
Program Entry Guide



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Introduction

1.0 Introduction

The following terms will help you understand how to use this Program Entry Guide:

Groups: The D6412 program parameters described in this manual are organized into groups. Most groups contain parameters that are related in some way. For example, the Authority Levels Group contains parameters that configure the D6412's four Authority Levels.

Parameters: Each program parameter sets a specific value or chooses an option.

Nibbles: Once the installer selects a value for a parameter, the panel stores the selection in one or more "nibbles" of E² memory. When programming from the Command Center, the installer enters their selection directly into the memory Nibbles. When programming from the remote programmer, the installer need only make one entry per parameter.

Selections for Nibbles range from 0 to 15 (16 selections total). For many programming parameters, there are less than 16 choices. To properly enter a selection that is only one digit in length, press the appropriate number key on the Command Center, or press the [0] followed by the appropriate number key. Then press the [*] key to enter your choice into the system. For example, [4] + [*] and [0] + [4] + [*] are the same entry.

Options: 'Options' are a unique type of parameter that allow the installer to configure up to four (4) features by entering a value in a single Nibble. The following table is an example of the options available for some parameters.

Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Options	X															
Call for Service Display at Call for Service Interval		X		X		X		X		X		X		X		X
Call for Service Report at Call for Service Interval			X	X			X	X			X	X			X	X
Call for Service Display at System Inactive Interval					X	X	X	X					X	X	X	X
Enable Weekly Test Reminder									X	X	X	X	X	X	X	X

For this example, if you want to disable the parameter, enter zero (0) in the Nibble to select No Options. If you want the Call for Service Display and Report at the Call for Service Interval, enter 3 in the parameter Nibble. Or, if you would like the panel to perform all four options, enter 15 in the programming Nibble.

Any darkly shaded columns indicated selections that are not available.

1.1 Other Literature Referenced

Throughout this manual, references will be made to other documentation. See Table 1 for a more complete and detailed description of the D6412 Control/Communicator, including the part number for ordering purposes.

Name of document	Part Number
<i>D6412 Installation Guide</i>	45349
<i>D6412 Program Record Sheet</i>	45350
<i>D6412 SIA Quick Start Guide</i>	46930

Table 1: Other Literature Referenced

1.2 Documentation Conventions

Type Styles Used in this Manual

To help identify important items in the text, the following type styles are used:

Bold text	indicates selections that you may use while programming your panel, important facts and headings, and other information that should be noted.
<i>Italicized text</i>	refers the user to another section of this manual or another manual entirely. It also symbolizes names for records that the user creates.
Courier Text	indicates what may appear on the command center/keypad or internal printer.
[TEXT OR ###]	indicates to the user that a specific key should be pressed.
[##]	indicates a panel event number (see <i>Appendix B</i>).
<i>Italicized Text</i>	indicates a D6412 programming parameter.

Important Notes, Cautions and Warnings

Throughout this document helpful tips and notes will be presented concerning the entire application and/or programming the unit. They will be set off as follows:



Important Notes - Should be heeded for successful operation and programming. Also tips and shortcuts may be included here.



Caution - These caution the operator that physical damage to the panel and/or equipment may occur.



Warning - These warn of the possibility of physical damage to the operator, program and/or equipment.



SIA- These indicate that features of this panel meet the SIA Control Panel Standard for False Alarm Reduction. For more information, see the “D6412 SIA Quick Start Guide” and the “Control Panel Standard – Features for False Alarm Reduction” (ANSI/SIA CP-01-2000, Ó1994-2000 Security Industry Association).

1.3 Programming Options/Methods

Programming from a Text Command Center

Any of the D6412's parameters can be set from a text command center. Installers can connect a text command center to the panel's Aux/Data terminals. Appendix E contains complete instructions for programming the D6412 from a text command center.

RAM IV

You can use Radionics' Remote Account Manager IV (RAM IV) to program the D6412 remotely or locally. RAM IV also includes diagnostic functionality.

To use RAM IV locally, you will need a D9533 Serial Module. The D9533 does not need to remain connected to the D6412 after the programming session. See the *D6412 Installation Guide* (P/N: 45349) for proper connections.

D6412

Routing Destinations

2.0 D6412 Programming Parameters

2.1 Routing Destinations

The D6412 has two routing 'destinations' for the routing of reports. The panel routes by point and report group to the destinations. For example, you can send alarm reports for one point to Destination 1 and for another point to Destination 2.

You can program two phone numbers for each destination. **Communication Fail events are by destinations and not by phone number.** See Appendix A, *Routing/Dialing Tables* for a complete description of the routing/dialing process.

Routing Destination 1		Routing Destination 2	
Phone 1	Phone 2	Phone 1	Phone 2

Figure 1: Routing Destinations

Phone Number 1 for Destination 1 (2)

Nibble: 0000-0031 for Destination 1
0066-0097 for Destination 2

Default: 0

Selections: 0-15 (See Table 2)



When entering phone numbers, use "10" ([1] + [0] from the Command Center) to enter "0"; use "0" to terminate the phone number.

Table 2 shows the selections for any phone number.

Digit to be Dialed	Enter at the Command Center
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	10
*	11
#	12
p (4 second pause)	13
f (on-hook, pause, off-hook)	14
Reserved	15
t (terminate)	0

Table 2: Phone Number Selections

If less than 32 digits are entered into the Phone Number Nibble range, the D6412 automatically truncates the number.

2.1.1 Entering Phone Numbers from the Command Center

The panel can dial up to 32 digits per phone number. Each digit occupies one Nibble.



Note that to program a zero (0) when entering phone numbers from a Command Center, you must enter 10 at the programming Nibble for that digit.



Terminate telephone numbers with less than 32 digits by entering a zero (0) in the programming Nibble after the last digit to be dialed.



*If you program Phone Number 1 with a sequence to cancel call waiting (typically *70 pause) followed by the phone number, you should program Phone 2 without the call waiting cancel sequence. If the subscriber cancels Call Waiting without notifying their alarm installing company the panel will still be able to send reports using Phone 2. Dialing a call waiting sequence on a non-call waiting line prevents the system from dialing the central station receiver successfully.*

2.1.2 Alternate Communication Path

The D6412 can send reports using alternate communication paths (other than phone). To use an alternate communication path:

1. Connect and configure the appropriate alternate communication module. See the installation manual provided with the module for installation instructions.
2. Enter the Terminate selection (0) as the first digit of the Phone Number for the alternate communication module.
3. Follow the zero (0) with the number for an alternate communication path as shown in Table 3.
4. Alternate Communication modules generate the following reports: AltComm Cond [166], AltComm Fail [167], AltComm Rstrl [16]. See *Appendix B: Panel Events and Reporting Formats* for a description of each report.

Alternate Communication Path	Number to Enter after Termination Zero (0)
Alternate Communication Paths will be defined in a later revision	TBD

Table 3: Alternate Communication Selections

Phone Number 2 for Destination 1 (2)

- Nibble:** 0032-0063 for Destination 1
0098-0129 for Destination 2
- Default:** 0
- Selections:** 0-15 (See Table 2)



When entering phone numbers, use "10" ([1] + [0] from the Command Center) to enter "0"; use "0" to terminate the phone number.

See Phone Number 1 for Destination 1 (2) for programming information.

D6412

Routing Destinations

Format for Destination 1 (2)

- Nibble:** **0064** for Destination 1
 0130 for Destination 2
- Default:** **1 = Modem IIIa²**
- Selections:** **1 = Modem IIIa²**
 2 = Contact ID
 3 = Reserved
 4 = Basic Pager

Use this parameter to select a reporting format. All reports for this destination will be sent in the format chosen here.

Leave this parameter at the default setting to transmit reports in the Radionics Modem IIIa² format with its advanced reporting capabilities.

Only the following Central Station Receivers support the D6412 Modem Format:

- **D6600 with CPU v.01.01.03 (or higher)**
- **D6500 with D6511 MPU v1.05 (or higher)**

The D6500 with D6510 MPU does not support the D6412 Modem Format.

See *Appendix B: Panel Events and Reporting Formats* for a complete description of each reporting format and a listing of the specific D6412 reports.

Check panel communications (from panel to Central Station) to verify that the panel is communicating properly in the selected reporting format at least once annually.



Reserved

- Nibble:** **0065, 0131**

Phone, Auto-Forward and RAM Configuration

2.2 Phone, Auto-Forward and RAM Configuration

Use the parameters in this section to set the dialing format for the D6412 and to configure the Auto-Forward and RAM (Remote Account Manager) features.

DTMF/Pulse Dialing

Nibble: 0132
 Default: 0 (DTMF)
 Selections: 0 = DTMF
 1 = Pulse

The D6412 dials in the format selected here (DTMF or Pulse). This format is used for all dialing attempts.

Call Forwarding Auto On Digits

Nibble: 0133-0164
 Default: 0
 Selections: 0-15 (See Table 2)

This parameter configures the D6412's Call Forwarding Auto On/Off feature.



In order to use this feature, the premises must have Call Forwarding service from the local telephone company. The D6412 Call Forwarding Auto On/Off feature does not forward calls; it turns the telephone company's Call Forwarding service on or off by dialing digits just as the user would.

If the D6412's Call Forwarding Auto On/Off feature is enabled and a user turns the system All On, the panel dials the digits and characters entered at this parameter to activate the telephone company's Call Forwarding service.

A typical dialing sequence might be:

- two-digit telephone company feature code (72)
- pause
- phone number to forward to (315-555-1212)
- flash (on-hook, pause, off-hook)
- terminate (t)

For this sequence, the entry at this parameter would be:
 7 2 p 3 1 5 5 5 5 1 2 1 2 f t.



The Auto-Forward feature is only available for Area 1.



When entering phone numbers, use "10" ([1] + [0] from the Command Center) to enter "0"; use "0" to terminate the phone number.

Phone, Auto-Forward and RAM Configuration

Call Forwarding Auto Off Digits

Nibble: 165-0180
Default: 0
Selections: 0-15 (See Table 2)

This parameter configures the D6412's Call Forwarding Auto On/Off feature.



In order to use this feature, the premises must have Call Forwarding service from the local telephone company. The D6412 Call Forwarding Auto On/Off feature does not forward calls; it turns the telephone company's Call Forwarding service on or off by dialing digits just as the user would.

The D6412 dials the digits entered here (up to 16) when the Call Forwarding Auto On/Off feature is enabled and the system is turned Off (from All On).

If the D6412's Call Forwarding Auto On/Off feature is enabled and a user turns the system off (from All On), then the panel dials the digits and characters entered at this parameter to turn off the Call Forwarding service.



When entering phone numbers, use "10" ([1] + [0] from the Command Center) to enter "0"; use "0" to terminate the phone number.



The Auto-Forward feature is only available for Area 1.

Remote Programming Call Back Phone Number

Nibble: 0181-0212
Default: 0
Selections: 0-15 (See Table 2)

The phone number you enter here is the number the D6412 dials to initiate RAM IV remote programming sessions. A session can be started by:

- RAM IV calls the panel, the panel answers and determines it is RAM calling, then the panel hangs up and calls RAM back
- If a RAM Call Back phone number is entered, Cmd 43 can be used to initiate a panel call to RAM IV.
- If a RAM Call Back phone number is not entered, the panel must receive an incoming call before using Cmd 43.

The panel can be programmed to call this number automatically at test report time (see *Automatic Test Report Options*, page 23, for more information).

When entering phone numbers, use "10" ([1] + [0] from the Command Center) to enter "0"; use "0" to terminate the phone number.

Phone, Auto-Forward and RAM Configuration

RAM Answer Ring Count, Answering Machine Bypass

Nibble: 0213
Default: 7
Selections: 0 = Panel will not answer the phone
 1 - 13 = Ring Count
 14 = Answering Machine Bypass 1
 15 = Answering Machine Bypass 2

The ring count sets the number of rings the panel waits for before picking up and seizing the phone line for a remote programming session, or for remote arming with a telephone (see *Arming Options 1*, page 27).

The panel will not seize the phone line for remote programming or remote arming with telephone when this parameter is set to zero (0).

This ring count is used for any panel arming state, armed or disarmed.

The Answering Machine Bypass function can be restricted to only operate when All or Part On (see *Arming Options 1*, page 27). When the Answering Machine Bypass function is restricted to only operate when the system is All or Part On, the panel will not answer the phone for a remote arming session when it is disarmed (Off). However, Cmd 43 – Remote Program, can still initiate a remote programming session. See *Appendix D: Operations Guide* for a description of all command functions available to the D621 LED Command Center and D623/D625 Text Command Centers.

Answering Machine Bypass 1

1. Call the premises; let the phone ring no more than two (2) times. Then hang up/disconnect the remote programmer.
2. Wait at least eight (8) seconds to call back, but call back within 45 seconds.
3. The panel will then pick up after the first ring.

Answering Machine Bypass 2

1. Call the premises; let the phone ring no more than four (4) times. Then hang up/disconnect the remote programmer.
2. Wait at least eight (8) seconds to call back, but call back within 45 seconds.
3. The panel will then pick up after the first ring.

RAM Passcode

Nibble: 0214-0219
Default: 9,9,9,9,9,9
Selections: 0 – 9, A-F (10 = A to 15 = F)

Six (6) characters are required. The RAM Passcode in the remote programmer must match the RAM Passcode in the panel in order to make a successful connection.

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Phone, Auto-Forward and RAM Configuration

Phone Line Fault Response Options

Nibble: 0220
 Default: 0
 Selections: 0, 1, 3, 5-7 (See Table 4)

Phone Line Fault Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Phone Line Supervision	X															
Trouble at Command Center		X		X		X		X								
Burg Alarm & Strobe Functions, All or Part On				X				X	X							
Burg Alarm & Strobe Functions, Off								X	X	X						

Table 4: Phone Line Fault Options

The D6412 monitors the phone line for voltage only. The voltage on the line must drop below 3V and stay there for at least 40 seconds. The D6412 declares the line restored when the voltage rises above 3V and stays there for at least 40 seconds.

When enabled, the Phone Line Fault event appears at all Command Centers for all areas. The D6412 sends a Phone Line Restore [100] report when a phone line fault event restores.

If the phone line fails (as described above), but restores before a Comm Fail event:

1. System detects phone line fail and puts Event [99] in the log.
2. System starts dialing attempts if programmed for Phone Fail report.
3. Phone line restores before comm fail event.
4. System sends phone line fail and phone line restore reports.

If the phone line fails (as described above), but does not restore:

1. System detects phone line fail and puts report in the event in the log.
2. System starts dialing attempts if programmed for Phone Fail report.
3. Dialing attempts end with comm fail event, phone fail report is flushed.
4. System detects phone line is restored and puts restoral report in buffer.
5. System starts dialing attempts and sends phone fail restoral and comm restoral reports.

If an alternate communication path is enabled, the D6412 can send a Phone Line Fail [99] report via the alternate communication path when a phone line fault event occurs.

- **No Phone Line Supervision:** If selected, the D6412 will not monitor the phone line voltage. Phone Line Fault events will not appear at command centers. The other Phone Line Fault Response options are also disabled if No Phone Line Supervision is selected.
- **Trouble at Command Center:** If a phone line fault occurs as described above, the Command Center displays a phone line trouble message. To enable the Command Center to emit a trouble tone on system troubles, see *Command Center Options*, page 46, for details.
- **Burg Alarm & Strobe Functions, All or Part On:** If a phone line fault occurs as described above, the system's burglary alarm and strobe function as configured when the system is armed All On or Part On. See page 73, *Outputs*, for burglary alarm/strobe output configuration.
- **Burg Alarm & Strobe Functions, Off:** If a phone line fault occurs as described above, the system's burglary alarm and strobe function as configured when the system is off (not armed). See page 72, *Outputs*, for burglary alarm/strobe output configuration.

For UL Listed installations, phone line supervision must be turned on (enter 1 at Nibble 0220).



2.3 Global Reporting Options

These parameters configure the reporting for all areas, all points and all users.

Global Reporting Options

Nibble: 0221

Default: 1 = Enable Reporting

Selections: 0, 1, 3, 5, 7, 9, 11, 13, 15 (See Table 5)

Global Reporting Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Local Only	X															
Enable Reporting		X		X		X		X		X		X		X		X
Extend Handshake				X				X				X				X
Delay Alarm Output						X		X						X		X
Burg Alarm After Two Failed Attempts										X		X		X		X

Table 5: Global Reporting Options

- **Local Only:** the panel sends no reports.
- **Enable Reporting:** the panel will send reports as programmed provided that at least one phone number has been programmed for at least one Routing Destination (see *Routing Destinations*, page 8). Reporting options can be enabled and disabled in other parameters. See *Open/Close Reporting Options*, page 29; *Area # Open/Close Reporting Options*, page 34; *Authority Level Option 6*, page 37; and *Reporting Enable, Trouble Response Options, Point Index ##*, page 64.
- **Extend Handshake:** when the panel finishes dialing the central station receiver it waits for a 'handshake' tone from the receiver. The 'handshake' is the first thing the receiver sends after answering the phone. Typically each reporting format the receiver supports has its own handshake tone. If a receiver supports several formats it sounds the handshake tones one at time.
Choosing this option extends the time the panel waits for a handshake from the central station receiver from 45 to 60 seconds.



Radionics recommends that you only extend the handshake wait when advised by Radionics Technical Support.

- **Delay Alarm Output:** the panel delays burglary alarm output until communication to the central station receiver is complete or there are two failed dialing attempts. The delayed alarm output functions are 1-8, 1-9 and 1-10 (see page 74 for descriptions of output types). 'Bell Time' is not delayed, and begins at the alarm event. If Bell Time is set at three minutes or less, alarm output delayed by this feature may be very short (less than 1 minute), or the alarm output may not activate at all. See *Outputs*, page 73, for a complete description of output functions. The command center sounder is not delayed by this option.
- **Burg Alarm After Two Failed Attempts:** Setting this option to Yes provides a steady alarm output after two failed attempts to transmit a burglary alarm report from any point when the system is armed. 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 this option. Set this option to No if you want to prevent an alarm output from silent points even when the system fails to communicate with the receiver. This option only applies to output types 1,8 (Alarm – All On, Part On & Part 2 On; non-fire 24-hr alarms); 1,9 (Alarm – Part & Part 2 Modes; non-fire 24-hr alarms) and 1,10 (Alarm – Controlled points, 24-hr points-fire & non-fire). See *Outputs*, 73, page for alarm configuration.



The burg alarm output will still activate after two failed communication attempts even if it is set for silent operation.

D6412

Global Reporting Options

Ack Wait Time

Nibble: 0222

Default: 5 (5 seconds)

Selections: 0 - 15 (1-15 seconds; 1-second increments, 0 = 1 second)

Use this parameter to set the amount of time the D6412 waits for an acknowledgment tone from the central station receiver.



Radionics strongly recommends that the default value be used unless otherwise instructed by Radionics Technical Support.

AC Power Supervision Options

Nibble: 0223

Default: 5

Selections: 0-15 (See Table 6)

AC Power Supervision Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Options Selected	X															
AC Fail Report is Tag-along		X		X		X		X		X		X		X		X
Disable AC Fail Local Annunciation (at Command Ctr)			X	X			X	X			X	X			X	X
Enable Arm/Disarm/Bypass Tracking					X	X	X	X					X	X	X	X
Enable Internal Crystal to Keep Time									X	X	X	X	X	X	X	X

Table 6: AC Power Supervision Options

Use this parameter to configure the D6412's local response to AC power failure.

AC power must be failed for a minimum of two (2) minutes before the D6412 responds to the failure. It must be restored for a minimum of two (2) minutes before the D6412 responds to the AC restoral.

The trouble tone for AC fail events sounds at all command centers in all areas. Silencing the trouble tone for a system status trouble silences the trouble at all command centers in all areas.

- **AC Tag-along:** AC Fail and Restoral reports are not sent at the time of the event, but are sent as 'tag-along' reports with the next report to be sent.
- **Disable AC Fail Local Annunciation (at Command Center):** If the control is only powered from a DC power source (through battery connections), select Option 2, Disable AC Fail AC Fail Local Annunciation. This will prevent the panel from annunciating AC failures locally at the command center. You must also disable AC Fail reporting at the next parameter, *AC Fail, Low Battery Report Options*.
- **Enable Arm/Disarm/Bypass Tracking:** If Option 4, Enable Arm/Disarm/Bypass Tracking, is not selected, the panel always powers up in the disarmed state (Off), even if the panel was armed before powering down. Points that were bypassed before powering down are not bypassed at power-up.
- **Enable Internal Crystal to Keep Time:** Not selecting this option keeps time by looking at the 60 Hz in AC power. Enable if running on DC only (for example, if you are generating your own power or power cycles are not consistent), otherwise leave set to default.

AC Fail [1], Low Battery [22] Report Options

Nibble: 0224
 Default: 4
 Selections: 0-15 (See Table 7)

AC Fail, Low Battery Reporting Options	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No AC Fail Reports, No Low Battery Reports	X															
AC Fail Reports		X		X		X		X		X		X		X		X
AC Restoral Reports			X	X			X	X			X	X			X	X
Low & Missing Battery and Restoral Reports					X	X	X	X					X	X	X	X
Ground Fault and Restoral Reports									X	X	X	X	X	X	X	X

Table 7: AC Fail Report and Low Battery Report Options

AC Fail, Low Battery and Ground Fault events occur at all Command Centers for all areas.

Use this parameter to enable reporting of AC power and battery supervision events, and ground fault events. You must also program at least one phone number for at least one Routing Destination (see page 8), and enable reporting at the Global Reporting Options parameter (see page 15).

The battery is considered low if the nominal voltage on the battery terminals drops below 12.1 volts.

If the nominal voltage on the battery terminals drops below 10.2 volts, the low battery will be considered a missing battery.

System Status Report Swinger Count

Nibble: 0225
 Default: 0
 Selections: 0-15

Set this parameter to zero (0) to disable the System Status Report Swinger feature. System Status reports are sent as they occur.

Entering a value from 1 to 15 enables the System Status Report Swinger feature and sets the swinger count. Each system status report has its own swinger counter. When the count is reached that report is no longer transmitted during the arming cycle.

For example, if you entered 1 at this parameter, the panel would only transmit one AC fail report, no matter how many times AC failed and restored during the arming cycle.

Not all System Status Reports follow this Swinger Count. System Status reports that follow the count set in this parameter are marked with an 'S' in Reporting Formats Table found in Appendix B.

System Status Reports Routing

Nibble: 0226
 Default: 1
 Selections: 0 = No Reports, no Events to Log/Printer

1 = Reports to Destination 1, Events to Log/Printer

2 = Reports to Destination 2, Events to Log/Printer

3 = Reports to Destinations 1 & 2, Events to Log/Printer

4 = Reports to Destination 2 only on Destination 1 Comm Fail Event, Events to Log/Printer

5 = No reports, Events to Log/Printer

System Status reports routed by this parameter are marked with an "R" in *Appendix B: Reporting Formats*.

Comm Fail 1 (2) reports follow System Status Reports routing. Comm Fail reports for either destination are only sent if the other destination is the System Status Reports destination. See *Appendix A* for the dialing sequence and description of the Comm Fail event.

Global Reporting Options

Call for Service Interval

Nibble: 0227-0228
 Default: 0,0
 Selections: 0 - 9

Use this parameter to determine the interval in weeks (7 days), (00 to 99). For example, if you enter 0,2, the panel waits 2 weeks (14 days) between displaying service messages.

At this interval, the Command Center displays a Call for Service fault and/or sends a Call for Service [37] report (per the *Call for Service/System Inactive Options* parameter below). The display appears at all command centers in all areas. The report is sent for Area 1 only and follows System Status Report routing.

Cmd 47 (Reset Sensors) resets the fault at all the command centers in all areas.

System Inactive Interval

Nibble: 0229-0230
 Default: 0,0
 Selections: 0 - 9

If an area is not armed (All, Part, or Part 2) in this interval, the panel sends a System Inactive [136] Report for that area. A 'System Inactive' Display is optional, see the *Call for Service/System Inactive* parameter below. Interval is in weeks (00 to 99).

Call for Service/System Inactive Options

Nibble: 0231
 Default: 8
 Selections: 0-15 (See Table 8)

Call for Service/System Inactive Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Options	X															
Call for Service Display at Call for Service Interval		X		X		X		X		X		X		X		X
Call for Service Report at Call for Service Interval			X	X			X	X			X	X			X	X
Call for Service Display at System Inactive Interval					X	X	X	X					X	X	X	X
Enable Weekly Test Reminder									X	X	X	X	X	X	X	X

Table 8: Call for Service/System Inactive Options

- **Call for Service Display at Call for Service Interval:** At the Call for Service Interval, the Command Center displays a 'Call for Service' trouble at all command centers in all areas and/or sends a report for Area 1. Cmd 47, Reset Sensors, resets the fault at all command centers in all areas. There is no trouble tone for the Call for Service Interval event.
- **Call for Service Report at Call for Service Interval:** The Call for Service [37] Report follows System Status routing. The interval is in weeks (00 to 99). See *Call for Service Interval*.
- **Call for Service Display at System Inactive Interval:** At the System Inactive Interval, the Command Center displays a 'Call for Service' trouble at all command centers and/or sends a System Inactive [136] report for that area. See *System Inactive Interval*.
- **Enable Weekly Test Reminder:** if you select this option, the system command centers display **System Test Due, Press 1 to test**. A reminder is generated eight (8) days after the last user test. **There is no trouble tone for this trouble reminder event.** When the user enters Cmd 4 to view the trouble, the system displays **System Test Due, Press 1 to test**.

Log Supervision Configuration

Nibble: 0232

Default: 2

Selections: 0 = No Log Threshold Events or Reports, No Log Overflow Events or Reports
 1 = Overflow Event and Report [84]; Threshold Event and Report [85] at 50% full
 2 = Overflow Event and Report [84]; Threshold Event and Report [85] at 75% full
 3 = Overflow Event and Report [84]; Threshold Event and Report [85] at 90% full
 4 = Overflow Event; Threshold Event at 50% full; Local Events, No Reports
 5 = Overflow Event; Threshold Event at 75% full; Local Events, No Reports
 6 = Overflow Event; Threshold Event at 90% full; Local Events, No Reports

The D6412 can store up to 254 events in its event log (history). On startup, a new panel has 100% of its log available for new events. It is 0% full. As the panel begins storing events the capacity for new events is reduced. When event 254 is stored the panel is 100% full. On the 255th event the panel begins overwriting events (beginning with the oldest).

The RAM IV remote programmer can access the panel log. Once the log is received by RAM IV, events can be 'cleared', returning the log to 0% capacity.

To help avoid overwriting events that have not been received by RAM IV, this parameter configures the system for supervision of its event log (history).

Setting this parameter to 0 disables supervision. No log threshold or overflow events are entered in the log. No log reports are sent.

Setting this parameter to 1, 2, or 3 creates log overflow and threshold events in the log. A threshold event is created when the panel writes the first event to the log that exceeds the threshold (50%, 75%, or 90% full). A threshold report reminds the central station to access the event log with RAM IV, freeing log space, before the panel reaches 100% full (log overflow) and begins overwriting events.

Overflow events are created when the log reaches 100% of capacity and begins writing over events that have not been received by RAM IV.

Setting this parameter to 4, 5, or 6 creates the threshold and overflow events, but no reports are sent. The events are local only.

Log events (threshold and overflow) only ever appear in the log. They are not system troubles. They are viewed locally with Cmd 85 – View Log, or remotely with RAM IV.

Auto On Pre-Alert Time

Nibble: 0233

Default: 6 (30 minutes)

Selections: 0 – 15 (time = selection x 5 minutes)

Multiply the value entered in this parameter by five (5) minutes to determine the duration of the Auto On Pre-Alert. The pre-alert sounds before the Auto On Sked to warn users to exit or extend (Cmd 51) the auto arming. See *Authority Level Option 12*, page 39, to configure the Authority Levels for Cmd 51.

At the Auto On time, the panel starts exit delay. See *Skeds*, page 79, for a complete description of the Auto On Skeds.

If the area is armed according to the scheduled arming state (All On or Part On) during Auto On Pre-Alert Time and then disarmed **before** the scheduled arming, auto-arming will not occur.

Global Reporting Options

Cancel Event Enabled

Nibble: 0234

Default: 1

Selections: 0 = No Cancel Reports
1 = Cancel Reports Enabled

If the Cancel Event is enabled (enter 1 in at Nibble 0234), a 'Cancel Window' starts with the initiation of alarm events. The Cancel Window is equal to Bell Time. If the user acknowledges the alarm inside the cancel window, a Cancel Event is created. If reporting is enabled, a Cancel [38] or Fire Cancel [39] report is sent.

If the Abort feature is enabled, the Cancel report is sent if the user acknowledges the alarm after the Abort Window has expired but before the Cancel Window expires. See *Alarm Event Abort Window*, page 69, for more information.

If a user acknowledges a non-fire alarm event by entering their passcode before the Alarm Event Abort Window expires:

1. The alarm event is aborted. Alarm, Cancel* and Restoral reports associated with the alarm are not transmitted. The alarm event becomes a local only event.
2. The user hears a unique three long beep tone at the command center.
3. The text command center indicates the aborted alarm on the display. The LED command centers indicate the aborted alarm with a slow flash in Alarm Memory.

* A Cancel Window starts with the initiation of the alarm event and follows Bell Time. If the user acknowledges the alarm inside the cancel window (bell time), a Cancel [38] or Fire Cancel [39] report is sent. If the Abort feature is enabled, the Cancel report is sent if the user acknowledges the alarm after the Abort Window has expired but before bell time expires.



Alarm Event Abort is required for SIA Control Panel Standard for False Alarm Reduction.

Reserved

Nibble: 0235-0243

2.4 Tests

System Test – Cmd 41 Configuration Options

Nibble: 0244

Default: 5

Selections: 0-15 (See Table 9)

System Test Cmd 41 Configuration Options	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
System Test Cmd 41 Disabled	X															
Test Bell		X		X		X		X		X		X		X		X
Test Strobe			X	X			X	X			X	X			X	X
Test Battery					X	X	X	X					X	X	X	X
Send Test Report									X	X	X	X	X	X	X	X

Table 9: System Test Cmd 41 Configuration Options

This is a global (all areas) option.

When the user enters Cmd 41 at the command center, the system performs a self-test that includes the options selected at this parameter. The configuration applies to all areas.



For UL 1023, Household Fire Systems, you must select Test Bell, Test Strobe (if installed) and Test Battery (enter 7 for this parameter).

- **Test Bell:** makes a “bell test” part of the system test. The panel activates the Bell Time (1–5) and Alarm Output (1-8, 1-9, 1-10, 1-11, and 1-12) functions for three (3) seconds. See *Outputs*, page 73, for a complete description of output functions.
- **Test Strobe:** makes a “strobe test” part of the system test. The panel activates the Strobe Output functions and waits for the user to press the [*] key to end the test. If the user fails to press the [*] key within 20 minutes, the D6412 automatically terminates the strobe test and proceeds to the next programmed test.
- **Test Battery:** makes the “battery test” part of the system test. The battery test causes the system to run on battery power only for four (4) minutes. If the battery voltage falls below 12.1 volts during the four-minute test, or if the battery is missing, the system restores AC power and displays a system trouble at all command centers. If programmed for battery reports, the panel sends a low battery or missing battery report. Users can end the test by pressing [Cmd] on the command center.
- **Send Test Report:** makes a “communications test” part of the system test. If selected, this option causes the panel to attempt to send a Test [137] report when the user initiates a System Test with Cmd 41. If there is a system trouble present at the time of the test, the panel sends a Test, Off Normal [138] report. The test report follows the routing for the Automatic Test [137] report. If the test communication is unsuccessful, the panel creates a system trouble communication failure.

Tests

System Test – Cmd 41 Enable Options

Nibble: 0245
 Default: 15
 Selections: 0-15 (See Table 10)

System Test Cmd 41 Enable Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
System Test Cmd 41 Disabled	X															
Enable System Test Cmd 41 for Area 1		X		X		X		X		X		X		X		X
Enable System Test Cmd 41 for Area 2			X	X		X	X			X	X			X	X	
Enable System Test Cmd 41 for Area 3					X	X	X	X					X	X	X	X
Enable System Test Cmd 41 for Area 4									X	X	X	X	X	X	X	X

Table 10: System Test Cmd 41 Enable Options

This option enables Cmd 41 for each of the four areas. Although the configuration of Cmd 41 is global, the command will only be enabled for command centers in the areas selected here, and only for users with the proper Authority Level. See *Authority Level Option 9*, page 38.



If the System Test is not enabled in the previous parameter (Nibble 0244 is set for 0), then this parameter is not functional and does not need to be programmed.

Walk Test Cmd 44 Configuration Options

Nibble: 0246
 Default: 8
 Selections: 0-15 (See Table 11)

Walk Test Cmd 44 Configuration Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Walk Test Cmd 44 Disabled	X															
Start with System Test		X		X		X		X		X		X		X		X
Include Fire Points			X	X		X	X			X	X			X	X	
Include 24-hour Points					X	X	X	X					X	X	X	X
Include Controlled Points									X	X	X	X	X	X	X	X

Table 11: Walk Test Cmd 44 Configuration Options

When a user enters Cmd 44 at a command center to start a walk test, the system includes the option(s) selected in this parameter. If included, the System Test follows its own configuration. See *System Test – Cmd 41 Configuration Options* (page 21) and *System Test – Cmd 41 Enable Options* (page 22). No reports are sent from points included in the test.



If a point type is not included, those points remain active during the test.

A Walk Test Start [158] report, with user number, is sent at the start of the test. A Walk Test End [159] report, with User Number 0 (zero), is sent at its conclusion.

Entering Walk Test mode starts a 20-minute timer. After 15 minutes with no activity from the included points, a warning tone (same as Auto-arm warning) begins. After 20 minutes the test automatically terminates with User Number 0 (zero).



Any fire or 24-hour point faulted at the termination of the test will generate a trouble response, not an alarm response. If programmed for alarm reports but not trouble reports, trouble reports are sent as part of the trouble response in this instance.

Walk Test Cmd 44 Enable Options

Nibble: 0247
 Default: 15
 Selections: 0-15 (See Table 12)

Walk Test Cmd 44 Enable Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Walk Test Cmd 44 Disabled	X															
Walk Test Cmd 44 Enabled for Area 1		X		X		X		X		X		X		X		X
Walk Test Cmd 44 Enabled for Area 2			X	X			X	X			X	X			X	X
Walk Test Cmd 44 Enabled for Area 3					X	X	X	X					X	X	X	X
Walk Test Cmd 44 Enabled for Area 4									X	X	X	X	X	X	X	X

Table 12: Walk Test Cmd 44 Enable Options

Use this parameter to choose which areas have Cmd 44 enabled. Although the configuration of Cmd 44 is global, the command will only be enabled for command centers in the areas selected here, and only for users with the proper Authority Level. See *Authority Level Option 9*, page 38.

Walk Test Start [158] / Walk Test End [159] Report Routing

Nibble: 0248
 Default: 5
 Selections: 0 = No Reports, No Events to Log/Printer
 1 = Reports to Destination 1; Events to Log/Printer
 2 = Reports to Destination 2; Events to Log/Printer
 3 = Reports to Destinations 1 & 2; Events to Log/Printer
 4 = Reports to Destination 2 Only on Destination 1 Comm Fail Event; Events to Log/Printer
 5 = No Reports; Events to Log/Printer

This is a global (all areas) parameter. See *Appendix A* for the dialing sequence and a description of a Comm Fail Event.

Automatic Test [137] Report Options

Nibble: 0249
 Default: 0
 Selections: 0-15 (See Table 13)

Automatic Test Report Options	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Automatic Test Options	X															
Test Report Only If System Is Armed		X		X						X		X				
Defer Test Report If Other Report Sent in Test Interval			X	X							X	X				
Test Reports for All Areas (else Area 1 only)					X								X			
Call RAM at Test Time (After Test Report)									X	X	X	X	X			

Table 13: Automatic Test [137] Report Options

Use these options to configure the Automatic Test [137] report. If Option 8 is selected, a variety of tasks could be accomplished at this time, including downloading the log to the central station.

- **Test Report Only If System is Armed:** this option sends a test report only if the system is armed.
- **Defer Test Report if Other Report Sent in Test Interval:** if another report is sent during the test interval, this option defers the test report until the end of the test interval.
- **Test Reports for All Areas (else Area 1 only):** if selected, this option generates a test report for all enabled areas.
- **Call RAM at Test Time (After Test Report):** if selected, this option calls RAM IV at test time after the system sends the test report. RAM IV Phone Number should be programmed. See *Remote Programming Call Back Phone Number*, page 12, for more information.

Tests

Automatic Test Report [137] Time

Nibble: 0250-0253
Default: 0,0,0,0 (Test reports disabled)
Selections: 0 – 9

Enter the time of day for the Automatic Test. Use 24-hour format (HHMM) where midnight is 2400, noon is 1200 and 12:01 am is 0001. Enter one digit in each of the four Nibbles so that Nibbles 0250 and 0251 are the hour and 0252 and 0253 are the minutes. An entry of 0000 (the default setting) disables the Automatic Test [137] report.

Automatic Test [137] Report Interval

Nibble: 0254
Default: 2
Selections: 0 = No Automatic Test
1 = 1 Hour
2 = 1 Day
3 = 7 Days
4 = 28 Days

Entering zero (0) at this parameter disables the Automatic Test [137] report feature.

The one-hour interval is incremented on the minute. For example, if you set the Automatic Test Time parameter to 1020 (10:20 am), the Automatic Test Interval is one hour, and left programming mode at 11:10, then the panel would send a test report at 11:20 am (less than one hour after leaving programming mode). The next test report would come at 12:20 pm.

The one-day, seven-day and 28-day intervals are incremented at midnight (2400). For example, if you set the Automatic Test Time parameter to 1020 (10:20 am), the Automatic Test Interval is one day and left programming mode at 10:10 am, then the panel would not send a test report until 10:20 the next day (after the one-day interval increment at midnight).

If the Automatic Test report is disabled in the previous parameter, this parameter becomes meaningless for the Automatic Test, but is still useful when using RAM IV.

Test Report Routing

Nibble: 0255
Default: 1
Selections: 0 = No Reports; No Events to Log/Printer
1 = Reports to Destination 1; Events to Log/Printer
2 = Reports to Destination 2; Events to Log/Printer
3 = Reports to Destination 1 & 2; Events to Log/Printer
4 = Reports to Destination 2 Only on Destination 1 Comm Fail Event; Events to Log/Printer
5 = No Reports; Events to Log/Printer

Test reports include the System Test [137] [138] reports from Cmd 41 and Cmd 44. The Walk Test Start [158] and Walk Test End [159] reports follow their own routing.

This is a global (all areas) parameter.



Reporting must be enabled at the Global Reporting Options prompt and at least one phone number must be entered for one routing destination.

