DS7400XiV4-EXP

Security Systems

EN

Reference Guide

Control Panel

BOSCH

Contents

Figures

Tables

1.0 Introduction

1.1 Documentation Conventions

1.1.1 Type Styles Used

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

Bold text Indicates important text or terms that you should note.

Italicized text Refers you to a drawing, table, or other section of this document.

[#][9][1] Bracketed numbers represent keypad keys. When next to one another, they represent the key sequence to press for a particular function. For this example, pressing the [#] key followed by the [9] key and [1] key begins the keypad test function.

1.1.2 Notes, Cautions, and Warnings

Throughout this document there are important notes that address personal and/or equipment safety issues, system operation issues, etc. They are set off as follows:

The Important Note identifies information intended for successful operation.

The Caution Note identifies information intended to prevent an incident that may prohibit the functionality of the program/equipment.

The Warning Note identifies information intended to prevent an incident that may prohibit the functionality of the program/equipment and/or personal injury.

The No Static Note identifies components that are static-sensitive. Follow anti-static procedures when handling these components.

1.2 Scope of Document

See below for an overview of this document and other documents related to the DS7400XiV4 Control Panel:

Table 1: Document Overview

Document	Part Number	Description
User's Guide	4998154961	Contains keypad operation instructions for the end-user. Covers use of the LCD (text) keypad and the LED keypad.
Reference Guide (this document)	4998154963	Contains all wiring and setup instructions, and programming parameters with descriptions. Troubleshooting information also included.
Wireless Reference Guide	4998154962	Contains all programming parameters related to the wireless devices that are compatible with the DS7400Xi Control Panel.
Release Notes	4998154793	Contains issues and features with the control panel that were found or added after printing of the documentation.

2.0 Specifications

Table 2: Specifications

Description	Value
Enclosure Housing	20 gauge (1.0 mm), cold-rolled steel. 12.5 x 14.5 x 3 in. (31.8 x 36.8 x 7.6 cm) (H x W x D).
Temperature	+32°F to +120°F (0°C to +49°C)
Power[1]	• Input power: 18 VAC, 50 VA, 50 Hz./60 Hz • Auxiliary regulated power: 12 VDC, 1.0 A maximum • Auxiliary power voltage range: 12 V special application • Optional standby battery: 12 V, 7.0 Ah - 35 Ah maximum • Control panel current draw: 175 mA, standby • 250 mA, Alarm
Outputs	• Alarm Output: 12 VDC, 1.75 A output. Can be programmed for steady or pulsed output. • Programmable output 1[2]: Solid state current sink (1.0 A max.). Shorts to Aux. negative when activated. Use for alarm, arming state, or access control. This output is generally programmable. • Programmable output 2[2]: Solid state voltage source (500 mA max.). Can be used for alarm, arming state, or access control. This output is generally programmable. For use with devices such as the DS250 with a 4-wire base.
Zones	• 8 on-board zones. Up to 248 total zones with expansion modules. • Zone Response Time: 300 ms.

Table 2: Specifications (continued)

Description	Value
Keypads[3, 4]	• Maximum number of keypads: 15 • Maximum wire length each keypad: 1000 ft. (305 m) • Maximum total wire length in system: 6000 ft. (1830 m) • Wire type: 4 conductor, unshielded, 0.8 mm (#22 AWG) "Telephone quad" or 1.0 mm (#18 AWG) quad wiring. Can be home-run or daisy- chained.
Communicator	• Reports to two phone numbers with full single, double and backup reporting • Communicates in SIA (110 or 300 baud), 3/1, 3/1 Ext., 3/1 with Parity, 3/1 Ext. with Parity, 4/1, 4/2, BFSK, Contact ID, and Pager formats
Partitions	Up to 8 independent areas. One area can be a common area.
Users	Up to 200 individual users. Each user has own PIN number (the 4- or 6-digit code entered at the keypads) and own authority level (to determine which functions can be performed).
Lightning Protection	MOVs (metal oxide varistors) and spark gaps provide protection from lightning surges and static discharges.
Burglar/Fire Zone Inputs	• Number of on-board circuits: 8 • End-of-line resistor: 2.2 k Ω (P/N 25899, provided) • Loop resistance tolerance: 60 Ω

Table 2: Specifications (continued)

Description	Value
Fire Signal Initiating Circuit (2-wire mode)	Fire circuit works with 2- or 4-wire detectors and has optional alarm verification. • Number of circuits: 8 on-board • Type of circuit: Class B, latching • End-of-line resistor: 2.2 k Ω (P/N 25899, provided) • Supervisory current: 5.5 mA • Maximum short circuit current: 22 mA • Maximum line resistance: 60 Ω • Circuit voltage range: 8.5 VDC to 14.1 VDC • Total detector standby current: 2.5 mA
Multiplex Bus Wiring Requirements[5]	• 0.8 mm (#22 AWG). Up to 610 m (2000 ft.) per system. • 1.0 mm (#18 AWG). Up to 1525 m (5000 ft.) per system.
Multiplex Zone Sensor Loop Wiring	Maximum wire length not to exceed 150 m (500 feet) regardless of the wire gauge.
Option Bus Wiring Requirements	Maximum wire length 305 m (1000 feet) per home-run.
Maximum Load Currents	See *Table 3*.
Backup Battery Calculation	Use *Table 4* to calculate the standby battery capacity when using the DS7400Xi.
Standby Current Load	See *Table 5*.

NOTES:

[1] = The total current output capacity for all auxiliary devices, including keypads and smoke detectors = 1.5 A standby, 2.5 A alarm. These ratings are maximum values. The total combined output cannot exceed the maximum load current.

[2] = Current draw should be subtracted from either maximum auxiliary or maximum alarm current draw.

[3] = No more than 2 keypads (0.8 mm/#22 AWG) or 3 keypads (1.0 mm/#18 AWG) are recommended on any 305 m (1000 ft.) run.

[4] = Shared cable is not recommended for keypad, multiplex, options bus, telephone, or siren wiring.

[5] = Do **not** use twisted-pair or shielded cable. Do **not** share cable with the keypad lines.

2.1 Maximum Load Currents

Table 3: Maximum Load Currents

Maximum Load Currents	Standby	Alarm
Maximum Current by Output: Not to exceed the maximum load currents listed above in Standby or Alarm.		
Aux. Power and Keypad (combined)	1.0 A	1.0 A
Option Power	1.0 A	1.0 A
Bell Output	–	1.75 A
Programmable Output 2	500 mA	500 mA
Loop Power	500 mA	500 mA

2.2 Backup Battery Calculation

Use *Table 4* to calculate the standby battery capacity when using the DS7400Xi.

2.3 Standby Current Load

See *Table* 5:

- Battery Ah – (20% storage + 0.375 Ah Alarm)
- *Table* 5 shows the derated battery divided by hours minus the control panel standby (175 mA).

Table 4: Backup Battery Calculation

Device	Quantity	Standby Current per Device	Total Standby Current (Quantity x Standby Current per Device)	Alarm Current per Device	Total Alarm Current (Quantity x Alarm Current per Device)
DS7400Xi (4+) Control Panel	1	175 mA	175 mA	250 mA	250 mA
DS4010i RS-232 Serial Interface Module		35 mA maximum		35 mA maximum	
DS7420i – Dual Phone Line/Bell Supervision Module		20 mA		140 mA	
DS7430 – Multiplex Expansion Module		65 mA		65 mA	
DS7432/DS7432E – 8-Input Remote Module		10 mA		10 mA	
DS7433 – 8-Input Direct Module		65 mA		80 mA	
DS7436 – Dual Multiplex Expansion Module		130 mA		130 mA	
DS7445i/DS7445V2 Keypad		75 mA		75 mA	
DS7447E/DS7447V2 Keypad		100 mA		100 mA	
DS7448 Keypad		80 mA		100 mA	
DS7457iE/DS7457iF – Single Zone Multiplex Input Module		350 µA		350 µA	
DS7460i – Dual Zone Module		1 mA		1 mA	
DS7461i – Single Zone Input Module		0.5 mA		0.5 mA	
DS7465i – Input/ Output Module		1 mA		1 mA	
DS7480 – Bell Supervision Module		7 mA		50 mA	
DS7481 – Single Phone Line Monitor		20 mA		20 mA	
DS7489 – Solid State Output Module		10 mA		750 mA[1]	
DS9484 – Remote Power Supply					
DX3010 – Octal Relay Module[1]		10 mA + 40 mA[2]		10 mA + 40 mA[2]	
DX4010i – RS-232 Serial Interface Module		25 mA		25 mA	
DX4020 – Network Interface Module		84 mA/110 mA[3]		84 ma/110 mA[3]	

Table 4: Backup Battery Calculation (continued)

Device	Quantity	Standby Current per Device	Total Standby Current (Quantity x Standby Current per Device)	Alarm Current per Device	Total Alarm Current (Quantity x Alarm Current per Device)
MX250 Series Multiplex Smoke Detectors		500 µA		560 µA	
MX775i PIR Detector		200 µA		200 µA	
MX794i PIR Detector		800 µA		800 µA	
MX934i PIR Detector		200 µA		200 µA	
MX938i PIR Detector		200 µA		200 µA	
RF3222/RF3222E Wireless Receivers		30 mA		30 mA	
2-Wire Smoke Detectors					
4-Wire Smoke Detectors					
Bells, Horns, and so on					
Other Sensors					
Door Access Control Module (DACM)					
Other					
		Grand Total		Grand Total	

[1] = Maximum current draw if using the control panel power supply. Total of all outputs **cannot** exceed 750 mA.

[2] = When calculating Standby and Alarm Current for the Octal Relay Module, use 10 mA plus 40 mA for each activated relay.

[3] = 84 mA max, 80 mA nominal 10 Base-T; 110 mA max, 100 mA nominal 100 Base-T

Table 5: Standby Current Load

Rechargeable Battery Size	Maximum Standby for 4 hours	Maximum Standby for 8 hours	Maximum Standby for 24 hours	Maximum Standby for 48 hours	Maximum Standby for 60 hours	Maximum Standby for 72 hours	Maximum Standby for 80 hours
7 Ah	1.0 A	470 mA	-	-	-	-	-
8 Ah	1.2 A	580 mA	-	-	-	-	-
14 Ah	1.5 A	1.1 A	270 mA	-	-	-	-
15 Ah	1.5 A	1.2 A	300 mA	-	-	-	-
17.2 Ah	1.5 A	1.5 A	380 mA	100 mA	-	-	-
21 Ah	1.5 A	1.5 A	500 mA	160 mA	100 mA	-	-
28 Ah	1.5 A	1.5 A	740 mA	280 mA	190 mA	130 mA	100 mA
30 Ah	1.5 A	1.5 A	800 mA	310 mA	210 mA	150 mA	120 mA
35 Ah	1.5 A	1.5 A	970 mA	400 mA	280 mA	200 mA	170 mA

2.4 Options

Table 6: Options

Module	Description	Current Draw
DS7412	RS-232 Serial Interface module	25 mA; 35 mA with LEDs on
DS7416i	Advanced Radio Communications Module	127 mA Standby and Alarm
DS7420i	Dual Phone Line/Bell Supervision Module (1 per system)	20 mA Standby; 140 mA Alarm
DS7430	Multiplex Expansion Module (1 per system)	65 mA, Standby; 65 mA, Alarm
DS7432/ DS7432E	8-Input Remote Module (up to 30 per system. Requires a DS7430 or DS7436 Multiplex Expansion Module)	10 mA, Standby; 10 mA, Alarm
DS7433	8-Input Direct Module (1 per system. Can not be used with the DS7430 or DS7436 Multiplex Expansion Modules)	65 mA, Standby; 80 mA, Alarm. Add 15 mA for each additional zone in alarm
DS7436	Dual Multiplex Expansion Module. (1 per system)	130 mA, Standby or Alarm
DS7445i/ DS7445V2	Control Station. (15 Keypads max. per system)	75 mA, Standby; 75 mA, Alarm
DS7447E/ DS7447V2	Control Station. (15 Keypads max. per system)	100 mA, Standby; 100 mA, Alarm
DS7448	Control Station. (15 Keypads max. per system)	80 mA, Standby; 100 mA, Alarm
DS7457iE/ DS7457iF	Single Zone Multiplex Input Module (requires a DS7430 or DS7436 Multiplex Expansion Module)	350 µA, Standby; 350 µA, Alarm
DS7460i	Dual Zone Module (up to 60 per system. Requires a DS7430 or DS7436 Multiplex Expansion Module)	1 mA, Standby; 1 mA, Alarm

Table 6: Options (continued)

Module	Description	Current Draw
DS7461i	Single Zone Input Module	0.5 mA Standby and Alarm
DS7465i	Input/Output Module (up to 60 per system. Requires a DS7430 or DS7436 Multiplex Expansion Module). Occupies two zones.	1 mA Standby; 1 mA with relay energized
DS7480	Bell Supervision Module (one per system)	Current Draw = 7 mA @ 12 VDC, Standby; 50 mA @ 12 VDC, Alarm
DS7481	Single Phone Line Monitor (one per system).	20 mA, Standby; 20 mA, Alarm
DS7489	Solid State Output Module (two per system)	10 mA. Provides a current sink (the output shorts to common (-) when activated). The maximum current draw for all 8 outputs combined cannot exceed 750 mA.
DS9484	Remote Notification Appliance Circuit (NAC) Power Supply designed to add four additional NACs (NFPA 72 Class B, Style Y) to a Fire Alarm Control Panel (FACP).	150 mA, Standby; 6 A maximum, Alarm
DX3010	Octal Relay Module (two per system)	10 mA + 40 mA for each relay when energized
DX4010i	RS-232 Serial Interface Module	25 mA Standby and Alarm
DX4020	Network Interface Module	84 mA max, 80 mA nominal 10 Base-T; 110 mA max, 100 mA nominal 100 Base-T
MX250	Multiplex Photoelectric Smoke Detector	0.5 mA Nominal; 0.56 mA Maximum, Alarm

Table 6: Options (continued)

Module	Description	Current Draw
MX775i	Multiplex Passive Infrared (PIR) Intrusion Detector	200 µA, Standby; 2 mA in Walk Test mode
MX794i	The MX794 is a Long Range Multiplex PIR Intrusion Detector with Self-test.	800 µA, Standby; 2 mA, Alarm.
MX934i	Multiplex Passive Infrared (PIR) intrusion detector.	200 µA, Standby; 2 mA in Walk Test mode.
MX938i	360° Ceiling Mount Multiplex PIR Intrusion Detector.	200 µA, Standby; 2.5 mA in Walk Test mode
DACM	Door Access Control Module	
RF3222 RF3222E	120-zone Wireless Receiver (up to two receivers per system. Requires use of a DS7430 or DS7436 Multiplex Expansion Module.)	30 mA

2.5 Control Panel Package Formats

The control panel is also available in three package formats:

Table 7: Package Formats

Package	Description
DS7400XiF	DS7400Xi in large red enclosure manufactured from 1.2 mm (18 gauge) cold-rolled steel, measuring 38.1 cm x 52.7 cm x 10.8 cm (15.0 in. x 20.75 in. x 4.25 in.) (H x W x D).
DS7400XiFCP	DS7400XiF package with DS7420i, DS7447E/DS7447V2 and a AE-TR16.
DS7400XiCC	DS7400Xi in an Attack Enclosure.

3.0 Control Panel Installation

The DS7400XiV4 Control Panel and the enclosure are shipped together. The control panel, however, must be installed into the enclosure. Hardware for mounting the enclosure to a wall, and the control panel to the enclosure is located in its own hardware pack.

Before servicing, remove all power including the transformer, battery, and phone line. A complete functional test is required after any programming.

Incorrect connections may result in damage to the unit.

The system is power limited except for battery terminals. All wiring entering this enclosure must be power limited.

An appropriate two-pole disconnect device must be installed by qualified service personnel, as part of the building installation.

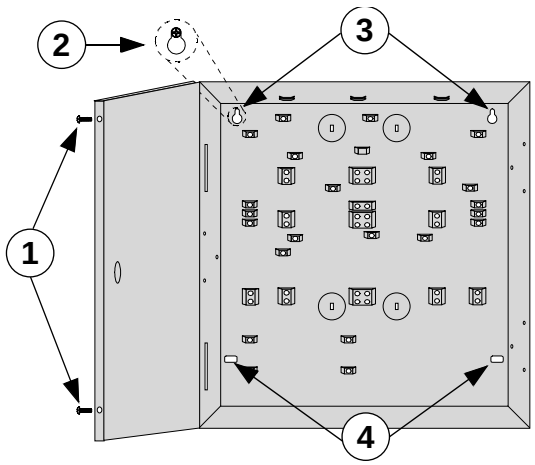
3.1 Install the Enclosure

1. Knock out the desired wire entrances on the enclosure.
2. Use the enclosure as a template and mark the top mounting holes on the mounting surface.
3. Pre-start the screws (not supplied) for these holes.
4. Place the enclosure onto these screws. See *Figure 1*.
5. Tighten the screws.
6. Screw in the remaining two screws into the bottom holes. See *Figure 1*.

Use proper anchor and screw sets when installing the enclosure on non-load-bearing surfaces, such as dry wall.

Use the screws provided to secure the enclosure cover (see *Figure 1*).

Figure 1: Enclosure Installation



1- Screws for securing the cover

2- Slide enclosure screws into upper portion of mounting hole

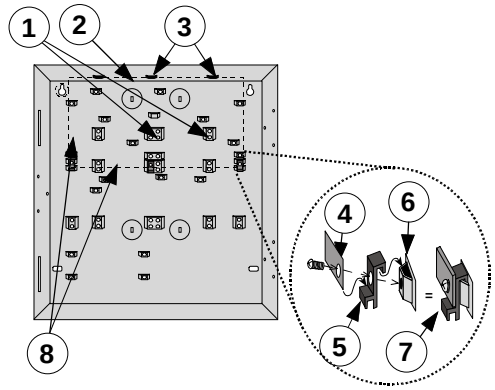
3- Top holes

4- Bottom holes

3.2 Install the Control Panel

1. Place the control panel board clips on the appropriate standoffs in the enclosure. See *Figure 2*.
2. Slide the control panel board into the slots at the top of the enclosure and then secure it with the two screws provided. See *Figure 2*.

Figure 2: Control Panel Board Mounting



1- Install support standoffs (0.08 mm) here

2- Control panel board location

3- Place edge of control panel board between slots

4- Corner of control panel board

5- Control panel board clip

6- Enclosure standoff

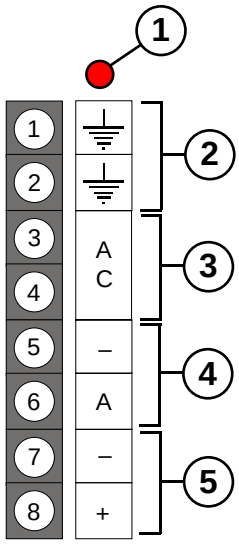
7- Completed assembly

8- Control panel board terminal block locations

3.3 Ground and Transformer Connection

1. Connect the green/yellow earth ground wire from the earth ground stud on the top hinge of the enclosure to the control panel's Terminal 1 or Terminal 2. See *Figure 3*.
2. Connect the orange and yellow wires from the transformer to the control panel's Terminal 3 and Terminal 4. See *Figure 3*.

Figure 3: Ground, AC Input, Alarm Output, and Auxiliary Power Terminal Connections



1- AC Power Indication LED

*2- **Earth ground:** Must be connected to a good earth ground, such as a cold water pipe. Also connect to enclosure cover using supplied jumper cable.*

*3- **AC input:** Use a 18 VAC 50 VA transformer. The transformer requires 50/60 Hz–do not share.*

*4- **Alarm output:** Provides 12 VDC, special application, up to 1.75 A for powering bells, siren drivers, and so on. Function programmed in Address 2734 (see Section 5.9.6 Output Programming).*

*5- **Auxiliary power:** Provides 12 VDC, special application, up to 1.0 A for powering detectors.*

3.4 Standby Battery Installation

High current arcs are possible. The red (+) battery lead and the control panel's "Batt +" connector can create high current arcs if shorted to terminals or enclosure. Use caution when working with the red lead and the control panel's "Batt +". Always disconnect the red lead from the battery before removing the red lead from the control panel.

Danger of explosion if battery is incorrectly replaced. Replace with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

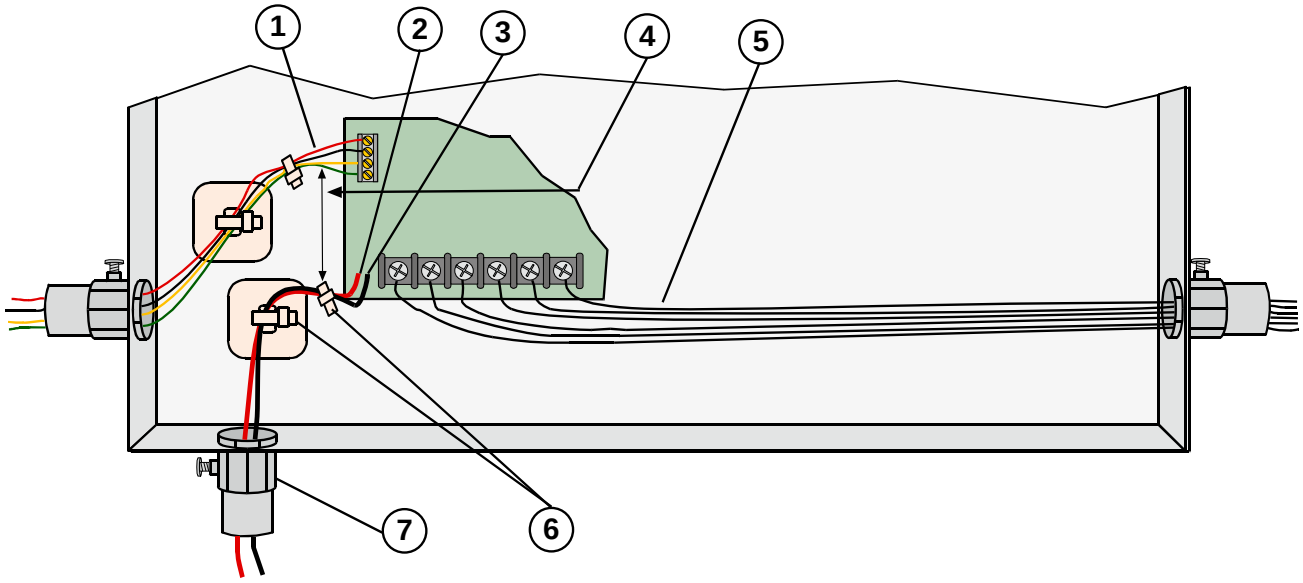
Replace the standby battery every 3 to 5 years under normal use. Exceeding the maximum output ratings, or connecting the control panel to an outlet that is routinely switched off, causes heavy discharges. Routine heavy discharges can lead to premature battery failure. Record the date of installation directly on the battery.

Once the standby battery and the transformer connections are made, the control panel charges the standby battery as you finish the installation.

See *Figure 4* for details when installing the standby battery.

The battery terminals and wires are not power limited. You must maintain a minimum of 6.4 mm (¼-inch) spacing between the battery terminals, battery wiring, and all other wiring. Battery wiring cannot share the same conduit, conduit fittings, or conduit knock-outs with other wiring.

Figure 4: Battery Wiring and Other Wiring Using Conduit



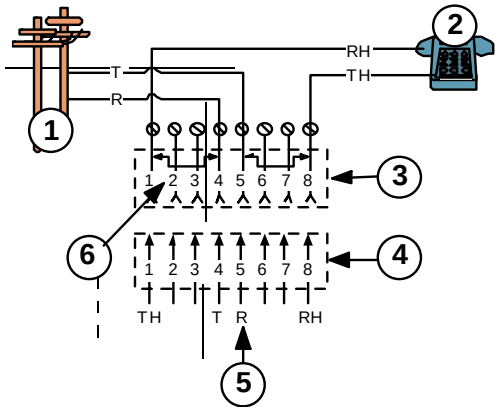
1- Option bus or keypad wires
2- Red (+) battery wire
3- Black (-) battery wire
4- 6.4 mm (¼-inch) minimum space
5- Output or zone wires
6- To ensure proper spacing, secure wires using tie-wraps or similar devices
7- Only required if external batteries are used. Otherwise, install battery inside enclosure.

3.5 Telephone Connections

Use the following steps to make the telephone connections to the control panel:

1. To prevent jamming of signals, wire the RJ31X jack or RJ38X jack to support line seizure as shown in *Figure 5*.
2. Install the jack on the street side of the phone switch, wired ahead of any PBX equipment. Line seizure temporarily interrupts normal phone usage while the control panel transmits data.
3. Confirm that the control panel seizes the line, acquires dial tone, reports correctly to the receiver, and releases the phone line to the in-house phone system.
4. Connect the telephone cord's flying leads to the telephone terminals as shown in *Figure 6* (Red to A; Gray to A1; Brown to B1; Green to B).
5. Plug the other end of the cord to the RJ31X jack or RJ38X jack.

Figure 5: RJ31X/RJ38X Wiring



1- Outside Telco (PSTN)
2- Premises telephone
3- RJ31X or RJ38X jack
4- Telco connector block
5- Phone line connections to control panel
6- Bar short removed on Telco connector block insertion – positions 1 & 4 and 5 & 8

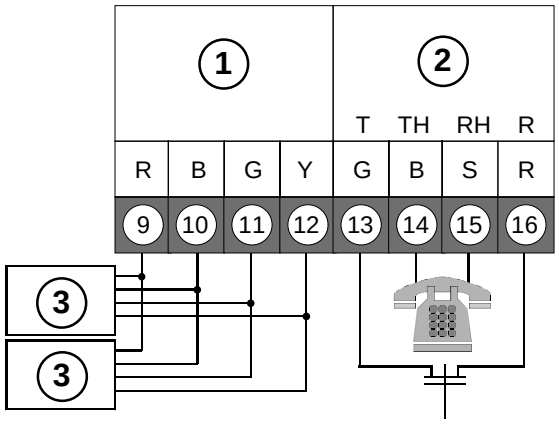
3.6 Keypad Wiring

Consult your keypad's installation manual for complete installation instructions. Connect the keypads to the keypad bus or option bus terminals as shown in *Figure 6*.

Keypads contain static-sensitive components. Follow anti-static procedures when handling the keypads.

Shared cable is not recommended for keypad, multiplex, options bus, telephone, or siren wiring.

Figure 6: Phone Line and Keypad Bus Terminal Connections



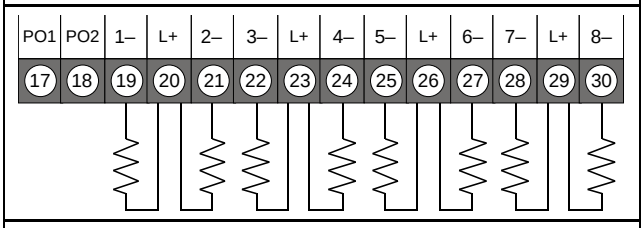
*1- **Keypad bus**–You can use up to 15 keypads. Can be "home run" or "daisy-chained." Maximum wire length for each is 305 m (1000 ft). Maximum total wire length in system is 1830 m (6000 ft) when using 0.8 mm (#22 AWG) or 1.0 mm (#18 AWG) cable.*
2- Phone line
3- Keypad. Keypads 1 to 10 connect to the keypad bus, and Keypads 11 to 15 connect to the option bus. See Section 3.9 Option Bus Wiring.

3.7 Zones 1 to 8 Wiring

Zones 1 to 8 are intended for connection of Normally Open or Normally Closed alarm contacts. They can also be used for compatible 2-wire smoke detectors. These zones require a 2.21 kΩ resistor (P/N 25899) at the end of the loop. Power is momentarily removed from L+ after a [PIN][System Reset] or during a fire verification. See *Figure 7* terminals 19 through 30, and see *Figure 8*.

Zones 1 to 8 assignments are programmed in Address 0031 to 0038. See *Section 5.9.2 Zone Programming: Assigning a Zone Function to the Zone.*

Figure 7: Zones 1 to 8 Wiring



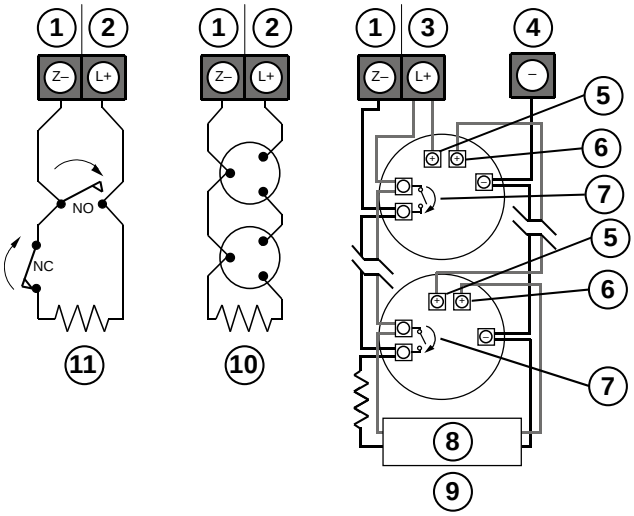
EOL = 2.2k

3.8 Programmable Output Wiring

See *Figure 7*, Terminals 17 and 18. PO1 shorts to aux. power negative when activated. PO1 can sink up to 1.0 A. PO1 function is programmed in Address 2735. See *Section 5.9.6 Output Programming*.

PO2 supplies 12 V and up to 500 mA when activated. PO2 function is programmed in Address 2736. See *Section 5.9.6 Output Programming*.

Figure 8: Typical Burglar and Fire Wiring



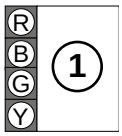
1- Zone Input
2- Loop +
3- Loop + or PO2
4- Aux. Power – Terminal 5 or 7(see Figure 3)
5- Power in
6- Power out
7- Alarm
8- End-of-line supervision relay (for example, EOL200)
9- Typical 4-wire smoke detector wiring (for example, DS250 in an MB4W base)
10- Typical 2-wire smoke detector wiring (EOL = 2.2k)
11- Typical burglar alarm loop wiring (EOL = 2.2k)

3.9 Option Bus Wiring

See *Figure 9*. Used for options such as the DS7416i Communications Module, the DS7420i Dual Phone Line Module, and so on. Also for Keypads 11 to 15.

For Commercial Fire Mode, Option Bus wiring should be in conduit if run outside the enclosure.

Figure 9: Option Bus Wiring



1- Option Bus

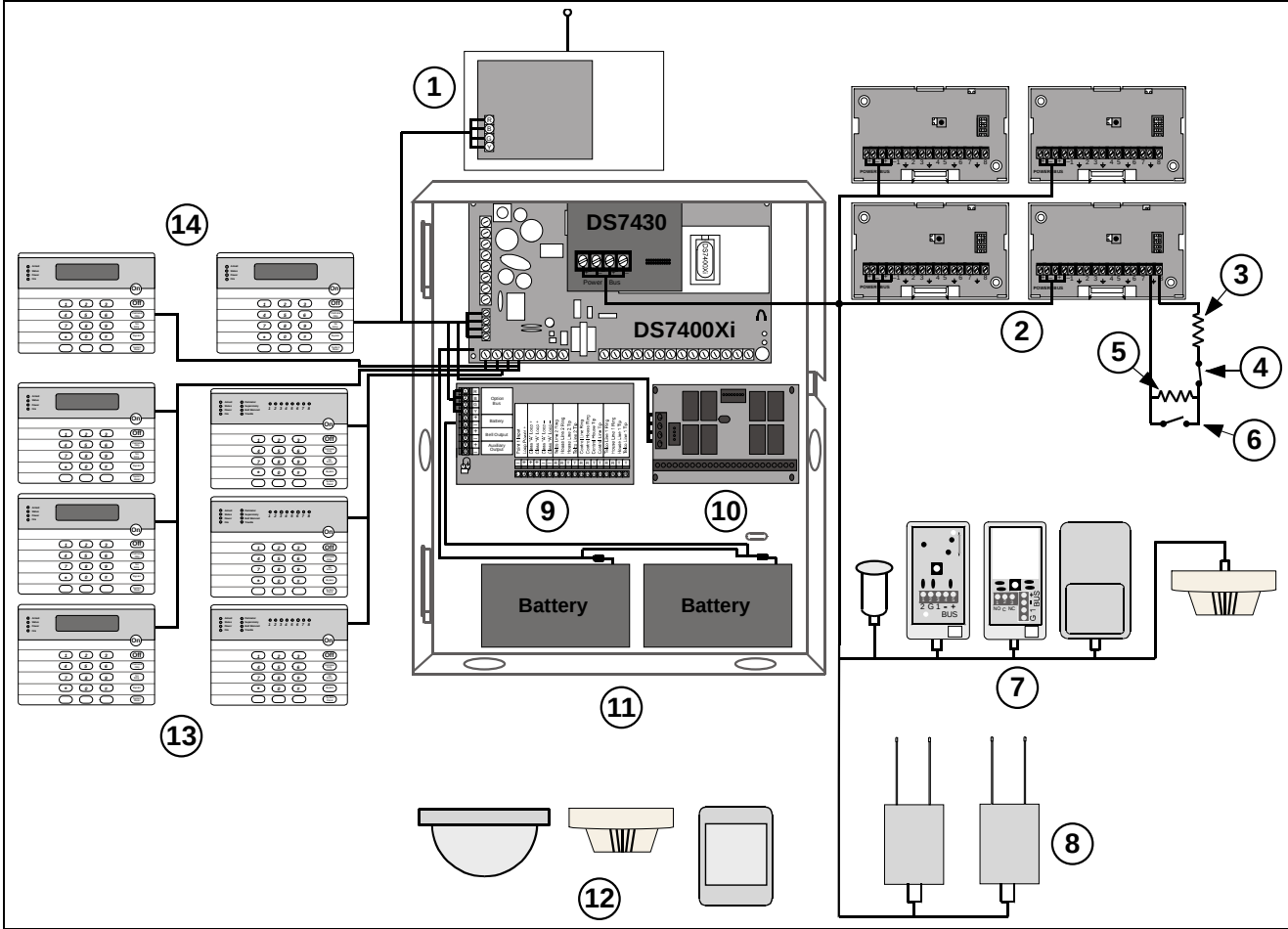
3.10 Hardware Layout Example

See *Figure 10*.

- Up to 15 keypads can be used. Keypads 1 to 10 connect to the Keypad Bus and Keypads 11 to 15 connect to the Option Bus. One keypad must be designated as Keypad 1 and connected to the Keypad Bus. See the *DS7447E/DS7447V2, DS7445i/DS7445V2, and DS7448 Installation Instructions* for further details.
- A DS7420i (Dual Phone Line/Bell Supervision Module) can be connected to the control panel, and placed within the enclosure. Connect to the Options Bus of the control panel. See the appropriate keypad *Installation Instructions* for further details.
- Up to two DX3010 Octal Relay Modules can be connected to the control panel and placed within the enclosure. Connect to the Option Bus of the control panel. This provides an additional 8 Form "C" relay outputs for the Control Panel. See the *DX3010 Installation Instructions* for further details.
- A DS7430 or a DS7436 (Multiplex Expansion Module) can be connected to the control panel using the expansion port. This allows for the connection of additional zones using the Option Bus. See the *DS7430 or DS7436 Installation Instructions* for further details.
- Up to 30 DS7432E 8-Input Remote Modules can be connected to the DS7430 or DS7436. Connect to the Power and Bus Terminals of the Multiplex Expansion Module. This allows for a means of addressing up to 240 input loops of conventional contacts to the control panel. See the *DS7432E Installation Instructions* for further details.

- Up to two RF3222E 120-Zone Wireless Receivers can be connected to the DS7430 or DS7436. Connect to the Power and Bus terminals of the Multiplex Expansion Module. This allows for the monitoring of wireless detectors.
- A DX4020 provides bi-directional communication over an Ethernet network. It can also be used for remote programming sessions with RPS. One DX4020 is allowed per system.
- Up to 248 zones are available for the connection of Single, Multiple, Input/Output, and Multiplex devices. Up to 112 wireless zones (137 to 248) are also available.

Figure 10: Hardware Layout Example



1- DX4020 Network Interface Module
2- DS7432E 8-Input Remote Modules
3- 22 k Tamper Resistor
4- Tamper Device
5- 47 k Device Resistor
6- Device
7- DS7460i Input Modules, DS7465i Input/Output Modules, and MX250 Series Smoke Detectors
8- RF3222E Wireless Receiver
9- DS7420i Dual Phone Line/Bell Supervision Module
10- DX3010 Output Expander
11- Batteries – ensure at least 6.4 mm (¼-inch) separation between battery wires and all other cabling
12- *Wireless sensors*
13- *Keypads*
14- *Keypads 11 to 15 must be connected to the Option Bus. Keypads 1 to 10 must be connected to the Keypad Bus.*

4.0 Operating Guide

For additional information on operating this system, see the *DS7400Xi (Ver. 4+) User's Guide (P/N: 43851)* and the front cover of this Reference Guide.

4.1 Emergency Procedures

4.1.1 Identifying Alarm Sounds

Your alarm system might be programmed for a steady alarm sound or a pulsed alarm sound. It is important to learn the difference between a fire alarm sound and an intrusion alarm sound before you are confronted with an actual emergency.

4.1.2 Silencing Alarms

All alarms can be silenced with any PIN that has disarm privileges. Entering your [PIN][Off] silences the alarm and turns off (disarm) the control panel.

4.1.3 Fire Alarms

Fire alarms are silenced using the same procedure as intrusion alarms: a [PIN] (with disarm privileges) plus the [Off] key.

The Fire alarm system is not reset until alarms at smoke detectors are cleared by using the [System Reset] command. The Fire alarm system is not functional until this procedure has been followed. See *Section 4.2 Fire Reset/Fire Trouble.*

4.2 Fire Reset/Fire Trouble

4.2.1 Fire Reset

During a fire alarm, exit the premises immediately. When you have determined there is no fire, you can silence the bells/sirens before you initiate the [System Reset] command: [PIN][System Reset].

Before the [System Reset] command is used, determine which smoke detector has alarmed so the monitoring company can verify its operation.

To use the System Reset command sequence, your PIN must have disarm privileges. The System Reset command performs a fire reset, a battery test, and clears all system troubles.

If the System Reset command is not performed after 24 hours of the fire alarm, the keypad sounds and it displays "Fire Alarm Not Reset." If the sounders are silenced and the system is reset properly, this warning does not occur.

4.2.2 Fire Trouble

A Fire Trouble message with a zone number signifies a problem with the fire system, such as a break in the wiring that monitors smoke detectors. If the unit is in the commercial fire mode, a Fire Trouble message with no zone number indicates a ground fault.

A Fire Trouble is indicated by a short beep from the keypad sounders every 10 seconds. The DS7447E/ DS7447V2 displays “Fire Trouble” followed by the zones in a trouble condition. The DS7445i/DS7445V2 turns the Fire and Trouble Lights on steady and lights the corresponding zone LEDs.

Notify your installing company immediately if the Fire Trouble message is displayed.

The Fire Trouble beep can be silenced with any [PIN] plus the [Off] key. After problems are remedied, a [PIN] plus the [Off] key should again be entered to clear the “Fire Trouble” display.

4.2.3 Dirty Smoke

A Dirty Smoke display, followed by a zone number and accompanied by a beep every ten seconds indicates that the smoke detector for that zone requires cleaning or replacement. The smoke detector also gives a Dirty indication by flashing its LED once per second. The Dirty Smoke beep can be silenced by any [PIN] plus the [Off] key.

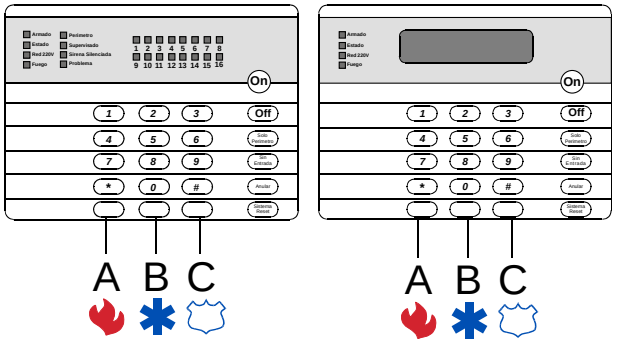
Notify your installing company immediately if the Dirty Smoke message is displayed.

4.3 Emergency Keypad Alarms

The Emergency Alarm Keys [A], [B], and [C] may generate Fire, Special Emergency, and Panic Alarms if programmed by the installer.

Ask your installing company to explain the function of these keys.

Figure 11: Emergency Keypad Alarms



To activate an Emergency Key, press the key for two seconds.

Use the Disarming Command Sequence to cancel or silence these alarms.

If the Emergency Alarm Keys are to be used, they should be labeled to signify their functions.

