DS7400Xi Control/Communicator

Terminal Wiring & Programming

Control Terminal Wiring

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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.

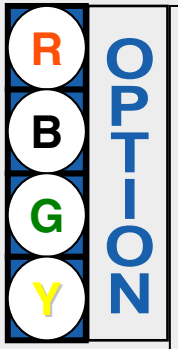
System is Power Limited except for battery terminals. All wiring entering the enclosure must be power limited.

DS7400Xi Panel Wiring & Programming

A/C Power Indication LED

1	⏚	EARTH GROUND: Must be connected to a good earth ground such as a cold water pipe and also connected to the cabinet cover using the supplied wire jumper.
2	⏚	
3	AC	A/C INPUT: Use U.L. listed, 18 VAC 50 VA, class 2 transformer. Model TR-1850 requires 50/60 Hz. unswitched dedicated outlet. Do not share.
4	AC	
5	–	ALARM OUTPUT: Provides 12 VDC, special application, up to 1.75A for powering bells, sirens drivers, etc. Function programmed in address 0146
6	A	
7	–	AUXILIARY POWER: Provides 12 VDC, special application, up to 1.0A for powering detectors.
8	+	

DS7400Xi Panel Wiring & Programming



OPTIONS BUS:

Used for options such as the ARDIS communications module, the DS7420i Dual Phone Line module, etc. Also for keypads #11 - #15.

For Commercial Fire Mode: Option Bus Wiring must be run in conduit if run outside the enclosure.

Options Include:

DS7412 RS-232 Interface Module
DS7488 Octal Relay Module
DS7489 Octal Open Collector Module
DS7420i Commercial Fire Module
DS7416 ARDIS Transmitter
X7410 X10 Interface Module

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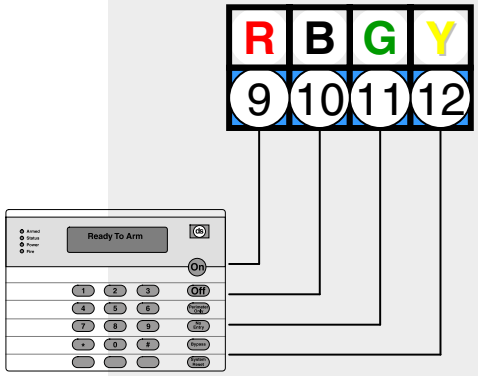
KEYPAD BUS*:
Up to 15 keypads** may be used.
Can be “home-run” or “daisy-chained.”



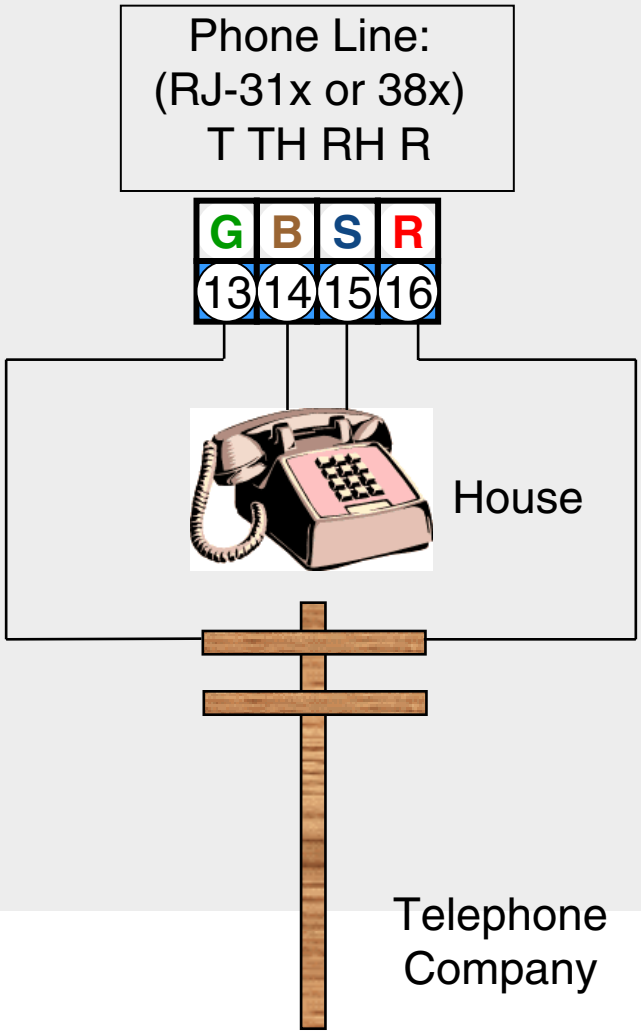
Keypads #1 - 10

* = Maximum wire length each: 1000 ft. (305 m). Max. wire length total in system: 6000 ft. (1830 m) when using #22 AWG (.8mm) or #18 AWG (1.0mm) cable.

** = Keypads #1 - 10 connect to the Keypad Bus.
Keypads #11 - 15 connect to the Options Bus.

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

DS7400Xi Panel Wiring & Programming



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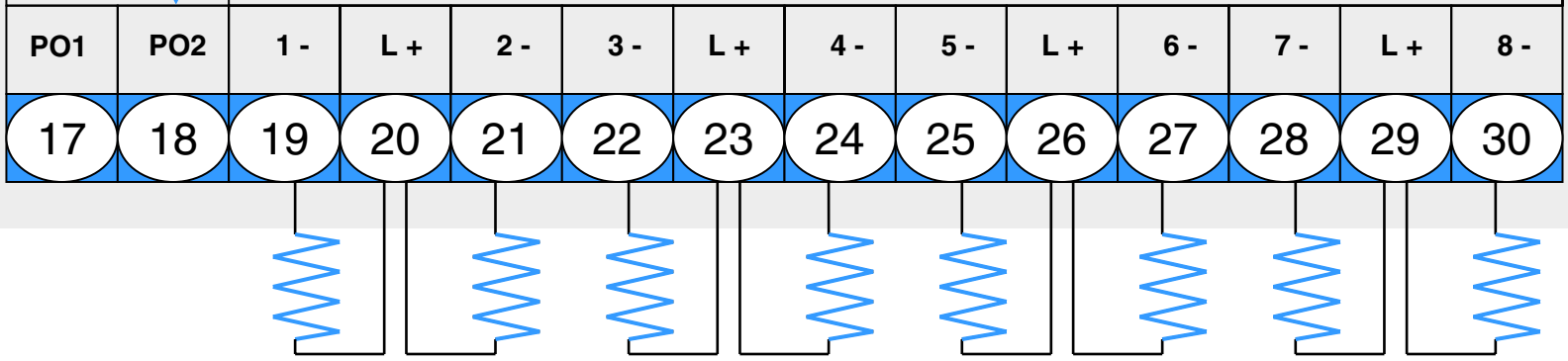
PROGRAMMABLE OUTPUTS:
PO1 shorts to aux. power negative when activated. PO1 can sink up to 1.0A.
PO1 function programmed in address 0147.

PO2 supplies 12 V and up to 500 mA when activated.
PO2 function programmed in address 0148.

ZONES 1-8 : Intended for connection of Normally Open or Normally Closed alarm contacts. May be used for compatible 2-wire smoke detectors. These zones require a 2.21KW resistor (P/N 25899) at the end of the loop.
Power is momentarily removed from L+ after a [PIN]+[System Reset] or during fire verification.
Zone 1-8 assignments are programmed in addresses 0018-0025.



Wiring & Programming for Installations using Ademco AB-12 Housing

Disconnect wire jumper from terminal 4 to inner housing of Bell Box.
(Prevents a ground fault condition)

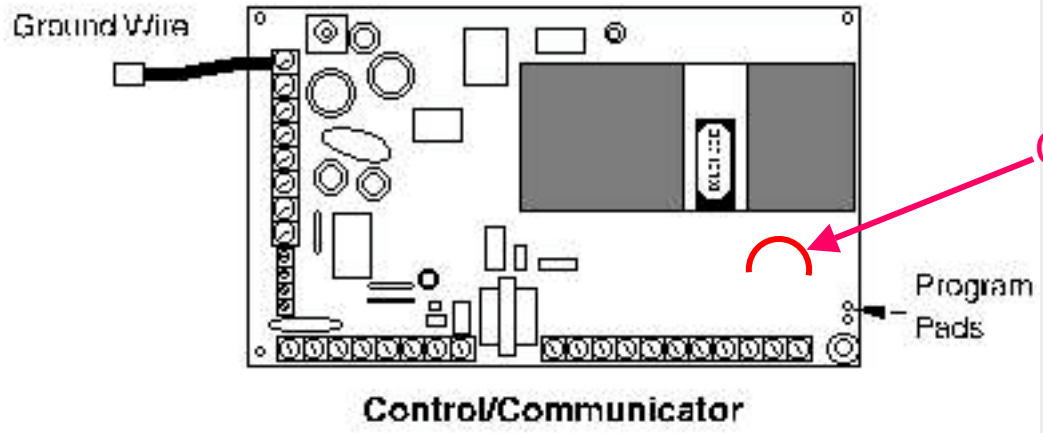
Connect wiring between control and Bell Box as shown next slide.
To use AB-12 Bell/Housing, cut jumper wire “JP1” on control.
EOL used in AB-12 Bell / Housing must be 27K ohms.

Program Zone 8 as 24-hour zone by programming it to follow zn function 7.
(Program address 0025 should be 07)

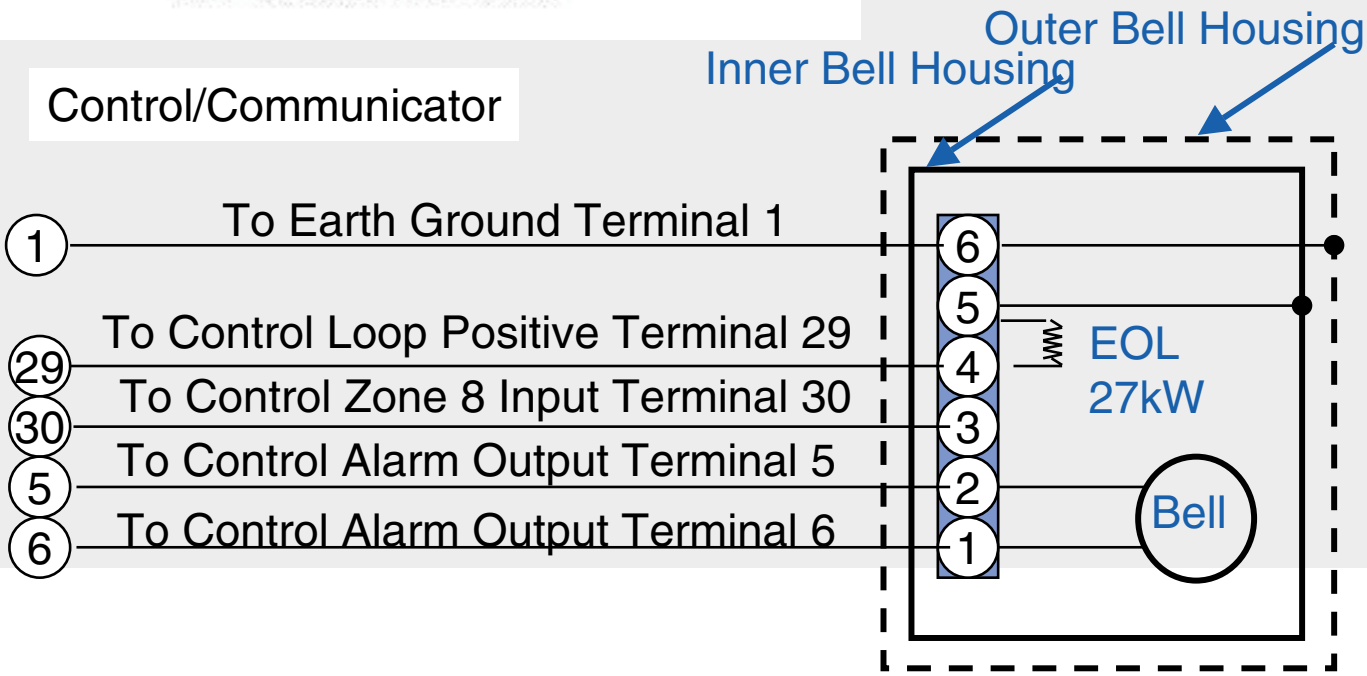
Do not change default programming of zone function 7.
(Program address 0007 should be 22)

