



# **ESPRIT-APOLLO ADDRESSABLE FIRE CONTROL PANEL INSTALLATION, COMMISSIONING & OPERATING MANUAL**

This manual covers the installation, programming and commissioning of the one to two loop and one to four loop Esprit-Apollo Addressable fire alarm control panels

## INTRODUCTION

	
	
<p style="text-align: center;"><b>Haes Technologies Ltd, Unit 3, Horton Industrial Park, West Drayton, Uxbridge, UB7 8JD</b></p> <p style="text-align: center;"><b>22</b></p>	
<p>Model Number</p> <p>ESA-1006/1007</p>	<p>CPR Number</p> <p>2797 CPR 720738</p>
<p style="text-align: center;"><b>European Standard EN54-2: 1997 + A1: 2006</b></p> <p>Control and indicating equipment for fire detection and fire alarm systems for buildings.</p> <p style="text-align: center;">Provided Options (with requirements):</p> <p>Output to fire alarm devices, dependency type 'A', 'B' &amp; 'C', delays to outputs, test condition</p> <p style="text-align: center;"><b>European Standard EN54-4: 1998</b></p> <p>Power supply equipment for fire detection and fire alarm systems for buildings.</p>	
<p>Haes Technologies Ltd declare that the products identified below conform to the essential requirements specified in the Construction Products Regulation CPR305/2011/EU.</p> <p><b>In addition, the product complies with the following:</b></p> <p>Low Voltage Directive 2014/35/EC,</p> <p>IEC 62368-1: Safety of information technology equipment Electromagnetic Compatibility Directive 2014/30/EC</p> <p>EN61000-6-3:2007 + A1:2011 Emissions, Class B</p> <p>EN50130-4: 2011 + A1:2014 Immunity, Product Family Standard.</p> <p>This product has been designed to comply with the requirement of the low voltage safety and the EMC directives. Failure to follow the instructions may compromise its adherence to this standard.</p>	

List of optional functions with requirements:

EN54-2: 1997 + A1

Control and indicating equipment for fire detection and fire alarm systems for buildings

Provided options:

- 7.8 Outputs to Fire Alarm Devices
- 7.9 Fire alarm routing
- 7.11 Delays to outputs
- 7.12 Dependencies on more than one alarm signal
- 7.13 Alarm Counter
- 10 Test Condition
- 12.5 Integrity of transmission paths

EN54-4: 1997 +A2

Power supply equipment for fire detection and fire alarm systems for buildings.

Non-standard

Provided Options:

- Charge during alarm
- Earth fault monitoring
- UPS Mode
- Changeable password for Level 2
- Adjustable Date & Time



Link to PC configuration software download

# SAFETY

## IMPORTANT NOTICE

PLEASE READ THIS MANUAL CAREFULLY BEFORE HANDLING THE EQUIPMENT AND OBSERVE ALL ADVICE GIVEN WITHIN IT.

THIS PARTICULARLY APPLIES TO THE PRECAUTIONS NECESSARY TO AVOID ELECTRO-STATIC DISCHARGE



## Important Safety Notes

The panel is safe to operate provided it has been installed in compliance with the manufacturer's instructions and used in accordance with this manual.

Hazardous voltages are present inside the panel—DO NOT open it unless you are qualified and authorised to do so. There is no need to open the panel's enclosure except to carry out commissioning, maintenance and remedial work. This work must only be carried out by competent service personnel who are fully conversant with the contents of the panel's installation manual and have the necessary skills for maintaining this equipment.

The product must be installed, commissioned and maintained for operation, including periodic checks, in accordance with applicable codes of practice, national standard regulations and local instructions for fire systems appropriate to the country and location of the installation. It is the responsibility of the system user to ensure it is regularly serviced and maintained in good working order.

This equipment is designed to be operated from 230VAC 50/60 Hz mains supplies and is of Class I construction. As such it must be connected to a protective earthing conductor in the fixed wiring of the installation. Failure to ensure that all conductive accessible parts of this equipment are adequately bonded to the protective earth will render the equipment unsafe.

## Disclaimer

No responsibility can be accepted by the manufacturer or distributors of this fire alarm panel for any misinterpretation of an instruction or guidance note or for the compliance of the system as a whole. The manufacturer's policy is one of continuous improvement and we reserve the right to make changes to product specifications at our discretion and without prior notice. E & O E.

## Warnings

	<p>Before installation, refer to the Ratings shown on the label inside the product and to the 'Specifications Chart' in this document. If you are unclear on any point, please DO NOT proceed. Contact the manufacturer or supplier for clarification and guidance.</p> <p>Only Trained service personnel should undertake the Installation, Programming and Maintenance of this equipment.</p>
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## Cautions

### Equipment Guarantee



This product has been manufactured in conformance with the requirements of all applicable EU Council Directives and is not guaranteed unless the complete system is installed and commissioned in accordance with the laid down national standards by an approved and competent person or organisation.

This product has been designed to comply with the requirements of the Low Voltage Safety and the EMC Directives. Failure to follow the installation instructions may compromise its adherence to these standards.



Waste Electrical and Electronic Equipment Directive

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## PRODUCT OVERVIEW

Quality, reliability, ease of use and feature rich are attributes that are consistent across the entire range of Haes fire alarm control panels. The ESPRiT Addressable panels encompass all these attributes, to provide the fire alarm engineer's panel of choice.

For the fire alarm engineer, the panel has been designed to be easy to install and to minimise labour costs, by providing ample room for tasks such as wiring and changing batteries. Activation is via key switch or access code, which means you should always be able to work on the panel and the one man walk tests will help reduce the cost of maintaining the fire alarm system.

The ESPRiT-Apollo Addressable fire control panel is designed to be intuitive and flexible for the fire alarm engineer to programme and incorporates a large 240 x 64-pixel graphical display, with an easy-to-navigate menu system, which uses simple discernible icons in each section.

Simplicity is one of the most important aspects when considering the end user of a fire alarm panel. The easy-to-read control panel, with its graphical LCD display and five marked control buttons, and the 3-step silence functionality gives non-technical people the confidence to correctly manage their fire alarm system.

All inputs and outputs are fully programmable and there are options to have delays to the outputs. The programming features also include 3 different modes to help reduce false alarms. Local fire authorities are demanding this type of functionality to reduce unwanted callouts from alarm receiving centres.

As an addressable panel, signals from detectors, manual call points or any other devices are individually identified at the control panel's LCD graphical display. In addition, the control panel LED indicators will provide a simple 'at a glance' overview of which zone or zones have gone into the alarm condition, showing the extent of fire or smoke spread.

ESPRiT Addressable panels are approved to European standards EN54-2 & 4, Fire Detection and Alarm Systems – Control & Indicating Equipment.

This product has been designed and manufactured in the United Kingdom.

## General Description of the Equipment

The control panel cabinet comprises of a sheet steel enclosure, suitable for wall mounting, with a hinged lockable front access door. Cable entry is via 20mm 'knockouts' at the top and rear of the cabinet.

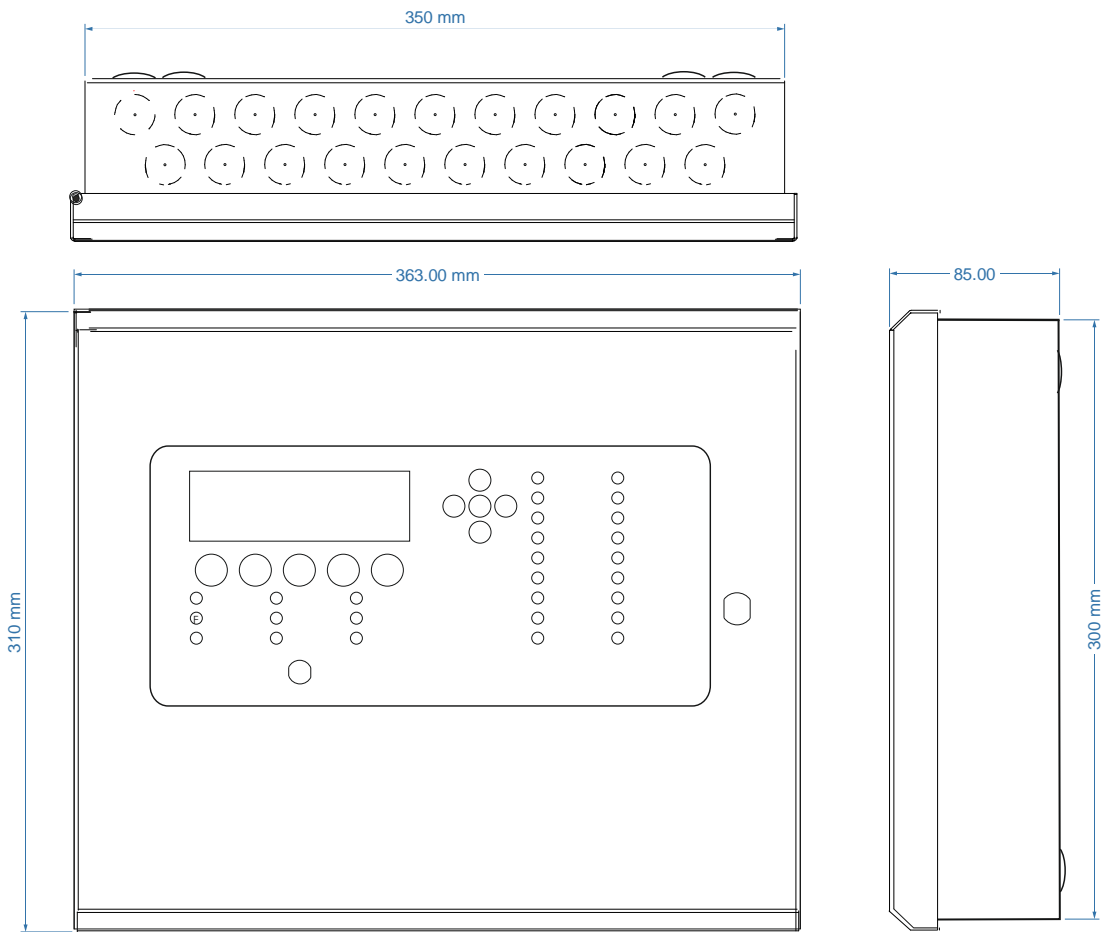
Different key types are used for the door lock and the 'activate controls' key-switch.

This control panel is available in either 1 to 2 loops or 1 to 4 loops, in two different enclosure sizes. Each loop can have up to 240 devices connected (480 or 960 devices in total).

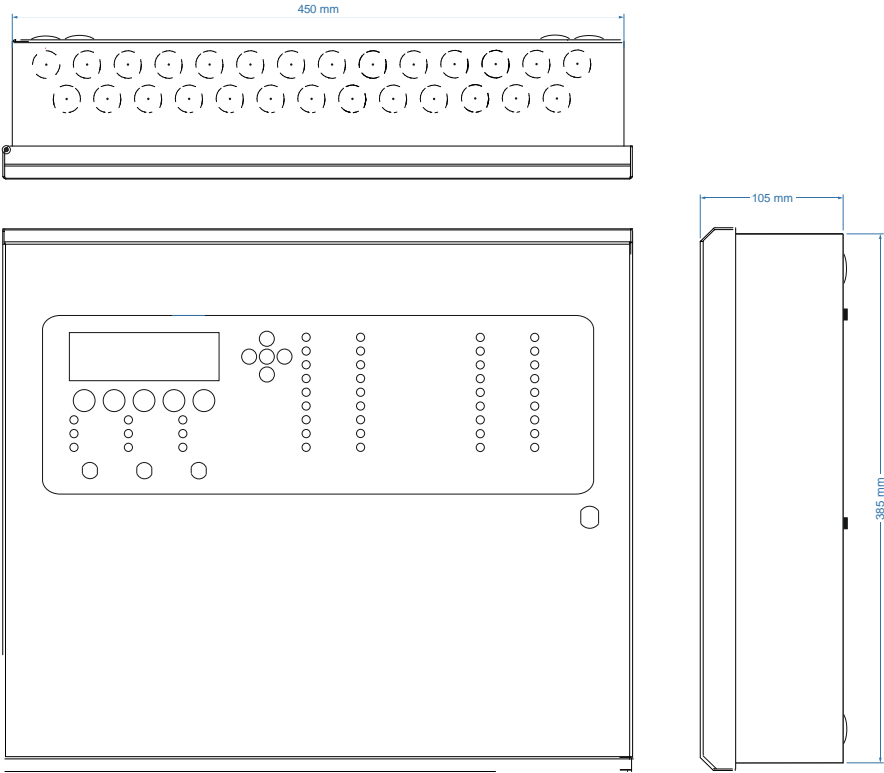
This product has been designed to support Apollo protocol devices.

The panels are supplied with a 100W, 3.4Amps power supply module rated at 230VAC, 50/60Hz.

Cabinet (One to Two Loops)

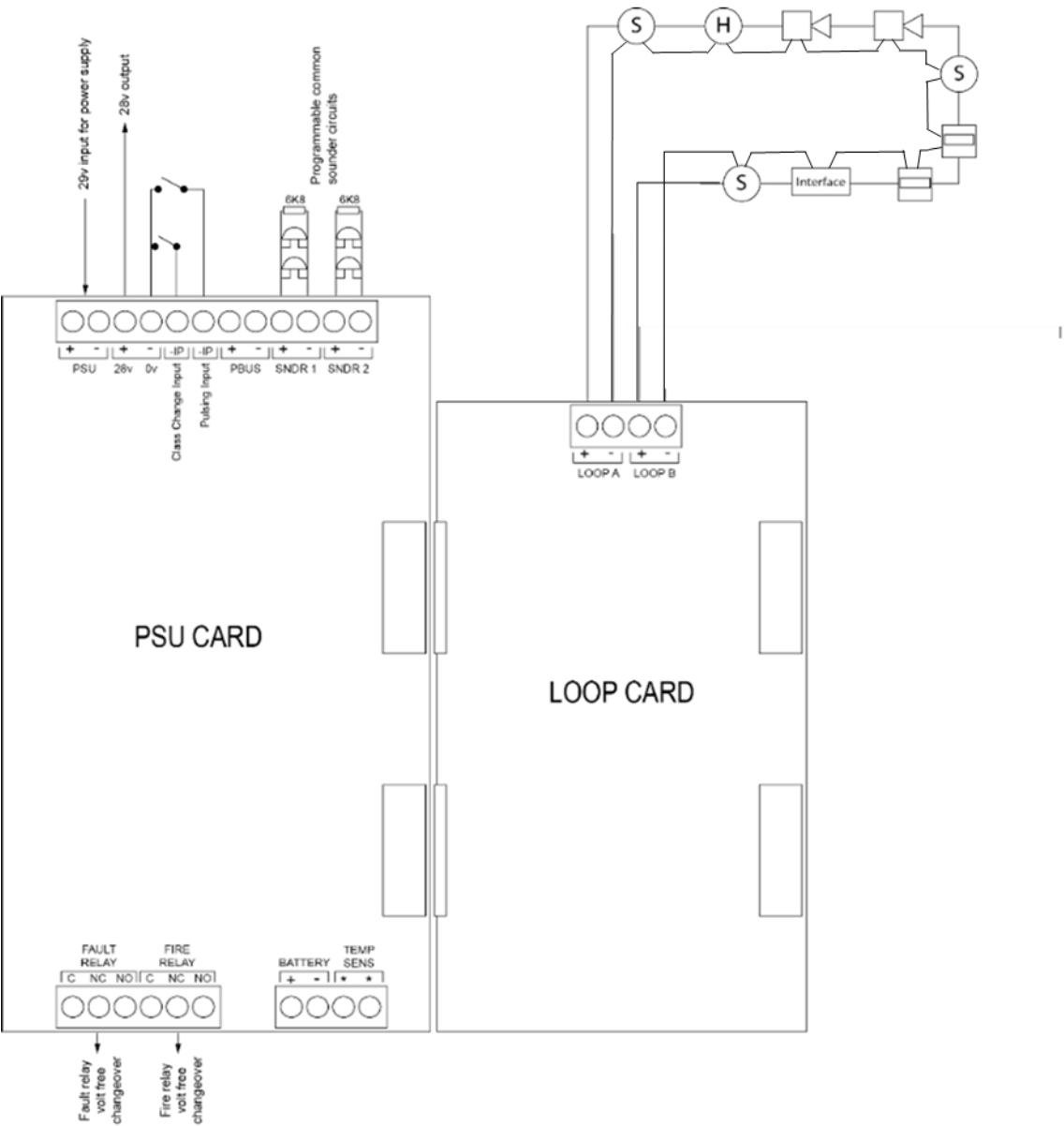


Cabinet (One to Four Loops)



Circuit Boards

TPC2879-206 PSU PCB & TPC2890-206 Apollo Loop Card PCB



**Circuit Description/Function****TPC2879-206 PSU PCB****PSU (+ -)**

Monitored 29.0VDC input from power supply module

**28V / 0V (+ -)**

28V output, fused at 500mA

**Class Change Input (-IP)**

Class Change switch (–ve) input, which causes the common and loop sounders to operate.

**Pulsing Input (-IP)**

Pulse switch (–ve) input, which causes the common and loop sounders to pulse.

**PBUS (+ -)**

The PBUS circuit is not used on this Panel.

**SNDR 1 (+ -)/SNDR 2 (+ -)**

Two 24VDC programmable and monitored sounder outputs, configurable as FARE and FWRE (Fire and Fault routing).

- They can be programmed to turn OFF or ON in Continuously mode or in Pulsing mode (1s ON and 1s OFF).
- The sounders can be configured to be non-silencing or silencing.

**FAULT RELAY (C NC NO)**

Common fault signal changeover relay contacts. Contacts are normally energised (failsafe), change over when any fault is active on the panel or in the event of total power loss. Unfused, Max 3A at 30VDC.

**FIRE RELAY (C NC NO)**

Common alarm changeover relay contacts. Activates when an alarm condition exists on an input or detector device. Unfused, Max 3A at 30VDC.

**BATTERY (+ -)**

Connections for 7Ah or 18Ah VRLA batteries charging output (temperature compensated). 27.3VDC output at 20°C, Max. charging current: 700mA or 1.2A.

**TEMP SENS (\* \*)**

Connections for battery temperature sensor.

**TPC2890-206-PAD (Apollo) Loop Card PCB****LOOP A (+ -)/LOOP B (+ -)**

Addressable fire detectors, coincidence circuit inputs. Current limit Max. 500mA. A maximum of either 2 or 4 loop cards may be fitted, depending on the panel type. Each loop card can manage a maximum of 240 connected devices.

**TPCA05 Network Card PCB****COMS A (+ -) / COMS B (+ -)**

RS485 serial communication terminals connected to form a loop or a radial network.