Label the A key as the Fire key. This is the only key you can designate as the Fire key.

Label the B key as the Special Emergency key.

Label the C key as the Panic key.

4.4 Personal Identification Numbers

4.4.1 General Information

A PIN (Personal Identification Number) is the 4 or 6 digit code users must enter at the keypad to gain access to the system. Your system has the capability to assign up to 200 PINs, each four or six digits long. A PIN can be assigned to each User Number.

Never program PINs with common sequences such as 1 2 3 4, 1 1 1 1, or 2 4 6 8 because they are easily violated.

A User Number is the number that identifies each person using the system. There are 200 possible User Numbers available for use (001 through 200).

Each User Number can have only one PIN assigned to it. Attempting to assign the same PIN to multiple User Numbers results in the three-beep error tone, and the entry is not made.

User Number 001 is designated as a Master code. It can be used to add, delete, or change other PINs. It always has access to all areas regardless of how it is programmed.

User Number 001 is shipped from the factory with the PIN of 1 2 3 4. If your system has been reprogrammed for 6-digit PINs, the PIN for User Number 001 is 123456.

Change this PIN to one of your personal preference, and program it as a Master code.

A Master code is one of the available authority levels which can be assigned to a user to determine which functions that user will be able to perform. See *Table 8: Authority Levels*.

Table 8: Authority Levels

Level Number	Level Name	Description
0	Master	Can enter all commands, add or change PINs in assigned areas, change the time and date, bypass, arm, disarm, perform system tests, system reset and view history. User Number 001 must have the Master authority level. Any or all PINs can behave as a Master code.
1	Unlimited	Can enter all commands, bypass, arm, disarm, system reset and perform system tests. It can not change PINs.
2	General	Can bypass, arm and disarm. It can not change PINs, system reset, enter [#][7] or any of the [#][8] functions.
3	Arm Only	Can arm the system with [PIN][ON] arming sequence only. It can not perform any other functions, including disarming.

Table 8: Authority Levels (continued)

Level Number	Level Name	Description
4	Temporary	Valid only for a specified time (the PIN expires on the expiration date). It can arm and disarm the system, but cannot perform any other functions. If this is done from a Master keypad, the user must be in Single Partition Mode. If access is assigned to more than one area, you must enter a Temporary PIN expiration date for all assigned areas (see Changing the Expiration Date for Temporary PINs below).
5	Duress	When the system is disarmed using the duress code, a silent report is sent to the monitoring service. The Duress code is intended to be used when the user is forced to disarm the system.
6	Access Code	When a PIN with an Access Code is entered, any output programmed for Access Output (i.e. door strikes) pulses on for 10 seconds (works when the system is armed or disarmed).

4.4.2 Programming PINs

PINs can only be added, changed, or removed in Master Programming Mode; they are **not** programmable from an RF (wireless) keypad.

Write down your entries before you enter the Master Code Programming Mode and have them with you as you begin programming. Make your entries promptly. If a long delay occurs in your entries, the 3-beep error tone sounds and exits you from the programming mode.

It is recommended that all PIN programming procedures be performed at a DS7447E/DS7447V2 keypad since this keypad provides visual prompts throughout the programming sequence. **No visual clues are given from a DS7445i/DS7445V2 keypad.** When the programming sequence is successfully completed, both the DS7447E/DS7447V2 and DS7445i/DS7445V2 keypads signal the successful completion with a long beep.

Perform the following procedure to add or change a PIN:

If you are adding a temporary PIN, you must enter the expiration date before adding the temporary PIN.

1. Enter Master Programming Mode (press [Master PIN][#][0]).
2. Enter a 0 for PIN Setup programming (press [0]).
3. Enter the User Number (enter a 3-digit number from 001 to 200).
4. Enter the Authority Level (enter a number from 0 to 6).
5. Enter the Area(s) (Partitions) to which this user will have access (press [1], [2], [3], [4], [5], [6], [7], and/or [8] followed by [#]).
6. Enter the PIN (enter any 4- or 6-digit number; do not press [#]).
7. Enter the PIN again followed by [#].

Perform the following procedure to set the expiration date for an existing Temporary PIN:

1. Enter Master Programming Mode (press [Master PIN][#][0]).
2. Enter a 3 for Date of Code Expiration Setup programming (press [3]).
3. Enter the Expiration Month (press [0][1] for January through [1][2] for December).
4. Enter the Expiration Day (press [0][1] through [3][1]). *The Temporary PIN expires at Midnight on the day selected.*
5. Enter the Year (enter the last two digits of the year followed by [#]).

Entering the command sequence [Master Code][#][0][3][#] causes the DS7447E/DS7447V2 keypad to read back the temporary code expiration date.

Perform the following procedure to remove a PIN:

1. Enter Master Programming Mode (press [Master PIN][#][0]).
2. Enter a 0 for PIN Setup programming (press [0]).
3. Enter the User number of the PIN to be cancelled, followed by [#] (enter a 3-digit number from 001 to 200, then press [#]).

User Number 001 cannot be disabled in this manner.

4.5 The Master Keypad

4.5.1 General Information

Your system might include a Master keypad. A Master keypad is a DS7447E/DS7447V2 keypad programmed to give a user access to all the areas the user has access to, not just the area in which the Master keypad is located. This is different from a Standard keypad in that Standard keypads only give access to the single area in which they are located. Commands entered at the Master keypad affect all the areas to which the user has access. If this is not desired, the Master keypad can also be used to control each area individually; this is called Single Partition Mode. Single Partition Mode allows a user to control any or all of the areas the user has access to on an individual (one-by-one) basis (see *Section 4.5.3 Single Partition Mode* for more information).

In order to use the Master keypad, your PIN must be assigned to the area in which the Master keypad is located.

4.5.2 Master Keypad Displays

Master keypad displays differ slightly from Standard keypads. The Master keypad display scrolls the Status of each area, followed by the area number. For example, if all areas are armed, the Master keypad scrolls through the following displays:

Armed area 1	**Armed area 2**	**Armed area 3**	**Armed area 4**
Armed area 5	**Armed area 6**	**Armed area 7**	**Armed area 8**

If only Partitions 1, 2, 3, 4, 6, and 8 are armed, the Master keypad scrolls through the following displays:

Armed area 1	**Armed area 2**	**Armed area 3**	**Armed area 4**
Ready to Arm area 5	**Armed area 6**	**Ready to Arm area 7**	**Armed area 8**

Displays for areas that are Not Ready display in the same manner.

Use *Table 9* to understand what each LED function of the Master keypad represents.

4.5.3 Single Partition Mode

Single Partition Mode is used to control areas (partitions) on a “one at a time/one by one” basis from the Master keypad.

To enter the Single Partition Mode, enter your [PIN], then press the [#] key twice. This accesses the first area you have access to. Enter the command sequence you wish for this area. You do not need to use your PIN again. To move on to the next area you have access to, press the [#] key twice.

To exit the Single Partition Mode, hold the [*] key down for 2 seconds. The system also automatically exits Single Partition Mode after 40 seconds without a keypad entry.

Example of accessing Single Partition Mode

1. Enter your [PIN], followed by the [#] key twice: [1][2][3][4][#][#].

   The first area you have access to is displayed: "**Ready to Arm. Cafeteria.**"
2. Complete the command sequence (in this case arming) you wish for this area: [On].
3. Move to the next area you have access to by pressing the [#] key twice: [#][#].

   The next area you have access to is displayed: "**Ready to Arm. Office.**"
4. Complete the command sequence you wish for this area.
5. After you have completed all the command sequences for the areas you have access to, exit Single Partition Mode by pressing the [*] key for two seconds.

4.5.4 Arming from the Master Keypad

To arm *all* the Partitions to which you have access:

[PIN] + any Arming Command Sequence. This arms all the areas to which you have access even if they are already armed.

To arm *only some* of the Partitions to which you have access:

- [PIN][#][#]. This puts you into Single Partition Mode.
- The first area to which you have access is displayed: “Ready to Arm. Cafeteria.”
- Enter the Arming Command Sequence you want for this area.
- [#][#] opens the next area to which you have access.
- The next area to which you have access is displayed: "Ready to Arm. Office."
- Enter the Arming Command Sequence you want for this area.
- After arming any or all areas to which you have access, you may exit Single Partition Mode by holding the [*] key for at least two seconds. The system also exits Single Partition Mode after 40 seconds without a keypad entry.

4.5.5 Disarming from the Master Keypad

To disarm *all* the Partitions to which you have access:

- [PIN][Off]. This will disarm all the areas to which you have access even if they are already disarmed.

To disarm *only some* of the Partitions to which you have access:

- [PIN][#][#]. This puts you into Single Partition Mode.
- The first area to which you have access is displayed: "Armed. Cafeteria."
- If you wish to disarm this area, enter [Off]. If not, go to the next step.
- [#][#] opens the next area to which you have access.
- The next area to which you have access is displayed: "Armed. Office."
- If you wish to disarm this area, enter [Off]. If not, go to the next step.
- After disarming any or all areas to which you have access, you may exit Single Partition Mode by holding the [*] key for at least two seconds. The system also exits Single Partition Mode after 40 seconds without a keypad entry.

4.5.6 Master Keypad LED Descriptions

Table 9: Master Keypad LED Descriptions

LED	Off	Flashing	On
Armed (red)	All areas are disarmed.	One or more areas are armed, or an alarm has occurred.	All areas are armed, and no alarms have occurred.
Status (green)	Not ready to arm (if the Armed LED is On, all areas are armed).	One or more zones are bypassed.	All areas are ready to arm.
Power (green)	The Control Panel has lost battery and AC power.	Control Panel problems exist. See *Section 4.6 Keypad Error Displays*.	Normal operation. The Control Panel is running on AC power with no problems.
Fire (red)	There are no fire alarms.	A fire zone is in alarm.	A fire trouble condition exists.

4.6 Keypad Error Displays

4.6.1 General Information

Error Displays can only be read when the control panel is disarmed. Some control panel errors, such as battery trouble and any RF troubles, cause the keypad sounders to beep every 10 seconds. The keypad sounders can be silenced for 4 hours by entering: [PIN][Off].

The sounders continue to sound until the problem is fixed.

To clear a display, enter [PIN][System Reset].

Clear the Error Display only on the advice of your installing company or if you are certain the problem has been remedied.

Table 10: Keypad Error Displays

Display	Meaning
DS7445i/DS7445V2: Power LED flashing *DS7447E/DS7447V2:* Control Trouble Enter #87	There is an error message. To display the message, enter [PIN][#][8][7].
DS7445i/DS7445V2: LED 1 on *DS7447E/DS7447V2:* AC Power Failure	There is a power failure, and the control panel is operating on backup battery power.
DS7445i/DS7445V2: LED 2 on *DS7447E/DS7447V2:* Battery Trouble	If the system has just been through a power failure, wait at least two hours for the battery to recharge, then enter [PIN][System Reset] to perform a battery test,
DS7445i/DS7445V2: LED 3 on *DS7447E/DS7447V2:* Communicator Err	The control panel failed to communicate with the Central Station.

Table 10: Keypad Error Displays (continued)

Display	Meaning
DS7445i/DS7445V2: LED 4 on *DS7447E/DS7447V2:* System Fault	Internal error in the control circuitry or optional circuitry. See System Faults.
DS7445i/DS7445V2: LED 5 on *DS7447E/DS7447V2:* Keypad Fault	One of the keypads is not responding to the control panel.
DS7445i/DS7445V2: LED 6 on *DS7447E/DS7447V2:* Keypad Tamper	One of the keypad housings is open.
DS7445i/DS7445V2: LED 7 on *DS7447E/DS7447V2:* Multiplex Bus	The multiplex bus is defective or shorted.
DS7445i/DS7445V2: LED 8 on *DS7447E/DS7447V2:* Aux. Power Fault	The auxiliary power is shorted.
DS7445i/DS7445V2: not applicable *DS7447E/DS7447V2:* Zone Trouble	One of the zones is not responding to the control panel. This might appear during power-up; if so, ignore it.
DS7445i/DS7445V2: not applicable *DS7447E/DS7447V2:* RF	Indicates a problem with an RF (wireless) zone.
DS7445i/DS7445V2: not applicable *DS7447E/DS7447V2:* Dirty Chamber	One of the multiplex smoke detectors failed the sensitivity test and might require cleaning or replacement. The keypad beep may be cleared by entering [PIN][Off].

4.6.2 System Faults

System faults can be read from any keypad because they are system-wide. All other Error Displays are limited to the area the standard keypad is in. If you are on a Master keypad, you can read Error Displays one area at a time.

System faults are designated as shown in *Table 11.*

Table 11: System Faults

[#][8][7] Displays:	[#][8][9] Displays:
RAM Fault	System Fault 01
ROM Fault	System Fault 02
EEPROM Fault	System Fault 03
Ground Fault	System Fault 04
2Ph/Bell Fault = loss of communication to DS7420i	System Fault 10
Line 1 Fault = DS7420i phone line 1 fault	System Fault 11
Line 2 Fault = DS7420i phone line 2 fault	System Fault 12
Bell Fault = DS7420i bell circuit fault	System Fault 13
Aux. Relay Fault = DS7420i auxiliary relay fault	System Fault 14
Oct. Relay Fault = loss of communication to DX3010	System Fault 20
Serial IF Fault	System Fault 30
Printer Error	System Fault 33
Reserved for older panels	System Fault 50
AR IB Queue Full = modem buffer full	System Fault 51
AR Host Down = network data switch down	System Fault 52
AR Unreg. Modem = modem not registered	System Fault 53
AR Power Fail = power source below defined threshold	System Fault 54
AR Network Lost = loss of network	System Fault 55
AR Modem HW Err = modem hardware error	System Fault 56
AR Modem SW Err = modem software error	System Fault 57
AR Opt. Bus Err = loss of communications to ARDIS module	System Fault 58
AR Corrupt MSG = message error	System Fault 59

Table 11: System Faults (continued)

[#][8][7] Displays:	[#][8][9] Displays:
AltComm A Tx Err SerialBI/F Fault SerialB Tx Error SerialB Rx Error SerialBFlowError AltComm A Error AltComm B Error AltComm B Tx Err	System Fault 60

4.6.3 Event History

The History Buffer stores the last 400 events in memory. The DS7447E/DS7447V2 can display all of these events. If this test is performed from a Master keypad, it must be in Single Partition Mode. The DS7445i/ DS7445V2 can only display those zones (1 to 16) that have alarmed since the last Event History Readback. The RF3341 cannot display history events.

To readback the Event History Buffer:

- Press [PIN][#][8][9]. On a DS7447E/DS7447V2 keypad, the last event to take place will be displayed. On a DS7445i/DS7445V2 keypad, the zone LEDs for any zones that have alarmed since the last Event History Readback in that area will flash.
- Scroll through the events using the [9], [6], and [#] keys as follows:
    - To begin scrolling back through the events, press the [#] key. The [#] key scrolls you back through the history line by line.
    - The [9] key scrolls you back in reverse chronological order by event.
    - A [6] scrolls you back up through the events (toward the most recent) by event.

Each event consists of two or three lines or display screens. The first line/screen is the event title and user. The second line/screen is the date of the event or the change being made. If there is a third line/screen, it is the date of the change.

When performing this from a Master keypad, each area (partition) displays its own history as the user scrolls through the areas.

- To exit the Event History Mode, press the [*] key or wait 20 seconds and the keypad exits automatically.

4.7 Testing Your System

4.7.1 Zone (System Walk) Test

The Zone Test is used to confirm that detectors report alarms to the keypad. A Zone Test works on all zones, except 24-hour zones and fire zones. While the keypad is in a Zone Test, no control panel alarms activate an alarm, except 24-hour zone alarms and fire alarms; these override the Zone Test function.

To perform a Zone Test:

1. Press [PIN][#][8][1].
    - The DS7445i/DS7445V2 zone LEDs of any untested zones will flash.
    - The DS7447E/DS7447V2 displays "Test Zone" followed by the zone number of any zones that have not been tested.
2. Pick any untested zone and manually cause a detector to alarm using a method specified in the detector's installation instructions.
    - The DS7445i/DS7445V2 zone LED for the zone currently being tested will turn on steady.
    - The DS7447E/DS7447V2 displays "Now Testing" followed by the zone number of the zone that is currently being tested.
3. Clear the alarm condition from the detector using a method specified in the detector's installation instructions, and trigger an alarm on the next detector in that zone. Continue until all detector's in that zone are tested.
    - As each zone is tested, its DS7445i/DS7445V2 zone LED turns off.
    - As each zone is tested, the DS7447E/DS7447V2 display returns to "Test Zone" and indicates the remaining untested zones.
4. Test each zone.
5. Exit the Zone Test using [PIN][#].

4.7.2 Battery Tests

You can test the battery and the local sounder, or just test the battery. If these tests are performed from a Master keypad, it must be in Single Partition Mode. System Tests are not available from RF (wireless) keypads.

To start a Local Battery/Sounder Test:

Press [PIN][#][8][5].

All keypad LEDs turn on. The keypad sounder and all alarm sounding devices operate for two seconds. If the test fails, the control panel indicates a control problem. See *Section 4.6 Keypad Error Displays*.

To start a Battery Test:

- Press [PIN][System Reset]. The control panel performs a battery test. The control panel reports a Low Battery or a Low Battery Restoral if necessary.

4.7.3 Communication Test

This test is available only if the system transmits alarms and system information to a monitoring service, and is programmed by the security installing company to permit control panel tests. This test can be performed from a Master Keypad. The account code for area #1 is sent with the test report. System Tests are not available from RF (wireless) keypads.

To initiate a Communication Test:

Press [PIN][#][8][2].

A long beep sounds. A test report is sent to the monitoring service. If the test fails, the keypad sounds continuously. Press [System Reset] to silence the sounder.

This test might take several minutes to complete.

4.7.4 Fire Walk Test

This test is used to confirm that smoke detectors report alarms to the keypads. The Fire Walk Test tests all fire zones, including verified fire and waterflow.

At the start of the Fire Walk Test, a Fire Walk Test report, if programmed, is sent to the central station. Fire alarm reports are not sent to the central station during the Fire Walk Test. A Fire Walk Test restoral is sent upon completion of the Fire Walk Test.

The Fire Walk Test runs for 20 minutes after it is started. The test time is extended to 20 minutes every time another zone is tested.

When a fire zone is tested, any output programmed to follow that zone activates for 5 seconds.

To perform a Fire Walk Test:

1. Press [PIN][#][9][1].
    - Zone LEDs for any untested zones flash on DS7445i/DS7445V2 keypads.
    - The DS7447E/DS7447V2 displays “Fire Test” followed by the zone number for any zones not tested.
2. Pick any untested zone and manually cause a detector to alarm using the method specified in the detector’s installation instructions.
    - The zone LED for the zone currently being tested turns on steady on DS7445i/ DS7445V2 keypads.
    - The DS7447E/DS7447V2 displays “Fire Testing” followed by the zone number of the zone currently being tested.
3. Clear the alarm condition from the detector using the method specified in the detector’s installation instructions, and trigger an alarm on the next detector in that zone. Continue until all detectors in that zone are tested.
    - As each zone is tested, its zone LED turns off on a DS7445i/DS7445V2 keypad.
    - As each zone is tested, the DS7447E/DS7447V2 display returns to “Fire Test” and indicates the remaining untested zones.
4. Test each zone as instructed by your installing company.
5. Exit the Zone Test using [PIN][#].

A Fire Walk Test prevents the system from sending any fire reports during the test.

5.0 Programming the Control Panel

5.1 Entering Programmer's Mode

To enter the Programmer's Mode, enter the Programmer's Code followed by [#][0]. Shorting the program pads (see *Section 3.0 Control Panel Installation* for location) on the control panel also enters Programmer's Mode.

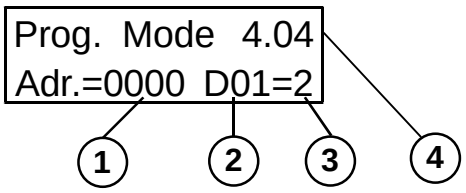
The default Programmer's Code is [9][8][7][6]. If the system is reprogrammed for 6-digit PINs, the default Programmer's Code is [9][8][7][6][5][4].

5.2 Reading Back a Program Address

To read back the value of a program address, enter that program address followed by [#]. Each data digit is displayed one data digit at a time. To view the second data digit, press the [#] button again.

Figure 12 shows a sample display.

Figure 12: Program Address Display



1- Program address
2- Data Digit number
3- Value of the Data Digit
4- Control panel firmware revision

5.3 Entering a Value in a Program Address

To enter a value in the program address:

1. Enter the program address.
2. Enter the value for each data digit and press [#] to save the values.

The display shows the program address and displays the value of each data digit after you enter it. The data is programmed (saved) when you press the [#] key. The control panel automatically increments to the next program address.

- To program the next address, enter the desired information.
- To read back the value of the address, press the [#] key.
- To program a different address, press the [*] key two times and enter the program address.
- If you make a mistake at any time, press the [*] key twice before pressing the [#] key. This clears the display and allows you to enter the desired program address.

5.4 HEX Values

Some data digit values are greater than 9. These values must be programmed by pressing the [*] key followed by some other number. These values are displayed as HEX characters (A to F) when entered. Example: entering [*][0] at the keypad displays A.

The HEX character values are shown in *Table 12*.

Table 12: HEX Character Values

Keys Pressed	HEX Character
[*][0]	A
[*][1]	B
[*][2]	C
[*][3]	D
[*][4]	E
[*][5]	F

5.5 Defaults

The DS7400XiV4 is shipped as a working, pre-programmed control panel. Many of the programming addresses might already be set to the values you need.

5.5.1 Defaulting the Control Panel

Entering [0][1][#] in Program Address 4058 immediately resets the control panel to the factory default. Any programming already done by the installer is erased. This action cannot be reversed. Only enter [0][1][#] in Program Address 4058 when you are completely sure you want to erase all installer programming.

To set the control panel's programming values back to the default:

1. Enter the programming mode.
2. Enter [4][0][5][8][0][1][#].

5.6 Exiting Programmer's Mode

To exit Programmer's Mode, press the [*] key for at least 2 seconds. If no keypad entries are made for 4 minutes, the control panel automatically exits Programmer's Mode.

5.7 Understanding the Parameter Option Charts

The programming section of this document presents programming parameters as shown below to identify the available selections.

Example: Custom Arming Programming

- **Address:** 2725
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 13*)
  - Data Digit 2: ____ (see *Table 14*)
- **Default:** 0
- **Selections:** 0 to 9, *0 to *5 (hexadecimal values that display as A through F at the keypads)

Table 13: Keyswitch Custom Arming Programming (Address 2725, Data Digit 1)

	Selections for Data Digit 1															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Bypass Zone Function 1		•		•		•		•		•		•		•		•
Bypass Zone Function 2			•	•			•	•			•	•			•	•
Bypass Zone Function 3					•	•	•	•					•	•	•	•
Bypass Zone Function 4									•	•	•	•	•	•	•	•

Table 14: Custom Arming Programming (Address 2725, Data Digit 2)

	Selections for Data Digit 2															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Bypass Zone Function 5		•		•		•		•		•		•		•		•
Bypass Zone Function 6			•	•			•	•			•	•			•	•
Bypass Zone Function 7					•	•	•	•					•	•	•	•
Bypass Zone Function 8									•	•	•	•	•	•	•	•

Many addresses require two data digit entries. For these addresses, there are two option tables (one table for each data digit).

To select an option or set of options, select the corresponding value and enter it in the appropriate data digit.

The values under the **Selections for Data Digit #** heading are displayed across the top of each table. Each value is tied to options by a "•."

Spaces are provided above the address tables for logging each data digit entry.

The default selection is listed above the table in bulleted form along with the option's address and selection range.

The numbered cell that corresponds with the option's default setting is blackened to provide a quick visual reference. For example, the cells labeled **0** in the example above are this option parameter's defaults.

Columns that are grayed out are reserved and should not be selected.

5.8 General Control Panel Programming

General control panel programming defines the system-wide general operating parameters. See the Glossary (*Section 7.2.1 General Control Programming*) for more information.

- **Address:** 0000
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 15*; default = 1)
  - Data Digit 2: ____ (see *Table 16*; default = 3)
- **Selections:** 0 to 9, *0 to *5 (hexadecimal values that display as A through F at the keypads)

Table 15: General Control Programming (Address 0000, Data Digit 1)

	Selections for Data Digit 1															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Allow Normal and Custom Arming[1]	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Allow Perimeter Instant Arming[1]	●	●			●	●			●	●			●	●		
Allow Perimeter Arming[1]	●	●			●	●			●	●			●	●		
Allow Maximum Security Arming[1]	●	●			●	●			●	●			●	●		
Closing Ring-Back					●	●	●	●					●	●	●	●
Siren on Comm. Fail for Silent Zone									●	●	●	●	●	●	●	●
50 Hz Operation		●		●		●		●		●		●		●		●
60 Hz Operation	●		●		●		●		●		●		●		●	

Table 16: General Control Programming (Address 0000, Data Digit 2)

	Selections for Data Digit 2															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Restore Zone When Sounders Silence	●			●			●									
Restore Zone When Zone Restores		●			●			●								
Restore Zone When System is Disarmed			●			●			●							
Allow Swinger Shunts. Send Bypass Reports				●	●	●										
Allow Swinger Shunts. No Bypass Reports							●	●	●							

[1] See the following:

- **Normal Arming = [PIN][On]**: If programmed, Normal Arming arms the entire system while allowing entry delays for entry/exit zones.
- **Perimeter Instant Arming = [PIN][No Entry][Perimeter Only]**: If programmed, Perimeter Instant Arming arms only the perimeter of the system and does not allow entry delays for entry/exit zones.
- **Perimeter Arming = [PIN][Perimeter Only]**: If programmed, Perimeter Arming arms only the perimeter of the system while allowing entry delays for entry/exit zones.
- **Custom Arming = [PIN][#][4]**: If programmed, Custom Arming allows custom arming of the system and bypasses the zone functions specified in Program Addresses 2725-2728.
- **Maximum Security Arming = [PIN][No Entry][On]**: If programmed, Maximum Security Arming arms the entire system and does not allow entry delays for entry/exit zones.

5.9 Programming a Zone

Programming a zone is a four step process. Perform the following steps, in this sequence, to program a zone:

1. Program zone functions (what the zone does in alarm). See *Section 5.9.1 Zone Function Programming.*
2. Assign a zone function to the zone. See *Section 5.9.2 Zone Programming: Assigning a Zone Function to the Zone.*
3. Assign a zone type to the zone. See *Section 5.9.3 Zone Programming: Zone Type Program Addresses.*
4. Assign the zone to an area. See *Section 5.9.4 Zone Partition Assignment.*

Step 1: Programming Zone Functions

5.9.1 Zone Function Programming

A zone function describes how a zone behaves. Up to 30 different zone functions can be programmed. You may use the default values and skip this step, or change the defaults, or add new zone functions. See *Section 7.2.2 Zone Function Programming* for zone function programming glossary definitions.

See the *DX7400Xi-EXP Wireless Reference Guide* (P/N: 4998154790) for additional information.

- **Address:** 0001 to 0030
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 17*; see *Table 20* for defaults)
  - Data Digit 2: ____ (see *Table 18*; see *Table 20* for defaults)
- **Selections:** 0 to 7, *2 to *5 (hexadecimal values that display as C through F at the keypads)

Table 17: Zone Function Programming (Address 0001 to 0030, Data Digit 1)

	Selections for Data Digit 1															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Invisible Alarm	•				•								•			
Silent Alarm		•				•								•		
Steady Alarm Output			•				•								•	
Pulsing Alarm Output				•				•								•
Alarm on Short	•	•	•	•	•	•	•	•								
Alarm on Open	•	•	•	•									•	•	•	•
Trouble on Open[1]					•	•	•	•								
Trouble on Short													•	•	•	•

Table 18: Zone Function Programming (Address 0001 to 0030, Data Digit 2)

Select Options	Value	Select Options	Value
Interior Delayed	0	Day Monitor	8
Perimeter Instant	1	Keyswitch[2]	9
24-Hour	2	Fire Zone with Verification	*0
Entry/Exit Delay #1	3	Fire Zone without Verification	*1
Entry/Exit Delay #2	4	Waterflow	*2
Interior Entry/Exit Follower	5	Supervisory	*3
Interior Home/Away	6	Entry/Exit Delay Cancel 1	*4
Interior Instant	7	Entry/Exit Delay Cancel 2	*5

[1] Only when disarmed. When armed, this becomes Alarm on Open or Short for non-24-hour zones.

[2] If Data Digit 2 = 9 (keyswitch), see *Table 19* to determine the value for Data Digit 1.

Table 19: Keyswitch Programming (Address 0001 to 0030, Data Digit 1, if Data Digit 2 = 9)

Select Options	Value
Single Partition – No Force Arm	0
Single Partition – Can Force Arm	1
All Partitions – No Force Arm	2
All Partitions – Can Force Arm	3

Table 20: Address 0001 to 0030 Zone Function Default Values

Value (fill in)	Zone Function	Address	Default Values (will be forced to different values when in Commercial Fire Mode; see *Section 5.9.15 Commercial Fire Mode Programming* for more information)
	1	0001	2 = Steady alarm output, alarm on short and open. 3 = Entry/exit delay 1.
	2	0002	2 = Steady alarm output, alarm on short and open. 4 = Entry/exit delay 2.
	3	0003	2 = Steady alarm output, alarm on short and open. 1 = Perimeter Instant.
	4	0004	2 = Steady alarm output, alarm on short and open. 5 = Interior entry/exit follower.
	5	0005	2 = Steady alarm output, alarm on short and open. 6 = Interior home/away.
	6	0006	2 = Steady alarm output, alarm on short and open. 7 = Interior Instant.
	7	0007	2 = Steady alarm output, alarm on short and open. 2 = 24-Hour.
	8	0008	7 = Pulsing alarm output, alarm on short, trouble on open. A = Fire zone with verification.
	9	0009	2 = Steady alarm output, alarm on short and open. 1 = Perimeter Instant.
	10	0010	2 = Steady alarm output, alarm on short and open. 1 = Perimeter Instant.
	11	0011	2 = Steady alarm output, alarm on short and open. 1 = Perimeter Instant.
	12	0012	2 = Steady alarm output, alarm on short and open. 1 = Perimeter Instant.
	13	0013	2 = Steady alarm output, alarm on short and open. 1 = Perimeter Instant.
	14	0014	2 = Steady alarm output, alarm on short and open. 1 = Perimeter Instant.
	15	0015	2 = Steady alarm output, alarm on short and open. 1 = Perimeter Instant.
	16 to 30	0016 to 0030	2 = Steady alarm output, alarm on short and open. 1 = Perimeter Instant.

Step 2: Assigning a Zone Function to the Zone

In this step, a zone function is assigned to the zone.

5.9.2 Zone Programming: Assigning a Zone Function to the Zone

In zone programming, each zone is defined according to its assigned input (single or multiple zone input, or a DS7465i) and its zone function (1-30) or output function (1-24). Use the first column of *Table 20* to list how you programmed Addresses 0001 through 0030.

See the *DX7400XiV4 Wireless Reference Guide* (P/N: 4998154790) for additional information.

The DS7465i occupies two zones. The odd-numbered zone of the zone pair is the input zone. The even-numbered zone of the zone pair is the output relay. The output follows an output function.

- **Addresses:** 0031 to 0278
- **Data Digits:**
  - See the first column of *Table 20* for Zone Functions; see *Table 21* for defaults.
- **Selections:** 00 (zone disabled), or 01 to 30. See the first column of *Table 20* for the pre-defined zone functions.

Table 21: Address 0031 to 0278 Zone Programming Default Values

Zone Number	Address	Zone Function Default
1	0031	01
2	0032	02
3	0033	03
4	0034	04
5	0035	05
6	0036	06
7	0037	07
8	0038	08
9 to 248	0039 to 0278	00

NOTE: Address = Zone Number + 30

Step 3: Assigning a Zone Type to the Zone

5.9.3 Zone Programming: Zone Type Program Addresses

In zone type programming, each zone is assigned a zone type to define its physical location as either on-board, single zone inputs, or multiple zone inputs.

See the *DX7400XiV4 Wireless Reference Guide* (P/N: 4998154790) for additional information.

The DS7465i occupies two zones. The odd-numbered zone of the zone pair is the input zone. The even-numbered zone of the zone pair is the output relay. The output follows an output function.

See *Table 24* to determine which zones apply to each program address.

- **Address:** 0415 to 0538
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 22*; default = 0)
  - Data Digit 2: ____ (see *Table 23*; default = 0)
- **Selections:** 0 to 3, 5

Table 22: Address 0415 to 0538, Data Digit 1 Odd Zone Number

Select Option	Value
Single Zone Input (Zones 1 to 8 on the control panel, multiplex contacts, sensors, or a DS7457/DS7461i)	0
Multiple Zone Input (any zone that is on a DS7432E, DS7433, or DS7460i) If Data Digit 1 = 1, Data Digit 2 must = 2 Multiple Zone Inputs must start on an odd zone number	1
DS7465i Connections (the input zone or the output relay on a DS7465i) **NOTE:** If Data Digit 1 = 2, then Data Digit 2 must = 2.	2
Keyfob	5

[1] The DX7465i occupies two zones. the odd-numbered zone of the zone pair is the input zone. The even-numbered zone of the zone pair is the output relay.

Table 23: Address 0415 to 0538, Data Digit 2 Even Zone Number

Select Option	Value
Single Zone Input (Zones 1 to 8 on the control panel, multiplex contacts, sensors, or a DS7457/DS7461i)	0
Multiple Zone Input (any zone that is on a DS7432E, DS7433, or DS7460i) If Data Digit 1 = 1, Data Digit 2 must = 2 Multiple Zone Inputs must start on an odd zone number	1
DS7465i Connections[2] (the input zone or the output relay on a DS7465i) **NOTE:** If Data Digit 1 = 2, then Data Digit 2 must = 2.	2
Keyfob	5

[2] The DX7465i occupies two zones. the odd-numbered zone of the zone pair is the input zone. The even-numbered zone of the zone pair is the output relay.

Table 24: Address 0415 to 0538, Zone-to-Address Cross Reference (Assign Zone Type)

Zones	Address	Zones	Address	Zones	Address
Zones 1 & 2	0415	Zones 85 & 86	0457	Zones 169 & 170	0499
Zones 3 & 4	0416	Zones 87 & 88	0458	Zones 171 & 172	0500
Zones 5 & 6	0417	Zones 89 & 90	0459	Zones 173 & 174	0501
Zones 7 & 8	0418	Zones 91 & 92	0460	Zones 175 & 176	0502
Zones 9 & 10	0419	Zones 93 & 94	0461	Zones 177 & 178	0503
Zones 11 & 12	0420	Zones 95 & 96	0462	Zones 179 & 180	0504
Zones 13 & 14	0421	Zones 97 & 98	0463	Zones 181 & 182	0505
Zones 15 & 16	0422	Zones 99 & 100	0464	Zones 183 & 184	0506
Zones 17 & 18	0423	Zones 101 & 102	0465	Zones 185 & 186	0507
Zones 19 & 20	0424	Zones 103 & 104	0466	Zones 187 & 188	0508
Zones 21 & 22	0425	Zones 105 & 106	0467	Zones 189 & 190	0509
Zones 23 & 24	0426	Zones 107 & 108	0468	Zones 191 & 192	0510
Zones 25 & 26	0427	Zones 109 & 110	0469	Zones 193 & 194	0511
Zones 27 & 28	0428	Zones 111 & 112	0470	Zones 195 & 196	0512
Zones 29 & 30	0429	Zones 113 & 114	0471	Zones 197 & 198	0513
Zones 31 & 32	0430	Zones 115 & 116	0472	Zones 199 & 200	0514
Zones 33 & 34	0431	Zones 117 & 118	0473	Zones 201 & 202	0515
Zones 35 & 36	0432	Zones 119 & 120	0474	Zones 203 & 204	0516
Zones 37 & 38	0433	Zones 121 & 122	0475	Zones 205 & 206	0517
Zones 39 & 40	0434	Zones 123 & 124	0476	Zones 207 & 208	0518
Zones 41 & 42	0435	Zones 125 & 126	0477	Zones 209 & 210	0519
Zones 43 & 44	0436	Zones 127 & 128	0478	Zones 211 & 212	0520
Zones 45 & 46	0437	Zones 129 & 130	0479	Zones 213 & 214	0521
Zones 47 & 48	0438	Zones 131 & 132	0480	Zones 215 & 216	0522
Zones 49 & 50	0439	Zones 133 & 134	0481	Zones 217 & 218	0523
Zones 51 & 52	0440	Zones 135 & 136	0482	Zones 219 & 220	0524
Zones 53 & 54	0441	Zones 137 & 138	0483	Zones 221 & 222	0525
Zones 55 & 56	0442	Zones 139 & 140	0484	Zones 223 & 224	0526
Zones 57 & 58	0443	Zones 141 & 142	0485	Zones 225 & 226	0527
Zones 59 & 60	0444	Zones 143 & 144	0486	Zones 227 & 228	0528
Zones 61 & 62	0445	Zones 145 & 146	0487	Zones 229 & 230	0529
Zones 63 & 64	0446	Zones 147 & 148	0488	Zones 231 & 232	0530
Zones 65 & 66	0447	Zones 149 & 150	0489	Zones 233 & 234	0531
Zones 67 & 68	0448	Zones 151 & 152	0490	Zones 235 & 236	0532
Zones 69 & 70	0449	Zones 153 & 154	0491	Zones 237 & 238	0533
Zones 71 & 72	0450	Zones 155 & 156	0492	Zones 239 & 240	0534
Zones 73 & 74	0451	Zones 157 & 158	0493	Zones 241 & 242	0535
Zones 75 & 76	0452	Zones 159 & 160	0494	Zones 243 & 244	0536
Zones 77 & 78	0453	Zones 161 & 162	0495	Zones 245 & 246	0537
Zones 79 & 80	0454	Zones 163 & 164	0496	Zones 247 & 248	0538
Zones 81 & 82	0455	Zones 165 & 166	0497		
Zones 83 & 84	0456	Zones 167 & 168	0498		

NOTE: When using premises RF: **1)** Zones 129 through 136 are reserved, and **2)** Zones 137 through 248 are available as RF zones **only**. Wired zones cannot occupy Zones 137 through 248 when using RF.

Step 4: Assigning an Area (Partition) to the Zone

5.9.4 Zone Partition Assignment

In zone partition assignment, each zone is assigned to an area (partition). By default, all zones are assigned to Area 1.

The area assignment for odd numbered zones is programmed in the first data digit of these addresses. The area assignment for even numbered zones is programmed in the second data digit of these addresses.

For example, to assign Zone 1 to Area 1 and Zone 2 to Area 2, program address 0287 as 01.

See *Table 26* to determine which zones apply to each Program Address.

See the *DX7400XiV4 Wireless Reference Guide* (P/N: 4998154790) for additional information.