DS7400Xi Panel Wiring & Programming

detection systems

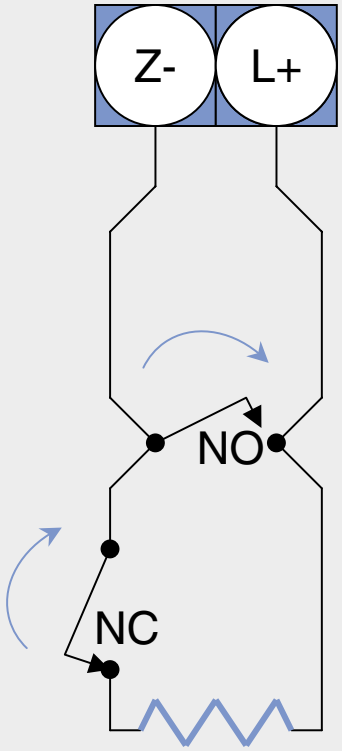


Control/Communicator

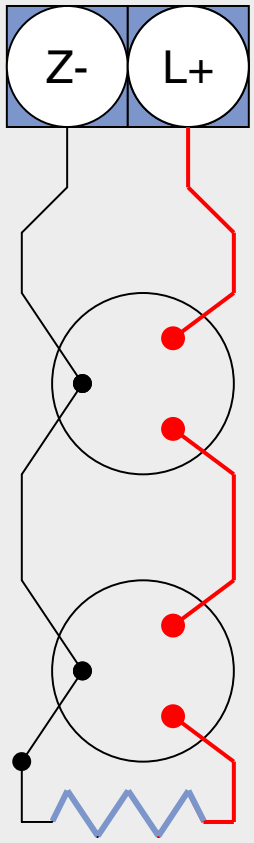


DS7400Xi Panel Wiring & Programming

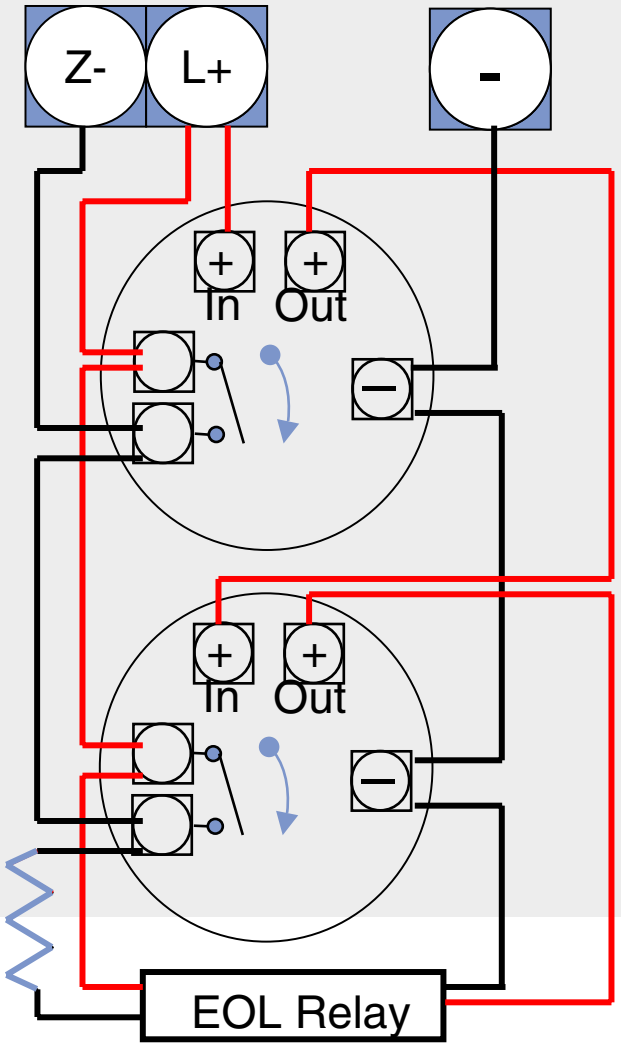
detection systems



Typical burglar alarm loop wiring



Typical 2-wire smoke detector wiring



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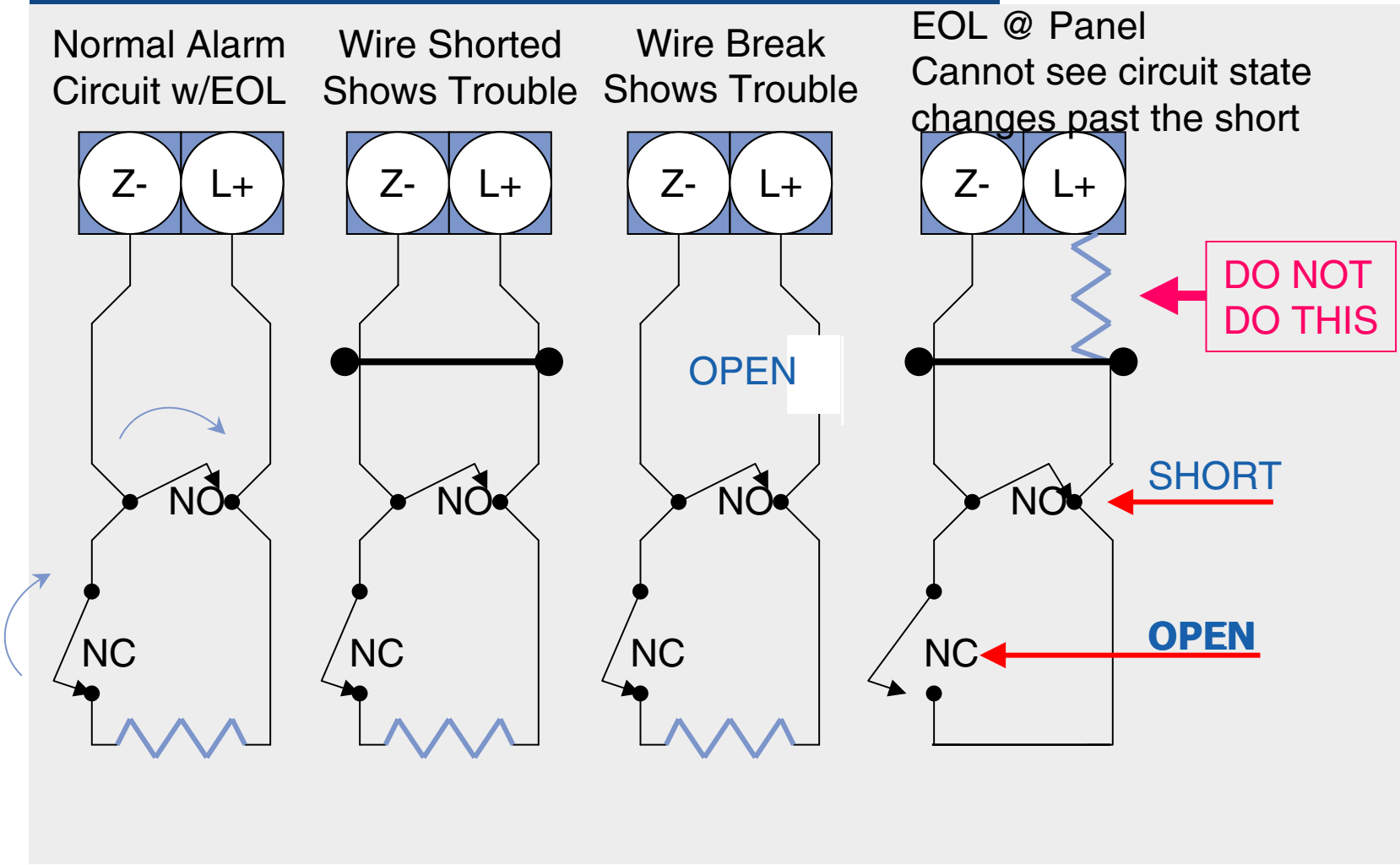
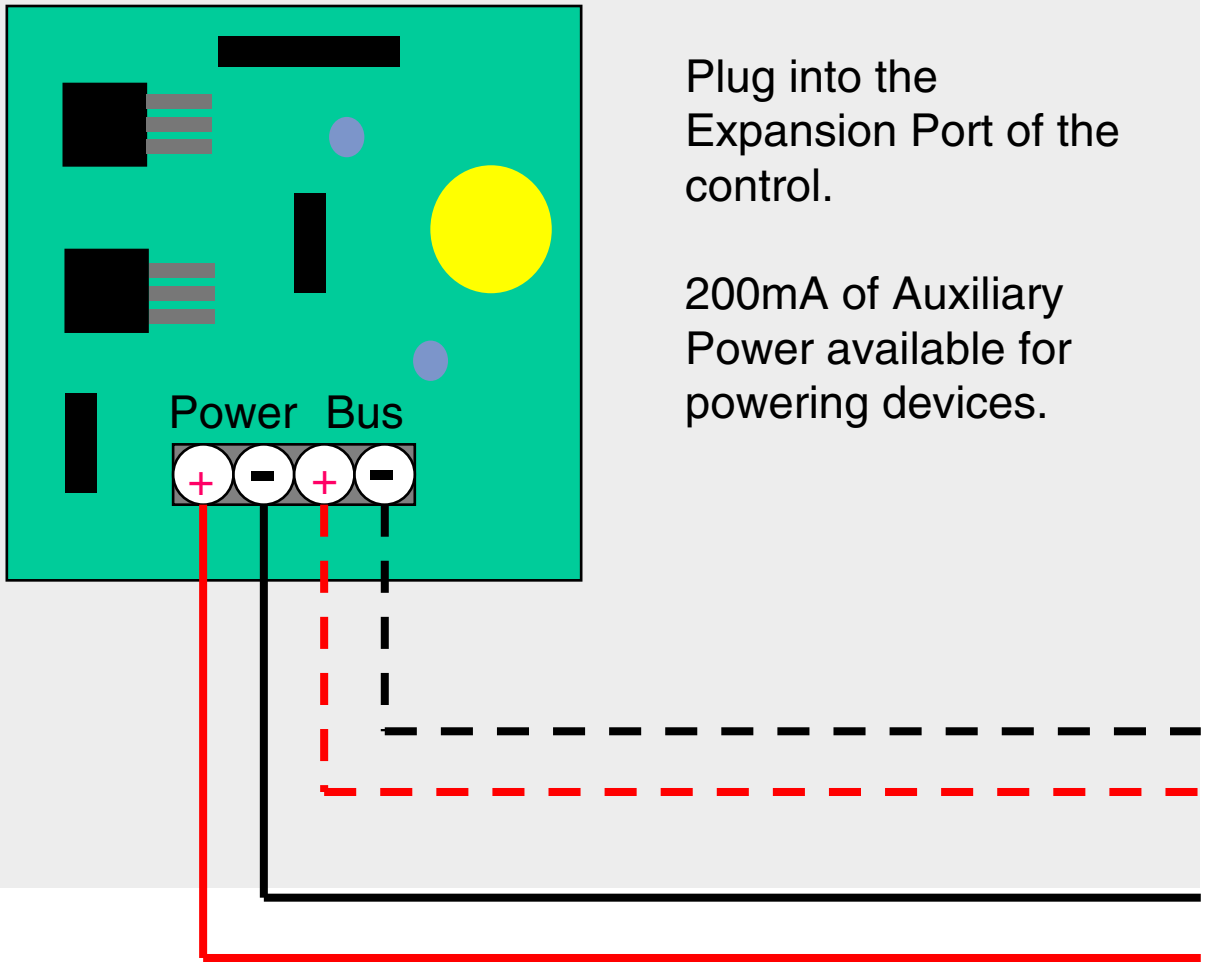


