EC-P50

10-50 Zone Intruder Alarm System

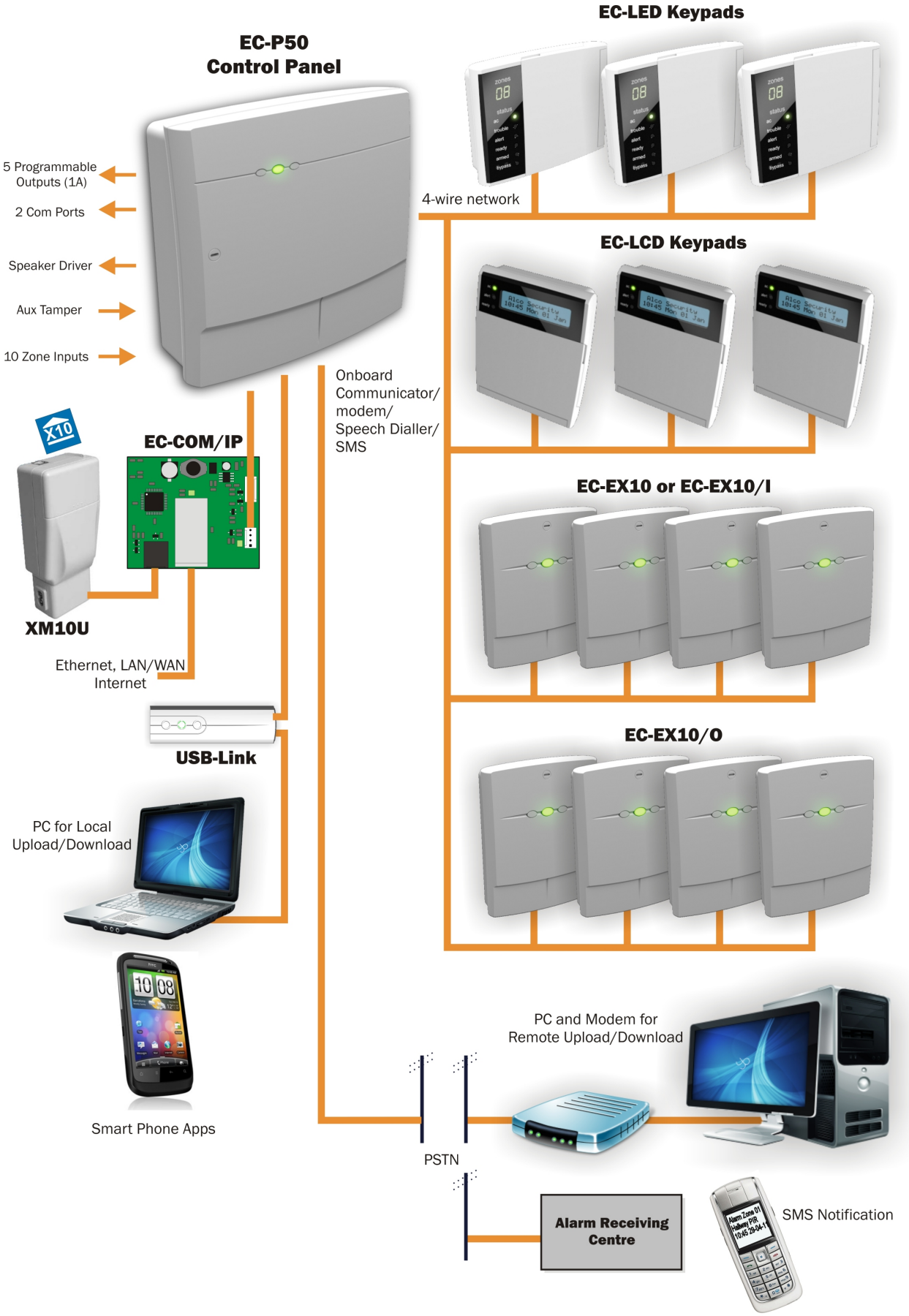
Installation Manual

eclipse

Contents

1. System Overview

System Configuration



Control Panel

The EC-P50 control panel is an advanced intruder alarm system with 10 on-board zones and on-board multi format communicator. The system can be expanded to 50 zones using the 10 zone expansion modules (EC-EX10 or EC-EX10/I). The EC-EX10/O can be used where additional programmable outputs are required. The system supports 5 partitions and 50 user codes and is ideal for multi-area and multi-tenant applications within domestic and commercial installations.

The control panel provides a multi-channel integrated speech dialler and voice annunciation feature. Voice messages are recorded via a touch tone telephone or by using the Eclipse UDL software package.

Remote arming and disarming and system control can also be carried out by calling the protected premises with a touch-tone telephone. On answering the incoming call you are greeted with a voice prompted menu.

The system can be further enhanced by using the EC-COM/IP module which provides both IP and X-10 connectivity. X-10 is a simple home automation protocol that uses the existing mains wiring to communicate with X-10 compatible devices via a XM10U controller. Once the EC-COM/IP is installed, both the system and X-10 devices can be controlled remotely using smart phone apps.

A choice of either LCD or LED remote keypads is available. Other features include:

- 10 programmable on-board zones
- 5 programmable outputs (1Amp rated)
- On-board communicator/modem/speech dialler
- Local or remote upload/download
- 1000 event log
- Advanced system diagnostics
- 1.5 Amp switched mode power supply
- Two communication ports for accessories etc
- Loudspeaker output
- Selectable battery charging rate
- Real time clock
- Two-wire smoke detector support
- Flash upgradable

Remote Keypads

The EC-P50 will accept up to a maximum of 6 remote keypads. All remote keypads require a 4-wire connection to the control panel using standard alarm cable. The following models are available:

EC-LED Remote Keypad

The LED keypad features a dual 7 segment display for displaying zone status and system fault messages. A set of dedicated system status LEDs for AC, Ready, Armed, Trouble, Bypass, Alert and Alarm are also provided. Other features include:

- Internal sounder
- Backlit keyboard

EC-LCD Remote Keypad

The LCD keypad features a 2 x 20 character blue display for showing all zone status and system fault messages. A set of dedicated system status LEDs for AC, Trouble and Alert are also provided. Other features include:

- Internal sounder
- Backlit keyboard

Expansion Modules

The following expansion modules are available:

EC-EX10 Zone & Output Expander

The EC-EX10 is a housed zone and output expansion module that is connected to the 4-wire control panel network. Features include:

- 10 fully programmable zone inputs
- 10 programmable outputs (8 x 100mA; 2 x 1Amp)
- Internal piezo sounder
- 16Ω loudspeaker connection, with programmable volume
- Tamper protection
- Engineer keypad port
- Stylish housing

EC-EX10/I Zone Expander

The EC-EX10/I is a housed zone expansion module that is connected to the 4-wire control panel network. Features include:

- 10 fully programmable zone inputs
- Tamper protection
- Stylish housing

EC-EX10/O Output Expander

The EC-EX10/O is a housed output expansion module that is connected to the 4-wire control panel network. Features include:

- 10 programmable outputs (8 x 100mA; 2 x 1Amp)
- Tamper protection
- Stylish housing

EC-COM/IP Communication Module

The EC-COM/IP is an IP based communicator and X-10 home automation interface PCB module. Features include:

- Ethernet connection to LAN/WAN
- Remote access via Eclipse UDL or smart phone app
- Alarm reporting via LAN/WAN to PC based alarm receiver
- X-10 port for automating X-10 devices via the XM10U/E
- X-10 devices controlled via the system or smart phone app
- PCB module clips into EC-P50 control panel housing

EC-USB-Link

The EC-USB-Link provides USB connectivity between the EC-P50 and the host computer. It is required when a direct connection is required between the Eclipse UDL software package and the EC-P50.

Upload/Download Software

Eclipse UDL is a Windows® based software package that can be used to remotely or locally program and diagnose the Eclipse range of security systems. Features include:

- Simple intuitive user interface
- Local or remote via modem and IP
- System remote control
- Advanced system diagnostics

2. Installation

Installation Sequence

Before attempting to install the alarm system, read this section. Once you have an overall understanding of the installation sequence, carefully work through each step.

1. Design the Layout
Make a rough sketch of the premises to get an idea of where all alarm detection devices, keypads and other modules are to be located.

2. Mounting the Control Panel
The control panel must be mounted within the protected area close to an unswitched AC power source and the incoming telephone line.

You must complete all wiring before connecting the battery, or applying AC to the panel.

3. Install the Remote Keypads
Mount the remote keypads at locations that are easily accessible during entry and exit from the protected area. Connect the remote keypads to the control panel.

4. Zone Wiring
Install detection devices and connect to control panel or expander.

5. Other Wiring
Complete all other wiring including external/internal sounders and telephone line connections.

6. Apply Power to the Control Panel
Once steps 1 to 5 are completed, apply power to the control panel. First, connect the red battery lead to the positive terminal and the black lead to negative. Then, connect the AC.

7. Program the System
If available use the Eclipse UDL software package to program the system, if this is not available program this system in accordance with the procedures in Section 3.

8. Testing the System
Test the system thoroughly to ensure that all features and functions are operating as required.

Control Panel

Mounting

Mount the control panel on a flat, plumb wall using at least three appropriate screws. The rear casing has been designed with a central key-hole slot so that mounting is possible without removing the Printed Circuit Board (PCB).

The angled slot in the lower corner has been provided to allow the panel to be levelled easily. If the PCB has to be removed, carefully pull back the two front PCB securing clips, lift the front of the PCB and slide it downward. To replace the PCB simply reverse the above procedure.

It is essential to ensure that none of the fixing slots or cable entries are accessible after fixing.

Mains cabling must be secured (e.g. with a cable tie) to one of the anchor points provided.

Wiring the Control Panel

WARNING: ELECTRICITY CAN KILL

BEFORE connecting the control panel ALWAYS disconnect the supply at the consumer unit.

If in ANY doubt consult a qualified electrician.

ONLY connect the mains supply to the mains terminal block, NEVER connect the mains supply directly to the PCB.

The system installation MUST be carried out in accordance with the national safety standards, for example EN 60950: 1992.

ALWAYS refer to National Wiring Regulations when conducting installation.

An appropriate and readily accessible disconnection device (e.g. an unswitched fused spur) MUST be provided as part of the installation.

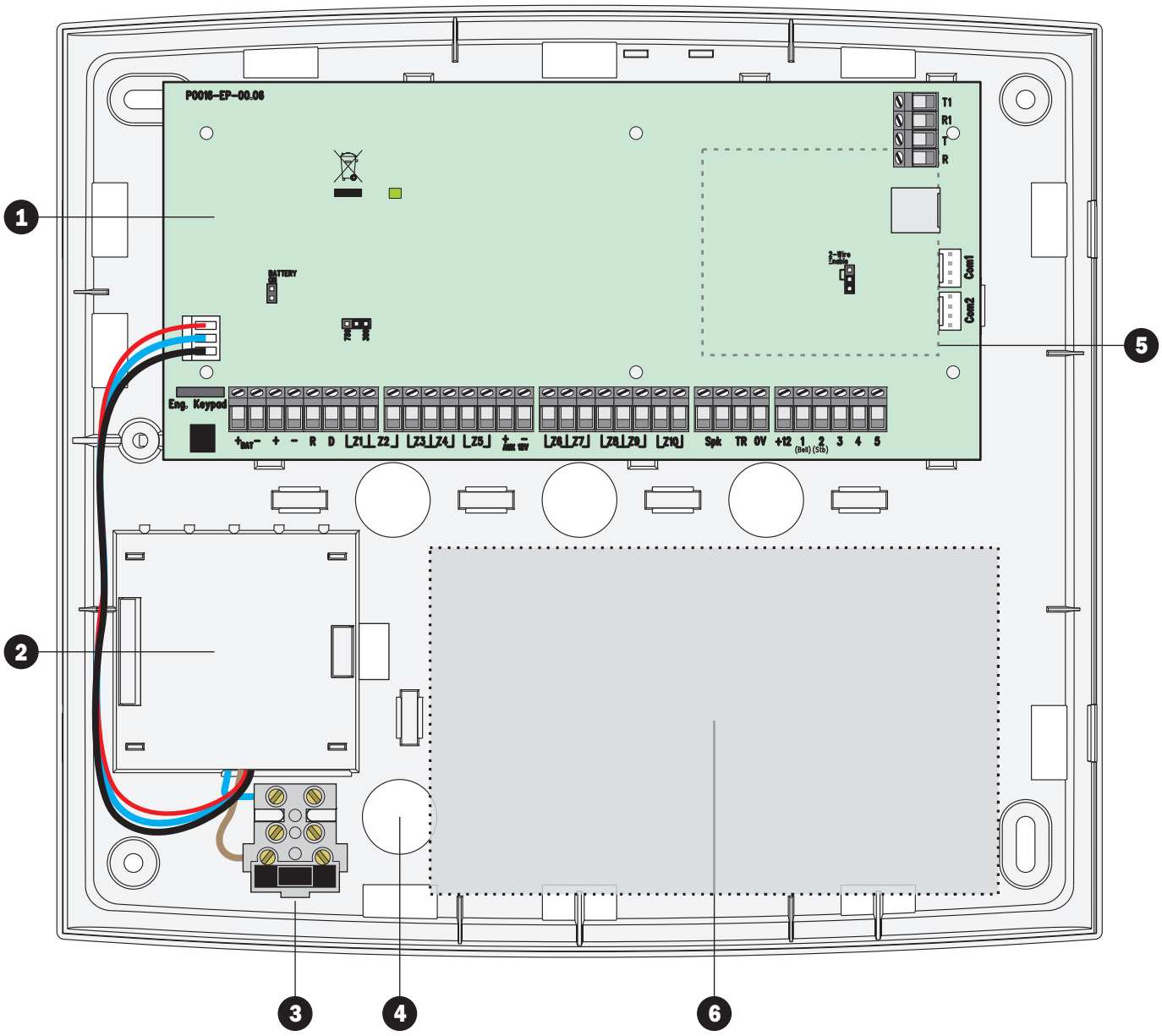
The disconnection device must NOT be fitted in a flexible cord.

Where identification of the neutral in the mains supply is NOT possible, a two-pole disconnection device MUST be used.

The building mains supply MUST incorporate appropriate short-circuit backup protection (e.g. a fuse or circuit breaker) of High Breaking Capacity (HBC, at least 1500A).

Use mains cable of adequate carrying capacity for the rated current (i.e. at least 0.75mm2).

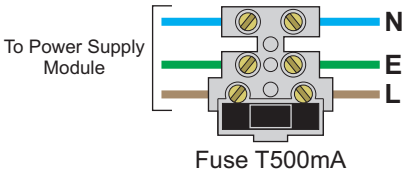
Control Panel Layout



1. Main Printed Circuit Board (PCB)
The main PCB that provides the terminals connection to remote keypads and detection devices, see PCB Layout on next page for full details.

2. Switched Mode Power Supply
The switch mode power supply module is housed under this protected area and provides power to the main PCB via the three-way harness.

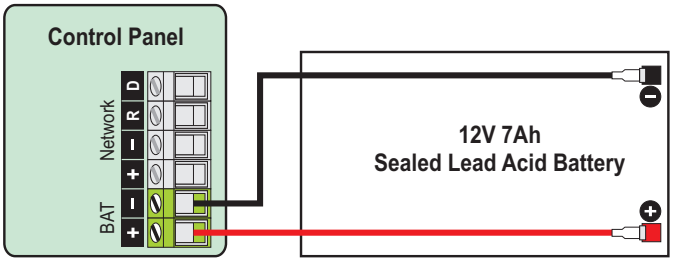
3. Mains Connection
The AC Mains supply is connected to a 3 way Euro Type fused terminal block, which is fitted with a 500mA fuse.



4. Mains Supply Cable Entry
The mains supply cable must be routed into the control panel housing via this cable entry.

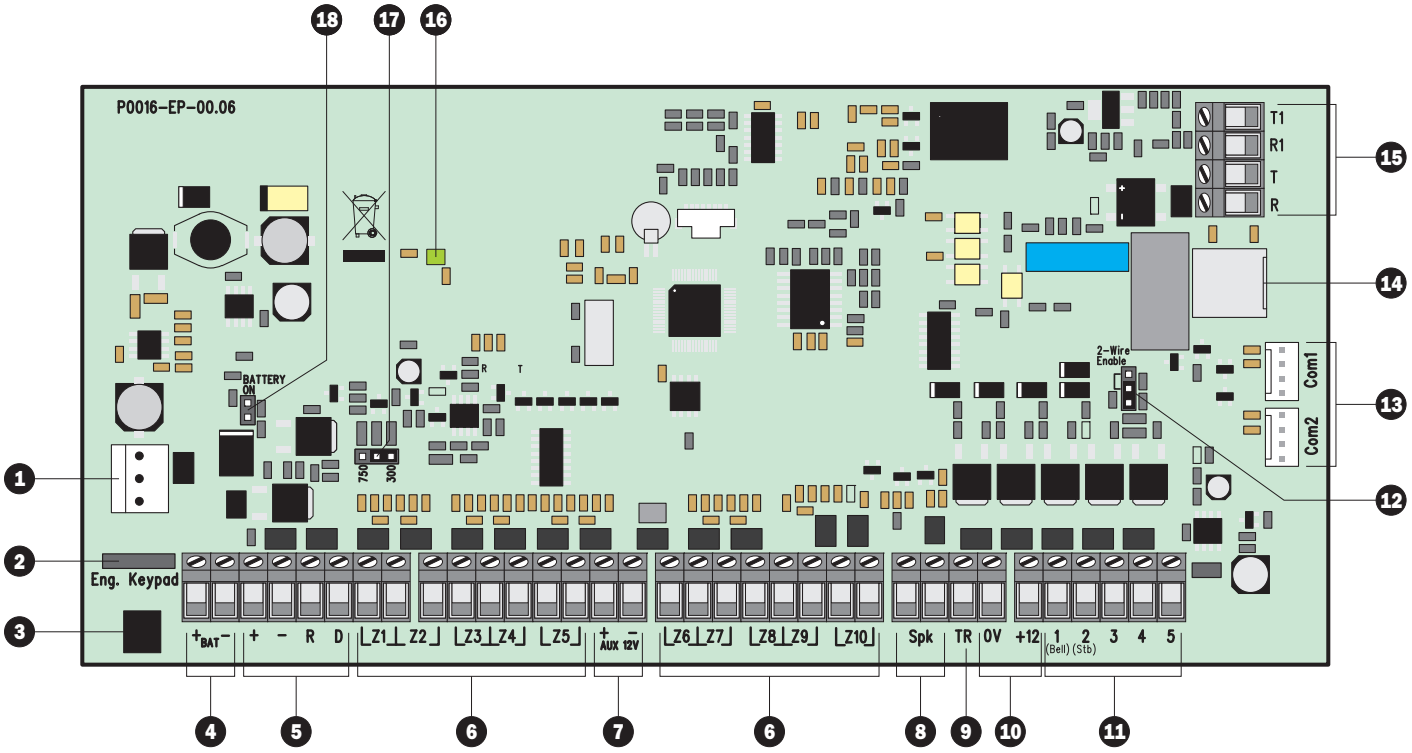
5. Communication Module
An optional Eclipse Communication Module can be clipped into the housing under the main PCB.

6. Standby Battery
The system housing will accept a 12V 7Ah battery to provide continued operation in the event of an AC mains failure. Connect the red battery lead to the positive terminal of the battery and then connect the black battery lead to the negative terminal.



The system will only become “live” when the AC supply is connected or the “Battery On” pins are shorted, see item 18 of PCB layout.

PCB Layout



1. PSU Connector
The harness from the switched mode power supply module plug onto this connector and provides the power (13.7V) to power the system.

2. Engineer's Remote Keypad Connector
An engineer's remote keypad maybe plugged onto to this connector so that system programming and testing can be carried out at the location of the control panel.

3. Lid Tamper Switch
This switch detects when the cover is in position and the screw is fully secured. The tamper is designed to activate when the screw is undone.

4. Battery Connections
A 12V rechargeable battery must be connected to these two terminals in order to provide continuous system operation in the event of mains failure. The battery output is protected by an auto resetting fuse (PTC) rated at 1.6 Amp.

5. Network Connections
The network terminals provide connections to the remote keypads and zone expanders. The + and – terminals provide power whilst the R and R terminals are the data signals.

6. Zone Inputs 1 to 10
Detection devices such as movement sensors, vibration and door contacts are connected to the zone input terminals. There are several ways in which to wire a detection device (see page 11). Each zone is fully programmable, see page 19 for information on programming zones.

7. Auxiliary 12V
These terminals provide auxiliary power for detection devices that require 12V power, e.g., moment sensors. The auxiliary output is protected by an auto resetting fuse (PTC) rated at 1.1 Amp).

8. Speaker
These terminals are used for driving 16Ω extension loudspeakers (see page 12).

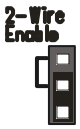
9. Bell Tamper Return
This terminal is connected to the tamper return connection from an external sounder unit. If it is not required link it to 0V.

10. External Sounder 12V
These terminals provide power for external sounder units. The output is protected by an auto resetting fuse (PTC) rated at 1.1A.

11. Panel Outputs 1 to 5
These are fully programmable high current (1 Amp), switched negative supervised outputs. Panel outputs 1 and 2 default to bell and strobe operation, but can be programmed for other functions if required, see page 30 for programming details. Each output can also be programmed for supervision monitoring, see page 25.

12. Two-Wire Smoke Detector Enable
Set this link as shown when connecting 2-wire smoke detectors to Panel Output 5.

2-wire Smoke Detectors Enabled: Panel Output 5 must be programmed as "2-wire Smoke" (0047) and smoke detectors must be connected as shown page 13.