- **Address:** 0287 to 0410
- **Data Digits:**
  - Data Digit 1: ____ (see *Table 25*; default = 0; applies to odd-numbered zones)
  - Data Digit 2: ____ (see *Table 25*; default = 0; applies to even-numbered zones)
- **Selections:** 0 to 7

Table 25: Address 0287 to 0410, Data Digits 1 & 2

Select Option	Value
Belongs to Area 1	**0**
Belongs to Area 2	1
Belongs to Area 3	2
Belongs to Area 4	3
Belongs to Area 5	4
Belongs to Area 6	5
Belongs to Area 7	6
Belongs to Area 8	7

Table 26: Address 0287 to 0410, Zone-to-Address Cross Reference (Assign Area)

Zones	Address	Zones	Address	Zones	Address
Zones 1 & 2	0287	Zones 85 & 86	0329	Zones 169 & 170	0371
Zones 3 & 4	0288	Zones 87 & 88	0330	Zones 171 & 172	0372
Zones 5 & 6	0289	Zones 89 & 90	0331	Zones 173 & 174	0373
Zones 7 & 8	0290	Zones 91 & 92	0332	Zones 175 & 176	0374
Zones 9 & 10	0291	Zones 93 & 94	0333	Zones 177 & 178	0375
Zones 11 & 12	0292	Zones 95 & 96	0334	Zones 179 & 180	0376
Zones 13 & 14	0293	Zones 97 & 98	0335	Zones 181 & 182	0377
Zones 15 & 16	0294	Zones 99 & 100	0336	Zones 183 & 184	0378
Zones 17 & 18	0295	Zones 101 & 102	0337	Zones 185 & 186	0379
Zones 19 & 20	0296	Zones 103 & 104	0338	Zones 187 & 188	0380
Zones 21 & 22	0297	Zones 105 & 106	0339	Zones 189 & 190	0381
Zones 23 & 24	0298	Zones 107 & 108	0340	Zones 191 & 192	0382
Zones 25 & 26	0299	Zones 109 & 110	0341	Zones 193 & 194	0383
Zones 27 & 28	0300	Zones 111 & 112	0342	Zones 195 & 196	0384
Zones 29 & 30	0301	Zones 113 & 114	0343	Zones 197 & 198	0385
Zones 31 & 32	0302	Zones 115 & 116	0344	Zones 199 & 200	0386
Zones 33 & 34	0303	Zones 117 & 118	0345	Zones 201 & 202	0387
Zones 35 & 36	0304	Zones 119 & 120	0346	Zones 203 & 204	0388
Zones 37 & 38	0305	Zones 121 & 122	0347	Zones 205 & 206	0389
Zones 39 & 40	0306	Zones 123 & 124	0348	Zones 207 & 208	0390
Zones 41 & 42	0307	Zones 125 & 126	0349	Zones 209 & 210	0391
Zones 43 & 44	0308	Zones 127 & 128	0350	Zones 211 & 212	0392
Zones 45 & 46	0309	Zones 129 & 130	0351	Zones 213 & 214	0393
Zones 47 & 48	0310	Zones 131 & 132	0352	Zones 215 & 216	0394
Zones 49 & 50	0311	Zones 133 & 134	0353	Zones 217 & 218	0395
Zones 51 & 52	0312	Zones 135 & 136	0354	Zones 219 & 220	0396
Zones 53 & 54	0313	Zones 137 & 138	0355	Zones 221 & 222	0397
Zones 55 & 56	0314	Zones 139 & 140	0356	Zones 223 & 224	0398
Zones 57 & 58	0315	Zones 141 & 142	0357	Zones 225 & 226	0399
Zones 59 & 60	0316	Zones 143 & 144	0358	Zones 227 & 228	0400
Zones 61 & 62	0317	Zones 145 & 146	0359	Zones 229 & 230	0401
Zones 63 & 64	0318	Zones 147 & 148	0360	Zones 231 & 232	0402
Zones 65 & 66	0319	Zones 149 & 150	0361	Zones 233 & 234	0403
Zones 67 & 68	0320	Zones 151 & 152	0362	Zones 235 & 236	0404
Zones 69 & 70	0321	Zones 153 & 154	0363	Zones 237 & 238	0405
Zones 71 & 72	0322	Zones 155 & 156	0364	Zones 239 & 240	0406
Zones 73 & 74	0323	Zones 157 & 158	0365	Zones 241 & 242	0407
Zones 75 & 76	0324	Zones 159 & 160	0366	Zones 243 & 244	0408
Zones 77 & 78	0325	Zones 161 & 162	0367	Zones 245 & 246	0409
Zones 79 & 80	0326	Zones 163 & 164	0368	Zones 247 & 248	0410
Zones 81 & 82	0327	Zones 165 & 166	0369		
Zones 83 & 84	0328	Zones 167 & 168	0370		

5.9.5 Zone Bypass Programming: Program Addresses (2721 to 2724)

Zone bypass programming determines which zone functions can be bypassed. Zone functions that cannot be bypassed cannot be force armed either. Fire zones can never be manually bypassed, but can be force armed. A default of **0** or **8** means those zone functions can be bypassed.

This programming item does **not** affect Custom Arming Programming (Program Addresses 2725 to 2778) or Swinger Shunt Bypasses (see *Section 5.8 General Control Panel* Programming).

Zone Bypass Programming (Address 2721)

- **Address:** 2721
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 27*; default = 0)
  - Data Digit 2: ____ (see *Table 28*; default = 8)
- **Selections:** 0 to 9, *0 to *5 (hexadecimal values that display as A through F at the keypads)

Table 27: Zone Bypass Programming (Address 2721, Data Digit 1)

	Selections for Data Digit 1															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Zone Function 1 Can Be Bypassed	•		•		•		•		•		•		•		•	
Zone Function 2 Can Be Bypassed	•	•			•	•			•	•			•	•		
Zone Function 3 Can Be Bypassed	•	•	•	•					•	•	•	•				
Zone Function 4 Can Be Bypassed	•	•	•	•	•	•	•	•								

Table 28: Zone Bypass Programming (Address 2721, Data Digit 2)

	Selections for Data Digit 2															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Zone Function 5 Can Be Bypassed	•		•		•		•		•		•		•		•	
Zone Function 6 Can Be Bypassed	•	•			•	•			•	•			•	•		
Zone Function 7 Can Be Bypassed	•	•	•	•					•	•	•	•				
Zone Function 8 Can Be Bypassed	•	•	•	•	•	•	•	•								

Zone Bypass Programming (Address 2722)

- **Address:** 2722
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 29*; default = 0)
  - Data Digit 2: ____ (see *Table 30*; default = 0)
- **Selections:** 0 to 9, *0 to *5 (hexadecimal values that display as A through F at the keypads)

Table 29: Zone Bypass Programming (Address 2722, Data Digit 1)

	Selections for Data Digit 1															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Zone Function 9 Can Be Bypassed	•		•		•		•		•		•		•		•	
Zone Function 10 Can Be Bypassed	•	•			•	•			•	•			•	•		
Zone Function 11 Can Be Bypassed	•	•	•	•					•	•	•	•				
Zone Function 12 Can Be Bypassed	•	•	•	•	•	•	•	•								

Table 30: Zone Bypass Programming (Address 2722, Data Digit 2)

	Selections for Data Digit 2															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Zone Function 13 Can Be Bypassed	•		•		•		•		•		•		•		•	
Zone Function 14 Can Be Bypassed	•	•			•	•			•	•			•	•		
Zone Function 15 Can Be Bypassed	•	•	•	•					•	•	•	•				
Zone Function 16 Can Be Bypassed	•	•	•	•	•	•	•	•								

Zone Bypass Programming (Address 2723)

- **Address:** 2723
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 31*; default = 0)
  - Data Digit 2: ____ (see *Table 32*; default = 0)
- **Selections:** 0 to 9, *0 to *5 (hexadecimal values that display as A through F at the keypads)

Table 31: Zone Bypass Programming (Address 2723, Data Digit 1)

	Selections for Data Digit 1															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Zone Function 17 Can Be Bypassed	•		•		•		•		•		•		•		•	
Zone Function 18 Can Be Bypassed	•	•			•	•			•	•			•	•		
Zone Function 19 Can Be Bypassed	•	•	•	•					•	•	•	•				
Zone Function 20 Can Be Bypassed	•	•	•	•	•	•	•	•								

Table 32: Zone Bypass Programming (Address 2723, Data Digit 2)

	Selections for Data Digit 2															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Zone Function 21 Can Be Bypassed	•		•		•		•		•		•		•		•	
Zone Function 22 Can Be Bypassed	•	•			•	•			•	•			•	•		
Zone Function 23 Can Be Bypassed	•	•	•	•					•	•	•	•				
Zone Function 24 Can Be Bypassed	•	•	•	•	•	•	•	•								

Zone Bypass Programming (Address 2724)

- **Address:** 2724
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 33*; default = 0)
  - Data Digit 2: ____ (see *Table 34*; default = 0)
- **Selections:** 0 to 9, *0 to *5 (hexadecimal values that display as A through F at the keypads)

Table 33: Zone Bypass Programming (Address 2724, Data Digit 1)

	Selections for Data Digit 1															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Zone Function 25 Can Be Bypassed	•		•		•		•		•		•		•		•	
Zone Function 26 Can Be Bypassed	•	•			•	•			•	•			•	•		
Zone Function 27 Can Be Bypassed	•	•	•	•					•	•	•	•				
Zone Function 28 Can Be Bypassed	•	•	•	•	•	•	•	•								

Table 34: Zone Bypass Programming (Address 2724, Data Digit 2)

	Selections for Data Digit 2															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Zone Function 29 Can Be Bypassed	•		•													
Zone Function 30 Can Be Bypassed	•	•														

5.9.6 Output Programming

Output programming defines the event, area, and type of alarm (burglary or fire) that triggers each of the three physical outputs on the control panel.

See *Section 3.8 Programmable Output Wiring* for the location of the physical outputs on the control panel.

See *Section 7.2.4 Output Programming* for output programming glossary definitions.

See the *DX7400XiV4 Wireless Reference Guide* (P/N: 4998154790) for additional information.

- **Address:** 2734 to 2736
- **Data Digits:**
  - Data Digit 1: ____ (see *Table 35*; see *Table 39* for defaults)
  - Data Digit 2: ____ (see *Table 36*; default = 3)
- **Selections:** 0 to 9; *0, *1, *3 (hexadecimal values that display as A , B, and D respectively at the keypads)

Table 35: Address 2734 to 2736, Data Digit 1

Select Option	Value
Latch on ANY Zone Alarm[1]	0
ON during Entry Pre-Alert/Exit Warning	1
On for 10 sec after pressing [System Reset]	2
ON when system is Armed[2]	3
Ground Start	4
System Status (ready to arm)	5
Zone Alarm	6
Zone Alarm delayed by 20 sec	7
Keypad Sounder Output	8
Access Output (10 sec pulse)	9
Keyfob/RF Keypad[3]	*0
Panic Duress Output[4]	*1
On during battery test	*3

[1] This includes invisible zones. See *Section 7.2.4 Output Programming* for output programming glossary definitions.

[2] If Data Digit 1 = 3, see *Table 37* for configuring Data Digit 2.

[3] If Data Digit 1 = *0, see *Table 38* for configuring Data Digit 2.

[4] See *Section 7.2.4 Output Programming* for a description of this option.

Table 36: Address 2734 to 2736, Data Digit 2

Select Option	Value
Disabled	0
Burglar Alarm	1
Fire Alarm	2
Burg and Fire Alarm	**3**

Table 37: Address 2734 to 2736, Data Digit 2 When Data Digit 1 = 3

Select Option	Value
Disabled	0
Armed Full	1
Armed Partial	2
Armed Any	**3**

Table 38: Address 2734 to 2736, Data Digit 2 When Data Digit 1 = *0

Options	RF3334	Value
Disabled		0
Momentary	Option Key	1
Toggle	Option Key	2
Momentary[1]	Auxiliary Key	3
Toggle[1]	Auxiliary Key	4

[1] Applies on to RF Keyfob (does not apply to RF Keypad).

Table 39: Address 2734 to 2736 Defaults

Output	Address	Default
Alarm	2734	6 3
Programmable Output 1	2735	3 3
Programmable Output 2	2736	2 3

5.9.7 Output Partition Assignment

In Output Partition Assignment, each on-board output is assigned to an area. By default, outputs are assigned to all areas.

See the *DX7400XiV4 Wireless Reference Guide* (P/N: 4998154790) for additional information.

- **Address:** 2737 to 2738
- **Data Digits:**
  - Data Digit 1: ____ (see *Table 40*; see *Table 42* for defaults)
  - Data Digit 2: ____ (see *Table 40* for Address 2737 and *Table 41* for Address 2738; see *Table 42* for defaults)
- **Selections:** 0 to 8

Table 40: Address 2737 to 2738, Data Digit 1, and Address 2737 Data Digit 2

Select Option	Value
Belongs to Area 1	0
Belongs to Area 1	1
Belongs to Area 1	2
Belongs to Area 1	3
Belongs to Area 1	4
Belongs to Area 1	5
Belongs to Area 1	6
Belongs to Area 1	7
Follows all Areas	**8**

Table 41: Address 2738, Data Digit 2

Keyfob Chirp Options	Value
Chirp Disabled	**0**
Bell Output	1
PO1	2
PO2	3

Table 42: Address 2737 to 2738 Defaults

Output	Address	Default
Alarm	2737 DD1	8
Programmable Output 1	2737 DD2	8
Programmable Output 2	2738 DD1	8
Keyfob Chirp Options	2738 DD2	0

5.9.8 Partition Control Programming

Partition Control programming defines the number of areas (partitions) in use and the common area (common area can only be Area 1).

See *Section 7.2.5 Area (Partition) Control* Programming for Partition Control Programming glossary definitions.

- **Address:** 3420
- **Data Digits:**
  - Data Digit 1: ____ (see *Table 43*; default = 0)
  - Data Digit 2: ____ (see *Table 44*; default = 0)
- **Selections:** 0 to 7

Table 43: Address 3420, Data Digit 1

Select Option	Value
Use 1 Area	**0**
Use 2 Areas	1
Use 3 Areas	2
Use 4 Areas	3
Use 5 Areas	4
Use 6 Areas	5
Use 7 Areas	6
Use 8 Areas	7

Table 44: Address 3420, Data Digit 2

Select Option	Value
No Common Area	**0**
Area 1 Common to Area 2 and 3	1
Area 1 Common to Area 2 to 4	2
Area 1 Common to Area 2 to 5	3
Area 1 Common to Area 2 to 6	4
Area 1 Common to Area 2 to 7	5
Area 1 Common to Area 2 to 8	6

5.9.9 Quick Arm Control Programming

Quick Arm Control programming defines which areas can be quick armed (armed without requiring a PIN to be entered).

- **Address:** 3477
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 45*; default = 0)
  - Data Digit 2: ____ (see *Table 46;* default = 0)
- **Selections:** 0 to 9, *0 to *5 (hexadecimal values that display as A through F at the keypads)

Table 45: Quick Arm Control Programming (Address 3477, Data Digit 1)

	Selections for Data Digit 1															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Area 1 Quick Arm Enabled		•		•		•		•		•		•		•		•
Area 2 Quick Arm Enabled			•	•			•	•			•	•			•	•
Area 3 Quick Arm Enabled					•	•	•	•					•	•	•	•
Area 4 Quick Arm Enabled									•	•	•	•	•	•	•	•

Table 46: Quick Arm Control Programming (Address 3477, Data Digit 2)

	Selections for Data Digit 2															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Area 5 Quick Arm Enabled		•		•		•		•		•		•		•		•
Area 6 Quick Arm Enabled			•	•			•	•			•	•			•	•
Area 7 Quick Arm Enabled					•	•	•	•					•	•	•	•
Area 8 Quick Arm Enabled									•	•	•	•	•	•	•	•

5.9.10 Keypad Assignment Programming

Keypad Assignment Programming is where you assign the keypad type and the area (partition) to which it belongs.

See *Section 7.2.6 Keypad Assignment Programming* for keypad assignment programming glossary definitions.

See the *DX7400XiV4 Wireless Reference Guide* (P/N: 4998154790) for additional information.

Each keypad must have its own option bus address. See the installation instructions for your keypad for more information. One keypad must be selected as Keypad 1.

- **Addresses:** 3131 to 3138
- **Data Digit:** See *Table 47.*
- **Defaults:** See *Table 47.* If using only one keypad, the default is an Alpha keypad belonging to Area 1. Otherwise, the default is 0.
- **Selections:**
  - **Keypad Type:** 0 to 3 (see *Table 48*)
  - **Backlight Operation:** 0 or 1 (see *Table 49*)

Table 47: Address 3131 to 3138 Keypad Assignment Programming

Address	Data Digit	Keypad	Default	Assigned Value	Address	Data Digit	Keypad	Default	Assigned Value
3131	1[1]	1	1	❒	3135	1	9	0	❒
	2	2	0	❒		2	10	0	❒
3132	1	3	0	❒	3136	1[1]	11[2]	0	❒
	2	4	0	❒		2[1]	12[2]	0	❒
3133	1	5	0	❒	3137	1[1]	13[2]	0	❒
	2	6	0	❒		2[1]	14[2]	0	❒
3134	1	7	0	❒	3138	1[1]	15[2]	0	❒
	2	8	0	❒	**Backlight**[4]	2		0	❒

[1] When in Commercial Fire Mode, certain keypads must have specific assignments (see *Section 7.2.11 Commercial Fire Mode Programming*).

[2] Keypads 11 to 15 are connected to the option bus. If the DS7412 is connected to the option bus (at Keypad Address 13 or 14), Keypad 13 or 14 is unavailable. Similarly, if the DS7420i is connected to the option bus at Keypad Address 15, Keypad 15 is unavailable; and if the DX3010 is connected to the option bus at Keypad Address 11 to 15, the corresponding keypad(s) is (are) unavailable.

Table 48: Keypad Type (Addresses 3131 to 3138)

Select Options	0	1	2	3
Disabled	•			
Alpha (LCD) Keypad		•		•
LED Keypad			•	
Master Keypad[3]				•

[3] If only using one area, do not select Master Keypads. Only use a Master Keypad if you need to view multiple areas from a single keypad.

[4] See *Table 49* for backlight options for all keypads.

Table 49: Backlight Options for All Keypads (Address 3138, Data Digit 2)

Select Options	0	1
LCD Backlight Always On	•	
LCD Backlight Off Until Keypress		•

5.9.11 Keypad Partition Assignment

See the *DX7400XiV4 Wireless Reference Guide* (P/N: 4998154790) for additional information.

- **Addresses:** 3139 to 3146
- **Data Digit:** See *Table 50*
- **Default:** 0
- **Selections:** See *Table 51*

Table 50: Address 3139 to 3146 Keypad Partition Assignment

Address	Data Digit	Keypad	Default	Assigned Value	Address	Data Digit	Keypad	Default	Assigned Value
3139	1	1	0	❒	3143	1	9	0	❒
	2	2	0	❒		2	10	0	❒
3140	1	3	0	❒	3144	1	11	0	❒
	2	4	0	❒		2	12	0	❒
3141	1	5	0	❒	3145	1	13	0	❒
	2	6	0	❒		2	14	0	❒
3142	1	7	0	❒	3146	1	15	0	❒
	2	8	0	❒		2	This Data Digit **must** be 0.		0

Table 51: Address 3139 to 3146 Keypad Partition Assignment Selections

Select Option	Value
Belongs to Area 1	**0**
Belongs to Area 2	1
Belongs to Area 3	2
Belongs to Area 4	3
Belongs to Area 5	4
Belongs to Area 6	5
Belongs to Area 7	6
Belongs to Area 8	7

5.9.12 Emergency Key Programming

Emergency Key and Panic Key programming disables or activates the A, B, and C keys located on the keypads and/or keyfobs. See *Figure 13*.

Although there are no A, B, and C keys on a keyfob, you have to program A, B, and C keys for keyfob Panic Keys to work. The user must hold down both the Arm and Disarm buttons to cause a panic alarm.

Emergency Key programming also determines a silent, pulsed, or steady alarm.

See *Section 7.2.7 Emergency Key Programming* for Emergency Key Programming glossary definitions.

See the *DX7400XiV4 Wireless Reference Guide* (P/N: 4998154790) for additional information.

- **Addresses:** 3147 to 3148
- **Data Digit:**
  - Address 3147, Data Digit 1: ____ (see *Table 52*; default = 0)
  - Address 3147, Data Digit 2: ____ (see *Table 53;* default = 0)
  - Address 3148, Data Digit 1: ____ (see *Table 54*; default = 0)
  - Address 3148, Data Digit 2: **Must be 0**
- **Default:** 0
- **Selections:** 0 to 3

Table 52: Address 3147 Data Digit 1, Fire Key A Selections

Select Option	Value
Fire Key Disabled	**0**
Fire Key = Disabled	1
Fire Key = Steady Alarm	2
Fire Key = Pulsed Alarm	3

NOTE: May be forced to a different value when in Commercial Fire Mode. See *Section 5.9.15 Commercial Fire Mode* Programming.

Table 53: Address 3147 Data Digit 2, Emergency Key B Selections

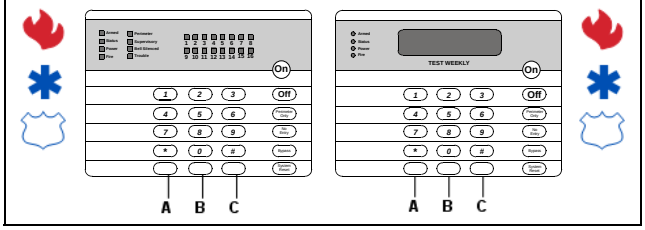
Select Option	Value
Special Emergency Key Disabled	**0**
Special Emergency Key = Silent Alarm	1
Special Emergency Key = Steady Alarm	2
Special Emergency Key = Pulsed Alarm	3

Table 54: Address 3148 Data Digit 1, Panic Key C Selections

Select Option	Value
Panic Key Disabled	**0**
Panic Key = Silent Alarm	1
Panic Key = Steady Alarm	2
Panic Key = Pulsed Alarm	3

NOTE: May be forced to a different value when in Commercial Fire Mode. See *Section 5.9.15 Commercial Fire Mode* Programming.

Figure 13: Emergency Keys



5.9.13 Custom Arming Programming (Program Addresses 2725 to 2728)

See *Section 7.2.8 Custom Arming Programming* for Custom Arming Programming glossary definitions.

Custom Arming Programming (Program Address 2725)

- **Address:** 2725
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 55*)
  - Data Digit 2: ____ (see *Table 56*)
- **Default:** 0
- **Selections:** 0 to 9, *0 to *5 (hexadecimal values that display as A through F at the keypads)

Table 55: Custom Arming Programming (Address 2725, Data Digit 1)

	Selections for Data Digit 1															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Bypass Zone Function 1		●		●		●		●		●		●		●		●
Bypass Zone Function 2			●	●			●	●			●	●			●	●
Bypass Zone Function 3					●	●	●	●					●	●	●	●
Bypass Zone Function 4									●	●	●	●	●	●	●	●

Table 56: Custom Arming Programming (Address 2725, Data Digit 2)

	Selections for Data Digit 2															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Bypass Zone Function 5		●		●		●		●		●		●		●		●
Bypass Zone Function 6			●	●			●	●			●	●			●	●
Bypass Zone Function 7					●	●	●	●					●	●	●	●
Bypass Zone Function 8									●	●	●	●	●	●	●	●

Custom Arming Programming (Program Address 2726)

- **Address:** 2726
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 57*)
  - Data Digit 2: ____ (see *Table 58*)
- **Default:** 0
- **Selections:** 0 to 9, *0 to *5 (hexadecimal values that display as A through F at the keypads)

Table 57: Custom Arming Programming (Address 2726, Data Digit 1)

	Selections for Data Digit 1															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Bypass Zone Function 9		●		●		●		●		●		●		●		●
Bypass Zone Function 10			●	●			●	●			●	●			●	●
Bypass Zone Function 11					●	●	●	●					●	●	●	●
Bypass Zone Function 12									●	●	●	●	●	●	●	●

Table 58: Custom Arming Programming (Address 2726, Data Digit 2)

	Selections for Data Digit 2															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Bypass Zone Function 13		•		•		•		•		•		•		•		•
Bypass Zone Function 14			•	•			•	•			•	•			•	•
Bypass Zone Function 15					•	•	•	•					•	•	•	•
Bypass Zone Function 16									•	•	•	•	•	•	•	•

Custom Arming Programming (Program Address 2727)

- **Address:** 2727
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 59*)
  - Data Digit 2: ____ (see *Table 60*)
- **Default:** 0
- **Selections:** 0 to 9, *0 to *5 (hexadecimal values that display as A through F at the keypads)

Table 59: Custom Arming Programming (Address 2727, Data Digit 1)

	Selections for Data Digit 1															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Bypass Zone Function 17		•		•		•		•		•		•		•		•
Bypass Zone Function 18			•	•			•	•			•	•			•	•
Bypass Zone Function 19					•	•	•	•					•	•	•	•
Bypass Zone Function 20									•	•	•	•	•	•	•	•

Table 60: Custom Arming Programming (Address 2727, Data Digit 2)

	Selections for Data Digit 2															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Bypass Zone Function 21		•		•		•		•		•		•		•		•
Bypass Zone Function 22			•	•			•	•			•	•			•	•
Bypass Zone Function 23					•	•	•	•					•	•	•	•
Bypass Zone Function 24									•	•	•	•	•	•	•	•

Custom Arming Programming (Program Address 2728)

- **Address:** 2728
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 61*)
  - Data Digit 2: ____ (see *Table 62*)
- **Default:** 0
- **Selections:** 0 to 9, *0 to *5 (hexadecimal values that display as A through F at the keypads)

Table 61: Custom Arming Programming (Address 2728, Data Digit 1)

	Selections for Data Digit 1															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Bypass Zone Function 25		•		•		•		•		•		•		•		•
Bypass Zone Function 26			•	•			•	•			•	•			•	•
Bypass Zone Function 27					•	•	•	•					•	•	•	•
Bypass Zone Function 28									•	•	•	•	•	•	•	•

Table 62: Custom Arming Programming (Address 2728, Data Digit 2)

	Selections for Data Digit 2			
Select Options	**0**	**1**	**2**	**3**
Bypass Zone Function 29		•		•
Bypass Zone Function 30			•	•

5.9.14 Force Arming and Ground Fault Detect Programming

Force Arming programming defines how many zones can be force armed using an arming sequence followed by the [Bypass] key. With this entry, all violated zones (up the programmed limit) are automatically Force Armed (bypassed). Ground Fault Detect programming determines whether or not the control panel detects a ground fault condition.

See *Section 7.2.9 Force Arming* and *Section 7.2.10 Ground Fault Detect Programming* for glossary definitions.

- **Address:** 2732
- **Data Digits:**
  - Data Digit 1: ____ (see *Table 63*)
  - Data Digit 2: ____ (see *Table 69*)
- **Default:** 1
- **Selections:** 0 to 9 for Data Digit 1; 0 and 1 for Data Digit 2.

Table 63: Address 2732, Data Digit 1

Select Option	Value
Do not allow Force Arming	0
Allow up to one zone to be Force Armed	**1**
Allow up to two zones to be Force Armed	2
Allow up to three zones to be Force Armed	3
Allow up to four zones to be Force Armed	4
Allow up to five zones to be Force Armed	5
Allow up to six zones to be Force Armed	6
Allow up to seven zones to be Force Armed	7
Allow up to eight zones to be Force Armed	8
Allow up to nine zones to be Force Armed	9

This limit does **not** apply when arming with a keyswitch programmed with force arming enabled.

Table 64: Address 2732, Data Digit 2

Select Option	Value
Ground Fault Detect off	0
Ground Fault Detect on	**1**

5.9.15 Commercial Fire Mode Programming

This section describes how to define the parameters for the Commercial Fire Mode.

See *Section 7.2.11 Commercial Fire Mode Programming* for Commercial Fire Mode Programming glossary definitions.

- **Address:** 2733
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 65*)
  - Data Digit 2: ____ (see *Table 66*)
- **Default:** 0
- **Selections:** 0 to 9, *0 to *2 (hexadecimal values that display as A through C at the keypads)

Table 65: Commercial Fire Mode Programming (Address 2733, Data Digit 1)

	Selections for Data Digit 1												
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**
Commercial Fire Mode Disabled	•												
Local Commercial Fire Mode Enabled		•	•	•	•	•	•						
Central Station Commercial Fire Mode Enabled								•	•	•	•	•	•
10 Second Delay on Waterflow Zone			•						•				
20 Second Delay on Waterflow Zone				•						•			
30 Second Delay on Waterflow Zone					•						•		
40 Second Delay on Waterflow Zone						•						•	
50 Second Delay on Waterflow Zone							•						•

Table 66: Commercial Fire Mode Programming (Address 2733, Data Digit 2)

	Selections for Data Digit 2					
Select Options	**0**	**1**	**2**	**3**	**4**	**5**
Bell and Auxiliary Activate on Fire	•	•	•	•	•	•
Bell and Auxiliary Activate on Burg				•	•	•
Pulsing Fire Alarms are 1 Sec On/1 Sec Off	•			•		
Pulsing Fire Alarms use California March Time		•			•	
Pulsing Fire Alarms use Temporal Cadence			•			•

When programming fire zones, it is recommended that they be Zone Functions 12 and 13. See *Sections 5.9.1 Zone Function Programming*, *5.9.2 Zone Programming: Assigning a Zone Function to the Zone*, and *Regardless of Which Commercial Fire Mode is Chosen on page 52*.

When Central Station Commercial Fire Mode is Chosen

When Central Station Commercial Fire Mode is chosen, Address 4021 (DS7420i: Dual Phone Line/Bell Supervision Module Output Programming), will be forced to a value of 5.

When Local Commercial Fire Mode is Chosen

When Local Commercial Fire Mode is chosen, Address 4021 (DS7420i: Dual Phone Line/Bell Supervision Module Output Programming) will be forced to a value of 3, 4, or 5 (turns the Bell Monitor feature ON and the Alarm Output on Line Fault feature OFF).

Regardless of Which Commercial Fire Mode is Chosen

Regardless of which Commercial Fire Mode is chosen, the following parameters are forced when exiting Local Programmer's Mode:

- Zone Function 12, Address 0012, is 7 *0. (Alarm on Short, Trouble on Open, Pulsing Fire with verification)
- Zone Function 13, Address 0013, is 7 *1. (Alarm on Short, Trouble on Open, Pulsing Fire without verification)
- Zone Function 14, Address 0014, is 7 *2. (Alarm on Short, Trouble on Open, Pulsing Water Flow)
- Zone Function 15, Address 0015, is 7 *3. (Alarm on Short, Trouble on Open, Pulsing Supervisory)
- Zone Bypass Address 2722 does not allow Zone Functions 12 - 15 to be bypassed.
- Emergency Key, Address 3147, Data Digit 1, becomes a 3 if programmed previously as a 2. Data Digit 2 becomes a 2 if programmed previously as a 3.
- Panic Key, Address 3148, Data Digit 1, becomes a 2 if programmed previously as a 3.
- Fire Bell Cutoff, Address 4032: If less than 5, set to 5, otherwise untouched.
- The AC Fail Report delay is randomly between 6 to 12 hours regardless of the delay time programmed in 4034. Also, the AC Fail Report is not sent as a "tag-along."

Communication Parameters When In Central Station Commercial Fire Mode

In Central Station Commercial Fire Mode, the following communication parameters are forced:

If Report Codes are 0, the defaults listed in *Table 67* are set. Otherwise, they are unchanged.

Table 67: Communication Parameters Changed By Central Station Commercial Fire Mode

Parameter Name	Address	Default	Parameter Name	Address	Default
Keypad Fire Alarm Report Programming	3207	*0 1	Zone Function 13 Trouble Report Programming	3283	6 4
Keypad Fire Restoral Report Programming	3208	7 1	Zone Function 14 Trouble Report Programming	3284	6 5
Zone Function 12 Alarm Report Programming	3220	*0 3	Zone Function 15 Trouble Report Programming	3285	6 6
Zone Function 13 Alarm Report Programming	3221	*0 4	Low Battery Restoral Report Programming	3337	7 9
Zone Function 14 Alarm Report Programming	3222	*0 5	AC Failure Report Programming	3338	6 *0
Zone Function 15 Alarm Report Programming	3223	*0 6	AC Restoral Report Programming	3339	7 *0
Zone Function 12 Restoral Report Programming	3252	7 3	Communication Test/System Normal Report Programming	3340	8 3
Zone Function 13 Restoral Report Programming	3253	7 4	Remote Program Successful Report Programming	3341	7 *5
Zone Function 14 Restoral Report Programming	3254	7 5	Remote Program Unsuccessful Report Programming	3342	6 *5
Zone Function 15 Restoral Report Programming	3255	7 6	System Trouble Report Programming	3345	3 9
Low Battery Report Programming	3336	6 9	System Restoral Report Programming	3346	3 *0
Zone Function 12 Trouble Report Programming	3282	6 3	Communication Test/System Off Normal Report Programming	3347	3 9

NOTES:

- If in Central Station Commercial Fire Mode, and Phone Control (Address 3156, Data Digit 1) is set to 0, the Phone Control address automatically changes to Data Digit 1 = 6 and Data Digit 2 = 1 (4/2 @ 18/23, 10 pps). Otherwise, the Phone Control address is left unchanged.
- If in Central Station Commercial Fire Mode, Test Report (Address 4026) automatically changes to Data Digit = 8 (call out every day). Data Digit 2 is left unchanged.

5.9.16 Open/Close Report Control Programming

See *Section 7.2.12 Open/Close Report Control Programming* for Open/Close Report Control Programming glossary definitions.

- **Address:** 3149
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 68*; default = 8)
  - Data Digit 2: ____ (see *Table 69*; default = 0)
- **Selections:** 0 to 9 (Data Digit 1); 0 or 1 (Data Digit 2)

Table 68: Open/Close Report Control Programming (Address 3149, Data Digit 1)

	Selections for Data Digit 1									
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Do not report opens or closes	•									
Report opens and closes in Area 1		•	•	•	•	•	•	•	•	
Report opens and closes in Area 2			•	•	•	•	•	•	•	
Report opens and closes in Area 3				•	•	•	•	•	•	
Report opens and closes in Area 4					•	•	•	•	•	
Report opens and closes in Area 5						•	•	•	•	
Report opens and closes in Area 6							•	•	•	
Report opens and closes in Area 7								•	•	
Report opens and closes in Area 8									•	
Report first Area to open and last Area to close[1, 2]										•

[1] When using this option, all areas should have the same account code.

[2] If Data Digit 1 = 9, then Data Digit 2 **must** = 0.

Table 69: Address 3149, Data Digit 2

Select Option	Value
Send Closing and Bypass Reports at close	**0**
Send Closing and Bypass Reports after exit delay	1

5.9.17 Open/Close and Zone Report Programming

This section allows you to decide which phone number sends open and close reports, zone alarm, zone restoral, and zone trouble reports.

- **Address:** 3151
- **Data Digit:**
  - Data Digit 1 (for Open and Close Reports): ____ (see *Table 70*)
  - Data Digit 2 (for Zone Alarm, Zone Restoral, Zone Trouble, Bypass, Unbypass, and Trouble Restoral Reports): ____ (see *Table 71*)
- **Default:** 0
- **Selections:** 0 to 3

Table 70: Address 3151, Data Digit 1 (Open/Close)

Select Option	Value
Alternate between both Phone Numbers	**0**
Report to Phone Number 1	1
Report to Phone Number 2	2
Report to Phone Number 1 and 2	3

Table 71: Address 3151, Data Digit 2 (Zones)

Select Option	Value
Alternate between both Phone Numbers	**0**
Report to Phone Number 1	1
Report to Phone Number 2	2
Report to Phone Number 1 and 2	3

5.9.18 Report Control Programming

This section allows you to decide which phone number sends reports other than Open/Close Reports and Zone Reports.

- **Address:** 3152
- **Data Digit:**
  - Data Digit 1 (for Open and Close Reports): ____ (see *Table 72*)
  - Data Digit 2: **Must = 0**
- **Default:** 0
- **Selections:** 0 to 3

Table 72: Address 3152, Data Digit 1 (Report Control)

Select Option	Value
Alternate between both Phone Numbers	**0**
Report to Phone Number 1	1
Report to Phone Number 2	2
Report to Phone Number 1 and 2	3

Data Digit 1 does not include Open and Close Reports or Zone Reports. See *Sections 5.9.16 Open/Close Report Control* Programming and *5.9.17 Open/Close and Zone Report Programming*.

5.9.19 Entry and Exit Timer Programming (Program Addresses 4028 to 4030)

Entry and Exit Delay Timers are in 5-second intervals. The maximum delay time is 255 seconds.

For example:

- 01 (Data Digit 1 = 0, Data Digit 2 = 1) provides a 5-second timer
- 03 (Data Digit 1 = 0, Data Digit 2 = 3) provides a 15-second timer
- 12 (Data Digit 1 = 1, Data Digit 2 = 2) provides a 60-second timer
- 51 (Data Digit 1 = 5, Data Digit 2 = 1) provides a 255-second timer

Entry Delay Time 1

- **Address:** 4028
- **Default:** 09 (45 seconds)
- **Selections:** 00 to 51 (0 to 255 seconds, in 5-second intervals)

Entry Delay Time 2

- **Address:** 4029
- **Default:** 09 (45 seconds)
- **Selections:** 00 to 51 (0 to 255 seconds, in 5-second intervals)

Exit Delay Time

- **Address:** 4030
- **Default:** 12 (60 seconds)
- **Selections:** 00 to 51 (0 to 255 seconds, in 5-second intervals)

5.9.20 Fire and Burglary Bell Cutoff Programming (Program Addresses 4032 to 4033)

Fire and Burglary Bell Cutoff timers are set in 1-minute intervals. A value of 99 = 30-second cutoff.

For example:

- 01 (Data Digit 1 = 0, Data Digit 2 = 1) provides a 1-minute cutoff
- 03 (Data Digit 1 = 0, Data Digit 2 = 3) provides a 3-minute cutoff
- 12 (Data Digit 1 = 1, Data Digit 2 = 2) provides a 12-minute cutoff
- 99 (Data Digit 1 = 9, Data Digit 2 = 9) provides a 30-second cutoff

Fire Bell Cutoff

- **Address:** 4032
- **Default:** 04 (4 minutes)
- **Selections:** 00 to 99 (0 to 98 minutes; 99 = 30-second cutoff)

Address 4032 might be forced to a different value when in Commercial Fire Mode. See *Regardless of Which Commercial Fire Mode is Chosen on page 52*.

Burglary Bell Cutoff

- **Address:** 4033
- **Default:** 04 (4 minutes)
- **Selections:** 00 to 99 (0 to 98 minutes; 99 = 30-second cutoff)

5.9.21 AC Fail Report Delay Programming

The AC Fail Delay Times are programmed as Hexadecimal values.

For example:

- 0 0 = Send only with next report
- 1 *4 = 30 minute delay
- 3 *2 = 60 minute delay
- 7 8 = 120 minute delay
- *5 0 = 240 minute delay
- *5 *5 = Random delay (at least 15 minutes, but less than 120 minutes)

*0 through *5 are Hex values. They display as A through F at the keypads.

See *Section 7.2.13 Report Programming* for AC Fail Report Delay glossary definitions.

AC Fail Report Delay (Address 4034)

- **Address:** 4034
- **Default:** 00 (send only with next report)
- **Selections:** 00 to FF

5.9.22 General Authority Programming

This allows for a user with a General Authority level to arm, disarm and bypass specified zones.

See *Section 7.2.1 General Control Programming* for General Authority Programming glossary definitions.

- **Addresses:** 3421 to 3424
- **Data Digit:** See *Table 73.*
- **Default:** 0
- **Selections:** See *Table 74.*

Table 73: Address 3421 to 3424 General Authority Programming

Address	Data Digit	Area	Default	Assigned Data Digit
3421	1	1	0	❒
	2	2	0	❒
3422	1	3	0	❒
	2	4	0	❒
3423	1	5	0	❒
	2	6	0	❒
3424	1	7	0	❒
	2	8	0	❒

Table 74: Address 3421 to 3424 Selections

Select Option	Value
General Code can Arm, Disarm, and Bypass	**0**
General Code can Arm and Bypass	1
General Code can Arm and Disarm	2
General Code can Arm	3

5.9.23 Arming Warning Programming (Program Addresses 3425 to 3428)

Arming Warning programming defines whether the keypad is audible during the exit delay and auto arm period. If programmed, the keypad sounder activates once every 5 seconds during the exit delay. With 10 seconds and 5 seconds remaining, the keypad sounder activates 3 times. During auto arming, a pre-arming period begins 15 minutes before the system arms automatically. The keypad sounders pulses five times every minute. During the last five minutes before arming, these sounders are on steady.

Arming Warning for Areas (Partitions) 1 and 2 (Address 3425)

- **Data Digit:**
  - Data Digit 1: ____ (see *Table 75*)
  - Data Digit 2: ____ (see *Table 76*)
- **Default:** 0
- **Selections:** 0 or 4

Table 75: Address 3425, Data Digit 1

Area 1	Value
No Keypad Sounder during Exit Delay	**0**
Keypad Sounder during Exit Delay	4

Table 76: Address 3425, Data Digit 2

Area 1	Value
No Keypad Sounder during Exit Delay	**0**
Keypad Sounder during Exit Delay	4

Arming Warning for Areas (Partitions) 3 and 4 (Address 3426)

- **Data Digit:**
  - Data Digit 1: ____ (see *Table 77*)
  - Data Digit 2: ____ (see *Table 78*)
- **Default:** 0
- **Selections:** 0 or 4

Table 77: Address 3426, Data Digit 1

Area 3	Value
No Keypad Sounder during Exit Delay	**0**
Keypad Sounder during Exit Delay	4

Table 78: Address 3426, Data Digit 2

Area 4	Value
No Keypad Sounder during Exit Delay	**0**
Keypad Sounder during Exit Delay	4

Arming Warning for Areas (Partitions) 5 and 6 (Address 3427)

- **Data Digit:**
  - Data Digit 1: ____ (see *Table 79*)
  - Data Digit 2: ____ (see *Table 80*)
- **Default:** 0
- **Selections:** 0 or 4

Table 79: Address 3427, Data Digit 1

Area 5	Value
No Keypad Sounder during Exit Delay	**0**
Keypad Sounder during Exit Delay	4

Table 80: Address 3427, Data Digit 2

Area 6	Value
No Keypad Sounder during Exit Delay	**0**
Keypad Sounder during Exit Delay	4

Arming Warning for Areas (Partitions) 7 and 8 (Address 3428)

- **Data Digit:**
  - Data Digit 1: ____ (see *Table 81*)
  - Data Digit 2: ____ (see *Table 82*)
- **Default:** 0
- **Selections:** 0 or 4

Table 81: Address 3428, Data Digit 1

Area 7	Value
No Keypad Sounder during Exit Delay	**0**
Keypad Sounder during Exit Delay	4

Table 82: Address 3428, Data Digit 2

Area 8	Value
No Keypad Sounder during Exit Delay	**0**
Keypad Sounder during Exit Delay	4

5.9.24 RS-232 Interface Control Programming

RS-232 Interface Control Programming allows you to enable or disable the interface and to select which history events are sent to the printer as they occur. Selecting **No Events** causes the history to only print on command.