## Technical Specification

General Specification	
Enclosure	<b>Steel IP30.</b> Epoxy powder coated Interpon Radon, silver grey.
Cabling	Fire resistant screened cable, minimum size 1 mm <sup>2</sup> . Max cable length 1 Km (20 Ohm). FireBurn, FP200 or equivalent (max capacitance 1uF, max inductance 1 millihenry).
Detector compatibility	Apollo
Temperature range: -5°C to +40°C	Maximum relative humidity: 95%
Approx. dimensions of panel (W x H x D)	355 x 310 x 80mm (1 to 2 loop) 463 x 393 x 100 (1 to 4 loop)

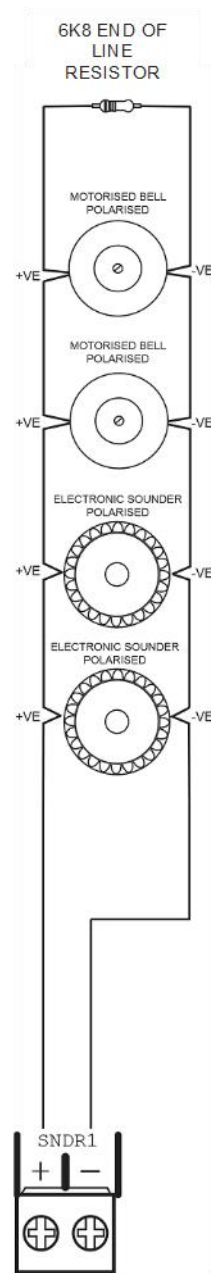
Power Supply Specification		
Mains supply	230VAC +10% / -15% 50Hz max current 0.347Amp (35W) for 1 to 2 Loop 1.08Amp (100W) for 1 to 4 Loop	
Mains supply fuse	2 Amp (T2A 250V) 35W unit 3 Amp (T4A 250V) 100W unit	Not accessible for servicing. Internal to switch mode power unit
Internal power supply rating	3.4Amps total including battery charging	Maximum load shared between outputs: 3Amps for 3.4Amps PSU
Power supply output voltage	19.8 - 29.0VDC	Tolerance +/- 0.1%
Maximum ripple voltage	150 mV p-p (Both Sizes)	Supply and charger fault monitored
Min current supplied by PSU (I <sub>min</sub> )	40mA	
Maximum continuous load for battery standby (I <sub>maxA</sub> )	I <sub>max A</sub> : 1 to 2 Loop Panel – 630mA 1 to 4 Loop Panel – 930mA	I <sub>max B</sub> not specified
Battery charging voltage	27.3VDC nominal at 20°C	Temperature compensated
Battery charging output current	700mA or 1.2A Current limited	Charging suppressed During Alarm Condition
Min/max battery size and type	2 x 7.0Ah 12volt for 1 to 2 Loop Panel 2 x 17.2Ah 12volt for 1 to 4 Loop Panel	
Max current drawn from batteries	3 Amps with main power source disconnected. Battery fuse 5A (5x20 glass, quick blow)	
Battery high impedance fault (Batt Hi Z)	Resistance > 1 Ohm	1-hour reporting time
Battery type	YUASA NP7-12 (12V 7.0Ah)/ NP18-12 (12V 17.2Ah)	

Battery fuse	5A	
Quiescent current	128mA 40mA	1 loop system Each additional loop card
Alarm Current	180mA	1 loop system

#### Electrical Specification Inputs & Outputs – TPC2879-206 PSU PCB

Terminal capacity	0.5mm <sup>2</sup> to 2.5mm <sup>2</sup> solid or stranded wire.	
PSU Input +/- to PCB	29VDC supply input. Diode protected for reversal and independent short circuit. Max current 5 amps.	Max input current 5 amps. Input voltage 29.0VDC to 30VDC.
28v+, 0v- power output	28VDC supply output for fire alarm accessory relays etc. Max continuous use = 400mA.	Fused at 500mA. Fuse = 500mA resettable fuse.
Common fire relay	Fire relay contact. Clean C/O. Max 3A at 30VDC.	Unfused
Common fault relay	Maintained fault relay contact. Clean C/O Max 3A at 30VDC.	Unfused
Inputs: CC, PULSE	Switched -ve inputs, connect to 0v to trigger. Max input voltage = 30VDC. Non-latching, max resistance = 100R.	Protected via 10K Ohm impedance, 3v6 Zener diode.
SOUNDERS 1 and 2 (two sounder circuits)	28VDC polarity reversal monitored sounder outputs to fire alarm devices. End of line resistor: 6K8 Ohm 5% 0.25W EOL resistor.	Monitoring current limit 28mA, fused at 500mA. Typical max load 22 devices at 18mA each per circuit.
Zone normal threshold	Minimum 192 analogue value	Analogue value within (0 – 255)
Temp Sense Input * *	Input for connection of battery temperature sensor. Attach to central point of sealed lead acid battery pair.	Thermistor TTC5103 10,000 Ohms at 25°C.
LOOP	Addressable circuit	Monitoring current limit 500mA. Max 240 devices per loop.
Number of detection circuits	1 to 2 loops 1 to 4 loops	1 to 18 Detection Zones 1 to 36 Detection Zones

Typical Sounder Circuit Conventional System Schematic



# INSTALLATION

## Safety


This product should be installed, commissioned and maintained by, or under the supervision of, competent persons according to good engineering practice and ,

- i. Local codes of practice
- ii. Statutory requirements and national standard regulations for fire systems appropriate to the country and location of the installation.
- iii. Any instructions specifically advised by the manufacturer.

You are requested to take such steps as are necessary to ensure that any appropriate information about this product is made available by you to anyone concerned with its use.

Further copies of this User Instruction Manual are available from the website [www.https://haes-tech.com](http://www.https://haes-tech.com).

This equipment is designed to be operated from 230V AC 50/60 Hz mains supplies and is of Class I construction. As such it must be connected to a protective earthing conductor in the fixed wiring of the installation. Failure to ensure that all conductive accessible parts of this equipment are adequately bonded to the protective earth will render the equipment unsafe.

	<p><b>THIS IS A PIECE OF CLASS I EQUIPMENT AND MUST BE EARTHED</b></p> <p>Only trained, suitably skilled and technically competent service personnel should undertake the Installation, Programming and Maintenance of this equipment.</p>
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## ESD Precaution

Observe precautions for handling electrostatic sensitive devices. This particularly applies to the precautions necessary to avoid Electro-Static Discharge.



This equipment is constructed with static sensitive components. Wear an anti-static earth strap connected to panel enclosure's earth point. Before installing or removing any printed circuit boards, or connecting cables, remove all sources of power (mains and battery).

## Installing the system

### General

Care should be taken with regards to avoiding the close proximity of high voltage cables or areas likely to induce electrical interference. Earth links should be maintained on all system cables and grounded in the control panel. The detection and sounder circuit cabling is classed as extra low voltage and must be segregated away from mains voltage.

Any junction boxes used should be clearly labelled FIRE ALARM.

Any ancillary devices, e.g. door retaining magnets, must be powered from a separate power source.

Any coils or solenoids used in the system must be suppressed, to avoid damage to the control equipment.

### Environment

The site chosen for the location of the panel should be clean, dry and not subject to shock or vibration. Damp, salt air or environments, where water ingress or extremes of temperature may affect the panel, must be avoided. The temperature should be in the range of -5°C to +40°C, and the relative humidity should not exceed 95%.

### Mounting the cabinet

Before mounting the cabinet, remove the main PCB:

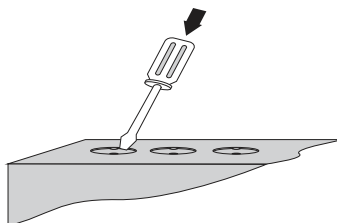
- Remove the power supply module connecting wires from the main PCB, taking care to note where to re-connect them. The main PCB can then be carefully pulled off its mounting clips.

Secure the cabinet to the wall using the four indented holes in the back of the cabinet. Ensure the cabinet is mounted level and in a convenient location for it to be operated and serviced.

Recommended screws size is M 4.0 \* 38mm.

External cables should pass through a suitable gland via preformed knockouts at the top and rear of the cabinet. Any unused knockouts must be securely blanked off. Remove any knockouts and ensure the cabinet is clear of swarf etc., prior to refitting the PCB.

Knockouts should be removed with a sharp tap at the rim of the knockout, using a 6mm broad bladed screwdriver. Use of excessive force will damage the enclosure around the knockout.




## Mains connections

**Note:** All connections must be carried out in accordance with local requirements and regulations.

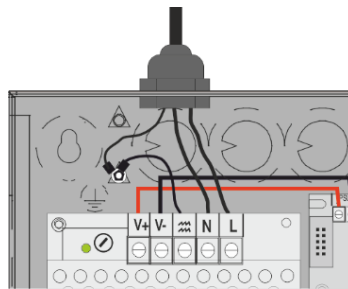
Do not connect the mains supply to the panel until you are fully conversant with the layout and features of the equipment.

A rating plate is attached to the power supply module describing the nature of the supply permitted.

The incoming mains supply should be brought into the panel via one of the knockouts provided.

A suitable cable gland must be used to secure the outer sheath of the cable used. The earth must first be connected to the primary earth stud (peg) marked with a  symbol, using a suitable ring crimp.

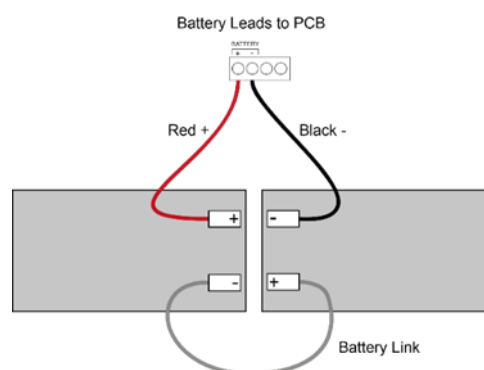
Sufficient earth lead should be left to allow Live and Neutral connections to be accidentally pulled from the terminal block while leaving the earth connection intact.



## Connecting the batteries

Batteries of even very small capacity can deliver very high currents, which can cause injury or fire. Therefore, battery connections should be done with caution.

To optimise the service life of the batteries, the battery charger output voltage varies with temperature.



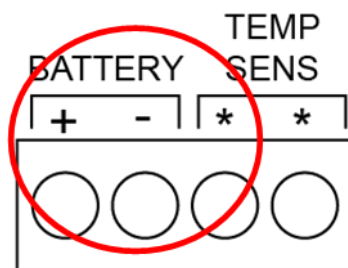
**Note:** In the event of mains failure, the battery charger circuit will protect the batteries from full discharge by disconnecting them when they reach 19v. When the mains supply is restored the batteries will be automatically reconnected.

**Note:** If the mains are connected before the batteries, the panel will show a Power Supply Fault for up to 1 minute until the monitoring cycle has finished polling. This is normal. If the fault does not clear after 1 minute, check connections.

## Battery charging voltage checks

The battery charging voltage is factory calibrated to 27.3VDC +/- 0.2V at 20°C. This should not normally require adjustment. Where battery problems are experienced, the following information should be considered.

- If a battery is disconnected from the charger, no voltage will appear on the output leads or terminals, due to intelligent battery controls.
- Check the power supply voltage at the PSU supply input terminals. With the batteries disconnected the voltage should be 29VDC +/- 0.2V.
- To test the batteries, turn off the mains and see if the system will run on the batteries. Check the battery voltage, which should be 26.8V for a good battery or 22V for a flat battery.
- When the panel is re-charging a low battery, it should be possible to see the voltage across the batteries increase gradually. If this is not occurring, the batteries or the panel may be faulty.



## Battery Charging Voltage Calibration

Should the battery charging voltage require calibrating (i.e. following replacement of the main board), proceed as follows:



- Turn **Activate Controls** key clockwise to **On**
- or
- Use the keypad to enter Authorised User (Access level 2) code 1111:
  - Press ✓ key
  - Use Up/Down arrow keys to increase/decrease the number value
  - Use Left/Right arrow keys to move to the next digit in the 4-digit sequence
  - When all 4 digits have been set to the code 1111, press the ✓ key again
  - The **Main Menu** will become available for operation
  - On the **Main Menu**, use Left/Right arrow keys to move cursor box to **Report** menu
  - Press Enter ✓ key to select the **Report** menu
  - Under **Report Menu**, use Left/Right arrow keys to highlight the **BATTERY** option, and then press Enter ✓ key to select it
  - BATTERY STATUS** menu will display the following:
    - TEMPERATURE: nn.nn
    - BATTERY VOLTS: nn.nn
    - CHARGE: nn.nn



**Current: n.nn**

**DAC OUTPUT: nnn.nn**

**VREF INT: nnnn**

**CALIBRATION: n.nnnnnn**

- Place Multimeter probes onto battery input terminals and observe the Battery Volts reading
- Using Up/Down arrow keys; adjust the calibration until the **BATTERY VOLTS** figure, shown on the panel LCD screen, matches the Battery Voltage as measured on the Multimeter
- Press return  key, or Enter  key, to accept the changes and return to the **Report Menu**. A short acknowledgement sound will be present.

**Note:** Do not allow the menu to time-out, before pressing the return  key or Enter  key, as the calibration changes made will be lost and the calibration procedure will need to be repeated.

## Loop Circuits

All wires connected to the terminals of the loop card must be passed through a tube ferrite to comply with EMC standards. A suitable ferrite is the Würth 74270096. The HAES part code is IND74270096.

## Device Addressing

With XP protocol, any device (Core/non-core) can be used for address range 1-126.

The address range can be extended to 240 devices when core protocol is enabled.

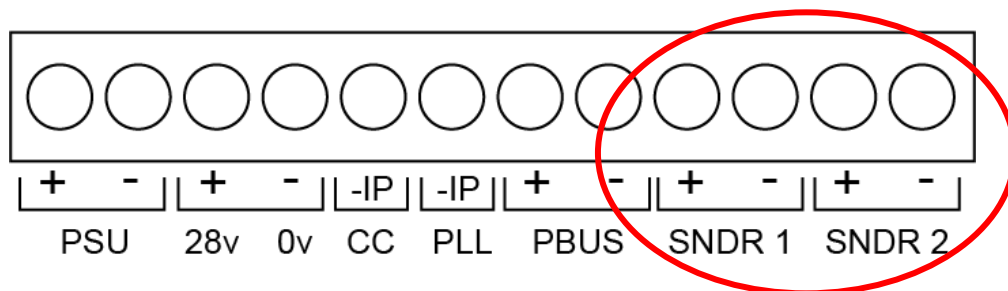
To avoid complications, it is recommended to use only core devices when core protocol is enabled, however, with mixed devices the following rules apply:

1. Addresses 127 and 128 cannot be used.
2. All non-core devices must be within addresses 1-126.
3. For any non-core device in address 1-126, the associated upper address cannot be used. The upper address is calculated as the lower address + 128.  
e.g. non-core device at address 10 invalidates address 138 (10+128).

## Sounders/Output Circuits

Two (24VDC) programmable and monitored sounder output circuits are provided.

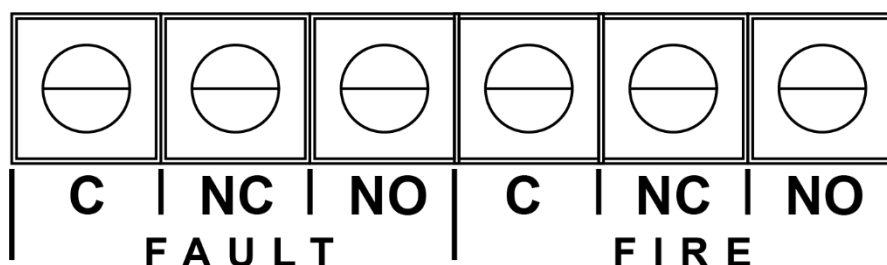
- They can be programmed to turn OFF or ON in Continuously mode or in Pulsing mode (1s ON and 1s OFF).
- The sounders can be configured to be non-silencing or silencing.



## Relay Outputs

The panel is equipped with two relay outputs, which activate on Fault and/or Fire Alarm conditions respectively, by default.

The relays can be programmed to turn OFF or ON in Continuously Mode or in Pulsing Mode (1s ON and 1s OFF) and can be set to operate as General Alarm, Evacuation Alarm, Fails Safe, Fault and Can be Silenced.



## Inputs - Class Change and Pulse

### Class Change

Switch (-ve) inputs which cause the common sounder and loop sounders outputs to operate.

### Pulse

Switch (-ve) inputs which cause the common sounder and loop sounders outputs to pulse.

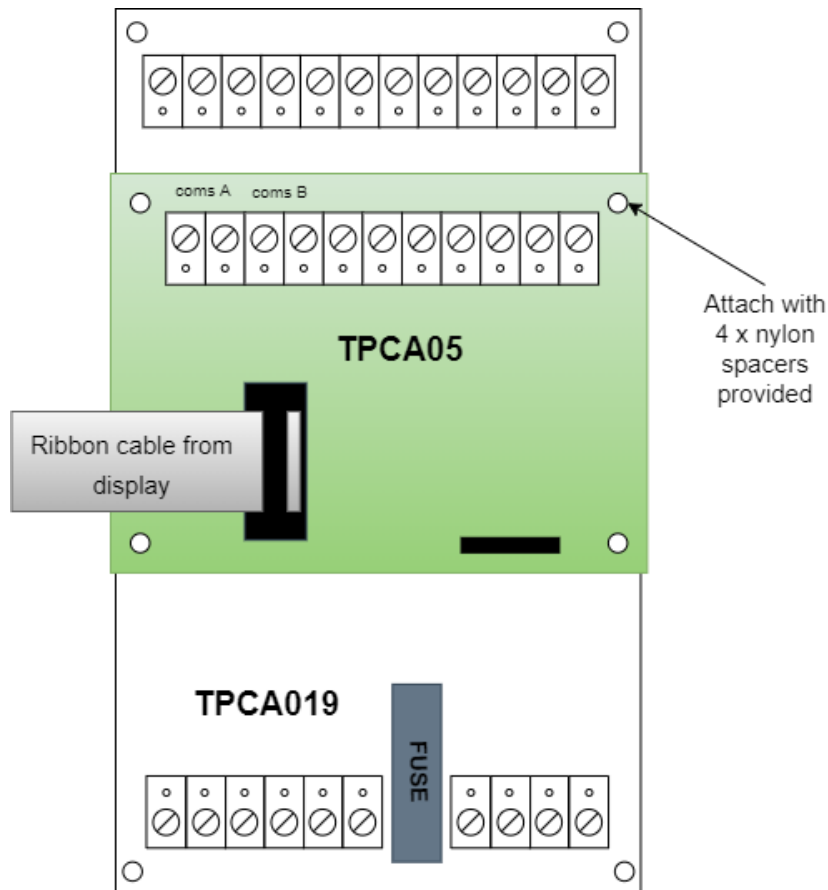
## P-BUS

The PBUS circuit is not used on this Panel.

## Network Card

The PCA05 network card must be fitted to the control panel before it can be networked to another panel or a repeater. This is installed as follows:

- Ensure the mains power is switched off before proceeding.
- Remove the ribbon cable connector from the socket “COMMS A” located on the middle, left side of the PSU card.
- Fit the PCA05 network card into the “COMMS A” socket and support the card using the supplied pillars.
- Reconnect the ribbon cable connector into the socket on the PCA05 Network card.
- Set the DIL switches to the required value. 0 = master panel, 1 to 7 = slave panels.
- Power up the panel and execute the LEARN procedure to add the network card to the configuration.