2-wire Smoke Detectors Disabled: Panel Output 5 will function as a normal output.

13. Communication Ports 1 and 2
Two serial communication ports 1 and 2 are provided for local downloading and for third party devices.

14. RJ11 Telephone Line Connector
An RJ11 connector is provided so that the panel can be connected to the telephone line via a standard RJ11 patch lead.

15. Telephone Line Connections
Telephone line connections (see page 14).

16. Power/Status LED
On steady when either AC or standby battery is present. Flashes when the on-board communicator is dialling or sending data.

17. Battery Charging Rate
The standby battery can be recharged at different rates:

300mA: This is the recommended charge rate for a 7Ah standby battery. The system will fully recharge a flat battery within 24hours.

750mA: This is the recommended charge rate for a 17Ah standby battery. The system will fully recharge a flat battery within 24hours.

18. Battery On (Kick Start)

When powering the system from battery only, the “Battery On” pins must be momentarily shorted together with a plain blade screwdriver or similar to kick start the power supply into operation.

Connecting Devices to the Network

Before connecting devices to the control panel network, isolate ALL power from the control panel (AC Mains & Battery). Do not continue if there is still power present on the control panel.

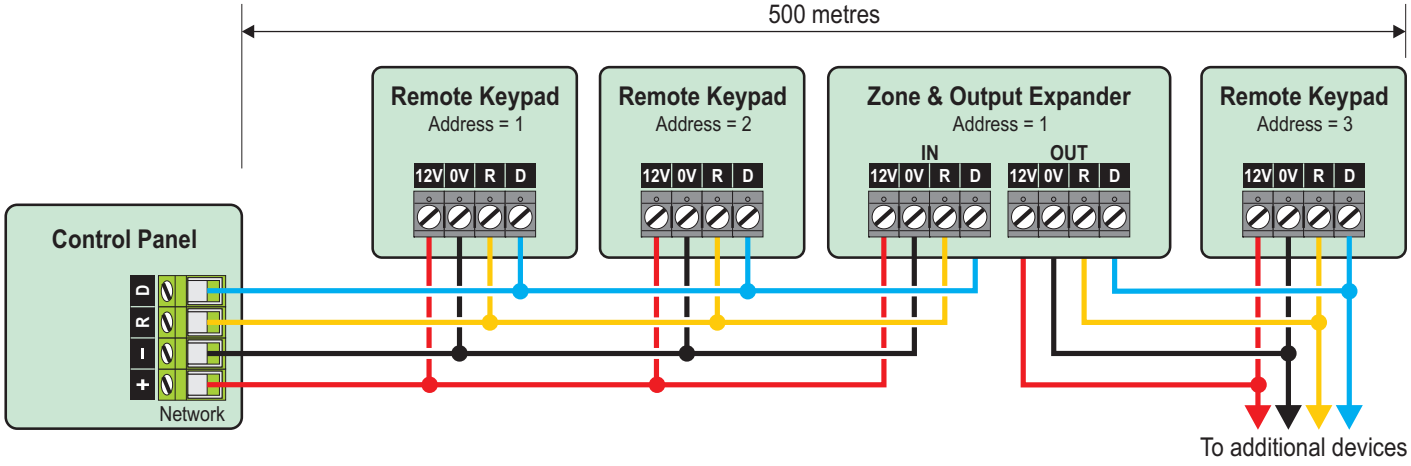
Connecting devices with power still present on the control panel may damage the device or control panel and invalidate any warranty.

Remote keypads and expanders are all connected to the same network terminals located at the bottom left hand corner of the control panel and may be connected serially (daisy chain), in parallel (star) or any combination of the two.

Network Connections

The network is made up of four terminals incorporating power and data. To ensure correct operation, all four terminals on the device must be connected to the corresponding terminals on the control panel, or previous device. The table below shows each terminal and its description:

+	+12V Supply
-	0V Supply
R	Data Return
D	Data I/O



Cable Type and Distances

For improved immunity to electrical noise, the use of screened 4 core cable is recommended. The screen should be twisted together and wired into the (–) terminal at the control panel only.

The maximum recommended distance for devices when using standard 7/0.2 alarm cable is:

- 250m for each branch when using the star (parallel) configuration
- When using a daisy chain (series) configuration the maximum distance will depend on the number of devices connected on the chain. The more devices that are connected, the shorter the distance to the last device (this is due to voltage drop in the cable)

Whichever method of wiring configuration is used, ensure that the voltage between the '+' and '–' terminals at each device is no lower than 10.0V when the system is running on the standby battery.

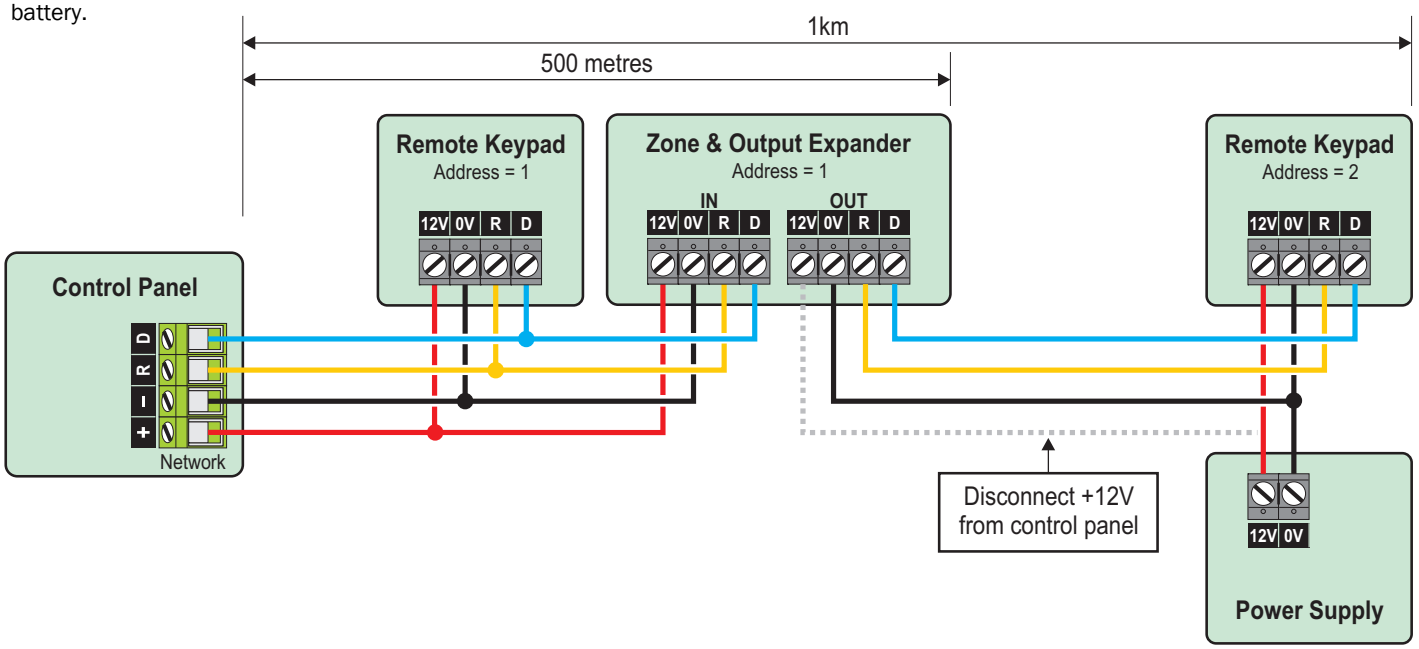
Overcoming Voltage Drop

There are several ways to overcome voltage drop:

- Use thicker lower resistance cable. Standard 7/0.2 alarm cable has a resistance of 8Ω per 100m
- Double up on the power connections – this will require using a 6 or 8-core cable rather than a 4-core cable
- Install a power supply to power the device locally, remember to common the two negative connections

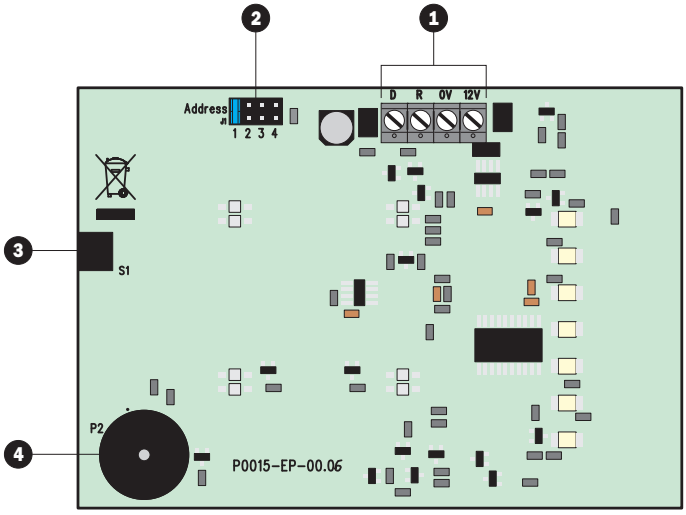
Installing a Power Supply

When a power supply is installed, the 0V connections on the power supply must be connected through to 0V on the control panel and the +12V connection between the control panel and the device must be disconnected (see figure below).

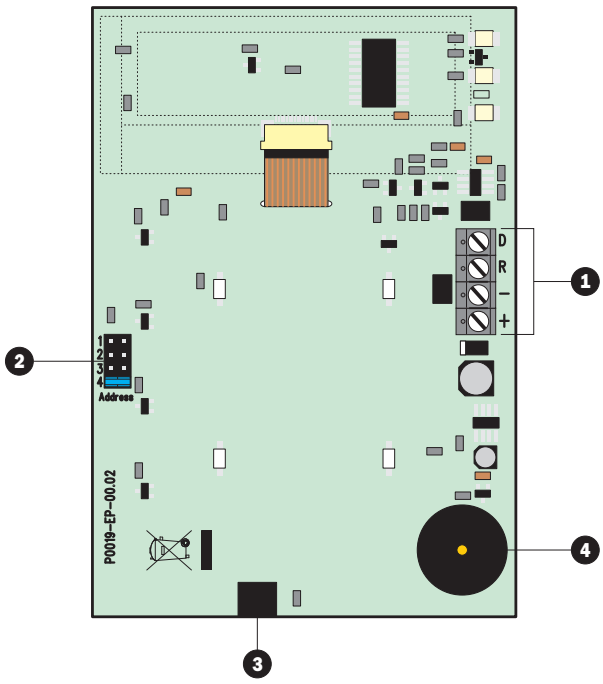


Remote Keypads

PCB Layouts



LED Remote Keypad



LCD Remote Keypad

1. Network Connections
The remote keypad is connected to the network terminals located at the bottom left hand side of the PCB.

2. Address Selection
Each remote keypad must be assigned a different address using the Address selector. Move the jumper to the required position 1, 2, 3 or 4.

3. Tamper Switch
The lid tamper for each remote keypad can be enabled or disabled if required. Please refer to page 27 for further details.

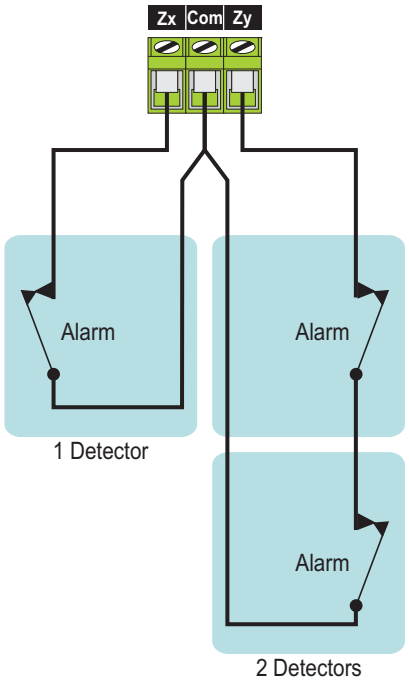
4. Piezo Sounder
The piezo sounder generates low level alarm, key press, and warning tones. Each type of tone can be enabled or disabled for each remote keypad, please refer to page 28 for further details.

Wiring Detection Devices

The EC-P50 provides 10 zones for connecting detection devices such as movement sensors and magnetic door contacts. Each zone is fully programmable to allow for maximum flexibility (see page 19 for Zone Programming details). The program options for a zone will also determine how the zone may be wired. The following wiring options are available:

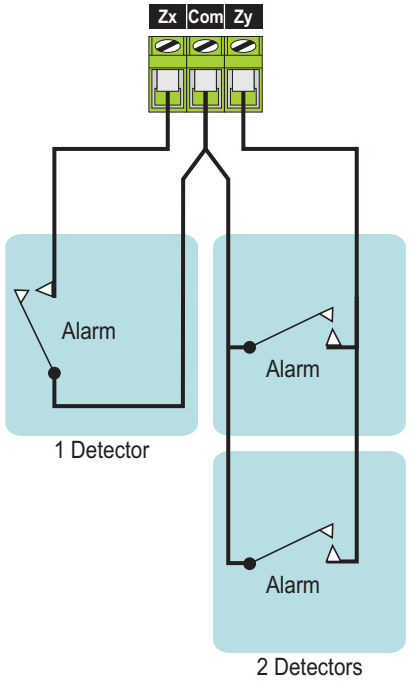
Normally Closed

This wiring configuration should be used when connecting detection devices that only have a normally closed alarm output. Connect the detector as shown below and ensure that the zone is programmed for “Normally Closed” operation, see page 20.



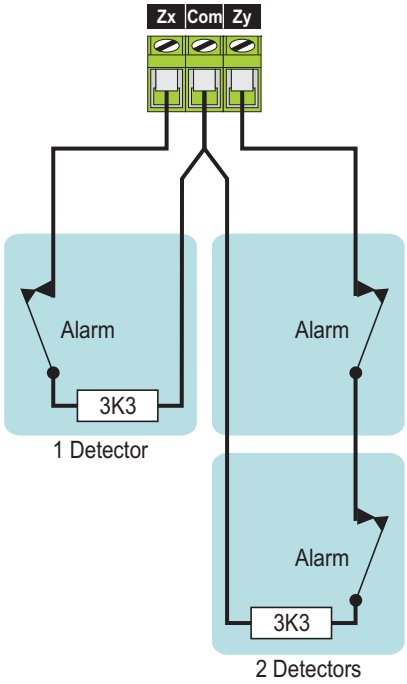
Normally Open

This wiring configuration should be used when connecting detection devices that only have a normally open alarm output. Connect the detector as shown below and ensure that the zone is programmed for “Normally Open” operation, see page 20.



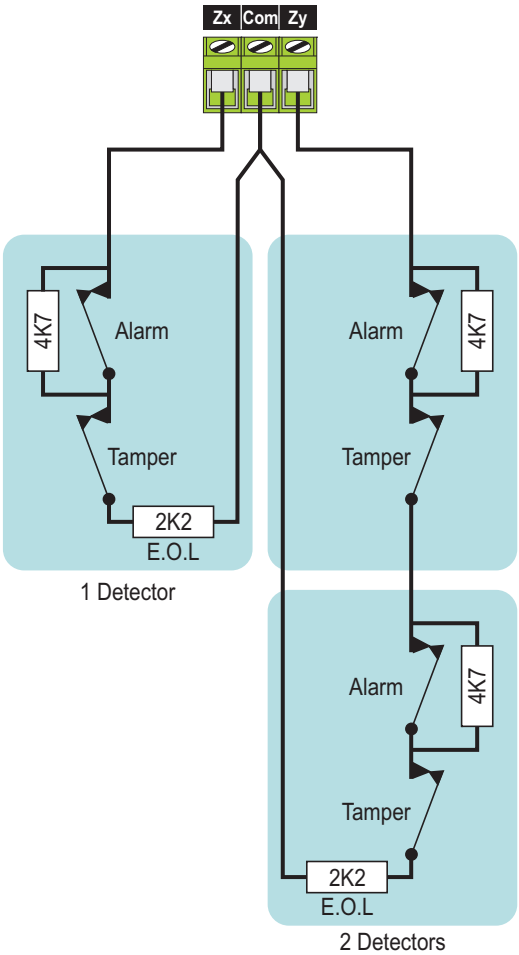
Single EOL - N/C

This wiring configuration should be used when connecting detection devices that only have a normally closed alarm output. Connect the detector as shown below and ensure that the zone is programmed for “Single EOL – N/C” operation, see page 20.



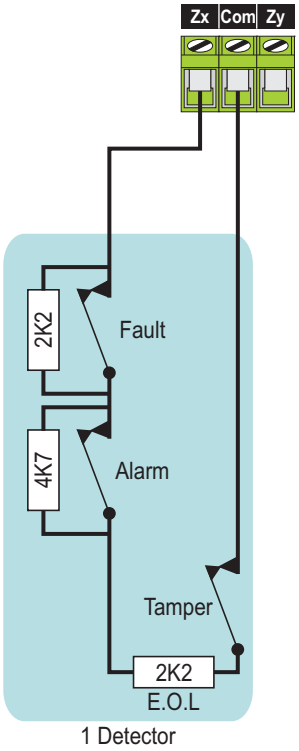
Double EOL

This wiring configuration should be used when connecting detection devices that have a normally closed alarm and tamper output. Connect the detector as shown below and ensure that the zone is programmed for “Double EOL” operation, see page 20.



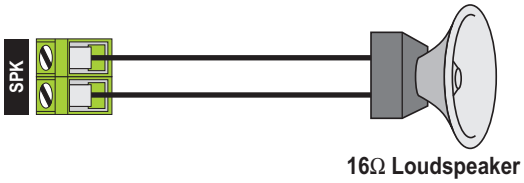
Triple EOL

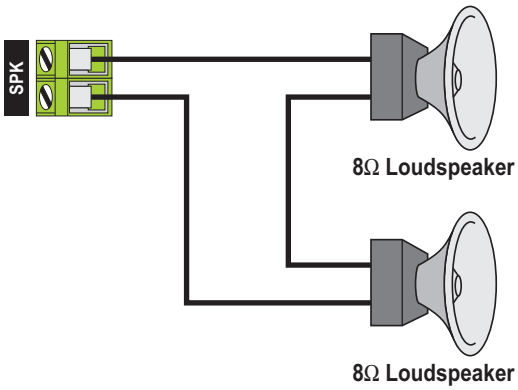
This wiring configuration should be used when connecting detection devices that support triple EOL configuration, this will allow the system to monitor alarm, tamper fault and mask. Connect the detector as shown below and ensure that the zone is programmed for “Triple EOL” operation, see page 20.



Loudspeaker Connections

The EC-P50 has a loudspeaker output capable of driving one 16Ω or two 8Ω wired in series as shown below:





The volume level can be programmed, please refer to page 25 for details. The loudspeaker can also be tested, please refer to page 25 for further details.

External Sounder/Strobe Connections

The following connections are available for connection to an external sounder/strobe unit:

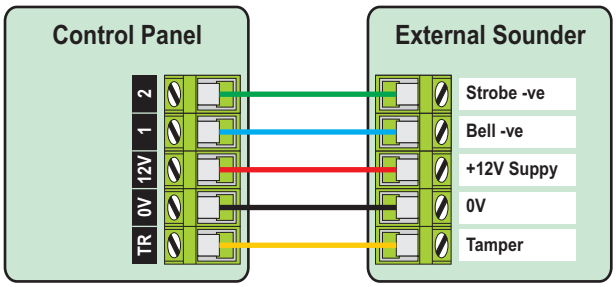
TR
Tamper Return input. Connect to the tamper output on the external sounder/strobe unit. If this input is not used it must be linked to 0V.

0V
0V supply. Connect to the 0V (-) supply on the external sounder/strobe unit.

+12
Positive 12V supply, which is protected by an auto resetting fuse (PTC) rated at 1.1A. Connect to the +12V (+) supply on the external sounder/strobe unit.

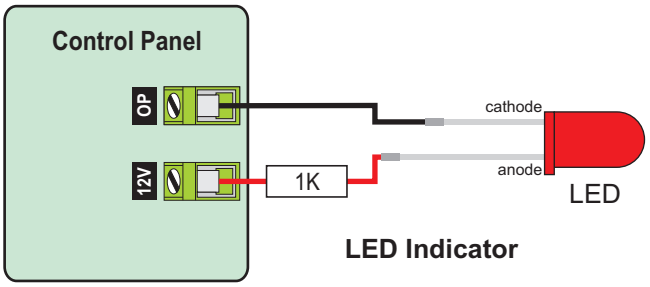
Bell (1)
Panel output 1 is pre-configured for Bell operation, i.e. it switches to 0V when active. Connect this terminal to the bell trigger input on the external sounder/strobe unit. The output can be inverted for SCB operation, see page 30 for details.

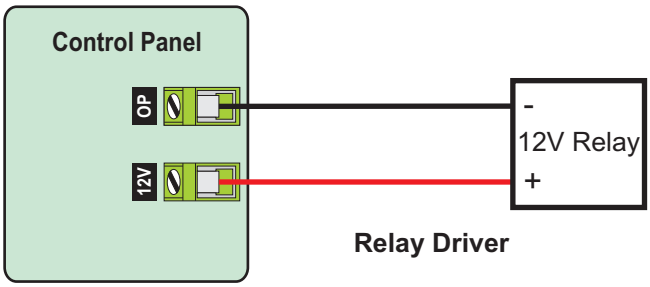
Strobe (2)
Panel output 2 is pre-configured for Strobe operation, i.e., it switches to 0V when active. Connect this terminal to the strobe input on the external sounder/strobe unit.

