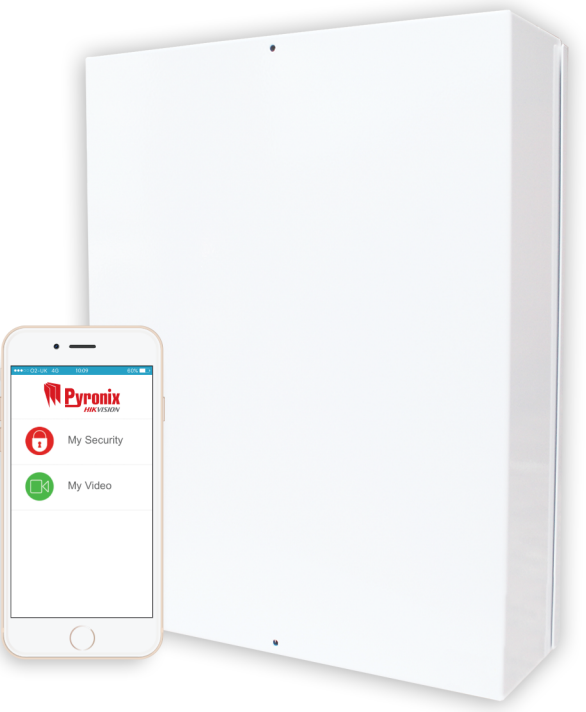
PCX 78

Installation Guide



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Copyright

Intended purpose

This document provides information about installing, configuring and commissioning the product.

Conventions

This document uses the following conventions:

▶ For more information...	A cross-reference to a related or more detailed topic.

Warning *Indicates a hazardous situation which, if not avoided, could result in death or serious injury.*

Caution *Indicates a hazardous situation which, if not avoided, could result in moderate injury, damage the product, or lead to loss of data.*

Notice *Indicates an important situation which, if not avoided, may seriously impair operations.*

Additional information relating to the current section.

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Contents

Contents iii
System Description 5
Introduction 5
HomeControl+ App 6
System Overview 7
Using the Keypad on the PCX 9
Installation 11
Important Installation Notes 11
Overview of Devices 12
RS-485 Wiring 13
Input Mapping Overview 14
Output Mapping Overview 15
Setting up 15
The Printed Circuit Board 17
Power and Battery Connections for the PCX S 18
Power and Battery Connections for the PCX L 20
Connecting Peripherals 21
Input Connections 21
Output (PGM) Connections 23
External Sounder Connections 25
Modems 27
Connecting Modems 28
PSTN Modem (DIGI-1200) 28
GPRS Modem (DIGI-GPRS) 29
LAN Modem (DIGI-LAN) 30
Wi-Fi Modem (DIGI-WIFI/XA) 30
Connecting to the Upload/Download Software 30
Serial Connection (RS232) 31
PyronixCloud Connection 32
Configuration 33
The Engineer Menu 33
Navigating in the Engineer and User Menus 33
Main Menus and Sub Menus 33
Entering the Engineer Menu 35
Accessing the Engineer Menu on any External Wired Keypad 35
Date & Time 36
Learn Wireless Devices 37
Program Inputs 38
Program EOL 39
Install RIXs 40
Program Outputs 41
Install Keypads/Readers 42
Program Timers 43
Change Codes 44
Volume Control 45
System Options 46
Options 46
System Displays and Exit Options 47

Review Logs 48
Engineer Tests 49
Diagnostics 50
Wireless Devices 50
Wired Devices 51
Communications (DIGI-GPRS) 52
Communications (DIGI-1200) 53
Communications (DIGI-LAN) 54
Communications (DIGI-WIFI/XA) 55
Engineer Restore Options 56
Communications 57
App Set-Up (standard security) 58
App Set-Up (high security) 59
Network Set-Up 60
ARC Signalling 61
User SMS Signalling 62
Advanced Communications 63
Alarm Responses 64
Options Up/Downloading 65
Download by RS-232 65
Download by Cloud (standard security) 66
Download by Cloud (high security) 67
Download by Serial Comm 68
Software Revision 68
Factory Default 69
Exiting the Engineer Menu 70
Standalone Wired Keypad 71
Technical Specifications 72
Communication loom 74
Troubleshooting 76
Device Fail / Active Faults 76
System Faults and Troubleshooting 76
Support contact details 79
Reference 80
Handover Form 80
EN 50131 Terminology 80
Input Types 81
Output Types 82
Time Inputs 86
SMS Commands 88
Event Types 89
General Event Types 89
SIA and Contact ID codes 90
Access Levels 95
Compliance 96
Notes 97

System Description

Introduction

The PCX is a hybrid alarm system. It integrates the award winning Enforcer two-way wireless technology with multiple automation outputs and a host of high security features. The system is easy to use and can alert you to system activations via HomeControl+ smartphone App notification messages. It can also send alarms to the Alarm Receiving Centre and maintenance company.

Always Alert

The two-way wireless movement detectors are fully operational when the system is armed, making your system more secure. In other wireless systems, devices are disabled for up to five minutes after every activation to save battery, therefore compromising your security.

Battery Monitoring/Saving

Advanced technology preserves the battery life of each wireless device. The PCX panel also informs you in advance of when a battery needs replacing, giving you enough time to change the battery in the specific device before it stops working. This key feature keeps your environment fully protected, unlike other conventional systems.

High Security Encryption

128 bit high security wireless encryption protocol and intelligent wireless jamming detection.

User Friendly Keyfobs

The two-way wireless keyfob allows you to see the status of your PCX via three colour LEDs:

- System armed: A RED LED will illuminate.
- System disarmed: A GREEN LED will illuminate.
- System fault: An AMBER LED will illuminate (this will flash when the keyfob is unable to arm the system).
- Alarm activated: A flashing RED LED.

It is possible to allocate different functions to each keyfob, such as: arming or disarming different areas, activating outputs to control external devices (such as: gates), requesting the system status and activating PA (panic alarms).

Up to 32 wireless keyfobs can be added to your PCX. Each wireless keyfob has a unique ID, which can be reported to the ARC and HomeControl+ App. These are stored in the event log of the PCX individually.

Keyfobs may only be used if the PCX-RIX32-WE is installed. Ask your engineer for more information.

User Automation Outputs

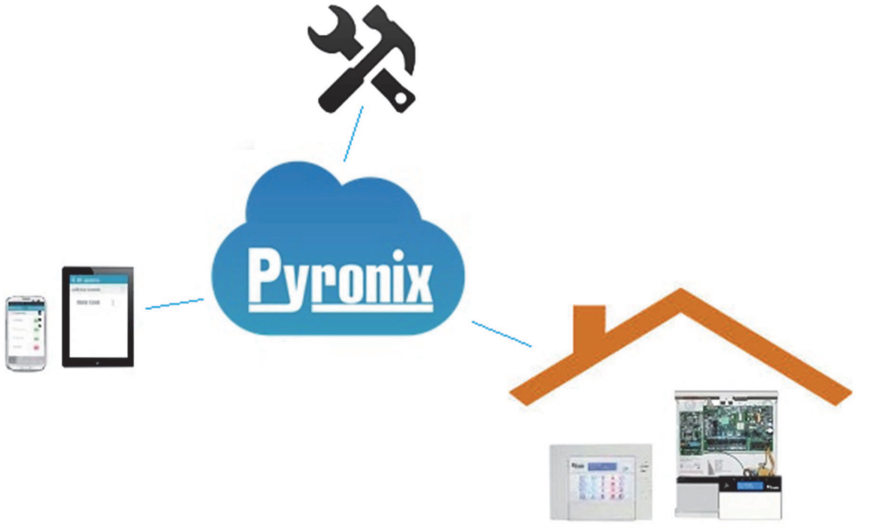
The PCX gives you the option to operate devices (such as: gates, lights, sprinklers.) via your keypad or remotely via your keyfob or HomeControl+ App.

HomeControl+ App and SMS notifications

Your PCX will provide you with real-time push notifications on your smart device or within the HomeControl+ App, such as: that your child has returned home from school, or a leakage of water in your property. You can also opt to receive these via SMS text messages, when a GPRS modem is connected to the panel.

HomeControl+ App

The PCX system can be remotely controlled using the HomeControl+ App. It allows you to arm and disarm the PCX, check the system status and bypass inputs. It also allows you to activate devices remotely, such as gates, lights, sprinklers and more. The HomeControl+ App and PyronixCloud communication is fully encrypted to the highest standard and no sensitive user data is stored on the PyronixCloud.



The HomeControl+ App is available in two versions: Android from Google Play Store and iOS from Apple store.

ANDROID APP ON Google play

Available on the App Store

System Overview

There are two control panels in the PCX hybrid range:

- PCX S approved to EN50131 Grade 2
- PCX L approved to EN50131 Grade 3

Both panels are suitable for small to medium commercial installations. These systems start with 8 wired inputs, and can be increased to a possible 78 using our wired and wireless expansion modules.

Table 1 - Areas

Area	PCX	Additional Information
Independent areas	8	
Sub areas	5	Each sub-area is created by a proximity reader

Table 2 - Inputs

Input	PCX	Additional Information
Wired inputs On-board	8	Supports Double Pole (N/C), DEOL and 3EOL
Wired inputs (max)	78	
Wireless inputs (max)	64	2 x Wireless input expander: PCX-RIX32-WE
Maximum inputs	78	8 x Wired/wireless input expanders: PCX-RIX8, PCXRIX8+, PCX-RIX8+PSU, PCX-RIX32-WE. 6 x Keypads/readers: PCX-LCD/EX, PCX-PROX/EXT, PCXPROX/INT

Table 3 - PGM Outputs

Output	PCX	Additional Information
PCB	5	1 Relay, 4 transistor (Inputs 7 & 8 may be used as outputs)
ATE outputs	10	Low power ATE outputs
Maximum PGM outputs	85	3 x Outputs on the PCB 2 x Shared outputs on the PCB: XPGM 1&2 (Inputs 7&8) 2 x Output expanders: PCX-ROX8R8T, PCX-ROX16R+PSU 8 x Wired input expanders: PCX-RIX8+, PCX-RIX8+PSU each have 4 outputs on board 6 x Keypads, or 1 x Keypad and 3 to 5 x Readers: 6 outputs 10 x ATE PGMs
User automation outputs	30	Allows users to activate these outputs via keypad (PCXLCD/ EX), smart device app, or keyfob (KEYFOB-WE)

Table 4 - Codes

Code	PCX	Additional Information
Wireless keyfobs	32	Using 1 x Wireless expander: PCX-RIX32-WE
Maximum User Codes	100 + 1 Master	Including wireless keyfobs: KEYFOB-WE
Duress / guard codes	10	
Engineer Codes	1	

Table 5 - Arming Devices

Procedure	PCX	Additional Information
Arming devices	6 maximum	PCX-LCD/EX, PCX-EXT-BK/W, PCX-PROX/INT

Table 6 - Communication

Communication	PCX	Additional Information
Phone numbers	8	
Modems / Communication paths	PSTN, GPRS, LAN, Wi-Fi	PSTN modem (DIGI-1200) GPRS modem (DIGI-GPRS) LAN modem (DIGI-LAN) Wi-Fi modem (DIGI-WIFI/XA)
Formats for ARC	PSTN: SIA Levels 1 & 3, CONTACT ID GPRS or LAN or WiFi: SIA IP, CONTACT ID IP	
Formats for User	SMS signals to a user's mobile phone. Also allows user remote control panel via SMS commands. Push notification to a user's mobile phone.	

Table 7 - Logs

Log	PCX
Memory logs	1250
Memory type	EEPROM

Table 8 - Power Rating

Power rating	PCX S	PCX L	Additional Information
PSU	1.5A	2.0A	Power supply built onboard
Battery type	3-7Ah	7-17Ah	Recommended batteries

Table 9 - Dimensions and Compliance

Dimensions and compliance	PCX S	PCX L	Additional Information
Dimensions	297 x 250 x 82mm	390 x 305 x 100mm	PCB: 170 x 110 x 40mm
EN grading*	Grade 2	Grade 3	
Environment class	II	II	

* EN50131 compliance labeling should be removed if non-compliant configurations are used.

Default Codes

Master Manager Code: 1234 Engineer Code: 9999

Notice *Technical functions for example fire, gas and flooding are not security graded as they are outside the scope of EN50131-1 and EN50131-3*

Using the Keypad on the PCX

Table 10 - Button Operations

Button	Description
A	Quickly exit a menu. Select Area A. Change case when entering text.
B	Move back to the previous main menu item. Select Area B.
C	Move back to the previous option in a sub-menu. Select Area C. Display additional information in the log. Delete letters or numbers when entering text. Enables chime feature.
D	Scroll forwards in the log. Select Area D. Access the user menu. Press and hold to configure the keypad.
	Trigger PA (Panic Alarms) - only if enabled by an engineer.
	Trigger fire alarms - only if enabled by an engineer.
◀ ▶	Move from one option to another while in a sub-menu. Move through text.
1 2 3	Select Area 1, 2 or 3. Also functions the same as the rest of the number / letter keys for entering numbers and text.
✓	Select items and enter into a sub-menu or option.
0	Enter a space when entering text. Select Area 0.
X	Scroll forwards in the main menu and sub-menus. When you have scrolled through all the options in a menu, returns to the previous menu level.

On the PCX it is possible to write personalized titles for the following:

- Input Description, Location
- Area Names
- Site Name
- Device Name, Location
- Input and Output expander location descriptions
- User Names

The PCX incorporates a predictive text feature (T9 type). For example, if you enter ‘B’ ‘Bedroom’ will be displayed. If the word that you require doesn’t appear on the LCD display, just type the word letter by letter.

- To type a word, press the relevant button the appropriate number of times – e.g. for the letter ‘k’ press the 5 key two times, or for the letter ‘s’ press the 7 button four times.
- To enter punctuation marks, press the 1 button.

Installation

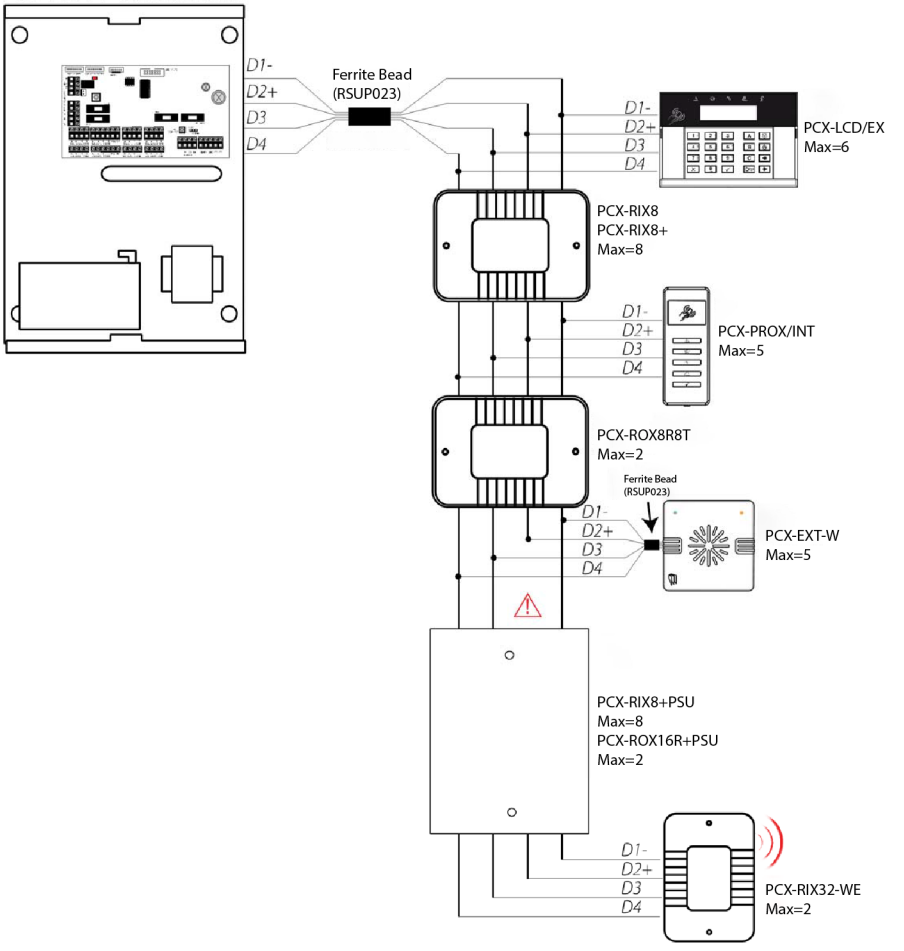
Important Installation Notes

- Ensure wiring is done to the national wiring regulations in the country where the installation is taking place.
- Ensure that a readily-accessible disconnect device is incorporated in the premises installation wiring. Ensure it is provided externally to the equipment and as close as possible to the supply, with a contact separation of at least 3.0 mm. Example: Fused Spur Unit.
- When fixing external wires, ensure that means are provided in the installation to prevent the SELV (Safety Electrical Low Voltage) or signal circuits from coming into contact with live parts of the power supply circuit. Wires shall be fixed near their terminal blocks.
- The end of stranded conductor shall not be consolidated by soft soldering at places where the conductor is subjected to contact pressure. Example: Must not solder ends of wires which are to be secured in detector and control panel terminal connectors.
- On completion of wiring use tie-wraps to prevent any loose wires causing a safety hazard (material of cables tie shall be rated at least HB or better).
- Cable ties and hoses shall be separate for power supply cable and SELV (Safety Electrical Low Voltage) wirings.
- Size of protective bonding conductors: minimum section 1.5mm^2. Example: Electrical Earth wire connections.

Overview of Devices

All peripherals, such as LCD keypads, readers, expanders, are connected via the D1-, D2+, D3 and D4 terminals.

Figure 1: Example of a typical PCX bus



General Principles

1. No alarm system cable should be run with other cables carrying AC or digital signals.
2. The cables should be protected by the use of grommets where appropriate.
3. For greater than 1000m range, standard isolated RS485 repeaters are required.
4. There must be a ferrite bead fitted to one of the outgoing data lines and secured inside the PCX case itself. The Ferrite bead is supplied packaged with a cable-tie which must be used to secure it in the case and prevent it shorting any electrical contacts (Ferrite as shown).

   There must also be a ferrite bead fitted to the data wires of a PCX-EXT-BK/W (if connected). The Ferrite bead is supplied with the reader.

5. If an expansion module with a power supply on board is connected, the D2+ terminal must not be connected between the main bus and module.

RS-485 Wiring

Cable type	Screened Cable	Bus range (m)	Wiring Format	
			Daisy Chain Range	Star Range
4 core alarm cable	Use when bus located near fragmented 230V AC mains power line	300 m	1000m For greater than 1000m range, standard isolated RS485 repeaters are required.	50 m
6 core alarm cable doubling D1 (0V) and D2 (12V)		1000 m		
Twisted pair		1000 m		

Figure 2: Star Wiring example

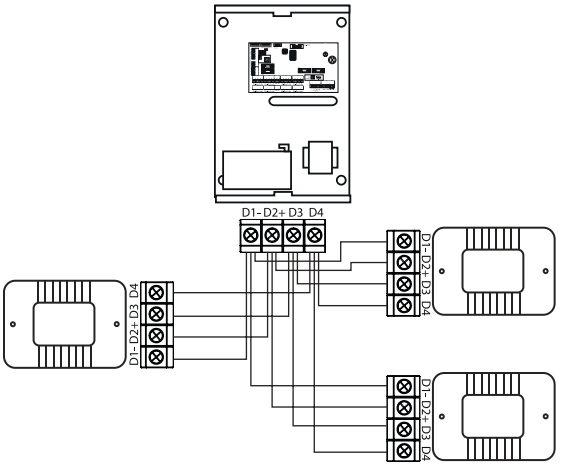
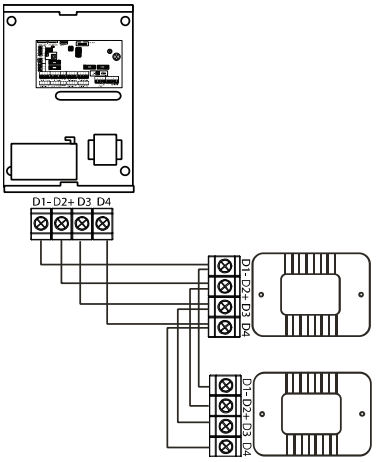


Figure 3: Daisy Chain Wiring example



Input Mapping Overview

Devices	Address	Available inputs
PCX PCB	N/A	1-8
RIX-8I / RIX8+PSU / RIX32-WE (Device A)	0	9-16
RIX-8I / RIX8+PSU / RIX32-WE (Device A)	1	17-24
RIX-8I / RIX8+PSU / RIX32-WE (Device A)	2	25-32
RIX-8I / RIX8+PSU / RIX32-WE (Device A)	3	33-40
RIX-8I / RIX8+PSU / RIX32-WE (Device B)	4	41-48
RIX-8I / RIX8+PSU / RIX32-WE (Device B)	5	49-56
RIX-8I / RIX8+PSU / RIX32-WE (Device B)	6	57-64
RIX-8I / RIX8+PSU / RIX32-WE (Device B)	7	65-72
PCX-LCDP	0	73-74
PCX-LCDP / PROX-I / PROX-E	1	75-76
PCX-LCDP / PROX-I / PROX-E	2	77-78
Total		78

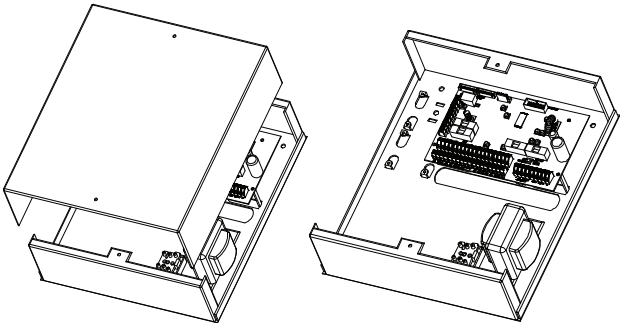
2 x PCX-RIX32-WE can be connected to the PCX. Each expander allows 32 inputs which are separated into 4 addresses (each address enables 8 wireless inputs). It is possible to mix the wired and wireless remote expanders.

Output Mapping Overview

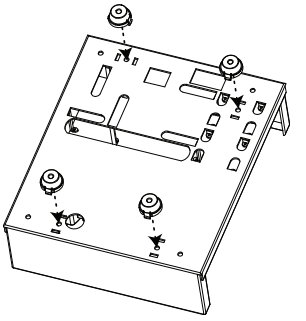
Devices	Address	Available outputs
PCX PCB	PCB	5 (2 shared)
Digi/ATE Outputs (using communication loom)	Loom	10
PCX-ROX8R8T / PCX-ROX16R+PSU	0	1-16
PCX-ROX8R8T / PCX-ROX16R+PSU	1	1-16
PCX-RIX8+/ PCX-RIX8+PSU	0	1-4
PCX-RIX8+/ PCX-RIX8+PSU	1	1-4
PCX-RIX8+/ PCX-RIX8+PSU	2	1-4
PCX-RIX8+/ PCX-RIX8+PSU	3	1-4
PCX-RIX8+/ PCX-RIX8+PSU	4	1-4
PCX-RIX8+/ PCX-RIX8+PSU	5	1-4
PCX-RIX8+/ PCX-RIX8+PSU	6	1-4
PCX-RIX8+/ PCX-RIX8+PSU	7	1-4
PCX-LCD/EX	0	1
PCX-LCD/EX / PCX-PROX/INT / PCX-EXT-BK/W	1	1
PCX-LCD/EX / PCX-PROX/INT / PCX-EXT-BK/W	2	1
PCX-LCD/EX / PCX-PROX/INT / PCX-EXT-BK/W	3	1
PCX-LCD/EX / PCX-PROX/INT / PCX-EXT-BK/W	4	1
PCX-LCD/EX / PCX-PROX/INT / PCX-EXT-BK/W	5	1
Total		85

Setting up

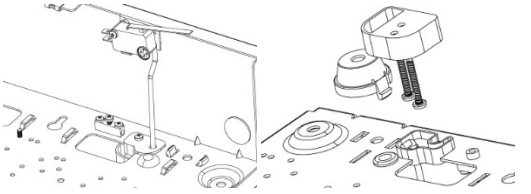
1. Unscrew and remove the cover of the PCX. The PCX Printed Circuit Board is located to the top right-hand side.



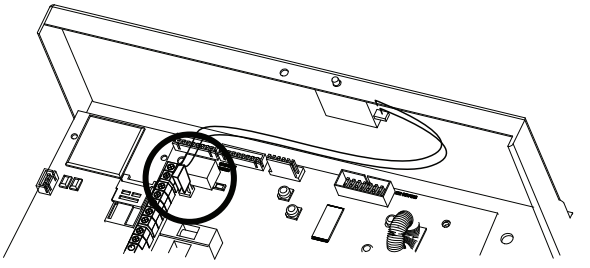
2. Install the supplied stand-offs if needed before mounting the metal case to the wall.



3. Connect any modems if required and any other devices (input expanders, output expanders etc.) before powering up the system.
4. Wire the telephone line if the DIGI-1200 modem (PSTN) is installed.
5. Install the SIM card, connect the antenna and locate outside of the metal casing if the GPRS modem is used.
6. Screw the back metal plate to the wall.
7. Check the tamper mechanism.
   a. PCX L: The tamper mechanism comes already fitted and will operate properly once the casing is fitted to the wall. If using the stand-offs, the following will need to be used for the rear tamper mechanism to work correctly.



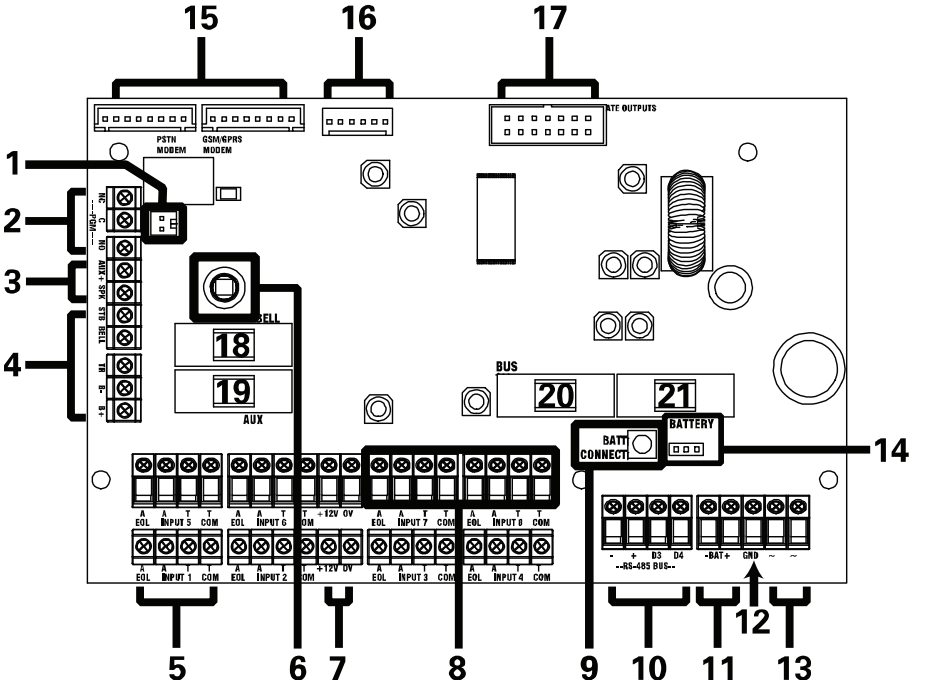
   b. PCX S: The tamper mechanism comes already fitted.