To print the History Buffer starting from the most recent event, enter the Master Code followed by [#][0][8]. To stop printing, enter Master Code [#][0][8] again.

- **Address:** 4019
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 83*; default = 0)
  - Data Digit 2: ____ (see *Table 84*; default = 7)
- **Selections:** 0 or 1 for Data Digit 1; 0 to 7 for Data Digit 2.

Table 83: Address 4019, Data Digit 1

Select Option	Value
DS7412 Disabled	**0**
DS7412 Enabled	1

Table 84: Address 4019, Data Digit 2

	Selections for Data Digit 2							
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
No Events	•							
Alarms, Troubles, and Restorals		•		•		•		•
Opens and Closes			•	•			•	•
All Other Events					•	•	•	•

5.9.25 RS-232 Interface Configuration Programming

RS-232 Interface Configuration Programming allows you to configure the interface for your printer. Most printers operate using the default values for the DS7412. Some printers might operate more efficiently using optional program values.

Consult the operating guide provided with your printer to ensure that its configuration matches the one programmed here.

If using the RPS Direct Connection option for programming, Address 4019 must be set for 1 0. Address 4020 must be set for 2 5.

- **Address:** 4020
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 85*; default = 0)
  - Data Digit 2: ____ (see *Table 86*; default = 0)
- **Selections:** 0 to 5 for Data Digit 1; 0 to 7 for Data Digit 2.

Table 85: Address 4020, Data Digit 1

Select Option	Value
300 baud	**0**
1200 baud	1
2400 baud	2
4800 baud	3
9600 baud	4
14400 baud	5

Table 86: Address 4020, Data Digit 2

	Selections for Data Digit 2							
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
No Parity	•	•	•	•				
ODD Parity					•	•		
EVEN Parity							•	•
Software Flow Control	•		•		•		•	
Hardware Flow Control		•		•		•		•
1 Stop Bit	•	•			•	•	•	•
2 Stop Bits			•	•				
8 Data Bits	•	•	•	•	•	•	•	•

5.9.26 RS-232 Carriage Return/Line Feed Control

The RS-232 Carriage Return/Line Feed (CR/LF) Control allows you to choose between sending carriage returns/line feeds or spaces to the DS7412 module. This is only used when Program Address 4019 Data Digit 2 is programmed with the numbers 1 through 7 (see *Section 5.9.24 RS-232 Interface Control Programming*).

- **Address:** 4027
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 87*; default = 0)
  - Data Digit 2: **Must = 0**
- **Selections:** 0 or 1

Table 87: Address 4027, Data Digit 1

Select Option	Value
Send CR/LF	**0**
Send Spaces	1

5.9.27 Report Programming (Program Addresses 3207 to 3419)

- To send the User number along with open, close, or partial close reports: place an F (*5) in the extended digit.
- To disable a report (meaning that nothing is sent), place a '0' in the reporting digit.
- When using SIA or Contact ID format, place a '1' in the reporting digit of each report you enable. It is not necessary to program the extended digit.
- For suggested values for 4/2, BFSK and Pager format, see Sections 12.1 to 12.3. For SIA and Contact ID, the values sent are listed in Sections 13.1 and 13.2. For other formats, consult your central station.
- **HEX values:** Some Data Digit values are higher than 9. These values are programmed by pressing the [*] key followed by another number. These values will display as HEX characters when entered. The HEX character values are: ***0 = A *1 = B *2 = C *3 = D *4 = E *5 = F**

See *Section 7.2.13 Report Programming* for Report Programming glossary definitions.

Table 88: Report Programming (Addresses 3207 to 3419)

Report	Address	Default	Reporting Digit 1	Reporting Digit 2
Keypad Fire Alarm	3207	00		
Keypad Fire Restore	3208	00		
Zone Funct. 1 Alarm	3209	10		
Zone Funct. 2 Alarm	3210	20		
Zone Funct. 3 Alarm	3211	30		
Zone Funct. 4 Alarm	3212	40		
Zone Funct. 5 Alarm	3213	50		
Zone Funct. 6 Alarm	3214	60		
Zone Funct. 7 Alarm	3215	70		
Zone Funct. 8 Alarm	3216	80		
Zone Funct. 9 Alarm	3217	00		
Zone Funct. 10 Alarm	3218	00		
Zone Funct. 11 Alarm	3219	00		
Zone Funct. 12 Alarm	3220	00		
Zone Funct. 13 Alarm	3221	00		

Table 88: Report Programming (Addresses 3207 to 3419) (continued)

Report	Address	Default	Reporting Digit 1	Reporting Digit 2
Zone Funct. 14 Alarm	3222	00		
Zone Funct. 15 Alarm	3223	00		
Zone Funct. 16 Alarm	3224	00		
Zone Funct. 17 Alarm	3225	00		
Zone Funct. 18 Alarm	3226	00		
Zone Funct. 19 Alarm	3227	00		
Zone Funct. 20 Alarm	3228	00		
Zone Funct. 21 Alarm	3229	00		
Zone Funct. 22 Alarm	3230	00		
Zone Funct. 23 Alarm	3231	00		
Zone Funct. 24 Alarm	3232	00		
Zone Funct. 25 Alarm	3233	00		
Zone Funct. 26 Alarm	3234	00		
Zone Funct. 27 Alarm	3235	00		
Zone Funct. 28 Alarm	3236	00		
Zone Funct. 29 Alarm	3237	00		
Zone Funct. 30 Alarm	3238	00		
Keypad Emergency	3239	00		
Keypad Panic	3240	00		
Zone Funct. 1 Restoral	3241	00		
Zone Funct. 2 Restoral	3242	00		
Zone Funct. 3 Restoral	3243	00		
Zone Funct. 4 Restoral	3244	00		
Zone Funct. 5 Restoral	3245	00		
Zone Funct. 6 Restoral	3246	00		
Zone Funct. 7 Restoral	3247	00		
Zone Funct. 8 Restoral	3248	00		
Zone Funct. 9 Restoral	3249	00		
Zone Funct. 10 Restoral	3250	00		
Zone Funct. 11 Restoral	3251	00		
Zone Funct. 12 Restoral	3252	00		
Zone Funct. 13 Restoral	3253	00		
Zone Funct. 14 Restoral	3254	00		
Zone Funct. 15 Restoral	3255	00		
Zone Funct. 16 Restoral	3256	00		
Zone Funct. 17 Restoral	3257	00		
Zone Funct. 18 Restoral	3258	00		
Zone Funct. 19 Restoral	3259	00		
Zone Funct. 20 Restoral	3260	00		
Zone Funct. 21 Restoral	3261	00		
Zone Funct. 22 Restoral	3262	00		
Zone Funct. 23 Restoral	3263	00		
Zone Funct. 24 Restoral	3264	00		
Zone Funct. 25 Restoral	3265	00		
Zone Funct. 26 Restoral	3266	00		

Table 88: Report Programming (Addresses 3207 to 3419) (continued)

Report	Address	Default	Reporting Digit 1	Reporting Digit 2
Zone Funct. 27 Restoral	3267	00		
Zone Funct. 28 Restoral	3268	00		
Zone Funct. 29 Restoral	3269	00		
Zone Funct. 30 Restoral	3270	00		
Zone Funct. 1 Trouble	3271	00		
Zone Funct. 2 Trouble	3272	00		
Zone Funct. 3 Trouble	3273	00		
Zone Funct. 4 Trouble	3274	00		
Zone Funct. 5 Trouble	3275	00		
Zone Funct. 6 Trouble	3276	00		
Zone Funct. 7 Trouble	3277	00		
Zone Funct. 8 Trouble	3278	00		
Zone Funct. 9 Trouble	3279	00		
Zone Funct. 10 Trouble	3280	00		
Zone Funct. 11 Trouble	3281	00		
Zone Funct. 12 Trouble	3282	00		
Zone Funct. 13 Trouble	3283	00		
Zone Funct. 14 Trouble	3284	00		
Zone Funct. 15 Trouble	3285	00		
Zone Funct. 16 Trouble	3286	00		
Zone Funct. 17 Trouble	3287	00		
Zone Funct. 18 Trouble	3288	00		
Zone Funct. 19 Trouble	3289	00		
Zone Funct. 20 Trouble	3290	00		
Zone Funct. 21 Trouble	3291	00		
Zone Funct. 22 Trouble	3292	00		
Zone Funct. 23 Trouble	3293	00		
Zone Funct. 24 Trouble	3294	00		
Zone Funct. 25 Trouble	3295	00		
Zone Funct. 26 Trouble	3296	00		
Zone Funct. 27 Trouble	3297	00		
Zone Funct. 28 Trouble	3298	00		
Zone Funct. 29 Trouble	3299	00		
Zone Funct. 30 Trouble	3300	00		
Zone Funct. 1 Trouble Restoral	3301	00		
Zone Funct. 2 Trouble Restoral	3302	00		
Zone Funct. 3 Trouble Restoral	3303	00		
Zone Funct. 4 Trouble Restoral	3304	00		
Zone Funct. 5 Trouble Restoral	3305	00		
Zone Funct. 6 Trouble Restoral	3306	00		
Zone Funct. 7 Trouble Restoral	3307	00		
Zone Funct. 8 Trouble Restoral	3308	00		
Zone Funct. 9 Trouble Restoral	3309	00		
Zone Funct. 10 Trouble Restoral	3310	00		
Zone Funct. 11 Trouble Restoral	3311	00		

Table 88: Report Programming (Addresses 3207 to 3419) (continued)

Report	Address	Default	Reporting Digit 1	Reporting Digit 2
Zone Funct. 12 Trouble Restoral	3312	00		
Zone Funct. 13 Trouble Restoral	3313	00		
Zone Funct. 14 Trouble Restoral	3314	00		
Zone Funct. 15 Trouble Restoral	3315	00		
Zone Funct 16 Trouble Restoral	3316	00		
Zone Funct. 17 Trouble Restoral	3317	00		
Zone Funct. 18 Trouble Restoral	3318	00		
Zone Funct. 19 Trouble Restoral	3319	00		
Zone Funct. 20 Trouble Restoral	3320	00		
Zone Funct. 21 Trouble Restoral	3321	00		
Zone Funct. 22 Trouble Restoral	3322	00		
Zone Funct. 23 Trouble Restoral	3323	00		
Zone Funct. 24 Trouble Restoral	3324	00		
Zone Funct. 25 Trouble Restoral	3325	00		
Zone Funct. 26 Trouble Restoral	3326	00		
Zone Funct. 27 Trouble Restoral	3327	00		
Zone Funct. 28 Trouble Restoral	3328	00		
Zone Funct. 29 Trouble Restoral	3329	00		
Zone Funct. 30 Trouble Restoral	3330	00		
Open	3331	00		
Close	3332	00		
Duress	3333	00		
Partial Close	3334	00		
First Open After Alarm	3335	00		
Low Battery	3336	00		
Low Battery Restoral	3337	00		
AC Failure	3338	00		
AC Restoral	3339	00		
Comm. Test/ System Normal	3340	00		
Remote Program Successful	3341	00		
Remote Prog. Unsuccess-ful	3342	00		
Local Program Successful	3343	00		
Local Program Unsuccess-ful	3344	00		
System Trouble	3345	00		
System Trouble Restoral	3346	00		
Comm Test/ System Off Norm	3347	00		
Exit Error	3348	00		
Recent Closing	3349	00		
System Walk Test	3350	00		
System Walk Test Restoral	3351	00		
Fire Walk Test	3352	00		
Fire Walk Test Restoral	3353	00		
Dirty Smoke Chamber	3356	00		

Table 88: Report Programming (Addresses 3207 to 3419) (continued)

Report	Address	Default	Reporting Digit 1	Reporting Digit 2
Dirty Chamber Restoral	3357	00		
Zone Funct. 1 Bypass	3358	00		
Zone Funct. 2 Bypass	3359	00		
Zone Funct. 3 Bypass	3360	00		
Zone Funct. 4 Bypass	3361	00		
Zone Funct. 5 Bypass	3362	00		
Zone Funct. 6 Bypass	3363	00		
Zone Funct. 7 Bypass	3364	00		
Zone Funct. 8 Bypass	3365	00		
Zone Funct. 9 Bypass	3366	00		
Zone Funct. 10 Bypass	3367	00		
Zone Funct. 11 Bypass	3368	00		
Zone Funct. 12 Bypass	3369	00		
Zone Funct. 13 Bypass	3370	00		
Zone Funct. 14 Bypass	3371	00		
Zone Funct. 15 Bypass	3372	00		
Zone Funct. 16 Bypass	3373	00		
Zone Funct. 17 Bypass	3374	00		
Zone Funct. 18 Bypass	3375	00		
Zone Funct. 19 Bypass	3376	00		
Zone Funct. 20 Bypass	3377	00		
Zone Funct. 21 Bypass	3378	00		
Zone Funct. 22 Bypass	3379	00		
Zone Funct. 23 Bypass	3380	00		
Zone Funct. 24 Bypass	3381	00		
Zone Funct. 25 Bypass	3382	00		
Zone Funct. 26 Bypass	3383	00		
Zone Funct. 27 Bypass	3384	00		
Zone Funct. 28 Bypass	3385	00		
Zone Funct. 29 Bypass	3386	00		
Zone Funct. 30 Bypass	3387	00		
Zone Funct. 1 Bypass Restore	3388	00		
Zone Funct. 2 Bypass Restore	3389	00		
Zone Funct. 3 Bypass Restore	3390	00		
Zone Funct. 4 Bypass Restore	3391	00		
Zone Funct. 5 Bypass Restore	3392	00		
Zone Funct. 6 Bypass Restore	3393	00		
Zone Funct. 7 Bypass Restore	3394	00		
Zone Funct. 8 Bypass Restore	3395	00		
Zone Funct. 9 Bypass Restore	3396	00		
Zone Funct 10 Bypass Restore	3397	00		
Zone Funct 11 Bypass Restore	3398	00		
Zone Funct 12 Bypass Restore	3399	00		
Zone Funct. 13 Bypass Restore	3400	00		
Zone Funct. 14 Bypass Restore	3401	00		

Table 88: Report Programming (Addresses 3207 to 3419) (continued)

Report	Address	Default	Reporting Digit 1	Reporting Digit 2
Zone Funct. 15 Bypass Restore	3402	00		
Zone Funct. 16 Bypass Restore	3403	00		
Zone Funct. 17 Bypass Restore	3404	00		
Zone Funct. 18 Bypass Restore	3405	00		
Zone Funct. 19 Bypass Restore	3406	00		
Zone Funct. 20 Bypass Restore	3407	00		
Zone Funct. 21 Bypass Restore	3408	00		
Zone Funct. 22 Bypass Restore	3409	00		
Zone Funct. 23 Bypass Restore	3410	00		
Zone Funct. 24 Bypass Restore	3411	00		
Zone Funct. 25 Bypass Restore	3412	00		
Zone Funct. 26 Bypass Restore	3413	00		
Zone Funct. 27 Bypass Restore	3414	00		
Zone Funct. 28 Bypass Restore	3415	00		
Zone Funct. 29 Bypass Restore	3416	00		
Zone Funct. 30 Bypass Restore	3417	00		
Keypad Tamper	3418	00		
Keypad Tamper Restoral	3419	00		

5.9.28 Phone/DS7416i Routing Control (Program Addresses 3153 and 3154)

If Address 3155 is programmed to "Try DS7416i first", the following addresses can be used to control report routing. If Address 3155 is set to "Send alarms via both DS7416i and digital", this forces alarms to go to the phone even if the Phone/DS7416i report routing for alarms does not specify phone usage.

Phone/DS7416i Report Routing

- **Address:** 3153
- **Data Digit:**
  - Data Digit 1 (Open and Close Reports): ____ (see *Table 89*; default = 3)
  - Data Digit 2 (Zone Alarm, Zone Restoral, and Zone Trouble Reports): ____ (see *Table 90*; default = 3)
- **Selections:** 1 to 3, 7, *1, *5 (hexadecimal values that display as B and F at the keypads)

Table 89: Address 3153, Data Digit 1

	Selections for Data Digit 1					
Select Options	**1**	**2**	**3**	**7**	***1**	***5**
Use Phone	●		●	●	●	●
Use DS7416i		●	●	●	●	●
Use Either			●		●	
Use Both				●		●
Try Phone First					●	●

Table 90: Address 3153, Data Digit 2 (Zones)

	Selections for Data Digit 2					
Select Options	**1**	**2**	**3**	**7**	***1**	***5**
Use Phone	●		●	●	●	●
Use DS7416i		●	●	●	●	●
Use Either			●		●	
Use Both				●		●
Try Phone First					●	●

Phone/DS7416i Report Routing and Phone First Count

Phone First Count is used to control the number of attempts made on the phone line before switching to the DS7416i. This value is only referenced if the "Use Phone", "Use DS7416i", and "Try Phone First" options are all selected. If the value is less than or equal to 2, or more than 5, two attempts are made on the phone before trying the DS7416i if the Phone First option is selected.

- **Address:** 3154
- **Data Digit:**
  - Data Digit 1 (System Reports): ____ (see *Table 91*; default = 3)
  - Data Digit 2 (Phone First Count): ____ (see *Table 92*; default = 0)
- **Selections:**
  - Data Digit 1: 1 to 3, 7, *1, *5 (hexadecimal values that display as B and F at the keypads)
  - Data Digit 2: 0 to 9; *0 to *5 (hexadecimal values that display as A through F at the keypads)

Table 91: Address 3154, Data Digit 1

	Selections for Data Digit 1					
Select Options	**1**	**2**	**3**	**7**	***1**	***5**
Use Phone	●		●	●	●	●
Use DS7416i		●	●	●	●	●
Use Either			●		●	
Use Both				●		●
Try Phone First					●	●

Table 92: Address 3154, Data Digit 2

Select Option	Value	Select Option	Value
0 Attempts	**0**	8 Attempts	8
1 Attempt	1	9 Attempts	9
2 Attempts	2	10 Attempts	*0
3 Attempts	3	11 Attempts	*1
4 Attempts	4	12 Attempts	*2
5 Attempts	5	13 Attempts	*3
6 Attempts	6	14 Attempts	*4
7 Attempts	7	15 Attempts	*5

5.9.29 Account Code Programming (Addresses 3429 to 3459)

Account Code programming defines the number sent to the central station that identifies this control panel. It also identifies which area (partition) is reporting from this control panel.

- **Default:** 0000
- **Data Digits:** See *Table 93*.

Account Codes are programmed from left to right. If programming a 3 digit Account Code, the fourth digit of the address must be "0."

For example: If the Account Code is 121, program 1210 in the programming address.

To send a zero "0," enter it as *0 (this does not apply to the added zero in a three digit Account Code).

For example: If the Account Code is 101, program 1*010 in the programming address. If the Account Code is 3050, program 3*05*0 in the programming address.

Table 93: Account Code Programming (Address 3429 to 3459)

Area	Phone # Account Code and Address	Data Digit 1	Data Digit 2	Data Digit 3	Data Digit 4
1	Phone #1 Account Code (Address 3429)	☐	☐	☐	☐
	Phone #2 Account Code (Address 3431)	☐	☐	☐	☐
2	Phone #1 Account Code (Address 3433)	☐	☐	☐	☐
	Phone #2 Account Code (Address 3435)	☐	☐	☐	☐
3	Phone #1 Account Code (Address 3437)	☐	☐	☐	☐
	Phone #2 Account Code (Address 3439)	☐	☐	☐	☐
4	Phone #1 Account Code (Address 3441)	☐	☐	☐	☐
	Phone #2 Account Code (Address 3443)	☐	☐	☐	☐
5	Phone #1 Account Code (Address 3445)	☐	☐	☐	☐
	Phone #2 Account Code (Address 3447)	☐	☐	☐	☐
6	Phone #1 Account Code (Address 3449)	☐	☐	☐	☐
	Phone #2 Account Code (Address 3451)	☐	☐	☐	☐
7	Phone #1 Account Code (Address 3453)	☐	☐	☐	☐
	Phone #2 Account Code (Address 3455)	☐	☐	☐	☐
8	Phone #1 Account Code (Address 3457)	☐	☐	☐	☐
	Phone #2 Account Code (Address 3459)	☐	☐	☐	☐

5.9.30 Phone Number General Control Programming

See *Section 7.2.14 Phone Number General Control Programming* for Phone Number General Control glossary definitions.

- **Address:** 3155
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 94*; default = 2)
  - Data Digit 2: ____ (see *Table 95*; default = 0)
- **Selections:** 0 to 9, *0 to *5 (hexadecimal values that display as A through F at the keypads)

Table 94: Address 3155, Data Digit 1)

	Selections for Data Digit 1											
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**
Enable remote programmer call-back		●		●		●		●		●		●
Dial pulse on all phone numbers	●	●					●	●				
Dial tone on all phone numbers[1]					●	●					●	●
Dial tone, switch to pulse if required			●	●					●	●		
Try DS7416i first[2]							●	●	●	●	●	●

Table 95: Address 3155, Data Digit 2)

	Selections for Data Digit 1															
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**	***3**	***4**	***5**
Dialer delay of 15 seconds on non-24-hour burglar alarms only[3]		●		●		●		●		●		●		●		●
Dialer delay of 15 seconds on 24-hour burglar and fire alarms only[3]			●	●			●	●			●	●			●	●
Send alarms using either DS7416i or digital[4]	●	●	●	●					●	●	●	●				
Send alarms using both DS7416i and digital[2, 4]					●	●	●	●					●	●	●	●
Use 110 baud communication for RPS	●	●	●	●	●	●	●	●								
Use 300 baud communication for RPS									●	●	●	●	●	●	●	●

[1] Required on PBX systems.

[2] If this option is selected, see *Section 5.9.28 Phone/DS7416i Routing Control* (Program Addresses 3153 and 3154).

[3] These selections can only be used with systems that have only one area.

[4] Only applicable when using the DS7416i option.

5.9.31 Phone Number Format Programming

- **Addresses:**
  - 3156: Phone Number 1 Format
  - 3157: Phone Number 2 Format
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 96*)
  - Data Digit 2: ____ (see *Table 97*)
- **Default:** 0
- **Selections:**
  - Data Digit 1: 0 to 9, *0, *2, and *5 (hexadecimal values that display as A, C, and F respectively at the keypads)
  - Data Digit 2: 0 through 5

When using the DS7416i Advanced Radio Communications Module, set Data Digit 1 to 9 and Data Digit 2 to 1 for Program Addresses 3156 and 3157.

Table 96: Address 3156 and 3157, Data Digit 1

Select Option	Value
Phone number disabled	0
3/1 (no Extended Reporting)	1
3/1E (Extended Reporting)	2
3/1 with parity	3
3/1 Extended with parity	4
4/1	5
4/2	6
BFSK	7
SIA 110 baud	8
Contact ID	9
SIA 300 baud	*0
Personal dialing	*2
Pager	*5

Table 97: Address 3156 and 3157, Data Digit 2

	Selections for Data Digit 1					
Select Options	**0**	**1**	**2**	**3**	**4**	**5**
1900 Hz data/1400 Hz acknowledge	●		●		●	
1800 Hz data/2300 Hz acknowledge		●		●		●
BFSK, SIA, Contact ID		●				
10 pulses per second (pps)	●	●				
20 pulses per second (pps)			●	●		
40 pulses per second (pps)					●	●

Compatible Receivers

Table 98 lists the Digital Alarm Communicator Receivers and Formats that are compatible with the DS7400Xi.

Contact your central station to determine which format to use, and if a special line card is required.

Table 98: Compatible Receivers and Formats

	Format								
Receiver	**3/1**	**3/1E (Ext)**	**3/1 with Parity**	**3/1E with Parity**	**4/1**	**4/2**	**BFSK**	**Contact ID**	**SIA**
ADEMCO: Model 685	•	•	•	•	•	•	•	•	
F.B.I.: Model CP-220	•	•	•	•	•	•	•	•	
I.T.I.: Model CS-4000	•	•			•	•	•		
Osborne-Hoffman: Model II	•	•	•	•	•	•	•	•	•
Radionics: Model 6000	•	•	•	•			•		
Radionics: Model 6500	•	•	•	•	•	•	•		
Bosch: Model 6600	•	•	•	•	•	•	•	•	•
Silent Knight: Model 9000	•	•	•	•	•	•	•		•
Varitech: Model V-300	•	•	•	•	•	•	•		

• = The format type the DS7400XiV4 supports and the Digital Alarm Communicator Receiver accepts.

5.9.32 Phone Answering Programming

See *Section 7.2.15 Phone Answering Programming* for phone answering glossary definitions.

- **Address:** 3158
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 99*; default = 0)
  - Data Digit 2: ____ (see *Table 100*; default = 0)
- **Selections:** 0 to 9, *0 to *5 (hexadecimal values that display as A through F at the keypads)

Table 99: Address 3158, Data Digit 1

Select Option When Armed	Value
Don't answer phone	**0**
Answer phone on 1 ring[1]	1
Answer phone on 2 rings	2
Answer phone on 3 rings[1]	3
Answer phone on 4 rings	4
Answer phone on 5 rings[1]	5
Answer phone on 6 rings	6
Answer phone on 7 rings[1]	7
Answer phone on 8 rings	8
Answer phone on 9 rings[1]	9
Answer phone on 10 rings	*0
Answer phone on 11 rings[1]	*1
Answer phone on 12 rings	*2
Answer phone on 13 rings[1]	*3
Answer phone on 14 rings	*4
Answer phone on 15 rings[1]	*5

[1] Overrides answering machine. The control panel answers on the first ring of the second call made within one minute.

Table 100: Address 3158, Data Digit 2

Select Option When Disarmed	Value
Don't answer phone	**0**
Answer phone on 1 ring[1]	1
Answer phone on 2 rings	2
Answer phone on 3 rings[1]	3
Answer phone on 4 rings	4
Answer phone on 5 rings[1]	5
Answer phone on 6 rings	6
Answer phone on 7 rings[1]	7
Answer phone on 8 rings	8
Answer phone on 9 rings[1]	9
Answer phone on 10 rings	*0
Answer phone on 11 rings[1]	*1
Answer phone on 12 rings	*2
Answer phone on 13 rings[1]	*3
Answer phone on 14 rings	*4
Answer phone on 15 rings[1]	*5

[1] Overrides answering machine. The control panel answers on the first ring of the second call made within one minute.

5.9.33 Pager Delay Time

When using the Pager Dialing Format (selected in Addresses 3156 and 3157; see *Section 5.9.31 Phone Number Format Programming*), you can insert a delay time after the phone number is dialed and before the reports are sent to the pager system. This delay allows greeting and instruction messages in the pager system. This delay does not affect any other report formats.

The delay time is a two-digit number, programmed across both data digits. For example, to set a delay time of 5 seconds, make Data Digit 1 = 0 and Data Digit 2 = 5. The default delay time = 10 seconds (Data Digit 1 = 1 and Data Digit 2 = 0).

- **Address:** 4038
- **Data Digit:**
  - Data Digit 1: ____ (default = 1)
  - Data Digit 2: ____ (default = 0)
- **Selections:** 0 to 9
- **Delay Time Range:** 00 to 99 seconds

5.9.34 Programmer's and Master Code Programming (Addresses 7589 to 7592)

Programmer's Code programming defines the Programmer's Code. This code is used to enter Programming Mode from the keypads.

Although the DS7400Xi (Ver. 4+) Control Panel is pre-programmed with 6-digit codes, it is also shipped with a 4-digit PIN length default. The default codes for the Programmer's Code and the Master Code are 4-digits (9876 and 1234 respectively) unless you reprogrammed for a 6-digit PIN length.

Programmer's Code

Enter the Programmer's Code as six digits.

The Programmer's Code cannot be the same as any PIN number.

- **Address:** 7589
- **Data Digit:**
  - Data Digit 1: ____ (default = 9)
  - Data Digit 2: ____ (default = 8)
  - Data Digit 3: ____ (default = 7)
  - Data Digit 4: ____ (default = 6)
  - Data Digit 5: ____ (default = 5)
  - Data Digit 6: ____ (default = 4)
- **Selections:** 0 to 9
- **Default:** 987654

Master Code

Master Code programming defines what the Master Code will be. This code is the highest authority level for a PIN.

If the Master Code is lost, use this address to program a new one. Otherwise, the Master Code Programming Mode should be used to create PINs that have a Master Code authority level.

Master Code for User Number 001 has its authority fixed at Level 0. It will always have access to all areas.

User Numbers 002 through 200 must be programmed from the Master Code Programming Mode.

- **Address:** 7592
- **Data Digit:**
  - Data Digit 1: ____ (default = 1)
  - Data Digit 2: ____ (default = 2)
  - Data Digit 3: ____ (default = 3)
  - Data Digit 4: ____ (default = 4)
  - Data Digit 5: ____ (default = 5)
  - Data Digit 6: ____ (default = 6)
- **Selections:** 0 to 9
- **Default:** 123456

5.9.35 PIN Length Programming

PIN Length Programming defines the length of the PINs that are assigned to each user. PINS can be programmed to be 4 or 6 digits in length.

- **Address:** 3478
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 101*; default = 0)
  - Data Digit 2: **Must = 0**
- **Selections:** 0 or 1

Table 101: Address 3478, Data Digit 1

Select Option	Value
4-digit PINs	**0**
6-digit PINs	1

5.9.36 Octal Relay Module Output Programming

Follow Action (Addresses 2740 to 2771)

- **Program Address A:** 2740 to 2770
- **Data Digit:**
  - Data Digit 1: 1 (default = 1)
  - Data Digit 2: ___ (default = 3)
- **Program Address B:** 2741 to 2771
- **Data Digit:**
  - Data Digit 1: ____ (default = 0)
  - Data Digit 2: ____ (default = 6)

To program an Octal Relay Module for Follow Action:

1. Select the Octal Relay to program (see *Table 102*).
2. Program Data Digit 1 of Program Address A as **1** for Follow Action.
3. Program Data Digit 2 of Program Address A for the desired function (see *Table 103*).
4. Program Data Digit 1 and 2 of Program Address B for the desired function (see *Table 104*).
5. Once both Address A and Address B have been programmed, proceed to program the next Octal Relay.

The Octal Relay Module is the DX3010. See *Section 2.4 Options* for more information, and to *Section 7.2.4 Output Programming* for output programming glossary definitions.

For Octal Relay Partition Assignment, see *Octal Relay Module Output Partition Assignment* (Addresses 2844 to 2851) on *page 80*.

If a DS9484 is used, it replaces the DX3010 and takes up outputs 1-4 of the Octal Relay Module. Outputs 5-8 of the Octal Relay Module are unavailable. If two DS9484 power supplies are used, one replaces Octal Relay Module 1 and the other replaces Octal Relay Module 2.

Disable Relays 5 to 8 and 13 to 16 when using a DS9484.

Table 102: Octal Relay Program Addresses

Octal Relay Number	DX3010-1					
	Address A (see *Table 106*)			Address B (see *Table 107*)		
1	2740	1		2741		
2	2742	1		2743		
3	2744	1		2745		
4	2746	1		2747		
5	2748	1		2749		
6	2750	1		2751		
7	2752	1		2753		
8	2754	1		2755		
9	2756	1		2757		
10	2758	1		2759		
11	2760	1		2761		
12	2762	1		2763		
13	2764	1		2765		
14	2766	1		2767		
15	2768	1		2769		
16	2770	1		2771		

Table 103: Octal Relay Address A Selections

	Selections for Data Digit 2			
Follow Action Select Options	**0**	**1**	**2**	**3**
Disabled	•			
Burglar Alarm		•		•
Fire Alarm			•	•

Table 104: Octal Relay Address B Selections

	Selections for Data Digits 1 & 2	
Follow Action Select Options	**DD1**	**DD2**
Latch ON after Zone Alarm[1]	0	0
ON during Entry Pre-Alert	0	1
ON for 10 sec after pressing [System Reset]	0	2
ON for Any Armed state	0	3
Ground Start	0	4
System Status (Ready to Arm)	0	5
Zone Alarm	0	6
Zone Alarm Delayed by 20 sec	0	7
Keypad Sounder Output	0	8
Access Output (10 sec pulse)	0	9
Future Selection	0	*0
Panic/Duress Output[2]	0	*1
ON when System is Partial	0	*2
ON when System is Fully Armed	0	*3

[1] This includes invisible zones. See the glossary for details.

[2] See *Section 7.2.4 Output Programming* for a description of this option.

Follow System Wide Event (Addresses 2740 to (2771)

- **Program Address A:** 2740 to 2770
- **Data Digit:**
  - Data Digit 1: 2 (default = 1)
  - Data Digit 2: ____ (default = 3)
- **Program Address B:** 2741 to 2771
- **Data Digit:**
  - Data Digit 1: ____ (default = 0)
  - Data Digit 2: ____ (default = 6)

To program an Octal Relay Module for Follow System Wide Event:

1. Select the Octal Relay to program (see *Table 105*).
2. Program Data Digit 1 of Program Address A as **2** for Follow System Wide Event.
3. Program Data Digit 2 of Program Address A for the desired function (see *Table 106*).
4. Program Data Digit 1 and 2 of Program Address B for the desired function (see *Table 107*).
5. Once both Address A and Address B have been programmed, proceed to program the next Octal Relay.

For Octal Relay Partition Assignment, see *Octal Relay Module Output Partition Assignment* (Addresses 2844 to 2851) on *page 80*.

Table 105: Octal Relay Program Addresses

Octal Relay Number	DX3010-1					
	Address A (see *Table 106*)			Address B (see *Table 107*)		
1	2740	**2**		2741		
2	2742	**2**		2743		
3	2744	**2**		2745		
4	2746	**2**		2747		
5	2748	**2**		2749		
6	2750	**2**		2751		
7	2752	**2**		2753		
8	2754	**2**		2755		
9	2756	**2**		2757		
10	2758	**2**		2759		
11	2760	**2**		2761		
12	2762	**2**		2763		
13	2764	**2**		2765		
14	2766	**2**		2767		
15	2768	**2**		2769		
16	2770	**2**		2771		

Table 106: Octal Relay Address A Selections

	Selections for Data Digit 2			
Follow System Wide Event Select Options	**0**	**1**	**2**	**3**
Disabled	•			
Burglar Alarm		•		•
Fire Alarm			•	•

Table 107: Octal Relay Address B Selections

	Selections for Data Digits 1 & 2	
Follow System Wide Event Select Options	**DD1**	**DD2**
Disabled	0	0
AC Power Fail	0	1
Low Battery	0	2
Communicator Failure	0	3
System Fault[1]	0	4
Keypad Supervision Fault	0	5
Multiplex Bus Fault	0	6
RF Receiver Fault	0	7
Aux Power Fault	0	8
Fire Zone Trouble	0	9
Supervisory	0	*0
Zone Trouble	0	*1
Duress	0	*2
Battery Test	0	*3
Future Selection	0	*4
Future Selection	0	*5

[1] System Faults include:

- RAM fault
- ROM fault
- Bell/Line Monitor fault
- Line 1 fault
- Line 2 fault
- Bell fault
- Aux Power fault
- Octal Relay fault
- Serial Module fault
- Serial Transmit fault
- Serial Receive fault
- Aux. Relay fault
- Alternate Communication fault
- RF Receiver Tamper
- RF Receiver Jammed
- RF Receiver Trouble
- Printer Off-line

Follow Function (Addresses 2740 to (2771)

- **Program Address A:** 2740 to 2770
- **Data Digit:**
  - Data Digit 1: 3 (default = 1)
  - Data Digit 2: ____ (default = 3)
- **Program Address B:** 2741 to 2771
- **Data Digit:**
  - Data Digit 1: ____ (default = 0)
  - Data Digit 2: ____ (default = 6)

To program an Octal Relay Module for Follow Output Function:

1. Select the Octal Relay to program (see *Table 108*).
2. Program Data Digit 1 of Program Address A as **3** for Follow Function.
3. Program Data Digit 2 of Program Address A for the desired function (see *Table 109*).
4. Program Data Digit 1 and 2 of Program Address B for the desired function (see *Table 110*).
5. Once both Address A and Address B have been programmed, proceed to program the next Octal Relay.

For Octal Relay Partition Assignment information, see *Octal Relay Module Output Partition Assignment* (Addresses 2844 to 2851) on *page 80*.

For output function information, see *Section 5.9.37 Output Function Programming* on *page 81*.

Table 108: Octal Relay Program Addresses

Octal Relay Number	DX3010-1					
	Address A (see *Table 109*)			Address B (see *Table 110*)		
1	2740	**3**		2741		
2	2742	**3**		2743		
3	2744	**3**		2745		
4	2746	**3**		2747		
5	2748	**3**		2749		
6	2750	**3**		2751		
7	2752	**3**		2753		
8	2754	**3**		2755		
9	2756	**3**		2757		
10	2758	**3**		2759		
11	2760	**3**		2761		
12	2762	**3**		2763		
13	2764	**3**		2765		
14	2766	**3**		2767		
15	2768	**3**		2769		
16	2770	**3**		2771		

Table 109: Octal Relay Address A Selections

	Selections for Data Digit 2			
Follow Function Select Options	**0**	**1**	**2**	**3**
Disabled	•			
Burglar Alarm		•		•
Fire Alarm			•	•

Table 110: Octal Relay Address B Selections

	Selections for Data Digits 1 & 2	
Follow Function Select Options	**DD1**	**DD2**
Disabled	0	0
Follow Output Function 1	0	1
Follow Output Function 2	0	2
Follow Output Function 3	0	3
Follow Output Function 4	0	4
Follow Output Function 5	0	5
Follow Output Function 6	0	6
Follow Output Function 7	0	7
Follow Output Function 8	0	8
Follow Output Function 9	0	9
Follow Output Function 10	0	*0
Follow Output Function 11	0	*1
Follow Output Function 12	0	*2
Follow Output Function 13	0	*3
Follow Output Function 14	0	*4
Follow Output Function 15	0	*5
Follow Output Function 16	1	0
Follow Output Function 17	1	1
Follow Output Function 18	1	2
Follow Output Function 19	1	3
Follow Output Function 20	1	4
Follow Output Function 21	1	5
Follow Output Function 22	1	6
Follow Output Function 23	1	7
Follow Output Function 24	1	8

Follow Zone (Addresses 2740 to (2771)

- **Program Address A:** 2740 to 2770
- **Data Digit:**
  - Data Digit 1: 4 (default = 1)
  - Data Digit 2: ____ (default = 3)
- **Program Address B:** 2741 to 2771
- **Data Digit:**
  - Data Digit 1: ____ (default = 0)
  - Data Digit 2: ____ (default = 6)

To program an octal relay module for Follow Zone:

1. Select the octal relay to program (see *Table 111*).
2. Program Data Digit 1 of Program Address A as **4** for Follow Zone.
3. Program Data Digit 2 of Program Address A for the desired function (see *Table 112*).
4. Program Data Digit 1 and 2 of Program Address B for the desired zone. Enter the HEX value of the zone (see *Table 113*).
5. Once both Address A and Address B have been programmed, proceed to program the next Octal Relay.