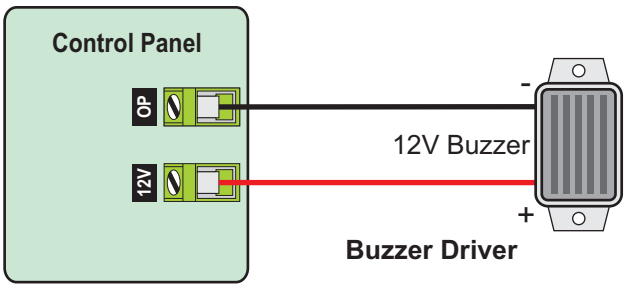


Panel Outputs 1 - 5

The control panel has five programmable outputs, which can be used to drive auxiliary devices such as LEDs, sounders or relays etc. (see page 30 for details on programming outputs). Each panel output is rated at 1 Amp and switches to 0V when active. The figure bellow shows some wiring examples:



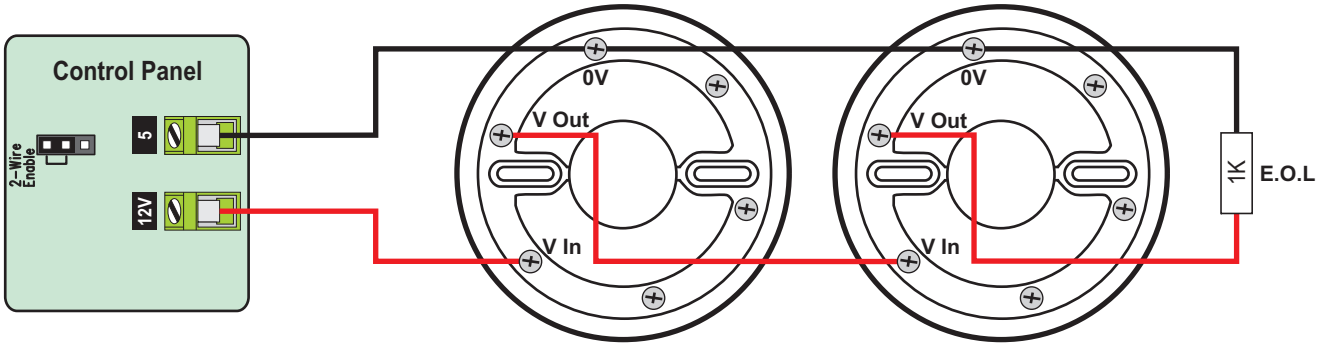




2-Wire Smoke Detectors

A maximum of 10, 12V 2-wire smoke detectors can be connected to the control panel using panel output 5. The detectors must be connected as shown below. The Enable 2-wire jumper link must be set as shown and the output must be programmed for “2-wire Smoke” (0047) operation, see page 30 for details.

A Maximum of 10 2-Wire Smoke Detectors
can be connected to panel output 5

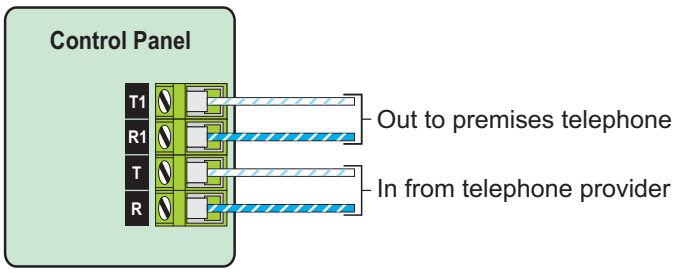


Telephone Line Connections

The control panel has an advanced on-board communicator and modem, which can be used for the following:

- Sending digital alarm status information to an alarm receiving centre using industry standard protocols
- Sending voice messages to a mobile or landline telephone
- Remote uploading/downloading via Eclipse UDL software package

If any of these features are used, a permanent telephone connection should be made to the control panel as shown:

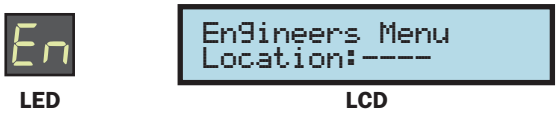


Commissioning

Once ALL connections have been made to the control panel and power is ready to be applied, you should read this section before continuing.

The control panel leaves the factory programmed with default settings and when the system is powered up for the first time the default settings are in use. If the factory defaults need to be reloaded in the future, please see "Power-up Options Menu".

- Connect the black battery lead to the negative (–) terminal of the standby battery and the red battery lead to the positive (+) terminal of the standby battery. The green power LED on the main PCB will light.
- If the system enters into an alarm condition, enter the default master user code 5678. The alarm tone will then stop.
- To access the Engineer Programming Menu, enter the default engineer code 1234. The remote keypads will show:

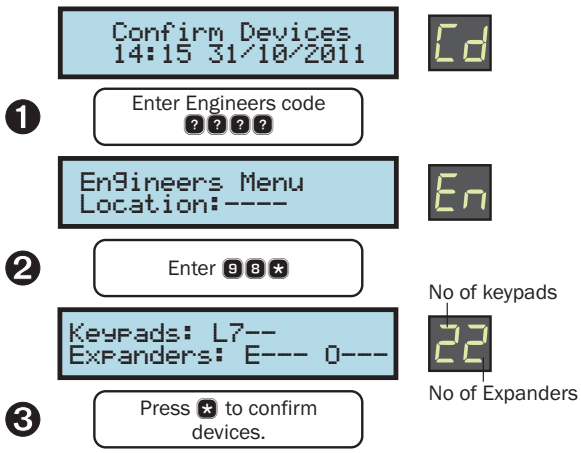


- Confirm that all devices connected to the control panel are being recognized; see "Confirm Devices" below.
- Program the system as described in the next section (Programming the Control Panel).
- Carry out a walk test as described on page 42. Remember that some powered detectors (e.g. PIRs and combined technology detectors) take several minutes to warm up before they become operational.
- Test the internal sounder, external sounder and strobe as described on page 42.
- Replace the lid and secure with the lid screw supplied - do not over-tighten.
- Enter *99 to leave the programming menus.
- The Service light will be flashing to indicate that action is required. Switch on the mains supply to the control panel. The Service light will stop flashing and stay on continuously.

Installation is now complete and the system is ready for use. Please ensure the system users are provided with adequate training on operating the alarm system.

Confirm Devices

When the system is powered up, the devices connected to the control panel network must be confirmed. If the network configuration changes after confirmation, the system will show "Confirm Devices":



Key:
L=EC-LCD Keypad
7=EC- LED Keypad
E=EC-EX10 Expander
I=EC-EX10/I Expander
O=EC-EX10/O Expander

Power-Up Options Menu

When power is applied to the system, the control panel enables the "Power-Up Options Menu" for 10 seconds. During this period the control panel status LED flashes between red and green and the system will accept the following commands:

Command	Description
*0#	**Default Engineer Code** Entering this command will set engineer access code back to 1234.
*3#	**Save as Factory Defaults** Entering this command will save the current control panel program configuration as the NEW factory default profile.
*6#	**Set UDL Password** Entering this command will set the UDL password to 123456.
*9#	**Load Factory Defaults** Entering this command will set all control panel program configuration options to the factory default settings.

3. Programming the Control Panel

Introduction

This section covers the system programming and it is important that all engineers read this section carefully so as to familiarise themselves with the many features and functions of the control panel. To access the programming menu, enter the factory default engineer code 1234. If a mistake is made whilst entering the code, simply re-enter the code correctly.

When the system is in Engineers Mode, ALL zones and tampers are disabled.

Each programming option is accessed by a four digit location number followed by *. The location numbers have been grouped together into logical sections. The programming sections are:

Exiting Engineer's Program Mode

To exit the engineers programming menus and return to the normal disarmed mode, ensure the display is prompting you to enter a location number then enter 99*.

Menu Navigation and Data Entry

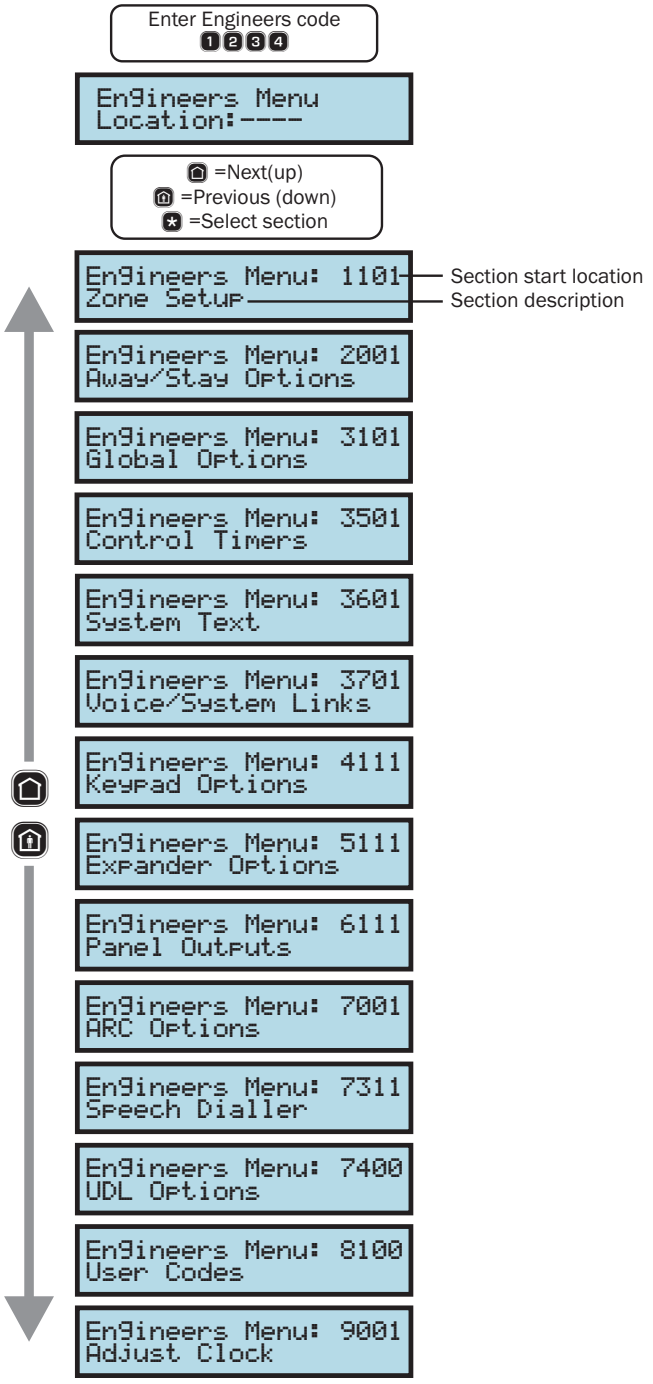
Each programming location is accessed by entering its four digit location number followed by ✱. If you don't know the exact location you can enter less than four digits and the panel will take you to the first location that starts with numbers you have entered. For example if you enter 1 2 the panel will take you to location 1201 – Zone 01 Wiring Type.

LCD Navigation

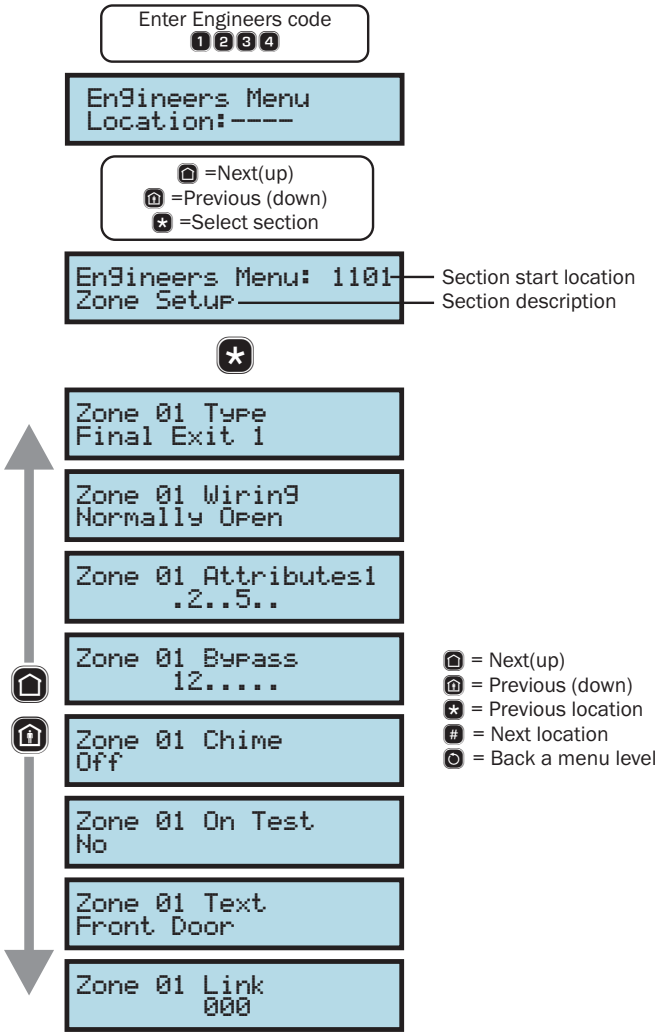
If the system is fitted with an LCD keypad, you can navigate through the main menu using the following keys:

- ⌂ = Next program section
- ⌂ = Previous program section
- ✱ = Select location of displayed section
- ↺ = Back a menu level

LCD main menu navigation



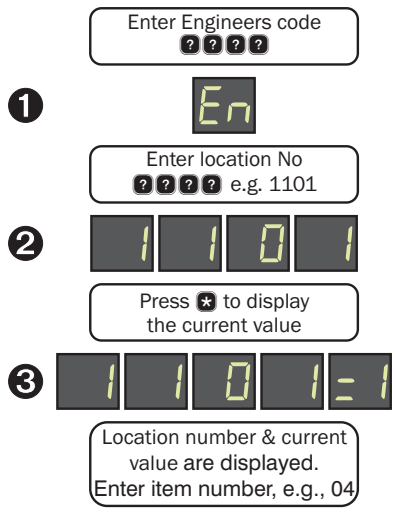
LCD sub menu navigation



Selection List

This type of data entry is used when selecting an option from a predefined list. Each item in the list has a number and associated description. When using the LCD keypad for programming the description is displayed. The LED keypad can only display the number. The figures below show the programming procedure for both LED and LCD remote keypads:

Selection List: LED Keypad



❹ 

Press ✪ to accept and return to step ❸

Press ⊙ to cancel and return to step ❶

Press # to accept and move to next location

Selection List: LCD Keypad

Enter Engineers code ????

❶ 

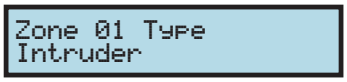
Enter location No ???? e.g. 1101

❷ 

Press ✪ to display the current value

❸ 

Press ⌂ to scroll through list options or enter item number, e.g., 04

❹ 

To display the item number press and hold any number key.

❺ 

Press ✪ to accept and return to step ❸

Press ⊙ to cancel and return to step ❶

Press # to accept and move to next location.

Bit Toggle Selection

This type of data entry is used for enabling and disabling up to 8 options. Each option is represented by a number 1 to 8 and has an associated description. When using the LCD keypad for programming the description can be displayed by holding down the bit option number, the LED keypad can only display the number. The figures below show the programming procedure for both LED and LCD remote keypads:

Bit Toggle Selection: LED Keypad

Enter Engineers code ????

❶ 

Enter location No ???? e.g. 1301

❷ 

Press ✪ to display the current value

❸ 

Location number & current options are displayed. Options 2 & 5 are enabled.

Use keys ❶ to ❽ to toggle options on or off, e.g, press 2 to turn option2 off.
⓪ = All options off.
❾ = All options on.

❹ 

Press ✪ to accept and return to step ❸

Press ⊙ to cancel and return to step ❶

Press # to accept and move to next location

Bit Toggle Selection: LCD Keypad

Enter Engineers code ???

❶ 

Enter location No ???? e.g. 1301

❷ 

Press ✪ to display the current value

❸ 

Location number & current options are displayed. Options 2 & 5 are enabled.

Use keys ❶ to ❽ to toggle options on or off, e.g, press 2 to turn option2 off.
⓪ = All options off.
❾ = All options on.

❹ 

To display the option description press and hold the option number key.

❺ 

Press ✪ to accept and return to step ❸

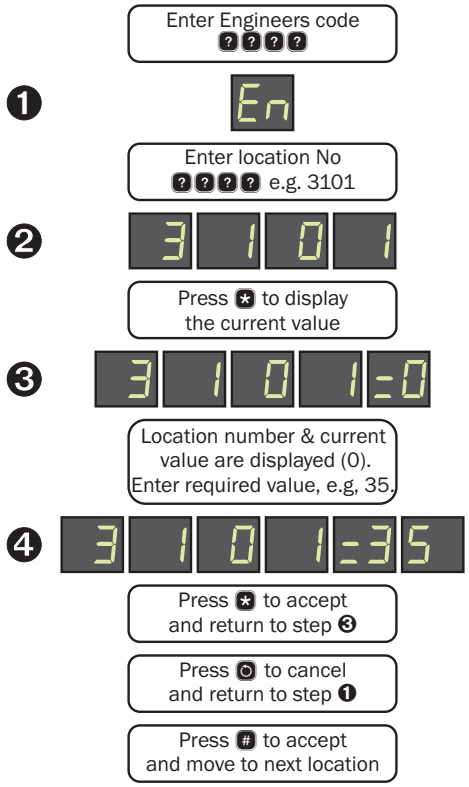
Press ⊙ to cancel and return to step ❶

Press # to accept and move to next location.

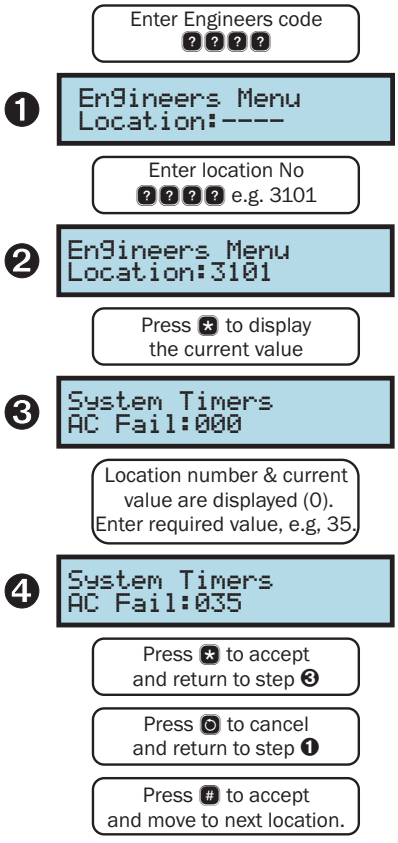
Number Entry

This type of data entry is used for entering numeric values, such as timers. The figures below show the programming procedure for both LED and LCD remote keypads:

Number Entry: LED Keypad



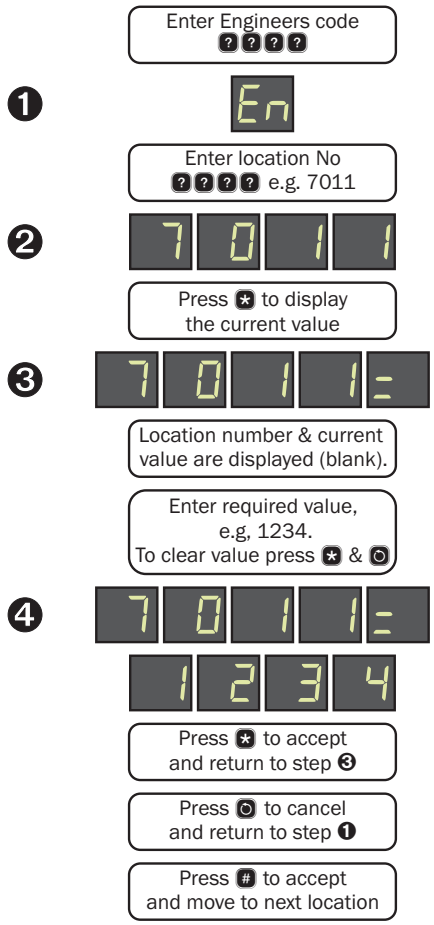
Number Entry: LCD Keypad



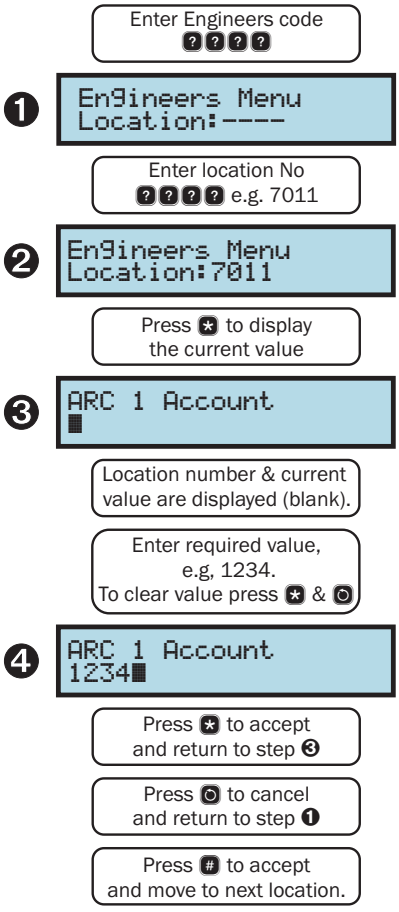
String Edit - Number Mode

This type of data entry is used for entering a long string of numbers, such as telephone and account numbers. The figures below show the programming procedure for both LED and LCD remote keypads:

String Edit - Number Mode: LED Keypad



String Edit - Number Mode: LCD Keypad



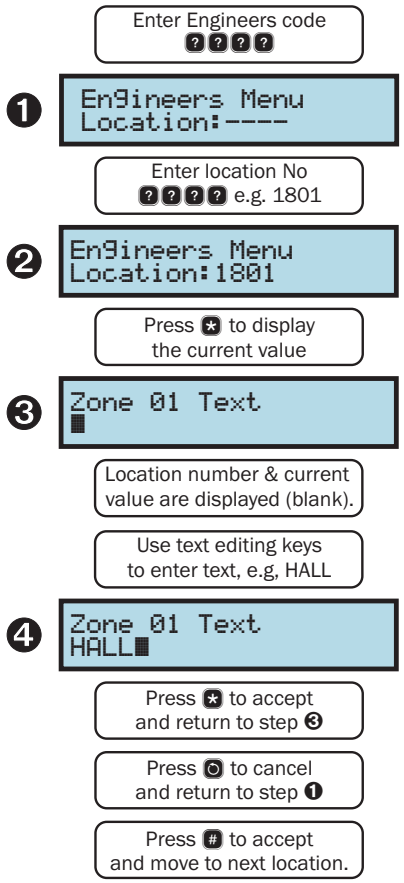
String Edit - Text Mode

This type of data entry is used for entering text such as user names and zone text. This mode is designed only for the LCD keypad. The text is entered in the same way as entering text on a mobile telephone. Each key is mapped to one or more letters. Pressing a key will select the first letter, pressing it again will select the next etc. The table below shows the keys to use and the characters that are assigned to them:

Key	Characters								
1	1								
2	A	B	C	2	a	b	c		
3	D	E	F	3	d	e	F		
4	G	H	I	4	g	h	i		
5	J	K	L	5	j	k	l		
6	M	N	O	6	m	n	o		
7	P	Q	R	S	7	p	q	r	s
8	T	U	V	8	t	u	v		
9	W	X	Y	Z	9	w	x	y	z
0	_	0	.	-	(	)	#		
⊠	Clear all characters								

The figures below show the programming procedure for LCD remote keypads:

String Edit - Text Mode: LCD Keypad



1. Zone Programming

This section covers programming of the detection zones; each zone must be programmed a zone type, wiring type, attributes and areas.

