ENFORCER
two way wireless technology

Pyronix Cloud

PCX 46 App
Control Panel

Programming Reference Manual

PCX 46 App (Small):

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

PCX 46 App (Large):

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

Software version >10.3
RINS1828-2

Pyronix HIKVISION

1. Contents Page

2. Introduction

2.1 Hybrid Integrated System with Automation Control

The **PCX 46 App** is hybrid alarm system. It integrates the award winning Enforcer Two Way wireless technology with 30 automation outputs and a host of high security features. The **PCX 46 App** is easy to use and designed to communicate to you about any system activations via our HomeControl+ smartphone App notification messages. It can also send alarms to the Alarm Receiving Centre and maintenance company.

2.2 Two-Way Wireless Technology

Using the wireless input expansion module RIX 32-WE, the **PCX 46 App** converts into a high security wireless system taking full advantage of Pyronix' innovative wireless technology using the Pyronix High Security Wireless Encryption Protocol. This module also allows the access to all Enforcer system 2-way wireless peripherals.

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

Battery Monitoring/Saving: The Enforcer wireless peripherals use advanced technology to preserve the battery life of each wireless device. However, the system informs you when a battery needs replacing a month in advance before the device stops working. This key feature gives you enough time to change the battery in the specific device. Other wireless alarm systems may not give you a low battery warning signal, meaning that devices could stop working, leaving your environment unprotected.

High Security Encryption: The wireless protocol is encrypted with 128 bit making it practically impossible to replicate or copy its wireless peripherals. It also uses an intelligent wireless jamming detection technology.

User Friendly Keyfobs: Up to 32 wireless keyfobs can be added to the **PCX 46 App** system. Each wireless keyfob has its own user ID which can be reported to the ARC and user mobile phone. It is possible to allocate different functions to each keyfob such as arming / disarming different areas, activating the automation outputs to control external devices such as gates, requesting system status, and activating panic alarms giving you total control of your system. It shows you the system status using a 3 colour LED:

System armed: When the system is armed a RED LED will illuminate momentarily.

System disarmed: When the system is disarmed a GREEN LED will illuminate momentarily.

System fault: When the system is in fault condition an AMBER LED will illuminate.

2.3 User Automation Outputs

The **PCX 46 App** has ability to operate up to 30 user automation outputs that give you the option activate gates, lights, sprinklers, etc. via your keypad, wireless keyfob or smart phone app.

2.4 SMS Text Alarm Notifications

When your system is activated it will notify you via SMS text messages in real time. For example, notification that your child has returned home from school safely or notification of a leakage of water in your property etc.

2.5 System Remote Control with the HomeControl+ App

The **PCX 46 App** system can be remotely controlled using the HomeControl+ smartphone App. It allows you to arm and disarm the **PCX 46 App**, check the system status and bypass inputs. It also allows you to activate remotely up to 30 devices such as gates, lights, sprinklers and more.
The Pyronix+ App and Pyronix Cloud communication is fully encrypted to the highest standard (AES 256) and no sensitive user data is stored on the Pyronix Cloud.

The Pyronix+ App is available in 2 versions Android from Google Play Store and iOS from Apple store.
www.pyronixcloud.com

ANDROID APP ON Google play

Available on the App Store

3. Keypad Operation

Button keys:

The following alpha-numerical buttons are used
[A] = Selects Area A, Upper case /lower case, Exit engineers menu.
[B] = Selects Area B
[C] = Selects Area C, Clears letters / adds a space
[D] = Selects Area D
[D] = Press to Enter Manager Mode
[🔥] = Press for 2 sec to generate Fire alarm
[🐻] = Press for 2 sec to generate PA alarm
[◀] = moves cursor left
[▶] = moves cursor right

On the **PCX 46 App** it is possible to write personalized titles for the following:

- Inputs, Input Number, Location
- Area Names
- Site Name
- Keypad/Reader, Keypad Number, Location
- Input and Output expander location descriptions
- User Names

The **PCX 46 App** 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. For punctuation marks, press the [1] button.

4. The Engineer Menu

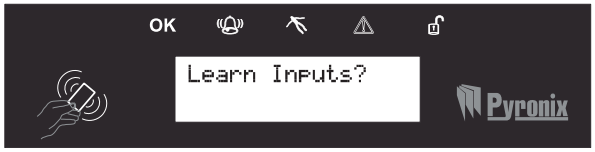
The system is programmed from the Engineer Menu. To enter the Engineer Menu, the panel must be fully disarmed state. Whilst in Engineer Mode all tamper alarms (including case tamper), will be disabled.

4.1 Navigating in the Engineers and User Menu

[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] = 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.

4.1.1 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 with a question mark (?).
-

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 [✓] 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 sub-menu to the next sub-menu or back to the main menu.

NOTE: For your security, the keypad becomes disabled for 90 seconds after 16 incorrect key-presses, or after 6 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.

4.2 Entering The Engineer Menu (Default Engineer Code = 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 'Authorization required' will be shown on the display. After entering the Engineer code 9999 (default code) the first option that is shown will be: **Date & Time?** , the fault (⚠) LED will flash and high pitch tone will be generated regularly indicating the Engineer Menu has been accessed.

4.3 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 'PRESS A TO EXIT & SAVE ENG MENU?'.

4.4 Accessing the Engineers 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.

4.5 Saving Your Programming

Any programming done in the engineer or user mode will not be saved on the system until the Engineer or User menu have been exited.

5. Engineer Menu

Please refer to the Programming Manual for this chapter. The meaning of every option presented in the Programming manual is explained here in detail.

5.1 Date and Time?

All log entries and the system display include the date and time so it is vital that the correct date and time is programmed. This may be also programmed in the Master Manager Mode.

NOTE 1: When a modem is connected, the PCX 46 will auto-set the date and time from the network that it is connected to. This will be done: on initial power up, with a mains and battery failure and one hour after the last time update.

NOTE 2: Please note that powering down the system and removing the battery will reset the time and date information.

5.1.1 Time Zone

This option is available to help set the correct time for the specified time zone. See APPENDIX A: Time Inputs, page: 38.

5.1.2 Change Year

For the year 2016, enter 16.

5.1.3 Change Month

For March, enter 03.

5.1.4 Change Day

For 31st, enter 31.

5.1.5 Change Hours

Use 24 hour clock format. For 8pm enter 20:00.

5.1.6 Change Minutes

For 7:30, enter 30.

5.1.7 Software Clock Adjust

If enabled, the control panel will adjust the clock correctly if the control panel gains or loses time.

NOTE: This option is used in conjunction with the "System Options", 'Software Clock' function.

5.1.8 Summer Time Adjust

If activated this option will automatically change 1 hour ahead and backward for the summer and winter time.

5.2 Learn Wireless Devices?

This function should only be used if a PCX-RIX32-WE (Enforcer wireless expander) is connected to the **PCX 46 App**. Please see the Installation Reference Manual for connecting this expander.

This menu learns or deletes wireless devices for the inputs and bells.

NOTE: The keyfobs are learned and programmed from the Master Manager menu.

5.2.1 Learn Inputs?

Learn Devices

This menu allows you to start the procedure of learning wireless inputs onto the system.

Choose Input

Use this menu to choose which input on the system you wish to learn. 'Learnt' will be displayed if a device is already learnt, or 'Available' will be displayed if it is not.

Choose Input⇨ Learning...

1) Take the wireless device, and open the casing

2) Remove the plastic insulation between the battery and terminal.

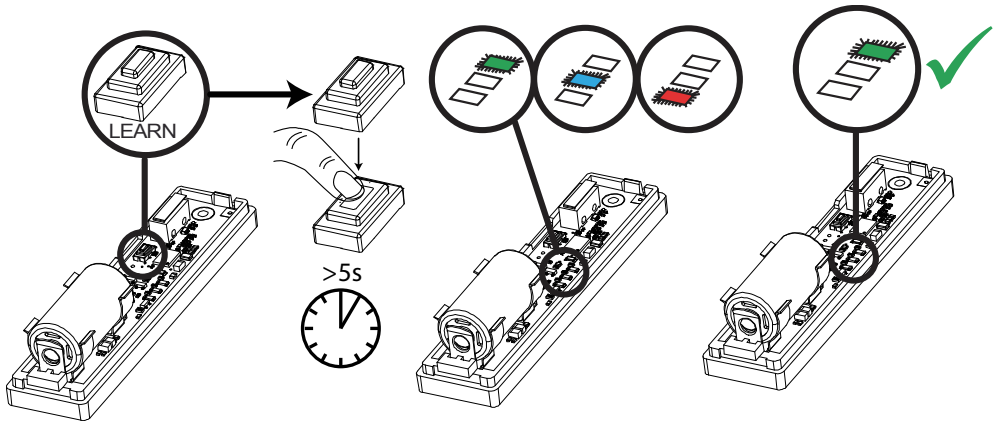
3) If a Device is not learned = The Green and Red LEDs on the Device will flash alternately.

4) Press and hold the 'learn' button on the Device = The 3 LEDs will start cycling.

5) Release the 'Learn' button = 'Input Learnt' will be displayed and confirmation tone on the panel will be emitted.

6) If an input has already been learnt, 'Input learnt already' will be displayed.

Example: The image below shows how to learn an Magnetic Contact. The same procedure is followed for other Inputs and sensors. Please note if smoke or carbon monoxide sensors are learnt, they will just include one multi-colour LED.



Delete Devices

Already learnt inputs may be deleted from this menu.

Delete All ⇨ Enter Code

To delete all wireless input devices, enter '2000' (this is the **PCX 46 App** Security Code). "Please wait" will be displayed while the **PCX 46 App** deletes **ALL** the wireless devices learnt on the inputs.

Choose Input to Delete

This option allows you to delete only a specific wireless device learnt to an input. Any inputs that display 'learnt' can be deleted. "Please wait" will be displayed while the **PCX 46 App** deletes the wireless device. Return to this process to delete more devices.

5.2.2 Learn Bells?

Learn Devices

Entering this menu allows you to start learning wireless bells onto the system

Select Bell

Use this menu to choose which bell on the system you wish to learn. 'Learnt' will be displayed if a bell is already learnt, or 'Available' will be displayed if not.

Select Bell⇨ Learning...

1) Open the bell

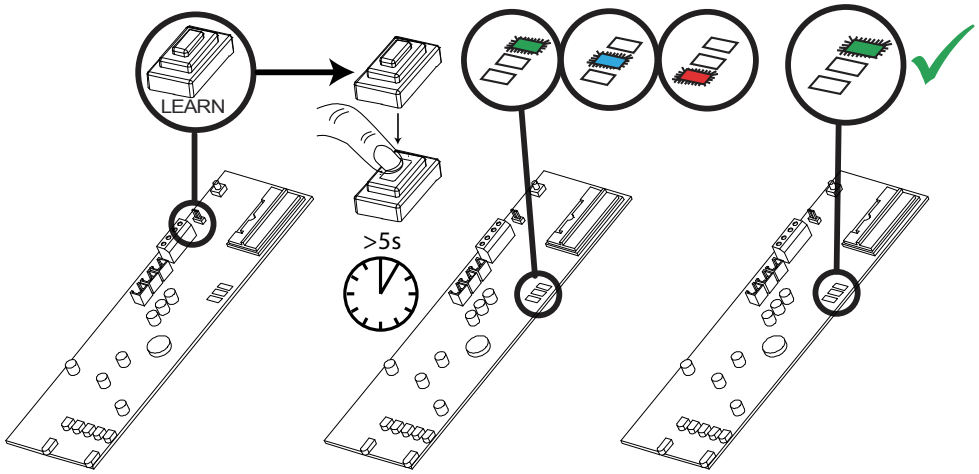
2) Plug the battery connector into the battery terminal.

3) If a Device is not learned = The Green and Red LEDs on the Device will flash alternately.

4) Press and hold the 'learn' button on the Device = The 3 LEDs start cycling around.

5) Release the 'Learn' button = 'Bell Learnt' will be displayed and confirmation tone on the panel will be emitted.

If a Bell has already been learnt, 'Bell learnt already' will be displayed.



Delete Devices

Already learnt bells may be deleted by entering this menu.

Delete All ⇨ Enter Code

To delete all wireless Bells enter 2000 security code. "Please wait" will be displayed while the PCX 46 App deletes them.

Choose Bell to Delete

This option allows you to delete only a specific wireless Bell learnt. Any Bells that display 'learnt' can be deleted. "Please wait" will be displayed while the PCX 46 App deletes the wireless Bells. Return to this process to delete more devices.

5.2.3 Learn Wireless Keypads Procedure

Learn Devices?

Entering this menu allows wireless keypads to be learnt on to the system

Select Keypad

Select the position to learn the wireless keypad to. If the position is already taken it will display "Learnt", if it is free it will display "Available."

Select Keypad⇨ Learning...

1) Open the wireless keypad.