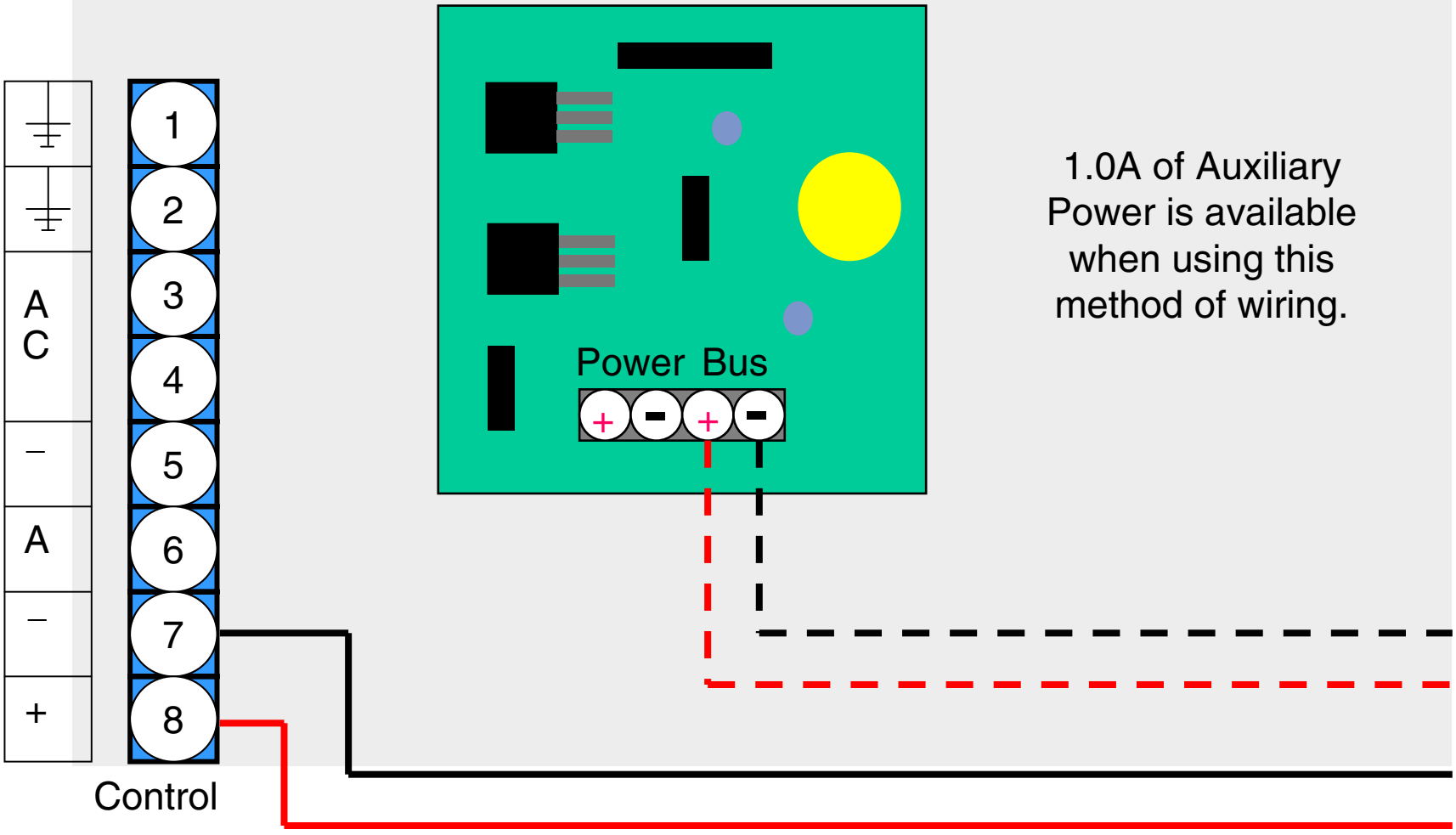
DS7430 Multiplex Expansion



Plug into the Expansion Port of the control.

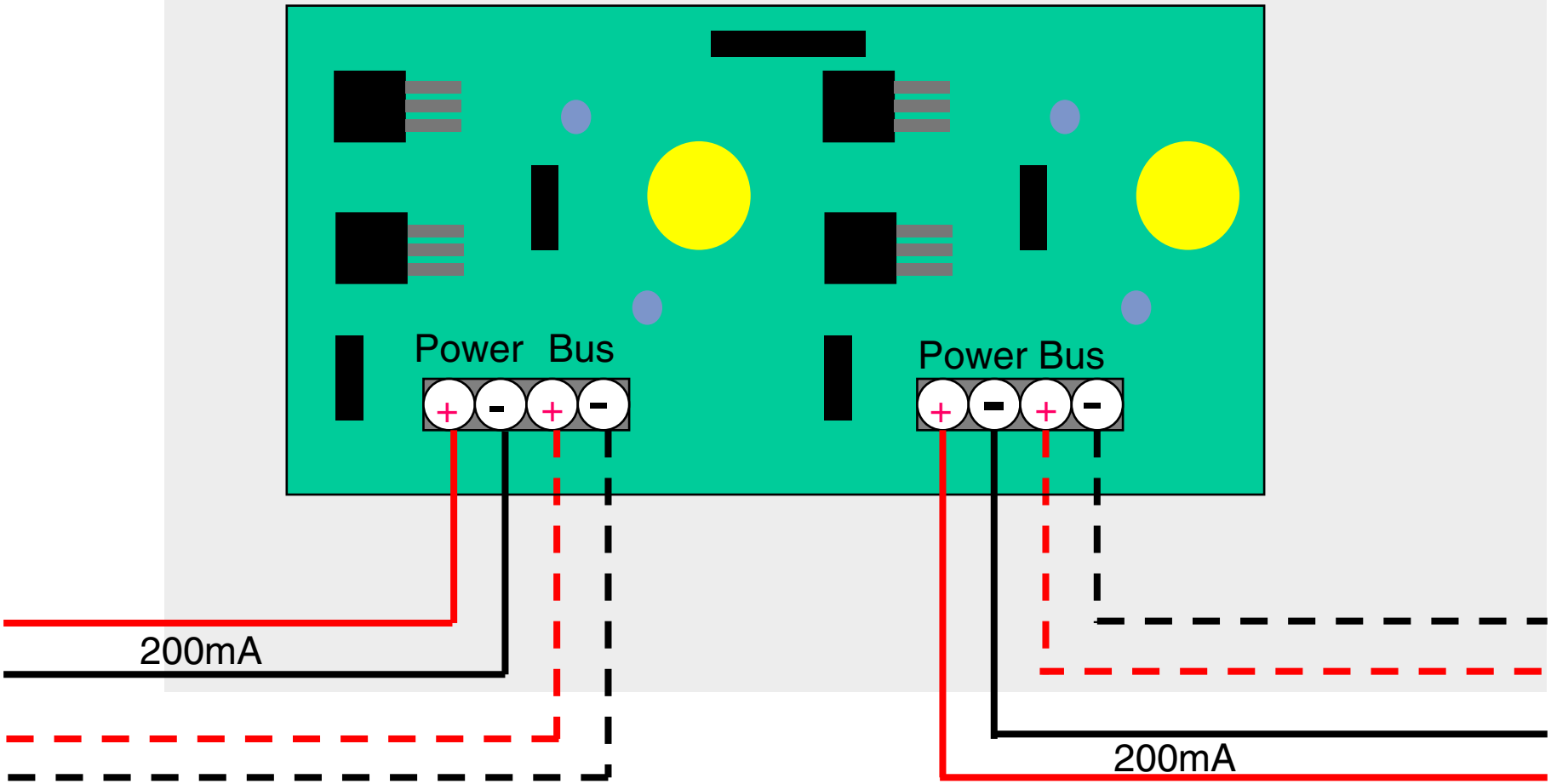
200mA of Auxiliary Power available for powering devices.

DS7430 Multiplex Expansion



1.0A of Auxiliary Power is available when using this method of wiring.

DS7436 Multiplex Expansion



Using the Reference Guide

Sections

- The Cover - Keypad Quick Reference
- Specifications
- Enclosure Installation & Terminal Wiring
- Quick Start Guide
- System Worksheet - Helps with system planning
- System Overview/Glossary - Explains most important terms
- Operating Guide
- Programming
- U.L. Listed Systems Guide
- Communicator Formats Guide
- Troubleshooting Guide - Solutions to most common problems

DS7400Xi Version 3.04

1) Fire Walk Test (V3.04)

Revision 3.04 incorporates a “Fire Walk Test” to allow the manual testing of all fire zones in the panel.

Two reports --

“Fire Walk Test” and “Fire Walk Test Restore”

are available

to notify the Central Station that the Fire Walk Test is in progress.

No fire alarm reports are sent during the Fire Walk Test.

DS7400Xi Version 3.04

2) Multiplex Smoke Detectors (V3.04)

The DS7400Xi has the capacity to use Detection Systems MX280 Series Multiplex Smoke Detectors.

These Low Profile Smoke Detectors mount directly to the Multiplex Bus and have the ability to self monitor the sensitivity of the detector using the ChamberCheck feature.

When a smoke detector is out of its sensitivity range, the keypads display “Dirty Chamber,” and the panel may be programmed to send a “Dirty Chamber” report to the Central Station.

The MX280THL Smoke Detector also has the ability to send a Low Temperature (“Freeze Alarm”) report when the temperature in the building is less than 45 degrees F for 30 minutes or more.

The MX280 Series Smoke Detectors became available during 1998.

DS7400Xi Version 3.04

3) Auto Arm Sounders (V3.04)

You may now select (in addresses 0202-0205) whether or not the sounders are activated during the Auto Arm period.

4) Battery Test (V3.04)

The internal battery is now automatically tested every two minutes.

5) ROM Size Change (V3.03)

Revision 3.03 and higher of the DS7400Xi now uses a 32-pin ROM.

The board revision required for this ROM is 29230F.

Controls manufactured prior to the introduction of the 32 pin socket included a 28 pin socket.

They cannot be upgraded using version 3.03 or above.

6) LED Keypads Zone Display (V3.03)

The LED keypads were only displaying the lowest numbered zone when multiple zones were faulted.

LED keypads now properly display all faulted zones (for which an LED exists).

LED keypads will still only display zones 1 through 8 (for DS7445) or 1 through 6 (for DS7443).

7) Outputs Following Panic/Duress (V3.03)

Outputs configured to follow Panic/Duress events assigned to All Partitions come on for any panic/duress event.

Those outputs also energize, as stated in Reference Guide Section 8.4, for any Silent or Invisible zone violation.

8) Duress PIN Operation (V3.03)

When using the Duress PIN to disarm a partition when in single partition mode on a master keypad, the user is able to toggle through all partitions using # - #.

Any outputs configured to follow Panic/Duress events remain on until a valid PIN + OFF sequence is issued by a user with at least General Authority.

9) ARDIS Acknowledgment Wait Time (V3.02)

In response to an ARDIS requirement, the time the panel waits for an acknowledge signal from ARDIS was increased from 30 to 45 seconds.

10) "Not Ready" Display Changes (V3.02)

The "Not Ready" display indicates the number of the violated zone in all cases except for Invisible zones.

Invisible zones that are violated do not display until a PIN + OFF sequence is entered.

On a master keypad, an area with a violated invisible zone displays "Not Ready," but does not display any zone number.

11) Arming During the Auto-Arm Warning Period (V3.01)

When a panel is disarmed after having been armed during the Auto-Arm Warning period, a subsequent PIN + OFF sequence no longer initiates another 30 minute Auto-arm timer.

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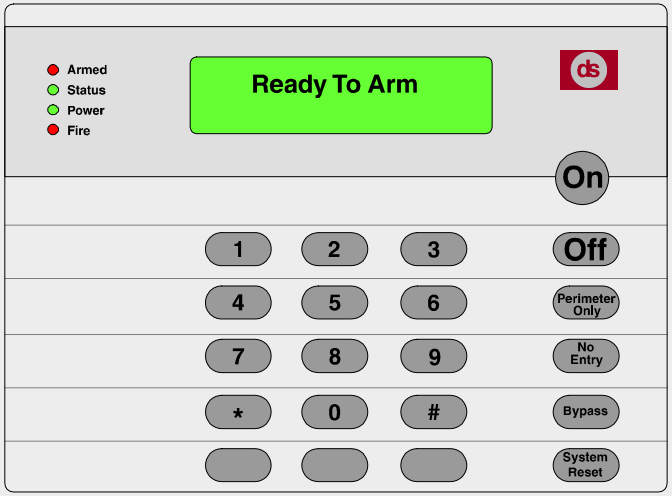
Programming the DS7400Xi Control Communicator Version 3.0



Addressing a Multiplex Sensor

Must be done prior to installation of the device

Program Zone.
Address 0026-0145 must be programmed before addressing sensor.

Disconnect the multiplex bus. Only one device (the one being addressed) should be connected to the bus at this time

If using BUSLOC, program BUSLOC code

BusLoc code (address 9999) is a special anti-takeover code that is programmed into the sensors

BusLoc code in panel must match BusLoc code in sensors; control can't be replaced using these sensors unless you know BusLoc code.