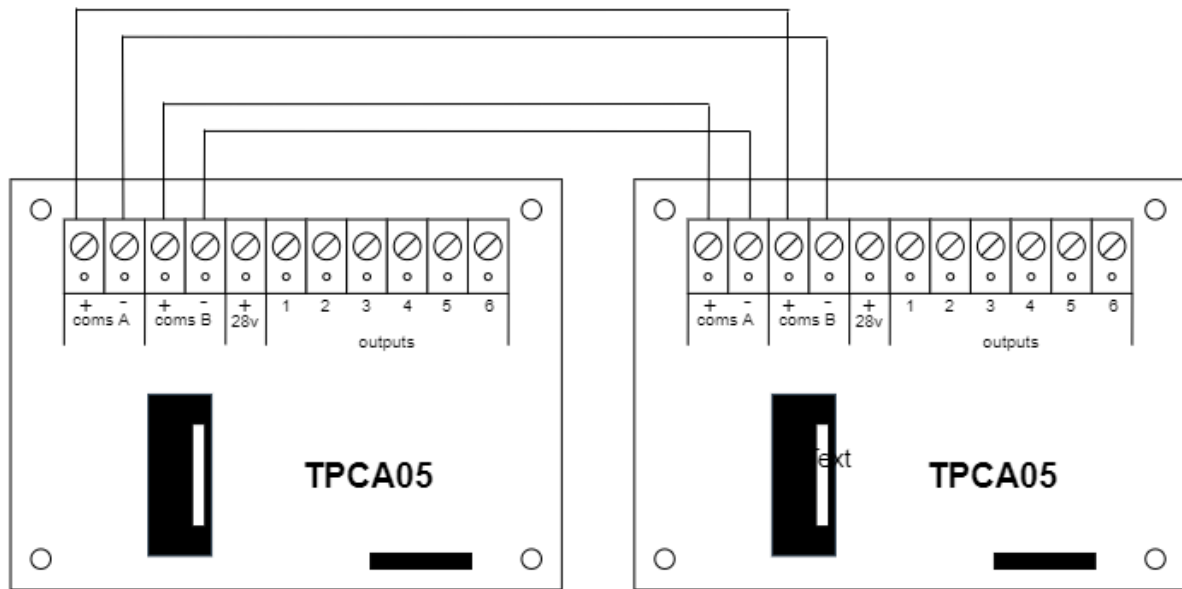
**Note:** The firmware versions of all the panels of a networked system should be the same.

## Network Wiring

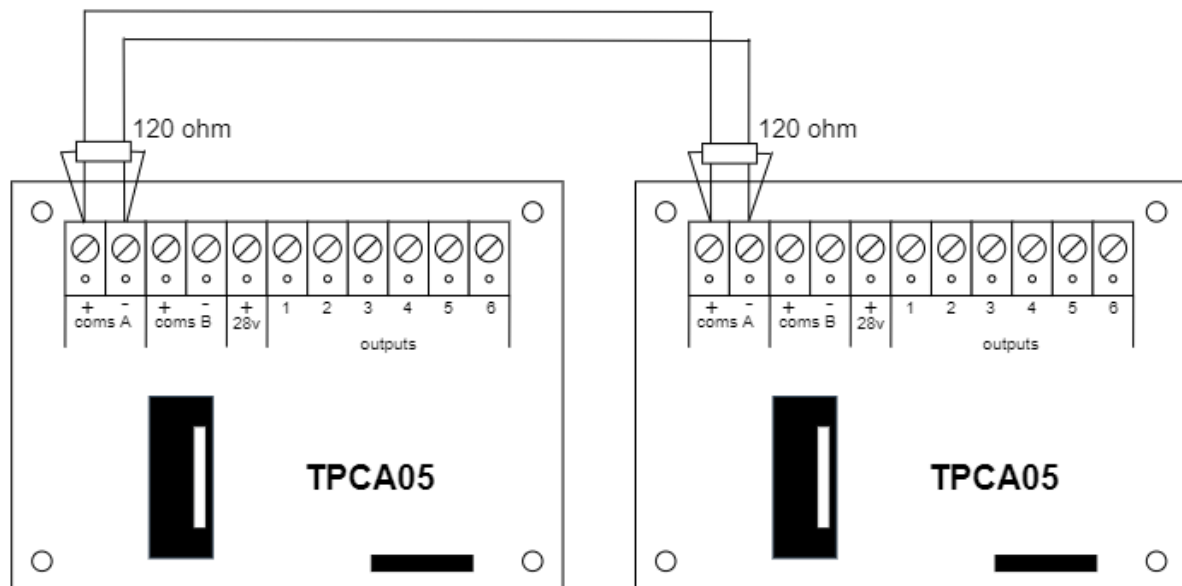
Panel-to-Panel connections require 2 wires for a Legacy connection or 4 wires for a Fault Tolerant connection.

Panel-to-Repeater connections require 2 wires for a Legacy connection or 4 wires for a Fault Tolerant connection and an additional 2 wires for 28v power.

### Fault tolerant connection



### Legacy connection



Each Network Card has a PCB-mounted DIL switch and must be allocated a unique address between 0 and 7 for panels and 8 and 15 for repeaters.

### PCA35 Network Card

The PCA35 network card has the same mounting holes as the PCA05 and is connected to the panel in the same way. The first four terminals on the left as shown above are still the network connections for connecting panel together. However, the positions of the positive and negative terminals are reversed. The correct polarity is printed on the PCB.

#### Terminal Connections

A-	RS485 terminal for local network. Start of loop.
A+	RS485 terminal for local network. Start of loop.
B-	RS485 terminal for local network. End of loop.
B+	RS485 terminal for local network. End of loop.
0V	Power supply for future enhancement.
28V	Power supply for future enhancement.
SUB-	RS485 terminal for future enhancement.
SUB+	RS485 terminal for future enhancement.
BMS-	RS485 terminal for Building Management System.
BMS+	RS485 terminal for Building Management System.

## BMS Support

The BMS connections support an RS485 network to a Building Management System at 3.3V signal levels. Currently, only Modbus protocol is supported at 19200 baud. The Modbus network address defaults to 70.

### Modbus Specification

a) Function codes supported:

- 4 Read Input Registers

b) Register Map

- **System Status Register:**

Address 1

- Alarm (1<sup>st</sup> bit)
- Fault (2<sup>nd</sup> bit)
- Disablements Active (3<sup>rd</sup> bit)
- Test Mode Activated (4<sup>th</sup> bit)
- Evacuation (5<sup>th</sup> bit)

- **Panels Status Registers** (1 register for each of 64 panels):

Address 256 – 319

- Alarm (1<sup>st</sup> bit)
- Fault (2<sup>nd</sup> bit)
- Disablements Active (3<sup>rd</sup> bit)
- Test Mode Activated (4<sup>th</sup> bit)
- Evacuation (5<sup>th</sup> bit)
- Alarm Silenced (6<sup>th</sup> bit)
- Buzzer Muted (7<sup>th</sup> bit)
- Class Change Active (8<sup>th</sup> bit)
- Alert Active (9<sup>th</sup> bit)

- **Zone Status Registers** (8 registers for each of 64 panels):

Address 512 – 1023

- Each bit indicates the alarm status of a single zone of a single panel.

e.g. Address 512 indicates the first 16 zones of panel 1 (LSB = zone 1).

Address 516 indicates zones 64 to 79 of panel 1 (LSB = zone 64).

Address 520 indicates the first 16 zones of panel 2 (LSB = zone 1).

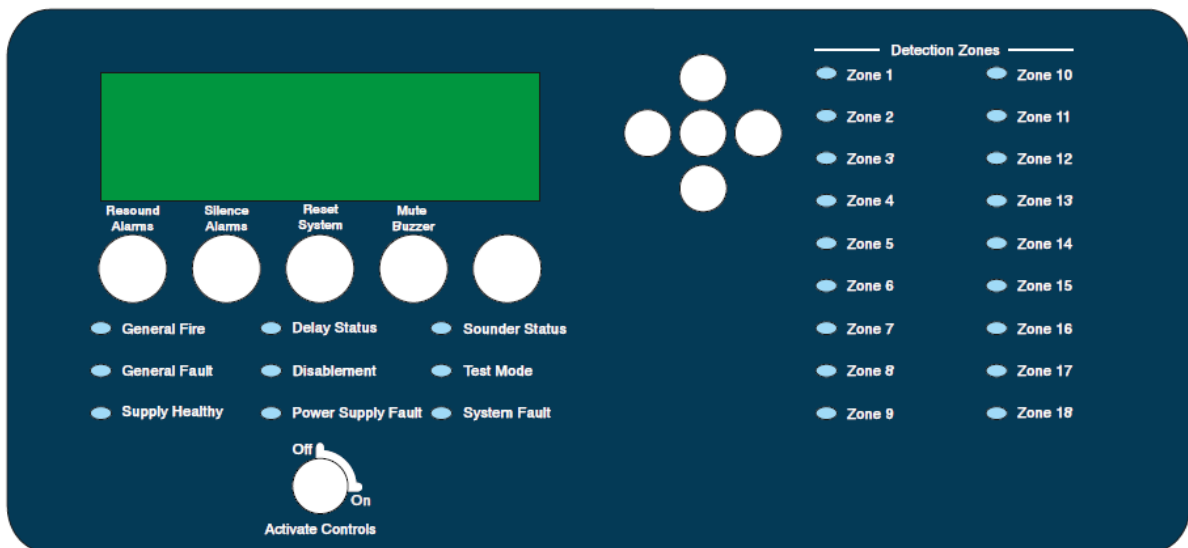
# OPERATING INSTRUCTIONS

## Panel Control and Indications








### Control Panel

The Control Panel contains:

- LCD Display screen
- 5 button control keys
- Up/down/left/right arrow keys and enter (✓) key curser control keypad
- Panel status LED indicators
- Detection zones LED indicators
- Activate Controls Key Switch



### Keypads

	Resound Alarms	Use to resound the alarms after they have been silenced. Can also be used to invoke full evacuation.
	Silence Alarms	Use to silence the sounders during an alarm condition.
	Reset System	Resets the panel back to standby mode.
	Mute Buzzer	Mutes the panels internal fire and fault buzzer.
	Return	Press to exit current menu or command as indicated in the bottom corner of the LCD display.
	Scroll Display (arrows)	Press to navigate the display messages and menus
	Enter (Tick)	Press to select the available menus Press to confirm selection of a menu option Press to confirm some of the configuration options

**Status LED Indicators**

<b>LED Name</b>	<b>LED ON</b>	<b>LED Pulsing</b>
<b>Detection Zones: Zones 1 - 18</b>	N/A	Indicates alarm condition in zone.
<b>Supply Healthy:</b>	Indicates mains and/or battery supply is present.	N/A
<b>General Fire:</b>	Indicates panel is in alarm condition that has been silenced.	Indicates panel is in the unsilenced alarm condition
<b>General Fault:</b>	Indicates one or more faults are present and the buzzer has been muted	Indicates one or more faults are present.
<b>Disablement:</b>	Indicates one or more circuits have been disabled.	N/A
<b>Test Mode:</b>	Indicates one or more circuits are in test Mode	N/A
<b>Sounder Status:</b>	Indicates sounder circuits have been disabled or are in test mode	Indicates a fault on one or more sounder circuits.
<b>Power supply Fault:</b>	Indicates a power supply fault on mains power input or battery and buzzer has been muted	Indicates a power supply fault on mains power input or battery
<b>Delay Status:</b>	Delays are configured	Delay is running
<b>System Fault:</b>	Indicates a system failure, panel not functional or the internal PCB configuration has not been set up correctly.	Indicates the panel has recovered from a system fault.

## Configuration Software Downloads

The Haes Configuration panel software enhances the ease of programming of the panel, by enabling the engineer to both download existing panel configurations for amendment, or programme new panel configuration 'off panel' before uploading onto the panel. Programming of the configuration uses easy to follow tables.

The Haes Configuration panel software is available to be downloaded from the Haes website:



<https://haes-tech.com>

## System Requirements

The Haes Configuration Panel software is designed for use with Windows 7 and Windows 10 Operating System. It is not intended for use with Apple macOS, Android or Linux OS.

The following are required:

- Laptop or Tablet device running Windows 7 or Windows 10 OS
- Cable with a USB-B connector.

## User Controls

Three levels of control, with programmable code entry, are available on the panel:

- General User (Access level 1)
- Authorised User (Access level 2)
- Engineer (Access level 3) (CONFIG Mode).

In General User (Access level 1) mode; most of the keypad controls are inactive, to protect the system from unauthorised operation.


Once the panel is powered up, the panel will perform a routine **LOOP STATUS** check. When this is complete, the LCD screen will display any faults found, accompanied by the relevant status LEDs flashing and a warning tone. After clearing any faults found and a successful **LOOP STATUS** check, the Title screen will be displayed. The General User (Access level 1) are then available.

## General User Controls

The General User (Access Level 1) controls are accessible when the **Activate Controls** key is set to **Off** and four-digit access code has not been entered.

### Available Functions

The functions that can be performed in Access Level 1 are:

- Mute the internal buzzer 
- View active faults.
- Change from General User to Authorised User; using either the **Activate Controls** key switch, or by entering the four-digit code to access level 2.

## Authorized User Controls

The Authorized User (Access level 2) controls can be accessed by:

- turning the Activate Controls key clockwise into the 'On' position. The padlock symbol will show unlocked and all the buttons on the keypad will be operational. To deactivate the controls, turn the key back to the OFF position. The padlock symbol will show locked.

or

- entering four-digit code 1111:
  - Press ✓ key
  - Use the Up/Down arrow keys to increase/decrease the number value.
  - Use the Left/Right arrow keys to move to the next digit in the 4-digit sequence.
  - When all 4 digits have been set to the code **1111**, press enter ✓ key once again.
  - The **MAIN MENU** will become available for operation.

Once the code is entered, or the **Activate Controls** key is turned to **On**, the LCD unit will display the **MAIN MENU**. Use the Scroll Control keypad up/down and left/right arrows, and the enter ✓ key to navigate the Access level 2 menu.

**Note:** If the Activate Controls key is in the **On** position, the keypad will remain active.




**Note:** It is not possible to remove the key, whilst it is in the **On** position.


**Note:** The padlock symbol is shown on the LCD screen, to the right of the Time and Date indication.

**Note:** The Access level 2 code 1111 is the factory default. The access code may be changed from the **CONFIG** menu **PANEL** sub-menu.

### Available Functions

The functions that can be performed at Access level 2 are:

- Resound the alarms 
- Silence the alarms 
- Reset the system 

- Mute the internal buzzer 
- Access the Authorised User (Access level 2) menu structure, from the icons on the **MAIN MENU**
- Access the **CONFIG** menu (Access level 3) Engineer controls, for configuration and commissioning of the system, by entering the Engineer Access level 3 four-digit access code.

### Authorised User Menu Options

The Authorised user menu options are available from the **MAIN MENU**:

- USER
- REPORT
- ENG

### Engineer Controls

The Engineer (Access level 3) controls can be accessed by:

- From the Authorised User (Access level 2) **MAIN MENU**, use Left/Right arrow keys to move cursor to **CONFIG** menu icon.
- Press ✓ key to select **CONFIG** menu. The digital display will show the following message:

Enter Level 3 Access Code

- Use the keypad to enter code 3333:
  - Press ✓ key
  - Use the Up/Down arrow keys to increase/decrease the number value.
  - Use the Left/Right arrow keys to move to the next digit in the 4-digit sequence.
  - When all 4 digits have been set to the code 3333 press ✓ key once again. The Access level 3 menu will become available for operation.

Use the Scroll Control keypad up/down and left/right arrows, and the enter ✓ key to navigate the Access level 3 menu.

**Note:** The Access level 3 code 3333 is the factory default.

### Available Functions

The functions that can be performed at Access level 3 are:

- Set the panel to automatically learn what internal cards are fitted within the panel and devices (detectors, sounders, call-points, etc.) are connected to the internal cards.
- Configure the outputs for the various external devices (detectors, sounders, etc.).
- Reset panel to factory defaults.
- Reset four-digit passcodes.

### Engineer Menu Options

The Engineer (Access level 3) menu options, available from the **MAIN MENU**, are:

- CONFIG

## Panel Alarm Conditions

### Fire Alarm Condition

The display shows location/origin of the fire alarm and the total number of zones in a fire alarm condition.

If two or more zones enter the fire alarm condition, the display also shows the location of the last zone to enter a fire alarm condition.

In addition:

- The **General Fire** LED and the respective Detection Zone LED(s) will be illuminated.
- The fire alarm bells/sounders will activate (depending on how they are programmed to respond).

To silence the internal buzzer, press the **Mute Buzzer** button.


To silence the bells, press the **Silence Alarm** button.


To reset the panel, press the **Reset System** button.

### Fault Condition

If the panel detects a fault condition, the display will indicate the number and nature of the fault(s). The internal buzzer will sound with an intermittent tone and the amber **General Fault** LED will illuminate pulsing, and any other specific Fault LED indications will be illuminated.

Press the Left/Right and Up/Down arrow keys to scroll through the list of faults.

Press the Mute Buzzer  key to silence the internal buzzer. The General Fault amber LED will change to steady illumination.

**Note:** The fault condition is non-latching (except System Fault) and the indications will automatically be cleared when the fault is remedied. Press the **Reset System**  key to clear a Fault.

**Note:** If silenced, the buzzer will re-sound when a new fault occurs.

### Functionality During a System Fault

A system fault is indicated when a processor, controlling a function in the panel, has a watchdog time-out or processor failure. In the event of a system fault, the affected board may not be functional.

The following indications may be observed:

- Display Board (Main control board)
  - **System Fault** LED only illuminated.
  - Continuous buzzer sound
  - Display board (main control board) is halted, and no other indication or control is possible.
  - Fault relay is activated.
- Extension LED board (optional)
  - **System Fault** LED continuous and General Fault LED pulsing
  - The extension LED Board is halted.
  - Fault relay is active.

- Fire alarms can still be detected and controlled by the panel.
- Power Supply Board
  - **System Fault** LED pulsing
  - General Fault LED pulsing
  - Power Supply Fault LED pulsing
  - Fault relay activated.
  - Mains or battery power will still operate the panel. Batteries will not be charging.
  - Indications will remain until the fault is rectified and the panel is reset.
- System Fault recovery
  - **System Fault** LED pulsing
  - General Fault LED pulsing
  - Pulsed buzzer (fault tone) indicates a system fault has occurred, and the affected board has recovered.
  - The indication will remain until the panel is reset.

### Functionality During a Loop Fault

If a fault occurs on a transmission path (short circuit or interruption), the function of the remaining operational devices is re-established within 300 sec following the occurrence of the fault.