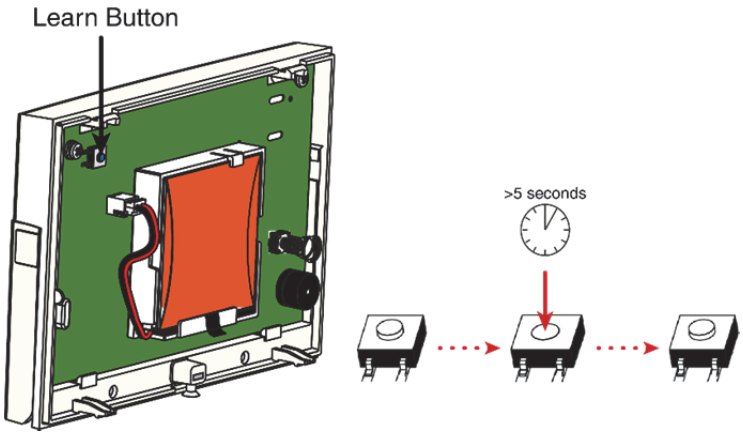
2) Plug the battery connector into the battery port.

3) If the device is not learnt = The AMBER and GREEN LEDs on the device will flash (alternating.)

4) Press and hold the 'LEARN' button on the device and 4 LEDs start cycling through.

5) Release the 'LEARN' button = 'Wrls Keypad Learnt' will be displayed, the GREEN LED on the keypad will flash and a confirmation tone will be emitted from the panel.

If the wireless keypad has already been learnt to another position, 'Wrls Keypad Learnt ALREADY!!' will be displayed.



Delete Devices

Wireless keypads that are already learnt to the system can be deleted from the system by entering this menu

Delete All ⇨ Enter Code

To delete all wireless keypads enter '2000' (this is the PCX 46 Security Code). "Please wait" will be displayed while the PCX 46 deletes them.

Choose Wireless Keypad to Delete

This option deletes only a specific wireless keypad that is learnt. Any wireless keypads that display 'learnt' can be deleted. "Please wait" will be displayed while the PCX 46 deletes the wireless keypad. Return to this process to delete more devices.

5.2.4 Learn Keyfobs Procedure

The keyfobs are learnt and deleted from the Master Manager menu.

Learn Keyfobs

1) Enter Master Manager Menu (Default Master Code = 1234).

2) Scroll to the "LEARN USER CODES KEYFOBS & TAGS" option.

3) Choose a code to allocate the keyfob to.

4) If a keyfob, code or tag are not learnt the space, between brackets will be empty.

5) If a keyfob, code or tag is learnt between the brackets will be shown [******].

6) Press and hold any of the keyfob buttons for 5sec.

7) A confirmation tone will be emitted and keyfob will be shown on the display.

Proceed with the programming of the keys shown next.

Delete Keyfobs

1) Enter Master Manager Menu (Default Master Code = 1234).

2) Scroll to "LEARN USER CODES KEYFOBS & TAGS" option.

3) Choose the keyfob to delete = between the brackets will be shown [******].

4) Press [C] . Between the brackets will be shown [ ] to confirm the deletion.

5.3 Program Inputs?

By default, all inputs are set to 'unused'. Before programming, identify input type required:

#These inputs cannot be bypassed.

*Use of inputs 19, 20 and 23 will make the system unable to comply with EN50131-1 Security Grade 2 or 3.

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

Choose Input

Choose an input to program.

Input in Area

Enter the areas you would like the input to operate in.

Common Input

In certain situations, a 'common' area may be needed. A common area is an area that only arms if other specific areas are armed.

Example: A reception in a building will only need to be armed if the offices and warehouse are armed. If the office is armed, but the warehouse isn't, then the reception would still need to be inactive so people would be able to leave the premises. One input can be allocated to one or more areas. In this example the inputs located in the reception area will be in the offices and warehouse areas and have the common attribute activated.

Area A: Office – Inputs 1, 2, 3, 4 and 8. **Area B:** Warehouse – Inputs 5, 6, 7 and 8.

Input 8: The detector connected to this input is going to be the input located in the Reception and is common to Area A and Area B. Input 8 will only be active if the Area A and Area B are both armed. If one of them is disarmed then input 8 will not be active either.

5.3.1 Input Attributes?

Attribute	Operation for both wired and wireless inputs
Chime	When enabled the system loudspeaker(s) will 'chime' when an input is triggered whilst the alarm panel is disarmed. Chime can be single – sounding once of follow – sounding while the door is left open. **NOTE**: The chime can be turned On or Off in disarmed mode by pressing [c] when all Entry Delay inputs are closed.
Allow Bypass	Enables the input to be manually bypassed during the arming procedure or from the user menu whilst the panel is disarmed.
Double Knock	If enabled, an alarm will be generated if this input is triggered twice within the pre-programmed time window or if the input remains active for that period. The double knock option does not work on Follow input type.
Combined Input	Alarm will only be generated if 2 inputs one next to the other with Combined Input attribute have been activated at the same time. This option is very useful for setting up out door perimeter protection.
Normally Open	Both wired and wireless inputs are normally set to Normally Closed. This attribute allows setting up the input as a Normally Open.

Mask Test	The panel will not arm if the user does not activate each detector with this attribute after starting the arming timer. This is a way to prevent arming the system with masked or faulty detectors.
Non Activity Input	This attribute works in conjunction with the NAT (Non Activity) timer. If a detector has not been activated in during the NAT time the NAT output if programmed will be activated. An event will be registered in the log too.
Special Log (SP)	Forces a log entry when the input is opened or closed, even when an alarm does not result. May be selected to apply when a system is armed, when disarmed, or always.
Inertia Input	If this function is enabled, all inputs will operate as "inertia". Please note that only PCX-RIX8i input expanders can be used with this function. Inertia operates by determining the gross attack and pulse count of the force. For example: Gross Attack = 4 m/s. Pulse Count = 3. The input will activate after sensing 3 "knocks" near the area where the shock is installed (each pulse is kept in memory for 15 seconds).

5.3.2 Input Description?

2 text labels can be associated to each input:

Input Location: Here should be written the meaning of the input. There are 14 characters available for this label.

Example**:** Input Number = Input 01; Input Name = Living Room. In case there has been a tamper alarm on an input the SMS alarms will show: 'input 01, Living Room, Tamper Alarm'. On the display will be shown: 01-Living Room, Tamper on Input. Meaning: Tamper alarm on Input 01 that is the Living Room.

Enter Number: Best practice is to write the Input Number (Input 01, Input 02 and so on) on this label. This label will be shown in the event log, following alarms, and reported in the SMS alarms as a reference point. There are only 7 characters available for this label.

Manually Bypassing Inputs Procedure

Method 1: Whilst the system is arming, press the ☑ key to bypass inputs. (EN50131 compliant)

Method 2: Enter user menu and from the "Bypass inputs" option bypass the inputs as required.

Automatic Bypassing Inputs Procedure

Inputs may be automatically bypassed when the panel auto re-arms if this option is enabled in the system options.

5.4 Program EOL?

The end of line programming for all inputs on the PCX 46 can be selected from the below choices and is applied to all wired inputs:

5.4.1 Choose EOL Range

[0] 1K/1K* (1K Alarm: 1K, Tamper: 1K)

[1] 4K7/2K2* (Alarm: 4K7, Tamper: 2K2)

[2] 4K7/4K7* (Alarm: 4K7, Tamper: 4K7)

[3] 4K7/2K2* Wide (Alarm: 4K7, Tamper: 2K2, Wide means (wide tolerance) that more than one detector can be wired to an input)

An asterisk (*) indicates the single end of line value. For example, 4K7/2K2* means the 2K2 is the single end of line value. Please note, when using a RIX8i the 1K/1K can only be used.

5.5 Install RIX?

A maximum of 4 x wired input expanders or 1 x wireless input expander can be installed on the

PCX 46 App. **NOTE:** Wireless or wired must be chosen accordingly in the menu.

5.5.1 RIX Address

Select the address of the RIX installed (Address 0-3). **NOTE**: If a PCX-RIX32-WE (Enforcer wireless expander) is installed, each address will enable 8 wireless inputs on the expander. See the Installation Reference for more information.

5.5.2 RIX Installed

Enables the Wired Expander or Wireless RIX that has been installed. 2= Wireless / 1= Wired / 0= No

5.5.3 RIX Location

The description text is stored for reference on later maintenance visits i.e. "GROUND FLOOR". For information on how to use predictive text, please see page 5.

5.6 Program Outputs?

This option enables the programming of the outputs on the Enforcer 32-WE and any devices that are connected. Please see APPENDIX C: Output Types, page: 41.

5.6.1 Endstation PGMs?

These are the outputs on control panel itself. There are 3 outputs: PGM (relay), Strobe and Bell. This also includes the 9 ATE outputs that are enabled when a loom is connected to the board (please see the Installation Reference manual).

5.6.2 RIX Module PGMs?

These are the outputs that are located on an input expander module if connected.

5.6.3 ROX Module PGMs?

This option enables the addition of wired ROX modules to the PCX 46.

5.6.4 Keypad PGMs?

Allows the programming of the PGM options for the output located on the wired keypads.

5.6.5 Reader PGMs?

Allows the programming of the PGM options for the outputs located on the wired readers.

5.6.6 User Outputs?

These outputs are used for creating automation control for Devices. The user can control them remotely from the user menu on the keypad. The automated user outputs can be programmed either latched or pulsed.

NOTE: The PGM Outputs polarity cannot be inverted. Only the ATE outputs can.

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

5.7 Install Keypads and Readers?

Ensure that all keypads and readers are addressed correctly before enabling them in this function.

NOTE: Care should be taken to ensure that every area that can be armed, or to which an Input is allocated, can be disarmed by at least one keypad/tag reader.

5.7.1 Device Address

Address [0] is reserved for the first LCD keypad on the bus. In the addresses from 1 to 5 it is possible to allocate external wired readers or LCD keypads.

5.7.2 Device Type

The device types that are possible to program are LCD keypads [0] or Readers [1].

5.7.3 Reader Device Type

This option will only appear when you program a Reader into the system. You can then select how you would like the Reader to operate.

Arm/Disarm

This will make the Reader act like a normal keypad (arming/disarming the areas etc.)

Device Arms Areas: This feature programs which area(s) the reader can arm.

Device Disarms: This feature programs which area(s) the reader can disarm.

Device in Area: This feature programs in which area(s) the reader is active.

Device Name: Enter the name of the device for example: 'Front Door'.

Enter Number: Enter a number of the device, such as: 'Reader 01'

Input Description: Enter a description /any additional information that is helpful.

Arm/Disarm Sub-Area

A reader can be used to create sub-areas controlled independently from the area.

Add inputs: Each sub-area may consist of any number of inputs, all of which must be allocated to the same area. No input may be allocated to more than one sub-area. Entry Delay input types cannot be allocated to a sub-area and in the sub-area the arming/disarming of the inputs is immediate without delay timers. The sub-areas can be operated by proximity tag, or by key (or other) switch wired into the first input on the tag reader. Notice the proximity Tags for sub-area control are programmed through the Manager menu in 'LEARN USER CODES KEYFOBS & TAGS'. The reader provides 'Alarm' and 'Ready' outputs dedicated to that sub-area. It also provides relevant indications, including Arm/Disarm status, so should always be located adjacent to the controlling Key switch where this is used. Sub-Area Arms: If this option is selected as 'If Area Armed' then the sub-area will always arm when the area in which is it located is armed. If selected as 'Never' it will always require manual arming from the tag. The sub-area must ALWAYS be disarmed manually. An additional option is available in the 'COMMUNICATIONS' -> 'Digi Modem Signalling' -> custom 'Event Type' options, called 'S-Area Alarm-Rst' to permit an abort signal to be generated by silencing an alarm at the Reader after an alarm has been generated in the sub-area.

Action	**Status**	**Notes**
Disarmed	Detectors within sub-areas are inactive	'Disarmed' indication lit
Sub-areas Input triggered	No response	
Attempt to arm sub-areas with an open input	-	'Fault' LED flashes and intermittent tone to indicate 'cannot arm'
Arming with no open inputs	Sub-area arms	'Disarmed' LED distinguishes
Sub-area Input triggered	Alarm generated	'Alarm' LED lights, alarm tone generated
Valid code entered at a Keypad whilst alarm in sub-area is active	Alarm silenced by user code	Sub-area remains armed

Sub-Area Control: The sub area can be controlled by Tag or Input. When an input is used to control the sub-area a keyswitch input type should be used and connected to an external key or switch.

Sub-Area Name: Enter the name of the sub-area such as Private Office.

Enter Number: Enter an appropriate number for the Sub-Area

Input Description: Enter an appropriate description e.g. the location of the room /area

Assigning Tags to Sub Area Reader: To assign tags to the sub-areas, enter the master manager menu and select 'LEARN USER CODES KEYFOBS & TAGS', add a new user code (tag) and when the prompt shows "Access Reader", enter the address of the reader you would like the tag to operate for the sub-areas.

Access Control

Allows the reader to control doors fitted with electrical locks. On the readers there are 2 Inputs that can also be outputs. They can be connected to the lock for opening and controlling the door.

Lock Open Time: This is the time the door release is going to be active when a valid tag is presented.

Door Open Time: This is the time the door is allowed to be open before triggering an alarm.

Door Contact No: Give the door contact an appropriate number if required (i.e. if monitoring door)

Door Name: Give the door an appropriate name.

Enter Number: Enter an appropriate number e.g. a door, reader, keypad or zone number.