8. Secure all the wires and close the enclosure making sure the tamper is operational
9. Turn on the power to the PCX. The keypad will show:

485 COMMS FAIL	>> Please wait <<	PCX Time 10:09 c

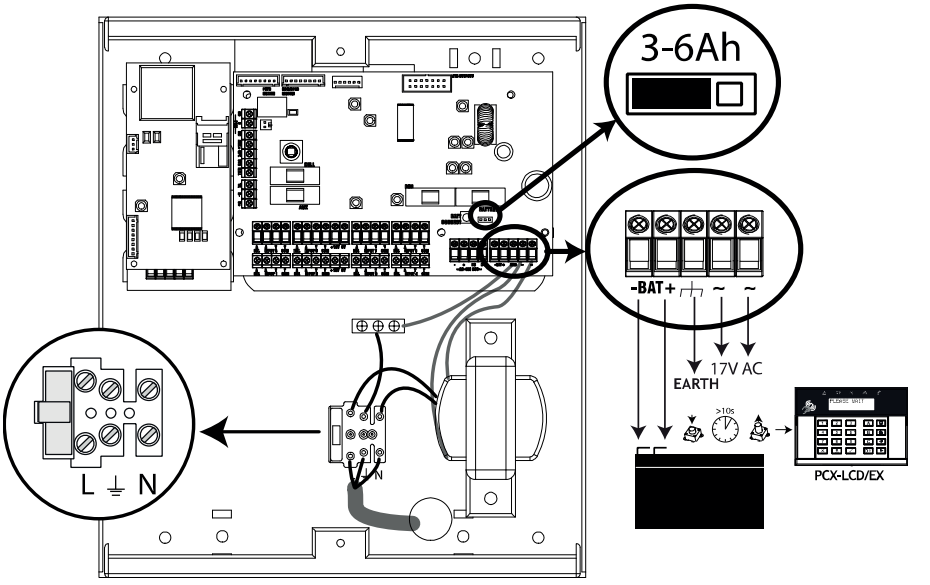
The Printed Circuit Board



No	Item	Description
1	Case tamper hold-off jumper	
2	PGM 1 relay output	
3	Speaker connection	Connects a 16 Ohm speaker
4	External sounder connections	Connects an external sounder
5	Input connections	8 fully programmable inputs
6	Tamper switch	Optional tamper protection for the metal casing
7	Auxiliary 12 V power	12 V power supply
8	Inputs or outputs	Inputs 7 and 8 may be programmed as outputs if unused
9	Battery connect 'Kickstart' switch	To power-up and program from battery power when no mains power is available
10	RS485 bus terminals	Connects peripherals
11	Battery connection	For battery power up
12	Earth connection	Connects the earth
13	18 V connection	Connects the ac transformer 18 V AC supply
14	Battery charge capacitor jumper	For battery power up
15	PSTN, GPRS & LAN modems	Connects PSTN, GPRS and LAN modems

No	Item	Description
16	RS232 connection	This connection is used for an RS232 lead that will connect to a PC to allow uploading and downloading of data using the InSite software
17	Communication outputs	Connects the ATE and its communication loom to enable an additional 10 programmable outputs. These are low current and would normally be used when connecting a stand-alone communicator to the panel.
18	Bell fuse	
19	Auxiliary fuse	
20	Bus fuse	
21	Battery fuse	

Power and Battery Connections for the PCX S



Panel power supply input	Nominal	Range
Mains Supply Voltage AC	230 Vac at 50 Hz	-15% +10%
Transformer Rating PCX L	18 VA	18.0 V at 1.0 A

Panel power supply output	Nominal	Range
Output voltage	13.7 Vdc	10 - 15 Vdc
Output Current PCX L	1 A continuous	1.5 A peak, during battery charging
Power Supply Type A.		

Battery charging specification	
Float voltage	13.8 Vdc
Battery low voltage cut-off	10.5 V
Recharge time	< 24 hours
Control panel type	
Standby battery capacity current	300 mA (3 Ah to 6 Ah)
Standby battery capacity current	700 mA (7 Ah to 17 Ah)

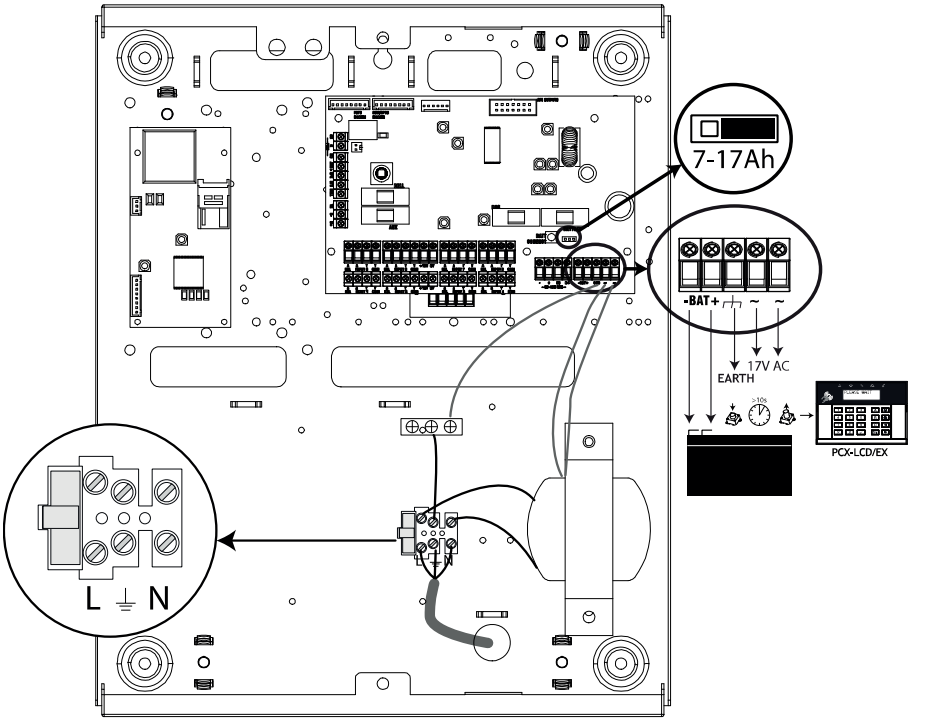
Fuses	Value	Type
230 V mains fuse for mains terminals	T500 mAH anti-surge slow blow 250 V	Ceramic

The battery connect 'kickstart' button is used to power-up the control panel when there is no mains supply present. For example: if you wish to program a panel that is being fitted in a new-build premises before the mains supply has been fully installed. To use it – Hold for 5 seconds and then release.

► *For more information, see "The Printed Circuit Board" on page 17*

Notice *Ensure that the battery jumper is in the correct position for the capacity of battery that you have connected – otherwise the panel may under-charge a large battery or over-charge and damage a smaller battery.*

Power and Battery Connections for the PCX L



Panel power supply input	Nominal	Range
Mains Supply Voltage AC	230 Vac at 50 Hz	-15% +10%
Transformer Rating PCX L	45 VA	18.5 V at 2.5 A

Panel power supply output	Nominal	Range
Output voltage	13.7 Vdc	10 - 15 Vdc
Output Current PCX L	1.5 A continuous	2.0 A peak, during battery charging
Power Supply Type A.		

Battery charging specification	
Float voltage	13.8 Vdc
Battery low voltage cut-off	10.5 V
Recharge time	< 24 hours
Control panel type	
Standby battery capacity current	300 mA (3 Ah to 6 Ah)
Standby battery capacity current	700 mA (7 Ah to 17 Ah)

Fuses	Value	Type
230 V mains fuse for mains terminals	T500mA H anti-surge slow blow 250 V	Ceramic

The battery connect 'kickstart' button is used to power-up the control panel when there is no mains supply present. For example: if you wish to program a panel that is being fitted in a new-build premises before the mains supply has been fully installed. To use it – Hold for 5 seconds and then release.

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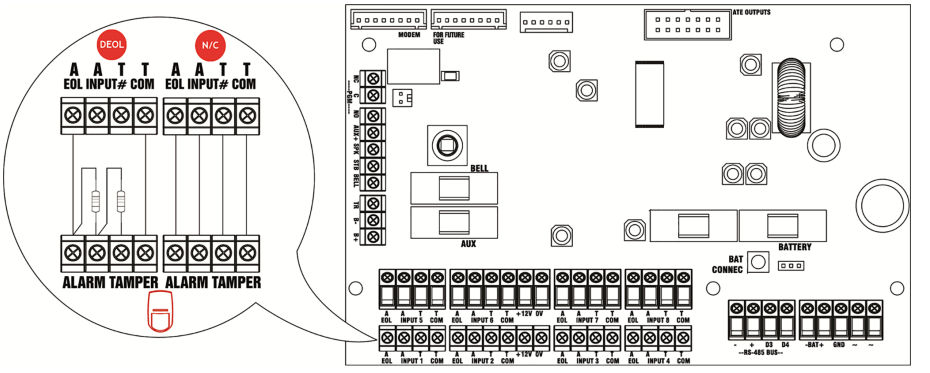
Connecting Peripherals

Input Connections

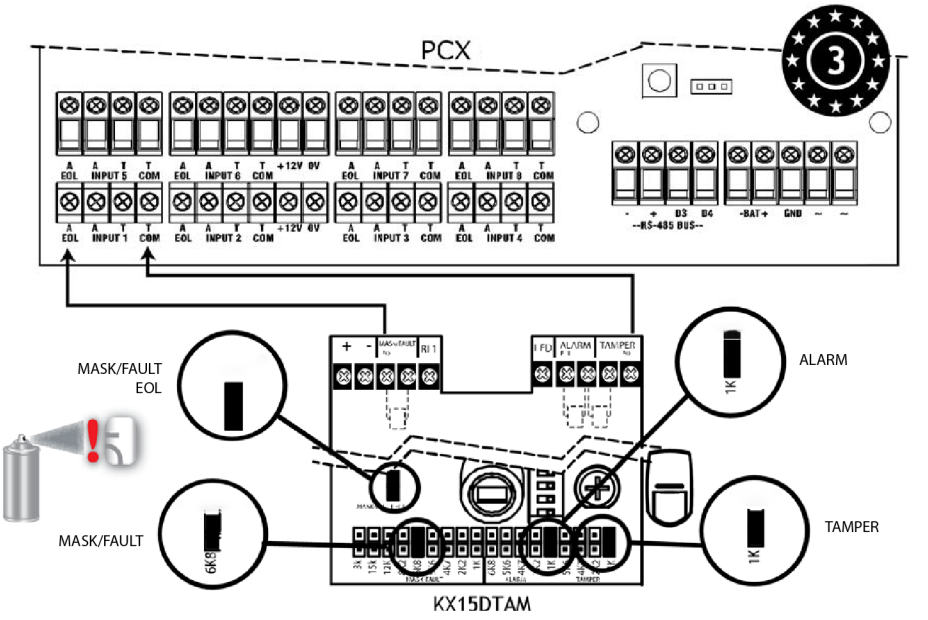


If 'Normally Closed' (double pole) wiring is selected, the diagnostics on the keypad will show **1K Alarm and 1K Tamper**.

Input resistance	1k / 1k DEOL Range	4k7 / 2k2 DEOL Range	4k7 / 4k7 DEOL Range
Normal	0k5 to 1k4	1k4 to 2k9	3k7 to 8k3
Burglary alarm	1k5 to 5k9	4k2 to 7k8	8k4 to 10k2

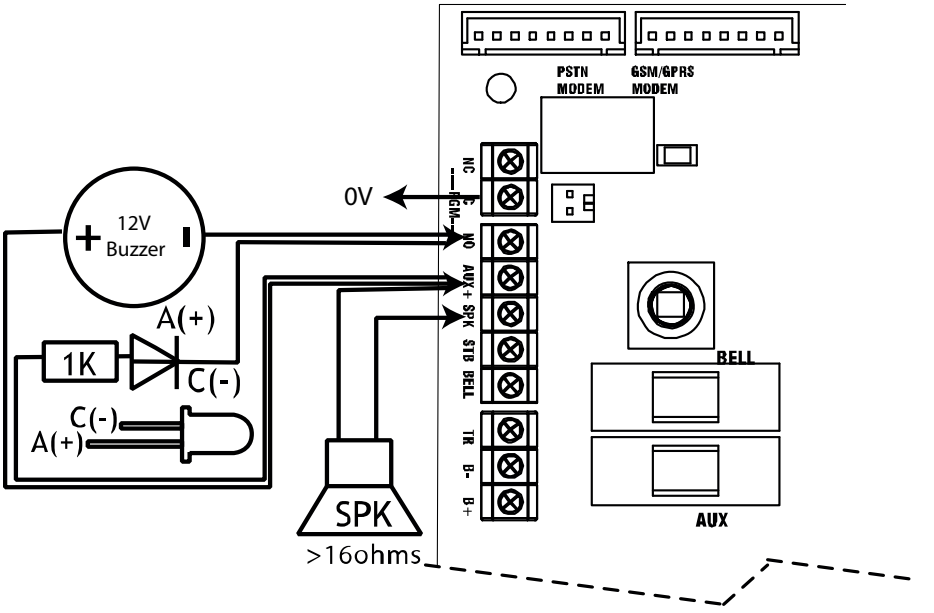
Input resistance	1k / 1k DEOL Range	4k7 / 2k2 DEOL Range	4k7 / 4k7 DEOL Range
Fault	6k to 8k1	8k to 11k3	10k3 to 14k9
Masking (6k8)	8k2 to 17k	11k6 to 22k	15k to 22k
Tamper	<0k5 or <17k	<1k4 or >22k	<3k7 or >23k

Grade 3 Mask/Fault Input Wiring



Input resistance	1k / 1k DEOL Range	4k7 / 2k2 DEOL Range	4k7 / 4k7 DEOL Range
Normal	0k5 to 1k4	1k4 to 2k9	3k7 to 8k3
Burglary alarm	1k5 to 5k9	4k2 to 7k8	8k4 to 10k2
Fault	6k to 8k1	8k to 11k3	10k3 to 14k9
Masking (6k8)	8k2 to 17k	11k6 to 22k	15k to 22k
Tamper	<0k5 or <17k	<1k4 or >22k	<3k7 or >23k

Output (PGM) Connections



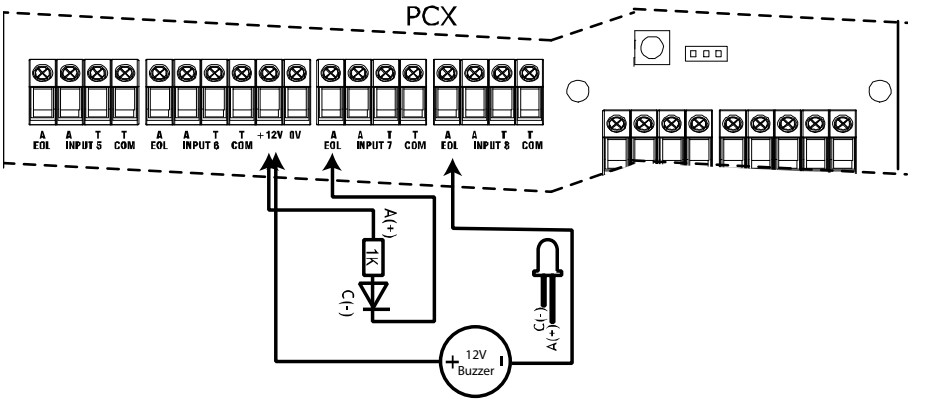
Normal state: 12 V

Active state: 0 V

Current: 100 mA

XPGM Connections

If Inputs 7 and 8 are programmed as 'unused', these inputs can be used as 2 further outputs (known as XPGM1 and XPGM2).



Normal state: Floating

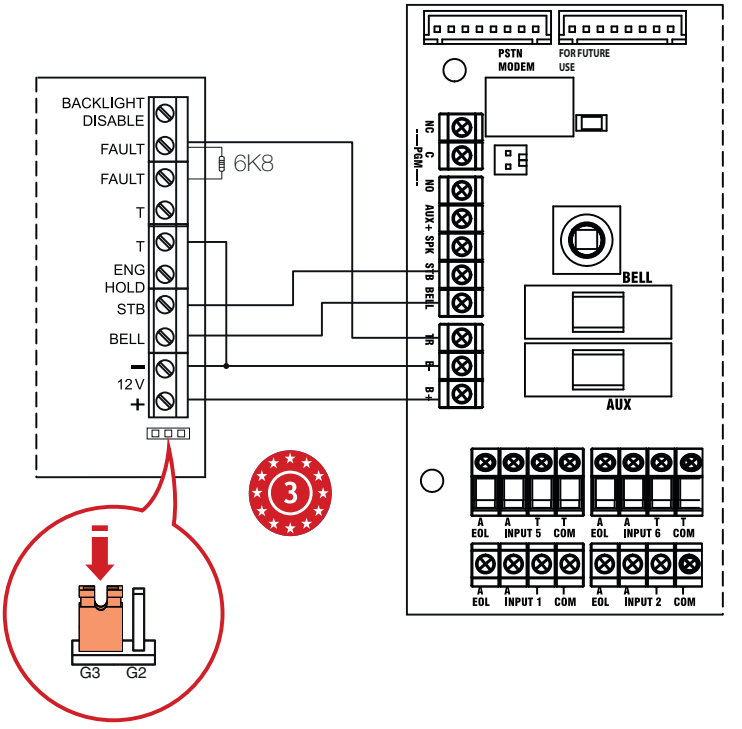
Active state: 0 V

Current: 50 mA switched to 0 V

External Sounder Connections

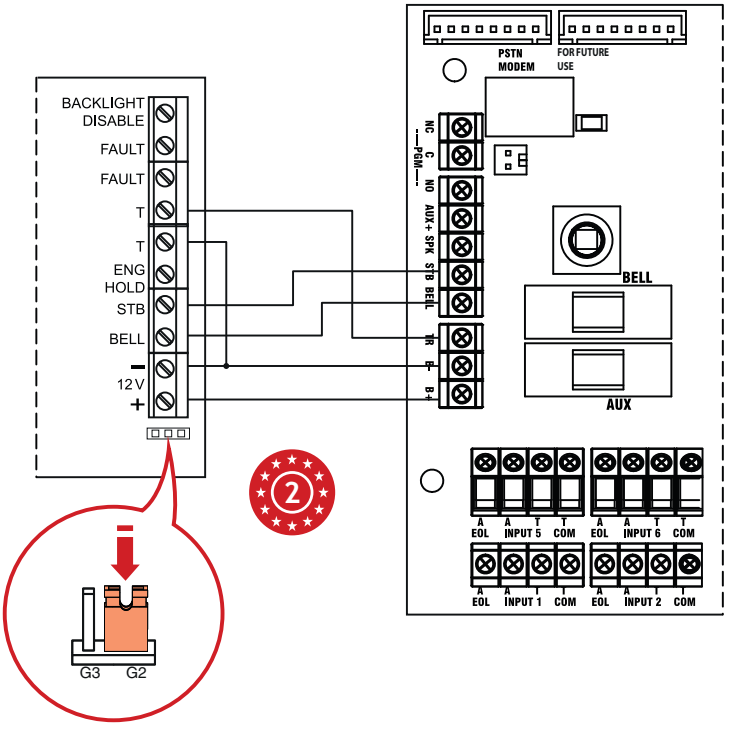
Grade 3 External Sounder Wiring

Pyronix Grade 3 External Sounders: Deltabell Plus, Deltabell X, Invincibell Plus, Invincibell X.



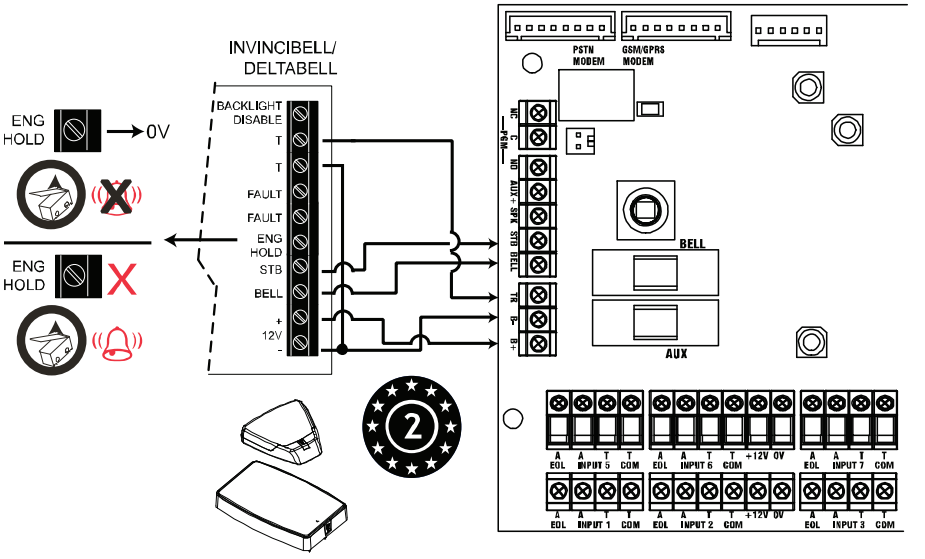
Grade 2 External Sounder Wiring with a Grade 3 Bell

Pyronix Grade 3 External Sounders: Deltabell Plus, Deltabell X, Invincibell Plus, Invincibell X.



Grade 2 External Sounder Wiring

Pyronix Grade 2 External Sounders: Deltabell E, Invincibell E.



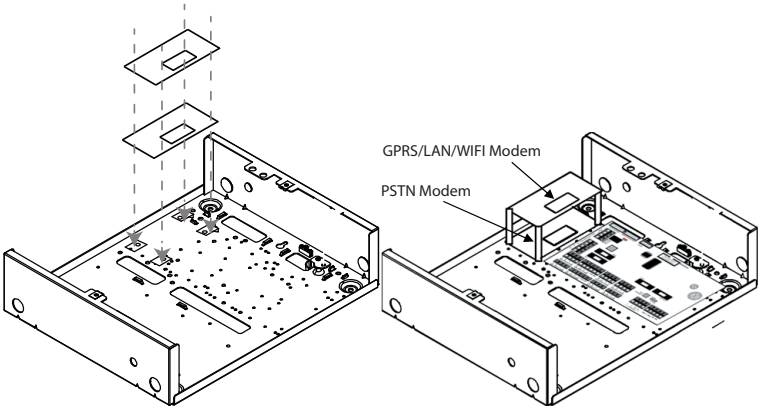
Modems

You can connect the following modems to the PCX:

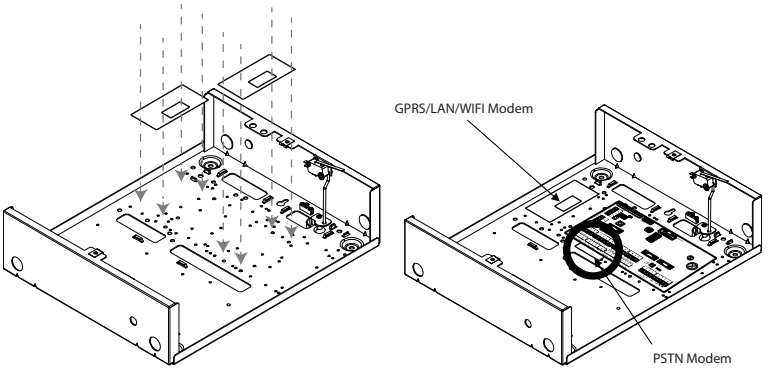
- DIGI-1200
- DIGI-GPRS
- DIGI-LAN
- DIGI-WIFI/XA

Connecting Modems

1. Insert the modems into the PCX.
   a. If you have the PCX S, connect the modems as shown below. The PSTN modem should be located at the bottom (closest to the base). The GPRS, LAN and Wi-Fi modems should be located at the top.



   b. If you have the PCX L, connect the modems as shown below. The PSTN modem should be located underneath the PCX PCB. The GPRS, LAN and Wi-Fi modems should be located to the left of the PCX PCB.



2. Connect the modems to the control panel.
   You can only connect the PSTN modem to the left modem port on the panel's PCB.
   ► *For more information, see the user documentation for the modem*

PSTN Modem (DIGI-1200)

The PSTN modem card is used to enable the PCX to communicate either via contact ID or SIA.

Before making these connections, all power must be disconnected from the system.

Notice *The telecom ground terminal (TE) should always be connected to earth in order to maximise the effectiveness of the transient voltage protection on the unit.*

Notice *Turn off the mains power before disconnecting the PSTN modem.*

A and B terminals: Telephone line output for connection to analogue PSTN telephone line.

A-1 and B-1 terminals: Telephone line output for connection to other telecom equipment.

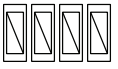
GPRS Modem (DIGI-GPRS)

The GPRS modem card (DIGI-GPRS) fits inside the PCX. Besides communications with the PyronixCloud and HomeControl+ App, it has the following operations:

- Send Alarms to the ARC: With the DIGI-GPRS it is possible to send alarm events the monitoring station via Contact ID IP, SMS Contact ID and SIA IP protocols.
- Send SMS Alarms to the user: With DIGI-GPRS it is possible to send SMS alarm messages to the user.
- Program the panel remotely via the PyronixCloud.
- Line Fault Detection: This is programmable in the **PROGRAM TIMERS?** menu. It is timed in minutes and is the **Line Fault Delay** option.

The supplied antenna will need to be connected to the DIGI-GPRS and placed in a suitable area where the signal strength at its maximum. Do not stick the self-adhesive antenna onto the metal enclosure of the PCX.

Table 11 - GPRS status LEDs

	Signal Strength	OFF = No signal strength
	Signal Strength	ON = Signal strength 50%
	Signal Strength	ON = Signal strength full
	Green pulsing	Communicating with network
	Orange on	When making a call

Notice *Remove the power supply of the DIGI-GPRS modem from panel when installing or changing the SIM card. Check the SIM card credit regularly.*

LAN Modem (DIGI-LAN)

The DIGI-LAN fits inside the PCX. It allows communications with the PyronixCloud and HomeControl+ App via a standard Ethernet internet connection cable and also has the following features:

- Send Alarms to the ARC: With the DIGI-LAN it is possible to send alarm events to the monitoring station via Contact ID IP and SIA IP protocols.
- Program the panel remotely via secure network connection: With the DIGI-LAN it is also possible to program the PCX remotely via a secure internet connection and use of the InSite UDL software.
- Program the panel remotely via the PyronixCloud.
- Status LEDs: The DIGI-LAN features the industry standard Ethernet/LAN cable connection status and activity LEDs.
- Micro SD slot: For future features in development.

Wi-Fi Modem (DIGI-WIFI/XA)

The Wi-Fi modem card (DIGI-WIFI/XA) fits inside the PCX. It allows communications with the PyronixCloud and HomeControl+ App via a Wi-Fi internet connection and also has the following features:

- Send Alarms to the ARC: With the Wi-Fi modem card it is possible to send alarm events to the monitoring station via Contact ID IP and SIA IP protocols.
- Program the panel remotely via secure network connection: With the Wi-Fi modem card it is also possible to program the PCX remotely via a secure internet connection and use of the InSite UDL software.
- Program the panel remotely via the PyronixCloud.

