Ampac

Fire detection and evacuation solutions that save lives.

Loop Sense

Fire Alarm Control Panel

(AS4428 & AS7240 .2 & 4)

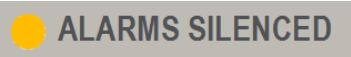## Operation and Onsite Programming

MAN 1567-3

Responding to a Fire

Access Level 2 (Default Access Level)

The and indicators will be illuminated

The Button is pressed to silence the buzzer

The key is pressed to silence any silence-able outputs that have been activated.

The LED will be illuminated to indicate that the silence-able outputs have been silenced and resound is available. The operation of the SILENCE key will be logged.

The key is pressed to disable the Displayed Device / Zone.

The LED will be illuminated to indicate that the selected Devices / Zones have been Disabled

The key is pressed to reset the fire condition. All outputs activated in response to the fire will deactivate and the panel will revert to the normal condition providing there are no other abnormal conditions present. The operation of the RESET key will be logged.

Disabling a Zone / Device

The following example outlines how to disable a ZONE/DEVICE.

Press [MENU ENTER]

Then [2 ABC] to open the "Control" menu.
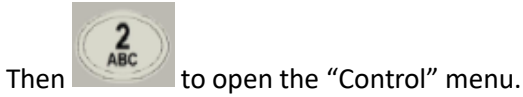
```
CONTROL MENU
1▶ZONE             3|PANEL
2|DEVICE           4|GLOBAL CONTROL
```

Once in the "Control" menu press [1] to open the "Zone" or [2 ABC] to open the "Device" menu. By following the screen prompts select the type of control, once selected simply step through the menu again to implement.

```
Select Zone:
<zone descriptor>
Z1      Z2      Z3      Z4      Z5
X6      X7      X8      X9      X10
X11     X12     X13     X14     X15
X16     X17     X18     X19     X20
X21     X22     X23     X24     X25
X26     X27     X28     X29     X30
```

Once selected the following screen will be displayed

```
Zzzz                <status>
<zone descriptor>
1:DISABLE INPUTS    2:DISABLE SOUNDERS
3:SILENT WALK TEST  4:WALK TEST DEVICE▶
```

The [DISABLE] key is pressed to disable the Zone / Device

Note: *Sounder access is available at Level 3 only*

The [GENERAL DISABLEMENT] will illuminate and the Status will change to DISABLED

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Contents

1   About This Manual

1.1   Introduction

This manual contains all the information required to operate the *LoopSense* Fire Alarm Control Panel (FACP) and perform on site programming functions. The first step in becoming a proficient operator is to become familiar with and understand the "Menu Structure" (see section 10) and the keys used to navigate through it. Once this concept along with the screen prompts that are displayed during the navigation process are understood the user will find the operation of the *LoopSense* Fire Alarm Control Panel (FACP) a simple task.

1.2   General Requirements

The *LoopSense* FACP has been designed and manufactured from high quality commercial components so as to comply with major world standards. To ensure these standards are not compromised in any way installation staff and operators should;

➢   Be qualified and trained for the task they undertake;

➢   Be familiar with the contents of this manual prior to the installation, commissioning or operation of a *LoopSense* control system;

➢   Observe anti-static pre-cautions at all times; and

➢   Be aware that if a problem is encountered or there is any doubt with respect to the operational parameters of the installation the supplier should be contacted.

1.3   References

LoopSense Installation & Commissioning Manual

LoopMaster Users Manual

Apollo Detector / Device Manuals

Ampac Product Data Sheets

Australian Standard   AS4428-3 and AS7240-2&4

1.4   Symbols

ⓘ   Important operational information

☞**Note:** Configuration considerations

Observe antistatic precautions

Mains supply earth

DANGER mains supply present

2 Introduction

2.1 System Overview

The purpose of the FACP is to monitor changes in inputs, report those changes and update selected outputs as programmed using the *LoopMaster* Configuration software.

The FACP processes changes in the inputs fire, fault, pre-alarm, emergency, security, user, transparent and system and has a built-in menu structure to view its status, perform operational tests, and to some degree modify the panel's configuration and programming without the use of the *LoopMaster* Configuration software.