Enter multiplex programming mode. Enter Address 9995.

Connect sensors one at a time, and follow instructions on LCD.

Addressing a Multiplex Sensor

D5060 Multiplex Point Programmer

Handheld programming tool.

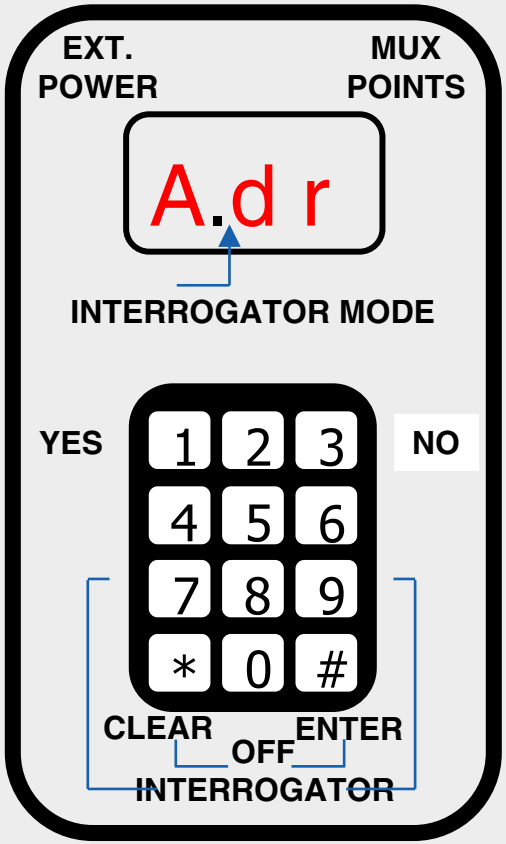
Programs DS point modules, contacts, multiplex motion detectors.

Take the D5060 to the point.

Powered by two 9VDC batteries. [Approximately 12 hours of use.]

Can also be powered by 16.5VAC transformer.

D5060 Multiplex Point Programmer



Point Type Entry Codes

Value	Point Type
0	Remove Point
1	Contact
2	Sensor or Single Point
3	Input / Output Module
4	Mux Smoke without Low Temp
5	Mux Smoke with Low Temp
6	Dual Point

Multiplex Point Programmer Displays and Meanings

Display	Meaning
Adr	Enter Address
A.dr	Enter Address for Interrogation Mode
bAd	Battery Voltage is below 15 volts
Err	Point was not programmed correctly
Lob	Battery Voltage is below 16 volts
noP	No Response from Point
rSP	Point Responds to Address
tYP	Enter Point Type
t.YP	Enter Point Type for Interrogation Mode

WDSRP Remote Programmer

Windows Detection Systems Remote Programmer

Unattended Capability

One program for all DS controls

Windows 3.1 or Windows 95

Multiple Sessions

Up to 4 phone lines at once

See separate Powerpoint Presentation:

"Windows Detection Systems Remote Programming"

How to connect to WDSRP

Manual call - Someone on site

Call the panel location from a phone connected to the computer

Once connection to location completed, press MANUAL at WDSRP.

Wait for carrier tone then press #86 at the keypad

Data Call

Panel programmed to answer - it will

Panel not programmed to answer, press #86

Automatic Call - Panel calls WDSRP

Programmed to Call on a time basis - or -

Forced to Call by keypad command - #83

Must have the following programmed:

Account ID #1 Phone #1 Phone #3

Programming From the Keypad

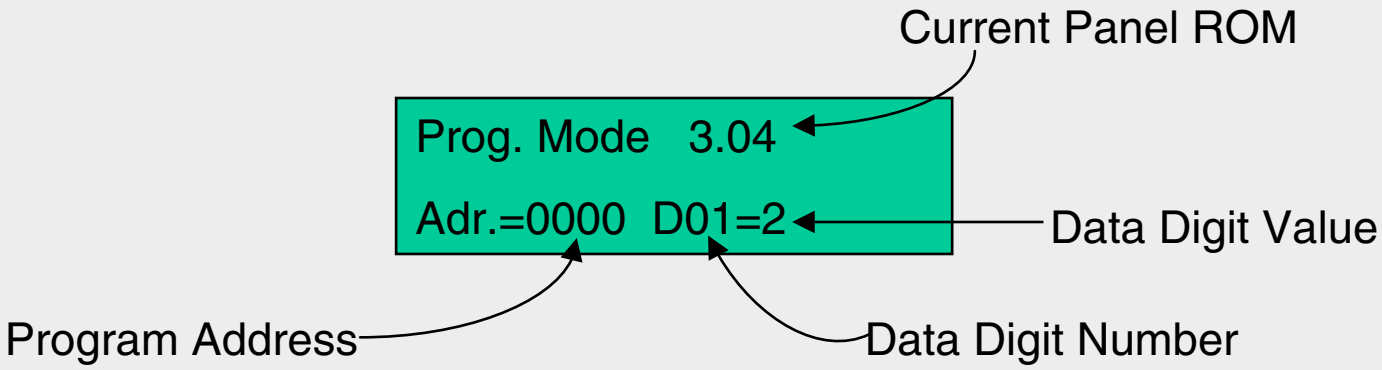
Enter the program mode

Default password is 9876 # 0 -or-

Short Program Pads

4 digit Program Address (always)

2 digit value (usually)



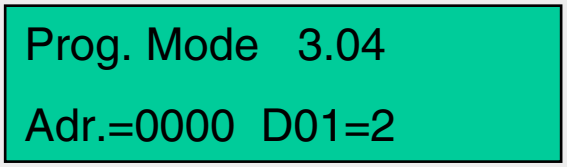
Programming From the Keypad

To enter data:

Enter the address

Enter the Value

Press the # to accept



To read data:

Enter the address

Press the #

Continue with # through addresses

Tip: Programming mode will automatically scroll to next address.

You only need to enter one address in a sequence.

Programming From the Keypad

If you wish to program a different address, press the * key two times and enter the program address you wish to program.

If you make a mistake at any time, press the * key two times before pressing the # key.

This will clear the display, allowing you to enter the program address with which you wish to work.

Programming From the Keypad

Entering Hexadecimal Characters

Used when entering values greater than “9”

Press * then 0 - 5 (* = a value of 10)

Hex characters values are:

*0 = A	*1 = B	*2 = C	*3 = D	*4 = E	*5 = F
10	11	12	13	14	15

Programming From the Keypad

	0	1	2	3	4	5	6
Feature 1	●			●	●		●
Feature 2		●		●		●	●
Feature 3		●		●	●		●

Defaults

The DS7400Xi is shipped from the factory as a working, pre-programmed control.

Many of the programming addresses may already be set to the values you need.

The default values are shown in **Reverse Print**

In the example above, a **0** is the default value.

If the default value is not shown in **Reverse Print**, it will be shown in a separate table.

Programming From the Keypad

	0	1	2	3	4	5	6
Feature 1	●			●	●		●
Feature 2		●		●		●	●
Feature 3		●		●	●		●

Setting the Control to the Factory Default

Entering [0] [1] [#] in Program Address 4058 will immediately reset the control to the factory default.

Any programming already done by the installer will be 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's programming values back to the default, enter the programming mode, then enter [4] [0] [5] [8] [0] [1] [#].

Programming From the Keypad

Understanding the Programming Charts

The Programming Reference Guide makes use of three types of charts.

If the chart looks like this, a combination of features is available to be programmed for that particular address.

Which is the default ???

Select Options	Enter the Data Digit as a: 0	1	2	3	4	5	6	7
Feature 1	●		●		●		●	
Feature 2		●		●		●		●
Feature 3			●	●			●	●
Feature 4					●	●	●	●

Enter one of these numbers for appropriate data digit

Dots represent which options / features included with each selection, eg., Features 2 & 4 would require an entry of “5”.

Identifies options/features available for this address

Programming From the Keypad

If the chart looks like this, only a single feature is available to be programmed for that particular address.

Select Option	DD
Disabled	0
Perimeter Instant	1
24-Hour	2
Entry/Exit Delay #1	3
Entry/Exit Delay #2	4

Identifies options/features available for this address

To select “Entry/Exit Delay #2, enter the data digit as “4”

Enter one of these numbers for appropriate data digit

General Control Programming: Prog Address 0000

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

Data Digit 1 2

For installations in North America, select 60 Hz option.

*0 - *5 are Hex values. They will display as A-F at keypads.

Next Slide

General Control Programming: Address 0000

Select Options	Enter DD as a: 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				●	●	●

To Previous Slide, Digit 2

Programming A Zone

Programming a zone is a 3 step process.

Step 1 is programming zone functions (what a zone will do in alarm).

Step 2 is assigning a zone function to the zone.

Step 3 is to assign the zone to a partition.

Programming Address 0001-0015

*2 - *5 are Hex values. They will display as C-F at keypads.

Data Digit 1 2

Select Options	Enter the Data Digit as a: 0	1	2	3	4	5	6	7	*2	*3	*4	*5
Invisible Alarm	●				●				●			
Silent Alarm		●				●				●		
Steady Alarm Output			●				●				●	
Pulsing Alarm Output				●				●				●
Alarm on Short	●	●	●	●	●	●	●	●				
Alarm on Open	●	●	●	●					●	●	●	●
Trouble on Open **					●	●	●	●				
Trouble on Short									●	●	●	●

** Only when disarmed.
When armed, this becomes Alarm on Open or Short for 24-hr Zones.
Note: Multiplex contacts (DS7450 & DS7452) should not be programmed for Trouble on Open.

Next Slide

Addresses 0001-0015: Zone Functions

Note:
If Digit 2 = 9, use this chart to select Digit 1

Data Digit
1 2

Select Option	DD
Single Partition-No ForceArm	0
Single Partition-Can ForceArm	1
All Partitions-No ForceArm	2
All Partitions-Can ForceArm	3

Otherwise, Digit 2 transfers to chart on Previous Slide.

Select Option	DD
Disabled	0
Perimeter Instant	1
24-Hour	2
Entry/Exit Delay #1	3
Entry/Exit Delay #2	4
Interior Entry/Exit Follower	5
Interior Home/Away	6
Interior Instant	7
Day Monitor	8
Keyswitch (See note)	9
Fire Zone with Verification	*0
Fire Zone without Verif.	*1
Waterflow	*2
Supervisory	*3
Entry/Exit Delay Cancel 1	*4
Entry/Exit Delay Cancel 2	*5

Programming A Zone

Value (Fill in)	Zone Function	Address	Default Values (Will be forced to different values when in Commercial Fire Mode. See Sec 11.15.3)
	1	0001	2 = Steady Alarm Output, alarm on short & open 3 = Entry/Exit Delay 1
	2	0002	2 = Steady Alarm Output, alarm on short & open 4 = Entry/Exit Delay 2
	3	0003	2 = Steady Alarm Output, alarm on short & open 1 = Perimeter Instant
	4	0004	2 = Steady Alarm Output, alarm on short & open 5 = Interior Entry/Exit Follower
	5	0005	2 = Steady Alarm Output, alarm on short & open 6 = Interior Home/Away
	6	0006	2 = Steady Alarm Output, alarm on short & open 7 = Interior Instant
	7	0007	2 = Steady Alarm Output, alarm on short & open 2 = 24-Hour
	8	0008	2 = Pulsing Alarm Output, alarm on short; trouble on open. *0 = Fire Zone with Verification

Programming A Zone

Value (Fill in)	Zone Function	Address	Default Values (Will be forced to different values when in Commercial Fire Mode. See Sec 11.15.3)
	9	0009	0 = _____ 0 = Disabled
	10	0010	0 = _____ 0 = Disabled
	11	0011	0 = _____ 0 = Disabled
	12	0012	0 = _____ 0 = Disabled
	13	0013	0 = _____ 0 = Disabled
	14	0014	0 = _____ 0 = Disabled
	15	0015	0 = _____ 0 = Disabled

Program Address 0001-0015 Zone Functions

Exercise:

Program a custom zone function as follows:

- Zone Function 9
- Steady Alarm
- Alarm on Short
- Alarm on Open
- Entry/Exit Delay Cancel 1

Program Address: 0 0 0 9

DD1 DD2: 2 *4

Programming Zones

First choose the	Type of Hardware	(Data Digit 1)	Step One
Then assign a	Zone Function	(Data Digit 2)	Step Two

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Programming Zones:

Data Digit 1

Select Option	DD
Single Zone Input [Zns 1-8, mux contacts, sensors, or DS7457)	0
Multiple Zone Input [Any Zone on a DS7432, DS7433, or DS7460)	1
DS7465 Connections Input Zn or Output Relay	2

For input [odd-numbered] zns, use Zone Function value.