**Note:** This is compliant with EN54-2, Clause 12.5.

## CONFIGURING THE SYSTEM

When the system is installed and is ready to be commissioned, configure as follows:

- Use the **CONFIG MENU > CONFIG PANEL** sub-menu > **LEARN** option, to enable the panel to automatically learn what internal cards, external devices (detectors, sounders, etc.) are connected in the system.
- Set the panel user interface controls (Time & Date, Display contrast, internal buzzer volume, etc.), using the **USER MENU** sub-menus, described below.
- Configure the system (loops, zones, devices, etc.), identified by the **CONFIG MENU > CONFIG PANEL** sub-menu > **LEARN** option; using the **USER** and **CONFIG** sub-menus, described below.
- Any alarm or fault events, system status etc., can be viewed using the **REPORT** menus, described below.
- Outputs from the various devices fitted in the system can be tested from the **ENG** menu **OUTPUTS** option, described below.

### Dependency Modes (False Alarm Management)

Dependency modes are features described in EN54-2 for the processing of confirmation alarms. It is a requirement by some monitoring stations and local fire authorities, to reduce the possibility of false alarms.

The panel has 3 dependency mode options, A, B & C. Only one type can be applied to the panel but any or all zones can be independently set for dependency mode.

Dependency mode, if assigned to a zone, is set to type A by default.

#### Dependency 'A' will apply the following sequence:

1. The first detector alarm is inhibited for 30 seconds.
2. The panel re-checks the inhibited device after this time.
3. If this device is still in alarm, the panel activates a full fire condition.
4. Otherwise, the panel stays in an alert condition for a total of 1 - 10 minutes (programmable, see **CONFIG PANEL: OPTIONS, 6: CONFIRM TIME**). Any new alarm from the same zone within this time activates a full fire condition.
5. After this programmed confirmation time or if RESET, the panel reverts to the inactivated state.

#### Dependency 'B' will apply the following sequence:

1. The first detector alarm will indicate at the control panel but not activate the sounders.
2. This first detector is inhibited for up to 4 minutes (programmable, see **CONFIG PANEL: OPTIONS, 7: INHIBIT TIME**).
3. The panel re-checks the inhibited device after this time.
4. If this device is still in alarm, the panel activates a full fire condition.
5. Otherwise, the panel stays in an alert condition for a total of 5 - 15 minutes (programmable, see **CONFIG PANEL: OPTIONS, 6: CONFIRM TIME**). Any new alarm from the same or a different zone within this time activates a full fire condition.
6. After this programmed confirmation time or if RESET, the panel reverts to the inactivated state.

**Dependency 'C' will apply the following sequence:**

1. The first detector alarm will indicate at the control panel and active sounders that have been programmed to respond during this delayed state.
2. The panel will not activate a full fire condition unless a second detector is activated in the same or any other zone.

**Accessing the Menu Structure**

Power-on the panel and wait for it to perform a routine **LOOP STATUS** check. Any faults detected will be displayed, accompanied by a warning tone. Press the **Mute Buzzer** button to silence the warning tone. Resolve any faults before proceeding.

Next proceed by pressing the ✓ button, the LCD unit displays the following Access Level 2 Menu (see picture below):

To access the menu structure:

- Turn **Activate Controls** key switch clockwise to **On**

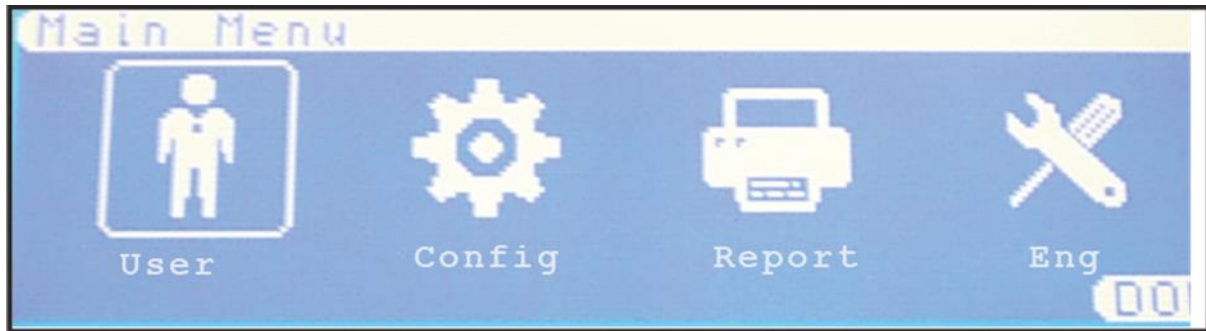
or

- use the keypad to enter Authorised User (Access level 2) code **1111**:
  - Press ✓ key to select Access level 2. The digital display will show the following message:

Enter Level 2 Access Code

- Use Up/Down arrow keys to increase/decrease the number value.
- Use Left/Right arrow keys to move to the next digit in the 4-digit sequence.
- When all 4 digits have been set to the code **1111**, press the ✓ key again.
- The LCD unit displays the Access Level 2 **Main Menu** (see picture below), which is available for operation.

**Note:** Access level 2 Menu will deactivate after 60 sec if not used.



On the LCD screen, the box surrounding the menu icon is the cursor; this can be navigated through the menu options by using the Left/Right arrow keys to select required menu option and then pressing the ✓ key.

The Left/Right and Up/Down arrow keys can then be used to access further sub-menus and options within the main menus.

Press ✓ key to select required sub-menu or option and to make changes to a selected option.

Where there are options that have adjustable values, these are altered with the Up/Down arrow keys followed by pressing ✓ key, when required value is reached.

Use the return ↵ key to exit all menus and options.

## Learn System


To set the system to automatically learn what internal cards, external devices are connected, access the **CONFIG PANEL** menu's **LEARN** sub-menu:

**Note:** Setting the panel to LEARN SYSTEM will overwrite any device configuration previously set.

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor to **CONFIG** menu icon.
- Press ✓ key to select **CONFIG** menu. The digital display will show the following message:


Enter Level 3 Access Code

- Use the keypad to enter code **3333**:
  - Press ✓ key
  - Use the Up/Down arrow keys to increase/decrease the number value.
  - Use the Left/Right arrow keys to move to the next digit in the 4-digit sequence.
  - When all 4 digits have been set to the code **3333** press ✓ key once again. The Access level 3 menu will become available for operation.
- On the **CONFIG Menu**, highlight **PANEL** option and then press ✓ key to gain access to it.
- Next highlight the **LEARN** option, under the **CONFIG PANEL** menu and press ✓ key to select it.
- The system will perform a learning routine, to acknowledge the Internal Cards installed and the External Devices connected to it, and the other networked panels. The following information will be displayed in turn, each accompanied by a progress bar:
  - **LEARNING INTERNAL CARDS:**

- **LEARNING DEVICES:**
- **LEARNING NETWORK:**
- On completion of the learning routine, the **LEARN PANEL** sub-menu will display all the internal cards, devices and RSUs that were found. The learn process cannot be cancelled. To stop the process, power to panel can be removed.
  - **INTERNAL CARDS:** The **LEARN PANEL** menu will display the internal cards found connected, or not, indicated by **YES** or **NO**:
    - INTERNAL CARDS-
    - 1: PSU CARD: YES or NO
    - 2: LOOP ONE: YES or NO
    - 3: LOOP TWO: YES or NO
    - 4: LOOP THREE: YES or NO
    - 5: LOOP FOUR: YES or NO
    - 6: ZONE LED: YES or NO
    - 7: NETWORK CARD: YES or NO
    - 8: Relay ONE: YES or NO
    - 9: Relay TWO: YES or NO
- Press return  key to accept.
- **DEVICES:** The **LEARN PANEL DEVICES** screen will display the number (n) of found, removed and new devices, for each of the loops. See table below:

LOOP	FOUND	REMOVED	NEW	DEFAULT NEW: YES / NO
01	nnn	nnn	nnn	
02	nnn	nnn	nnn	
03	nnn	nnn	nnn	
04	nnn	nnn	nnn	

**Note:** To set the default for new devices to either **YES** or **NO**, use the Left/Right arrow keys to toggle between the two options.

- Press return  key again
  - **NETWORK:** The **LEARN PANEL** sub-menu will display a list containing all the other 15 network addresses showing if they are connected or not indicated by **PRESENT** or **NOT PRESENT**:

**-NETWORK-**

**1: 2nd PANEL: PRESENT/NOT PRESENT**

**2: 3rd PANEL: PRESENT/NOT PRESENT**

to


**7: 8th PANEL: PRESENT/NOT PRESENT**


**8: 1st Repeater: PRESENT/NOT PRESENT**

to

**15: 8th Repeater: PRESENT/NOT PRESENT**

**Note:** This sub-menu is only shown on panel 1. On all other panels, this sub-menu is skipped.

- Press the return  key to finally accept. A short acknowledgement sound will be present.

**Note:** The status of the Repeaters may be changed, using the Up/Down arrow keys and the  key to change between PRESENT or NOT PRESENT. However, any differences, between detected devices and changes made by user, will result in a System Fault condition. The **General Fault** and **System Fault** status LEDs will be illuminated pulsing, with an accompanying fault tone from the internal buzzer. Additionally, on return to the Title screen, a FAULT display will list the applicable faults. This condition will require the panel to be re-configured to clear.

## USER MENU

Accessible from the **MAIN MENU** (Access level 2), the **USER MENU** and its subsequent sub-menus are used to set-up the panel ready for configuration. The **USER MENU** sub-menus are:

- USER
  - DISABLE
    - DISABLE MENU
      - REMOVE ALL DISABLEMENTS
      - GENERAL
      - LOOP DEVICES
      - ZONES
  - TEST
    - TEST MODE
      - TEST ON/OFF
      - SETTINGS
  - DELAY
    - DELAY MENU
  - SCAN
  - TIME & DATE
    - Time & Date
    - Set DST
  - Lamp Test
  - Contrast
  - BUZZER

To access the **MAIN MENU**:

- Turn Activate Controls Key to On

or

- Use the keypad to enter code **1111**:
  - Press ✓ key
  - Use the Up/Down arrow keys to increase/decrease the number value
  - Use the Left/Right arrow keys to move to the next digit in the 4-digit sequence
  - When all 4 digits have been set to the code **1111** press ✓ key once again
  - The **MAIN MENU** will become available for operation.

**Note:** Access level 2 Menu will deactivate after 60 sec if not used.

## USER MENU: DISABLE

Used to enable/disable outputs, devices, and Zones:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **USER** menu icon.
- Press ✓ key to select the **USER MENU**
- Under **USER MENU**, use Left/Right arrow keys to move cursor to **DISABLE** icon. Press ✓ key to select the **DISABLE** sub-menu.
- The following menu will be displayed:  
**DISABLE MENU**  
**1: REMOVE ALL DISABLEMENTS**  
**2: GENERAL**  
**3: LOOP DEVICES**  
**4: ZONES**
- Use the Up/Down arrow keys to move to the required option and press the enter ✓ key to select it.
- Press the **BACK** ↩ key to return to the **USER MENU**.

### DISABLE MENU: 1: REMOVE ALL DISABLEMENTS

To remove all disablements currently set in the system:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **USER** menu icon.
- Press ✓ key to open the **USER MENU**
- Under **USER MENU**, use Left/Right arrow keys to move cursor to **DISABLE** menu icon. Press ✓ key to open the **DISABLE MENU** sub-menu.
- From the **DISABLE MENU**, use the Up/Down arrow keys to highlight the option:  
**1: REMOVE ALL DISABLEMENTS**
- Press enter ✓ key once, a confirmation dialog, with options for **NO/YES**, will appear:

**ARE YOU SURE?**  
**REMOVE ALL DISABLEMENTS**  
**NO                      YES**

- Use Left/Right arrow keys to highlight the **YES** option and press ✓ key once. A short acknowledgement sound will be present.
- When finished, press return ↵ key to return to **DISABLE MENU**.
- Next, press return ↵ key to return to the **USER MENU**.

## DISABLE MENU: 2: GENERAL

To enable or disable SOUNDERS/LOOP OUTPUTS/FIRE Relay/FARE OUTPUT/FAULT Relay/FWRE OUTPUT:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **USER** menu icon.
- Press ✓ key to select the **USER MENU**.
- Under **USER MENU** press ✓ key to select the **DISABLE** sub-menu.
- From the **DISABLE MENU**, use the Up/Down arrow keys to select the option:  
2: GENERAL
- Press enter ✓ key once to open the **GENERAL** sub-menu, the following **DISABLE MENU** options will be displayed:

### DISABLE MENU

1: SOUNDERS: ENABLED/DISABLED

2: LOOP OUTPUTS: ENABLED/DISABLED

3: FIRE RELAY: ENABLED/DISABLED

4: FARE OUTPUT: ENABLED/DISABLED



5: FAULT RELAY: ENABLED/DISABLED

6: FWRE OUTPUT: ENABLED/DISABLED

- Use the Up/Down arrow keys to select the required option.
- Press enter ✓ key to toggle between **ENABLED** or **DISABLED**

**Note:** If any of these options are set to **DISABLED**, the amber **Disablement** LED will be illuminated as steady. If the **SOUNDERS** option is set to **DISABLED**, the amber **Sounder Status** LED will also be illuminated.

The disablement of the fault relay does not comply with EN54-2.

- When finished, press return  key to accept the changes and return to **DISABLE MENU**. A short acknowledgement sound will be present.
- Press the return  key to return to **USER MENU**.

## DISABLE MENU: 3: LOOP DEVICES

To enable or disable individual devices on each of the Loops (1 – 2 or 1 – 4):

- On the **Main Menu**, use Left/Right arrow keys to move cursor box to **USER** menu
- Press ✓ key to select the **USER MENU**
- Use Left/Right arrow keys to highlight the **DISABLE** icon.
- Press ✓ key to select the **DISABLE** sub-menu.
- From the **DISABLE MENU**, use Up/Down arrow keys to select the option:

### 3: LOOP DEVICES

- Press ✓ key to open the **LOOP DEVICES** sub-menu, the following **DISABLE MENU** will be displayed:

**DISABLE MENU**      **LOOP: 1 – 2 or 1 – 4**

**DEVICE: 001 – 126 (If Core Protocol is enabled then 240)**

**TYPE: nnn** – device type in numerical form (e.g. 012 – wall sounder, refer to Device Type table)

**STATUS: ENABLED/DISABLED**

- Use the Left/Right arrow keys to select the required Loop.
- Use the Up/Down arrow keys to select the required Device.
- Press enter ✓ key to toggle between **ENABLED** or **DISABLED**

**Note:** If the status of any device is set to **DISABLED**, the amber **Disablement** LED will be illuminated as steady.

- When finished, press return ↵ key to accept the changes and return to **DISABLE MENU**. A short acknowledgement sound will be present.
- Press the return ↵ key to return to **USER MENU**.
- Press return ↵ key to return to **MAIN MENU**.

#### **DISABLE MENU: 4: ZONES**

To enable or disable individual device zones (1 – 18, 1 – 36 or 1 - 128):

- On the **Main Menu**, use Left/Right arrow keys to move cursor box to **USER** menu.
- Press ✓ key to select the **USER MENU**
- Use Left/Right arrow keys to highlight the **DISABLE** sub-menu.
- Press ✓ key to select the **DISABLE** sub-menu.
- From the **DISABLE MENU**, use Up/Down arrow keys to highlight the option:  
4: ZONES
- Press ✓ key to open the **ZONES** sub-menu, the following **DISABLE MENU** will be displayed:

**DISABLE MENU**


**ZONE: DEVICE ZONE 001 – 018, 001 – 036 or 001 - 128**

**STATUS: ENABLED/DISABLED**

- Use the Up/Down arrow keys to select the required Zone
- Press ✓ key to toggle **STATUS** between **ENABLED** and **DISABLED**

**Note:** If the status of any zone is set to **DISABLED**, the amber **Disablement** LED will be illuminated as steady.

- When finished, press return ↵ key to accept the changes and return to **DISABLE MENU**. A short acknowledgement sound will be present.
- Press the return ↵ key to return to **USER MENU**.

- Press return  key to return to **MAIN MENU**.

## USER MENU: TEST

In **TEST MODE**, the devices in the Zone(s) in test (i.e. detectors, call points, etc.) can be activated and the panel will automatically reset, enabling the panel to be tested by one person. The Zone(s) to be tested can be set under **TEST MODE: SETTINGS**, and the **TEST MODE** can be activated from **TEST MODE: ON/OFF**:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **USER** menu icon
- Press ✓ key to select the **USER MENU**
- Under **USER MENU**, use Left/Right arrow keys to move cursor to **TEST** icon. Press ✓ key to select the **TEST MODE** sub-menu.
- The following menu will be displayed:

## TEST MODE

## ON/OFF      SETTINGS

- Use the Left/Right arrow keys to move to the required option and press the enter ✓ key to select it.
- Press the back ↶ key to return to the **USER MENU**.

## TEST MODE: ON/OFF

This is the main activation control for **TEST MODE**, along with sounder options. Any Zones that have been set for **TEST MODE** will be disabled (i.e. operate normally) unless **INCLUDE ALL ZONES** or **EXCLUDE ALL ZONES** function has been set in **TEST MODE: SETTINGS**.

To set the system **TEST MODE ON** or **OFF**:

- On the **Main Menu**, use Left/Right arrow keys to move cursor box to **USER** menu
- Press ✓ key to select the **USER MENU**.
- Under **USER MENU** highlight the **TEST** option and press ✓ key to select it.
- On the **TEST MODE** sub-menu, highlight the **ON/OFF** sub-menu and then press ✓ key to access it.
- The **TEST ON/OFF** sub-menu will be displayed:

**TEST ON/OFF**

**OFF**

## WITH SOUNDERS

## WITHOUT SOUNDERS



**Note:** Selecting **WITH SOUNDERS** or **WITHOUT SOUNDERS** will activate the **TEST MODE** function, so that any Zones set for this mode can be tested. The **Test Mode** amber LED will illuminate.

**Note:** Selecting **OFF** will de-activate the **TEST MODE** function so that any Zones set for this mode will still activate Fire Alarms in the standard way. The **Test Mode** amber LED will not illuminate.

- Use the Left/Right arrow keys to select one of the above options and then press ✓ key to activate it.
- Next, press the return ↵ key to return to **TEST MODE** menu.

## TEST MENU: SETTINGS

This menu sets the Zone(s) to be tested.

To select the Test Mode settings:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **USER** menu icon.
- Press ✓ key to select the **USER MENU**.
- Under **USER MENU** highlight the **TEST** option and press ✓ key to select it.
- On the **TEST MODE** sub-menu, highlight the **SETTINGS** sub-menu and then press ✓ key to access it.
- Under **TEST SETTINGS** sub-menu, the following options will be displayed:

### TEST SETTINGS

#### ZONES

#### INCLUDE ALL ZONES

#### EXCLUDE ALL ZONES

- Use the Up/Down arrow keys to highlight the required option
- Press enter ✓ key to select it
- On selecting the **ZONES** option, the following details will be displayed:

#### ZONES


**ZONE: DEVICE ZONE 1 – 18, 1 – 36 or 1 - 128**

#### STATUS: EXCLUDED/TESTING

- Use the Up/Down arrow keys to select the required Zone
- Press ✓ key to toggle between **EXCLUDED** or **TESTING**
- Press the return ↵ key to return to **TEST MODE** menu.
- On selecting **INCLUDE ALL ZONES** or **EXCLUDE ALL ZONES**, a confirmation dialog, with options for **NO/YES**, will appear. Use Left/Right arrow keys to highlight the appropriate option and press ✓ key once. A short acknowledgement sound will be present.
- Next, press the return ↵ key to return to **TEST MODE** menu.
- Press the return ↵ key to return to **USER Menu**.