Zone Type

Each zone must be programmed to the correct type in order for the correct response.

Locations: 1101 to 1150

Zone 01 to 50: Zone Type.

Entry Mode: Mode: Selection List (see page 16).

00 Not Used

Use this zone type for unused zones, as zone programmed as "Not Used" are not be monitored by the system.

01 Final Exit 1

Use this zone type for the main entry/exit detector, normally a magnetic contact on the front door. The zone can be activated during the exit mode without causing a fault. If the system is armed, activation of the zone will start the Entry 1 Delay timer for the relevant arm mode.

02 Final Exit 2

Use this zone type for an alternative entry/exit detector. The zone can be activated during the exit mode without causing a fault. If the system is armed, activation of the zone will start the Entry 2 Delay timer for the relevant arm mode.

03 Walk Through

Use this zone type for detection devices along the entry/exit route. This zone type will allow the user to walk past the detector without causing a fault during the exit mode or an Intruder alarm during the entry mode. However, if activated at any other time the zone will cause an immediate intruder alarm. This zone type will also start the entry mode when the system is stay armed.

04 Intruder

Use this zone type for detection devices such as PIR's, vibration detectors, magnetic door contacts etc. This zone type generates an intruder alarm if activated when the system is armed.

05 Perimeter

Use this zone type for detection devices such as external PIR's, IR beams. This zone type generates an intruder alarm if activated when the system is armed.

06 Fire

Use this zone type for smoke and heat detectors. This zone type generates a distinctive fire alarm if activated at any time.

07 PA Silent

Use this zone type for panic buttons. This zone type generates a silent panic alarm if it is activated at any time.

08 PA Audible

Use this zone type for panic buttons. This zone type generates an audible panic alarm if it is activated at any time.

09 Medical

Use this zone type for medical alarms. This zone type generates a medical alarm if it is activated at any time.

10 24 Hour

Use this zone type for detectors that require 24 hour monitoring. This zone type generates an intruder alarm if it is activated when the system is armed. If activated during the disarmed state an internal alarm is generated.

11 Tamper

Use this zone type for tamper protection. This zone type generates a tamper alarm if it is activated when the system is armed. If

activated during the disarmed state an internal alarm is generated.

12 Exit Terminator
Use this zone type for external push to set buttons. This zone type terminates the exit delay when activated during exit mode. The arming mode must be configured for "Exit Terminator" for this zone type to function.

13 Away Arm Key
Use this zone type for a key switch or lock that has switch contacts. This zone type will away arm the assigned areas when active and disarm the assigned areas when healthy. If a "momentary" operation is required then the "Momentary Keyswitch" attribute can be assigned, see page 20.

14 Stay Arm Key
Use this zone type for a key switch or door lock that has switch contacts. This zone type will stay arm (1) the assigned areas when active and disarm the assigned areas when healthy. If a "momentary" operation is required then the "Momentary Keyswitch" attribute can be assigned, see page 20.

15 Stay 2 Arm Key
This zone type operates as type 14, but performs a stay arm 2.

16 Stay 3 Arm Key
This zone type operates as type 14, but performs a stay arm 3.

17 Bypass Key
Use this zone type for a key switch or door lock that has switch contacts. This zone type will bypass all zones with the bypass attribute when active and reinstate them when healthy. If a "momentary" operation is required then the "Momentary Keyswitch" attribute can be assigned, see page 20.

18 Security Key
Use this zone type for a key switch. This zone type will disable all remote keypads when active and reinstate them when healthy. If a "momentary" operation is required then the "Momentary Keyswitch" attribute can be assigned, see page 20.

19 Auxiliary
Use this zone type for auxiliary devices, which do not require an audible alarm response. This zone type generates a silent alarm if activated at any time.

20 Warning
Use this zone type for monitoring devices that require a warning indication. This zone type generates a warning (low level beeps from the keypad every 30 seconds and zone indication) if the zone remains active for longer than the warning delay time, see page 24 for details.

21 Log/Monitor
Use this zone type for monitoring devices that require an event log entry. This zone type generates a log entry if activated at any time.

22 Trouble/Fault
Use this zone type for monitoring fault outputs on devices such as remote power supplies. This zone type generates a fault condition if it is activated at any time.

Zone Wiring
Each zone must be programmed to the correct wiring type in order for the correct response.

Locations: 1201 to 1250
Zone 01 to 50: Zone Wiring.

Entry Mode: Mode: Selection List (see page 16).

0 Normally Closed
Use this wiring type for normally closed detection devices.

1 Normally Open
Use this wiring type for normally open detection devices.

2 Single EOL - N/C
Use this wiring type for normally closed detection devices.

3 Double EOL
Use this wiring type for detection devices that require both alarm and tamper monitoring.

4 Triple EOL
Use this wiring type for detection devices that require alarm, tamper, fault and anti-mask monitoring.

Zone Attributes
Each zone can have one or more optional attributes programmed to further alter its functionality.

Locations: 1301 to 1350
Zone 01 to 50: Zone Attributes.

Entry Mode: Bit Toggle Selection (see page 17).

1 Double Knock
On: When a zone is enabled for Double Knock it will only cause an alarm when:

(a) The zone remains active for the duration of the "Double Knock Delay".

(b) The zone is violated twice within the "Double Knock Delay".

(c) If any two zones with the "Double Knock" attribute are activated during the "Double Knock Time Window".

Off: The zone functions as normal.

2 Enable Comms
On: The on-board communicator will report the alarm status to the monitoring station when the zone causes an alarm.

Off: The alarm status is not transmitted.

3 Reset
On: Zones with this attribute will not be monitored during the detector reset period. The detector reset occurs when the exit mode is started or when the user resets the system after an alarm. Detection devices such as smoke detectors that are powered from an output programmed as "Detector Reset" should have this attribute switched on.

Off: The zone functions as normal.

4 Zone Response
On: Zones with this attribute respond at the response rate determined by the "Zone Response Timer".

Off: The zone functions as normal.

5 Auto Rearm
On: Zones with this attribute will only re-arm at the end of the bell duration providing that the "Auto Re-Arm Counter" limit has not been reached. Once this limit has been reached, the zone will lock out and not cause any further Intruder alarms.

Off: The zone will always re-arm.

6 Remote Detector Test
On: Zones with this attribute are monitored for specific activity during the remote detector test. The detector must be connected to the control panel using triple EOL wiring and the detector remote test input must be connected to a panel output programmed as "Remote Detector Test".

Off: The zone functions as normal.

7 Momentary Keyswitch
On: If the zone type is a keyswitch type, the operation mode is changed to momentary.

Off: If the zone type is a keyswitch type, the operation remains as latching mode.

Zone Areas

The EC-P50 has 5 areas which allow the system to be divided into different areas of protection. Each area can be armed and disarmed independently from each other. By default all zones are assigned to area 1, but if required a zone can be assigned to any of the 5 available areas. If a zone is assigned to more than one area it will only be armed when all assigned areas are armed.

Locations: 1401 to 1450
Zone 01 to 50: Areas.

Entry Mode: Bit Toggle Selection (see page 17).

1 Area 1
On: The zone is assigned to area 1.
Off: The zone is not assigned to area 1.

2 Area 2
On: The zone is assigned to area 2.
Off: The zone is not assigned to area 2.

3 Area 3
On: The zone is assigned to area 3.
Off: The zone is not assigned to area 3.

4 Area 4
On: The zone is assigned to area 4.
Off: The zone is not assigned to area 4.

5 Area 5
On: The zone is assigned to area 5.
Off: The zone is not assigned to area 5.

Zone Bypass Options

Each zone can have one or more optional bypass attributes programmed to control when the zone is bypassed.

Locations: 1501 to 1550
Zone 01 to 50: Zone Bypass Options.

Entry Mode: Bit Toggle Selection (see page 17).

1 In Stay 1
On: The zone is bypassed when Stay 1 arming mode is selected.
Off: The zone is not bypassed when Stay 1 is selected.

2 In Stay 2
On: The zone is bypassed when Stay 2 arming mode is selected.
Off: The zone is not bypassed when Stay 2 is selected.

3 In Stay 3
On: The zone is bypassed when Stay 3 arming mode is selected.
Off: The zone is not bypassed when Stay 3 is selected.

4 Manual
On: The zone can be manually bypassed by the user when arming the system.
Off: The zone cannot be bypassed by the user.

5 Auto Bypass
On: The zone is automatically bypassed at the end of exit mode if the zone is still active.
Off: The zone is not bypassed at the end of exit mode, and the system will fail to arm if the zone remains active.

6 Keyswitch Bypass
On: The zone is bypassed when a "Bypass Key" zone type is active and reinstated when the "Bypass Key" is secure.
Off: The zone is not bypassed when a Bypass Key is operated.

7 Cleaner
On: The zone is bypassed when a cleaner code is entered.
Off: The zone is not bypassed when the cleaner code is entered.

Zone Chime

Each zone can have an optional chime mode programmed that allows the panel and remote keypads to generate an audible tone when the zone is activated in the disarmed mode.

Locations: 1601 to 1650
Zone 01 to 50: Zone Chime.

Entry Mode: Mode: Selection List (see page 16).

0 Off
The zone will not generate a chime tone.

1 Tone 1
The zone generates chime tone 1 when activated in the disarmed mode.

2 Tone 2
The zone generates chime tone 2 when activated in the disarmed mode.

3 Tone 3
The zone generates chime tone 3 when activated in the disarmed mode.

4 Voice
The zone generates a voice response from control panel loudspeaker when activated in the disarmed mode, e.g. "Zone three".

Zone Soak Test

Each zone can be put on test for a programmed soak test period. When a zone is on test it will not cause an alarm if activated, but the system will record the failure in the event log and indicate the fault to the user.

Locations: 1701 to 1750
Zone 01 to 50: Zone Soak Test.

Entry Mode: Mode: Selection List (see page 16).

0 No
The zone is not on soak test.

1 Yes
The zone is on soak test.

Zone Text

Each zone can be assigned a 20 character label that is displayed on LCD remote keypads when viewing the zone status and event log.

Locations: 1801 to 1850
Zone 01 to 50: Zone Text.

Entry Mode: String Edit - Text Mode (see page 19).

Zone Link

Each zone can be assigned a "Link" number, which in turn is used to control "Link Control" output types, for details on link control, see page 32.

Locations: 1901 to 1950
Zone 01 to 50: Zone Link.

Entry Mode: Number Entry (see page 18).

2. Area Options

This section covers programming of the arming modes, timers and options for each of the 5 areas.

Area Timers

Each arming mode has its own set of timers that are used to control various delays during arming, disarming and in alarm.

Locations: [2][1][0][1] to [2][1][0][7]
Area 1: Timers 01 to 07.
[2][2][0][1] to [2][2][0][7]
Area 2: Timers 01 to 07.
[2][3][0][1] to [2][3][0][7]
Area 3: Timers 01 to 07.
[2][4][0][1] to [2][4][0][7]
Area 4: Timers 01 to 07.
[2][5][0][1] to [2][5][0][7]
Area 5: Timers 01 to 07.

Entry Mode: Number Entry (see page 18).

01 Exit Delay
When the Arming Mode is configured as Timed or deferred, this timer sets the delay between the user initiating the exit procedure and the system actually arming.

02 Entry 1 Delay
When the system is armed, activation of a "Final Exit 1" zone will start the entry 1 delay timer, this allows the user time to access the remote keypad and disarm the system.

03 Entry 2 Delay
When the system is armed, activation of a "Final Exit 2" zone will start the entry 2 delay timer, this allows the user time to access the remote keypad and disarm the system.

04 Second Entry
If at the end of normal entry (Entry 1 or 2) delay, the system has not been disarmed, the system will start the second entry delay, during this time the internal alarm tone will sound. If at the end of the second entry delay the system has still not been disarmed, a full alarm is generated.

05 Bell Delay
When an alarm is generated, this timer is used to delay the activation of the external sounder and strobe.

06 Bell Duration
When an alarm is generated, this timer is used to control the active duration of the external sounder and strobe.

07 Comms Delay
When an alarm is generated, this timer is used to delay the activation of the on-board communicator.

Area Arming Modes

This set of options control how the selected area is armed for both the "Away" and "Stay" arming mode.

Locations: [2][1][3][1] - Area 1 Away Arm Mode.
[2][2][3][1] - Area 2 Away Arm Mode.
[2][3][3][1] - Area 3 Away Arm Mode.
[2][4][3][1] - Area 4 Away Arm Mode.
[2][5][3][1] - Area 5 Away Arm Mode.
[2][1][3][2] - Area 1 Stay Arm Mode.
[2][2][3][2] - Area 2 Stay Arm Mode.
[2][3][3][2] - Area 3 Stay Arm Mode.
[2][4][3][2] - Area 4 Stay Arm Mode.
[2][5][3][2] - Area 5 Stay Arm Mode.

Entry Mode: Bit Toggle Selection (see page 17).

0 Final Exit
When the exit mode is started, the selected area will only arm after the activation of a Final Exit 1 or Final Exit 2 zone type, e.g., after the front door is opened the closed.

1 Timed Exit
When the exit mode is started, the selected area will arm after the Exit Delay timer has expired.

2 Exit Terminator
When the exit mode is started, the selected area will only arm after activation of a Final Exit 1 or Final Exit 2 zone type, followed by the activation of an Exit terminator zone, e.g., after the front door is opened the closed and the push to set button has been pressed.

3 Deferred
When the exit mode is started, the selected area will arm after the Exit Delay timer has expired. However, if a zone off the exit route is activated during this period, the Exit Delay timer is suspended whilst the zone is active.

Area Configuration Options 1

This first set of configuration options controls the operation of each area.

Locations: [2][1][4][1] - Area 1 Configuration Options 1.
[2][2][4][1] - Area 2 Configuration Options 1.
[2][3][4][1] - Area 3 Configuration Options 1.
[2][4][4][1] - Area 4 Configuration Options 1.
[2][5][4][1] - Area 5 Configuration Options 1.

Entry Mode: Bit Toggle Selection (see page 17).

1 Arming with AC off
On: The selected area can be armed when the mains supply is switched off.
Off: The selected area cannot be armed when the mains supply is switched off.

2 Arming with ATS Fault
On: The selected area can be armed with an Alarm Transmission Fault (telephone line fault).
Off: The selected area cannot be armed when the mains supply is switched off.

3 Auto Stay Arm
On: The selected area automatically performs a Stay Arm, if the user does not activate a Final Exit zone.
Off: The selected area will always perform an Away Arm.

4 Silent Exit
On: The selected area exit tone remains silent during exit mode.
Off: The selected area exit tone is generated during exit mode.

5 Local Exit Tone
On: If the exit tone is enabled, the exit tone is only generated from the remote keypad that was used arm the selected area.
Off: If the exit tone is enabled, the exit tone is generated from all devices assigned to selected area.

6 Anti-Masking when Armed
On: Anti-Masking faults are only monitored when the selected area is armed.
Off: Anti-Masking faults are monitored at all times for the selected area.

7 Bell on Arm Fail

On: If the selected area fails to arm, the external sounder and strobe is activated.

Off: The external sounder and strobe are not activated.

8 Pulse Strobe on Arm

On: When the selected area is armed successfully, the external strobe is activated for 5 seconds.

Off: The external strobe is not activated.

Area Configuration Options 2

This second set of configuration options controls the operation of each area.

Locations: 2142 - Area 1 Configuration Options 2.
2242 - Area 2 Configuration Options 2.
2342 - Area 3 Configuration Options 2.
2442 - Area 4 Configuration Options 2.
2542 - Area 5 Configuration Options 2.

Entry Mode: Bit Toggle Selection (see page 17).

1 Only Exit when Ready

On: The exit mode can only be started if all zones are healthy (System Ready) for the selected area.

Off: The exit mode can be started even if one or more zones are active. The active zones will be indicated on the remote keypads and a fault tone is generated.

2 Instant Bell on ATS Fault

On: The selected area bell delay is overridden and set to zero, when the Alarm Transmission System (ATS/on-board communicator) fault occurs.

Off: The selected area bell delay remains unchanged, when an ATS fault occurs.

3 Alarms are Engineer Reset

On: Intruder alarms generated in the selected area require an engineer to reset the system back to normal.

Off: Intruder alarms in the selected area can be reset by users.

4 Enable Bell Squawk

On: The bell output is pulsed once for a very short period when the selected area is armed and twice when disarmed.

Off: The bell output operates as normal for the selected area.

5 Enable Walk Squawk

On: The bell output is pulsed once for a very short period when a zone is activated during a walk test in the selected area.

Off: The bell output operates as normal for the selected area.

6 Enable Walk Voice

On: The zone and number (e.g., "Zone 10") is announced through the loudspeaker when a zone is activated during a walk test in the selected area.

Off: The bell output operates as normal for the selected area.

7 Chime = Link 99

On: The chime feature is automatically turned on and off by Link Control 99.

Off: The chime feature must be manually turned on or off by the user.

Area Keyswitch Control

The set of options controls how the selected area responds when a keyswitch zone is used for arming.

Locations: 2143 - Area 1 Keyswitch Control.
2243 - Area 2 Keyswitch Control.
2343 - Area 3 Keyswitch Control.
2443 - Area 4 Keyswitch Control.
2543 - Area 5 Keyswitch Control.

Entry Mode: Bit Toggle Selection (see page 17).

1 Silent Arm

On: The exit tone remains silent during exit mode, when a keyswitch is used to arm the selected area.

Off: The exit tone is generated during exit mode, when a keyswitch is used to arm the selected area.

2 Disabled when Armed

On: The keyswitch is disabled when selected area is armed (arm only keyswitch).

Off: The keyswitch remains enabled when the selected area is armed.

3 Instant Arm

On: The selected area is armed instantly when a keyswitch is used.

Off: The area exit mode is used to arm the selected area.

Area Timer Control

This set of options controls how the system Control Timers can be used to automatically arm/disarm the selected areas at specific times and on specific days of the week. Please refer to page 26 for details on Control Timer configuration.

Locations: 2151 - Area 1 Timer Control.
2251 - Area 2 Timer Control.
2351 - Area 3 Timer Control.
2451 - Area 4 Timer Control.
2551 - Area 5 Timer Control.

Entry Mode: Bit Toggle Selection (see page 17).

1 Arm with Control Timer 1

On: The selected area is automatically armed by Control Timer 1.

Off: The selected area is not armed automatically.

2 Arm with Control Timer 2

On: The selected area is automatically armed by Control Timer 2.

Off: The selected area is not armed automatically.

3 Arm with Control Timer 3

On: The selected area is automatically armed by Control Timer 3.

Off: The selected area is not armed automatically.

4 Arm with Control Timer 4

On: The selected area is automatically armed by Control Timer 4.

Off: The selected area is not armed automatically.

5 Disarm with Control Timer 1

On: The selected area is automatically disarmed by Control Timer 1.

Off: The selected area is not disarmed automatically.

6 Disarm with Control Timer 2

On: The selected area is automatically disarmed by Control Timer 2.

Off: The selected area is not disarmed automatically.

7 Disarm with Control Timer 3

On: The selected area is automatically disarmed by Control Timer 3.

Off: The selected area is not disarmed automatically.

8 Disarm with Control Timer 4

On: The selected area is automatically disarmed by Control Timer 4.

Off: The selected area is not disarmed automatically.

3. System Configuration

This section covers programming of the system timers, counters, hardware, control timers, banner text, voice options and links.

System Timers

The system timers control global system timing and delay operation.