For output [even-numbered] relays, use Output Function value

Data Digit 2 [ ]

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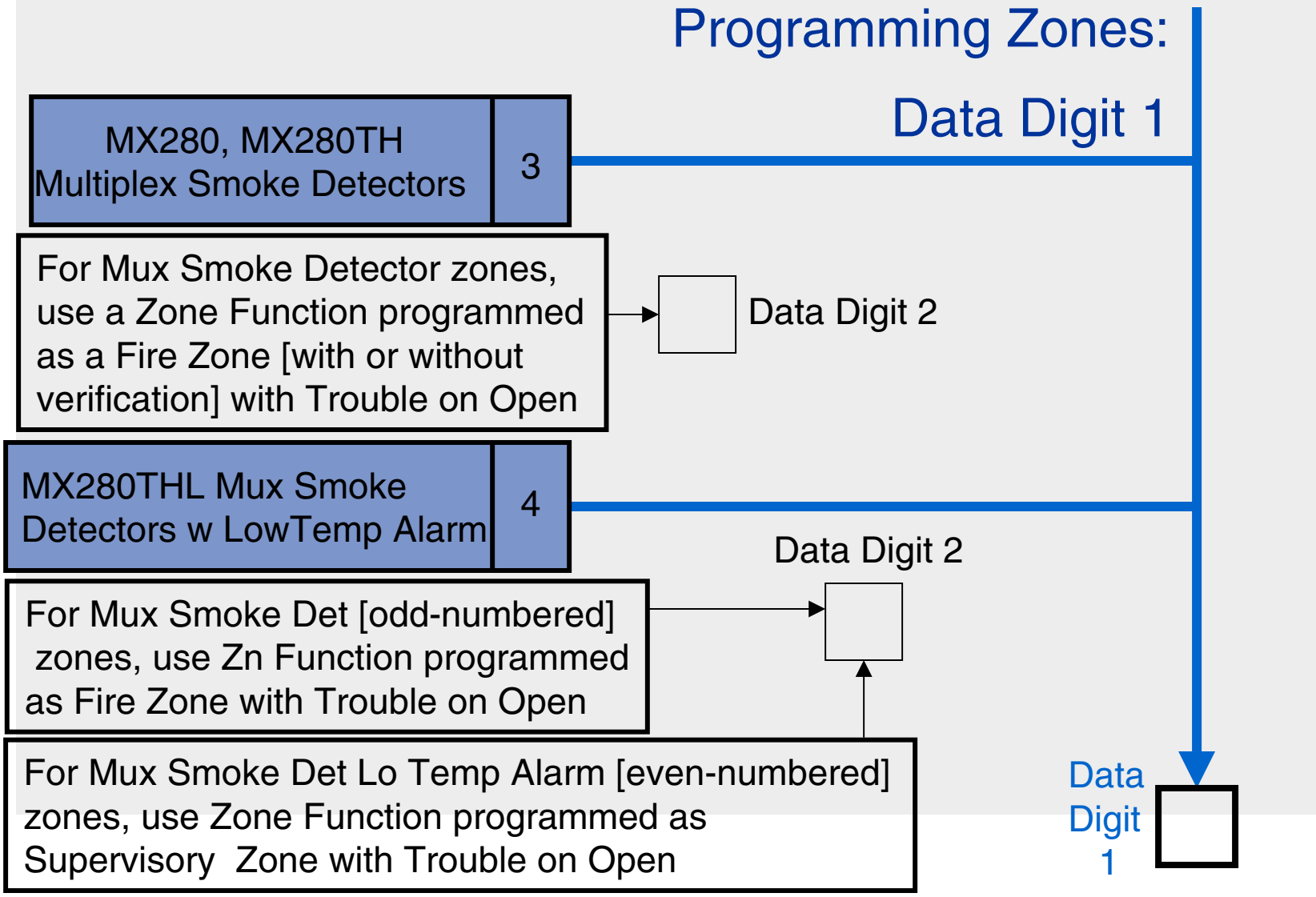
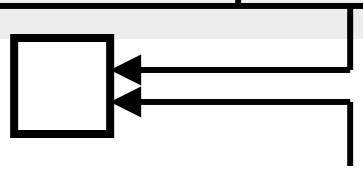


DS7400Xi Panel Wiring & Programming

detection systems

Zone Funct. #	Address	ZoneFunction Descriptions [Default values shown will differ if changed in Zone Function Programming.]	Zone Function Value
1	0001	Steady Alarm Output, alarm on short & open Entry/Exit Delay 1	1
2	0002	Steady Alarm Output, alarm on short & open Entry/Exit Delay 2	2
3	0003	Steady Alarm Output, alarm on short & open Perimeter Instant	3
4	0004	Steady Alarm Output, alarm on short & open Interior entry/exit follower	4
5	0005	Steady Alarm Output, alarm on short & open Interior home/away	5
6	0006	Steady Alarm Output, alarm on short & open Interior Instant	6
7	0007	Steady Alarm Output, alarm on short & open 24-Hour	7
8	0008	Pulsing Alarm Output, alarm on short, trbl on open Fire zone with verification	8



DS7400Xi Panel Wiring & Programming

Zone Funct. #	Address	ZoneFunction Descriptions [Default values shown will differ if changed in Zone Function Programming.]	Zone Function Value
9	0009	Description	9
10	0010	Description	*0
11	0011	Description	*1
12	0012	Description	*2
13	0013	Description	*3
14	0014	Description	*4
15	0015	Description	*5

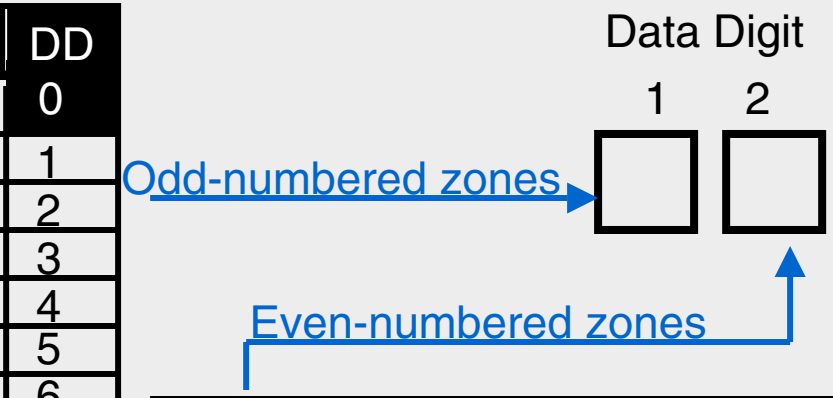
Programmed Zone Defaults

Zone Number	Address	Default
1	0018	01
2	0019	02
3	0020	03
4	0021	04
5	0022	05
6	0023	06
7	0024	07
8	0025	08
9 - 128	0026-0145	00

Step 3:Programming Zone Partition Assignments Addresses 1248-1311

Select Option	DD
Belongs to Partition 1	0
Belongs to Partition 2	1
Belongs to Partition 3	2
Belongs to Partition 4	3
Belongs to Partition 5	4
Belongs to Partition 6	5
Belongs to Partition 7	6
Belongs to Partition 8	7

Partition Assignment	Address
For Zones 1 and 2	1248
For Zones 3 and 4	1249
For Zones 5 and 6	1250
For Zones 7 and 8	1251
For Zones 9 thru 128	1252-1311



Select Option	DD
Belongs to Partition 1	0
Belongs to Partition 2	1
Belongs to Partition 3	2
Belongs to Partition 4	3
Belongs to Partition 5	4
Belongs to Partition 6	5
Belongs to Partition 7	6
Belongs to Partition 8	7

Zone Function Bypass Programming

Program Address 0016

Data Digit 1 2

Select Options	Enter the Data Digit as a: 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	●	●	●	●	●	●	●	●								

*0 - *5 are Hex values. They will display as A-F at keypads.

Select Options	Enter the Data Digit as a: 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 Function Bypass Programming

Program Address 0017

Data Digit 1 2

Select Options	Enter the Data Digit as a: 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	●	●	●	●	●	●	●	●								

*0 - *5 are Hex values. They will display as A-F at keypads.

Select Options	Enter the Data Digit as a: 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	●	●	●	●					●	●	●	●				

Output Programming: Addresses 0146-0148

Data Digit 1 2

Select Option	DD
Latch on ANY Zone Alarm [incl Invisible]	0
ON During Entry Pre-Alert	1
ON for 10 sec. After pressing [System Reset]	2
ON When System is Armed	3
Ground Start	4
System Status (Ready to Arm)	5
Zone Alarm	6
Zone Alarm delayed by 20 seconds	7
Keypad Sounder Output	8
Access Output (10-second pulse)	9
Panic Duress Output ***	*1

Options	DD
Disabled	0
Burglar Alarm	1
Fire Alarm	2
Burg and Fire Alarm	3

PO1 will be ON for 10-sec after Sys Reset pressed.
PO2 will be OFF for 10-sec after Sys Reset pressed.

*** Section 6.4 of Reference Guide describes this function

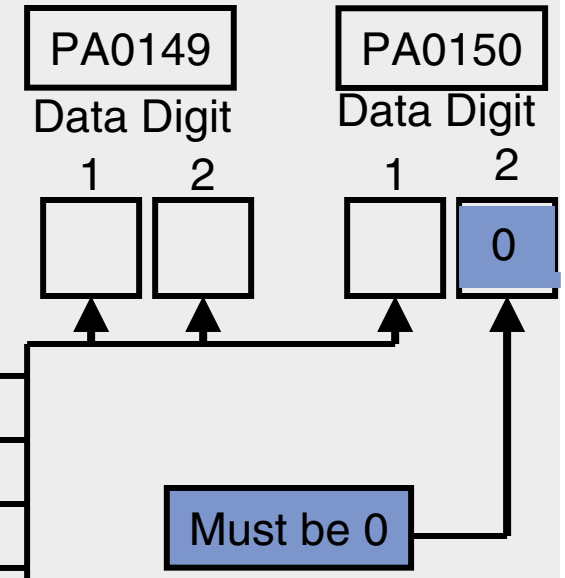
Output Programming: Addresses 0146-0148

Output	Address	Default
Alarm	0146	63
Programmable Output 1	0147	33
Programmable Output 2	0148	23

Output Partition Assignment

Output	Address	Default
Alarm	0149-DD1	8
Programmable Output 1	0149-DD2	8
Programmable Output 2	0150-DD1	8

Select Option	DD
Belongs to Partition 1	0
Belongs to Partition 2	1
Belongs to Partition 3	2
Belongs to Partition 4	3
Belongs to Partition 5	4
Belongs to Partition 6	5
Belongs to Partition 7	6
Belongs to Partition 8	7
Follows all Partitions	8