## USER MENU: DELAY

If, during configuration of the panel, **DELAY DEPENDENCY** is set to **DELAY** (for false alarm management, refer to **CONFIG PANEL Menu: OPTIONS** instructions), the **DELAY** sub-menu allows for the **DELAY DEPENDENCY** to be enabled/disabled, at Access Level 2:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **USER** menu.
- Press ✓ key to select the **USER MENU**.
- Under **USER MENU** highlight the **DELAY** option and press ✓ key to select it
- The **DELAY** sub-menu will display the following options:
  - 1: DELAY SETTINGS: ENABLE/DISABLE**
- At option 1, press ✓ key to change between **ENABLED** or **DISABLED**
- Press return  key to accept changes.

## USER MENU: SCAN

The **SCAN** sub-menu allows each loop card to look for and record what devices are installed in the loop, without overwriting the devices included during configuration:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **USER** menu.
- Press ✓ key to select the **USER MENU**.
- Under **USER MENU** highlight the **SCAN** option and press ✓ key to select it
- A confirmation dialog, with options for **NO/YES**, will appear:

**ARE YOU SURE?**

**SCAN FOR DEVICES**

**NO                      YES**

- Use Left/Right arrow keys to highlight the **YES** option and press ✓ key once. A short acknowledgement sound will be present.
- A **LOOP STATUS** dialog will open:
  - LOOP STATUS**
  - LOOP1: ACQ LOOP STRUCT**
  - LOOP2: OFFLINE**
  - LOOP3: OFFLINE**
  - LOOP4: OFFLINE**
- As each loop performs a scan, it indicates that it is acquiring the loop structure and is accompanied by a progress bar.
- On completion of the scan the display will return to the **MAIN MENU**.

## USER MENU: TIME&DATE

The **TIME&DATE** sub-menu is used to set the system clock and to set the period where the system clock is moved forward 1 hour, to reflect local Daylight Savings Time (DST):

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **USER** menu
- Press ✓ key to select the **USER MENU**.
- Under **USER MENU** highlight the **Time&Date** option and press ✓ key to select it
- The **Time&Date** sub-menu will display the following options:

### Time&Date Menu

**Time&Date**

**Set DST**

- Use the Left/Right arrow keys to highlight the required option and press ✓ key to select it.

## TIME&DATE MENU: TIME & DATE

To set the system Time & Date:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **USER** menu icon
- Press ✓ key to select the **USER MENU**.
- Under **USER MENU** highlight the **Time&Date** option and press ✓ key to select it.
- On the **USER Time&Date** sub-menu, highlight the **Time&Date** option and press ✓ key to access it.
- Adjust the time and date as required, using the Up/Down and Left/Right arrow keys.
- Press return ↵ key once to return to **Time&Date** menu.

## TIME & DATE MENU: SET DST

The **Set DayLight Savings Menu** is used to set the start and end of local Daylight Savings Time on the system:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **USER** menu icon
- Press ✓ key to select the **USER MENU**.
- Under **USER MENU** highlight the **Time & Date** option and press ✓ key to select it.
- On the **User Tim&Date** sub-menu, highlight **Set DST** option and press ✓ key to access it.
- Under the **Set DayLight Savings Menu** sub-menu, the following options will be displayed:


### Set DayLight Savings Menu

**Starts:** LAST Sunday      **MAR**

**Ends:** **LAST** Sunday      **OCT**

### Auto Update DayLight Savings: YES/NO

#### DST: ACTIVE/INACTIVE

- To change the **Set DayLight Savings** sub-menu options, to match local start and end of DST:
  - Use Left/Right arrow keys to move between the various fields (indicated by underline cursor). Use Up/Down arrow keys to toggle to the required setting for each field:
    - **Starts: LAST/1<sup>st</sup>/2<sup>nd</sup>/3<sup>rd</sup>/4<sup>th</sup> Monday – Sunday JAN - DEC** - adjust the date, to show when the local Day Light Savings time begins (e.g. – **Starts: Last Sunday MAY**)
    - **Ends: LAST/1<sup>st</sup>/2<sup>nd</sup>/3<sup>rd</sup>/4<sup>th</sup> Monday – Sunday Jan - DEC** - adjust the date, to show when the local Day Light Savings time ends (e.g. – **Ends: 4th Tuesday OCT**)
    - **Auto Update DayLight Savings: YES/NO** - adjust to turn on or off the automatic switching of the system clock forward by 1 hour to match local DST.
    - **DST: ACTIVE / IN-ACTIVE** – not amendable, automatically shows the current DST state, dependent on the above settings.
- Press return  key once to return to **Time & Date** menu.

### USER MENU: LAMP TEST

To operate the **LAMP TEST** menu, to test the panel LCD display and warning LEDs:


- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **USER** menu.
- Press ✓ key to select the **USER MENU**.
- Under **USER MENU** highlight the **Lamp Test** option, and then press ✓ key to select it.
- This action will enable the lamp test mode: a long acknowledgement sound will be present, the digital display will go OFF, and all LEDs on the front fascia will come on, following this sequence:
  - First, the following LEDs will come on, at the same time, for a couple of seconds:
    - General Fire
    - General Fault
    - Supply Healthy
    - Delay Status
    - Disablement
    - Power Supply Fault
    - Sounder Status
    - Test Mode
    - System Fault

- Second, the following Detection Zone LEDs will come on, at the same time, for a couple of seconds: (Loop 1 – 2)
  - Zone 1 to Zone 9
  - Zone 10 to Zone 18
- Third, the following Detection Zone LEDs will come on, at the same time, for a couple of seconds (Loop 3 – 4):
  - Zone 19 to Zone 27
  - Zone 28 to Zone 36

**Note:** After the lamp test has been performed, the LCD digital display will turn back ON (displaying the **USER MENU**), after all LEDS have extinguished and the long acknowledgement sound has stopped.

### USER MENU: CONTRAST


To set the LCD screen contrast and backlight, operate the Contrast menu:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **USER** menu icon
- Press ✓ key to select the **USER MENU**
- Under **USER MENU** highlight the **Contrast** option, and then press ✓ key to select it
- Under the **Contrast** sub-menu, the two following options will be available:
  - **Contrast:** use the left and right arrow keys to adjust the value
  - **BACKLIGHT:** using the up and down arrow keys, one of the following values can be set: **MIN**, **HALF**, and **MAX**
- Press return  key to return to **USER MENU**. A short acknowledgement sound will be present.

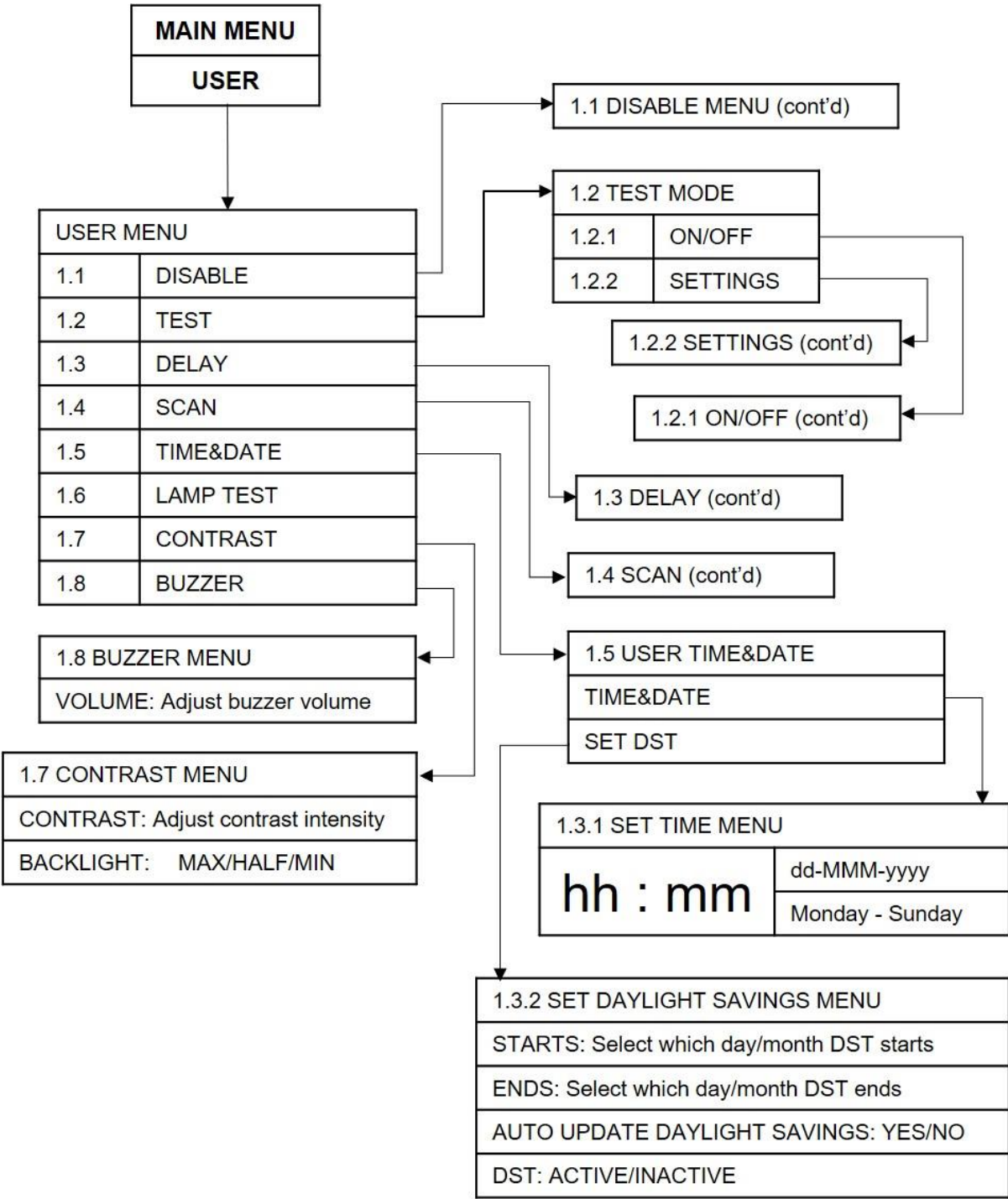
### USER MENU: BUZZER

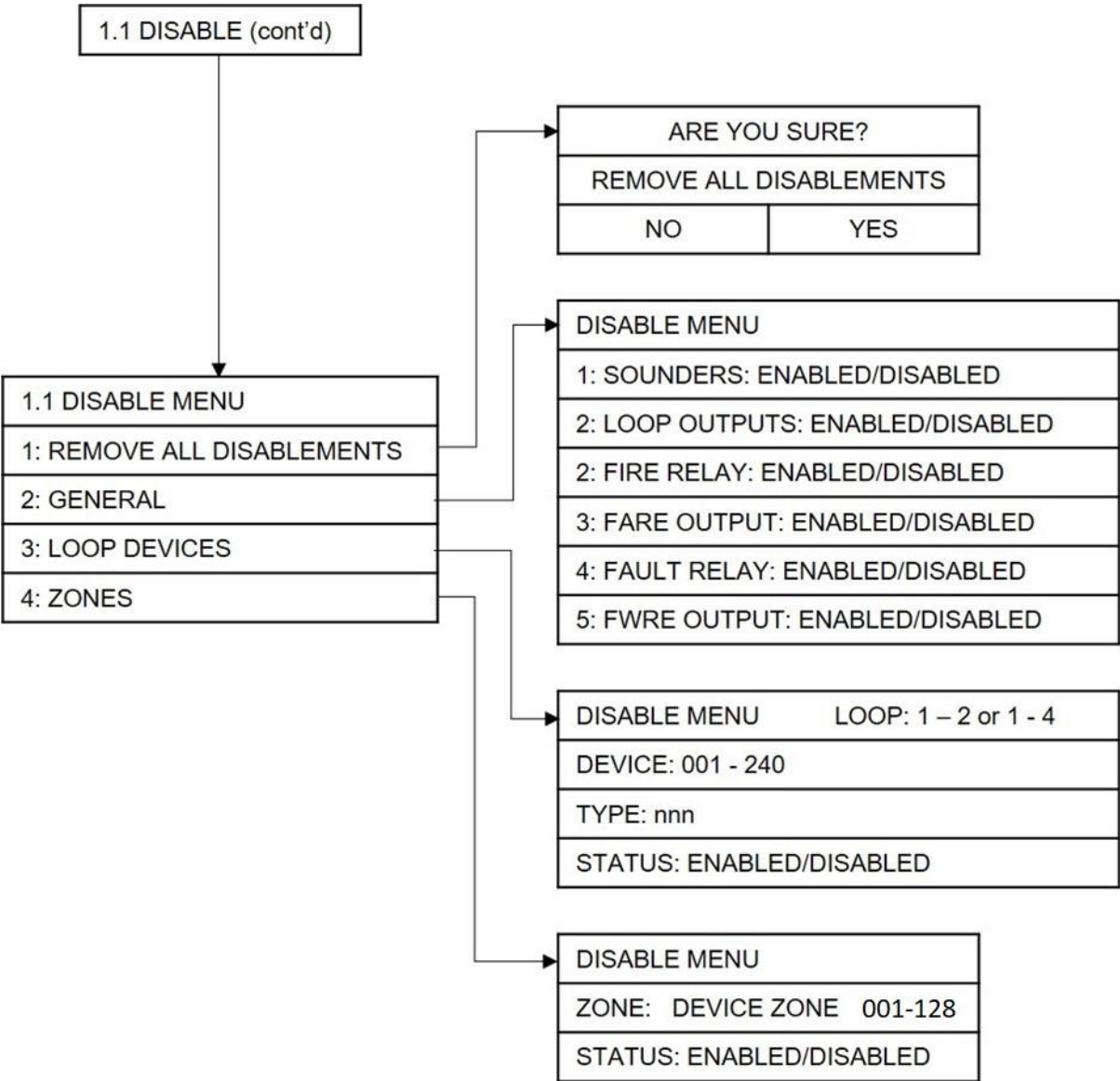
To set the volume for the panel internal buzzer, open the **BUZZER** menu:

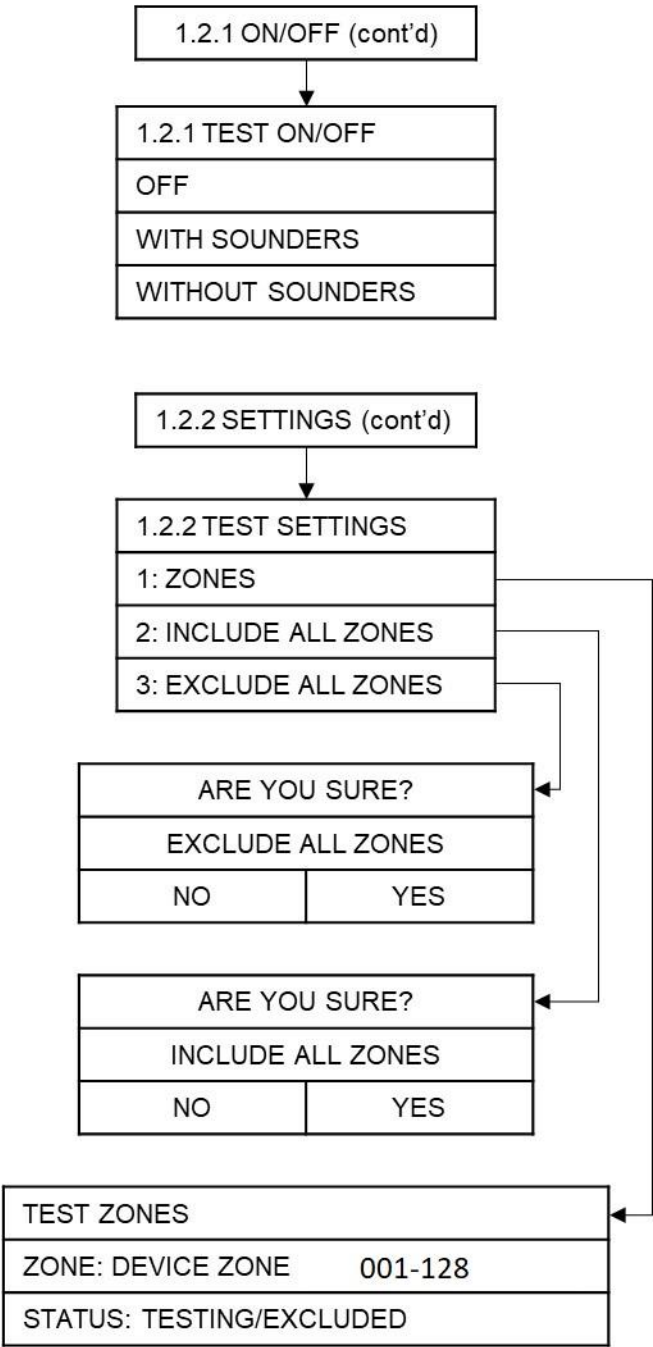
- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **USER** menu icon
- Press ✓ key to select the **USER MENU**.
- Under **USER MENU**, highlight the **BUZZER** option and then press ✓ key to select it.
- Under **BUZZER Menu** the following option will be available:
 

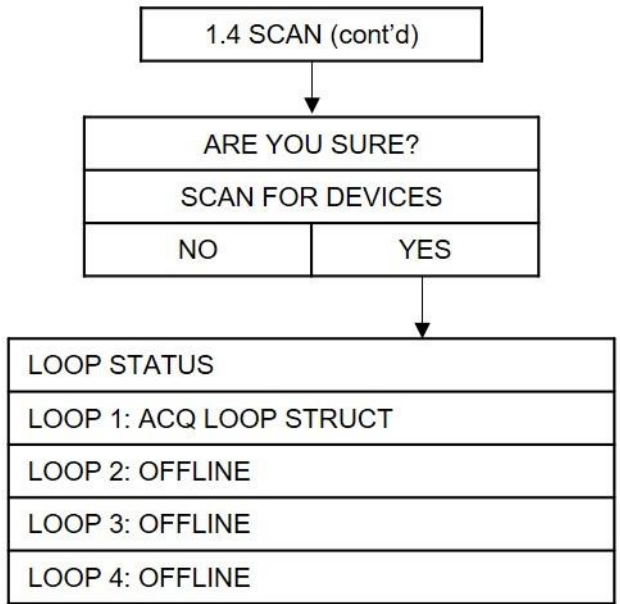
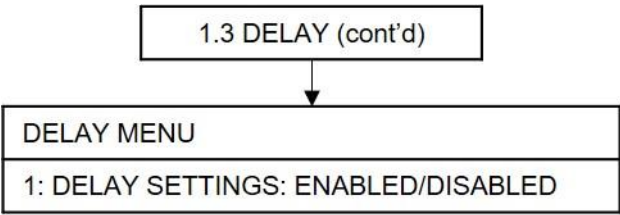
VOLUME
- Use Left/Right arrow keys to adjust the buzzer volume
- Press return  key to return to **USER MENU**. A short acknowledgement sound will be present.

