

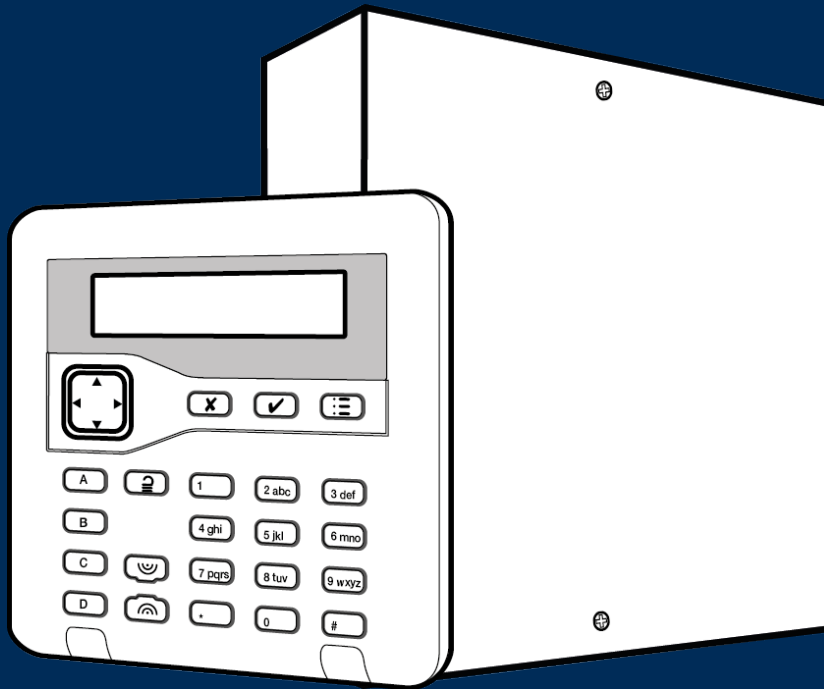


Security Tech Germany

Terxon SX Alarm Panel

Installation Manual

AZAA10000



1.449.06.10

V1.1

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About this Guide

This guide is for people who need to install and configure an **Terxon SX** intrusion system. The guide gives an introduction to **Terxon SX**, provides pre-installation information, and explains how to configure the unit using the options in the Installer menu of the user interface.

This manual explains:

- The architecture and components of **Terxon SX** Alarm Panel.
- System limits, such as the maximum number of zones and bus devices.
- How to plan the installation of **Terxon SX** Alarm Panel.
- How to install a **Terxon SX** Alarm Panel unit.

Before using this device for the first time, please read the following instructions carefully and observe all warning information, even if you are familiar with the use of electronic devices. All guarantee claims are invalid in the event of damage caused by non-compliance with this safety information. We cannot be held liable for resulting damage.

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1. Introduction

1.1. About the Terxon SX Alarm Panel

The **Terxon SX** panel is a 10-zone panel for wired detectors and up to four keypads. The panel has been designed to satisfy the most demanding requirements of alarm-systems professionals for domestic and small commercial applications and is both easy to install and robust.

1.1.1. Explanation of Symbols

The following symbols are used in this manual:

Symbol	Signal Word	Meaning
	Caution	Indicates a risk of injury or health hazards caused by electrical voltage.
	Important	Indicates possible damage to the device / accessories or a risk of injury or health.
	Note	Indicates important information.

1.1.2. Limitation of Liability

Thank you for purchasing the Terxon SX alarm control panel. This device fulfils the requirements of the applicable European and national directives. Conformity has been verified and the corresponding declarations and documents are available from the manufacturer (www.abus.com). To ensure safe operation, please read, understand and follow the instructions for use. If you have any questions, please contact your specialist dealer. Every effort has been made to ensure the accuracy of the contents of this manual. Every care has been taken in the preparation of this manual to ensure its accuracy. However, the author and ABUS Security Center GmbH & Co. KG do not, however, accept any liability for any damage or loss resulting from improper installation and use, unauthorised use and failure to observe the safety instructions and warnings. We accept no liability for consequential damage. The product and its components must not be modified or converted. Failure to observe these instructions will invalidate the warranty for the product. The contents of this document are subject to change without prior notice.

1.1.3. Warranty

Um einen Garantieanspruch geltend zu machen, müssen Sie dem beanstandeten Produkt den Originalkaufbeleg mit dem Kaufdatum und einer kurzen schriftlichen Beschreibung des Defekts beilegen. Wenn Sie an Ihrer Alarmzentrale einen Mangel feststellen, der bereits beim Verkauf vorhanden war, wenden Sie sich in den ersten zwei Jahren bitte direkt an Ihren Verkäufer.

1.1.4. Intended Use

In Verbindung mit den entsprechenden Meldern und Signalgebern ist die Terxon SX-Alarmzentrale für den Schutz Ihres Eigentums bestimmt. Sie kann Ihre Geschäftsräume, Ihr Zuhause, Ihre Garage, Ihr Gartenhaus, Ihren Zweitwohnsitz usw. schützen.

1.1.5. Important Safety Information

Power supply



CAUTION: All electrical connections must be carried out by a qualified electrician and comply with current local regulations. Only operate this device through a power source which supplies the mains power specified on the type plate. If you are unsure which voltage is supplied at the installation location, contact your energy

provider. Disconnect the device from the power supply before carrying out maintenance or installation work. The device is only fully disconnected from the mains network when the power supply unit is removed. In order to eliminate the risk of fire, the device's mains plug should always be disconnected from the mains socket, if the device is not being used for an extended period of time. Prior to unstable weather and/or when there is a risk of lightning strike, disconnect the device from the mains network or connect the device to a UPS. Avoid overloading electrical sockets, extension cables and adapters, as this can result in fire or electric shock.

Cables



CAUTION: Always grasp cables by the plug connector and do not pull the cable itself. Never grasp the power cable with wet hands, as this can cause a short circuit or electric shock. Do not place the device itself, items of furniture or other heavy objects on the cable and ensure that it does not become kinked, especially at the connector plug and at the connection sockets. Never tie a knot in the cable and do not bundle it together with other cables. All cables should be laid so that they cannot be trodden on or cause a hazard. Damaged power cables can cause fire or electric shock. Check the power cable from time to time. Do not modify or manipulate the power cable or plug. Only use adapter plugs or extension cables that conform to applicable safety standards, and do not interfere with the mains or power cables.

Children



Important: Keep electrical devices out of reach of children. Never allow children to use electrical devices unsupervised. Children may not always properly identify possible hazards. Small parts may be fatal if swallowed. Keep packaging film away from children. There is a risk of suffocation. This device is not intended for children. If used incorrectly, parts under spring tension may fly out and cause injury to children (e.g. to eyes).

Unpacking the device

Handle the device with extreme care when unpacking it. Packaging and packaging aids can be reused and, as far as possible, should be sent for recycling. If the original packaging has been damaged, inspect the device first. If the device shows signs of damage, return it in the original packaging and inform the delivery service.

EMC Precautions



CAUTION: If you need to handle the PCB take precautions to prevent damage by static electricity.

Installation location/operating environment

Do not place any heavy objects on the device. The unit is not designed for use in rooms outside the specified operating temperature or humidity range, or where excessive dust is present. Please refer to the individual devices technical data for more detailed information. Ensure that:

adequate ventilation is always guaranteed; no direct sources of heat can affect the device; interior devices are not exposed to direct sunlight or strong artificial light; the device is not in the immediate vicinity of magnetic fields (e.g. loudspeakers); no naked flames (e.g. lit candles) are placed on or next to the device; sprayed or dripping water is prevented from coming into contact with interior devices and caustic fluids are avoided; the device is not operated in the vicinity of water, in particular, the device should never be submerged (do not place objects containing fluids, e.g. vases or drinks, on or near the device); no foreign bodies penetrate the device; the device is not exposed to wide temperature variations, as otherwise there may be condensation from humidity causing electrical short circuits; the device is not exposed to excessive shock or vibration.

Start-up

Observe all safety and operating instructions before operating the device for the first time. Improper or unprofessional work on the mains network or domestic installations puts both you and others at risk.

Documentation



Important: Good practice requires that documentation is not stored within the enclosure.

Care and maintenance

When conducting maintenance or cleaning work, disconnect the device from the mains.

Cleaning

Only clean the device housing with a damp cloth. Do not use solvents, white spirit, thinners or other caustic substances: Rub the surface gently with a cotton cloth until it is completely dry.

Disposal



Important: EU Directive 2012/19/EU regulates the proper return, treatment and recycling of used electronic devices. This symbol means that, in the interest of environmental protection, the device must be disposed of separately from household or industrial waste at the end of its lifespan in accordance with applicable local legal guidelines. Used devices can be disposed of at official recycling centres in your country. Observe local regulations when disposing of materials. Further details on returns (also for non-EU countries) can be obtained from your local authority. Separate collection and recycling conserve natural resources and ensure that all the provisions for protecting health and the environment are observed when recycling the product.

1.1.6. Declaration of Conformity

ABUS Security Center hereby declares that the enclosed product complies with the requirements of the following directives:

- EMC Directive (2014/30/EU)
- RoHS Directive (2011/65/EU)

The full EU Declaration of the Conformity text can be obtained at the following address:
ABUS Security Center GmbH & Co. KG

1.1.7. Standards on user names & codes

- User names and codes for logging into security systems should be known only by the legal owners and never given out to unauthorised parties.
- If you have to pass this information on via email, please take care to send the user name and code in two separate emails.
- User names and codes should be changed regularly.
- User names must be at least eight characters long
- They should ideally contain characters from at least three of the following categories: uppercase, letters, lowercase letters, special characters, and numbers.
- User names should never contain your own name, the name of a family member, your pet, your best friend or your favourite celebrity, or your hobby or date of birth.
- Avoid using user names and codes that you use on other websites or that could be easily guessed by others.
- Your user name should not be able to be found in a dictionary and should never be a product name.
- It should not be a conventional series of characters, a repeated pattern or a keyboard pattern, such
 - as asdfgh or 1234abcd.
- You should avoid only using numbers at the end of your user name or using one of the more typical
 - special characters (! " # \$ % & ' () * + , - . / : ; < = > ? @ [] ^ _ { } |) at the beginning or end to compensate for an otherwise simple user name.
- User names and codes should be changed at least every 180 days.
- New user names and codes should not be identical to any of the three combinations used before
 - them.
- New user names and codes should differ from user names and codes that have been used before by at least two characters.
- Macros and scripts should not be used to input user names and codes.

1.1.8. Summary of features

The **Terxon SX** features:

- On-board connections for up to 10 wired zones, a wired siren/strobe unit, external loudspeaker, and one open-collector output.
- An RS485 bus for connecting up to four keypads.
- One 8-output plug-by port.
- Support for one full-set level and up to three part-set levels.
- Metal case, fitted with a 1A power supply and space for a 12Vdc 7Ah backup battery.
- Back and lid tamper switches.
- Support for up to 10 users.



Note: The maximum number of on-board zones is for Fully-Supervised Loop (FSL) or 2-wire Closed Circuit (CC) wiring. If 4-wire CC wiring is used, the maximum number of on-board zones is halved.

Table 1 specifies the features and system limits for each panel in the **Terxon SX**.

Table 1: Terxon SX features

Zones	Max on-board radio zones	0
	Max on-board wired zones (See note)	10
	Max wired zones (system wide)	10
Bus	RS485 Buses	1
	Max bus devices	4
Outputs	Max on-board radio outputs	0
	On-board transistor outputs	1
	On-board relay outputs	0
	Max outputs on expanders, keypads, etc.	0
	On-board plug-by outputs	8
	On-board siren\strobe connections	Yes
Ports	Ethernet port	No
	Plug-on module port	No
	USB port	No
	On-board loudspeaker connections	1
	Micro SD card slot	No
Devices	Max wired keypads	4
	Max external radio siren\strobe units	0
	Max network cameras	0
	Max internal radio sounders	0
	Max Wireless Access Modules	0
Case	Panel case	Metal
	Battery	1 (7Ah)
	Power Supply Unit (PSU)	1.0A
	PSU current reserved for battery charging	180mA
	Back and lid tamper	Yes
Software	Users	10
	Part sets (including per partition in partitioned mode)	3
	Mandatory log events	250
	Non-mandatory log events	100
	Calendar set events	0
	Calendar set exceptions	0
	Max shunt groups	0
	Max simultaneous keypad sessions	1
	Web interface	No
	Firmware update via web interface, cloud auto update, or SD card	No
	Firmware update via USB port	No

1.2. System bus

The **Terxon SX** has a system bus, which is used to connect wired keypads to the alarm panel. The devices can connect to the bus using a daisy chain or star layout, as shown in **Fehler!**
Verweisquelle konnte nicht gefunden werden.

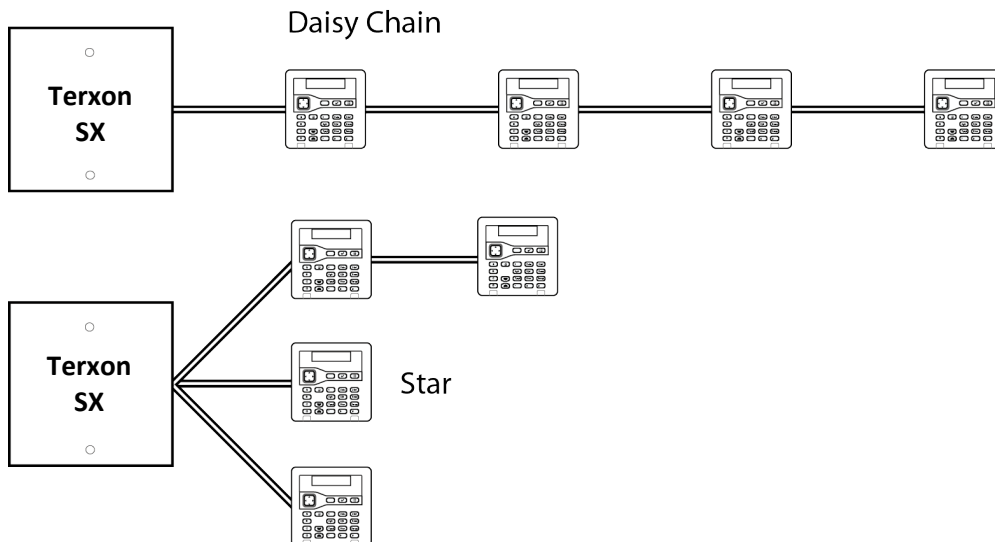


Figure 1: Daisy chain and star connections

Each keypad has a unique bus address, which it obtains from the alarm panel either during the commissioning stage of a new installation, or when the installer adds the keypad from the Installer menu. Each keypad stores its address in non-volatile memory.

1.2.1. Bus address

Each keypad has a unique bus address. A keypad obtains its address from the Alarm Panel either during the commissioning stage of a new installation, or when the installer adds the keypad from the Installer menu. The Alarm Panel assigns the lowest-available address. Each keypad stores its address in non-volatile memory.

1.3. Part-setting

The **Terxon SX** can set in one of four ways:

Either full set or one of three part sets (part set B, C or D). Each zone can belong to one or more part sets (using the Part Set attribute). When the system is full set, the panel sets all zones, irrespective of the part set they belong to. When part set, the panel sets only those zones that belong to the part set.

1.4. Supported Hardware

This section gives an overview of the purpose of each type of additional hardware device.

1.4.1. Keypads

Keypads are used by installers to configure the system, and by users to set or unset the system. Up to four keypads can be used. The **Terxon SX** Alarm Panel can use wired keypads connected to the system bus. Table 1 (page 13) specifies the number of keypads supported by the panel. Table 2 (page 15) shows the features of supported by the keypad.

Terxon SX Bus Keypad (AZBE10000)

Table 2: Keypad features

Wired keypad	Yes
Two-line by 20-character backlit LCD display	Yes
Illuminated four-way switch (navigation key), which is used to navigate through menus	Yes
LEDs behind the navigation key to show the fault status of the system	Yes
Numeric keypad for entering access codes and keying in text	Yes
Dedicated A,B, C and D keys, which can be programmed to set or part set individual partition, or allocated to control outputs	Yes
Keys for "yes" and "no" functions	Yes
Unset key	Yes
Hold-Up Alarm (HUA) keys	Yes
User menu key and an automatic timeout from the user menu	Yes
Internal sounder to give setting tones, alarm sounds, etc.	Yes
Backlit keys	Yes

1.4.2. Detectors (zones)

Wired detectors

Detectors are the physical devices that detect alarm conditions. A zone is the lowest-level item within the intrusion system that can be set or unset.