Input Description: Enter an appropriate description e.g. the location of the door.

NOTE: Access control falls outside the scope of EN50131-1

Disarm Only

Allows the reader to be used to disarm the system only.

Device Disarms: This feature programs which area(s) the reader can disarm.

Device in Area: This feature programs in which area(s) the reader is active.

Device Name: Enter the name of the door such as Front Door.

Enter Number: Enter an appropriate number e.g. a door, reader, keypad or zone number.

Input Description: Enter an appropriate description e.g. the location of the door/reader.

Entry Control

Allows the reader to be used as arm/disarm Device and access control.

Device Arms Areas: This feature programs which area(s) the reader can arm.

Device Disarms: This feature programs which area(s) the reader can disarm.

Device in Area: This feature programs in which area(s) the reader is active.

Lock Open Time: This is the time the door release is going to be active when a valid tag is presented.

Door Open Time: This is the time the door is allowed to be open before triggering an alarm.

Door Contact No: Give the door contact an appropriate number if required (i.e. if monitoring door)

Door Name: Give the door an appropriate name.

Enter Number: Enter an appropriate number e.g. a door, reader, keypad or zone number.

Input Description: Enter an appropriate description e.g. the location of the door.

Keypad Device Type

Device Arms Areas: This feature programs which area(s) the keypad can arm.

Device Disarms: This feature programs which area(s) the keypad can disarm.

Device in Area: This feature programs in which area(s) the keypad is active.

Device Name: Enter an appropriate name for the device.

Enter Number: Enter an appropriate number e.g. keypad 1.

Input Description: Enter an appropriate description e.g. the location of the keypad.

5.7.4 Wireless Keypads

There are four positions allocated for wireless arming devices. These appear as Wrls Address 1-4.

Device Type

This must be set to "Wireless Keyp[3]" for the device type

Options

The table below shows the options for the wireless keypad, the choices and what is each choice's consequence

Option	*Choice*	*Function*
Tag Read Enable	Yes [1] (Default)	This enables the tag reader on the wireless keypad.
	No [0]	This disables the tag reader on the wireless keypad.
Auto Wakeup	Yes [1] (Default)	The keypad will automatically wake up during an entry time.
	No [0]	The keypad must be woken up manually to disarm the system.
Supervision	Yes [1] (Default)	The panel will supervise the unit on the system (this is used with the supervision timer.)
	No [0]	The unit is unsupervised. If the keypad is taken from site the panel will not notice.

Back Light	Yes [1] (Default)	When a key is pressed the keypad will illuminate.
	No [0]	The keypad will never illuminate.
Entry/Exit Sound	Yes [1] (Default)	The keypad will mimic the keypad's entry and exit tones.
	No [0]	The keypad will be silent during entry and exit times.
Device Arms Area	[ABCD]	The areas that the wireless keypad can arm.
Device Disarms	[ABCD]	The areas that the wireless keypad can disarm.
Device in Area	[ABCD]	Which partitions the wireless keypad is located in. (Any areas the wireless keypad can set but it is not programmed to be "in" will quick set.)
Device Name?		The keypad can be given a name. I.E Factory
Enter Location		Extra information on its location can be entered here. I.E North Wall

5.8 Program Timers?

Timers	Description	Options
Entry Time 1 Entry Time 2	Programmes the entry time for each area. If entry time is started at a door programmed in multiple areas, the longest time will apply. Entry time 1 will apply to any inputs programmed as "Entry Delay 1" type, and Entry Time 2 will apply to any inputs programmed as "Entry Delay 2" type. Ensure that timer is no longer than 45 seconds in order to comply with EN50131-1.	0-255 seconds
Exit Time	Programmes the exit time for each area.	0 – 255 seconds
Bell Time	Cut off time for external sounder. Separate for each area. Repeat above steps for each of the PCX 46 areas programmed on your system.	0 – 15 minutes
Bell Delay	Delay after burglary alarm before bell activation. NOT valid within 3 minutes of final arm, or after entry time started. If 'Silent 1st Alarm' selected in alarm responses, delay commences at confirmed alarm.	0-20 minutes
Strobe Time	The duration of time the strobe output remains live after the bell time ends, '99' means endless.	0-99 minutes
Number Re arms	Number of times system re-arms after bell time ends. Re-arm number applies to each area, and does not affect emergency alarms. '9' = 'always re-arm'.	0 – 9
AC Fail Delay	Time delay before mains failure or technical alarm signalled. '250' = never alarms. System change-over to battery supply and associated 'alert' indication is always immediate. Mains Fail message on keypad not permitted until valid code entry.	0-250 minutes
Speaker Time	Time speaker and keypad buzzers remain live after bell time ends, '99' = 'endless'.	0-99 minutes
Final Door Delay	Time between final door input closing and system arming. When a code is entered to arm the system the exit time will start but the system will not arm until it sees the final exit door open and close and duration of the final door delay.	0-255 seconds
Double Knock	Length of filter period applied to inputs with 'Double Knock' input attribute.	0 – 75 seconds
Delay Send Entry	Delays 'Burglary' alarm signalling if an alarm is generated by deviation from the entry route. Delay Send Entry must be programmed for a minimum of 30 seconds to comply with EN50131-1.	0-255 seconds
Line Fault Delay	Duration of Telecom (GSM) Line Fault before 'Line Fault' alarm triggered, '250' endless.	0-250 minutes
Arm Fail Time	If a system has not been armed within the entry delay time, for example door left open the Arm Fail Time will take over and at the expiry of this time an alarm will be created. This time should be longer than the Entry Delay time.	0-255 seconds
Guard Code Delay	Minimum time an alarm must have been present before a 'Guard' code will be accepted to disarm.	0-10 minutes
Fire Bell Time	Cut off time for fire alarm. '99' = endless.	1 – 99 minutes
Arm Fail Warning	The "Arm Fail Warning" will overwrite the "Arm Fail Time" feature if the "Alarm When Arm Fail" in System Options has to be set up to NO. Example of how this feature works: Set Arm Fail Warning longer time than the Entry Delay Time. For example if the Entry Delay time is set to 30sec the Arm Fail Time could be set to 1minute. If the system is not armed after 30sec then the Entry Delay Tones will start and the system will be disarmed at the end of the Arm Fail Warning time. An event Arm Fail Warning Activated will be logged in the event log too.	0 – 99 minutes

NAT Day Timer	NAT stands for Non-Activity Timer. This is used in conjunction with the input attribute 'Non Activity Input', and will monitor the chosen input for the selected number of days. At expiration of timer, and if the input has not opened within that time, then this will be stored in the panel log. Non Activity fault and there will be an output activated if programmed to it. Send SMS message if "Special Log" is on.	0-14 days
NAT Hours Timer	NAT stands for Non-Activity Timer. This is used in conjunction with the input attribute 'Non Activity Input', and will monitor the chosen input for the selected number of hours. At expiration of timer, and if the input has not opened within that time, then this will be stored in the panel log. Non Activity fault and there will be an output activated if programmed to it. Send SMS message if "Special Log" is on.	00-23 hours
Pulsed Burglar Any	This option sets up the duration of the pulse of an output programmed as "Pulsed Burglary Any" activates after a burglary alarm.	0-255 seconds
WLs Supervision Time	This is the time window before a supervision fault will be signalled. For example: if the time is set for 2 hours, then any device that doesn't communicate with the PCX 46 within that period will cause a supervision fault. Must be programmed to 2 hours or less for compliance to EN 50131.	0-99 hours
WLs Jamming Time	This is the time window that if a wireless device had its signal 'blocked' a fault would display. For example, if the time is set for 30 seconds, then if a wireless device is 'jammed' longer than 30 seconds a fault will be displayed. Must be set to 30 seconds or less (but not zero) for compliance to EN 50131.	0-100 seconds
Service Time	This is a timer that can be programmed in days, and will display a message to the user warning that a service is due. An engineer code will clear the message.	367

5.9 Change Codes?

All codes may be 4, 5, or 6 digits long and also can be assigned as proximity tags and keyfobs. 100 user codes are available.

NOTES: Only Duress/Guard, Master Manager and Engineer codes can be changed by the engineer. User codes can only be changed by the Master Manager from the Master Manager menu. The Master User and Engineer Codes cannot be deleted.

User	Arm and Disarm System. Also for Access Control and Sub Area Control functions	Programmed by Manager only.
Manager Default: 1234	Arm and Disarm System. Also access to Manager menu functions	Programmed by Manager or Engineer.
Engineer Default: 9999	Access to all engineering functions; also arm/disarm system for test purposes.	Programmed by Engineer.
Duress	Disarm system, generating silent 'Duress' signal.	Programmed by Engineer.
Guard	Disarm system, but only after an alarm has been active for a minimum time (programmable). Also arm system. An output type is available to activate whenever this code is used.	Programmed by Engineer.

5.9.1 Change Duress/Guard Codes?

Choose Code Number

If a code or tag is already allocated, the display will show [******]. Press the [C] key to clear the code.

Choose Code Number ⇨ User Type

The user type can be Duress [2] or Guard [3].

5.9.2 Duress Code

The Duress code can arm or disarm the system and if used a Duress communication event will be sent. An output type is available to activate whenever this code is used (Duress type 008 - see page 12 - 13 Program Outputs).

User In Area

Choose the area(s) the code is active in

User In Area⇨User Arm Options

[0] Disarm/Arm: The code will arm and disarm the areas selected in the previous option.

[1] Disarm Only: The code will only disarm the areas selected in the previous option.

[2] Arm Only: The code will only arm the areas selected in the previous option.

[3] None: No option programmed.

User In Area⇨User Arm Options⇨Arm Area Choice

If a user code is allocated to more than one area and the 'Arm Area Choice' option is set to NO, the code will automatically arm all areas it has been allocated to in the same time. If the Arm Area Choice has been set to YES then the user will be given the ability to choose which area to arm when the arming procedure has been activated.

User In Area⇨User Arm Options⇨Arm Area Choice⇨User Name

Write the name of the user of this code.

5.9.3 Guard Code

This code can disarm the system, but only after an alarm has been active for a minimum time programmable in the timers. Use of this code will generate a normal user arm/disarm event. An output type is available to signal whenever this code is used.

User In Area

Choose the area the code is active in

User In Area⇨User Arm Options

[0] Disarm/Arm: The code will arm and disarm the areas selected in the previous option.

[1] Disarm Only: The code will only disarm the areas selected in the previous option.

[2] Arm Only: The code will only arm the areas selected in the previous option.

[3] None: No option programmed.

User In Area⇨User Arm Options⇨Arm Area Choice

If user code is allocated to more than one area and the 'Arm Area Choice' option is set to NO, the code will automatically arm all areas it has been allocated to in the same time. If the Arm Area Choice has been set to YES then the user will be given the ability to choose which area to arm when the arming procedure has been activated.

User In Area⇨User Arm Options⇨ Arm Area Choice⇨ User Name

Write the name of the user of this code.

NOTE: For both duress and guard codes is possible to program a tag too. If a tag is programmed it has to be associated to a reader.

5.9.4 Change Master Manager Code

If a code or tag is already allocated, the display will show [******]. Press the [C] key to clear the code and use the numeric keys to input the new code. This option allows the engineer to change the Master Manager code should this have been lost or forgotten.

User In Area

Choose the area the code is active in.

User In Area⇨ User Arm Options

[0] Disarm/Arm: The code will arm and disarm the areas selected in the previous option.

[1] Disarm Only: The code will only disarm the areas selected in the previous option.

[2] Arm Only: The code will only arm the areas selected in the previous option.

[3] None: No option programmed.

User In Area⇨ User Arm Options⇨ Arm Area Choice

If user code is allocated to more than one area and the 'Arm Area Choice' option is set to NO, the code will automatically arm all areas it has been allocated to in the same time. If the Arm Area Choice has been set to YES then the user will be given the ability to choose which area to arm when the arming procedure has been activated.

User In Area⇨ User Arm Options⇨ Arm Area Choice⇨ User Name

Write the name of the user of this code.

5.9.5 Change Engineer Code

If a code or tag is already allocated, the display will show [******]. Press the [C] key to clear the code and use the numeric keys to input the new code.

5.10 Volume Control?

The Volume Control function applies to both the buzzer and the internal sounder.

5.10.1 Area Entry Tone Volume

0=Completely Silent, 1=Silent, but beeps when the system is armed. 2-7 Internal Siren

5.10.2 Area Exit Tone Volume

0=Completely Silent, 1=Silent, but beeps when the system is armed. 2-7 Internal Siren

5.10.3 Alarm Volume

0=Completely Silent, 1=Silent, but beeps when the system is armed. 2-7 Internal Siren

5.10.4 Fire Alarm Volume

0=Completely Silent, 1=Silent, but beeps when the system is armed. 2-7 Internal Siren

5.10.5 Technical Alarm Volume

0=Completely Silent, 1=Silent, but beeps when the system is armed. 2-7 Internal Siren

5.10.6 24 Hour Alarm Volume

0=Completely Silent, 1=Silent, but beeps when the system is armed. 2-7 Internal Siren

5.10.7 Chime Volume

0=Completely Silent, 1=Silent, but beeps when the system is armed. 2-7 Internal Siren

5.10.8 Code Stops Sound

This option is very useful when 2 or more independent areas are used on one system. If programmed as 'Yes', once an alarm has been generated in an area, the user of a different area by his/her user code on his/her keypad will silence the alarm without disarming the area; and an 'Open After Alarm' (Abort) event will be sent for the silenced area. The area will still be armed until a valid user code that controls that area is entered.