Table 111: Octal Relay Program Addresses

Octal Relay Number	DX3010-1					
	Address A (see *Table 112*)			Address B (see *Table 113*)		
1	2740	4		2741		
2	2742	4		2743		
3	2744	4		2745		
4	2746	4		2747		
5	2748	4		2749		
6	2750	4		2751		
7	2752	4		2753		
8	2754	4		2755		
9	2756	4		2757		
10	2758	4		2759		
11	2760	4		2761		
12	2762	4		2763		
13	2764	4		2765		
14	2766	4		2767		
15	2768	4		2769		
16	2770	4		2771		

Table 112: Octal Relay Address A Selections

	Selections for Data Digit 2												
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**
Disabled	•												
When a zone is shorted		•	•	•	•	•	•	•	•	•	•	•	•
When a zone is opened			•		•		•		•		•		•
When control panel is armed		•	•			•	•	•	•			•	•
When control panel is not armed				•	•	•	•			•	•	•	•
Latch when activated[1]								•	•	•	•	•	•

[1] This applies **only** to the DS7465i outputs. DX3010 outputs do **not** latch when this is selected

Table 113: HEX Values

Zone	HEX Value	Zone	HEX Value	Zone	HEX Value	Zone	HEX Value	Zone	HEX Value	Zone	HEX Value
1	01	31	1*5	61	3*3	91	5*1	121	79	151	97
2	02	32	20	62	3*4	92	5*2	122	7*0	152	98
3	03	33	21	63	3*5	93	5*3	123	7*1	153	99
4	04	34	22	64	40	94	5*4	124	7*2	154	9*0
5	05	35	23	65	41	95	5*5	125	7*3	155	9*1
6	06	36	24	66	42	96	60	126	7*4	156	9*2
7	07	37	25	67	43	97	61	127	7*5	157	9*3
8	08	38	26	68	44	98	62	128	80	158	9*4
9	09	39	27	69	45	99	63	129	81	159	9*5
10	0*0	40	28	70	46	100	64	130	82	160	*00
11	0*1	41	29	71	47	101	65	131	83	161	*01
12	0*2	42	2*0	72	48	102	66	132	84	162	*02
13	0*3	43	2*1	73	49	103	67	133	85	163	*03
14	0*4	44	2*2	74	4*0	104	68	134	86	164	*04
15	0*5	45	2*3	75	4*1	105	69	135	87	165	*05
16	10	46	2*4	76	4*2	106	6*0	136	88	166	*06
17	11	47	2*5	77	4*3	107	6*1	137	89	167	*07
18	12	48	30	78	4*4	108	6*2	138	8*0	168	*08
19	13	49	31	79	4*5	109	6*3	139	8*1	169	*09
20	14	50	32	80	50	110	6*4	140	8*2	170	*0*0
21	15	51	33	81	51	111	6*5	141	8*3	171	*0*1
22	16	52	34	82	52	112	70	142	8*4	172	*0*2
23	17	53	35	83	53	113	71	143	8*5	173	*0*3
24	18	54	36	84	54	114	72	144	90	174	*0*4
25	19	55	37	85	55	115	73	145	91	175	*0*5
26	1*0	56	38	86	56	116	74	146	92	176	*10
27	1*1	57	39	87	57	117	75	147	93	177	*11
28	1*2	58	3*0	88	58	118	76	148	94	178	*12
29	1*3	59	3*1	89	59	119	77	149	95	179	*13
30	1*4	60	3*2	90	5*0	120	78	150	96	180	*14

Table 113: HEX Values (continued)

Zone	HEX Value	Zone	HEX Value	Zone	HEX Value	Zone	HEX Value	Zone	HEX Value	Zone	HEX Value
181	*15	193	*21	205	*2*3	217	*39	229	*45	241	*51
182	*16	194	*22	206	*2*4	218	*3*0	230	*46	242	*52
183	*17	195	*23	207	*2*5	219	*3*1	231	*47	243	*53
184	*18	196	*24	208	*30	220	*3*2	232	*48	244	*54
185	*19	197	*25	209	*31	221	*3*3	233	*49	245	*55
186	*1*0	198	*26	210	*32	222	*3*4	234	*4*0	246	*56
187	*1*1	199	*27	211	*33	223	*3*5	235	*4*1	247	*57
188	*1*2	200	*28	212	*34	224	*40	236	*4*2	248	*58
189	*1*3	201	*29	213	*35	225	*41	237	*4*3		
190	*1*4	202	*2*0	214	*36	226	*42	238	*4*4		
191	*1*5	203	*2*1	215	*37	227	*43	239	*4*5		
192	*20	204	*2*2	216	*38	228	*44	240	*50		

Octal Relay Module Output Partition Assignment (Addresses 2844 to 2851)

- **Addresses:** 2844 to 2851
- **Data Digits 1 and 2:** See *Table 114*
- **Defaults:** See *Table 114*
- **Selections:** 0 through 8 (see *Table 115*)

Table 114: Address 2844 to 2851 Octal Relay Module Output Partition Assignment

Address	Data Digit	Relay	Default	Assigned Data Digit	Address	Data Digit	Relay	Default	Assigned Data Digit
2844	1	1	8	❒	2848	1	9	8	❒
	2	2	8	❒		2	10	8	❒
2845	1	3	8	❒	2849	1	11	8	❒
	2	4	8	❒		2	12	8	❒
2846	1	5	8	❒	2850	1	13	8	❒
	2	6	8	❒		2	14	8	❒
2847	1	7	8	❒	2851	1	15	8	❒
	2	8	8	❒		2	16		❒

Table 115: Octal Relay Module Output Partition Assignment Selections

Select Option	Value
Belongs to Area 1	0
Belongs to Area 2	1
Belongs to Area 3	2
Belongs to Area 4	3
Belongs to Area 5	4
Belongs to Area 6	5
Belongs to Area 7	6
Belongs to Area 8	7
Follows all Areas	8

5.9.37 Output Function Programming

Output function programming allows you to have any output follow status events by area or system-wide, or follow zone outputs in an Input/Output Cross Matrix. See *Section 7.2.4 Output Programming* for Output Function Programming glossary definitions. See *Table 126* to determine which program addresses make up each output function.

See the *DX7400XiV4 Wireless Reference Guide* (P/N: 4998154790) for additional information.

Table 116: Program Addresses 2772 to 2843, Data Digit 1 Selections

Select Option	Value	For Digit 2, Refer To:
Latch ON after Zone Alarm	0	*Table 118*
ON during Entry Pre-Alert	1	*Table 118*
ON when system is armed	3	*Table 119*
Zone Alarm	6	*Table 118*
Zone Alarm delayed by 20 sec	7	*Table 118*
Keypad Sounder output	8	*Table 118*
Access output (10 sec pulse)	9	*Table 118*
Keyfob/RF Keypad output	*0	*Table 121*
Panic/Duress output	*1	*Table 118*
Follow System Status Event	*2	*Table 123*
Follow a single zone	*3	*Table 124*
Follow two zones, when EITHER zone changes state	*4	*Table 127*
Follow two zones, when BOTH zones change state	*5	*Table 127*

Follow Status Events for Individual Areas (Partitions)

Data Digit 1 Options 0-9 and *1 program an output function to follow status events for individual areas.

See *Table 116* for output function options. See *Table 117* for output function numbers/program addresses.

Table 117: Output Functions/Program Address 1

Output Function[1]	Program Address 1	Output Function[1]	Program Address 1
1	2772	13	2808
2	2775	14	2811
3	2778	15	2814
4	2781	16	2817
5	2784	17	2820
6	2787	18	2823
7	2790	19	2826
8	2793	20	2829
9	2796	21	2832
10	2799	22	2835
11	2802	23	2838
12	2805	24	2841

[1] See *Section 5.9.38 Output Function Partition Assignment* for information on assigning output functions to areas.

Data Digit 2 programs how the output function responds when the status event selected in Data Digit 1 occurs. See *Table 118* for Data Digit 2 options.

Table 118: Output Function to Follow Status Events for Individual Areas (Partitions), Data Digit 2

	Selections for Data Digit 2			
Follows	**0**	**1**	**2**	**3**
Disabled	•			
Burglar Alarm		•		•
Fire Alarm			•	•

If you select "ON when system is armed" (Option 3 - see *Table 116*), use *Table 119* to select Data Digit 2.

Table 119: Output Function for ON When System is Armed, Data Digit 2

	Selections for Data Digit 2			
Follows	**0**	**1**	**2**	**3**
Disabled	•			
Armed Full		•		
Armed Partial			•	
Armed Any				•

For example, to program Output Function 1 to sound the Burglar Alarm when a Zone Alarm occurs:

1. Enter "6" (see *Table 116*) in Data Digit 1 of Program Address 2772 (see *Table 117*).
   This option programs the output function to follow zone alarms as a status event.
2. Enter "1" (see *Table 118*) in Data Digit 2 of Program Address 2772.
   When a zone alarm occurs, the output assigned to Output Function 1 sounds the Burglar Alarm.

Follow Wireless Keyfob Output Buttons

Data Digit 1 Option *0 programs an output function to follow the output buttons on a wireless keyfob. See *Table 116* for output function options. See *Table 123* for output function numbers/program addresses. See the *DX7400XiV4 Wireless Reference Guide* (P/N: 4998154790) for additional information.

Table 120: Output Functions/Program Address 1

Output Function[1]	Program Address 1	Output Function[1]	Program Address 1
1	2772	13	2808
2	2775	14	2811
3	2778	15	2814
4	2781	16	2817
5	2784	17	2820
6	2787	18	2823
7	2790	19	2826
8	2793	20	2829
9	2796	21	2832
10	2799	22	2835
11	2802	23	2838
12	2805	24	2841

[1] See *Section 5.9.38 Output Function Partition Assignment* for information on assigning output functions to areas.

Data Digit 2 programs the keyfob key. See *Table 121* for Data Digit 2 options.

Table 121: Output Function to Follow Wireless Keyfob Output Buttons, Data Digit 2

Select Option	RF3334E	Selections for Data Digit 2
Disabled		0
Moment	Option Key	1
Toggle	Option Key	2
Moment[1]	Auxiliary Key	3
Toggle[1]	Auxiliary Key	4

[1] Applies on to RF Keyfob (does not apply to RF Keypad).

For example, use the following steps to assign Output Function 2 to the keyfob's Option key. Pressing this key toggles the assigned output.

1. Enter "*0" (see *Table 116*) in Data Digit 1 of Program Address 2775 (see *Table 120*).
   This option programs the output function to follow the keyfob's output buttons.
2. Enter "2" (see *Table 121*) in Data Digit 2 of Program Address 2775.
   This option assigns the output function to the Option key on the keyfob. When this button is pressed, the assigned output toggles states (turns on or off).

Follow Status Events System-Wide

Data Digit 1 Option *2 programs an output function to follow status events throughout the entire system (system-wide).

See *Table 116* for output function options. See *Table 125* for output function numbers/program addresses.

Table 122: Output Functions/Program Address 1

Output Function[1]	Program Address 1	Output Function[1]	Program Address 1
1	2772	13	2808
2	2775	14	2811
3	2778	15	2814
4	2781	16	2817
5	2784	17	2820
6	2787	18	2823
7	2790	19	2826
8	2793	20	2829
9	2796	21	2832
10	2799	22	2835
11	2802	23	2838
12	2805	24	2841

[1] See *Section 5.9.38 Output Function Partition Assignment* for information on assigning output functions to areas.

Data Digit 2 assigns the status event to be followed. When this event occurs, all outputs using this output function activate. See *Table 126* for Data Digit 2 options.

Table 123: Output Function to Follow Status Events System Wide, Data Digit 2

Select Option	Selections for Data Digit 2
AC Power Failure	1
Low Battery	2
Communication Failure	3
System Fault[1]	4
Keypad Supervision Fault	5
Multiplex Bus Fault	6
Radio Receiver Fault	7
Aux Power Fault	8
Fire Trouble	9
Supervisory	*0
Zone Trouble	*1
Duress PIN	*2

[1] System Faults include:

- RAM Fault
- ROM Fault
- Bell/Line Monitor Fault
- Line 1 Fault
- Line 2 Fault
- Bell Fault
- Aux. Power Fault
- Octal Relay Fault
- Serial Module Fault
- Serial Transmit Fault
- Serial Receive Fault
- Aux. Relay Fault
- Alternate Communications Fault
- RF Receiver Tamper
- RF Receiver Jammed
- RF Receiver Trouble
- Printer Off-Line

For example, use the following steps to program Output Function 3 to follow Low Battery status events.

1. Enter "*2" (see *Table 116*) in Data Digit 1 of Program Address 2778 (see *Table 125*).
   This option programs the output function to follow status events system-wide.
2. Enter "2" (see *Table 126*) in Data Digit 2 of Program Address 2778.
   This option assigns the output function to follow Low Battery status events. When a low battery status event occurs, all outputs using this output function activate.

Follow a Single Zone

Data Digit 1 Option *3 programs an output function to follow one zone in an input/output cross matrix. This option requires the use of two program addresses:

- **Program Address 1:** Enter the output function option in Data Digit 1 (see *Table 124*); enter the zone/control panel state option in Data Digit 2 (see *Table 125*).
- **Program Address 2:** Enter the zone number in Data Digits 1 and 2 using hex values (see *Table 113*).

See *Table 116* for output function options. See *Table 124* for output function numbers/program addresses.

Table 124: Output Functions. Program Addresses 1 and 2

Output Function[1]	Program Address 1			Program Address 2 (for Follow Zone 1)		
1	2772	*3		2773		
2	2775	*3		2776		
3	2778	*3		2779		
4	2781	*3		2782		
5	2784	*3		2785		
6	2787	*3		2788		
7	2790	*3		2791		
8	2793	*3		2794		
9	2796	*3		2797		
10	2799	*3		2800		
11	2802	*3		2803		
12	2805	*3		2806		
13	2808	*3		2809		
14	2811	*3		2812		
15	2814	*3		2815		
16	2817	*3		2818		
17	2820	*3		2821		
18	2823	*3		2824		
19	2826	*3		2827		
20	2829	*3		2830		
21	2832	*3		2833		
22	2835	*3		2836		
23	2838	*3		2839		
24	2841	*3		2842		

[1] See *Section 5.9.38 Output Function Partition Assignment* for information on assigning output functions to areas.

Table 125: Program Address 1, Data Digit 2 for Follow Zones

	Selections for Data Digit 2												
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	***0**	***1**	***2**
Disabled	•												
When a zone is shorted		•	•	•	•	•	•	•	•	•	•	•	•
When a zone is opened			•		•		•		•		•		•
When control panel is armed		•	•			•	•	•	•			•	•
When control panel is not armed				•	•	•	•			•	•	•	•
Latch when activated[1]								•	•	•	•	•	•

[1] This applies **only** to the DS7465i outputs. DX3010 outputs do **not** latch when this is selected.

For example, use the following steps to program Output Function 4 to follow Zone 1 when the zone is shorted and the control panel is armed.

1. Enter "*3" (see *Table 124*) in Data Digit 1 of Program Address 1 (2781).
   This option programs the output function to follow a selected zone in an input/output cross matrix.
2. Enter "1" (see Table 128) in Data Digit 2 of Program Address 1 (2781).
   This option programs the output function to activate when the zone it follows is shorted and the control panel is armed.
3. Enter "0" in Data Digit 1 of Program Address 2 (2782), and "1" in Data Digit 2 of Program Address 2 to assign this output function to Zone 1. The entries made in Program Address 2 are hex values (see Table 113).

Output Function 4 is now assigned to follow Zone 1. Any output assigned to Output Function 4 activates when Zone 1 is shorted and the control panel is armed.

Follow Two Zones

Data Digit 1 Options *4 and *5 program an output function to follow two zones in an input/output cross matrix.

- **Option *4:** Follow two zones when EITHER zone changes state.
- **Option *5:** Follow two zones when BOTH zone changes state.

This option requires the use of three program addresses:

- **Program Address 1:** Enter the output function option in Data Digit 1 (see *Table 116*); enter the zone/control panel state option in Data Digit 2 (see *Table 128*).
- **Program Address 2:** Enter the first zone number in Data Digits 1 and 2 using hex values (see *Table 113*).
- **Program Address 3:** Enter the second zone number in Data Digits 1 and 2 using hex values (see *Table 113*).
- See *Table 116* for output function options. See *Table 126* for output function numbers/program addresses.

Table 126: Output Functions, Program Addresses 1 to 3

Output Function[1]	Program Address 1	Program Address 2 (for Follow Zone 1)	Program Address 3 (for Follow Zone 2)
1	2772	2773	2774
2	2775	2776	2777
3	2778	2779	2780
4	2781	2782	2783
5	2784	2785	2786
6	2787	2788	2789
7	2790	2791	2792
8	2793	2794	2795
9	2796	2797	2798
10	2799	2800	2801
11	2802	2803	2804
12	2805	2806	2807
13	2808	2809	2810
14	2811	2812	2813
15	2814	2815	2816
16	2817	2818	2819
17	2820	2821	2822
18	2823	2824	2825
19	2826	2827	2828
20	2829	2830	2831
21	2832	2833	2834
22	2835	2836	2837
23	2838	2839	2840
24	2841	2842	2843

[1] See *Section 5.9.38 Output Function Partition Assignment* for information on assigning output functions to areas.

Data Digit 2 for Program Address 1 assigns the zone/control panel state to be followed. See *Table 125* for Data Digit 2 options.

For example, use the following steps to program Output Function 5 to follow Zones 2 and 3 when both zones are shorted and the control panel is armed.

1. Enter "*5" (see *Table 116*) in Data Digit 1 of Program Address 1 (2784). See *Table 126*.
   This option programs the output function to follow two zones in an input/output cross matrix. Outputs assigned to this output function activate when both zones change state.
2. Enter "1" (see *Table 125*) in Data Digit 2 of Program Address 1 (2784).
   This option programs the output function to activate when the zones it follows are shorted and the control panel is armed.
3. Enter "0" in Data Digit 1 of Program Address 2 (2785), and "2" in Data Digit 2 of Program Address 2 to assign this output function to Zone 2. The entries made in Program Address 2 are hex values (see *Table 113*).
4. Enter "0" in Data Digit 1 of Program Address 3 (2786), and "3" in Data Digit 2 of Program Address 3 to assign this output function to Zone 3. The entries made in Program Address 3 are hex values (see *Table 113*).

Output Function 5 is now assigned to follow Zones 2 and 3. Any output assigned to Output Function 5 activates when both Zones 2 and 3 are shorted, and the control panel is armed.

5.9.38 Output Function Partition Assignment

- **Addresses:** 2852 to 2863
- **Data Digits:** See *Table 127*
- **Selections:** 0 to 8 (see *Table 128*)

Table 127: Address 2852 to 2863 Output Function Partition Assignment

Address	Data Digit	Function	Default	Assigned Data Digit	Address	Data Digit	Function	Default	Assigned Data Digit
2852	1	1	0	❒	2858	1	13	0	❒
	2	2	0	❒		2	14	0	❒
2853	1	3	0	❒	2859	1	15	0	❒
	2	4	0	❒		2	16	0	❒
2854	1	5	0	❒	2860	1	17	0	❒
	2	6	0	❒		2	18	0	❒
2855	1	7	0	❒	2861	1	19	0	❒
	2	8	0	❒		2	20	0	❒
2856	1	9	0	❒	2862	1	21	0	❒
	2	10	0	❒		2	22	0	❒
2857	1	11	0	❒	2863	1	23	0	❒
	2	12	0	❒		2	24	0	❒

Table 128: Area (Partition) Assignment Selection Options

Select Option	Value
Belongs to Area 1	0
Belongs to Area 2	1
Belongs to Area 3	2
Belongs to Area 4	3
Belongs to Area 5	4
Belongs to Area 6	5
Belongs to Area 7	6
Belongs to Area 8	7
Follows all areas	8

5.9.39 Dual Phone Line/Bell Supervision Module Output Programming

The Dual Phone Line/Bell Supervision Module is the DS7420i. See *Section 2.4 Options* for more information.

When in Central Station or Local Commercial Fire Mode, this address is forced to a specific value (see *When Central Station Commercial Fire Mode is Chosen* and *When Local Commercial Fire Mode is Chosen* on *page 51* for more information).

- **Address:** 4021
- **Data Digit:**
  - Data Digit 1: ____ (see *Table 129*; default = 0)
  - Data Digit 2: **Must = 0**
- **Selections:** 0 through 9

Table 129: Program Address 4021, Data Digit 1 Selections

	Selections for Data Digit 1									
Select Options	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Disabled	•									
Bell Monitor				•	•	•			•	•
Phone Line 1 Monitor		•	•		•	•	•	•	•	•
Phone Line 2 Monitor			•			•		•		•
Alarm Output on line fault							•	•	•	•

5.9.40 Call-Out Timer Programming

This section allows you to define the Hour and Minute for the Communicator Test Report and Remote Programmer Call-Out.

The default time for the Communicator Test Report to be sent and for the control panel to call the Remote Programmer is Midnight.

Test Report Hour

- **Address:** 4022
- **Data Digit:**
  - Data Digit 1: ____ (default = 0)
  - Data Digit 2: ____ (default = 0)
- **Selections:** 0 to 2 for Data Digit 1; 0 to 3 for Data Digit 2
- **Default:** 00

Test Report Minute

- **Address:** 4023
- **Data Digit:**
  - Data Digit 1: ____ (default = 0)
  - Data Digit 2: ____ (default = 0)
- **Selections:** 0 to 5 for Data Digit 1; 0 to 9 for Data Digit 2
- **Default:** 00

Call-Out Hour

- **Address:** 4024
- **Data Digit:**
  - Data Digit 1: ____ (default = 0)
  - Data Digit 2: ____ (default = 0)
- **Selections:** 0 to 2 for Data Digit 1; 0 to 3 for Data Digit 2
- **Default:** 00

Call-Out Minute

- **Address:** 4025
- **Data Digit:**
  - Data Digit 1: ____ (default = 0)
  - Data Digit 2: ____ (default = 0)
- **Selections:** 0 to 5 for Data Digit 1; 0 to 9 for Data Digit 2
- **Default:** 00

5.9.41 Test Report and Remote Programmer Call-Out Programming

This section allows you to define the Day and Frequency for the Communicator Test Report and the Remote Programmer Call-Out.

If this address is not programmed, the Communicator Test Report is not sent and the control panel does not call the Remote Programmer.

- **Address:** 4026
- **Data Digit:**
  - Data Digit 1: ____ (default = 0; see *Table 130*)
  - Data Digit 2: ____ (default = 0; see *Table 131*)
- **Selections:** 0 to *2 for Data Digit 1; 0 to *0 for Data Digit 2

*0 through *2 are Hex values. They display as A through C at the keypads.

Table 130: Address 4026, Data Digit 1 Selection Options

Select Option	Value
Do not send a Test Report	**0**
Send a Test Report on Sunday	1
Send a Test Report on Monday	2
Send a Test Report on Tuesday	3
Send a Test Report on Wednesday	4
Send a Test Report on Thursday	5
Send a Test Report on Friday	6
Send a Test Report on Saturday	7
Send a Test Report every day	8
Send a Test Report every 8 days	9
Send a Test Report every 28 days	*0
Send a Test Report every hour	*1
Send a Test Report every 12 hours	*2

Table 131: Address 4026, Data Digit 2 Selection Options

Select Option	Value
Do not call the Remote Programmer	0
Call the Remote Programmer on Sunday	1
Call the Remote Programmer on Monday	2
Call the Remote Programmer on Tuesday	3
Call the Remote Programmer on Wednesday	4
Call the Remote Programmer on Thursday	5
Call the Remote Programmer on Friday	6
Call the Remote Programmer on Saturday	7
Call the Remote Programmer every day	8
Call the Remote Programmer every 8 days	9
Call the Remote Programmer every 28 days	*0

5.9.42 Alpha Description Programming

Alpha Description Programming allows up to 16 characters to be programmed for the description of each area or zone (for example, 'J. Hill's Office"). If a description is less than 16 characters, leave the remaining addresses blank. Once programmed, the descriptions are displayed on the alpha keypads.

See the following:

- *Table 132* lists the Program Addresses used to program Alpha-Numeric characters for each area.
- *Table 133* lists the Program Addresses used to program Alpha-Numeric characters for each zone.
- *Table 134* identifies the values that must be entered to generate each Alpha-Numeric character.
- *Alpha Description Programming Worksheet Example* on *page 92* provides an example of how to fill the Alpha Description Programming worksheets.
- *Alpha Description Programming Worksheet for Areas 1 through 8 (Addresses 0545 through 0672)* on page 93 is the programming worksheet for Areas 1 through 8.
- *Alpha Description Programming Worksheet for Zones 1 through 8 (Addresses 0673 through 0800)* on page 96 is the programming worksheet for Zones 1 through 8.
- See *Program Addresses* on page 129 for a complete Alpha Programming Worksheet that covers all addresses 0545 through 6920.

Table 132: Area Alpha Description Program Addresses (0545 to 0672)

Area	Program Addresses
1	0545 to 0560
2	0561 to 0576
3	0577 to 0592
4	0593 to 0608
5	0609 to 0624
6	0625 to 0640
7	0641 to 0656
8	0657 to 0672

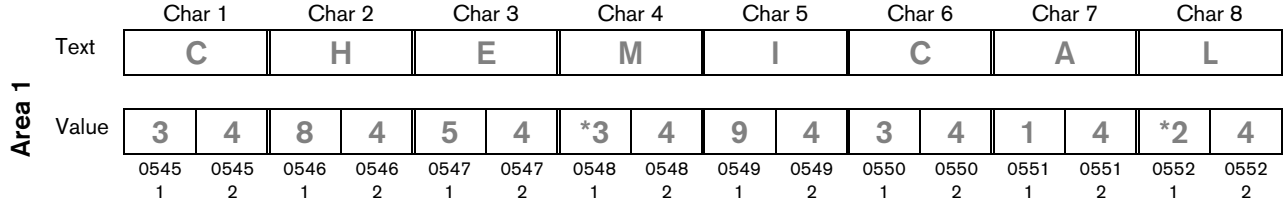
Table 133: Zone Alpha Description Program Addresses (0673 to 2720, 5001 to 6920)

Zone	Program Addresses
1	0673 to 0688
2	0689 to 0704
3	0705 to 0720
4	0721 to 0736
5	0737 to 0752
6	0753 to 0768
7	0769 to 0784
8	0785 to 0800
9 to 128	0801 to 2720 (16 addresses per zone)
129 to 248	5001 to 6920 (16 addresses per zone)

Table 134: Alpha-Numeric Character Values

Value	Character	Value	Character	Value	Character
02	blank space	04	@	06	'
12	!	14	A	16	a
22	“	24	B	26	b
32	#	34	C	36	c
42	$	44	D	46	d
52	%	54	E	56	e
62	&	64	F	66	f
72	‘	74	G	76	g
82	(	84	H	86	h
92	)	94	I	96	i
*02	*	*04	J	*06	j
*12	+	*14	K	*16	k
*22	‘	*24	L	*26	l
*32	-	*34	M	*36	m
*42	.	*44	N	*46	n
*52	/	*54	O	*56	o
03	0	05	P	07	p
13	1	15	Q	17	q
23	2	25	R	27	r
33	3	35	S	37	s
43	4	45	T	47	t
53	5	55	U	57	u
63	6	65	V	67	v
73	7	75	W	77	w
83	8	85	X	87	x
93	9	95	Y	97	y
*03	:	*05	Z	*07	z
*13	;	*15	[	*17	{
*23	<	*25	¥	*27	|
*33	=	*35	]	*37	}
*43	>	*45	^	*47	
*53	?	*55	_		

Alpha Description Programming Worksheet Example



Alpha Description Programming Worksheet for Areas 1 through 8 (Addresses 0545 through 0672)

Area 1

	Char 1	Char 2	Char 3	Char 4	Char 5	Char 6	Char 7	Char 8
Text								
Default	A	r	e	a	(space)	1		

Value																
Default	1	4	2	7	5	6	1	6	0	2	1	3				
	0545 1	0545 2	0546 1	0546 2	0547 1	0547 2	0548 1	0548 2	0549 1	0549 2	0550 1	0550 2	0551 1	0551 2	0552 1	0552 2

	Char 9	Char 10	Char 11	Char 12	Char 13	Char 14	Char 15	Char 16
Text								

Value																
	0553 1	0553 2	0554 1	0554 2	0555 1	0555 2	0556 1	0556 2	0557 1	0557 2	0558 1	0558 2	0559 1	0559 2	0560 1	0560 2

Area 2

	Char 1	Char 2	Char 3	Char 4	Char 5	Char 6	Char 7	Char 8
Text								
Default	A	r	e	a	(space)	2		

Value																
Default	1	4	2	7	5	6	1	6	0	2	23					
	0561 1	0561 2	0562 1	0562 2	0563 1	0563 2	0564 1	0564 2	0565 1	0565 2	0566 1	0566 2	0567 1	0567 2	0568 1	0568 2

	Char 9	Char 10	Char 11	Char 12	Char 13	Char 14	Char 15	Char 16
Text								

Value																
	0569 1	0569 2	0570 1	0570 2	0571 1	0571 2	0572 1	0572 2	0573 1	0573 2	0574 1	0574 2	0575 1	0575 2	0576 1	0576 2

Area 3

	Char 1	Char 2	Char 3	Char 4	Char 5	Char 6	Char 7	Char 8
Text								
Default	A	r	e	a	(space)	3		

Value																
Default	1	4	2	7	5	6	1	6	0	2	3	3				
	0577 1	0577 2	0578 1	0578 2	0579 1	0579 2	0580 1	0580 2	0581 1	0581 2	0582 1	0582 2	0583 1	0583 2	0584 1	0584 2

	Char 9	Char 10	Char 11	Char 12	Char 13	Char 14	Char 15	Char 16
Text								

Value																
	0585 1	0585 2	0586 1	0586 2	0587 1	0587 2	0588 1	0588 2	0589 1	0589 2	0590 1	0590 2	0591 1	0591 2	0592 1	0592 2

Area 4

	Char 1	Char 2	Char 3	Char 4	Char 5	Char 6	Char 7	Char 8
Text								
Default	A	r	e	a	(space)	4		

Value																
Default	1	4	2	7	5	6	1	6	0	2	4	3				
	0593 1	0593 2	0594 1	0594 2	0595 1	0595 2	0596 1	0596 2	0597 1	0597 2	0598 1	0598 2	0599 1	0599 2	0600 1	0600 2

	Char 9	Char 10	Char 11	Char 12	Char 13	Char 14	Char 15	Char 16
Text								

Value																
	0601 1	0601 2	0602 1	0602 2	0603 1	0603 2	0604 1	0604 2	0605 1	0605 2	0606 1	0606 2	0607 1	0607 2	0608 1	0608 2

Area 5

	Char 1	Char 2	Char 3	Char 4	Char 5	Char 6	Char 7	Char 8
Text								
Default	A	r	e	a	(space)	5		

Value																
Default	1	4	2	7	5	6	1	6	0	2	5	3				
	0609 1	0609 2	0610 1	0610 2	0611 1	0611 2	0612 1	0612 2	0613 1	0613 2	0614 1	0614 2	0615 1	0615 2	0616 1	0616 2

	Char 9	Char 10	Char 11	Char 12	Char 13	Char 14	Char 15	Char 16
Text								

Value																
	0617 1	0617 2	0618 1	0618 2	0619 1	0619 2	0620 1	0620 2	0621 1	0621 2	0622 1	0622 2	0623 1	0623 2	0624 1	0624 2

Area 6

	Char 1	Char 2	Char 3	Char 4	Char 5	Char 6	Char 7	Char 8
Text								
Default	A	r	e	a	(space)	6		

Value																
Default	1	4	2	7	5	6	1	6	0	2	6	3				
	06251	06252	06261	06262	06271	06272	06281	06282	06291	06292	06301	06302	06311	06312	06321	06322

	Char 9	Char 10	Char 11	Char 12	Char 13	Char 14	Char 15	Char 16
Text								

Value																
	06331	06332	06341	06342	06351	06352	06361	06362	06371	06372	06381	06382	06391	06392	06401	06402

Area 7

	Char 1	Char 2	Char 3	Char 4	Char 5	Char 6	Char 7	Char 8
Text								
Default	A	r	e	a	(space)	7		

Value																
Default	1	4	2	7	5	6	1	6	0	2	7	3				
	06411	06412	06421	06422	06431	06432	06441	06442	06451	06452	06461	06462	06471	06472	06481	06482

	Char 9	Char 10	Char 11	Char 12	Char 13	Char 14	Char 15	Char 16
Text								

Value																
	06491	06492	06501	06502	06511	06512	06521	06522	06531	06532	06541	06542	06551	06552	06561	06562

Area 8

	Char 1	Char 2	Char 3	Char 4	Char 5	Char 6	Char 7	Char 8
Text								
Default	A	r	e	a	(space)	8		

Value																
Default	1	4	2	7	5	6	1	6	0	2	8	3				
	06571	06572	06581	06582	06591	06592	06601	06602	06611	06612	06621	06622	06631	06632	06641	06642

	Char 9	Char 10	Char 11	Char 12	Char 13	Char 14	Char 15	Char 16
Text								

Value																
	06651	06652	06661	06662	06671	06672	06681	06682	06691	06692	06701	06702	06711	06712	06721	06722

Alpha Description Programming Worksheet for Zones 1 through 8 (Addresses 0673 through 0800)

Zone 1

	Char 1	Char 2	Char 3	Char 4	Char 5	Char 6	Char 7	Char 8
Text								

Value																
	0673 1	0673 2	0674 1	0674 2	0675 1	0675 2	0676 1	0676 2	0677 1	0677 2	0678 1	0678 2	0679 1	0679 2	0680 1	0680 2

	Char 9	Char 10	Char 11	Char 12	Char 13	Char 14	Char 15	Char 16
Text								

Value																
	0681 1	0681 2	0682 1	0682 2	0683 1	0683 2	0684 1	0684 2	0685 1	0685 2	0686 1	0686 2	0687 1	0687 2	0688 1	0688 2

Zone 2

	Char 1	Char 2	Char 3	Char 4	Char 5	Char 6	Char 7	Char 8
Text								

Value																
	0689 1	0689 2	0690 1	0690 2	0691 1	0691 2	0692 1	0692 2	0693 1	0693 2	0694 1	0694 2	0695 1	0695 2	0696 1	0696 2

	Char 9	Char 10	Char 11	Char 12	Char 13	Char 14	Char 15	Char 16
Text								

Value																
	0697 1	0697 2	0698 1	0698 2	0699 1	0699 2	0700 1	0700 2	0701 1	0701 2	0702 1	0702 2	0703 1	0703 2	0704 1	0704 2

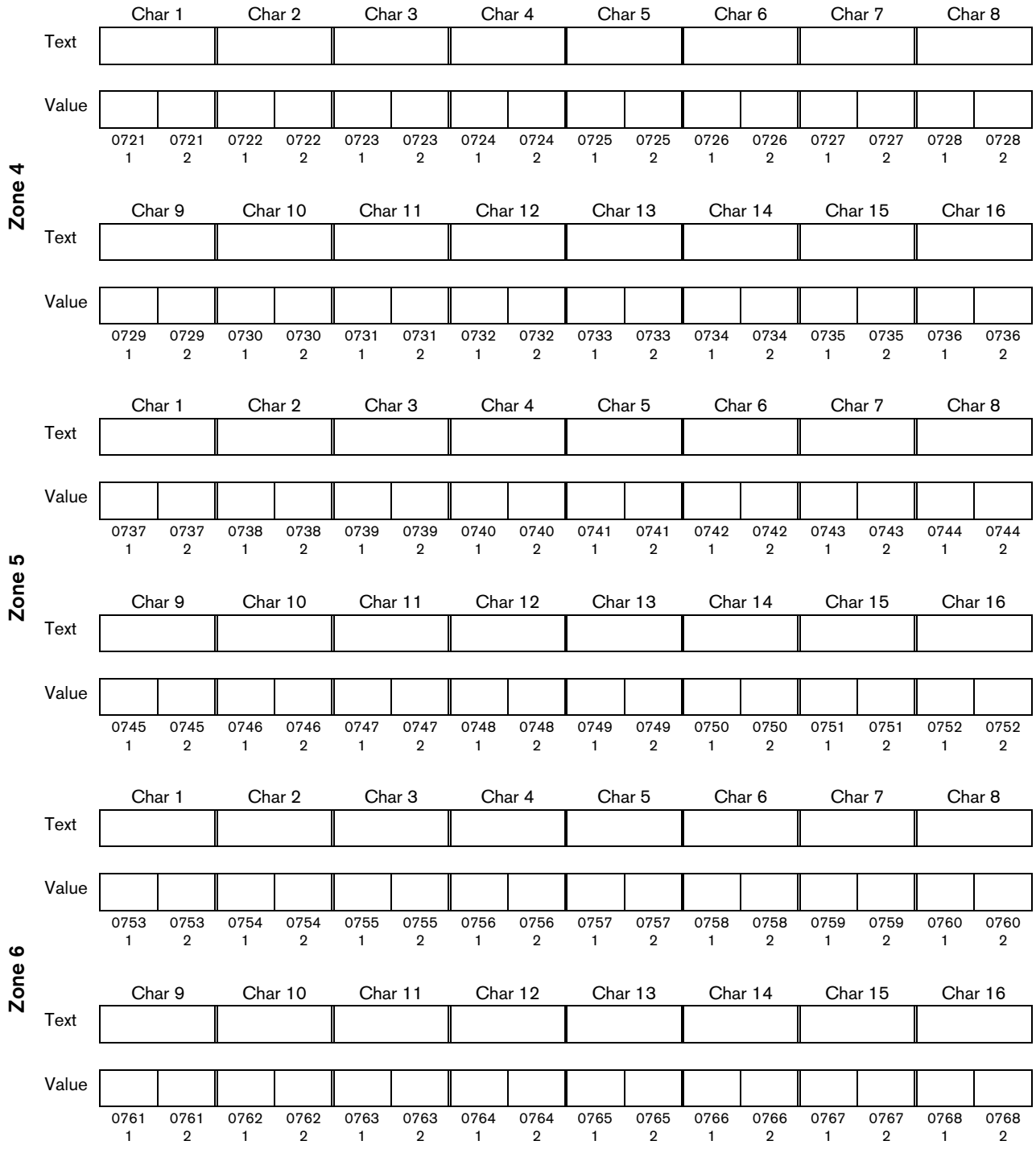
Zone 3

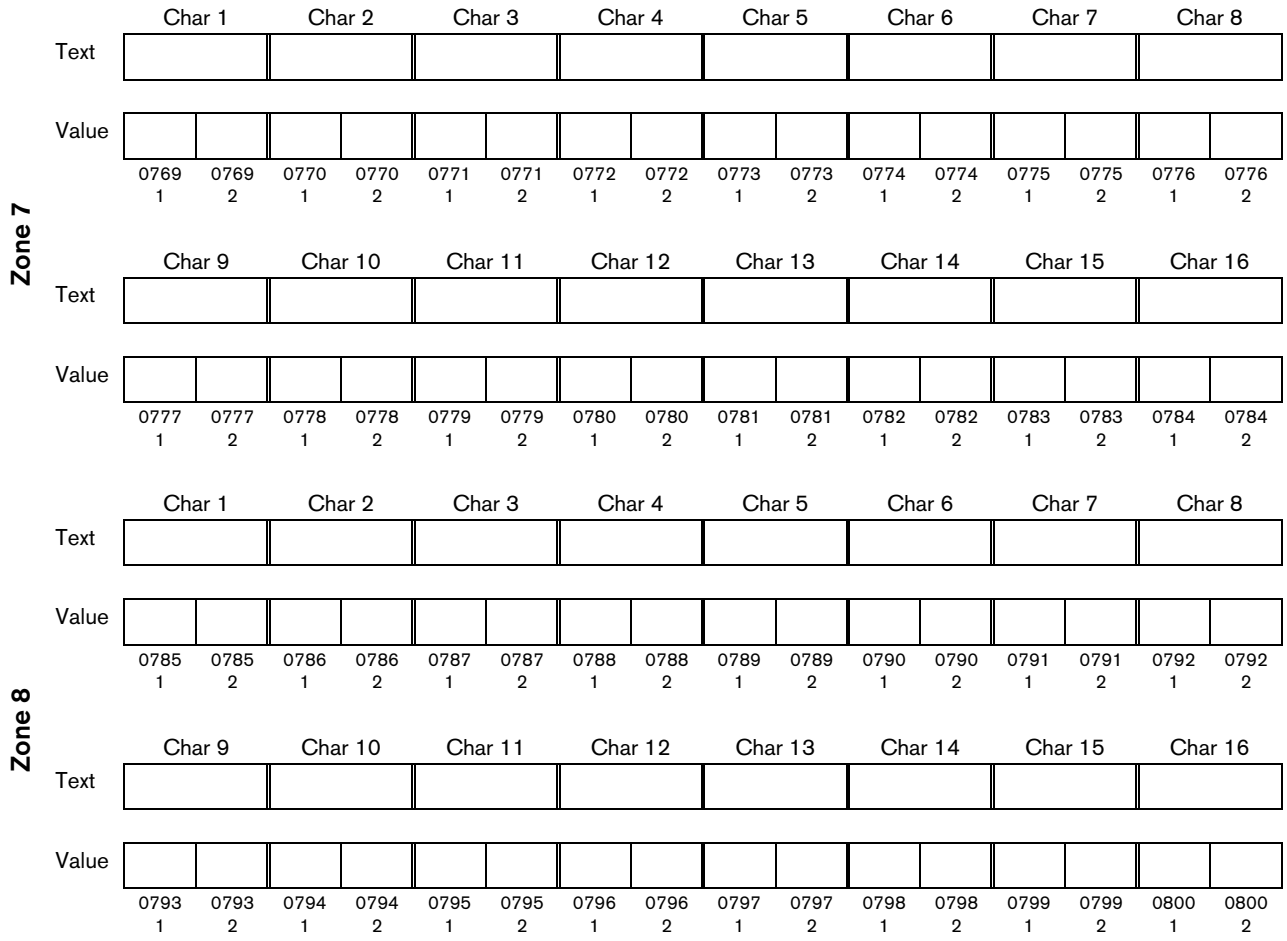
	Char 1	Char 2	Char 3	Char 4	Char 5	Char 6	Char 7	Char 8
Text								

Value																
	0705 1	0705 2	0706 1	0706 2	0707 1	0707 2	0708 1	0708 2	0709 1	0709 2	0710 1	0710 2	0711 1	0711 2	0712 1	0712 2

	Char 9	Char 10	Char 11	Char 12	Char 13	Char 14	Char 15	Char 16
Text								

Value																
	0713 1	0713 2	0714 1	0714 2	0715 1	0715 2	0716 1	0716 2	0717 1	0717 2	0718 1	0718 2	0719 1	0719 2	0720 1	0720 2


Zone 4
Char 1 Char 2 Char 3 Char 4 Char 5 Char 6 Char 7 Char 8
Text
Value
0721 1 0721 2 0722 1 0722 2 0723 1 0723 2 0724 1 0724 2 0725 1 0725 2 0726 1 0726 2 0727 1 0727 2 0728 1 0728 2
Char 9 Char 10 Char 11 Char 12 Char 13 Char 14 Char 15 Char 16
Text
Value
0729 1 0729 2 0730 1 0730 2 0731 1 0731 2 0732 1 0732 2 0733 1 0733 2 0734 1 0734 2 0735 1 0735 2 0736 1 0736 2
Zone 5
Char 1 Char 2 Char 3 Char 4 Char 5 Char 6 Char 7 Char 8
Text
Value
0737 1 0737 2 0738 1 0738 2 0739 1 0739 2 0740 1 0740 2 0741 1 0741 2 0742 1 0742 2 0743 1 0743 2 0744 1 0744 2
Char 9 Char 10 Char 11 Char 12 Char 13 Char 14 Char 15 Char 16
Text
Value
0745 1 0745 2 0746 1 0746 2 0747 1 0747 2 0748 1 0748 2 0749 1 0749 2 0750 1 0750 2 0751 1 0751 2 0752 1 0752 2
Zone 6
Char 1 Char 2 Char 3 Char 4 Char 5 Char 6 Char 7 Char 8
Text
Value
0753 1 0753 2 0754 1 0754 2 0755 1 0755 2 0756 1 0756 2 0757 1 0757 2 0758 1 0758 2 0759 1 0759 2 0760 1 0760 2
Char 9 Char 10 Char 11 Char 12 Char 13 Char 14 Char 15 Char 16
Text
Value
0761 1 0761 2 0762 1 0762 2 0763 1 0763 2 0764 1 0764 2 0765 1 0765 2 0766 1 0766 2 0767 1 0767 2 0768 1 0768 2



5.9.43 Phone Number Programming

- To program the "*" character, enter *1 (the "*" character is sent as "1" "1" when pulse dialing).
- To program the "#" character, enter *2 (the "#" character is only valid when tone dialing).
- To program a three-second delay, enter *3.
- To wait for the dial tone, enter *4 in the first digit.
- To disable a Phone Number, enter *5 in the first digit.