Note: Although it is possible to connect detectors in series and therefore to have more than one detector in the same zone, it is not normal practice. Instead, there is normally only one detector per zone and for this reason, detectors are often referred to as "zones" within the intrusion system.

Wired detectors connect using standard alarm cable to the **Terxon SX**. Please refer to page 18 (Detector (zone) wiring types) for details of the different wiring methods you can use.



Note: If 4-wire CC wiring is used, this may reduce the available number of zones to 5.

All wired detectors with contacts that open and close are supported, as there is no protocol involved.

1.4.3. Plug-by (digital communicator)

The **Terxon SX** includes an 8-output plug-by communicator port, which allows the system to communicate externally to an alarms-receiving site using a separate digital communicator (purchased separately).

By default, the outputs are switched negative (from 12Vdc to 0V) when active. You can program these outputs to be switched positive (from 0V to 12Vdc) when active.

1.4.4. Output device

A device such as an indicator, lighting system or third-party item of equipment can be switched on or off using the transistor (open-collector) output available on the **Terxon SX** PCB. You can configure the output in the Installer menu to control the external device when, for example there is an alarm in a specified zone.

By default, the output is switched negative (from 12Vdc to 0V) when active; you can program it to be switched positive (from 0V to 12Vdc).

1.4.5. Sounders

Sounders indicate alarms, entry tones, exit tones and other conditions. There are various types of sounder:

- **Keypad sounders** – A sounder is built into each keypad.
- **External wired siren/strobe unit** – The **Terxon SX** provides connections to drive a standard wired siren/strobe unit in Self-Activating Bell (SAB) or Self-Contained Bell (SCB) mode.
- **Loudspeakers** – The **Terxon SX** have connections for a loudspeaker, which you may want to use to increase the volume or location of setting and unsetting tones. The loudspeaker must have an impedance of 16 Ohms. You must not connect two loudspeakers in parallel to the same port.

2. Planning the installation

2.1 Choosing the installation locations

When planning the installation, consider the following recommendations concerning the locations of where to install the panel and other devices.

2.1.1 Alarm panel

The panel must be located:

- Within the protected area (but not in an entry or exit zone).
- Upright (battery at the bottom) on a wall or other flat surface to discourage tamper attempts from the rear.
- Out of sight of potential intruders.
- Where maximum cable distances will not be exceeded (see page 20).

2.1.2 Keypads

Keypads should be located at a convenient height. Keypads must be within the area protected by the intrusion system and ideally out of sight of potential intruders.

2.1.3 External siren

This must be located out of reach of intruders and vandals but must be easily visible for maximum deterrence.

2.2 Checking power availability

You must make sure that:

- The panel's 1.0A power supply has sufficient capacity to power all connected devices. 180mA is reserved for battery charging.
- The backup battery can provide sufficient power in the event of a mains failure.

If there is insufficient power available from the panel or backup battery, consider the use of additional power supplies.

When considering the power drawn, include the panel's PCB and all peripherals powered by the panel, including any plug-by communicator, keypads and wired detectors.

Table 3: Current Consumptions

gives a summary of the current consumed by the i-on10 PCBs and popular peripheral devices.

Table 3: Current Consumptions

Device	Current Consumption (In Alarm)
Terxon SX PCB	Quiescent: 40mA
	In alarm: 70mA
Keypad AZBE10000	Quiescent: 35mA (backlight off)
	In alarm: 65mA (backlight on)
Wired PIR	15mA
External siren/strobe	Quiescent: 35mA
	In alarm: 225mA
Plug-by digital communicator	25mA

2.2.1 Backup power calculation

The following shows a simplified example of checking power availability.

Device (quiescent)	Current
Panel PCB	40mA
10 x PIRs at 15mA each	150mA
2 Keypads at 25mA each (backlights off)	50mA
Plug-by digital communicator	25mA
Siren	35mA
Total	300mA

During an alarm, the current consumptions are:

Device (in alarm)	Current
Panel PCB	70mA
10 x PIRs at 15mA each	150mA
2 x Keypads at 65mA each	130mA
Plug-by digital communicator	150mA
Siren	225mA
Total	725mA

Since the panel's power supply can provide 820mA (excluding battery charging), the above shows that the power supply is able to power the system during an alarm (725mA). Calculation for the battery capacity:

$$(0.3A \times 11.5h) + (0.725A \times 0.5h) = 3.81Ah$$

2.3 Detector (zone) wiring types

Before installation, you need to choose the wiring type (method) to use for any wired detectors: Fully-Supervised Loop (FSL), 4-wire Closed Circuit (CC), or 2-wire CC, as described below. You must use the same wiring type for all wired detectors.

You will need to ensure that all detectors are wired correctly and that you select the default wiring type during the initial power-up procedure.

2.3.1 Fully Supervised Loop (FSL)

This uses a single pair of wires for each detector, with resistors at the end of the line and across the alarm contact (Figure 2). The resistors allow the system to monitor for short-circuit or open-circuit conditions to guard against cable tampering.

The End-of-Line (EOL) and alarm contact resistors can be any of the following values (respectively): 2k2 and 4k7, 1k and 1k, 2k2 and 2k2, or 4k7 and 4k7. The resistance bands for FSL are as shown in Table 4.

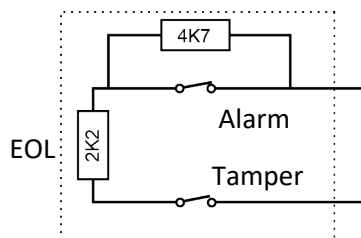


Figure 2: FSL connections for 2k2/4k7, 1k/1k, 2k2/2k2 and 4k7/4k7

FSL with 8k2/8k2 resistors (for use with **Guardall®** resistors)

Figure 3: FSL connections for 8k2/8k2

shows the wiring method when using 8k2 and 8k2 resistors.

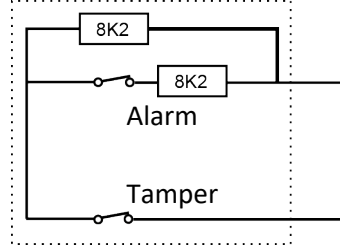


Figure 3: FSL connections for 8k2/8k2

Table 4: FSL Resistor Bands

Zone State	2k2/4k7 FSL	1k/1k FSL	2k2/2k2 FSL	4k7/4k7 FSL	8k2/8k2 FSL
Tamper	0k0 – 1k759	0k0 - 0k799	0k0 – 1k759	0k0 – 3k759	0k0 –
Normal	1k76 – 4k08	0k8 - 1k4	1k76 - 3k08	3k76 - 6k58	4k1 -
Alarm	4k081 – 8k28	1k401 - 2k4	3k081 - 5k28	6k581 - 11k28	8k2 -
Tamper	> 8k28	>2k4	>5k28	>11k28	>9k8

2.3.2 Double Doors

If required, two door contacts can be connected to the same zone using the resistor configuration shown in Figure 4. In this configuration, the zone must have the Double Doors attribute set (see page 40). The zone must use 4k7 shunt resistors and a 2k2 EOL resistor.

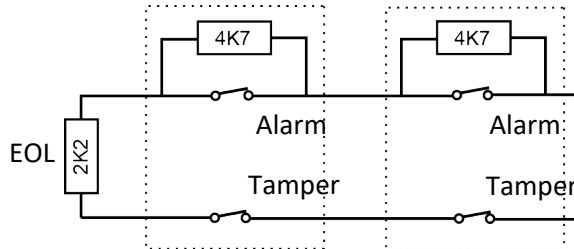


Figure 4: Two detectors per zone (Double Doors)

2.3.3 4-wire CC

This uses a separate pair of wires for the alarm and tamper contacts. No end-of-line resistors are used. Selecting 4-wire CC normally halves the maximum number of wired zones that can connect to the **Terxon SX**.

2.3.4 2-wire CC

This uses a single pair of wires for each detector. No end-of-line resistors are used.

2.4 Checking cable requirements

2.4.1 Standard cable type

Normally, the panel requires standard 7/0.2 un-screened 4-core alarm cable for wiring to keypads and wired siren/strobe units.

2.4.2 Screened cable

For maximum performance in environments where there is electromagnetic noise, use twisted-pair screened cable with a characteristic impedance of 100-120 Ohms, such as cable designed for RS485.

If screened cable is required:

1. Avoid earth loops by connecting the screen on the cable to mains earth at the panel but

- not at the keypad.
- 2. The continuity of the cable screen is most important and screens MUST be continuous along the full length of the cable.
- 3. Where the cable enters any metal enclosure, ensure the screen is isolated from the case.

2.4.3 Cable segregation

Segregate bus cabling to keypads from any other wiring, such as mains cables, telephone cables, computer network cables and R.F. cables.

Keep cables to keypads clear of cables supplying extension loudspeakers or any high-current devices.

2.4.4 Mains cable routing

Use separate cable-entry holes in the enclosure for mains and signal cables. Please refer to chapter 3 – *Installing the Terxon SX* on page 21 for details of the holes to use for each type of cable.

2.4.5 Cable length and configuration (star or daisy chain)

You can connect devices either in daisy chain (serially), or in star (parallel) configuration at the panel connector (Figure 5, page 20). For star configurations, the cable length from panel to the most distant keypad should be kept short and should not exceed 100m.

For a daisy-chain configuration, the total cable length should not exceed 1,000m.

Note that if there are only two arms in a star configuration, this is equivalent to a daisy-chain configuration.

2.4.6 Bus termination

In some cases, the ends of the bus may need to be terminated to improve performance in electrically noisy environments or where there are long cable runs. The panel and keypads have a termination link on their PCB. Fitting a jumper to the link adds a termination to the cable.

In a daisy-chain configuration, fit the termination jumpers in the devices at each end of the chain.

In a star configuration, terminate at the two devices on the ends of the longest cables (Figure 5).

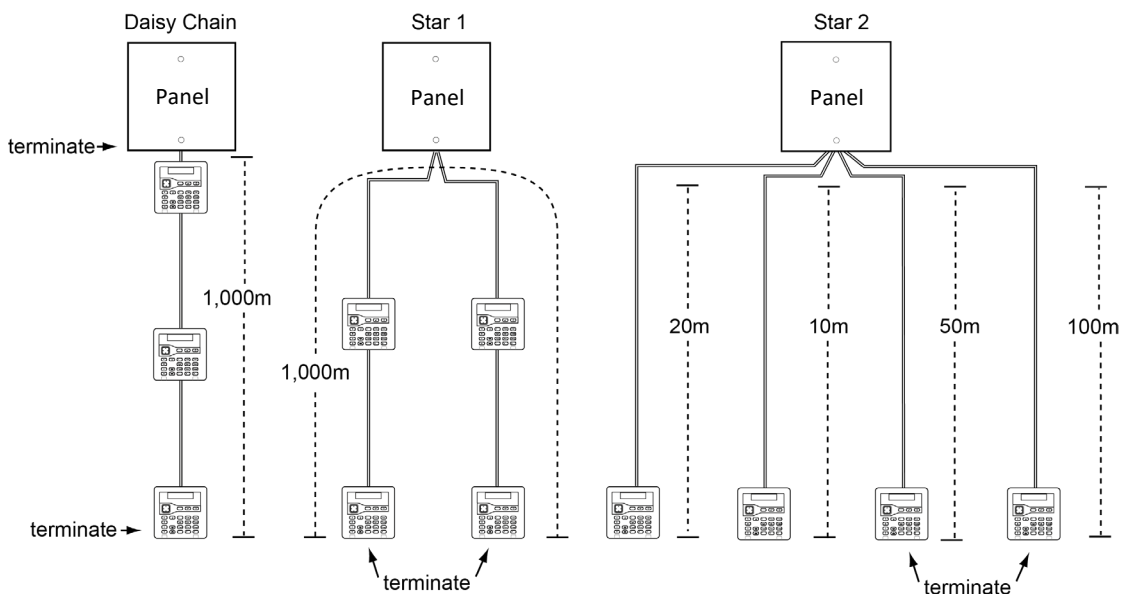


Figure 5: Bus termination

3. Installing the Terxon SX

3.1 Safety Information

This product must be installed by qualified service personnel.



CAUTION: BEFORE INSTALLING THIS EQUIPMENT, ENSURE THAT THE MAINS SUPPLY FOR THE Alarm Panel IS DISCONNECTED AND ISOLATED. All electrical connections must be carried out by a qualified electrician and comply with current local regulations.



CAUTION: When connected to the mains with power applied, mains voltages are present on the shrouded heads of the terminal screws of the mains connector



CAUTION: The mains cable to the Alarm Panel must use a double-pole isolation device in accordance with EN 62368-1.



WARNING: Good practice requires that documentation is not stored within the enclosure.



CAUTION: If you need to handle the PCB in the Alarm Panel, take standard precautions to prevent damage by static electricity.



Exposure to radio-frequency radiation: The radiated output power of this device is within those levels considered safe by European exposure limits. Nevertheless, when fitting the product, place it in such a manner as to minimise the potential for human contact during normal operation. To minimise exposure, users should be more than 200 mm from the device during normal operation.

3.2 Pre-Installation Requirements

Before starting the installation, make sure that you have followed all the requirements specified in Chapter 2 - *Planning the Installation* (page 17). This includes checking the power requirements, checking cable requirements and performing a radio survey (if applicable).

3.3 Terxon SX Installation Instructions

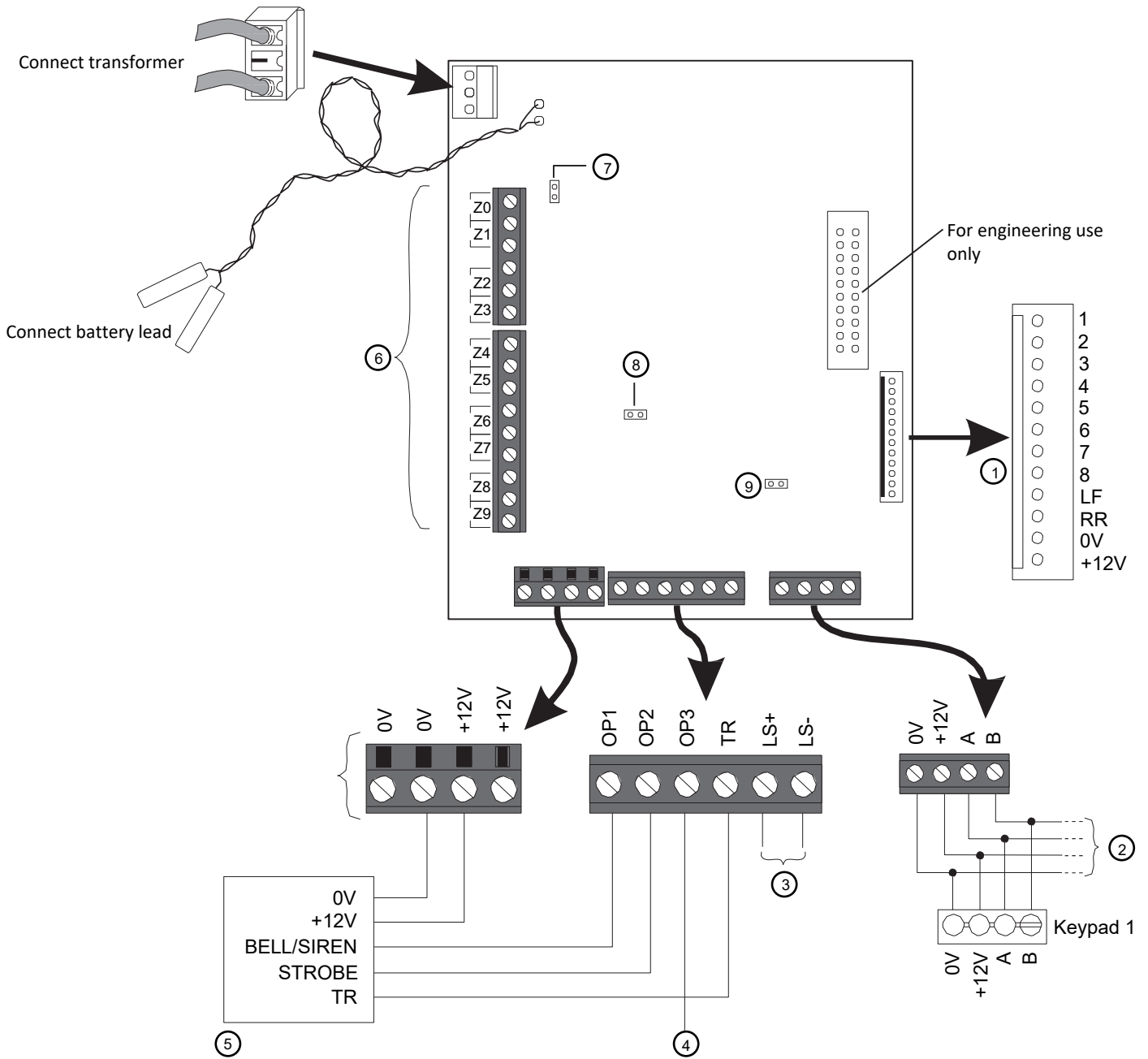


Figure 6 – Terxon SX PCB Overview

3.4 Overview of PCB

1. Plug-by communicator port

You can connect a plug-by communicator to this port.