5.10.9 Silent Technical Alert

If enabled, any technical alert sounds (such as mains fail, line fail etc.) will be silent.

NOTE: If the Exit time has started from an Arm Device programmed in multiple areas, or Entry time started from a door programmed into multiple areas, the HIGHER relevant level will apply.

5.10.10 Disable Call Fault

If enabled, all call faults will not be shown on the display, but they will appear in the log.

5.11 System Options

5.11.1 System Options

In the system options there are a number of options available to further tailor the operation of the system as to the project needs. The system options are described in the table below:

Arm With Tamper	If 'Yes', arming will be allowed regardless of the following faults: Case tamper and System tampers.
Arm If Modem Fault	If 'Yes', arming will be allowed regardless of the following conditions: Telecom line fail, Modem failed, ATE line fault, ATE one path fail, Digi dial fail, ATE communication fail.
Arm With Tec/Flt	If 'Yes', arming will be allowed regardless of whether 'mains', 'battery', 'telecom line', or other system fault is present.
Arm Fail = Alarm	If 'Yes' = A graduated alarm will be generated when the 'Arm Fail' timer expires (see Program Timers), if an exit procedure is still incomplete the arm fail output will trigger too. If 'No' = The Exit Time will continue until the Exit door is closed. It will return to disarmed mode at the end of the 'Arm Fail Warning' time if programmed.
Do Battery Load Test	If 'Yes' the system will perform a full load test of the battery at 7.00am each day.
Arm Acknowledge	This function is used to indicate the armed status of the system via the bell. Strobe Flash: A single flash will be generated when the system is armed. Bell Squawk: A single squawk for 5 seconds will be generated when the system is armed. Both Strobe/Squawk: A single flash and squawk will be generated when the system is armed. **NOTE:** This can create a potential security risk. Since the keyfob can show this status too we recommend using the keyfob instead.
Bypass On Re-Arm	If 'Yes', the input that generates an alarm will be bypassed when the bell time expires. If the input is closed then it will automatically become active again.
Forced Arm	If 'Yes', the Enforcer 32-WE will arm even if an input is open at the time of arming and will be bypassed (bypass attribute must be enabled).
Tag Only Disarm	If 'Yes' the Enforcer 32-WE prevents a user code being entered during the Entry Time, but allows a code to silence the Enforcer 32-WE once in alarm. A tag will disarm and reset the system.
Quick Arm	If 'Yes', the Enforcer 32-WE allows a user to arm the system by pressing the t key and then selecting the area: A, B, C or D. **NOTE:** This option should not be used on EN 50131 Graded systems.
Invert ATE PGMs	If 'YES': 'Positive Removed'. If 'NO': 'Positive Applied'. (Default is 'YES'). Any output switches from 5 to 0 volts; if set to YES, they switch to 0 to 5 volts
Software Clock	If set to 'YES' then the clock will run from the PCX processor, or if 'NO' then the clock will run from the mains frequency.
Keypad PA Key	Pressing the dedicated PA button or a combination of 1 and 7 keys will produce a PA. There are several options for this feature: Disabled=Inactive; Silent+Digi=Silent PA (signalling only); Bells Only=Bells Only (No signalling); Bell+Signal=Signalling and Bells.
Manager Program PA	If enabled, a manager will be able to program a wireless keyfob button action as personal attack.
ATE Input	Permits selection of inputs on communicator to suit 'UK STU' (including Red Care Reset), 'ATE Line Fault' (including Telback), 'Do not use' or 'Not Used'. Note: This option must be set to 'ATE' or 'UK STU' in order for Line Fault, etc. monitoring to function. This option is NOT required for use with the digi-modem.
Tag Disarm+Door	Used in conjunction with "Door Control" option in Reader setting. If set to 'No' – readers will disarm system but not control doors. If set to 'Yes' the readers control the arming/disarming and doors as long as the reader has been programmed in the reader options.
Keypad Fire Key	If enabled the fire alarm button on the keypad will be enabled.
Arm with Supervision Fault	If 'Yes' the panel will arm the system if there is a wireless supervision fault. The keypad will flag up a wireless supervision fault but allow the user to arm the system. If "No" will not be possible to arm the system with a supervision fault. The keypad will flag up the fault and the arming procedure will be stopped.

Keyfob on Entry	If 'Yes' allows use of the wireless keyfob to disarm the system only when the Entry Door has been opened and entry time has started.
Download if Armed	If enabled, downloading from the InSite software to the panel is possible regardless of if the PCX is armed or not. If disabled, downloading will only be possible when the PCX is disarmed.
6 Digit Codes	All codes can either be 4,5 or 6 digits. If this option is enabled, all codes must be 6 digits.
Time Prompt	If "Yes" the panel will prompt the user to manually update the time if the panel loses the current time. I.E Power cycling the product

5.11.2 System Displays

Please see page 5 for the 'Text Programming' section as this function involves programming different text for the **PCX 46 App** system.

System Displays	Description
Area Texts	You may choose how you want each area to be displayed, i.e. "Area A" may be used to fully arm a house therefore you may want to call it "Full House Arm" for example. You can have a maximum of 16 characters on the display.
Top Display Text	The top display text is shown on the keypad in disarmed mode.
Display If Armed	If programmed as 'yes' then the system will display on the keypads when the system is armed.
Display Alarms	If programmed as 'yes' then the system will display on the keypads any alarms without requiring user to enter their code or tag.
Ready LED ON	If programmed as 'enabled', the 'OK' LED will illuminate whilst the panel is disarmed and when all the Inputs in the areas (that the keypad controls) are closed.
Display PAs	If programmed as 'yes' then the system will display on the keypads any PA alarms without requiring the user to enter their code or tag.
Display Silent PAs	If programmed as 'yes' then the system will display on the keypads any silent PA alarms without requiring the user to enter their code or tag.
Display Inputs	If programmed as 'enabled', any inputs activated in disarmed mode will be displayed.
Disarm LED ON	If programmed as 'enabled', the disarm LED (green) will illuminate continuously whilst the system is in the disarmed state.

5.11.3 Exit Options

Timed	The system will only arm when the programmed 'Exit Time' has expired providing that all inputs are closed. Any 'Push To Arm' buttons fitted will also be live in this mode. The system allows the programming of 2 different Entry/Exit timers to be used with 'Entry Delay 1' and 'Entry Delay 2' input types.
Final Door	The system will only arm when an input programmed as 'Entry Delay 1' or 'Entry delay 2' opens and closes. This procedure is used to allow arming the system by the action of closing the exit door. It is possible to program a small delay time for the final door delay in 'Change Timers'.
Push To Arm	The system will only arm when a 'Push to Arm' button has been pressed. This function will override the programmed 'Exit Time'. The button can be used as a door bell when the chine input attribute is enabled ('Program Inputs')
Timed / Final	This function follows the 'timed' operation, except that the timer will be overridden if an Entry Delay input (door) is opened and closed before the timer expires

NOTE 1: If the arming has not been completed within the programmed 'Entry Delay' time, it is possible to generate an alarm or return in disarmed mode. This option is defined in 'Change Timers' and 'System Options'->Options'.

5.12 Review Logs?

There are two logs available on the system, panel and access control. Each log displays most recent event first. Use the ◄ ► keys to move forwards and backwards through the log. To view additional details, press the C key. If no other information is available, the display will move to the next log

entry. Pressing the [A] key will return to the main screen for that entry.

NOTE: In any disarmed or armed period, the **PCX 46 App** will only log a maximum of three occurrences of any particular event. It is not permitted to delete logs.

5.12.1 The Panel Log?

Includes Arm, Disarm, Trouble, User, Alarm, Engineer Access, Time & Date changes and etc.

5.12.2 The Access/Control Log?

Includes all Access Control and Guard Tour events.

5.13 Engineer Tests?

This function allows the engineer to test inputs, outputs, batteries and the bell.

5.13.1 Walk Test?

This function allows the engineer to test all programmed inputs on each area. The Inputs that haven't been activated will be shown on the display. As each Input is triggered, a chime will sound and that input will disappear from the scrolling list. Once all the Inputs have been walk tested, 'Walk Test Completed' will be displayed. When walk-testing a double-knock detector, it must be triggered twice within the preset period. When testing combined detectors, you must first activate the first detector once and then trigger the second detector; next open the second detector and trigger the first detector. A walk test can also be done on a single input if needed. This can be selected by pressing the [X] key after the areas are displayed.

NOTE: The walk test feature can only be used if inputs are already programmed and saved (i.e. after exiting the Engineers menu).

5.13.2 Soak Test?

The Soak Test is used when inputs need testing without creating problems for the user. For example testing a perimeter alarm set up when false alarms are likely. If the input in soak test is activated whilst the area(s) in which it is located is armed, it will indicate the activation (at disarm) and enter the details in the system log.

NOTE: If additional inputs are placed on test without removing previously tested ones, they will be returned to soak test.

5.13.3 Bell Test?

Any outputs programmed as 'any bell' or 'any strobe' (including the wireless bells) will be activated in this test.

5.13.4 Battery Load Test?

The system performs a check of the battery operation every 10 seconds, by dipping the power supply voltage momentarily, and measuring the system voltage. If the battery voltage measured is below 12.0V, or the battery fuse has failed, a 'BATTERY FAULT 100' warning will be generated. The **PCX 46 App** may be programmed to perform an automatic battery load test at every power supply at 07:00am each day from 'SYSTEM CONFIGURATION?' -> 'Options' -> 'Do Battery Load Test' (See page 19) menu. This will drop the power supply voltage below the battery voltage, whilst monitoring the system diagnostics. The test will NOT take place if: the End Station bell and strobe PGMs are active, the system is in Engineer Mode, any battery fault exists, any mains fault exists, or the system option is not selected. If the test has already started, it will be aborted if any of these conditions apply, other than entry into Engineer Mode. If the test is aborted, it will NOT take place until the next day.

5.13.5 Test PGMs?

Before you can test any outputs, the output programming must be saved to the NVM by first exiting the Engineer Menu. The engineer can test all the Programmable Outputs on the End Station (panel), ROXs, keypads and readers.

5.13.6 Send a Test Call?

If Contact ID or SIA has been programmed, you can send a test call from this option. The system will send a test call event once the call is activated. Press the [✓] key after the prompt "Are you Sure?"

5.13.7 By-pass Fire/PA?

Whilst in the Engineer menu, the Fire and Personal Attack inputs/keypad alarms remain active. This function disables any Fire/PA activations when the Engineer menu is active.

5.14 Diagnostics?

This option enables the engineer to perform full diagnostics on all key wired and wireless components of the system.

5.14.1 Wireless Devices?

View Inputs?

This option shows the status of the wireless inputs such as Open, Close, Tamper, Fault. If the ☑ key is pressed after the input status, a resistance reading will also be shown.

View Inputs Signal Strength?

This option is used to measure the signal strength for wireless inputs. The signal strength is shown on each individual wireless Device as well as on the control panel. On each Device a Green LED will show good or excellent and Red LED will show weak or no wireless signal.

View Bells Signal Strength?

This option is used to measure the signal strength of wireless bells.

View Wireless Keypad Signal Strength?

This option is used to display the signal strength of the wireless keypads. On each device the green LED will flash for good or excellent signal strength and the red LED will flash for low signal strength.

View Inputs Battery Status?

This option is used to check the wireless devices battery status information if a PCX-RIX32-WE (Wireless expander) is connected to the panel.

View Bells Battery Status?

This option is used to check the bells battery status information.

View Wireless Keypad Battery Status?

This option is used to check the battery status of the wireless keypads.

5.14.2 Wireless Dual Frequency Menu

NOTE: The PCX 46 must have a PCX-RIX32-WE that is version >3.5 installed for this menu to be visible.

The wireless expander is capable of switching frequency if the primary frequency gets jammed or is in a noisy environment. All wireless devices on the system must be version >3.5 in order for the expander to switch frequency.

Channel

This option will display the frequency channel that the expander is operating on.

01 – Primary frequency

02 – Secondary frequency

Channel Reason

This option displays the reason that the expander has had to switch frequency

SF/DF Status

This will display whether the panel is in single frequency or dual frequency mode. If this displays single frequency there will be devices on the system that are version <3.5

First SF Device

This will display the first single frequency device on the system. As the device displayed is deleted, it will display the next single frequency device until all remaining devices are dual frequency.

5.14.3 Wired Devices?

View Inputs?

This option shows the status of the wired Inputs such as Open, Close, Tamper, Fault. If the ☑ key is pressed after the Input status, a resistance reading will also be shown. This menus is subdivided into Panel zones, Expander zones, Keypad zones, and reader zones for ease of use.

View PSUs?

Panel PSU: End station voltage readings are displayed = Voltage: 13.7V.

Exp PSU (expander): Choose the expander address from [0] to [3] to read the PSUs voltage readings.

O/P Mod PSU: Choose the output module address from [0] to [2] to read the PSUs voltage readings.