*1 to *5 are Hex values. They appear as B to F at the keypads.

The phone line that the control panel is connected to should not have a Call Waiting feature. If it must have call waiting, program the code to disable call waiting and add a three second delay before the phone number. This prevents incoming calls from interrupting a communication. For example: call waiting can be disabled in many areas by dialing *70 before the phone number for tone dial and 1170 for pulse dial.

Phone Number 1 Programming (Address 3159)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

21	22	23	24	25	26	27	28	29	30	31	32

Phone Number 2 Programming (Address 3175)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

21	22	23	24	25	26	27	28	29	30	31	32

Phone Number 3, Remote Programmer Callout Programming (Address 3191)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

21	22	23	24	25	26	27	28	29	30	31	32

5.10 Network Communication

The control panel can be configured to communicate over an Ethernet network. Reports can be sent over this network from the control panel to a central station receiver. Remote programming can also be conducted over this network. A DX4020 Network Interface Module (NIM) is required for network communications. See the *DS7400XiV4 Release Notes* (P/N: 4998154793) for complete instructions when setting up the control panel for network communication.

If the control panel is configured for network communications, you must select Contact ID for the reporting format. See *Section 5.9.31 Phone Number Format Programming* for more information.

6. Troubleshooting Guide

6.1 Keypad Problems

Table 135: Keypad Troubleshooting

Symptom	Probable Cause	Possible Solutions
Entry Error: **Please Re-enter** displays on keypad. A three-beep error tone emits continuously.	a. Two or more keypads share the same address. b. The DS7430, DS7433, or DS7436 is installed in the wrong pins.	a. Install keypad jumper properly in back of keypads. b. Be sure the DS7430, DS7433, or DS7436 is installed properly.
Keypad displays **Not Programmed, See Install Guide**, sounder is on and the keypad does not operate.	a. The keypad not addressed properly. b. The keypad is not programmed properly. c. Keypads 11through 15 are not properly configured.	a. Install the keypad jumper properly in the back of the keypad. b. Check keypad programming addresses 3131-3138. c. Check keypad addresses 11-15. System only sees keypads on the options bus.
Keypad displays **Ready to arm, Area 1** when using only one area. Keypad displays **System Fault**, sounder is on, and the keypad does not operate.	The keypad is programmed as a Master keypad. a. Keypad wiring error. b. Keypad(s) assigned to wrong or non-existent area. c. The control panel's microprocessor isn't running.	Master keypads can only be used on multi-area systems. Program the keypad as a standard keypad. a. Check wiring. b. Assign the keypad(s) to correct area. If none of the keypads are correctly assigned, re-enable keypad 1 by shorting the program contacts in the lower right corner of the main panel board. This forces program mode and assign keypad 1 as alpha, non-master to Area 1. c. Disconnect battery and any aux. power load. If the microprocessor has shut down, aux. power reads approximately 11.5 VDC. If the EEProm chip has been field-replaced, power down AC and battery, and check for bent or mis-inserted pins; Otherwise, replace the control panel.
Keypad alpha display is locked up, but the keys still function.	The keypad is enabled, but as an LED keypad.	Enter the program mode at the keypad and input the correct sequence to re-enable it as an alpha keypad. Care must be taken, since there is no visual feedback to verify programming until the keypad is properly enabled.
Can't read back history with # 89 input.	a. Entering from Master keypad. b. Not using a PIN with test authority.	a. First enter Single Partition Mode. b. Use a PIN with test authority.

Table 135: Keypad Troubleshooting (continued)

Symptom	Probable Cause	Possible Solutions
In history, the Read-back for the A, B, and C keys shows: A = Fire B = Emergency C = Panic But, the Central Station transmissions display B as Silent Panic and C as Audible Panic.	Formats display information regarding the B and C keys differently. In Contact ID: A = Fire B = Silent Panic C = Audible Panic In SIA: A = Fire B = Emergency C = Panic	Discrepancy exists in the definition of these keys in the two formats. Whatever the keys are programmed for in the control panel, that is what is sent.
Cannot perform a zone test (#81).	a. Entering from a Master keypad. b. Not using a PIN with test authority.	a. Zone test is not available from a Master keypad. b. Use a PIN with test authority.
Chime Mode (#7) does not work when a zone is faulted.	a. Not activating for interior zones. b. The keypad is not assigned to the same area as the zone being activated.	a. Chime mode only activates for perimeter zones - Chime mode must be programmed. Also, if the perimeter zone has trouble enabled (trouble on open), the chime won't work if that zone is opening. b. Chime mode only activates the sounder on keypads that are assigned to the same area as the zone.
Some functions do not work on a Master keypad.	Some functions require you to enter Single Partition Mode when using a Master keypad.	The following commands require that you are in Single Partition Mode when entering from a Master keypad: History read-back • Chime mode • Checking zone status • Checking zone trouble status (after #87 - Master keypad only shows area name) • Bypassing zones

6.2 Reporting Problems

Table 136: Reporting Troubleshooting

Symptom	Probable Cause	Possible Solutions
Does not send open or close reports.	Not programmed correctly.	Check addresses 3331, 3332, 3334, and 3333.
Reports for areas 2-8 are being sent with Area 1's reporting ID.	The account codes for 2 through 8 are not programmed or are not programmed correctly.	Check addresses 3429 through 3459.
Not getting AC power fail reports.	a. AC power fail messages are sent only with other reports, such as low battery. b. Check AC report offset (3338). If 00, AC report works like above, if another number, AC report is delayed.	a. Try forcing another report to send when AC is not present. b. Wait until the delay times out or set to a lower number if desired.

Table 136: Reporting Troubleshooting (continued)

Symptom	Probable Cause	Possible Solutions
Control panel never sends history to RPS.	a. Not programmed to send history. b. Time and date not set.	a. Check programming. b. Verify that the time in the control panel is set.
The control panel test report is not being sent.	a. Report not programmed properly. b. There was a control panel problem at the time the report should have been sent. If this is the case, the control panel test report is not sent. Instead, the control panel sends the "System Off Normal" report.	a. Check programming addresses 4022, 4023, 4026, and 3340. b. Program "System Off Normal" report in address 3347.

6.3 Zone Problems

Table 137: Zone Troubleshooting

Symptom	Probable Cause	Possible Solutions
Fire Alarm displays on keypad but no zone numbers are displayed.	In Commercial Fire Mode, fire alarms must be silenced before the zone number appears.	Enter a valid disarm PIN and press #, then enter a valid disarm PIN and press # again to display the zones.
Every other zone displays **Not Ready.**	Zone Programming is incorrect.	Program as a multiple zone input for DS7432E or DS7460, a single zone input for contacts and sensors, or program as a DS7465i.

Table 137: Zone Troubleshooting (continued)

Symptom	Probable Cause	Possible Solutions
Zones 9 and above show **Not Ready, Zone Trouble.**  Never disconnect the power when in the programming mode. Always disconnect the Multiplex Bus or have the DS7430 or DS7436 in the disable programming mode when powering up or down.	a. The multiplex expansion module is not installed properly. b. Multiplex wiring is missing or is not installed properly. c. 8-Input remote module DIP switches are not set properly. d. 8-Input remote module covers are removed. e. The BusLoc® code is set incorrectly or has not been programmed into modules. f. Zone Programming is incorrect. g. Multiplex module not programmed. h. Multiplex Bus voltage is 12 VDC or greater. (Normal is approximately 8 to 10 VDC.) i. Multiplex Bus voltage is 5VDC or less (normal is approximately 8 to 10 VDC.)	a. Make sure the multiplex expansion module is seated properly in the pins on the DS7400Xi circuit board. b. Check wiring and perform a system reset. c. Correctly set the DIP switches for the 8-Input remote modules. d. Replace covers or install the tamper bypass jumper. e. BusLoc® cannot be used with 8-Input remote modules. If using 8-Input modules, remove the BusLoc® code. **OR** If using two-input remote modules or the DS7465i, be sure to use BusLoc® when programming. If not using BusLoc®, be sure to remove the BusLoc® code from address 9999. f. Program as a multiple zone input for DS7432E or DS7460, a single zone input for contacts and sensors, or program as a DS7465i. g. Program the module. h. Two modules are programmed with the same address. The problem will only occur when both modules are off normal. Isolate the duplicate module by disconnecting sections of the bus and performing a [PIN][System Reset]. Reprogram modules. **OR** The system is in the programming mode. Exit the programming mode. **OR** Zones have been added to a system protected by Busloc®. Clear Busloc®. i. There is a short on the multiplex bus. **OR** There is a bad module on the bus. **OR** One or more modules on the bus are connected backwards; reverse polarity.

Table 137: Zone Troubleshooting (continued)

Symptom	Probable Cause	Possible Solutions
Invisible or silent zone activates alarm output.	The output is programmed as "latch on alarm" (0).	Program the output to follow zone alarms (6).
Keypad displays **Fire Trouble**, but does not indicate any zones.	A ground fault condition exists.	See *#87 display = **Ground Fault*** on *page 106*.
Keypad displays **Not Ready,** but no zone number is displayed.	An invisible zone is not ready.	Press [PIN][OFF] to display the zone number of the invisible zone that is not ready.

6.4 General System Problems

Table 138: General System Troubleshooting

Symptom	Probable Cause	Possible Solutions
Cannot set the programming values to the factory default.	Enter a value of 01 in address 4058.	Only enter a value of 01 in address 4058 when you are sure you want to default the programming. Doing so immediately erases all programming.
Power LED is flashing, keypad displays **Control Trouble Press #87.**	A control panel trouble exists.	Press [#][8][7] to determine the trouble condition.
#87 display = **Oct. Relay Fault** #89 display = **System Fault 20**	a. The octal relay module (DX3010) is defective or the wiring to the module is defective. b. There is no DX3010 or a DX3010 was removed from the system.	a. Check the wiring to the module. b. Enter, then exit programming mode. This rescans the option bus and clears the problem.
#87 display = **Multiplex Bus Fault**	The Multiplex Bus is defective or shorted.	Check wiring for shorts.
Cannot reset to factory default.	Keypad programming access is set to PARTIAL from remote programmer.	Change setting to FULL from the Remote programmer.
#87 display = **RAM Fault** #89 display = **System Fault 01** **OR** #87 display = **ROM Fault** #89 display = **System Fault 02** **OR** #87 display = **EEProm Fault** #89 display = **System Fault 03**		a. An EEPROM fault can be caused by disconnecting power from the control panel when it is in Programmer's Mode. In this case, enter then exit program mode to clear. b. Try to clear the error at the keypad by entering a PIN then Reset. c. Remove AC and battery power, then re-apply. Event history is lost and time/date must be reset. d. If error persists, return the control panel to factory default programming by setting program address 4058 to "01". If the error clears, re-program the control panel. e. If error still persists, replace the control panel.

Table 138: General System Troubleshooting (continued)

Symptom	Probable Cause	Possible Solutions
#87 display = **Communicator Err** #89 display = **Report Failure X**	The control panel has failed to communicate.	Check history #89 to determine the source: Report Failure 1 = Phone number 1 Report Failure 2 = Phone number 2 Report Failure 3 = Phone number 3 (remote programmer) Report Failure 4 = DS7416i Communications fault
#87 display = **2Ph/Bell Fault** #89 display = **System Fault 10**	a. The dual phone line/bell supervision module (DS7420i) is defective or the wiring to the module is defective. b. There is no DS7420i or a DS7420i was removed from the system.	a. Check the wiring to the module. b. Enter, then exit programming mode. This will re-scan the options bus and clear the problem.
#87 display = **Line 1 Fault** #89 display = **System Fault 11**	There is a phone line fault on line 1.	Check phone line 1 for proper operation.
#87 display = **Line 2 Fault** #89 display = **System Fault 12**		Check phone line 2 for proper operation. To monitor only one phone line, reprogram address 4021.
#87 display = **Bell Fault** #89 display = **System Fault 13**	There is a phone line fault on line 2.	Check the bell circuit wiring. Be sure that the end-of-line resistor is in place. Place an end-of-line resistor across the bell terminals if the bell circuit is not used.
#87 display = **Aux. Output Fault** #89 display = **System Fault 14**	The bell circuit on the DS7420i is open or shorted. The auxiliary circuit on the DS7420i is open or shorted.	Check the auxiliary circuit wiring. Be sure that the end-of-line resistor is in place. Place an end-of-line resistor across the auxiliary terminals if the auxiliary circuit is not used. Cut the auxiliary supervision jumper on the DS7420i to use the auxiliary circuit without supervision.
#87 display = **Aux Power Fault**	The auxiliary power output has been shorted.	Remove wiring from auxiliary power and check for shorts.
#87 display = **Keypad Fault**	a. The keypad wiring is defective. b. A keypad is missing. c. A keypad was programmed, but is not intended in this system.	a. Check keypad operation and wiring. b. Install a keypad. c. Remove from programming (3131 to 3138).

Table 138: General System Troubleshooting (continued)

Symptom	Probable Cause	Possible Solutions
#87 display = **Ground Fault** #89 display = **System Fault 04**	There is a short to ground somewhere in the system.	Disconnect field wiring from each terminal while watching the keypad display. When the keypad power LED stops flashing, you have found the wire that is causing the ground fault. The LED does not stop flashing if there is another system fault present. If there is no keypad nearby, or another control problem exists, you can use a volt meter to find the ground fault: a. Connect the negative lead of a volt-meter to the control panel ground terminal. b. Connect the positive terminal to the Aux Power - terminal. You should read -4.5 to -7.5 VDC. A reading considerably higher or lower indicates a ground fault. Disconnect field wiring from each terminal while watching the meter. When the voltage reading returns to between -4.5 and -7.5 VDC, you have found the wire that is causing the ground fault.
#87 display = AR IB Queue Full #89 display = System Fault 51	The message queue in the RF modem is full and no messages can get out to the radio network.	Check RF coverage of the unit and check for RF noisy environment.
#87 display = AR Host Down #89 display = System Fault 52	The central station receiver is no longer available to the network.	Contract the central station and notify of status.
#87 display = **AR Unreg. Modem** #89 display = **System Fault 53**	The modem is not registered through all parts of the network.	Contact the network administrators or technical service.
#87 display = **AR Power Fail** #89 display = **System Fault 54**	There is a possible problem with the DS7416i Module.	Return for service.
#87 display = **AR Network Lost** #89 display = **System Fault 55**	The DS7416i Module has lost contact with the radio network.	Check the location and coverage of the unit.
#87 display = **AR Modem HW Err** #89 display = **System Fault 56**	There is a possible problem with the radio modem.	Replace the unit.
#87 display = **AR Modem SW Err** #89 display = **System Fault 57**	The DS7416i Module is having trouble communicating with the radio modem.	Check for noisy environment and replace the unit if the problem continues.
#87 display = **AR Opt. Bus Err** #89 display = **System Fault 58**	The control panel can no longer communicate with the DS7416i Module.	Check the wiring between the DS7400Xi and the DS7416i Module.
#87 display = **AR Corrupt MSG** #89 display = **System Fault 59**	Communication between the control panel and the DS7416i Module is corrupted.	Check for noisy environment, and check the wiring between the DS7400Xi and the DS7416i Module.

Table 138: General System Troubleshooting (continued)

Symptom	Probable Cause	Possible Solutions
Unable to arm the system.	a. Zone(s) faulted. b. If an AC failure exists, you must force arm.	a. Determine the cause of the problem and clear the indicated zone(s). b. Enter an arming sequence, then press the Bypass key during a 5 second beep.
#87 display = **Battery Trouble**	a. The battery failed a battery test. b. The battery is defective. c. The wiring to the battery is disconnected.	a. If there has just been a power failure, wait at least two hours for the battery to recharge then perform a System Reset to re-test the battery and clear the error. b. Replace the battery. c. Check wiring.
#87 display = **Zone Trouble**	a. A zone is not responding to the control panel. b. The zone is programmed for "Trouble on Open" and the loop is open. There is a power failure and the control panel is operating on battery backup. If there is a general power failure, wait for the power to return. If there is not a general power failure in the building.	a. Check wiring to the zone. **OR** If the zone is not to be used, remove from programming. b. If using Normally Closed contacts, re-program zone for alarm on open. **OR** If using Normally Open contacts and trouble on open is desired, check for opens in the loop. Remove wiring and place an EOL resistor across the zone to eliminate a problem with the control panel. If the trouble goes away, the problem is in the wiring or in a contact connected to the zone.
#87 display = **AC Power Failure**	a. The transformer is unplugged. b. The wiring from the transformer is defective. c. The circuit to the transformer is off or defective. d. The transformer is defective. e. In some cases, the transformer may be connected to a circuit controlled by a switch or a circuit breaker that is periodically turned off.	a. Plug the transformer in. b. Check the wiring. c. Check the circuit and circuit breakers. d. Replace the transformer. e. Connect to a circuit that is not controlled this way.
Fire Alarm displays "000".	The Fire Alarm was caused by the "A" key.	Use the System Reset command to clear the display.
Fire Trouble, no zone number.	When in Commercial Fire Mode, a ground fault causes this display.	See #87 Ground Fault display for solution.

Table 138: General System Troubleshooting (continued)

Symptom	Probable Cause	Possible Solutions
Fire Trouble _____ zone number.	Fire zone wiring problems.	If you try to disable the zone by reprogramming it, you need to reset the control panel by either entering then exiting programmer's mode, or removing then restoring power to the control panel.
Dirty Chamber _____ zone number.	A multiplex smoke detector has failed its internal sensitivity test.	Clean or replace the dirty smoke detector or chamber.  Do not use water to clean the chamber.

7. Reference Materials

7.1 Addressing Multiplex Zones

This section does not apply to the following multiplex devices:

- DS7457i/DS7457iF
- DS7460i
- DS7461i
- DS7465i

See the documentation for these devices for addressing instructions.

Before installing a multiplex device, its address and other information must be entered into the control panel.

If you are using a DS7436 Multiplex Expansion Module, program it using Bus A.

7.1.1 Control Panel Setup

Before a multiplex device address can be entered into the control panel, the control panel must be properly programmed. See *Programming a Zone* on page 31 to do the following:

1. Assign a zone number
2. Assign a zone type
   - Single zone input
   - Multiple zone input
   - DS7465 input/output module
   - Multiplex smoke detector
   - Multiplex smoke detector with low temperature alarm
3. Assign which zone function or output function the multiplex zone follows
4. Assign an area/partition to the multiplex zone

For example, the following steps show how to program Zone 9 as a single zone input device (MX950) that follows Zone Function 1 and is assigned to Area/Partition 1.

1. Enter the programmer's mode.
2. Enter Address 0039.
3. Press [0][1][#] to program Data Digits 1 and 2 (Data Digit 1 = 0; Data Digit 2 = 1).
4. Enter Address 0291.
5. Press [0][0][#] to program Data Digits 1 and 2 (Data Digit 1 = 0; Data Digit 2 = 0).
6. Exit the programmer's mode.

7.1.2 Multiplex Device Setup

When the control panel is properly set up for multiplex zones, you can begin programming multiplex devices.

1. Disconnect all multiplex devices from the DS7430.
2. Program the multiplex devices from the control panel.
   a. Enter the programmer's mode.
   b. Enter the multiplex programming mode by pressing [9][9][9][5][#].

      The control panel checks the multiplex connection to confirm that nothing is connected. The text keypad shows:

      Checking
      Multiplex Bus

      The display then scrolls to the first zone you entered as a multiplex zone.

      To scroll to a different zone, press [Reset/*], and then enter the desired three-digit zone number. The text keypad shows:

      Sens/Contact 009
      Press # to Prog

   c. Reconnect the multiplex device that coincides with the displayed zone to the DS7430.
   d. Press [#] to enter the device into the control panel.

      If you are programming a DS7465 or a multiple input device, these device types require two zone addresses. For example, if Address 009 is assigned to a DS7465, the DS7465 will also occupy Address 010 when you press [#].

If you are programming a single input device, press [#] to contiune. The text keypad shows:

Sensor?	Press 4
Contact?	Press 6

Press [4] to enter sensor devices into the control panel. Press [6] to enter contact devices into the control panel.

The keypad sounds a single beep and scrolls to the next zone if the device is properly entered.

If the zone is not programmed properly, the keypad sounds a three-beep error tone.

e. Disconnect the device you just programmed from the DS7430, and connect the next device. Press [#] to continue programming.

24-hour zones will alarm when you exit the programmer's mode. Alarm reports for these zones are sent if programmed. If you do not want these reports sent, remove power from the system now by disconnecting the transformer and the red battery lead. Do not reconnect power until all zones are installed and connected to the multiplex bus.

If there are no other multiplex zones to program, the text keypad shows:

Mux Zone
Enter Zone

Press and hold [Reset/*] for two seconds to exit the zone programmer's mode. This returns you to the programmer's mode. Press and hold [Reset/*] for two more seconds to exit the programmer's mode.

To disable or remove a multiplex zone, set the program address's data digits to 00.

7.2 Glossary

7.2.1 General Control Programming

Normal Arming: [PIN][On]: If programmed, arms the entire system while allowing entry delays for entry/exit zones.

Perimeter Instant Arming: [PIN][No Entry][Perimeter Only]: If programmed, arms only the perimeter of the system and does not allow entry delays for entry/exit zones.

Perimeter Arming: [PIN][Perimeter Only]: If programmed, arms only the perimeter of the system while allowing entry delays for entry/exit zones.

Custom Arming: [PIN][#][4]: If programmed, allows custom arming of the system and bypasses the zone functions specified in data addresses 2725-2728.

Maximum Security Arming: [PIN][No Entry][On]: If programmed, arms the entire system and does not allow an entry delay for entry/exit zones.

General Authority by Area: A general (level 2) authority can be programmed to have arm-only authority; arm and bypass authority; arm and disarm authority; or arm, disarm, and bypass authority by area. This is done at addresses 3421-3424.

- Arm-only access by area allows someone with a General Authority to arm zones in an area he can not disarm.
- This level can still be used to arm, disarm, and bypass zones in the other areas that it has access to.

Closing Ring-Back: If programmed, the keypad sounders and Bell will activate for 2 seconds after the system is armed and the closing report is successfully sent. This requires Closing Ring-Back and Closing Report to be programmed.

- If a closing report is not programmed, the control panel will test for a dial tone when the system is armed. If the test passes, the system will arm normally. If the test fails, the system will arm, but will indicate a trouble condition.
- The DS7447E/DS7447V2 keypad will display "Communication Err" after [#][8][7] is entered.

Siren on Comm. Fail for Silent Zone: If programmed, a silent zone will sound the alarm outputs if the zone is in an alarm condition and the system fails to communicate with the central station.

Restore when Sounders Silence: If programmed, a zone sends a restoral report and is ready to activate again only after the burglary bell cut-off time expires or the bells are silenced.

- The zone can alarm multiple times per armed period.

Restore when Zone Restores: If programmed, a zone sends a restoral report and is ready to activate again as soon as it physically restores.

- This zone can alarm multiple times per armed period.

Restore when System Disarms: If programmed, a zone sends a restoral report when the system is disarmed.

- It can only alarm once per armed period.

Allow Swinger Shunts: If programmed, a zone can only alarm or trouble up to three times per armed period. After the third alarm or trouble, the zone will be bypassed and a bypass report will be sent.

7.2.2 Zone Function Programming

Zone Function: A Zone Function is the description of how a particular zone behaves(for example, steady alarm output, bypassing allowed, alarm on short, trouble on open, perimeter instant).

- There are many possible zone functions. Up to 30 different zone functions are allowed per control panel.
- Zone functions may be custom made as needed.
- Each zone must be programmed as a specific zone function. Any number and combination of zones may be programmed as particular zone functions.
- Program zone functions at addresses 0001-0030.

Invisible Alarms: This is a zone programmed not to have an alarm output or an alarm display at any keypad when activated. An alarm signal will be sent, but the DS7447E/DS7447V2 keypad display will read "Not Ready" while this zone is violated.

- Invisible Alarm zones are recommended for holdup alarms.

Silent Alarms: This is a zone programmed to activate the visual display at the keypad, but not audible signals.

- If this zone is also an entry zone, an entry tone will sound when this zone is activated.

Bypassing Allowed: This is a zone programmed to allow bypassing (shunting). This is done using the bypass command or the force-arming sequence.

Alarm on Short: This is a zone programmed to activate an alarm when its loop is shorted.

Alarm on Open: This is a zone programmed to activate an alarm when its loop is opened.

Trouble on Open: This is a zone programmed to activate a trouble when its loop is opened and the system is disarmed.

- If the system is armed, this zone will activate an alarm if shorted or opened.
- For 24-hour zones, regardless of the arming state of the control panel, this always remains as a Trouble on Open.

Trouble on Short: This is a zone programmed to activate a trouble when its loop is shorted and the system is disarmed.

- If the system is armed, this zone will activate an alarm if shorted or opened.
- For 24-hour zones, regardless of the arming state of the control panel, this always remains as a Trouble on Short.

Interior Delayed: This is a zone programmed to be ignored during the entry/exit delay period. If it is violated when the system is armed, it will activate a delay for the programmed entry delay time. The keypad pre-alert sounders will activate and the system may be disarmed during this delay period. If the system is not disarmed during this delay period, this zone will activate an alarm. This zone is bypassed by Perimeter Instant or Perimeter Armed.

Perimeter Instant: This is a zone programmed to activate an alarm even during the entry/exit delay period.

24-Hour: This is a zone programmed to activate when its loop is faulted, even if the system is disarmed.

Entry/Exit Delay #1: This is a zone programmed to be ignored during the entry/exit delay period.

- If it is violated while the system is armed, it will activate a delay for the amount of time programmed for entry delay time #1 (address 4028). The keypad pre-alert sounders will activate and the system may be disarmed during this delay period.
- If the system is not disarmed during the entry period, this zone will activate an alarm.

Entry/Exit Delay #2: This is a zone programmed to behave identical to the Entry/Exit Delay #1 zone function except that it uses entry delay time #2 (address 4029).

If both entry delays have been activated, the control panel will use the shorter entry delay.

Entry/Exit Delay Cancel Zone Functions: Entry/Exit Delay Cancel 1 and Entry/Exit Delay Cancel 2 Zone Functions cause the exit delay to expire as soon as the premises is vacated.

- If a zone is programmed as an Entry/Exit Delay Cancel zone, and it is activated during the exit delay, the exit delay will expire as soon as the zone has been restored.
- Entry/Exit Delay Cancel 1 follows entry delay 1.
- Entry/Exit Delay Cancel 2 follows entry delay 2.

Interior Entry/Exit Follower: This is a zone programmed to be ignored during an entry/exit delay and then become an interior instant zone.

- If this zone is violated while the system is armed and no entry/exit zones have been violated, it will activate an alarm.
- If this zone is violated after an entry/exit delay zone is violated, it will follow that entry/exit delay time.
- This zone is bypassed by Perimeter Instant or Perimeter arming.

Interior Home/Away: This is a zone programmed to become an interior instant zone if the system is armed and an entry/exit delay zone is violated during the exit delay time.

- If the system is armed and an entry/exit delay zone is not violated, this zone will be bypassed.
- This zone is bypassed by Perimeter Instant or Perimeter arming.

Interior Instant: This is a zone programmed to activate an alarm even during the entry/exit delay periods.

- It is bypassed by Perimeter Instant or Perimeter arming.

Day Monitor: This is a zone programmed to be a perimeter instant zone when the system is armed.

- When the system is disarmed, any violation of this zone will activate the keypad sounders which will sound continuously until a disarm command sequence is entered.
- The alarm outputs for this zone will not activate and there will be no report for this zone when the system is disarmed.

Keyswitch Input: This is a zone programmed to allow the system to be armed or disarmed using a Normally Open momentary keyswitch.

- Outputs for keyswitch LEDs and sounders are available using the programmable outputs or the Octal relay outputs.
- An output is needed for each LED and sounder.
- A keyswitch will only control the area that these zones are assigned to unless programmed as a master, then it will control all at once. See Program Address 0001, Data Digit 1.
- Keyswitches and keypads may be used in the same area, if desired.

Fire Zone: This is a zone programmed to activate if the system is armed or disarmed.

- It can be silenced (not reset) by entering a valid [PIN][Off].
- The display will indicate a Fire Alarm for this zone on all keypads in every area.
- A fire reset command must be entered after silencing the alarm to re-enable this zone.
- If this zone is programmed for trouble and the loop opens, the DS7447E/DS7447V2 keypad will display "Fire Trouble" for this zone and the keypad sounders will beep once every ten seconds.
- If the system is a combination fire and burglar alarm, the fire alarm has priority over the burglar alarm.

Fire Zone with Verification: This zone is identical to a Fire Zone except that after the first alarm, it will perform a fire reset and then wait up to two minutes for a second alarm.

- If a second alarm occurs within this two minute period, the system will indicate a fire alarm.
- If there is no second alarm within this two minute period, the control panel will reset back to its normal condition.

Water Flow Zone: This is a zone programmed to operate like a Fire Zone, but is specifically intended for water flow switches.

- An optional retard timer can be programmed to compensate for changes in water pressure. If the timer is used, the water flow zone must be activated for the complete time period; an alarm will be initiated at the end of the timer period.
- The maximum combined water flow delay of the control panel and the device must not exceed two minutes.

Any zone can be a water flow zone, but only zones 1 through 4 may be programmed as delayed water flow zones.

Supervisory Zone: This is a zone programmed to accommodate shut-off valves.

- It will indicate a supervisory condition at the keypads when activated.

7.2.3 Zone Programming

Zone: A Zone is an input to the DS7400Xi Control/Communicator.

- There are eight hardwired zones on the main circuit board.
- Additional zones may be added by using the DS7433 (8 zone expansion module), the DS7430 (multiplex loop module), and/or other modules.

Single Zone Input: This is an individual zone such as the on-board zones and multiplex contact zones.

Multiple Zone Input: This is a zone connected to one of the 8-Input Modules (DS7432E or DS7433) or to a Dual Zone Module (DS7460i).

- The inputs are programmed separately (see the separate Programming Addresses Worksheet, P/N: 29802).
- When using the Dual Zone Module (DS7460), loop A is always programmed as an odd numbered program address (ending in 1, 3, 5, 7, or 9). Loop B is the even numbered program address that follows loop A.

DS7465i: This is the input zone or the output relay on a DS7465i. The odd numbered zone is programmed for the input zone function and the even numbered zone is programmed for the output function.

Multiplex Smoke: This is a multiplexed input zone (zones 9-248) that is used with a MX250 or MX280 series smoke detector. This zone must have a Zone Function of Fire Zone and Trouble on Open applied to the multiplex smoke zone.

Smoke alarm: This must be the odd-numbered zone of the zone pair required for these devices. The zone must be programmed with a zone function that is set for Fire Zone and Trouble on Open.

7.2.4 Output Programming

Latch on Any Zone Alarm: This is an output programmed to activate upon any zone alarm (including invisible zones) and will latch until the system has been disarmed.

- If this output is programmed to respond only to a fire zone, it will remain latched until the fire reset command is performed.

ON during Entry Pre-Alert: This is an output programmed to activate when an entry/exit zone is violated while the system is armed.

- It will remain activated until the system is disarmed, or until the entry delay time has expired.

ON for 10 seconds after [PIN][System Reset] is entered: This is an output programmed to activate for 10 seconds after the fire reset command is entered at the keypad or if a Fire Zone with Verification activates.

- This output is intended to be used to power 4-wire smoke detectors or any other device that requires a power interruption to reset an alarm condition.

When Programmable Output 2 is programmed this way, it will normally supply auxiliary power and will turn OFF for 10 seconds when the fire reset command is entered.

ON when System is Armed: This is an output programmed to activate when the system is armed.

- It will remain activated until the system is disarmed.

Ground Start: This is an output programmed to activate for 3 seconds when the phone line is seized. It is intended for use with ground start phone systems that require a momentary short to ground to obtain a dial tone.

- Connect a separate 12 VDC, DPDT relay.
- Connect both relay contact commons to ground, and connect the Normally Open of each contact to terminal positions 13 and 16 (one to terminal 13, the other to 16) of the DS7400Xi.
- This output follows all areas regardless of how data digit 2 of the output programming address is programmed.
- Not intended for UL Listed systems. Not for use with phone line monitors.

System Status (ready to arm): This is an output programmed to follow the Status LED of the keypad.

- It will activate when the system is ready to arm with no zones violated.

Zone Alarm: This is an output programmed to activate when a zone is in an alarm condition.

- It will remain activated until the system is disarmed or the bell cut-off time expires.
- This output is intended to activate alarm bells and sirens.
- This will not activate from Silent or Invisible Zones.

Zone Alarm Delayed by 20 sec.: This is an output programmed to wait 20 seconds after a zone enters an alarm condition to activate.

- It will remain activated until the system is disarmed or the bell cut-off time expires.
- This output is intended to activate alarm bells and sirens, but provides a delay to allow the user to silence the system before it activates.

Output Functions: Output Functions can be programmed to follow system events or to follow one or two specific zones in a "cross-matrix" fashion (see Input/Output Cross-Matrixing).

- These Output Functions can be programmed to control Octal Relay outputs or Multiplex Bus outputs.
- Output Functions are programmed in addresses 2772 to 2843.

Input/Output Cross Matrixing: Input/Output Cross Matrixing allows Output Functions to follow the status of specific input zones (zones 1 through 248 only).

- Outputs can be programmed to follow any combination of one or two zones, open or closed, with the system armed or disarmed.
- If programmed to latch, the output will latch until a valid PIN is entered at the keypad.

Keypad Sounder Output: This is an output programmed to follow the keypad sounder.

- It activates during the entry pre-alert and during any day monitor alarm. It does not follow momentary keypad beeps such as keystrokes, chimes, and so on.

Access Output: This is an output programmed to activate for 10 seconds when an access control PIN is entered at the keypad.

Panic/Duress Output: All outputs, including the three on-board outputs, the Octal Relays, and the Output Functions, support a Panic/Duress function. This output will follow Duress activations, Keypad Emergency Keys B and C, and Invisible and Silent Zone alarms. It will only be reset by a user acknowledgement and will not reset after the burglary bell time-out occurs. Duress activations will latch until acknowledged by a user.

Multiplex Bus Outputs: The DS7400Xi supports up to 60 DS7465i Input/Output Modules.

- These modules are connected to the multiplex bus and provide one input loop and one Form "C" output relay.
- The input loop operates the same as all other multiplex inputs.
- The output loop can be programmed to follow Output Functions.
- Multiplex Bus outputs can be bypassed using the bypass function. If an output zone is bypassed while it is ON, it will turn OFF. The bypass will not be removed when the system is armed and then disarmed; it must be cancelled by entering the bypass command again or by canceling all bypasses.

DS7465i Module outputs will not pulse, even if programmed to do so.

Octal Relay Modules (DX3010): The DS7400Xi can support two Octal Relay Modules.

- Each relay can be programmed to follow system-wide events or Output Functions as described above.

Solid State Output Modules (DS7489): The DS7400Xi can support two Solid State Output Modules.

- Each output can be programmed to follow system-wide events or Output Functions as described above.

7.2.5 Area (Partition) Control Programming

Area Control Programming: Use up to eight areas. They are assigned (program address 3420) in order.

- For example, when using only one area, it is Area 1. When using three areas, they are Areas 1, 2, and 3.
- Partitioning allows the system to act as up to 8 different systems.
- Zones, keypads, outputs, and other items may be assigned to particular areas.
- Access to areas may be through each area's keypad or through a Master keypad (**see the User's Guide P/N: 43851 for more details**).

Common Area: Area 1 can be programmed as a common area, that is, common to other areas. This allows it to be used in an installation with one common entry area such as a foyer or vestibule.

- When Area 1 is programmed as a common area, it will only arm when all the areas it is common to are armed.
- The common area will disarm when any of the areas it is common to are disarmed - only if the user has access to the common area.
- When using a common area, a Master keypad should be used and assigned to the common area (see *Section 7.2.6 Keypad Assignment Programming*).

7.2.6 Keypad Assignment Programming

Keypad Assignment: The keypad type and the area it is assigned to must be programmed.

- Each program address (3131-3138) programs the keypad type for two keypads. For example: for address 3131, data digit 1 is for keypad 1, data digit 2 is for keypad 2.
- Each program address (3139-3146) programs the area assignment for two keypads. For example: for address 3139, data digit 1is for the area assignment of keypad 1, data digit 2 is for the area assignment of keypad 2.
- Users must have access to the area the keypad is assigned to in order to use the keypad.

Master Keypad Programming: A Master keypad can be used to access all the areas.

- It will display the arm/disarm status of all the areas and can be used to individually control each area (see *Section 4.5 The Master Keypad*).
- A Master keypad can be assigned to any of the areas.
- Any number of the 15 allowable keypads can be a Master keypad.
- When using the common area, it is suggested that a Master keypad be used and that it is assigned to the common area.

7.2.7 Emergency Key Programming

Do not label these keys if they are unprogrammed. Only the “A” key may be programmed and labeled as the Fire key. These keys are not intended to substitute for Listed manual pull boxes.

Fire Key: The emergency key (key A) at the bottom left of the keypad entry area is the Fire Key. If programmed, the key will activate a fire alarm when pressed for 2 seconds.

- It may be programmed for a steady or pulsed alarm.

The Fire Key will generate the fire alarm sounders in the area that activated the Fire Key. Any other areas in use will only have their keypad sounders activated. All keypad displays will be the same.

Special Emergency Key: The emergency key (key B) at the bottom center of the keypad entry area is the Special Emergency Key.

- If programmed, the key will activate a supplementary or an auxiliary type alarm when pressed for 2 seconds.
- It may be programmed for a silent, steady, or pulsed alarm.