By default, outputs 1-8 are 0V when active, and 12Vdc when inactive. Please refer to *1.5.3 Plug-by (digital communicator)* on page 15 in this guide for the default output type used for each output and programming details.

Connect LF (Line Fail) to an output from the communicator that is 12Vdc when communicator detects that there is a communications fault to the ARC, and 0V when no fault is present.

If a dual-path (landline and mobile) communicator is used, re-program one of the plug-by outputs to type ATS Test, and wire that to the ATS Test input of the communicator. Also connect Line Fail to the Line Fail output of the communicator, as above. The Alarm Panel generates an “ATE LF Single” alert if one network is unavailable, or “ATE LF All” if both are unavailable.

Connect RR (Remote Reset) to an output from the communicator that indicates to the panel that a user can reset the system after a system tamper. The input must be 12Vdc for at least 100ms to indicate the reset, and 0v normally. For further details, see *Remote Reset (Redcare Reset)* on page 54 in this guide.



Note: During system commissioning, confirm with the ARC that the communicator is working correctly.

2. System bus

Up to four keypads can connect to the system bus. The installation instructions supplied with each keypad provide details of how to install the device. The address of each device is set by the panel.

Please refer to *Step 3: Install cabling* on page 25 for guidance about cabling. See also *RS485 bus termination link* on page 25

3. Loudspeaker connections

If fitted, a loudspeaker mimics alarm tones and repeats setting and entry tones. The loudspeaker must be a minimum of 16 Ohms.



Note:

- A loudspeaker is not a warning device as described by EN50131-4.
 - You can set the loudspeaker volume from the Installer menu.
-

4. Open-collector (wired) output

The open-collector transistor output can be used to switch external equipment on or off. By default, the output is 12Vdc when inactive and 0V when active (this can be reversed from the Installer menu).

5. Siren/strobe connections

Please refer to the installation instructions provided with the siren/strobe unit for connection details.

6. Wired zone connections

You can connect up to 10 wired detectors (0 to 9) to the panel using the Fully-Supervised Loop (FSL), 4-wire Closed Circuit (CC) or 2-wire CC wiring method (Figure 5, page 20). You must use the same method for all detectors. If 4-wire CC is used, the number of zones is halved and are numbered 1-5.

For any method, the total wiring and switch resistance must be less than 100 Ohms (EOL resistor shorted in the case of FSL).

By default, the system assumes normally-closed contacts. Detectors with normally-open contacts must be programmed with the “Inverted” attribute set.

Please refer to 2.3 *Detector (zone) wiring types* on page 18 in this guide for wiring details if you want to use two detectors per zone.

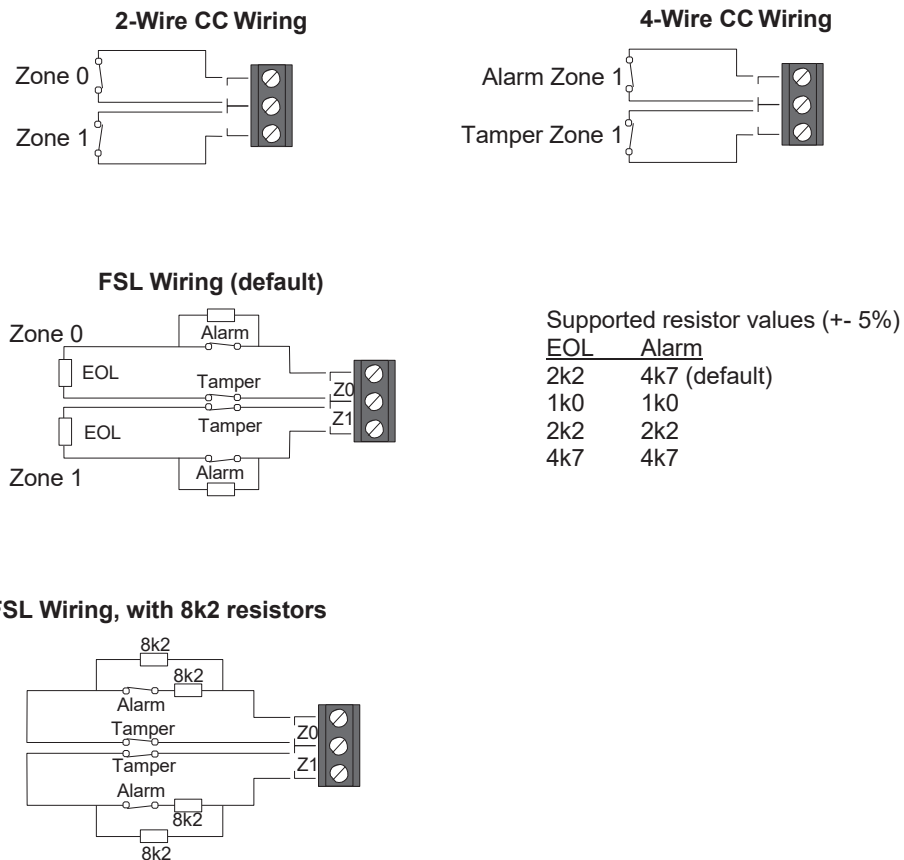


Figure 7 – Wiring Types

7. Kick-start link

Ordinarily, the panel starts only after the mains supply is switched on, even if a battery is connected. If you want to operate the panel temporarily using only the battery, start the panel by briefly shorting this link.

8. Reset codes link

You can use this link to reset the installer and all user codes (e.g. in the event that codes have been forgotten). This link can be enabled or disabled by a setting in the Installer menu. Please refer to 4.5.3 *Resetting Access Codes* on page 33 for further details.

9. RS485 bus termination Link

If the panel uses a single daisy chain to connect keypads and is at one end of the chain, fit a jumper across this link in the panel and in the last keypad on the bus. RS485 termination can improve performance in electrically noisy environments. Please refer to *2.4.6 Bus termination* on page 20 for further details.

3.5 Installing the Panel

Step 1: Choose a location for the panel

The panel must be located:

- Within the protected area (but not in an entry or exit zone).
- Out of sight of potential intruders.
- Upright (battery at the bottom) on a wall or other flat surface (to discourage tamper attempts from the rear).

Step 2: Check standby battery capacity

Check that the battery is able to power the system for at least 12 hours during a mains failure, including two periods of 15 minutes in alarm.

To do this, you will need to calculate the total current drawn from the battery during a mains failure. Please refer to *2. Planning the installation* on page 17 for worked examples.

Step 3: Install cabling

Note the following (refer to Chapter 2.4.4 – *Mains cable routing* on page 20 for guidance):

- Normally, standard 7/0.2 un-screened alarm cable is suitable for wiring to keypads and wired siren/strobe units.
- Screened cable may be needed if the cable runs near to sources of electromagnetic interference.
- Keep cables to keypads separate from any other wiring.
- You can connect keypads using a daisy-chain (serial) or star (parallel) configuration.
- Cables must enter the panel using the dedicated cable-entry holes (Figure 1).
- The maximum length of the cable to keypads depends on a number of factors, including the number of keypads and whether daisy-chain or star connections are used.

Step 4: Remove the lid of the panel

Release the two screws on the front of the lid then lift it off.

Step 5 Mount the panel

Mount the panel in the orientation shown in

Figure 8 - Fixing holes and cable entries

using the three fixing holes and minimum 40m long No8 (4mm) screws. Use only the designated fixing holes.

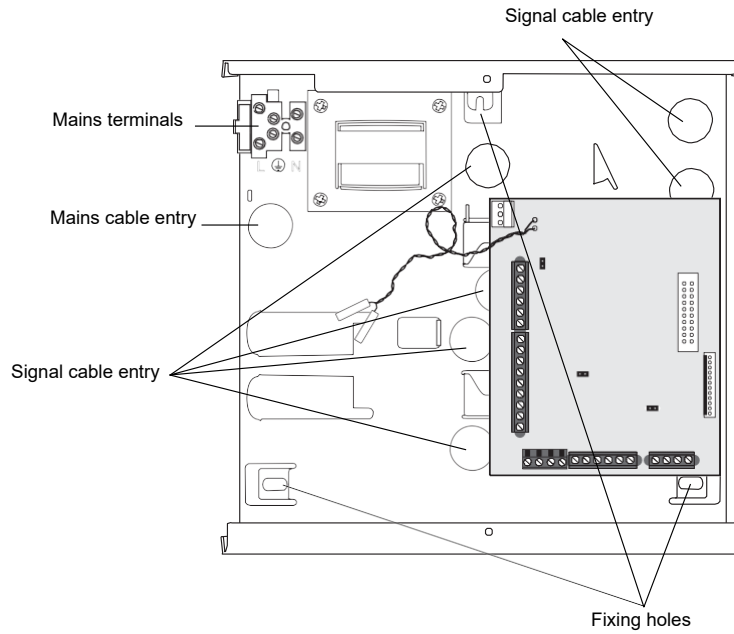


Figure 8 - Fixing holes and cable entries

Step 6: Position the communicator and fit the fourth pillar

If a communicator is used, position it under the PCB.

Fit the supplied fourth pillar for the PCB (see Figure 2) and secure the PCB to the pillar using the supplied M3x12 screw.

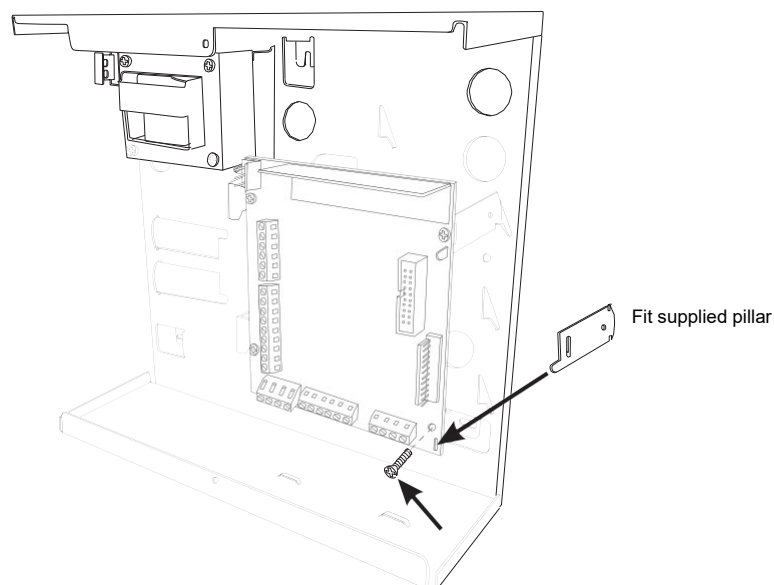


Figure 9 – Fitting the fourth pillar

Step 7: Connect all wired devices

Connect all wired devices except the battery, as shown in *Figure 6* on page 22.

Step 8: Connect the Battery:



Note: Connecting the battery does not start the system.

Fit a 7Ah lead-acid battery in the bottom-left corner of the panel.

Connect the battery leads to the battery (red to positive and black to negative) and connect the transformer lead to the PCB (*Figure 6* on page 22).

Step 9: Connect the mains cable



WARNING: ENSURE THAT THE MAINS SUPPLY IS DISCONNECTED AND ISOLATED!

Connect the mains cable to the terminal block (*Figure 10*) and fit a strain-relief tie. Do not apply power until after the lid is re-fitted.

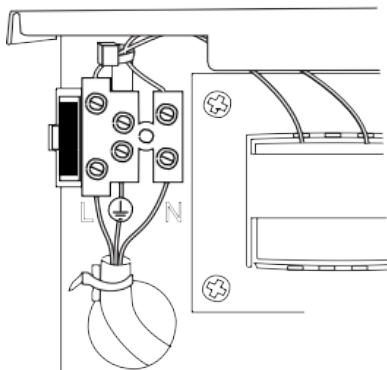


Figure 10 – Mains connections

Step 10: Re-fit the lid, switch on and configure the system



WARNING: During initial power-up, keypad sounders and any internal loudspeaker may give an alarm tone. If you are working at the top of a ladder, make sure that the sudden noise does not startle you and cause a fall.

Re-fit the lid, then switch on the mains supply to the panel.

Go through the initial configuration prompts and set up the system as described in *Configuring the System* on page 28. You are prompted to specify installer and user codes during initial system configuration.

4. Configuring the System

This chapter explains how to:

- Use the initial power-up procedure to configure the basic settings of the panel.
- Enter and exit the Installer menu.
- Select options and change settings in the Installer menu.
- Reset the panel.



Note: This chapter assumes that all wiring is complete, as described in chapter 3 – Installing the **Terxon SX**

4.1 Initial Power-up Procedure



WARNING: During initial power-up, sounders and the siren may give an alarm tone. If you are working at the top of a ladder, make sure that the sudden noise does not startle you and cause a fall.



Note: The following assumes that the panel has not been previously configured and that all keypads have a "null" address (no address previously allocated). If required, please refer to page 33 for details of how to reset an existing system.

To configure the system for the first time:

1. Connect the panel's battery.
2. Close the lid of the panel if there is no need to keep it open.
3. Switch on the mains supply.



Note: Ordinarily, the panel starts only after the mains supply is switched on, even if a battery is connected. If you want to operate the panel temporarily using only the battery (or a 12VDC supply), start it by briefly shorting the kick-start link on the PCB.

4. Wait until you see:

Press addr button(s)
on wired keypads

This message indicates that the keypad has a "null" address.

5. Go to the keypad you want to use for initial configuration. Obtain an address for this keypad by pressing and holding **A** and **✓** keys simultaneously **for at least three seconds** until you hear a sound. The display shows the address allocated by the panel, such as "b1-d01" (bus 1, device 01).
The address is now stored in the keypad.

6. Choose the language:

LANGUAGE
English v1.05

You can change the language by pressing **✓** one or more times. Press **✓** to continue. From this point on, the display operates in the selected language. If you want to change the language later, use *Installer menu – System Options – Updates – Language*.

7. Choose the country version you want use:

COUNTRY DEFAULTS
*UK

8. Select the wiring type to use for wired zones:

WIRED ZONE TYPE

*2-wire FSL 2k2/4k7

You can change the wiring type by pressing ∇ one or more times. Press \checkmark to continue.

Further information about zone wiring types is given on **page 13**.



Note: You can change this setting later using *Installer menu – System Options*.

9. **If you selected the UK as the country version, specify the alarm confirmation mode:**

CONFIRMATION MODE

*BS8243

You can change the confirmation code by pressing ∇ one or more times. Press \checkmark to continue.

Please refer to **page 55** if you need information about confirmation modes. You can change this setting later using *Installer menu – System Options – Confirmation – Confirmation Mode*.

10. User codes (e.g. to set or unset the system) can be four or six digits long. Select the required length:

USER CODE FORMAT

4 Digit User Codes

Press ∇ if you want to select six-digit user codes. Press \checkmark to continue.



Note: you can change this setting later using *Installer menu – System Options – Restore Defaults – Staged Defaults – Users*.

11. Specify an installer code:

NEW INSTALLER CODE

()

Use the numeric keys to specify the code. When prompted, confirm the code with \checkmark .

Do not forget this code!

12. Specify a code for the default master user:

NEW USER 1 CODE

()

Use the numeric keys to specify the code. When prompted, confirm the code with \checkmark .

Do not forget this code!

13. You will see one of the following:

- If the lid of the panel is closed, you will see the standby screen. For example:

TERXON SX

00:00 01/01/2020

- If the lid of the panel is open, you will see:

INSTALLER EXIT FLTS

Panel lid open

14. If the standby screen is displayed, enter the installer menu (as described in the next section). Otherwise, if the "Panel lid open" message is displayed, press * to access the Installer menu.
15. Carry out the required configuration tasks in the Installer menu; for example, to:
 - Add the other keypads, if used (**page 31**).
 - Program zones.
 - Configure the auxiliary output (if used).
 - Configure setting options.