Keypad Volts: Choose the Keypad address from [0] to [5] to read the keypad voltage.

Reader Volts: Choose the Reader address from [0] to [5] to read the reader voltage.

Calibration?

For manufacturer use only unless otherwise instructed.

5.14.4 Communications Diagnostics?

Signal Strength?

This function shows the GSM/GPRS signal strength (15-30 Good, below 15 Low) and the network as well as the GPRS modem version (if a Digi-GPRS with a valid SIM card is connected to the panel).

APN Status

This function shows the APN data/server connection status (initializing/no network/basic network/full network/Polling Cloud) Please see the programming manual for further information on each status.

ARC Status

This function shows the ARC connection status (initializing/no network/basic network/full network/Polling ARC) Please see the programming manual for further information on each status.

Last Polled App

This function displays the time and date that the system last made contact with the HomeControl+ App.

Last Polled Cloud

This function displays the time and date that the system last made contact with the PyronixCloud.

Last Polled ARC

This function displays the time and date that the system last made contact with the ARC (Alarm Receiving Centre).

PSTN Line Status:

Displays the Line status of the PSTN telephone line connection (if a Digi-1200 PSTN module is installed).

5.15 Engineer Restore Options

The Engineer Reset Options are used so that once an alarm has occurred; the PCX control panel system can only be reset by an Engineer code, anti-code or red care reset from an Alarm Receiving Center (ARC).

5.15.1 Restore Burglary

If 'UK Intruder', an Engineer code must be used to reset the PCX control panel after an alarm. 'Secure Intruder' should not be used.

5.15.2 Restore PA

If 'YES', an Engineer code must be used to reset the PCX control panel after an Hold Up, Input Hold Up, or Duress activation.

5.15.3 Restore Tamper

If 'YES', an Engineer code must be used to reset the PCX control panel after a tamper activation.

5.15.4 Restore Soak

If 'YES', an Engineer code must be used to reset the PCX control panel after an input that is on 'soak' has triggered when the PCX control panel is set.

5.15.5 Restore Faults

If 'YES', an Engineer code must be used to reset the PCX control panel after the following faults: ATE telecom fail, Modem fail, ATE single path fail, Telecom line fail, Battery disconnect, Batt charge, Battery load, Excessive charge, Battery critical and Device fail.

5.15.6 Anti-Code Restore

If 'YES', the PCX control panel will display an Anti-Code, to which can be used to generate a special reset code (usually from the ARC) to reset the PCX control panel.

NOTE: that if Anti-Code is selected, this will coincide with the options that have been selected previously. For example, if 'Engineer Restore Intruder' is selected, and Anti-Code is selected, then an anti-code will be produced on intruder activation.

5.16 Communications?

The 'Communications' function programs the App, network, ARC, SMS and UDL facilities.

5.16.1 Set Up App?

The HomeControl+ App is available in two versions: Android from the Google Play Store; and iOS from the Apple store. Please refer to the App Setup Guide and user guides for more details.

Use App: Enables the app functionality.

System ID: Displays the unique 'System ID' used to register the **PCX 46 App** with the PyronixCloud.

Cloud Password: A password is required to allow cloud access.

Security:

- Normal: Requires only a password for connection.
- High: creates the following menu options;
  - Generate App Password Key: A 24 character Hex-key is generated.
  - View App Password Key: Displays the key that has previously been generated.
  - Send Password Key in an SMS (when a GPRS module is fitted): Once a mobile number is entered, an SMS is sent with the security key.

App Password: The password that is entered on the App itself

Poll Server (Cloud):

- Yes: The **PCX 46 App** Panel will poll with the PyronixCloud App server regularly.
- No: The **PCX 46 App** Panel will not poll with the PyronixCloud App server. An SMS being sent to the panel may be required to initiate communication.

The timing of the poll is 8 minutes

Network Set-Up?

Three different modules can be connected to the **PCX 46 App** Panel to enable different forms of communication. Please refer to the Installation Reference manual for information. The sub-menus will be enabled only for the module installed.

Program GPRS?

GPRS APN: Enter the GPRS APN, such as 'orange internet'.

GPRS User ID: Enter the GPRS user ID if the network requires this.

GPRS Password: Enter the GPRS password if the network requires this.

Program LAN?

Enable Auto IP?

- Yes: The **PCX 46 App** Panel will obtain the set up data from the router using DHCP.
- No: The following will be required:
  - IP Address: Enter the IP Address where xxx is a number between 1 & 255.
  - Subnet Mask: For most domestic installations the subnet mask will be 255.255.255.0.
  - Router Address: Enter the gateway, i.e. the routing device that the panel is connected to.
  - 1st DNS IP Address: Enter the DNS Server IP Address.
  - 2nd DNS IP Address: Enter the alternative DNS server IP address if required.

Program Wi-Fi

For future use.

5.16.2 Digi Modem signalling?

The **PCX 46 App** system can communicate with an Alarm Receiving Centre (ARC) using the LAN module, PSTN or the GPRS modem.

ARC Details: Choose which ARC to program from 1 to 4.

Modem Type Used:

PSTN	**GSM**	**GPRS**	**GSM / GPRS**
VOICE PSTN (future use)	**WiFi (future use)**	**Ethernet (LAN)**	

Formats Available:

- Contact ID/Contact ID IP = See page: 44 for the event table.

- SIA IP, SIA levels 1 & 3 = See page: 44 for the event table.

Valid Areas:
This option permits the set up of a different ARC for a different area. Select which area this particular ARC will be reporting. Selecting ABCD0123 means the ARC will be receiving events from all areas.
Area Accounts⇨ One Area Account
This options permits the engineer to set up an individual area account for each area or open common account for all of them. Use the [A] key to add hexadecimal values; B to F. Numbers are entered by the number keys.
Redials: If the alarm event has not been received by the monitoring station after the first number has been called, the second number will be called. The two numbers will be alternated as many times as the redials are set to. If a call has been acknowledged by the monitoring station then **PCX 46 App** Panel will stop calling.
Time-out: This is the time in seconds before a call times out from not being answered/received.
Test Calls:
The test call is used to show that the system is still active when no activations have been made. Setting up a test call asks for a start time in hours and minutes and the frequency of the call in days, hours and minutes.
Event Types: Please see page: 44 for all event options. If 'Custom' is selected, all event types can be chosen.
Sign Up ARC:
ARC Sign-Up IP: The ENIP Address that is supplied by the ARC.
ARC Sign-Up Port: The Port of the ENIP Server that is supplied by the ARC.
Security:

- Normal: Requires a password and connection handle (supplied by the ARC).
- High: Send Key by SMS:
  - Yes: The security key will be sent by the ARC software to the panel.
  - No: The security key and connection handle must be entered manually on the panel.

Send Sign Up to ARC?

- Sign Up Successful: A message will be displayed indicating that the sign up was successful.
- Sign Up Failed: This may be due to the following reasons:
  - Incorrect Security Key
  - Incorrect Connection Handle
  - ARC Server not available
  - Account already exists

5.16.3 SMS Signalling

To signal via SMS, a valid mobile number and the desired event types must be programmed.
SMS Details: Up to 10 mobile numbers can be programmed.
User Mobile: The mobile phone where all events will be sent can be entered with or without the international dialling code (use the [A] key to enter the '**+**' symbol). The international dialling code must be entered if the number is from a foreign SIM card.
Valid Areas:
This option permits the set up of a different ARC for a different area. Select which area this particular ARC will be reporting. Selecting ABCD0123 means the ARC will be receiving events from all areas.
Redials: If the alarm event has not been received by the monitoring station after the first number has been called, the second number will be called. The two numbers will be alternated as many times as the redials are set to. If a call has been acknowledged by the monitoring station then the panel will stop calling.
Timeout: This is the time in seconds before a call times out from not being answered/received.
Test Calls:
The test call is used to show that the system is still alive when no activations have been made. Setting up a test call asks for a start time in hours and minutes and the frequency of the call in days, hours and minutes.
Event Types: Please see page: 44 for all event options. If 'Custom' is selected, all event types can

be chosen.

SMS Common Message:

This message will always be sent as part of the SMS activation text.

5.16.4 Advanced Communications

Prefix Tel No: This option only appears if a PSTN (Digi-1200) modem is installed. It allows you to enter a number or series of numbers that will prefix all outgoing calls. For example, a lot of telephone systems require a '9' adding to the beginning of a number so that an external call can be made from an internal extension system.

Wait Dial Tone: Allows a dial tone to be transmitted or not for compatibility with different telecommunications equipment (This option only appears if a PSTN (Digi-1200) modem is installed).

Send Events UDL: This option enables or disables the sending of system events via the Insite UDL software.

Modem Tel no: One telephone number can be entered for each of the UDL PCs associated with your alarm system.

Send Alarms/Faults/Open/Close/Access Ctrl: - The following menus allow you to enable or disable the event categories/types that are sent via UDL.

5.17 Alarm Responses?

The Alarm Response function controls how the system communicates when certain alarms are active. The different alarm responses are: Keypads, Internal Sounders, Bells Only and Signal Digi (communication to ARC or user). The different alarm responses work on a cycle (starting from 'Keypads' and finishing at 'Digi'). Each alarm response stage will take 15 seconds before moving on to the next response. For example, If the alarm response for Area A starts at 'Internal Sounders' and stops at 'Digi', then once Area A is armed and an alarm has been activated, the internal sounders will first activate, then after 15 seconds the Sirens will activate and then after another 15 seconds the 'Digi Modem' will activate (signal). The Enforcer 32-WE can operate on a combined area basis, for example if both areas 'A' and 'B' are armed; it may be desired to have the process of the alarm responses to change. Therefore, the 'If areas armed' section would be used, the desired areas and the alarm responses selected. If A, B, C is entered for example, then A, B & C must be armed for the upgrade to take place. This option is a very useful when an outdoor perimeter area is created. It allows the creation of audible and communication alarms following different rules compared to other areas in the system.

5.17.1 Area A, B, C, D Starts at:

This feature programs where the Alarms for each area A, B, C or D start: Keypads, Internal Sounders, Bells Only or Signal Digi. If programmed as keypads then the alarm will start from keypad sounders and then depending on where it's programmed to stop at -will progress up to a maximum of communicating the alarm event i.e. 'Digi'. Each alarm response will take 15 seconds before moving on to the next.

5.17.2 Area A, B, C, D Stops at:

Alarms for each area can stop at: Keypads, Internal Sounders, Bells Only and Signal Digi. For example, if programmed to start at keypad and stop at keypad this means the alarm will only be ever displayed on the keypad.

5.17.3 Fire Alarm Starts at:

This feature programs the starting point of alarm responses for fire alarm. The levels are: Keypads, Internal Sounders, Bells Only and Signal Digi.

5.17.4 Fire Alarm Stops at:

This feature programs the ending point of alarm responses for fire alarm: Keypads, Internal Sounders, Bells Only and Signal Digi.

5.17.5 Gas Alarm Starts at:

This feature programs the starting point of alarm responses for Gas alarm. The levels are: Keypads, Internal Sounders, Bells Only and Signal Digi.

5.17.6 Gas Alarm Stops at:

This feature programs the ending point of alarm responses for Gas alarm: Keypads, Internal

Sounders, Bells Only and Signal Digi.

5.17.7 PA Alarm Starts at:

This feature programs the starting point of alarm responses for PA alarm. The levels are: Keypads, Internal Sounders, Bells Only and Signal Digi.

5.17.8 PA Alarm Stops at:

This feature programs the ending point of alarm responses for PA alarm: Keypads, Internal Sounders, Bells Only and Signal Digi.

5.17.9 24 Hour Alarm Starts at:

This feature programs the starting point of alarm responses for 24h alarm. The levels are: Keypads, Internal Sounders, Bells Only and Signal Digi.

5.17.10 24 Hour Alarm Stops at:

This feature programs the ending point of alarm responses for 24h alarm: Keypads, Internal Sounders, Bells Only and Signal Digi.

5.17.11 Any Alarm Starts at:

This feature overrides the settings above. It can be used to create greater flexibility in the use of the alarm responses feature and in this case it's set up for each area if they are in armed status only.

5.17.12 If Areas Armed

Select the areas that the following settings will be applicable to.

5.17.13 Any Alarm Stops at:

For example, if 24 Hour Alarm is set to Start at Keypad and stops at Keypad, this feature allows set up for all Areas if they are armed to make any alarm stopping at Digi.

5.17.14 If Areas Armed

Select the areas that the above setting will be applicable to.

5.18 Options Up/Downloading?

The system can be programmed from the keypad or the InSite UDL Software. There are 2 methods of connection for programming the panel via the UDL Software:

1) Via the RS232 input locally;

2) Remotely GPRS, PSTN or LAN modems.

The UDL InSite Software allows the servicing and monitoring of the system and review of the logs.

RM Service: The Remote Maintenance Service is an automatic service performed by the panel and the InSite UDL Software. This service enables the panel to automatically call a PC with the InSite UDL software installed and deliver all diagnostics data to that PC. In this way the installer does not have to visit the site to measure all the required measurements. This information could be used for creation of regular technical reports to send to users as a proof for maintenance of the site.