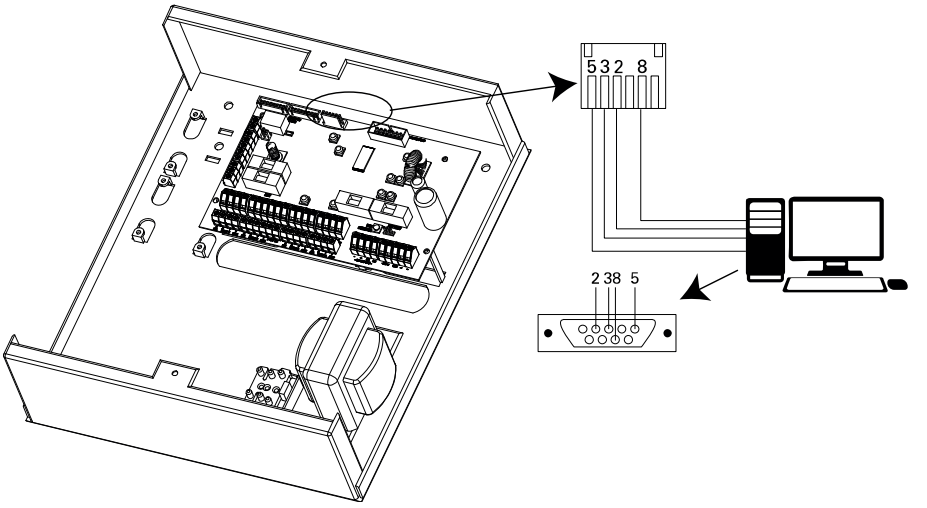
Connecting to the Upload/Download Software

The PCX can be programmed by a keypad or the UDL InSite Software provided free of charge. You can download the UDL InSite Software from www.pyronix.com.

The connection between control panel and UDL software can be done in the following ways:

- Serial connection (RS232)
- PyronixCloud connection (DIGI-GPRS, DIGI-LAN, DIGI-WIFI/XA)

Serial Connection (RS232)



On the panel

1. Enter the Engineer Menu (code **9999**).
2. Scroll the menu (✕ button) until **Options Up/Downloading** is displayed.
3. Choose **RS-232** in the **Download by** option.
4. On the **UDL Password** screen, do not enter anything and press ✓.
5. On the **UDL Priority** screen, we recommend setting this to **High** [**0**] to prevent events and notifications from disconnecting the UDL connection. Press ✓.

On InSite UDL software from a PC

1. To setup the COM port associated to **Modem**, open the software, click on **Configuration > Modem Settings > RS-232**.
2. Make sure that the serial COM used by UDL is the same set in the PC (**Control Panel > Device manager > Ports**.
3. Make sure that the RS-232 icon in the UDL graphic user interface is green.
4. Click on **Force Dial Customer**.
5. Set the **Dial Mode** field to **RS-232**.
6. Enter the Engineer Code in the **Engineer Code** field.
7. Click on **Dial**.

   If connection is successful, the RS-232 icon will become blue.

PyronixCloud Connection

Make sure that the panel is connected to an internet connection, either by LAN, Wi-Fi, or GPRS using a data-enabled SIM card.

On the panel

1. Enter the Engineer Menu (code **9999**).
2. Scroll the menu (✕ button) until on **Options Up/Downloading**. Press ✓.
3. Choose **Cloud** (option **6**) in the **Download by** options. Press ✓.
4. Make a note of your System ID (to enter in the InSite Software later). Press ✓.
5. Select the security type. For initial connections we recommend [**0**] (Standard). Press ✓.
6. Create or enter a system password and take note of it. Press ✓.
7. On the **Poll Server?** screen, select **Yes** [**1**]. Press ✓.
8. On the **UDL Password** screen, do not enter anything and press ✓.
9. On the **UDL Priority** screen, we recommend setting this to **High** [**0**] to prevent events and notifications from disconnecting the UDL connection. Press ✓.

On InSite UDL software from a PC

1. Click on **Force Dial Customer**.
2. Click on the **Dial Mode** drop-down list and select **Cloud**.
3. Enter the **System ID** of your Panel (See **Options Up/Downloading** in the Engineer Menu on panel) into the field titled **Serial Number**.
4. Enter the **System password** (as entered in **Options Up/Downloading** on the panel into the field titled **System password**.
5. Leave the UDL security level at **Normal** for initial connection test in **System UDL Security Level** field.
6. Enter the **Engineer Code** as used on the panel you are trying to connect.
7. In the **Enter Customer In Database As** field, simply give the panel you are connecting to an appropriate name.
8. Click **Dial**. If the connection is successful, the Cloud Icon will become blue, a dialogue box will appear asking if you would like to create a customer – click **Yes** to continue.
9. The panel is now successfully connected to the InSite UDL software.

Configuration

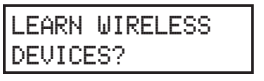
The Engineer Menu

The system is programmed from the Engineer Menu. To enter the Engineer Menu, the panel must be in fully disarmed state. Whilst in Engineer Mode, all tamper alarms (excluding PA and safety devices) will be disabled.

Navigating in the Engineer and User Menus

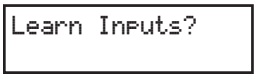
[X]	**NO**	Press to move forward when in Engineer or Master Manger mode.
[B]	**BACK**	Press to move backward when in Engineer or Master Manger mode.
[✓]	**YES**	Press to enter in a submenu or option when in Engineer or Master Manger mode. Press to move from one option into another option while in a submenu.
[A]	**EXIT**	Press to quick exit the Engineer Menu from any main menu (written in capital letters).
[C]	**CANCEL**	Press to move back from one programmable option to the previous option.

Main Menus and Sub Menus



You are in a main menu item if:

- The maintenance LED is flashing slowly
- The menu item will be in upper case letters with a question mark (?).



You are in a sub menu item if:

- The maintenance LED is flashing rapidly
- The menu item will be in lower case letters.

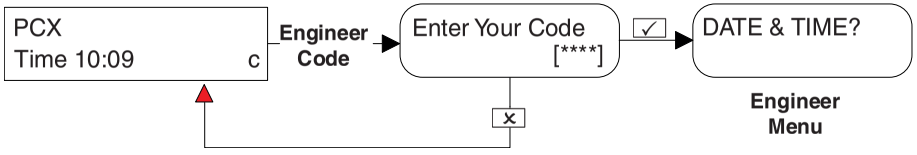
In order to navigate in the menu system, one has to answer the questions in the main and sub menus. For example, if the question is **LEARN WIRELESS DEVICE?**:

- Pressing [✓] will bring you in the sub-menu **Learn Inputs?**
- Pressing [✓] again will take you to the programmable options of this submenu.
- Pressing [X] will take you out of the individual option, will move you up from one submenu to the next sub-menu or back to the main menu.

Notice *For your security, the keypad becomes disabled for 120 seconds after 13 incorrect keypresses, or after 3 attempts to present invalid tags. It will subsequently be disabled again after 7 further incorrect key-presses or after another invalid tag is presented. Once a correct code or tag has been registered, the keypad is returned to normal operation. PIN code entry must be completed within 60 seconds or it will count as an invalid code being used.*

Entering the Engineer Menu

To enter the Engineer Menu, enter the Engineer Code. The default Engineer Code is 9999.



Access maybe denied if:

1. One or more areas are armed.
2. The Master user has disabled the access of the Engineer Menu from **Allow Engineer Menu** in the Master Manager Mode. If this is the case **Authorisation required** will be shown on the display.

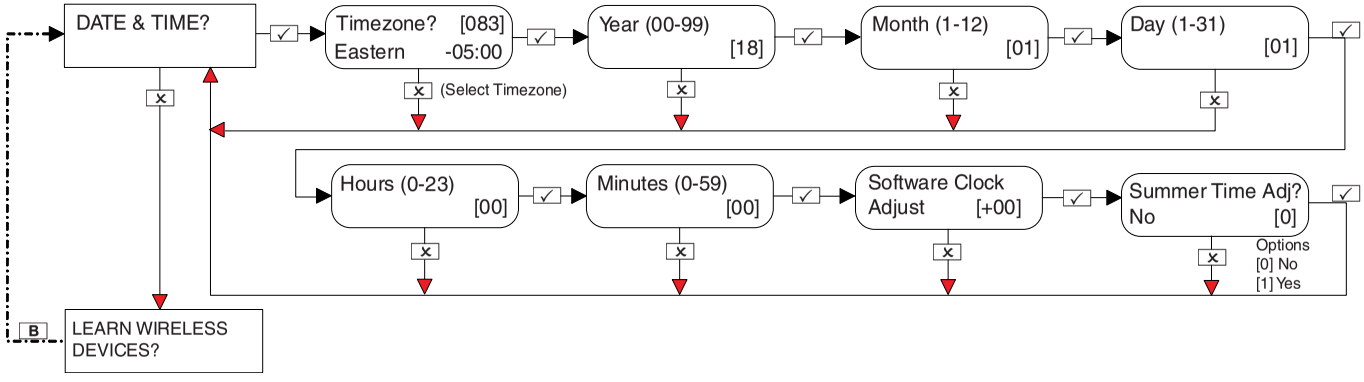
After entering the Engineer Code, the first option that is shown will be: **Date & Time?**. The fault (⚠) LED will flash and a high pitch tone will be generated regularly indicating the Engineer Menu has been accessed.

Accessing the Engineer Menu on any External Wired Keypad

It is possible to access the Engineer Menu on any keypad that is part of the system. If you are in the Engineer Menu in keypad address 0, the other keypads will display **System busy**.

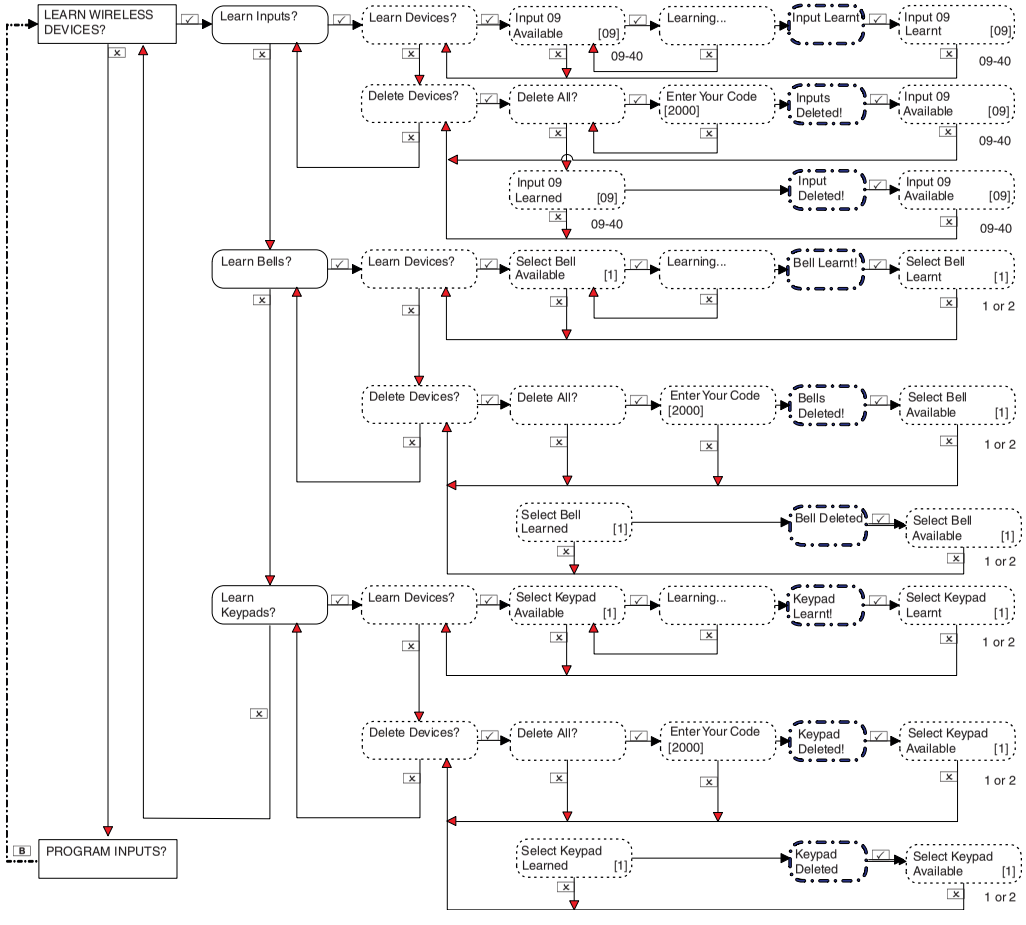
To access the Engineer Menu on a different keypad, press the B button on the relevant keypad.

Date & Time

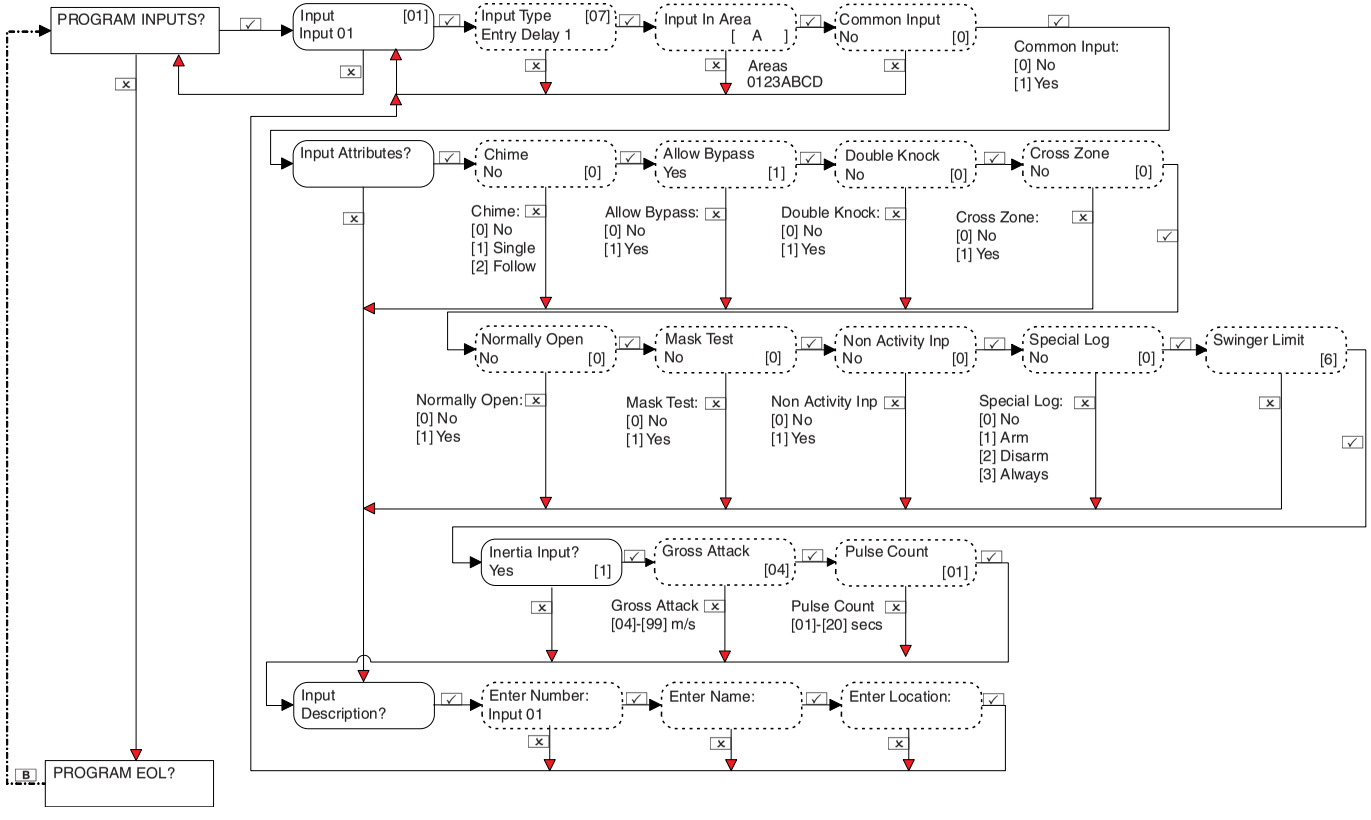

DATE & TIME?
Timezone? [083]
Eastern -05:00
(Select Timezone)
Year (00-99) [18]
Month (1-12) [01]
Day (1-31) [01]
Hours (0-23) [00]
Minutes (0-59) [00]
Software Clock Adjust [+00]
Summer Time Adj? No [0]
Options
[0] No
[1] Yes
B
LEARN WIRELESS DEVICES?

Learn Wireless Devices

This function can only be used if a PCX-RIX32-WE (Enforcer wireless expander) is installed on the PCX.

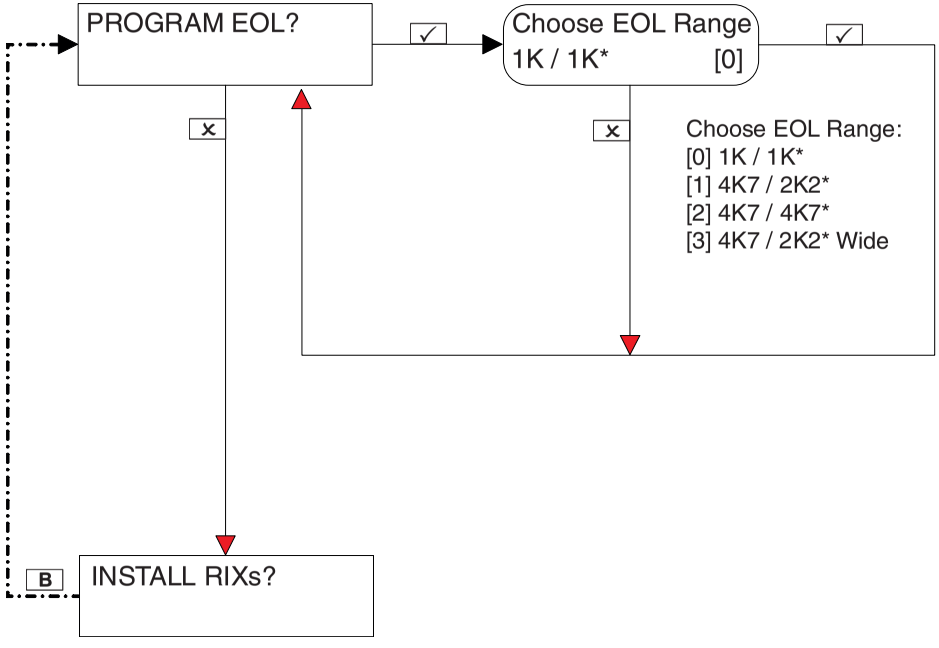


Program Inputs



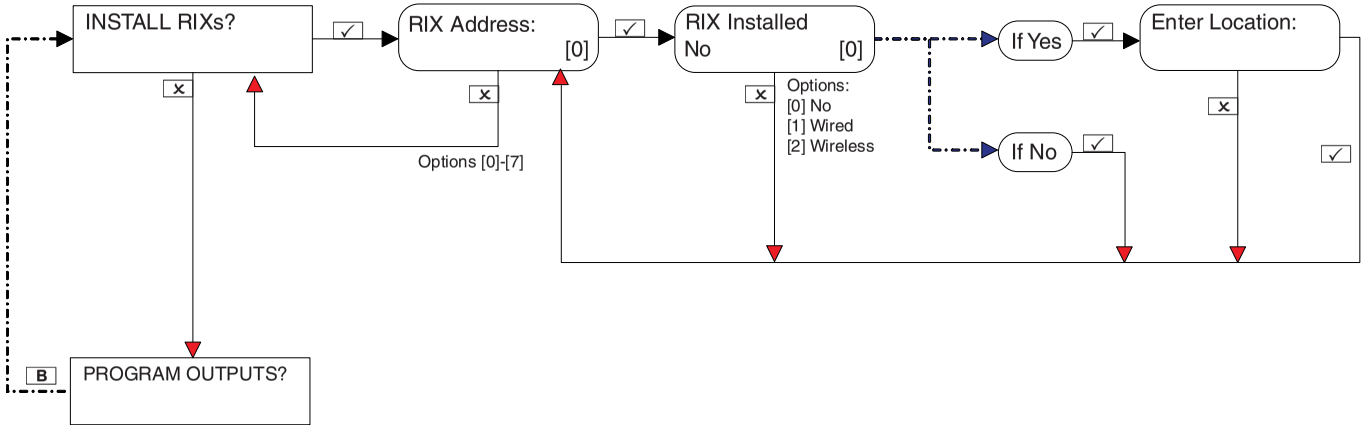
► *For more information, see "Input Types" on page 81*

Program EOL

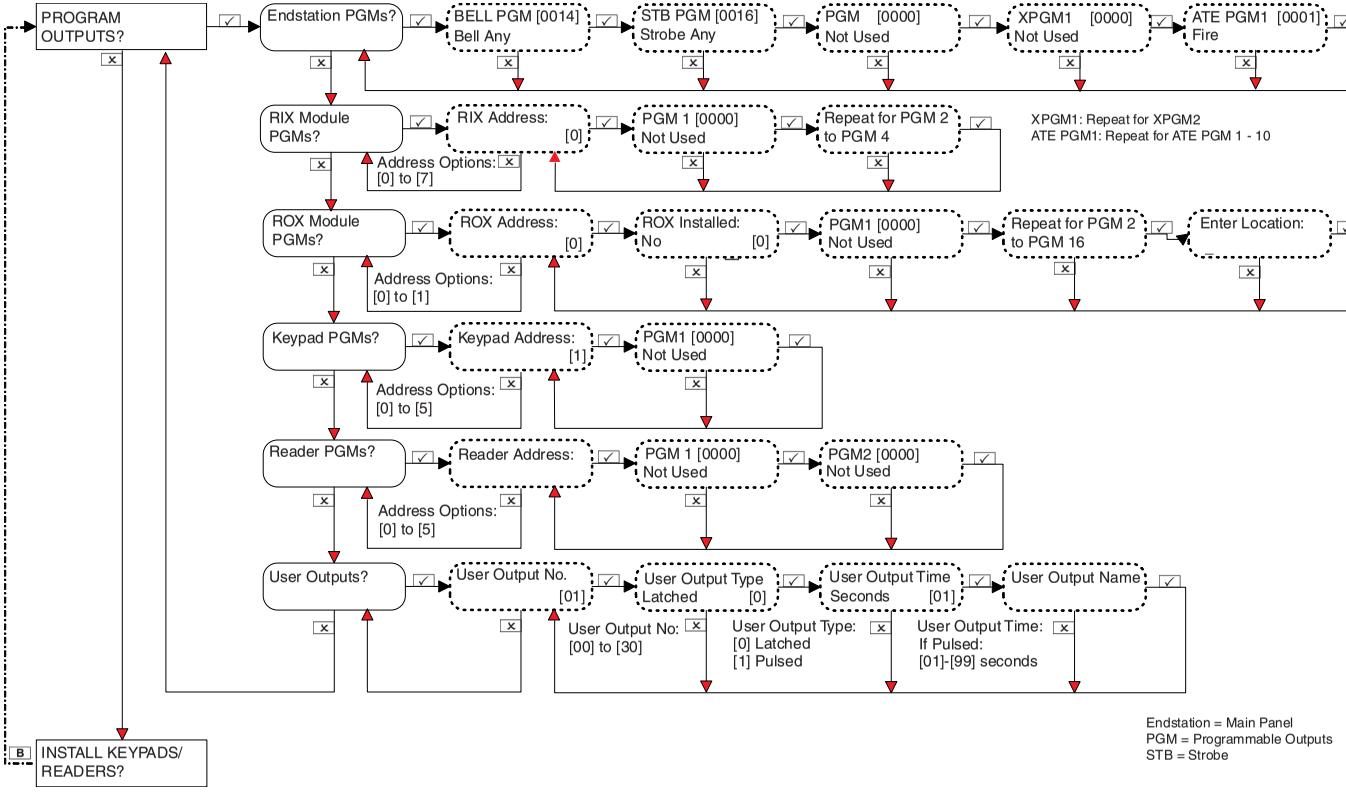


* Indicates the value of the Single End of Line resistor.