2.5 Programming Options

Remote Programming (RAM IV) Options

Nibble: 0256
 Default: 1
 Selections: 0-7 (See Table 14)

Remote Programming Options	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Disable Remote Programming	X															
Enable Remote Programming		X		X		X		X								
Enable Remote Programming Callback			X	X			X	X								
Terminate Remote Programming Session on Alarm					X	X	X	X								
Reserved																

Table 14: Remote Programming Options

- Enable Remote Programming:** the system answers the phone at the programmed ring count for remote programming sessions. Cmd 43 can also be used to start a remote programming session or answer the phone if Nibble 0213 is set to 0. See *RAM Answer Ring Count, Answering Machine Bypass*, page 13.
 - If the programming session is completed successfully, the D6412 sends a Valid Remote Access [103] report.
 - If you change the panel parameters during the programming session, the D6412 sends a Parameters Changed [98] report.
 - If the programming session is terminated with a 'reset panel' from RAM IV, the D6412 sends a Reboot [104] report.
 - If the programming session is not successfully completed, the D6412 sends an Invalid Remote Access [102] report.
- Enable Remote Programming Callback:** the system answers the phone at the programmed ring count for remote programming sessions (see *RAM Answer Ring Count, Answering Machine Bypass*, page 13). If it determines that the remote programmer is calling, it will hang up and call the remote programmer back using the programmed call-back phone number (see *Remote Programming Call Back Phone Number*, page 12). When this is enabled, Cmd 43 can also be used to start a programming session. When a user enters Cmd 43 at the command center, the panel calls RAM IV.
 - If the callback to RAM IV is not successful, the D6412 sends a Bad Call [101] report.



For this option to operate properly, Option 1, Enable Remote Programming, must be selected.



- Terminate Remote Programming Connection on Alarm:** an alarm on any point or any command center will terminate the remote programming session.

For this option to operate properly, Option 1, Enable Remote Programming, must be selected.

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Programming Options

Installer Switch and Daylight Savings Time Options

Nibble: 0257
 Default: 15
 Selections: 0-15 (See Table 15)

Installer Switch and Daylight Savings Time Options	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Options Selected	X															
Installer Switch Enabled		X		X		X		X		X		X		X		X
Auto Adjust for Daylight Savings Time Enabled			X	X			X	X			X	X			X	X
Keypad Programming Enabled					X	X	X	X					X	X	X	X
PK32 (Programming Key) Enabled									X	X	X	X	X	X	X	X

Table 15: Installer Jumper and Daylight Savings Time Options

- **Installer Switch Enabled:** the Installer Switch must be closed for local programming.



Radionics strongly recommends leaving the Installer Switch Enabled option in the default (enabled) configuration.

A closed Installer Switch disables most panel functions, including:

- panel reporting with alarms (only sends installer-initiated test reports and service start reports)
- the A, B and C keys
- alarm output



A closed Installer Switch activates a Call for Service system trouble at all command centers.

The disabled reporting characteristic of the Installer Switch can be used for service tasks (for example, replacing hold-up buttons). It could also be used to allow the panel's battery to charge during the installation process.

- **Auto Adjust for Daylight Savings Time Enabled:** The D6412 automatically sets its clock ahead one hour at 2:00 am on the first Sunday in April, and sets its clock back one hour at 2:00 am on the last Sunday in October.



If Keypad Programming or PK32 are not enabled, access to the D6412 via a keypad will not be possible. Remote programming (RAM IV) will be the only programming method available.

- **Keypad Programming Enabled:** All panel parameters can be programmed from any system text keypad or an Installer Keypad. See page 130 for a description of the Installer Mode.
- **PK32 (Programming Key) Enabled:** The PK32 Programming Key can be used to send or receive a program record (the panel's parameter settings). See page 135 for more information regarding the Programming Key.



If the Keypad Programming and Remote Programming options are not enabled, there will be no way to access panel programming.

2.6 Global Open/Close Options

Arming Options 1

Nibble: 0258
 Default: 1
 Selections: 0-7 (See Table 16)

Arming Options	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Options Enabled	X															
Enable All On – No Exit Feature		X		X		X		X								
Answering Machine Bypass Only When All/Part On			X	X			X	X								
Remote Arming with Telephone, Area 1					X	X	X	X								
Reserved																

Table 16: Arming Options 1

- **Enable All On – No Exit Feature:** If this feature is selected and the system is turned All On and no entry or exit points are faulted during exit delay, the system automatically shifts to Part On (Part 1). Part On (not All On) appears in the log and reports.



Enable All On – No Exit is required for SIA Control Panel Standard for False Alarm Reduction.

- **Answering Machine Bypass Only When All/Part On:** the Answering Machine Bypass function is activated at the *RAM Answer Ring Count, Answering Machine Bypass* parameter (see page 13). If activated there, this option can be used to restrict its function so that it only operates when the system is All On or Part On. The system will not answer if disarmed.
- **Remote Arming with Telephone, Area 1:** controls the built-in telephone arming feature for Area 1. When enabled, the panel answers the phone on the ring count for remote programming. When the panel answers the phone:
 - If the panel is All or Part On, it sounds three beeps and starts the handshake tone for remote programming.
 - If the panel is Off, it sounds one short beep and then starts the handshake tone for remote programming (one long beep). Press and hold the [5] key* for two seconds immediately **after** the first short arming beep and **before** the handshake tone begins.
 - The panel will arm if it detects a [5] key press from the telephone (All On with Delay, faulted points are force-armed like keyswitch arming). The panel waits three seconds, sounds three beeps (new armed state) and then hangs up.
 - * If arming from a cell phone, quickly press the [5] key three times. If pressing and holding the [5] key for two seconds from a house (landline) phone does not produce a tone long enough to arm Area 1, retry by quickly pressing the [5] key three times.



Remotely disarming the panel cannot be done with a telephone.

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Global Open/Close Options

Arming Options 2

Nibble: 0259
 Default: 0
 Selections: 0-15 (See Table 17)

Arming Options	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Options Enabled	X															
First Area to Open / Last Area to Close Reporting		X		X		X		X		X		X		X		X
Make Area 1 Common Area			X	X			X	X			X	X			X	X
Enable Cmd 80 All Areas All On					X	X	X	X					X	X	X	X
Enable Cmd 81 All Areas Off									X	X	X	X	X	X	X	X

Table 17: Arming Options 2

- First Area to Open [164] / Last Area to Close [165] Reporting:** The system transmits one Closing [165] report when all areas are turned On and one Opening [164] report when any area is turned Off. Passcode and Opening/Closing reports must be enabled for all areas. Open and Close reports are for Area 1 using Area 1's account numbers.



All area account numbers must be the same in order to send Area 1's Account Numbers. See Areas on page 33 for information on programming account numbers.

- Make Area 1 Common Area:** All other areas are made common to Area 1. Area 1 arms when all the other areas are armed All On, and Area 1 disarms when any other area is disarmed.
- Enable Cmd 80 All Areas All On*:** Faulted points are force-armed. See *Authority Level Option 8*, page 38, to configure the Authority Level for Cmd 80.
- Enable Cmd 81 All Areas Off*:** Cmd 81 always requires a passcode. See *Authority Level Option 8*, page 38, to configure the Authority Levels for Cmd 81.

* All = All areas in which the user has the appropriate authority level.

Bypass/Force-Arm Limit

Nibble: 0260
 Default: 0
 Selections: 0-15

The parameter configures all areas.

This parameter sets the maximum number of points that can be force-armed or bypassed for any one area. The area will not arm if this limit is reached and points remain faulted.

Entering zero (0), the default setting, for this parameter allows an unlimited number of points to be force-armed or bypassed. The Point Index determines which points are bypassable.



Force-arming is not permitted in UL installations.

Open/Close Reporting Options

Nibble: 0261
 Default: 15
 Selections: 0-15 (See Table 18)

Open/Close Reporting Options	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Open, Close, Exit Error or Recent Close Reports	X															
Opening [89 – 96, 164] Reports Enabled		X		X		X		X		X		X		X		X
Closing [42 - 67, 165] Reports Enabled			X	X			X	X			X	X			X	X
Exit Error [18] Report Enabled					X	X	X	X					X	X	X	X
Recent Closing [19 – 20] Reports Enabled									X	X	X	X	X	X	X	X

Table 18: Open/Close Reporting Options

This is a global parameter that affects all points, all areas and all passcodes.



Once enabled and configured here, Opening and Closing reports can be restricted by area (see Area Open/Close Reporting Option, page 34) and by Authority Level (see Authority Level Option 6, page 37). Reporting must be enabled at the system level first (see Global Reporting Options, page 15).

- **Opening Reports Enabled:** if selected, this option enables Opening [89-96, 164] reports.
- **Closing Reports Enabled:** if selected, this option enables Closing [42-67, 165] reports.
- **Exit Error:** Only the Exit Error [18] report is enabled and disabled by this parameter. The Exit Error event is always enabled. If an entry or exit point (Point Types 11 and 12) is violated at the end of exit delay. These events will occur in this order:
 1. Local alarm annunciation is started (command centers and alarm outputs)
 2. Entry delay starts (the command center can either sound an alarm or initiate entry delay)
 3. The alarm transmission procedure begins if the system is not turned off at the end of entry delay. An Exit Error [18] report is included if programmed. The Exit Error report follows the Alarm Report routing.

Exit Error is required for SIA Control Panel Standard for False Alarm Reduction.



- **Recent Closing:** an Alarm Recent Closing [19 – 20] report (including the user number) is sent for any alarm within two (2) minutes of the end of the exit time.

Recent Closing is required for SIA Control Panel Standard for False Alarm Reduction.



Global Open/Close Options

Opening/Closing Report Routing

Nibble: 0262

Default: 1

Selections: 0 = No Reports; No Events to Log/Printer
1 = Reports to Destination 1; Events to Log/Printer
2 = Reports to Destination 2; Events to Log/Printer
3 = Reports to Destination 1 & 2; Events to Log/Printer
4 = Reports to Destination 2 Only on Destination 1 Comm Fail Event; Events to Log/Printer
5 = No Reports; Events to Log/Printer

This is a global parameter that affects all points, all areas and all passcodes.

The Exit Error [18] and Recent Closing [19 – 20] reports follow alarm routing. See *Appendix A* for the dialing sequence and a description of a Comm Fail event.



You must enable reporting at the Global Reporting Options prompt and enter at least one phone number for one routing destination.

Exit Time Restart

Nibble: 0263

Default: 1

Selections: 0 = No Exit Time Restart
1 = Restart

If this parameter is set to Restart (1), a violation, restoral, second violation of an entry/exit point (before the end of exit delay) restarts exit delay. One restart is allowed per arming cycle. Violation, restoral, second violation must all occur at the same point.



Exit Time Restart is required for SIA Control Panel Standard for False Alarm Reduction.

Entry Delay Time 1

Nibble: 0264-0265
Default: 1,14 (30 seconds)
Selections: 0,0 to 15,15



The shortest possible Entry Delay is 30 seconds, regardless of the values entered in this parameter.

Entry Delay is the time the system allows the user to turn the system off before an alarm initiates. 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.

The D6412 provides two entry delays. Only point types programmed to initiate Entry Delay 1 use the entry delay time you set at the Entry Delay Time 1 parameter. Point types programmed to initiate Entry Delay 2 use the entry delay time you set at the Entry Delay Time 2 parameter.

If the system is On and a user enters through a point assigned to Entry Delay 2, the system initiates Entry Delay 2. If the user enters through a point assigned to Entry Delay 1, and then through a point assigned to Entry Delay 2, the system **will not** switch from Entry Delay 1 to Entry Delay 2.

The system sounds an entry delay tone at the area's command center during entry delay.

Programming from the Command Center

Programming two Nibbles for each sets the Entry Delay Time 1 and Entry Delay Time 2 parameters. The system multiplies the first entry in the first Nibble by 16 and adds it to the entry in the second Nibble. For example, to set Entry Delay Time 1 to 50 seconds you would enter 3 in the first Nibble (3 x 16 = 48) and then enter 2 in the second Nibble (48 + 2 = 50). Use the formula below to calculate the delay time for programming this parameter.

$$\begin{array}{ccccccc}
 3 & \times & 16 & = & 48 & + & 2 = & 50 \\
 \text{(Nibble 0264)} & & & & & \text{(Nibble 0265)} & \text{(Entry Delay Time)} &
 \end{array}$$

Entry Delay Time 2

Nibble: 0266-0267
Default: 7,8 (120 seconds)
Selections: 0,0 to 15,15 (range: 30 to 255 seconds)

See the previous parameter, *Entry Delay Time 1*, for information on programming Entry Delay Time 2.

Global Open/Close Options

Part Mode Delay Time

Nibble: 0268-0269
Default: 0, 0 (Disabled)
Selections: 0,0 to 15,15 (range: 30 to 255 seconds)



The lowest value that can be entered for Part Mode Delay is 30 seconds, regardless of the values entered in this parameter.

Making an entry in the Part Mode Delay Time parameter creates an entry delay time that only applies when the system is Part On.

If the system is Part On and **any armed** point is faulted (fire and 24-hour points excluded), the system starts a Part Mode entry delay timer. It uses this Part Mode timer for points that are assigned to either Entry Delay 1 or Entry Delay 2, **and points that are not assigned entry delay.**

Setting the Part Mode Delay Time to zero disables the Part Mode delay feature. When Part On, the armed points follow the entry delay assigned to them.

Programming from the Command Center

Programming two Nibbles sets the Part Mode Delay Time. The system multiplies the number entered in the first Nibble by 16 and adds that total with the number entered in the second Nibble. For example, to set Part Mode Delay Time 1 to 50 seconds, you would enter 3 in the first Nibble (3 x 16 = 48) and then enter 2 for the second Nibble (48 + 2 = 50). Use the formula below to calculate the delay time for programming this parameter.

$$\begin{array}{ccccccc} 3 & \times & 16 & = & 48 & + & 2 = & 50 \\ \text{(Nibble 0268)} & & & & & \text{(Nibble 0269)} & \text{(Entry Delay Time)} & \end{array}$$

Exit Delay Time 1

Nibble: 0270-0271
Default: 3,12 (60 seconds – UL Listed default)
Selections: 0,0 to 15,15 (range: 45 to 255 seconds)



The lowest value that can be entered for Exit Delay is 45 seconds, regardless of the values entered in this parameter.

Exit delay is the time the system allows users to exit the premises. Users must leave the premises before exit delay expires.

The D6412 provides two exit delays. When a user turns the system All or Part On with delay, the system always starts Exit Delay 1. Exit delay is set to the time you enter at the Exit Delay Time 1 parameter.

If a point assigned to Exit Delay 2 is faulted when exit delay is running, the system switches from Exit Delay 1 to Exit Delay 2 (the time you enter at the Exit Delay Time 2 parameter).

If a user force-arms an Exit Delay 2 point, the system uses Exit Delay 2 and Entry Delay 2.

Programming from the Command Center

Programming two Nibbles for each parameter sets Exit Delay Time 1 and Exit Delay Time 2. The system multiplies the number entered in the first Nibble by 16 and adds that total with the number entered in the second Nibble. For example, to set Exit Delay Time 1 for 50 seconds, you would enter 3 in the first Nibble (3 x 16 = 48) and then enter 2 for the second Nibble (48 + 2 = 50).

Exit Delay Time 2

Nibble: 0272-0273
Default: 7, 8 (120 seconds)
Selections: 0,0 to 15,15 (range: 45 to 255 seconds)

See the previous parameter, *Exit Delay Time 1*, page 32, for information on programming Exit Delay Time 2.

Reserved

Nibble: 0274-0275

2.7 Areas

Use the parameters in this section to configure up to four Areas. Along with the parameters in this section, each Area has 16 characters of programmable text for an Area name and 16 characters of programmable Area Idle text. All panel text is programmed from the command center in a special text-programming mode. See *Programming Text Nibbles* on page 131 for text programming instructions.

Area	Account # for Routing Destination 1	Account # for Routing Destination 2	Open/Close Reporting Options	Lock Area Reporting
1	Nibble 0276-0285 10,10,10,10,0,0,0,0,0,0	Nibble 0286-0295 10,10,10,10,0,0,0,0,0,0	Nibble 0296 1	Nibble 0297 0
2	Nibble 0298-0307 10,10,10,10,0,0,0,0,0,0	Nibble 0308-0317 10,10,10,10,0,0,0,0,0,0	Nibble 0318 1	Nibble 0319 0
3	Nibble 0320-0329 10,10,10,10,0,0,0,0,0,0	Nibble 0330-0339 10,10,10,10,0,0,0,0,0,0	Nibble 0340 1	Nibble 0341 0
4	Nibble 0342-0351 10,10,10,10,0,0,0,0,0,0	Nibble 0352-0361 10,10,10,10,0,0,0,0,0,0	Nibble 0362 1	Nibble 0363 0

Table 19: Area Configuration Nibbles and Default Values

Area # Account Number for Routing Destination 1

Nibble: See Table 19

Default: See Table 19

Selections: 0-15 (See Table 20)

Each Area uses the account number entered in its account number in its reports to the central station receiver. Different account numbers can be programmed for two routing destinations. See *Routing Destinations*, page 8, for a complete description of how the D6412 routes reports to the routing destinations.

Account numbers can contain four, six, eight or ten digits. If less than four digits are entered, the D6412 adds up to four zeros to make a four-digit account number. If five, seven or nine digits are entered, the D6412 adds a zero to make the account number six, eight or ten digits in length respectively.



Only Radionics' Modem IIIa² format supports ten-digit account numbers. Verify that the central station receiver to which the D6412 reports supports Modem IIIa² and ten-digit account numbers before programming a ten-digit number in the Account Numbers parameters.

If you select a reporting format other than Modem IIIa², the panel will automatically truncate the account number to the maximum length supported by that format. See *Appendix B* for a complete description of the reporting formats available in the D6412.

For This Selection	Press This at the Cmd Ctr	For This Selection	Press This at the Cmd Ctr
0	10	8	8
1	1	9	9
2	2	B	11
3	3	C	12
4	4	D	13
5	5	E	14
6	6	F	15
7	7	Terminate	0

Table 20: Account Number Digit Selections

Areas

Entering Account Numbers from the Command Center

Use Table 20 to make your entries in the Account Number Nibbles. One account number digit occupies each Nibble. Be sure to use a zero (0) to terminate the account number entry if it is less than ten digits. For example, to set an account number of 1234, enter 1 2 3 4 0.



When entering phone numbers, use “10” ([1] + [0] from the Command Center) to enter “0”; use “0” to terminate the phone number.

Area # Account Number for Routing Destination 2

Nibble: See Table 19
Default: See Table 19
Selections: 0-15 (See Table 20)

See *Area # Account Number for Routing Destination 1*, page 33, for details on programming this parameter.

Area # Opening [89-96]/Closing [42-67] Reporting Options

Nibble: See Table 19
Default: See Table 19
Selections: 0-1, 3-15 (See Table 21)

Area # Open/Close Reporting Options	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Open or Close Reports for Area #	X															
Open/Close Reports for Area # Enabled		X		X		X		X		X		X		X		X
Restrict Open/Close Reports; Open After Alarm, Close on Force Arm				X			X	X				X				X
Open/Close Reports for Part On Modes						X	X	X						X		X
1 Second Bell Test on Closing Ack										X		X		X		X

Table 21: Area Open/Close Reporting Options

- Open/Close Reports for Area # Enabled:** This parameter configures Opening/Closing reports for each area. This also includes the report for the Extend Auto event (Event 21) (see *Appendix B* for more information). Opening [89-96] and Closing [42-67] reports must be enabled at the system level (see *Open/Close Reporting Options*, page 29). Opening and Closing reports are also enabled by Authority Level (see *Authority Level Option 6*, page 37). Reporting must also be enabled at the system level (see *Global Reporting Options*, page 15).
- Restrict Open/Close Reports:** Open From Alarm, Close on Force Arm: When selected and Bell Time has expired, the D6412 only sends opening reports when the user disarms the system after an alarm. The D6412 attaches a “From Alarm” message to the Modem IIIa² opening report. The D6412 will only send closing reports when a point is force-armed. Force arming is set by authority level (see *Authority Level Option 7*, page 38) and by point index configuration (see *Options 2, Point Index ##*, page 63).
- Open/Close Reports for Part On Modes:** When selected, the D6412 sends closing reports when users turn the system Part On. If any points are bypassed, bypass reports are also sent. The D6412 sends opening reports when users disarm the system. If the user disarms the system after an alarm, the system attaches an “After Alarm” message to the opening report. Part On arming is set by authority level (see *Authority Level Option 2*, page 36) and by point index configuration (see *Options 1, Point Index ##*, page 61).
- 1 Second Bell Test on Closing Ack:** Outputs assigned to Alarm Output Functions 1-8, 1-9 and 1-10 activate for one second.

Lock Area # Reporting

Nibble: See Table 19

Default: 0

Selections: 0 = Lock Area Reporting Disabled
 1 = Lock Area Reports to Routing Destination 1
 2 = Lock Area Reports to Routing Destination 2

Use this parameter to lock area reporting to either Routing Destination 1 or Routing Destination 2. If you enable this feature for an area, all reports for that area are sent to the selected destination. Routing parameters for the individual reports are ignored.

For example, if you set this parameter to 1, all reports in the area are sent to Destination 1. If you set this parameter to 2, all reports in the area are sent to Destination 2.

2.8 Authority Level Configuration

The Authority Level determines which functions are available to system users. Each user is assigned an Authority Level. Use the parameters in this section to configure each of the four authority levels available in the D6412.

See *Appendix D: Operation Guide*, page 111, for an explanation of the commands listed below in each Authority Level Configuration option.

Authority Level defaults consists of the following options:

- **Authority Level 1:** All options except for Option 5.
- **Authority Level 2:** All options except for Option 5.
- **Authority Level 3:** All options except for Options 5, 8, 10 & 11.
- **Authority Level 4:** All options except 7-15.

Authority Level Config Option 1: Cmd 1/All On

Nibble: 0364

Default: 15

Selections: 0-15 (See Table 22)

Authority Level Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Passcode Required	X															
Assign to Authority Level 1		X		X		X		X		X		X		X		X
Assign to Authority Level 2			X	X			X	X			X	X			X	X
Assign to Authority Level 3					X	X	X	X					X	X	X	X
Assign to Authority Level 4									X	X	X	X	X	X	X	X

Table 22: Authority Level Option 1-3 Parameter Options

This parameter determines the required authority level to perform the following functions:

- Cmd 1 – All On with Delay
- Cmd 1 – All On with Delay, No Exit Tone*
- Cmd 1 – All On with No Delay
- All On Key – All On with Delay
- All On Key – All On with Delay, No Exit Tone*
- All On Key – All On with No Delay

If a passcode is required and not entered, the system asks for it after the command is entered.

* Exit Time is doubled when arming the system All On with Delay, Silent. See pages 114 in this manual for instructions.

Authority Levels

Authority Level Config Option 2: Cmd 2/Part On

Nibble: 0365
 Default: 15
 Selections: 0-15 (See Table 22)

This parameter determines the required authority level to perform the following functions:

- Cmd 2 – Part On with Delay
- Cmd 2 – Part On with Delay, No Exit Tone*
- Cmd 2 – Part On with No Delay
- Part On Key – Part On with Delay
- Part On Key – Part On with Delay, No Exit Tone*
- Part On Key – Part On with No Delay

If a passcode is required and not entered, the system asks for it after the command is entered. Points must be configured for Part On arming. See *Options 1, Point Index ##*, page 61.

* Exit Time is doubled when arming the system All On with Delay, Silent. See pages 114 in this manual for instructions.

Authority Level Config Option 3: Cmd 3/Part 2 On

Nibble: 0366
 Default: 15
 Selections: 0-15 (See Table 22)

This parameter determines the required authority level to perform the following functions:

- Cmd 3 – Part 2 On with Delay
- Cmd 3 – Part 2 On with Delay, Silent
- Cmd 3 – Part 2 On with No Delay

If a passcode is required and not entered, the system asks for it after the command is entered.

Authority Level Config Option 4: Disarming the System

Nibble: 0367
 Default: 15
 Selections: 0-15 (See Table 23)

Authority Level Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Disarm Not Assigned	X															
Assign to Authority Level 1		X		X		X		X		X		X		X		X
Assign to Authority Level 2			X	X			X	X			X	X			X	X
Assign to Authority Level 3					X	X	X	X					X	X	X	X
Assign to Authority Level 4									X	X	X	X	X	X	X	X

Table 23: Authority Level Option 4 Parameter Options

This parameter determines which authority levels can disarm (turn off) the system.



If 0 (Disarm Not Assigned) is selected for Authority Level Option 4 (Nibble 0367), you will not be able to disarm the system.

Authority Level Config Option 5: One-Time Disarm

Nibble: 0368
 Default: 8
 Selections: 0-15 (See Table 24)

Authority Level Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
One Time Disarm Not Assigned	X															
Assign to Authority Level 1		X		X		X		X		X		X		X		X
Assign to Authority Level 2			X	X			X	X			X	X			X	X
Assign to Authority Level 3					X	X	X	X					X	X	X	X
Assign to Authority Level 4									X	X	X	X	X	X	X	X

Table 24: Authority Level Option 5 Parameter Options

If an authority level can disarm the system (see *Authority Level Option 4*, page 36), use this parameter to restrict that authority level to One-time Disarm (can only disarm the system once).

Authority Level Config Option 6: Disable Open/Close Reports

Nibble: 0369
 Default: 0
 Selections: 0-15 (See Table 25)

Authority Level Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Send Open/Close For All Levels	X															
Assign to Authority Level 1		X		X		X		X		X		X		X		X
Assign to Authority Level 2			X	X			X	X			X	X			X	X
Assign to Authority Level 3					X	X	X	X					X	X	X	X
Assign to Authority Level 4									X	X	X	X	X	X	X	X

Table 25: Authority Level Option 6 Parameter Options

No Open/Close reports are sent for the Authority Level(s) selected at this parameter. For example, if Open/Close Reports are enabled for an area and Open/Close reports are disabled for Authority Level 1 in this parameter, the D6412 **will** send Open/Close reports for users assigned to Authority Levels 2, 3 and 4. It **will not** send Open/Close reports for users assigned to Authority Level 1, even though Open/Close reports are enabled for the area.

See the following parameters to properly enable/disable Open/Close Reporting: Routing Destinations, page 8; Global Reporting Options, page 15; *Open/Close Reporting Options*, page 29; and *Area # Open/Close Reporting Options*, page 34.



When the authority level is set to 15, no Open/Close reports are sent even if the arming key (All On, Part On, Cmd 1, Cmd 2 or Cmd 3) does not require a passcode.

Authority Levels

Authority Level Config Option 7: Force Arm/Cmd 0/Bypass

Nibble: 0370
 Default: 7
 Selections: 0-15 (See Table 26)

Authority Level Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Passcode Required	X															
Assign to Authority Level 1		X		X		X		X		X		X		X		X
Assign to Authority Level 2			X	X			X	X			X	X			X	X
Assign to Authority Level 3					X	X	X	X					X	X	X	X
Assign to Authority Level 4									X	X	X	X	X	X	X	X

Table 26: Authority Level Option 7-15 Parameter Options

This parameter determines the required authority level to perform the following functions:

- Force Arm.
- Cmd 0 – Selective Bypass.
- Bypass Key.

Points must be configured for Bypass/Force Arm operation. See Options 2, Point Index ##, page 63.

Authority Level Config Option 8: Cmd 80/Cmd 81

Nibble: 0371
 Default: 3
 Selections: 0-15 (See Table 26)

This parameter determines the required authority level to perform the following functions:

- Cmd 80 – All On with Delay, All Areas
- Cmd 81 – Off, All Areas

Commands 80 and 81 must be enabled at the system level first. See *Arming Options 2*, page 28.

Authority Level Config Option 9: Cmd 40-44, 47, 48

Nibble: 0372
 Default: 7
 Selections: 0-15 (See Table 26)

This parameter determines the required authority level to perform the following functions:

- Cmd 40 View Alarm Memory
- Cmd 41 System Test
- Cmd 42 View System Trouble (Cmd 42-0 View Call for Service Trouble)
- Cmd 43 Remote Program (to enable Cmd 43, see *Remote Programming (RAM IV Options*, page 25)
- Cmd 44 Walk Test
- Cmd 47 Reset Sensors
- Cmd 48 View Point Trouble

Authority Level Config Option 10: Cmd 45, 52, 53, 56, 58, 62, 63, 65, 83, 84

Nibble: 0373
Default: 3
Selections: 0-15 (See Table 26)

This parameter determines the required authority level to perform the following functions:

- Cmd 45 - Set Time and Date (send Date/Time Change [73] report)
- Cmd 52 - Change Skeds (see Skeds, page 79, for information on Skeds)
- Cmd 53 - Renew One-Time Passcodes
- Cmd 56 - Change (Add) Other Passcodes
- Cmd 58 - Delete Passcodes
- Cmd 62 - Set Watch Tone
- Cmd 63 - Set Watch Points
- Cmd 65 - Set Part 2 Points
- Cmd 83 - Auto-Call Forwarding Enable, Digits to dial at All On
- Cmd 84 - Auto-Call Forwarding Disable, Digits to dial at disarm

Authority Level Config Option 11: Cmd 50

Nibble: 0374
Default: 3
Selections: 0-15 (See Table 26)

This parameter determines the required authority level to perform the Cmd 50 - Move to Area function.

Authority Level Config Option 12: Cmd 51

Nibble: 0375
Default: 7
Selections: 0-15 (See Table 26)

This parameter determines the required authority level to perform the Cmd 51 - Extend close (Automatic Arming) function.

Authority Level Config Option 13: Cmd 49, 54, 61, 82

Nibble: 0376
Default: 7
Selections: 0-15 (See Table 26)

This parameter determines the required authority level to perform the following functions:

- Cmd 49 - Adjust command center keystroke volume and lighting
- Cmd 54 - Change or reset outputs
- Cmd 61 - Watch toggle Off/On
- Cmd 82 - Auto-Forward - Enable/Disable

Authority Level Config Option 14: Cmd 55

Nibble: 0377
Default: 7
Selections: 0-15 (See Table 26)

This parameter determines the required authority level to perform the Cmd 55 - Passcode Change function.

Authority Level Config Option 15: Cmd 85

Nibble: 0378
Default: 7
Selections: 0-15 (See Table 26)

This parameter determines the required authority level to perform the Cmd 85 - View Log function.

Passcode Configuration, Installer Passcode

2.9 Passcode Configuration, Installer Passcode

Passcode Length

Nibble: 0379
 Default: 4
 Selections: 3 - 7

This parameter determines the number of digits in a passcode. All user passcodes and the installer passcode follow this length. The RAM passcode, page 13, is not affected by the setting made in this parameter.



If the passcode length is shortened after passcodes are entered, duplicate passcodes could be created (for example, passcodes 1235 and 1238 would both become 123).

If the passcode is lengthened, some passcodes may be disabled (for example, passcode 396, if lengthened to five digits, would become 396FF [F=blank] thus disabling the passcode since F cannot be entered at a command center).

User Tamper Options

Nibble: 0380
 Default: 1
 Selections: 0-3 (See Table 27)

User Tamper Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No User Tamper Alert Events	X															
User Tamper [156] Reports Enabled		X		X												
User Tamper Activates Burg Alarm Output			X	X												
Reserved																
Reserved																

Table 27: User Tamper Options

A user tamper event is:

- a user entering a passcode that is not in the system (the user must enter the invalid code the number of times shown in *User Tamper Retry Count*, page 41).
- a user entering a passcode that is in the system but does not have the authority for the desired function
- **User Tamper Reports Enabled:** User Tamper events appear at all command centers assigned to the area where the user is accessing the system. User Tamper [156] reports and user tamper activated alarm outputs are tied to the command center’s area. If only the User Tamper [156] Reports Enabled option is selected and there is a user tamper event, the text command center where the event occurs shows **Keypad Locked**.
- **User Tamper Activates Burg Alarm Output:** If the burglary alarm output (steady alarm output) is selected and there is a user tamper event, the text command center where the user tamper occurred will show **Keypad Locked!** Other text command centers in the area will show **User Tamper Alarm, Enter code to silence**. While the command center is locked out, any key pressed produces an error tone (for text and LED command centers). Selecting “User Tamper Activates Burg Alarm Output” specifically activates output functions 1-8, 1-9 and 1-10. See page Table 53, “Output Function Types,” page 74, for descriptions of these output functions.

Passcode Configuration, Installer Passcode

User Tamper Retry Count

Nibble: 0381

Default: 4

Selections: 0 = Passcode Tamper Disabled

1 – 15 = Number of Attempts Before Passcode Tamper Event

Entering zero (0) disables this feature. The panel creates a User Tamper event when a user enters an invalid passcode the number of times programmed in this parameter. For example, if 5 is entered in this parameter, when an invalid passcode is entered five times, a User Tamper event occurs.

User Tamper Lockout Time

Nibble: 0382

Default: 2

Selections: 0 – 15 minutes

This parameter determines how long a command center will be locked out when a User Tamper event occurs (selections are in minutes).

Installer Passcode

Nibble: 0383-0389

Default: 6543210

Selections: 0 - 9



Do not use digits 10-15 when creating the Installer Passcode. Entering these digits will make the passcode unusable and will lock the installer out of the panel.

The Installer Passcode length is the same as all other system passcodes (see *Passcode Length*, page 40). The default installer passcode is 6543(210) depending on the passcode length.

The Installer passcode cannot disarm the system, but it can access all other commands

The Installer passcode reports as User 0.

D6412

Users

2.10 Users

This section details configuring each user's passcode, authority level and area assignment. The D6412 system supports up to 32 users. Table 28 outlines the User parameters and the respective Nibbles for each User. See page 44 for User programming parameters.

User #	Passcode							Authority Level	Area
	Digit 1	Digit 2	Digit 3	Digit 4	Digit 5	Digit 6	Digit 7	Selection	Selection
1	Nibble 0390 (1)	Nibble 0391 (2)	Nibble 0392 (3)	Nibble 0393 (4)	Nibble 0394 (5)	Nibble 0395 (6)	Nibble 0396 (7)	Nibble 0397 (1)	Nibble 0398 (15)
2	Nibble 0399 (0)	Nibble 0400 (0)	Nibble 0401 (0)	Nibble 0402 (0)	Nibble 0403 (0)	Nibble 0404 (0)	Nibble 0405 (0)	Nibble 0406 (0)	Nibble 0407 (0)
3	Nibble 0408 (0)	Nibble 0409 (0)	Nibble 0410 (0)	Nibble 0411 (0)	Nibble 0412 (0)	Nibble 0413 (0)	Nibble 0414 (0)	Nibble 0415 (0)	Nibble 0416 (0)
4	Nibble 0417 (0)	Nibble 0418 (0)	Nibble 0419 (0)	Nibble 0420 (0)	Nibble 0421 (0)	Nibble 0422 (0)	Nibble 0423 (0)	Nibble 0424 (0)	Nibble 0425 (0)
5	Nibble 0426 (0)	Nibble 0427 (0)	Nibble 0428 (0)	Nibble 0429 (0)	Nibble 0430 (0)	Nibble 0431 (0)	Nibble 0432 (0)	Nibble 0433 (0)	Nibble 0434 (0)
6	Nibble 0435 (0)	Nibble 0436 (0)	Nibble 0437 (0)	Nibble 0438 (0)	Nibble 0439 (0)	Nibble 0440 (0)	Nibble 0441 (0)	Nibble 0442 (0)	Nibble 0443 (0)
7	Nibble 0444 (0)	Nibble 0445 (0)	Nibble 0446 (0)	Nibble 0447 (0)	Nibble 0448 (0)	Nibble 0449 (0)	Nibble 0450 (0)	Nibble 0451 (0)	Nibble 0452 (0)
8	Nibble 0453 (0)	Nibble 0454 (0)	Nibble 0455 (0)	Nibble 0456 (0)	Nibble 0457 (0)	Nibble 0458 (0)	Nibble 0459 (0)	Nibble 0460 (0)	Nibble 0461 (0)
9	Nibble 0462 (0)	Nibble 0463 (0)	Nibble 0464 (0)	Nibble 0465 (0)	Nibble 0466 (0)	Nibble 0467 (0)	Nibble 0468 (0)	Nibble 0469 (0)	Nibble 0470 (0)
10	Nibble 0471 (0)	Nibble 0472 (0)	Nibble 0473 (0)	Nibble 0474 (0)	Nibble 0475 (0)	Nibble 0476 (0)	Nibble 0477 (0)	Nibble 0478 (0)	Nibble 0479 (0)
11	Nibble 0480 (0)	Nibble 0481 (0)	Nibble 0482 (0)	Nibble 0483 (0)	Nibble 0484 (0)	Nibble 0485 (0)	Nibble 0486 (0)	Nibble 0487 (0)	Nibble 0488 (0)
12	Nibble 0489 (0)	Nibble 0490 (0)	Nibble 0491 (0)	Nibble 0492 (0)	Nibble 0493 (0)	Nibble 0494 (0)	Nibble 0495 (0)	Nibble 0496 (0)	Nibble 0497 (0)
13	Nibble 0498 (0)	Nibble 0499 (0)	Nibble 0500 (0)	Nibble 0501 (0)	Nibble 0502 (0)	Nibble 0503 (0)	Nibble 0504 (0)	Nibble 0505 (0)	Nibble 0506 (0)
14	Nibble 0507 (0)	Nibble 0508 (0)	Nibble 0509 (0)	Nibble 0510 (0)	Nibble 0511 (0)	Nibble 0512 (0)	Nibble 0513 (0)	Nibble 0514 (0)	Nibble 0515 (0)
15	Nibble 0516 (0)	Nibble 0517 (0)	Nibble 0518 (0)	Nibble 0519 (0)	Nibble 0520 (0)	Nibble 0521 (0)	Nibble 0522 (0)	Nibble 0523 (0)	Nibble 0524 (0)
16	Nibble 0525 (0)	Nibble 0526 (0)	Nibble 0527 (0)	Nibble 0528 (0)	Nibble 0529 (0)	Nibble 0530 (0)	Nibble 0531 (0)	Nibble 0532 (0)	Nibble 0533 (0)
17	Nibble 0534 (0)	Nibble 0535 (0)	Nibble 0536 (0)	Nibble 0537 (0)	Nibble 0538 (0)	Nibble 0539 (0)	Nibble 0540 (0)	Nibble 0541 (0)	Nibble 0542 (0)

Table 28: User Passcode, Authority Level & Area Programming

User #	Passcode							Authority Level	Area
	Digit 1	Digit 2	Digit 3	Digit 4	Digit 5	Digit 6	Digit 7	Selection	Selection
18	Nibble 0543 (0)	Nibble 0544 (0)	Nibble 0545 (0)	Nibble 0546 (0)	Nibble 0547 (0)	Nibble 0548 (0)	Nibble 0549 (0)	Nibble 0550 (0)	Nibble 0551 (0)
19	Nibble 0552 (0)	Nibble 0553 (0)	Nibble 0554 (0)	Nibble 0555 (0)	Nibble 0556 (0)	Nibble 0557 (0)	Nibble 0558 (0)	Nibble 0559 (0)	Nibble 0560 (0)
20	Nibble 0561 (0)	Nibble 0562 (0)	Nibble 0563 (0)	Nibble 0564 (0)	Nibble 0565 (0)	Nibble 0566 (0)	Nibble 0567 (0)	Nibble 0568 (0)	Nibble 0569 (0)
21	Nibble 0570 (0)	Nibble 0571 (0)	Nibble 0572 (0)	Nibble 0573 (0)	Nibble 0574 (0)	Nibble 0575 (0)	Nibble 0576 (0)	Nibble 0577 (0)	Nibble 0578 (0)
22	Nibble 0579 (0)	Nibble 0580 (0)	Nibble 0581 (0)	Nibble 0582 (0)	Nibble 0583 (0)	Nibble 0584 (0)	Nibble 0585 (0)	Nibble 0586 (0)	Nibble 0587 (0)
23	Nibble 0588 (0)	Nibble 0589 (0)	Nibble 0590 (0)	Nibble 0591 (0)	Nibble 0592 (0)	Nibble 0593 (0)	Nibble 0594 (0)	Nibble 0595 (0)	Nibble 0596 (0)
24	Nibble 0597 (0)	Nibble 0598 (0)	Nibble 0599 (0)	Nibble 0600 (0)	Nibble 0601 (0)	Nibble 0602 (0)	Nibble 0603 (0)	Nibble 0604 (0)	Nibble 0605 (0)
25	Nibble 0606 (0)	Nibble 0607 (0)	Nibble 0608 (0)	Nibble 0609 (0)	Nibble 0610 (0)	Nibble 0611 (0)	Nibble 0612 (0)	Nibble 0613 (0)	Nibble 0614 (0)
26	Nibble 0615 (0)	Nibble 0616 (0)	Nibble 0617 (0)	Nibble 0618 (0)	Nibble 0619 (0)	Nibble 0620 (0)	Nibble 0621 (0)	Nibble 0622 (0)	Nibble 0623 (0)
27	Nibble 0624 (0)	Nibble 0625 (0)	Nibble 0626 (0)	Nibble 0627 (0)	Nibble 0628 (0)	Nibble 0629 (0)	Nibble 0630 (0)	Nibble 0631 (0)	Nibble 0632 (0)
28	Nibble 0633 (0)	Nibble 0634 (0)	Nibble 0635 (0)	Nibble 0636 (0)	Nibble 0637 (0)	Nibble 0638 (0)	Nibble 0639 (0)	Nibble 0640 (0)	Nibble 0641 (0)
29	Nibble 0642 (0)	Nibble 0643 (0)	Nibble 0644 (0)	Nibble 0645 (0)	Nibble 0646 (0)	Nibble 0647 (0)	Nibble 0648 (0)	Nibble 0649 (0)	Nibble 0650 (0)
30	Nibble 0651 (0)	Nibble 0652 (0)	Nibble 0653 (0)	Nibble 0654 (0)	Nibble 0655 (0)	Nibble 0656 (0)	Nibble 0657 (0)	Nibble 0658 (0)	Nibble 0659 (0)
31	Nibble 0660 (0)	Nibble 0661 (0)	Nibble 0662 (0)	Nibble 0663 (0)	Nibble 0664 (0)	Nibble 0665 (0)	Nibble 0666 (0)	Nibble 0667 (0)	Nibble 0668 (0)
32	Nibble 0669 (0)	Nibble 0670 (0)	Nibble 0671 (0)	Nibble 0672 (0)	Nibble 0673 (0)	Nibble 0674 (0)	Nibble 0675 (0)	Nibble 0676 (0)	Nibble 0677 (0)

Table 28: (cont.): User Passcode, Authority Level & Area Programming



The D6412 reserves the following User IDs for automated functions:

- **User ID 252:** Sked operation
- **User ID 253:** Remote telephone communication
- **User ID 254:** RAM IV communication
- **User ID 255:** Keyswitch operation

Users

Passcode, User

- Nibble:** See Table 28
- Default:** See Table 28
- Selections:** 0 - 9

Use the Passcode parameter to enter a passcode for each user (up to 32). The passcode length parameter determines the number of digits in the passcodes.