Technical Alarms Monitoring

It is possible to program the panel to call the UDL InSite Software when alarms, faults, arm/disarm and access control events are generated to up to 4 PCs running the UDL InSite Software.

5.18.1 RS232, Local Connection

The RS232 is used to program the panel locally connecting it to a PC running the UDL Software via a special cable. If this option is chosen no other programming is required.

5.18.2 Modem, Remote Connection

The modem (PSTN/GPRS/LAN) is used to program the panel remotely connecting it to a PC running the UDL Software via data modem.

Dial Mode Option (when 'modem' selected)

This function programs the procedure used for the call between PC and panel:

Auto Answer: When called from a PC the panel will answer the call immediately.

Dial Back: When called from PC the panel will take the line, disconnect and call the PC.

Panel Dials: Does not allow the PC to dial into the panel. A call has to be initiated by the user or engineer from the panel.

Dial In Options

Direct Dial: When the PC dials the panel, it will respond immediately.

2call Ansr (Shared Line): When the PC dials the panel, it will hang up after a designated number of rings, and dial again. The first call primes the panel, which will then answer the second call. The number of rings to prime the panel is entered in "Number of Rings before AMC" menu option.

Number of Rings for 2call: Enter the number of rings needed to prime the panel before answering the next call.

Modem Speed

This option defaults to 'high' – but may be set to 'medium' for compatibility purposes.

Prefix Telephone Number

The prefix is an extra digit required to reach the panel i.e. dial 9 to get an 'outside' line.

Redials:

The number of redials that it will call to the InSite software before it fails.

UDL Password

This password is used to identify the UDL connection. Make sure the password here and on the PC InSite software are the same.

Site Name:

Entry of a Site name is optional – however if it is entered, ensure that it is the same (verbatim) here and on the Insite software.

UDL Priority:

We recommend that this is set to 'High' if set to 'normal' then HomeControl+ App notifications may disconnect the UDL connection while you are trying to use UDL.

5.18.3 Cloud, Remote Connection

The GPRS modem is used to program the panel remotely connecting it to a PC running the UDL Software via data modem. In this function the System ID will be displayed, and a UDL password key can be generated in order to connect.

UDL Password

This password is used to identify the UDL connection. Make sure the password here and on the PC InSite software are the same.

Site Name:

Entry of a Site name is optional – however if it is entered, ensure that it is the same (verbatim) here and on the Insite software.

UDL Priority:

We recommend that this is set to 'High' if set to 'normal' then HomeControl+ App notifications may disconnect the UDL connection while you are trying to use UDL.

5.19 Software Revision?

This option shows the software version, hub version and modem version installed in the panel. Please obtain the software version number prior to contacting customer support so that the correct information can be given upon supporting the product.

5.20 Factory Default?

This option is used to reset the panel to a factory default.

5.20.1 Factory Default Code

The Default code is: 2000

Once applied the system will be reset to factory defaults.

5.20.2 Clear Wireless Data?

This option will give the installer the option not to clear wireless devices if they have been programmed on the system already.

5.20.3 Clear Codes?

This option will give the installer the option not to clear user codes if they have been programmed

on the system already.

5.21 Exit Engineer Menu?

Either exit via the 'EXIT ENGINEER MENU' option or press [A] from any other main menu.

6. Adding External Wired Keypads

The keypads have a small internal menu used mostly for addressing, changing key click volume and brightness of the LCD display.

6.1.1 Entering and Exiting the Keypad Menu

To enter the keypad menu, press and hold the [D BYP] button until 'SECURITY CODE:' is displayed, and then enter '2000'. To exit, press the [A] key.

6.1.2 Keypad Menu Options

ADDRESS = Used to assign an address to a keypad [00] is the keypad on the panel

LANGUAGE = Allows to assign a language used only for the keypad menu only

KEYPAD INPUTS READING = Showing the resistor reading and status on the 2 inputs located on the keypad

KEY-CLICK VOLUME = Sets the volume of the buttons

TAG VOLUME = Sets the volume when tag used

KEYPAD VOLUME = Sets the general volume of the keypad

ID TAG = Used to read the ID unique number of the Tag

RESET KEYPAD = Resets keypad to factory

BACKLIGHT = Sets the backlight intensity of the keypad

DELAY FIRE AND PA BUTTONS = Sets the how long the PA and Fire buttons have to be pressed for before an alarm is created

6.1.3 Testing The Keypad

With the system disarmed, press and hold the [B] key for 10 seconds at any keypad. This will cause all the LEDs on that keypad to illuminate and the LCD screen to scroll a display testing each pixel. The keypad will revert to normal display approximately 10 seconds after the [B] key is released.

7. Options Programmable Only From PC

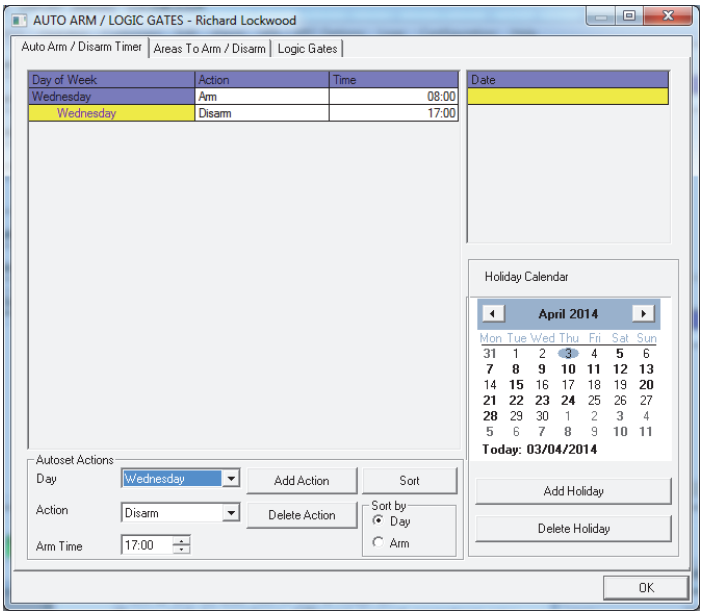
The UDL software is available on www.pyronix.com/downloads. The software can be used to upload/download to the control panel and data can be viewed.

Two features that the UDL software incorporates are describe below:

- Auto Arm & Disarm Timer
- Logic Gates

Please refer to the UDL software help guides for help in the initial software set up first.

7.1 Auto Arm/Disarm Timers



This function will allow automatic arming and disarming procedures. This is useful when a premises is left unmanned for a period of time (due to holidays etc).

Create a new customer, and select 'PCX 46'.

The Auto-Arm/Logic Gates will be enabled, click the button.

Adding Arm/Disarm actions

1. Select 'Add Action'.
2. Select the Day of the week that requires to be 'Auto Armed'. This will then be displayed in the list.
3. Select the action of this timer (E.g. Arm)
4. Select the time (24 hour: E.g. 14:00) when the action should start.
5. Another action can now be added (E.g. Disarm) and select the time for this action.

Adding 'Holidays'

A holiday setting will override any auto timers that coincide with the holiday. Once the holiday has passed, it will not repeat the year after or at any other time.

1. Click 'Add Holiday'

2. Select the dates that are required for the holiday period. These will be displayed at the top right of the screen under 'Date.'

3. If any holidays are added by mistake, select that holiday and click 'delete'.

NOTE: Make sure that any action already programmed matches correctly when the holiday period has finished.

E.g. If the dates January 1st, January 2nd, and January 3rd are selected, the panel will stay armed on

all dates regardless of the auto timers. However, an auto timer should be set up to disarm the day after the holiday has ended if required.

7.2 Areas to Arm/Disarm

This section of the software selects the area's that will be Armed/Disarmed during the 'Auto Arm/Disarm' period.

1. Select the areas to be armed and type them in the 'Area's' field.

2. Select the 'Warning Period'. This is a time (in minutes) when the control panel will warn anyone who may be in the premises that an auto arm is about to take place.

NOTE: The warning time is additional to the Auto-arm time. E.g. if the auto arm time is 22:00, a warning time of 15 minutes will added to this , so the actual panel arm time will become 22:15. If the panel must arm at 22:00, but a 15 minute warning time is also needed, the auto arm time should be selected as 21:45.

3. Select the 'Delay to Arm' time. This time is used if a person in the premises needs to delay the auto-timer. If a code is entered on the control panel during the warning period time, the auto timer can be delayed. E.g. If the warning period is set to 15 minutes, and the Delay Auto-Arm Time is set to 20 minutes. Then a user will have a further 5 minutes before the Auto-Arm begins.

NOTE: It you do need a delay auto arm time, it is recommended that this time is set to 1 minute more than the Warning period. The delay auto timer must always be set higher than the Warning Period.

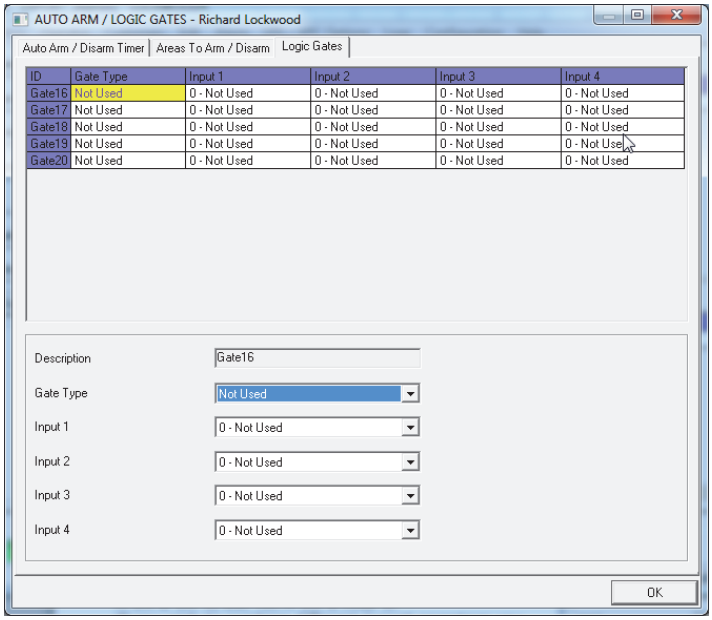
4. Select the areas to disarm for the Auto-Disarms programmed previously. These are usually the same as the areas that have been selected to Arm.

5. The '12 month calendar' is for using repetitive holidays that need to be repeated every year. For example this may be needed for national events, memorial days, birthdays etc.

Once all completed, exit the screen by clicking 'OK' and download the data to the control panel.

7.3 Programming Logic Gates

Logic Gates allow the use of 'logical operations' (OR, AND and NOT) to give greater control of how an output is activated. Rather than having an output activated following a 'burglary' alarm, it is possible to create an output that is activated, for example, when there is a 'burglary in area A' AND when area C is also armed.



This could be useful in a scenario where different offices are occupied in different areas, and you do not want an external communicator or siren to signal an alarm in one area if other areas are still occupied.

5 logic gates are available for programming. To program logic gates:

1. Select the Logic Gates tab

2. Select the gate type: AND, OR, NOT

3. Select the inputs (up to 4 can be selected). These are the input types of the control panel.

4. Up to 5 logic gates can be programmed (Gates 16-20). These can only be programmed in the UDL software under 'Inputs/Outputs' button.

NOTE 1: Each gate can only be programmed with one 'logical operator'. For example, a gate can be programmed as A OR B OR C, but not A OR B AND C. If you wish to combine different logical operators you will need to split the operation between two logic gates. Thus to obtain A **OR** B **AND** C you can use the flowing logic: Logic Gate 1 = A **OR** B; Logic Gate 2 = Logic Gate 1 **AND** C. The following example shows how you would program the command:

{["Burglary Any" OR "Tamper Any"] AND "Ready C"}:

NOTE 2: Only Gates 16-20 can be programmed. Gates 1-15 are for future use

8. Faults and Troubleshooting

8.1 Device Fail / Active Faults

If a device on the **PCX 46 App** system 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 (0-5 available) failure = "Device 3, Device Fail Kpd"
- Internal/External Tag Readers address 2 (1-5 available) failure = "Device 2, Device Fail Trd"
- Remote Input Expander address 0 (0-3 available) = "ZEM-00, Device Fail ZEM"
- Remote Output Expanders address 0 (0-1 available) = "ROX-00, Device Fail ROX"

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

8.2 System Faults and Troubleshooting

8.2.1 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 MODE" is set to 'NONE' or 'RS232'. If present, but not detected, check Digi Modem cable is connected correctly.
LINE FAULT	There is no telephone or GPRS/GSM line	Make sure to plug the PSTN modem in analogue convention type telephone line. Make sure the SIM card is plugged on the modem Make sure the GSM/GPRS signal is good enough.
CALL FAIL TO ARC	Call to ARC has failed. NOTE 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 using DIGI/ATE pins on the panel.	Check voltage on input pin– if +5/12 volts, device connected is showing fault. Note: 'Line Fault' timer operative
DIGI Call Fail 100	Call to ARC from device using End Station DIGI/ATE pins has failed.	Check voltage on input – if +5/12 volts, device connected is showing fault

8.2.2 RS485 Bus Problems

Fault	Description	Solution
DEVICE FAIL xxx xxx = ROX xxx = ZEM 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: Output expander = ROX input expander= ZEM 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 re-boot 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 [D] 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 90 seconds for keypad to be re-introduced onto the system.