USER MENU Breakdown









## CONFIG Menu

Accessible from the **MAIN MENU** (Access level 2); the **CONFIG** Menu (Access level 3), and its subsequent sub-menus, is used to configure the panel and its attached devices. The sub-menus available are:

- **CONFIG**
  - **PANEL**
    - **LEARN**
    - **TONES**
    - **ZONES**
    - **OPTIONS**
    - **DEFAULT**
    - **PASSWORD**
  - **DEVICES**
    - **DEVICES**
    - **SOUNDERS**
    - **RELAY**
  - **NETWORK**
    - **OPTIONS**
    - **PANEL**
  - **PSU**

To access the **CONFIG** menu:

- Turn Activate Controls Key to On

or

- Use the keypad to enter code **1111**:
  - Press ✓ key
  - Use the Up/Down arrow keys to increase/decrease the number value.
  - Use the Left/Right arrow keys to move to the next digit in the 4-digit sequence.
  - When all 4 digits have been set to the code **1111** press ✓ key once again. The **MAIN MENU** will become available for operation.
- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **CONFIG** icon.
- Press ✓ key to select the **CONFIG** icon. The digital display will show the following message:

Enter Level 3 Access Code
- Use the keypad to enter code **3333**:
  - Press ✓ key
  - Use the Up/Down arrow keys to increase/decrease the number value.

- Use the Left/Right arrow keys to move to the next digit in the 4-digit sequence.
- When all 4 digits have been set to the code **3333** press ✓ key once again. The Access level 3 menu will become available for operation.

**Note:** Access level 3 Menu will deactivate after 60 sec if not used.

### CONFIG Menu: **PANEL**

Under the **PANEL** sub-menu, the following sub-menus are available to configure the panel controls and outputs:

- LEARN
- TONES
- ZONES
- OPTIONS
- DEFAULT
- PASSWORD

### CONFIG PANEL Menu: **LEARN**

To set the panel to automatically learn what internal cards, external devices and Peripheral BUS (P-BUS) RSUs are connected to the system, access the **LEARN PANEL** menu:

**Note:** Running a learning routine will overwrite any device configuration previously set.

- On the **CONFIG MENU**, highlight **PANEL** option and then press ✓ key to gain access to it.
- Next highlight the **LEARN** option, under the **CONFIG PANEL** menu and press ✓ key to select it.

The system will perform a learning routine; in order to acknowledge the Internal Cards installed in the panel, the External Devices connected to the system. The following information will be displayed in turn, each accompanied by a progress bar:

- LEARNING INTERNAL CARDS:
- LEARNING DEVICES:
- LEARNING NETWORK:

- On completion of the learning routine, the **LEARN PANEL** sub-menu will display all the internal cards, devices and RSUs that were found available:

- INTERNAL CARDS:** The **LEARN PANEL** menu will display the internal cards found connected, or not, indicated by **YES** or **NO**:

-INTERNAL CARDS-

1: PSU CARD: YES/NO

2: LOOP ONE: YES/NO

3: LOOP TWO: YES/NO

4: LOOP THREE: YES/NO

5: LOOP FOUR: YES/NO

6: ZONE LED: YES/NO

7: NETWORK CARD: YES/NO


8: Relay ONE: YES/NO

9: Relay TWO: YES/NO

- Press return  key to accept.
  - DEVICES:** The **LEARN PANEL DEVICES** screen will display the number (n) of found, removed and new devices, for each of the loops:

LOOP	FOUND	REMOVED	NEW	
01	nnn	nnn	nnn	<b>DEFAULT</b>  <b>NEW : YES / NO</b>
02	nnn	nnn	nnn	
03	nnn	nnn	nnn	
04	nnn	nnn	nnn	

**Note:** To set the default for new devices to either YES or NO, use the Left/Right arrow keys to toggle between the two options.

- Press return  key again
  - NETWORK:** The **LEARN PANEL** sub-menu will display a list containing all 16 Network devices and show if they are connected or not, indicated by **PRESENT** or **NOT PRESENT**:

- NETWORK-

1: 2nd PANEL: PRESENT/NOT PRESENT

2: 3rd PANEL: PRESENT/NOT PRESENT


to

7: 8th PANEL: PRESENT/NOT PRESENT

8: 1st Repeater: PRESENT/NOT PRESENT


to

**15: 8th Repeater: PRESENT/NOT PRESENT**

- Press the return  key to finally accept. A short acknowledgement sound will be present.
- **Note:** The status of the RSUs may be changed, using the Up/Down arrow keys and the ✓ key to change between **PRESENT** or **NOT PRESENT**. However, any differences between detected devices and changes made by user, will result in a System Fault condition. The **General Fault** and **System Fault** status LEDs will be illuminated pulsing, with an accompanying fault tone from the internal buzzer. Additionally, on return to the Title screen, a **FAULT** display will list the applicable faults. This condition will require the panel to be re-configured to clear.

**CONFIG PANEL Menu: TONES**

To set the Panel tones and volumes for various device outputs, access the **TONES** menu:

- On the **CONFIG Menu**, highlight **PANEL** option and then press ✓ key in order to gain access to it.
- On the **CONFIG PANEL** sub-menu, highlight the **TONES** option and press ✓ key again.
- The **TONES SETTINGS** sub-menu is presented as follows:
  - 1: TONE PAIR: 1 – 15**
  - 2: SOUNDER VOLUME: 1 – 7**
  - 3: ALARM TONE: TONE OFF/1/2**
  - 4: ZONAL TONE: TONE OFF/1/2**
  - 5: EVAC TONE: TONE OFF/1/2**
  - 6: DELAYS TONE: TONE OFF/1/2**
  - 7: ALERT TONE: TONE OFF/1/2**
  - 8: CLASS CHANGE TONE: TONE OFF/1/2**
- Use the Left/Right arrow keys to move to the required **PROFILE** and press ✓ key to select the chosen profile.
- Use the Up/Down arrow keys to move between settings and press ✓ key to select the required setting.
- Press the return  key to return to the **CONFIG PANEL** menu.

## CONFIG PANEL Menu: ZONES

To configure the system Detection Zones, access the **ZONES** menu:

- On the **CONFIG MENU**, highlight **PANEL** option and then press ✓ key to gain access to it.
- On the **CONFIG PANEL** sub-menu, highlight the **ZONES** option and press ✓ key again.
- The **ZONES SETTINGS** for the selected Zone will be presented:  
**ZONE SETTINGS    ZONE 01 – 18, 01 – 36 or 01 - 128**  
**1: ZONE NAME: DEVICE ZONE 001 – 018, 001 – 036 or 001 - 128**  
**2: ZONE DEPENDENCY: ENABLED/DISABLED**
- Use Left/Right arrow keys to select required Zone
- Use the Up/Down arrow keys to move between options **1** to **3** and press ✓ key to select the required setting.
- At option **1**, to compose a zone name for the numbered zone, press ✓ key to open the **CONFIG NAME** display. This display is an alphanumeric keyboard. Use Up/Down and Left/Right arrow keys and ✓ key to compose a name for the selected Zone (e.g. Kitchen-Flr1). Using the **ALT** option cycles between uppercase, lowercase, numeric and special character keyboards. Press return ↵ key to accept changes
- At option **2**, press ✓ key to change between **ENABLED** or **DISABLED**
  - Press return ↵ key to accept changes.

## CONFIG PANEL Menu: OPTIONS

To configure the panel sounder outputs, including the delay dependency modes (for false alarm management), access the **OPTIONS** menu:

- On the **CONFIG Menu**, highlight **PANEL** option and then press ✓ key in order to gain access to it.
- Highlight the **OPTIONS** icon under the **CONFIG PANEL** menu and press ✓ key again.
- The information available under **OPTIONS** sub-menu will be presented as follows:  
**1: LANGUAGE: ENGLISH etc.**  
**2: ZONES RESOUND 2ND ALARM: NO/YES**  
**3: SOUNDER ONE FARE: NO/YES**  
**4: SOUNDER TWO FWRE: NO/YES**  
**5: DELAY DEPENDENCY: DISABLED/TYPE A/TYPE B/TYPE C/DELAY**  
**6: CONFIRM TIME: XXmin XXsec**  
**7: INHIBITED TIME: XXmin XXsec**  
**8: MAX ZONES: NO/YES (sets 128 zones)**  
**9: CORE PROTOCOL L1: NO/YES**  
**10: CORE PROTOCOL L2: NO/YES**

**11: CORE PROTOCOL L3: NO/YES**

**12: CORE PROTOCOL L4: NO/YES**

**13: POLLING LED: NO/YES**

**14: EVAC USE ON MUSTER: NO/YES**

**15: PULSE USE ON MUSTER: NO/YES**

- Use the Up/Down arrow keys to navigate between options **1** to **15**
- For option **1** select the displayed language: English Spanish, Cantonese or Italian.
- For options **2**, **3**, and **4**, press ✓ key to set value **NO** or **YES**
- For option **5**, press ✓ key to change cycle through **DELAY DEPENDENCY** type options
- Depending on the **DELAY DEPENDENCY** type selected at option **5**, option **6** will display **CONFIRM TIME**, the currently set delay time from first detection to return to Alert Condition (see **Dependency Modes (False Alarm Management)**) and option **7** will display the **INHIBITED TIME** (the time delay from entering the Alert condition to panel Reset), press ✓ key to select option, then use Up/Down arrow keys to change time (each key press increases/decreases time in 30 sec increments)
- For options **8-15**, press ✓ key to set value **NO** or **YES**
- For options **8-11** are for **Core Protocol**, for devices up to **240**.


**Note:** If **SOUNDER ONE FARE** and/or **SOUNDER TWO FWRE** (options **3** and **4**) are set to **YES**, their status (**NORMAL/ACTIVE**) will be displayed on the LCD screen title display, and in place of the event counts (**A nn F nn D nn O nn**) on any of the **EVENT** reports (**ALARM**, **FAULT**, **DISABLE** and **OTHER**).

**Note:** If **SOUNDER TWO FWRE** (option **4**) is set to **YES**, faults on the SOUNDER TWO circuit will NOT be indicated (all other fault indications are unaffected). This feature does not conform with BS EN 54-2, clause 8.2.4 g) and clause 8.9.

**Note:** If any non-core devices are used then addresses 127 and 128 cannot be used.

Any non-core device will invalidate the address which is at its own address plus 128.

e.g. Address 1 invalidates Address 129

- Next, press the return  key once to accept all changes and to return to **CONFIG PANEL** menu. A short acknowledgement sound will be present.

## **CONFIG PANEL Menu: DEFAULT**

To return the panel to its factory default settings, access the **DEFAULT** menu:

- Highlight **PANEL** option and then press ✓ key in order to gain access to it.
- Highlight the **DEFAULT** option under the **CONFIG PANEL** menu and press ✓ key again.
- The following information will be displayed on the digital display:


**ARE YOU SURE?**

**SET DEVICE DEFAULTS**

**NO YES**

- Use the Left/Right arrow keys to choose between **YES** or **NO** options and then press ✓ key in order to enable your action.
- If **NO** value has been selected, then the system will return to **CONFIG PANEL** menu and the current settings will be maintained.
- If **YES** value has been selected, then all current settings will be overwritten, and the system will return to original factory settings.

**Caution** is recommended before choosing the **YES** value for the **DEFAULT** option! Choosing this option will remove ALL configuration that has been set and will return the panel to its factory default settings.


- Press the return  key once to return to **CONFIG PANEL** menu. A short acknowledgement sound will be present.

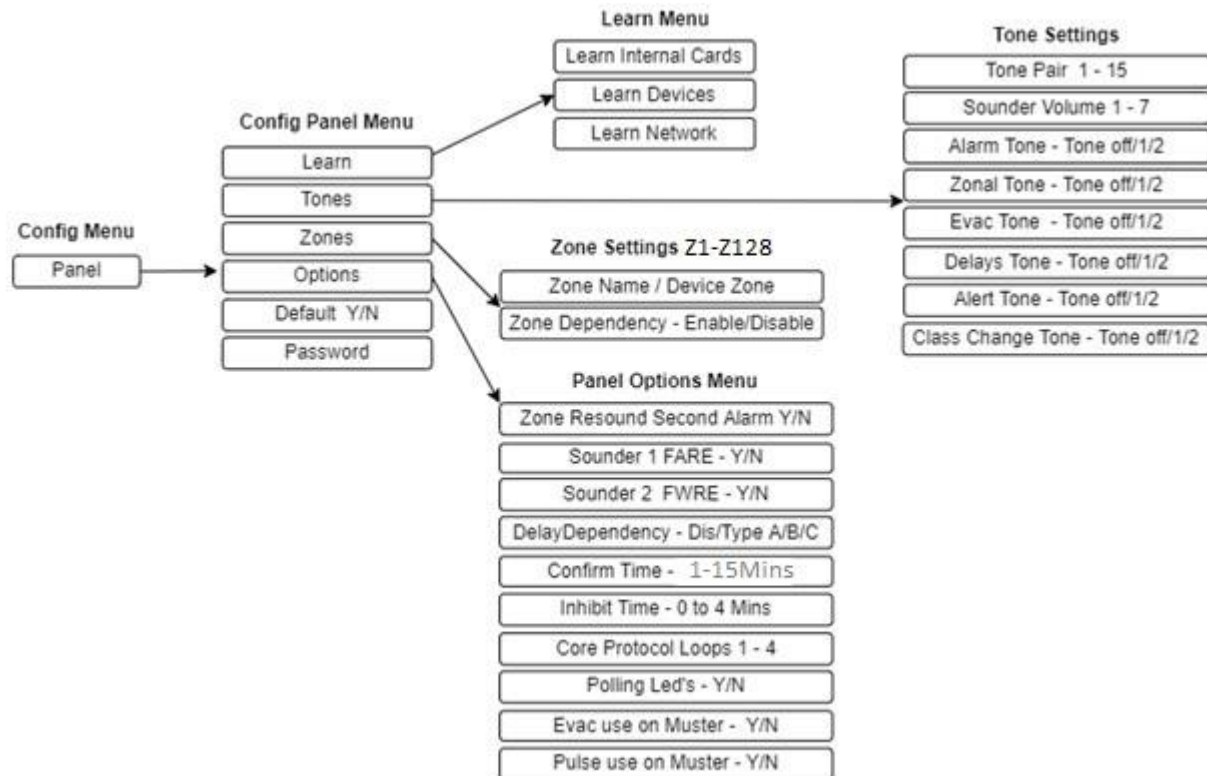
### CONFIG PANEL Menu: PASSWORD

To set the 4-digit access codes, access the Password menu:

- Highlight **PANEL** option and then press ✓ key in order to gain access to it.
- Highlight the **Password** option under the **CONFIG PANEL** menu and press ✓ key again.
- The **Set Password Menu** will be presented as follows:
 

OLD User Password: 1111                      Back

User Password: 0000                      Confirm
- Use the Up/Down arrow keys to increase/decrease the number value
- Use the Left/Right arrow keys to move to the next digit in the 4-digit sequence
- When all 4 digits have been set to the required new code press ✓ key once again.
- Press the return  key once to return to **PANEL** menu.



## CONFIG Menu: DEVICES

Under the **PANEL** sub-menu, the following sub-menus are available, to configure external devices (call points, detectors, sounders, relays, etc.) connected to the system:

- DEVICES
- SOUNDERS
- RELAY

## CONFIG DEVICES Menu: DEVICES

To configure Device Name, Zone, output, tones, volume, etc. for individual devices in each of the loops, access the DEVICES sub-menu:

- On the **CONFIG MENU**, highlight **DEVICES** icon and then press ✓ key in order to gain access to it.
- Highlight the **DEVICES** option under the **CONFIG DEVICES** sub-menu, and press ✓ key again.
- The **CONFIG DEVICE** information display will be presented as follows:

**CONFIG DEVICE**

**LOOP: 1 – 2 or 1 – 4**

**DEVICE: 001 – 126 (If Core Protocol is enabled then 240)**

**TYPE:** nnn (see note, below)

**NAME:** Device      Name

**ZONE:** DEVICE ZONE 001 – 018, 001 – 036 or 001 - 128

**Note:** For each device selected (001 – 240), the display will show the number (n) of the device type.

**Note:** The **NAME** option displays the number (n) of the loop (1 – 2 or 1 – 4) and device (001 – 240) selected, together with the device's name (i.e. 'Detector') if it has been configured (see below).

**Note:** The **ZONE** option displays the number of the zone (001 – 018, 001 – 036 or 001 - 128) that the selected device is installed in, together with the zone's name (i.e. 'Kitchen') if it has been configured under **CONFIG PANEL Menu: ZONES**.

- Use the Left/Right arrow keys to select the required Loop (1 – 2 or 1 – 4)
- Use the Up/Down arrow keys to select the required device (001 – 126, Or up to 240 if Core Protocol Enabled) fitted in the selected loop
- Next press ✓ key again and a list containing information about the selected device will be displayed as follows (or, if finished, press return ↵ key to return to CONFIG DEVICES menu):

**1: DEVICE NAME:** name

**2: ZONE:** 001 – 018, 001 – 036 or 001 - 128

**3: SOUNDER BASE:** NONE/ON/MULTI

**4: RELAY FUNCTION**

**5: CAN BE SILENCED:** YES/NO

**6: LATCH ALARM:** YES/NO

**7: DELAY DEPENDENCY:** ENABLED/DISABLED

**8: MUSTER:** ENABLED/DISABLED

**9: NOT ALARM:** YES/NO

**10: SET DEVICE DEFAULTS**

- Use Up/Down arrow keys to navigate between options **1** to **9**.
- At option **1**, press ✓ key to edit device name. This displays a **CONFIG NAME** sub-menu, including an alphanumeric keyboard. Use Up/Down and Left/Right arrow keys and ✓ key to compose a name for the selected Device (e.g. 'Kitchen-Detector1'). Using the **ALT** option cycles between uppercase, lowercase, numeric and special character keyboards. Press return ↵ key to accept changes
- At option **2**, press ✓ key in order to enable changes to the option, then use Up/Down arrow keys to display the zone number (**1 – 18, 1 – 36 or 1 - 128**)
- At options **3, 5, 6, 7, 8** and **9**, press ✓ key in order to toggle between values. Use Up/Down arrow keys to move to next option when required value has been selected.
- At option **10**, a **SET DEVICE DEFAULTS** sub-menu will appear, as follows:



**ARE YOU SURE?**

## SET DEVICE DEFAULTS

**NO YES**

- Use Left/Right arrow keys to toggle between YES/NO options and press ✓ Key to select.

**Note:** Caution is recommended before choosing the YES value for the DEFAULT option! Choosing this option will remove ALL configuration that has been set for the device and will return the device to its factory default settings.