Since the default passcode length is four digits, the default passcode for User 1 is 1234. If the passcode length is increased to five digits, the default passcode for User 1 becomes 12345. If six digits are selected, the default passcode becomes 123456, and if the maximum number of digits is programmed, the default passcode becomes 1234567.



Do not use digits 10-15 when creating a User Passcode. Entering these digits will make the passcode unusable and will lock the user out of the panel.

Authority Level, User

- Nibble:** See Table 28
- Default:** See Table 28
- Selections:**
 - 0 (disabled)
 - 1 = Authority Level 1
 - 2 = Authority Level 2
 - 3 = Authority Level 3
 - 4 = Authority Level 4

This parameter assigns an authority level to each user. The Authority Level assigns functions to the user's passcode and RF keyfob (see *Authority Levels*, page 35). See *RF Keyfobs*, page 89, for a description of RF keyfobs and how to assign them to users.

Area Option, User

- Nibble:** See Table 28
- Default:** See Table 28
- Selections:** 0-15 (See Table 29)

Area Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Not Assigned to an Area	X															
Assigned to Area 1		X		X		X		X		X		X		X		X
Assigned to Area 2			X	X			X	X			X	X			X	X
Assigned to Area 3					X	X	X	X					X	X	X	X
Assigned to Area 4									X	X	X	X	X	X	X	X

Table 29: Area Options

Assigning passcodes to multiple areas allows users to view and operate multiple areas at a single command center. This is a passcode/user function and is not a command center scope function (there is no command center scope in the D6412).

2.11 Command Centers

Wired command centers 1 to 8 are fixed at SDI addresses 1 to 8.

All command centers (and other SDI devices) are fully supervised. Supervision reports (missing, tamper, etc.) follow the System Status Report routing.

Command Center	Command Center Options	Area	DIP Switch Settings*
1	Nibble 0678 3	Nibble 0679 1	1, MODE
2	Nibble 0680 3	Nibble 0681 0	2, MODE
3	Nibble 0682 3	Nibble 0683 0	1, 2, MODE
4	Nibble 0684 3	Nibble 0685 0	4, MODE
5	Nibble 0686 3	Nibble 0687 0	1, 4, MODE
6	Nibble 0688 3	Nibble 0689 0	2, 4, MODE
7	Nibble 0690 3	Nibble 0691 0	1, 2, 4, MODE
8	Nibble 0692 3	Nibble 0693 0	8, MODE

Table 30: Command Center Programming Parameter Nibbles and Default Values

* The switches listed in this column are the switches that must be placed in the ON position. See Figure 2 for correct DIP switch orientation.

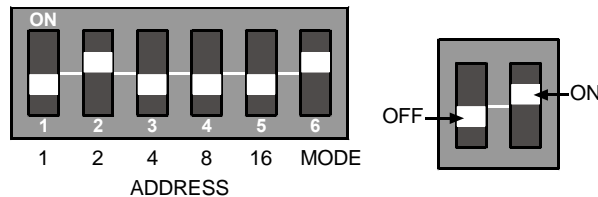


Figure 2: Command Center DIP Switch Orientation

See Table 31 for Command Center DIP Switch addressing.

DIP Switches	DIP Switch Settings					
	S1	S2	S3	S4	S5	S6
SDI Address	1	2	4	8	16	MODE
0*						
1	ON					ON
2		ON				ON
3	ON	ON				ON
4			ON			ON
5	ON		ON			ON
6		ON	ON			ON
7	ON	ON	ON			ON
8				ON		ON

Table 31: DIP Switch Settings for Command Center Addressing

* Address 0 is reserved for the installer's keypad. See the D6412 Installation Guide (P/N: 45349) for information on the Installer's Keypad.

Command Centers

Command Center # Options

Nibble: See Table 30
Default: See Table 30
Selections: 0-3, 8-11 (See Table 32)

Command Center Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Command Center Options	X															
Beep Command Center on System Trouble		X		X						X		X				
Enable Exit Tone			X	X							X	X				
Reserved																
Don't Show Point Status on Command Centers									X	X	X	X				

Table 32: Command Center Options

- **Beep Command Center on System Trouble:** sounds a tone at the command center when a system trouble occurs.



For UL Listed installations, Beep Command Center on System Trouble must be turned on.

- **Enable Exit Tone:** sounds the exit delay tone at this command center when exit delay is active.
- **Don't Show Point Status on Command Centers:** if not selected (no "X" in option box for this feature), the text command center displays "OK for All On" or "OK for Part On" across the second line. This indicates that all points are normal and the system is ready to arm All On or Part On.
 - If a point (controlled or 24-hour non-fire) is faulted (either open or shorted), the Area Idle Text for this point's assigned area replaces the "OK for All On" message.



If "Don't Show Point Status on Command Centers" is selected, the default Area Idle Text displays as "Not Ready." If no points are faulted, the Area Idle Text must be changed. See "Programming Text Nibbles", page 131, for text entry instructions.

- If a controlled point not configured for Part On arming is faulted (either open or shorted), "OK for Part On" replaces "OK for All On" on the text command center's display. The system may be armed Part On, but cannot be armed All On until the faulted point is restored. See *Options 1, Point Index ##*, page 61, for point index configuration details.

This option configures the LED command center to not show point status when its area is Off (disarmed). Users must press the [*] key to see point status.

Command Center # Area

Nibble: See Table 30
Default: See Table 30
Selections: 0 = Disable
 1 = Assign Command Center to Area 1
 2 = Assign Command Center to Area 2
 3 = Assign Command Center to Area 3
 4 = Assign Command Center to Area 4

Choose one area to assign the command center to. Users (passcodes) can be assigned to multiple areas.

The Move command (Cmd 50) allows users (passcodes) assigned to multiple areas to view those areas from one command center. There is no command center scope in this product.

ABC Keys and Duress Parameters

2.12 ABC Keys and Duress Parameters

The parameters in this section configure the ABC keys and the Duress function for all command centers and areas. Each key has 16 characters of programmable text that is displayed when the key is activated (press twice to activate). See *System Text*, page 85, and *Programming Text Nibbles*, page 131, for information on System Text programming and Text Nibble entries.

[A] Key Area Option

Nibble: 0694
Default: 15
Selections: 0-15 (See Table 33)

A Key Area Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Disabled for All Areas	X															
A Key Works for Area 1		X		X		X		X		X		X		X		X
A Key Works for Area 2			X	X			X	X			X	X			X	X
A Key Works for Area 3					X	X	X	X					X	X	X	X
A Key Works for Area 4									X	X	X	X	X	X	X	X

Table 33: [A] Key Area Options

Use this parameter to assign areas to the [A] Key. [A] Key reports as Point 100 for all areas.

[A] Key Alarm Response

Nibble: 0695
Default: 0
Selections: 0 = No Alarm Response
 1 = Activate Fire Alarm Response
 2 = Activate Panic Alarm Response
 3 = Activate Emergency Response

The parameter determines the alarm response for the [A] key.

- **Fire Alarm Response:** displays **Fire Alarm Key #** at the text command centers. If programmed, the panel sends a Fire Alarm [75] report and activates the Fire Alarm output.
- **Panic Alarm Response:** nothing is displayed and no sounds are emitted at the command centers. If programmed, a Panic [6] report is sent and the Burglary Alarm output is activated.
- **Emergency Alarm Response:** displays **Alarm Key #** at the text command centers. If programmed, an Emergency Alarm [4] report is sent and the Burglary Alarm output is activated.

[B] Key Area Option

Nibble: 0696
Default: 15
Selections: 0-15 (See Table 34)

B Key Area Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Disabled for All Areas	X															
B Key Works for Area 1		X		X		X		X		X		X		X		X
B Key Works for Area 2			X	X			X	X			X	X			X	X
B Key Works for Area 3					X	X	X	X					X	X	X	X
B Key Works for Area 4									X	X	X	X	X	X	X	X

Table 34: [B] Key Area Options

Use this parameter to assign areas to the [B] Key. [B] Key reports as Point 101 for all areas.

ABC Keys and Duress Parameters

[B] Key Alarm Response

Nibble: 0697
 Default: 0
 Selections: 0 = No Alarm Response
 1 = Activate Fire Alarm Response
 2 = Activate Panic Alarm Response
 3 = Activate Emergency Response

See [A] Key Alarm Response, page 47, for more information about these parameter options.

[C] Key Area Option

Nibble: 0698
 Default: 15
 Selections: 0-15 (See Table 35)

C Key Area Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Disabled for All Areas	X															
C Key Works for Area 1		X		X		X		X		X		X		X		X
C Key Works for Area 2			X	X			X	X			X	X			X	X
C Key Works for Area 3					X	X	X	X					X	X	X	X
C Key Works for Area 4									X	X	X	X	X	X	X	X

Table 35: [C] Key Area Options

Use this parameter to assign areas to the [C] Key. [C] Key reports as Point 102 for all areas.

[C] Key Alarm Response

Nibble: 0699
 Default: 0
 Selections: 0 = No Alarm Response
 1 = Activate Fire Alarm Response
 2 = Activate Panic Alarm Response
 3 = Activate Emergency Response

See [A] Key Alarm Response, page 47, for more information about these parameter options.

Alarm Output Option for ABC Keys

Nibble: 0700
 Default: 0
 Selections: 0-7 (See Table 36)

Alarm Output Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Alarm Output for A B C Keys	X															
Alarm Output for A Key		X		X		X		X								
Alarm Output for B Key			X	X			X	X								
Alarm Output for C Key					X	X	X	X								
Reserved																

Table 36: Alarm Output Options

Use this parameter to assign an alarm output option to the ABC keys. The alarm output will activate for the response type assigned to each key. See [A] Key Alarm Response, page 47. This is a global parameter that affects all areas.

ABC Keys and Duress Parameters

ABC Key Reports, Acknowledgement Beep at Command Center Options

Nibble: 0701
 Default: 0
 Selections: 0-15 (See Table 37)

ABC Key Report & Ack Beep Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Alarm Report for ABC Keys	X															
Enable ABC Key Reporting (A=100, B=101, C=102)		X		X		X		X		X		X		X		X
Acknowledgement Beep for A Key			X	X			X	X			X	X			X	X
Acknowledgement Beep for B Key					X	X	X	X					X	X	X	X
Acknowledgement Beep for C Key									X	X	X	X	X	X	X	X

Table 37: ABC Key Report & Acknowledgement Beep Options

This is a global parameter that affects all areas.

- **Enable ABC Key Reporting:** if enabled, the [A] Key reports as Point 100, the [B] Key reports as Point 101 and the [C] Key reports as Point 102.
- **Acknowledgement Beep for ABC Keys:** The command center beeps when the central station receiver acknowledges a report. If the key is not programmed for reports, the beep occurs on activation.

Duress Reporting Options

Nibble: 0702
 Default: 0
 Selections: 0-15 (See Table 38)

Duress Reporting Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No User Emergency Function Reporting	X															
Make User 32 a Duress User		X		X		X		X		X		X		X		X
Make User 31 a Duress User			X	X			X	X			X	X			X	X
Make User 30 a Duress User					X	X	X	X					X	X	X	X
Make User 29 a Duress User									X	X	X	X	X	X	X	X

Table 38: Duress Reporting Options

This parameter creates up to four (4) duress users (and passcodes). Creating a duress user does not change any other functionality programmed for that user.

Whenever a user enters a duress passcode (passcode assigned to a duress user), the D6412 sends a Duress [74] report and executes functions per the duress user's authority level.

To create a unique duress user (and passcode) for all areas, select Option 1, 2, 4 and 8 and then assign each of the four users (User 29 through 32) to only one area.

To create one duress user (and passcode) for all areas, select Option 1, 2, 4 or 8 and then assign a user (User 29 through 32) to all four areas.

ABC Keys and Duress Parameters

A B C Key and Duress Report Routing

Nibble: 0703

Default: 1

Selections:

- 0 = No Reports, No Events to Log/Printer
- 1 = Reports to Destination 1, Events to Log/Printer
- 2 = Reports to Destination 2, Events to Log/Printer
- 3 = Reports to Destination 1 & 2, Events to Log/Printer
- 4 = Reports to Destination 2 Only on Destination 1 Comm Fail Event, Events to Log/Printer
- 5 = No Reports, Events to Log/Printer

The [A] key reports as Point 100 for all areas, the [B] key reports as Point 101 for all areas and the [C] key reports as Point 102 for all areas.

This is a global parameter that affects all areas. See *Appendix A* for the dialing sequence and a description of Comm Fail event.



You must enable reporting at the Global Reporting Options prompt and enter at least one phone number for one routing destination.

The RF Keyfob "Panic" feature follows this routing.

Reserved

Nibble: 0704-0705

2.13 Locations

The D6412 supports up to 40 Locations. Using the parameters in this section, you can assign each location to an area, a point number and a device.

Each location is configured by the following four parameters. Table 39 shows the configuration information in a table format. You **must** program the four parameters for each location (defaults are shown in Table 39). See pages 55-56 for Location programming parameters.

Location Parameters					Device Parameter Selections				
These columns show the default Nibble programming for each of the four Location parameters. These four parameters configure each of the 40 locations.					These columns show the selections for the 'Device' parameter. The Device parameter tells the D6412 where to find the sensor loop (or transmitter) status for each location. The cells in these columns tell you which loop to use on each device. Each cell also tells you which EOL (end-of-line) resistor value to use for each loop.				
Location #	Device (default)	Pt Index (default)	Area (default)	Point # (default)	1 On-Board	2 D9528	3 D9528, Doubled	4 RF Receiver 1	5 RF Receiver 2
1	Nibble: 0706 (1)	Nibble: 0707 (1)	Nibble: 0708 (1)	Nibble: 0709-0710 (0-1)	2.2 kΩ only	SDI Addr 101 Loop 1, 2.2kΩ		SDI Addr 50 Transmitter 1	SDI Addr 51 Transmitter 1
2	Nibble: 0711 (1)	Nibble: 0712 (11)	Nibble: 0713 (1)	Nibble: 0714-0715 (0-2)	3.65 kΩ only when doubled with 10	SDI Addr 101 Loop 2, 2.2kΩ		SDI Addr 50 Transmitter 2	SDI Addr 51 Transmitter 2
3	Nibble: 0716 (1)	Nibble: 0717 (11)	Nibble: 0718 (1)	Nibble: 0719-0720 (0-3)	3.65 kΩ only when doubled with 11	SDI Addr 101 Loop 3, 2.2kΩ		SDI Addr 50 Transmitter 3	SDI Addr 51 Transmitter 3
4	Nibble: 0721 (1)	Nibble: 0722 (13)	Nibble: 0723 (1)	Nibble: 0724-0725 (0-4)	3.65 kΩ only when doubled with 12	SDI Addr 101 Loop 4, 2.2kΩ		SDI Addr 50 Transmitter 4	SDI Addr 51 Transmitter 4
5	Nibble: 0726 (1)	Nibble: 0727 (13)	Nibble: 0728 (1)	Nibble: 0729-0730 (0-5)	3.65 kΩ only when doubled with 13	SDI Addr 101 Loop 5, 2.2kΩ		SDI Addr 50 Transmitter 5	SDI Addr 51 Transmitter 5
6	Nibble: 0731 (1)	Nibble: 0732 (14)	Nibble: 0733 (1)	Nibble: 0734-0735 (0-6)	3.65 kΩ only when doubled with 14	SDI Addr 101 Loop 6, 2.2kΩ		SDI Addr 50 Transmitter 6	SDI Addr 51 Transmitter 6
7	Nibble: 0736 (1)	Nibble: 0737 (14)	Nibble: 0738 (1)	Nibble: 0739-0740 (0-7)	3.65 kΩ only when doubled with 15	SDI Addr 101 Loop 7, 2.2kΩ		SDI Addr 50 Transmitter 7	SDI Addr 51 Transmitter 7
8	Nibble: 0741 (1)	Nibble: 0742 (4)	Nibble: 0743 (1)	Nibble: 0744-0745 (0-8)	3.65 kΩ only when doubled with 16	SDI Addr 101 Loop 8, 2.2kΩ		SDI Addr 50 Transmitter 8	SDI Addr 51 Transmitter 8
9	Nibble: 0746 (0)	Nibble: 0747 (0)	Nibble: 0748 (1)	Nibble: 0749-0750 (0-9)	Not available as double point.	SDI Addr 102 Loop 1, 2.2kΩ	SDI Addr 106 Loop 1, 3.65 kΩ	SDI Addr 50 Transmitter 9	SDI Addr 51 Transmitter 9
10	Nibble: 0751 (0)	Nibble: 0752 (0)	Nibble: 0753 (1)	Nibble: 0754-0755 (1-0)	Doubled with 2, 2.2kΩ	SDI Addr 102 Loop 2, 2.2kΩ	SDI Addr 106 Loop 2, 3.65 kΩ	SDI Addr 50 Transmitter 10	SDI Addr 51 Transmitter 10
11	Nibble: 0756 (0)	Nibble: 0757 (0)	Nibble: 0758 (1)	Nibble: 0759-0760 (1-1)	Doubled with 3, 2.2kΩ	SDI Addr 102 Loop 3, 2.2kΩ	SDI Addr 106 Loop 3, 3.65 kΩ	SDI Addr 50 Transmitter 11	SDI Addr 51 Transmitter 11
12	Nibble: 0761 (0)	Nibble: 0762 (0)	Nibble: 0763 (1)	Nibble: 0764-0765 (1-2)	Doubled with 4, 2.2kΩ	SDI Addr 102 Loop 4, 2.2kΩ	SDI Addr 106 Loop 4, 3.65 kΩ	SDI Addr 50 Transmitter 12	SDI Addr 51 Transmitter 12
13	Nibble: 0766 (0)	Nibble: 0767 (0)	Nibble: 0768 (1)	Nibble: 0769-0770 (1-3)	Doubled with 5, 2.2kΩ	SDI Addr 102 Loop 5, 2.2kΩ	SDI Addr 106 Loop 5, 3.65 kΩ	SDI Addr 50 Transmitter 13	SDI Addr 51 Transmitter 13
14	Nibble: 0771 (0)	Nibble: 0772 (0)	Nibble: 0773 (1)	Nibble: 0774-0775 (1-4)	Doubled with 6, 2.2kΩ	SDI Addr 102 Loop 6, 2.2kΩ	SDI Addr 106 Loop 6, 3.65 kΩ	SDI Addr 50 Transmitter 14	SDI Addr 51 Transmitter 14
15	Nibble: 0776 (0)	Nibble: 0777 (0)	Nibble: 0778 (1)	Nibble: 0779-0780 (1-5)	Doubled with 7, 2.2kΩ	SDI Addr 102 Loop 7, 2.2kΩ	SDI Addr 106 Loop 7, 3.65 kΩ	SDI Addr 50 Transmitter 15	SDI Addr 51 Transmitter 15
16	Nibble: 0781 (0)	Nibble: 0782 (0)	Nibble: 0783 (1)	Nibble: 0784-0785 (1-6)	Doubled with 8, 2.2kΩ	SDI Addr 102 Loop 8, 2.2kΩ	SDI Addr 106 Loop 8, 3.65 kΩ	SDI Addr 50 Transmitter 16	SDI Addr 51 Transmitter 16

Table 39: Location/Area/Point Table

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Locations

Location #	Location Parameters				Device Parameter Selections				
	Device (default)	Pt Index (default)	Area (default)	Point # (default)	1 On-Board	2 D9528	3 D9528, Doubled	4 RF Receiver 1	5 RF Receiver 2
17	Nibble: 0786 (0)	Nibble: 0787 (0)	Nibble: 0788 (1)	Nibble: 0789-0790 (1-7)		SDI Addr 103 Loop 1, 2.2kΩ	SDI Addr 106 Loop 1, 2.2kΩ	SDI Addr 50 Transmitter 17	SDI Addr 51 Transmitter 17
18	Nibble: 0791 (0)	Nibble: 0792 (0)	Nibble: 0793 (1)	Nibble: 0794-0795 (1-8)		SDI Addr 103 Loop 2, 2.2kΩ	SDI Addr 106 Loop 2, 2.2kΩ	SDI Addr 50 Transmitter 18	SDI Addr 51 Transmitter 18
19	Nibble: 0796 (0)	Nibble: 0797 (0)	Nibble: 0798 (1)	Nibble: 0799-0800 (1-9)		SDI Addr 103 Loop 3, 2.2kΩ	SDI Addr 106 Loop 3, 2.2kΩ	SDI Addr 50 Transmitter 19	SDI Addr 51 Transmitter 19
20	Nibble: 0801 (0)	Nibble: 0802 (0)	Nibble: 0803 (1)	Nibble: 0804-0805 (2-0)		SDI Addr 103 Loop 4, 2.2kΩ	SDI Addr 106 Loop 4, 2.2kΩ	SDI Addr 50 Transmitter 20	SDI Addr 51 Transmitter 20
21	Nibble: 0806 (0)	Nibble: 0807 (0)	Nibble: 0808 (1)	Nibble: 0809-0810 (2-1)		SDI Addr 103 Loop 5, 2.2kΩ	SDI Addr 106 Loop 5, 2.2kΩ	SDI Addr 50 Transmitter 21	SDI Addr 51 Transmitter 21
22	Nibble: 0811 (0)	Nibble: 0812 (0)	Nibble: 0813 (1)	Nibble: 0814-0815 (2-2)		SDI Addr 103 Loop 6, 2.2kΩ	SDI Addr 106 Loop 6, 2.2kΩ	SDI Addr 50 Transmitter 22	SDI Addr 51 Transmitter 22
23	Nibble: 0816 (0)	Nibble: 0817 (0)	Nibble: 0818 (1)	Nibble: 0819-0820 (2-3)		SDI Addr 103 Loop 7, 2.2kΩ	SDI Addr 106 Loop 7, 2.2kΩ	SDI Addr 50 Transmitter 23	SDI Addr 51 Transmitter 23
24	Nibble: 0821 (0)	Nibble: 0822 (0)	Nibble: 0823 (1)	Nibble: 0824-0825 (2-4)		SDI Addr 103 Loop 8, 2.2kΩ	SDI Addr 106 Loop 8, 2.2kΩ	SDI Addr 50 Transmitter 24	SDI Addr 51 Transmitter 24
25	Nibble: 0826 (0)	Nibble: 0827 (0)	Nibble: 0828 (1)	Nibble: 0829-0830 (2-5)		SDI Addr 104 Loop 1, 2.2kΩ	SDI Addr 107 Loop 1, 3.65kΩ	SDI Addr 50 Transmitter 25	SDI Addr 51 Transmitter 25
26	Nibble: 0831 (0)	Nibble: 0832 (0)	Nibble: 0833 (1)	Nibble: 0834-0835 (2-6)		SDI Addr 104 Loop 2, 2.2kΩ	SDI Addr 107 Loop 2, 3.65kΩ	SDI Addr 50 Transmitter 26	SDI Addr 51 Transmitter 26
27	Nibble: 0836 (0)	Nibble: 0837 (0)	Nibble: 0838 (1)	Nibble: 0839-0840 (2-7)		SDI Addr 104 Loop 3, 2.2kΩ	SDI Addr 107 Loop 3, 3.65kΩ	SDI Addr 50 Transmitter 27	SDI Addr 51 Transmitter 27
28	Nibble: 0841 (0)	Nibble: 0842 (0)	Nibble: 0843 (1)	Nibble: 0844-0845 (2-8)		SDI Addr 104 Loop 4, 2.2kΩ	SDI Addr 107 Loop 4, 3.65kΩ	SDI Addr 50 Transmitter 28	SDI Addr 51 Transmitter 28
29	Nibble: 0846 (0)	Nibble: 0847 (0)	Nibble: 0848 (1)	Nibble: 0849-0850 (2-9)		SDI Addr 104 Loop 5, 2.2kΩ	SDI Addr 107 Loop 5, 3.65kΩ	SDI Addr 50 Transmitter 29	SDI Addr 51 Transmitter 29
30	Nibble: 0851 (0)	Nibble: 0852 (0)	Nibble: 0853 (1)	Nibble: 0854-0855 (3-0)		SDI Addr 104 Loop 6, 2.2kΩ	SDI Addr 107 Loop 6, 3.65kΩ	SDI Addr 50 Transmitter 30	SDI Addr 51 Transmitter 30
31	Nibble: 0856 (0)	Nibble: 0857 (0)	Nibble: 0858 (1)	Nibble: 0859-0860 (3-1)		SDI Addr 104 Loop 7, 2.2kΩ	SDI Addr 107 Loop 7, 3.65kΩ	SDI Addr 50 Transmitter 31	SDI Addr 51 Transmitter 31
32	Nibble: 0861 (0)	Nibble: 0862 (0)	Nibble: 0863 (1)	Nibble: 0864-0865 (3-2)		SDI Addr 104 Loop 8, 2.2kΩ	SDI Addr 107 Loop 8, 3.65kΩ	SDI Addr 50 Transmitter 32	SDI Addr 51 Transmitter 32

Table 39 (Cont.): Location/Area/Point Table

Locations

Location Parameters					Device Parameter Selections				
These columns show the default Nibble programming for each of the four Location parameters. These four parameters configure each of the 40 locations.					These columns show the selections for the 'Device' parameter. The Device parameter tells the D6412 where to find the sensor loop (or transmitter) status for each location. The cells in these columns tell you which loop to use on each device. Each cell also tells you which EOL (end-of-line) resistor value to use for each loop.				
Location #	Device (default)	Pt Index (default)	Area (default)	Point # (default)	1 On-Board	2 D9528	3 D9528, Doubled	4 RF Receiver 1	5 RF Receiver 2
33	Nibble: 0866 (0)	Nibble: 0867 (0)	Nibble: 0868 (1)	Nibble 0869-0870 (3-3)		SDI Addr 105 Loop 1, 2.2kΩ	SDI Addr 107 Loop 1, 2.2kΩ	SDI Addr 50 Transmitter 33	SDI Addr 51 Transmitter 33
34	Nibble: 0871 (0)	Nibble: 0872 (0)	Nibble: 0873 (1)	Nibble 0874-0875 (3-4)		SDI Addr 105 Loop 2, 2.2kΩ	SDI Addr 107 Loop 2, 2.2kΩ	SDI Addr 50 Transmitter 34	SDI Addr 51 Transmitter 34
35	Nibble: 0876 (0)	Nibble: 0877 (0)	Nibble: 0878 (1)	Nibble 0879-0880 (3-5)		SDI Addr 105 Loop 3, 2.2kΩ	SDI Addr 107 Loop 3, 2.2kΩ	SDI Addr 50 Transmitter 35	SDI Addr 51 Transmitter 35
36	Nibble: 0881 (0)	Nibble: 0882 (0)	Nibble: 0883 (1)	Nibble 0884-885 (3-6)		SDI Addr 105 Loop 4, 2.2kΩ	SDI Addr 107 Loop 4, 2.2kΩ	SDI Addr 50 Transmitter 36	SDI Addr 51 Transmitter 36
37	Nibble: 0886 (0)	Nibble: 0887 (0)	Nibble: 0888 (1)	Nibble 0889-0890 (3-7)		SDI Addr 105 Loop 5, 2.2kΩ	SDI Addr 107 Loop 5, 2.2kΩ	SDI Addr 50 Transmitter 37	SDI Addr 51 Transmitter 37
38	Nibble: 0891 (0)	Nibble: 0892 (0)	Nibble: 0893 (1)	Nibble 0894-0895 (3-8)		SDI Addr 105 Loop 6, 2.2kΩ	SDI Addr 107 Loop 6, 2.2kΩ	SDI Addr 50 Transmitter 38	SDI Addr 51 Transmitter 38
39	Nibble: 0896 (0)	Nibble: 0897 (0)	Nibble: 0898 (1)	Nibble 0899-0900 (3-9)		SDI Addr 105 Loop 7, 2.2kΩ	SDI Addr 107 Loop 7, 2.2kΩ	SDI Addr 50 Transmitter 39	SDI Addr 51 Transmitter 39
40	Nibble: 0901 (0)	Nibble: 0902 (0)	Nibble: 0903 (1)	Nibble 0904-0905 (4-0)		SDI Addr 105 Loop 8, 2.2kΩ	SDI Addr 107 Loop 8, 2.2kΩ	SDI Addr 50 Transmitter 40	SDI Addr 51 Transmitter 40

Table 39 (Cont.): Location/Area/Point Table

Sample Location Scenario

The following scenario is intended to show how the parameters in Table 39 are used to configure a Location by walking you through a step-by-step example.

Suppose the intended premises for the D6412 is a small store that consists of the following four areas:

- Area 1: Manager's Office/Money Room
- Area 2: Entrance Foyer
- Area 3: Sales Floor
- Area 4: Employee Break Room

Your task is set up Location 9 as an Entry/Exit door (door contact) for Area 2. It is connected to a D9528 Point Expansion Module. It is the first point in Area 2.

Step 1: Set the Device Parameter

The Device parameter tells the D6412 how the Location is connected to the panel: on-board sensor loop, off-board expander (D9528) or RF expander (SDI RF Receiver). Since Location 9 is connected to a D9528 Point Expansion Module **without** point-doubling, you would enter a "2" in Nibble 0746.

Location #	Device (default)	Pt Index (default)	Area (default)	Point # (default)	1 On-Board	2 D9528	3 D9528, Doubled	4 RF Receiver 1	5 RF Receiver 2
9	Nibble: 0746 2	Nibble: 0747 (0)	Nibble: 0748 (1)	Nibble: 0749-0750 (0-9)	Not available as double point.	SDI Addr 102 Loop 1, 2.2 kΩ	SDI Addr 106 Loop 1, 3.65 kΩ	SDI Addr 50 Transmitter 9	SDI Addr 51 Transmitter 9

Change Nibble 0746 from "0" to "2" for D9528 without point-doubling.

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Locations

Step 2: Set the Point Index Parameter

The Point Index tells the D6412 how the particular Location will “behave.” There are several parameters for configuring a Point Index. See *Point Index Configuration*, page 57, for details.

For example, your entry for Nibble 0747 would be “11.” Based on the Point Index default, this means that the D6412 will now recognize the device at Location 9 as an Entry/Exit Delay 1 Point Type. To learn more about the Point Index Configuration for this particular point type and other point types, see page 57.

Location #	Device (default)	Pt Index (default)	Area (default)	Point # (default)	1 On-Board	2 D9528	3 D9528, Doubled	4 RF Receiver 1	5 RF Receiver 2
9	Nibble: 0746 2	Nibble: 0747 11	Nibble: 0748 (1)	Nibble: 0749-0750 (0-9)	Not available as double point.	SDI Addr 102 Loop 1, 2.2 kΩ	SDI Addr 106 Loop 1, 3.65 kΩ	SDI Addr 50 Transmitter 9	SDI Addr 51 Transmitter 9

Change Nibble 0747 from “0” to “11” for Entry/Exit Delay 1 Point Type.

Step 3: Set the Area Parameter

The Area parameter tells the D6412 which area Location 9 will appear in. Each location can be assigned to only one area. Since Location 9 is in Area 2 for this example, enter a “2” in Nibble 0748 to assign Location 9 to Area 2.

Location #	Device (default)	Pt Index (default)	Area (default)	Point # (default)	1 On-Board	2 D9528	3 D9528, Doubled	4 RF Receiver 1	5 RF Receiver 2
9	Nibble: 0746 2	Nibble: 0747 11	Nibble: 0748 2	Nibble: 0749-0750 (0-9)	Not available as double point.	SDI Addr 102 Loop 1, 2.2 kΩ	SDI Addr 106 Loop 1, 3.65 kΩ	SDI Addr 50 Transmitter 9	SDI Addr 51 Transmitter 9

Change Nibble 0748 from “1” to “2” to assign Location 9 to Area 2.

Step 4: Set the Point # Parameter

The Point Number determines the point number that appears on Command Center displays, in the panel event log and at the optional printer for Location 9. This number is also reported to the Central Station.

The default point number for Location 9 is “09” (Nibble 0749-0750). However, this default can be changed to any number. Since this is the first location in a new area (Area 2), change the default to “01” by entering a “0” in Nibble 0749 and a “1” in Nibble 0750. **Be careful not to duplicate point numbers within the same area.**

Location #	Device (default)	Pt Index (default)	Area (default)	Point # (default)	1 On-Board	2 D9528	3 D9528, Doubled	4 RF Receiver 1	5 RF Receiver 2
9	Nibble: 0746 2	Nibble: 0747 11	Nibble: 0748 2	Nibble: 0749-0750 0-1	Not available as double point.	SDI Addr 102 Loop 1, 2.2 kΩ	SDI Addr 106 Loop 1, 3.65 kΩ	SDI Addr 50 Transmitter 9	SDI Addr 51 Transmitter 9

Change the Point Number from “09” to “01” for Location 9.



Make sure two Nibbles are used to enter the Point Number.

Summary

The D6412 will now recognize the following information for Location 9:

- **Device:** 2 (Location is on a D9528 Point Expansion Module)
- **Point Index:** 11 (Entry/Exit Delay 1)
- **Area:** 2 (Location 9 is assigned to Area 2)
- **Point #:** 01 (Location 9 point type will report to Command Centers, panel event log and Central Station as Point # 01 in Area 2).

Location ##, Device

Nibble:	See Table 39
Default:	See Table 39
Selections:	0 = Disabled 1 = On-board 2 = Wired Point Expander 3 = Doubled Wired Point Expander 4 = SDI RF Receiver 1 5 = SDI RF Receiver 2

Each Location in the D6412 can be assigned to one of three types for devices: the D6412's on-board sensor loops, a D9528 point expander or a RF point expander. Use each location's device parameter to assign the location to a device.

RF Transmitters and Point States

With the exception of the door/window transmitter, all RF transmitters show only two point states (Normal and Shorted).



When a location is assigned to a RF point expander, the door/window transmitter (RF3401) has the ability to monitor both a reed switch (magnet) and a supervised sensor loop. After the ID for a door/window transmitter is added, the D6412 shows the status for the point as normal. If the first message from the transmitter is "no magnet and open loop," the D6412 reports the point as faulted. If a "normal magnet" message is received, the magnet is supervised. If a "normal loop" message is received, the loop is supervised.

For this example, the door/window transmitter is mounted on a doorjamb and its magnet on the door. Closing the door places the magnet next to the reed switch. Now the panel has seen the reed switch in a normal (not faulted) state. From this point forward, it will show the point (door/window transmitter) as faulted whenever it sees the reed switch faulted. It will show the point as normal when the reed switch returns to normal, even though the sensor loop remains faulted.

To continue with this example, we have attached a contact on a window near the door. We have wired in the contact and the EOL resistor to the Door/Window transmitter's sensor loop and closed the window. Now the panel has seen the sensor loop in a normal (not faulted) state. From this point forward, it will show the point (door window transmitter) as faulted whenever it sees either the sensor loop or the reed switch faulted. It will only show the point as normal when both the reed switch and the sensor loop return to normal.

When only the reed switch is monitored, only the Normal and Shorted point states are shown.

When both the reed switch and sensor loop are monitored, only the Normal and Shorted point states are shown.

When only the sensor loop is monitored, Normal, Shorted, and Open point states are shown.



Cut out reed switch if not used.

Location ##, Point Index

Nibble:	See Table 39
Default:	See Table 39
Selections:	0 – 15 (See Table 40)

The Point Index determines how the system responds to faults on the sensor loop assigned to the location. See *Point Index Configuration*, page 57, for a complete description of point indexes. For Watch Point only functionality (no Trouble, no Alarm), set the Point Index to 0.

Locations

Location ##, Area

Nibble: See Table 39

Default: See Table 39

Selections: 0 = Disabled
1 = Assign Location X to Area 1
2 = Assign Location X to Area 2
3 = Assign Location X to Area 3
4 = Assign Location X to Area 4

The Area assignment parameter determines which area a location is assigned to. Each location can only be assigned to one area.

Location ##, Point Number

Nibble: See Table 39

Default: See Table 39

Selections: 0 – 9 (Selection range represents Command Center keypad keys)

This parameter determines the Point Number that appears in command center displays, the panel event log and at the optional printer. This is also the point number reported to the central station.



This parameter can be used to create a Point 1 for each area.

Point Index Configuration

2.14 Point Index Configuration

The D6412 can monitor any combination of up to 40 sensor loops and/or RF transmitters. Each sensor loop or transmitter is assigned to a location. Each location is assigned to one of 15 Point Indexes so that the D6412 knows how to respond to sensor loop or transmitter changes.

Table 40 outlines the Point Index parameters and the Nibbles associated with them for each Point Index.