4.2 Entering the installer menu

Entering the Installer menu allows you to configure the system using the options provided. You cannot enter the Installer menu if the system is set.

While you are logged in:

- The system will not generate alarms. You are, for example, able to open the lid of the panel without generating an alarm. All Hold-Up Alarms (HUAs), fire-alarm zones, 24-hour zones and tampers are disabled.
- Any other user trying to set the system from a keypad or access the user menu will see the message "Installer on Site".

To enter the Installer menu

1. Make sure the system is fully unset and showing the standby screen. For example:

```

Terxon SX
00:00 01/01/2020
  
```

2. Enter the Installer code, as specified when the panel was first configured:

```

Enter Access Code:
(* )
  
```



Note: Only one user can be logged in at any one time. If you or another user is logged in at another keypad, you will see "System Busy".

3. You may be prompted to enter a user code:

```

User Code Required
( )
  
```

This is displayed if you have not used the Installer menu with the previous 30 minutes, or if the system has been armed and disarmed within that period. You can disable this feature using *System Options – User Options – User Access – User Code Required* (**see page 52**). You cannot enter a Set Only user code.

4. The bottom line displays *Detectors/Devices*, which is the first option in the menu:

```

INSTALLER MENU
Detectors/Devices
  
```

Refer to the next section for details of how to use the user interface.

4.2.1 Saving Changes

Changes are saved only when you leave the Installer menu. If you remove all power before leaving the Installer menu, changes will not be saved. Note that this does not apply if you restore factory defaults; that change takes place immediately.

4.2.2 Code Lockouts

If you (or any user) enter your code incorrectly, the display shows the time and date again, gives an error tone and you can try again.

If there are four consecutive incorrect access codes, the system starts a tamper alarm and locks out all users for 90 seconds. This event is recorded in the log.

Once the lock-out time has expired, you can try again. If the next attempt is also invalid, system locks for another 90 seconds, but will not start another tamper alarm.

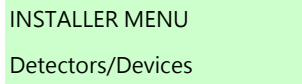
4.2.3 Transferring to another keypad

While in the Installer menu, you can transfer to any other keypad without leaving the Installer menu. To do this, simply go to any other keypad and enter the Installer access code. The new keypad will pick up your position in the Installer menu. The keypad you have left will exit the Installer menu.

4.3 Understanding the User Interface

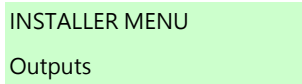
4.3.1 Selecting Options

The panel displays configuration options in menus. The top-level Installer menu contains options such as *Detectors/Devices*:



```
INSTALLER MENU
Detectors/Devices
```

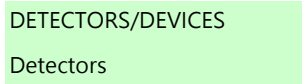
You can select a different option by pressing the ▲ or ▼ key at the keypad until the name of the option or device you want is displayed. For example, pressing ▼ once when *Detectors/Devices* is displayed displays *Outputs*:



```
INSTALLER MENU
Outputs
```

Pressing ▲ displays the earlier option in the menu. For example, pressing ▲ once when *Outputs* is displayed displays *Detectors/Devices*.

Pressing ✓ selects that option, which may display a menu of further options. For example, selecting *Detectors/Devices* displays the first option in the *Detectors/Devices* menu:



```
DETECTORS/DEVICES
Detectors
```

You can repeat the process until you have selected the lowest-level setting you want to change. Pressing ✖ at the keypad takes you back one level. For example, pressing ✖ when you are in the *Detectors/Devices – Detectors* menu takes you back to the *Detectors/Devices* menu.

Appendix B: Installer Menu Map

shows a menu map, which gives the position of all menus and options in the Installer menu.

4.3.2 Changing a Setting

To change the setting of an option, you normally follow the same procedure as above by pressing ▲ or ▼ one or more times to select the required setting and pressing ✓ to make the change. Some options require you to press ► or ◀ to change the setting from, for example, Yes to No. Other options may require you to enter text, as described in the next section.

4.3.3 Entering Text

You can use the numeric (0-9), * and # keys on the keypad to enter numbers and text when required to do so for an option. All numeric keys are labelled to show the characters you can enter using that key. For example, you can use the "2" key to enter A, B, C and 2 (where applicable). Also use (where applicable):

- # to change between capital and lower-case letters.
- 0 to enter a zero, space or other characters such as "&", "@" and "/".

When you first select an option to enter text, the display shows the cursor at the beginning of the bottom line. If you press a key, the bottom line clears and the character you key-in appears at the beginning of the line.

A cursor on the display shows the position of the next character. If you are keying in capital letters, the cursor is a block. For lower-case letters, the cursor is an underline.

If you press \blacktriangleright when you first select an option to enter text, the existing text shifts right one character and you can insert a new character in the empty space. To move the cursor left or right, press \blacktriangleup or \blacktriangledown respectively. To delete a character, press \blacktriangleleft .

4.4 Exiting the Installer Menu

To exit the Installer menu:

1. Replace the lid of the panel or other devices (if you removed them) to close all tamper switches.
2. Press \star until the display shows:

A green rectangular box representing a display screen with the text "Leave" on the top line and "installer mode?" on the bottom line.

3. Press \checkmark to leave Installer menu. (Press \star if you do not want to leave the menu.)
4. If there are no faults, the display shows the time and date, and the system is ready for use.

4.4.1 Exiting with Faults

You can exit the Installer menu, even if faults are present (such as the front of a detector being open). Exiting the Installer menu with faults present will not cause an alarm but does keep the faults active.

If you attempt to exit the Installer menu with faults present, you will see:

A green rectangular box representing a display screen with the text "Cannot Exit." on the top line and "Faults Found." on the bottom line.

This is followed by a list of faults, starting with the first. For example:

A green rectangular box representing a display screen with the text "INSTALLER EXIT FLTS" on the top line and "ZOT Zone 0" on the bottom line.

Either:

1. Press \star to return to the Installer menu (for example, to rectify an issue that is causing the fault).

Or:

1. You can also press \blacktriangleup or \blacktriangledown to scroll through the whole list of faults (whether previously displayed or not).

2. After you have displayed all faults, pressing ✓ displays:

```
INSTALLER MENU
Detectors/Devices
```

If all faults are then cleared, you will see:

```
INSTALLER EXIT FLTS
All Faults Cleared
```

3. Press ✕ to return to the Installer menu or press ✓ to exit the Installer menu.

4.5 Resetting (Defaulting) the System

4.5.1 Restoring Panel Factory Defaults

You can remove all configuration from the panel using *System Options – Restore Defaults – Factory Defaults (see page 54)*.

4.5.2 Resetting a keypad's address

You can clear the address stored in a keypad's non-volatile memory by pressing the **D** and ✕ keys together while the front cover is open.

4.5.3 Resetting Access Codes

You can use the Reset Codes link on the panel's PCB to delete the installer and all user codes. You will be prompted to specify new codes for the installer and master user.

You may want to use this feature in the event that the installer code has been forgotten. Once you are in the Installer menu, you can use *System Options, Restore Defaults, Staged Defaults* to reset user codes (*see page 59*).



Note: You can disable the Reset Codes link by disabling *System Options, Hardware, Reset Codes Pins (see page 59)*.

To reset the codes:

1. If you know the installer code, enter it to prevent a tamper alarm when you remove the lid of the panel.
2. Remove mains power to the panel.
3. Remove the lid of the panel (the tamper must be activated for the procedure to work)
4. Disconnect the battery.
5. Place a jumper across the Kick-Start link.
6. While shorting the Reset Codes link, reconnect the battery and keep the short in place until you see the following:

```
NEW INSTALLER CODE
( )
```

7. Enter a code you want to use for the installer code. Confirm when prompted.
8. Enter a code you want to use for the master user code. Confirm when prompted.
9. Remove the jumper across the Kick-Start link.
10. Close the lid.
11. Reconnect the mains supply.

5. Detectors / Devices Menu

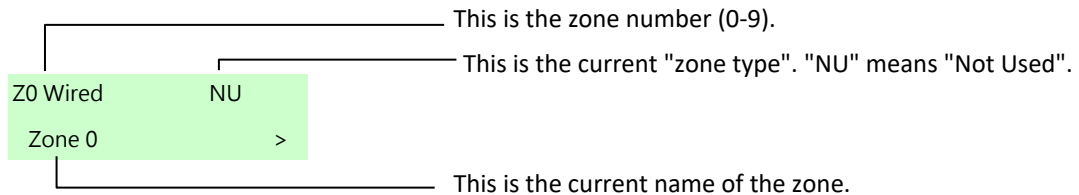
This chapter explains the options in the Detector / Device menu.

5.1 Detectors

5.1.1 Program Zones

You can program (configure) each zone's behaviour at any time, whether or not a wired detector is connected.

When you enter the menu, you will see the current configuration of Zone 0:



Use ▲ or ▼ to select the zone you wish to configure, then press ✓.



Note: If a wired zone does not have a detector connected to it, make sure that its zone type is Not Used (the default).

5.1.2 Name

You can give each zone a name of up to 40 characters. The panel displays this name when, for example, you select the zone, or the zone generates an alarm.

5.1.3 Type

The list below shows the available zone types.



Note:

- When configuring zone types, the display shows a "*" to the left of the zone's current type.
 - You can select a zone type quickly by entering the two-digit shortcut number shown in brackets after the type's name in the list below. For example, enter "05" to select Final Exit. The number does not appear on the display.
 - The abbreviation of the type name (e.g. HUA) appears in the top-right corner of the display when you select a zone.
 - When several zones are activated at the same time, the panel processes Hold Up Alarm and Normal Alarm zones first, followed by Fire, and then all other alarm types. The panel always processes alarms before alerts.
-

Not Used - NU (00)

The alarm system will not respond when an event triggers this detector. This is the default zone type for all zones.

Hold Up Alarm – HUA (01)

Operating a device programmed as Hold Up Alarm (HUA) will start an alarm whether the system (or part set) is set or unset.

The alarm response for HUA (audible, silent or displayed) depends on the options selected by *HUA Response* (see page 57).

There may also be an alarm transmission to the ARC, depending on how you have configured the system.

HUAs have an alarm sound that is distinct from other alarm types.

Fire Alarm - FA (02)

Smoke or heat detectors connected to Fire Alarm zones cause keypads, loudspeakers and the external siren to give a pulsing fire signal (subject to the *Alarm Response*; see **page 50**). Fire alarms operate whether the system is set or unset and will always trigger communications.

Note that a tamper from a hardwired smoke alarm on a Fire Alarm zone when the system is unset will cause an internal alarm (keypad sounders and loudspeakers only).

Normal Alarm - NA (03)

When triggered, a zone of type Normal Alarm will start an alarm provided the system (or part set) is set.

24 Hour Alarm - 24 (04)

Activating this zone while the system (or part set) is unset causes an internal alarm (keypads and loudspeakers). Activating this zone while the system (or part set) is set causes an alarm from internal sounders and the external siren (subject to the *Alarm Response*; see **page 50**).

Final Exit – FE (05)

Zones of this type must be the last detector to be activated on exit, or the first to be activated on entry. You can use zones of this type to complete the setting of the system, or to start the entry procedure. See **page 49** to set the exit mode type.



Note: If you give a Final Exit zone any of the Part Set attributes, you can program that zone to behave like a Normal Alarm zone if the user part sets the system. See **page 51**.

Entry Route – ER (06)

Use this zone type for detectors sited between the Final Exit door/detector and the location where the system is set/unset. If the entry/exit timer is running when an Entry Route zone is triggered, no alarm occurs until the entry/exit timer expires.



Note: If you give an Entry Route zone one of the Part Set attributes, you can program that zone to behave like a Final Exit zone if the user part sets the system. See **page 51**.

Technical Alarm –TA (07)

Use this zone type when you want to monitor equipment, for example a freezer, without raising a full alarm. If a Technical Alarm zone is activated, the panel logs the event, generates a fault condition, and (if the panel is correctly programmed, see **page 60 Fehler! Textmarke nicht definiert.**) starts communication.

If the technical alarm occurs while the system is set, the system makes no audible alarm. When a user unsets the system, the display shows an alert.

If a Technical Alarm zone is activated while the system is unset, the system starts an alert immediately and gives a brief tone at keypads and loudspeakers every few seconds. When a user enters a valid access code, the tone stops and the display shows the zone causing the alarm.

When the user acknowledges the alert by pressing ✓, the panel resets the technical alarm ready for the next event.

Note that a tamper on a Technical Alarm zone when the system is unset will cause an internal alarm.

Key Switch Moment. – KSM (08)

Use this zone type to connect a momentary keyswitch to a single zone.

Each time a user operates the keyswitch, the panel changes the current set state. The keyswitch can full set or unset.

Key Switch Latched – KSL (09)

Use this zone type to connect a fixed position keyswitch to a single zone.

When the user opens the keyswitch contacts, the panel sets the system. When the user closes the contacts, the panel unsets the system. The keyswitch can full set or unset.

Note:

The keyswitch zone types are intended for use on zones that connect to an access-control keypad, electronic key or other type of hardwired device used to set or unset the system.



When the user operates the keyswitch while the system is unset, the panel starts the programmed exit mode.

When the user operates the keyswitch while the system is set, the panel unsets the system immediately.

The user cannot reset the system from a keyswitch zone.

Tamper – T (10)

Use this zone type to monitor the tamper status of external equipment. The panel monitors a Tamper zone at all times. When triggered in the unset condition, only internal sounders operate. When triggered in the set condition, the alarm response (see **page 50**) determines whether the external siren, strobe and communications also respond to the alarm.

HUD Fault – HUD (16)

Use this zone type to monitor the fault output of wired hold-up devices that are capable of reporting faults. When a detector triggers a zone with this type, the panel generates an “HUD Fault” alert. If a user tries to set the system when this zone is active, the panel displays the fault on the keypad. The user can override the fault and carry on setting.

If the alarm system is set, the panel logs the event, starts any programmed communication, but does not generate an alert until the system is unset.

Once the zone is restored, a user can clear the alert by pressing ✓ and entering their access code.

Log Only – LO (17)

When a detector triggers a zone with this type, the panel logs the event and activates any outputs that are programmed to follow this zone. The zone is active whether the system is set or unset. Typical uses for this zone type are for integrating the alarm system with a CCTV system.



Note: Zone Follow outputs will activate on both alarm and tamper of a Log Only zone.

Exit Terminate - ET (18)

Use this zone type to terminate setting when the exit mode is Exit Terminate (see **page 49**). This zone type is designed for a normally-open momentary switch.

Note that this zone type is armed during the setting time, but inactive both while the system is set, and while the system is unset. If you apply the Chime attribute to this zone, the system will give a chime tone when the zone is activated both while the system is unset and while the system is set.

Lock Set - LS (21)

Use this zone type to complete setting when the exit mode is Lock Set (see **page 49**). This zone type is designed for a normally open switch (one that is open when the lock is locked). Note that this zone type is armed during setting and when the system is set.

A Lock Set zone can take the Inverted attribute.

Security - SC (23)

This zone type is intended for use if keypads are located in areas that are accessible to non-authorized people while the system is unset. When a Security zone is active, the panel disables the buttons on all keypads. The display and proximity tag sensor continue to function normally.

If an authorized user presents a proximity tag to the keypad, the panel activates the keys so that the user can operate the system. The panel deactivates the keys when that user is finished.

The keypad buttons will work normally when the system is set.

Tamper Return - TR (24)

This zone type makes it possible to monitor a tamper return wire from an external sounder. The panel monitors a Tamper Return zone at all times.

When triggered in the unset condition, only internal sounders operate. When triggered in the set condition, the alarm response (see **page 50**) determines whether the external siren, strobe and communications also respond to the alarm.

5.1.4 Attributes

Table 5 shows the zone attributes and the zone types they apply to. You can assign more than one attribute to a zone. The display shows only the available attributes for the zone type you select.