- Press the return  key once to return to **CONFIG DEVICE** information display.
- Press the return  key once to return to **CONFIG DEVICES Menu**

## CONFIG DEVICES Menu: SOUNDERS

To configure the various sounder outputs for the system, access the **SOUNDERS** menu:

- On the **CONFIG MENU**, highlight **DEVICES** sub-menu and then press ✓ key in order to gain access to it.
- Highlight the **SOUNDERS** option under the **DEVICES** sub-menu, and press ✓ key again.
- The sounders information, available under **SOUNDERS** sub-menu will be presented as follows:

**SOUNDERS <PSU SNDR ONE/TWO>**

**1: IN ALARM: OFF/PULSING/CONTINUOUS**


**2: IN EVAC OFF/PULSING/CONTINUOUS**

**3: IN DELAY: OFF/PULSING/CONTINUOUS**

**4: IN ALERT: OFF/PULSING/CONTINUOUS**

**5: IN CLASS CHANGE: OFF/PULSING/CONTINUOUS**

**6: SOUNDER CAN BE SILENCED: YES/NO**

- Use Left/Right arrow keys to toggle between **PSU SNDR ONE** and **TWO**
- For options **1** to **6**, press ✓ key to toggle between values. When required selection has been made, use Up/Down arrow keys to move to next option.
- Press the return  key once to return to **CONFIG DEVICES** menu.

## CONFIG DEVICES Menu: RELAY

To access the **RELAY** menu:

- On the **CONFIG MENU**, highlight **DEVICES** icon and then press ✓ key in order to gain access to it.
- Highlight the **RELAY** option under the **CONFIG DEVICES** sub-menu, and press ✓ key again.
- The information available under **RELAY** sub-menu will be presented as follows:

**CONFIG RELAY <FIRE/FAULT>**

**1: IN ALARM: OFF/PULSING/CONTINUOUS**

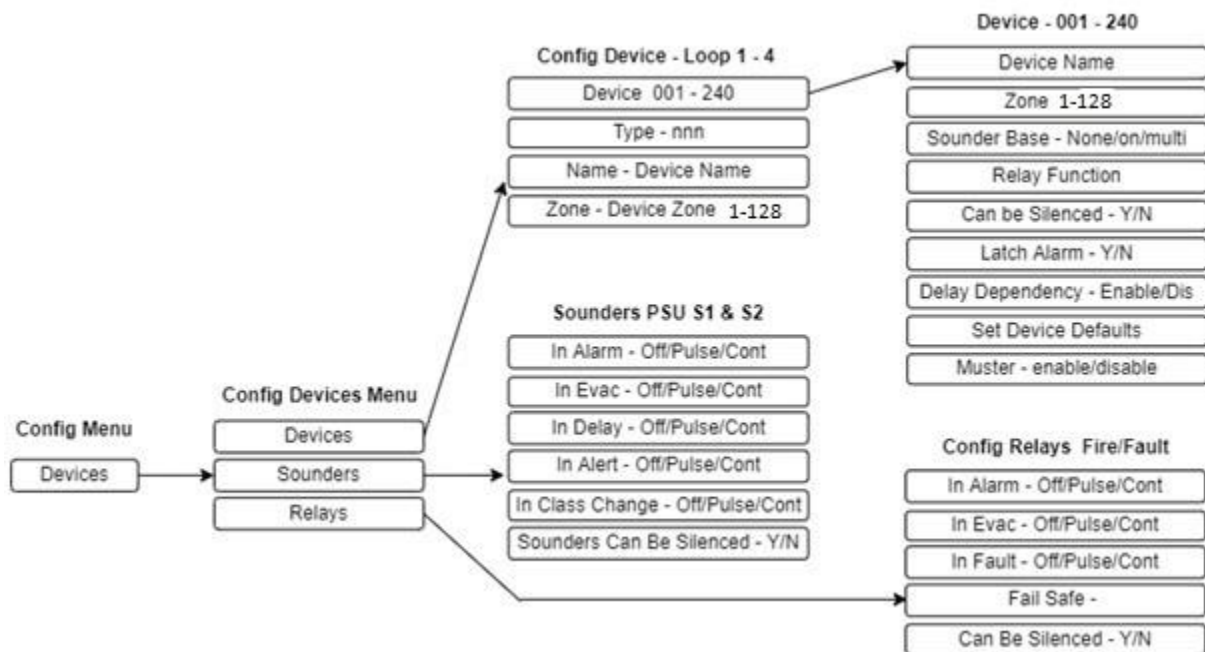
**2: IN EVAC: OFF/PULSING/CONTINUOUS**

**3: IN FAULT: OFF/PULSING/CONTINUOUS**

**4: FAIL SAFE: YES/NO**

**5: CAN BE SILENCED: YES/NO**

- Use Left/Right arrow keys to toggle between the **FIRE** and **FAULT** relays.
- Use Up/Down arrow keys to navigate between options **1** to **5**.
- For options 1 to 5, press ✓ key to toggle between values.
- Press the return ↵ key once to return to **CONFIG DEVICES** menu.



## CONFIG Menu: NETWORK

Under the **CONFIG** sub-menu, the following sub-menus are available to configure network options and panels:

- **OPTIONS**
- **PANEL**

### CONFIG NETWORK Menu: OPTIONS

To configure the network options, access the **OPTIONS** menu:


- Highlight the **OPTIONS** option under the **CONFIG** menu and press ✓ key.
- The information available under **OPTIONS** sub-menu will be presented as follows:

**1: NETWORK MODE: FAULT TOLERANT / RADIAL**

**2: LOCAL GENERAL DISABLE: YES/NO**

**3: SITE CODE: (16-character code identifying the site)**

**4: SERVER STATUS: (status of connection to server)**

- Use the Up/Down arrow keys to navigate between options **1** to **4**.
- Press ✓ key to set the required value.
- Next, press the return  key once to accept all changes and to return to the **CONFIG NETWORK** menu. A short acknowledgement sound will be present.

**Note:** Other options that were on this menu in previous versions have been removed and replaced by a more detailed set of options that can only be setup using the PC configuration software.

### CONFIG NETWORK Menu: PANEL

If Panels or Repeaters have been added or removed from the network, since the last CONFIG LEARN routine, the devices on the network can be configured from the PANEL menu:

- From the **CONFIG NETWORK MENU**, highlight **PANEL** option and then press ✓ key to gain access to it.
- The information available under **PANEL ON-LINE** will be presented as follows:

**1: 2nd PANEL: PRESENT/NOT PRESENT**

**2: 3rd PANEL: PRESENT/NOT PRESENT**

to

**7: 8th PANEL: PRESENT/NOT PRESENT**

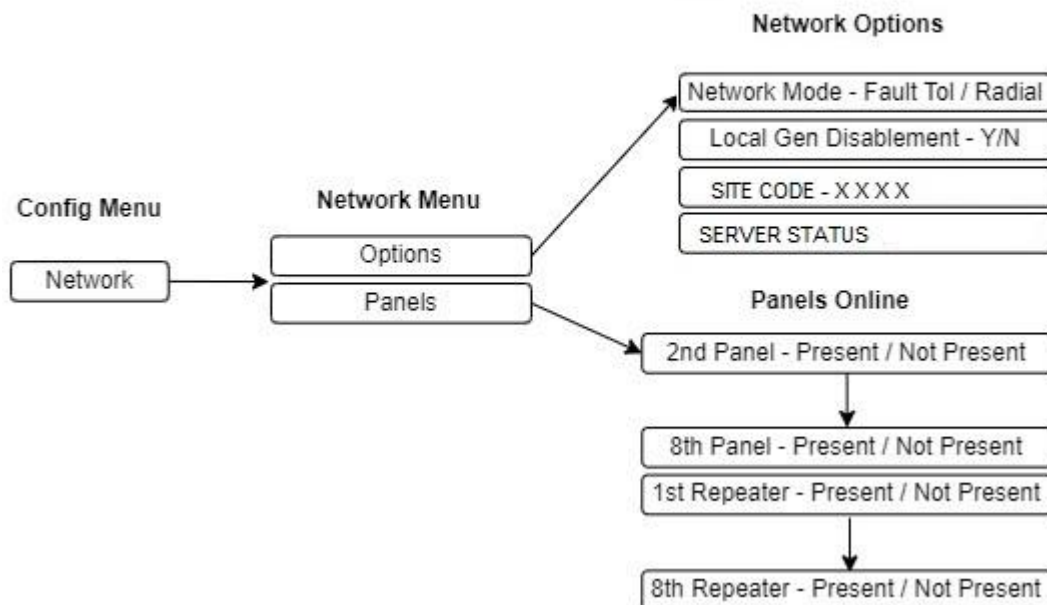
**8: 1st Repeater: PRESENT/NOT PRESENT**

to

### 15: 8th Repeater: PRESENT/NOT PRESENT

- If, since the last panel LEARN routine, panels or repeaters have been added to, or removed from, the network, their status can be changed manually:
  - Use the Up/Down arrow keys to select which RSUs are to be configured.
  - Press ✓ key to change between **PRESENT** or **NOT PRESENT** values.
- Press the return ↵ key once to return to **CONFIG NETWORK** menu. A short acknowledgement sound will be present.

**Note:** Any differences, between detected devices and changes made by user, will result in a General Fault condition. The General Fault status LED will be illuminated pulsing, with an accompanying fault tone from the internal buzzer. Additionally, on return to the Title screen, a FAULT display will list the applicable faults. This condition will require the panel to be re-configured to clear.



## CONFIG Menu: PSU

To configure Power Supply Unit settings, access the PSU menu:

- From the **CONFIG Menu**, highlight **PSU** option and then press **✓** key in order to gain access to it.
- The information available under **CONFIG PSU** option will be presented as follows:

### CONFIG PSU

1: BATTERY MONITORING: YES/NO


2: BATTERY HIGH-Z MONITORING: YES/NO

3: CHARGE DURING ALARM: YES/NO

4: EARTH FAULT MONITORING: YES/NO

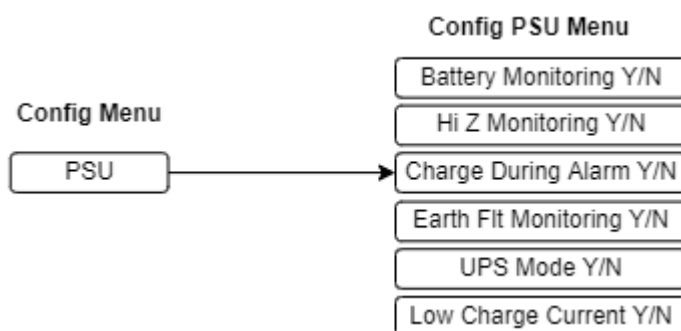
5: UPS MODE: YES/NO

6: LOW CHARGE CURRENT: YES/NO

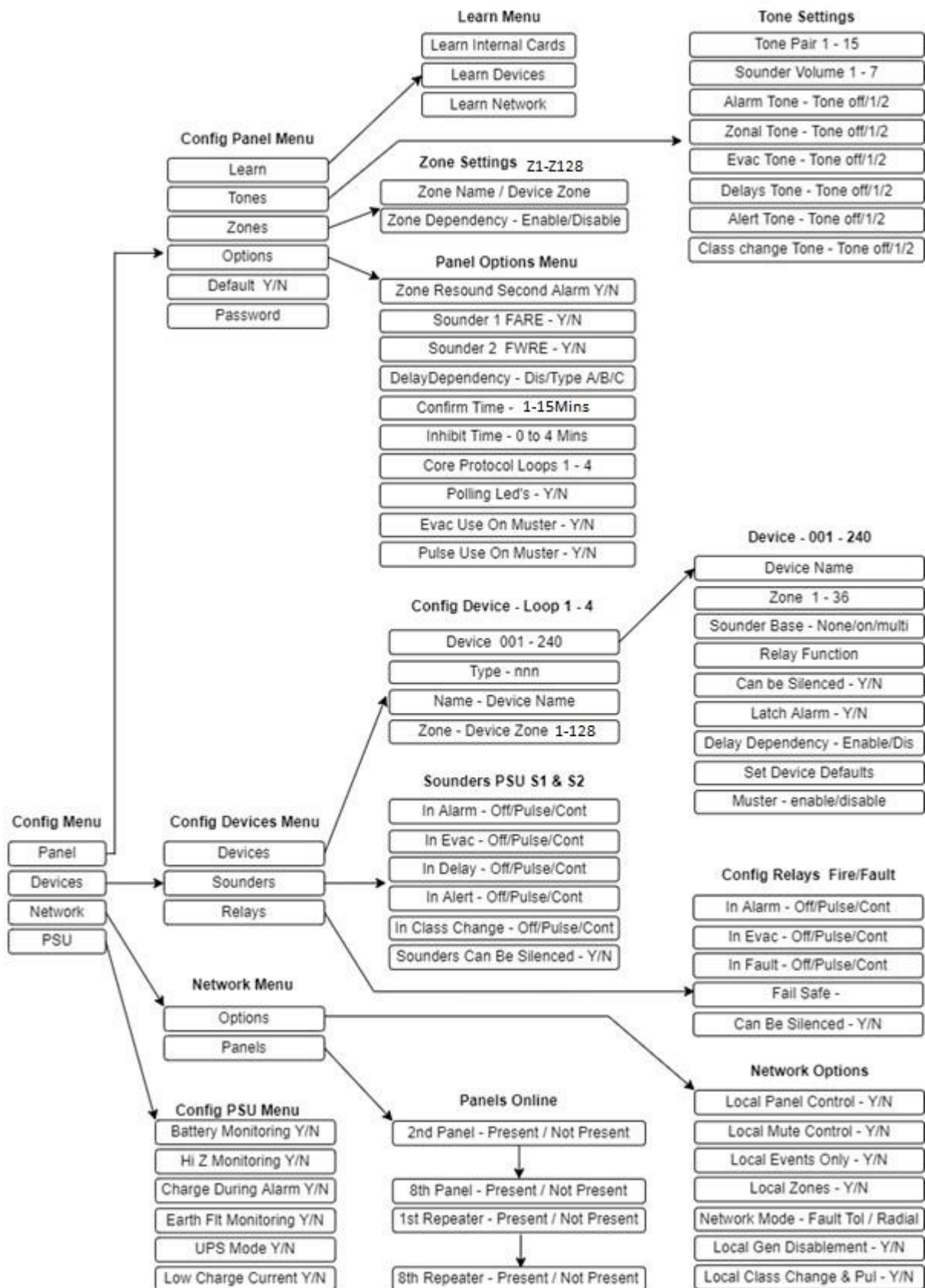
- Use the up/down arrow keys to navigate between options **1 – 6**
- Press **✓** key to change between **YES** or **NO** values, as required, for each option.
- Press the return  key once to return to **CONFIG Menu**. A short acknowledgement sound will be present.

**Note:** The configuration of Power Supply Unit Settings function allows compliance with BS EN 54-2:1997 + A1:2006.

**Note:** Setting **BATTERY MONITORING** (option 1) to **NO** disables both battery monitoring and battery charging. This is NOT compliant with BS EN 54-2.



## CONFIG Menu Breakdown



## Report Menu

From the **REPORT** menu, on the Main Menu, the following sub-menus are available:

- **REPORT**
  - **EVENTS:**
    - ALARM
    - FAULT
    - DISABLE
    - TEST
    - OTHER
  - **STATUS:**
    - LOOP
    - DEVICE
    - PSU Card
    - BATTERY
  - **VERSIONS:**
  - **HISTORY**
  - **COUNTER**

To access the **REPORT** menu:

- Turn Activate Controls Key to On

or

- Use the keypad to enter code **1111**:
  - Press ✓ key
  - Use the Up/Down arrow keys to increase/decrease the number value.
  - Use the Left/Right arrow keys to move to the next digit in the 4-digit sequence.
  - When all 4 digits have been set to the code **1111** press ✓ key once again. The **MAIN MENU** will become available for operation.

**Note:** Access level 2 Menu will deactivate after 60 sec if not used.

## REPORT Menu: EVENTS

From the **REPORT** Menu **EVENTS** sub-menu, reports on the number and type of Alarm, Fault, Disablements, etc. events can be displayed:

## REPORT EVENTS Menu: ALARM

To get ALARM events information:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **REPORT** menu icon.
- Press ✓ key to select the **REPORT** menu.
- Under **REPORT MENU**, highlight the **EVENTS** icon and press ✓ key to select it.
- On the **REPORT EVENTS** sub-menu, highlight the **ALARM** option and press ✓ key to select it.
- The number (**n**) of Alarm events will be displayed in the following manner:

**ALARM**                      A nn   F nn   D nn   T nn   O nn

### List of detected alarms.

**or**

**ALARM** FWRE: NORMAL/ACTIVE and/or FARE: NORMAL/ACTIVE

### List of detected alarms.

(Displayed if **Sounder One FARE** and/or **Sounder Two FWRE** are selected to **YES**, under **CONFIG: PANEL: OPTIONS**, during configuration)

Where:


**A** means Alarm.

**F** means Faults.

**D** means Disablement.

T means Test.

**O** means Other.

- Press the return  key or ✓ key to return to the **MAIN MENU** display.

## Report EVENTS Menu: FAULT

To get **FAULT** events information:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **REPORT** icon.
- Press ✓ key to select the **REPORT** menu.
- Under **REPORT MENU**, highlight the **EVENTS** sub-menu and press ✓ key to select it.
- Under **REPORT EVENTS** sub-menu, select **FAULT** option and press ✓ key to select it.

- **Fault** info will be displayed in the following manner:

**FAULT**                      **A nn   F nn   D nn   T nn   O nn**

**List of detected faults.**

or

**FAULT**                      **FWRE:**                      **NORMAL/ACTIVE**                      and/or                      **FARE:**  
**NORMAL/ACTIVE**

**List of detected faults.**

(Displayed if **Sounder One FARE** and/or **Sounder Two FWRE** are selected to **YES**, under **CONFIG: PANEL: OPTIONS**, during configuration)

Where:


**A** means Alarm.

**F** means Faults.

**D** means Disablement.

T means Test.

**O** means Other.

- Press the return  key or ✓ key to return to the **MAIN MENU** display.

## Report EVENTS Menu: DISABLE

To get **DISABLE** events information on system disablements:

- On the **Main Menu**, use Left/Right arrow keys to move cursor box to **Report** menu.
- Press ✓ key to select the **Report** menu.
- Under **Report Menu**, highlight the **EVENTS** sub-menu and press ✓ key to select it.
- Under **Report EVENTS** sub-menu, select **DISABLE** option and press ✓ key to select it.
- **DISABLE** info will be displayed in the following manner:

**DISABLE**                      A nn   F nn   D nn   T nn   O nn

### List of detected disablements.

or

**DISABLE      FWRE: NORMAL/ACTIVE and/or FARE: NORMAL/ACTIVE**

### List of detected disablements.

(Displayed if **Sounder One FARE** and/or **Sounder Two FWRE** are selected to **YES**, under **CONFIG: PANEL: OPTIONS**, during configuration)

**A** means Alarm.

**F** means Faults.

**D** means Disablement.

T means Test.

**O** means Other.

- Next, press return  key or ✓ key to return to the **Main Menu** display.