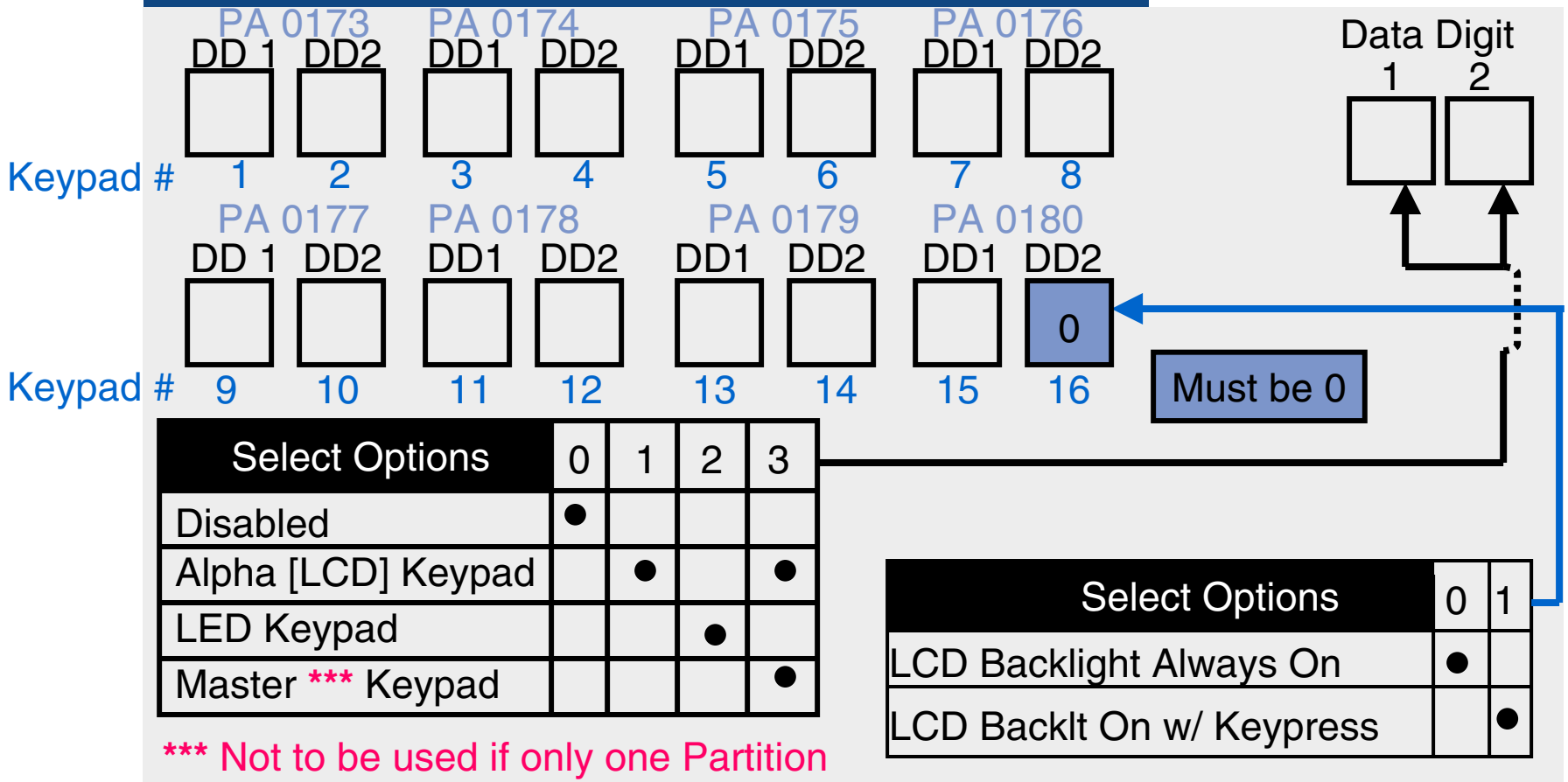
Partition Control Programming

PA 0165
Data Digit
1 2

Select Option	DD
Use 1 Partition	0
Use 2 Partitions	1
Use 3 Partitions	2
Use 4 Partitions	3
Use 5 Partitions	4
Use 6 Partitions	5
Use 7 Partitions	6
Use 8 Partitions	7

Select Option	DD
No Common Area	0
Partition 1 Common to Part. 2 & 3	1
Partition 1 Common to Part. 2 - 4	2
Partition 1 Common to Part. 2 - 5	3
Partition 1 Common to Part. 2 - 6	4
Partition 1 Common to Part. 2 - 7	5
Partition 1 Common to Part. 2 - 8	6

DS7400Xi Panel Wiring & Programming



Select Options	0	1	2	3
Disabled	●			
Alpha [LCD] Keypad		●		●
LED Keypad			●	
Master *** Keypad				●

*** Not to be used if only one Partition

Select Options	0	1
LCD Backlight Always On	●	
LCD Backlt On w/ Keypress		●

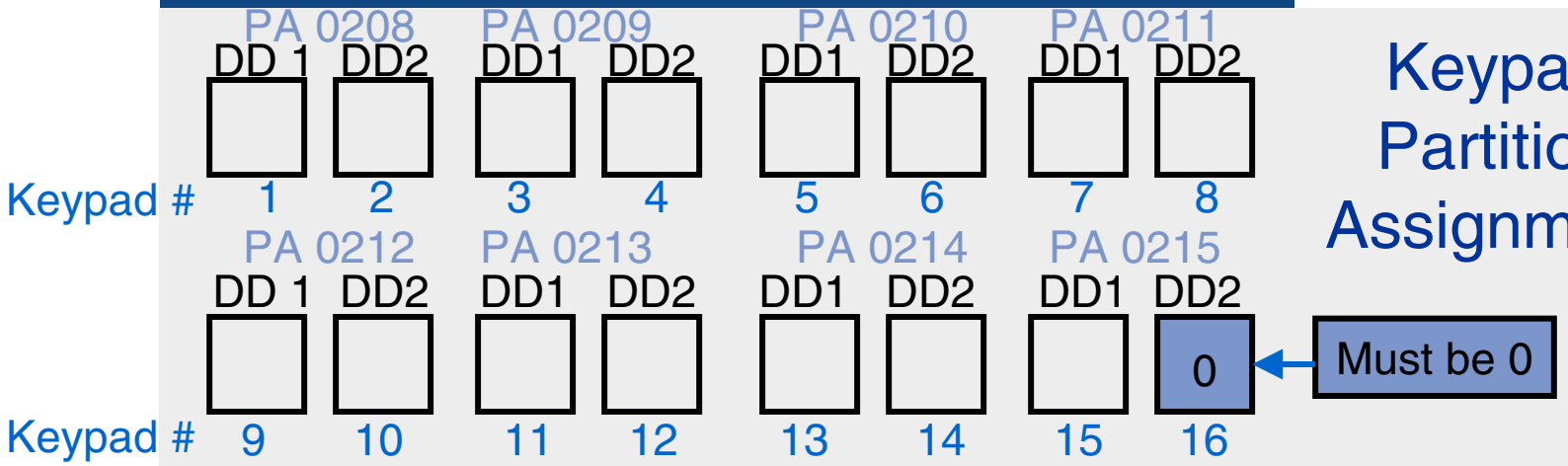
Keypad Assignment Programming

A member of the Bosch Group

DS7400Xi Panel Wiring & Programming

detection systems

Keypad Partition Assignment



Select Options	DD
Belongs to Partition 1	0
Belongs to Partition 2	1
Belongs to Partition 3	2
Belongs to Partition 4	3
Belongs to Partition 5	4
Belongs to Partition 6	5
Belongs to Partition 7	6
Belongs to Partition 8	7

A-B-C Key Programming

PA 0181

Data Digit 1 2

A

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

B

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

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

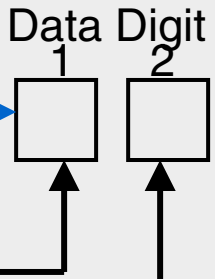
C

[ ] [0] ← Must be 0

PA 0182 Data Digit 1 2

Custom Arming Programming:
PIN + # 4 Arming

Program Address 0183



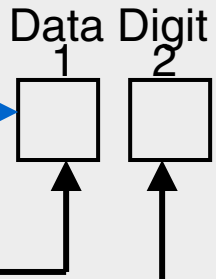
Select Options	Enter the Data Digit as a: 0	1	2	3	4	5	6	7	8	9	*0	*1	*2	*3	*4	*5
Bypass Zone Function 1		●		●		●		●		●		●		●		●
Bypass Zone Function 2			●	●			●	●			●	●			●	●
Bypass Zone Function 3					●	●	●	●					●	●	●	●
Bypass Zone Function 4									●	●	●	●	●	●	●	●

*0 - *5 are Hex values. They will display as A-F at keypads.

Select Options	Enter the Data Digit as a: 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:
PIN + # 4 Arming

Program Address 0184



Select Options	Enter the Data Digit as a: 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									●	●	●	●	●	●	●	●

*0 - *5 are Hex values. They will display as A-F at keypads.

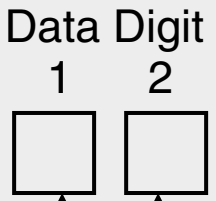
Select Options	Enter the Data Digit as: 0	1	2	3	4	5	6	7
Bypass Zone Function 13		●		●		●		●
Bypass Zone Function 14			●	●			●	●
Bypass Zone Function 15					●	●	●	●

Force Arming & Ground Fault Programming

PA0185

Select Option	DD
Do not allow Force Arming	0
Allow up to 1 zone to be Force Armed	1
Allow up to 2 zones to be Force Armed	2
Allow up to 3 zones to be Force Armed	3
Allow up to 4 zones to be Force Armed	4
Allow up to 5 zones to be Force Armed	5
Allow up to 6 zones to be Force Armed	6
Allow up to 7 zones to be Force Armed	7
Allow up to 8 zones to be Force Armed	8
Allow up to 9 zones to be Force Armed	9

Select Option	DD
Ground Fault Detect Off	0
Ground Fault Detect On	1



Commercial Fire Mode Programming

PA 0186

Data Digit 1 2

Select Options	Enter the Data Digit as a: 0	1	2	3	4	5	6	7	8	9	*0	*1	*2
Commercial Fire Mode disabled	●												
Local Comm. Fire Mode enabled		●	●	●	●	●	●						
CentrStaComm.FireMode enabled								●	●	●	●	●	●
10-sec delay on waterflow zone			●						●				
20-sec delay on waterflow zone				●						●			
30-sec delay on waterflow zone					●						●		
40-sec delay on waterflow zone						●						●	
50-sec delay on waterflow zone							●						●

*0 - *2 are Hex values. They will display as A-C at keypads.

Zones 1 - 4 may only have waterflow delays.

Next Slide

Commercial Fire Mode Programming PA 0186

DD2

Data Digit 1 on Previous Slide

Select Options	Enter Data Digit as: 0	1	2	3	4	5
Bell and Aux activate on Fire	●	●	●	●	●	●
Bell and Aux activate on Burg				●	●	●
Pulsing Fire Alarms = 1 sec on, 1 sec off	●			●		
Pulsing FA use California Standard		●			●	
Pulsing FA use Temporal Code 3			●			●

Open/Close Report Control Programming

PA 0187
Data Digit
1 2

Select Options	Enter the Data Digit as a: 0	1	2	3	4	5	6	7	8	9
Do not report opens or closes	●									
Report opens and closes in Partition 1		●	●	●	●	●	●	●	●	
Report opens and closes in Partition 2			●	●	●	●	●	●	●	
Report opens and closes in Partition 3				●	●	●	●	●	●	
Report opens and closes in Partition 4					●	●	●	●	●	
Report opens and closes in Partition 5						●	●	●	●	
Report opens and closes in Partition 6							●	●	●	
Report opens and closes in Partition 7								●	●	
Report opens and closes in Partition 8									●	
Report first to open and last to close **										●

** If this option used, all partitions must share same account number.

Do not send Trouble at close for Bypassed Zones	0
Send Trouble at close for Bypassed Zones	1

Open/Close & Zone Report Programming

PA 0189

Data Digit

1 2

Select Option	DD
Alternate between both Phone Nbrs	0
Report to Phone Number 1	1
Report to Phone Number 2	2
Report to Phone Numbers 1 and 2	3

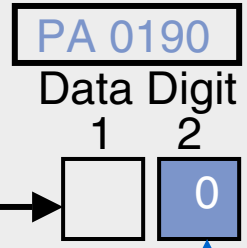
Data Digit 1 is for Open and Close Reports

Select Option	DD
Alternate between both Phone Nbrs	0
Report to Phone Number 1	1
Report to Phone Number 2	2
Report to Phone Numbers 1 and 2	3

Data Digit 2 is for Zone Alarm, Zone Restoral, & Zone Trouble Reports

Report Control Programming

Select Option	DD
Alternate between both Phone Nbrs	0
Report to Phone Number 1	1
Report to Phone Number 2	2
Report to Phone Numbers 1 and 2	3



Data Digit 1 does not include Open & Close or Zone Reports

Data Digit 2 must be 0.