Locations:
- 3101 - AC Fail Delay.
- 3102 - ATS Fault Delay.
- 3103 - Zone Response Time.
- 3104 - Abort Delay.
- 3105 - Battery Test Period.
- 3106 - Battery Test Duration.
- 3107 - Zone Soak Test Time.
- 3108 - Double Knock Delay.
- 3109 - Service Interval.
- 3110 - Confirmation Period.
- 3111 - Pulse 1 Time.
- 3112 - Pulse 2 Time.
- 3113 - Pulse 3 Time.
- 3114 - Delay 1 Time.
- 3115 - Delay 2 Time.
- 3116 - Delay 3 Time.
- 3117 - Warning Delay.

Entry Mode: Number Entry (see page 18).

01 AC Fail Delay
This timer is used to delay (0-255 minutes) the audible annunciation from the keypads and internal sounders following an AC mains failure. Default = 30 minutes.

02 ATS Fault Delay
This timer is used to delay (0-255 minutes) the audible annunciation from the keypads and internal sounders following a ATS fault (telephone line fault). Default = 30 minutes

03 Zone Response Time
This timer is used to control the response (0-255 x 10ms) of zones programmed with the "Fast Response" attribute. Default = 750 milliseconds.

04 Abort Delay
This timer is used to control abort delay period (0-255 x seconds). When an intruder alarm is generated, this timer is started and if the system is disarmed before the timer expires an "Alarm Abort" event is generated. This event can be signalled to the alarm receiving centre. Default = 180 seconds.

05 Battery Test Period
This timer is used to control frequency (0-255 hours) at which the standby battery is load tested. Default = 24 hours.

06 Battery Test Duration
This timer is used to control the duration (0-255 seconds) of the standby battery load test. Default = 10 seconds.

07 Zone Soak Test Time
This timer is used to control the duration (0-255 days) of the zone soak test. The timer is automatically started after a zone is put on test. Default = 14 days.

08 Double Knock Delay
This timer controls the duration (0-255 seconds) of the double knock delay. The double knock delay is used to control the operation of zones programmed with "Double Knock" attribute, see page 20. Default = 30 seconds.

09 Service Interval
This timer controls the frequency (0-255 weeks) in which a "Service Required" event is generated. Default = 0 weeks.

10 Confirmation Period
This timer controls the duration (0-255 minutes) in which a confirmed alarm event can be generated. When the system is armed and an intruder alarm is generated (first alarm), this timer is started. If a second, but different zone activates an intruder alarm before the timer expires, a confirmed alarm event is generated. Default = 45 minutes.

11 Pulse 1 Time
This timer controls the active duration (0-255 seconds) of outputs programmed with the "Pulse 1" attribute. Default = 10 seconds.

12 Pulse 2 Time
This timer controls the active duration (0-255 seconds) of outputs programmed with the "Pulse 2" attribute. Default = 30 seconds.

13 Pulse 3 Time
This timer controls the active duration (0-255 minutes) of outputs programmed with both the "Pulse 1" and "Pulse 2" attributes. Default = 10 minutes.

14 Delay 1 Time
This timer controls the switch on delay (0-255 seconds) of outputs programmed with the "Delay 1" attribute. Default = 10 seconds.

15 Delay 2 Time
This timer controls the switch on delay (0-255 seconds) of outputs programmed with the "Delay 2" attribute. Default = 30 seconds.

16 Delay 3 Time
This timer controls the switch on delay (0-255 minutes) of outputs programmed with both the "Delay 1" and "Delay 2" attributes. Default = 10 minutes.

17 Warning Delay
This timer controls the delay (0-255 seconds) in which zones programmed as "Warning" must remain active before a warning tone is generated. Default = 60 seconds.

System Counters

The system counters are used to limit the number of times a function or feature can be carried out.

Locations:
- 3201 - Auto Rearm Counter.
- 3202 - Number of Remote Resets.
- 3203 - Count Warning.
- 3204 - Count Logging.

Entry Mode: Number Entry (see page 18).

01 Auto Rearm Counter
This counter controls the number of times (0-255) a zone can rearm during an armed period. Once a zone has reached its rearm limit, it is locked out so that it cannot cause further alarm activations during the same armed period. Default = 3.

02 No of Remote Resets
This counter controls the number of times (0-255) the UDL software can be used to reset the system remotely before an engineer must attend site. Default = 0.

03 Count Warning
This counter controls the number of times (0-255) that a zone must activate, before triggering the corresponding "Zone ## Count" output. Default = 0.

02 Count Logging
This counter controls the number of times (0-255) that a zone must activate, before logging a "Zone Count ##" event in the system log. Default = 0.

Hardware - Volume Levels

This set of options controls the volume levels for each group of system tones and voice messages.

Locations: 3301 - Panel Speaker Volume.
3302 - Chime Volume.
3303 - Advisory Tone Volume.
3304 - Alarm Tone Volume.

Entry Mode: Number Entry (see page 18).

01 Panel Speaker Volume
This option controls the level (0-10) of the exit, entry, fault and warning tones from the control panel speaker. Default = 5.

02 Chime Volume
This option controls the level (0-10) of the chime tone from the control panel speaker. Default = 5.

03 Advisory Tone Volume
This option controls the level (0-10) of the advisory tones from the control panel speaker. Default = 5.

04 Alarm Tone Volume
This option controls the level (0-10) of the alarm tones from the control panel speaker. Default = 10.

Output Monitoring

This option enables/disables fault monitoring of the control panel outputs.

Locations: 3310

Entry Mode: Bit Toggle Selection (see page 17).

1 Panel Output 1 (Bell)
On: The output is monitored for faults.
Off: The output is not monitored.

2 Panel Output 2 (Strobe)
On: The output is monitored for faults.
Off: The output is not monitored.

3 Panel Output 3
On: The output is monitored for faults.
Off: The output is not monitored.

4 Panel Output 4
On: The output is monitored for faults.
Off: The output is not monitored.

5 Panel Output 5
On: The output is monitored for faults.
Off: The output is not monitored.

Hardware Monitoring

This set of options allows the monitoring of the control panel hardware to be enabled or disabled.

Locations: 3311

Entry Mode: Bit Toggle Selection (see page 17).

1 Panel Box Tamper
On: The box tamper is monitored for activity.
Off: The box tamper is not monitored.

2 Auxiliary Fuse
On: The auxiliary 12V fuse is monitored for faults.
Off: The auxiliary 12V fuse is not monitored.

3 System Voltage
On: The system voltage is monitored for faults.
Off: The system voltage is not monitored.

4 Battery Presence
On: The standby battery is monitored for its presence.
Off: The standby battery is not monitored.

5 Mains AC
On: The mains supply is monitored for its presence.
Off: The mains supply is not monitored.

6 Telephone Line
On: The telephone line connection is monitored for faults.
Off: The telephone line connection is not monitored.

7 Bell Tamper
On: The bell tamper input is monitored for activity.
Off: The bell tamper input is not monitored.

System Configuration 1

This first set of configuration options allow the system operation and features to be altered.

Locations: 3401

Entry Mode: Bit Toggle Selection (see page 17).

1 Auto BST/GMT
On: The system clock is automatically put forward by one hour on the last Sunday in March at 2.00AM and put back by one hour on last Sunday in October at 2:00AM.
Off: The system clock remains unchanged.

2 Battery Test by Control Timer 5 and Disarm
On: The battery test feature is invoked when Control Timer 5 switches on and every time the system is disarmed.
Off: The battery test feature is performed by the "Battery Test Period" timer.

3 Reinstate Bypassed Zones on Disarm
On: Any zones that have been manually bypassed are automatically reinstated when the system is disarmed.
Off: Bypassed zones remain bypassed after the system is disarmed.

4 Enable EN50131-1 Requirements
On: The system operates so as to comply with requirements of EN50131-1.
Off: The system operates as normal.

5 Disable Bell when Disarmed
On: The bell output is disabled when the system is disarmed.
Off: The bell output is enabled when the system is disarmed and if a 24hr alarm zone is activated it will trigger the bell output.

6 Disable Communications when Disarmed
On: The control panel on-board communicator is disabled when the system is disarmed.
Off: The on-board communicator is enabled when the system is disarmed.

7 Tamper Alarms are Engineer Reset
On: Tamper alarms require an engineer to reset the system.
Off: The user can reset tamper alarms.

8 View Active Zones
On: Zone activity is displayed when the system is disarmed.
Off: Zone activity is not displayed.

System Configuration 2

This second set of configuration options further allow the system operation and features to be altered.

Locations: 3402

Entry Mode: Bit Toggle Selection (see page 17).

1 Global Keypad Information

On: The area and zone status information displayed on the system remote keypads is global, i.e., all keypads show the same information.

Off: The area and zone status information displayed on the system remote keypads is local, e.g., if the keypad is assigned to area 3, then only information relating area 3 is displayed.

2 EXP Lost = Zone Tamper

On: When a zone expander is disconnected from the network, each programmed zone on the expander generates a tamper response.

Off: When a zone expander is disconnected from the network, the system only generates an expander lost response.

Control Timers

The EC-P50 has five programmable Control Timers, each timer has a switch on time (On Time), switch off time (Off Time) and days of operation for both the On and Off times. Control Timer can be used to automatically arm the system or lock users from accessing the system. The control timer can also be assigned a "Link" number, which in turn is used to control "Link Control" output types, for details on link control, see page 32.

Locations: 3501 to 3505

Control Timers 1 to 5: On Time.

3511 to 3515

Control Timers 1 to 5: Off Time.

Entry Mode: Number Entry (see page 18).

Enter time in 24hour format, e.g., 1715 = 05.15 PM.

Locations: 3521 to 3525

Control Timers 1 to 5: On Time Days.

3531 to 3535

Control Timers 1 to 5: Off Time Days.

Entry Mode: Bit Toggle Selection (see page 17).

Options 1 to 7 = Sunday to Saturday.

Locations: 3541 to 3545

Control Timers 1 to 5: Link.

Entry Mode: Number Entry (see page 18).

Banner Text

This set of options allows you to customise the text that is displayed on LCD keypads. The "Keypad Banner" is displayed on the top line when the system is disarmed. The "Engineer Reset Banner" is displayed on the bottom line when the system requires an engineer to reset the system. The top line will always show "Call Engineer".

Locations: 3604 - Keypad Banner.

3605 - Engineer Reset Banner.

Entry Mode: String Edit - Text Mode (see page 19).

Area Labels

This set of options allows you to assign a text label for each area, e.g., "Shop floor" for area 1. The area label can be displayed when the user arms and disarms the system or it can also be displayed when programming zone, keypad, expander and user area options.

Locations: 3611 to 3615

Areas 1 to 5: Text Labels.

Entry Mode: String Edit - Text Mode (see page 19).

Remote Control Labels

This set of options allows you to customise the text label that is displayed on LCD keypads for each remote control output. When the user accesses the remote control output menu, the labels are displayed, e.g., "Garden Lights".

Locations: 3621 to 3625

Remote Control 1 to 5: Text Labels.

Entry Mode: String Edit - Text Mode (see page 19).

Voice Options

This system has 15 programmable voice messages; each message can be up to 16 seconds long. The messages can be recorded using the Eclipse UDL software and uploaded into the control panel. Alternatively voice messages can be recorded from a telephone handset.

Activate by Link Control

The Link Control is the logical output trigger that causes the voice message to be played. The system has 99 "Link Control" outputs, which can be programmed to trigger for a combination of system events, see "Link Control" on page 32.

Locations: 3701 to 3715

Voice Message 01 to 15: Activated by Link.

Entry Mode: Number Entry (see page 18).

Voice Message Options

The voice message options allow you to control how the message is played.

Locations: 3801 to 3815

Voice Message 01 to 15: Options.

Entry Mode: Bit Toggle Selection (see page 17).

1 Keep Repeating

On: The voice message repeats continuously until the associated "Link Control" is no longer active.

Off: The voice message plays once.

2 Repeat every 10 Seconds

On: The voice message repeats every 10 seconds until the associated "Link Control" is no longer active.

Off: The voice message plays once.

3 Repeat every 30 Seconds

On: The voice message repeats every 30 seconds until the associated "Link Control" is no longer active.

Off: The voice message plays once.

4 Repeat every Minute

On: The voice message repeats every minute until the associated "Link Control" is no longer active.

Off: The voice message plays once.

5 Repeat every 5 Minutes

On: The voice message repeats every 5 minutes until the associated "Link Control" is no longer active.

Off: The voice message plays once.

6 Repeat every 15 Minutes

On: The voice message repeats every 15 minutes until the associated "Link Control" is no longer active.

Off: The voice message plays once.

7 Repeat every 30 Minutes

On: The voice message repeats every 30 minutes until the associated "Link Control" is no longer active.

Off: The voice message plays once.

8 Repeat every 60 Minutes

On: The voice message repeats every 60 minutes until the associated "Link Control" is no longer active.

Off: The voice message plays once.

Options 2 to 8 can be added together to create combined timings, e.g., if option 3 and 4 are on the voice message will repeat every 1 minute and 30 seconds.

System Links

Each system output can be assigned a "Link" number, which in turn is used to control the "Link Control" output types, for details on link control, see page 32.

Locations: 3901 to 3950

System Outputs 01 to 50: Link.

Entry Mode: Number Entry (see page 18).

The table below shows the system output types and their corresponding number 01 to 50. For details of each system output function, please see page 31.

System Link Types	
01 = AC Fault	06 = System Armed/Alarm
02 = ATS Fault	07 = Bell
03 = System Open	08 = Strobe
04 = System Armed	09 = Intruder Alarm
05 = System Part Armed	10 = Confirmed Alarm
11 = Alarm Abort	16 = Medical Alarm
12 = Fire Alarm	17 = Tamper Alarm
13 = PA Alarm	18 = Ready for Arming
14 = Duress Alarm	19 = Trouble
15 = 24hr Alarm	20 = Alert
21 = Bypass	26 = PSTN Off-Hook
22 = In Walk Test	27 = PSTN Ringing
23 = Flash 1 Second	28 = Battery Fault
24 = User Test Active	29 = Control Panel Box Tamper
25 = PSTN Fault	30 = Bell Tamper
31 = Engineer on Site	36 = Entry Mode
32 = Detector Reset	37 = Second Entry Mode
33 = Switched 12V	38 = General Alarm
34 = System Low Volts	39 = Auxiliary
35 = Exit Mode	40 = Warning
41 = Keypads Locked	46 = Cleaner Bypassed
42 = Output Fault	47 = 2-Wire Smoke
43 = Engineer Reset Required	48 = 2-Wire Smoke Alarm
44 = Device Fault	49 = 2-Wire Smoke Fault
45 = Service Required	50 = Door Access
51 = Alarm Test	
52 = Panel AC On	
53 = Reset Active	
54 = Arming Failed	
55 = Confirm Device	

4. Keypad Configuration

This section covers programming of the remote keypads.

Keypad Options 1

This first set of options controls how the selected keypad onboard keys and tamper function.

Locations: 4111 to 4114

Keypads 1 to 4: Options 2.

Entry Mode: Bit Toggle Selection (see page 17).

1 Fire Activation from keys 1 and 3

On: Pressing keys 1 and 3 on the selected keypad at the same time will generate a fire alarm event.

Off: The selected keypad cannot generate fire alarm events.

2 Medical Activation from keys 4 and 6

On: Pressing keys 4 and 6 on the selected keypad at the same time will generate a medical alarm event.

Off: The selected keypad cannot generate medical alarm events.

3 PA Activation from keys 7 and 9

On: Pressing keys 7 and 9 on the selected keypad at the same time will generate a panic alarm (PA) event.

Off: The selected keypad cannot generate panic alarm events.

4 Silent Keypad PA

On: If option 3 is enabled the selected keypad will generate a silent panic alarm event.

Off: If option 3 is enabled the selected keypad will generate an audible panic alarm event.

5 Quick Away Arm Enabled

On: The away arm mode can be carried out from the selected keypad by simply pressing key.

Off: The user passcode must be entered at the selected keypad before the away arm mode can be selected.

6 Quick Stay Arm Enabled

On: The stay arm mode can be carried out from the selected keypad by simply pressing key.

Off: The user passcode must be entered at the selected keypad before the stay arm mode can be selected.

7 Quick Bypass Enabled

On: The zone bypass feature can be invoked at the selected keypad by simply pressing key.

Off: The user passcode must be entered at the selected keypad before the bypass feature can be selected.

8 Keypad Tamper Enabled

On: The lid tamper on the selected keypad is monitored.

Off: The lid tamper on the selected keypad is not monitored.

Keypad Options 2

This second set of options controls how the selected keypad functions when invalid keys are pressed (code tamper).

Locations: 4121 to 4126

Keypads 1 to 6: Options 2.

Entry Mode: Bit Toggle Selection (see page 17).

1 Enable Code Tamper

On: Entering 15 or more invalid key presses on the selected keypad will generate a code tamper event.

Off: The selected keypad cannot generate code tamper events.

2 Lockout Keypad

On: If the "Enable Code Tamper" option is enabled for the selected keypad, the keypad operation will be locked out for 5 minutes if a code tamper event is generated.

Off: The selected keypad operation remains unchanged.

Keypad Sounds

This set of options controls how the selected keypad generates sounds from its on-board sounder.

Locations: 4131 to 4136

Keypads 1 to 6: Sounds.

Entry Mode: Bit Toggle Selection (see page 17).

1 Alarm Tones

On: The selected keypad generates alarm tones.

Off: The selected keypad will not generate alarm tones.

2 Trouble Tones

On: The selected keypad generates trouble tones.

Off: The selected keypad will not generate trouble tones.

3 Chime Tones

On: The selected keypad generates chime tones.

Off: The selected keypad will not generate chime tones.

4 Entry Tones

On: The selected keypad generates entry tones.

Off: The selected keypad will not generate entry tones.

5 Exit Tones

On: The selected keypad generates exit tones.

Off: The selected keypad will not generate exit tones.

6 Key Press Tones

On: The selected keypad generates key press tones.

Off: The selected keypad generates a short click tone when keys are pressed.

7 Advisory Tones

On: The selected keypad generates advisory tones.

Off: The selected keypad will not generate advisory tones.

8 Tamper Tones

On: The selected keypad generates tamper alarm tones.

Off: The selected keypad will not generate tamper alarm tones.

Keypad Areas

Keypads must be assigned to one or more areas to ensure correct operation of the system. The keypad areas control the following:

- When the system is exit mode only the keypads in the areas that are being armed will generate the exit tone.
- When arming one or more areas from a keypad, only the arming modes for the area(s) that are assigned to keypad are applied. The areas that are not assigned are armed instantly. For example, if the keypad is assigned to area 2, and a user request to arm all areas (1-5), areas 1, 3, 4 and 5 arm instantly and the exit mode for area 2 is applied e.g. 30 seconds exit delay.
- When using a "Local Standard" user only the areas assigned to keypad can be armed and disarmed.
- When a lid tamper is activated from the keypad, the tamper alarm is generated for the area(s) assigned to keypad.

Locations: 4141 to 4146

Keypads 1 to 6: Areas.

Entry Mode: Bit Toggle Selection (see page 17).

1 Area 1

On: The keypad is assigned to area 1.

Off: The keypad is not assigned to area 1.

2 Area 2

On: The keypad is assigned to area 2.

Off: The keypad is not assigned to area 2.

3 Area 3

On: The keypad is assigned to area 3.

Off: The keypad is not assigned to area 3.

4 Area 4

On: The keypad is assigned to area 4.

Off: The keypad is not assigned to area 4.

5 Area 5

On: The keypad is assigned to area 5.

Off: The keypad is not assigned to area 5.

5. Expander Configuration

This section covers programming of the expander modules.

Expander Areas

Expanders must be assigned to one or more areas to ensure correct operation of the system. The expander areas control the following:

- When the system is exit mode only the expander in the areas that are being armed will generate the exit tone.
- When a lid tamper is activated from the expander, the tamper alarm is generated for the area(s) assigned to expander.

Locations: 5101 to 5104

Expander 1 to 4: Areas.

Entry Mode: Bit Toggle Selection (see page 17).

1 Area 1
On: The expander is assigned to area 1.
Off: The expander is not assigned to area 1.

2 Area 2
On: The expander is assigned to area 2.
Off: The expander is not assigned to area 2.

3 Area 3
On: The expander is assigned to area 3.
Off: The expander is not assigned to area 3.

4 Area 4
On: The expander is assigned to area 4.
Off: The expander is not assigned to area 4.

5 Area 5
On: The expander is assigned to area 5.
Off: The expander is not assigned to area 5.

Expander Options

This set of options controls how the selected expander tamper and internal piezo sounder function.

Locations: 5111 to 5114

Expanders 1 to 4: Options.

Entry Mode: Bit Toggle Selection (see page 17).

1 Enable Tamper
On: The lid tamper on the selected expander is monitored.
Off: The lid tamper on the selected expander is not monitored.

2 Enable Piezo
On: The internal piezo sounder on the selected expander is enabled.
Off: The internal piezo sounder on the selected expander is disabled.

Expander Sounds

This set of options controls how the selected expander generates sounds from its onboard piezo sounder and loudspeaker output.

Locations: 5121 to 5124

Expanders 1 to 4: Sounds.

Entry Mode: Bit Toggle Selection (see page 17).

1 Alarm Tones
On: The selected expander generates alarm tones.
Off: The selected expander will not generate alarm tones.

2 Trouble Tones
On: The selected expander generates trouble tones.
Off: The selected expander will not generate trouble tones.