8.2.3 Detection Faults

Fault	Description	Solution
BELL TAMPER	Tamper fault detected on connection from SAB	Terminal TR should be at or near 0v. If not, is Bell Tamper switch closed? Check Fuse F2 intact, and 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.	Press the X key to clear.
BELL Fault	Bell or other warning device has triggered its fault output which is detected by the control panel	Correct fault at warning device to restore the output.

8.2.4 Power Supply Problems

Fault	Description	Solution
BATTERY FAULT xxx	Battery not present or Battery volts low	Note: 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. Note: System is about to be powered down!
MAINS FAIL xxx	Mains supply failed	System detects mains frequency out of specification, as well as voltage. Note: 'AC FAIL' timer operative
FUSE x FAULT	Fuse identified failed, OR Output protected by fuse	Fuse 1 = O/Ps, Fuse 2 = BELL Fuse 3 = AUX, Fuse 4= BUS

	drawing excessive current	Fuse 5 = BATTERY
LOW VOLTS xxx	Power supply volts low	Battery volts below normal 'battery fault' level during mains failure

8.2.5 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 Input Areas 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.

8.2.6 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) CASE TAMPER	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
WLs JAMMING	Jamming fault on the panel.	Check no radio interference is in close

Pnl	Something is jamming/interfering with wireless peripherals.	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.

8.2.7 Errors When Arming

Fault	**Description**	**Solution**
Please leave via exit door	If the exit mode is programmed as Final Door, 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 a 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.

9. EN 50131 Terminology

PCX 46 App Language	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

10. Access Levels

Level 1: Access by any person; for example the general public.

Level 2: User access by an operator; for example customers (systems users).

Level 3: User access by an engineer; for example an alarm company professional.

Level 4: User access by the manufacturer of the equipment.

NOTE: 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.

APPENDIX A: Time Inputs

No.	Time	Input
0	*Not Used*	
1	*Abu Dhabi*	*4*
2	*Adelaide*	*9.5*
3	*Alaska*	*-9*
4	*Almaty*	*6*
5	*Amman*	*3*
6	*Amsterdam*	*1*
7	*Arizona*	*-7*
8	*Astana*	*6*
9	*Athens*	*2*
10	*Atlantic Time*	*-4*
11	*Auckland*	*12*
12	*Azores*	*-1*
13	*Baghdad*	*3*
14	*Baja Californ*	*-8*
15	*Baku*	*4*
16	*Bangkok*	*7*
17	*Beijing*	*8*
18	*Beirut*	*2*
19	*Belgrade*	*1*
20	*Berlin*	*1*
21	*Bern*	*1*
22	*Bogota*	*-5*
23	*Brasilia*	*-3*
24	*Bratislava*	*1*
25	*Brisbane*	*10*
26	*Brussels*	*1*
27	*Bucharest*	*2*
28	*Budapest*	*1*
29	*Buenos Aires*	*-3*
30	*Cairo*	*2*
31	*Canberra*	*10*
32	*Cape Verde*	*-1*
33	*Caracas*	*-4.5*
34	*Casablanca*	*0*
35	*Caucasus Std*	*4*
36	*Centl America*	*-6*
37	*Central Time*	*-6*
38	*Chennai*	*-5*
39	*Chihuahua*	*-7*
40	*Chihuahua*	*-7*
41	*Chongqing*	*8*
42	*Copenhagen*	*1*
43	*Darwin*	*9.5*
44	*Dhaka*	*6*
45	*Dublin*	*0*
46	*Eastern Time*	*-5*
47	*Edinburgh*	*0*
48	*Ekaterinburg*	*6*
49	*Fiji*	*12*
50	*Georgetown*	*-4*
51	*Greenland*	*-3*
52	*Guadalajara*	*-6*
53	*Guadalajara*	*-6*
54	*Guam*	*10*
55	*Hanoi*	*7*
56	*Harare*	*2*
57	*Hawaii*	*-10*
58	*Helsinki*	*2*
59	*Hobart*	*10*
60	*Hong Kong*	*8*
61	*Indiana East*	*-5*
62	*Intnl Datli*	*-12*
63	*Irkutsk*	*9*
64	*Islamabad*	*5*
65	*Istanbul*	*2*
66	*Jakarta*	*7*
67	*Jerusalem*	*2*
68	*Kabul*	*4.5*
69	*Kamchatka*	*12*
70	*Karachi*	*5*
71	*Kathmandu*	*5.75*
72	*Kolkata*	*5*
73	*Krasnoyarsk*	*8*
74	*Kuala Lumpar*	*8*
75	*Kuwait*	*3*
76	*Kyiv*	*2*
77	*La Paz Mexico*	*-7*
78	*La Paz Mexico*	*-7*
79	*LaPaz S Ameri*	*-4*
80	*Lima*	*-5*
81	*Lisbon*	*0*
82	*Ljubljana*	*1*
83	*London*	*0*
84	*Madrid*	*1*
85	*Magadan*	*12*
86	*Manaus*	*-1*
87	*Marshall Is*	*12*
88	*Mazatlan New*	*-1*
89	*Mazatlan Old*	*-1*
90	*Melbourne*	*10*
91	*Mexico City*	*-6*
92	*Mexico City*	*-6*
93	*Mid-Atlantic*	*-2*
94	*Midway Islan*	*-11*
95	*Minsk*	*3*
96	*Monrovia*	*0*
97	*Monterrey*	*-6*
98	*Monterrey*	*-6*
99	*Montevideo*	*-3*
100	*Moscow*	*4*
101	*Mountain Time*	*-7*
102	*Mumbai*	*5*
103	*Muscat*	*4*
104	*Nairobi*	*3*
105	*New Caledonia*	*11*
106	*New Delhi*	*5*
107	*Newfoundland*	*3.5*
108	*Novosibirsk*	*7*
109	*Nuku*	*13*
110	*Osaka*	*9*
111	*Pacific*	*-8*
112	*Paris*	*1*
113	*Perth*	*8*
114	*Port Louis*	*4*
115	*Port Moresby*	*10*
116	*Prague*	*1*
117	*Pretoria*	*2*
118	*Quito*	*-5*
119	*Reykjavik*	*0*
120	*Riga*	*2*
121	*Rio Branco*	*-5*
122	*Riyadh*	*3*
123	*Roma*	*1*
124	*Samoa*	*13*
125	*Santiago*	*-4*
126	*Sapporo*	*9*
127	*Sarajevo*	*1*
128	*Saskatchewan*	*-6*
129	*Seoul*	*9*
130	*Singapore*	*8*
131	*Skopje*	*1*
132	*Sofia*	*2*
133	*Solomon Is*	*-11*
134	*Sri Jayaward*	*5.5*
135	*St. Petersburg*	*4*
136	*Stockholm*	*1*
137	*Sydney*	*10*
138	*Taipei*	*8*
139	*Tallinn*	*2*
140	*Tashkent*	*5*
141	*Tbilisi*	*4*
142	*Tehran*	*3.5*
143	*Tijuana*	*-8*
144	*Tokyo*	*9*
145	*Ulaan Bataar*	*8*
146	*Urumqi*	*8*
147	*Vienna*	*1*
148	*Vilnius*	*2*
149	*Vladivostok*	*11*
150	*Volgograd*	*4*
151	*Warsaw*	*1*
152	*Wellington*	*11*
153	*W.Central Afri*	*1*
154	*Windhoek*	*1*
155	*Yakutsk*	*10*
156	*Yangon Rangu*	*6.5*
157	*Yerevan*	*4*
158	*Zagreb*	*1*

APPENDIX B: Input Types

No	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.
11	Push To Arm	**Active during exit time,** to complete arming procedure. No audible or communicator response. Panel will communicate a final armed event once the Push to Arm button has been pressed. **NOTE:** *May be used to act as 'doorbell' by use of 'chime' input attribute.* **Example:** Wire the Door Bell button to the input. Enable "Push to Arm" option from "EXIT MODES", add a "Push to Arm" input type to the input and enable the "Chime" attribute for it. Enter user code, the panel starts arming. Exit the building and close the door. Press the Bell button. The system will arm. If pressing the Bell button while the panel is in any other condition the Chime will sound.
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.
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.
18	Shunt	**Active at all times**: No audible or communicator response. It is possible to associate inputs to the shunt input. It is normally connected to a key-

		switch (or equivalent) and when On or Off it shunts or un-shunts the inputs assigned to it. Associated outputs are available to follow this input type. **Creating a Shunt Group:** A shunt group may consist of any number of inputs programmed as Instant, Tamper, 24hr and Follow types. These must all be allocated in the same area. **NOTE:** *These inputs will need to be programmed before allocated to the shunt input.* The inputs in the shunt group/list will only activate after 10 seconds of the nominated shunt input. **Example:** If input 1 is programmed as 'Shunt Input', and inputs 2 and 3 are programmed as "24hr", then once input 1 has been opened, after 10 seconds inputs 2 and 3 become active. Action 1: Shunt Input closed Status: Inputs within the shunt list are shunted (Disarmed) Outputs: 'Follow Input' PGM output On Action 2: Shunt Input opened Status: After 10 seconds inputs in the shunt list are going to activate, i.e. become Un-shunted (Armed) Outputs: 'Follow Input' PGM output OFF. The 'Shunt Fault' PGM output is on for 10 seconds. Action 3: Shunt Input opened with active detector from the shunt list Status: After 10 seconds inputs in the shunt list are going to activate, ie become Un-shunted (Armed) Outputs: 'Follow Input' PGM output OFF. The 'Shunt Fault' (type 36) PGM output pulses until the detector closes.
19	Disarm Only*	**Active when armed:** Accepts input from keyswitch (or equivalent) to disarm the area(s) assigned to it.
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)
29	Interior	This will work the same as an instant type input, the only difference is that when CID reporting is programmed then any inputs that are programmed as Interior will report CID event 132.
32	Flood	This input type will work as a 24hr input, any inputs that are programmed for Flood will activate the external siren and will report CID event 113.
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.
40	Perimeter	This will work the same as an instant type input, the only difference is that when Contact ID reporting is programmed, then any inputs that are programmed as Perimeter will report Contact ID event 131.
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.

#These inputs cannot be bypassed.

*Use of inputs 19, 20 and 23 will make the system unable to comply with EN50131-1 Security Grade 2.

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

APPENDIX C: 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
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 (see Program Timers).	
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

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, Shunt List, Sub-Area, Area); - Follow When (Always, When Armed, When Disarmed); - Input to Follow (between 1 to 64)	
0036	Shunt Fault	This input activates if someone tries to shunt an input group where some of the inputs allocated to this group are open.	
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 & 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
0064	Pre RM Service	Activates 1h before the RM Service call	When test completed
0065	Input Fault (Follow NAT)	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	
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)	0213	System Ready A (As 0013 for Area A)
0203	Burglary A (As 0003 for Area A)	0214	Bell A (As 0014 for Area A)
0204	Final Arm A (As 0004 for Area A)	0216	Strobe A (As 0016 for Area A)
0207	Tamper A (As 0007 for Area A)	0217	Bypass At Rearm A (As 0017 for Area A)
0208	Duress A (As 0008 for Area A)	0218	Burglary (Unconfirmed) A (As 0018 for Area A)
0209	PA Device A (As 0009 for Area A)	0219	Ready A (As 0019 for Area A)
0210	Fire Reset A (As 0010 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			
0620-0639	Logic Gate 1-20. Logic gate outputs (programmable via the upload/download software)		
1001-1066	Active when input opened and close when input is closed		

APPENDIX D: Event Types

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
Burglary Restore	× / ✓	✓	✓	×
Fire	× / ✓	✓	✓	✓
Fire Restore	× / ✓	✓	✓	×
PA Alarm	× / ✓	✓	✓	✓
PA Restore	× / ✓	✓	✓	×
Medical	× / ✓	✓	✓	✓
Medical Restore	× / ✓	✓	✓	×
S-Area Alarm/Rst	× / ✓	✓	✓	×
Tamper	× / Tamper Once /	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	× / ✓	×	×	×
Information	× / ✓	×	×	×

APPENDIX E: Event Types (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	on			
Forced Arm	CF	3401	1				
Arm	CL	3401	1				
DISARM							
Disarm	OP	1401	2	on			
Auto Disarm	OA	1403	2				
(Special Arm/Disarm) ARM/DISARM WITH CODES 15 to 25							
Special Disarm	OP	1401	3				on
Special Arm	CL	3401	3				
SUBAREA / SHUNT ARM/DISARM							
Sub-Area Arm	CG	3402	4	on			
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 input Activity - Sent	NA	1680	7				
24h Alarm	BA	1133	7				
Perimeter Alarm	BA	1131	7				
Keybox/Guard Input 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	on	on	on	on
Fire key pressed	FA	1110	10				
FIRE ALARM RESTORE							

