A" by pressing the [*] key to learn how to recover.	
10. You can quickly remove the last "A" by pressing any of the numeric keys (0 to 9) to backspace. The display looks like the figure to the right. Press the [A] key to exit Modify Mode. MOD disappears from the display. You return to View Mode. Make sure the entry you made is correct before moving to the next prompt.	12.2 MOD GARAGE

18.7 Keypad Programming Tips

- Be careful when backspacing, you can backspace beyond your entry and into the first line of the display. If this happens, press the [CLEAR] key and start your entry over again.
- You can exit Modify Mode at any prompt without changing the entry by pressing the [CLEAR] key.
- When you are not sure of your entry or location while keypad programming, pressing the [CLEAR] key is always the safest action.
- View Mode always shows you the current value of any prompt.
- Numbers can be entered directly, except at prompts for custom text. For example, to enter “5” in the telephone number, you can press the [5] key. You do not need to use the scroll list.
- The [B] key scrolls backwards through the scroll lists. Sometimes the quickest route to the character you want is backwards. For example, the quickest way to get from the first character in the text scroll list, “A,” to the “space” character, the last character, is by pressing the [B] key.

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