Point Index	Point Type	Pulse Count	Pulse Count Time	Options 1	Options 2	Report Enable Trouble Response	Alarm Route	Restoral Route
1	Nibble 0906 (1)	Nibble 0907 (0)	Nibble 0908 (0)	Nibble 0909 (0)	Nibble 0910 (2)	Nibble 0911 (11)	Nibble 0912 (1)	Nibble 0913 (1)
2	Nibble 0914 (2)	Nibble 0915 (0)	Nibble 0916 (0)	Nibble 0917 (0)	Nibble 0918 (2)	Nibble 0919 (11)	Nibble 0920 (1)	Nibble 0921 (1)
3	Nibble 0922 (3)	Nibble 0923 (0)	Nibble 0924 (0)	Nibble 0925 (1)	Nibble 0926 (0)	Nibble 0927 (10)	Nibble 0928 (1)	Nibble 0929 (1)
4	Nibble 0930 (4)	Nibble 0931 (0)	Nibble 0932 (0)	Nibble 0933 (1)	Nibble 0934 (7)	Nibble 0935 (9)	Nibble 0936 (1)	Nibble 0937 (1)
5	Nibble 0938 (5)	Nibble 0939 (0)	Nibble 0940 (0)	Nibble 0941 (1)	Nibble 0942 (7)	Nibble 0943 (9)	Nibble 0944 (1)	Nibble 0945 (1)
6	Nibble 0946 (6)	Nibble 0947 (0)	Nibble 0948 (0)	Nibble 0949 (1)	Nibble 0950 (7)	Nibble 0951 (9)	Nibble 0952 (1)	Nibble 0953 (1)
7	Nibble 0954 (7)	Nibble 0955 (0)	Nibble 0956 (0)	Nibble 0957 (1)	Nibble 0958 (7)	Nibble 0959 (9)	Nibble 0960 (1)	Nibble 0961 (1)
8	Nibble 0962 (8)	Nibble 0963 (0)	Nibble 0964 (0)	Nibble 0965 (1)	Nibble 0966 (7)	Nibble 0967 (9)	Nibble 0968 (1)	Nibble 0969 (1)
9	Nibble 0970 (9)	Nibble 0971 (0)	Nibble 0972 (0)	Nibble 0973 (0)	Nibble 0974 (0)	Nibble 0975 (9)	Nibble 0976 (1)	Nibble 0977 (1)
10	Nibble 0978 (10)	Nibble 0979 (0)	Nibble 0980 (0)	Nibble 0981 (8)	Nibble 0982 (2)	Nibble 0983 (11)	Nibble 0984 (1)	Nibble 0985 (1)
11	Nibble 0986 (11)	Nibble 0987 (0)	Nibble 0988 (0)	Nibble 0989 (5)	Nibble 0990 (7)	Nibble 0991 (9)	Nibble 0992 (1)	Nibble 0993 (1)
12	Nibble 0994 (12)	Nibble 0995 (0)	Nibble 0996 (0)	Nibble 0997 (5)	Nibble 0998 (7)	Nibble 0999 (9)	Nibble 1000 (1)	Nibble 1001 (1)
13	Nibble 1002 (13)	Nibble 1003 (0)	Nibble 1004 (0)	Nibble 1005 (1)	Nibble 1006 (7)	Nibble 1007 (9)	Nibble 1008 (1)	Nibble 1009 (1)
14	Nibble 1010 (14)	Nibble 1011 (0)	Nibble 1012 (0)	Nibble 1013 (1)	Nibble 1014 (7)	Nibble 1015 (9)	Nibble 1016 (1)	Nibble 1017 (1)
15	Nibble 1018 (14)	Nibble 1019 (0)	Nibble 1020 (0)	Nibble 1021 (5)	Nibble 1022 (7)	Nibble 1023 (9)	Nibble 1024 (1)	Nibble 1025 (1)

Table 40: Point Index Configuration Table

Point Type, Point Index

Nibble: See Table 40

Default: See Table 40

Selections: 0-15 (See Table 41)

This parameter defines what type of point each point index is associated with. See Table 41 for a description of each type of point and the events and reports associated with that point type.

- **Controlled Point:** Controlled points are turned on and off when the user turns the system on (armed) and off (disarmed).
- **24-hour Point:** 24-hour points are always on and cannot be turned off by the user. Faults on 24-hour points do not have to be cleared or bypassed to turn the system on (armed).

Point Index Configuration

Point Type		Description	Events/Reports [Reference to Appendix B]	
24-hour Point Types	0	Watch Mode Only	No alarm or trouble response to opens or shorts (Watch Mode Only).	
	1	24-hour, Fire	Short on sensor loop starts Fire Alarm response. Open on sensor loop starts trouble response. Activates Fire Alarm Output (Temporal Code 3). Do not assign 'doubled locations (points)' to a Fire Point Index.	Fire Alarm [75-77], Fire Missing [78], Fire Restore from Alarm [79], Fire Restore from Missing [174], Fire Trouble [80], Fire Trouble Restore [81], Fire Bypass [26-27], Swinger Bypass [33], Restoral from Swinger Bypass [173], Fire Unbypass [34]
	2	24-hour, Fire with Alarm Verification	Short on sensor loop starts the verification process: 1. Panel removes power to Point 1 (and activates Fire Verification output function if programmed) for 15 seconds to reset smoke detectors. See page 75 for Fire Verification Output Function information. 2. Short on sensor loop within 120 seconds of reset starts alarm response. If point remains normal or open for the 120 second verification window there is no alarm response. Open on sensor loop starts trouble response. Activates Fire Alarm Output (Temporal Code 3). Do not assign 'doubled locations (points)' to a Fire Point Index.	Fire Alarm [75-77], Fire Missing [78], Fire Restore from Alarm [79], Fire Restore from Missing [174], Fire Trouble [80], Fire Trouble Restore [81], Fire Bypass [26-27], Fire Unbypass [34]
	3	24-hour, Voice Active	The Voice Verification Module (D169) shorts a Voice Active point to tell the panel a 2-way Voice Verification session is active. Only trouble on open option is available. See <i>Voice Verification, Option 1</i> , page 61, for a complete description of the Voice Verification function.	Trouble [139], Trouble Restore [146]
	4	24-hour, Tamper	Short or open causes alarm response if no Trouble Option.	Alarm [3], Cross Alarm [10], Unverified Cross [17], Bypass [30-31], Swinger Bypass [33], Unbypass [36], Swinger Bypass Restore [173], Trouble [139], Trouble Restore [146], Missing Trouble [88], Restore from Alarm [112], Restore from Missing Trouble [176]
	5	24-hour, Emergency	Short or open causes alarm response if no Trouble Option.	Alarm [4], Cross Alarm [11], Unverified Cross [17], Bypass [30-31], Swinger Bypass [33], Unbypass [36], Swinger Bypass Restore [173], Trouble [140], Trouble Restore [147], Missing Trouble [88], Restore from Alarm [113], Restore from Missing Trouble [176]
	6	24-hour, Visible Panic	Short or open causes alarm response if no Trouble Option.	Alarm [5], Cross Alarm [12], Unverified Cross [17], Bypass [30-31], Swinger Bypass [33], Unbypass [36], Swinger Bypass Restore [173], Trouble [141], Trouble Restore [148], Missing Trouble [88], Restore from Alarm [114], Restore from Missing Trouble [176] reports.
	7	24-hour, Invisible Panic	Short or open causes alarm response if no Trouble Option. No alarm tones or alarm display at Command Center even if the Alarm Output option is enabled.	Alarm [6], Cross Alarm [13], Unverified Cross [17], Bypass [30-31], Swinger Bypass [33], Unbypass [36], Swinger Bypass Restore [173], Trouble [142], Trouble Restore [149], Missing Trouble [88], Restore from Alarm [115], Restore from Missing Trouble [176]
	8	24-hour, Burglary	Short or open causes alarm response if no Trouble Option. Trouble option generates alarm response when Area is All or Part On, Trouble response when area is Off.	Burglary [7], Cross Alarm [14], Unverified Cross [17], Bypass [30-31], Swinger Bypass [33], Unbypass [36], Swinger Bypass Restore [173], Trouble [143], Trouble Restore [150], Missing Alarm [87], Missing Trouble [88], Restore from Alarm [116], Restore from Missing Alarm [175], Restore from Missing Trouble [176]

Table 41: Point Type Options

Point Index Configuration

	Point Type	Description	Events/Reports [Reference to Appendix B]
24-hour Point Types	9	24-hour, Independent Point Control <i>This point type is for on-board locations 2 to 8 only! You must set the EOL Resistor parameter Nibble 1026 for 1k EOL resistors. Do not add an EOL resistor to the Independent Point Control.</i> Independent Point Control reports send only in Modem IIIa ² . If the Alarm Output option is selected disarming the Independent Point Control silences the alarm output.	24hr Burglary [7], Point Closing [68], Point Open [97], Bypass [28,29], Unbypass [35], Swinger Bypass [33], Swinger Bypass Restore [173], Trouble [143], Trouble Restore [150], Restore from Alarm [116]
	10	Controlled Key-switch See page 62 "Point Options 1 for Keyswitch Point Type" for more information. Can be programmed for a momentary or maintained keyswitch.	Alarm [9], Bypass [28,29], Forced Pt [32], Swinger Bypass [33], Unbypass [35], Swinger Bypass Restore [173], Trouble [145], Trouble Restore [152], Missing Alarm [87], Missing Trouble [88], Restore from Alarm [118], Restore from Missing Alarm [175], Restore from Missing Trouble [176]
Controlled Point Types	11	When panel is On, short or open starts Entry Delay 1 if no Trouble Option. Follows Entry Delay 1 or 2. Follows exit delay. If this point type is programmed for Trouble and a trouble conditions occurs, an alarm event is generated. Entry/Exit Delay and Start Entry Delay settings are ignored for trouble events.	Alarm [08], Cross Alarm [15], Unverified Cross [17], Bypass [28,29], Forced Pt [32], Swinger Bypass [33], Unbypass [35], Swinger Bypass Restore [173], Trouble [144], Trouble Restore [151], Missing Alarm [87], Missing Trouble [88], Restore from Alarm [117], Restore from Missing Alarm [175], Restore from Missing Trouble [176]
	12	When panel is On, short or open starts Entry Delay 2 if no Trouble Option. Follows Entry Delay 1 or 2. Follows exit delay. If this point type is faulted or bypassed at the start of exit delay or during exit delay, exit time is set to Exit Delay 2. If this point type is programmed for Trouble and a trouble condition occurs, an alarm event is generated. Entry/Exit Delay and Start Entry Delay settings are ignored for trouble events.	Alarm [08], Cross Alarm [15], Unverified Cross [17], Bypass [28,29], Forced Pt [32], Swinger Bypass [33], Unbypass [35], Swinger Bypass Restore [173], Trouble [144], Trouble Restore [151], Missing Alarm [87], Missing Trouble [88], Restore from Alarm [117], Restore from Missing Alarm [175], Restore from Missing Trouble [176]
	13	Follows exit delay. Follows, but can not start entry delay. Instant if first (or out of sequence if programmed for sequence). If this point type is programmed for Trouble and a trouble conditions occurs, an alarm event is generated. Entry/Exit Delay and Start Entry Delay settings are ignored for trouble events.	Alarm [9] reports, Cross Alarm [16], Unverified Cross [17], Bypass [28,29], Forced Pt [32], Swinger Bypass [33], , Unbypass [35], Missing Alarm [87], Swinger Bypass Restore [173], Trouble [145], Trouble Restore [152], Missing Trouble [88], Restore from Alarm [118], Restore from Missing Alarm [175], Restore from Missing Trouble [176]
	14	Does not follow entry or exit delay. Faulting a Controlled Instant point during Entry/Exit Delay creates an instant alarm, which terminates the Entry/Exit Delay period.	Alarm [9] reports, Cross Alarm [16], Unverified Cross [17], Bypass [28,29], Forced Pt [32], Swinger Bypass [33], , Unbypass [35], Missing Alarm [87], Swinger Bypass Restore [173], Trouble [145], Trouble Restore [152], Missing Trouble [88], Restore from Alarm [118], Restore from Missing Alarm [175], Restore from Missing Trouble [176]
	15	Reserved	Reserved for future use.

Table 41 (cont.): Point Type Options

Point Index Configuration

Pulse Count, Point Index

Nibble: See Table 40
Default: 0 for all Point Indexes, see Table 40
Selections: 0 : 300 ms
 1:20 ms

2-15: number of pulses required within the programmed Pulse Count Time for an alarm to occur.

This parameter determines the number of times a sensor loop must pulse (electrically off normal) in the Pulse Count Time (see below) before the panel declares the point faulted. This applies to both on- and off-board points.

- Setting the Pulse Count to 0 tells the D6412 to look for 1 pulse within a 300 ms time-span before declaring the point faulted).
- Setting the Pulse Count to 1 tells the D6412 to look for 1 pulse within a 20 ms time-span before declaring the point faulted).



Radionics recommends leaving Pulse Count at the default of 0.

Pulse Count Time, Point Index

Nibble: See Table 40
Default: 0 for all Point Indexes, see Table 40
Selections: 0-15 (See Table 42)

When the panel detects a pulse (electrically off normal), it starts a timer and waits the time selected in this parameter to reach the Pulse Count and declare the point faulted.



If a single pulse starts the pulse count timer and lasts 20 seconds, the panel declares the point faulted regardless of the pulse count.

Pulse Count Time Selections for 20 mS Point Scan Time (On-board Points Only)		Pulse Count Time Selections for 300 mS Point Scan Time (On- and Off-board Points)	
Selection	Pulse Count Time	Selection	Pulse Count Time
0	0.5 Seconds	8	20 Seconds
1	1 Second	9	30 Seconds
2	2 Seconds	10	40 Seconds
3	3 Seconds	11	50 Seconds
4	4 Seconds	12	60 Seconds
5	5 Seconds	13	90 Seconds
6	10 Seconds	14	120 Seconds
7	15 Seconds	15	200 Seconds

Table 42: Pulse Count Time Selections

Off-board Points: only selections 8 to 15 are appropriate for off-board points. The Point Scan Time is fixed by the point expansion devices. Only assign off-board points to point indexes with the Pulse Count Time programmed with selections 8 to 15.

Point Count/Point Count Time Example:

Suppose you must program a Point Index to detect four 20 ms pulses within 10 seconds before it declares the point off normal. Follow these steps:

1. Enter "4" in the Pulse Count Nibble of the Point Index you are configuring.. "4" identifies the number of pulses the D6412 must see.
2. Since your time span is 10 seconds, this Point Index will use a point scan time of 20 ms and is only for on-board points (see left side of Table 43). The selection for 10 seconds is 6. Enter "6" into the Pulse Count Time Nibble of the Point Index you are configuring.

Point Index Configuration

Options 1, Point Index ##

- Nibble:** See Table 40
- Default:** See Table 40
- Selections:** 0-15 (See Table 43)

Options 1, Point Index	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Options Enabled	X															
Enable Alarm Event Abort		X		X		X		X		X		X		X		X
Voice Verification			X	X			X	X			X	X			X	X
Armed for Part Mode					X	X	X	X					X	X	X	X
Sensor Trouble Monitor									X	X	X	X	X	X	X	X

Table 43: Point Index Options 1 Selections

- **Alarm Event Abort (Non-Fire Points Only):** assigns the abort feature to a Point Index. See *Alarm Event Abort Window*, page 69, to learn how to set the Alarm Event Abort Window. If a user acknowledges a non-fire alarm point event by entering their passcode before the Alarm Event Abort Window expires:
 - the alarm event is aborted. Alarm, Cancel* and Restoral reports associated with the alarm are not transmitted and the event becomes a local only event.
 - the users hears a unique three long beep tone at the command center.
 - the text command centers indicate that the alarm was aborted on the display. It appears as a slow flash in Alarm Memory at LED command centers.



Alarm Event Abort is required for the SIA Control Panel Standard for False Alarm Reduction.

* A Cancel window starts with the initiation of the alarm event and follows the Bell Time. If the user acknowledges the alarm inside the Cancel window (bell time), a Cancel [38] or a Fire Cancel [39] report is sent. If the Abort feature is enabled, the Cancel report is sent if the user acknowledges the alarm after the Abort window has expired, but before the bell time expires.



The Cancel Window is required for SIA Control Panel Standard for False Alarm Reduction.

This option has no effect on Fire and Fire with Verification point types.

The Alarm Event Abort feature does not apply to alarm events initiated by the ABC Keys, the Duress passcode or the keyfob Panic function.



- **Voice Verification:** allows the panel to control a D169 2-way Voice Verification Module. The D169 allows the central station personnel to verify alarms with a two-way voice session with the premises. The premises phone line runs from the panel to the D169 and then to the premises phones. There are two other module connections to the panel: the programmable relay output (-12 VDC) programmed with the Voice Request output function, and a point (zone) programmed as a Voice Active point. The panel must also have one or more points with the Voice Verification option selected. When a point with Voice Verification generates an alarm event:
 1. The panel transmits the alarm report to the receiver at the central station.
 2. When the central station receiver acknowledges the report, the panel activates the Voice Request output function and starts a 30-second report delay time. All reports are delayed. The D169 has 30 seconds to start a two-way voice session.
 3. An operator at the central station picks up the phone line from the receiver with a DTMF telephone and presses [2].

Point Index Configuration

4. At the premises, the D169 picked up the phone line when the panel activated the Voice Request output function. When it hears the DTMF tone from the operator pressing [2], it begins a two-way voice session by first shorting the panel's Voice Active point.
 5. When the Voice Active point is shorted, the panel silences the non-fire alarm output (sets the Bell Timer to zero). Only the user can silence a fire alarm output.
 6. As long as the Voice Active point is shorted, the panel continues to keep reports buffered.
 7. The D169 ends the voice session by removing the short from the voice active point. The panel resets the bell time and Alarm Event Abort Window (assuming a user at the premises did not change the arming state of the panel during the voice session). Normal reporting (communication) resumes.
- **Armed for Part Mode:** determines the points that arm when the user turns the system Part On. Only those points assigned to a point index (controlled point types only) with this option enabled are armed.
 - **Sensor Trouble Monitor:** enables/disables reporting the sensor trouble monitor fault condition. This feature does not apply to fire point types or non-fire 24-hour point types. See *Sensor Monitor Time* (page 68) for a complete description of the Sensor Trouble Monitor feature.

Point Options 1 for Keyswitch Point Type

Default: See Table 40

Selections:

0 = Maintained, All On, Off from Any	
1 = Maintained, All On, No Off	
2 = Maintained, No On, Off from Any	<i>Keyswitch Point Type Selections 3, 7, 11 and 15 are reserved for future use.</i>
4 = Maintained, Part On, Off from Any	
5 = Maintained, Part On, No Off	
6 = Maintained, No On, Off from Part On or Part 2 On	
8 = Momentary, All On, Off from Any	
9 = Momentary, All On, No Off	
10 = Momentary, No On, Off from Any	
12 = Momentary, Part On, Off from Any	
13 = Momentary, Part On, No Off	
14 = Momentary, No On, Off from Part On or Part 2 On	

Keyswitch Operation

For maintained keyswitches, the EOL resistor for the point is connected in series. An open on the circuit arms the area; a return to normal on the circuit disarms the area. A short on the circuit produces an alarm if the area is armed and a trouble if the area is disarmed.

For momentary keyswitches, the EOL resistor for the point is connected in parallel with the keyswitch so that the switch shorts the resistor when it operates. Operating the keyswitch (normal to short to normal) toggles the arming state. An open on the circuit produces an alarm if the area is armed and a trouble if the area is disarmed.

See the *D6412 Installation Guide* (P/N: 45349) for detailed instructions on wiring a keyswitch.

Silencing Alarms

- **Momentary Keyswitch:** To silence alarms (stop Alarm output), operate the keyswitch. If the area is armed, operating the keyswitch to silence the alarm will also disarm the area. If the area is disarmed, operating a momentary keyswitch to silence the alarm will not arm the area.
- **Maintained Keyswitch:** If the area is armed, turn the keyswitch to the disarmed position. The D6412 will disarm the area and silence the alarm. If the area is disarmed, turn the keyswitch to the armed position (the D6412 will not arm) and then return to the disarmed position.

Options 2, Point Index ##

Nibble: See Table 40
Default: See Table 40
Selections: 0-15 (See Table 44)

Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Options Enabled	X															
Swinger Bypass		X		X		X		X		X		X		X		X
Alarm Output			X	X			X	X			X	X			X	X
Can Be Bypassed or Force Armed					X	X	X	X					X	X	X	X
Cross Point									X	X	X	X	X	X	X	X

Table 44: Point Index Options 2 Selections

- **Swinger Bypass:** activates both Swinger Bypass functions for Alarm Output (Functions 1-5, 1-8 to 1-12) and Point Reporting. See *Swinger Count for Point Reports (Alarm, Trouble, Restore)* on page 68 for additional Swinger information.



Swinger Bypass is required for SIA Control Panel Standard for False Alarm Reduction.

- **Alarm Output:** activates the alarm output functions (Output Function 1-8 to 1-12, see *Outputs*, page 73) for alarm events.
- **Can Be Bypassed or Force Armed:** only points assigned to a point index with this option enabled can be bypassed or force armed. Bypassed controlled points remain bypassed for the arming cycle. Force armed points return to the system automatically if they restore during the arming cycle.
 24-hour points (fire and non-fire) can be made bypassable with this option. They cannot be made to force arm since they are always armed.



Force Arming is not permitted for UL applications.

- **Cross Point:** creates a Cross Point point index, which fixes the Point Pulse Count at two (2) and uses it and the Point Pulse Count Time as follows:
 - When any point assigned to the Cross Point index detects a pulse, the D6412 starts the Pulse Count Time as programmed in the Pulse Count Time parameter.
 - If a second point assigned to the same Cross Point index detects a pulse, the D6412 creates a Cross Point Alarm event for both points.
 - A second pulse on the first point does not create an alarm event.
 - If a single pulse on a cross point lasts 20 seconds, the D6412 creates an alarm event for that point only; it is not a Cross Point event.
 - If programmed for unverified event reporting (see *Point Response Options*, page 66), the D6412 sends an Unverified Cross [17] or a Fire Unverified [77] report point that detects a pulse without another cross point pulse to verify it.



Cross Point is required for SIA Control Panel Standard for False Alarm Reduction.

Point Index Configuration



RF Transmitters and Point States: with the exception of the door/window transmitter, all RF transmitters show only two point states (Normal and Shorted).

When a location is assigned to a RF point expander, the door/window transmitter (RF3401) has the ability to monitor both a reed switch (magnet) and a supervised sensor loop. After the ID for a door/window transmitter is added, the D6412 shows the status for the point as normal. If the first message from the transmitter is “no magnet and open loop,” the D6412 reports the point as faulted. If a “normal magnet” message is received, the magnet is supervised. If a “normal loop” message is received, the loop is supervised.

Example: After the door/window transmitter ID is added, the panel shows the status for the point as normal even though both the reed switch and sensor loop are faulted.

For this example the door/window transmitter is mounted on a door jamb and its magnet on the door. Closing the door places the magnet next to the reed switch, now the panel has seen the reed switch in a normal (not faulted) state. From this point forward, it will show the point (door window transmitter) as faulted whenever it sees the reed switch faulted. It will show the point as normal when the reed switch returns to normal, even though the sensor loop remains faulted.

To continue with this example, we have attached a contact on a window near the door, We have wired in the contact and the EOL resistor to the Door/Window transmitter’s sensor loop and closed the window. Now the panel has seen the sensor loop in a normal (not faulted) state. From this point forward, it will show the point (door window transmitter) as faulted whenever it sees either the sensor loop or the reed switch faulted. It will only show the point as normal when both the reed switch and the sensor loop return to normal.

When the reed switch only is monitored only the Normal and Shorted point states are shown.

When both the reed switch and sensor loop are monitored only the Normal and Shorted point states are shown.

When the sensor loop only is monitored Normal, Shorted, and Open point states are shown.



Cut out reed switch if not used.

Reporting Enable, Trouble Response Options, Point Index ##

Nibble: See Table 40
Default: See Table 40
Selections: 0-15 (See Table 45)

Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Alarm or Trouble Reports	X															
Alarm and Trouble Reports Enabled		X		X		X		X		X		X		X		X
Trouble Response on Open			X	X			X	X			X	X			X	X
Trouble Response on Short					X	X	X	X					X	X	X	X
Restoral Reports Enabled										X	X	X	X	X	X	X

Table 45: Reporting & Trouble Response Options

The trouble response for controlled and 24-hour burglary point types occurs only when the points are disarmed. When armed, any point fault generates an alarm response.

Other 24-hour point types (Tamper, Emergency, Panic, Invisible, and Independent Point Control) always have trouble response as programmed.



Fire point types always have Trouble Response on Open and Alarm Response on Short regardless of programming.

- **Alarm and Trouble Reports Enabled:** if enabled, the system generates Alarm and Trouble reports.
- **Trouble Response on Open:** if enabled, an open circuit generates a Trouble response.
- **Trouble Response on Short:** if enabled, a shorted circuit generates a Trouble response.
- **Restoral Reports Enabled:** if enabled, the system generates Restoral reports.

Alarm Report Routing, Point Index ##

Nibble: See Table 40

Default: See Table 40

Selections:

- 0 = No Reports, No Events to Log/Printer
- 1 = Reports to Destination 1, Events to Log/Printer
- 2 = Reports to Destination 2, Events to Log/Printer
- 3 = Reports to Destinations 1 & 2, Events to Log/Printer
- 4 = Reports to Destination 2 Only On Destination 1 Comm Fail Event, Events to Log/Printer
- 5 = No Reports, Events to Log/Printer

Reports for Alarm, Cancel and Exit Error events follow Alarm report routing. See *Appendix A* for dialing sequence and a description of Comm Fail event.

Restoral reports are routed as shown in the next parameter. Trouble reports are routed globally. See *Global Reporting Options*, page 15.



To enable reporting at the Global Reporting Options prompt, at least one phone number must be entered for one routing destination.

Restoral Reporting, Point Index ##

Nibble: See Table 40

Default: See Table 40

Selections:

- 0 = No Reports, No Events to Log/Printer
- 1 = Reports to Destination 1, Events to Log/Printer
- 2 = Reports to Destination 2, Events to Log/Printer
- 3 = Reports to Destinations 1 & 2, Events to Log/Printer
- 4 = Reports to Destination 2 Only On Destination 1 Comm Fail Event, Events to Log/Printer
- 5 = No Reports, Events to Log/Printer

In Modem IIIa² format, the panel sends Restoral from Alarm, Restoral from Fire Alarm, etc. See *Appendix A* for dialing sequence and a description of Comm Fail event.

Alarm reports are routed as shown in the previous parameter. Trouble reports are routed globally. See *Global Reporting Options*, page 15.



To enable reporting at the Global Reporting Options prompt, at least one phone number must be entered for one routing destination.

D6412

Global Point Configuration

2.15 Global Point Configuration

EOL Resistor Value (for On-board Locations 2 to 8)

- Nibble: 1026
 Default: 2
 Selections: 0 = No End of Line Resistor
 1 = 1k
 2 = 2.2k
 3 = 3.65k
 4 = Point Doubled, 2.2k and 3.65k

On-board Location 1 always requires a 2.2 k for end-of-line supervision. If point doubling is turned on, the locations are paired (see Table 46).

EOL	Location							
3.65 k	X	2	3	4	5	6	7	8
2.2 k	1	10	11	12	13	14	15	16

Table 46: EOL Resistor Location Pairing

Both 2.2k and 3.65k End-of-Line (EOL) resistors are included in the D6412 hardware pack.

If you are connecting a D268/D269 or D279 Independent Point Control to the D6412, you must set this parameter to 1 for 1k EOL resistors. Remember that on-board sensor loops 2 to 8 will have to be terminated with 1k EOL resistors. Point 1 is always terminated with a 2.2k EOL resistor.



Point Response Options (for all points)

- Nibble: 1027
 Default: 0
 Selections: 0-7 (See Table 47)

Point Response Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Options Selected	X															
Enable Smart Swinger		X		X		X		X								
Unverified Events Send Trouble Reports			X	X			X	X								
Entry Delay Is Sequential					X	X	X	X								
Reserved																

Table 47: Point Response Options

- Smart Swinger:** allows points that were swinger bypassed to report new alarm events if they are faulted when bell time is running. The central station receives alarm reports from points that previously reported that they were swinger bypassed. When bell time is running, the Swinger Count applies to these points. They only send reports until bell time expires or until the swinger count is reached again at which time they will swinger bypass again. If these bypassed points are faulted while bell time is not running, they remain swinger bypassed and do not send reports.
- Unverified Events Send Trouble Reports:** when enabled, Fire Alarm with Verification points that have single, unverified events generate an Unverified Event report. Also when enabled, points with the Cross Point option enabled that have a single pulse generate an Unverified Event report.



SIA Control Panel Standard for False Alarm Reduction recommends that “Unverified Events Send Trouble Reports” be enabled.

Global Point Configuration

- Entry Delay Is Sequential:** when enabled, the delay points must be faulted in order by *location* (lowest to highest). If the sequence is broken, entry delay is ended and an alarm response begins. Entry delay sequence starts when the location with an Entry/Exit delay point type is faulted and continues with the faulting of consecutive locations assigned to Follower point types. The sequence of point types must be consecutive and without any gaps. For example, Location sequence 2, 3, 4, 5 with Location 2 as an Entry/Exit point type and Locations 3-5 as Follower point types is OK. A location sequence of 2, 3, 5 with Location 4 as a Fire point type is not a valid sequence. See Table 41, Point Type Options, on page 58, for descriptions of Entry/Exit and Follower point types.

Bypass / Force Bypass Report Routing

Nibble: 1028

Default: 1

Selections:

- 0 = No Reports, No Events to Log/Printer
- 1 = Reports to Destination 1, Events to Log/Printer
- 2 = Reports to Destination 2, Events to Log/Printer
- 3 = Reports to Destinations 1 & 2, Events to Log/Printer
- 4 = Reports to Destination 2 Only On Destination 1 Comm Fail Event, Events to Log/Printer
- 5 = No Reports, Events to Log/Printer

This parameter sets the routing for Bypass and Forced reports. See *Appendix A* for dialing sequence and a description of Comm Fail event.



Reporting at the Global Reporting Options prompt must be enabled and at least one phone number for one routing destination must be entered.

Swinger Count for Alarm Output

Nibble: 1029

Default: 1

Selections:

- 0 (Swinger Disabled)
- 1 - 15

Each individual point has a swinger count for alarm output.

Swinger Bypass reports are not sent for Swinger Bypass for Alarm Output. Swinger Bypass reports have their own swinger count (see *Swinger Count for Point Reports*, page 68). The Swinger Count is reset on both arming and disarming of the system, allowing the Swinger Bypass feature to work for both controlled and 24-hour points. A trouble condition occurs after Swinger Bypass.

Example: Assume the Swinger Bypass option is enabled, the panel is armed, no points are in alarm and the Swinger Count for Alarm Output is set to 2. Points 1, 3 and 5 go into alarm. At the end of bell time, the Swinger Count for Alarm Output for Points 1,3 and 5 decrements from 2 to 1. Since the counter does not reach zero, no points are bypassed.

A second alarm event for any of those points bypasses that point.



When the Swinger Count is set to zero (0), points with Swinger Bypass enabled are bypassed on one activation.



Swinger Count for Alarm Output is required for SIA Control Panel Standard for False Alarm Reduction.

Global Point Configuration

Swinger Count for Point Reports (Alarm, Trouble, Restore)

Nibble: 1030
 Default: 1
 Selections: 0 (Swinger Disabled)
 1 - 15

Swinger shut down for the dialer is a global function that affects all areas.

Swinger Bypass [33] reports are sent for swinger bypass of points.

The Swinger Count is reset on both arming and disarming, allowing the Swinger Bypass feature to work for both controlled and 24-hour points.

Example: Assume the Swinger Bypass option is enabled, the panel is armed and there are no alarms. When the point sends an Alarm or Trouble event to the dialer, the swinger count for point reports is checked. If the counter is at zero, the point is swinger bypassed (Swinger Bypass [33] report is sent). If the counter is not at zero, the panel decrements the counter. If the counter then goes to zero, the point is swinger bypassed (Swinger Bypass [33] report is sent).



Swinger Count for Point Reports is required for SIA Control Panel Standard for False Alarm Reduction.

Bypass, Swinger Bypass, Sensor Trouble Report Options

Nibble: 1031
 Default: 3
 Selections: 0-15 (See Table 48)

Bypass, Swinger Bypass, Sensor Trouble Report Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Options Selected	X															
Point Bypass and Swinger Bypass Reports Enabled		X		X		X		X		X		X		X		X
Bypass and Swinger Bypass Restoral Reports Enabled			X	X			X	X			X	X			X	X
Sensor Trouble Reports Enabled					X	X	X	X					X	X	X	X
Sensor Trouble Restoral Reports Enabled									X	X	X	X	X	X	X	X

Table 48: Bypass, Swinger Bypass & Sensor Trouble Report Options

Use this parameter to enable Point Bypass, Swinger Bypass and Sensor reports (and their respective restoral reports) are enabled. This is a global parameter that affects all areas.

Sensor Monitor Time

Nibble: 1032-1033
 Default: 0,7
 Selections: 0 - 9

This parameter determines the number of days (00 to 99) that the panel can function without sensor (point) activity (time accumulates only when the area is off/disarmed). This feature is assigned by Point Index in Point Options 1. This feature does not apply to fire point types or non-fire 24-hour point types, only controlled points. If there is no sensor activity after the entered time period, a trouble report is sent. See *Options 1, Point Index ##*, page 61, to enable/disable the sensor trouble monitor fault condition.

Alarm Event Abort Window

Nibble: 1034
Default: 2
Selections: 0 - 1 = 15 Seconds
 2 = 30 Seconds
 3 - 15 = 45 Seconds

This parameter sets the length of the window. See *Point Index Options 1*, page 61, for more information on applying the Alarm Event Abort feature to a Point Index.



This option only affects non-fire points. Fire and Fire with Verification points are not affected by enabling this option.

If a user acknowledges a non-fire alarm event by entering their passcode before the Alarm Event Abort Window expires:

1. The alarm event is aborted. Alarm, Cancel* and Restoral reports associated with the alarm are not transmitted. The alarm event becomes a local only event.
2. The user hears a unique three long beep tone at the command center.
3. The text command center indicates the aborted alarm on the display. The LED command centers indicate the aborted alarm with a slow flash in Alarm Memory.

* A Cancel Window starts with the initiation of the alarm event and follows Bell Time. If the user acknowledges the alarm inside the cancel window (bell time), a Cancel [38] or Fire Cancel [39] report is sent. If the Abort feature is enabled, the Cancel report is sent if the user acknowledges the alarm after the Abort Window has expired but before bell time expires.

Alarm Event Abort Window is required for SIA Control Panel Standard for False Alarm Reduction.

**Reserved**

Nibble: 1035-1037

Point Trouble, Restoral from Trouble Report Routing

Nibble: 1038
Default: 1
Selections: 0 = No Reports, No Events to Log/Printer
 1 = Reports to Destination 1, Events to Log/Printer
 2 = Reports to Destination 2, Events to Log/Printer
 3 = Reports to Destinations 1 & 2, Events to Log/Printer
 4 = Reports to Destination 2 Only On Destination 1 Comm Fail Event, Events to Log/Printer
 5 = No Reports, Events to Log/Printer

Point Trouble report events include RF Low Battery [121], RF Tamper Trouble [121], and Trouble Events [139 – 145]. Restoral from Trouble report events include: Restoral from Trouble [146 – 152].

Alarm reports are configured by point. Alarm report events include: Exit Error [18], Cancel [38, 39] and Abort.

See *Appendix A* for dialing sequence and a description of Comm Fail event.



Reporting at the Global Reporting Options prompt must be enabled and at least one phone number for one routing destination must be entered.

D6412

Global Output Configuration

2.16 Global Output Configuration

The D6412 supports a total of 20 programmable outputs including four on-board (PO1 to PO4) and up to 16 off-board.

Outputs 5 through 12 are on an off-board SDI device (D9529 OctoOutput or X7410i Module), SDI Address 150.

Outputs 13 through 20 are on an off-board SDI device (D9529 OctoOutput or X7410i Module), SDI Address 151.

Global Output Options

Nibble: 1039
 Default: 0
 Selections: 0-15 (See Table 49)

Global Output Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Options Selected	X															
Output 2 Is Supervised Horn/Speaker Output		X		X		X		X		X		X		X		X
Send Output Set/Reset Reports			X	X			X	X			X	X			X	X
Enable Strobe Arming Flash to Indicate RF Keyfob and Keyswitch Arm/Disarm					X	X	X	X					X	X	X	X
Enable Alarm Output Arming Beep to Indicate RF Keyfob and Keyswitch Arm/Disarm									X	X	X	X	X	X	X	X

Table 49: Global Output Options

This parameter affects all programmable outputs.

- Output 2 Is Supervised Horn/Speaker Output:** Programmable Output 2 (PO2) becomes a supervised siren driver. If a siren or speaker is not connected, the D6412 generates a Siren Trouble event that can include a Siren Trouble [160] report. The restoral event is reported with Siren Trouble Restore [161]. See the *D6412 Installation Guide* (P/N 45349) for connection instructions and specifications for siren/speakers. Compatible speakers include Radionics' D118 and D119 Speaker Drivers.
- Send Output Set/Reset Reports:** The D6412 sends Output Set [109 – 111] and Output Reset [106 – 108] reports when Outputs are operated by a user, a sked or RAM.
- Enable Strobe Arming Flash to Indicate RF Keyfob and Keyswitch Arm/Disarm:** The Strobe Output Function indicates RF and keyswitch arming and disarming as follows:
 - 3 seconds = transition to Off (disarmed)
 - 6 seconds = transition to All or Part On
- Enable Alarm Output Arming Beep to Indicate RF Keyfob and Keyswitch Arm/Disarm:** Any Alarm Output Functions (1-8, 1-9, 1-10) indicate RF and Keyswitch arming and disarming as follows:
 - 1 Beep = transition to Off (disarmed)
 - 2 Beeps = transition to All On
 - 3 Beeps = transition to Part On



This feature is only available for RF Keyfobs (not RF keypads).

Bell Time

Nibble: 1040
Default: 6
Selections: 0 – 15

Bell Time determines how long, zero to 15 minutes, the Alarm Output, Fire Alarm Output and Silent Alarm Output functions remain activated when triggered by an alarm event.

Siren Warble Frequency (Non-Fire Alarm Output Functions)

Nibble: 1041
Default: 7
Selections: 0 (lowest tone/frequency) to 15 (highest tone/frequency)

Programmable Output 2 can be configured as a supervised horn/speaker output (see *Global Output Options*, page 70).

This parameter sets the warble frequency for the alarm output functions (1-8, 1-9, 1-10). The setting chosen here does not apply to other output functions.

Lowering the frequency effectively raises the perceived volume.

Alarm Output Arming Beep Volume

Nibble: 1042
Default: 7
Selections: 0 (no sound) to 15 (loudest)*

* A setting of 1 = "quiet"

Programmable Output 2 can be configured as a supervised horn/speaker output (see *Global Output Options*, see page 70).

This parameter sets the perceived volume for the Alarm Output Arming Beep only. No other siren sounds or output functions are affected by this parameter.

Global Output Configuration

Strobe Output Type Options

Nibble: 1043

Default: 15

Selections: 0-15 (See Table 50)

Strobe Output Type Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Bell Time Activates Strobe Output Type	X															
Alarm Output Type 1,8 Activates Strobe		X		X		X		X		X		X		X		X
Alarm Output Type 1,9 Activates Strobe			X	X			X	X			X	X			X	X
Alarm Output Type 1,10 Activates Strobe					X	X	X	X					X	X	X	X
Alarm Output Type 1,11 Activates Strobe									X	X	X	X	X	X	X	X

Table 50: Strobe Output Type Options

This parameter configures the Strobe Output Type (see *Outputs*, page 73). Choose any combination of these options to activate the strobe output type. Passcode entry resets the function.