Table 5: Zone attributes available for zone types

	<u>Zone Attributes</u>															
	Chime1	Chime2	Soak Test	Double Knock	Reset	Part Set B	Part Set C	Part Set D	Omittable	Force Set Omit	Inverted	Linked Zone	Extended Entry Time	Double Doors	Force Set	
<u>Zone Type</u>																
Not Used																
Hold Up Alarm											X					
Fire Alarm											X					
Normal Alarm	X	X	X	X	X	X	X	X	X	X	X	X		X		
24 Hour Alarm						X	X	X	X		X			X		
Final Exit	X	X				X	X	X		X	X		X	X		
Entry Route	X	X	X	X	X	X	X	X	X		X			X		
Technical Alarm	X	X				X	X	X	X		X					
Key Switch Moment.											X					X
Key Switch Latched											X					X
Tamper			X			X	X	X	X	X	X					
HUD Fault									X	X	X					
Log Only	X	X									X			X		
Exit Terminate	X	X									X					
Lock Set											X					
Security											X					
Tamper Return			X			X	X	X	X	X						

Chime1 and Chime2

When enabled, the system gives a non-alarm chime when the zone is triggered. For all but Exit Terminate zones, the chime operates only when the system is unset. For Exit Terminate, the chime operates when the system is set or unset.

Chime1 and Chime 2 have different tones and can be used to distinguish zones.

Soak Test

Use this zone attribute if you want to place under long term test a detector that you suspect is giving false alarms. Zones with this attribute are disabled for 14 days after you return the panel to user/unset mode. If the zone remains inactive for the whole fourteen days then after midnight on the 14th day, the panel returns the zone to normal use.

If the zone is activated during those 14 days while the system is set, the panel logs the event as a "Soak Fail Znn Alm" (nn is the zone number) without sounding any sirens or starting communications. The panel also lights the red LEDs around the navigation key on the keypad to alert the user when they unset the system. An installer must key in their access code to reset the alert.

During setting, a brief message is displayed to inform the user that one or more zones are in soak test.



Note: If there is an output configured as type Zone Follow for a zone under Soak Test, the panel will continue to operate the output if the soak test zone is triggered. The output will operate whether the zone is set or unset.

Double Knock

Zones programmed with this attribute will cause an alarm only if the zone is EITHER triggered, restored and triggered again within a five-minute period, or if the zone remains active for 10 seconds.

Reset

Enable this attribute if you have connected a latching type of shock or vibration sensor to a zone. You will also need to program an output of type Shock Sensor Reset.

The panel ignores the zone during setting while the Shock Sensor Reset output is active, and for an extra three seconds after the output restores.



Note: It is recommended that you set the exit time to a value not less than 10 seconds to allow detectors to reset correctly and avoid the possibility that the panel will isolate a zone that has not reset.

If the exit time is less than 10 seconds and the detector does not successfully reset (it remains in an active state), the panel will not add the detector back to the system until detector becomes inactive. This is to prevent false alarms.

Part Set B

When a user sets part set B, the panel sets only those zones where the Part Set B attribute = "Yes". (See also "Exit Mode" on [page 49](#))

Part Set C

When a user sets part set C, the panel sets only those zones where Part Set C attribute = "Yes".

Part Set D

When a user sets part set D, the panel sets only those zones where Part Set D attribute = "Yes".

Omittable

When a zone has this attribute, a user can omit it before setting the system.

If a user tries to set the system when a zone with this attribute is open (active) the panel alerts them and pauses the setting procedure. The user can acknowledge the alert by pressing ✓ and continue setting, providing the feature is enabled in *System Options – User Options – User Access – Quick Omit* (see [page 52](#)).



Note: Take care when assigning Omittable to an Entry Route zone when Quick Omit is enabled. There is a risk that the user may omit the Entry Route zone in error.

Force Set Omit

If this attribute is set to On, a zone of type Key Switch Momentary or Key Switch Latched can force set the system while the zone is active, providing the zone has the Force Set attribute set to On.

When a force set occurs, the system omits the active zone that is attempting to set, and sets the remaining zones normally.

Inverted

On FSL zones, the attribute makes the panel treat resistances in the 6k9 band as “tamper”, and resistances below the 2k2 band as “alarm”. In 4-wire CC zones the attribute makes the panel treat open alarm contacts as “no alarm” and closed alarm contacts as “alarm”. (Tamper contacts are not affected by the Invert attribute.)

You can apply this attribute to any zone type except Tamper Return and Not Used.

Linked Zone

If a zone activates that has this attribute, a second zone with this attribute must also activate within the *Linked Zone Time* (see **page 59**) for an alarm to trigger.

This attribute is normally used only for an area protected by an array of infra-red beams, with each beam connected to a separate zone.

Extended Entry Time

This attribute is only for Final Exit zone types. If enabled and the zone is triggered to start the entry procedure, the system uses the *Extended Entry Time* setting (**page 50**). If disabled, the system uses the standard *Entry Time* setting (**page 50**).

This attribute allows for cases where you need to allow an increased length of time for the entry procedure for certain zones. For example, you may want to allow 40 seconds for a front door, and 90 seconds for a garage entrance.

Double Doors

This attribute is available only if the zone is configured to use the 2k2/4k7 FSL wiring method (see **page 58**). Setting this attribute allows the zone to monitor two door contacts in series, providing each detector has a 4k7 shunt resistor and there is a 2k2 end-of-line resistor. Please refer to **page 19** for wiring details.

To enhance system security, it is not recommended to use this attribute if only one detector is connected to the zone.

Force Set

This attribute is for zones of type Key Switch Momentary and Key Switch Latched only.

You may wish to allow the key switch to set the alarm system even if one or more zones are active or have faulty detectors. This is known as a "force set". The detectors that are active or are faulty must have the *Force Set Omit* attribute set to Yes. When a force set occurs, the system omits the active or faulty zones and sets the remaining zones normally.

Off – The key switch cannot force set the system, even if you have applied the *Force Set Omit* attribute to any zones.

On – The key switch can force set the system.

5.2 Address Bus Device

You can use this option to:

- Add new keypads to the system once they are physically wired to the bus. The panel assigns a bus address to each keypad you add. (You can perform the same action using Detectors/Devices – Wired Keypads – Address Bus Device.)
- Re-scan the bus for any found or missing keypads.



Note: If you need to replace or remove a keypad, please use Delete Keypad (**page 32**) or Replace Keypad (**page 33**).

5.2.1 Adding a keypad

If the keypad you are adding already has an address stored within it, you will need to clear the address before adding it to the bus. You can do this manually by pressing the D and * keys while the keypad's tamper switch is open, or by using *Delete Keypad* (see **page 42**)

To add a new keypad:

1. From the Installer menu, select *Detectors/Devices – Address Bus Device*, and press * when you see "Re-scan bus?". The following is displayed:

```
Press addr button(s)
on bus devices
```

2. When you see the above message, the panel is ready to allocate an address to each additional keypad that has a "null" address. Press and hold A and ✓ together at a keypad that needs an address. Release the keys when you hear a sound. The display shows the allocated address, such as "b1-d02" (bus 1, device 02).



Note: For **Terxon SX** the bus number is always 1, and the device number is in the range 01 to 04.

Note: Do not attempt to obtain an address for two keypads at the same time.

3. When you have finished addressing all keypads, press *.

5.2.2 Re-scanning the bus

The panel keeps a record of every keypad that it has learned. To keep the list up to date, the panel scans the bus during power up and when you leave the Installer menu. You can also scan the bus by pressing ✓ when you see the "Re-scan bus?" prompt after selecting *Detectors/Devices – Address Bus Device*.

During a scan, the panel queries every keypad on the bus to report its bus address. The panel then compares the reported addresses with those that it has stored and may report:

- **Duplicate bus addresses** – That is, keypads that have the same address. You will need to change the address of one of the keypads to make it unique.
- **Found and/or lost bus devices** – If the panel finds a keypad on the bus that has not been added using the Installer menu, or a previously-added keypad is missing, the display shows, for example:

```
FOUND 0, LOST 1
Lost b1-d02
```

The top line shows the number of new keypads found, and the number of existing keypads lost. The bottom line shows the first in the list of found and lost keypads. You can use the up/down navigation keys to scroll through the list.

If you see that there are found or lost keypads:

- **Either:** Press * to return to the Installer menu to check that all keypads are listed and addressed correctly. Make sure that the keypads are powered up.
- **OR:** Press ✓ to make the panel update its internal record of keypads attached to the bus.

The display shows:

```
Accept all changes
to bus
```

Press ✓ to accept the changes, or press * to return without making changes



Note: Accepting changes deletes all programmed information for any lost keypads.

If you are re-scanning the bus through *Address Bus Device*, the display shows:

Press addr button(s)
on bus devices

If there are new keypads, continue as described in the previous section. Alternatively, press * if there are no new keypads.

Changes are not saved until you leave Installer menu. If the panel loses power before leaving Installer menu, the bus re-configure does not take effect.

5.3 Wired Keypads

5.3.1 Address Bus Device

You can use this option to add a wired keypad to the system once it is physically wired to the bus. This is an alternative to using *Detectors/Devices – Address Bus Device*. For further information, please refer to **page 40**.

5.3.2 Edit Keypad

You can use this option to edit settings for a specific keypad.



Note: If you wish to find out where the device is located, press “*”. The displayed device will sound a continuous tone. Press “#” to stop the tone.

Name

You can give each keypad a name. The panel displays the name when it is reporting faults or other events, making it easier to locate the affected device.

Key A/B/C/D

These options allow you to program the A, B, C and D (quick-set) keys. You can enable the quick-set keys to full set the system, or set part sets B, C and D. To choose the setting method, select *Action, Set*, and then the required option. Each keypad can have a different arrangement of quick-set keys.

Each quick-set key can have a name. The keypad displays this name while the system is setting after the user presses that key.

Note:



- The ABCD LEDs at the keypad show the state of the quick-set keys. When the part set that a quick-set key is allocated to is set, the associated LED glows.
- The panel logs the use of quick-set keys

5.3.3 Delete Keypad

Always use *Delete Keypad* when you wish to remove a wired keypad from the bus. Using this option defaults the bus device number stored within the device (making the device safe to add to other systems). Exit the Installer menu to save the change.



Note: Remove all power from the system (battery and mains) before disconnecting any keypad from the bus.

Holding down D and * at a keypad while its tamper switch is open clears the address from the keypad. Normally, you should clear the address only by using *Delete Keypad*. If you have used D and * at a keypad that is known to the system and still connected to the bus, you can either power the panel down and up again for it to recognise the keypad (you will be prompted to press the A and ✓ keys), or go to another keypad and use *Delete Keypad* to delete the keypad.

5.3.4 Enable Keypad

Use this option and set the enable status to “No” if you suspect that the device is faulty and wish to remove it from service temporarily.

While the keypad is disabled, the panel ignores all signals or input from the device but retains the name and other settings allocated to the device.

If a user tries to set the system, the keypad displays “Tick to continue Disabled”, together with the address of the disabled keypad, but will continue to set the system if the user presses ✓.

5.3.5 Replace Keypad

Use this option if you wish to replace a wired keypad with a new keypad but leave the keypad's configuration intact in the panel.

When you use *Replace Keypad*, the panel disables the selected keypad, but retains the keypad's configuration. You can then power down the system, disconnect the keypad from the bus, and reconnect a new keypad to the bus.

When you power up the panel again, the remaining keypads will show an alert that the old keypad has been disabled. Select *Replace Keypad* again, select the *Add* option and then hold down the A and ✓ keys on the new keypad. The panel will assign the bus device address of the keypad you removed to the new keypad, along with all the configuration from the old keypad. The new keypad will not need any further configuration.



Note: If you are replacing a keypad on a single-keypad system, you will have to re-program the new keypad with all the functions of the old keypad, including any non-default ABCD key functions.

6. Outputs Menu

This chapter explains the options in the Outputs menu.

6.1 Wired Outputs

The Wired Outputs menu provides access to edit the configuration of the three hardwired outputs on the panel's PCB.

1. Select *Panel*. The display shows the current configuration for output 1. The bottom line of the display shows the output's output type (by default, "Siren").
2. Select either output 1, 2 or 3.

You can edit the output's *Name*, *Type* and *Polarity*, as described next.

Name

Specifies the output's name.

Type

Select the output type:



Note: You can select an output type quickly by entering the number shown in brackets after the type's name, for example: "04" to select Open/Close. The number does not appear on the display.

Not Used (00)

The output is never active.

Fire Alarm (01)

Active when the panel starts a fire alarm.

Hold Up Alarm (02)

Active when the panel starts a hold up alarm.

Burglar Alarm (03)

Active when any of the following zones are triggered while set: Normal Alarm, Tamper (in a set system), Entry Route, Tamper Zone (in a set system), Entry time expires, 24 hour (in a set system).

Open/Close (04)

Active when the system is unset. Inactive when the system is set.



Note: This output is inverted relative to other outputs, it is normally at 0V for an unset (open) system.

Alarm Abort (05)

Active when an alarm has been aborted by the user within the abort period. Deactivates when the alarm is reset.

Technical Alarm (06)

Active when there is a technical alarm. Deactivates when the zone causing the alarm is restored AND a user enters a valid access code to acknowledge the technical alarm alert.

Confirmed Alarm (07)

Active when there is a confirmed alarm. Deactivates when the system is reset. The operation of this output type depends on the option selected in *System Options – Confirmation – Confirmation Mode* (see **page 55**):

A/C Fail (12)

Active when mains power is absent. The action of this output depends on the value programmed in *System Options – Hardware – Mains Fail Delay* (see **page 58**).

Battery Fault (13)

Active when the panel detects a fault with its backup battery. The panel deactivates the output when it detects a good battery.

Tamper (16)

Active when the panel detects a tamper at the panel (lid or back), wired keypad, detector, or when there is an activation of a zone of type Tamper.

The panel deactivates the output when tamper is reset.

Zone Omit (Setting) (17)

Active when the user omits a zone while setting the system. The output deactivates when the panel restores the zone.

Zone Omit (System) (18)

In the event of an unconfirmed alarm, the system will rearm itself when the confirmation timer expires. If the zone that caused the unconfirmed alarm is still active at the time of the rearm, the panel will omit that zone and activate the output. The panel will restore the zone and output when a user or engineer resets the system.

General Fault (19)

Active when there is any event that causes an alert indication. This includes: AC Fail, Battery Fault and Tamper.

Note that a General Fault output will trigger within a few seconds of an AC Fail and is NOT affected by the *Mains Fail Delay* setting.

Siren (21)

Active when the panel starts a full alarm, a hold up alarm or a fire alarm (the siren has a distinctive tone during a fire alarm). The panel deactivates this output at the end of the siren time. See **page 51** to choose the siren duration.

Strobe (22)

Active when either of the following occurs:

- a) The panel starts a full alarm, hold-up alarm or fire alarm. The output remains active until the user disarms the system.
- b) Setting or unsetting, if you have selected "strobe on set" and/or "strobe on unset" (see *page 51*).

Entry Exit Follow (23)

Active when the entry or exit time starts and deactivates at the end of the entry/exit time, or if the entry/exit time is terminated. The output can be used for a separate entry/exit buzzer. Note that the output does not operate if the exit mode is silent set or instant set.

Armed (24)

Active when the system is full or part set.

PIR Set Latch (25)

Active when the system is set. Inactive when the system is unset or an alarm condition occurs. The output is active for one second when a reset is performed or when the panel leaves installer mode.



Note: By default this output is at +12V when active and 0V when inactive. Use the Inverted attribute if you wish to change this behaviour.

Shock Sensor Reset (26)

The output deactivates five seconds after the setting procedure has started (such as five seconds after an instant set or five seconds after the exit timer starts). Use this output to reset shock sensors (for example, the "Viper"). The normal state of this output is active.

Walk Test (27)

Active when a user starts Installer or User Walk Tests. Also active during the time between silencing and resetting the system. This output can be used on movement detectors that are able to switch off the Walk Test lamp in any state other than a Walk Test.

Smoke Sensor Reset (28)

This output is active (0V) all the time except when a user acknowledges a fire alarm. After which, the panel deactivates the output for three seconds. This output type is designed to be connected to low-voltage smoke detector reset terminals.



Note: Some smoke detectors require that the user reset the system twice after an alarm. This is to give the detector time to close its alarm contacts after the reset pulse.

24 Hour Alarm (29)

Active when the panel starts a 24-hour alarm.

Setting Complete (30)

Active when the panel finishes setting. Active for 10 seconds.

Unset Complete (31)

Active when someone unsets the system or disarms it after an alarm. The output is active for 10 seconds.

Full Set Ready (32)

Active when no detectors are reporting "alarm" signals.

Full Set (33)

Active when the system is full set.

Part Set (34)

Active when the system is part set.

Part Set B (35)

Active when setting Part Set B. Deactivated on unsetting Part Set B.

This output type is available only if a zone has the *Part Set B* attribute set to *On*.

Part Set C (36)

Active when setting Part Set C. Deactivated on unsetting Part Set C.