## Report EVENTS Menu: TEST

To get **TEST** events information on system test modes enabled:

- On the **Main Menu**, use Left/Right arrow keys to move cursor box to **Report** menu.
- Press ✓ key to select the **Report** menu.
- Under **Report Menu**, highlight the **EVENTS** sub-menu and press ✓ key to select it.
- Under **Report EVENTS** sub-menu, select **TEST** option and press ✓ key to select it.
- **TEST** info will be displayed in the following manner:

**TEST                      A nn   F nn   D nn   T nn   O nn**

**List of test modes enabled.**

or

**TEST              FWRE: NORMAL/ACTIVE and/or FARE: NORMAL/ACTIVE**

**List of test modes enabled.**

(Displayed if **Sounder One FARE** and/or **Sounder Two FWRE** are selected to **YES**, under **CONFIG: PANEL: OPTIONS**, during configuration)

**A** means Alarm.

**F** means Faults.

**D** means Disablement.

**T** means Test.

**O** means Other.

- Next, press return ↵ key or ✓ key to return to the **Main Menu** display.

## REPORT EVENTS Menu: OTHER

To obtain a report on **OTHER** events information (any events not covered under ALARM, FAULT or DISABLE – e.g. Non-Fire alarm events):

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **REPORT** menu icon.
- Press ✓ key to select the **REPORT** menu.
- Under **REPORT MENU**, highlight the **EVENTS** sub-menu and press ✓ key to select it.
- Under **REPORT EVENTS** sub-menu, select **OTHER** option and press ✓ key to select it.
- **OTHER** info will be displayed in the following manner:

**OTHER**                      **A nn**   **F nn**   **D nn**   **T nn**   **O nn**

## List of detected events

or

**OTHER  
NORMAL/ACTIVE**      **FWRE:**      **NORMAL/ACTIVE**      **and/or**      **FARE:**

## List of detected events

(Displayed if **Sounder One FARE** and/or **Sounder Two FWRE** are selected to **YES**, under **CONFIG: PANEL: OPTIONS**, during configuration)

**A** means Alarm.

**F** means Faults.

**D** means Disablement.

T means Test.

**O** means Other.

- Next, press return  key or ✓ key to return to the **MAIN MENU** display.

## REPORT Menu: STATUS

From the **REPORT STATUS** sub-menu, status information can be displayed for system Loops, individual external devices, the PSU card and the batteries:

### REPORT STATUS Menu: LOOP

To get status information on the system's loops, access the **LOOP** status menu:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **Report** menu.
- Press ✓ key to select the **Report** menu.
- Under **Report Menu**, select the **STATUS** option and then press ✓ key to access it.
- On the **Report STATUS** menu, highlight the **LOOP** option and press ✓ key to access it.
- **LOOP** status will be displayed as follows:

**LOOP STATUS**

**LOOP: 1 – 2 or 1 – 4**

**STATUS:** Current status of the loop, may toggle between status messages

**BRANCH A: ON/OFF**


**BRANCH B: ON/OFF**

**VOLTS: nn:nn**

**VOLTS: nn:nn**

**Current: nn:nn**

**Version: n.n.nn**

- Use the Left/Right arrow keys to select the required loop.
- Next, press return  key to return to **Report STATUS** menu.

## REPORT STATUS Menu: DEVICE

To get status information on external devices fitted to the system, access the **DEVICE STATUS** menu:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **REPORT** menu icon.
- Press ✓ key to select the **REPORT** menu.
- Under **REPORT MENU**, select the **STATUS** option and then press ✓ key to access it.
- Under **REPORT STATUS** sub-menu, highlight the **DEVICE** option, and then press ✓ key to select it.
- The **DEVICE** status will be displayed, as follows:

## DEVICE STATUS

**LOOP: 1 – 2 or 1 – 4**

**DEVICE: 001 - 240** – the number of each of the devices fitted in this loop,

**TYPE: nnn** – shows the number (**n**) of the device type

**DISABLED: YES/NO**

**DEVICE TEST: YES/NO**

**ZONE TEST: YES/NO**

**NAME: LOOP nn**                      **DEVICE nnn**    **name** – name (i.e. 'sounder', if configured) of the numbered (**n**) device (**001 – 240**) under the numbered (**n**) loop (**01 – 02** or **01 – 04**)

**ZONE: DEVICE ZONE nnn name** – name (i.e. 'Kitchen', if configured) of the numbered (n) zone (001 – 018, 001 – 036 or 001 - 128), where the devices are placed

**Note:** Refer to the Device type table for a list of devices and their type/sub-type numbers.

- Use the Left/Right arrow keys to select the required loop.
- Use the Up/Down arrow keys to select the required device.
- Next press **✓** key to receive information about the external devices connected to this system. In addition to Device, Type and Subtype – as above; the following status information is retrieved for the external devices connected to each loop:

**ALARM: YES/NO**

**FAULT: YES/NO**

**SHORT: YES/NO**

ISOL: YES/NO

**NO RESP: YES/NO**

**ENABLED: YES/NO**

**DAY: YES/NO**

**POW ON: YES/NO (POW=POWER)**

- Next, press return  key to return to the **REPORT STATUS** menu.

## REPORT STATUS Menu: PSU CARD

To get status information for the panel's PSU card, access the PSU Card Status menu:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **REPORT** menu icon.
- Press ✓ key to select the **REPORT** menu.
- Under **REPORT MENU**, select the **STATUS** option and then press ✓ key to access it.
- Under **REPORT STATUS** sub-menu, highlight the **PSU CARD** option, and then press ✓ key to select it.
- **PSU CARD STATUS** menu will display information related to:
  - The power supply of the system
  - The power supply to the external devices connected to the PSU card.
- Next, press return ↵ key to return to the **REPORT STATUS** menu.

## REPORT STATUS Menu: BATTERY

To get status information on the system's battery, access the **BATTERY STATUS** menu:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **REPORT** menu icon.
- Press ✓ key to select the **REPORT** menu.
- Under **REPORT MENU** select the **STATUS** option and then press ✓ key to access it.
- Under **REPORT STATUS** sub-menu highlight the **BATTERY** option, and then press ✓ key to select it.
- **BATTERY STATUS** menu will display information related to the following:
  - BATTERY STATUS**
  - TEMPERATURE: nn.nn**
  - BATTERY VOLTS: nn.nn**
  - CHARGE: nn.nn**
  - Current: n.nn**
  - DAC OUTPUT: nnn.nn**
  - VREF INT: nnnn**
  - CALIBRATION: n.nnnnnn**
- Next, press return ↵ key or ✓ key to return to the **REPORT STATUS** menu. A short acknowledgement sound will be present.

## REPORT Menu: VERSIONS

To access the software Versions information:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **REPORT** menu icon.
- Press ✓ key to select the **REPORT** menu.
- Under **REPORT MENU**, select the **VERSIONS** option and then press ✓ key to access it.
- **Versions** information will be displayed, as follows:

**DISPLAY: VER: n.n\_nnnn**

**SITE DATA: dd-MMM-yy hh:mm:ss nnnn**

**PSU: VER: n.nn**

**LP 1: VER: n.n.nn LP 2: VER: n.n.nn**

**LP 3: VER: n.n.nn LP 4: VER: n.n.nn**

**Note** – Where:

**n** = displayed number.

**dd** = day.

**MMM** = Month.

**yy** = year.

- Next, press return ↵ key or ✓ key to return to the **REPORT MENU**.

## REPORT Menu: HISTORY

To access **EVENT HISTORY** information:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **REPORT** menu icon.
- Press ✓ key to select the **REPORT** menu.
- Under **REPORT MENU**, select the **HISTORY** option and then press ✓ key to access it.
- The **EVENT HISTORY** will open, e.g.:

nnnn : **PANEL RESET**

nnnn : **BATTERY MISSING**

nnnn : **MAINS FAIL**

**Note:** Where **nnnn** represents an automatically assigned four-digit sequential number, allocated to each event.

- Use the Up/Down arrow keys to access relevant event and press ✓ key to display the date and time the selected event occurred:

nnnn : **dd-MMM-yy hh:mm:ss**

**Note:** where:

**nnnn** = sequential number allocated to the event.

**dd** = day.

**MMM** = Month.

**yy** = Year.

**hh** = hour.

**mm** = minutes.

**ss** = seconds.

- Next, press return ↵ key or ✓ key to return to the **Report Menu**.

## REPORT Menu: COUNTER

To get **ALARM COUNT** information:

- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to **REPORT** menu.
- Press ✓ key to select the **REPORT** menu.
- Under **REPORT MENU** select the **COUNTER** option and then press ✓ key to access it.
- The **ALARM COUNT** sub-menu will open, and the following information will be available:

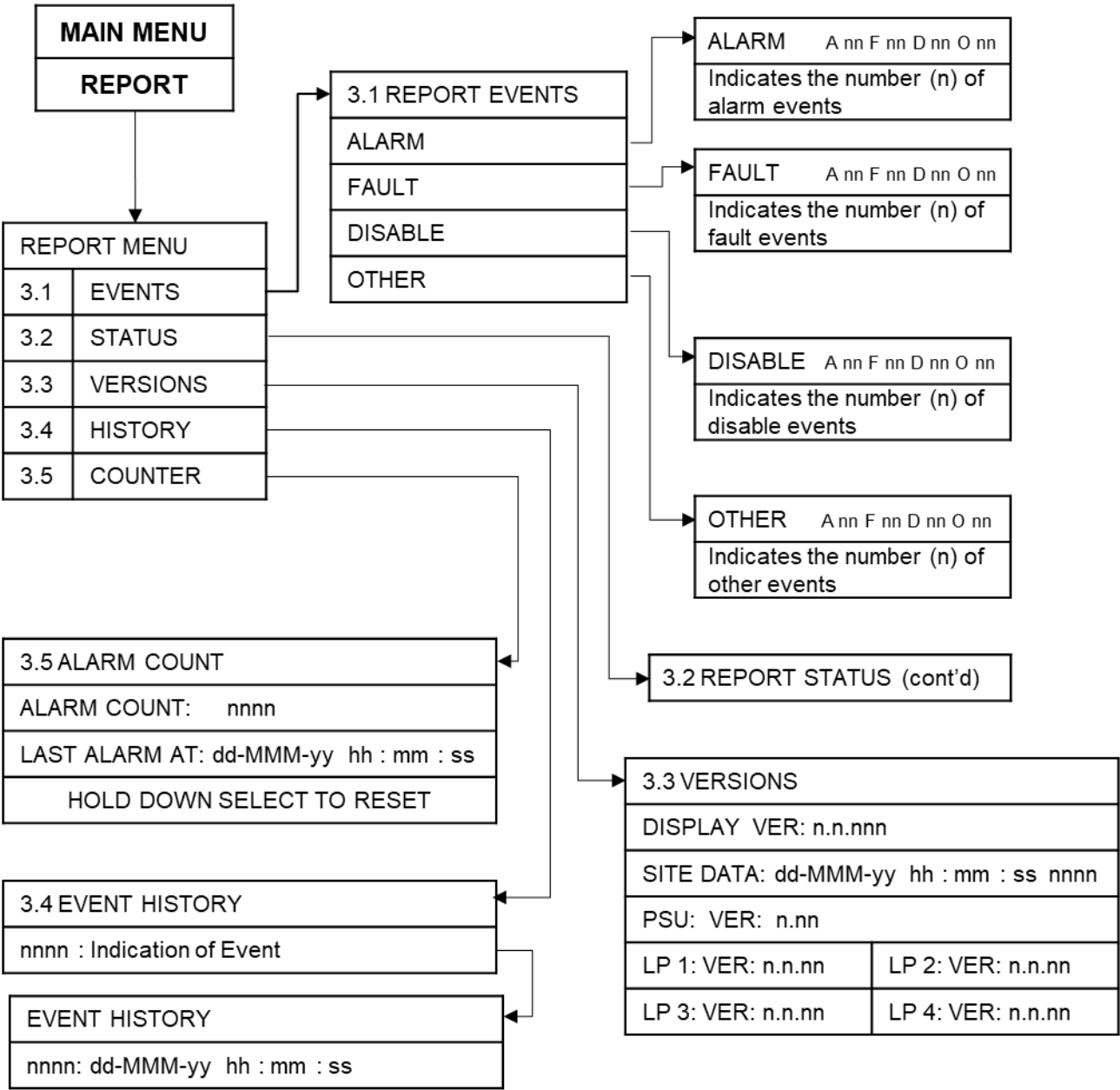
**ALARM COUNT: nnnn** (number (n) of alarm events that have occurred)

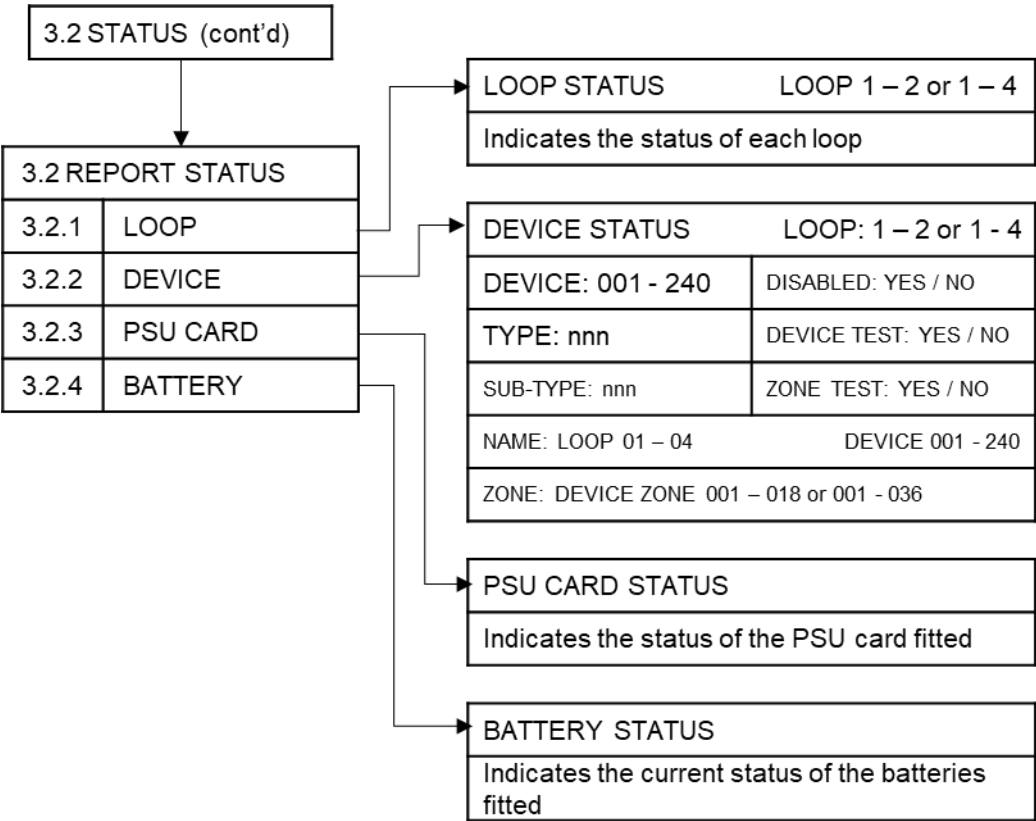
**LAST ALARM AT: dd-MMM-yy    hh:mm:ss** (date and time when the last event happened)

### HOLD DOWN SELECT TO RESET

- Press and hold down ✓ key and the following will be displayed:  
**Enter Level 4 Access Code**
- Use the keypad to enter code **4444**:
  - Press ✓ key
  - Use the Up/Down arrow keys to increase/decrease the number value of the first digit in the 4-digit sequence.
  - Use the Left/Right arrow keys to move to the next digit in the 4-digit sequence.
  - When all 4 digits have been set to the code **4444** press ✓ key once again.
- This action will clear to zero the value of any **Alarm Count** (if more than zero). A short acknowledgement sound will be present.
- Press return ↵ key to return to **REPORT MENU**.
- Press return ↵ key again to return to the **MAIN MENU**.

REPORT Menu Breakdown





## ENG Menu

From the **ENG** menu on the **MAIN MENU**, the following sub-menus are available.

- **OUTPUTS**

To access the CONFIG menu:

- Turn Activate Controls Key to On

or

- Use the keypad to enter code **1111**:
  - Press ✓ key
  - Use the Up/Down arrow keys to increase/decrease the number value.
  - Use the Left/Right arrow keys to move to the next digit in the 4-digit sequence.
  - When all 4 digits have been set to the code **1111** press ✓ key once again. The **MAIN MENU** will become available for operation.

**Note:** Access level 2 Menu will deactivate after 60 sec if not used.

### ENG Menu: OUTPUTS

To set the test output for the external devices connected to the system, access the **ENG** menu **OUTPUTS** sub-menu:

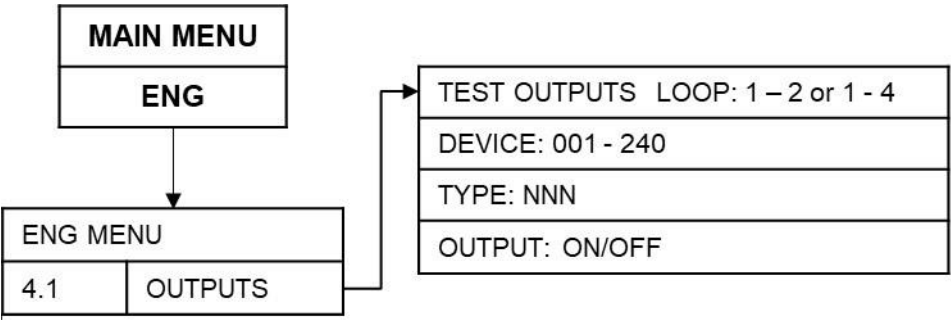
- On the **MAIN MENU**, use Left/Right arrow keys to move cursor box to highlight **ENG** menu icon.
- Press ✓ key to select the **ENG** menu.
- Under **ENG Menu**, highlight the **OUTPUTS** option, and then press ✓ key to select it.
- Under the **ENG OUTPUTS** menu, the following information will be available:

**TEST OUTPUTS**                      **LOOP 1 – 2 or 1 – 4**  
**DEVICE: 001 – 240**  
**TYPE: nnn**  
**OUTPUT: ON/OFF**

**Note:** Refer to the Device type table for a list of devices and their type/sub-type numbers.

- Use the Left/Right arrow keys to select the loop.
- Use Up/Down arrow keys to select the device.
- Press ✓ key to toggle between **ON** and **OFF** settings.
- Press return ↵ key once to return to **ENG** menu.
- Press return ↵ key again to return to **Main Menu**.

ENG Menu Breakdown



## **SERVICE AND MAINTENANCE**

The product must be maintained for operation, including periodic checks, in accordance with applicable codes of practice, national standard regulations and local instructions for fire systems appropriate to the country and location of the installation. It is the responsibility of the system user to ensure it is regularly serviced and maintained in good working order.

## SCHEDULE OF TESTING

This section to be used to record ALL weekly tests of the fire alarm system

[illegible]



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