3 Chime Tones
On: The selected expander generates chime tones.
Off: The selected expander will not generate chime tones.

4 Entry Tones
On: The selected expander generates entry tones.
Off: The selected expander will not generate entry tones.

5 Exit Tones
On: The selected expander generates exit tones.
Off: The selected expander will not generate exit tones.

6 Key Press Tones
On: Not supported on the expander.
Off: Not supported on the expander.

7 Advisory Tones
On: The selected expander generates advisory tones.
Off: The selected expander will not generate advisory tones.

8 Tamper Tones
On: The selected expander generates tamper alarm tones.
Off: The selected expander will not generate tamper alarm tones.

Expander Outputs

Both EC-EX10 and EC-EX10/O have 10 programmable outputs. This set of options allows the output type (function) to be assigned to each of the expander outputs.

Locations: 5201 to 5210

Expander 1: Output 1 to 10 Type.

5211 to 5220

Expander 2: Output 1 to 10 Type.

5221 to 5230

Expander 3: Output 1 to 10 Type.

5231 to 5240

Expander 4: Output 1 to 10 Type.

Entry Mode: Selection List (see page 16).

Enter the two digit group number followed by the two digit type number, e.g., 0301 = "Zone 01 Alarm". See page 31 for a complete list of output functions.

Expander Output Attributes

This set of options allows the output attributes to be assigned to each of the expander outputs.

Locations: 5301 to 5310

Expander 1: Output 1 to 10 attributes.

5311 to 5320

Expander 2: Output 1 to 10 attributes.

5321 to 5330

Expander 3: Output 1 to 10 attributes.

5331 to 5340

Expander 4: Output 1 to 10 attributes.

Entry Mode: Bit Toggle Selection (see page 17).

See page 30 for details on output attributes.

Expander Output Areas

This set of options allows the output areas to be assigned to each of the expander outputs.

Locations: 5401 to 5410

Expander 1: Output 1 to 10 areas.

5411 to 5420

Expander 2: Output 1 to 10 areas.

5421 to 5430

Expander 3: Output 1 to 10 areas.

5431 to 5440

Expander 4: Output 1 to 10 areas.

Entry Mode: Bit Toggle Selection (see page 17).

1 Area 1

On: The expander output is assigned to area 1.

Off: The expander output is not assigned to area 1.

2 Area 2

On: The expander output is assigned to area 2.

Off: The expander output is not assigned to area 2.

3 Area 3

On: The expander output is assigned to area 3.

Off: The expander output is not assigned to area 3.

4 Area 4

On: The expander output is assigned to area 4.

Off: The expander output is not assigned to area 4.

5 Area 5

On: The expander output is assigned to area 5.

Off: The expander output is not assigned to area 5.

6. Panel Outputs and Devices

This section covers programming of the control panel outputs, communication ports and other devices that maybe connected to the control panel.

Panel Output Type

This set of options allows the output type (function) to be assigned to the control panel high current outputs.

Locations: 6111 to 6115

Panel Outputs 1 to 5: Output Type.

Entry Mode: Selection List (see page 16).

Enter the two digit group number followed by the two digit type number, e.g., 3001 = “Zone 01 Alarm”.

Panel Output Attributes

This set of options allows the output attributes to be assigned to the control panel high current outputs.

Locations: 6121 to 6125

Panel Outputs 1 to 5: Output Attributes.

Entry Mode: Bit Toggle Selection (see page 17).

1 Latching

On: The selected output latches on when triggered and is only cleared when the user resets the system.

Off: The selected output responds normally.

2 Inverted

On: The selected output is inverted, off when active and on when inactive.

Off: The selected output responds normally.

3 User Test

On: The selected output is activated when the user output test is selected.

Off: The selected output remains unchanged during the user output test.

4 Pulse 1

On: The selected output activates for the duration of the “Pulse 1 Time” system timer, see page 24.

Off: The selected output responds normally.

5 Pulse 2

On: The selected output activates for the duration of the “Pulse 2 Time” system timer, see page 24.

Off: The selected output responds normally.

6 Delay 1

On: The selected output activates after the delay set by the “Delay 1 Time” system timer, see page 24.

Off: The selected output responds normally.

7 Delay 2

On: The selected output activates after the delay set by the “Delay 2 Time” system timer, see page 24.

Off: The selected output responds normally.

8 Armed Only

On: The selected output only activates if the system is armed.

Off: The selected output responds normally.

If “Pulse 1” and “Pulse 2” options are enabled then the selected output activates for the duration of the “Pulse 3 Time” system timer, see page 24.

If “Delay 1” and “Delay 2” options are enabled then the selected output activates after the delay set by the “Delay 3 Time” system timer, see page 24.

Panel Output Areas

This set of options allows the output areas to be assigned to each of the control panel high current outputs.

Locations: [6][1][3][1] to [6][1][3][5]
Panel Outputs 1 to 5: Output Areas.

Entry Mode: Bit Toggle Selection (see page 17).

1 Area 1
On: The panel output is assigned to area 1.
Off: The panel output is not assigned to area 1.

2 Area 2
On: The panel output is assigned to area 2.
Off: The panel output is not assigned to area 2.

3 Area 3
On: The panel output is assigned to area 3.
Off: The panel output is not assigned to area 3.

4 Area 4
On: The panel output is assigned to area 4.
Off: The panel output is not assigned to area 4.

5 Area 5
On: The panel output is assigned to area 5.
Off: The panel output is not assigned to area 5.

Output Types

The output types are grouped together in the following groups:

Group	Description
00	**Global** Global system output function.
01	**Reserved** Not available on the EC-P50.
02	**Control Timer** Control Timers 1 to 5.
03	**Remote Control** Remote control outputs 1 to 5.
04	**Link Control** Input linked logical conditioned outputs.
10	**Zone Count** Zones 1 to 50 count outputs.
20	**Zone Mimic** Zones 1 to 50 mimic outputs.
30	**Zone Alarm** Zones 1 to 50 alarm outputs.
40	**Zone Tamper** Zones 1 to 50 tamper alarm outputs.
50	**Zone Masked** Zones 1 to 50 masked outputs.
60	**Zone Fault** Zones 1 to 50 fault outputs.
70	**Zone Bypassed** Zones 1 to 50 bypassed outputs.
80	**User Access** Users 00 to 50 access outputs.

00: Global

The table below list the output function available in this group:

No	Type & Description
0000	**Not Used** This output type does not activate.
0001	**AC Fault** This output type activates when the mains supply has been removed for the duration of the AC Fail timer.
0002	**ATS Fault** This output type activates when the on-board communicator detects a phone line fault (Alarm Transmission Fault).
0003	**Unset** This output type activates when the system is in the disarmed state.
0004	**Armed** This output type activates when the system is armed in any of the armed modes (Away or Stay)
0005	**Part Armed** This output type activates when the system is armed in any of the Stay armed modes.
0006	**Armed/Alarm** This output type activates when the system is armed and pulses when an alarm is generated.
0007	**Bell Active** This output type activates when an alarm is generated (it may be delayed if the bell delay time is greater than zero). The duration of this output type is controlled by the “Bell Duration” timer.
0008	**Strobe Active** This output type activates when an alarm is generated and deactivates when the system is reset
0009	**Alarm** This output type activates when an intruder alarm is generated.
0010	**Confirmed Alarm** This output type activates when two different zones cause an intruder alarm.
0011	**Alarm Abort** This output type activates when the user disarms the system after an alarm and within the “Abort Delay” period.
0012	**Fire Alarm** This output type activates when a fire alarm is generated.
0013	**PA Alarm** This output type activates when a panic alarm is generated.
0014	**Duress Alarm** This output type activates when a duress alarm is generated.
0015	**24hr Alarm** This output type activates when a 24hr alarm is generated.
0016	**Medical Alarm** This output type activates when a medical alarm is generated.
0017	**Tamper Alarm** This output type activates when a tamper alarm is generated.
0018	**Ready** This output type activates when the system is ready for arming, i.e. all zones are healthy.
0019	**Trouble** This output type activates when a trouble alarm is generated.
0020	**Alert** This output type activates when an alert event is generated and deactivates when the user has acknowledged the alert.
0021	**Zone Bypass** This output type activates when one or more zones are bypassed.
0022	**In Walk Test** This output type activates when the user walk test mode is selected.
0023	**Flash 1 Second** This output type continually pulses on and off at a rate of 1 second.
0024	**User Test Active** This output type activates when the user test mode is selected in the “Bell Test” menu.

No	Type & Description
0025	**PSTN Fault** This output type activates when a fault is detected on the PSTN connected to the control panel.
0026	**PSTN Off Hook** This output type activates when an off-hook condition is detected on the PSTN connected to the control panel.
0027	**PSTN Ringing** This output type activates when ringing is detected on the PSTN connected to the control panel.
0028	**Battery Fault** This output type activates when a fault is detected with the control panel standby battery.
0029	**Box Tamper Fault** This output type activates when the control panel box tamper is open.
0030	**Bell Tamper Fault** This output type activates when the control panel bell tamper is open.
0031	**Engineer on Site** This output type activates when the engineer is logged on.
0032	**Detector Reset** This output type is normally active and is used for powering devices that require their power supply to be removed in order to reset them. The output deactivates for 5 seconds at the start of exit mode and when the system is reset.
0033	**Detector Latch** This output type is used to latch the alarm condition on detection devices that have a latch input.
0034	**System Low Volts** This output type activates when a low voltage fault is detected with the control panel standby battery.
0035	**In Exit** This output type activates when the system is in exit mode.
0036	**In Entry** This output type activates when the system is in entry mode.
0037	**In Second Entry** This output type activates when the system is in second entry mode.
0038	**In Alarm** This output type activates when any alarm is generated.
0039	**Auxiliary Alarm** This output type activates when an auxiliary alarm is generated.
0040	**Warning Alarm** This output type activates when a warning alarm is generated.
0041	**Keypads Locked** This output type activates when a security key is active.
0042	**Output Fault** This output type activates when a fault is detected on one of the monitored control panel outputs.
0043	**Call Engineer** This output type activates when the system requires an engineer access code in order to reset the system.
0044	**Device Fault** This output type activates when a device fault is detected.
0045	**Service Required** This output type activates when the service timer expires.
0046	**Cleaner Bypassed** This output type activates when a “Cleaner Bypass” is invoked.
0047	**2-Wire Smoke** This output type is specifically designed for use with “Panel Output 5”, when connecting 2-Wire Smoke Sensors.
0048	**2-Wire Smoke Alarm** This output type activates when a 2-Wire smoke alarm is generated.
0049	**2-Wire Smoke Fault** This output type activates when a 2-Wire smoke fault is generated.
0050	**Door Access** This output type activates for 30 seconds when any valid user code is entered.
0051	**Alarm Test** This output type activates when the user select the alarm sounder test.
0052	**Panel AC On** This output type activates when the mains supply is present.
0053	**Reset Active** This output type activates for 10 seconds after a user resets the system.
0054	**Arming Failed** This output type activates when the system fails to arm.
0055	**Confirm Device** This output type activates when the number of devices on the network differ to the number confirmed by the engineer.
0056	**Stay Arm 1** This output type activates when the system is armed in the Stay 1 mode.
0057	**Stay Arm 2** This output type activates when the system is armed in the Stay 2 mode.
0058	**Stay Arm 3** This output type activates when the system is armed in the Stay 3 mode.

Group 02: Control Timer

The EC-P50 has 5 control timers each timer can be assigned to an output:

No	Type & Description
0201	**Control Timer 1** This output type activates when Control Timer 1 is on and deactivates when Control Timer 1 is off.
0202-0205	**Control Timer 2 - 5** As Control Timer 1.

Group 03: Remote Control

There are 5 remote controlled outputs, which can be assigned to an output:

No	Type & Description
0301	**Remote Control 1** This output type is switched on and off via the *UDL* software, smart phone app and via a touch tone telephone.
0302-0305	**Remote Control 2 - 5** As Remote Control 1.

Group 04: Link Control

There are 99 Link controlled outputs, which can be assigned to an output:

No	Type & Description
0401	**Link Control 01** This output type is controlled by a combination of linked inputs.
0402-0499	**Link Control 02 - 99** As Link Control 01.

To create a link controlled output you must assign link inputs to the Link Control. The available inputs are:

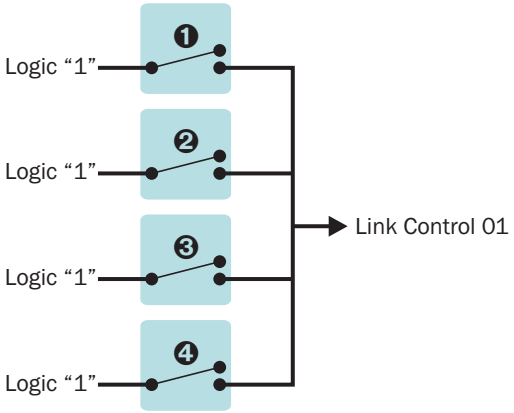
- Zone Links
- Control Timer Links
- Voice Message Links
- System Links
- User Link

The inputs can be assigned to the Link Control to perform either a logical “OR” function or a logical “AND” function. The logic function is controlled by the link input number:

001 - 099: Logical “OR” Link inputs.

101 - 199: Logical “AND” Link inputs.

Link Control Example 1
In the first example we will setup “Link Control 01” so that it activates when zone 1 “OR” zone 2 “OR” zone 3 is active “OR” user 02 is entered. The figure below show the logic diagram for this:



The four switches represent the link inputs and programmed as follows:

❶ Location 1901: Zone 01 Link = 001 (Link Control 01 “OR”).

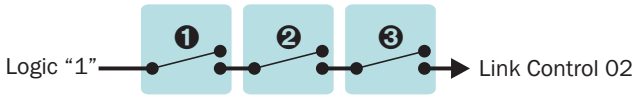
❷ Location 1902: Zone 02 Link = 001 (Link Control 01 “OR”).

❸ Location 1903: Zone 03 Link = 001 (Link Control 01 “OR”).

❹ Location 8502: User 02 Link = 001 (Link Control 01 “OR”).

As the figure above shows the Link Control 01 will be active (logic 1) when any of the input links are closed (active). Now that Link Control 01 is configured it can be assigned to a panel output or voice message trigger.

Link Control Example 2
In this example we will setup “Link Control 02” so that it activates when zone 4 “AND” zone 5 are active “AND” when the system is armed. The figure below shows the logic diagram for this:



The three switches represent the link inputs and are programmed as follows:

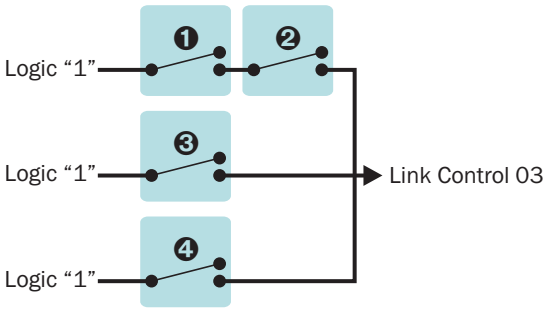
❶ Location 1904: Zone 04 Link = 102 (Link Control 02 “AND”).

❷ Location 1905: Zone 05 Link = 102 (Link Control 02 “AND”).

❸ Location 3904: System Armed Link = 102 (Link Control 02 “AND”).

As the figure above shows, the Link Control 02 will be active (logic 1) only when ALL of the input links are closed (active).

Link Control Example 3
In this example we will setup “Link Control 03” so that it activates when zone 10 “AND” Control Timer 1 is on “OR” when the system is in exit mode “OR” when an intruder alarm occurs. The figure below show the logic diagram for this:



The four switches represent the link inputs and programmed as follows:

❶ Location 1910: Zone 10 Link = 103 (Link Control 03 “AND”).

❷ Location 3541: Control Timer 1 Link = 103 (Link Control 03 “AND”).

❸ Location 3935: System Exit Link = 003 (Link Control 03 “OR”).

❹ Location 3909: System Intruder Alarm Link = 003 (Link Control 03 “OR”).

As the figure above shows the Link Control 03 will be active (logic 1) only when link input 1 and 2 are closed (active) or when either link inputs 3 and 4 are closed (active).

Group 10: Zone Count

The zone activity count threshold of each zone can be assigned to an output:

No	Type & Description
1001	**Zone 01 Count** This output type activates when zone 01 activity count reaches the threshold set by the “Zone Warning” counter. See page 24.
1002-1050	**Zone 02 - 50 Count** As Zone 01 Count.

Group 20: Zone Mimic

The mimic condition of each zone can be assigned to an output:

No	Type & Description
2001	**Zone 01 Mimic** This output type activates when zone 01 is active and deactivates when zone 01 is healthy.
2002-2050	**Zone 02 - 50 Mimic** As Zone 01 Mimic.

Group 30: Zone Alarm

The alarm condition of each zone can be assigned to an output:

No	Type & Description
3001	**Zone 01 Alarm** This output type activates when zone 01 generates an alarm and deactivates when the alarm is reset.
3002-3050	**Zone 02 - 50 Alarm** As Zone 01 Alarm.

Group 40: Zone Tamper

The tamper condition of each zone can be assigned to an output:

No	Type & Description
4001	**Zone 01 Tamper** This output type activates when zone 01 generates a tamper alarm and deactivates when the alarm is reset.
4002-4050	**Zone 02 - 50 Tamper** As Zone 01 Tamper.

Group 50: Zone Masked

The mask condition of each zone can be assigned to an output:

No	Type & Description
5001	**Zone 01 Masked** This output type activates when zone 01 generates a mask fault and deactivates when the fault is cleared and reset.
5002-5050	**Zone 02 - 50 Masked** As Zone 01 Masked.

Group 60: Zone Fault

The fault condition of each zone can be assigned to an output:

No	Type & Description
6001	**Zone 01 Fault** This output type activates when zone 01 generates a fault and deactivates when the fault is cleared and reset.
6002-6050	**Zone 02 - 50 Fault** As Zone 01 Fault.

Group 70: Zone Bypassed

The bypass condition of each zone can be assigned to an output:

No	Type & Description
7001	**Zone 01 Bypassed** This output type activates when zone 01 is bypassed and deactivates when the zone is reinstated.
7002-7050	**Zone 02 - 50 Bypassed** As Zone 01 Bypassed.

Group 80: User Access

The system access of each user can be assigned to an output:

No	Type & Description
8000	**User 00 Access** This output type activates for 30 seconds after user 00 has entered their access code.
8001-8050	**User 01 - 50 Access** As User 00 Access.

Communication Ports

These two options allow the operating mode for the two on-board communication ports to be configured.

Locations: 6201 - Com Port 1: Mode.
6202 - Com Port 2: Mode.

Entry Mode: Selection List (see page 16).

0 UDL USB-Link
This mode configures the selected communication port for UDL USB-Link operation. The USB-Link should be connected to the computer and the other end should be connected to the selected control panel communication port.

1 Printer
This mode configures the selected communication port for printer operation. Use this mode when using a terminal program via the USB-Link to capture the printer output from the control panel.

2 3rd Party Module
This mode configures the selected communication port for a 3rd Party Module operation. Use this mode when connecting a supported 3rd party communication module to the control panel.

3 Communication Module
This mode configures the selected communication port for Communication Module operation. Use this mode when connecting any Eclipse communication module to the control panel.

4 Contact ID
This mode configures the selected communication port for Contact ID operation. In this mode the Contact ID in ASCII format is sent to the port.

5 Debug USB-Link
This mode configures the selected communication port for data debug operation. Use this mode when using a terminal program via the USB-Link to capture the debug data from the control panel.

GSM & SMS Centre

These options allow the GSM and SMS Centre to be configured.

Locations: 6301 - GPRS APN Name
6302 - GPRS APN User
6303 - GPRS APN Password
6304 - SIM Pin
6302 - SIM Credit Code
6311 - SMS Service Centre

Entry Mode: String Edit - Number Mode (see page 18).

GPRS APN Name
The Access Point Name (APN) used by the GSM network operator for IP packet data communication.

GPRS APN User
The APN user name used to log into the APN.

GPRS APN Password
The APN password name used to log into the APN.

Listed below are the GPRS setting used by the major UK GSM network operators:

Operator	APN	User	Password
Vodafone	internet	web	web
Orange	Orangeinternet	*	*
O2	Mobile.o2.co.uk	web	web
T-Mobile	General.t-mobile.uk	*	*
Three	3internet	*	*

* = Leave blank.

SIM Pin
If the SIM is protected by a PIN, then the number must be entered in this location in order for correct operation.

SIM Credit Code
If the GSM network operator supports credit balance via USSD, then enter the USSD code, e.g., *123#.

SMS Service Centre Number
The system can send SMS messages to mobile telephones via the standard PSTN telephone network. To achieve this, it uses the ETSI ES 201 912 protocol 1. This protocol is not supported worldwide so please check with your telephone provider. Listed below are the SMS Centre numbers for supported countries and operators:

Country	Operator	SMS Centre Number
UK	BT	17094009
Ireland	Eirecom	17409900
Germany	T-Com	0193010
Belgium	Belgacom	14974800
France	France Telecom	0809101000
Switzerland	Swisscom	0622100000
Netherlands	KPN Telecom	0673644444
South Africa	Telkom	1091969

Caller Line Identity must be enabled in order for the SMS Service Centre to accept the message.

IP Configuration
These options allow the IP details to be configured and are required when using the EC-COM/IP module.

Locations: 6401 - IP Address
6402 - Subnet Mask
6403 - Gateway Address
6404 - Port Number

Entry Mode: String Edit - Number Mode (see page 18).

IP Address
A valid IP address must be assigned to the module. It must be entered in dot-decimal notation, e.g. “192.168.0.58”. Enter 🏠3 to insert a “.”.