If no strobe type output is selected (zero is selected for this option), the strobe output follows Bell Time (see page 71 for Bell Time information).

- **Bell Time Activates Strobe Output Type:** The Strobe Output Type 1,6 activates when an alarm event starts Bell Time. Passcode entry resets the function.
- **Alarm Output Type 1,8 Activates Strobe:** Any event that activates Alarm Output Type 1,8 will also activate the Strobe Output Type 1,6. Passcode entry resets the function.
- **Alarm Output Type 1,9 Activates Strobe:** Any event that activates Alarm Output Type 1,9 will also activate the Strobe Output Type 1,6. Passcode entry resets the function.
- **Alarm Output Type 1,10 Activates Strobe:** Any event that activates Alarm Output Type 1,10 will also activate the Strobe Output Type 1,6. Passcode entry resets the function.
- **Alarm Output Type 1,11 Activates Strobe:** Any event that activates Alarm Output Type 1,11 will also activate the Strobe Output Type 1,6. Passcode entry resets the function.

2.17 Outputs

The D6412 supports a total of 20 programmable outputs including four on-board (PO1 to PO4) and up to 16 off-board outputs. On-board Output 2 (PO2) can be configured as a supervised siren output (8 ohm, 10 watt). See the *D6412 Installation Guide* (P/N 45349) for instructions on wiring PO2 to a siren/speaker.

Defaults for the on-board outputs (PO1 to PO4) are as follows: PO1 = 1, 10 Alarm Output*; PO2 to PO20 = Disabled.

* **1, 10: Alarm for Controlled Points, 24-hour Points (Fire and Non-Fire).** Activated by alarm on Controlled point when All On, Part On, and Part 2 On, or by alarm on Fire and Non-fire 24 hour point, and by user/installer 'Bell Test'. Follows bell time for Steady and Pulse modes. Passcode resets. **Off-board outputs cannot provide output in Temporal Code 3 format (only on-board outputs). Off-board outputs configured for Temporal Code 3 will provide a steady output. Follows programming for 'Alarm' output types.**

Outputs 5 through 12 are on an off-board SDI device (D9529 OctoOutput or X7410i Module), SDI Address 150. Outputs 13 through 20 are on an off-board SDI device (D9529 OctoOutput or X7410i Module), SDI Address 151.

Table 51 outlines the output parameters and their respective Nibble assignments.

Output	Area	Function		Mode	Base	Multiplier		
		Digit 1	Digit 2			Digit 1	Digit 2	
Outputs 1-4: On-board (PO1-PO4)	1	Nibble 1044 (1)	Nibble 1045 (1)	Nibble 1046 (10)	Nibble 1047 (1)	Nibble 1048 (0)	Nibble 1049 (0)	Nibble 1050 (0)
	2	Nibble 1051 (1)	Nibble 1052 (0)	Nibble 1053 (0)	Nibble 1054 (1)	Nibble 1055 (0)	Nibble 1056 (0)	Nibble 1057 (0)
	3	Nibble 1058 (1)	Nibble 1059 (0)	Nibble 1060 (0)	Nibble 1061 (1)	Nibble 1062 (0)	Nibble 1063 (0)	Nibble 1064 (0)
	4	Nibble 1065 (1)	Nibble 1066 (0)	Nibble 1067 (0)	Nibble 1068 (1)	Nibble 1069 (0)	Nibble 1070 (0)	Nibble 1071 (0)
Outputs 5-12: Off-board SDI Device Address 150	5	Nibble 1072 (1)	Nibble 1073 (0)	Nibble 1074 (0)	Nibble 1075 (1)	Nibble 1076 (0)	Nibble 1077 (0)	Nibble 1078 (0)
	6	Nibble 1079 (1)	Nibble 1080 (0)	Nibble 1081 (0)	Nibble 1082 (1)	Nibble 1083 (0)	Nibble 1084 (0)	Nibble 1085 (0)
	7	Nibble 1086 (1)	Nibble 1087 (0)	Nibble 1088 (0)	Nibble 1089 (1)	Nibble 1090 (0)	Nibble 1091 (0)	Nibble 1092 (0)
	8	Nibble 1093 (1)	Nibble 1094 (0)	Nibble 1095 (0)	Nibble 1096 (1)	Nibble 1097 (0)	Nibble 1098 (0)	Nibble 1099 (0)
	9	Nibble 1100 (1)	Nibble 1101 (0)	Nibble 1102 (0)	Nibble 1103 (1)	Nibble 1104 (0)	Nibble 1105 (0)	Nibble 1106 (0)
	10	Nibble 1107 (1)	Nibble 1108 (0)	Nibble 1109 (0)	Nibble 1110 (1)	Nibble 1111 (0)	Nibble 1112 (0)	Nibble 1113 (0)
	11	Nibble 1114 (1)	Nibble 1115 (0)	Nibble 1116 (0)	Nibble 1117 (1)	Nibble 1118 (0)	Nibble 1119 (0)	Nibble 1120 (0)
	12	Nibble 1121 (1)	Nibble 1122 (0)	Nibble 1123 (0)	Nibble 1124 (1)	Nibble 1125 (0)	Nibble 1126 (0)	Nibble 1127 (0)
Outputs 13-20: Off-board SDI Device Address 151	13	Nibble 1128 (1)	Nibble 1129 (0)	Nibble 1130 (0)	Nibble 1131 (1)	Nibble 1132 (0)	Nibble 1133 (0)	Nibble 1134 (0)
	14	Nibble 1135 (1)	Nibble 1136 (0)	Nibble 1137 (0)	Nibble 1138 (1)	Nibble 1139 (0)	Nibble 1140 (0)	Nibble 1141 (0)
	15	Nibble 1142 (1)	Nibble 1143 (0)	Nibble 1144 (0)	Nibble 1145 (1)	Nibble 1146 (0)	Nibble 1147 (0)	Nibble 1148 (0)
	16	Nibble 1149 (1)	Nibble 1150 (0)	Nibble 1151 (0)	Nibble 1152 (1)	Nibble 1153 (0)	Nibble 1154 (0)	Nibble 1155 (0)
	17	Nibble 1156 (1)	Nibble 1157 (0)	Nibble 1158 (0)	Nibble 1159 (1)	Nibble 1160 (0)	Nibble 1161 (0)	Nibble 1162 (0)
	18	Nibble 1163 (1)	Nibble 1164 (0)	Nibble 1165 (0)	Nibble 1166 (1)	Nibble 1167 (0)	Nibble 1168 (0)	Nibble 1169 (0)
	19	Nibble 1170 (1)	Nibble 1171 (0)	Nibble 1172 (0)	Nibble 1173 (1)	Nibble 1174 (0)	Nibble 1175 (0)	Nibble 1176 (0)
	20	Nibble 1177 (1)	Nibble 1178 (0)	Nibble 1179 (0)	Nibble 1180 (1)	Nibble 1181 (0)	Nibble 1182 (0)	Nibble 1183 (0)

Table 51: Output Configuration Table

Outputs

Area, Output ##

Nibble: See Table 51
Default: See Table 51
Selections: 0-15 (See Table 52)

Area Output Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Disabled	X															
Area 1		X		X		X		X		X		X		X		X
Area 2			X	X			X	X			X	X			X	X
Area 3					X	X	X	X					X	X	X	X
Area 4									X	X	X	X	X	X	X	X

Table 52: Area Options

The Area assignment determines the scope of the output. Functions are only activated by command centers or points assigned to the same area. Outputs can be assigned to multiple areas.

Function, Output ##

Nibble: See Table 51
Default: See Table 51
Selections: See Table 53

This parameter assigns each output to a specific function. The function determines when the output activates. The Mode, Time and Multiplier parameters, in combination with this Function parameter, determine when the output deactivates.

All output functions can be reset using Command 54 except Alarm Outputs that follow Function Types 1, 8 to 1, 12 and 2,11 (see Table 53), and those functions resettable by Command 47.

Digit 1	Digit 2	Function Type	Description
0	0	Disabled	
0	1	Armed – All, Part, or Part 2	Output activates when the system is turned All On, Part On, or Part 2 On. For Steady or Pulse modes, the output remains activated until the system is turned off.
0	2	Armed – Part or Part 2	Output activates when the system is turned Part On or Part 2 On. For Steady or Pulse modes, the output remains activated until the system is turned off, or moved to another armed state.
0	3	Armed – All	Output activates when the system is turned All On. For Steady or Pulse modes, the output remains activated until the system is turned off, or moved to another armed state.
0	4	Auto Arm Pre-Arming Alert	Output activates at the start of the Auto Arm Pre-Alert. For Steady or Pulse modes, the output remains activated for the duration of the alert. See the <i>Auto Arm Pre Alert Time</i> parameter.
0	5	Exit Delay or Entry Delay.	Output activates at the start of Exit Delay or Entry Delay. For Steady or Pulse modes the output remains activated until entry or exit delay ends.
0	6	Exit Delay	Output activates at the start of Exit Delay. For Steady or Pulse modes the output remains activated until exit delay ends.
0	7	Exit Delay Finished (until disarmed)	Output activates at the end of Exit Delay. For Steady or Pulse modes the output remains activated until the system is disarmed.
0	8	Bell Test on Close	For systems programmed for closing reports, the output activates when the acknowledgement for the closing report is received. For systems not sending closing reports, the output activates at the end of Exit Delay. For Steady or Pulse modes the output remains activated until the system is disarmed.
0	9	Entry Delay	Output activates at the start of Entry Delay. For Steady or Pulse modes the output remains activated until entry delay ends.
0	10	Entry Delay + Watch	Output activates at the start of Entry Delay. For Steady or Pulse modes, the output remains activated until entry delay ends. The output also activates whenever a Watch point is faulted. The output does not activate if Watch Tone is turned off.

Table 53: Output Function Types

Digit 1	Digit 2	Function Type	Description
0	11	Exit Delay, Entry Delay, Watch	Output activates at the start of Exit Delay or Entry Delay. For Steady or Pulse modes, the output remains activated until entry or exit delay ends. The output also activates whenever a Watch point is faulted. The output does not activate if Watch Tone is turned off.
0	12	Phone Line Fail	Output activates when a Phone Line Fail condition is detected. For Steady or Pulse modes the output remains activated until the condition is cleared. <i>This output works independently of Nibble 0220 (p. 14), "Phone Line Fault Response Options."</i>
0	13	Ack Received (any report)	Output activates when the acknowledgement for any report is received. For Steady or Pulse modes Cmd 47 resets.
0	14	AC Fail	Output activates when a AC Fail condition is detected. For Steady or Pulse modes the output remains activated until the condition is cleared.
0	15	Low or Missing Battery	Output activates when a panel Low or Missing Battery condition occurs. For Steady or Pulse modes the output remains activated until the condition is cleared.
1	0	PO 2 (on-board) Siren Supervision Fail	Output activates when a Siren Supervision Fail condition is detected. For Steady or Pulse modes the output remains activated until the condition is cleared.
1	1	Sensor Trouble Monitor	Output activates when a Sensor Trouble Monitor condition is detected in conjunction with the selection made for the Sensor Monitor Time setting. For Steady or Pulse modes the output remains activated until the Sensor Monitor Trouble condition is cleared.
1	2	Duress, Cmd 47 (reset) resets.	Output activates whenever a Duress passcode is entered. For Steady or Pulse modes the output remains activated until user enters Cmd 47.
1	3	User Tamper, Cmd 47 (reset) resets.	Output activates on a User Tamper event. For Steady or Pulse modes the output remains activated until user enters Cmd 47.
1	4	Arming Beeps (for keyswitch/RF arming)	Disarm/All On/Part (1&2) Beeps for keyswitch/RF arming. 1=Off, 2=All, 3=Part. Mode and Time parameters do not apply. <i>This feature works in conjunction with Nibble 1039 (p. 70). The numbers preceding Off, All and Part indicate the number of times the output will beep, depending on the selected arming mode (keyfob or keyswitch).</i>
1	5	Bell Time – Starts on any Alarm Event. Code Stops. Activates on Bell Test.	Output activates on any alarm event. Entering passcode terminates Bell Time. For Steady and Pulse modes the output remains activated for the duration programmed in the Bell Time parameter. Entering passcode terminates Bell Time.
1	6	Strobe	See <i>Strobe Output Type Options</i> , page 72, to learn how Strobe starts. Code resets. Passcode entry resets the function.
1	7	Silent Alarm	Activated by alarm on non-fire points programmed for No Alarm Output. Follows bell time for Steady and Pulse modes. Passcode stops.
1	8	Alarm – All On, Part On, and Part 2 On, Non-fire 24 hour alarms	Activated by alarm on Controlled point when All On, Part On, and Part 2 On, or by alarm on Non-fire 24 hour point, and by user/installer 'Bell Test'. Follows bell time for Steady and Pulse modes. Passcode resets. <i>Follows programming for 'Alarm' output types.</i>
1	9	Alarm – Part and Part 2 Modes, Non-fire 24 hour alarms	Activated by alarm on Controlled point when Part On, and Part 2 On, or by alarm on Non-fire 24 hour point, and by user/installer 'Bell Test'. Follows bell time for Steady and Pulse modes. Passcode resets. <i>Follows programming 'Alarm' output types.</i>
1	10	Alarm – Controlled Points, 24-hr points (Fire and Non-Fire)	Activated by alarm on Controlled point when All On, Part On, and Part 2 On, or by alarm on Fire and Non-fire 24 hour point, and by user/installer 'Bell Test'. Follows bell time for Steady and Pulse modes. Passcode resets. <i>Off-board outputs cannot provide output in Temporal Code 3 format (only on-board outputs). Off-board outputs configured for Temporal Code 3 will provide a steady output. Follows programming for 'Alarm' output types.</i>
1	11	Fire Alarm	Activated by alarm on Fire point, and by user/installer 'Bell Test'. Follows bell time. Pulses in Temporal Code 3 format per NFPA and UL requirements. Mode and Time parameters do not apply. Passcode resets. <i>Off-board outputs cannot provide output in Temporal Code 3 format (only on-board outputs). Off-board outputs configured for Temporal Code 3 will provide a steady output. Follows programming for 'Alarm' output types.</i>
1	12	Fire Alarm, Latching	Activated by alarm on Fire point, and by user/installer 'Bell Test'. Does not pulse in Temporal Code 3 format. Mode and Time parameters do not apply. Cmd 47 resets. <i>Follows programming for 'Alarm' output types.</i>
1	13	Fire Verification	Inverted, resettable output used with Fire Verification points. Verification for Fire Verification point type and Cmd 47 activate output for approximately 15 seconds. Mode and Time parameters do not apply. See page 58 for "24-hour, Fire with Alarm Verification" point type description. Used for 4-wire smoke detectors.
1	14	System Trouble	Activates on any System Trouble. Resets when all system troubles are clear.

Table 53 (cont.): Output Function Types

D6412

Outputs

Digit 1	Digit 2	Function Type	Description
1	15	O Key (Trapezoid Key on RF Key Fob)	Activates when Trapezoid Key on RF Keyfob is pressed. Cmd 47 resets. Pressing O (trapezoid) key again also resets output.
2	0	P Key(Rising Sun Key on RF Fob)	Activates when Rising Sun Key on RF Keyfob is pressed. Cmd 47 resets. Pressing P (sun) key again also resets output.
2	1	'Panic' on RF Fob	Activates when Arm Key (locked icon) and Disarm Key (unlocked icon) on RF Keyfob are pressed at the same time. Cmd 47 resets.
2	2	'Panic' on RF Fob, Bell Time, Code resets	Activates when Arm Key (locked icon) and Disarm Key (unlocked icon) on RF Keyfob are pressed at the same time. Steady and Pulse modes follow bell time. Passcode resets.
2	3	A-Key	Activates when A-key is pressed twice. Cmd 47 resets.
2	4	B-Key	Activates when B-key is pressed twice. Cmd 47 resets.
2	5	C-Key	Activates when C-key is pressed twice. Cmd 47 resets.
2	6	3 Unsuccessful Dialing Attempts.	Activates after 3 unsuccessful dialing attempts. Resets with first successful call or Cmd 47.
2	7	Communication Fail Event. Successful communication clears.	Activates after Communication Fail Event. Resets with any successful communication or Cmd 47.
2	8	Panel Off Hook	Activates when the panel takes the phone line off hook for a dialing attempt. Resets when the panel finishes with the phone line and goes on hook.
2	9	Ring Detect	Activates when the panel detects a ring on the phone line. Resets when ringing stops.
2	10	Voice Request	For use with an optional Voice Verification Module (D169). The output activates for 2 seconds when the panel receives an acknowledgement of an alarm report from a point with the Voice Verification option enabled. Mode and Time parameters do not apply.
2	11	Follow Command Center Sounder.	Available for on board outputs only. Output follows command center sounder. Mode and Time parameters do not apply.
2	12	Watch	Activates per Watch Feature configuration (Cmd 61, 62, 63). Follows command center sounder per Watch Tone configuration. See Cmd 61, 62 and 63 starting on page 119.
2	13	Ready to Arm (No controlled points faulted)	Output is activated (on) when: (1) panel is disarmed & no controlled points are faulted (2) panel is armed & no controlled points are faulted (3) panel is armed & any controlled point is faulted. Output is deactivated (off) when panel is disarmed & any controlled point is faulted. Output is deactivated even if the point became faulted when panel was armed.
2	14	Exit Error	Activates if controlled point is faulted at the end of Exit Delay. Resets when the system is disarmed.
2	15	AC 60 Hz	Activates on 60 Hz. Resets on 50 Hz.
3	0	Ground Start	Activates for approximately 0.5 seconds at the start of any dialing attempt. Use to bring up dial tone in ground start phone systems. See <i>D6412 Installation Guide</i> for wiring instructions.
3	1	Follow Point Index 1	These 15 output functions activate for any fault on any point assigned to the specified Point Index.
		To	
3	15	Follow Index 15	
4	0	Cmd 54	Activated/deactivated by Cmd 54.
4	1	Alarm Point Index 1	These 15 output functions activate for alarms on any point assigned to the specified Point Index and the area(s) the output is assigned to. They reset when none of the points assigned to the specified index are in alarm.
		To	
4	15	Alarm Index 15	
5	0	Cmd 54	Activated/deactivated by Cmd 54.
5	1	Trouble Point Index 1	These 15 output functions activate for troubles on any point assigned to the specified Point Index. They reset when none of the points assigned to the specified index are in trouble.
		To	
5	15	Trouble Index 15	
6	0	Cmd 54	Activated/deactivated by Cmd 54.
6	1	Follow Passcode 1	These output functions activate when the specified passcode is entered. Passcode area assignments are ignored when these output functions are selected.
		To	
6	15	Follow Passcode 15	
7	0	Follow Passcode 16.	
		To	
7	15	Follow Passcode 31	
8	0	Follow Passcode 32	
8	1	Sked Only	This output type is only available for Outputs 1 to 15. Activated by Skeds. See <i>Skeds</i> for more information.
8	2	Cmd 54	Activated/deactivated by Cmd 54.

Table 53 (cont.): Output Function Types

Mode (Steady, Pulse, One Shot), Output ##
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Nibble: See Table 51

Default: See Table 51

Selections: 0-13 (See Table 54)

Mode	Mode Description
0	Output Disabled
1	Steady – Normally open. On-board outputs go low (sink voltage) when activated. Off-board outputs are energized (output pulls up) when activated. Time parameters do not apply. Resets as specified by output function.
2	Latch – Normally open. On-board outputs latch low (sink voltage) when activated. Off-board outputs latch energized (output pulls up) when activated. Time parameters do not apply. Reset on Cmd 54.
3	Toggle – Toggle output state. When the output is activated, the output toggles states.
4	Pulse – Normally open. On-board outputs pulse low (sink voltage) when activated. Off-board outputs pulse energized (output pulls up) when activated. The time parameters set the 'activated' duration of the pulse.
5	One Shot – Normally open. On-board outputs go low (sink voltage) when activated. Off-board outputs are energized (output pulls up) when activated. Time parameter sets the duration of the 'One Shot' (activation). Always runs the full duration. A new triggering event does not restart. Use Cmd 54 to manually reset.
6	One Shot with Re-Trigger – Normally open. On-board outputs go low (sink voltage) when activated. Off-board outputs are energized (output pulls up) when activated. Time parameter sets the duration of the 'One Shot' (activation). Always runs at least the full duration. A new triggering event restarts the one shot timer. Could be used with a motion sensor as trigger for lighting control.
7	One Shot with Reset – Normally open. On-board outputs go low (sink voltage) when activated. Off-board outputs are energized (output pulls up) when activated. Time parameter sets the duration of the 'One Shot' (activation). Termination of the triggering event terminates the 'One Shot' early.
8	Steady, Reversed Logic Normal – On-board outputs normally low (they sink voltage). Off-board outputs are normally energized (outputs pulled up). On-board outputs open when activated. Off-board outputs de-energize (output drops) when activated. Time parameters do not apply. Resets as specified by output function.
9	Latch, Reversed Logic Normal – On-board outputs normally low (they sink voltage). Off-board outputs are normally energized (outputs pulled up). On board outputs latch open when activated. Off-board outputs latch de-energized (output drops) when activated. Time parameters do not apply. Reset on Cmd 54.
10	Pulse, Reversed Logic Normal – On-board outputs normally low (they sink voltage). Off-board outputs are normally energized (outputs pulled up). On board outputs pulse open when activated. Off-board outputs pulse de-energized (output drops) when activated. The time parameters set the 'activated' duration of the pulse.
11	One Shot, Reverse Logic Normal – On-board outputs normally low (they sink voltage). Off-board outputs are normally energized (outputs pulled up). On board outputs go open when activated. Off-board outputs de-energize (output drops) when activated. Time parameter sets the duration of the 'One Shot' (activation). Always runs the full duration. A new triggering event does not restart. Use Cmd 54 to manually reset.
12	One Shot with Re-Trigger, Reverse Logic Normal – On-board outputs normally low (they sink voltage). Off-board outputs are normally energized (outputs pulled up). On board outputs go open when activated. Off-board outputs de-energize (output drops) when activated. Time parameter sets the duration of the 'One Shot' (activation). Always runs at least the full duration. A new triggering event restarts the one shot timer. Could be used with a motion sensor as trigger for lighting control.
13	One Shot with Reset, Reverse Logic Normal – On-board outputs normally low (they sink voltage). Off-board outputs are normally energized (outputs pulled up). On board outputs go open when activated. Off-board outputs de-energize (output drops) when activated. Time parameter sets the duration of the 'One Shot' (activation). Always runs at least the full duration. Termination of the triggering event terminates the 'One Shot' early.

Table 54: Output Mode Options

Outputs

Configuring Steady, Pulse and One Shot Mode

- **Steady and Toggle Modes:** These modes are not affected by the Time Base and Time Multiplier parameters below.
- **Pulse Modes:** The system calculates the On Time (activation) and the Off Time for outputs based on the values in the Time Base and Time Multiplier (see Table 55). The duration or On Time of an output is determined by selecting one of the four time base options from Table 55. The Off Time is calculated as a multiple of the On Time by choosing a decimal number between 00 and 99 as the Time Multiplier.

Time Base	On Time (On Time = Time Base)	Time Multiplier	Off Time (Off Time = Time Base x Time Multiplier)	Tolerance
0	0	N/A	Always Off	N/A
1 (200 ms)	200 ms	01-99	200 ms – 19.8 sec	±200 ms
2 (1 sec)	1 sec	01-99	1 – 99 sec	±1 sec
3 (1 min)	1 min	01-99	1 – 99 min	±1 min
4 (1 hr)	1 hr	01-99	1 – 99 hr	±1 hr

Table 55: Pulse Mode Table

- **One Shot Modes:** The duration of the On Time of a One Shot output is determined by the product of the value programmed in the Time Base parameter and the value in the Time Multiplier parameter.

Time Base	Time Multiplier	On Time (On Time = Time Base x Time Multiplier)	Tolerance
0	N/A	0	N/A
1 (200 ms)	01-99	200 ms – 19.8 sec	±200 ms
2 (1 sec)	01-99	1 sec – 99 sec	±1 sec
3 (1 min)	01-99	1 min – 99 min	±1 min
4 (1 hr)	01-99	1 hr – 99 hr	±1 hr

Table 56: One Shot Mode Table



Pulse Modes and One Shot Modes: If using a larger time base value, be aware that the output may not activate immediately as desired. It may wait until the “off time” has expired before activating.

Base, Output

Nibble: See Table 51
Default: See Table 51
Selections: 1 = 200 milliseconds
 2 = 1 second
 3 = 1 minute
 4 = 1 hour

See Table 55 and Table 56.

Multiplier

Nibble: See Table 51
Default: See Table 51
Selections: 0 – 9

See Table 55 and Table 56.

2.18 Skeds

Skeds are programmable events that occur at a specific (programmable) time of day and day of the week. These events can be Auto On, Auto Part On, Auto Part 2 On, Auto Off or Sked Output Function.

Users can extend Auto On, Auto Part On and Auto Part 2 On time by one hour using Cmd 51. When Cmd 51 is executed, the panel sends an Auto On Extended [21] report.

Users can also change Skeds using Cmd 51 (Change Skeds). To enable Cmd 51 by Authority Level, see *Authority Level Config Option 10*, page 39.

The following sections and parameters detail the programming of each of the eight (8) skeds. The parameters in the *Outputs* section, page 73, determine the characteristics of the output activation that occurs at the Sked time.

Sked	Type	Assign (Area or Output)	Time				Days Option 1	Days Option 2
			(H _ _ _)	(_ H _ _)	(_ _ M _)	(_ _ _ M)		
1	Nibble 1184 (0)	Nibble 1185 (0)	Nibble 1186 (0)	Nibble 1187 (0)	Nibble 1188 (0)	Nibble 1189 (0)	Nibble 1190 (0)	Nibble 1191 (0)
2	Nibble 1192 (0)	Nibble 1193 (0)	Nibble 1194 (0)	Nibble 1195 (0)	Nibble 1196 (0)	Nibble 1197 (0)	Nibble 1198 (0)	Nibble 1199 (0)
3	Nibble 1200 (0)	Nibble 1201 (0)	Nibble 1202 (0)	Nibble 1203 (0)	Nibble 1204 (0)	Nibble 1205 (0)	Nibble 1206 (0)	Nibble 1207 (0)
4	Nibble 1208 (0)	Nibble 1209 (0)	Nibble 1210 (0)	Nibble 1211 (0)	Nibble 1212 (0)	Nibble 1213 (0)	Nibble 1214 (0)	Nibble 1215 (0)
5	Nibble 1216 (0)	Nibble 1217 (0)	Nibble 1218 (0)	Nibble 1219 (0)	Nibble 1220 (0)	Nibble 1221 (0)	Nibble 1222 (0)	Nibble 1223 (0)
6	Nibble 1224 (0)	Nibble 1225 (0)	Nibble 1226 (0)	Nibble 1227 (0)	Nibble 1228 (0)	Nibble 1229 (0)	Nibble 1230 (0)	Nibble 1231 (0)
7	Nibble 1232 (0)	Nibble 1233 (0)	Nibble 1234 (0)	Nibble 1235 (0)	Nibble 1236 (0)	Nibble 1237 (0)	Nibble 1238 (0)	Nibble 1239 (0)
8	Nibble 1240 (0)	Nibble 1241 (0)	Nibble 1242 (0)	Nibble 1243 (0)	Nibble 1244 (0)	Nibble 1245 (0)	Nibble 1246 (0)	Nibble 1247 (0)

Table 57: Skeds Programming Parameters Nibble and Default Values Table

Type, Sked #

Nibble: See Table 57

Default: See Table 57

Selections: 0 = Disabled

1 = Auto All On

2 = Auto Part On

3 = Auto Part 2 On

4 = Auto Off

5 = Output Function On (Activate) (Outputs 1 to 15 only)

6 = Output Function Off (Outputs 1 to 15 only)

During the Auto On Pre-Alert (see *Auto On Pre-Alert*, page 19), the user can extend Auto On, Auto Part On and Auto Part 2 On by one hour using Cmd 51. When Cmd 51 is executed, the panel sends an Auto On Extended [21] report.

The Output Function On and Output Function Off sked types override any output function at Sked time (except for alarm output functions 1,8 to 1,12).

D6412

Skeds

Assign (Area or Output), Sked #
--

- Nibble:** See Table 57
- Default:** See Table 57
- Selections:**
- 0 = Disabled
 - 1 = Area 1 or Output 1
 - 2 = Area 2 or Output 2
 - 3 = Area 3 or Output 3
 - 4 = Area 4 or Output 4
 - 5 = Output 5
 - 6 = Output 6
 - 7 = Output 7
 - 8 = Output 8
 - 9 = Output 9
 - 10 = Output 10
 - 11 = Output 11
 - 12 = Output 12
 - 13 = Output 13
 - 14 = Output 14
 - 15 = Output 15

Entering a zero (0) in this parameter disables the Sked.

If the Sked Type is Auto On or Auto Off, this parameter assigns an Area to the Sked.

If the Sked Type is Output Function On or Output Function Off, this parameter assigns a programmable output. How the programmable output functions at Sked time is determined in the *Outputs* section, page 73.

The output assigned to the Sked in this parameter can be any output function. At Sked time, the Sked overrides that function.

The Sked function is only available for Outputs 1 to 15.

Time, Sked #

- Nibble:** See Table 57
- Default:** See Table 57 (0,0,0,0 = Sked Disabled)
- Selections:** 0 – 9

Enter the time of day that the Sked will occur. There are four digits in this entry, each one occupying a Nibble. Enter the time in 24-hour format (HHMM) where Midnight is 2400, noon is 1200 and 12:01 am is 0001. Entering 0000 disables the Sked.

Days Option 1, Sked #

Nibble: See Table 57
Default: See Table 57
Selections: 0-15 (See Table 58)

Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Option Selected	X															
Every Day		X		X		X		X		X		X		X		X
Monday			X			X		X		X		X		X		X
Tuesday					X		X					X		X		X
Wednesday								X		X		X		X		X

Table 58: Skeds Days Option 1 Options

Use this parameter to determine the day of the week the Sked occurs.

Entering zero (0) for this parameter may disable the Sked if no selection is made at Sked 1 Days, Option 2.

Days Option 2, Sked #

Nibble: See Table 57
Default: See Table 57
Selections: 0-15 (See Table 59)

Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Option Selected	X															
Thursday		X		X		X		X		X		X		X		X
Friday			X	X			X	X			X	X			X	X
Saturday					X	X	X	X					X	X	X	X
Sunday									X	X	X	X	X	X	X	X

Table 59: Skeds Days Option 2 Options

Use this parameter to determine the day of the week the Sked occurs.

Entering zero (0) for this parameter may disable the Sked if no selection is made at Sked 1 Days, Option 1.

D6412

SDI Bus Device Configuration

2.19 SDI Bus Device Configuration

The following parameters configure devices that connect to the SDI Bus on the D6412.

Reserved	
-----------------	--

Nibble: 1248

Premises RF Receiver Options	
-------------------------------------	--

Nibble: 1249

Default: 0

Selections: 0 = No RF Receiver Connected
 1 = Receiver 1 Connected, Set Receiver to Address 50
 2 = Receiver 2 Connected, Set Receiver to Address 51
 3 = Receivers 1 and 2 Connected, Set Receiver 1 to Address 50, Receiver 2 to Address 51
 4-8 = Reserved

All the status reports for the receiver include the address. For example, if the cover is removed, Event 127 (SDI Tamper) is generated and sends the following message in Modem IIIa²: "SDI Tamper Device 50."

This parameter tells the D6412 if a premises RF Receiver is connected.

Option	Enter This Value to Select Options									
	0	1	2	3	4	5	6	7	8	
No RF Receiver Connected	X									
Receiver 1 Connected, Set Receiver to Address 50		X		X						
Receiver 2 Connected, Set Receiver to Address 51			X	X						

Options 4-8 for Nibble 1249 are reserved for future use.

Table 60: Premises RF Receiver Options

- **Receiver 1 Connected, Set Receiver to Address 50:** RF Receiver 1 has been connected to the control panel. Set the receiver's address to 50 (jumper setting OFF). See page 132 for details on adding RF ID codes and RF transmitters and point states.
- **Receiver 2 Connected, Set Receiver to Address 51:** RF Receiver 2 has been connected to the control panel. Set the receiver's address to 51 (jumper setting ON). See page 132 for details on adding RF ID codes and RF transmitters and point states.

Premises RF Receiver, Supervision Interval	
---	--

Nibble: 1250

Default: 5

Selections: 0 = No Supervision
 4 = 12 Hours
 5 = 24 Hours

Premises RF transmitters (sensors) send a supervisory signal approximately once every hour. The premises RF receiver expects to hear this signal from every transmitter in the interval determined in this parameter. A "Missing" report is sent for each device that the RF receiver does not hear.

Supervision Interval for fire transmitters is fixed at 4 hours.



SDI Bus Device Configuration

RF Jam Detect Level

Nibble: 1251
 Default: 12
 Selections: 0-15

This parameter configures the RF receivers for jam detection.



Radionics recommends that you leave the RF Jam Detect Level setting at the default unless advised by Radionics Technical Support.

Reserved

Nibble: 1252

D9533 RS-232 Module Output Configuration

Nibble: 1253
 Default: 0
 Selections: 0 = Disabled (No RS232 Module Connected)
 1 = RS232 Output in Log Format for Printer
 2 = RS232 Output in GSP Format

Set the D9533 to Address 250.

- **RS-232 Output in Log Format for Printer:** output is formatted ASCII text similar to the text that appears in the text command center displays. Each log event is outputted in real time. Line breaks are included making this option suitable for connecting a serial printer to the module.



If you connect a printer to the D9533 and get unexpected results, check the module output configuration (Nibble 1253), baud rate configuration (Nibble 1254) and parity/flow control/stop bit configuration (Nibble 1255) for proper settings.

- **RS-232 Output is GSP Format:** output is formatted in Gateway Serial Protocol. GSP protocol allows you to integrate the D6412 with future GSP-compatible devices.

D9533 RS-232 Module Configuration-Baud Rate

Nibble: 1254
 Default: 2
 Selections: 0 = 300
 1 = 1200
 2 = 2400
 3 = 4800
 4 = 9600
 5 = 14400

This parameter tells the panel what baud rates the D9533 supports.



If you connect a printer to the D9533 and get unexpected results, check the module output configuration (Nibble 1253), baud rate configuration (Nibble 1254) and parity/flow control/stop bit configuration (Nibble 1255) for proper settings.

D6412

SDI Bus Device Configuration

D9533 Module Configuration-Parity, Flow Control, Stop Bit

Nibble: 1255

Default: 0

Selections: 0-7 (See Table 61)

Selection	Parity			Flow Control		Stop Bits	
	None	Odd	Even	Software	Hardware	1	2
0	X			X		X	
1	X				X	X	
2	X			X			X
3	X				X		X
4		X		X		X	
5		X			X	X	
6			X	X		X	
7			X		X	X	

Table 61: D9533 RS-232 Parity-Flow Control-Stop Bit Options

D624 Telephone Command Module, Access Options

Nibble: 1256

Default: 0

Selections: 0-15 (See Table 62)

Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Disabled, No D624 Connected	X															
Access Granted to Users With Authority Level 1		X		X		X		X		X		X		X		X
Access Granted to Users With Authority Level 2			X	X			X	X			X	X			X	X
Access Granted to Users With Authority Level 3					X	X	X	X					X	X	X	X
Access Granted to Users With Authority Level 4									X	X	X	X	X	X	X	X

Table 62: D624 Telephone Command Module Access Options

Set this parameter to zero (0) if there are no D624 modules connected to the panel, or to disable any D624 modules that are connected to the panel.

Selecting any of the other options allows system control for users assigned to the chosen authority level.

Reserved

Nibble: 1257-1265

2.20 System Text

Nibbles are shown for each text parameter. When programming from the command center, selecting any nibble in the parameter puts you in special text programming mode that allows you to edit text blocks of 16 characters (see *Appendix E: Programming from a Text Command Center*).

Call for Service Text

Nibble: 1266-1297
Default: Blank
Selections: See Appendix E

This parameter provides 16 characters of programmable text to be displayed in the second line of the display whenever the first line is **Call for Service**. The following are possible entries for the second line of text:

- Central Station phone number
- Preferred phone number called for service
- "Press 0 to View", which will show system trouble details

[A] Key Text

Nibble: 1298-1329
Default: A Key Text
Selections: See Appendix E

[B] Key Text

Nibble: 1330-1361
Default: B Key Text
Selections: See Appendix E

[C] Key Text

Nibble: 1362-1393
Default: C Key Text
Selections: See Appendix E

D6412

Area Text

2.21 Area Text

Area 1 Name

Nibble: 1394-1425
Default: Area 1 Name Text
Selections: See Appendix E

This parameter provides 16 characters of programmable text for Area 1. See the *D6412 Program Record Sheet* (P/N 45350).

Area 1 Idle Text

Nibble: 1426-1457
Default: Not ready
Selections: See Appendix E

This parameter provides 16 characters of programmable text for Area 1 to be displayed when the system is idle (no alarms, no troubles, system disarmed). See the *D6412 Program Record Sheet* (P/N 45350).

If "Don't Show Point Status on Command Centers" is not selected (see *Command Center # Options*, page 46), the text command center displays "OK for All On" or "OK for Part On" across the second line. This indicates that all points are normal and the system is ready to arm All On or Part On. If a point (controlled or 24-hour non-fire) is faulted (either open or shorted), the Area Idle Text for this point's assigned area replaces the "OK for All On/Part On" message.

If "Don't Show Point Status on Command Centers" is selected, the default Area Idle Text displays as "Not Ready." If no points are faulted, the Area Idle Text must be changed. See "Programming Text Nibbles", page 131, for text entry instructions.

If a controlled point not configured for Part On arming is faulted (either open or shorted), "OK for Part On" replaces "OK for All On" on the text command center's display. The system may be armed Part On, but cannot be armed All On until the faulted point is restored. See *Options 1, Point Index ##*, page 61, for point index configuration details.



Area 2 Name

Nibble: 1458-1489
Default: Area 2 Name Text
Selections: See Appendix E

Area 2 Idle Text

Nibble: 1490-1521
Default: Not ready
Selections: See Appendix E

Area 3 Name

Nibble: 1522-1553
Default: Area 3 Name Text
Selections: See Appendix E

Area 3 Idle Text

Nibble: 1554-1585
Default: Not ready
Selections: See Appendix E

Area 4 Name

Nibble: 1586-1617
Default: Area 4 Name Text
Selections: See Appendix E

Area 4 Idle Text

Nibble: 1618-1649
Default: Not ready
Selections: See Appendix E

2.22 Location Text

Location	Point Text		Location	Point Text	
	Nibbles	Default		Nibbles	Default
1	1650	Location 1 Text	21	2290	Location 21 Text
2	1682	Location 2 Text	22	2322	Location 22 Text
3	1714	Location 3 Text	23	2354	Location 23 Text
4	1746	Location 4 Text	24	2386	Location 24 Text
5	1778	Location 5 Text	25	2418	Location 25 Text
6	1810	Location 6 Text	26	2450	Location 26 Text
7	1842	Location 7 Text	27	2482	Location 27 Text
8	1874	Location 8 Text	28	2514	Location 28 Text
9	1906	Location 9 Text	29	2546	Location 29 Text
10	1938	Location 10 Text	30	2578	Location 30 Text
11	1970	Location 11 Text	31	2610	Location 31 Text
12	2002	Location 12 Text	32	2642	Location 32 Text
13	2034	Location 13 Text	33	2674	Location 33 Text
14	2066	Location 14 Text	34	2706	Location 34 Text
15	2098	Location 15 Text	35	2738	Location 35 Text
16	2130	Location 16 Text	36	2770	Location 36 Text
17	2162	Location 17 Text	37	2802	Location 37 Text
18	2194	Location 18 Text	38	2834	Location 38 Text
19	2226	Location 19 Text	39	2866	Location 39 Text
20	2258	Location 20 Text	40	2898	Location 40 Text

Table 63: Location Text Programming Nibbles and Default Values

Location ## Point Text

Nibble: See Table 63

Default: See Table 63

Selections: See Appendix E

This parameter provides 16 characters of programmable text for each Location.