This output type is available only if a zone has the *Part Set C* attribute set to *On*.

Part Set D (37)

Active when setting Part Set D. Deactivated on unsetting Part Set D.

This output type is available only if a zone has the *Part Set D* attribute set to *On*.

Set Fail (38)

Active when a set command fails. Remains active until the user acknowledges the set fail.

Zone Follow (39)

Active when any selected zone is active, irrespective of whether the zone is set or unset.

The zones can include Log Only zones. Specify the zones using the *Zones* option (see **page 48**).

Zone Alarm (40)

Active when any selected zone is in alarm.

Note:

The zone must be capable of causing an alarm, such as zones of type Fire Alarm, Normal Alarm, Entry Route, Tamper, 24 Hour and Technical. A Final Exit zone will also cause an alarm if the Entry Time runs out before the user unsets the system.



- The zone must be set, unless it is a Fire Alarm zone. The system must be full set, or the zone must belong to the part set that the user has selected.

The output deactivates when the alarm is reset. Specify the zones using the *Zones* option (see **page 48**).

User Defined (43)

Activated when by any one of the following events:

A user operates the output from the *User Menu – Outputs On/Off* option.

A user presses one of the A, B, C or D keys that the installer has configured to operate a user-defined output.

When you select this type, you can choose:

Polarity – See **page 48**.

Latched – When set to No, the output changes state when activated, but then returns to the normal state again after the period specified by *On Time* (see below). When set to Yes, the output changes state every time a user operates the output, or according to a schedule if you specify *On Time*, *Off Time* and *Days* (see below).

On Time/Off Time/Days – If *Latched* is set to No, use *On Time* to specify the number of seconds you want the output to remain active. If you specify zero seconds, the output will not operate.

If *Latched* is set to Yes:

- You can use *On Time*, *Off Time* and *Days* to specify a schedule for the output to activate and deactivate automatically. Use *On Time* and *Off Time* to specify the time you want the output to activate and deactivate. Use *Days* to specify the days of the week you want the output to operate.



Note: If a user activates the output while it is deactivated, the output stays activated until the panel reaches the next off time. If a user de-activates the output while it is activated, the output deactivates until the panel reaches the next on time.

- Leave *On Time*, *Off Time* and *Days* without values if you want the output to act as a simple on/off switch under the control of the user.

Line Fault (44)

Active when the panel detects a communications fault. Deactivates when the communications fault clears

Courtesy Light (45)

Active when the entry or exit timer is running. The panel activates this output when the entry or exit time starts, and deactivates the output 10 seconds after the entry or exit time stops.

Installer on Site (46)

The panel activates the output when an installer enters the Installer menu, and deactivates the output once the installer has exited the Installer menu.

Duress Code (47)

Active when a user keys in a Duress code and deactivates the output when a user or engineer resets the system.

HUA Confirmed Alarm (48)

Although this output type is always available in the menu, it operates only when **BS8243** is enabled.

Active when there is an HUA Confirmed Alarm (see *page 55*).

Lockset Unlocked (49)

The panel activates the output when the Lock Set zone is activated and deactivates the output when a Lock Set zone is deactivated.

Burg Confirm timer (50)

Active when a Burg confirmation timer is running. Inactive when the timer stops.

Although this output type is always available in the menu, it operates only when **BS8243** or DD243 is enabled.

HUA Confirm Timer (51)

Active when an HUA confirmation timer is running. Inactive when the timer stops.

Although this output type is always available in the menu, it operates only when **BS8243** is enabled.

Rearmed (52)

The panel activates the output if the system re-arms at least once after the user armed it.

If *Confirmation Mode* (*page 55*) is set to **BS8243** or DD243, the panel activates the output as it rearms the system after the confirmation timer expires.

If *Confirmation Mode* is set to Basic, the panel activates the output as it rearms the system when the bell/siren time expires.

The panel deactivates the output when a user or installer resets the system.

Burg Confirmed Alarm (53)

Active when there is a Burg Confirmed Alarm (see *page 55*).

The panel deactivates the output when a user or engineer resets the system.

Entry Only (71)

Active when the system is in entry mode.

Exit Only (72)

Active when the system is in exit mode. Note this output will NOT activate if the system uses Instant Set exit mode.

Chime Tone Mimic (73)

Active when any zone with a chime attribute is active.

Alert Active (74)

Active when the LEDs around the navigation key on a keypad are red. The panel deactivates the output when the LEDs go green.

Panel Lid Open (75)

Active when the panel lid or back tamper is active. The panel deactivates the output when the panel lid or back tamper is inactive.

6.1.1 Polarity

You can change the polarity of a wired output to suit the type of equipment that the output must work with. Selecting *Normal* causes the output to be +12V when inactive, and at 0V when active. Selecting *Inverted* causes the output to be 0V when inactive, and at +12V when active. Note that any change in the polarity of an output does not take effect until you leave the Installer menu.

6.1.2 Latched

Used for the User Defined output type – see **page 37**

6.1.3 Pulsed

This option is available for some output types. Selecting Yes causes the output, when activated, to give a single pulse of a specified length after a specified delay. See *Delay* and *On Time* below. If *Pulsed* is set to No, the output changes state when the zone changes state.



Note: This option is not available for output types that already have built-in pulse behavior, including PIR Set Latch, Shock/Smoke Sensor Reset, Setting/Unset Complete, User-Defined and Courtesy Light.

6.1.4 Delay

This is available when *Pulsed* is set to Yes. The delay can take any value from 0 to 999 seconds. If set to 0, the output operates immediately. When set to any other value, the output waits for the specified number of seconds before becoming active.

6.1.5 On Time

Used for the User Defined output type - see **page 46** and when *Pulsed* is set to Yes. *On Time* can take any value from 1 to 999 seconds. The output is active for the specified number of seconds. (A value of 0 seconds is not allowed.)

6.1.6 Zones

This option is available for *Zone Follow* and *Zone Alarm* output types. Select the zones that apply.

6.2 Plug-By Outputs

The plug-by outputs are designed for use by a standalone communicator to send alarm information to an ARC. You can edit each output's settings in the same way as for wired outputs (see **page 43**). See **page 68** for a list of the default output types assigned to the plug-by outputs.



Note: To make the plug-by outputs operate, you must select an alarm response that includes communications (see from **page 50**).

See **page 54** for details of the Remote Reset input of the plug-by communicator port.

7. Setting Options Menu

The *Setting Options* menu contains all the options to program entry, exit and alarm response. You can configure different settings for the full-set level and each part-set B/C/D level.

7.1 Full Set and Part Set options

7.1.1 Name

Use this option to name the full set or part set.

- Part Set B/C/D names are displayed in the setting procedure (when selecting a part set to set), and while the system is counting down during a timed set.

7.1.2 Exit Mode

Timed Set

Use this setting to make the system set after a delay. Use *Exit Time* (see **page 50**) to specify the delay. The panel logs the start of timed exit.

Final Door Set

Use this setting to complete the setting of the system by closing a door fitted with a Final Exit zone detector. Once the door closes, the system sets after the *Settle Time* expires. Note that the exit time does not expire in this option. The panel logs the start of final door exit.



Note: To enable part setting, include a zone of type “*Final Exit*” as one of the part-set zones. Also select Final Exit in *Pt.set Final Exit* (see **page 51**).

Instant Set

The system sets immediately and without any setting tone. Keypads and loudspeakers (if used), give a confirmation tone when the system is set or unset.

Keypads and loudspeakers give the entry tone.

Silent Set

The system sets after the time programmed in the Entry/Exit Time menu but does not give any exit or setting tones over keypads or any loudspeaker.

Keypads and loudspeakers give the entry tone.

When the system unsets, keypads (but not loudspeakers) give a double-beep confirmation tone.

Lock Set

Use this setting if you are using a lock to set the system.

To use *Lock Set*, you must:

Configure a Lock Set zone (see **page 36**) that is activated by a suitable lock (located on the final exit door).

Configure a Final Exit zone (see **page 35**) connected to the final exit door.

Setting: Once the user has started the setting sequence, the exit tone sounds, which continues until the user closes the Final Exit door and operates the lock. When the *Settle*

Time (see **page 50**) expires, the panel sets the system and converts the Final Exit zone to a zone of type Normal Alarm.

Unsetting: When a user de-activates the Lock Set zone, the panel converts any zone originally programmed as Final Exit back to Final Exit (so that the entry time starts when the user opens the entry door) and starts a warning tone (distinct from the entry tone). If the user activates the Lock Set zone again without starting the Entry Timer, the panel changes all Final Exit zones back into Normal Alarm zones and stops the warning tone.

Exit Terminate

Setting: The user must start the setting sequence in the normal way, and then complete setting in one of the following ways once they have left the protected area:

- By activating an Exit Terminate zone (see **page 36**).

When the user starts the setting sequence, the exit tone is sounded and the exit time does not expire. Once the user completes the setting sequence, the system sets when the *Settle Time* (see **page 50**) expires.

The user can unset using any of the following methods:

- By presenting a proximity tag to an external proximity tag reader.
- By activating a Final Exit zone (to start an entry timer) and then entering an access code or presenting a proximity tag to a keypad.

7.1.3 Settle Time

This option is available only if *Exit Mode* is set to Final Door Set, Lock Set or Exit Terminate. This option allows you to define a time delay to allow detectors to settle before the system sets. During this period, the sounders stop and the panel ignores any alarms generated by the detectors.

Enter two digits to specify a time in seconds, from 01 to 30.

7.1.4 Exit Time

This option is available only if *Exit Mode* is set to Timed Set or Silent Set. The exit time can take any value between 10s and 120s.

7.1.5 Entry Time

The entry time can take any value between 10s and 120s. The entry time you select in this option applies to full set and all part sets.

7.1.6 Extended Entry Time

This defines the entry time for Final Exit zone types that have the *Extended Entry Time* attribute enabled (see **page 40**).

7.1.7 Alarm Response



Note: This is available only for a part set. The response for a full set is always Siren + Comms.

Internal: Keypads and loudspeakers.

Siren: External sirens, keypads and loudspeakers.

Siren + Comms: Communication, external sirens, keypads and loudspeakers.

Note that any Siren Delay (see **page 51**) applies to Siren+Comms, but not Internal or Siren alarm responses.

7.1.8 Siren Delay

You can use this option to delay the sounding of a confirmed alarm.

If *System Options – Confirmation – Sounder On* is set to Confirm (see **page 56**), *Siren Delay* delays the sound at keypads and loudspeakers for the specified period after the confirmed alarm.

If *System Options – Confirmation – Siren On* is set to Confirm (see **page 57**), *Siren Delay* delays the sound at the external siren for the specified period after the confirmed alarm.

The system then operates the siren and sounders for the programmed *Siren Time*. See also "Sounder and siren operation" on **page 56**.



Note: *Siren Delay* has no effect if *Alarm Response* (**page 50**) is not set to Siren + Comms, or if a line fault is detected.

7.1.9 Siren Time

This option changes the length of time that the system operates the siren and loudspeakers during an alarm.

7.1.10 Pt.set Final Exit



Note: This is available only for a part set. This option controls how the system uses Final Exit zones when the system is part set.

Final Exit: Any zones of type Final Exit with Part Set B, C or D attributes continue to act as Final Exit zones during part setting.

Normal Alarm: Any zones of type Final Exit with the Part Set B, C or D attributes act as Normal Alarm zones during part setting.

7.1.11 Pt.set Entry Route



Note: This is available only for a part set. This option controls how the system treats Entry Route zones when the system is part set.

Entry Route: Any zones of type Entry Route with the Part Set B, C or D attributes continue to act as Entry Routes zones during part setting.

Final Exit: Any zones of type Entry Route zones with the Part Set B, C or D attributes act as Final Exit zones during part setting.

7.1.12 Strobe on Set

When set to On, this option causes the panel to activate any output of type Strobe, and the strobe on any sirens. The outputs/strobes are active for ten seconds after the system sets.

7.1.13 Strobe on Unset

When set to On, this option causes the panel to activate any output of type Strobe, and the strobe on any sirens. The outputs/strobes are active for ten seconds after the system unsets.

8. System Options Menu

This menu contains options that affect the working of the alarm system as a whole.

8.1 User Options

8.1.1 User Access

Use this option to give users access to various system facilities.

HUA Keys Active

This option allows users to start an HUA alarm from keypads by pressing both Hold Up Alarm keys at the same time.

Select Yes to make the HUA keys functional. Select No to disable the keys.

HUAs have an alarm sound that is distinct from other alarm types.

Quick Set

This option controls the operation of the A, B, C or D keys.

Yes – Allows users to set the alarm system by pressing A, B, C or D without entering an access code.

No – Users must enter an access code before pressing the A, B, C or D key.

Quick Omit

Yes – Allows users to omit a zone that is active while the user is setting the system. The zone must have the *Omittable* attribute (see **page 39**).

No – Users must use the *Omit* menu to omit a zone that is active before they can set the system.

User Code Reqd

Yes – After entering the installer code, the system prompts for a user code before allowing access to the Installer menu.

No – You can access the Installer menu simply by keying in the installer code.

Duress Enable

Selecting Yes allows master users to assign the Duress user type to users.

A duress code can set and unset the system in the same way as a normal user. However, each time the code is used, the panel triggers any output configured as type Duress, and (if applicable) communicates Duress and Set/Unset events.

Terminated Set

(This option is currently not used)

Tamper Omit

If a user omits a zone, it may be necessary also to omit the tamper belonging to that zone.

Yes – The tamper is omitted when a user omits a zone.

No – The user cannot omit a tamper on a zone.

Silence Alerts

This option controls the length of time that keypads and loudspeakers give the alert tone (a brief 'beep' every second) when there is an alert.

Note:

Some alerts are associated with a specific part of the system (such as an alert generated by a detector of type Technical Alarm that is in a part set). Other alerts are associated with the whole system (such as an alert generated by a low backup battery). **An alert is not sounded if all part sets the alert is associated with are set.**



- Keypad navigation keys glow red when there is an alert sounded at the keypad (or if there would have been an alert sounded if had not been for the selection of No Alert Tones).
-

User Code – The alert tone is sounded until a user keys in an access code to acknowledge the alert.

30/60/120 minutes – The alert tone is sounded for the selected time. The alert tone stops if a user enters a valid access code.

No Alert Tones – There is no alert tone.

8.1.2 User Reset

This option determines under what circumstances a user or the installer can reset the system after an alarm.

Zone Alarms

This appears when *System Options – Confirmation – Confirmation Mode* is set to *Basic (page 55)*.

Yes – The user can reset the system after an alarm triggered by a zone's alarm circuit.

No – The installer must reset the system after an alarm triggered by a zone's alarm circuit. See also "Remote Reset" on *page 54*.



Note: Users can reset the system if they unset the system during an alarm, but before the Alarm Abort period has expired (see *page 57*).

Zone Tamperers

Yes – The user can reset the system after an alarm caused by a zone's tamper circuits being triggered.

No – The installer must reset the system after an alarm caused by a zone's tamper circuits being triggered. The alarm abort period does not apply.

System Tamperers

Yes – The user can reset the system after an alarm caused by a system tamper.

No – The installer must reset the system after a system tamper alarm. The alarm abort period does not apply.

A system tamper can be caused by, for example:

Operating a lid/back tamper switch on a device.

Applying a voltage higher than approximately 4V to the TR input from an external sounder.

If a tamper occurs when the system is set, the panel classifies this as an unconfirmed or confirmed alarm. The reset follows the alarm reset option NOT the tamper.

Remote Reset (RedCare Reset)

If you select NO for System Tamper, then when a tamper occurs, the panel enables the Remote Reset input pin on the plug-by connector. After an alarm, the user may silence the sounders, but to reset the system, the user must first contact the ARC. The ARC (after verifying the user's identity) can cause the Remote Reset input to go to +12V by way of the plug-by communicator. On receiving the signal, the panel allows the user to reset the system.

If the ARC causes Remote Reset to go to +12V and it reverts back to 0V before the user resets the system, the panel remembers that the signal has been sent and still allows the user to reset the system using their normal access code.

Code Tamper

Yes – The user can reset the system after an alarm caused by a code lockout (see **page 31**).

No – The installer must reset the system after an alarm caused by a code lockout.

8.1.3 Keypad Text

This allows you to specify the text that appears on the first line of the display in the standby screen (such as your company name). See **page 32** for editing text.

8.2 Restore Defaults

8.2.1 Staged Defaults

This menu option allows you to default parts of the panel's configuration without affecting the whole system. You can choose to default the following:

Users

Defaults (removes) all user access codes, including for the master user. You are prompted to enter a new code for the master user.