Fire Alarm Restore	**FH**	**3110**	**11**	**on**	**on**		
Fire key Restore	**FH**	**3110**	**11**				
PA ALARM							
Duress Code	**HA**	**1121**	**12**	**on**	**on**	**on**	**on**
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**	**on**	**on**		
Silent PA Restore	**HH**	**3122**	**13**				
Keypad PA Restore	**PR**	**3120**	**13**				
MEDICAL ALARM							
Medical Alarm	**MA**	**1100**	**14**	**on**	**on**	**on**	**on**
MEDICAL RESTORE							
Medical Alarm Restore	**MH**	**3100**	**15**	**on**	**on**		
SUB-AREA ALARM/RESTOR							
Ward Alarm	**BA**	**1130**	**16**	**on**			
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 Input	**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 Input Restore	**TH**	**3144**	**18**				
Case Tamper Restore	**TR**	**3137**	**18**				
Siren Case Tamper Restore	**YH**	**3321**	**18**				
BYPASS							
Input Bypassed	**BB**	**1570**	**19**	**on**	**on**	**on**	
Input Force (Bypassed) Armed		**1570**	**19**				
Fire input Bypassed	**FB**	**1571**	**19**				
24h Alarm input Bypassed	**BB**	**1572**	**19**				
RESTORE OF BYPASS							
Fire input Bypass Restore	**FU**	**3571**	**20**	**on**	**on**		
24h Alarm input	**BU**	**3572**	**20**				

Bypass Restore							
Input Bypass Restore	**BU**	**3570**	**20**				
TECHNICAL							
Low Volts	**AT**	**1302**	**21**	**on**	**on**	**on**	
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**	**on**	**on**		
Device Restored	**ER**	**3333**	**22**				
Fuse fail restore	**IR**	**3300**	**22**				
Detector Fault Restore	**BJ**	**3324**	**22**				
Wired Siren Fault Restore	**YH**	**3320**	**22**				
AC MAINS MISSING/RESTORE							
Mains Fail Fault	**AT**	**1301**	**23**	**on**	**on**	**on**	**on**
Restore of Mains Fault	**AR**	**3301**	**23**				
WIRELESS ALARM/RESTORE							
Radio low battery	**XT**	**1384**	**24**	**on**	**on**	**on**	
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 Faill		**1350**	**25**				
Input Line Fail	**LT**	**1351**	**25**				
Telecom Line Fault	**LT**	**1351**	**25**				
Input Line Restored	**LR**	**3351**	**25**				
Telecom Line	**LR**	**3351**	**25**				

Restored							
ACCESS CONTROL							
Door Left Open	**DL**	**1426**	**26**	**on**			
Door Forced	**DF**		**26**				
MASK ALARM/RESTORE							
Detector Masked	**BT**	**1324**	**27**	**on**	**on**	**on**	
Detector Masked Restore	**BJ**	**3324**	**27**				
SPECIAL LOG							
Input Special Log Opened	**UA**	**1146**	**28**				
Input Special Log Closed	**UR**	**3146**	**28**				
Input Special Log Switcher Opened	**UA**	**1146**	**28**				
Input Special Log Switcher Closed	**UR**	**3146**	**28**				
ALARM SILENCED							
Alarm Silenced	**OR**	**1406**	**29**		**on**		
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**				

APPENDIX F: Factory Defaults

ENGINEER MENU	MENU	DEFAULTS
DATE & TIME?	TimeZone	[83] London
	Year	07
	Month	01
	Day	01
	Hours	00
	Minutes	00
	Software Clock Adjust	+00
	Summer Time Adjust	Yes [1]
LEARN WIRELESS DEVICES	Inputs 1 - 32	Available (via PCX RIX32-WE)
	Bells 1 - 2	Available
PROGRAM INPUTS	Inputs 1 - 8	Unused
	Inputs 9 - 46	Unused
	Inputs In Area	A
	Common input	No [0]
	Input Attributes	
	Chime	No [0]
	Allow Bypass	Yes [1]
	Double Knock	No [0]
	Combined Input	No [0]
	Normally Open	No [0]
	Mask Test	No [0]
	Non Activity Input	No [0]
	Special Log	No [0]
	Inertia input	No [0]
	Input Location	
	Enter Number	Input 01
	Input Description	_
PROGRAM EOL	Choose EOL Range	1K / 1K* [0]
INSTALL RIXs	RIX Address	[0] - [3]
	RIX Installed	No [0]
PROGRAM OUTPUTS	**Endstation Outputs**	
	BELL PGM	Bell Any [0014]
	STB PGM	Strobe Any [0016]
	PGM	Not Used [0000]
	XPGM1/2	Not Used [0000]
	ATE PGM 1	Fire [0001]
	ATE PGM 2	PA Device Any [0009]
	ATE PGM 3	Burglary Any [0018]
	ATE PGM 4	Final Arm All [0004]
	ATE PGM 5	Tamper Any [0007]
	ATE PGM 6	Bypass Rearm Any [0017]
	ATE PGM 7	Engineer Access [0059]
	ATE PGM 8	AC Mains Fail [0052]
	ATE PGM 9	Battery Fault [0053]
	ATE PGM 10	Pre RM Service [0064]
	RIX Module PGMs	
	RIX Address [0] – [3]	PGMs 1-4 Not Used [0000]
	ROX Module PGMs	
	ROX Address [0] – [1]	PGMs 1-16 Not Used [0000]
	Input Description	
	ROX Installed	No [0]
	Keypad Outputs	
	Device Address [0] – [5]	PGM 1 Not Used [0000]
	Reader Outputs	
	Reader Address [0] – [5]	PGM 1-2 Not Used [0000]
	User Outputs?	
	User Output No. [01] – [30]	User Output Type [0] Latched
		User Output Name _
INSTALL KEYPADS/READERS	Device Address	[0] – [5]
	Device Type	[0] Keypad, [1]-[5] Not Used
	Device Arms Area	[0123ABCD]
	Device Disarms	[0123ABCD]
	Device In Area	[0123ABCD]
	Device Name?	
	Enter Number	Keypad 0 (for address [0])

	Enter Name	_
PROGRAM TIMERS	Entry Time 1	[030] seconds
	Entry Time 2	[030] seconds
	Exit Time	[030] seconds
	Bell Time	[03] minutes
	Bell Delay	[00] minutes
	Strobe Time	[00] minutes
	Number Re-Arms	[3]
	AC Fail Delay	[005] minutes
	Final Door Delay	[005] seconds
	Double Knock	[10] seconds
	Delay Send Entry	[000] seconds
	Line Fault Delay	[250] minutes
	Arm Fail Time	[250] seconds
	Guard Code Delay	[03] minutes
	Fire Bell Time	[99] minutes
	Arm Fail Warning	[00] minutes
	NAT Day Timer	[00] days
	NAT Hours Timer	[00] hours
	Pulsed Burglar Any	[005] seconds
	Wireless Supervision Time	[02] hours
	Wireless Jamming Time	[100] Seconds
	Service Timer	[000] Days
CHANGE CODES	Change Duress/Guard Codes	1-20 Empty
	Change Master Manager Code	1234
	User In Area	[0123ABCD]
	User Arm Options	Disarm/Arm [0]
	Area Arm Choice	Yes [1]
	User Name	_
	Change Engineer Code	9999
VOLUME CONTROL	Entry	[4]
	Exit	[4]
	Alarm	[7]
	Fire	[7]
	Technical	[2]
	24 Hour	[4]
	Chime	[4]
	Code Stops Sound	Yes [1]
	Silent Tech Alert	No [0]
	Disable Call Fault	No [0]
SYSTEM OPTIONS		
Options:	Arm With Tamper	Yes [1]
	Arm if Modem Flt	Yes [1]
	Arm with Tec/Flt	Yes [1]
	Arm Fail = Alarm	No [0]
	Do Bat Load Test	No [0]
	Arm Acknowledge	Strobe Flash [1]
	Bypass on Re-Arm	No [0]
	Forced Arm	Yes [1]
	Tag Only Disarm	No [0]
	Quick Arm	No [0]
	Invert ATE PGMs	No [0]
	Software Clock	No [0]
	Keypad PA Key	Bell+Signal [2]
	Manager Prog PA	Yes [1]
	ATE Input	None [3]
	Tag Disarm+Door	Yes [1]
	Keypad Fire Key	Yes [1]
	Arm with Spvn Fault	Yes [1]
	Keyfob on Entry	No [0]
	Download If Armed	No [0]
	6 Digit Codes	No [0]
System Displays:	Area A,B,C,D Text	Area A, Area B, etc.
	Top Display Text	PCX 46
	Display If Armed	Yes [1]
	Display Alarms	Yes [1]
	Ready LED On	Yes [1]
	Display PAs	Yes [1]

	Display Silent PAs	Yes [1]
	Display Inputs	Yes [1]
	Disarm LED On	Yes [1]
Exit Modes:	Exit Mode (for all areas)	Timed [0]
REVIEW LOGS	Panel Log	
	Access Control Log	
ENGINEER TESTS	Walk Test	
	Walk Test Areas	[0123ABCD]
	Soak Test	
	Soak inputs	[--]
	Soak Days Left	[00]
	Initial Soak	[00]
	Test Bell & Stb	Testing Bell…
	Battery Load Test	
	Test PGMs	PGM Test: [0000]
	Send a Test Call	
	By-Pass Fire/PA	No [0]
DIAGNOSTICS		
Wireless Devices Diagnostics:	View Inputs	RIX Inputs [0] – [3]
	View Inputs Signal Strength	RIX Address [0] – [3]
	View Bells Signal Strength	_ _
	View Inputs Battery Status	RIX Address [0] – [3]
	View Bells Battery Status	Bell [1] – [2]
Wired Devices Diagnostics:	View Inputs	
	Endstation Inputs	FFFFFFFF
	RIX Inputs	[0] – [3]
	Keypad Inputs	[0] – [5]
	Reader Inputs	[0] – [5]
	View PSUs	Panel PSU: 13.5V
	Calibration	Manufacturer use only
Communications Diagnostics:	Signal Strength	
	APN Status	Initialising
	ARC Status	Initialising
	Last Polled App	Never
	Last Polled Cloud	Never
	Last Polled ARC	Never
	PSTN Line Status (if installed)	Present
ENGINEER RESTORE OPTIONS	Restore Burglary	No [0]
	Restore PA	No [0]
	Restore Tamper	No [0]
	Restore Soak	No [0]
	Restore Faults	No [0]
	Anti Code Restore	No [0]
COMMUNICATIONS	Set Up App	
	Use App	No [0]
	System ID:	AAAAAAAA (unique to panel)
	Cloud Password	_ (entered by user)
	Security	Normal [0]
	App Password	_ (entered by user)
	Poll Server	No [0]
Network Set-Up	Program GPRS	
	GPRS APN	(network specific)
	GPRS USER ID	(network specific)
	GPRS Password	(network specific)
	Program LAN	
	Enable Auto IP	No [0]
	IP Address	
	Subnet Mask	
	Router Addr	
	1st DNS IP Address	
	2nd DNS IP Address	
	Program Wifi	For Future Use
Digi Modem Signalling	ARC Details	ARC1 Main [1] , ARC2 Main [2] ARC1 Backup [3] , ARC2 Backup [4]
	Modem Type Used (ARC [1]–[4])	PSTN [0]
	Format	Not Used [254]
	Sign Up to ARC	

	ARC SignUp IP	_ . . .
	ARC SignUp Port	_
	Security	High [1]
	Send key by SMS	Waiting for key…
SMS Signalling	SMS Details	[01] – [10]
	User Mobile	(enter number to show menus)
	Valid Areas	A
	Redials	[09]
	Time Out	[99] Seconds
	Test Calls	No [0]
	Event Types	Default 1 [0]
SMS Common Message	Common Message	Alarm System
Advanced Comms	Prefix Tel No. (if PSTN installed)	_
	Wait Dial Tone(if PSTN installed)	No [0]
	Send Events UDL	[1] - [4]
	Modem Tel No_	
	Send Alarms	No [0]
	Send Faults	No [0]
	Send Open/Close	No [0]
	Send Access/Control	No [0]
ALARM RESPONSES	Areas start at	Signal Digi [3]
	Areas stop at	Signal Digi [3]
	Fire start at	Signal Digi [3]
	Fire stop at	Signal Digi [3]
	PA start at	Signal Digi [3]
	PA stop at	Signal Digi [3]
	24 Hour start at	Signal Digi [3]
	24 Hour stop at	Signal Digi [3]
	Any Alarms Start	Signal Digi [3]
	If Areas Armed	-
	Any Alarms Stop	Signal Digi [3]
	If Areas Armed	-
OPTIONS UP/DOWNLOADING	Download by	RS-232 [2] (default)
	UDL Password	_
	UDL Priority	High [0]
If you change it to [1] Modem:	Dial mode Option	Auto-Answer [0]
	Dial In Options	Direct Dial [0]
	No. of Rings for 2call	[05]
	Modem Speed	High [1]
	Prefix Tel No	_
	Redials	[03]
	UDL Password	_
	Site Name	_
	UDL Priority	High [0]
If you change it to [6] Cloud:	System ID:	AAAAAAAA (unique to panel)
	Security	Normal [0]
	System Password	_
	Poll Server	No [0]
	UDL Password	_
	Site Name	_
	UDL Priority	High [0]
SOFTWARE REVISION		
FACTORY DEFAULT		(code is 2000)
PRESS A TO EXIT & SAVE ENG MENU		

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