Panic Key: The emergency key (key C) at the bottom right of the keypad entry area is the Panic Key.

- If programmed, the key will activate a panic alarm when pressed for 2 seconds; nothing will display at the keypad to indicate an alarm.
- It may be programmed for a silent, steady, or pulsed alarm.

The Special Emergency Key and the Panic Key will generate the alarm sounders only in the area of the keypad that activated that Key.

7.2.8 Custom Arming Programming

Custom Arming - [PIN][#][4]: If programmed, the [PIN][#][4] command sequence may be used to custom arm the system by arming only certain zone functions.

- For example: All interior zones plus some perimeter zones may be bypassed while leaving some of the perimeter armed.

7.2.9 Force Arming

Force Arming: If programmed, allows violated zones to be force armed. When force arming, the user must enter the usual arming command followed by the [Bypass] key. This automatically bypasses zones that are violated and programmed as bypassable.

- Fire zones, supervisory zones, keyswitch zones, waterflow zones, and non-bypassable zones can not be force armed.
- See *Section 5.9.14 Force Arming* and Ground Fault Detect Programming for more information.

7.2.10 Ground Fault Detect Programming

- **Ground Fault:** If programmed, this function will allow the system to detect ground faults. This function is required for fire panels and will be forced on when the control panel is in the commercial fire mode.
- See *Section 5.9.14 Force Arming* and Ground Fault Detect Programming for more information.

7.2.11 Commercial Fire Mode Programming

In a system that includes both fire alarm and burglar alarm devices, the system must produce distinct sounds for fire and burglar alarm conditions either by using different indicating appliances or by using distinct cadences for the same appliance.

Commercial Fire Mode: When in Commercial Fire Mode, the control panel will perform some functions (for example, communications) differently to conform with commercial fire regulations.

- See *Section 5.9.15 Commercial Fire Mode* Programming for more information.

Water Flow Zone Delay: This is the amount of time a water flow zone must be violated before the control panel will initiate an alarm.

- The delay is necessary to accommodate normal changes in water pressure.
- If the water flow initiating device incorporates its own time delay, do not program the control panel unit to exceed 120 seconds combined time delay.

Pulsing Fire Zone: This is a zone programmed to output a pulse for a fire alarm in the normal manner (one second ON, one second OFF).

California March Time: This is a zone programmed to output a pulse for a fire alarm in the California Time cadence (ten 1/2 second pulses, followed by one second of quiet time).

Temporal: This is a zone programmed to output a pulse for a fire alarm in the Temporal cadence (three 1/2 second pulses, followed by one second of quiet time).

Single Keypad Use: The keypad should be used on the keypad bus and be mounted to the front of the control panel enclosure OR if within the same room as the control panel equipment with the wire run in conduit (or equivalently protected against mechanical injury) within 20 ft. (6.1 m) of the control panel equipment.

- This keypad should be assigned as address 1.

Multiple Keypad Use: *One keypad only* must be used on the option bus, at any address from 11 to 14, and must meet the following requirements:

- The keypad must be mounted to the front of the control panel enclosure OR mounted within the same room as the control panel equipment and the wire is run in conduit (or equivalently protected against mechanical injury) within 20 ft. (6.1 m) of the control panel equipment.

- All other keypads should be connected to the keypad bus and may be placed as needed (within the noted wiring limitations in the installation manual).
- One keypad must be assigned as address 1.

7.2.12 Open/Close Report Control Programming

Open and Close Reports: If programmed, these reports are sent when the system is armed or disarmed. They may be sent independently for the opening and closing of each area, or the first area to open and the last area to close may send the reports.

• **Send Trouble at Close for Bypassed Zones:** If programmed, a trouble report will be sent for each zone bypassed when the system is armed.

• **Alternate between both Phone Numbers:** If programmed, open and close reports will be sent to phone number one first. If phone number one does not pick-up, the control panel will alternate to phone number two. If phone number two does not pick-up, the control panel will alternate back to phone number one. It will alternate between both phone numbers until successful.

7.2.13 Report Programming

Reports: For pulse formats, reports are programmed by entering data in the reporting and extended digits. The report will send the data programmed for each event. For SIA and Contact ID, the report formats are fixed and may be activated by placing a 1 in the reporting digit.

- To disable a report, enter a 0 in the reporting digit.
- To send the Man No. along with Open and Close reports, program an "F" (enter [*][5] at the keypad) in the extended digit.

Keypad Fire Alarm: This report is sent when a fire alarm has been activated by the "A" emergency key.

Keypad Fire Restoral: This report is sent when a keypad fire alarm has been restored using the [System Reset] command.

Keypad Emergency Alarm: This report is sent when an emergency alarm has been activated using the "B" emergency key.

Keypad Panic: This report is sent when an emergency alarm has been activated using the "C" emergency key.

Keypad Tamper: For keypads fitted with a wall tamper switch, this report is sent when the keypad is removed from the wall.

Keypad Tamper Restoral: For keypads fitted with a wall tamper switch, this report is sent when the keypad is properly replaced on the wall after experiencing a tamper condition.

Zone Function Alarm: An alarm report is sent when a zone alarm occurs. Alarm reports are enabled by zone function. Program this report for any zone functions you wish to send an alarm report about. For local zones (no reports), do not program an alarm report. The zone number will automatically be sent for this report in SIA or Contact ID format.

Zone Function Restoral: This report is sent when the zone alarm and trouble conditions are cleared. The zone number will automatically be sent for this report in SIA or Contact ID format.

Zone Function Trouble: This report is sent when a zone trouble condition occurs. This can be an open circuit, if the zone is programmed for "trouble on open", a multiplex tamper switch being activated, or a multiplex zone not communicating with the control panel. The zone number will automatically be sent for this report in SIA or Contact ID format.

Zone Function Bypass: This report is sent when a zone is bypassed. (Note: Fire zones can never be bypassed.) Zone bypass reports for non-24 hour zones are sent with the closing report. Bypass reports for 24 hour zones are sent when the zone is bypassed. If a zone is force armed, the bypass report is sent with the partial close report. If a 24 hour or non-24 hour zone is custom armed, the bypass report is sent with the partial close report.

Zone Function Bypass Restoral: This report is sent when the zone bypass is cleared. For non-24-hour zones the bypass restoral is sent with the open report. Bypass restoral reports for 24 hour zones are sent when the zone is manually restored. The bypass restoral report for a zone that was force armed is sent when the zone is restored. If a 24 hour or non-24 hour zone was custom armed, the bypass restoral is sent with the open report.

Open: This report is sent when the system has been disarmed. In SIA or Contact ID formats, the user number for the person who disarmed the system will be sent with this report. To send the user number along with an Open report in other formats, program the extended digit of the report as *5. In Contact ID format, the area number will also be sent along with this report. The Open report will only be sent if a Close report was sent previously.

Close: This report is sent when the system has been armed. In SIA or Contact ID formats, the user number for the person who armed the system will be sent with this report. To send the user number along with a Close report in other formats, program the extended digit of the report as *5. In Contact ID format, the area number will also be sent along with this report.

Duress: This report is sent when the system is disarmed using a duress code. The user number is not sent with this report.

Partial Close: This report is sent when the system is armed partially, or force armed.

First Open After Alarm: This report is sent when the system is disarmed after an alarm has occurred.

Low Battery: This report is sent when a low battery condition occurs.

Battery Restoral: This report is sent when a low battery condition restores.

AC Fail: This report is sent when an AC failure condition occurs. This report may be delayed in address 4034.

AC Failure Report Delay: The AC power loss report can be programmed to delay for up to 254 minutes (see *Section 5.9.21 AC Fail Report Delay* Programming). (The same delay would also apply to the AC restoral report.)

- If another report is sent during this delay period, the AC fail report will be sent along with this report.
- If the AC power restores during this delay period, the AC loss report will not be sent.
- Programming address 4034 as FF causes the report to be sent at a random interval of at least 15 minutes, but no more than 2 hours after the AC failure occurs.

AC Restoral: This report is sent when an AC failure condition restores.

Communicator Test/System Normal: This report is sent at the 24-hour check-in time if there is not a control panel trouble, an active fire alarm that has not been acknowledged, a fire trouble, or a supervisory condition. Note: To send a Communicator Test even if one of these conditions exists, program the Communicator Test/System Off Normal.

Remote Program Successful: This report is sent after a Remote Program session, if the session was terminated properly.

Remote Program Unsuccessful: This report is sent after a Remote Program session, if some error has occurred or the session did not terminate properly.

Local Program Successful: This report is sent when local programmer's mode is exited and there is no error associated with the programming.

Local Program Unsuccessful: This report is sent when local programmer's mode is exited and there has been some error associated with the programming.

System Trouble: This report is sent when a control panel trouble condition occurs.

System Trouble Restoral: This report is sent when all system trouble conditions restore.

Communicator Test/System Off Normal: This report is sent at the 24-hour check-in time if there is a control panel trouble, an active fire alarm that has not been acknowledged, a fire trouble, or a supervisory condition.

Exit Error: This report is sent if an exit error occurs. An exit error occurs when an entry/exit zone is still violated at the end of the exit delay. If this happens, the entry delay will begin and any output programmed to activate an alarm will energize. If the system is not disarmed before the entry delay expires, an alarm report for the effected zone will be sent and the Exit Error report will be sent. If this report is not programmed, the control panel will not sound the exit error warning.

Recent Closing: This report is sent, along with any alarm reports, when there is an alarm within the first five minutes after the system has been armed.

System Walk Test: This report is sent when a system test has been started ([#][8][1] key sequence). Zone reports are sent during a system test.

System Walk Test Restoral: This report is sent when the system test has been completed or has timed-out.

Fire Walk Test: This report is sent when a Fire Walk Test has been started ([#][9][1] key sequence). Zone reports are not sent during a Fire Walk Test.

Fire Walk Test Restoral: This report is sent when the Fire Walk Test has been completed or has timed-out.

Dirty Chamber Report: This report is sent when a MX250 Series smoke detector fails to pass the "Chamber Check®" sensitivity test.

Dirty Chamber Restoral: This report is sent when a MX250 Series smoke detector has been returned to normal operation after service.

7.2.14 Phone Number General Control Programming

Enable Remote Programmer Callback: If programmed, when the remote programmer tries to initiate a session with the control panel, the control panel will hang up and call the remote programmer phone number.

- Ensures the correct remote programmer is initiating the call.

Dial Pulse on all Phone Numbers: If programmed, the control panel will dial phone number 1, 2, and the remote programmer phone number 3 using the pulse format.

Dial Tone on all Phone Numbers: If programmed, the control panel will dial phone number 1, 2, and the remote programmer phone number 3 using the tone format.

7.2.15 Phone Answering Programming

Answering Machine Bypass: This feature allows the control panel to answer incoming calls when answering machines are used. If the line rings, stops ringing, then rings again within one minute, the control panel will seize the phone line on the first ring.

Phone Answering Programming: The control panel can be programmed to answer the phone after a selected number of rings for remote programming access. It can also be programmed to answer the phone after a different number of rings when in armed or disarmed states.

- This can be used to call the control panel location and determine its arming state.

7.3 For Installations in New Zealand

Two-wire Connection: The operation of this equipment on the same line as telephones or other equipment with audible warning devices or automatic ring detectors will give rise to bell tinkle or noise and may cause false tripping of the ring detector. Should such problems occur, the user is not to contact Telecom Faults Service.

7.4 Report Programming: Suggested Values

7.4.1 4/2 Format

Zone Function Report Codes

	Report			Restoral			Trouble			Trouble Restoral			Bypass			Bypass Restoral		
Zone Function	Addr	Value		Addr	Value		Addr	Value		Addr	Value		Addr	Value		Addr	Value	
1	3209	A	1	3241	2	1	3271	6	1	3301	4	1	3358	8	1	3388	9	1
2	3210	A	2	3242	2	2	3272	6	2	3302	4	2	3359	8	2	3389	9	2
3	3211	A	3	3243	2	3	3273	6	3	3303	4	3	3360	8	3	3390	9	3
4	3212	A	4	3244	2	4	3274	6	4	3304	4	4	3361	8	4	3391	9	4
5	3213	A	5	3245	2	5	3275	6	5	3305	4	5	3362	8	5	3392	9	5
6	3214	A	6	3246	2	6	3276	6	6	3306	4	6	3363	8	6	3393	9	6
7	3215	A	7	3247	2	7	3277	6	7	3307	4	7	3364	8	7	3394	9	7
8	3216	A	8	3248	2	8	3278	6	8	3308	4	8	3365	8	8	3395	9	8
9	3217	A	9	3249	2	9	3279	6	9	3309	4	9	3366	8	9	3396	9	9
10	3218	A	A	3250	2	A	3280	6	A	3310	4	A	3367	8	A	3397	9	A
11	3219	A	B	3251	2	B	3281	6	B	3311	4	B	3368	8	B	3398	9	B
12	3220	A	C	3252	2	C	3282	6	C	3312	4	C	3369	8	C	3399	9	C
13	3221	A	D	3253	2	D	3283	6	D	3313	4	D	3370	8	D	3400	9	D
14	3222	A	E	3254	2	E	3284	6	E	3314	4	E	3371	8	E	3401	9	E
15	3223	A	F	3255	2	F	3285	6	F	3315	4	F	3372	8	F	3402	9	F
16	3224	A	F	3256	2	F	3286	6	F	3316	4	F	3373	8	F	3403	9	F
17	3225	A	F	3257	2	F	3287	6	F	3317	4	F	3374	8	F	3404	9	F
18	3226	A	F	3258	2	F	3288	6	F	3318	4	F	3375	8	F	3405	9	F
19	3227	A	F	3259	2	F	3289	6	F	3319	4	F	3376	8	F	3406	9	F
20	3228	A	F	3260	2	F	3290	6	F	3320	4	F	3377	8	F	3407	9	F
21	3229	A	F	3261	2	F	3291	6	F	3321	4	F	3378	8	F	3408	9	F
22	3230	A	F	3262	2	F	3292	6	F	3322	4	F	3379	8	F	3409	9	F
23	3231	A	F	3263	2	F	3293	6	F	3323	4	F	3380	8	F	3410	9	F
24	3232	A	F	3264	2	F	3294	6	F	3324	4	F	3381	8	F	3411	9	F
25	3233	A	F	3265	2	F	3295	6	F	3325	4	F	3382	8	F	3412	9	F
26	3234	A	F	3266	2	F	3296	6	F	3326	4	F	3383	8	F	3413	9	F
27	3235	A	F	3267	2	F	3297	6	F	3327	4	F	3384	8	F	3414	9	F
28	3236	A	F	3268	2	F	3298	6	F	3328	4	F	3385	8	F	3415	9	F
29	3237	A	F	3269	2	F	3299	6	F	3329	4	F	3386	8	F	3416	9	F
30	3238	A	F	3270	2	F	3300	6	F	3330	4	F	3387	8	F	3417	9	F

System Report Codes

	Report			Restoral		
	Addr	Value		Addr	Value	
Low Battery	3336	3	1	3337	7	1
AC Fail	3338	3	2	3339	7	2
System Trouble	3345	3	3	3346	7	3
Keypad Fire	3207	3	4	3208	7	4
System Walk Test	3350	3	5	3351	7	5
Fire Walk Test	3352	3	6	3353	7	6
Dirty Smoke Chamber	3356	3	8	3357	7	8

User Report Codes

	Report		
	Addr	Value	
Open	3331	5	1
Close	3332	5	2
Partial Close	3334	5	3
First Open After Alarm	3335	5	4
Exit Error	3348	5	5
Recent Closing	3349	5	6
Keypad Emergency	3239	5	7
Keypad Panic	3240	5	8
Duress	3333	5	9

Report Successful/Unsuccessful Codes

	Report			Restoral		
	Addr	Value		Addr	Value	
Remote Program	3341	E	F	3342	F	F
Local Program	3343	E	F	3344	F	F

7.4.2 BFSK Format

Zone Function Report Codes

	Report			Restoral			Trouble			Trouble Restoral			Bypass			Bypass Restoral		
Zone Function	Addr	Value		Addr	Value		Addr	Value		Addr	Value		Addr	Value		Addr	Value	
1	3209	1	0	3241	E	1	3271	F	1	3301	E	1	3358	F	1	3388	E	1
2	3210	2	0	3242	E	2	3272	F	2	3302	E	2	3359	F	2	3389	E	2
3	3211	3	0	3243	E	3	3273	F	3	3303	E	3	3360	F	3	3390	E	3
4	3212	4	0	3244	E	4	3274	F	4	3304	E	4	3361	F	4	3391	E	4
5	3213	5	0	3245	E	5	3275	F	5	3305	E	5	3362	F	5	3392	E	5
6	3214	6	0	3246	E	6	3276	F	6	3306	E	6	3363	F	6	3393	E	6
7	3215	7	0	3247	E	7	3277	F	7	3307	E	7	3364	F	7	3394	E	7
8	3216	8	0	3248	E	8	3278	F	8	3308	E	8	3365	F	8	3395	E	8
9	3217	8	0	3249	E	8	3279	F	0	3309	E	8	3366	F	0	3396	E	8
10	3218	8	0	3250	E	8	3280	F	0	3310	E	8	3367	F	0	3397	E	8
11	3219	8	0	3251	E	8	3281	F	0	3311	E	8	3368	F	0	3398	E	8
12	3220	8	0	3252	E	8	3282	F	0	3312	E	8	3369	F	0	3399	E	8
13	3221	8	0	3253	E	8	3283	F	0	3313	E	8	3370	F	0	3400	E	8
14	3222	8	0	3254	E	8	3284	F	0	3314	E	8	3371	F	0	3401	E	8
15	3223	8	0	3255	E	8	3285	F	0	3315	E	8	3372	F	0	3402	E	8
16	3224	8	0	3256	E	8	3286	F	0	3316	E	8	3373	F	0	3403	E	8
17	3225	8	0	3257	E	8	3287	F	0	3317	E	8	3374	F	0	3404	E	8
18	3226	8	0	3258	E	8	3288	F	0	3318	E	8	3375	F	0	3405	E	8
19	3227	8	0	3259	E	8	3289	F	0	3319	E	8	3376	F	0	3406	E	8
20	3228	8	0	3260	E	8	3290	F	0	3320	E	8	3377	F	0	3407	E	8
21	3229	8	0	3261	E	8	3291	F	0	3321	E	8	3378	F	0	3408	E	8
22	3230	8	0	3262	E	8	3292	F	0	3322	E	8	3379	F	0	3409	E	8
23	3231	8	0	3263	E	8	3293	F	0	3323	E	8	3380	F	0	3410	E	8
24	3232	8	0	3264	E	8	3294	F	0	3324	E	8	3381	F	0	3411	E	8
25	3233	8	0	3265	E	8	3295	F	0	3325	E	8	3382	F	0	3412	E	8
26	3234	8	0	3266	E	8	3296	F	0	3326	E	8	3383	F	0	3413	E	8
27	3235	8	0	3267	E	8	3297	F	0	3327	E	8	3384	F	0	3414	E	8
28	3236	8	0	3268	E	8	3298	F	0	3328	E	8	3385	F	0	3415	E	8
29	3237	8	0	3269	E	8	3299	F	0	3329	E	8	3386	F	0	3416	E	8
30	3238	8	0	3270	E	8	3300	F	0	3330	E	8	3387	F	0	3417	E	8

System Report Codes

	Report			Restoral		
	Addr	Value		Addr	Value	
Low Battery	3336	F	9	3337	E	9
AC Fail	3338	F	A	3339	E	A
System Trouble	3345	F	D	3346	E	D
Keypad Fire	3207	1	0	3208	E	1
System Walk Test	3350	7	1	3351	7	2
Fire Walk Test	3352	7	3	3353	7	4
Dirty Smoke Chamber	3356	3	3	3357	3	4

User Report Codes

	Report		
	Addr	Value	
Open	3331	B	F
Close	3332	C	F
Partial Close	3334	C	F
First Open After Alarm	3335	D	F
Exit Error	3348	0	0
Recent Closing	3349	0	0
Keypad Emergency	3239	0	0
Keypad Panic	3240	9	0
Duress	3333	A	0

Report Successful/Unsuccessful Codes

	Report			Restoral		
	Addr	Value		Addr	Value	
Remote Program	3341	0	0	3342	0	0
Local Program	3343	0	0	3344	0	0

7.4.3 Personal Dialing Format

This is a 2 pulse per second (PPS) 0/2 (no account code/2 report event digits) format intended for manual reception, i.e. the control panel will call a phone number where a person is expected to answer. After a call is made, the control panel will start sending the first report. If the report was a “Communication Test” and Program Address 3340 had a value of 12 the person answering the phone would hear 1 pulse followed by a 1 second delay, then 2 pulses followed by a 3 second delay. This sequence will repeat for 60 seconds per call. After the 60 seconds the control panel will hang up and call again if any reports still remain to be sent.

A way to expedite this report process would be to provide an acknowledge to the control panel that the report was heard and understood by the receiving party. When an acknowledge is provided, the control panel will start sending the next report or hang up if no reports remain. To provide an acknowledge, press the 1 key of the telephone keypad during the 3 second delay after the report transmission. This “Acknowledge Feature” is an enhancement that will allow the control panel to send all reports in one call. If the call is not acknowledged a communication failure is sent after all dial attempts are made.

Programming the first data digit as zero will disable the report. Values 1-9 and A-F are acceptable. A zero in the second data digit will send ten pulses.

7.4.4 Pager Format

The Pager format allows the control panel to dial a digital pager and leave a numeric message which includes an account ID and report type. The telephone number is dialed when a report is available. At the completion of the telephone dialing, a time delay equal to 10 seconds occurs. This delay allows time to connect with the pager service, while skipping over any voice announcement. When the delay has ended, the numeric message is sent. This message includes the account number followed by up to 5 reports. If a delay time greater than 10 seconds is required, see *Section 5.9.33 Pager Delay Time* to adjust the delay time. In addition, increments of 3 seconds can be added by programming the "*3" character (3 second delay) at the end of the phone number in address 3159 or 3175.

For example, if you call pager number 123-4567 and it takes 20 seconds after you finished dialing before you are allowed to enter the message, the following digits should be programmed in address 3159: 1 2 3 4 5 6 7 *3 *3 *3 *3. This will give you an overall delay of 22 seconds.

For Pager Format, it is not advisable to use the HEX character values (*0 = A, *1 = B, *2 = C, *3 = D, *4 = E, *5 = F) in the report programming addresses 3207 through 3419. These characters could cause unpredictable results when sent to a pager system that only expects numeric characters between 0-9. This is the reason that this format will not allow an associated user number with an open and close report.

The following are recommended programming values for addresses 3207 through 3419 when using the Pager format.

See *Zone Function Report Codes* on *page 123* for Reports with Restorals. The values for each report can be determined by the user in conjunction with the installer. Again, the digit “0” (zero) should **not** be used as the reporting (first) digit as it will affect other reports in the system. Examples have been provided for possible reporting values, but the values can be set to the user’s preferences.

Zone Function Report Codes

Zone Function	Report Addr	Report Value		Restoral Addr	Restoral Value		Trouble Addr	Trouble Value		Trouble Restoral Addr	Trouble Restoral Value		Bypass Addr	Bypass Value		Bypass Restoral Addr	Bypass Restoral Value	
1	3209	1	1	3241	6	4	3271	3	1	3301	6	5	3358	6	1	3388	6	6
2	3210	1	2	3242	6	4	3272	3	2	3302	6	5	3359	6	1	3389	6	6
3	3211	1	3	3243	6	4	3273	3	3	3303	6	5	3360	6	1	3390	6	6
4	3212	1	4	3244	6	4	3274	3	4	3304	6	5	3361	6	1	3391	6	6
5	3213	1	5	3245	6	4	3275	3	5	3305	6	5	3362	6	1	3392	6	6
6	3214	1	6	3246	6	4	3276	3	6	3306	6	5	3363	6	1	3393	6	6
7	3215	1	7	3247	6	4	3277	3	7	3307	6	5	3364	6	1	3394	6	6
8	3216	1	8	3248	6	4	3278	3	8	3308	6	5	3365	6	1	3395	6	6
9	3217	1	9	3249	6	4	3279	3	9	3309	6	5	3366	6	1	3396	6	6
10	3218	2	0	3250	6	4	3280	4	0	3310	6	5	3367	6	2	3397	6	6
11	3219	2	1	3251	6	4	3281	4	1	3311	6	5	3368	6	2	3398	6	6
12	3220	2	2	3252	6	4	3282	4	2	3312	6	5	3369	6	2	3399	6	6
13	3221	2	3	3253	6	4	3283	4	3	3313	6	5	3370	6	2	3400	6	6
14	3222	2	4	3254	6	4	3284	4	4	3314	6	5	3371	6	2	3401	6	6
15	3223	2	5	3255	6	4	3285	4	5	3315	6	5	3372	6	2	3402	6	6
16	3224	2	6	3256	6	4	3286	4	6	3316	6	5	3373	6	2	3403	6	6
17	3225	2	7	3257	6	4	3287	4	7	3317	6	5	3374	6	2	3404	6	6
18	3226	2	8	3258	6	4	3288	4	8	3318	6	5	3375	6	2	3405	6	6
19	3227	2	9	3259	6	4	3289	4	9	3319	6	5	3376	6	2	3406	6	6
20	3228	3	0	3260	6	4	3290	5	0	3320	6	5	3377	6	2	3407	6	6
21	3229	3	0	3261	6	4	3291	5	1	3321	6	5	3378	6	3	3408	6	6
22	3230	3	0	3262	6	4	3292	5	2	3322	6	5	3379	6	3	3409	6	6
23	3231	3	0	3263	6	4	3293	5	3	3323	6	5	3380	6	3	3410	6	6
24	3232	3	0	3264	6	4	3294	5	4	3324	6	5	3381	6	3	3411	6	6
25	3233	3	0	3265	6	4	3295	5	5	3325	6	5	3382	6	3	3412	6	6
26	3234	3	0	3266	6	4	3296	5	6	3326	6	5	3383	6	3	3413	6	6
27	3235	3	0	3267	6	4	3297	5	7	3327	6	5	3384	6	3	3414	6	6
28	3236	3	0	3268	6	4	3298	5	8	3328	6	5	3385	6	3	3415	6	6
29	3237	3	0	3269	6	4	3299	5	9	3329	6	5	3386	6	3	3416	6	6
30	3238	3	0	3270	6	4	3300	6	0	3330	6	5	3387	6	3	3417	6	6

System Report Codes

	Report Addr	Report Value		Restoral Addr	Restoral Value	
Low Battery	3336	7	0	3337	8	0
AC Fail	3338	7	1	3339	8	1
System Trouble	3345	7	2	3346	8	2
Keypad Fire	3207	7	3	3208	8	3
System Walk Test	3350	7	4	3351	8	4
Fire Walk Test	3352	7	5	3353	8	5
Dirty Smoke Chamber	3356	7	7	3357	8	7

User Report Codes

	Report Addr	Report Value	
Open	3331	9	0
Close	3332	9	1
Partial Close	3334	9	2
First Open After Alarm	3335	9	3
Exit Error	3348	9	7
Recent Closing	3349	9	4
Keypad Emergency	3239	9	5
Keypad Panic	3240	9	6
Duress	3333	9	7

Report Successful/Unsuccessful Codes

	Report Addr	Report Value		Restoral Addr	Restoral Value	
Remote Program	3341	8	8	3342	7	8
Local Program	3343	8	9	3344	7	9

7.5 Report Programming: Values Sent

7.5.1 SIA Formats

Digit 2	SIA Report	Explanation
1	PA	Panic Alarm
2	PR	Panic Restore
3	QA	Emergency Alarm
4	QR	Emergency Restore
5	TA	Tamper Alarm
6	TR	Tamper Restore
7	UA	Untyped Zone Alarm
8	UR	Untyped Zone Restore
9	UT	Untyped Zone Trouble
*0	UJ	Untyped Trouble Restore
*1	YP	Power Supply Trouble
*2	YQ	Power Supply Restore
*3	YX	Service Required

Zone Reports

Reports	SIA Event Code	SIA Data Field
Burglary Alarm for Zone	BA	Zone Number
Fire Alarm for Zone	FA	Zone Number
Waterflow Alarm for Zone	SA	Zone Number
Supervisory for Zone	SS	Zone Number
Burglary Restoral for Zone	BR	Zone Number
Fire Restoral for Zone	FR	Zone Number
Waterflow Restoral for Zone	SR	Zone Number
Supervisory Restoral for Zone	SJ	Zone Number
Burglary Trouble for Zone	BT	Zone Number
Burglary Trouble Restoral	BJ	Zone Number
Fire Trouble for Zone	FT	Zone Number
Fire Trouble Restoral	FJ	Zone Number
Waterflow Trouble for Zone	FT	Zone Number
Supervisory Trouble for Zone	FT	Zone Number
Burglary Zone Bypass	BB	Zone Number
Burglary Zone Bypass Restoral	BU	Zone Number
24-hour Zone Bypass	BB	Zone Number
24-hour Zone Bypass Restoral	BU	Zone Number
Tamper RF Zone	TT	Zone Number
Tamper, Alarm RF Zone	BA	Zone Number
Tamper Restoral RF Zone	BR	Zone Number
Low Battery RF Zone	XT	Zone Number
Low Battery Restoral RF Zone	BR	Zone Number

Keypad Reports

Reports	SIA Event Code	SIA Data Field
Keypad Fire (A)	FA	000
Keypad Fire Restoral (A)	FR	000
Keypad Emergency (B)	QA	None
Keypad Panic (C)	PA	None
Keypad Tamper	EX	None
Keypad Tamper Restoral	ER	None

System Reports

Reports	SIA Event Code	SIA Data Field
Open Report	OP	User Number
Close Report	CL	User Number
Duress Report	HA	000
Partial Close Report	CG	User Number
First Open after Alarm (Cancel) Report	OR	None
Low Battery	YT	None
Low Battery Restoral	YR	None
AC Failure	AT	None
AC Failure Restoral	AR	None
Octal Relay Fault Report	ET	None
Octal Relay Restoral	ER	None
Exit Error Report	EE	None
Recent Closing Report	CR	None
System Walk Test Start Report	TS	None
System Walk Test End Report	TE	None
Fire Walk Test Report	FI	None

Reports	SIA Event Code	SIA Data Field
Fire Walk Test Restoral	FK	None
Automatic System Normal Test Report	RP	None
Manual Communicator Test Report	RX	None
Remote Programming Successful Report	RS	None
Remote Programming Failure Report	RU	None
Local Programming Successful Report	YG	None
Local Programming Failure Report	YF	None
Communication Failure Report	YC	None
Communication Restoral	YK	None
EEPROM Checksum Failure/ Keypad Supervision Failure Report	ET	None
EEPROM Checksum Restoral/Keypad Supervision Restoral Report	ER	None
Aux Power Fault Report	YP	None
Aux Power Fault Restoral Report	YQ	None
Ground Fault Report	UT	None
Ground Fault Restoral Report	UJ	None
Automatic System Off Normal Test Report	RP	None
Phone Line 1 Fault Report	LT	None
Phone Line 1 Restoral Report	LR	None
Phone Line 2 Fault Report	LT	None
Phone Line 2 Restoral Report	LR	None
DS7416i Fault Report	YS	None
DS7416i Fault Restoral Report	YK	None
Bell Fault Report	ET	None
Bell Fault Restoral Report	ER	None
RAM Fault Report	ET	None
RAM Fault Restoral Report	ER	None
ROM Fault Report	ET	None
ROM Fault Restoral Report	ER	None
Serial Interface Fault Report	VT	None
Serial Interface Fault Restoral Report	VR	None
Aux Relay Fault Report	ET	None
Aux Relay Fault Restoral Report	ER	None

Smoke Detector Reports

Reports	SIA Event Code	SIA Data Field
Dirty Smoke Chamber Report	MC	Zone Number
Dirty Smoke Chamber Restoral Report	MO	Zone Number

Multiplex Bus Reports

Reports	SIA Event Code	SIA Data Field
Multiplex Bus Fault Report	ET	None
Multiplex Bus Fault Restoral Report	ER	None

RF Reports

Reports	SIA Event Code	SIA Data Field
Radio Receiver Tamper Report	XS	Receiver Number
Radio Receiver Tamper Restoral Report	XJ	Receiver Number
Radio Receiver Jammed Report	XQ	Receiver Number
Radio Receiver Jammed Restoral Report	XH	Receiver Number
Radio Receiver Trouble Report	XQ	Receiver Number
Radio Receiver Trouble Restoral Report	XH	Receiver Number
RF Zone Missing	TT	Receiver Number

7.5.2 Contact ID (CID) Formats

Fire Alarm Reports

Reports	CID Event Code	CID Data Field
Fire Alarm for Zone	110	Zone Number
Fire Restoral for Zone	110 Restoral	Zone Number
Keypad Fire (A)	110	000
Keypad Fire Restoral (A)	110 Restoral	000
Waterflow Alarm for Zone	113	Zone Number
Waterflow Restoral for Zone	113 Restoral	Zone Number

Panic Alarm Reports

Reports	CID Event Code	CID Data Field
Duress Report	121	000
Keypad Emergency (B)	122	None
Keypad Panic (C)	123	None

Burglar Alarm Reports

Reports	CID Event Code	CID Data Field
Burglary Alarm for Zone	130	Zone Number
Burglary Restoral for Zone	130 Restoral	Zone Number
Tamper, Alarm RF Zone	130	Zone Number
Low Battery Restoral RF Zone	130	Zone Number

Supervisory Reports

Reports	CID Event Code	CID Data Field
Supervisory for Zone	200	Zone Number
Supervisory Restoral for Zone	200 Restoral	Zone Number

System Trouble Reports

Reports	CID Event Code	CID Data Field
Aux Power Fault Report	300	None
Aux Power Fault Restoral	300 Restoral	None
AC Failure	301	None
AC Failure Restoral	301 Restoral	None
Low Battery	302	None
Low Battery Restoral	302 Restoral	None
RAM Fault Report	303	None
RAM Restoral	303 Restoral	None
ROM Fault Report	304	None
ROM Restoral	304 Restoral	None
Local Programming Successful Report	306	None
Local Programming Failure Report	306 Restoral	None
Ground Fault Report	310	None
Ground Fault Restoral	310 Restoral	None

Sounder/Relay Trouble Reports

Reports	CID Event Code	CID Data Field
Aux Relay Fault Report	320	004
Aux Relay Restoral	320 Restoral	004
Bell Fault Report	321	003
Bell Restoral	321 Restoral	003

System Peripheral Trouble Reports

Reports	CID Event Code	CID Data Field
Octal Relay Fault Report	330	005
Octal Relay Restoral	330 Restoral	005
Keypad Supervision Failure Report	330	None
Keypad Supervision Restoral	330 Restoral	None
Low Battery	302	None
Multiplex Bus Fault	333	None
Multiplex Bus Restoral	333 Restoral	None
Radio Receiver Trouble Report	333	Receiver Number

Reports	CID Event Code	CID Data Field
Radio Receiver Trouble Restoral	333 Restoral	Receiver Number
Serial Interface Fault Report	336	None
Serial Interface Restoral	336 Restoral	None
Keypad Tamper	341	None
Keypad Tamper Restoral	341 Restoral	None
Radio Receiver Tamper	341	Receiver Number
Radio Receiver Tamper Restoral	341 Restoral	Receiver Number
Radio Receiver Jammed	344	Receiver Number
Radio Receiver Jammed Restoral	344 Restoral	Receiver Number

Communication Trouble Reports

Reports	CID Event Code	CID Data Field
Phone Line 1 Fault Report	351	None
Phone Line 1 Fault Restoral	351 Restoral	None
Phone Line 2 Fault Report	352	None
Phone Line 2 Fault Restoral	352 Restoral	None
DS7416i[1] Fault Report	353	See note[1]
DS7416i[1] Fault Restoral	353 Restoral	See note[1]
Communication Failure Report	354	None
Communication Restoral	354 Restoral	None

[1] The two-digit #89 display System Fault numbers are sent in the CID data field for DS7416i fault reports.