Install RIXs

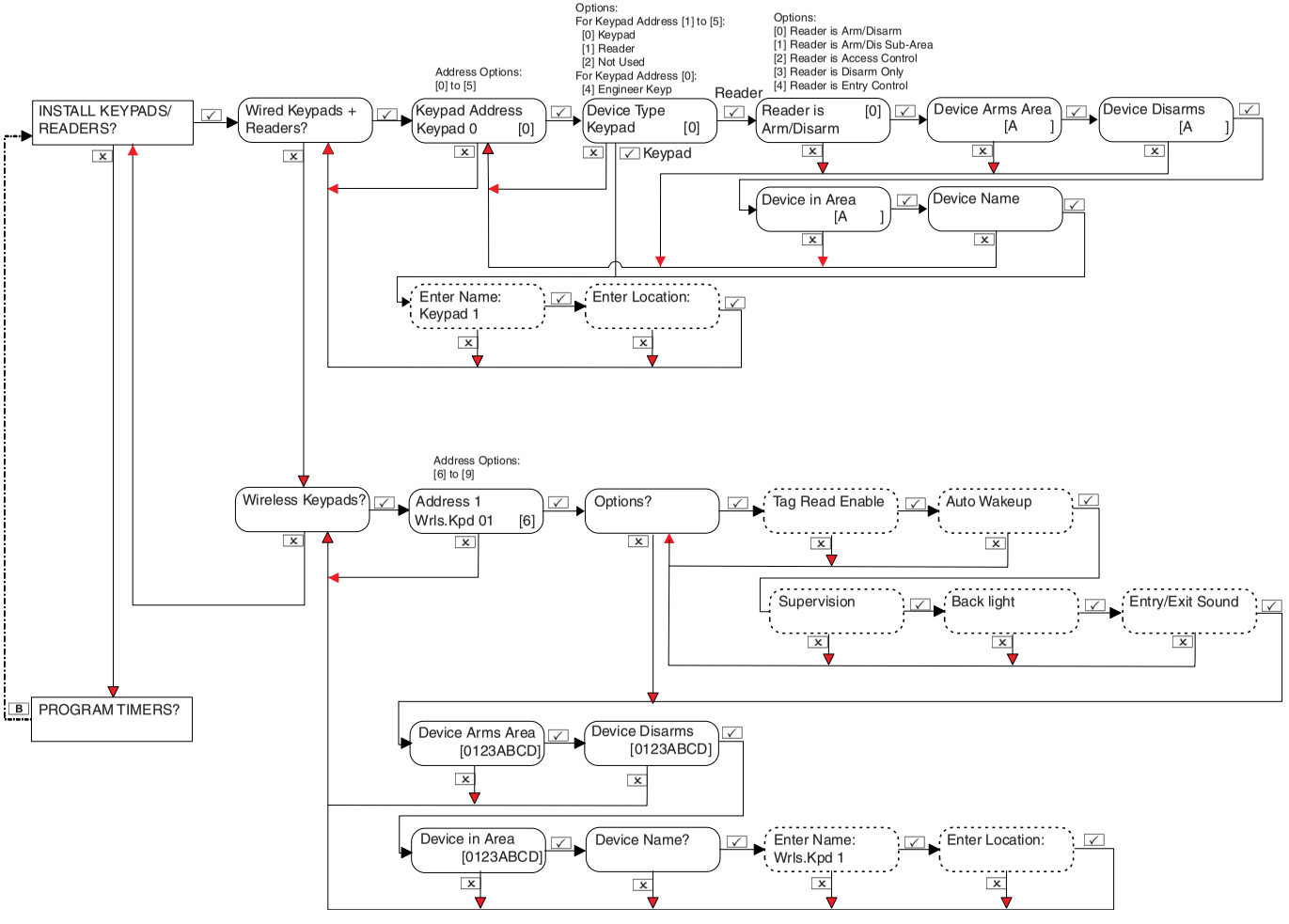


Program Outputs

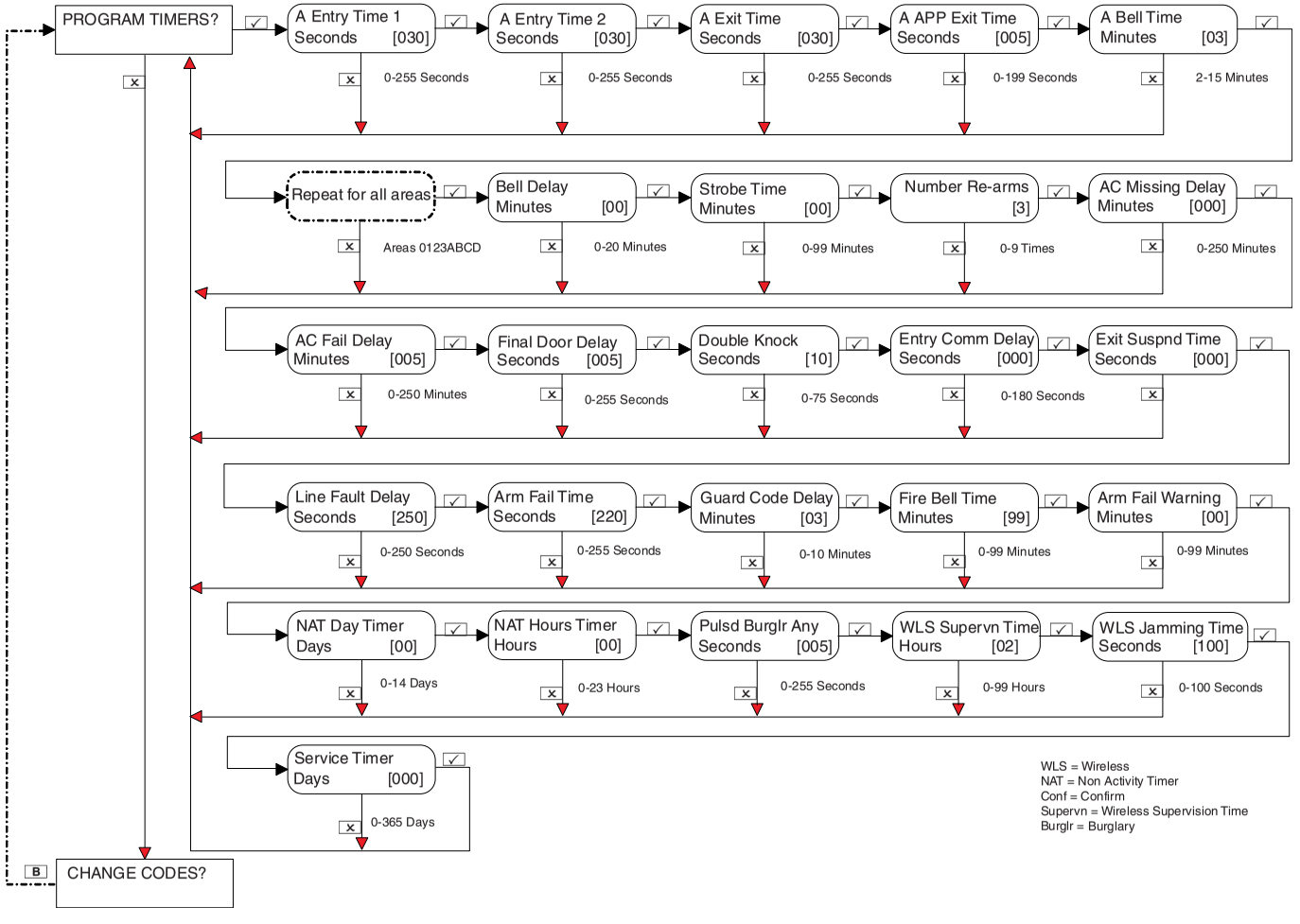


► *For more information, see "Output Types" on page 82*

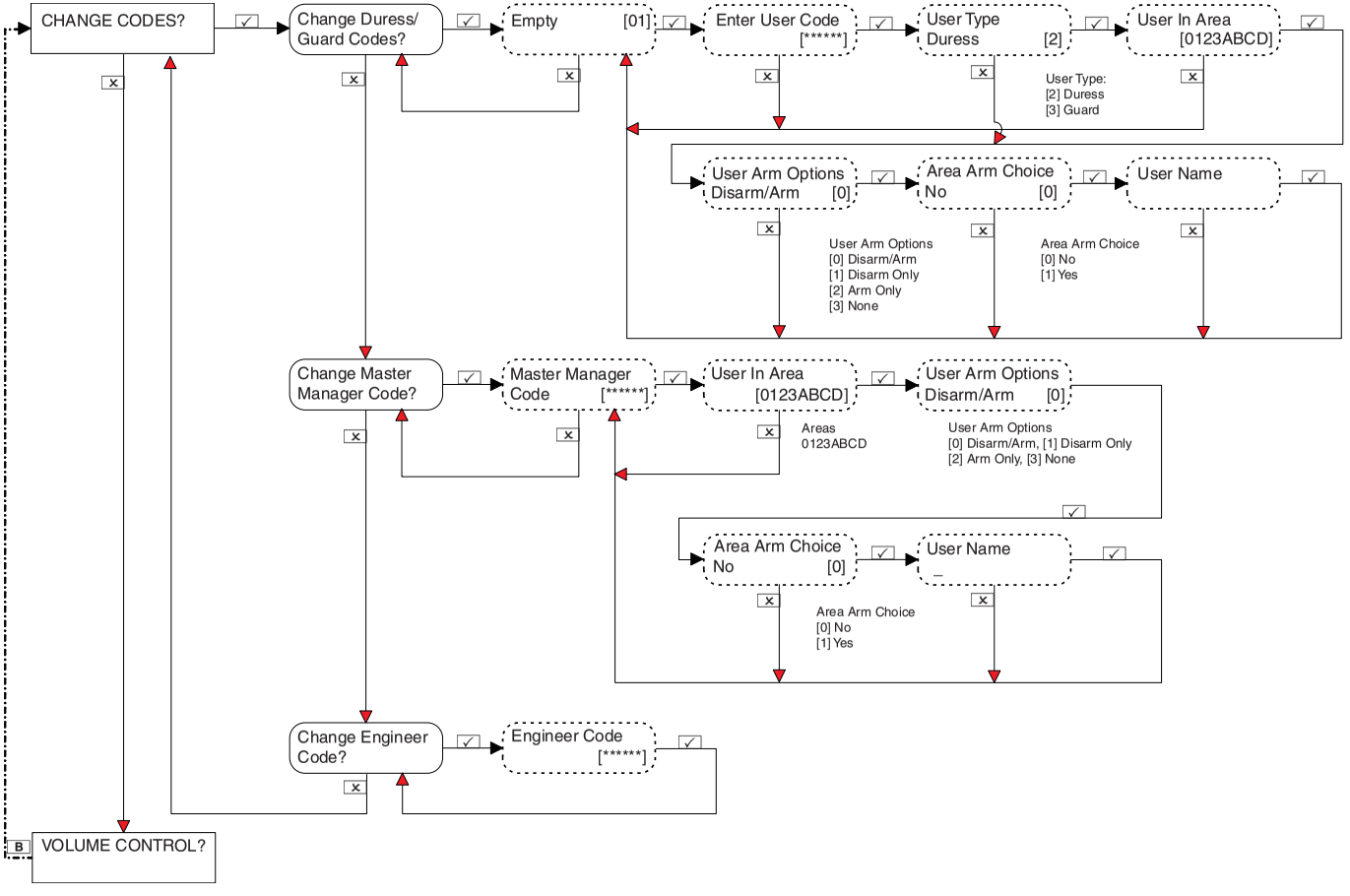
Install Keypads/Readers



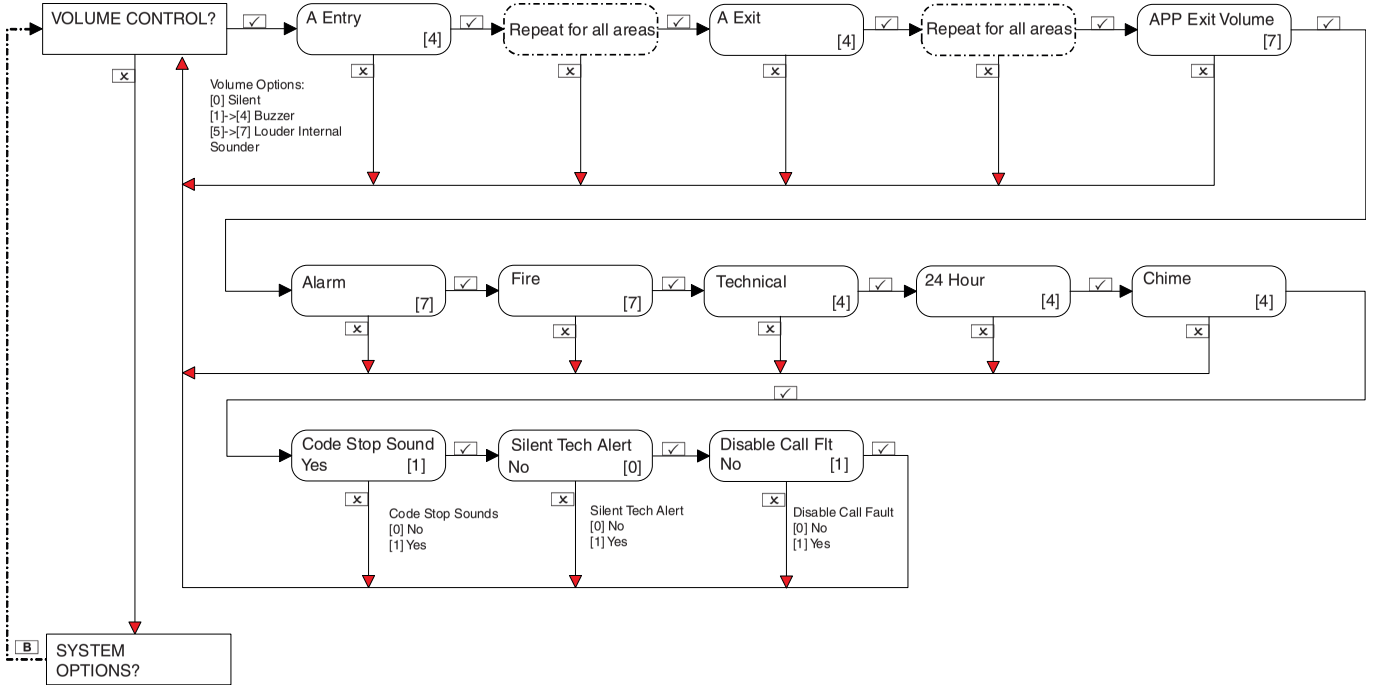
Program Timers



Change Codes

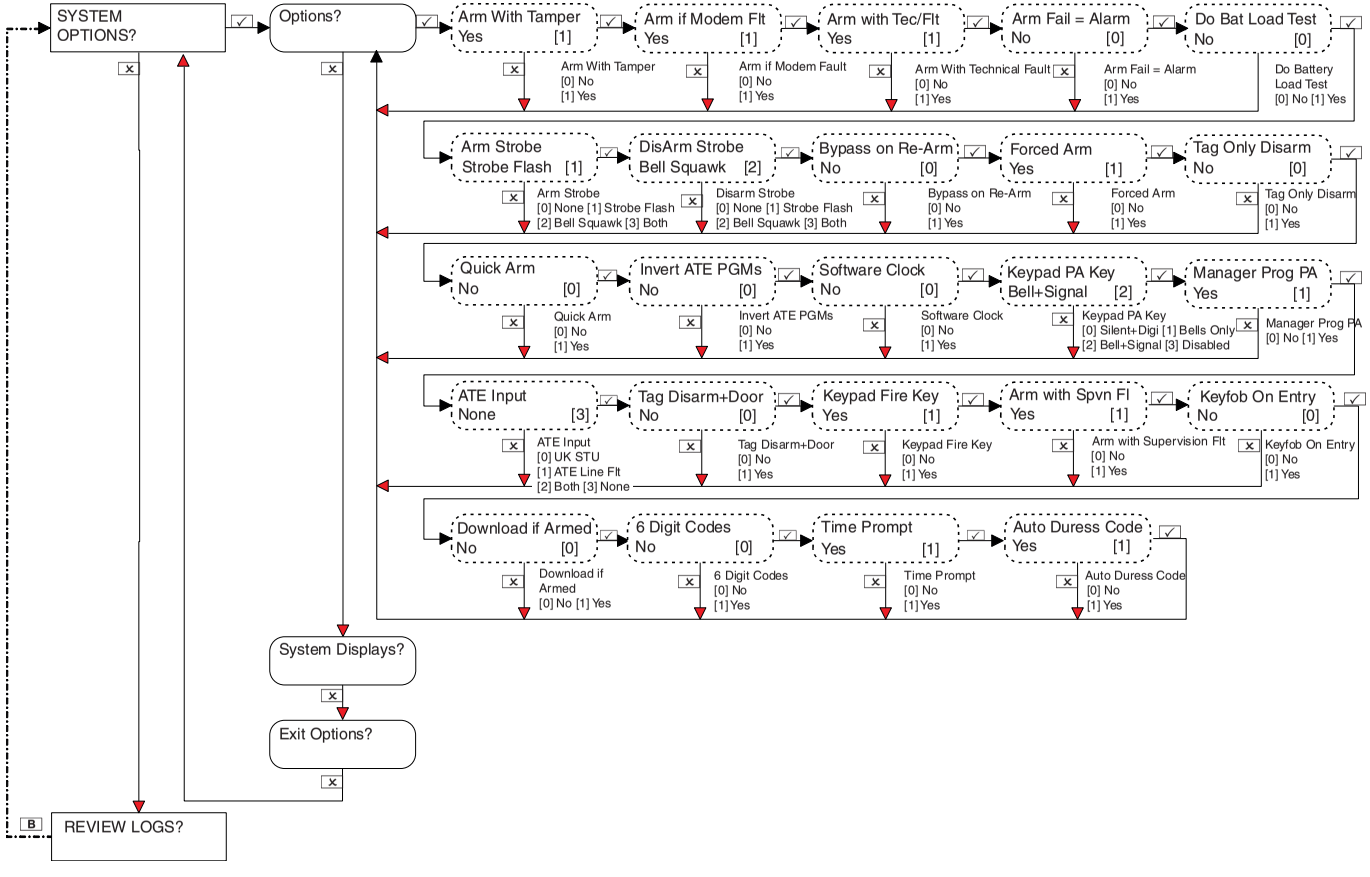


Volume Control

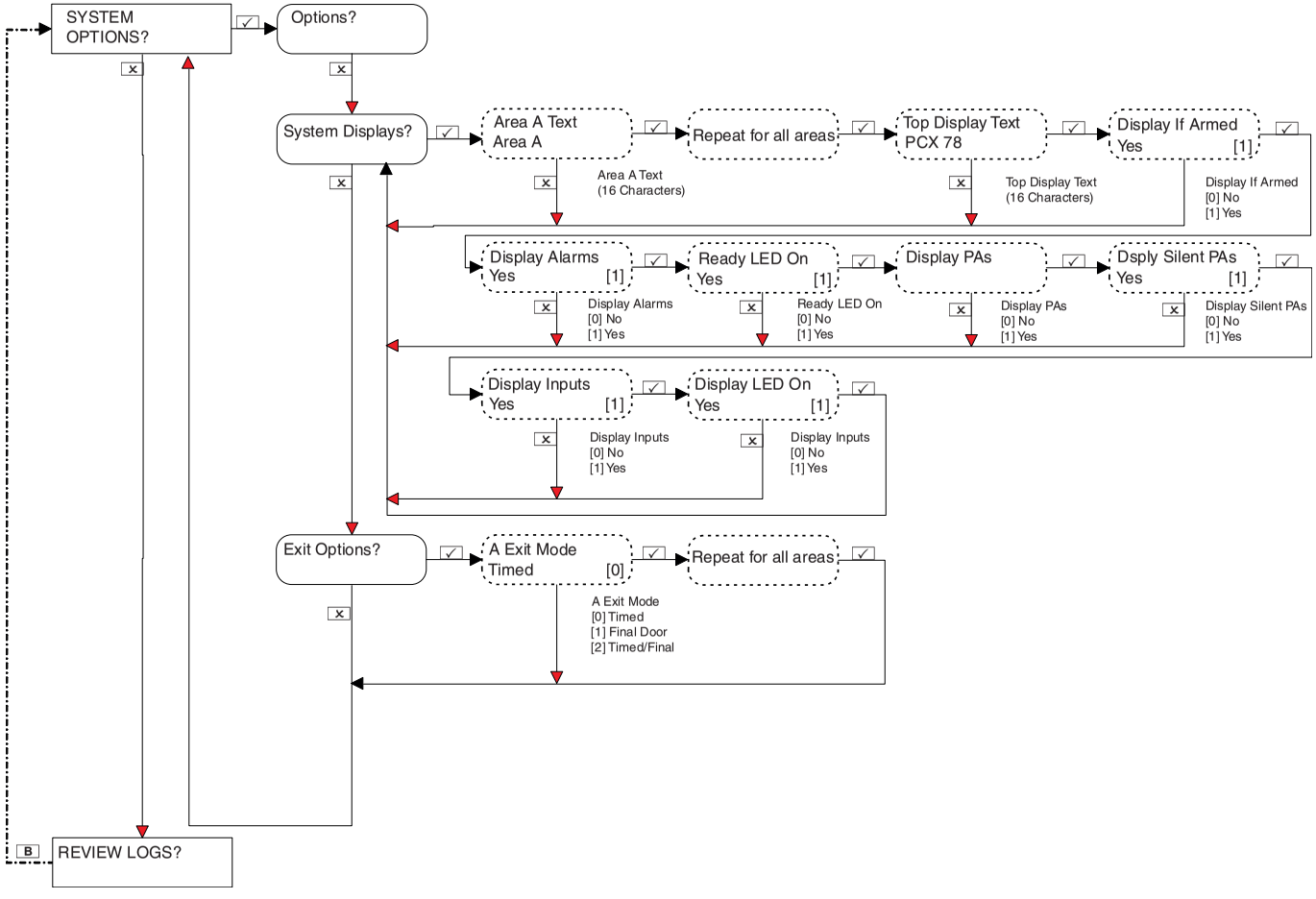


System Options

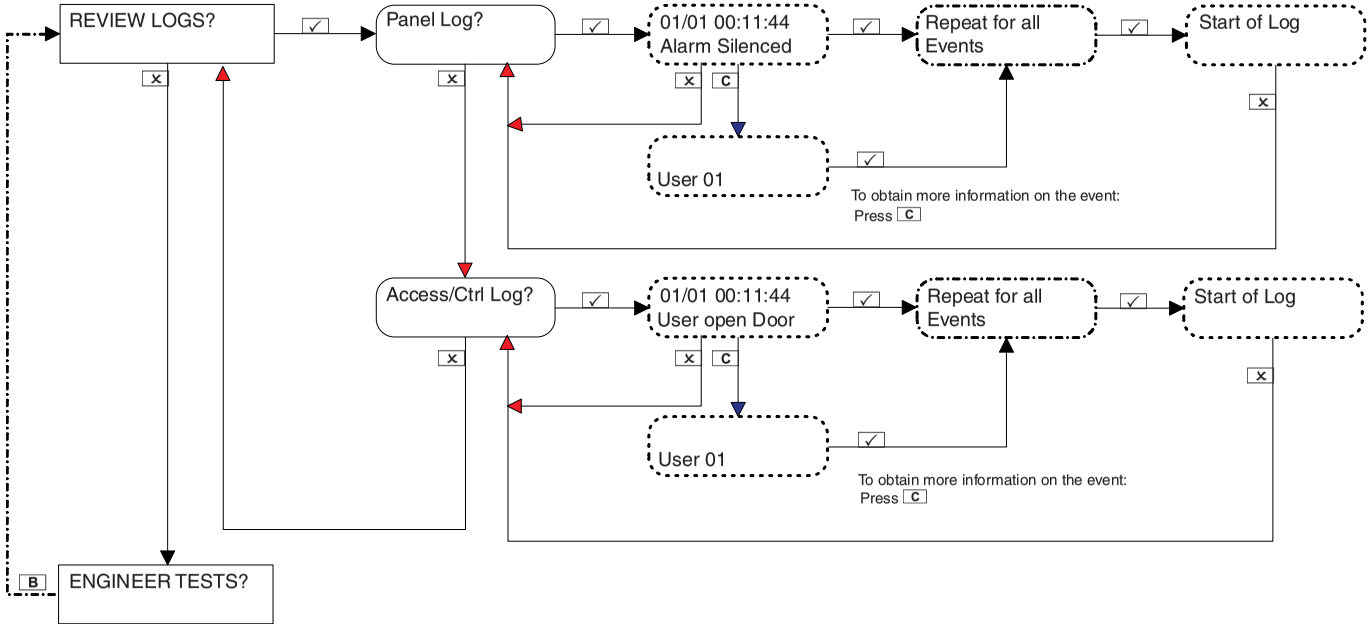
Options



System Displays and Exit Options



Review Logs

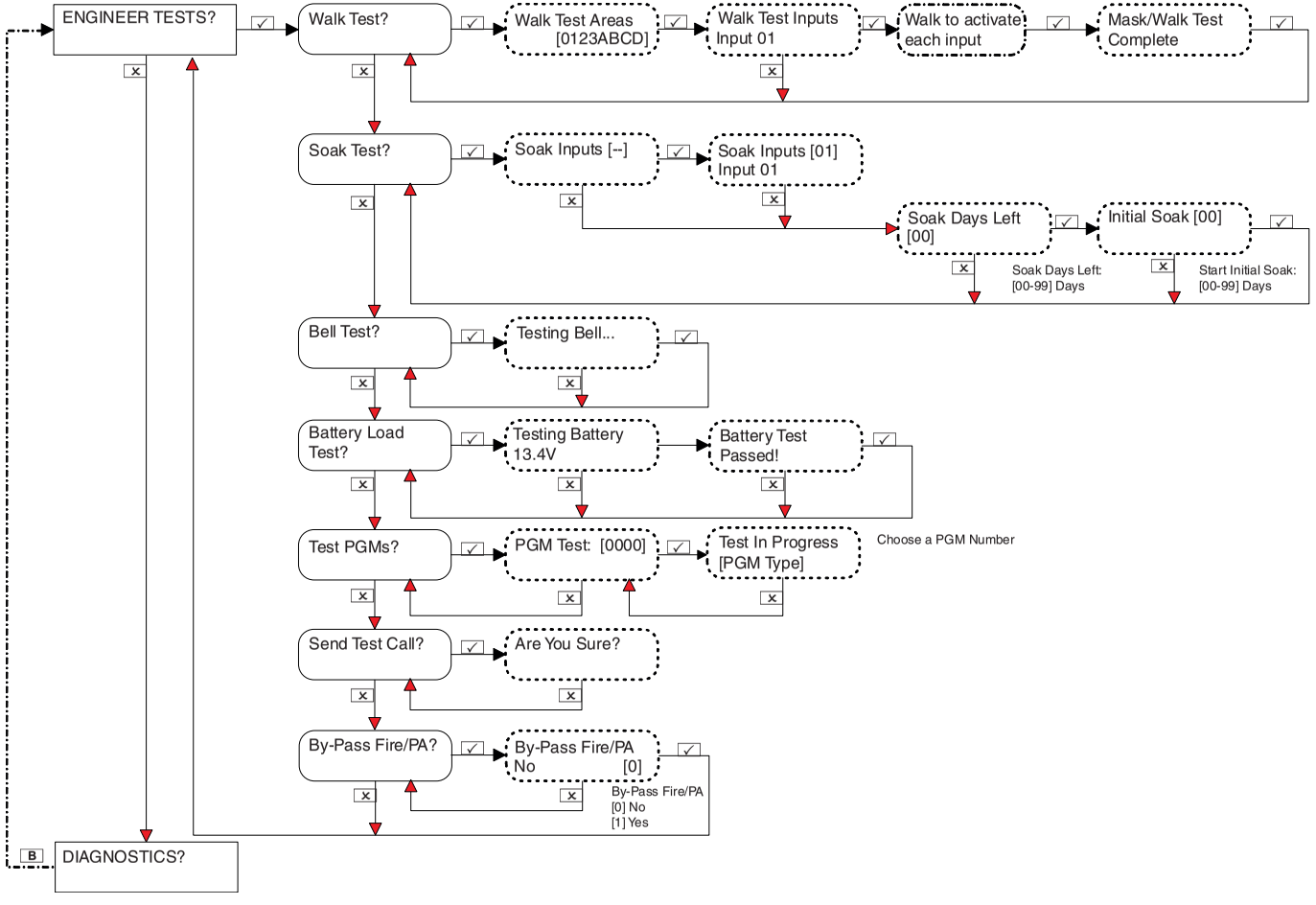


If a device on the PCX is not installed correctly or has been lost from the bus, a device fail will be present. An example of each fault is as follows:

- Failure on the panel = “Control Panel, Battery Fault”
- Keypad address 3 failure = “Device 3, Device Fail Kpd”
- Internal/External Tag Readers address 2 failure = “Device 2, Device Fail Trd”
- Remote Input Expander address 0 = “RIX-00, Device Fail RIX”
- Remote Output Expanders address 0 = “ROX-00, Device Fail ROX”

If a name is entered for a device, the log displays the name instead of the address.