You can also choose whether to use 4-digit or 6-digit codes.

If you change from 4-digit to 6-digit codes, two additional zeros are added to the end of the existing installer code. If you change from 6-digit to 4-digit codes, the final two digits are removed from the end of the existing installer code.

User 001

Defaults (removes) the master user settings, including the user access code, proximity reader tag, etc. You are prompted to enter a new code for the master user.

Zones

Defaults all information relating to zones (e.g. zone types and attributes).

Outputs

Defaults all output configuration.

Setting Information

Defaults all setting options.

System Options

Defaults all options in the *System Options* menu.

Communications

Defaults all configuration for communications.

8.2.2 Factory Defaults

This removes all configuration from a panel, including all names and stored texts, but not the log. To use the option:

1. Select *Factory Defaults* and confirm the operation when prompted.
2. Answer the configuration prompts. These are similar to those displayed when you first powered-up the panel (see **page 28**).
3. To delete all users, remove and reconnect all power to the panel immediately after using *Factory Defaults* (before you exit the Installer menu). You will need to repeat step 2 when you re-apply power.
4. Exit the Installer menu. The system scans the bus and finds the devices (see **page 41**).

8.3 Installer Options

8.3.1 Installer Name

The installer name is recorded against installer events in the log. When viewing the log, you can toggle between showing the user (installer) number and name using left/right keys.

8.3.2 Installer Code

This code allows you to enter the Installer menu (which also carried out an Installer reset). The Installer code does not allow you to set or unset the system.

8.3.3 Installer Timeout

The installer is automatically logged out of the Installer menu if there is no activity after the specified period.

8.3.4 Service Date

This option allows you to specify the date when the next maintenance service of the system is due. If *Service Banner* is enabled, the message "SERVICE REQUIRED" is displayed at keypads up to four hours after the start of the *Service Date*.

8.3.5 Service Banner

Enabling this option allows the "SERVICE REQUIRED" message to be displayed at keypads on the date specified by *Service Date*.

8.4 Confirmation

The options in the *Confirmation* menu depend on the *Confirmation Mode* you select.

8.4.1 Confirmation Mode



The confirmation mode setting is only available when the country preferences are set to "UK" (see **page 28**). If another country is selected, the basic confirmation mode is always used.

The Confirmation Mode setting determines what events the alarm panel requires to generate a "confirmed alarm":

- Basic - A confirmed alarm is generated when a second detector group alarm is activated while the system is in an alarm state.
-

8.4.2 Entry Alarm Delay

Use this option to determine what the system will do if a user strays from an Entry Route zone during entry. (This option is available to provide compliance with EN 50131-1.)

Disabled

Makes the system give an alarm immediately a user triggers a zone other than the entry route zone during entry.

Enabled

If the user triggers a zone other than the entry route zone during entry, the system waits 30 seconds before raising a full alarm. The system also gives an internal alarm during the 30-second wait.

If the user enters an access code before the end of the 30-second period, the user can reset the system.

8.4.3 Sounder On

Unconfirm

When the system is set, keypads and loudspeakers give the alarm sound when an unconfirmed alarm occurs.

Confirm

When the system is set, keypads and loudspeakers do not give the alarm sound until a confirmed alarm occurs.



Note: The panel will not allow you to select *Sounder on – Confirm* at the same time as *Siren on – Unconfirm*.

8.4.4 Sounder and siren operation

The behaviour of sounder and siren operation is described in the following table:

Table 6: Sounder and Siren Operation

Settings		Effect
Sounder On	Siren On	
Unconfirm	Unconfirm	Unconfirmed alarm: keypads, loudspeakers and sirens sound immediately and run for the <i>Siren Time</i> (see page 51). Confirmed alarm: the panel restarts the alarm sound at all devices, which runs for the full <i>Siren Time</i> , even if that had expired earlier.
Unconfirm	Confirm	Unconfirmed alarm: keypads and loudspeakers sound immediately and run for the <i>Siren Time</i> . Confirmed alarm: the panel waits for any <i>Siren Delay</i> (see page 51), and then starts the alarm sound at sirens and restarts the sound at all keypads and loudspeakers. This runs for the <i>Siren Time</i> .
Confirm	Confirm	Unconfirmed alarm: No alarm sounds. Confirmed alarm: the panel waits for any <i>Siren Delay</i> , and then starts the alarm sound at all keypads loudspeakers and sirens. This runs for the <i>Siren Time</i> .

8.4.5 Siren On

Unconfirm

The panel operates the siren for all alarms (and overrides any *Siren Delay*).

Confirm

When the system is set, the panel does not activate the siren(s) until a confirmed alarm occurs.

The behaviour of sounders and sirens is described in Table 6.

8.4.6 HUA Response

This option controls the audible alarm associated with Hold-Up Alarms (HUAs).

Note:

- All HUAs are disabled when an installer is using the Installer menu.
 - *HUA Keys Active* (see **page 52**) must be enabled to generate HUA alarms from keypads.
-

Audible

The panel starts HUA alarm tones from keypads and loudspeakers, operates HUA outputs, and activates any sirens. The sirens follow the *Siren Time* (see **page 51**).

Silent

The panel keeps the HUA alarm silent: there are no alarm tones, and any sirens or HUA outputs remain inactive.

Displayed

All keypad displays show an HUA alert message immediately (a user does not have to enter an access code to see the message). If more than one HUA is active, the display scrolls through the alert messages at approximately one-second intervals.

The panel also starts HUA alarm from keypads and loudspeakers, operates HUA outputs, and activates any sirens.

8.4.7 Abort Time

Use this option to change Alarm Abort Delay period. The timer can take any value in the range 0 to 120 seconds.

The panel starts the Alarm Abort Delay timer whenever it starts an alarm. If a user silences an alarm within the Abort Delay period, the alarm will not require an installer or remote reset.

If an alarm occurs and a user unsets the system **within** the Alarm Abort Delay period, the panel activates any output of type Alarm Abort (see **page 44**) and starts any Alarm Abort Fast Format communications programmed.

8.4.8 Auto Rearm

This option is available when *Confirmation Mode* is set to Basic.

Use this option to specify the number of times that the system will re-arm when the siren time expires.

Select NEVER to make the system never re-arm (the system will go into alarm once only). Select one of the other options to make the system re-arm once, twice, three, four or five times, or always. The system re-arms all closed zones, but not detectors that are still sending alarm signals. (Note that this setting is required in order to comply with EN50131.)

If the system has rearmed, then when a user enters the system through the Final Exit door, the panel will give an audible internal alarm in place of the normal entry tone.

8.5 Hardware

8.5.1 Panel Name

You can use this option to give the panel a name. The name is displayed only when using the *About, Panel* option (see **page 63**).

8.5.2 Wired Zone Type

The panel prompts you to select the zone wiring type when you power up a panel for the first time, or when you restore the panel to factory defaults (see **page 33**).

Panel Zones

This option lets you change the zone wiring type for the panel.

Please refer to **page 18** for details of the wiring types.

8.5.3 Panel Loudspeaker

Volume

Use this option to change the volume of chime, entry, exit, alert, confirmation and other tones from a loudspeaker connected to the panel. This volume control does NOT change the volume of alarm tones. You can separately adjust the volume of each type of tone.

8.5.4 Mains Fail Delay

This option allows you to specify the length of time (0 to 60 minutes) that the panel must wait after detecting a mains supply failure before reporting Mains Fail to the ARC.

When the mains supply fails, the panel lights the red alert LEDs around the navigation key within a few seconds of the failure, activates any output programmed as General Fault and logs the Mains Fail event (in the mandatory log).



Note: Keypads do not show alerts while the system is set.

The panel does not report mains interruptions of less than 9 seconds to the ARC. If mains is restored within that time, the panel switches off the red LEDs, deactivates the General Fault outputs and logs Mains Restore.

If a mains interruption lasts for longer than 9 seconds, the subsequent additional actions depend on the value in *Mains Fail Delay*:

- If *Mains Fail Delay* is set to 0, the panel starts an alert tone ten seconds after the mains fail at the keypads and communicates a mains fail signal to the ARC (provided a communicator is fitted). At the same time, the panel activates any outputs (including plug-by outputs) of type AC Fail.
- If *Mains Fail Delay* is set to 1-60 minutes, the panel starts the mains fail delay time ten seconds after the mains fail.

If mains power is restored before the end of the mains fail delay, the panel switches off the red LEDs, deactivates any General Fault outputs and logs the mains restore. The panel does not send any report to the ARC.

If the mains fail condition is still present at the end of the mains fail delay, the panel starts an alert tone at the keypads and communicates a mains fail signal to the ARC (provided a communicator is fitted). At the same time, the panel activates any outputs of type AC Fail. A user can silence the alert by pressing the navigation key and entering a valid access code. The keypad displays details of the alert. The General Fault and AC Fault outputs remain active.

Once mains power is restored, the panel deactivates any AC Fail outputs and logs the

mains restore. A user can reset the alert and deactivate any General Fault outputs by pressing the navigation and entering the access code again.

8.5.5 Linked Zone Time

This defines the time within which two zones that have the *Linked Zone* attribute must activate to trigger an alarm. See **page 40**. This option is available only if there is a zone that has the *Linked Zone* attribute.

8.5.6 Panel Tamper Return

This option allows you to select either CC or FSL for the Tamper Return (TR) terminal on the panel's PCB. By default, the terminal is CC. If you select FSL, you should insert a 2k2 resistor in series with the tamper return wire from the sounder.

8.5.7 Reset Codes Pins

This option allows you to enable or disable the Reset Codes link on the **Terxon SX** PCB. If you disable *Reset Codes Pins*, the Reset Codes link cannot be used to reset the installer and master user codes.



Warning: The panel will need to be replaced if you disable *Reset Codes Pins* and then forget the installer code!

8.6 Date and Time

8.6.1 Set Time & Date

This option lets you set the panel's internal clock to the correct time and date. You will have to re-program the date and time if the panel loses power for an extended time and the battery is exhausted.



Note: The internal clock adjusts itself for daylight saving in Spring and Autumn.

8.7 Updates

8.7.1 Language

This option allows you to select the language used for the menus and options.

9. Communications Menu

9.1 Line Fail Response

Use this option to specify how the system should respond when the panel detects a line-fail fault from the plug-by communicator. The panel monitors for line faults by using the LF input on the plug-by port. The communicator should apply 0V to the LF input if there is no fault, and 12Vdc if a fault is present.

Audible

ABUS Security-Center GmbH & Co. KG recommends audible response for line fault. If the system is unset, the system logs the event. Keypads and loudspeakers produce a short audible tone after *Line Fail Delay* when the line response changes from OK to fail. Entering a valid access code silences the tone and the display indicates a line fault. The system can be set again with the line fault present.

If the system is set, the panel logs the event but does not give any tone or display. The panel cancels any programmed siren delay if the line is out of order when an alarm occurs.

Silent

If the system is unset, the keypad display indicates a line fault, the LEDs around the navigation key glow red, and the panel logs the event. The system may be set again with the line fault present.

If the system is set then the panel does not give any indication or tone but does log the event. The panel cancels any programmed siren delay if the line is out of order when an alarm occurs.

Disabled

The panel does not monitor the line.

9.2 Line Fail Delay

Use this option to specify the length of time the panel waits after detecting a line-fail fault on a communications path from the plug-by port before it generates an alert, activates communications and activates line-fail outputs.



Note: The panel may take a few seconds to recognise a line fail. The actual delay between line fail and the resulting alert will be slightly longer than the value you specify.

10. Test Menu

10.1 Sirens and Sounders

This option allows you to test the warning devices.

Press ► to turn the device on. Press ► to turn the device off. The display shows On when the device should be operating and Off when the device should be silent.

10.1.1 Wired Sirens

This option allows you to operate all outputs of type Siren and Strobe.

10.1.2 Loudspeakers

You can use this option to test the sound from loudspeakers and keypads connected to the system.

10.1.3 Wired Keypads

Use this option to test the sounders on the wired keypads.

10.2 Wired Keypad

Use this menu option to test the keypad you are currently using.

When you start the test, the bottom line of the display shows the keypad name and bus address. All four ABCD LEDs should glow. The LEDs around the navigation should all glow red. Every time you press a navigation key, the LEDs change colour. Press all the keys one by one. The display should show you the key you pressed.

To test the HUA keys, press them both at the same time.



Note: An HUA alarm is not generated.

Press * to leave the test.

10.3 Walk Test

The walk test menu provides several different ways of organising a walk test.

When you select a *Walk Test* option (apart from *Chime*), the display shows the first item in a list of the detectors available for test. Walk around the area you wish to test and trigger each detector. If *Chime* is set to "On", every time you trigger a detector, keypads and loudspeakers give confirmation tone. The bottom-right corner of the display shows an "A" if you trigger the Alarm input and a "T" if you trigger the Tamper.

The top of the display shows the number of zones left to test. The panel decreases the number of zones every time you trigger an individual Alarm input.

The bottom line of the display shows the zone name. To see the zone number press ◀ or ▶.

Press ✓ to end the test.



Note: You can use *Walk Test* to test wired HUA switches. While you are using the Installer menu, activating a wired HUA switch will not cause an HUA alarm.

If you wish to see which zones have not yet been tested, press the menu key. The bottom line of the display will show the first in a list of those zones remaining to test. As you test each zone, it will disappear from the display. Press the menu key again to return to the full list of zones.

If at least one zone is tested successfully, the log records a "Walk Test Complete" event, which shows the number of zones tested against the total number of zones system wide.

Chime

Use this option to select Once, On or Off. Once causes keypads and loudspeakers to chime only once for each zone that is triggered during the walk test. On generates a chime every time a zone is triggered. Off switches off chiming.

System

This option allows you to walk round the entire system and test all the zones.

Zones

This option lets you select one or more individual zones, and test only those zones and no others.

Use ▲ or ▼ to scroll up and down the list of zones. Press ◀ or ▶ to display "Yes" at the end of the bottom line to mark the zone as one you want to test.

10.4 Zone Resistances

When you select *Zone Resistance*, the display shows the first of the available wired detectors. Press ▲ or ▼ to see the other detectors in the list.

The bottom line of the display shows the zone name. To see the zone number press ◀ or ▶.

The end of the bottom line shows the resistance of the zone. For 4-wire CC zones, the display

alternates between the Alarm resistance (“A”) and the Tamper resistance (“T”).
“O/C” means Open Circuit.
“0k00” means zero resistance or closed circuit.

10.5 Zone Status

10.5.1 Wired Zones

You can use this option to display the current status of each zone. Select the zone you want to check. The zone status (OK, alarm or tamper) is shown in the bottom-right corner of the display.

10.6 Outputs

Select the *Wired Outputs* or *Plug-by Outputs*, then ▲ or ▼ to select the output you wish to test, followed by ► to activate the output. Press ► again to deactivate the output. Press ✓ to finish the test.



Note: If you have programmed a plug-by output as an ATS Test output, then when you test that output, the panel will pulse the output active for the correct length of time to start a call in any connected dual-signalling communicator. You do not need to deactivate the output (This test is compliant with Form 175).

When you complete testing the outputs, check that they are in the state you wish to leave them in.

10.7 Locate Bus Device

This option allows you to list all the keypads connected to the bus, and to find out where they are located by activating their internal sounders.

Select the keypad to locate, then press > to turn on the keypad's sounder (press < or > to turn it off again). You can also silence the sound by opening the case of the device (activating the tamper switch).

11. View Log Menu

The panel keeps a log of events (for example, alarms and times of setting/unsetting). An installer or master user can read the log when the system is completely unset. Note that no other user type can read the log.

11.1 Log Events

To comply with EN50131-1:2006 for grade 2 systems, the log is divided internally into two portions: mandatory events and non-mandatory events. The installer can view either of these lists separately or see all log events in one list. Additionally, the EN 50136 Log stores SPT events to comply with this standard. Please refer to Appendix C on **page Fehler! Textmarke nicht definiert.** for a description of each log message.

Mandatory events are those that are recorded to comply with EN 50131. Non-mandatory events are other events not needed to comply with EN 50131.

The entire log stores its records for at least 10 years without power.

The first three events of the same type (e.g. tamper alarms) that occur in the same unset or set period are logged in the mandatory log. Any further events of that type are logged in the non-mandatory log.

When you are viewing a log event, pressing **➤** may display additional information.

12. About Menu

The *About* menu offers information about the panel and keypads.