D6412

RF Keypads

2.23 RF Keypads

The D6412 supports up to four RF keypads. Each keypad has two programming parameters. The RF keypads report low battery, tamper, etc. by point number (255, 254, 253, 252). **The compatible RF keypads have not been investigated by UL.**

RF Keypad	Options (Default)	Area (Default)	Receiver 1 SDI Address	Receiver 2 SDI Address
1	Nibble 2930 (0)	Nibble 2931 (0)	52	60
2	Nibble 2932 (0)	Nibble 2933 (0)	53	61
3	Nibble 2934 (0)	Nibble 2935 (0)	54	62
4	Nibble 2936 (0)	Nibble 2937 (0)	55	63

Table 64: RF Keypad Programming Nibbles and Default Values

RF Keypad # Options

Nibble: See Table 64
 Default: 0
 Selections: See Table 65

RF Keypad Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Option Selected	X															
Reserved																
Belongs to Receiver 2			X				X									
Supervised					X		X									
Reserved																

Table 65: RF Keypad Options

- **Belongs to Receiver 2:** RF Receiver 2 performs ID and monitoring functions for the command center. If this option is not selected, the command center belongs to Receiver 1.
- **Supervised:** The receiver always supervises the command center and the panel ignores the supervision based on the installer's configuration of this option.

RF Keypad # Area

Nibble: See Table 64
 Default: See Table 64
 Selections: 0 = Disabled

- 1 = Assign RF Keypad 1 to Area 1
- 2 = Assign RF Keypad 1 to Area 2
- 3 = Assign RF Keypad 1 to Area 3
- 4 = Assign RF Keypad 1 to Area 4

To enable a RF keypad it must be assigned to an Area.

To disable a RF keypad, enter a 0 at this parameter.

2.24 RF Keyfobs

RF Keyfobs (two- and four-button keychain keypads) are managed internally by the D6412. Keyfobs are assigned to passcodes (users) by entering IDs. No other programming parameters are required. Keyfobs follow the authority level and area assignment for the passcode they are assigned to. They report low battery conditions using the point number. The user's ID number, not the point number, is used for open/close reports. **The compatible RF keyfobs have not been investigated by UL.**

Each RF Receiver can handle 24 Keyfobs. For 32 Keyfobs, two RF Receivers are required. Nibble 2938 must be set to a value from 1 to 14.

To add an RF Keyfob into the system, see *Adding RF IDs* on page 132.

Keyfob Receiver Assignment Options

Nibble: 2938
 Default: 0
 Selections: See Table 66

Keyfob Receiver Assignment Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Option Selected	X															
Assign Keyfobs 1 to 8 to Receiver 2		X		X		X		X		X		X		X		
Assign Keyfobs 9 to 16 to Receiver 2			X	X			X	X			X	X			X	
Assign Keyfobs 17 to 24 to Receiver 2					X	X	X	X					X	X	X	
Assign Keyfobs 25 to 32 to Receiver 2									X	X	X	X	X	X	X	X

Table 66: Keyfob Receiver Assignment Options

This parameter assigns keyfobs in groups of eight to Receiver 2. Keyfobs not assigned to Receiver 2 are automatically assigned to Receiver 1. Selecting the default option (zero) assigns all keyfobs to Receiver 1.

Keyfob Options

Nibble: 2939
 Default: 0
 Selections: See Table 67

Keyfob Option	Enter This Value to Select Options															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No Option Selected	X															
Panic Enabled		X		X		X		X		X		X		X		X
Alarm Output on Panic			X	X			X	X			X	X			X	X
Assign O (trapezoid) Key to Part On					X	X	X	X					X	X	X	X
Assign P (sun) Key to Part 2 On									X	X	X	X	X	X	X	X

Table 67: Keyfob Options

This parameter configures all keyfobs for all areas and all passcodes.

- Panic Enabled:** pressing the Lock and Unlock keys on the keyfob simultaneously transmits a unique panic signal to the RF receiver. This option configures the system's response to the RF panic signal. If the keyfob Panic option is enabled, the system sends a Duress report with the User ID in the Modem IIIa² format. Duress reports from keyfobs follow ABC/Duress report routing.
- Alarm Output on Panic:** This option functions the same as the Panic Enabled option, except that Alarm Output on Panic also activates the alarm output.
- Assign O (trapezoid) Key to Part On:** programs the keyfob to turn the system Part On when the O key is pressed. If you select this option, you cannot use the O (trapezoid) key to activate Output 1, 15.
- Assign P (sun) Key to Part 2 On:** programs the keyfob to turn the system Part 2 On when the P key is pressed. The P (sun) key on the RF keypads is also configured by this option. If you select this option, you cannot use the P (sun) key to activate Output 2,0.

D6412

Return to Default

2.25 Return to Default

Reserved

Nibble: 2940

Reserved

Nibble: 2941

Reserved

Nibble: 2942

Reserved

Nibble: 2943

Return to Defaults

Nibble: 2944

Default: 0

Selections: 0 = Maintain User-Specified Settings
1 = Return All Parameters to Factory Defaults

Use this parameter to restore all of the manufacturer's default settings for all parameters (including this one) by entering 1.

Reserved

Nibble: 2945

Reserved

Nibble: 2946

3.0 Glossary

24-Hour Point	Points that are always on even when the system is turned off. Two types: Fire Points and Non-Fire 24-Hour Points.
Account Number	The account number is the number the D6412 transmits to the receiver. It is not the passcode. The account number is not sufficient identification to abort an alarm.
Area	An installer specified collection of points that can be armed and disarmed independently. An area can report with it's own account number. Opening, closing, alarm, trouble, and restoral reports are all associated with an area. You can organize the D6412's points and users into up to four independent areas, in essence creating four independent systems with a single control/communicator.
Arming States	
All On	All controlled points are armed. All On with No Delay (Instant) is an option. No exit or entry delay is provided with the No Delay option.
Part On	An installer-defined subset of the controlled points is armed. Part with No Delay (Instant) is an option. No exit or entry delay is provided.
Part 2 On	A user-defined subset of the controlled points is armed. Part 2 with No Delay (Instant) is an option. No exit or entry delay is provided.
Off	The controlled points are not armed.
Authority Level	A programmable feature that determines what a user can do in a given area.
Burglary Alarm Tone	A constant warble tone.
Bypass	To selectively remove points temporarily from the system.
Central Station	A facility where trained personnel monitor a security system 24 hours a day. The security system may be programmed to contact the central station during alarm conditions, enabling central station personnel to dispatch the proper authorities.
Checksum	A method of checking accuracy of transmitted information. A number representing the total number of bits of information transmitted is included with the transmission. The microprocessor counts the bits of information received and compares its sum to the transmitted checksum number. If the numbers do not match, the transmission is in error.
Command Center	The keypad from which the end-user initiates commands (functions).
Contact ID	A communication format that utilizes standard DTMF tones for transmission of information.
Control/Communicator	A control/communicator combines the functionality of an alarm control panel and the functionality of a digital dialer in a single device. In the past the control panel and communication functions were provided on separate products. In the D6412 literature, including this document, control/communicator, control panel, control, and panel are used interchangeably.
Controlled Point	A point that responds to alarm conditions depending upon whether the system is turned on or off.
Cross Point	Two point types that are configured to initiate an alarm when both point types have been faulted. Fire points cannot be set for Cross Point configuration.
DTMF Dialing	Dual Tone Multi-Frequency. A standard signaling method for dialing and data transmission using a combination of two sine waves at different frequencies. Also commonly referred to as Touch-Tone [®] signaling.
Duress Passcode	A passcode that arms and disarms a system just like a personal passcode does, however it also sends an alarm signal to the central station without sounding an alarm on the premises.

Glossary

Entry Delay	A programmed delay of the system alarm responses that allow a person to enter the building through the entry door to turn the system off. An alarm response will begin if the building is not exited before the entry delay expires.
Error Tone	The same warble tone as the Trouble Tone, but not repeated.
Faulted Point	A point that is not normal (e.g. – an open door or window).
Fire Alarm Tone	A warble tone that is on for one second, then briefly off (repeatedly).
Follower Point	A point programmed to initiate an instant alarm unless a delay point is faulted first. When a delay point is faulted first, the follower point assumes the entry delay time of the delay point.
Force Arming	A method of overriding the safety feature that prevents arming with a faulted circuit on a control/communicator.
Global	Something that affects the entire system (e.g. – global point configuration refers to the programmable features that affect all points).
Groups	The D6412 program parameters described in this manual are organized into groups. Most groups primarily contain parameters that are related in some way. For example, the Authority Levels Group contains parameters that configure the D6412's four Authority Levels.
Handshake	A signal sent by one end of the communications channel to the other indicating reception of signal.
Hold	An instruction to press and hold a key to perform a function.
Independent Point Control	A device that allows a single point or zone on a control/communicator to be armed or disarmed independently from the rest of the system.
Instant Alarm	A point type that initiates an alarm immediately when faulted. This point type does not follow any Entry/Exit delay time.
Invisible Point	A point that does not display at any command center during alarm or trouble conditions.
Keyfob	A small, hand-held wireless device usually designed to fit on a key chain that consists of buttons that allow the user to perform various functions, depending on the keyfob, such as arming/disarming the system, operating outputs or sending reports.
Keyswitch	
Momentary	To operate a momentary keyswitch, insert the key, turn it and then release it. The key returns to its starting position automatically. The key cannot be removed unless it is in the starting position.
Maintained	A maintained keyswitch typically has two positions marked "Armed" and "Disarmed." To operate, insert the key, turn the key to the desired position and remove the key.
Latching	The locking in of a circuit by means of a holding contact.
Location	On the D6412 Control/Communicator, a "location" represents the following parameter assignments: Area, Point Number and Device. A location tells the D6412 in which area a device is assigned and by which point number it reports.
Modem IIIa²	Modem IIIa ² is a Radionics reporting format (protocol) the D6412 uses to communicate to central station receivers. Even though you can program the D6412 to report in other formats only Modem IIIa ² reports are referenced in this document. If you choose an alternate reporting format use Appendix A in the D6412 Program Entry Guide to determine what report is substituted for the Modem IIIa ² report.
Nibble	Once the installer selects a value for a parameter, the panel stores the selection in E ² memory 'Nibbles'. Each parameter uses one or more Nibbles. When programming from the Command Center, the installer enters their selection directly into the memory Nibbles. When programming from the remote programmer, the installer need only make one entry per parameter.
No Delay	Turning the system on without Entry or Exit delay.

Off Display	The display that appears when the system is turned off and no keys are pressed (normal display).
Options	'Options' are a unique type of parameter that allow the installer to configure up to four (4) features by entering a value in a single Nibble.
PSTN	Public Switched Telephone Network. An assembly of communications facilities and central office equipment operated jointly by authorized common carriers that provides the general public with the ability to establish communications channels via discrete dialing codes.
Parity	A method of checking the accuracy of transmitted data by adding an extra bit to the number when necessary to make the number odd or even.
Parameter	Each program parameter sets a specific value or chooses an option.
Passcode	A unique identification number issued at the time of installation of each system. This passcode is required to operate the system (arm/disarm, test system, initiate commands, etc.) The passcode is not the same as the account number.
Points	The D6412 reports changing conditions on the sensor loops it monitors as 'point' events. For example when the condition on on-board sensor loop 1, changes from normal (supervised, end of line resistor in place) to 'shorted' the panel can be programmed to create an alarm event for 'point' 1. That alarm event appears in command center displays as 'Alarm, Pt 1'. If programmed for reporting, the panel would send an 'Alarm, Pt 1' report to the central station receiver in the Modem IIIa ² format. Other reporting formats typically use 'Zones' (Zn) in their reports in place of point.
Point Index	Used to construct "personality types" for points used in the D6412 system. Each unique point index number determines responses to specific conditions occurring on the protective points.
Point Type	Describes what the point does (for example – fire point, burglary point, 24-hour point, etc.).
Point Scan Time	The amount of time that passes while a point is electrically off-normal. This duration determines the length of a pulse.
Press/Push	These are used interchangeably instructing you to push down and then release a key.
Programmable Outputs	The D6412 provides up to 20 programmable outputs. These outputs are activated by installer selectable panel events. Event options include alarms, troubles, and scheduled events (Skeds). The D6412's on-board points provide power or dry contact switching upon activation. When programmed to activate on alarm events outputs are sometimes described as 'bell'. In some Modem IIIa ² reports outputs are described as 'relay'.
Pulse Count	A feature of an intrusion detection system in which an alarm is triggered only after there has been a series of detections in a short period of time. A pulse count is used in difficult environments where false alarms are a problem.
Pulse Dialing	A method of selecting the called number by pulsing the phone line.
RAM IV	RAM (R emote A ccount M anager) IV is a Windows [®] -based account management and panel programming utility designed to remotely set up and program specific control panels.
Remote Programming	System programming by means of the system user's telephone line.
Restoral Report	A signal transmitted upon the removal of a trouble or alarm condition from an alarm circuit.
Scope	1) A concept that limits the information presented to a given command center or printer. The boundaries are area-wide, account-wide or panel-wide. 2) A selected beginning and end points of a process – from an initial activity to a final activity – for the purpose of analysis.
SDI	S erial D evice I nterface.
SKED	A scheduling parameter that allows a selected event to happen at a specific time.

Glossary

Swinger Bypass	A programmable feature that determines the number of alarms or troubles the point can transmit in one hour. If the number is exceeded, the point is bypassed for the remainder of the arming period.
Trouble	A service condition that needs to be corrected, such as a broken wire.
Trouble Tone	A warble tone that is on briefly, followed by a pause, followed by the warble tone (repeatedly).
Visible Point	A point that displays at command centers during alarm or trouble conditions.
Warble Tone	A tone that is on for one second, then briefly off.
Wink	A slow LED flash rate used to indicate a specified status or condition.

Appendix A: Routing Dialing Tables

Introduction

This appendix contains tables showing the dialing attempts for each Destination/Phone Number configuration.



There is not a “Phone 2 Only” option. If you wish to program only one phone number for a Routing Destination, it must be Phone 1.

If Phone 1 is programmed to cancel Call Waiting, you should program Phone 2 without the Call Waiting cancel sequence. If the subscriber cancels Call Waiting without notifying the installing company, the panel will still be able to send reports using Phone 2. Dialing a Call Waiting sequence on a non-Call Waiting line prevents the system from successfully dialing the central station.

Comm Fail Event

A Communication Fail (Comm Fail) event is:

1. Clear (dump) the initiating report and any pending reports for the destination where the Comm Fail event occurred.
2. Create a Comm Fail [69] or AltComm Comm Fail [70] report which includes the Destination Number (1 or 2). Modem IIIa² reports report the destination number as a Route Group (RG). The Alternate Comm Fail report is used when an alternate communications path is used (SAFECOM for example).
3. The Comm Fail, Comm Restoral [71], Alternate Comm Restore [72] reports follow the System Status Reports routing.
4. If the Comm Fail occurred on destination 1 and System Status Reports routing is set to Destination 2 or set to Destination 2 on Destination 1 fail, then send Comm Fail report.
5. If the Comm Fail occurred on destination 1 and System Status Reports routing is set to Destination 1 then send a Comm Restore report with the next report for destination 1.
6. If the Comm Fail occurred on destination 2 and System Status Reports routing is set to Destination 1, then send Comm Fail report.
7. If the Comm Fail occurred on destination 2 and System Status Reports routing is set to Destination 2 then send a Comm Restore report with the next report for destination 2.
8. If a Comm Fail report is sent successfully to the ‘other’ destination, a Comm Restore event should be sent when there is a successful communication on the failed destination.

In the following tables an **X** shows the point where dialing attempts for a *Routing Destination* end (the last attempt) and the Comm Fail event begins.

Routing Option – Destination 1 Only

Phone 1 Programmed

Attempt	Destination 1		Destination 2	
	Phone 1	Phone 2	Phone 1	Phone 2
1	X			
2	X			
3	X			
4	X			
5	X			
6				
7				
8				
9				
10				

Phone 1 and Phone 2 Programmed

Attempt	Destination 1		Destination 2	
	Phone 1	Phone 2	Phone 1	Phone 2
1	X			
2		X		
3	X			
4		X		
5	X			
6				
7				
8				
9				
10				

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Appendix A

Routing Option – Destination 2 Only

Phone 1 Programmed

Attempt	Destination 1		Destination 2	
	Phone 1	Phone 2	Phone 1	Phone 2
1			X	
2			X	
3			X	
4			X	
5			X	
6				
7				
8				
9				
10				

Phone 1 and Phone 2 Programmed

Attempt	Destination 1		Destination 2	
	Phone 1	Phone 2	Phone 1	Phone 2
1			X	
2				X
3			X	
4				X
5			X	
6				
7				
8				
9				
10				

Routing Option – Destination 1 and Destination 2

Phone 1 Programmed for Both Destinations

Attempt	Destination 1		Destination 2	
	Phone 1	Phone 2	Phone 1	Phone 2
1	X			
2	X			
3	X			
4	X			
5	X			
1			X	
2			X	
3			X	
4			X	
5			X	

Phone 1 and Phone 2 Programmed for Both Destinations

Attempt	Destination 1		Destination 2	
	Phone 1	Phone 2	Phone 1	Phone 2
1	X			
2		X		
3	X			
4		X		
5	X			
1			X	
2				X
3			X	
4				X
5			X	

Phone 1 and Phone 2 Programmed for Destination 1, Phone 1 Programmed for Destination 2

Attempt	Destination 1		Destination 2	
	Phone 1	Phone 2	Phone 1	Phone 2
1	X			
2		X		
3	X			
4		X		
5	X			
1			X	
2			X	
3			X	
4			X	
5			X	

Phone 1 Programmed for Destination 1, Phone 1 and Phone 2 Programmed for Destination 2

Attempt	Destination 1		Destination 2	
	Phone 1	Phone 2	Phone 1	Phone 2
1	X			
2	X			
3	X			
4	X			
5	X			
1			X	
2				X
3			X	
4				X
5			X	

Appendix B: Panel Event and Reporting Formats

Introduction

The following table includes each D6412 panel event, the description for each event as it appears in the panel log, the reports sent for each event, the point types linked to the event and the RAM IV Event Alert Group number.

The last column, Status Reports, indicates System Status events. An R indicates that reports for the event follow the System Status routing. An S indicates that the event following the System Status Swinger Count. System reports do not include an Area number; they use the account number for Area 1.

Following the table is a description of the Basic Pager reporting format. The event numbers shown in the Panel Events and Reporting Formats table are the same numbers that will show up on a pager for each corresponding report.

Panel Event and Reporting Formats Table

Event #	Event as shown in Panel Log	Modem IIIa ² Report	Contact ID Report	Event Description	Point Types Linked to Event	RAM IV Event Group	Status Reports	
01	AC Fail	AC Fail	301 AC Loss	AC Power to panel interrupted.		12	R	S
02	AC Restore	AC Restoral	301 AC Loss	AC Power to panel restored.		12	R	S
03	Alarm, Tamper	Alarm	137 Tamper	Alarm, Tamper Point Type.	4-Tamper	3		
04	Alarm, Emergency	Alarm	101 Personal Emergency	Alarm, Emergency Point Type or ABC key programmed for emergency response.	5- Emergency Emergency Key	3		
05	Alarm, Panic	Alarm	120 Panic	Alarm, Panic-Visible Point Type.	6- Visible Panic Emergency Key	3		
06	Alarm, Invisible	Alarm	120 Panic	Alarm, Panic- Invisible Point Type or ABC key programmed for panic response.	7-Invisible Panic Emergency Key	3		
07	Alarm, 24-hr Burg	Alarm	133 24 Hr Safe	Alarm, Burglary Point Type or Independent Point Control Point Type.	8- Burglary 9- Independent Point Control	3		
08	Alarm, Cntrl, Dly	Alarm	134 Entry/Exit	Alarm, Delay 1 or Delay 2 Point Type.	11- Delay 1 12- Delay 2	3		
09	Alarm, Cntrl	Alarm	130 Burglary	Alarm, Keyswitch or Follower or Instant Point Types.	10- Keyswitch 13- Follower 14- Instant	3		
10	Cross, Tamper	Alarm Cross Point	137 Tamper	Alarm, Tamper Point Type with Cross Point Option selected.	4-Tamper	3		
11	Cross, Emergency	Alarm Cross Point	101 Personal Emergency	Alarm, Emergency Point Type with Cross Point Option selected.	5- Emergency	3		
12	Cross, Panic	Alarm Cross Point	120 Panic	Alarm, Panic-Visible Point Type with Cross Point Option selected.	6- Visible Panic	3		
13	Cross, Invisible	Alarm Cross Point	120 Panic	Alarm, Panic- Invisible Point Type with Cross Point Option selected.	7-Invisible Panic	3		
14	Cross, 24hr Burg	Alarm Cross Point	133 24 Hr Safe	Alarm, Burglary Point Type with Cross Point Option selected	8- Burglary	3		
15	Cross, Cntrl, Dly	Alarm Cross Point	134 Entry/Exit	Alarm, Delay 1 or Delay 2 Point Type with Cross Point Option selected.	11- Delay 1 12- Delay 2	3		
16	Cross, Cntrl	Alarm Cross Point	130 Burglary	Alarm, Keyswitch or Follower or Instant Point Types with Cross Point Option selected.	13- Follower 14- Instant	3		

Table 68: Panel Events and Reporting Formats

Appendix B

Event #	Event as shown in Panel Log	Modem IIIa ² Report	Contact ID Report	Event Description	Point Types Linked to Event	RAM IV Event Group	Status Reports	
17	Cross,Unverified	Unverified Event Burglary	378 Cross-zone Trouble ¹	A fault on one non-fire point type with the Cross Point Option selected. This is not an alarm event.	any with Cross Point Option	3		
18	Alarm Exit Error	Alarm Exit Error	374 Exit Error (zone)	Point faulted at the end of exit delay.	11- Delay 1 12- Delay 2	3		
19	Alrm Recent Clse	Alarm, Recent Closing	134 Entry/Exit ²	Alarm event within 2 minutes of closing.	11- Delay 1 12- Delay 2	3		
20	Alrm Recent Clse	Alarm, Recent Closing	130 Burglary ²	Alarm event within 2 minutes of closing.	10- Keyswitch 13- Follower 14- Instant	3		
21	Auto On Extended	Extend Close Time by Area	464 Auto-arm Time Extended	Auto On sked delayed one hour by user. Report follows Open/Close routing.		10		
22	Battery Low	Battery Low	302 Low System Battery	Panel battery is low.		12	R	S
23	Battery Missing	Battery Missing	311 Battery Missing/Dead	Panel battery is missing. Very low, shorted, or open batteries are reported as missing.		12	R	S
24	Rstrl Batt Low	Battery Restoral	302 Low System Battery	Battery restoral from low battery.		12	R	S
25	Rstrl Bat Missng	Battery Restoral	311 Battery Missing/Dead	Battery Restoral from missiging battery		12	R	S
26	Bypass,Fire,User	Command Bypass	571 Fire bypass	Selective bypass by user, fire point types	1- Fire 2- Fire with Alarm Verification	15		
27	Bypass,Fire, RAM IV	Remote Bypass (no call back) Remote Bypass (call back)	571 Fire bypass	Selective bypass by RAM IV, fire point types.	1- Fire 2- Fire with Alarm Verification			
28	Bypass,Ctrl,User	Command Bypass	570 Zone/Sensor bypass	Selective bypass by user, controlled point types.	10 to 14- Controlled Point Types	15		
29	Bypass,Ctrl, RAM IV	Remote Bypass (no call back) Remote Bypass (call back)	570 Zone/Sensor bypass	Selective bypass by RAM IV, controlled point types.	10 to 14- Controlled Point Types			
30	Bypass,24hr,User	Command Bypass	572 24-Hr Zone Bypass	Selective bypass by user, 24-hour non-fire point types.	2 to 9- 24-hour, Non-Fire Point Types	15		
31	Bypass,24hr, RAM IV	Remote Bypass (no call back) Remote Bypass (call back)	572 24-Hr Zone Bypass	Selective bypass by RAM IV, 24-hour non-fire point types.	2 to 9- 24-hour, Non-Fire Point Types			
32	Bypass,Forced Pt	Forced Point	570 Zone/Sensor bypass	Point force armed at force arming.	10 to 14- Controlled Point Types	15		
33	Bypass,Swinger	Swinger Bypass	575 Swinger Bypass	Point swinger bypassed.	All point types	15		
34	UnBypass,Fire, Usr	Bypass Restore (point < 256) (Fire Point)	571 Fire bypass	User cleared bypass (unbypass), Fire point types.	1- Fire 2- Fire with Alarm Verification	15		

Table 68 (cont.): Events and Reporting Formats

Event #	Event as shown in Panel Log	Modem IIIa ² Report	Contact ID Report	Event Description	Point Types Linked to Event	RAM IV Event Group	Status Reports	
35	UnBypss, Ctrl, Usr	Bypass Restore (point < 256)	570 Zone/Sensor bypass	User cleared bypass (unbypass), Controlled point types.	10 to 14- Controlled Point Types	15		
36	UnBypss, 24hr, Usr	Bypass Restore (point < 256)	572 24-Hr Zone Bypass	User cleared bypass (unbypass), 24-hour point types.	2 to 9- 24-hour, Non-Fire Point Types	15		
37	Call for Service	Service Request	616 Service Request	This report sent automatically at Call for Service Interval. It does not indicate a trouble condition.		12	R	
38	Cancel Alarm	Cancel Alarm (non-fire)	406 Cancel	User acknowledged active alarm before bell time expired, non-fire point types.		8		
39	Cancel Fire	Fire Cancel	406 Cancel	User acknowledged active alarm before bell time expired, fire point types.		7		
40	CheckSum Fail	Check Sum Fail	303 RAM Checksum Bad	Checksum on panel's parameters failed. Panel program should be verified.		12	R	S
41	ChckSum Fail, SDI	Parameter Checksum Fail (SDI Device reported)	330 System Peripheral trouble	Checksum on SDI device parameters failed. Device should be checked.		12	R	S
42	Cls, All, +Dly, Skd	Closing by Area	403 Automatic O/C	System turned All On with Entry/Exit delay by Sked.		10		
43	Cls, All, +Dly, KS	Closing by Area	409 Keyswitch O/C	System turned All On with Entry/Exit delay by Keyswitch.		10		
44	Cls, All, +Dly, RAM IV	Closing by Area	400 Open/Close	System turned All On with Entry/Exit delay by RAM IV.				
45	Cls, All, +Dly, Tel	Closing by Area	407 Remote Arm/Disarm	System turned All On with Entry/Exit delay by Telephone.		10		
46	Cls, All, +Dly, Usr	Closing by Area	401 O/C by User	System turned All On with Entry/Exit delay by User.		10		
47	Cls, All, -Dly, RAM IV	Closing by Area	400 Open/Close	System turned All On with no delay (instant) by RAM IV.				
48	Cls, All, -Dly, Usr	Closing by Area	401 O/C by User	System turned All On with no delay (instant) by User.		10		
49	Cls, Prt, +Dly, Skd	Perimeter Delay by Area	456 Partial Arm	System turned Part On with Entry/Exit delay by Sked.		10		
50	Cls, Prt, +Dly, KS	Perimeter Delay by Area	442 Keyswitch Armed Stay	System turned Part On with Entry/Exit delay by Keyswitch.		10		
51	Cls, Prt, +Dly, RAM IV	Perimeter Delay by Area	456 Partial Arm	System turned Part On with Entry/Exit delay by RAM IV.				
52	Cls, Prt, +Dly, Usr	Perimeter Delay by Area	456 Partial Arm	System turned Part On with Entry/Exit delay by User.		10		
53	Cls, Prt, -Dly, RAM IV	Perimeter Instant by Area	456 Partial Arm	System turned Part On with no delay (instant) by RAM IV.				
54	Cls, Prt, -Dly, Usr	Perimeter Instant by Area	456 Partial Arm	System turned Part On with no delay (instant) by User.		10		
55	Frc, All, +Dly, Skd	Forced Closing by Area	403 Automatic O/C	System forced All On with Entry/Exit delay by Sked. ³		10		
56	Frc, All, +Dly, KS	Forced Closing by Area	400 O/C	System forced All On with Entry/Exit delay by Keyswitch. ³		10		
57	Frc, All, +Dly, RAM IV	Forced Closing by Area	400 O/C	System forced All On with Entry/Exit delay by RAM IV. ³				

Table 68 (cont.): Events and Reporting Formats

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Event #	Event as shown in Panel Log	Modem IIIa ² Report	Contact ID Report	Event Description	Point Types Linked to Event	RAM IV Event Group	Status Reports	
58	Frc,All,+Dly,Tel	Forced Closing by Area	400 O/C	System forced All On with Entry/Exit delay by Telephone. ³		10		
59	Frc,All,+Dly,Usr	Forced Closing by Area	401 O/C by User	System forced All On with Entry/Exit delay by User. ³		10		
60	Frc,All,-Dly,RAM IV	Forced Closing by Area	400 O/C	System forced All On with no delay (instant) by RAM IV. ³				
61	Frc,All,-Dly,Usr	Forced Closing by Area	401 O/C by User	System forced All On with no delay (instant) by User. ³		10		
62	Frc,Prt,+Dly,Skd	Forced Close Perimeter Delay by Area	456 Partial Arm	System forced Part On with Entry/Exit delay by Sked. ³		10		
63	Frc,Prt,+Dly,KS	Forced Close Perimeter Delay by Area	456 Partial Arm	System forced Part On with Entry/Exit delay by Keyswitch. ³		10		
64	Frc,Prt,+Dly, RAM IV	Forced Close Perimeter Delay by Area	456 Partial Arm	System forced Part On with Entry/Exit delay by RAM IV. ³				
65	Frc,Prt,+Dly,Usr	Forced Close Perimeter Delay by Area	456 Partial Arm	System forced Part On with Entry/Exit delay by User. ³		10		
66	Frc,Prt,-Dly, RAM IV	Forced Close Perimeter Instant by Area	456 Partial Arm	System forced Part On with no delay (instant) by RAM IV. ³				
67	Frc,Prt,-Dly,Usr	Forced Close Perimeter Instant by Area	456 Partial Arm	System forced Part On with no delay (instant) by User. ³		10		
68	Point Closing	Point Closing		Point closed by Independent Point Control (D268/269 or D279).	9- Independent Point Control	10		
69	Comm Fail	Comm Fail (route group reported)	354 Failure to communicate event	Report failed to reach routing destination. The Routing Destination number (1 or 2) reported as Route Group in Modem IIIa ² reports.		12	R	S
70	CommFail, AltComm	Comm Fail (route group and SDI device reported)	354 Failure to communicate event	Report failed to reach routing destination configured for Alternate Communication. The Routing Destination number (1 or 2) reported as Route Group in Modem IIIa ² reports. SDI device number for Alternate Communication Module reported in Modem IIIa ² .		12	R	S
71	Comm Restoral	Comm Restoral (route group reported)	354 Failure to communicate event	After communication fail, report sent successfully to routing destination. The Routing Destination number (1 or 2) reported as Route Group in Modem IIIa ² reports.		12	R	S
72	CommRstl, AltComm	Comm Restoral (route group and SDI device reported)	354 Failure to communicate event	After communication fail, report sent successfully to routing destination configured for Alternate Communication. The Routing Destination number (1 or 2) reported as Route Group in Modem IIIa ² reports. SDI device number for Alternate Communication Module reported in Modem IIIa ² .		12	R	S

Table 68 (cont.): Events and Reporting Formats

Event #	Event as shown in Panel Log	Modem IIIa ² Report	Contact ID Report	Event Description	Point Types Linked to Event	RAM IV Event Group	Status Reports	
73	Date/Time Change	Date Changed	625 Time/Date reset	Date/Time in panel changed.		12	R	
74	Duress	Duress	121 Duress	User entered Duress passcode or pressed panic key sequence on RF Keyfob. The duress report is sent in addition to any other report that the user's action would generate.		1		
75	Fire,Alarm	Fire Alarm	110 Fire	Alarm event on fire point type.	1- Fire 2- Fire with Alarm Verification	2		
76	Fire,Cross	Fire Alarm Crossed Point	110 Fire	Verified alarm event on fire point type with Cross Point Option. See Cross Point Option, page 63	1- Fire 2- Fire with Alarm Verification	2		
77	Fire,Un-verified	Unverified Event-Fire	378 Cross-zone Trouble	Unverified alarm event on fire point type with Cross Point Option. See Cross Point Option, page 63 Or unverified event on Fire Verify point type. See page 58.	1- Fire 2- Fire with Alarm Verification	5		
78	Fire, Missing	Fire Missing	373 Fire Trouble	Fire point type assigned to point expander (wired or RF) not responding to panel's status poll.	1- Fire 2- Fire with Alarm Verification	5		
79	Fire,Alrm,Rstl	Fire Restoral from Alarm	110 Fire	Restoral from alarm, Fire point types	1- Fire 2- Fire with Alarm Verification	7		
80	Fire,Trouble	Fire Trouble	373 Fire Trouble	Trouble condition on Fire point types	1- Fire 2- Fire with Alarm Verification	5		
81	Fire,Trbl,Rstl	Fire Restoral from Trouble/Missin g/Supervision	373 Fire Trouble	Restoral from Trouble, Fire point types.	1- Fire 2- Fire with Alarm Verification	7		
82	Instl Mode,Start	Service Start	466 Service On Premises	Installer passcode entered. Installer mode accessed.		11	R	
83	Instl Mode,End	Service End	466 Service Off Premises	Installer mode exited.		11	R	
84	Log Overflow	Log Overflow	624 Event Log Overflow	Panel log overflow condition. Oldest events being overwritten.		12	R	
85	Log Threshold	Log Threshold	620 Event Log	Panel log reached threshold. See Log Supervision Configuration, page 19.		12	R	
86	AltCom Low Signl	Low Signal Strength III=level, ppp=path	350 Communication Trouble	Low Signal Strength detected on Alternate Communication device.		12	R	S
87	Missing,Alarm	Missing Alarm	140 General Alarm	Point assigned to point expander (wired or RF) not responding to panel's status poll while system is armed.	Any non-fire point type	3		

Table 68 (cont.): Events and Reporting Formats

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Appendix B

Event #	Event as shown in Panel Log	Modem IIIa ² Report	Contact ID Report	Event Description	Point Types Linked to Event	RAM IV Event Group	Status Reports	
88	Missing, Trouble	Missing Trouble	382 Loss of super-RPM	Point assigned to point expander (wired or RF) not responding to panel's status poll while system is disarmed.	Any non-fire point type	6		
89	Open, Skd	Opening by Area	403 Automatic O/C	Opening by Sked.		10		
90	Open, RAM IV	Opening by Area	400 Open/Close	Opening by RAM IV.				
91	Open, Usr	Opening by Area	401 O/C by User	Opening by user, by ID reported.		10		
92	Open, KS	Opening by Area	409 Keyswitch O/C	Opening by Keyswitch.		10		
93	Open, Skd, Alarm	Opening by Area from Alarm	403 Automatic O/C	Opening after Alarm event by Sked.		10		
94	Open, RAM IV, Alarm	Opening by Area from Alarm	400 Open/Close	Opening after Alarm event by RAM IV.				
95	Open, Usr, Alarm	Opening by Area from Alarm	401 O/C by User	Opening after Alarm event, ID reported.		10		
96	Open, KS, Alarm	Opening by Area from Alarm	409 Keyswitch O/C	Opening after Alarm event by Keyswitch		10		
97	Point Opening	Point Opening		Point opened by Independent Point Control (D268/269 or D279).		10		
98	Params Changed	Parameters Changed	306 Panel Programming Changed	Panel Parameters Changed		12	R	
99	Phone Line Fail	Phone Line Fail (Line 1)	351 Telco 1 fault	Phone line voltage less than 3 volts for 40 seconds.		12	R	S
100	Phone Line Rstl	Phone Line Restoral (Line 1)	351 Telco 1 fault	After Phone Line Fail event, phone line voltage detected at greater than 3 volts for 40 seconds.		12	R	S
101	Bad Call to RAM IV	Fail to Call RAM IV	413 Unsuccessful access	Panel attempted call to RAM IV, but was unsuccessful.		12	R	
102	RAM IV Access Fail	Invalid Remote Access	413 Unsuccessful access	RAM IV attempted to connect to panel but was not successful.			R	
103	RAM IV Access OK	Valid Remote Access	412 Successful Download/Access	RAM IV successfully connected to and disconnected from panel.			R	
104	Re-Boot, Panel	Re-Boot	305 System reset	Normal start up or reset with standby jumper.			R	S
105	Re-Boot, SDI	Re-Boot (SDI # reported)	339 Exp. Module Reset	Unexpected reset (reboot) from SDI device.		12	R	S
106	Output Reset, Usr	Relay Reset (by User)	320 Sounder/Relay	Output Reset by User		16	R	
107	Output Reset, Skd	Relay Reset (by Sked)	320 Sounder/Relay	Output Reset by Sked		16	R	
108	Output Reset, RAM IV	Relay Reset (by RAM IV)	320 Sounder/Relay	Output Reset by RAM IV			R	
109	Output Set, Usr	Relay Set (by user)	320 Sounder/Relay	Output Set by User		16	R	
110	Output Set, Skd	Relay Set (by Sked)	320 Sounder/Relay	Output Set by Sked		16	R	