Engineer Tests

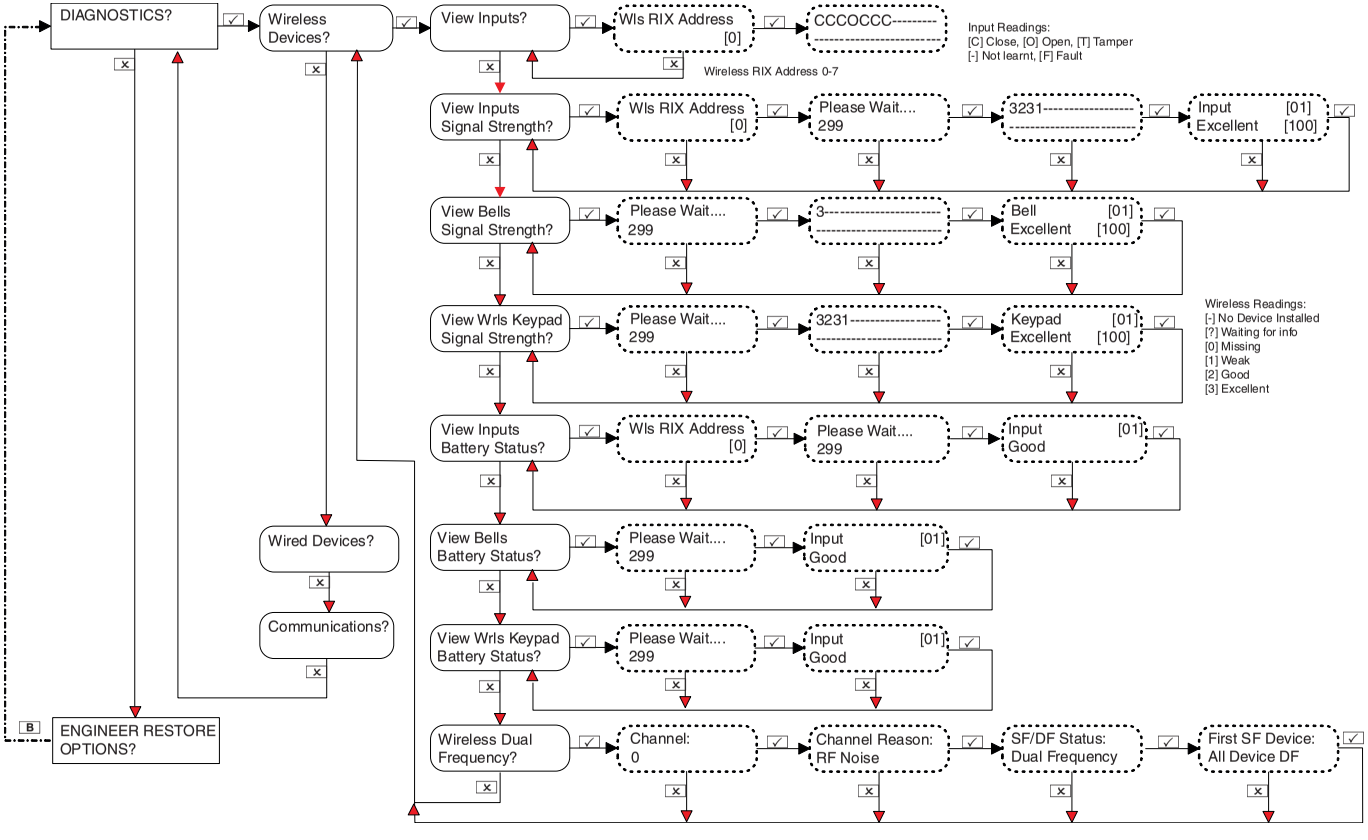


► *For more information, see "Output Types" on page 82*

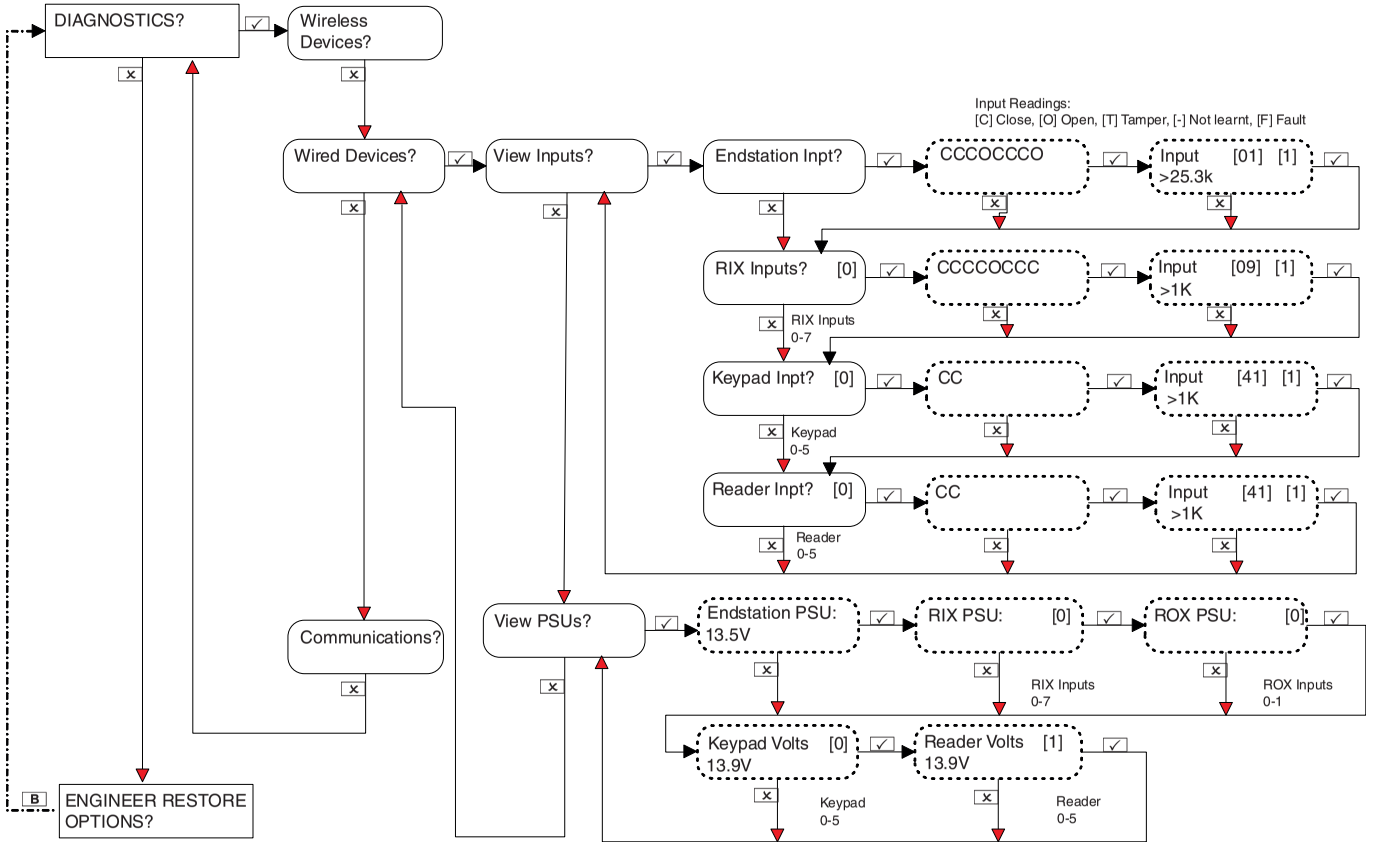
Diagnostics

Wireless Devices

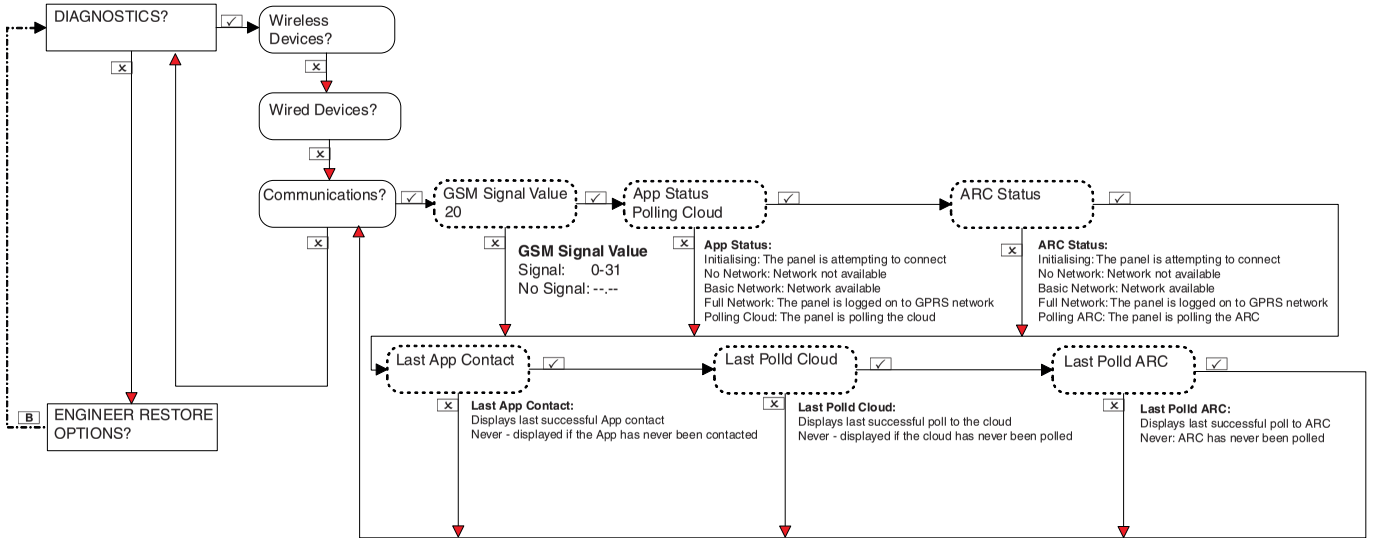
Wireless devices are only available if the PCX-RIX32-WE is installed.



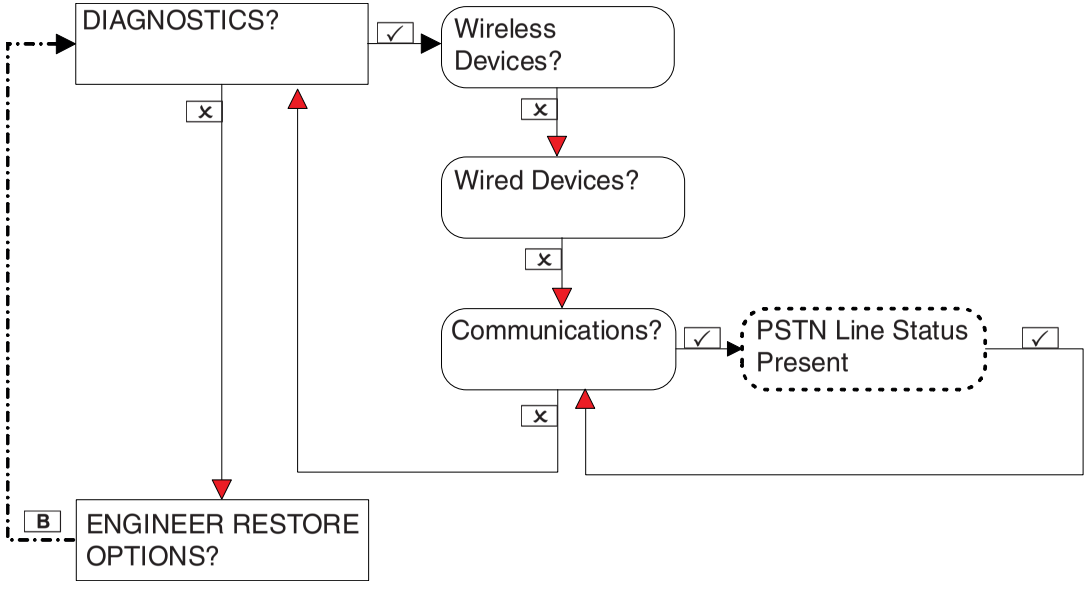
Wired Devices



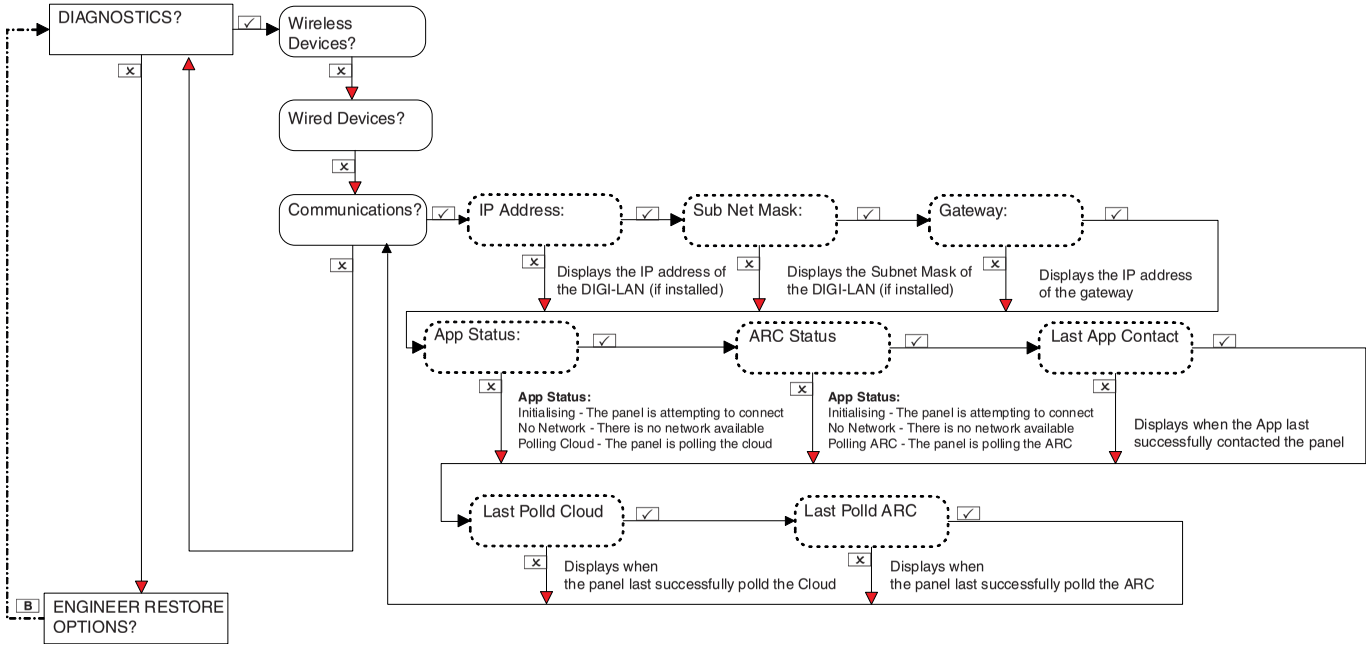
Communications (DIGI-GPRS)



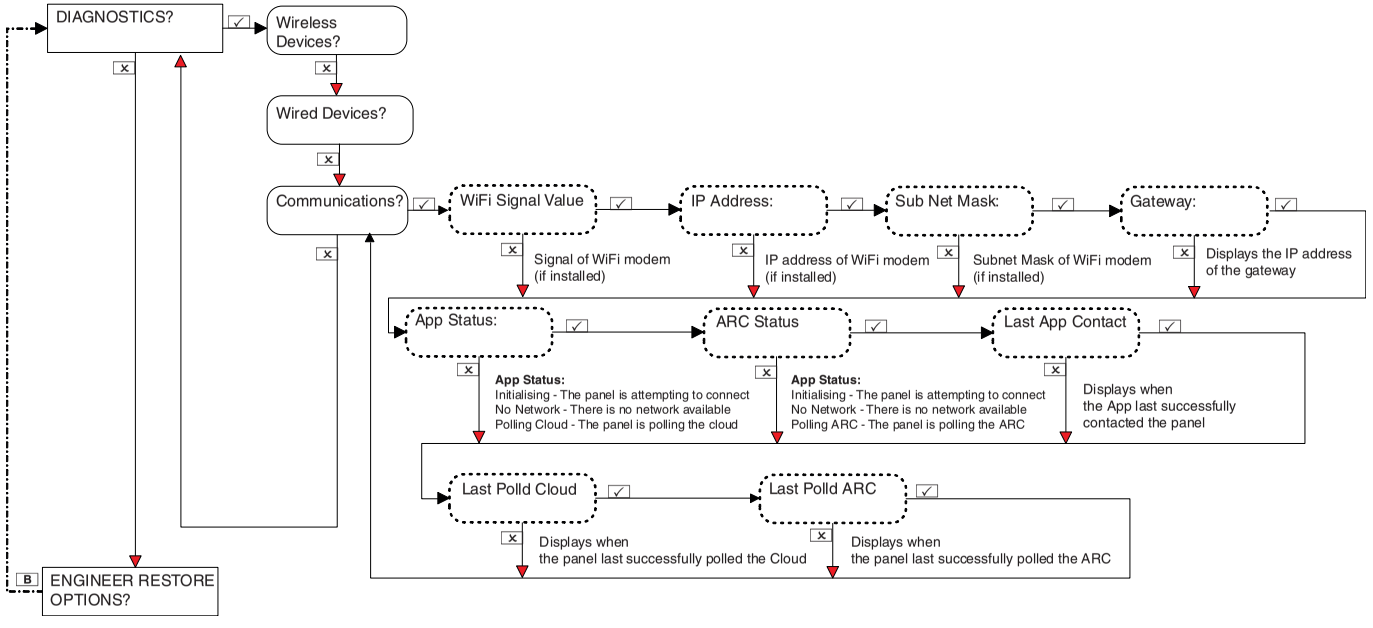
Communications (DIGI-1200)



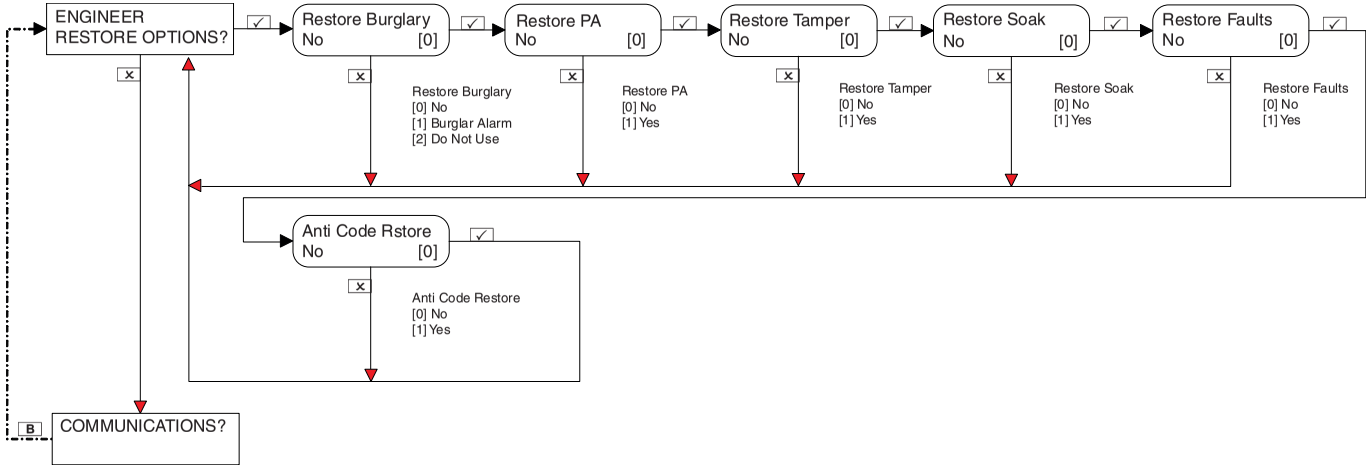
Communications (DIGI-LAN)



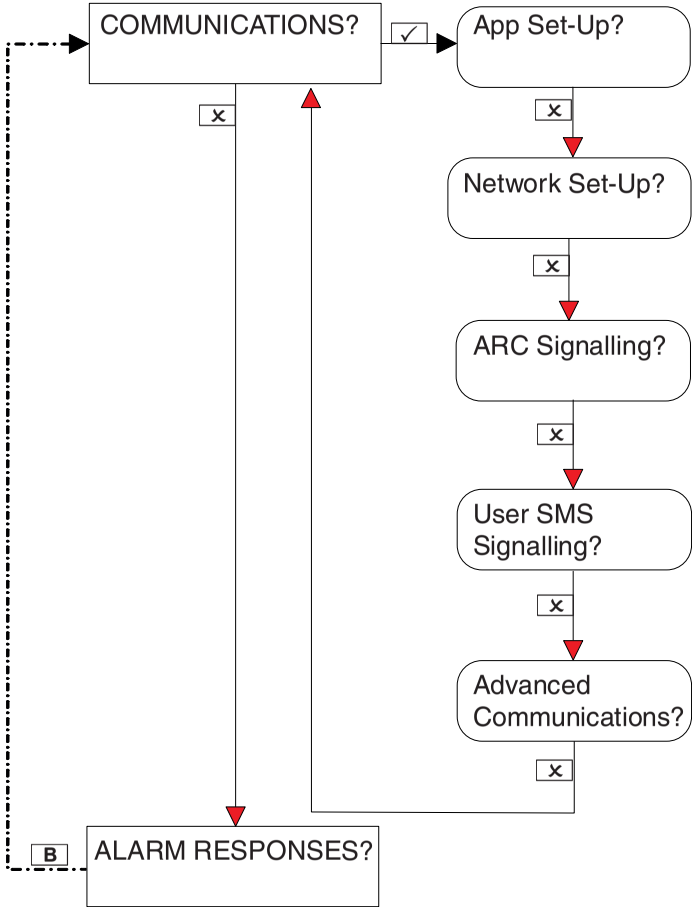
Communications (DIGI-WIFI/XA)



Engineer Restore Options



Communications



App Set-Up

This function enables or disables communication with the PyronixCloud and HomeControl+ app

Network Set-Up

Programs the DIGI-GPRS, DIGI-LAN or DIGI-WIFI/XA on the PCX.

ARC Signalling

Enables the PCX to signal either Contact ID IP or SIA 3 IP, or using the PSTN modem it can signal Contact ID or SIA Levels 1 & 3. All IP details and ARC setup are programmed in this menu.

User SMS Signalling

Enables the PCX to signal via SMS messaging as well as SMS remote control.

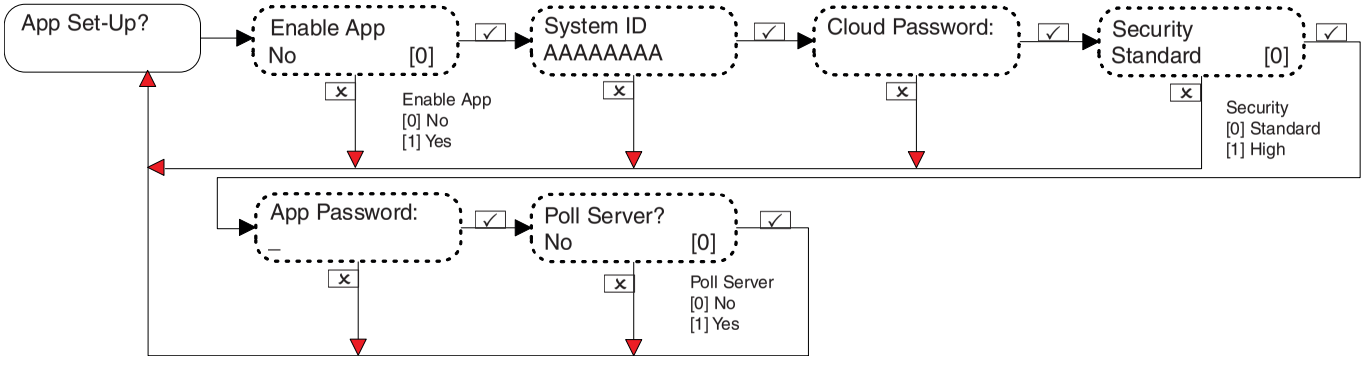
Advanced Communications

Configures advanced settings.

App Set-Up (standard security)

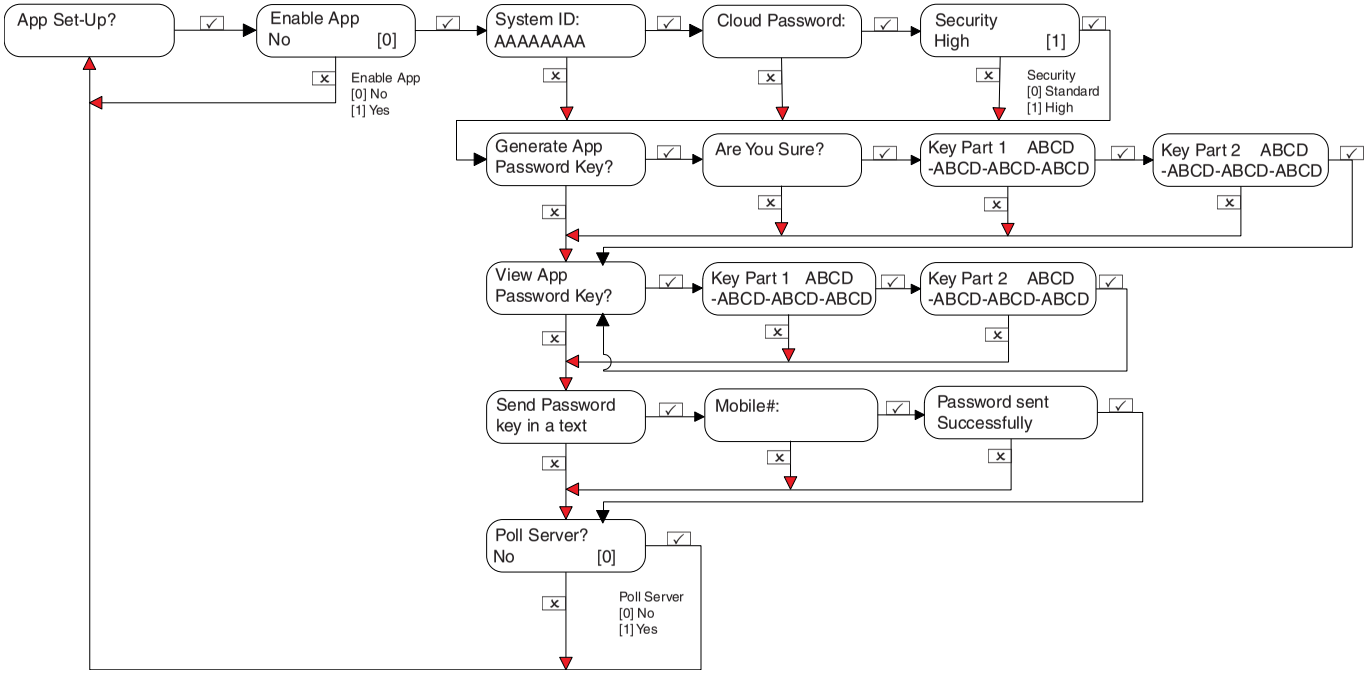
When creating passwords, please ensure that the password uses a variety of upper case, lower case, numbers and symbols to ensure the best security possible.

It is highly recommended to set **Poll Server** to **Yes**.