12.1 Panel

This option shows:

- The panel model (**Terxon SX**).
- The panel's name, if defined in *System Options, Hardware, Panel Name* (**page Fehler! Textmarke nicht definiert.**).
- The panel's software (firmware) version number.

Press **▲** or **▼** to see each item of information.

12.2 Bus

This shows the total number of devices on the bus. Since the bus can have only keypads, this is the same as the number of keypads.

12.3 Keypads

If you select a keypad by scrolling up or down the list and then press **✓**, the display shows the version of firmware running on the keypad.

If you find that the *Keypad* option does not display an individual keypad's software version, you can check the keypad by pressing the "A" and "✓" keys at the same time.

Appendix A: Log Messages

Introduction

This Appendix gives short explanations of the messages that may appear in the panel's log. Please note that many of the messages refer to specific devices by the bus and device number. Therefore, it is not possible to show in this list the exact log message that you may be seeing on any given installation.

The list itself is sorted alphabetically by the text of the message. In the column "Event Log Text" you will see "==" or sometimes "#". These characters stand in for the zone, user or device number that the panel has recorded for the event being logged. In the "Description" column this is shown as "n".

Log messages

Event Log Text (Scantronic)	Description
"== Ex Keys Rstr"	Excess keys (code attempts) tamper restore
"24hr Z=== Alarm"	24 hour alarm on zone n
"24hr Z=== Restore"	24 hour alarm on zone n restored
"A/C Fail"	AC mains failed and was communicated
"A/C Restore"	AC mains was restored
"Alarm Abort U--"	Alarm aborted by user n
"Alarm Conf ==ER"	Alarm has been confirmed by a missing external prox reader on keypad n
"Alarm Conf Bell #"	Confirmed alarm with tamper on Bell n
"Alarm Conf. =="	Confirmed alarm with tamper on keypad n
"Alarm Confirm Z=="	Confirmed alarm on zone
"Alarm Confirm"	Confirmed alarm
"Alm Conf Bus# Tamp"	An alarm was confirmed by a bus tamper
"Alm Conf Panel Lid"	Confirmed alarm with tamper on panel lid
"ATE L.F. All"	All lines to alarm transmission equipment failed
"ATE L.F. Restore"	Line to alarm transmission equipment restored
"ATE L.F. Single"	Alarm transmission equipment has a single line fault
"Auxiliary 12V Fail"	Panel 12V Aux DC not working
"Auxiliary 12V Rstr"	Panel 12V Aux DC restored

"Bad checksum"	There is an error on loading the panel with its software
"Batt = Fault Rst"	Panel battery restored
"Batt = Low/Missing"	Panel battery missing or low
"Bell # 12V Fail"	12V DC supply to bell n failed
"Bell # 12V Restore"	12V DC supply to bell n restored
"Bell # Tamper Rstr"	External wired siren n tamper restored
"Bell # Tamper"	External wired siren n tamper
"Burg Z== Alarm"	Burglar alarm on zone n
"Burg Z== Restore"	Burglar alarm on zone n restored
"Burg Z=== Alarm"	Burglar on First linked zone n in Beam Group
"Burg Z=== Restore"	Burglar on First linkedzone n in Beam Group restored
"Bus # 12V Fail"	12V DC supply to Bus n failed
"Bus # 12V Restore"	12V DC supply to Bus n restored
"Bus # Tamper Rstr"	Bus n has been restored
"Bus # Tamper"	Bus n has been tampered (for example wires cut or disconnected)
"Codes Defaulted"	All access codes were returned to factory defaults
"Configuration Fail"	The current configuration is not compatible with the software revision level of the panel
"Defaults Loaded"	The panel was returned to factory defaults
"Disabled =="	Keypad n disabled
"Dup. == Restore"	Duplicate keypad restored
"Duplicate =="	Duplicate keypad n detected
"Enabled =="	Keypad n enabled
"Entry Started Z=="	Entry started by zone n

"Entry Stray Z=="	Stray on entry alarm at zone n
"Ext WD Fault Z==="	A warning device has reported a fault through zone n
"Ext WD Restr Z==="	The fault reported through zone n by a warning device has been restored
"Fire Reset"	User reset system after fire alarm
"Fire Z== Alarm"	Fire alarm on zone n
"Fire Z== Restore"	Fire alarm on zone n restored
"HU == Alarm"	Hold Up alarm at keypad n
"HUA Cnf RF HD U---"	Hold Up Alarm confirmed by radio HUD belonging to user
"HUA Cnf RF MD U---"	Hold Up Alarm confirmed by radio Man Down transmitter belonging to user n
"HUA Conf Bus# Tamp"	Hold Up Alarm by a bus tamper
"HUA Conf HD =="	Hold Up Alarm confirmed on keypad n HUA keys
"HUA Conf Panel Lid"	Hold Up Alarm confirmed by panel lid tamper
"HUA Conf. ==ER"	Hold Up Alarm has been confirmed by a missing external prox reader on keypad n
"HUA Confirm =="	Hold Up Alarm confirmed on keypad HUA keys
"HUA Confirm Bell #"	Hold Up Alarm confirmed by panel Tamper Return (TR)
"HUA Confirm WAM==="	Hold Up Alarm confirmed by tamper on WAM n
"HUA Confirm Z==="	Hold Up Alarm confirmed on wired zone n
"HUA Confirm"	Hold Up Alarm confirmed on device
"HUA Restore P#"	Hold Up alarm at keypad restored for partition n
"HUA Restore"	Hold Up Alarm has been restored
"HUA Z== Alarm"	Hold Up alarm on zone n
"HUA Z== Restore"	Hold Up alarm restored on zone n
"HUD Fault Rst Z==="	A hold up device fault reported on zone n was restored
"HUD Fault Z==="	A hold up device reported a fault on zone n
"Inv Login Attpt KP"	Invalid access code entered on keypad
"Inv Login Attpt PX"	Invalid prox tag presented to keypad
"Inv Login Attpt RM"	Invalid remote access attempt
"K== Excess Keys"	Excess keys tamper at keypad n
"Key Sw Ptn # PtSet"	Partition part set from keyswitch
"Key Sw Ptn # Set"	Partition n set from keyswitch
"Key Sw Ptn # Unset"	Partition n unset from keyswitch
"Key Sw System PtSet"	System part set from keyswitch
"Key Sw System Set"	System set from keyswitch
"Key Sw System Unset"	System unset from keyswitch
"Keypad == added"	New keypad n added to system
"Keypad == found"	New keypad n found on bus
"Kpd == deleted"	Keypad deleted from system

"Lockset Z=== Set"	Zone n with type "lock set" was closed (If Inverted attribute is set to "normal")
"Lockset Z=== Unset"	Zone n with type "lock set" was opened (If Inverted attribute is set to "normal")
"Login Keypad"	Valid access code entered on keypad
"Login Prox"	Valid prox tag presented to keypad
"Low Batt = Restore"	Panel battery no longer low
"Low Battery ="	Panel battery low
"Missing == Rstr"	Missing keypd n restored to bus
"Missing =="	Keypad n missing from bus
"Missing ==ER Rs"	An External prox Reader connected to keypad n has been re-connected
"Missing ==ER"	An External prox Reader connected to keypad n has gone missing (possibly disconnected from the keypad)
"Occupancy Set P#"	Set but with Occupancy zone(s) open
"Panel A/C Fail"	AC power failure at panel
"Panel A/C Restore"	AC power restored at panel
"Panel lid open"	Panel lid open
"Remote Reset"	User reset system remotely
"Set Fail Z=="	Setting failed at zone
"Soak Fail Z== Alm"	Zone n on soak test failed
"Soak Fail Z== Tmp"	Zone n on soak test tampered
"Software Changed"	New panel software has been installed
"System Error"	Panel has fault in main processor
"System Rearmed"	User rearmed the system
"System Startup"	The system restarted after a power fail (mains and battery)
"Tamper == Rstr"	Tamper at keypad n restored
"Tamper =="	Tamper at keypad n
"Tamper ==ER Rst"	Tamper at external reader n restored
"Tamper ==ER"	Tamper at external reader n
"Tamper Z== Restore"	Zone n tamper restored
"Tamper Z=="	Zone n tamper
"Tech Z== Alarm"	Technical alarm on zone n
"Tech Z== Restore"	Technical alarm on zone n restored
"U-- Change U=="	User n changed their password
"U-- Config Change"	User n changed programming configuration
"U-- Delete U=="	User n deleted another User n from system
"U--- Duress Restr"	User n keyed in a Duress code to unset the system (part setting system)
"U--- Duress"	User n keyed in a Duress code to set the system (part setting system)
"U--- O/P === Off"	User defined output switched on by user n

"Lid Tamper Restore"	Panel lid closed
"U--- O/P === On"	User defined output switched off by user n
"U-- Off-Site"	User n left Installer mode
"U-- On-Site"	User n entered Installer mode
"U--- PtSet # Exit"	User n started the exit process for part set on partition n
"U-- Set Override"	User n overrode set fail
"U--- System Exit"	User n started the exit process for full set on a part setting system
"U-- System PtSet #"	User n part set system
"U-- System Reset"	User n reset system
"U-- System Set"	User n set system
"U-- System Unset"	User n unset system
"U-- Time/Date"	User n changed time and/or date
"U-- Z== Omit"	User n omitted zone
"U--- Z=== HUA Omit"	User n omitted Hold Up Alarm zone n

"U--- Z=== Omit Rst"	User n included Hold Up Alarm zone n
"U--- Z=== Omit Rst"	User n included (restored) zone n
"Walk Test Complete"	Detector walk test completed
"Z== Closed"	Zone n quiescent
"Z== Open"	Zone n activated
"Z== Smoke Flt Rst"	Smoke detector at zone n has been restored
"Z== Smoke Flt"	Smoke detector at zone n has fault
"Z== Smoke PSU Flt"	Smoke detector at zone n has power supply fault
"Z== Smoke PSU Rst"	Smoke detector at zone n power supply fault restored

Appendix B: Installer Menu Map

Important: The defaults listed below enable the panel to comply with EN50131 requirements. If you change those settings, the installation may no longer comply. If the panel does not comply with EN50131, you must remove any labelling that indicates compliance. Some options are available only if the relevant hardware is fitted, or for certain models of panel.

MENU Option		Factory Default	Notes	
1 Detectors/Devices				
Detectors	Program Zones	Zone 0...		
		Name	"Zone n"	
		Type	Not used	
		Attributes	All "off"	Available when zone is given a type other than "Not Used". Some attributes are only available on particular zone types. Double Knock does not comply with EN51031.
Address Bus Device				
Wired Keypads	Address Bus Device			
	Edit Keypad	Keypad Kn-51...		
		Name	"Keypad Kn-nn".	
		Key A	Name: "Key A" Action: Full Set	
		Key B	Name: "Key B" Action: Part Set B	
		Key C	Name: "Key C" Action: Part Set C	
		Key D	Name: "Key D" Action: Part Set D	
		Loudspeaker Volume		Available only when a suitable keypad is fitted.
		Buzzer Volume		
		Backlight		
		Internal Prox	Enabled	
	External Prox	Disabled		
	Delete Keypad			
	Enable Keypad		Yes (all keypads enabled)	
Replace Keypad				
Replace Keypad				
2 Outputs				
Wired outputs	Panel	EDIT <i>output</i>		
		Name		
		Type	For outputs 1 and 3, the default "Type" is "Siren". For output 2, the default "Type" is "Strobe".	
		Polarity	Normal	
		Latched	No	For User-Defined output type.
		Pulsed	No	Not available for dedicated siren and strobe outputs.
		Delay	0 seconds	
		On Time	1 second	Available when Pulsed set to "Yes".
Zones	None	Available only for Zone Follow and Zone Alarm output types.		

Plug-by outputs	EDIT PLUG-BY O/P1...	Name		
		Type	O/P1: Fire Alarm O/P2: Hold Up Alarm O/P3: Burglar Alarm O/P4: Open / Close O/P5: Zone Omit (System) O/P6: Tamper O/P7: Confirmed Alarm O/P8: General Fault	
		Polarity	Normal	
		Latched	No	For User-Defined output type.
		Pulsed	No	Not available for dedicated siren and strobe outputs.
		Delay	0 seconds	Available when Pulsed set to "Yes".
		On Time	1 second	
		Zones	None	Available only for Zone Follow and Zone Alarm output types.

3 Setting options

Full Set	Name	"Full Set"	
	Exit Mode	Timed Set	
	Settle Time	15 seconds	Available only if Exit Mode is "Final Door Set".
	Confirm Set	On	Available only if Exit Mode is "Silent Set".
	Exit Time	40 seconds	Available only if Exit Mode is "Timed Set" or "Silent Set".
	Entry Time	40 seconds	
	Extended Entry Time	40 seconds	
	Siren Delay	0	
	Siren Time	15 minutes	
	Strobe on Set	Off	
Strobe on Unset	Off		

Part Set B/C/D (available only if a zone has a Part Set attribute)	Name	"Part Set B/C/D"	
	Exit Mode	Instant Set	
	Settle Time	15 seconds	Available only if Exit Mode is "Final Door Set".
	Confirm Set	On	Available only if Exit Mode is "Silent Set".
	Exit Time	40 seconds	Available only if Exit Mode is "Timed Set" or "Silent Set".
	Entry Time	40 seconds	
	Extended Entry Time	40 seconds	
	Alarm Response	Siren	
	Siren Delay	0	
	Siren Time	15 minutes	
	Pt.set Final Exit	Final exit	
	Pt.set Entry Route	Entry Route	
	Strobe on Set	Off	
	Strobe on Unset	Off	

4 System Options

User Options	User Access	HUA keys active	No	
		Quick set	No	
		Quick omit	No	
		User code reqd	Yes	
		Duress Enable	No	
		Terminated Set	Yes	Used for KEY-EP.
		Tamper Omit	No	
		Silence Alerts	User Code	

	User Reset	Zone alarms	Yes	Available only if Confirmation Mode is "Basic".
		Zone tampers	Yes	
		System tampers	Yes	
		Code tampers	Yes	
	Keypad Text		Model name	
Restore Defaults	Staged defaults	Users		
		User 01		
		Zones		
		Outputs		
		Setting Info		
		System Options		
	Communications			
	Factory defaults			
Installer Options	Installer Name		"Installer"	
	Installer Code		Installer configured	
	Installer Timeout		60 minutes	
	Service Date		01/01/1900	
	Service Banner		Disabled	
Confirmation	Confirmation Mode	DD243		These options are available only when the country version is the UK. For all other countries, Basic is used.
		BS8243	Default for UK systems	
		Basic		
	Confirmation Time		30 minutes	Available for BS8243 or DD243.
	Entry Alarm Delay		Yes	
	After Entry		1 zones	Available for BS8243 or DD243. Default changes to 2 zones when Confirmation Mode = DD243.
	Entry Keypad Lock		Off	Available for BS8243 or DD243.
	Sounder on		Unconfirmed	
	Siren on		Unconfirmed	
	Unconfirmed reset		User	Available for BS8243 or DD243.
	Confirmed reset		Installer	Available for BS8243 or DD243.
	HUA Response		Audible	
	HUA Confirm Time		8 hours	Available for BS8243 only.
	Tamp as Tamp-Only		Enabled	Available for BS8243 only.
	Abort Time		120 seconds	
	Auto Rearm		Never	Available only when Confirmation Mode is "Basic".
Hardware	Panel Name			
	Wired Zone Type	Panel Zones	2 Wire FSL 2k2/4k7	
	Panel Loudspeaker	Volume	4	
	Mains Fail Delay		0 minutes	
	Linked Zone Time		10 seconds	
	Panel Tamper Return		CC	
	Reset Codes Pins		Enabled	
Date and Time	Set Date & Time			
Updates	Language			
6 Communications				
Line Fail Response	Plug-by		Silent	
Line Fail Delay	Plug-by		9s	
7 Test				
	Wired Sirens			
	Loudspeakers			

Sirens & Sounders	Wired Keypads			
	KEY-RKPZ			
Wired Keypad				
Radio Keypads	KEY-RKPZ			
Walk Test	Chime		Once	
	System			
	Zones			
Zone Resistances				
Zone Status	Wired Zones			
Signal Strengths	Radio Keypads	KEY-RKPZ		
Outputs	Wired Outputs		Once	
	Plug-by outputs			
Prox Tags				
Locate Bus Device				
8 View Log				
All Events				
Mandatory Events				
Non-Mand. Events				
9 ABOUT				
Panel				
Bus				
Keypads				