Table 68 (cont.): Events and Reporting Formats

Event #	Event as shown in Panel Log	Modem IIIa ² Report	Contact ID Report	Event Description	Point Types Linked to Event	RAM IV Event Group	Status Reports	
111	Output Set, RAM IV	Relay Set (by RAM IV)	320 Sounder/Relay	Output Set by RAM IV			R	
112	Rstrl, Tamper	Restoral from Alarm	137 Tamper	Restoral from alarm, Tamper point type.	4- Tamper	8		
113	Rstrl, Emergency	Restoral from Alarm	101 Personal Emergency	Restoral from alarm, Emergency point type.	5- Emergency	8		
114	Rstrl, Panic	Restoral from Alarm	120 Panic	Restoral from alarm, Panic point type.	6- Visible Panic	8		
115	Rstrl, Invisible	Restoral from Alarm	120 Panic	Restoral from alarm, Invisible point type.	7- Invisible Panic	8		
116	Rstrl, 24-hr Burg	Restoral from Alarm	133 24hr (Safe)	Restoral from alarm, 24-hour burglary point types.	8- Burglary 9- Independent Point Control	8		
117	Rstrl, Cntrl, Dly	Restoral from Alarm	134 Entry/Exit	Restoral from alarm, controlled point types.	11- Delay 1 12- Delay 2	8		
118	Rstrl, Cntrl	Restoral from Alarm	130 Burglary	Restoral from alarm, controlled point types.	10- Keyswitch 13- Follower 14- Instant	8		
119	Rcvr Jam	RF Interference	344 RF Receiver Jam Detect	Jammed condition detected on premises RF receiver.		9	R	S
120	Rcvr Jam Rstl	RF Interference Restoral	344 RF Receiver Jam Detect Restoral	Jammed condition detected on premises RF receiver cleared.		9	R	S
121	RF Battery Low	RF Transmitter Low Battery	384 RF Low Battery	Low Battery detected on premises RF transmitter.	Any point type	9		
122	RF Battery Rstl	RF Transmitter Battery Restore	384 RF Low Battery	Low Battery condition detected on premises RF transmitter cleared.	Any point type	9		
123	RF Tamper Trbl	RF Transmitter Tamper Trouble	383 Sensor Tamper	Premises RF Transmitter Tamper Trouble	Any point type	9		
124	RF Tamper Rstl	RF Transmitter Tamper Restoral	383 Sensor Tamper	Premises RF Transmitter Tamper Restoral	Any point type	9		
125	SDI Missing	SDI-Fail (Missing)	333 Exp. Module Failure	SDI device not responding to polling.		12	R	S
126	SDI Missing, Rstl	SDI-Fail (Missing) Restoral	333 Exp. Module Failure	SDI device declared as missing now responding to polling.		12	R	S
127	SDI Tamper	SDI-Tamper	341 Exp. Module Tamper	Tamper open on SDI Device Tamper.		12	R	S
128	SDI Tamper, Rstl	SDI-Tamper Restoral	341 Exp. Module Tamper	SDI Device Tamper Restoral.		12	R	S
129	SDI Trouble	SDI-Trouble	330 System Peripheral Trouble	Trouble detected on SDI Device.		12	R	S
130	SDI Trouble, Rstl	SDI-Trouble Restoral	330 System Peripheral Trouble	SDI (Option Bus) Device Trouble condition cleared.		12	R	S
131	SDI OverCurrent	SDI-Overcurrent	330 System Peripheral Trouble	Over current condition detected on SDI device.		12	R	S
132	SDI OverCur, Rstl	SDI-Overcurrent Restoral	330 System Peripheral Trouble	Over current condition on SDI device restored.		12	R	S
133	Sensor Mon Trbl	Sensor Trouble	391 Sensor Watch trouble	Sensor trouble detected. See page 68 for a description of Sensor Monitor feature. Reports follow point trouble routing.		6		

Table 68 (cont.): Events and Reporting Formats

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Appendix B

Event #	Event as shown in Panel Log	Modem IIIa ² Report	Contact ID Report	Event Description	Point Types Linked to Event	RAM IV Event Group	Status Reports
134	Sensor Mon Rstl	Trouble Restoral-Sensor	391 Sensor Watch trouble	Sensor trouble condition restored. Reports follow point trouble routing.		6	
135	Sensor Reset	Local event. No report.		User pressed Cmd 47.		12	
136	System Inactive	Closing Delinquent		System was not armed in Inactive Interval. See page 18. Cmd 47 or arming resets this trouble.		12	R
137	Test, OK	Test Report Non Expanded	602 Period Test Report	No system troubles at automatic test report time.		13	
138	Test,Off-Normal	Test Off Normal Non Expanded	608 Period Test Report, System Trouble Present	System trouble present at test time.		13	
139	Trbl,Tamper	Trouble	380 Sensor Trouble	Trouble condition on Tamper or Voice Active point types.	4-Tamper	6	
140	Trbl,Emergency	Trouble	380 Sensor Trouble	Trouble condition on Emergency point type.	5- Emergency	6	
141	Trbl,Panic	Trouble	375 Panic Zone Trouble	Trouble condition on Panic point type.	6- Visible Pani	6	
142	Trbl,Invisible	Trouble	375 Panic Zone Trouble	Trouble condition on Invisible point type.	7-Invisible Panic	6	
143	Trbl,24-hr Burg	Trouble	380 Sensor Trouble	Trouble condition on Burglary or Independent Point Control point types.	8- Burglary 9- Independent Point Control	6	
144	Trbl,Cntrl,Dly	Trouble	380 Sensor Trouble	Trouble condition on Delay point types.	11- Delay 1 12- Delay 2	6	
145	Trbl,Cntrl	Trouble	380 Sensor Trouble	Trouble condition on Keyswitch, Follower, and Instant point types.	10- Keyswitch 13- Follower 14- Instant	6	
146	Rstrl,Trbl,Tmpr	Restoral from trouble, missing, non-fire supervision	380 Sensor Trouble	Restoral from trouble condition on Tamper or Voice Active point types.	4-Tamper	8	
147	Rstrl,Trbl,Emerg	Restoral from trouble, missing, non-fire supervision	380 Sensor Trouble	Restoral from trouble condition on Emergency point type.	5- Emergency	8	
148	Rstrl,Trbl,Panic	Restoral from trouble, missing, non-fire supervision	375 Panic Zone Trouble	Restoral from trouble condition on Panic point type.	6- Visible Pani	8	
149	Rstrl,Trbl,Invis	Restoral from trouble, missing, non-fire supervision	375 Panic Zone Trouble	Restoral from trouble condition on Invisible point type.	7-Invisible Panic	8	
150	Rstrl,Trbl,24-hr	Restoral from trouble, missing, non-fire supervision	380 Sensor Trouble	Restoral from trouble condition on Burglary or Independent Point Control point types.	8- Burglary 9- Independent Point Control	8	
151	Rstrl,Trbl,Dly	Restoral from trouble, missing, non-fire supervision	380 Sensor Trouble	Restoral from trouble condition on Delay point types.	11- Delay 1 12- Delay 2	8	

Table 68 (cont.): Events and Reporting Formats

Event #	Event as shown in Panel Log	Modem IIIa ² Report	Contact ID Report	Event Description	Point Types Linked to Event	RAM IV Event Group	Status Reports	
152	Rstrl,Trbl,Cntrl	Restoral from trouble, missing, non-fire supervision	380 Sensor Trouble	Restoral from trouble condition on Keyswitch, Follower, and Instant point types.	10- Keyswitch 13- Follower 14- Instant	8		
153	User Code Area Set	User Level Set		User Code 'added' by assigning area.		16	R	
154	User Code Change	User Code Changed		User Code changed.		16	R	
155	User Code Delete	User Code Deleted		User Code deleted.		16	R	
156	User Code Tamper	User Code Tamper	461 Wrong Code Entry	Invalid User Codes entered at keypad exceeded User Tamper retry count. See page 41.		16	R	
157	User Level Set	User Level Set		User Level set.		16	R	
158	Walk Test Start	Walk Test Start	607 Walk Test Mode	Walk Test started with Cmd 44.		11		
159	Walk Test End	Walk Test End	607 Walk Test Mode	Walk Test ended by user or timed out.		11		
160	Siren Trouble	Output-Trouble	320 Sounder Relay	Trouble condition detected on Programmable Output 2 configured as supervised siren output.		12	R	S
161	Siren Restoral	Output-Restore	320 Sounder Relay	Trouble condition on supervised siren output cleared.		12	R	S
162	Grnd Fault	Ground Fault	310 Ground Fault	Ground fault detected on panels sensor loops, SDI bus, or Aux power outputs.		12	R	S
163	Grnd Fault, Rstrl	Ground Fault, Restoral	310 Ground Fault	Ground fault condition cleared.		12	R	S
164	First Open	Opening by Account	400 Open/Close	Panel is configured for multiple area first to open, last to close functionality. See page 33. First area has opened.		10		
165	Last Close	Closing by Account	400 Open/Close	Panel is configured for multiple area first to open, last to close functionality. See page 33. Last area has closed.		10		
166	AltCom Cond	Network Condition ppp=path, nnn=condition	350 Communication Trouble	Trouble detected on Alternate Communication network. Trouble condition is only specified in Modem IIIa ² report		12	R	S
167	AltComm Fail	Network Failure ppp=path, nnn=condition	350 Communication Trouble	Network failure detected on Alternate Communication network. Trouble condition is only specified in Modem IIIa ² report		12	R	S
168	AltComm Rstrl	Network Restoral ppp=path, nnn=condition	350 Communication Trouble	Network failure detected on Alternate Communication network. Trouble condition is only specified in Modem IIIa ² report		12	R	S
169	Reserved					12	R	S
170	Reserved					12	R	S
171	Reserved					12	R	S
172	Reserved					12	R	S

Table 68 (cont.): Events and Reporting Formats

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Appendix B

Event #	Event as shown in Panel Log	Modem IIIa ² Report	Contact ID Report	Event Description	Point Types Linked to Event	RAM IV Event Group	Status Reports	
173	Rstrl, Swinger	Bypass Restore (point < 256)	575 Swinger Bypass	Restoral from Swinger Bypass.	Any point type	8		
174	Rstrl,Fire,Miss			Restoral from Fire Missing. Local event, no report.	1- Fire 2- Fire with Alarm Verification	7		
175	Rstrl,Alarm,Miss			Restoral from Missing. Local event, no report.	Any non-fire point type	8		
176	Rstrl,Trble,Miss			Local event, no report.	Any non-fire point type	8		
177	Rstl,Low Signl			Restoral from Alternate Communication Low Signal Strength event.		12	R	S
178	UnBypss,Fire, RAM IV	Bypass Restore (point < 256) (Fire Point)	571 Fire bypass	Bypass on Fire point type cleared using RAM IV (un-bypass)	1- Fire 2- Fire with Alarm Verification			
179	UnBypss,Ctrl, RAM IV	Bypass Restore (point < 256)	570 Zone/Sensor bypass	Bypass on controlled point type cleared using RAM IV (un-bypass)	10 to 14- Controlled Point Types			
180	UnBypss,24hr, RAM IV	Bypass Restore (point < 256)	572 24 hour zone bypass	Bypass on 24-hour point type cleared using RAM IV (un-bypass)	2 to 9- 24-hour, Non-Fire Point Types			
181	RF Battery Low	RF Transmitter Low Battery (for use with Keyfob device)	384 RF Low Battery	Low battery condition on RF Keyfob.		9	R	
182	RF Battery Rstl	RF Transmitter Battery Restore (for use with Keyfob device)	384 RF Low Battery	Low battery condition on RF Keyfob restored.		9	R	

Table 68 (cont.): Events and Reporting Formats

Basic Pager Format

Configuring the D6412 for Basic Pager Format

Setting a Routing Destination to Basic Pager format configures the D6412 to send reports to a numeric pager. To utilize the Basic Pager format:

1. Enter the phone number for the pager in the 'Phone Number 1' parameter for the Routing Destination you have chosen as the Basic Pager Destination.

The D6412's Basic Pager format does not wait for an acknowledgement tone from the pager service provider to send its report to the pager. It dials the phone number, waits 250 milliseconds and then sends the report. To increase the delay (pause), add delay characters as needed to the end of the phone number. See Table 69 for the valid phone number entries.

2. Set the 'Format for Destination 1 (2)' parameter to 'Basic Pager' for the Routing Destination you have chosen as the Basic Pager Destination.

Set the routing for any reports you would like sent to the pager to the Routing Destination (1 or 2) you have chosen as the Basic Pager destination.

Report digits are dialed as 100-millisecond DTMF tone pulses with 100-millisecond pauses between the digits.

Configuring a Pager Display

A pager's display can show up to four fields of information in the order as shown below:

(Account Number) - (Event Number) - (Area Number) - (Point/User Number)

The data entered to set up a pager display follows the numbers entered for the panel's routing phone numbers.

See Table 69 for the valid phone number entries.

The following examples show how to set up a pager display with different fields showing with and without separators. The following variables will be used for each example:

- **Phone Number:** 978-1580
- **Account Number:** 1234
- **Event Number:** 08 (can be a 2- or 3-digit number)
- **Area Number:** 03
- **Point Faulted:** 21

Pager Display with All 4 Fields and No Separators

To set up a pager display that shows all four fields without any separators between fields, enter the Phone Number Nibbles as shown below:

- **Nibble Entry:** 9-7-8-1-5-8-10-13-13-13-0-#-0
- **Resulting Pager Display:** 1234080321
 - The first 7 digits entered (9, 7, 8, 1, 5, 8, 10) make up the sample phone number (to enter "0", key in "10" at the Command Center). Three pause characters (13, 13, 13 follow the phone number).
 - The 11th digit, "0", is the phone number terminator. This digit is always a "0" (zero).
 - The 12th digit, "#", (entered as "12" at the Command Center), turns off all field separators. Without any field separators, the digits will appear as shown above without any spacing between field groupings.
 - The 13th digit, "0", is the separator/field terminator. This digit is always a "0" (zero).
 - The absence of a "*" (asterisk) entry will show all four fields in the following order: Account Number, Event Number, Area Number and Point Number.

Appendix B

Pager Display with All 4 Fields with Separators

To set up a pager display that shows all four areas with separators between fields, enter the Phone Number Nibbles as shown below:

- **Nibble Entry:** 9-7-8-1-5-8-10-13-13-13-0-0
- **Resulting Pager Display:** 1234-08-03-21
 - The first 7 digits entered (9, 7, 8, 1, 5, 8, 10) make up the sample phone number (to enter "0", key in "10" at the Command Center). Three pause characters (13, 13, 13 follow the phone number).
 - The 11th digit, "0", is the phone number terminator. This digit is always a "0" (zero).
 - The 12th digit, "0", is the separator/field terminator. This digit is always a "0" (zero).
 - The absence of a "#" entry inserts separators (-) between each field.
 - The absence of a "*" (asterisk) entry will show all four fields in the following order: Account Number, Event Number, Area Number and Point Number.

Pager Display with First 3 Fields with Separators

To set up a pager display that shows the first three fields (Account Number, Event Number, and Area Number) with separators between fields, enter the Phone Number Nibbles as shown below:

- **Nibble Entry:** 9-7-8-1-5-8-10-13-13-13-0-*-*-*0
- **Resulting Pager Display:** 1234-08-03
 - The first 7 digits entered (9, 7, 8, 1, 5, 8, 10) make up the sample phone number (to enter "0", key in "10" at the Command Center). Three pause characters (13, 13, 13 follow the phone number).
 - The 11th digit, "0", is the phone number terminator. This digit is always a "0" (zero).
 - The 12th, 13th and 14th digits, "*" (asterisk entered as "11" at the Command Center), will show the first three fields in the following order: Account Number, Event Number and Area Number.
 - The 15th digit, "0" is the separator/field terminator. This digit is always a "0" (zero).
 - The absence of a "#" entry inserts separators (-) between each field. To turn the separators off, enter a "#" after the phone number terminator.

Pager Display with First 2 Fields with Separators

To set up a pager display that shows the first two fields (Account Number and Event Number) with separators between fields, enter the Phone Number Nibbles as shown below:

- **Nibble Entry:** 9-7-8-1-5-8-10-13-13-13-0-*-*0
- **Resulting Pager Display:** 1234-08
 - The first 7 digits entered (9, 7, 8, 1, 5, 8, 10) make up the sample phone number (to enter "0", key in "10" at the Command Center). Three pause characters (13, 13, 13 follow the phone number).
 - The 11th digit, "0", is the phone number terminator. This digit is always a "0" (zero).
 - The 12th and 13th digits, "*" (asterisk entered as "11" at the Command Center), will show the first two fields in the following order: Account Number and Event Number.
 - The 14th digit, "0" is the separator/field terminator. This digit is always a "0" (zero).
 - The absence of a "#" entry inserts separators (-) between each field. To turn the separators off, enter a "#" after the phone number terminator.

Pager Display with First Field Only

To set up a pager display that shows only the first field (Account Number), enter the Phone Number Nibbles as shown below:

- **Nibble Entry:** 9-7-8-1-5-8-10-13-13-13-0-*-0
- **Resulting Pager Display:** 1234
 - The first 7 digits entered (9, 7, 8, 1, 5, 8, 10) make up the sample phone number (to enter "0", key in "10" at the Command Center). Three pause characters (13, 13, 13 follow the phone number).
 - The 11th digit, "0", is the phone number terminator. This digit is always a "0" (zero).
 - The 12th digit, "*" (asterisk entered as "11" at the Command Center), will show the first field (Account Number) only.
 - The 13th digit, "0", is the separator/field terminator. This digit is always a "0" (zero).

Table 69 shows the selections for any phone number.

Digit to be Dialed	Enter at the Command Center
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	10
*	11
#	12
p (4 second pause)	13
f (on-hook, pause, off-hook)	14
???	15
t (terminate)	0

Table 69: Phone Number Selections



Any pauses that need to be entered in the dialing sequence (phone number) must go before the first terminator.



The number of pauses required will vary based on the requirements of the specific paging service being used.



Pre-testing should be performed to determine the correct number of pauses used to correctly establish panel communications by the pager sequence.



If the point/user number is three digits, the leading digit is omitted. For example, "252" displays as "52."

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Appendix C

Appendix C: SDI Address Table

Table 70 shows the SDI addresses for the different devices that can be connected to the D6412's SDI bus.

All the status reports for the receiver include the address. For example, if the cover is removed, Event 127 (SDI Tamper) is generated and sends the following message in Modem IIIa²: "SDI Tamper Device 50."

SDI Address	Device Description
0	Installer Keypad or local connection to RAM IV
1-8	Command Centers 1 to 8
40, 41	D624 Telephone Control Module
50	Premises RF Receiver 1
51	Premises RF Receiver 2
52-55	Premises RF Keypads Receiver 1
60-63	Premises RF Keypads Receiver 2
101-107	D9528 Wired Point Expanders
150,151	D9529 Octo-Outputs and/or D9529-X10 Output Module
250	D9533 Serial RS232 Interface

Table 70: SDI Address and Device Assignments

Appendix D: Operation Guide

Text Command Center



The system remembers passcodes entered for approximately 10 seconds after you have stopped pressing keys. To log out of the system, press the [Cmd] key twice. "Logged Out" will appear on the Command Center display.

The Text Command Center provides two lines of 16-character text for programming and general system operation. The command center may have up to 21 keys that perform various functions as described below.

Keys

1, 2, 3, 4, 5, 6, 7, 8, 9, 0	Numeric keys are used for entering passcodes, programming values, etc.
Cmd	The Cmd and numeric keys enter commands (for example, Cmd 41).
All On	Turns the system All On.
Part On	Turns the system Part On.
No Delay	Turns the system All or Part On with no entry or exit delay.
Bypass	Bypasses specified points.
*	Advances to the next display (when available).
A	An emergency function (Fire, Panic or Emergency Alarms) may be assigned to these keys. Press the key twice to activate its special function. Each key must be labeled with its assigned function.
B	
C	

Tones

The Text Command Center also emits various tones, as described below.

Fire Alarm	A repeated warble tone (on for one second then briefly off) emitted when a fire point activates.
Burglary Alarm	A continuous warble tone emitted when a burglary point activates. See <i>Bell Time</i> , page 71, for details on setting the duration of this tone.
Trouble	A repeated warble tone (on briefly followed by a pause followed by the warble tone) emitted when a system component is not functioning properly.
Key Press	Short tone indicating a key press.
Entry Delay	An intermittent tone that sounds upon entry (entry delay) and serves as a reminder to turn the system off.
Exit Delay	An intermittent beep indicating exit delay and counting down to arming.
Error	Warble tone (same as Trouble but not repeated) indicating an invalid entry.
OK	Single beep (one second) indicating an accepted entry.
Watch	Tone indicating a faulted watch point. Duration of the tone is determined by <i>Selecting Watch Tone</i> , page 120.

Backlight and Volume Control

See *Keypad Adjust (Cmd 49)*, page 112, for instructions on adjusting the command center's keystroke volume and display brightness.

Appendix D

Checking System Status

To check the system status, be sure the system is Off. Press **[Cmd]** to show the current system status. The following messages may appear:

System OK	System is ready to turn on
System Trouble! Press [4] to view	Indicates a system trouble condition. See <i>Checking System Troubles</i> , page 117, to determine the nature of the trouble.
Points bypassed Press [0] to view	Indicates bypassed points. See <i>Bypassing Points</i> , page 115, for more information.
Points faulted Press [0] to view	Indicates faulted points. See <i>Viewing Faulted Points</i> , page 114, for more information.

Commands

Commands allow the user to carry out various tasks (add/delete passcodes, set date/time, test the system, etc.). Commands will be indicated as follows: **[Cmd] + [6] + [3]**. To enter this command, press the **[Cmd]** key followed by the 6 key and then the 3 key.

Keypad Adjust (Cmd 49)

You can adjust the command center's keystroke volume and display brightness by using Command 49.

1. Press **[Cmd] + [4] + [9]**.
2. To adjust the command center's keystroke volume, press and hold the **[*]** key, and then press the **[1]** key to increase the volume, or the **[4]** key to lower the volume.
3. To adjust the command center's display brightness, press and hold the **[*]** key, and then press the **[3]** key to increase the brightness, or the **[6]** key to decrease the brightness.
4. Press **[Cmd]** to exit this command function when all adjustments have been made.

Silence Alarms

During an alarm, the alarm tone sounds and the display shows the point(s) in alarm. If a valid passcode is entered before the system dials the security company, the alarm report is cancelled.

1. Enter a valid passcode to silence the alarm and turn off the system (if it was on). If this is not done, an alarm report is sent to the central station. To determine if an alarm was reported (and later review the points that alarmed), see *View Alarm Memory*, page 117. The display continues to show the point that initiated the alarm.
2. Press **[Cmd]** to remove the alarm message from the display.

Turn the System Off

Enter a valid passcode to turn off the system (disarm). The idle text appears on the display.

Turn the System All On (Cmd 1)

This function turns the entire system on.

1. Make sure all points are normal (not faulted).
2. Press **[All On]** or press **[Cmd] + [1]**. If required, enter a valid passcode.
3. Exit Delay begins if all points are normal. Leave the premises during this time. If the system has a faulted point, either close it or bypass it (see *Bypass Points*, page 115).
During Exit Delay, you may stop the system from turning on by entering a valid passcode. If you wish to bypass points, press **[Bypass]**; you may skip the delay by pressing **[No Delay]**; or you may turn the system Part On by pressing **[Part On]**. The system prompts you through these options.
4. During the last 10 seconds of Exit Delay, the command center allows for a "last chance" response to disarm the system. During this time, the command center emits a double tone every second. The system then turns All On.
5. To turn the system off, enter a valid passcode.

Turn the System Part On

(Cmd 2)

This function turns on part of the system, leaving the rest of the system Off.

1. Make sure all points are normal (not faulted).
2. Press **[Part On]** or press **[Cmd] + [2]**. If all Part points are normal, the Exit Delay time starts. If there are faulted points, return them to normal or bypass them. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. During exit delay, you may stop the system from turning on by entering a valid passcode. If you wish to turn the system Part On with No Delay, press **[No Delay]**, or you may bypass points by pressing **[Bypass]**.
4. During the last 10 seconds of Exit Delay, the command center allows for a "last chance" response to disarm the system. During this time, the command center emits a double tone every second. The system then turns Part On.
5. To turn the system off, enter a valid passcode.

Turn the System Part 2 On

(Cmd 3)

This command turns on part of the system, leaving the rest of the system Off. Part 2 points are assigned by the user (refer to *Set Part 2 Points*).

1. Make sure all points are normal (not faulted).
2. Press **[Cmd] + [3]** to turn the system Part 2 On. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. During Exit Delay, you may stop the system from turning on by entering a valid passcode. If you wish to turn the system Part 2 On with No Delay, press **[No Delay]**, or you may bypass points by pressing **[Bypass]**.
4. During the last 10 seconds of Exit Delay, the command center allows for a "last chance" response to disarm the system. During this time, the command center emits a double tone every second. The system then turns Part On.
5. To turn the system off, enter a valid passcode.

Set Part 2 Points

(Cmd 65)

Use this command to assign points that arm when the system is turned Part 2 On.

1. Make sure the system is turned off (On indicator is off).
2. Press **[Cmd] + [6] + [5]**. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center displays the available points to assign to Part 2.
4. Enter the Point Number (1 through 40) and press **[*]** to toggle it Yes or No for Part 2 (Yes = Active, ready to detect intrusion / No = Non-active, you can move freely without sounding an alarm). Repeat this procedure until all the desired points are selected for Part 2.
5. Press **[Cmd]** to exit this function.

Turn the System On with No Delay

This command allows you to turn the system All On, Part On or Part 2 On without Entry or Exit delays. Turning the system on with no delay allows no Exit or Entry Delay time through the designated delay point (for example, Front Door). This function is useful when staying in the premises but with the system on.

1. Make sure all points are normal (not faulted).
2. Press **[All On]** to turn the system All On, or press **[Part On]** to turn the system Part On. To turn the system Part 2 On, press **[Cmd] + [3]**. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center displays prompt you to bypass points, if desired. If all points are normal, press **[No Delay]** to turn the system on with no delay. During the last 10 seconds of Exit Delay, the command center allows for a "last chance" response to disarm the system. During this time, the command center emits a double tone every second. The system then turns All or Part On.
4. To turn off the system, enter a valid passcode.

Turn the System On with No Exit Tone

Use this command to turn the entire system All On, Part On or Part 2 On without any exit tones. Turning the system on with no exit tone eliminates the tone emitted by the command center intended to alert occupants that the system is about to arm.

1. Make sure all points are normal (not faulted).
2. Arm the system by turning it All On, Part On or Part 2 On. The command center may prompt you to enter a valid passcode.
3. Enter the passcode and then use the appropriate key sequence to silence the exit tone (see Table 71).

Arming With	To Silence Exit Tone
Cmd 1 (All On)	Hold [1] key
Cmd 2 (Part On)	Hold [2] key
Cmd 3 (Part 2 On)	Hold [3] key
All On	Hold [All On] key
Part On	Hold [Part On] key

Table 71: Exit Tone Silencing Key Sequences



Pressing and holding the [1] (or [All On] key), the [2] (or [Part On] key), or the [3] key (Part 2 On), silences the Exit Delay tone and extends the Exit Delay period by doubling it.

Turn the System On with Points Faulted (Force Arm)

1. Press **[All On]** to turn the system All On, or press **[Part On]** to turn the system Part On. The command center may prompt you to enter a passcode.
2. Enter a valid passcode if necessary. The command center indicates any faulted points followed by instructions for bypassing the point (LED Command Center flashes the faulted points and emits an error tone).
3. Enter the number of the point to bypass followed by the [*] key.
4. To force arm the system All On or Part On with normal Exit Delay and exit tone press [All On] or [Part On]. A "point faulted" message appears on the display. Press [All On] or [Part On] again. Enter your passcode when prompted.
5. To force arm the system All On or Part On with Exit Delay doubled and no exit tone, press and hold [All On] or [Part On] until the "point faulted" message appears. Then press [All On] or [Part On] again. Enter your passcode if prompted. The system then scrolls the "Forced on!" message and the doubled Exit Delay Time countdown. The exit tone is silenced.

The system "forces" the faulted points on. As long as they remain faulted, they do not provide protection. If they return to normal before the system is turned off, they provide protection and are capable of starting alarm events. If a point becomes faulted after Exit Delay begins, the command center displays the faulted point. If the point remains faulted at the end of Exit Delay, it starts an alarm event.

*** Force Arming is not permitted for UL applications.**

View Faulted Points

(Cmd 0)

This command allows you to locate faulted points in the system.

1. Ensure that the system is turned off (On indicator is off).
2. Press **[Cmd]**. If points are faulted, the display shows **Press 0 to view**.
3. Press **[0]** to view the faulted points.
4. Return the faulted points to the normal (for example, close the door), or you may bypass the points by following the instructions on the command center display.

Once the faulted points are bypassed or returned to normal, the system is ready to turn on.

Bypass Points

Use this command to bypass one or more points before turning the system All On, Part On or Part 2 On. You can access bypassed points when the system is turned on without causing an alarm.

1. Ensure that the system is turned off (On indicator is off).
2. Press [**Bypass**]. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center scrolls a list of points that can be bypassed.
4. Enter the number of the point to bypass (1-40) followed by the [*] key. Repeat this step until all the necessary points are bypassed.
If a point is already bypassed, the command center instructs you on how to unbypass the point. The command center alerts you if a point cannot be bypassed.
5. Press [**Cmd**] to exit this function.

Date and Time**(Cmd 45)**

Use this command to set the date and time in the system.

1. Press [**Cmd**] + [4] [5]. The command center may prompt you to enter a passcode.
2. Enter a valid passcode if necessary. The command center prompts you to enter the date and time (MM/DD/YY HH:MM).
3. Enter the date and time (in 24-hour format) using the numeric keys. After you make your entries, the command center displays the date and time entered before returning to the normal display.

In the event of a power cycle (power to the system is lost and then is restored), the D6412 takes the last event in the log and uses that as a starting point for the time and date. It then alerts the user to enter the current time and date.

Change Passcodes**(Cmd 55)**

Use this command to change user passcodes at any time. Write down the current passcode and the new one before beginning.

1. Ensure that the system is turned off (On indicator is off).
2. Press [**Cmd**] + [5] + [5]. The OK tone sounds and the command center prompts you to enter the old passcode.
3. Enter the current passcode. If it is valid the command center prompts you to enter the new passcode.
4. Enter the new passcode using the same number of digits as the old passcode. If the error tone sounds, try a different new passcode. If the new passcode is valid the command center prompts you to enter the new passcode again.
5. Enter the new passcode again. If successful, the command center indicates **Code changed**. It automatically exits the function.

Change Other Passcodes**(Cmd 56)**

This command allows users with the applicable authority level to change passcodes for each user in the system.

1. Make sure that the system is turned off (On indicator is off).
2. Press [**Cmd**] + [5] + [6]. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center scrolls through the available options. If an option is not selected, the command center exits this function when the list ends.
4. Press [1] to change passcodes. The display shows the codes available to change.
5. Enter the user passcode number (1 through 32) to change followed by the [*] key (for example, press [2] + [*] to change the passcode for User 2). The command center prompts you to enter the new passcode.



If the user does not exist in the system, the command center will emit an error tone. To add a user, see Section 2.10, Users, page 42.

6. Enter the new passcode using the same number of digits as the current passcode. If the error tone sounds, try a different new passcode. If the new passcode is valid the command center prompts you to enter the new passcode again.

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7. Enter the new passcode again. If successful, the command center indicates **Code # changed**. If necessary, repeat these steps to change other passcodes, or press **[Cmd]** to exit this feature.

Change Other's Passcode Authority Level

(Cmd 56)

This command allows users with the appropriate authority level to change passcode authority levels for each user in the system. **You cannot change your own passcode authority level.**

1. Ensure that the system is turned off (On light indicator off).
2. Press **[Cmd] + [5] + [6]**. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center scrolls through the available options. If an option is not selected, the command center exits this function when the list ends.
4. Press **[2]** to change passcode authority levels. The display shows the codes available to change along with instructions.
5. Enter the user passcode number (1 through 32) to change followed by the **[*]** key.



If the user does not exist in the system, the command center will emit an error tone. To add a user, see Section 2.10, Users, page 42.

6. Enter the new authority level (1 through 4). The installer determines authority levels (see Authority Level Configuration, page 35, for more information).
7. Press **[Cmd]** to exit this feature.

Add a Passcode

(Cmd 56)

Use this command to add new passcodes to the system. This command requires the appropriate authority level to add passcodes. To add a new passcode to the system, you must assign an area(s) to the new user in addition to using the other Cmd 56 features (changing a passcode authority level).

1. Ensure that the system is turned off (On indicator is off).
2. Press **[Cmd] + [5] + [6]**. The command center may prompt you to enter a valid passcode.
3. Enter your passcode.
4. Press **[3]** to assign an area(s) to the new user.
5. Enter the user number (1-32) you want to assign area(s) to followed by the **[*]** key (for example, for User 4, press **[4] + [*]**).
6. Enter the area(s) (1-4) you want to assign to the new user by pressing the appropriate numeric key(s). For example, if the user is to be assigned to Areas 1 and 2, press the **[1]** and **[2]** keys. To remove a currently assigned area(s), press the corresponding numeric key(s). For example, if User 4 is assigned to Areas 1 and 2, but should only be assigned to Area 1, press the **[2]** key to remove Area 2 from User 4's area assignment.
7. Press the **[Cmd]** key twice to return to the three Cmd 56 selections.
8. Press **[1]** to create a new passcode for the new user.
9. Enter the user number (1-32) followed by the **[*]** key. For example, press **[4] + [*]** to create the passcode for User 4.
10. When the display prompts, "Please enter new code," enter a new passcode. If the error tone sounds, try a different new passcode. Enter the new passcode again for verification.
11. Press the **[Cmd]** key twice to return to the three Cmd 56 selections.
12. Press **[2]** to assign a passcode authority level to the new user.
13. Enter the user number (1-32) followed by the **[*]** key. For example, press **[4] + [*]** to assign an authority level for User 4.
14. Enter an authority level (1-4) by pressing the appropriate numeric key.
15. Use Steps 1-14 to add additional new users, or press the **[Cmd]** key until the command center emits a single beep tone and the display returns to the normal display.



The new user passcode, area assignment and authority level are automatically logged into the system's programming memory. Make sure any programming records are properly updated.

Delete Passcodes**(Cmd 58)**

This command allows users with the appropriate authority level to delete passcodes. **You cannot delete your own passcode.**

1. Ensure that the system is turned off (On indicator is off).
2. Press [**Cmd**] + [**5**] + [**8**]. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center prompts you to delete a code.
4. Enter the user passcode number (1-32) to delete followed by the [*] key.
5. Press [**Cmd**] to exit this feature. If no keys are pressed, the command center automatically returns to the normal display.

Renew One-time Passcodes**(Cmd 53)**

One-time passcodes are able to turn off the system once and then expire. This command allows users with the applicable authority level to renew the passcode once it has been used.

1. Ensure that the system is turned off (On indicator is off).
2. Press [**Cmd**] + [**5**] + [**3**]. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center scrolls through the available one-time passcodes.
4. Press [**0**] + [*] to renew all one-time passcodes, or enter the number of the code you wish to renew followed by the [*] key.
5. The display indicates which passcode is renewed, then the system returns to the normal display.

Check System Troubles**(Cmd 4)**

To check a system trouble, the system maybe be turned on or off.

1. Press [**Cmd**] + [**4**]. The trouble tone silences and the display scrolls the list of troubles. Follow the instructions shown on the command center display to view a trouble event.
2. Press [**Cmd**] to return to the off state.

View Alarm Memory**(Cmd 40)**

1. Ensure that the system is turned off (On light is off).
2. Press [**Cmd**] + [**4**] + [**0**]. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center displays all points in the alarm memory.
4. To clear the alarm memory, turn the system on again.

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View System Trouble

(Cmd 42)

This command allows you to view system troubles. See Table 72 for message descriptions.

1. Ensure that the system is turned off (On indicator is off).
2. Press **[Cmd] + [4] + [2]**. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center displays all system trouble events one at a time.
4. Press **[Cmd]** to return to the normal display.

Call for Service Message	Message Description
Comm Fail, Destination 1 [2]	System attempted to send report to this routing destination, but failed. See Appendix A of this Program Entry Guide for details on the failed communication event.
System battery is low	The battery connected to the D6412 has fallen below 12.1 volts.
System battery is missing	The battery connected to the D6412 is badly damaged or discharged, or disconnected. Nominal voltage below 12.1 V, battery is low; nominal voltage below 10.2 V, battery is missing.
Data bus missing, Device ###	The SDI data bus device set to the address shown in the display (###) is missing or has stopped responding.
Data bus tamper, Device ###	The tamper on the SDI data bus device set to the address shown in the display (###) is open.
Data bus reset, Device ###	The SDI data bus device set to the address shown in the display (###) has reset its microprocessor.
Data bus trouble, Device ###	The SDI data bus device set to the address shown in the display (###) is sending a trouble message to the panel. Troubles are defined per type. See the instructions for the device shown to learn the exact nature of the trouble.
Bell supervision fault, PO2	Programmable Output 2 (PO2) can be programmed as a supervised siren/speaker. See <i>Outputs</i> , page 73, for more information. When PO2 is programmed for supervision, disconnecting or shorting the siren or speaker generates this fault condition.
RF Rcvr Trouble, Device ###	The premises RF receiver set to the displayed SDI address (Device ###) is sending a trouble message to the D6412. Troubles are defined per receiver type. See the instructions for the receiver shown to learn the exact nature of the trouble.
RF Rcvr Jammed, Device ###	The premises RF receiver set to the displayed SDI address (Device ###) is sending a jammed message to the D6412.

Table 72: Call for Service Messages

The user may also press **[0]** to view system trouble details. See *System Text*, page 85, for information on entering Call for Service text.

View Point Trouble

(Cmd 48)

This command allows you to view points in trouble.

1. Ensure that the system is turned off (On indicator is off).
2. Press **[Cmd] + [4] + [8]**. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center scrolls through all points that are in trouble.
4. Turn the system on again to clear the memory.

View Log

(Cmd 85)

This command allows you to display the last 254 system events.

1. Press **[Cmd] + [8] + [5]**. The command center may prompt you to enter a passcode.
2. Enter a valid passcode if necessary. The command center displays the event and user information as well as the date and time of the event. Press **[*]** to advance to the next event.
3. Press **[Cmd]** to return to the normal display.

System Test**(Cmd 41)**

This command allows you to check system function by testing the system's bell, strobe, battery and phone line. The installer determines which items can be tested. See *System Test Configuration Options*, page 21, for more information.

1. Ensure that the system is turned off (On indicator is off).
2. Press [**Cmd**] + [**4**] + [**1**]. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center begins testing the first component. A test can take up to ten minutes.

When the tests are completed the system returns to the off state. You may quit the current test and proceed to the next one by pressing [*****], or you may abort the system test by pressing [**Cmd**].



When testing the bell and strobe, check for bell/strobe activation.

Walk Test**(Cmd 44)**

This command allows the user to test detection devices in the system. This should be performed weekly.

1. Ensure that the system is turned off (On light is off).
2. Press [**Cmd**] + [**4**] + [**4**]. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center begins the walk test and scrolls all points to be tested. You must trigger each device (Reed switch, PIR, etc.) to test it. The command center indicates the test status of each point.
4. To stop the test, press [**Cmd**].



Test fire detection devices (smoke/heat detectors) weekly as instructed by the security company.

Reset the System**(Cmd 47)**

This command resets the system, including fire points, after an alarm. The procedure lasts approximately 20 seconds.

1. Ensure that the system is turned off (On light is off).
2. Press [**Cmd**] + [**4**] + [**7**]. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The system resets, as indicated on the display. When complete, the command center returns to the normal display.

Turn Watch On/Off**(Cmd 61)**

The Watch feature causes the system to watch specific points when the system is turned off. The D6412 alerts you to opened doors, windows, etc.

This command turns the Watch feature on and off (see also *Select Watch Tone*, page 120, and *Select Watch Points*, page 120).

1. Ensure that the system is turned off (On indicator is off).
2. Press [**Cmd**] + [**6**] + [**1**]. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center displays the current Watch status (on or off).
4. Press [**1**] to turn the Watch feature On, or press [**2**] to turn it Off.
5. Press [**Cmd**] to exit this function.

Appendix D

Select Watch Tone

(Cmd 62)

The Watch feature causes the system to watch specific points when the system is turned off. The D6412 alerts you to opened doors, windows, etc.

This command determines how the system responds to faulted watch points (see also *Select Watch Points*, page 120).

1. Ensure that the system is turned off (On indicator is off).
2. Press [Cmd] + [6] + [2]. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center displays the current Watch tone.
4. Select the desired tone by pressing the appropriate corresponding key. The display indicates your selection.