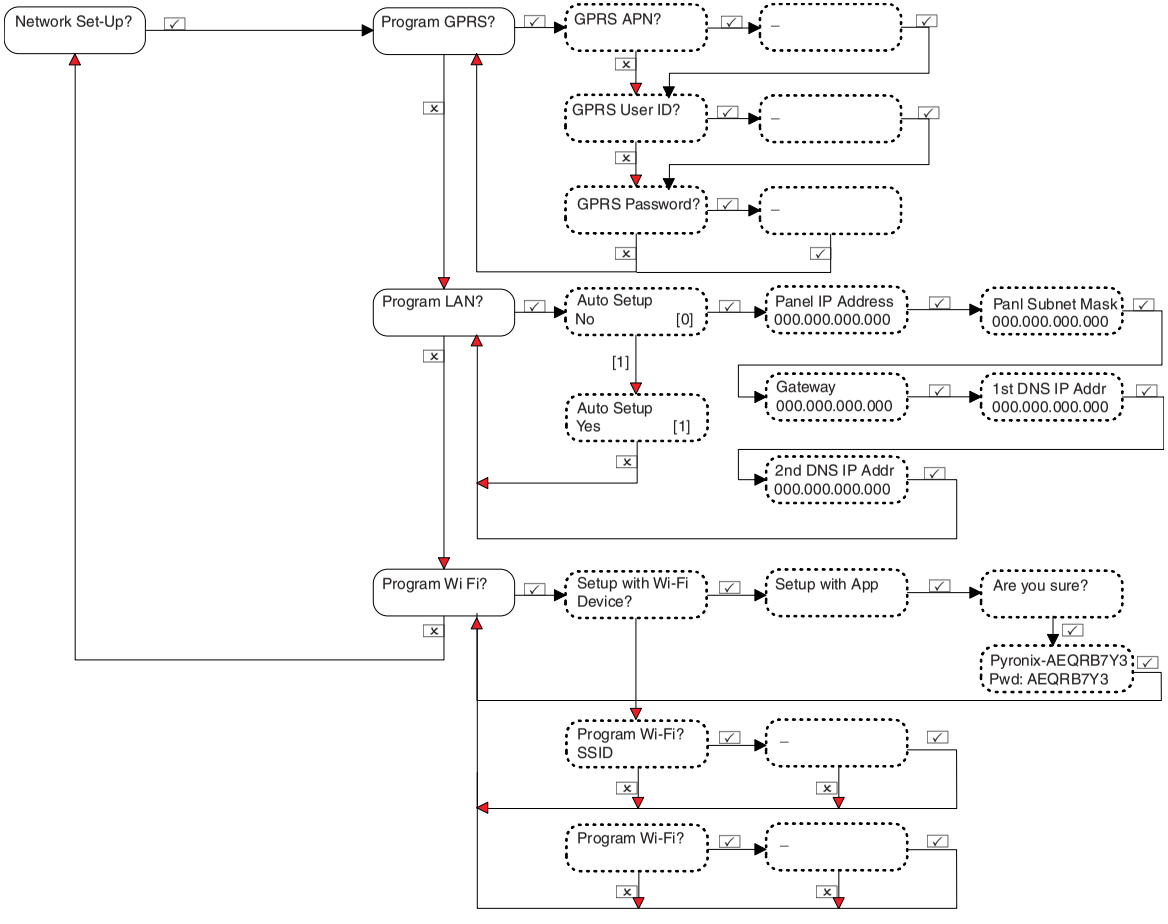


App Set-Up (high security)

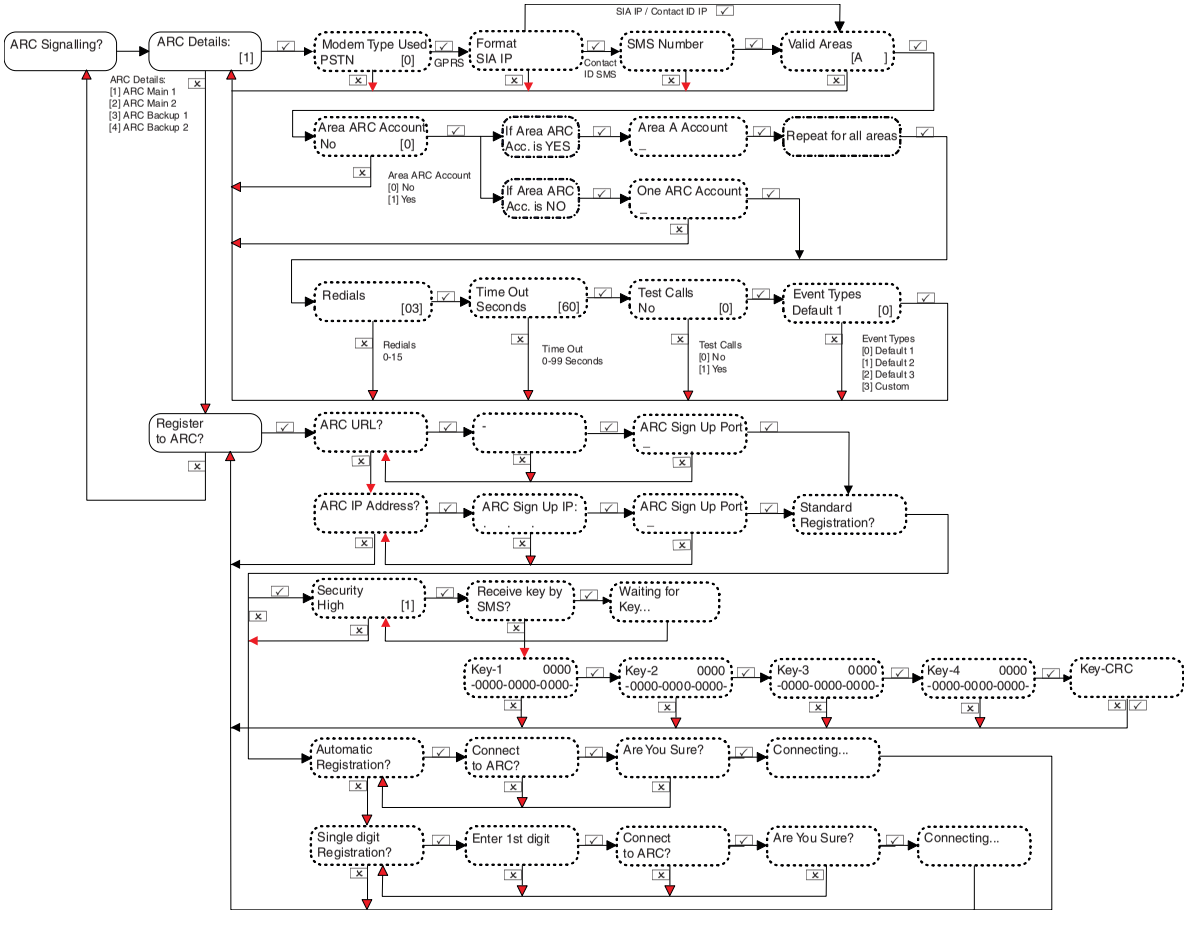
Mobile numbers can be entered with or without an international dialling code (e.g. +44). If you need to enter an international dialling code to send the key to a foreign SIM card, use the A key to enter the '+' symbol.



Network Set-Up



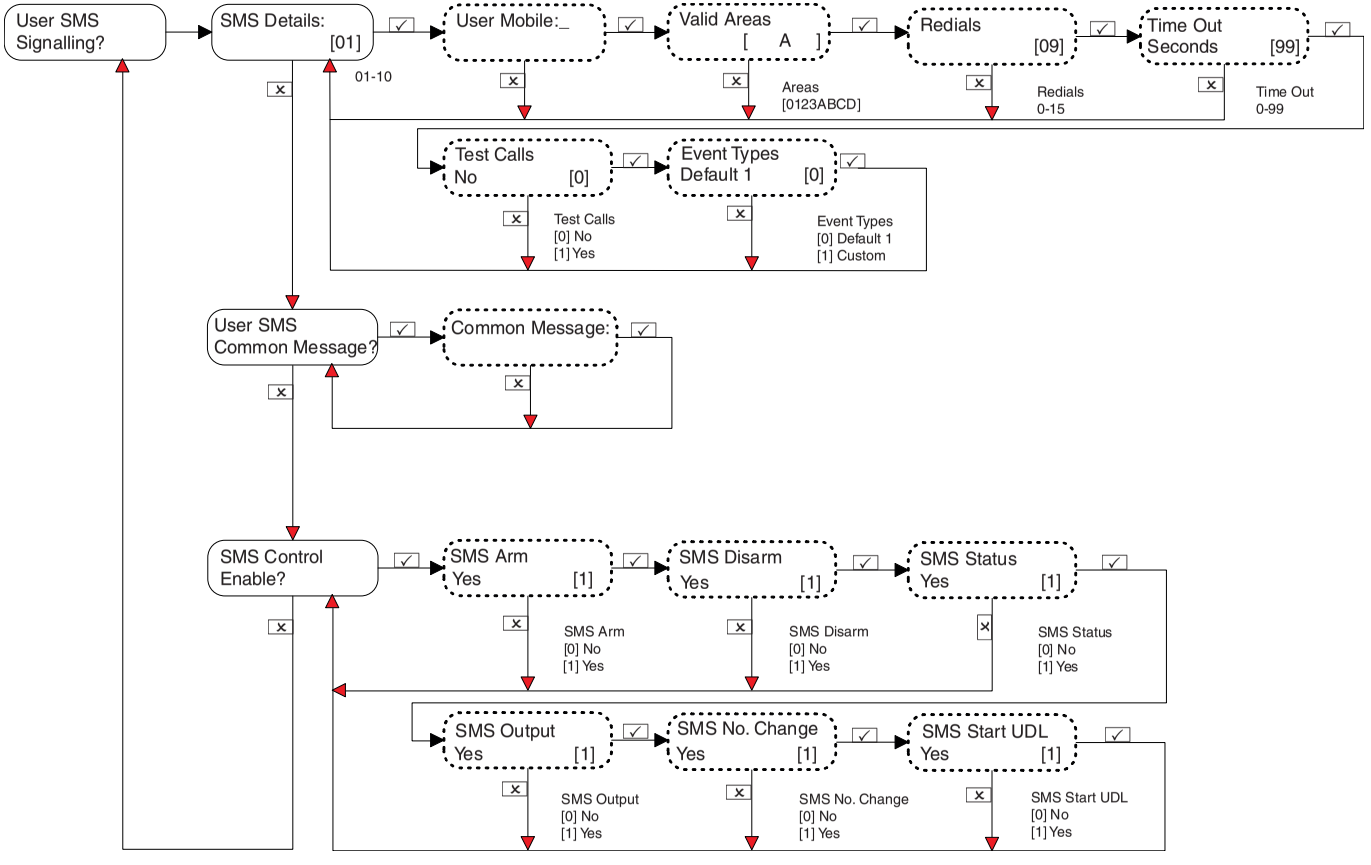
ARC Signalling



► *For more information, see "Event Types" on page 89*

User SMS Signalling

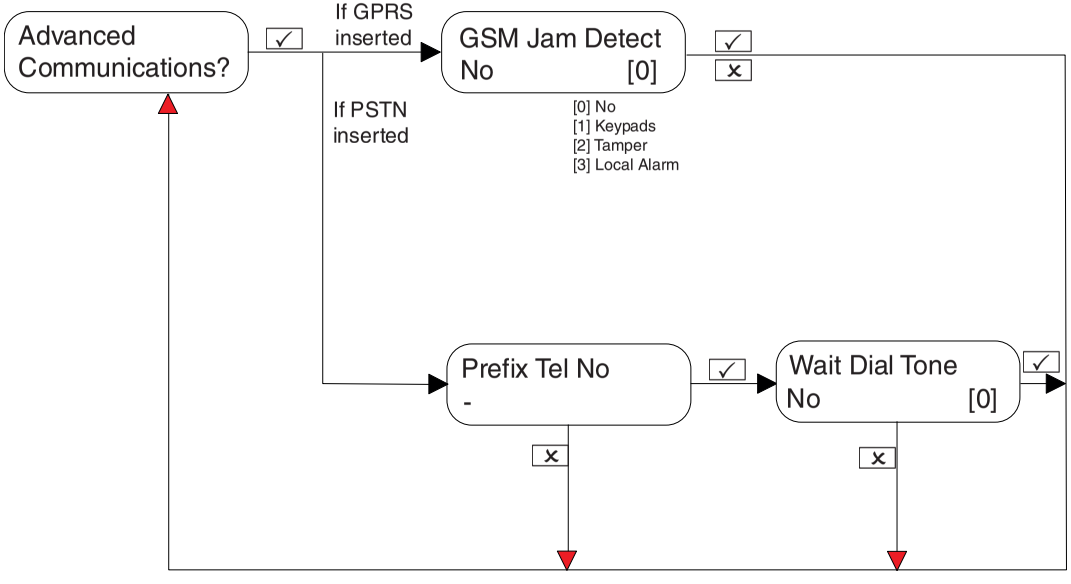
Mobile numbers can be entered with or without an international dialling code (e.g. +44). If you need to enter an international dialling code to send the key to a foreign SIM card, use the [A] key to enter the '+' symbol.



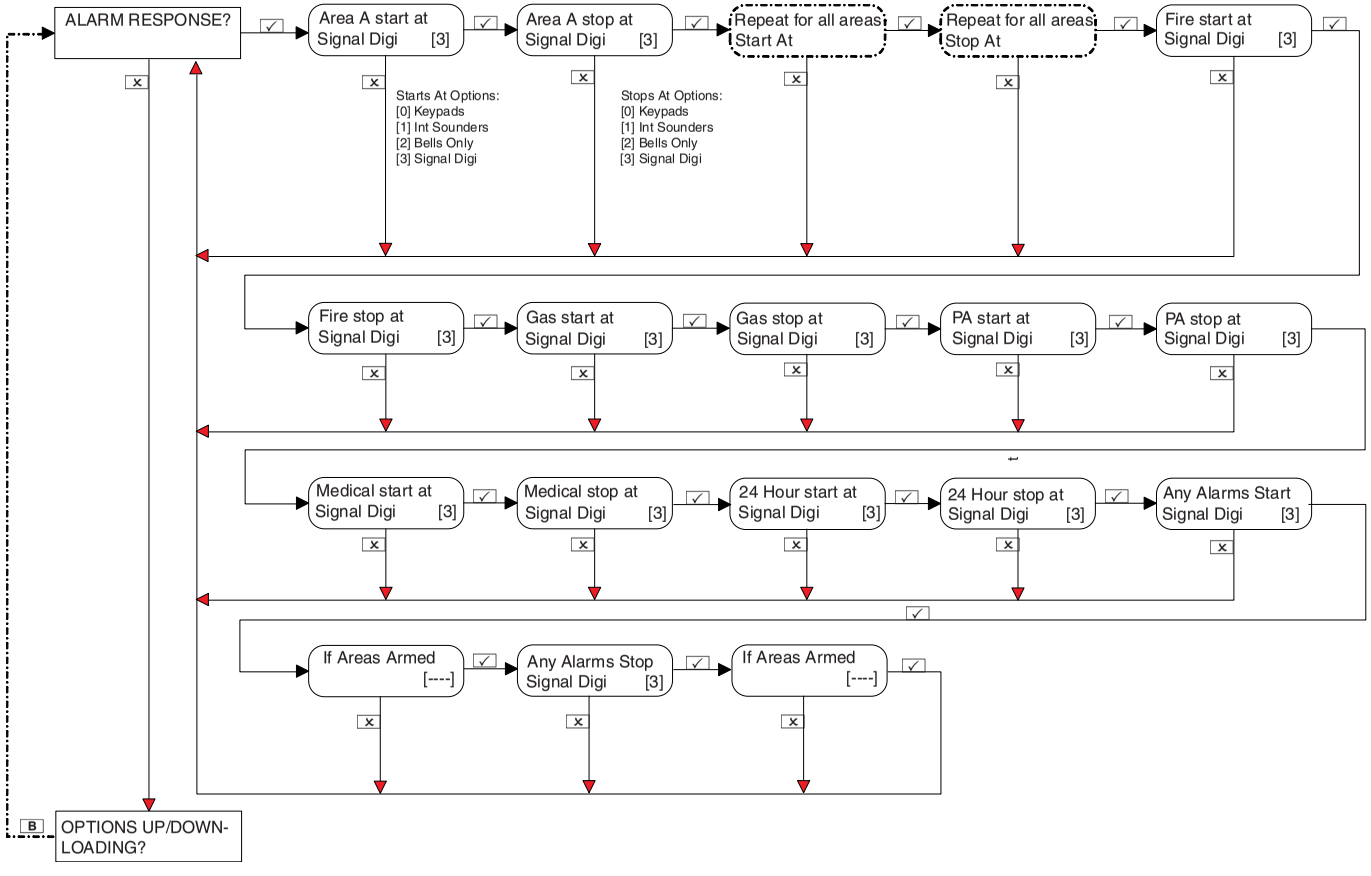
If **Test Calls** is selected as **Yes**, the following menu strings will be displayed:

- **Start Time Hours** and **Set Time Minutes**: The time the test call begins.
- **Interval Days**, **Interval Hours** and **Interval Minutes**: The interval time between each test call.

Advanced Communications

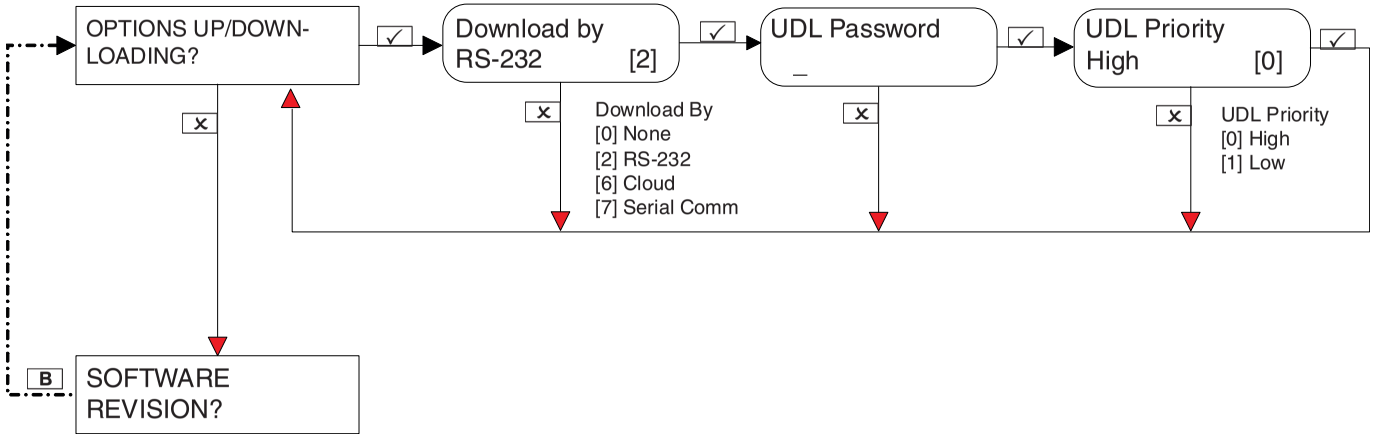


Alarm Responses

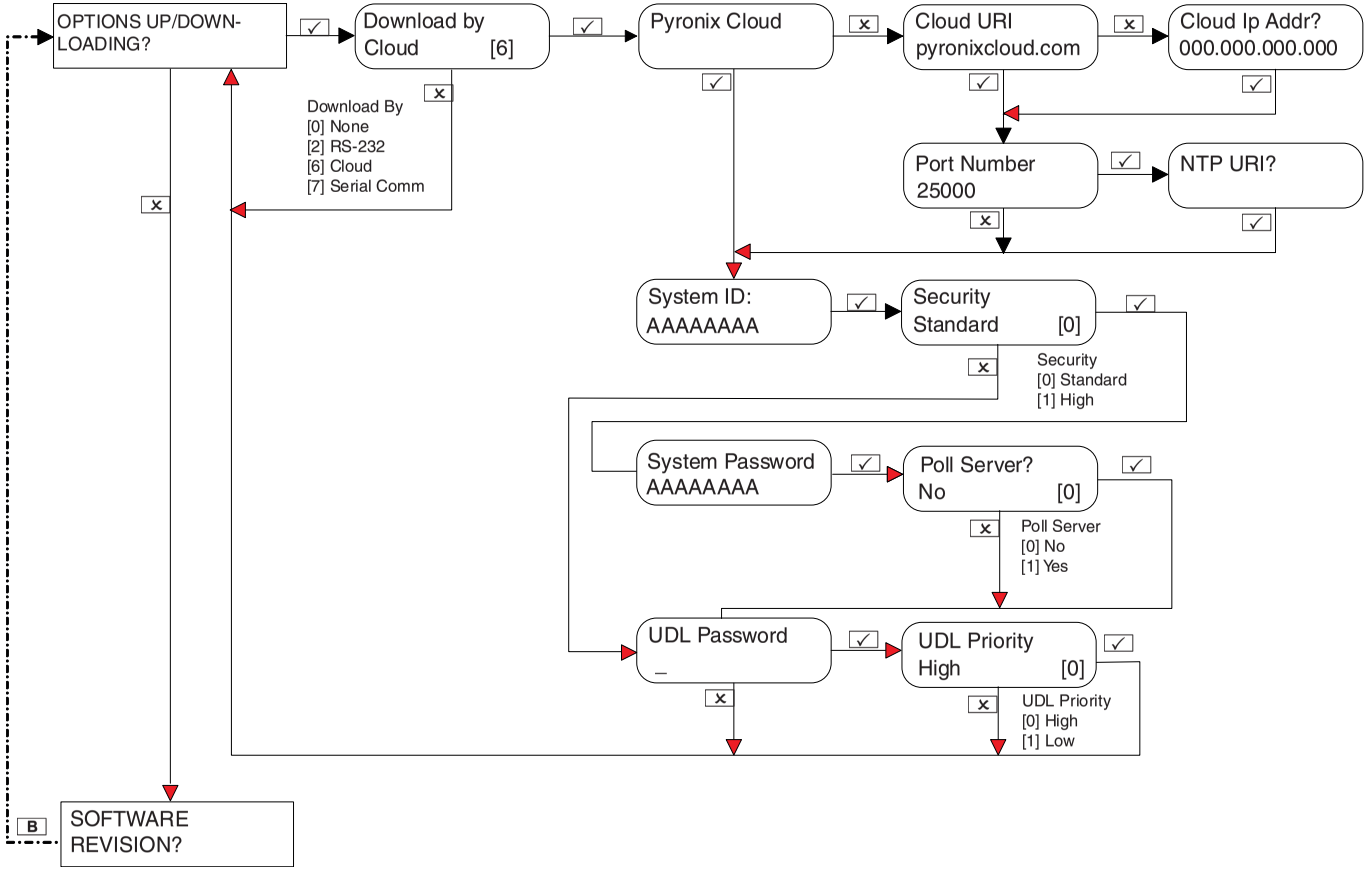


Options Up/Downloading

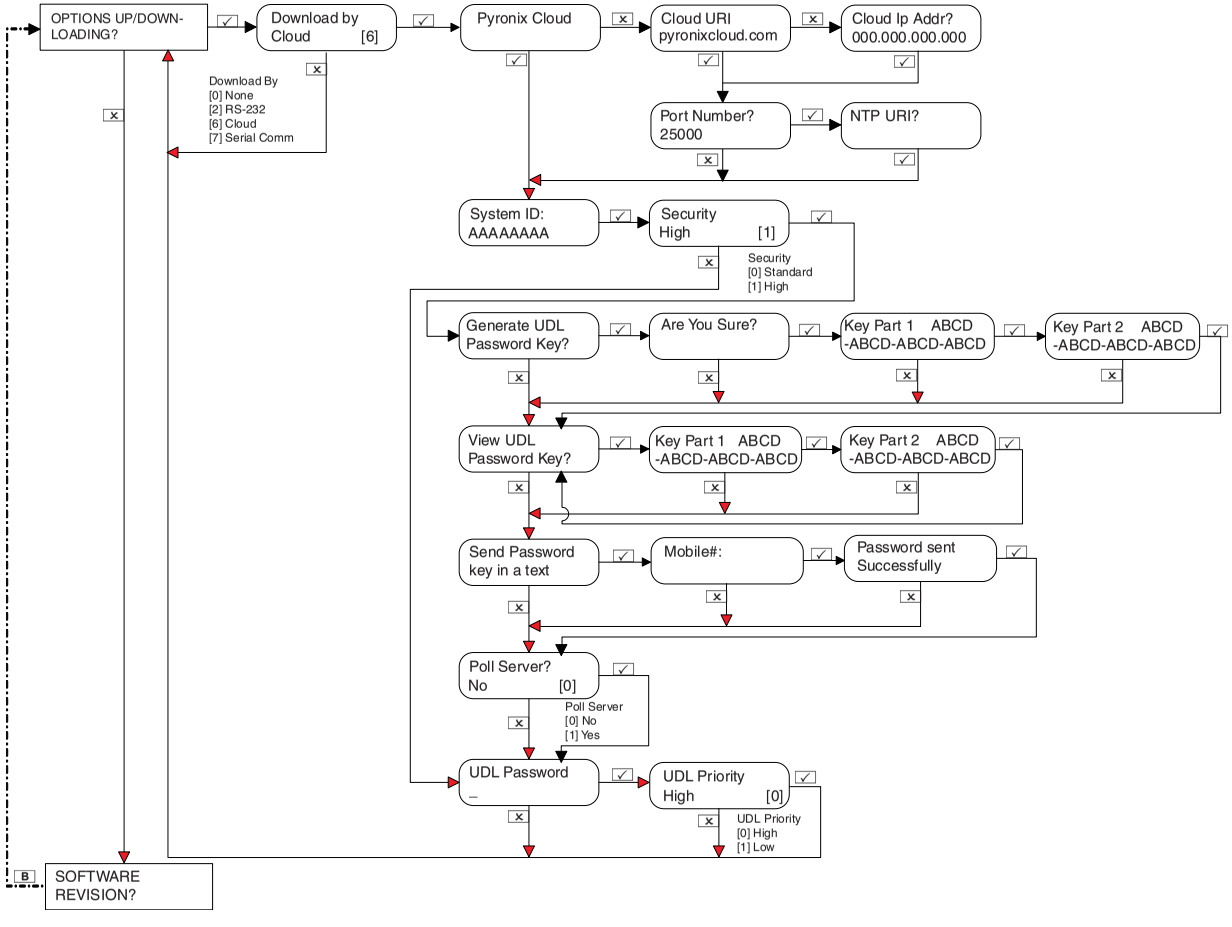
Download by RS-232



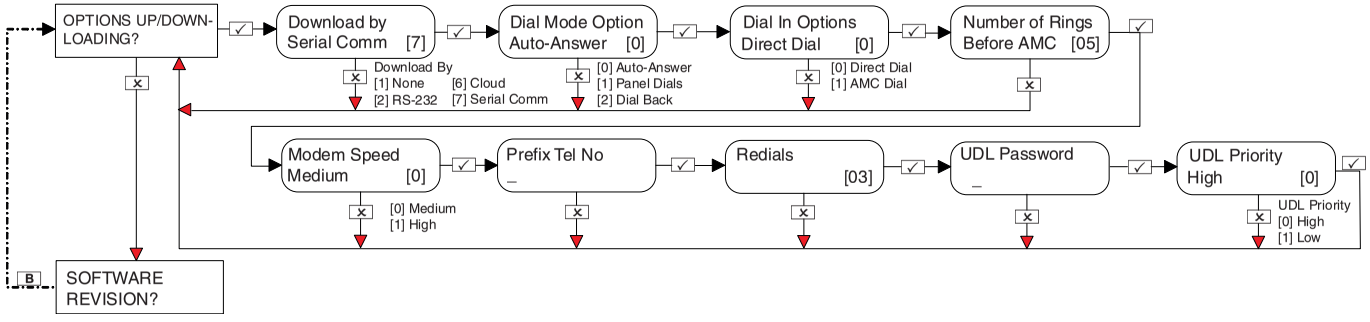
Download by Cloud (standard security)