Subnet Mask
The subnet mask used on the network must be assigned to the module. It must be entered in dot-decimal notation, e.g. “255.255.255.0”. Enter 🏠3 to insert a “.”.

Gateway Address
The gateway address (normally the ADSL router) used on the network must be assigned to the module. It must be entered in dot-decimal notation, e.g. “192.168.0.1”. Enter 🏠3 to insert a “.”.

Port Number
A valid port number must be assigned to the module. It must be entered as a decimal number, e.g. “8888”.

7. On-board Communicator

This section covers programming of the on-board communicator.

ARC 1-4: Telephone Number

This set of options allows the telephone number to be programmed for each ARC.

Locations: 7001 to 7004

ARC 1 to 4: Telephone Number.

Entry Mode: String Edit - Number Mode (see page 18).

Whilst programming telephone numbers, addition characters can be inserted to perform the following:

[#]1: Insert a "P" for a 1 second pause.

[#]2: Insert a "F" to force blind dialling (no dial-tone detection).

ARC 1-4: Account Number

This set of options allows the account number to be programmed for each ARC.

Locations: 7011 to 7014

ARC 1 to 4: Account Number.

Entry Mode: String Edit - Number Mode (see page 18).

ARC 1-4: Protocol

This set of options allows the protocol type to be programmed for each ARC.

Locations: 7021 to 7024

ARC 1 to 4: Protocol.

Entry Mode: Selection List (see page 16).

0 Disabled
The selected ARC is disabled.

1 Contact ID
The selected ARC is configured for Contact ID protocol. When triggered, the on-board communicator will dial the telephone number and attempt to communicate with the alarm receiver using Contact ID protocol.

2 Fast Format
The selected ARC is configured for Fast Format protocol. When triggered, the on-board communicator will dial the telephone number and attempt to communicate with the alarm receiver using standard Fast Format protocol. The control panel supports 16 Fast Format channels, see "Fast Format" on page 38.

3 Voice Format
The selected ARC is configured for Voice protocol. When triggered, the on-board communicator will dial the telephone number and play a fixed voice message relating to alarm event.

4 SMS Text
The selected ARC is configured for SMS protocol. When triggered, the on-board communicator will dial the SMS Centre and send a SMS text message to the telephone number programmed in the ARC. See page 34 for programming the SMS Centre number.

ARC 1-4: Protocol Options

This set of options allows the protocol options to be programmed for each ARC.

Locations: 7031 to 7034

ARC 1 to 4: Protocol Options.

Entry Mode: Bit Toggle Selection (see page 17).

1 Switch to Next ARC on failed Attempt
On: The on-board communicator switches to the next ARC in the sequence, if the current ARC attempt fails.

Off: The on-board communicator continues dialling the selected ARC until all its attempts have been used.

2 Use PSTN Pre-Dial
On: The on-board communicator dials the "PSTN Pre-Dial Number" before dialling the ARC telephone number. This is normally required when using an internal telephone system. See "PSTN Pre-Dial Number" on page 37.

Off: The on-board communicator only dials the ARC telephone number.

ARC 1-4: Call Sequence/Attempts

This set of options allows the call sequence to be programmed for each ARC.

Locations: 7041 to 7044

ARC 1 to 4: Call Sequence/Attempts.

Entry Mode: String Edit - Number Mode (see page 18).

The call sequence is entered as a string of digits; each number indicates the calling method:

1= PSTN (On-board Communicator)

2 = GSM Module

3 = IP Module

The call attempts are controlled by how many digits are entered. Here are some typical examples:

"111" = Attempt to call the selected ARC three times using the PSTN.

"1212" = Attempt to call the selected ARC four times alternating between PSTN and GSM.

"123" = Attempt to call the selected ARC three times using PSTN, then GSM and finally IP.

"31" = Attempt to call the selected ARC twice, first using IP then PSTN.

ARC 1-4: Reported Event Groups

This set of options allows you to control which group of events that are reported for each ARC.

Locations: 7051 to 7054

ARC 1 to 4: Reported Event Groups.

Entry Mode: Bit Toggle Selection (see page 17).

1 Alarms
On: The selected ARC reports events that are assigned in the alarm group.

Off: The selected ARC does not report alarm events.

2 Tampers
On: The selected ARC reports events that are assigned in the tamper group.

Off: The selected ARC does not report tamper events.

3 Faults
On: The selected ARC reports events that are assigned in the fault group.

Off: The selected ARC does not report fault events.

4 Open/Close
On: The selected ARC reports events that are assigned in the open/close group.

Off: The selected ARC does not report open/close events.

5 Test/Misc.

On: The selected ARC reports events that are assigned in the test/misc. group.

Off: The selected ARC does not report test/misc. events.

6 Restore

On: The selected ARC reports events that are assigned in the restore group.

Off: The selected ARC does not report restore events.

7 Custom

On: The selected ARC reports events that are assigned in the custom group.

Off: The selected ARC does not report custom events.

ARC 1-4: Cancel on Success

This set of options allows you to control communication sequence for each ARC. When the on-board communicator is triggered by an event it will call the ARC using the settings defined in ARC 1. If the communication attempt is successful, this option can be used to either cancel attempts for the remaining available ARC's or move on and call the next available ARC.

Locations: 7061 to 7064

ARC 1 to 4: Cancel on Success.

Entry Mode: Bit Toggle Selection (see page 17).

1 Stop ARC 1

On: The selected ARC will cancel further attempts to ARC 1 after a successful communication.

Off: The selected ARC will move on to next ARC after a successful communication.

2 Stop ARC 2

On: The selected ARC will cancel further attempts to ARC 2 after a successful communication.

Off: The selected ARC will move on to next ARC after a successful communication.

3 Stop ARC 3

On: The selected ARC will cancel further attempts to ARC 3 after a successful communication.

Off: The selected ARC will move on to next ARC after a successful communication.

4 Stop ARC 4

On: The selected ARC will cancel further attempts to ARC 4 after a successful communication.

Off: The selected ARC will move on to next ARC after a successful communication.

ARC 1-4: Areas

This option controls which areas report events to the ARC.

Locations: 7071 to 7074

ARC 1 to 4: Areas.

Entry Mode: Bit Toggle Selection (see page 17).

1 Area 1

On: Events that occur in area 1 are reported to ARC.

Off: Events that occur in area 1 are not reported.

2 Area 2

On: Events that occur in area 2 are reported to ARC.

Off: Events that occur in area 2 are not reported.

3 Area 3

On: Events that occur in area 3 are reported to ARC.

Off: Events that occur in area 3 are not reported.

4 Area 4

On: Events that occur in area 4 are reported to ARC.

Off: Events that occur in area 4 are not reported.

5 Area 5

On: Events that occur in area 5 are reported to ARC.

Off: Events that occur in area 5 are not reported.

ARC 1-4: IP Address

This option allows an IP address to be programmed for each ARC.

Locations: 7081 to 7084

ARC 1 to 4: IP Address.

Entry Mode: String Edit - Number Mode (see page 18).

Whilst programming IP address, addition characters can be inserted:

[#]3: Insert a ".".

ARC 1-4: IP Port Number

This option allows an IP port number to be programmed for each ARC.

Locations: 7091 to 7094

ARC 1 to 4: IP Port Number.

Entry Mode: String Edit - Number Mode (see page 18).

Options: Auto Test Call Period

The on-board communicator can be programmed to send a test call event to the ARC. This option controls the period in hours in which a test call is sent. The test call timer is reset every time a system event is successfully communicated, therefore a test call will only be sent once the timer reaches zero.

Location: 7101

Entry Mode: Number Entry (see page 18).

Options: Auto Test Call Time

This option allows you to program a time at which the on-board communicator sends a test call.

Location: 7102

Entry Mode: Number Entry (see page 18).

The time must be entered in a 24hr format, e.g., 2100 = 9:00PM.

To disable this feature program the time as 0000.

Options: Auto Test Days

This option allows you to select which days of the week the on-board communicator sends a test call.

Location: 7103

Entry Mode: Bit Toggle Selection (see page 17).

Options 1 to 7 = Sunday to Saturday.

Options: PSTN Pre-Dial Number

This option allows a PSTN pre-dial number (up to 3 digits) to be programmed. Most internal telephone systems require a digit to be dialled before an outside line and dial tone is made available. If this feature is required, make sure that the "Use PSTN Pre-Dial" option is enabled for the required ARC, see "Protocol Options" on page 36.

Location: 7104

Entry Mode: String Edit - Number Mode (see page 18).

Fast Format: Reporting Channels

When the ARC protocol is programmed as Fast Format, the channels that are used for reporting must be enabled or disabled.

Locations: 7201 - Reporting Channels 1 – 8.
7241 - Reporting Channels 9 – 16.

Entry Mode: Bit Toggle Selection (see page 17).

1 Report Channel 1/9
On: For location 7201 channel 1 is enabled, for location 7241 channel 9 is enabled.
Off: For location 7201 channel 1 is disabled, for location 7241 channel 9 is disabled.

2 Report Channel 2/10
On: For location 7201 channel 2 is enabled, for location 7241 channel 10 is enabled.
Off: For location 7201 channel 2 is disabled, for location 7241 channel 10 is disabled.

3 Report Channel 3/11
On: For location 7201 channel 3 is enabled, for location 7241 channel 11 is enabled.
Off: For location 7201 channel 3 is disabled, for location 7241 channel 11 is disabled.

4 Report Channel 4/12
On: For location 7201 channel 4 is enabled, for location 7241 channel 12 is enabled.
Off: For location 7201 channel 4 is disabled, for location 7241 channel 12 is disabled.

5 Report Channel 5/13
On: For location 7201 channel 5 is enabled, for location 7241 channel 13 is enabled.
Off: For location 7201 channel 5 is disabled, for location 7241 channel 13 is disabled.

6 Report Channel 6/14
On: For location 7201 channel 6 is enabled, for location 7241 channel 14 is enabled.
Off: For location 7201 channel 6 is disabled, for location 7241 channel 14 is disabled.

7 Report Channel 7/15
On: For location 7201 channel 7 is enabled, for location 7241 channel 15 is enabled.
Off: For location 7201 channel 7 is disabled, for location 7241 channel 15 is disabled.

8 Report Channel 8/16
On: For location 7201 channel 8 is enabled, for location 7241 channel 16 is enabled.
Off: For location 7201 channel 8 is disabled, for location 7241 channel 16 is disabled.

Fast Format: Restore Channels

When the ARC protocol is programmed as Fast Format, the channels that report a restore event can be enabled or disabled.

Locations: 7202 - Restore Channels 1 – 8.
7242 - Restore Channels 9 – 16.

Entry Mode: Bit Toggle Selection (see page 17).

1 Restore Channel 1/9
On: For location 7202 channel 1 is enabled, for location 7242 channel 9 is enabled.
Off: For location 7202 channel 1 is disabled, for location 7242 channel 9 is disabled.

2 Restore Channel 2/10
On: For location 7202 channel 2 is enabled, for location 7242 channel 10 is enabled.
Off: For location 7202 channel 2 is disabled, for location 7242 channel 10 is disabled.

3 Restore Channel 3/11
On: For location 7202 channel 3 is enabled, for location 7242 channel 11 is enabled.
Off: For location 7202 channel 3 is disabled, for location 7242 channel 11 is disabled.

4 Restore Channel 4/12
On: For location 7202 channel 4 is enabled, for location 7242 channel 12 is enabled.
Off: For location 7202 channel 4 is disabled, for location 7242 channel 12 is disabled.

5 Restore Channel 5/13
On: For location 7202 channel 5 is enabled, for location 7242 channel 13 is enabled.
Off: For location 7202 channel 5 is disabled, for location 7242 channel 13 is disabled.

6 Restore Channel 6/14
On: For location 7202 channel 6 is enabled, for location 7242 channel 14 is enabled.
Off: For location 7202 channel 6 is disabled, for location 7242 channel 14 is disabled.

7 Restore Channel 7/15
On: For location 7202 channel 7 is enabled, for location 7242 channel 15 is enabled.
Off: For location 7202 channel 7 is disabled, for location 7242 channel 15 is disabled.

8 Restore Channel 8/16
On: For location 7202 channel 8 is enabled, for location 7242 channel 16 is enabled.
Off: For location 7202 channel 8 is disabled, for location 7242 channel 16 is disabled.

Fast Format: Open/Close Channels

When the ARC protocol is programmed as Fast Format, the channels that report an Open/Close event can be enabled or disabled.

Locations: 7203 - Open/Close Channels 1 – 8.
7243 - Open/Close Channels 9 – 16.

Entry Mode: Bit Toggle Selection (see page 17).

1 Open/Close Channel 1/9
On: For location 7203 channel 1 is enabled, for location 7243 channel 9 is enabled.
Off: For location 7203 channel 1 is disabled, for location 7243 channel 9 is disabled.

2 Open/Close Channel 2/10
On: For location 7203 channel 2 is enabled, for location 7243 channel 10 is enabled.
Off: For location 7203 channel 2 is disabled, for location 7243 channel 10 is disabled.

3 Open/Close Channel 3/11
On: For location 7203 channel 3 is enabled, for location 7243 channel 11 is enabled.
Off: For location 7203 channel 3 is disabled, for location 7243 channel 11 is disabled.

4 Open/Close Channel 4/12
On: For location 7203 channel 4 is enabled, for location 7243 channel 12 is enabled.
Off: For location 7203 channel 4 is disabled, for location 7243 channel 12 is disabled.

5 Open/Close Channel 5/13
On: For location 7203 channel 5 is enabled, for location 7243 channel 13 is enabled.

Off: For location 7203 channel 5 is disabled, for location 7243 channel 13 is disabled.

6 Open/Close Channel 6/14

On: For location 7203 channel 6 is enabled, for location 7243 channel 14 is enabled.

Off: For location 7203 channel 6 is disabled, for location 7243 channel 14 is disabled.

7 Open/Close Channel 7/15

On: For location 7203 channel 7 is enabled, for location 7243 channel 15 is enabled.

Off: For location 7203 channel 7 is disabled, for location 7243 channel 15 is disabled.

8 Open/Close Channel 8/16

On: For location 7203 channel 8 is enabled, for location 7243 channel 16 is enabled.

Off: For location 7203 channel 8 is disabled, for location 7243 channel 16 is disabled.

Channel Type

When the ARC protocol is programmed as Fast Format, the channel type must be allocated to a system output type.

Locations: 7211 to 7218

Channels 1 to 8: Channel Type.

7251 to 7258

Channels 9 to 16: Channel Type.

Entry Mode: Selection List (see page 16).

Please refer to page 31 for a complete list of output types.

Channel Attributes

This set of options allows the output attributes to be assigned to the Fast Format channels.

Locations: 7221 to 7228

Channels 1 to 8: Channel Attributes.

7261 to 7268

Channels 9 to 16: Channel Attributes.

Entry Mode: Bit Toggle Selection (see page 17).

Please refer to page 30 for a complete list of output attributes.

Channel Areas

This set of options allows the output areas to be assigned to the Fast Format channels.

Locations: 7241 to 7248

Channels 1 to 8: Channel Areas.

7271 to 7278

Channels 9 to 16: Channel Areas.

Entry Mode: Bit Toggle Selection (see page 17).

Speech Dialler: Telephone Numbers 1 and 2

The on-board communicator also features a 4 channel speech dialler which can be used to call landline or mobile telephones to play a recorded voice message. Each channel can have two telephone numbers assigned. When the channel is triggered the on-board communicator will dial the number specified by the dial sequence and play the voice message associated with the channel for up to 1 minute. Pressing the [#] key on the telephone handset acknowledges the call and stops the dial sequence, pressing any other key also acknowledges the call, but the dial sequence will continues with next number.

The speech messages are recorded using the Eclipse UDL software package or a touch-tone telephone. The touch-tone method is covered in the "EC-P50 User Manual".

Locations: 7311 to 7314

Channels 1 to 4: Telephone Number 1.

7321 to 7324

Channels 1 to 4: Telephone Number 2.

Entry Mode: String Edit - Number Mode (see page 18).

Whilst programming telephone numbers, addition characters can be inserted to perform the following:

[1]: Insert a "P" for a 1 second pause.

[2]: Insert a "F" to force blind dialling (no dial-tone detection).

Speech Dialler: Dial Sequence

This set of options allows the dial sequence to be programmed for each speech dialler channel.

Locations: 7331 to 7334

Channels 1 to 4: Dial Sequence.

Entry Mode: String Edit - Number Mode (see page 18).

The call sequence is entered as a string of digits; each number indicates the calling method:

1: Dial Using Telephone No 1.

2: Dial Using Telephone No 2.

The call attempts are controlled by how many digits are entered. Here are some typical examples:

"1122" = Dial four times, first to telephone no 1 then telephone number 2.

"1212" = Dial four times alternating between telephone number 1 and 2.

Speech Dialler: Trigger Type

Each speech dialler channel can be triggered from any of the system output types, for example channel 1 could be programmed to "Intruder Alarm" whilst channel 2 could be programmed to "Fire Alarm". Please refer to page 31 for a complete list of output types and their corresponding type number.

Locations: 7341 to 7344

Channels 1 to 4: Trigger Type.

Entry Mode: Selection List (see page 16).

UDL Options

The set of options controls how the upload/download computer interacts with the control panel.

Location: 7400

Entry Mode: Bit Toggle Selection (see page 17).

1 2 Call Answer Phone Defeat

On: Incoming calls re answered when:

a) The remote UDL computer calls in and allows the panel to detect one or more rings.

b) The remote UDL computer ends the call.

c) The control panel answers the call immediately if the remote UDL computer calls again within 60 seconds.

Off: Incoming calls are answered after the "Ring Count" threshold is reached.

2 Auto Call-Back

On: After the remote UDL computer establishes a connection, the control panel ends the call and automatically calls the UDL computer.

Off: Call-Back only occurs if the remote UDL computer requests it.

3 User Call-Back

On: Remote UDL access can only be established if the user initiates from their end.

Off: Remote UDL access is enabled at all times.

4 Disable UDL when Armed

On: Remote UDL access is disabled when the system is armed.

Off: Remote UDL access is enabled at all times.

5 Disable Online Keypad

On: Remote UDL online keypad operation is disabled.

Off: Remote UDL online keypad operation is enabled.

UDL Password

The UDL password provides communication security with the remote UDL computer. The UDL password in the control panel must match the UDL password configured in the Eclipse UDL software package in order to establish a communication link.

Location: 7401

Entry Mode: Number Mode (see page 18).

The UDL password can be reset to a default setting of 123456 by entering *6# within 10 seconds of powering up the system.

UDL Ring Count

This counter controls how the on-board communicator takes to answer an incoming call.

Location: 7402

Entry Mode: Number Mode (see page 18).

Call-Back Number

When using the call back feature of the Eclipse UDL software, the telephone number of remote UDL computer's modem must be configured using this option.

Location: 7403

Entry Mode: String Edit - Number Mode (see page 18).

UDL Dial Sequence

This set of options allows the dial sequence to be programmed when using the call-back feature.

Location: 7404

Entry Mode: String Edit - Number Mode (see page 18).

1: PSTN (On-board Communicator)

2: SM Module

3: IP Module

The call attempts are controlled by how many digits are entered. Here are some typical examples:

"111" = Attempt to call-back the remote UDL computer three times using only PSTN.

"1212" = Attempt to call-back the remote UDL computer four times alternating between PSTN and GSM.

"123" = Attempt to call-back the remote UDL computer three times using PSTN, then GSM and finally IP.

UDL Remote IP Address

This is the IP Address of the remote UDL computer.

Location: 7405

Entry Mode: String Edit - Number Mode (see page 18).

UDL Remote IP Port

This is the IP port number of the remote UDL computer.

Location: 7406

Entry Mode: String Edit - Number Mode (see page 18).

UDL Account Number

This is the account number used by the Eclipse UDL database. The Eclipse UDL software will automatically assign this when you create a new account. However, the account number can be manually entered if required.

Location: 7407

Entry Mode: String Edit - Number Mode (see page 18).

8. System Users

This section covers programming of the system users.

The EC-P50 has a total of 51 users:

User 00 is the “Engineer” which has a default code of 1234.

User 01 is the “Master” user which has a default code of 5678.

Users 02 to 50 can be programmed to any user type and default to “Not in Use”.

User Access Code

Each user must be assigned an access code in order to operate the system; access codes may be 4, 5 or 6 digits in length. This option allows each user to be assigned an access code.

Locations: 8100 to 8150

Users 00 to 50: Access Code.

Entry Mode: String Edit - Number Mode (see page 18).

User Type

The user type defines the level access the user has in order to operate the system. This option allows the selected user type to be assigned. User 00 and User 01 types cannot be changed.

Locations: 8202 to 8250

Users 02 to 50: User Type.

Entry Mode: Selection List (see page 16).

0 Not in Use
The selected user is not in use.

1 Engineer
The selected user is an engineer and can access all options within the engineer’s program menu.

2 Technician
The selected user is a Technician and can access all options except the onboard communication options within the engineer’s program menu.

3 Master
The selected user is a Master user and can access all options within the user menu and program new users.

4 Manager
The selected user is a Manager user and can access all options within the user menu.

5 Standard
The selected user is a Standard user and can access the following options from the user menu: “Away Arm”, “Stay Arm”, “Do walk Test” and “Change Code”.

6 Local Standard
The selected user is a Local Standard user and can access the following options from the user menu: “Away Arm”, “Stay Arm”, “Do walk Test” and “Change Code”. This user type can only arm and disarm areas that are assigned to both their code and keypad. For example, if the user is assigned to all areas, and keypad 1 is assigned to area 1, then the user can only arm and disarm area 1 from keypad 1.