PA 0191-0196

Timer Programming

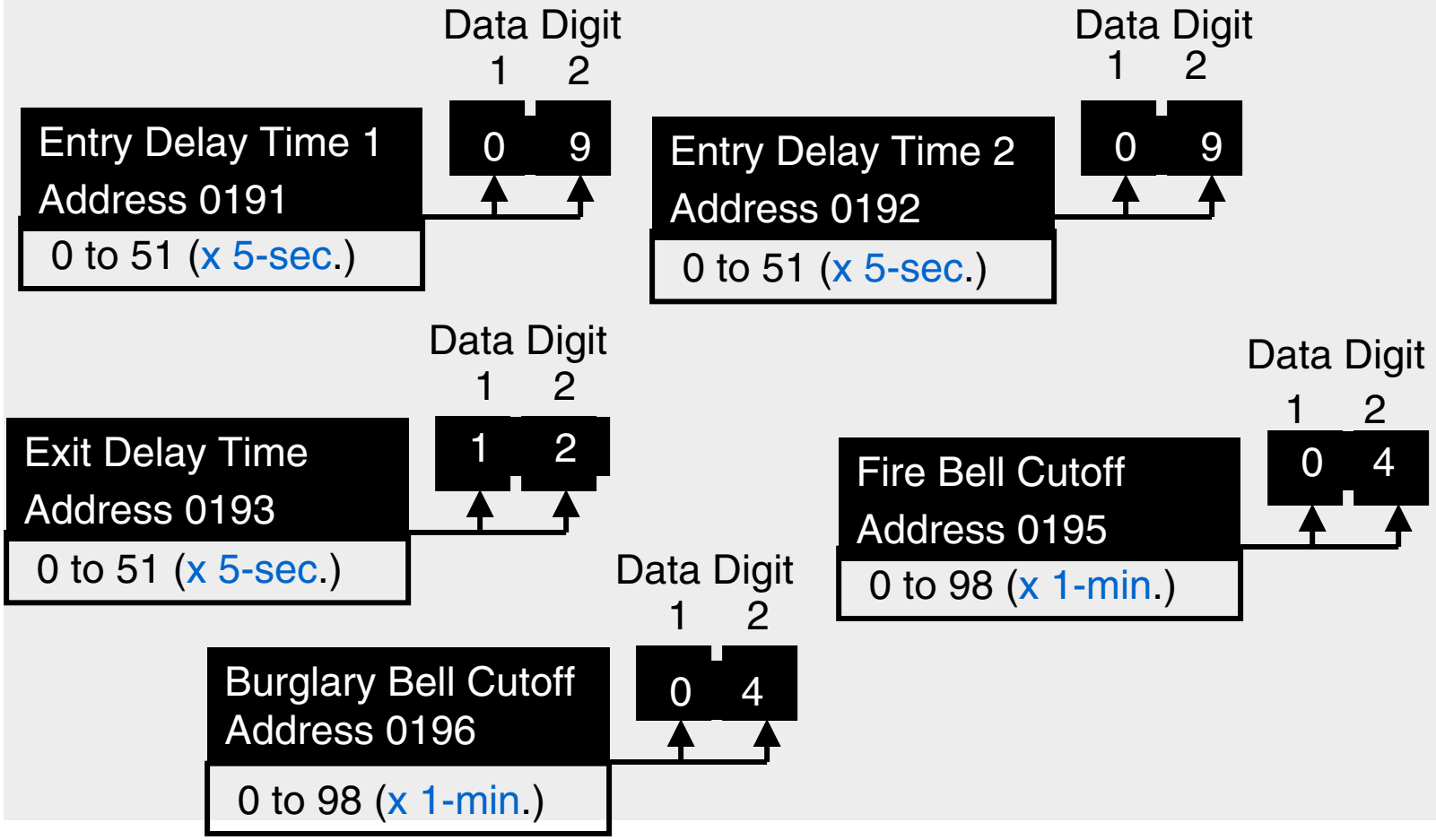
Bell Cutoff Times are programmed in One-Minute intervals, except that an entry of "99" produces a 30-second bell cutoff.

Entry and Exit Delay Times are programmed in 5-second intervals, as follows:

01 =	5 sec.
03 =	15 sec.
04 =	20 sec.
06 =	30 sec.
12 =	60 sec.
51 =	255 sec. [Maximum Programmable]

Timer Programming

PA 0191-0196



A/C Fail Report Delay Programming

The A/C Fail Delay Times are programmed as Hexadecimal values.
Example:

00	Send only with next report
1*4	30 Minute Delay
3*2	60 Minute Delay
78	120 Minute Delay
*5*5	Random Delay

(at least 15 but less than 120)

A/C Fail Report Delay
Address 0197

00 through FF

PA 0197

Data Digit

1	2
0	0

We count 0-9
Hex counts 0-15
To us 30 means 3 tens and 0 ones or (30 units)
To Hex 30 means 3 sixteens and 0 ones (48 units)
3*2 = 60 because

	3x16	equals	48
and	*2	equals	12
			60

General Code "Arm Only" Programming

PA 0198-0201

PA 0198
Data Digit
1 2
Partitions 1-2

PA 0199
Data Digit
1 2
Partitions 3-4

PA 0200
Data Digit
1 2
Partitions 5-6

PA 0201
Data Digit
1 2
Partitions 7-8

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

Data Digit 1: Odd-numbered Partitions

Data Digit 2: Even-numbered Partitions

General Code "Arm Only" Programming

PA 0202-0205

PA 0202
Data Digit
1 2
Partitions 1-2

PA 0203
Data Digit
1 2
Partitions 3-4

PA 0204
Data Digit
1 2
Partitions 5-6

PA 0205
Data Digit
1 2
Partitions 7-8

Select Option	DD
No Keypad Sounder During Exit Delay	0
Keypad Sounder During Exit Delay	4

Data Digit 1: Odd-numbered Partitions

Data Digit 2: Even-numbered Partitions

DS7412 RS232 Interface Programming

PA 0206

Select Option	DD
DS7412 Disabled	0
DS7412 Enabled	1

Data Digit

1 2

Select Options	Enter the Data Digit as: 0	1	2	3	4	5	6	7
No Events	●							
Alarms, Troubles, Restorals		●		●		●		●
Opens and Closes			●	●			●	●
All Other Events					●	●	●	●

DS7412 RS232 Interface Configuration Programming

PA 0207

Data Digit
1 2

Select Option	DD
300 Baud	0
1200 Baud	1
2400 Baud	2
4800 Baud	3
9600 Baud	4
14400 Baud	5

Select Options	Enter the Data Digit as: 0	1	2	3	4	5	6	7
No Parity	●	●	●	●				
Odd Parity					●	●		
Even Parity							●	●
Software Flow Ctrl	●		●		●		●	
Hardware Flow Ctrl		●		●		●		●
1 Stop Bit	●	●			●	●	●	●
2 Stop Bits			●	●				
8 Data Bits	●	●	●	●	●	●	●	●

Account Code Programming

PA 0496-0526

Each partition can be programmed with a separate account number to each of two phone numbers [Phone #1 and Phone #2].

Each account number takes two addresses [4 Data Digits] -- first 2 digits the even-numbered address; last 2 digits the odd-numbered address.

Default for all Account Codes is 0 0 0 0

Account Code Programming

PA 0496-0526

		Data Digits 1	2	3	4
Partition 1	Phone #1 Acct Code = PA 0496	_____	_____	_____	_____
	Phone #2 Acct Code = PA 0498	_____	_____	_____	_____
Partition 2	Phone #1 Acct Code = PA 0500	_____	_____	_____	_____
	Phone #2 Acct Code = PA 0502	_____	_____	_____	_____
Partition 3	Phone #1 Acct Code = PA 0504	_____	_____	_____	_____
	Phone #2 Acct Code = PA 0506	_____	_____	_____	_____
Partition 4	Phone #1 Acct Code = PA 0508	_____	_____	_____	_____
	Phone #2 Acct Code = PA 0510	_____	_____	_____	_____

Account Code Programming

PA 0496-0526

		Data Digits 1	2	3	4
Partition 5	Phone #1 Acct Code = PA 0512	_____	_____	_____	_____
	Phone #2 Acct Code = PA 0514	_____	_____	_____	_____
Partition 6	Phone #1 Acct Code = PA 0516	_____	_____	_____	_____
	Phone #2 Acct Code = PA 0518	_____	_____	_____	_____
Partition 7	Phone #1 Acct Code = PA 0520	_____	_____	_____	_____
	Phone #2 Acct Code = PA 0522	_____	_____	_____	_____
Partition 8	Phone #1 Acct Code = PA 0524	_____	_____	_____	_____
	Phone #2 Acct Code = PA 0526	_____	_____	_____	_____

Phone Number General Control Programming PA 0528

These notes apply to the following 2 slides:

A - Only applicable when using the ARDIS option.

P - See Addresses 0494-0495: ARDIS routing.

X - Required on PBX systems.

SP - Option limited to Single-Partition systems.

UA - Required by UL when using ARDIS module.

Phone Number General Control Programming

PA 0528

Data Digit 1 2

Select Options	Enter the Data Digit as a: 0	1	2	3	4	5	6	7	8	9	*0	*1
Enable remote progrmr call-back		●		●		●		●		●		●
Dial pulse on all phone numbers	●	●					●	●				
Dial tone on all phone numbers X					●	●					●	●
Dial tone, switch to pulse if requrd		●	●						●	●		
Try ARDIS network first A P							●	●	●	●	●	●

*0 - *2 are Hex values. They will display as A-C at keypads.

Next Slide

Phone Number General Control Programming

PA 0528
Data Digit 2

Data Digit 1 on Previous Slide

Select Options	Enter the Data Digit as a: 0	1	2	3	4	5	6	7	8	9	*0	*1	*2	*3	*4	*5
15-sec Dial delay - non-24-hr burglar alarms only SP		●		●		●		●		●		●		●		●
15-sec Dial delay - 24-hr burg & fire alarms only SP			●	●			●	●			●	●			●	●
Send alarms via ARDIS or digital A	●	●	●	●					●	●	●	●				
Send alarms via both ARDIS and digital A-UA					●	●	●	●					●	●	●	●
Use110 baud comm - WDSRP	●	●	●	●	●	●	●	●								
Use300 baud comm - WDSRP									●	●	●	●	●	●	●	●

Phone Number Format Programming

PA 0529-0530

Ph Nbr 1 Format = PA 0529
Ph Nbr 2 Format = PA 0530

Data Digit 1 2

Select Option	DD
Phone Number Disabled	0
3/1 No Extended Reporting	1
3/1E (Extended Reporting)	2
3/1 with Parity	3
3/1E with Parity	4
4/1	5
4/2	6
BFSK	7
SIA 110 Baud	8
Contact ID	9
SIA 300 Baud	*0
Pager	*5

*0 - *5 are Hex values. They will display as A-F at keypads.

Next Slide

Phone Number Format Programming

PA 0529-0530

Data Digit 2

Data Digit 1 on Previous Slide

Select Options	Enter Data Digit as: 0	1	2	3	4	5
1900Hz Data/ 1400Hz Ack	●		●		●	
1800Hz Data/ 2300Hz Ack		●		●		●
BFSK, SIA, Contact ID		●				
10 Pulses per second (PPS)	●	●				
20 Pulses per second (PPS)			●	●		
40 Pulses per second (PPS)					●	●

Telephone Answering Machine Programming

PA 0531

Data Digit 1 pertains to accessing panel by phone when armed.

Data Digit 2 pertains to accessing panel by phone when disarmed.

Odd numbered ring counts override the answering machine.

Consider even numbers for a disarmed commercial installation.

Remember once again that ∗0 through ∗5 are Hexadecimal values.

They will display as A through F at keypads.

Telephone Answering Machine Programming

* Odd number rings overrides answering machine.

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

PA 0531

Data Digit

1 2

Next Slide

Telephone Answering Machine Programming

Data Digit 1 on Previous Slide

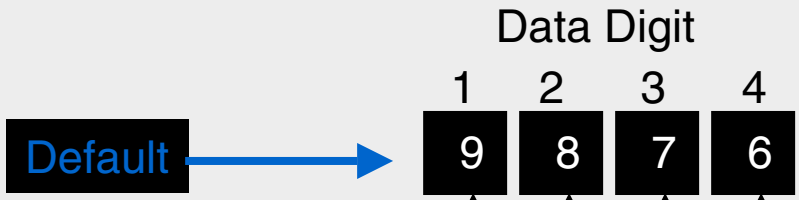
When Disarmed	
Select Option	DD
Don't Answer Phone	0
Answer Phone on 1 ring *	1
Answer Phone on 2 rings	2
Answer Phone on 3 rings *	3
Answer Phone on 4 rings	4
Answer Phone on 5 rings *	5
Answer Phone on 6 rings	6
Answer Phone on 7 rings *	7
Answer Phone on 8 rings	8
Answer Phone on 9 rings *	9
Answer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

PA 0531

Data Digit 2

Programmer's Code Programming

PA 0532

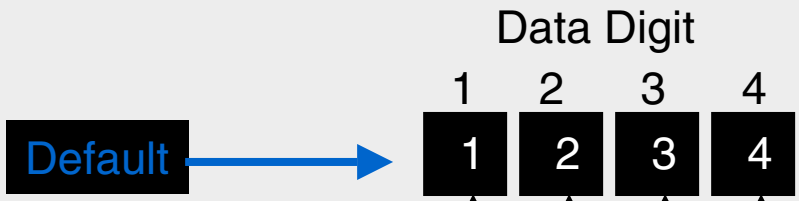


Enter a 4-digit Programmer's Code.