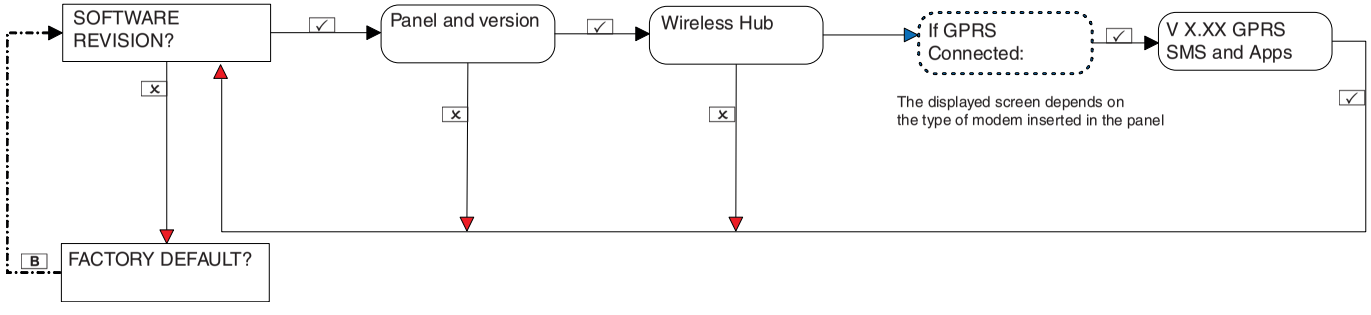
Download by Cloud (high security)



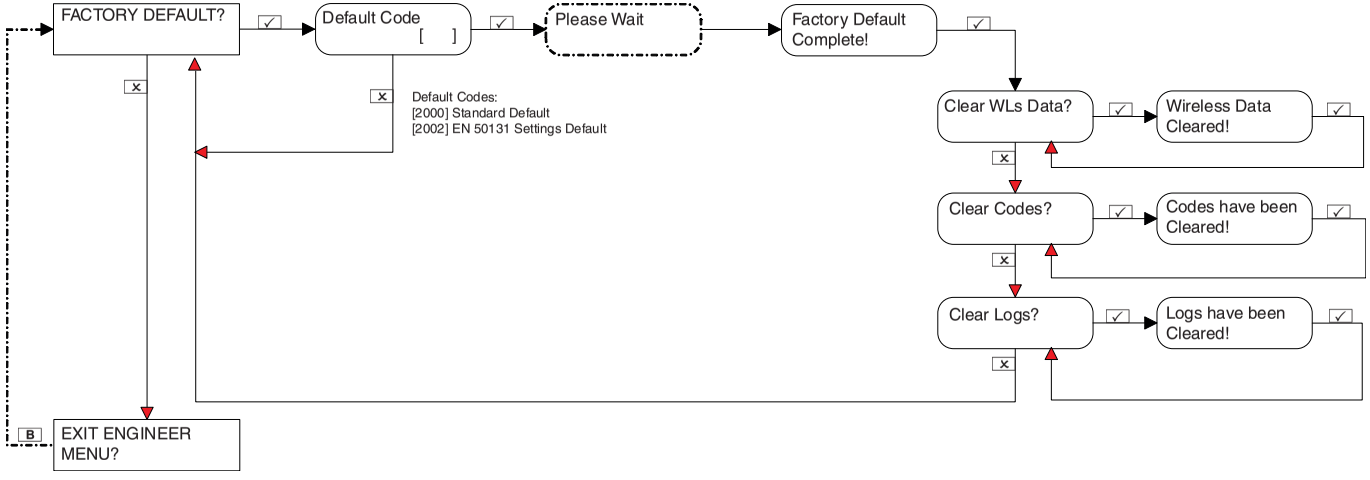
Download by Serial Comm



Software Revision



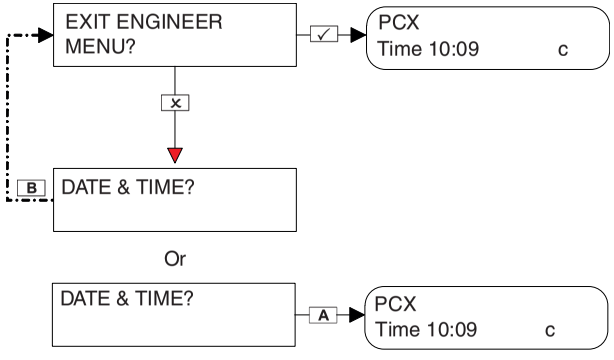
Factory Default



Exiting the Engineer Menu

On completion of programming, the system can be returned back to disarmed mode by pressing the A button from any main menu option (represented in capital letters) or pressing ✓ on the menu option **EXIT ENGINEER MENU?**.

Any programming done in the Engineer, Master or User mode will not be saved on the system until the menu has been exited.

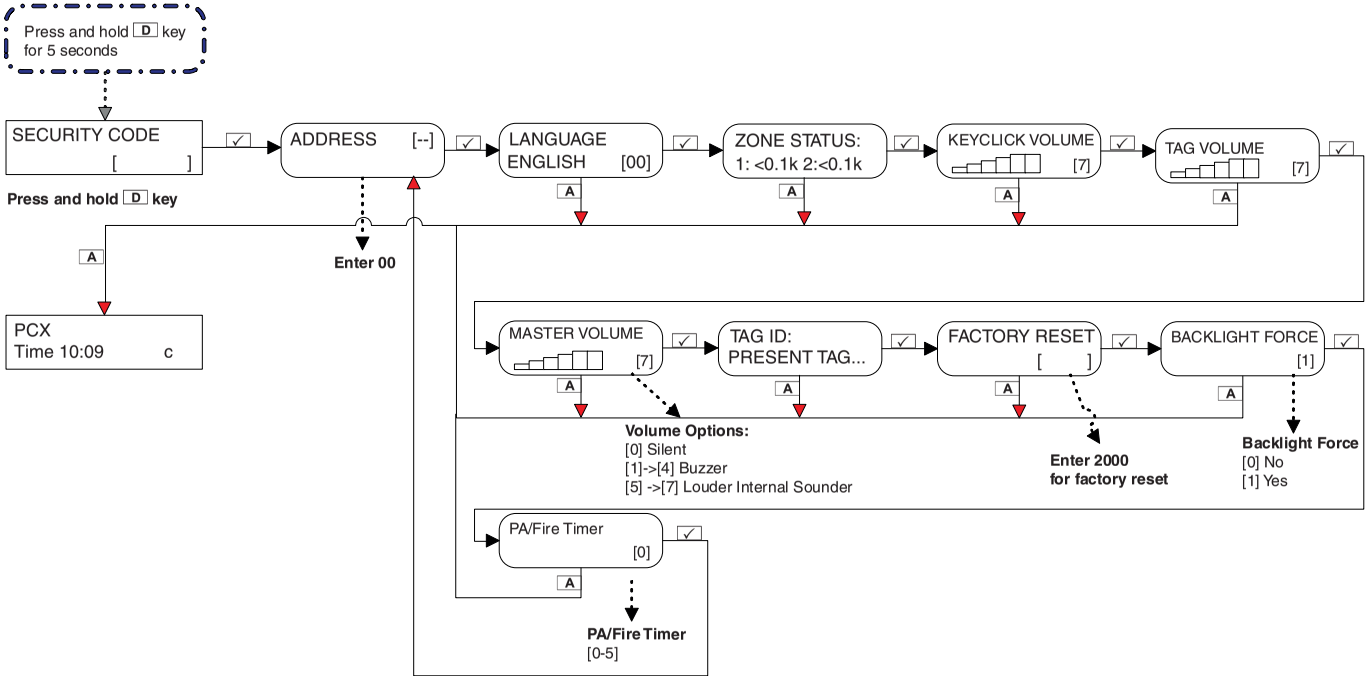


Press the A key to exit from any main menu.

Standalone Wired Keypad

This menu is dedicated to the keypad itself. This menu is mostly used for the following features: Keypad Address, Keyclick Volume, and Backlight Force.

The keypad on the PCX must be always programmed to '00'.



Technical Specifications

Table 12 - Programmable Outputs

Programmable Outputs	Power Rating	Normal State	Active State
PGM 1	Relay, 3A, max 30V	Changeover NC & NO	Changeover NC & NO
Speaker	16 ohms	No tones	Repeat RKP tones & internal sounder
Strobe Output	500mA	12v	0v
Bell Output	500mA	12v	0v
XPGM 1 (Input 7)	50mA	Floating	0v
XPGM 2 (Input 8)	50mA	Floating	0v
ATE Outputs	2mA	5v	0v

Table 13 - Input Resistance

Input Resistance	1k / 1k DEOL Range	4k7 / 2k2 DEOL Range
Normal	0k5 to 1k4	1k4 to 2k9
Burglary Alarm	1k5 to 5k9	4k2 to 7k8
Mask	8k2 to 17k	11k6 to 22k
Tamper	<0k5 or <17k	<1k4 or >22k

Table 14 - Fuses

Fuses	Value	Type
Bell Fuse for bell terminals	F800mA quick blow 250V	Glass
Aux Fuse for aux terminals	F800mA quick blow 250V	Glass
RS485 Bus Fuse for bus terminals	F800mA quick blow 250V	Glass
Battery Fuse for battery terminals	T 1.5A anti-surge slow blow 250V	Glass
230V Mains Fuse for mains terminals	T500mA H anti-surge slow blow 250V	Ceramic

Table 15 - Power

		Nominal	Range
Panel Power Supply Output	Output Voltage	13.7V DC	10-15V DC
	Output Current PCX S	1A Continuous	1.5A peak, during battery charging
	Output Current PCX L	1.5A Continuous	2.0A peak, during battery charging
Power Supply Type A			
Maximum output peak voltage: Max 100 mV			
SD Voltage which the deep discharge protection function will operate at: 10V			

		Nominal	Range
Over Voltage Protection Trigger Voltage: 18V			
PCX power supplies are NOT designed for use with multiple batteries connected. System load should not exceed the panel power supply output or the maximum load supportable by the battery for the specified backup time. The power ratings are based on battery shown in table – but ANY battery capable of supporting the system load for the required time may be used without affecting these ratings.			
Panel Power Supply Input	Mains Supply Voltage AC	230V AC at 50Hz	-15% +10%
	Transformer Rating PCX S	18VA	18V at 1.0A
	Transformer Rating PCX L	45VA	18.5V at 2.5A

Table 16 - Battery Charging Specification

Float Voltage	13.8v DC	Standby battery capacity current	
Battery low voltage cut off	10.5v	PCX S	300mA (3A to 6A)
Recharge time	<24 Hours	PCX L	700mA (7A to 17A)

Table 17 - EN50131-6:2008 Rated Output

Electrical Capability	EN50131-6 Rating. Maximum Load
Example Battery Model	Grade 2
Yuasa NP7-12	0.5A
Yuasa NP17-12	1.2A

In accordance with EN50131-6:2008, the PCX standby times and effective output currents depend on the Security Grade of the system and how 230V mains missing fault is signalled to the Alarm Receiving Centre. Power supplies are rated in accordance with the requirements of EN50131-6, which are related to the maximum battery size that can be accommodated in the housing and vary according to the grade of the system in which they are installed.

Table 18 - PCB Current Consumption

Quiescent	80mA

Table 19 - User Code and Tag Guessing

4-digit codes	10,000
6-digit codes	100,000
Disallowed codes	None
All codes	1612
According to EN50131-3:2009 Annex B	
According to spec of manufacturer of RFID components used	

Table 20 - Environmental

Operational	-10°C to +40°C, Certified
Storage	-20°C to +60°C
Humidity	75%

Table 21 - Dimensions

PCX S	297 x 250 x 82mm Weight: 4.8kg inc battery
PCX L	390 x 305 x 100mm Weight: 11.5kg inc battery
Printed Circuit Board	170 x 90 x 30mm

Table 22 - EN50131 Grading

PCX S	Grade 2
PCX L	Grade 3

Table 23 - ATS (Alarm Transmission System)

The below table specifies ATS (Alarm Transmission System) performance criteria in accordance with the requirements of EN50136-1:2012 and EN50136-2.

Notification Equipment	Grade 2 Criteria			
	Option A	Option B	Option C	Option D
Remotely powered external sounder	2	Optional	Optional	Optional
Self-powered external sounder	Optional	1	Optional	Optional
Main Communication Path (ATS)	ATS 2	ATS 2	ATS 2	ATS 3
Second Communication Path (ATS)	Optional	Optional	ATS 1	Optional

GRADE 2 option A, B, C and D with DIGI-LAN (SP5) or DIGI-GSM (SP2) and DP1 (DIGI-LAN or DIGI-GSM with DIGI-1200).

The use of the DIGI-GPRS (SP5) or DIGI-LAN (SP5) Option “Grade 3 Option A, B and D" are supported.

Communication loom

The ATE low power outputs are programmed in the engineer function: **Program Outputs > Endstation PGMs**

Colour	Description	Number
Purple	ATE Output 8: Mains Fail	0052
Light grey	ATE Output 10: Unused	0000
White	ATE Output 9: Battery Fault	0053
Black	ATE Output 7: Engineer Access	0059

Colour	Description	Number
Brown	ATE Output 4: Final Arm Any	0022
Red		0V
Orange	ATE Output 2: PA Device Any	0009
Yellow	DATE Output 3: Burglary Any	0018
Green	ATE Output 6: Bypass Rearm Any	0017
Blue	ATE Output 1: Fire	0001
Purple	ATE Output 5: Tamper Any	0007
Light grey		+12V
White	DO NOT USE	
Black	Line Fault	

Normal Status: 5V

Active Status: 0V

Current: 2mA

The polarity of the ATE outputs can be inverted from the function: **SYSTEM OPTIONS > Options > Invert ATE PGMs**.

Troubleshooting

Device Fail / Active Faults

If a device on the panel is not installed correctly or has been lost from the bus, a device fail occurs. An example of each fault is as follows:

- Failure on the panel: **Control Panel, Battery Fault**
- Keypad address 3 failure: **Device 3, Device Fail Kpd**
- Internal/External Tag Readers address 2 failure: **Device 2, Device Fail Trd**
- Remote Input Expander address 0: **RIX-00, Device Fail RIX**
- Remote Output Expanders address 0: **ROX-00, Device Fail ROX**

If a location name is entered for a device, the location is displayed on the keypad instead of the address, for example instead of **Device 3** for the Keypad, it would display **Entrance Corridor**.

System Faults and Troubleshooting

Table 24 - Communications Faults

Fault	Description	Solution
MODEM FAULT	The panel is unable to see the Digi Modem.	If modem not present, ensure that Disable Digi option is set to **YES** and **Download by** is set to **NONE** or **RS232**. If present, but not detected, check Digi Modem cable is connected correctly.
LINE FAULT	There is no communication path to the modem.	Ensure the modem has adequate signal in order to communicate. If there is a physical line to the modem, make sure it is connected securely at each end.
CALL FAIL TO ARC	Call to ARC has failed. This is a communication problem, which is rarely caused by an equipment fault. Most likely related to hand shake and kiss off frequency set up at receiver.	Check ALL call details are programmed correctly. Ensure signaling format is correctly set for ARC receiver.
DIGI LINE FAULT	PSTN Line Fault signalled by device wired into an input programmed as Line Fault.	Check to see if a positive voltage of about 5 is being applied to the black ATE pin, which by default is programmed to be a line fault. Check for faults on third-party signalling devices wired to the panel. Ensure a 'Line Fault' timer is programmed.
DIGI Call Fail 100	Call to ARC from device using End Station DIGI/ATE pins has failed.	Check that all communication devices on the panel have a valid signal.

Table 25 - RS485 Bus Problems

Fault	Description	Solution
DEVICE FAIL xxx xxx = ROX xxx = RIX xxx = Kpd xxx = Trd xxx = Pnl	Wired Device on the RS485 bus has been lost. Each Device is recognised by its own name such as the following: Output expander = ROX Input expander= RIX Keypad = Kpd Reader = Trd Control panel = Pnl	Identify device. Check device addressed correctly to match programming. Check connections at device, and cabling to it. If above correct, re-boot device, followed by reboot of End Station.
485/COMMS LOST	Displayed on keypad that has not yet established communications with the control panel (End Station).	Part of routine initialisation procedure. If persists, check display at other keypad(s) to confirm if device failure is at keypad or complete system BUS failure. Temporarily install additional keypad.
Keypad display is blank	Keypad address does not match any keypad enabled in the panel.	Check keypad address by pressing and holding DEF until the security code is required. Enter 2000 and set the keypad address. The primary keypad address MUST be always set to [00]. Make sure in the **Install Keypads and Readers** menu in Engineer mode that the keypad address set up correctly.
Keys locked out	a) More than one device connected at the same address. b) Too many incorrect key presses have been entered to create Code Guessing condition.	a) Correct addressing so that no overlaps. Then power system down and up again to correctly reinitialise. b) Wait 120 seconds for keypad to be reintroduced onto the system.

Table 26 - Detection Faults

Fault	Description	Solution
BELL TAMPER	Tamper fault detected on connection from SAB	Ensure terminal TR is at or near 0V. If not, check that the Bell Tamper switch is closed. Ensure fuse F1 is intact, and check the connections to SAB.
CASE TAMPER	Case tamper switch open	Ensure the switch is closed.
Code Guessing	Up to 13 Invalid key presses have been entered or 3 invalid tags have been presented.	After 120 seconds the keypad will unlock, then enter a valid code.

Table 27 - Power Supply Problems

Fault	Description	Solution
BATTERY FAULT xxx	Battery not present or Battery volts low	This indication should be expected during recharge after a mains failure.
BAT LOAD FAIL	Battery Load Test has failed	Only displays if option selected. Battery uncharged or capacity below specification may need replacing.
BAT CRITICAL	Battery being disconnected	Protects battery from deep discharge damage during extended mains failure. The system is about to be powered down.
PS O/P FAULT xxx	Power issue on a powered output expander	Check all the fuses and the battery in the powered output expander.

Fault	Description	Solution
MAINS FAIL xxx	Mains supply failed	System detects mains frequency out of specification, as well as voltage. The AC FAIL timer is operative.
FUSE x FAULT	Fuse identified failed, OR Output protected by fuse drawing excessive current	Fuse 1 = Bell Fuse 2 = Aux Fuse 3 = BUS Fuse 4 = Battery
LOW VOLTS xxx	Power supply volts low	Ensure the voltage coming out of the control panel PSU is ~12VDC.

Table 28 - Engineer Indications

Fault	Description	Solution
Engineer Access Denied	Access to Engineer Menu NOT possible, as system is not fully disarmed.	Ensure that ALL areas are disarmed, using a suitable User Codes / tags at appropriate keypads / readers.
Check Failed Input xxx	Input in fault on attempting to exit Engineer mode.	Applies to 24-hour tamper, or other Input types that would generate an alarm condition if the system were returned to disarmed mode. Also applies to tamper fault on other Input types. Check for fault on Input, or omit in programming.
Error Area not accessible	A Input has been programmed to an area for which no arming point is valid to disarm.	It would therefore be impossible to fully disarm the system after a tamper alarm on that Input. Programming must be adjusted before exiting Engineer mode.
Error some Areas cannot be disarmed	Arming points have been programmed so it's possible to arm an area, but not disarm it.	Programming must be adjusted before exiting Engineer mode.

Table 29 - Wireless Faults

These faults will only be possible if you have a wireless expansion module installed.

Fault	Description	Solution
U-01 (xx) WLs LOW BATT	Low battery on wireless keyfob (user) number xx	Replace the battery on the mentioned keyfob
I-01 (xx) WLs LOW BATT	Low battery on wireless Input number xx	Replace the battery on the mentioned Input device
B-01 (xx) WLs LOW BATT	Low battery on wireless bell number xx	Replace the battery on the mentioned radio bell
I-01 (xx) WLs SUPERVN	Device on wireless Input number xx has not 'checked in'	Walk test the detector, perform a diagnostic – signal strength test and try replacing the battery
B-01 (xx) WLs SUPERVN	Wireless bell number xx has not 'checked in' within time of 20 min	Test the bell, perform wireless signal strength diagnostic. Consider replacing the battery or relocating the bell.
- 01 (xx) TAMPER ON INPUT	Tamper fault on input number 01 xx = any input number	Check the tamper switch on the detector and make sure the case is closed properly.
WLs TAMPER Bxx	Tamper fault on wireless bell number xx	Check the tamper switch on the mentioned radio bell

Fault	Description	Solution
WLs JAMMING Pnl	Jamming fault on the panel. Something is jamming/interfering with wireless peripherals.	Check no radio interference is in close proximity to the radio devices/panel.
WLs Supervn Fault	No 'supervision polls' were received for 20 minutes before the arming operation. Wireless Input or Bell input number will be shown so the problem is easily identified.	Test the signal strength / battery on each wireless device
WLs Input / Input Type Mismatch	Wireless devices are learned on Inputs but no zone types have been programmed for them.	Program input type for each wireless device learned in the **PROGRAM INPUTS**.
Wireless Keypad x WLs Supervn Fault	No 'supervision polls' have been received by the panel for 20 minutes or the length of the 'supervision timer'. Wireless keypad number will be shown.	Test the signal strength and the battery on each wireless keypad.

Table 30 - Errors When Arming

Fault	Description	Solution
Please leave via exit door	If the exit mode is programmed as Entry Delay, then you must leave through that door to arm the system.	Leave via the agreed exit route.
Exit Via...	If any follow detectors or door contacts are open during the arming procedure, this prompts you to close them.	Close all Inputs.
Unable To Arm	A fault condition exists on the system. Details of the fault will scroll on the display.	Correct the problem if it is an input which is open, or call engineer.
Alarm during the arming	Fail to arm time has been exceeded.	Leave the premises within the fail to arm time, increase the fail to arm time in timers or disable this feature in system options.
Alarm during the arming procedure	Instant Inputs have been activated.	During the arming procedure do not activate instant Inputs.

Support contact details

Email: export.support@pyronix.com

Website: www.pyronix.com

Reference

Handover Form

Alarm Company:	
Date of Installation:	
Site Reference:	
Engineer Name:	
Engineer Contact Number:	
Installed to Grade 2:	Yes / No
Environmental Class:	
Other Comments:	

EN 50131 Terminology

Term (PCX Language)	Definition (EN50131 Language)
Arm	Set
Disarm	Unset
Day or Disarmed Mode	Unset State (may be relevant to a specific partition)
Personal Attack (PA)	Hold Up (HU)
Bypass	Inhibit
Unused	Isolated
Bell / External Sounder / SAB	External Warning Device (self-powered is assumed)
Internal Sounder / Speaker	Device combining internal warning device with audible indicator (using different tones and volumes)
Prox card, Tag, or wireless keyfob	Digital Key

Input Types

Number	Input types	Operation
0	Unused Factory default.	Input is disabled.
1	Fire	Active at all times. Audible Response: Differentiated Internal sound. Pulsed external sound. Communicator: 'Fire' signal
2	Gas	Active at all times. Audible Response: Full external + Internal sound. Communicator: 'Gas' signal
3	PA#	Active at all times. Audible Response: Differentiated Internal sound. Full external sound. Communicator: 'Personal Attack' and 'Input PA' signals
4	Silent PA#	Active at all times. Audible Response: None Communicator: 'Personal Attack' and 'Input PA' signals
5	Tamper	When disarmed: Audible Response: Internal only. Communicator: 'Tamper' signal. When armed: Audible Response: Full external + Internal sound. Communicator: 'Tamper' signal.
6	Instant	Active when armed: Audible Response: Full external + Internal sound. Communicator: 'Burglary' signal
7	Entry Delay1#$	Active when armed: Initiates 'Entry Timer 1' when door open. If system not disarmed before entry time expires then: Audible Response: Full External + Internal sound. Communicator: 'Burglary' signal. NOTE: See type 43 for Entry Delay2
8	Follow$	Active when armed, except during entry time. (Acts as an instant input if an Entry Delay input hasn't been activated beforehand). Audible Response: Full external + Internal sound. Communicator: 'Burglary' signal.
12	Switcher	Active at all times in armed and disarmed modes. No audible or communication alarms will be created. When activated it can trigger the associated output for switching external equipment. If the "Special Log" attribute is enabled for this input an SMS message will be sent each time the input is activated. Example: This kind of input type can be used to control CCTV. The concept is that when a switcher input type is activated, there is an output associated with it following that input (the most used solution is the use of output type – 0035). The switcher input is connected to a detector located next to a CCTV camera and the output is connected to video recording / transmitting equipment. If the detector is activated in armed or disarmed mode then the recording or transmission will start.
13	24 Hour	When armed: Audible Response: Full External + Internal sound; Communicator: '24hr Alarm' signal. When disarmed: Audible Response: Full External + Internal sound; Communicator: '24hr Alarm' signal if enabled in "Alarm Responses" menu.
15	Sub Area Control	Active at all times. When open, arms all the inputs assigned to it. When closed, disarms all the inputs assigned to it.
16	Fault	Active when armed or disarmed: Audible Response: internal sounder. Communicator: Fault event. If armed only: Activates 'Global Fault 1' output type. If disarmed or armed: Activates 'Global Fault 2' output type. Note that the 'Technical Fault' output type is triggered every time a fault is active including when the fault input type is active.
17	Arming Control	Active during arming procedure: No audible or communicator response. Prevents system being armed whilst the input is in an active state.
19	Disarm Only*	Active when armed: Accepts input from keyswitch (or equivalent) to disarm the area(s) assigned to it.

Number	Input types	Operation
20	Keyswitch Latched*	Accepts input from keyswitch (or equivalent) to arm/disarm the area assigned to it. Arming includes normal exit time, etc. Requires latching switch action. Normal operation is open circuit to arm the system, and close circuit to disarm the system.
21	Entry Shock	Active when system armed: This input type is advised to be used in conjunction with an Entry Delay input. The Entry Delay input is a door contact on the initial entry door, and the Entry Shock input is a non-latching shock sensor fitted to the door frame in the vicinity of the lock. If the door is forced a Burglary alarm will be generated immediately instead.
22	Line Fault	Active when fail. This input type is used to detect external transmission equipment line fail (output). If activated it will give a line fault alarm, and will signal telecom line fault on expiry of line fault timer. It can be used in conjunction with CCTV input (type 39)
23	Keyswitch Pulsed*	Accepts input from keyswitch to arm/disarm the area(s) assigned to it. Requires momentary action switch to toggle arm/disarm state. Note that Grade 1 operation only allows arming from the push button, but requires means to abort arming (not to disarm)
39	CCTV	Active at all times: No audible alarm or communicator response. The CCTV input should be connected to an external detector located next to a CCTV camera. An output can be programmed to follow this input and the output should be connected to a CCTV recording, transmission or other device. An input programmed as “Line Fault” (input type 22) should also be connected to an output of the CCTV transmission Device. If the CCTV transmission line has been cut or missing the ‘Line Fault’ input will activate. Following this, at each activation of the CCTV input the panel will signal CID events for ‘Silent Burglary’ and Line Fault. No audible alarm will be created. If the Line Fault is not active it will just log the activations of the CCTV input into the event log.
41	Patrol / Keybox	This input type will work similarly to a switcher input, it does not trigger an alarm but will report Contact ID event 250 and is also a useful input type when an output is required to follow the ‘Keybox’ type input.
42	Medical	This is a 24 Hrs type input it will activate the external sounder and report a Contact ID event 100.
43	Entry Delay 2$	Any input programmed as Entry Delay 2 will act as input type 07, but the associated entry timer will use Entry Timer 2, rather than Entry Timer 1.
45	Silent Medical	Active at all times. Audible Response: None. Reports a Contact ID event 100.