7 Arm Only
The selected user is an Arm Only user and can only access the arming options within the user menu.

8 Duress
The selected user is a Duress user and operates the same as a standard user, however, on entering the access code a silent duress alarm is generated and if programmed, the event is signalled to alarm receiving centre.

9 Access Control
The selected user is an Access Control user and on entering the access code the relevant “User Access” and “Door Access” output is activated.

User Locked By

The user access can be locked out by the use of a “Link Controlled” output (see page 32). The “Link Control” output can be configured to switch on by various link input conditions, e.g., “Link Control 01” could be programmed to operate when Control Timer 2 is active. This means that the user access code is disabled when the selected “Link Control” output is on and can be used for locking out selected users for particular conditions, e.g. you may want to prevent a user from accessing the system over the weekend.

Locations: 8300 to 8350

Users 00 to 50: User Locked By.

Entry Mode: Number Entry (see page 18).

User Name

Each user can be assigned a 8 character label that is displayed on LCD remote keypads when viewing the system event log.

Locations: 8400 to 8450

Users 00 to 50: User Name.

Entry Mode: String Edit - Text Mode (see page 18).

User Link

Each user can be assigned a “Link” number, which in turn is used to control “Link Control” output types, for details on link control, see page 32.

Locations: 8500 to 8550

Users 00 to 50: User Link.

Entry Mode: Number Entry (see page 18).

User Areas

Each user must be assigned to one or more areas in order for them to access the required area of protection. Users that are assigned to multiple areas will be given the option to select the areas they want to arm or disarm.

Locations: 8600 to 8650

Users 00 to 50: Areas.

Entry Mode: Bit Toggle Selection (see page 17).

9. Utilities

This section covers the programming of the system utilities.

Time and Date

The system has a real time clock that must be programmed so that the time and date is recorded correctly in the system event log. The time and date is also displayed on the bottom line of the LCD keypad. If the system looses all power, the time and date is maintained for approximately 2 days.

Locations: 9001 - Hours.
9002 - Minutes.
9003 - Seconds.
9004 - Day.
9005 - Month.
9006 - Year.

Entry Mode: Number Entry (see page 18).

User Menus

The engineer can access the user menus without exiting the engineer's program mode by entering 91*. The table below shows the user menu options and the command number used to access them.

Group	Command	Function
Arming	[home]	Away Arm
	[home]	Stay Arm
Reset	[reset]	Reset alarm or fault
System Tests	11	Walk Test
	12	Test Bell & Outputs
	13	Do Test Call
Event Log & UDL	21	View Log
	22	Print Log
	23	Call UDL
	24	Chime on/off
Users	81	Change code
Menus	91	Program Mode
	92	View Zone Status
	98	Confirm Devices
	99	Exit Menu

When using the LCD keypad the menu options and their command numbers are scrolled on the bottom line of the LCD. If the * key is pressed, the menu option that is currently being displayed is selected.

Away Arm [home]

Selecting this option will cause the system to start the exit mode and attempt to away arm the system. To cancel or disarm simply enter a valid user code.

Stay Arm [home]

Selecting this option will cause the system to start the exit mode and attempt to stay arm (1) the system. To cancel or disarm simply enter a valid user code.

Walk Test 11*

Selecting this option allows the detection zones to be tested without causing an alarm. As each zone is activated, the keypad generates an acknowledgment tone and the zone number is added to the list of tested zones. The tested zones are scrolled on the keypad display. When you have finished testing the zones, press [reset] to exit this option.

Test Bell & Outputs 12*

Selecting this option allows the bell, strobe and any outputs that have the "User Test" attribute to be switched on and off. After selecting this command keys 1 to 4 toggle on and off the following:

1 Bell Output
2 Strobe Output
3 User Test Outputs
4 Alarm Sounder

Press [reset] to exit this option.

Do Test Call 13*

Selecting this option will cause the on-board communicator to send a test call to the alarm receiving centre.

View Event Log 2 1 *

Selecting this option allows the event log to be viewed. The following keys are used when navigating through the log:

* Go backward.

Go forward.

Press ↺ to exit this option.

Print Event Log 2 2 *

Selecting this option causes the contents of the event log to be sent to the printer. Press ↺ to exit this option.

Either Com1 or Com2 must be configured for “Printer” mode in order to use this feature.

Call UDL 2 3 *

Selecting this option will cause the on-board communicator to call the remote computer modem, so that a remote link can be established.

The remote computer must be setup so that it is ready to receive the call. Only select this option when instructed to do so by the remote computer operator.

Chime on/off 2 4 *

Selecting this option will globally turn chime on or off.

Change Code 8 1 *

Selecting this option allows you to change your own access code. After selecting this option enter the new access code (4 - 6 digits) followed by *.

Program Mode 9 1 *

Selecting this option takes you back to the normal engineer’s program mode.

View Zone Status 9 2 *

Selecting this option either from engineer’s mode or the user menu allows you view the status/count of each zone. The following keys are used when using this option:

View next zone.

* View previous zone.

Press 0 to 4 to select the zone bank number.

Press ⌂ to toggle between status and count.

Press ↺ to exit this option.

Confirm Devices 9 8 *

Selecting this option either from engineer’s mode or the user menu allows you view and confirm the devices connected to the control panel network. See “Confirm Devices” on page 14.

Exit Menu 9 9 *

Selecting this option returns the system to the normal disarmed state.

Log Events

LCD	LED	Description
Intruder Alarm ??	IA ??	Intruder alarm activated by zone ??.
Intruder Restore ??	Ir ??	Intruder zone ?? restore.
Perimeter Alarm ??	PEA ??	Perimeter alarm activated by zone ??.
Perimeter Restore ??	PEr ??	Perimeter zone ?? restore.
24Hr Alarm ??	24HrA ??	24 hour alarm activated by zone ??.
24Hr Restore ??	24Hrr ??	24 hour zone ?? restore.
Entry Alarm ??	EA ??	Entry alarm activated by zone ??.
Entry Restore ??	Er ??	Entry zone ?? restore.
Warning Alarm ??	WA ??	Warning alarm activated by zone ??.
Warning Restore ??	Wr ??	Warning zone ?? restore.
Medical Alarm ??	dA ??	Medical alarm activated by zone ??.
Medical Restore ??	dr ??	Medical zone ?? restore.
Fire Alarm ??	FA ??	Fire alarm activated by zone ??.
Fire Restore ??	Fr ??	Fire zone ?? restore.
PA Alarm ??	PA ??	Panic alarm activated by zone ??.
PA Restore ??	Pr ??	Panic alarm zone ?? restore.
PA Silent Alarm ??	PSA ??	Silent panic alarm activated by zone ??.
PA Silent Restore ??	PSr ??	Silent panic alarm ?? restore.
Aux Alarm ??	AUA ??	Auxiliary alarm activated by zone ??.
Aux Restore ??	AUr ??	Auxiliary zone ?? restore.
Monitor Alarm ??	mA ??	Monitor alarm activated by zone ??.
Monitor Restore ??	mr ??	Monitor zone ?? restore.
Zone ?? Bypassed	by ??	Zone ?? bypassed.
Zone ?? Unbypassed	Uby ??	Zone ?? unbypassed.
Tamper ?? Alarm	tA ??	Tamper alarm activated by zone ??.
Tamper ?? Restore	tr ??	Tamper zone ?? restore.
Zone ?? Fault Alarm	FLtA ??	Fault alarm activated by zone ??.
Zone ?? Fault Restore	FLtr ??	Fault on zone ?? has restored.
Zone ?? Mask Alarm	mA ??	Mask alarm activated by zone ??.
Zone ?? Mask Restore	mr ??	Mask alarm on zone ?? has restored.
Low Bat.Alarm ??	Lb ??	Low battery alarm from wireless device on zone ??.
Low Bat.Restore ??	Lr ??	Low battery alarm on zone ?? has restored.
Bypass Active ??	byA ??	Group bypass activated by zone ??.
Bypass Restore ??	byr ??	Group bypass by zone ?? has restored.
Keyswitch Active ??	SA ??	Keyswitch connected to zone ?? is active.
Keyswitch Restore ??	Sr ??	Keyswitch connected to zone ?? has restored.
Alarm Active	AA	Intruder Alarm is active.
Bells Active	bA	Bell output is active.
Re-arm Lockout	rL	Re-arm lockout has occurred and no more alarm can be generated for the armed period.
Confirmed Alarm	CA	Confirmed alarm generated (two different zones activated).
Remote Access ??	rA ??	Remote access via PC number ??.
User ??	Ur ??	User access by user ??.
Duress ??	dr ??	Duress alarm by user ??.
User Tag ??	Ut ??	User ?? proximity tag access.
User ?? Lockout	UL ??	User ?? has been locked out from using the system.
User Tag ?? Lockout	tL ??	User ?? proximity tag has been locked out from using the system.
Code Tamper ?	Ct ?	Code tamper (invalid code) generated at keypad ?.
Exit Started ??	ESU ??	Exit mode started by user ??.
Exit Started Timer ?	ESt ??	Exit mode started by control timer ?.

LCD	LED	Description
Exit Started Zone ??	ESC ??	Exit mode started by zone ??.
Exit Stopped	ES	Exit mode stopped.
Exit Failed #??	EF ??	Exit mode failed by zone ??.
Entry Started ??	En ??	Entry mode stared by zone ??.
Entry Timeout	Et	Entry timeout alarm.
System Armed	SA	System armed.
System Disarmed	Sd	System disarmed.
Stay Armed #?	S ?	Stay armed #? (? = 1, 2 or 3).
Arm Failed #?	AF ?	Arming failed.
Armed With ATS Fault	AU	The system was armed with an Alarm Transmission System (ATS) fault.
Auto Armed	AA	The system was automatically armed.
Auto Disarmed	Ad	The system was automatically disarmed.
Remote Armed	rA	The system was automatically armed remotely.
Remote Disarmed	rd	The system was automatically disarmed remotely.
System Power Up	SU	The system was powered up.
AC Failed	ACOFF	The mains ac supply has been switched off.
AC Restore	ACOn	The mains ac supply has been restored.
Battery Fault #?	bF	Battery fault #? (1: Presence Fail; 2: Load Test Fail).
Battery Restore	br	Battery fault restored.
Low Battery Alarm	Lb	The system standby battery voltage is low (The system is running on battery only).
Time/Date Changed	td	The system time and date has been changed.
Engineer on site	EnOn	The engineer access code has been entered.
Engineer off site	EnOF	The engineer has logged off.
Bell Fuse Alarm	bFAL	The bell fuse has gone open circuit (electronic fuse).
Bell Fuse Restore	bFAr	The bell fuse has restored.
Aux Fuse Alarm	AFAL	The auxiliary 12V fuse has gone open circuit (electronic fuse).
Aux Fuse Restore	AFAr	The auxiliary 12V fuse has restored.
Battery Fuse Alarm	bFAL ?	The battery fuse has gone open circuit (electronic fuse).
Battery Fuse Restore	bFAr	The battery fuse has restored.
Box Tamper Alarm	btAL	The control panel box tamper has been activated.
Box Tamper Restore	btAr	The control panel box tamper has restored.
Keypad ? Tamper	rtAL ?	Keypad ? box tamper has been activated.
Keypad ? Tamp Rest	rtAr ?	Keypad ? box tamper has restored.
Device ?? Lost	rL ?	Device ?? on network lost.
Device ?? Found	rF ?	Device ?? on network found.
Walktest Started	tS	User walk test mode started.
Walktest Ended	tE	User walk test mode ended.
Bell Test Started	btS	User bell test started.
Bell Test Ended	btE	User bell test ended.
Auto Test Call	AtC	An automatic test call was sent to the Alarm Receiving Centre (ARC).
Manual Test Call	tC	A manual (user) test call was sent to the Alarm Receiving Centre (ARC).
Timer ? On	Ct ? On	Control Timer ? is on.
Timer ? Off	Ct ? OFF	Control Timer ? is off.
Zone Test ?? Days	tS ??	Zone soak test has started and will run for ?? days.
Zone ?? Test Fail	tF ??	Zone ?? has failed whilst on test.
First Knock ??	Fn ??	First activation from zone ??. The zone has the “Double Knock” attribute.
Alarm Aborted	AA	The user has disarmed the system within the abort delay period.
Bell Tamper Alarm	btAL	The bell tamper alarm has been activated.
Bell Tamper Restore	btAr	The bell tamper has restored.
ATS Fault	AtSF	The Alarm Transmission System (ATS) has detected a fault with the telephone line.
ATS Restored	AtSr	The ATS Fault has restored.

LCD	LED	Description
Keypad PA ?	rP ? A	A panic alarm was generated at keypad ? by pressing keys 7 and 9.
Keypad Fire ?	rF ? A	A fire alarm was generated at keypad ? by pressing keys 1 and 3.
Keypad Medical ?	rd ? A	A medical alarm was generated at keypad ? by pressing keys 4 and 6.
Output ? Fault	OPF ?	The control panel has detected a fault on panel output ?.
Output ? Restore	OPr ?	The fault on panel output ? has restored.
Com Module Alarm	CPA	The communication module has been disconnected/lost from com port ?.
Com Module Restore	CPr	The communication module has been connected/found from com port ?.
Zone ?? Count Alarm	??CA	Zone ?? has reached the “Count Logging” threshold.

LED Indications

The figure bellow shows the LED indicators for both the LED and LCD remote keypads:

LED Keypad

LCD Keypad

Icon	Name	LED	Description
	Power	Green	Mains AC power is present.
	Ready	Green	The system is ready for arming.
	Armed	Green	The system is armed (Away or Stay).
	Fault	Yellow	The system has one or more faults.
	Bypass	Yellow	One or more zones are bypassed.
	Alert	Red	One or more faults/alarms require attention.
	Alarm	Red	One or more alarms have occurred.

Fault & Status Messages

Faults and status messages may be indicated during the disarmed mode or after the user disarms the system. The table below shows the message for both the LED and LCD remote keypads:

LCD	LED	Description
AC mains off	AC	Mains AC power is off.
Battery Fault	bF	The standby battery in the control panel has a fault.
Phone Line Fault	LF	The on-board communicator has detected a fault with the telephone line.
Panel Tamper	Pt	The box tamper on the control panel has activated.
Bell Tamper	bt	The bell tamper on the control panel has activated.
Call Engineer	CE	Call engineer to reset the system.
Service Required	Cr	The service timer has expired and the installation company should be contacted.
2-Wire Smoke Alarm	SA	One or more 2-wire smoke detectors have activated a fire alarm.
2-Wire Smoke Fault	SF	One or more 2-wire smoke detectors have a fault.
Keypad ? Lost	r?	Keypad ? is no longer reporting to the control panel.
Keypad ? Tamper	t?	The box tamper on keypad ? has activated.
Expander 1 Lost	E1	Expander 1 is no longer reporting to the control panel.
Expander 1 Tamper	t1	The box tamper on expander 1 has activated.
Output ? Fault	O?	Output ? on the control panel has a fault.
Zone ??: Alarmed	??	Alarm activated on zone ??.

Resetting Faults & alarms

If a fault or alarm has occurred it can be reset as follows:

1. Enter a valid access code, this will silence the alarm or cancel the alert.
2. Enter a valid access and press ⏲ to reset the system.
3. Enter ✱99 to exit the menu. If the fault is still present it will still be indicated.

4. Specifications

EC-P50 Control Panel

Electrical

Supply Voltage:	230Vac.
Rated PSU Output:	1.5A.
Ripple:	<5%.
Current:	<100mA quiescent.
	<150mA in alarm.
Standby Battery:	12.0V SLA, 7Ah.
Recharge Time:	24hr @300mA; 10hr @750mA.
Low Voltage Alarm:	10.5V.
Deep Discharge Cut-off:	9.5V.
Fuses:	Mains: 315mA, 250V, 20mm.
	Auxiliary 12V: 900mA PTC.
	Bell: 900mA PTC.
	Battery: 1.6A PTC.
On-board Zones:	10.
Panel Outputs 1 - 5:	1A switched to 0V (supervised).
Speaker Output:	Minimum load 16Ω.
2-Wire Smoke Detectors:	ESL429CT or System Sensor 2100TS.
On-board Communicator:	Protocols: Fast Format, Contact ID, Voice, SMS ETSI ES 201 912 protocol 1, Speech Dialler and V21 Modem.
	Dialling: Pulse or DTMF.
	REN Rating: 1.0.

Environmental

Operating Temperature:	-25°C to +55°C (-13°F to +131°F).
Storage Temperature:	-25°C to +60°C (-13°F to +140°F).
Max. Humidity:	95% non-condensing.
EMC:	Residential, commercial and light industrial.

Do not throw away the product with the normal household waste at the end of its life, but hand it in at an official collection point for recycling. The on-board battery also contains substances that may pollute the environment. Always remove the battery before you discard and dispose of the battery at an official collection point for batteries.

Physical

Dimensions:	280.0mm x 255.0mm x 95.0mm.
Housing:	3mm Polycarbonate.
Packed Weight:	975g.

EC-LED Remote Keypad

Electrical

Voltage:	9 – 16VDC.
Current:	25mA quiescent. 40mA when active.

Environmental

Operating Temperature:	-25°C to +55°C (-13°F to +131°F).
Storage Temp.:	-25°C to +60°C (-13°F to +140°F).
Max. Humidity:	95% non-condensing.
EMC:	Residential, commercial and light industrial.

Physical

Dimensions:	130.0mm x 102.0mm x 27.0mm.
Housing:	3mm Polycarbonate.
Packed Weight:	225g.

EC-LCD Remote Keypad

Electrical

Voltage:	9 – 16VDC.
Current:	20mA quiescent. 30mA when active.

Environmental

Operating Temperature:	-25°C to +55°C (-13°F to +131°F).
Storage Temperature:	-25°C to +60°C (-13°F to +140°F).
Max. Humidity:	95% non-condensing.
EMC:	Residential, commercial and light industrial.

Physical

Dimensions:	102.0mm x 130.0mm x 27.0mm.
Housing:	3mm Polycarbonate.
Packed Weight:	225g.

EC-EX10/I Zone Expander

Electrical

Voltage:	9 – 16VDC.
Current:	30mA.
Zone Inputs:	10 fully programmable.
Auxiliary 12V:	Protected by 1A electronic fuse (PTC).

Environmental

Operating Temperature:	-25°C to +55°C (-13°F to +131°F).
Storage Temperature:	-25°C to +60°C (-13°F to +140°F).
Max. Humidity:	95% non-condensing.
EMC:	Residential, commercial and light industrial.

Physical

Dimensions:	136.0mm x 174.0mm x 35.0mm.
Housing:	3mm Polycarbonate.
Packed Weight:	250g.

EC-EX10 Zone & Output Expander

Electrical

Voltage:	9 – 16VDC.
Current:	40mA.
Zone Inputs:	10 fully programmable.
Outputs:	OP1-8: 100mA; OP9-10: 1Amp.
Loudspeaker:	Minimum load of 16Ω.
Auxiliary 12V:	Protected by 1A electronic fuse (PTC).

Environmental

Operating Temperature:	-25°C to +55°C (-13°F to +131°F).
Storage Temperature:	-25°C to +60°C (-13°F to +140°F).

Max. Humidity:	95% non-condensing.
EMC:	Residential, commercial and light industrial.

Physical

Dimensions:	136.0mm x 174.0mm x 35.0mm.
Housing:	3mm Polycarbonate.
Packed Weight:	350g.

EC-EX10/O Output Expander

Electrical

Voltage:	9 – 16VDC.
Current:	30mA.
Outputs:	OP1-8: 100mA; OP9-10: 1Amp
Auxiliary 12V:	Protected by 1A electronic fuse (PTC).

Environmental

Operating Temperature:	-25°C to +55°C (-13°F to +131°F).
Storage Temperature:	-25°C to +60°C (-13°F to +140°F).
Max. Humidity:	95% non-condensing.
EMC:	Residential, commercial and light industrial.

Physical

Dimensions:	136.0mm x 174.0mm x 35.0mm.
Housing:	3mm Polycarbonate.
Packed Weight:	250g.

EC-COM/IP Communication Module

Electrical

Voltage:	9 – 16VDC.
Current:	70mA.

Environmental

Operating Temperature:	-25°C to +55°C (-13°F to +131°F).
Storage Temperature:	-25°C to +60°C (-13°F to +140°F).
Max. Humidity:	95% non-condensing.
EMC:	Residential, commercial and light industrial.

Physical

Dimensions:	65.0mm x 55.0mm x 15.0mm.
Packed Weight:	100g.

Standards

Safety

Conforms to European Union (EU) Low Voltage Directive (LVD) 2006/95/EC.

EMC

Conforms to European Union (EU) Electro-Magnetic Compatibility (EMC) Directive 2004/108/EC.

Security

Conforms to EN 50131-1 and EN 50131-3 Grade 2, Environmental Class IV.

CE

The CE mark indicates that the EC-P50 complies with the European requirements for safety, health, environment and customer protection.

Warranty

Zeta Alarm Systems by GLT Exports Ltd products are carefully designed to provide reliable problem-free operation. Product quality is carefully controlled during all manufacturing processes. The EC-P50 is covered against defects in material or faulty workmanship for a period of 2 years from the date of purchase. Due to our policy of continuous product improvement, Zeta Alarm Systems by GLT Exports Ltd reserves the right to change specification without prior notice.

As the EC-P50 is not a complete intruder alarm system, but only part of it, Zeta Alarm Systems by GLT Exports Ltd does not accept responsibility or liability for any damages whatsoever based on any claim that the unit failed to function correctly.

Notes

Notes

Technical Support

Email: support@zetaalarmsystems.com