Watch Tone	Key	Description
Off	1	Display point identity; no tone on faulted points
Short Beep	2	Display point identity; sound short tone on faulted points
Beep Till Key	3	Display point identity; sound tone till [Cmd] key is pressed
Beep Till Closed	4	Display point identity; sound tone till point returns to normal or till [Cmd] key is pressed

Table 73: Watch Tone Descriptions

5. Press [Cmd] to exit this function.

Select Watch Points

(Cmd 63)

After programming the system's response to watch points (see *Select Watch Tone*, page 120), you must determine which points the system watches. This command programs watch points. 24-hour and 24-hour Fire points cannot be watched.

1. Ensure that the system is turned off (On indicator is off).
2. Press [Cmd] + [6] + [3]. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center displays all the current watch points followed by instructions for changing the watch status.
4. Press [0] + [*] to turn off all the points, or press the appropriate key followed by [*] for individual points. The display scrolls the remaining points. Repeat this step to program all the desired points.
5. When complete, press [Cmd] to exit this function.

Extend Auto On Time

(Cmd 51)

If entered during the Auto On Pre-alert Time, this command delays the auto-on time by one hour.

1. Ensure that the system is turned off (On light is off).
2. Press [Cmd] + [5] + [1]. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center displays the new time and date for the Auto-On Time.
4. Press [Cmd] to exit this function.

Change Skeds

(Cmd 52)

This command changes the time the sked turns the system on (All, Part or Part 2), off or generates an output.

1. Ensure that the system is turned off (On indicator is off).
2. Press [Cmd] + [5] + [2]. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center scrolls the available options.

To Change All On Skeds (see *Change Skeds for Steps 1-3*):

4. Press [1] and the command center scrolls the All On skeds already programmed in the system.
5. Press the number key of the sked you want to change followed by the [*] key.
6. Enter the time for the system to automatically turn All On using 24-hour format (HHMM).
7. Select the days for the system to perform this sked (Sunday = 1 through Saturday = 7, all days = 8).
8. If all days are programmed, press the [8] key to remove all days first, then press the corresponding number key(s) to add the desired days.

To Change Part On Skeds (see Change Skeds, page 120, for Steps 1-3):

4. Press [2] and the command center scrolls the Part On skeds already programmed in the system.
5. Press the number key of the sked you want to change followed by the [*] key.
6. Enter the time for the system to automatically turn Part On using 24-hour format (HHMM).
7. Select the days for the system to perform this sked (Sunday = 1 through Saturday = 7, all days = 8).
8. If all days are programmed, press the [8] key to remove all days first, then press the corresponding number key(s) to add the desired days.

To Change Part 2 On Skeds (see Change Skeds, page 120, for Steps 1-3)::

4. Press [3] and the command center scrolls the Part 2 On skeds already programmed in the system.
5. Press the number key of the sked you want to change followed by the [*] key.
6. Enter the time for the system to automatically turn Part 2 On using 24-hour format (HHMM).
7. Select the days for the system to perform this sked (Sunday = 1 through Saturday = 7, all days = 8).
8. If all days are programmed, press the [8] key to remove all days first, then press the corresponding number key(s) to add the desired days.

To Change Off Skeds (see Change Skeds, page 120, for Steps 1-3)::

4. Press [4] and the command center scrolls all the Off skeds already programmed in the system.
5. Press the number key of the sked you want to change followed by the [*] key.
6. Enter the time for the system to automatically turn Off using 24-hour format (HHMM).
7. Select the days for the system to perform this sked (Sunday = 1 through Saturday = 7, all days = 8).
8. If all days are programmed, press the [8] key to remove all days first, then press the corresponding number key(s) to add the desired days.

To Change Output Skeds (see Change Skeds, page 120, for Steps 1-3)::

4. Press [5] and the command center scrolls all the Output skeds already programmed in the system.
5. Press the number key of the sked you want to change followed by the [*] key.
6. Enter the time for the system to automatically operate the output using 24-hour format (HHMM).
7. Select the days for the system to perform this sked (Sunday = 1 through Saturday = 7, all days = 8).
8. If all days are programmed, press the [8] key to remove all days first, then press the corresponding number key(s) to add the desired days.

Change Outputs**(Cmd 54)**

This command changes turns pre-programmed outputs on and off.

1. Ensure that the system is turned off (On indicator is off).
2. Press [Cmd] + [5] + [4]. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center displays the current status (on or off), followed by instructions to turn the output on or off.
4. Press [0] + [*] to turn off all the outputs, or press the appropriate key followed by [*] for individual points. The display shows the new output status.
5. Press [Cmd] to return to the normal display.

Appendix D

Remote Arming with Telephone, Area 1

This function controls the built-in telephone-arming feature for Area 1. When enabled, the panel answers the phone on the ring count for remote programming.

When the panel answers the phone:

- If the panel is All or Part On, it sounds three beeps and starts the handshake tone for remote programming.
- If the panel is Off, it sounds one short beep followed by a 2-second pause (approximately), and then starts the handshake tone for remote programming (one long beep). Press and hold the [5] key* for two seconds immediately **after** the first short arming beep and **before** the handshake tone begins.
- The panel will arm if it detects a [5] key press from the telephone (All On with Delay, faulted points are force-armed). The panel waits three seconds, sounds three beeps (new armed state) and then hangs up.

* If arming from a cell phone, quickly press the [5] key three times. If pressing and holding the [5] key for two seconds from a house (landline) phone does not produce a tone long enough to arm Area 1, retry by quickly pressing the [5] key three times.



Remotely disarming the panel cannot be done with a telephone.

Remote Program

(Cmd 43)

This command forces the system to connect to the security company's remote computer for programming.

1. Ensure that the system is turned off (On indicator is off).
2. Press [Cmd] + [4] + [3]. The command center may prompt you to enter a passcode.
3. Enter a valid passcode if necessary. The command center indicates remote programming in progress. The command center exits this command when programming is complete.

All Areas Off

(Cmd 81)

Depending on the areas assigned to the user's authority level, this command can turn all areas off when the system is split into two to four areas.

1. Press [Cmd] + [8] + [1]. The command center may prompt you to enter a passcode.
2. Enter a valid passcode if necessary. The command center indicates that all areas are turned off.

All Areas On

(Cmd 80)

Depending on the areas assigned to the user's authority level, this command can turn all areas on when the system is split into two to four areas.

1. Press [Cmd] + [8] + [0]. The command center may prompt you to enter a passcode.
2. Enter a valid passcode if necessary. The command center indicates that all areas are turned on.

Move to Area

(Cmd 80)

This command allows the user to control multiple areas from one command center when the system is split into two to four areas.

1. Press [Cmd] + [5] + [0]. The command center may prompt you to enter a passcode.
2. Enter a valid passcode if necessary. The command center scrolls the available areas (1 to 4) followed by instructions to press a key or press [Cmd] to exit.

Auto-Forward On Setup

(Cmd 83)

This command allows the user to program the auto-forward sequence to redirect all incoming calls to a specified telephone number when the system is All On.

1. Press [Cmd] + [8] + [3]. The command center may prompt you to enter a passcode.
2. Enter a valid passcode if necessary. The command center scrolls directions for entering digits for Auto-Forward On.
3. Enter the desired sequence for auto-forwarding calls. Press and hold [Cmd] to exit.

Auto-Forward Off Setup

(Cmd 84)

This command allows the user to program the auto-forward sequence to cancel the redirection of all incoming calls to a specified telephone number when the system is turned off.

1. Press [**Cmd**] + [**8**] + [**4**]. The command center may prompt you to enter a passcode.
2. Enter a valid passcode if necessary. The command center scrolls directions for entering digits for Auto-Forward Off.
3. Enter the auto-forward off sequence. Press and hold [**Cmd**] to exit.

Auto-Forward On/Off

(Cmd 82)

This command turns the Auto-Forward feature on and off.

1. Press [**Cmd**] + [**8**] + [**2**]. The command center may prompt you to enter a passcode.
2. Enter a valid passcode if necessary. The command center displays the current status and available options. Press [**1**] to turn Auto-Forward On or press [**2**] to turn Auto-Forward Off.
3. Press [**Cmd**] to exit this feature.

LED Command Center

The system remembers passcodes entered for approximately 10 seconds after you have stopped pressing keys. To log out of the system, press the [Cmd] key twice. The Cmd LED will stay out acknowledging that you have successfully logged out.

The LED Command Center lights different indicators (numbers, All, Part, etc.) on the display to indicate system status. ***The D6412 system cannot be programmed from an LED Command Center.*** The command center may have up to 21 keys that perform various functions (see *Keys*, page 111, under the *Text Command Center*, page 111).

The LED Command Center also emits various tones as described above (see *Tones*, page 111, under *Text Command Center*, 111).

Commands

Commands allow the user to carry out various tasks (add/delete passcodes, set date/time, test the system, etc.). Commands will be indicated as follows: [**Cmd**] + [**6**] + [**3**]. To enter this command, press the [Cmd] key followed by the [**6**] key and then the [**3**] key.

Keypad Adjust

(Cmd 49)

See *Text Command Center, Keypad Adjust (Cmd 49)*, page 112, for instructions on adjusting the command center's keystroke volume. The display brightness cannot be adjusted on the LED Command Center.

Silence Alarms

During an alarm, the alarm tone sounds and the alarming points illuminate on the display. If a valid passcode is entered before the system dials the security company, the alarm report is cancelled.

1. Enter a valid passcode to silence the alarm and turn off the system (if it was on). If this is not done, an alarm report is sent to the central station. To determine if an alarm was reported (and later review the points that alarmed), see *View Alarm Memory*, page 117.
2. Press [**Cmd**] to remove the alarm message from the display.

Turn the System Off

Enter a valid passcode to turn off the system (disarm). The All or Part indicator is off.

Appendix D

Turn the System All On

(Cmd 1)

This function turns the entire system on.

1. Make sure all points are normal (not faulted).
2. Press **[All On]**. If required, enter a valid passcode.
3. Exit Delay begins if all points are normal. Leave the premises during this time. If the system has a faulted point, either close it or bypass it (see *Bypass Points*, page 115). During Exit Delay, you may stop the system from turning on by entering a valid passcode. If you wish to bypass points, press **[Bypass]**; you may skip the delay by pressing **[No Delay]**; or you may turn the system Part On by pressing **[Part On]**.
4. During the last 10 seconds of Exit Delay, the command center allows for a “last chance” response to disarm the system. During this time, the command center emits a double tone every second. The system then turns All On.
5. To turn the system off, enter a valid passcode.

Turn the System Part On

(Cmd 2)

This function turns on part of the system, leaving the rest of the system Off.

1. Make sure all points are normal (not faulted).
2. Press **[Part On]**. If all Part points are normal, the Exit Delay time starts. If there are faulted points, return them to normal or bypass them. The command center may prompt you to enter a passcode by flashing the Cmd indicator.
3. Enter a valid passcode if necessary. During Exit Delay, you may stop the system from turning on by entering a valid passcode. If you wish to turn the system Part On with No Delay, press **[No Delay]**, or you may bypass points by pressing **[Bypass]**.
4. During the last 10 seconds of Exit Delay, the command center allows for a “last chance” response to disarm the system. During this time, the command center emits a double tone every second. The system then turns Part On.
5. To turn the system off, enter a valid passcode.

Turn the System Part 2 On

(Cmd 3)

This command turns on part of the system, leaving the rest of the system Off (see *Set Part 2 Points*, page 124).

1. Make sure all points are normal (not faulted).
2. Press **[Cmd] + [3]** to turn the system Part 2 On. The command center may prompt you to enter a passcode by flashing the Cmd light.
3. Enter a valid passcode if necessary. During Exit Delay, you may stop the system from turning on by entering a valid passcode. If you wish to turn the system Part 2 On with No Delay, press **[No Delay]**, or you may bypass points by pressing **[Bypass]**.
4. During the last 10 seconds of Exit Delay, the command center allows for a “last chance” response to disarm the system. During this time, the command center emits a double tone every second. The system then turns Part 2 On.
5. To turn the system off, enter a valid passcode.

Set Part 2 Points

(Cmd 65)

1. Make sure the system is turned off (All and Part are off).
2. Press **[Cmd] + [6] + [5]**. The command center may prompt you to enter a passcode by flashing the Cmd light.
3. Enter a valid passcode if necessary. The command center display turns points already assigned for Part 2 on steady. Flashing points are available for Part 2 assignment.
4. Enter the Point Number (1 through 40) and press **[*]** to toggle it Yes or No for Part 2 (Yes = Active, ready to detect intrusion / No = Non-active, you can move freely without sounding an alarm). Repeat this procedure until all the desired points are selected for Part 2.
5. Press **[Cmd]** to exit this function.

Turn the System On with No Delay

See *Text Command Center, Turn the System On with No Delay*, page 113, for steps to perform this command. The command center lights All or Part when the system is on.

Turn the System On with No Exit Tone

See *Text Command Center, Turn the System On with No Exit Tone*, page 114, for steps to perform this command.

Turn the System On with Points Faulted (Bypass Points, Force Arm)

See *Text Command Center, Turn the System On with Points Faulted (Bypass Points, Force Arm)*, page 114, for steps to perform this command.

Bypass Points

This command allows you to bypass one or more points before turning the system All On, Part On or Part 2 On. Bypassed points can be accessed when the system is turned on without causing an alarm.

See *Text Command Center, Bypass Points*, page 125, for steps to perform this command. Bypassed points flash on the display.

Date and Time (Cmd 45)

See *Text Command Center, Date and Time*, page 115, for steps to perform this command. The display lights a digit to represent each entry (for example, points 1 through 6 light for each entry in the date and points 1 through 4 light for each entry in the time).

Change Passcodes (Cmd 55)

See *Text Command Center, Change Passcodes*, page 115, for steps to perform this command.

Change Other Passcodes (Cmd 56)

This command allows users with the applicable authority level to change passcodes for each user in the system. See *Text Command Center, Change Other Passcodes*, page 115, for steps to perform this command.

Change Other's Passcode Level (Cmd 56)

This command allows users with the applicable authority level to change passcode authority levels for each user in the system. You cannot change your own passcode authority level. See *Text Command Center, Change Other's Passcode Level*, page 116, for steps to perform this command.

Add a Passcode (Cmd 56)

This command allows users with the applicable authority level to add new passcodes to the system. See *Text Command Center, Add a Passcode*, page 116, for steps to perform this command.

Delete Passcodes (Cmd 58)

This command allows users with the applicable authority level to delete passcodes. You cannot delete your own passcode. See *Text Command Center, Delete Passcodes*, page 116, for steps to perform this command.

Renew One-time Passcodes (Cmd 53)

One-time passcodes are able to turn off the system once and then expire. This command allows users with the applicable authority level to renew the passcode once it's been used. See *Text Command Center, Renew One-time Passcodes*, page 117, for steps to perform this command.

Appendix D

Check System Troubles

(Cmd 4)

1. Make sure the system is turned off (All and Part are off).
2. Press [Cmd] + [4]

Point #	Trouble Condition	Description
2	System Trouble	Press [2] to determine the specific trouble. See <i>Viewing System Trouble</i> , page 126.
3	Remote Program Session Active	The security company is connected to the system via the telephone line.
1	Weekly Test Due	Weekly system test must be performed. Press [1] to start the test. See <i>System Test</i> , page 127.
5	Date and Time Lost	Press [5] to set the date and time.
6	Running on Battery Only	Power to the system is disconnected or failed.
8	Point Trouble	Press [8] to see point trouble. See <i>Viewing Point Trouble</i> , page 127.
10	Alarm Memory	Press [0] to view previous alarms.

Table 74: LED Command Center System Trouble Descriptions

3. Press [Cmd] to exit this command.

View Alarm Memory

(Cmd 40)

1. Make sure the system is turned off (All and Part are off).
2. Press [Cmd] + [4] + [0]. The command center displays all the points in alarm memory one at a time. If the point indicator is flashing rapidly, the alarm was transmitted to the security company. If the point flashes slowly, a cancel report followed the alarm report. If the point comes on steady, the alarm was aborted and no reports were sent.
3. To clear the alarm memory, turn the system on.

Viewing System Trouble

(Cmd 42)

1. Make sure the system is turned off (All and Part are off).
2. Press [Cmd] + [4] + [2]. The command center may prompt you to enter a passcode by flashing the Cmd light.
3. Enter a valid passcode if necessary. The command center displays the current system trouble events by lighting the point indicators.

Number	Point Indicator	Description
1	On	Telephone Line Fail
	Flashing Slow	Comm Fail, Destination 1
	Flashing Fast	Comm Fail, Destination 2
2	On	Alternate Comm Trouble
3	On	Standby Jumper Closed
4	On	Backup Battery Low
	Flashing Slow	Backup Battery Missing
5	On	Bell Supervision Fail
6	On	RF Receiver Jammer
	Flashing Slow	RF Receiver Trouble
7	On	Data Bus Device Missing
	Flashing Slow	Data Bus Device Tamper
	Flashing Fast	Data Bus Device Trouble/Reset
8	On	System Fault
	Flashing Slow	Service Interval

Table 75: Point Indicator Descriptions

4. Press [Cmd] to return to the off state.

View Point Trouble

(Cmd 48)

1. Make sure the system is turned off (All and Part are off).
2. Press [Cmd] + [4] + [8]. The command center may prompt you to enter a passcode by flashing the Cmd indicator.
3. Enter a valid passcode if necessary. The command center displays all points in trouble one at a time.

Point #	Trouble Condition
Off	No Point Trouble
On	Wiring Fault
Flashing Slow	RF Sensor Low Battery
Flashing Fast	RF Sensor Missing

Table 76: Point Number Trouble Conditions

4. Press [Cmd] to return to the off-state.

System Test

(Cmd 41)

See *Text Command Center, System Test*, page 119, for steps to perform this command.

The command center lights the follow points during different test.

Point #	Testing
1	Bell
2	Strobe
3	Backup Battery (up to 4 min.)
4	Communications (up to 10 min.)

Table 77: System Test Light Descriptions

The testing progress is indicated by the flash rate of the point indicator.

Point	Testing
Flashing Slow	Test underway
Flashing Fast	Test failed
On Steady	Testing complete

Table 78: System Test Point Indicators

Walk Test

(Cmd 44)

See *Text Command Center, Walk Test*, page 119, for steps to perform this command. Press [*] to exit the walk test.

Reset the System

(Cmd 47)

See *Text Command Center, Reset the System*, page 119, for steps to perform this command.

Turn Watch On/Off

(Cmd 61)

See *Text Command Center, Turn Watch On/Off*, page 119, for steps to perform this command. Entering Cmd 61 and a valid passcode toggles the Watch feature On and Off. When Watch is turned off, the command center emits 3 beeps. When Watch is turned on, the command center emits 1 beep.

Select Watch Tone

(Cmd 62)

See *Text Command Center, Select Watch Tone*, page 120, for steps to perform this command.

Select Watch Points

(Cmd 63)

See *Text Command Center, Select Watch Points*, page 120, for steps to perform this command. Watched points come on steady and points available to watch flash on the display.

Extend Auto On Time

(Cmd 51)

See *Text Command Center, Extend Auto On Time*, page 120, for steps to perform this command.

All Areas On

(Cmd 80)

Enter [Cmd] + [8] + [0] plus a valid passcode to turn all areas on.

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Appendix D

All Areas Off

(Cmd 81)

Enter [Cmd] + [8] + [1] plus a valid passcode to turn all areas on.

Auto-Forward On/Off

(Cmd 82)

See *Text Command Center, Auto-Forward On/Off*, page 123, for steps to perform this command.

Remote Arming with Telephone, Area 1

See *Text Command Center, Remote Arming with Telephone, Area 1*, page 122, to perform this function.

Keyswitch

You can connect a maintained or momentary contact arming station (keyswitch) to master arm/disarm any of the areas in the system. The keyswitch connects to an on-board or off-board point's sensor loop. Outputs can be programmed to activate arming status LEDs for keyswitch arming stations. See *Outputs* for more information.

Arming/Disarming

See *Point Index Configuration*, page 57, for details on configuring keyswitch arming options.

Silencing Alarms

To silence alarms, operate the keyswitch. If the area is armed, operating the keyswitch to silence the alarm also disarms the area. If the area is disarmed, operating the keyswitch silences the alarm but does not arm the area.

RF Keyfob

The RF3332 and RF3334 Wireless Keyfobs allow the user to arm and disarm the D6412 system. The RF3334 can also control other devices connected to the system within the protected area. The keyfobs are programmed with a unique code that allows it to only work with devices in the specific system.

The keyfobs have a range of up to 500 ft. (150 m) in open air, but normal building materials can greatly reduce that range. If the user is in an automobile or the premises has aluminum siding, the range can be further reduced. **Radionics recommends testing the keyfob at various locations within the premises to test the range.**



The RF3332 and RF3334 Keyfobs have not been investigated by UL at this time.

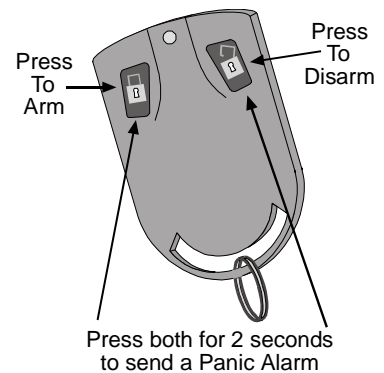
RF3332 Features

The RF3332 can arm and disarm the system. The keyfob can send a Panic code to the security company if the system is programmed to do so. The LED flashes to indicate signals sent to the alarm system.

To arm the system, press the left button with the closed padlock.

To disarm the system, press the right button with the open padlock.

To send a panic alarm, press and hold both buttons together for 2 seconds.



RF3334 Features

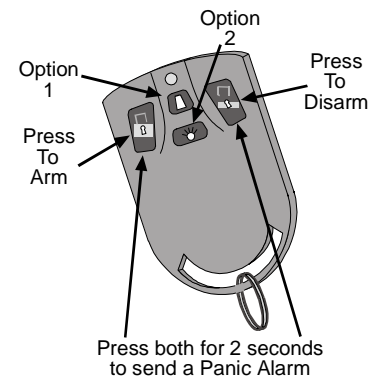
The RF3334 can arm and disarm the system. The keyfob can send a Panic code to the security company if the system is programmed to do so. The keyfob can also control other devices within the protected area. The LED flashes to indicate signals sent to the alarm system.

To arm the system, press the left button with the closed padlock.

To disarm the system, press the right button with the open padlock.

To send a panic alarm, press and hold both buttons together for 2 seconds.

The two option buttons in the center can be programmed to operate other devices with the protected area.



See the *RF3332 and RF3334 Wireless Keyfobs User Guide* (P/N 36954) for more information on keyfob use and maintenance.

Appendix E

Appendix E: Programming from a Text Command Center



A Text Command Center set to Address 0 can be used for keypad programming. The Installer Switch must be closed.



Press the [Cmd] key when the Text Command Center display prompts you to press the “#” key.

Installer Mode First

1. Close the Installer Switch.
2. Enter the Installer Passcode (default is 6 5 4 3).
3. Press [Cmd] + [4] [1]
4. Press [8] to enter programming mode. The command center displays **Radionics D6412 Revision ####**. for three seconds, then shows **Nib: 0000 D=0**. At this point you are ready to begin programming Nibbles.



If the D6412 is armed, you can only enter Programming Mode from the Installer's Keypad (Keypad Address 0).

Programming Mode

Viewing Nibbles

Each parameter described in this guide is composed of one or more Nibbles and each Nibble has its own number.

For example, the display may show **Nib: 0000 D=0**. The **Nib: 0000** indicates which Nibble you are at (in this case, Nibble 0000 which is the first digit of the Phone Number 1 for Destination 1 parameter). The second part of the display, **D=0**, indicates the value (data) that is currently set for that Nibble.

Going Direct

To view a specific Nibble, enter the Nibble number. You must enter the Nibble as a four-digit number. For example, to go to Nibble 0221, enter 0221. The digits entered appear in the second line of the display.

Press [Cmd] to enter the Nibble value and go to that Nibble. In this case the display will show **Nib: 0221 D=1**. The display is now showing the Nibble and value for the desired Nibble.

Scrolling

To scroll through the Nibbles, press the [Cmd] key to move forward and press the [*] key to move backward.

Editing Nibble Data

To change the value set for a Nibble, go to the desired Nibble by either going directly to it or scrolling through the Nibbles to reach the desired one.

When the desired Nibble appears on the display, you will see the current value for that Nibble. To change it, simply enter the new value. You'll see the new value appear on the second line of the display.

Press the [*] key to accept the new value. The display changes to show the new value.

Incorrect Nibble Entries

If you make an error entering a Nibble value, press the [Cmd] key once. Then reenter the Nibble number you wish to configure and enter the correct value followed by the [*] key.

Programming Text Nibbles

All text parameters accommodate 16 characters of text with each character occupying two Nibbles. When a text Nibble is selected, the panel goes into a special text-programming mode. When you enter the text-programming mode, you are automatically positioned to enter the first character of the text.

In text-programming mode the command center keys take on different characters (see Table 79). Press the keys repeatedly to scroll to the desired character.

Press the [0] key once to clear a character space or enter a blank space.

Key	# of Key Presses for each Character								
	1	2	3	4	5	6	7	8	9
1	.	,	?	!	-	&	<	>	1
2	A	B	C	a	b	c	2	'	
3	D	E	F	d	e	f	3		
4	G	H	I	g	h	i	4		
5	J	K	L	j	k	l	5		
6	M	N	O	m	n	o	6		
7	P	Q	R	S	p	q	r	s	7
8	T	U	V	t	u	v	8		
9	W	X	Y	Z	w	x	y	z	9
0		→	_	@	#	\$	%	*	0
*	Moves to the Nibble before the text block.								
Cmd	Moves to the Nibble after the text block.								
A	Moves the cursor to the previous character position in the text block.								
B	No Function – emits single tone when pressed.								
C	Moves the cursor to the next character position in the text block.								
All On, Part On, No Delay and Bypass keys all produce an error tone when pressed. Not used in text programming.									

Table 79: Key/Character Assignments

Exiting Programming Mode

To exit Programming Mode, press and hold the [Cmd] key and open the Installer Switch (if necessary).

Adding RF IDs (Enrolling Premises RF Devices)



Press the [Cmd] key when the Text Command Center display prompts you to press the “#” key.

When programming the D6412 to include Locations assigned to a premises RF receiver, you must enter RF Add Mode to enroll each RF transmitter, keypad and keyfob.

To enter RF Add Mode:

1. Close the Installer Switch.
2. Enter the Installer Passcode (default is 6 5 4 3).
3. Press [Cmd] + [4] + [1].
4. Press [7] for the RF menu.

To add RF ID codes into the system, press [1] when “Add RF ID? Press 1” scrolls across the display. The display then shows the following:

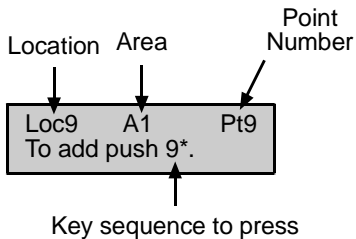


Figure 3: Adding RF ID Codes Menu Display

To add the location shown above as a RF device (Location 9 is used as an example), press [9] followed by [*]. The following display appears:

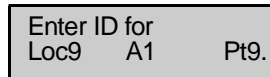


Figure 4: RF ID Code Display

Enter the 9-digit ID code found on the back of the RF device and then press [Cmd]. “ID added. Press #” appears on the second line of the display, indicating that the code has been successfully entered and accepted.

If an error message appears, make sure you enter the code as printed on the back of the device and that you only enter nine digits.

Press [Cmd]. The display returns to the first location designated as an RF device and scrolls through other RF device locations (if any). You may enter the desired location number and add the ID code as described above.

When all RF ID codes have been entered, press [Cmd] twice. The first line of the display shows “Configuring RF Please Wait.” During this period, the RF Receiver’s LED will blink approximately once every second until all ID bytes are recognized. IF the devices are successfully configured, the display returns to the scrolling RF Menu.

If an error message appears, make sure the RF Receiver’s transmit lines are properly connected to the panel and that no shorted conditions exist.

From the RF Menu, you may choose 1 to enter additional RF ID codes, or you may select one of the other RF Menu choices. If you are finished with the RF Menu, press [Cmd] to return to the main programming menu.

- **Locations 41-44:** RF Keypads (4 max – 1 per Location)
- **Locations 45-68:** RF Keyfobs on RF Receiver 1*
- **Locations 69-76:** RF Keyfobs on RF Receiver 2*

* 32 RF Keyfobs available with **BOTH** RF Receivers 1 and 2 connected to system.

Testing RF Devices

To test RF devices, press [2] when “Test RF Devices? Press 2” scrolls across the display. The display then shows the following:

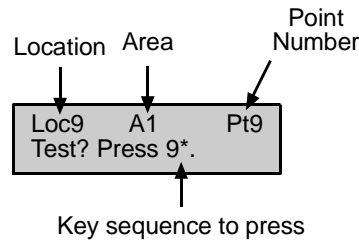


Figure 5: Test RF Devices Display

The display scrolls through all of the properly configured devices (the figure above shows Location 9 as an example) and asks whether you wish to test. Using Location 9 as an example, press [9] followed by [*] to test the RF device at Location 9. The first line of the display shows “Activate device!”, indicating that the device must be activated in order to test it. Once the device is activated, the following display appears:

L03	M01	P08
Loc9	A1	Pt9

Figure 6: RF Device Test Status Display

The first line in the figure above shows the RF device’s test status:

- **L03:** System recognizes the device and the device is operating properly. Other status displays include:
 - **L02:** System recognizes device and device operation is fair.
 - **L01:** The device must be relocated for proper operation.
- **M01:** Counts the number of device activations. For example, the device being tested is a RF3401 Point Transmitter. When the magnetic assembly is removed from the point transmitter base, the activation counter counts one activation. When the magnetic assembly is returned to the point transmitter base, the counter a second activation. Opening and closing the point transmitter’s case are also counted as activations.
- **P08:** Message packet transmission.
 - Alarm, Panic and Restoral messages are transmitted with 8 packets (Alarm and Restoral refer to the transitions in and out of alarm conditions).
 - Supervisory and Test transmissions (smoke detectors) consist of 4 packets.
 - RF keypads transmit 4 packets for all keys except the Emergency keys, which transmit 8 packets.
 - RF keyfobs transmit four packets for normal operation and 8 packets for Panic button operation (Arm and Disarm pressed simultaneously).

RF receivers must receive 7 or 8 data packets from a transmitter in order for that transmitter to be considered “Good” (L03). When testing RF keypads or keyfobs, the Panic functions must be used, otherwise the units only transmit 4 packets (see packet count above). When testing the installation of a smoke unit, the test button should not be used. Doing so will result in a 4-packet transmission.

When you have finished testing a device, press [Cmd]. The list of RF devices scrolls beginning with the first (lowest) location assigned to an RF device. You may select another location to test by entering the location number followed by the [*] key and repeating the procedure described above. If you are finished testing, press [Cmd] again and the RF Menu is displayed.

Viewing/Removing RF ID Codes

To view or remove RF ID codes, press [3] when “View or Remove RF ID? Press 3” scrolls across the display. The display then scrolls through the properly configured RF devices:

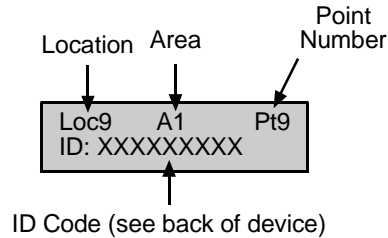


Figure 7: RF ID Code

After each ID code is shown, the display toggles to the following message before moving to the next ID code: “To remove ID press 9* (the number “9” represents the location number and is used as an example here and in the figure above).

To remove the ID code, press the number key(s) that corresponds with the location number (for this example, [9]). Then press [*]. The display then asks you to confirm your removal. Press the appropriate number key(s) followed by [*]. The display then shows “Removed ID” on the first line with the location, are and point numbers of the removed ID on the second line.

If you wish to remove additional ID codes, press [Cmd]. The scrolling list of RF devices returns. Press[Cmd] again to return to the RF Menu when you have finished removing all ID codes. Pressing [Cmd] a third time returns you to the main programming menu.

RF Transmitters and Point States

All RF transmitters with the exception of the Door/Window transmitter show only two point states: Normal and Shorted.

When you assign a location to an RF point expander, the Door/Window transmitter (RF3401) has the ability to monitor both a reed switch (magnet) and a supervised sensor loop. The D6412 automatically monitors either of the two or both.

The D6412 ignores the status of both the reed switch and the sensor loop until it sees a normal condition on either.



When a location is assigned to a RF point expander, the door/window transmitter (RF3401) has the ability to monitor both a reed switch (magnet) and a supervised sensor loop. After the ID for a door/window transmitter is added, the D6412 shows the status for the point as normal. If the first message from the transmitter is “no magnet and open loop,” the D6412 reports the point as faulted. If a “normal magnet” message is received, the magnet is supervised. If a “normal loop” message is received, the loop is supervised.

For example, after you add the ID for a door/window transmitter, the panel will show the status for the point as normal even though both the reed switch and sensor loop are faulted. If the door/window transmitter is mounted on a doorjamb and its magnet is on the door, closing the door places the magnet next to the reed switch and the point reports a normal state. From this point forward the point will appear as faulted whenever the reed switch separates from the magnet (reed switch is faulted). It will show the point as normal when the reed switch returns to normal even though the sensor loop remains faulted.

Continuing this example, a contact is mounted on a window near the door. The contact and EOL resistor are wired into the door/window transmitter’s sensor loop and the window is closed. The panel now sees the sensor loop in a normal state (not faulted). From this point forward it will show the point as faulted whenever it sees either the sensor loop or reed switch faulted. It will only show the point as normal when both the reed switch and the sensor loop return to normal.

When the reed switch only is monitored, only the Normal and Shorted point states are shown. When both the reed switch and the sensor loop are monitored, only the Normal and Shorted point states are shown. When the sensor loop only is monitored, Normal, Shorted and Open point states are shown.

Programming Key (PK32)

The PK32 Programming Key functions much like a blank floppy disk and can be used to copy a system's programming to another system. This key can also be used as a backup in the event that the system's programming entries are lost.

To access the PK32 Programming Key Menu, press [9] from the main programming menu. This menu contains the following selections:

- **Key to Panel:** Press [1] to send information from the Programming Key to the D6412.
- **Panel to Key:** Press [2] to send information from the D6412 to the Programming Key.
- **Check Key:** Press [3] to perform a functional diagnostic on the Programming Key. The status LED on the Programming Key will blink during the check. When the display shows "Check OK," the Programming Key is OK for use. Press [Cmd] to abort the check.
- **Erase Key:** Press [4] to erase the contents of the Programming Key.

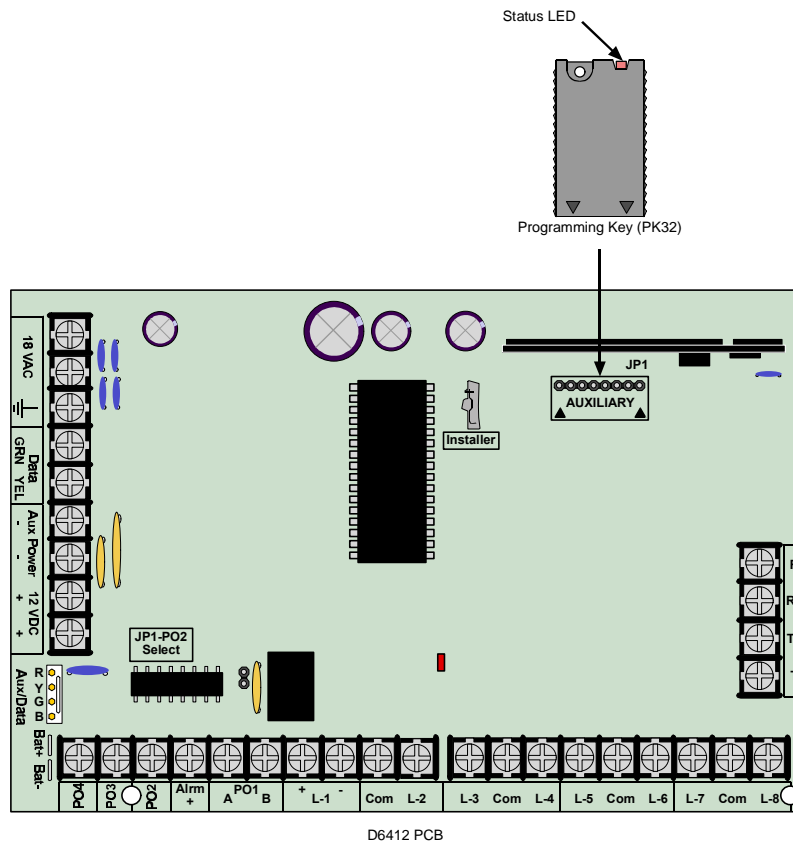


Figure 8: Installing the PK32 Programming Key on the D6412 PCB

Exiting Installer Mode

When you are ready to exit the Installer's Menu and return the system to normal operation, open the Installer's Switch. The following screen appears for approximately 10 seconds:

```
D6412   Rev X.XX
Please Wait...
```

Figure 9: Please Wait Display

After the wait period, the text command center display returns to normal (disarmed, no fault/trouble conditions).

Appendix F

Appendix F: RAM IV and Log

Log

The Log can store up to 254 events. When it reaches 75% full, the panel sends a Log Threshold [85] report. When the D6412 Log reaches capacity, the system sends a Log Overflow [84] report to the security company.

RAM IV can accept a download from the D6412 Log, thus clearing the log file. If the log is not cleared it begins writing over previous events.

The first line of the log shows the event description (see *Appendix B: Panel Event and Reporting Formats*). The second line of the log display alternates between the time and date of the event and the area, point (device), user and communication information for the event. The panel displays time in 24-hour format and the date in MM/DD/YY format.

To view the log, press [Cmd] + [8] + [5]. The Command Center may prompt you to enter a valid passcode. Press the [*] key to advance to the next event. Press [Cmd] to exit the log and return to the Off state.

Area, Point/Device/Line, User, Communication Data

The log employs the following characters to communicate certain information.

Display	Description
A#	Area Number
Pt##	Point Number
Dv###	Device Number
Ln##	Phone Line Number
Mn#	Minutes till Auto Arm Sked
U##	User Number
##	Communication Status for Routing Destinations 1 and 2
- (dash)	Destination Disabled
A	Aborted
D	Deleted from Pending Buffer by Panel Reset
F	Failed
L	Local
P	Pending
S	Sent

Table 80: Log Display Descriptions

Figure 10 is a Text Command Center display of an event log. The first line describes the event and the second line alternates between event specific information (such as area # and point #, if applicable) and the time and date of the event.

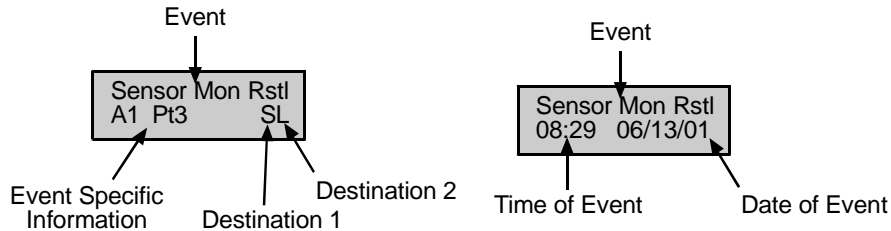


Figure 10: Log Display

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