Protection Loop Reports

Reports	CID Event Code	CID Data Field
Tamper Restoral RF Zone	370 Restoral	Zone Number
Burglary Trouble for Zone	370	Zone Number
Burglary Trouble Restoral	370 Restoral	Zone Number
Fire Trouble for Zone	373	Zone Number
Fire Trouble Restoral	373 Restoral	Zone Number
Waterflow Trouble for Zone	373	Zone Number
Supervisory Trouble for Zone	373	Zone Number

Sensor Trouble Reports

Reports	CID Event Code	CID Data Field
RF Zone Missing	381	Zone Number
Tamper RF Zone	383	Zone Number
Low Battery RF Zone	384	Zone Number
Dirty Smoke Chamber Report	385	Zone Number
Dirty Smoke Chamber Restoral	385 Restoral	Zone Number

Open/Close Reports

Reports	CID Event Code	CID Data Field
Open Report	401	User Number
Close Report	401 Restoral	User Number
Recent Closing Report	405	None
First Open after Alarm (Cancel) Report	406	None
Partial Close Report	456 Restoral	User Number
Exit Error Report	457	None

Remote Programming Reports

Reports	CID Event Code	CID Data Field
Remote Programming Successful Report	412	None
Remote Programming Failure Report	413	None

Bypass Reports

Reports	CID Event Code	CID Data Field
Burglary Zone Bypass	573	Zone Number
Burglary Zone Bypass Restoral	573 Restoral	Zone Number
24-hour Zone Bypass	573	Zone Number
24-hour Zone Bypass Restoral	573 Restoral	Zone Number

Test Reports

Reports	CID Event Code	CID Data Field
Manual Communicator Test Report	601	None
Automatic System Normal Test Report	602	None
Automatic System Off Normal Test Report	602	None
Fire Walk Test Report	604	None
Fire Walk Test Restoral	604 Restoral	None
System Walk Test Start Report	607	None
System Walk Test End Report	607 Restoral	None

7.6 Program Addresses

Address	Description
0000	General Control
0001	Zone Function 1
0002	Zone Function 2
0003	Zone Function 3
0004	Zone Function 4
0005	Zone Function 5
0006	Zone Function 6
0007	Zone Function 7
0008	Zone Function 8
0009	Zone Function 9
0010	Zone Function 10
0011	Zone Function 11
0012	Zone Function 12
0013	Zone Function 13
0014	Zone Function 14
0015	Zone Function 15
0016	Zone Function 16
0017	Zone Function 17
0018	Zone Function 18
0019	Zone Function 19
0020	Zone Function 20
0021	Zone Function 21
0022	Zone Function 22
0023	Zone Function 23
0024	Zone Function 24
0025	Zone Function 25
0026	Zone Function 26
0027	Zone Function 27
0028	Zone Function 28
0029	Zone Function 29
0030	Zone Function 30
0031	Zone Number 1
0032	Zone Number 2
0033	Zone Number 3
0034	Zone Number 4
0035	Zone Number 5
0036	Zone Number 6
0037	Zone Number 7
0038	Zone Number 8
0039	Zone Number 9
0040	Zone Number 10
0041	Zone Number 11
0042	Zone Number 12
0043	Zone Number 13
0044	Zone Number 14
0045	Zone Number 15
0046	Zone Number 16
0047	Zone Number 17
0048	Zone Number 18
0049	Zone Number 19
0050	Zone Number 20
0051	Zone Number 21
0052	Zone Number 22
0053	Zone Number 23
0054	Zone Number 24
0055	Zone Number 25
0056	Zone Number 26
0057	Zone Number 27
0058	Zone Number 28
0059	Zone Number 29
0060	Zone Number 30
0061	Zone Number 31
0062	Zone Number 32
0063	Zone Number 33
0064	Zone Number 34
0065	Zone Number 35
0066	Zone Number 36
0067	Zone Number 37
0068	Zone Number 38
0069	Zone Number 39
0070	Zone Number 40
0071	Zone Number 41
0072	Zone Number 42
0073	Zone Number 43
0074	Zone Number 44
0075	Zone Number 45
0076	Zone Number 46
0077	Zone Number 47
0078	Zone Number 48
0079	Zone Number 49
0080	Zone Number 50
0081	Zone Number 51
0082	Zone Number 52
0083	Zone Number 53
0084	Zone Number 54
0085	Zone Number 55
0086	Zone Number 56
0087	Zone Number 57
0088	Zone Number 58
0089	Zone Number 59
0090	Zone Number 60
0091	Zone Number 61
0092	Zone Number 62
0093	Zone Number 63
0094	Zone Number 64
0095	Zone Number 65
0096	Zone Number 66
0097	Zone Number 67
0098	Zone Number 68
0099	Zone Number 69
0100	Zone Number 70
0101	Zone Number 71
0102	Zone Number 72
0103	Zone Number 73
0104	Zone Number 74
0105	Zone Number 75
0106	Zone Number 76
0107	Zone Number 77
0108	Zone Number 78
0109	Zone Number 79
0110	Zone Number 80
0111	Zone Number 81
0112	Zone Number 82
0113	Zone Number 83
0114	Zone Number 84
0115	Zone Number 85
0116	Zone Number 86
0117	Zone Number 87
0118	Zone Number 88
0119	Zone Number 89
0120	Zone Number 90
0121	Zone Number 91
0122	Zone Number 92
0123	Zone Number 93
0124	Zone Number 94
0125	Zone Number 95
0126	Zone Number 96
0127	Zone Number 97
0128	Zone Number 98
0129	Zone Number 99
0130	Zone Number 100
0131	Zone Number 101
0132	Zone Number 102
0133	Zone Number 103
0134	Zone Number 104
0135	Zone Number 105
0136	Zone Number 106
0137	Zone Number 107
0138	Zone Number 108
0139	Zone Number 109
0140	Zone Number 110
0141	Zone Number 111
0142	Zone Number 112
0143	Zone Number 113
0144	Zone Number 114
0145	Zone Number 115
0146	Zone Number 116
0147	Zone Number 117
0148	Zone Number 118
0149	Zone Number 119
0150	Zone Number 120
0151	Zone Number 121
0152	Zone Number 122
0153	Zone Number 123

0154	Zone Number 124
0155	Zone Number 125
0156	Zone Number 126
0157	Zone Number 127
0158	Zone Number 128
0159	Zone Number 129
0160	Zone Number 130
0161	Zone Number 131
0162	Zone Number 132
0163	Zone Number 133
0164	Zone Number 134
0165	Zone Number 135
0166	Zone Number 136
0167	Zone Number 137
0168	Zone Number 138
0169	Zone Number 139
0170	Zone Number 140
0171	Zone Number 141
0172	Zone Number 142
0173	Zone Number 143
0174	Zone Number 144
0175	Zone Number 145
0176	Zone Number 146
0177	Zone Number 147
0178	Zone Number 148
0179	Zone Number 149
0180	Zone Number 150
0181	Zone Number 151
0182	Zone Number 152
0183	Zone Number 153
0184	Zone Number 154
0185	Zone Number 155
0186	Zone Number 156
0187	Zone Number 157
0188	Zone Number 158
0189	Zone Number 159
0190	Zone Number 160
0191	Zone Number 161
0192	Zone Number 162
0193	Zone Number 163
0194	Zone Number 164
0195	Zone Number 165
0196	Zone Number 166
0197	Zone Number 167
0198	Zone Number 168
0199	Zone Number 169
0200	Zone Number 170
0201	Zone Number 171
0202	Zone Number 172
0203	Zone Number 173
0204	Zone Number 174
0205	Zone Number 175
0206	Zone Number 176
0207	Zone Number 177
0208	Zone Number 178
0209	Zone Number 179
0210	Zone Number 180
0211	Zone Number 181
0212	Zone Number 182
0213	Zone Number 183
0214	Zone Number 184
0215	Zone Number 185
0216	Zone Number 186
0217	Zone Number 187
0218	Zone Number 188
0219	Zone Number 189
0220	Zone Number 190
0221	Zone Number 191
0222	Zone Number 192
0223	Zone Number 193
0224	Zone Number 194
0225	Zone Number 195
0226	Zone Number 196
0227	Zone Number 197
0228	Zone Number 198
0229	Zone Number 199
0230	Zone Number 200
0231	Zone Number 201
0232	Zone Number 202
0233	Zone Number 203
0234	Zone Number 204
0235	Zone Number 205
0236	Zone Number 206
0237	Zone Number 207
0238	Zone Number 208
0239	Zone Number 209
0240	Zone Number 210
0241	Zone Number 211
0242	Zone Number 212
0243	Zone Number 213
0244	Zone Number 214
0245	Zone Number 215
0246	Zone Number 216
0247	Zone Number 217
0248	Zone Number 218
0249	Zone Number 219
0250	Zone Number 220
0251	Zone Number 221
0252	Zone Number 222
0253	Zone Number 223
0254	Zone Number 224
0255	Zone Number 225
0256	Zone Number 226
0257	Zone Number 227
0258	Zone Number 228
0259	Zone Number 229
0260	Zone Number 230
0261	Zone Number 231
0262	Zone Number 232
0263	Zone Number 233
0264	Zone Number 234
0265	Zone Number 235
0266	Zone Number 236
0267	Zone Number 237
0268	Zone Number 238
0269	Zone Number 239
0270	Zone Number 240
0271	Zone Number 241
0272	Zone Number 242
0273	Zone Number 243
0274	Zone Number 244
0275	Zone Number 245
0276	Zone Number 246
0277	Zone Number 247
0278	Zone Number 248
0287	Zone 1 & 2 Area Assign.
0288	Zone 3 & 4 Area Assign.
0289	Zone 5 & 6 Area Assign.
0290	Zone 7 & 8 Area Assign.
0291	Zone 9 & 10 Area Assign.
0292	Zone 11 & 12 Area Assign.
0293	Zone 13 & 14 Area Assign.
0294	Zone 15 & 16 Area Assign.
0295	Zone 17 & 18 Area Assign.
0296	Zone 19 & 20 Area Assign.
0297	Zone 21 & 22 Area Assign.
0298	Zone 23 & 24 Area Assign.
0299	Zone 25 & 26 Area Assign.
0300	Zone 27 & 28 Area Assign.
0301	Zone 29 & 30 Area Assign.
0302	Zone 31 & 32 Area Assign.
0303	Zone 33 & 34 Area Assign.
0304	Zone 35 & 36 Area Assign.
0305	Zone 37 & 38 Area Assign.
0306	Zone 39 & 40 Area Assign.
0307	Zone 41 & 42 Area Assign.
0308	Zone 43 & 44 Area Assign.
0309	Zone 45 & 46 Area Assign.
0310	Zone 47 & 48 Area Assign.
0311	Zone 49 & 50 Area Assign.
0312	Zone 51 & 52 Area Assign.
0313	Zone 53 & 54 Area Assign.
0314	Zone 55 & 56 Area Assign.
0315	Zone 57 & 58 Area Assign.
0316	Zone 59 & 60 Area Assign.
0317	Zone 61 & 62 Area Assign.

0318	Zone 63 & 64 Area Assign.
0319	Zone 65 & 66 Area Assign.
0320	Zone 67 & 68 Area Assign.
0321	Zone 69 & 70 Area Assign.
0322	Zone 71 & 72 Area Assign.
0323	Zone 73 & 74 Area Assign.
0324	Zone 75 & 76 Area Assign.
0325	Zone 77 & 78 Area Assign.
0327	Zone 81 & 82 Area Assign.
0328	Zone 83 & 84 Area Assign.
0329	Zone 85 & 86 Area Assign.
0330	Zone 87 & 88 Area Assign.
0331	Zone 89 & 90 Area Assign.
0332	Zone 91 & 92 Area Assign.
0333	Zone 93 & 94 Area Assign.
0334	Zone 95 & 96 Area Assign.
0335	Zone 97 & 98 Area Assign.
0336	Zone 99 & 100 Area Assign.
0337	Zone 101 & 102 Area Assign.
0338	Zone 103 & 104 Area Assign.
0339	Zone 105 & 106 Area Assign.
0340	Zone 107 & 108 Area Assign.
0341	Zone 109 & 110 Area Assign.
0342	Zone 111 & 112 Area Assign.
0343	Zone 113 & 114 Area Assign.
0344	Zone 115 & 116 Area Assign.
0345	Zone 117 & 118 Area Assign.
0346	Zone 119 & 120 Area Assign.
0347	Zone 121 & 122 Area Assign.
0348	Zone 123 & 124 Area Assign.
0349	Zone 125 & 126 Area Assign.
0350	Zone 127 & 128 Area Assign.
0351	Zone 129 & 130 Area Assign.
0352	Zone 131 & 132 Area Assign.
0353	Zone 133 & 134 Area Assign.
0354	Zone 135 & 136 Area Assign.
0355	Zone 137 & 138 Area Assign.
0356	Zone 139 & 140 Area Assign.
0357	Zone 141 & 142 Area Assign.
0358	Zone 143 & 144 Area Assign.
0359	Zone 145 & 146 Area Assign.
0360	Zone 147 & 148 Area Assign.
0361	Zone 149 & 150 Area Assign.
0362	Zone 151 & 152 Area Assign.
0363	Zone 153 & 154 Area Assign.
0364	Zone 155 & 156 Area Assign.
0365	Zone 157 & 158 Area Assign.
0366	Zone 159 & 160 Area Assign.
0367	Zone 161 & 162 Area Assign.
0368	Zone 163 & 164 Area Assign.
0369	Zone 165 & 166 Area Assign.
0370	Zone 167 & 168 Area Assign.
0371	Zone 169 & 170 Area Assign.
0372	Zone 171 & 172 Area Assign.
0373	Zone 173 & 174 Area Assign.
0374	Zone 175 & 176 Area Assign.
0375	Zone 177 & 178 Area Assign.
0376	Zone 179 & 180 Area Assign.
0377	Zone 181 & 182 Area Assign.
0378	Zone 183 & 184 Area Assign.
0379	Zone 185 & 186 Area Assign.
0380	Zone 187 & 188 Area Assign.
0381	Zone 189 & 190 Area Assign.
0382	Zone 191 & 192 Area Assign.
0383	Zone 193 & 194 Area Assign.
0384	Zone 195 & 196 Area Assign.
0385	Zone 197 & 198 Area Assign.
0386	Zone 199 & 200 Area Assign.
0387	Zone 201 & 202 Area Assign.
0388	Zone 203 & 204 Area Assign.
0389	Zone 205 & 206 Area Assign.
0390	Zone 207 & 208 Area Assign.
0391	Zone 209 & 210 Area Assign.
0392	Zone 211 & 212 Area Assign.
0393	Zone 213 & 214 Area Assign.
0394	Zone 215 & 216 Area Assign.
0395	Zone 217 & 218 Area Assign.
0396	Zone 219 & 220 Area Assign.
0397	Zone 221 & 222 Area Assign.
0398	Zone 223 & 224 Area Assign.
0399	Zone 225 & 226 Area Assign.
0400	Zone 227 & 228 Area Assign.
0401	Zone 229 & 230 Area Assign.
0402	Zone 231 & 232 Area Assign.
0403	Zone 233 & 234 Area Assign.
0404	Zone 235 & 236 Area Assign.
0405	Zone 237 & 238 Area Assign.
0406	Zone 239 & 240 Area Assign.
0407	Zone 241 & 242 Area Assign.
0408	Zone 243 & 244 Area Assign.
0409	Zone 245 & 246 Area Assign.
0410	Zone 247 & 248 Area Assign.
0415	Zone 1 & 2 Zone Type
0416	Zone 3 & 4 Zone Type
0417	Zone 5 & 6 Zone Type
0418	Zone 7 & 8 Zone Type

0419	Zone 9 & 10 Zone Type
0420	Zone 11 & 12 Zone Type
0421	Zone 13 & 14 Zone Type
0422	Zone 15 & 16 Zone Type
0423	Zone 17 & 18 Zone Type
0424	Zone 19 & 20 Zone Type
0425	Zone 21 & 22 Zone Type
0426	Zone 23 & 24 Zone Type
0427	Zone 25 & 26 Zone Type
0428	Zone 27 & 28 Zone Type
0429	Zone 29 & 30 Zone Type
0430	Zone 31 & 32 Zone Type
0431	Zone 33 & 34 Zone Type
0432	Zone 35 & 36 Zone Type
0433	Zone 37 & 38 Zone Type
0434	Zone 39 & 40 Zone Type
0435	Zone 41 & 42 Zone Type
0436	Zone 43 & 44 Zone Type
0437	Zone 45 & 46 Zone Type
0438	Zone 47 & 48 Zone Type
0439	Zone 49 & 50 Zone Type
0440	Zone 51 & 52 Zone Type
0441	Zone 53 & 54 Zone Type
0442	Zone 55 & 56 Zone Type
0443	Zone 57 & 58 Zone Type
0444	Zone 59 & 60 Zone Type
0445	Zone 61 & 62 Zone Type
0446	Zone 63 & 64 Zone Type
0447	Zone 65 & 66 Zone Type
0448	Zone 67 & 68 Zone Type
0449	Zone 69 & 70 Zone Type
0450	Zone 71 & 72 Zone Type
0451	Zone 73 & 74 Zone Type
0452	Zone 75 & 76 Zone Type
0453	Zone 77 & 78 Zone Type
0454	Zone 79 & 80 Zone Type
0455	Zone 81 & 82 Zone Type
0456	Zone 83 & 84 Zone Type
0457	Zone 85 & 86 Zone Type
0458	Zone 87 & 88 Zone Type
0459	Zone 89 & 90 Zone Type
0460	Zone 91 & 92 Zone Type
0461	Zone 93 & 94 Zone Type
0462	Zone 95 & 96 Zone Type
0463	Zone 97 & 98 Zone Type
0464	Zone 99 & 100 Zone Type
0465	Zone 101 & 102 Zone Type
0466	Zone 103 & 104 Zone Type
0467	Zone 105 & 106 Zone Type
0468	Zone 107 & 108 Zone Type
0469	Zone 109 & 110 Zone Type
0470	Zone 111 & 112 Zone Type
0471	Zone 113 & 114 Zone Type
0472	Zone 116 & 115 Zone Type
0473	Zone 117 & 118 Zone Type
0474	Zone 119 & 120 Zone Type
0475	Zone 121 & 122 Zone Type
0476	Zone 123 & 124 Zone Type
0477	Zone 125 & 126 Zone Type
0478	Zone 127 & 128 Zone Type
0479	Zone 129 & 130 Zone Type
0480	Zone 131 & 132 Zone Type
0481	Zone 133 & 134 Zone Type
0482	Zone 135 & 136 Zone Type
0483	Zone 137 & 138 Zone Type
0484	Zone 139 & 140 Zone Type
0485	Zone 141 & 142 Zone Type
0486	Zone 143 & 144 Zone Type
0487	Zone 145 & 146 Zone Type
0488	Zone 147 & 148 Zone Type
0489	Zone 149 & 150 Zone Type
0490	Zone 151 & 152 Zone Type
0491	Zone 153 & 154 Zone Type
0492	Zone 155 & 156 Zone Type
0493	Zone 157 & 158 Zone Type
0494	Zone 159 & 160 Zone Type
0495	Zone 161 & 162 Zone Type
0496	Zone 163 & 164 Zone Type
0497	Zone 165 & 166 Zone Type
0498	Zone 167 & 168 Zone Type
0499	Zone 169 & 170 Zone Type
0500	Zone 171 & 172 Zone Type
0501	Zone 173 & 174 Zone Type
0502	Zone 175 & 176 Zone Type
0503	Zone 177 & 178 Zone Type
0504	Zone 179 & 180 Zone Type
0505	Zone 181 & 182 Zone Type
0506	Zone 183 & 184 Zone Type
0507	Zone 185 & 186 Zone Type
0508	Zone 187 & 188 Zone Type
0509	Zone 189 & 190 Zone Type
0510	Zone 191 & 192 Zone Type
0511	Zone 193 & 194 Zone Type
0512	Zone 195 & 196 Zone Type
0513	Zone 197 & 198 Zone Type
0514	Zone 199 & 200 Zone Type
0515	Zone 201 & 202 Zone Type
0516	Zone 203 & 204 Zone Type
0517	Zone 205 & 206 Zone Type
0518	Zone 207 & 208 Zone Type
0519	Zone 209 & 210 Zone Type
0520	Zone 211 & 212 Zone Type
0521	Zone 213 & 214 Zone Type
0522	Zone 215 & 216 Zone Type
0523	Zone 217 & 218 Zone Type
0524	Zone 219 & 220 Zone Type
0525	Zone 221 & 222 Zone Type

0526	Zone 223 & 224 Zone Type
0527	Zone 225 & 226 Zone Type
0528	Zone 227 & 228 Zone Type
0529	Zone 229 & 230 Zone Type
0530	Zone 231 & 232 Zone Type
0531	Zone 233 & 234 Zone Type
0532	Zone 235 & 236 Zone Type
0533	Zone 237 & 238 Zone Type
0534	Zone 239 & 240 Zone Type
0535	Zone 241 & 242 Zone Type
0536	Zone 243 & 244 Zone Type
0537	Zone 245 & 246 Zone Type
0538	Zone 247 & 248 Zone Type
0545	Alpha for Area 1
0561	Alpha for Area 2
0577	Alpha for Area 3
0593	Alpha for Area 4
0609	Alpha for Area 5
0625	Alpha for Area 6
0641	Alpha for Area 7
0657	Alpha for Area 8
0673	Alpha for Zone Number 1
0689	Alpha for Zone Number 2
0705	Alpha for Zone Number 3
0721	Alpha for Zone Number 4
0737	Alpha for Zone Number 5
0753	Alpha for Zone Number 6
0769	Alpha for Zone Number 7
0785	Alpha for Zone Number 8
0801	Alpha for Zone Number 9
0817	Alpha for Zone Number 10
0833	Alpha for Zone Number 11
0849	Alpha for Zone Number 12
0865	Alpha for Zone Number 13
0881	Alpha for Zone Number 14
0897	Alpha for Zone Number 15
0913	Alpha for Zone Number 16
0929	Alpha for Zone Number 17
0945	Alpha for Zone Number 18
0961	Alpha for Zone Number 19
0977	Alpha for Zone Number 20
0993	Alpha for Zone Number 21
1009	Alpha for Zone Number 22
1025	Alpha for Zone Number 23
1041	Alpha for Zone Number 24
1057	Alpha for Zone Number 25
1073	Alpha for Zone Number 26
1089	Alpha for Zone Number 27
1105	Alpha for Zone Number 28
1121	Alpha for Zone Number 29
1137	Alpha for Zone Number 30
1153	Alpha for Zone Number 31
1169	Alpha for Zone Number 32
1185	Alpha for Zone Number 33
1201	Alpha for Zone Number 34
1217	Alpha for Zone Number 35
1233	Alpha for Zone Number 36
1249	Alpha for Zone Number 37
1265	Alpha for Zone Number 38
1281	Alpha for Zone Number 39
1297	Alpha for Zone Number 40
1313	Alpha for Zone Number 41
1329	Alpha for Zone Number 42
1345	Alpha for Zone Number 43
1361	Alpha for Zone Number 44
1377	Alpha for Zone Number 45
1393	Alpha for Zone Number 46
1409	Alpha for Zone Number 47
1425	Alpha for Zone Number 48
1441	Alpha for Zone Number 49
1457	Alpha for Zone Number 50
1473	Alpha for Zone Number 51
1489	Alpha for Zone Number 52
1505	Alpha for Zone Number 53
1521	Alpha for Zone Number 54
1537	Alpha for Zone Number 55
1553	Alpha for Zone Number 56
1569	Alpha for Zone Number 57
1585	Alpha for Zone Number 58
1601	Alpha for Zone Number 59
1617	Alpha for Zone Number 60
1633	Alpha for Zone Number 61
1649	Alpha for Zone Number 62
1665	Alpha for Zone Number 63
1681	Alpha for Zone Number 64
1697	Alpha for Zone Number 65
1713	Alpha for Zone Number 66
1729	Alpha for Zone Number 67
1745	Alpha for Zone Number 68
1761	Alpha for Zone Number 69
1777	Alpha for Zone Number 70
1793	Alpha for Zone Number 71
1809	Alpha for Zone Number 72
1825	Alpha for Zone Number 73
1841	Alpha for Zone Number 74
1857	Alpha for Zone Number 75
1873	Alpha for Zone Number 76
1889	Alpha for Zone Number 77
1905	Alpha for Zone Number 78
1921	Alpha for Zone Number 79
1937	Alpha for Zone Number 80
1953	Alpha for Zone Number 81
1969	Alpha for Zone Number 82
1985	Alpha for Zone Number 83
2001	Alpha for Zone Number 84
2017	Alpha for Zone Number 85
2033	Alpha for Zone Number 86
2049	Alpha for Zone Number 87
2065	Alpha for Zone Number 88
2081	Alpha for Zone Number 89
2097	Alpha for Zone Number 90
2113	Alpha for Zone Number 91
2129	Alpha for Zone Number 92
2145	Alpha for Zone Number 93
2161	Alpha for Zone Number 94
2177	Alpha for Zone Number 95
2193	Alpha for Zone Number 96
2209	Alpha for Zone Number 97
2225	Alpha for Zone Number 98
2241	Alpha for Zone Number 99
2257	Alpha for Zone Number 100
2273	Alpha for Zone Number 101
2289	Alpha for Zone Number 102
2305	Alpha for Zone Number 103
2321	Alpha for Zone Number 104
2337	Alpha for Zone Number 105
2353	Alpha for Zone Number 106
2369	Alpha for Zone Number 107
2385	Alpha for Zone Number 108
2401	Alpha for Zone Number 109
2417	Alpha for Zone Number 110
2433	Alpha for Zone Number 111
2449	Alpha for Zone Number 112
2465	Alpha for Zone Number 113

2481	Alpha for Zone Number 114
2497	Alpha for Zone Number 115
2513	Alpha for Zone Number 116
2529	Alpha for Zone Number 117
2545	Alpha for Zone Number 118
2561	Alpha for Zone Number 119
2577	Alpha for Zone Number 120
2593	Alpha for Zone Number 121
2609	Alpha for Zone Number 122
2625	Alpha for Zone Number 123
2641	Alpha for Zone Number 124
2657	Alpha for Zone Number 125
2673	Alpha for Zone Number 126
2689	Alpha for Zone Number 127
2705	Alpha for Zone Number 128
2721	Zone Function Bypass 1-8
2722	Zone Function Bypass 9-16
2723	Zone Function Bypass 17-24
2724	Zone Function Bypass 25-30
2725	Command 4 (Cust.) Arming 1-8
2726	Command 4 (Cust.) Arming 9-16
2727	Command 4 (Cust.) Arming 17-24
2728	Command 4 (Cust.) Arming 25-30
2729	RF Zone Group Program. 129-248
2731	Receiver Configuration
2732	Force Arming & Ground Fault
2733	Commerical Fire Mode
2734	Alarm Output
2735	Programmable Output Type 1
2736	Programmable Output Type 2
2737	Output Part. Assign. & Bell Output
2738	Output Part. Assign. & Keyfob Chirp
2740	Octal Module #1, Relay #1
2742	Octal Module #1, Relay #2
2744	Octal Module #1, Relay #3
2746	Octal Module #1, Relay #4
2748	Octal Module #1, Relay #5
2750	Octal Module #1, Relay #6
2752	Octal Module #1, Relay #7
2754	Octal Module #1, Relay #8
2756	Octal Module #2, Relay #1
2758	Octal Module #2, Relay #2
2760	Octal Module #2, Relay #3
2762	Octal Module #2, Relay #4
2764	Octal Module #2, Relay #5
2766	Octal Module #2, Relay #6
2768	Octal Module #2, Relay #7
2770	Octal Module #2, Relay #8
2772	Output Function 1
2775	Output Function 2
2778	Output Function 3
2781	Output Function 4
2784	Output Function 5
2787	Output Function 6
2790	Output Function 7
2793	Output Function 8
2796	Output Function 9
2799	Output Function 10
2802	Output Function 11
2805	Output Function 12
2808	Output Function 13
2811	Output Function 14
2814	Output Function 15
2817	Output Function 16
2820	Output Function 17
2823	Output Function 18
2826	Output Function 19
2829	Output Function 20
2832	Output Function 21
2835	Output Function 22
2838	Output Function 23
2841	Output Function 24
2844	Octal Relay Area Assignment
2845	Octal Relay Area Assignment
2846	Octal Relay Area Assignment
2847	Octal Relay Area Assignment
2848	Octal Relay Area Assignment
2849	Octal Relay Area Assignment
2850	Octal Relay Area Assignment
2851	Octal Relay Area Assignment
2852	Output Function Area Assign.
2853	Output Function Area Assign.
2854	Output Function Area Assign.
2855	Output Function Area Assign.
2856	Output Function Area Assign.
2857	Output Function Area Assign.
2858	Output Function Area Assign.
2859	Output Function Area Assign.
2860	Output Function Area Assign.
2861	Output Function Area Assign.
2862	Output Function Area Assign.
2863	Output Function Area Assign.
3131	Keypad Assignment
3132	Keypad Assignment
3133	Keypad Assignment
3134	Keypad Assignment
3135	Keypad Assignment
3136	Keypad Assignment
3137	Keypad Assignment
3138	Keypad Assignment & Backlight Control
3139	Keypad Area Assignment
3140	Keypad Area Assignment
3141	Keypad Area Assignment
3142	Keypad Area Assignment
3143	Keypad Area Assignment
3144	Keypad Area Assignment
3145	Keypad Area Assignment
3146	Keypad Area Assignment
3147	Function Key Programming
3148	Function Key Programming
3149	Open/Close Report Control
3151	Open/Close Rprt. & Zone Alarm Routing
3152	System Routing
3153	Phone/DS7416i Routing
3154	Phone/DS7416i Routing
3155	Phone Number General Control

3156	Phone Number 1 Control
3157	Phone Number 2 Control
3158	Answer Ring Count (Arm/Disarm)
3159	Phone Number 1
3175	Phone Number 2
3191	Phone Number 3
3207	Keypad Fire Alarm Report
3208	Keypad Fire Restoral Report
3209	Zone Function 1 Alarm Report
3210	Zone Function 2 Alarm Report
3211	Zone Function 3 Alarm Report
3212	Zone Function 4 Alarm Report
3213	Zone Function 5 Alarm Report
3214	Zone Function 6 Alarm Report
3215	Zone Function 7 Alarm Report
3216	Zone Function 8 Alarm Report
3217	Zone Function 9 Alarm Report
3218	Zone Function 10 Alarm Report
3219	Zone Function 11 Alarm Report
3220	Zone Function 12 Alarm Report
3221	Zone Function 13 Alarm Report
3222	Zone Function 14 Alarm Report
3223	Zone Function 15 Alarm Report
3224	Zone Function 16 Alarm Report
3225	Zone Function 17 Alarm Report
3226	Zone Function 18 Alarm Report
3227	Zone Function 19 Alarm Report
3228	Zone Function 20 Alarm Report
3229	Zone Function 21 Alarm Report
3230	Zone Function 22 Alarm Report
3231	Zone Function 23 Alarm Report
3232	Zone Function 24 Alarm Report
3233	Zone Function 25 Alarm Report
3234	Zone Function 26 Alarm Report
3235	Zone Function 27 Alarm Report
3236	Zone Function 28 Alarm Report
3237	Zone Function 29 Alarm Report
3238	Zone Function 30 Alarm Report
3239	Keypad Emergency Report
3240	Keypad Panic Report
3241	Zone Function 1 Restoral Report
3242	Zone Function 2 Restoral Report
3243	Zone Function 3 Restoral Report
3244	Zone Function 4 Restoral Report
3245	Zone Function 5 Restoral Report
3246	Zone Function 6 Restoral Report
3247	Zone Function 7 Restoral Report
3248	Zone Function 8 Restoral Report
3249	Zone Function 9 Restoral Report
3250	Zone Function 10 Restoral Report
3251	Zone Function 11 Restoral Report
3252	Zone Function 12 Restoral Report
3253	Zone Function 13 Restoral Report
3254	Zone Function 14 Restoral Report
3255	Zone Function 15 Restoral Report
3256	Zone Function 16 Restoral Report
3257	Zone Function 17 Restoral Report
3258	Zone Function 18 Restoral Report
3259	Zone Function 19 Restoral Report
3260	Zone Function 20 Restoral Report
3261	Zone Function 21 Restoral Report
3262	Zone Function 22 Restoral Report
3263	Zone Function 23 Restoral Report
3264	Zone Function 24 Restoral Report
3265	Zone Function 25 Restoral Report
3266	Zone Function 26 Restoral Report
3267	Zone Function 27 Restoral Report
3268	Zone Function 28 Restoral Report
3269	Zone Function 29 Restoral Report
3270	Zone Function 30 Restoral Report
3271	Zone Function 1 Trouble Report
3272	Zone Function 2 Trouble Report
3273	Zone Function 3 Trouble Report
3274	Zone Function 4 Trouble Report
3275	Zone Function 5 Trouble Report
3276	Zone Function 6 Trouble Report
3277	Zone Function 7 Trouble Report
3278	Zone Function 8 Trouble Report
3279	Zone Function 9 Trouble Report
3280	Zone Function 10 Trouble Report
3281	Zone Function 11 Trouble Report
3282	Zone Function 12 Trouble Report
3283	Zone Function 13 Trouble Report
3284	Zone Function 14 Trouble Report
3285	Zone Function 15 Trouble Report
3286	Zone Function 16 Trouble Report
3287	Zone Function 17 Trouble Report
3288	Zone Function 18 Trouble Report
3289	Zone Function 19 Trouble Report
3290	Zone Function 20 Trouble Report

3291	Zone Function 21 Trouble Report
3292	Zone Function 22 Trouble Report
3293	Zone Function 23 Trouble Report
3294	Zone Function 24 Trouble Report
3295	Zone Function 25 Trouble Report
3296	Zone Function 26 Trouble Report
3297	Zone Function 27 Trouble Report
3298	Zone Function 28 Trouble Report
3299	Zone Function 29 Trouble Report
3300	Zone Function 30 Trouble Report
3301	Zone Function 1 Trouble Restoral
3302	Zone Function 2 Trouble Restoral
3303	Zone Function 3 Trouble Restoral
3304	Zone Function 4 Trouble Restoral
3305	Zone Function 5 Trouble Restoral
3306	Zone Function 6 Trouble Restoral
3307	Zone Function 7 Trouble Restoral
3308	Zone Function 8 Trouble Restoral
3309	Zone Function 9 Trouble Restoral
3310	Zone Function 10 Trouble Restoral
3311	Zone Function 11 Trouble Restoral
3312	Zone Function 12 Trouble Restoral
3313	Zone Function 13 Trouble Restoral
3314	Zone Function 14 Trouble Restoral
3315	Zone Function 15 Trouble Restoral
3316	Zone Function 16 Trouble Restoral
3317	Zone Function 17 Trouble Restoral
3318	Zone Function 18 Trouble Restoral
3319	Zone Function 19 Trouble Restoral
3320	Zone Function 20 Trouble Restoral
3321	Zone Function 21 Trouble Restoral
3322	Zone Function 22 Trouble Restoral
3323	Zone Function 23 Trouble Restoral
3324	Zone Function 24 Trouble Restoral
3325	Zone Function 25 Trouble Restoral
3326	Zone Function 26 Trouble Restoral
3327	Zone Function 27 Trouble Restoral
3328	Zone Function 28 Trouble Restoral
3329	Zone Function 29 Trouble Restoral
3330	Zone Function 30 Trouble Restoral
3331	Open Report
3332	Close Report
3333	Duress Report
3334	Partial Close Report
3335	First Open After Alarm Report.
3336	Low Battery Report
3337	Low Battery Restoral Report
3338	AC Fail Report
3339	AC Restoral Report
3340	Communicator Test/System Normal Report
3341	Remote Prog. Successful Report
3342	Remote Prog. Unsuccessful Report
3343	Local Prog. Successful Report
3344	Local Prog. Unsuccessful Report
3345	System Trouble Report
3346	System Trouble Restoral Report
3347	Communicator Test/System Off Normal Report
3348	Exit Error Report
3349	Recent Closing Report
3350	System Walk Test Report
3351	System Walk Test Restoral
3352	Fire Walk Test Report
3353	Fire Walk Test Restoral
3356	Dirty Smoke Chamber Report
3357	Dirty Smoke Chamber Restoral
3358	Zone Function 1 Bypass
3359	Zone Function 2 Bypass
3360	Zone Function 3 Bypass
3361	Zone Function 4 Bypass
3362	Zone Function 5 Bypass
3363	Zone Function 6 Bypass
3364	Zone Function 7 Bypass
3365	Zone Function 8 Bypass
3366	Zone Function 9 Bypass
3367	Zone Function 10 Bypass
3368	Zone Function 11 Bypass
3369	Zone Function 12 Bypass
3370	Zone Function 13 Bypass
3371	Zone Function 14 Bypass
3372	Zone Function 15 Bypass
3373	Zone Function 16 Bypass
3374	Zone Function 17 Bypass
3375	Zone Function 18 Bypass
3376	Zone Function 19 Bypass
3377	Zone Function 20 Bypass
3378	Zone Function 21 Bypass
3379	Zone Function 22 Bypass
3380	Zone Function 23 Bypass
3381	Zone Function 24 Bypass
3382	Zone Function 25 Bypass
3383	Zone Function 26 Bypass
3384	Zone Function 27 Bypass
3385	Zone Function 28 Bypass
3386	Zone Function 29 Bypass
3387	Zone Function 30 Bypass
3388	Zone Func. 1 Bypass Restoral
3389	Zone Func. 2 Bypass Restoral
3390	Zone Func. 3 Bypass Restoral
3391	Zone Func. 4 Bypass Restoral
3392	Zone Func. 5 Bypass Restoral
3393	Zone Func. 6 Bypass Restoral
3394	Zone Func. 7 Bypass Restoral
3395	Zone Func. 8 Bypass Restoral
3396	Zone Func. 9 Bypass Restoral
3397	Zone Func. 10 Bypass Restoral

3398	Zone Func. 11 Bypass Restoral
3399	Zone Func. 12 Bypass Restoral
3400	Zone Func. 13 Bypass Restoral
3401	Zone Func. 14 Bypass Restoral
3402	Zone Func. 15 Bypass Restoral
3403	Zone Func. 16 Bypass Restoral
3404	Zone Func. 17 Bypass Restoral
3405	Zone Func. 18 Bypass Restoral
3406	Zone Func. 19 Bypass Restoral
3407	Zone Func. 20 Bypass Restoral
3408	Zone Func. 21 Bypass Restoral
3409	Zone Func. 22 Bypass Restoral
3410	Zone Func. 23 Bypass Restoral
3411	Zone Func. 24 Bypass Restoral
3412	Zone Func. 25 Bypass Restoral
3413	Zone Func. 26 Bypass Restoral
3414	Zone Func. 27 Bypass Restoral
3415	Zone Func. 28 Bypass Restoral
3416	Zone Func. 29 Bypass Restoral
3417	Zone Func. 30 Bypass Restoral
3418	Keypad Tamper
3419	Keypad Tamper Restoral
3420	Partition Control
3421	Part. 1 & 2 General Code Control
3422	Part. 3 & 4 General Code Control
3423	Part. 5 & 6 General Code Control
3424	Part. 7 & 8 General Code Control
3425	Part. 1 & 2 Arming Warning Cntrl.
3426	Part. 3 & 4 Arming Warning Cntrl.
3427	Part. 5 & 6 Arming Warning Cntrl.
3428	Part. 7 & 8 Arming Warning Cntrl.
3429	Area 1 Account Code 1
3431	Area 1 Account Code 2
3433	Area 2 Account Code 1
3435	Area 2 Account Code 2
3437	Area 3 Account Code 1
3439	Area 3 Account Code 2
3441	Area 4 Account Code 1
3443	Area 4 Account Code 2
3445	Area 5 Account Code 1
3447	Area 5 Account Code 2
3449	Area 6 Account Code 1
3451	Area 6 Account Code 2
3453	Area 7 Account Code 1
3455	Area 7 Account Code 2
3457	Area 8 Account Code 1
3459	Area 8 Account Code 2
3477	Quick Arm Allowed
3478	PIN Length
4019	DS7412 Interface Control
4020	DS7412 Interface Configuration
4021	Dual Phone Line / Bell Supervision Module Output
4022	Comm. Test Report Timer
4024	Remote Programmer Timer
4026	Test Report & Remote Programmer Call-Out
4027	CR/LF Control
4028	Entry Delay Time 1
4029	Entry Delay Time 2
4030	Exit Delay Time
4032	Fire Bell Cutoff
4033	Burglary Bell Cutoff
4034	AC Fail Report Delay
4038	Pager Delay Timer
4039	RF Receiver Jam Detection Level
5001	Alpha for Zone Number 129
5017	Alpha for Zone Number 130
5033	Alpha for Zone Number 131
5049	Alpha for Zone Number 132
5065	Alpha for Zone Number 133
5081	Alpha for Zone Number 134
5097	Alpha for Zone Number 135
5113	Alpha for Zone Number 136
5129	Alpha for Zone Number 137
5145	Alpha for Zone Number 138
5161	Alpha for Zone Number 139
5177	Alpha for Zone Number 140
5193	Alpha for Zone Number 141
5209	Alpha for Zone Number 142
5225	Alpha for Zone Number 143
5241	Alpha for Zone Number 144
5257	Alpha for Zone Number 145
5273	Alpha for Zone Number 146
5289	Alpha for Zone Number 147
5305	Alpha for Zone Number 148
5321	Alpha for Zone Number 149
5337	Alpha for Zone Number 150
5353	Alpha for Zone Number 151
5369	Alpha for Zone Number 152
5385	Alpha for Zone Number 153
5401	Alpha for Zone Number 154
5417	Alpha for Zone Number 155
5433	Alpha for Zone Number 156
5449	Alpha for Zone Number 157
5465	Alpha for Zone Number 158
5481	Alpha for Zone Number 159
5497	Alpha for Zone Number 160
5513	Alpha for Zone Number 161
5529	Alpha for Zone Number 162
5545	Alpha for Zone Number 163
5561	Alpha for Zone Number 164

5577	Alpha for Zone Number 165
5593	Alpha for Zone Number 166
5609	Alpha for Zone Number 167
5625	Alpha for Zone Number 168
5641	Alpha for Zone Number 169
5657	Alpha for Zone Number 170
5673	Alpha for Zone Number 171
5689	Alpha for Zone Number 172
5705	Alpha for Zone Number 173
5721	Alpha for Zone Number 174
5737	Alpha for Zone Number 175
5753	Alpha for Zone Number 176
5769	Alpha for Zone Number 177
5785	Alpha for Zone Number 178
5801	Alpha for Zone Number 179
5817	Alpha for Zone Number 180
5833	Alpha for Zone Number 181
5849	Alpha for Zone Number 182
5865	Alpha for Zone Number 183
5881	Alpha for Zone Number 184
5897	Alpha for Zone Number 185
5913	Alpha for Zone Number 186
5929	Alpha for Zone Number 187
5945	Alpha for Zone Number 188
5961	Alpha for Zone Number 189
5977	Alpha for Zone Number 190
5993	Alpha for Zone Number 191
6009	Alpha for Zone Number 192
6025	Alpha for Zone Number 193
6041	Alpha for Zone Number 194
6057	Alpha for Zone Number 195
6073	Alpha for Zone Number 196
6089	Alpha for Zone Number 197
6105	Alpha for Zone Number 198
6121	Alpha for Zone Number 199
6137	Alpha for Zone Number 200
6153	Alpha for Zone Number 201
6169	Alpha for Zone Number 202
6185	Alpha for Zone Number 203
6201	Alpha for Zone Number 204
6217	Alpha for Zone Number 205
6233	Alpha for Zone Number 206
6249	Alpha for Zone Number 207
6265	Alpha for Zone Number 208
6281	Alpha for Zone Number 209
6297	Alpha for Zone Number 210
6313	Alpha for Zone Number 211
6329	Alpha for Zone Number 212
5345	Alpha for Zone Number 213
6361	Alpha for Zone Number 214
6377	Alpha for Zone Number 215
6393	Alpha for Zone Number 216
6409	Alpha for Zone Number 217
6425	Alpha for Zone Number 218
6441	Alpha for Zone Number 219
6457	Alpha for Zone Number 220
6473	Alpha for Zone Number 221
6489	Alpha for Zone Number 222
6505	Alpha for Zone Number 223
6521	Alpha for Zone Number 224
6537	Alpha for Zone Number 225
6553	Alpha for Zone Number 226
6569	Alpha for Zone Number 227
6585	Alpha for Zone Number 228
6601	Alpha for Zone Number 229
6617	Alpha for Zone Number 230
6633	Alpha for Zone Number 231
6649	Alpha for Zone Number 232
6665	Alpha for Zone Number 233
6681	Alpha for Zone Number 234
6697	Alpha for Zone Number 235
6713	Alpha for Zone Number 236
6729	Alpha for Zone Number 237
6745	Alpha for Zone Number 238
6761	Alpha for Zone Number 239
6777	Alpha for Zone Number 240
6793	Alpha for Zone Number 241
6809	Alpha for Zone Number 242
6825	Alpha for Zone Number 243
6841	Alpha for Zone Number 244
6857	Alpha for Zone Number 245
6873	Alpha for Zone Number 246
6889	Alpha for Zone Number 247
6905	Alpha for Zone Number 248

Index

R

S

T

U

W

Z

Bosch Security Systems
www.boschsecuritysystems.com

4998154963B

BOSCH