By default, all inputs are set to ‘unused’.

These inputs cannot be bypassed.

***** Use of these inputs will make the system unable to comply with EN50131-1 Security Grade 2.

$ Ensure that these inputs are used on an entry/exit route

Output Types

No.	Output Type	Active	Restore
0000	Not Used		
0001	Fire	At fire alarm activation	When a valid code is entered
0002	PA Any	At personal attack activation	When a valid code is entered
0003	Burglary Any	At burglary alarm from any area	At first valid code entry

No.	Output Type	Active	Restore
0004	Final Arm All	When ALL areas are armed	At code entry to disarm
0005	Open After Alarm (Abort)	When system is silenced after 'burglary' alarm has been activated	After 2 minutes
0007	Tamper Any	Tamper alarm in any area	At code entry to silence
0008	Duress Any	At a Duress alarm in any area	When a valid code is entered
0009	PA Device Any	At alarm on a PA input only from any area. (This does not include the keypad PA)	When a valid code is entered
0010	Gas	At gas alarm	When a valid code is entered
0011	Arm Fail	Pre-set time after start of exit time, if exit procedure is not complete	At code entry to rearm
0012	Entry Deviation	When deviation from entry route occurs, during entry time	At code entry to disarm
0013	System Ready Any	When any of the inputs but the Entry Delay and Follow are closed	If fault exists, and after final arm
0014	Bell Any	After alarm in any area	When alarm silenced or when siren timer expires
0016	Strobe Any	After alarm in any area	When disarmed or when strobe timer expires
0017	Bypass Rearm Any	When inputs are bypassed at rearm in any area	When system disarmed
0018	Burglary (Unconfirmed) Any	At Burglary alarm in any area	At code entry to silence
0019	Ready All	When all inputs but the 'Entry Delay' and 'Follow' inputs are closed	If fault exists, and after final arm
0020	Exit Starts All	At start of exit time to arm LAST area	At disarm FIRST area (i.e. no longer fully armed)
0021	Exit Starts Any	When exit time starts to arm FIRST area	At code entry to disarm LAST area
0022	Final Arm Any	When ANY area has been armed	At code entry to disarm LAST area
0023	Strobe if Arm Fail	Works similar to output 016, but also fires if the 'arm fail' timer expires	
0024	Unable to Arm	This output turns on for 5 seconds when the system is disarmed via a keyswitch input (either pulsed or latched keyswitch)*	
0025	Keyswitch Disarm	Output activates when an arming procedure is completed with inputs bypassed	
0026	Arm with Bypass	Active when the system is armed with an input bypassed	
0027	Pulsed Burglary Any	Active when burglary alarm is triggered, but deactivates once the Pulsed Intruder timer has expired	
0028	Power Fault	Active during low volts and battery faults. Restores at code entry after fault cleared	
0031	Entry	Active during any Entry time	
0032	Exit	Active during any Exit time	
0033	Entry / Exit	Active during any entry or exit time	
0034	Lights	When exit or entry timer starts	20 seconds after arm/disarm procedure completed

No.	Output Type	Active	Restore
0035	Follow Input	Active when a specific input number has been activated. It allows the following options to be programmed: - Follow Type (Follow, Timed, Latched, Code Reset); - Follow What (Input, Sub-Area, Area); - Follow When (Always, When Armed, When Disarmed); - Input to Follow (between 1 to 64)	
0037	Restore 1	At code entry to arm. The normal state of this input is 0v and it changes to 12v when activated.	After 3 seconds
0038	Restore 2	Activates whenever an additional area is armed. The normal state of this input is 0v and it changes to 12v when activated.	When disarmed
0039	PIR Latch 1	When armed (and in Walk Test)	At alarm, or when disarmed
0040	PIR Latch 2	This is the inverse polarity to PIR Latch 1	At alarm, or when disarmed
0041	AC Mains Good	Output showing the 230v mains supply is present	
0042	PIR LED Enable	This output activates during walk test	
0043	Follow Test	Output will activate only when tested from the Engineer Menu 'Test Outputs' in the 'Engineer Tests'. This output can be used as additional facility for testing the operation of a Bell. An output programmed to one of these configurations (43 and 44) may be used to trigger a relay to break the hold-off connection to the Bell – or even to provide the hold-off directly.	
0044	Off During Test	Output is normally active and will deactivate only when tested from the Engineer Menu 'Test Outputs' in the 'Engineer Tests'. Same as 43 but opposite activation.	
0048	Walk Test	This output is active during walk test, and will only deactivate when all detectors have been tested	
0049	Detector Masked	If any detector goes into 'mask' condition the output will activate	When masking fault clears
0050	Follow 24 Hour	If any input programmed as '24 Hour' activates	When input is restored
0051	Line/GPRS Fault	When Telephone or GPRS Line Fault is present	When fault clears
0052	AC Mains Fail	After pre-set time without mains power	On restoration of mains
0053	Battery Fault	When battery disconnected or load fail detected	At next valid code entry
0054	Low Volts	When less than 11.2v are present	When fault clears
0055	Global Fault 1 (Grade 2)	Activates if any fault occurs only when system is armed	When all faults cleared
0056	Global Fault 2 (Grade 3)	Activates if any fault occurs at any time	When all faults cleared
0057	German Relay	For future development. Do Not Use.	
0058	Guard Code Used	When 'guard' code used on the system	After 60 seconds
0059	Engineer Access	When entering Engineer Mode	When leaving Engineer Mode
0060	Follow Power Up	At power up	Live for 45 seconds
0063	Test UK STU	Activates when a test call is sent	When test completed

No.	Output Type	Active	Restore
0064	Pre RM Service	Activates 1h before the RM Service call	When test completed
0065	Follow NAT (Input Fault)	Activates when there is no activity on an input in the end of the "NAT-Non Activity Timers" in Change Timers	When there is activity.
0066	ATE Pin Not Used	Makes the ATE pin 5V or 0V depending on whether ATE outputs are inverted	
0067	Follow Chime	Active while a Chime signal is created on the panel	
0083	Medical		
0170-0199	User Defined 01-30	The user outputs are used for user automation to control external Devices. They can be controlled via the keypad from the user menu and can be programmed as 'latched' or timed (1 to 99 sec).	
0202	PA A (As 0002 for Area A)		
0203	Burglary A (As 0003 for Area A)		
0204	Final Arm A (As 0004 for Area A)		
0207	Tamper A (As 0007 for Area A)		
0208	Duress A (As 0008 for Area A)		
0209	PA Device A (As 0009 for Area A)		
0210	Fire Reset A (As 0010 for Area A)		
0213	System Ready A (As 0013 for Area A)		
0214	Bell A (As 0014 for Area A)		
0216	Strobe A (As 0016 for Area A)		
0217	Bypass At Rearm A (As 0017 for Area A)		
0218	Burglary (Unconfirmed) A (As 0018 for Area A)		
0219	Ready A (As 0019 for Area A)		
0220	Exit Starts A (As 0020 for Area A)		
Then this pattern repeats for all other areas other areas so that: *0222-0240 Area B* *0242-0260 Area C* *0262-0280 Area D* *0282-0300 Area 0* *0302-0320 Area 1* *0322-0340 Area 2* *0342-0360 Area 3*			

No.	Output Type	Active	Restore
0500	Lighthouse Any	When the affected area is armed. Pulses when the panel is in alarm, until the panel is unset.	When a valid code or tag is used in the affected area
0501	Lighthouse All		
0502-0509	Lighthouse Area A		
0503	Lighthouse Area B		
0504	Lighthouse Area C		
0505	Lighthouse Area D		
0506	Lighthouse Area 0		
0507	Lighthouse Area 1		
0508	Lighthouse Area 2		
0509	Lighthouse Area 3		
0620-0639	Logic Gate 1-20. Logic gate outputs (programmable via the upload/download software)		
1001-1078	Active when input opened and close when input is closed		

* The use of pulsed or latched keyswitch will make the system unable to comply with EN50131-1.

Time Inputs

No.	Time	Input	No.	Time	Input	No.	Time	Input
0	Not Used		53	Guadalajara	-6	106	New Delhi	5
1	Abu Dhabi	4	54	Guam	10	107	Newfoundland	3.5
2	Adelaide	9.5	55	Hanoi	7	108	Novosibirsk	7
3	Alaska	-9	56	Harare	2	109	Nuku	13
4	Almaty	6	57	Hawaii	-10	110	Osaka	9
5	Amman	3	58	Helsinki	2	111	Pacific	-8
6	Amsterdam	1	59	Hobart	10	112	Paris	1
7	Arizona	-7	60	Hong Kong	8	113	Perth	8
8	Astana	6	61	Indiana East	-5	114	Port Louis	4
9	Athens	2	62	Intnl Datli	-12	115	Port Moresby	10
10	Atlantic Time	-4	63	Irkutsk	9	116	Prague	1
11	Auckland	12	64	Islamabad	5	117	Pretoria	2

No.	Time	Input	No.	Time	Input	No.	Time	Input
12	Azores	-1	65	Istanbul	2	118	Quito	-5
13	Baghdad	3	66	Jakarta	7	119	Reykjavik	0
14	Baja Californ	-8	67	Jerusalem	2	120	Riga	2
15	Baku	4	68	Kabul	4.5	121	Rio Branco	-5
16	Bangkok	7	69	Kamchatka	12	122	Riyadh	3
17	Beijing	8	70	Karachi	5	123	Roma	1
18	Beirut	2	71	Kathmandu	5.75	124	Samoa	13
19	Belgrade	1	72	Kolkata	5	125	Santiago	-4
20	Berlin	1	73	Krasnoyarsk	8	126	Sapporo	9
21	Bern	1	74	Kuala Lumpar	8	127	Sarajevo	1
22	Bogota	-5	75	Kuwait	3	128	Saskatchewan	-6
23	Brasilia	-3	76	Kyiv	2	129	Seoul	9
24	Bratislava	1	77	La Paz Mexico	-7	130	Singapore	8
25	Brisbane	10	78	La Paz Mexico	-7	131	Skopje	1
26	Brussels	1	79	LaPaz S Ameri	-4	132	Sofia	2
27	Bucharest	2	80	Lima	-5	133	Solomon Is	-11
28	Budapest	1	81	Lisbon	0	134	Sri Jayaward	5.5
29	Buenos Aires	-3	82	Ljubljana	1	135	St. Petersburg	4
30	Cairo	2	83	London	0	136	Stockholm	1
31	Canberra	10	84	Madrid	1	137	Sydney	10
32	Cape Verde	-1	85	Magadan	12	138	Taipei	8
33	Caracas	-4.5	86	Manaus	-1	139	Tallinn	2
34	Casablanca	0	87	Marshall Is	12	140	Tashkent	5
35	Caucasus Std	4	88	Mazatlan New	-1	141	Tbilisi	4
36	Centl America	-6	89	Mazatlan Old	-1	142	Tehran	3.5
37	Central Time	-6	90	Melbourne	10	143	Tijuana	-8
38	Chennai	-5	91	Mexico City	-6	144	Tokyo	9
39	Chihuahua	-7	92	Mexico City	-6	145	Ulaan Bataar	8
40	Chihuahua	-7	93	Mid-Atlantic	-2	146	Urumqi	8
41	Chongqing	8	94	Midway Islan	-11	147	Vienna	1
42	Copenhagen	1	95	Minsk	3	148	Vilnius	2
43	Darwin	9.5	96	Monrovia	0	149	Vladivostok	11
44	Dhaka	6	97	Monterrey	-6	150	Volgograd	4
45	Dublin	0	98	Monterrey	-6	151	Warsaw	1
46	Eastern Time	-5	99	Montevideo	-3	152	Wellington	11
47	Edinburgh	0	100	Moscow	4	153	W.Central Afri	1
48	Ekaterinburg	6	101	Mountain Time	-7	154	Windhoek	1
49	Fiji	12	102	Mumbai	5	155	Yakutsk	10

No.	Time	Input	No.	Time	Input	No.	Time	Input
50	Georgetown	-4	103	Muscat	4	156	Yangon Rangu	6.5
51	Greenland	-3	104	Nairobi	3	157	Yerevan	4
52	Guadalajara	-6	105	New Caledonia	11	158	Zagreb	1

SMS Commands

All SMS commands must start with a valid User Code and are not case sensitive unless the utilised outputs are activated. If an SMS command is not recognised, the panel will send an 'incorrect command' message back to you.

Example SMS command send	Description	Example SMS command response
Arming via SMS text command		
1234 Arm 0	1234 = User Code. Arm 0 = Will arm in Areas 0	Final Arm; Area 0
1234 Arm ABCD0123	1234 = User Code. Arm ABCD0123 = Will arm in Areas ABCD0123	Final Arm; Area ABCD0123
NOTE: If no areas are specified then all areas will arm (default).		
Disarming via SMS text command		
1234 Disarm 0	1234 = User Code. Disarm 0 = Will disarm in Area 0	Disarm; Area 0
1234 Disarm ABCD0123	1234 = User Code. Disarm ABCD0123 = Will disarm in Areas ABCD0123.	Disarm; Area ABCD0123
NOTE: If no areas are specified then all areas will disarm (default).		
Arming with inputs bypassed via SMS text command		
1234 Arm 0 Bypass 4	1234 = User Code. Arm 0 Bypass 4 = Arms Area 0 and will bypass Input 4	Input Bypass; Area 0 Input 04 Force Arm: Area 0
1234 Arm 0 Bypass Kitchen	1234 = User Code. Arm 0 Bypass Kitchen = Arms Area 0 and will bypass the Input named Kitchen.	Input Bypass; Area 0 Kitchen Force Arm: Area 0
Bypassing inputs via SMS text command		
1234 Bypass 6	1234 = User Code. Bypass 6 = In the next arming procedure, Input 6 will be bypassed.	Input Bypass; Area 0 Input 06
1234 Bypass Garage	1234 = User Code. Bypass Garage = In the next arming procedure, and will bypass the Input named Garage.	Input Bypass; Area 0 Garage
NOTE: Output names have to be one word and spelled exactly as written in the panel e.g. Garage Door is not acceptable. It has to be written as Garage-Door in the panel and the respective command will be Garage-Door.		

Example SMS command send	Description	Example SMS command response
Checking the system status via SMS text command		
1234 Status	1234 = User Code. Status.	Area 0 Disarmed No Faults Area 1 Disarmed No Faults Area 2 Disarmed No Faults Area 3 Disarmed No Faults (etc.)
Operating the user automation outputs via SMS text commands		
1234 Output 1 On	1234 = User Code. User Output 1 turns on.	OUTPUT 1 ON
1234 Output Garage-Door On	1234 = User Code output Garage-Door on = Turns output named as Garage-Door on.	OUTPUT Garage-Door ON
1234 Output Garage-Door Off	1234 = User Code output Garage-Door off = Turns output named as Garage-Door off.	OUTPUT Garage-Door OFF
NOTE: Output names have to be one word and spelled exactly as written in the panel e.g. Garage Door is not acceptable. It has to be written as Garage-Door in the panel and the respective command will be Garage-Door. *NOTE: The user automation outputs can also be activated via the keypad or the keyfob.*		
Checking the user automation outputs status via SMS text commands		
1234 Output 1	1234 = User Code. User Output 1 status check.	OUTPUT 1 ON or OUTPUT 1 OFF
1234 Output Garage-Door Status	1234 = User Code. Output Garage-Door status check.	OUTPUT Garage-Door ON or OUTPUT Garage-Door OFF
NOTE: Output names have to be one word and spelled exactly as written in the panel e.g. Garage Door is not acceptable. It has to be written as Garage-Door in the panel and the respective command will be Garage-Door.		
Changing a mobile number via SMS text commands		
1234 Change 07777888999 07878888999	1234 = User Code. Change number 07777888999 to number 07878888999	CHANGE 07878888999
NOTE: Use the appropriate international dialling code (e.g. +44) when necessary (i.e. for foreign SIM cards). For example if you wanted to message a foreign SIM card at your holiday home abroad. When you send the SMS command, ensure you enter a space between the two mobile numbers.		

Event Types

General Event Types

	Custom	Default 1	Default 2	Default 3
Arm	× / ✓	✓	×	×
Disarm	× / ✓	✓	×	×
Special Arm/Dis	× / ✓	×	×	×
Sub Area/Sh. Arm	× / ✓	✓	×	×
Sub Area/Sh. Dis	× / ✓	✓	×	×
Burglary Alarm	× / Alarm Once / Alarm All	Alarm All	Alarm All	Alarm All
Burglary Restore	× / ✓	✓	✓	×

	Custom	Default 1	Default 2	Default 3
Fire	× / ✓	✓	✓	✓
Fire Restore	× / ✓	✓	✓	×
PA Alarm	× / ✓	✓	✓	✓
PA Restore	× / ✓	✓	✓	×
Medical	× / ✓	✓	✓	✓
Medical Restore	× / ✓	✓	✓	×
S-Area Alarm/Rst	× / ✓	✓	✓	×
Tamper	× / Tamper Once / Tamper All	Tamper All	Tamper All	Tamper All
Tamper Restore	× / ✓	✓	✓	×
Bypass	× / ✓	✓	✓	✓
Bypass Restore	× / ✓	✓	✓	×
Technical	× / ✓	✓	✓	✓
Technical Restore	× / ✓	✓	✓	×
AC Fault/Restore	× / ✓	✓	✓	✓
Wireless Faults	× / ✓	✓	✓	✓
Telecom Status	× / ✓	×	×	×
Access Control	× / ✓	✓	×	×
Mask / Restore	× / ✓	✓	✓	✓
Special Log	× / ✓	×	×	×
Alarm Silenced	× / ✓	×	×	×
Tech Alarm Silenced	× / ✓	×	×	×
Information	× / ✓	×	×	×

SIA and Contact ID codes

Event	SIA code	CID code	Event Type Number	Default 1 (ARC) Full Reporting	Default 2 (ARC) No Arm/Disarm	Default 3 (ARC) No Arm/Disarm and Alarm Restorals	Default (SMS)
ARM							
Auto Arm	CA	3403	1	✓	×	×	×
Forced Arm	CF	3401	1				
Arm	CL	3401	1				
DISARM							
Disarm	OP	1401	2	✓	×	×	×
Auto Disarm	OA	1403	2				
(Special Arm/Disarm) ARM/DISARM WITH CODES 15 to 25							
Special Disarm	OP	1401	3	×	×	×	✓
Special Arm	CL	3401	3				

Event	SIA code	CID code	Event Type Number	Default 1 (ARC) Full Reporting	Default 2 (ARC) No Arm/Disarm	Default 3 (ARC) No Arm/Disarm and Alarm Restorals	Default (SMS)
SUBAREA / SHUNT ARM/DISARM							
Sub-Area Arm	CG	3402	4	✓	×	×	×
Shunt Closed		1402	4				
Sub-Area Disarm	OG	1402	5				
Shunt Opened		3402	5				
BURGLARY ALARM							
Burglary Alarm	BA	1130	7	All	All	All	Once
Gas Alarm	GA	1151	7				
Entry/Exit alarm	BA	1134	7				
No Zone Activity - Sent	NA	1680	7				
24h Alarm	BA	1133	7				
Perimeter Alarm	BA	1131	7				
Keybox/Guard Zone Alarm		1250	7				
Flood Alarm	WA	1154	7				
Interior Alarm	BA	1132	7				
BURGLARY RESTORE							
Burglary Restore	BH	3130	9	All	All	×	×
Gas Restore	GH	3151	9				
Entry/Exit Restore	BH	3134	9				
Day Alarm Restore	BH	3133	9				
Interior Alarm Restore	BH	3132	9				
Perimeter Restore	BH	3131	9				
Keybox Restore		3250	9				
Flood Alarm Restore	WH	3154	9				
Ward Alarm Restore	BH	3130	9				
FIRE ALARM							
Fire Alarm	FA	1110	10	✓	✓	✓	✓
Fire Key Pressed	FA	1110	10				
FIRE ALARM RESTORE							
Fire Alarm Restore	FH	3110	11	✓	✓	×	×
Fire Key Restore	FH	3110	11				

Event	SIA code	CID code	Event Type Number	Default 1 (ARC) Full Reporting	Default 2 (ARC) No Arm/Disarm	Default 3 (ARC) No Arm/Disarm and Alarm Restorals	Default (SMS)
PA ALARM							
Duress Code	HA	1121	12	✓	✓	✓	✓
Keypad PA	PA	1120	12				
Radio Fob PA	PA	1120	12				
PA Alarm	PA	1120	12				
Silent PA	HA	1122	12				
PA ALARM RESTORE							
PA Restore	PH	3120	13	✓	✓	×	×
Silent PA Restore	HH	3122	13				
Keypad PA Restore	PR	3120	13				
MEDICAL ALARM							
Medical Alarm	MA	1100	14	✓	✓	✓	✓
MEDICAL RESTORE							
Medical Alarm Restore	MH	3100	15	✓	✓	×	×
SUB-AREA ALARM/RESTORE							
Ward Alarm	BA	1130	16	✓	×	×	×
TAMPER ALARM							
Invalid Tag	JA	1461	17	All	All	All	×
RS485 Fault	IA	1300	17				
Device Fail	ET	1333	17				
Tamper Alarm	TA	1137	17				
Tamper On Zone	TA	1144	17				
Code Guessing	JA	1461	17				
Case Tamper	TA	1137	17				
Siren Case Tamper	TA	1321	17				
Radio Tamper	TA	1337	17				
TAMPER RESTORE							
Tamper (Wired/Wireless) Restore	TH	3137	18	All	All	×	×
Tamper On Zone Restore	TH	3144	18				
Case Tamper Restore	TR	3137	18				
Siren Case Tamper Restore	YH	3321	18				

Event	SIA code	CID code	Event Type Number	Default 1 (ARC) Full Reporting	Default 2 (ARC) No Arm/Disarm	Default 3 (ARC) No Arm/Disarm and Alarm Restorals	Default (SMS)
BYPASS							
Zone Bypassed	BB	1570	19	✓	✓	✓	×
Zone Force (Bypassed) Armed		1570	19				
Fire Zone Bypassed	FB	1571	19				
24h Alarm Zone Bypassed	BB	1572	19				
RESTORE OF BYPASS							
Fire Zone Bypass Restore	FU	3571	20	✓	✓	×	×
24h Alarm Zone Bypass Restore	BU	3572	20				
Zone Bypass Restore	BU	3570	20				
TECHNICAL							
Low Volts	AT	1302	21	✓	✓	✓	×
Battery Disconnect	YT	1311	21				
Battery Load Fail	YT	1309	21				
Fuse 1	IA	1300	21				
Fuse 2	IA	1300	21				
Fuse 3	IA	1300	21				
Fuse 4	IA	1300	21				
Fuse 5	IA	1300	21				
Fuse 6	IA	1300	21				
Fuse 7	IA	1300	21				
Fuse 8	IA	1300	21				
Battery Critical	YT	1302	21				
Wired Siren Fault	YA	1320	21				
TECHNICAL RESTORE							
Battery Connect	YR	3311	22	✓	✓	×	×
Device Restored	ER	3333	22				
Fuse Fail Restore	IR	3300	22				
Detector Fault Restore	BJ	3324	22				
Wired Siren Fault Restore	YH	3320	22				

Event	SIA code	CID code	Event Type Number	Default 1 (ARC) Full Reporting	Default 2 (ARC) No Arm/Disarm	Default 3 (ARC) No Arm/Disarm and Alarm Restorals	Default (SMS)
AC MAINS MISSING/RESTORE							
Mains Fail Fault	AT	1301	23	✓	✓	✓	✓
Restore of Mains Fault	AR	3301	23				
WIRELESS ALARM/RESTORE							
Radio Low Battery	XT	1384	24	✓	✓	✓	×
Radio Supervision Failure	UY	1381	24				
Radio Hub Jamming	XQ	1344	24				
Radio Hub Jam Restore	XH	3344	24				
Radio Jamming Restore	XH	3344	24				
Radio Supervision Restore.	UJ	3381	24				
Radio Low Battery Restore	XR	3384	24				
TELECOM STATUS							
Modem Failed		1330	25	×	×	×	×
Modem Communication Fail		1350	25				
Input Line Fail	LT	1351	25				
Telecom Line Fault	LT	1351	25				
Input Line Restored	LR	3351	25				
Telecom Line Restored	LR	3351	25				
ACCESS CONTROL							
Door Left Open	DL	1426	26	✓	×	×	×
Door Forced	DF		26				
MASK ALARM/RESTORE							
Detector Masked	BT	1324	27	✓	✓	✓	×
Detector Masked Restore	BJ	3324	27				

Event	SIA code	CID code	Event Type Number	Default 1 (ARC) Full Reporting	Default 2 (ARC) No Arm/Disarm	Default 3 (ARC) No Arm/Disarm and Alarm Restorals	Default (SMS)
SPECIAL LOG							
Zone Special Log Opened	UA	1146	28	×	×	×	×
Zone Special Log Closed	UR	3146	28				
Zone Special Log Switcher Opened	UA	1146	28				
Zone Special Log Switcher Closed	UR	3146	28				
ALARM SILENCED							
Alarm Silenced	OR	1406	29	×	✓	×	×
Sub-Area Alarm Silenced	OG	1402	29				
TECHNICAL ALARM SILENCED							
Technical Alarm Silenced	OR	1406	30	×	×	×	×
Technical Alarm in Sub-Area Silenced	OG	1402	30				
INFORMATION							
Engineer Access	LB	1627	31	×	×	×	×
Engineer Exit	LX	1628	31				
System Restart		1305	31				
Logs Cleared		1621	31				
Engineer Reset	RN	3313	31				
Clean Started		1305	31				
Site Changed	YG	1306	31				
Logs Nearly Full		1623	31				
Input Walk Tested		1607	31				

Access Levels

Level	Description
1	Access by any person; for example the general public.
2	User access by an operator; for example customers (systems users).
3	User access by an engineer; for example an alarm company professional.
4	User access by the manufacturer of the equipment.

Alarm, tamper and fault indications will automatically be cleared within 3 minutes. If a user has finished viewing the information they can terminate the display instantly by pressing the ✓ key.

Compliance

As per EN 50131-1 the PCX is capable of supporting all conditions A, B and C:

In Grades 1 & 2 I&HAS when an I&HAS or part thereof is in a set state:

a. access to the supervised premises or part thereof, via an entry/exit route, shall be prevented, or
b. opening the door to the entry/exit route shall initiate an entry procedure, or
c. indication of the set/unset status shall be provided.

In Grades 3 & 4 I&HAS when an I&HAS or part thereof is in a set state:

a. access to the supervised premises or part thereof, via an entry/exit route, shall be prevented, or
b. opening the door to the entry/exit route shall initiate an entry procedure.

App HomeControl+ not certified IMQ-Security Systems.

EN50131-3:2009
EN50131-1:2008+A1:2009
Security Grade 2
Environmental Class II

EN50131-3:2009
EN50131-1:2008+A1:2009
Security Grade 3
Environmental Class II

For electrical products sold within the European Community.

At the end of the electrical products useful life, it should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice in your country. When disposing of the product and accessories, the batteries must be removed and disposed of separately in accordance with the local regulations.

Notes

CE