It must not match any currently programmed PIN number.

Default Master Code

PA 0534



The 4-digit Master Code shipped in each new panel is ...

If you have trouble memorizing it, use the Data Digits as a clue.

Octal Relay Module Output Programming

PA1456-1471

First DS7488 or DS7489		Second DS7488 or DS7489	
Octal Relay #	Addresses	Octal Relay #	Addresses
1	1456	9	1464
2	1457	10	1465
3	1458	11	1466
4	1459	12	1467
5	1460	13	1468
6	1461	14	1469
7	1462	15	1470
8	1463	16	1471

First Data Digit defines the specific relay option.
Second Data Digit determines whether relay will associate with Fire, Burglary, or neither.

Octal Relay Module Output Programming

PA1456-1471

Select Option	DD
Latch ON after Zone Alarm *	0
ON during Entry Pre-Alert	1
ON for 10-sec after System Reset	2
ON when System is Armed	3
Ground Start	4
System Status (Ready to Arm)	5
Zone Alarm	6
Zone Alarm delayed by 20 secs.	7
Keypad Sounder Output	8
Access Output (10-sec pulse)	9
Panic/Duress Output	*1
Follow System Wide Events	*2
Follow Output Functions	*3

Data Digit

1 2

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

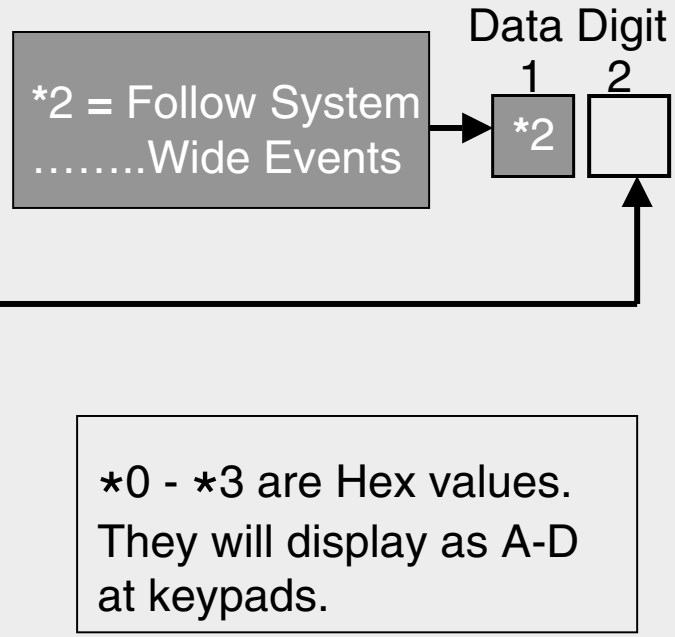
See Next 2 Slides

* Includes invisible zones.

Octal Relay Module Output Programming

PA1456-1471

Select Option	DD
Disabled	0
AC Power Fail	1
Low Battery	2
Communication Failure	3
Any System Fault	4
Keypad Supervision Fault	5
Multiplex Bus Fault	6
Aux Power Fault	7
Fire Zone Trouble	8
Supervisory	9
Zone Trouble	*1
Duress	*2
Battery Test	*3

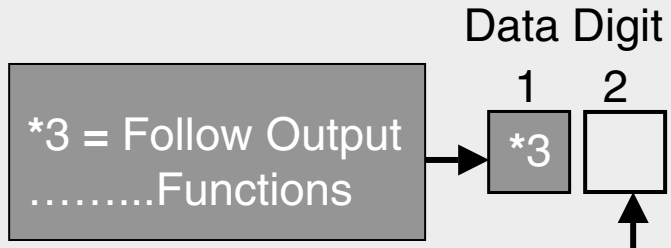


*0 - *3 are Hex values. They will display as A-D at keypads.

Select Option	DD
Disabled	0
Follow Output Function 1	1
Follow Output Function 2	2
Follow Output Function 3	3
Follow Output Function 4	4
Follow Output Function 5	5
Follow Output Function 6	6
Follow Output Function 7	7
Follow Output Function 8	8
Follow Output Function 9	9
Follow Output Function 10	*0
Follow Output Function 11	*1
Follow Output Function 12	*2
Follow Output Function 13	*3
Follow Output Function 14	*4
Follow Output Function 15	*5

Octal Relay Module Output Programming

PA1456-1471



*0 - *5 are Hex values. They will display as A-F at keypads.

Output Function Programming

PA 1472-1516

Each function could use up to 3 programming addresses.

Eg.: Output Function 1 is programmed at PA 1472 - 1473 - 1474.

Output Function #	Program Address 1	Program Address 2	Program Address 3
1	1472	1473	1474
2	1475	1476	1477
3	1478	1479	1480
4	1481	1482	1483
5	1484	1485	1486
6	1487	1488	1489
7	1490	1491	1492
8	1493	1494	1495
9	1496	1497	1498
10	1499	1500	1501
11	1502	1503	1504
12	1505	1506	1507
13	1508	1509	1510
14	1511	1512	1513
15	1514	1515	1516

Output Function Programming

PA 1472-1516

Program Address 1: Data Digit 1

Option	0	programs Output [latching] to follow Zone Alarm.
Options	1 thru *1	program Output to follow system-wide status events.
Options	*3 thru *5	program Output to follow a single zone, or two zones in an Input/Output Cross Matrix.

Output Function Programming PA1472-1516

Select Option	DD
Latch ON after Zone Alarm	0
ON during Pre-Alert	1
ON when system is armed	3
Zone Alarm	6
Zone Alarm delayed by 20-sec.	7
Keypad Sounder Output	8
Access Output (10-sec. pulse)	9
Panic/Duress Output	*1
Follow System Status Event	*2
Follow a single zone	*3
Follow 2 zones if either changes	*4
Follow 2 zones if both change	*5

Program Address 1 → Data Digit 1 2

Data Digit 1 2: 3

See next 2 slides

Follows	Data Digit 0	1	2	3
Disabled	●			
Burglar Alarm		●		●
Fire Alarm			●	●

Follows	Data Digit 0	1	2	3
Disabled	●			
Armed Full		●		
Armed Partial			●	
Armed Any				●

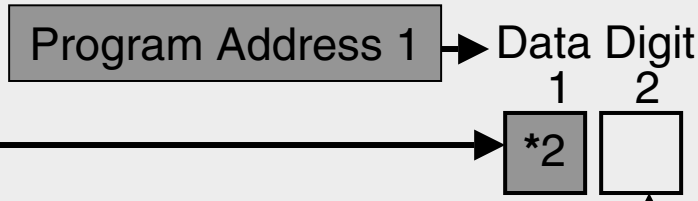
DS7400Xi Panel Wiring & Programming

detection systems

Select Option	DD
Follow System Status Event	*2

Select Option	DD
AC Power Failure	1
Low Battery	2
Communication Failure	3
System Fault (any)	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

Output Function Programming PA1472-1516



DS7400Xi Panel Wiring & Programming

detection systems

Select Option	DD
Follow a single zone	*3
Follow 2 zones if either changes	*4
Follow 2 zones if both change	*5

Output Function Programming PA1472-1516

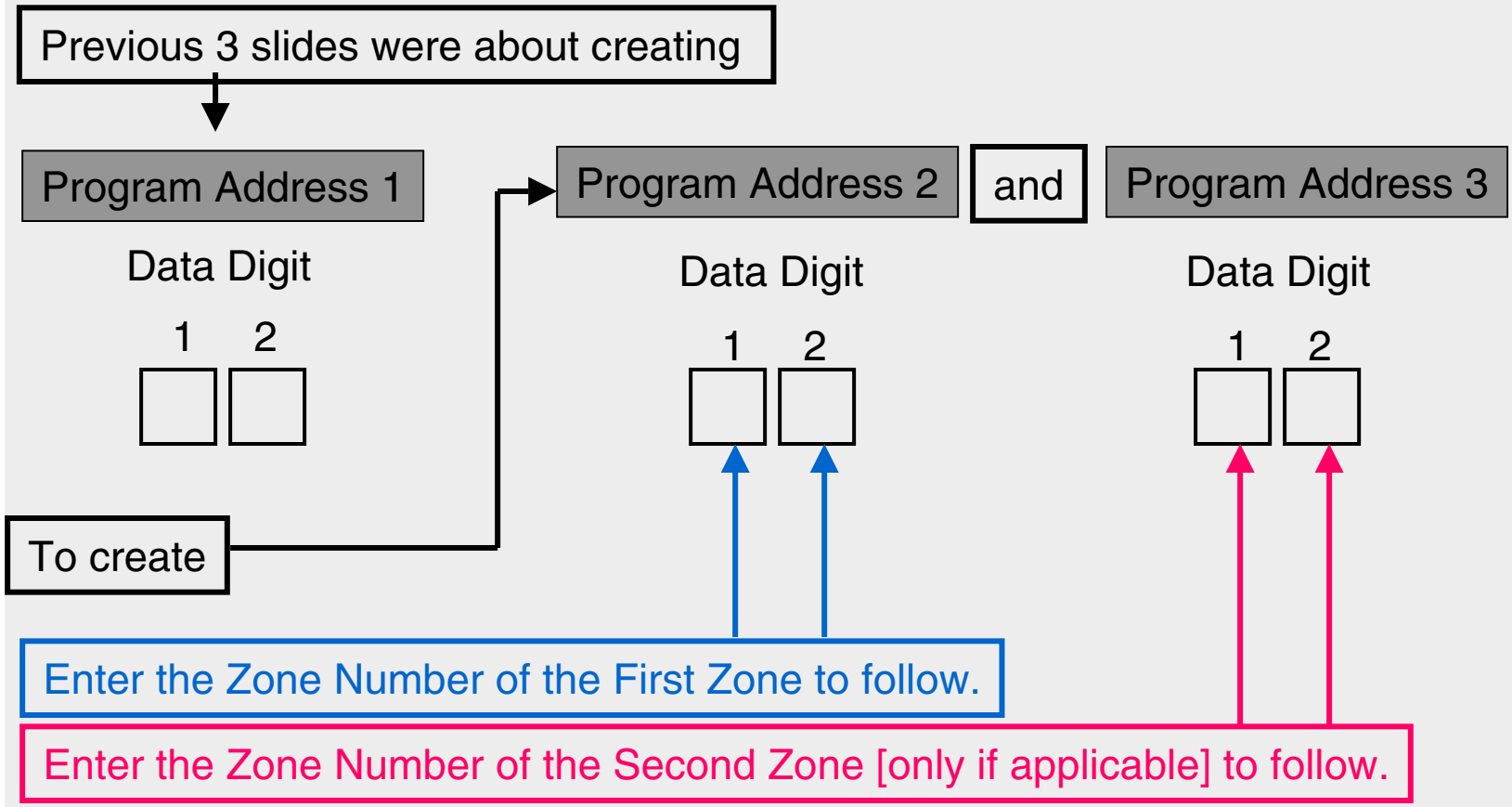
Program Address 1 → Data Digit 1 2

	Enter the Data Digit as a:												
Activate:	0	1	2	3	4	5	6	7	8	9	*0	*1	*2
Disabled	●												
When zone is shorted		●	●	●	●	●	●	●	●	●	●	●	●
When zone is opened			●		●		●		●		●		●
When panel is Armed		●	●			●	●	●	●			●	●
When panel is not Armed				●	●	●	●			●	●	●	●
Latch when activated **								●	●	●	●	●	●

** This is only for DS7465 Outputs.
DS7488 Outputs will not latch when activated

Output Function Programming

PA 1472-1516



DS7400Xi Panel Wiring & Programming

A complete list of Programming Addresses in numerical order appears on

Pages 87 thru 90 of the D7400Xi Reference Guide.

Any questions on D7400Xi programming ?

Thanks for your attention, and Happy Programming !!!