2.2 System Components

The following illustrates the main components of the system and the connectivity between them.
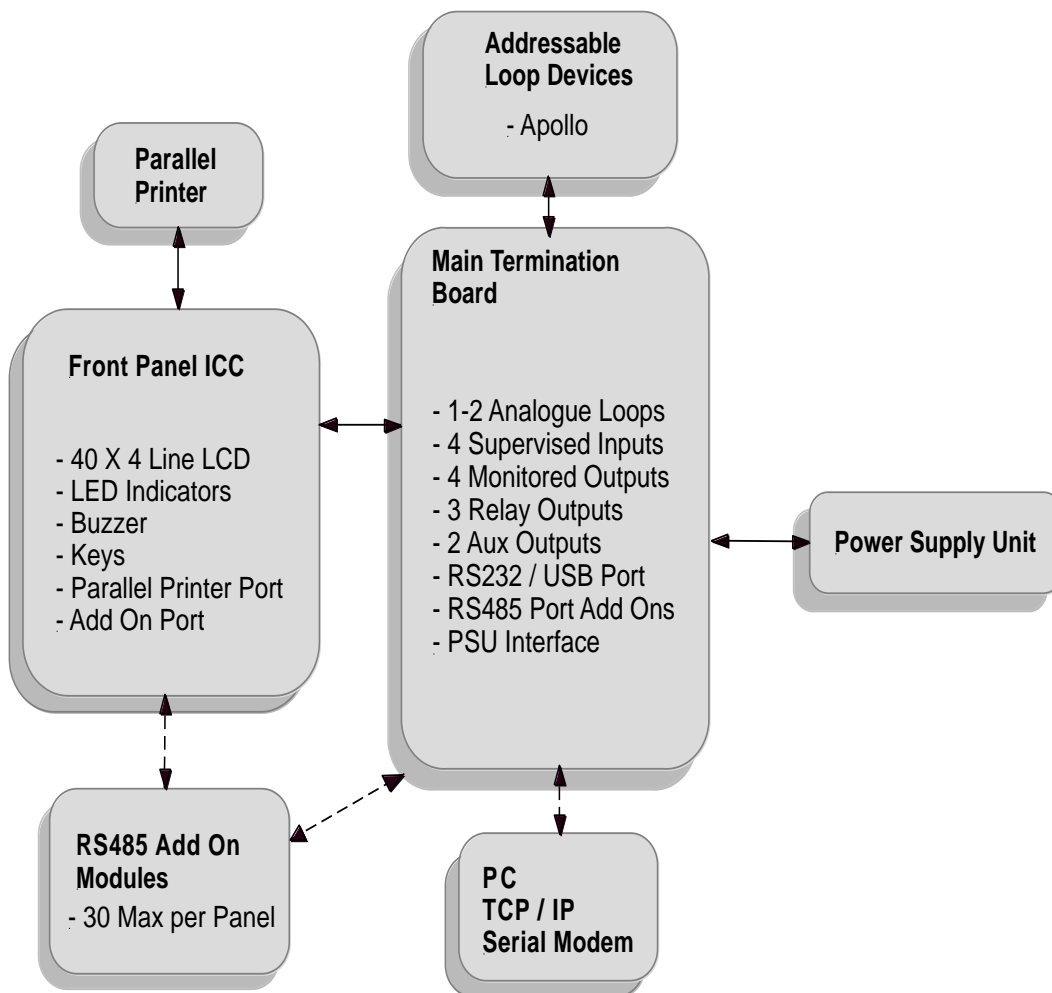
Figure 1: The LoopSense Concept

2.3   Features

LoopSense is a 1 - 2 loop Intelligent Analogue / Addressable FACP capable of supporting the following modules:

- ➢ Apollo protocol - 126 detectors / devices per loop
- ➢ SmartTerminal
- ➢ 8 Way Relay
- ➢ 8 Way Sounder
- ➢ 32 Zone Indicator
- ➢ Fan Control and Termination
- ➢ Switch & Indicator
- ➢ 8 Zone Conventional
- ➢ Agent Release
- ➢ 2nd. Loop enablement by way of a "Loop Activation Key" and programming
- ➢ Printer

Note: *Only devices compatible with* **LoopSense** *should be used in an installation.*

2.4   Options with requirements

The **LoopSense** FACP includes with the following 'Options with requirements' (as required by AS7240-2:2004):

- ➢ 7.8 Output to fire alarm devices

- ➢ 7.9.1 Output to fire alarm routing equipment

- ➢ 7.9.2 Input from fire alarm routing equipment

- ➢ 7.10.1Output type A to fire protection equipment

- ➢ 7.11.1 Delays to output – configuration of delays (for item C)

- ➢ 7.11.2 Delays to outputs – control of delays (for item C)

- ➢ 7.12.1 Dependency Type A

- ➢ 7.12.2 Dependency Type B

- ➢ 7.12.3 Dependency Type C

- ➢ 9.3 Fault signals from points

- ➢ 9.9 Output to fault warning routing equipment

- ➢ 10 Disable condition

- ➢ 10.5 Disablement of addressable points

- ➢ 11 Test Condition

- ➢ ZD Ancillary Control function

The **LoopSense** PSE includes the following 'Options with requirements' (as required by AS7240-4:2004):

- ➢ 5.5 Battery function check

3 System Functions

System functions are the key functions that provide the mechanism to change the way the panel responds to a condition, and the way an input/output behaves to a situation. It is there fore important the engineer has a good understanding of the functions recapped below.

3.1 I/O Control

There is a mechanism for controlling the inputs & outputs connected to the FACP through the front panel control / programming menu. This feature controls all the outputs, sounders, strobes/beacons and settings for alert & evacuation.

3.2 Disable / Enable

This feature is also available as part of the user interface on the front panel. It is possible to enable or disable inputs and outputs connected to the FACP. Inputs include zones, loops; loop devices and panel Add-Ons. Outputs include sounders, strobes/beacons etc.

3.3 Silence / Resound

This feature is available as part of the user interface on the front panel. This is a toggle button & pressing it once will cause the activated sounders, relays & beacons to be silenced (If they are configured with a silence-able attribute) and pressing the button again will cause the same devices to re-sound (referred to as a "toggling action").

However there can be some devices in the system, that are not configured to be silenced. For those devices, pressing the Silence/Resound button will have no effect and they will continue to sound / operate as programmed.

3.4 System Response Times

The panel reports a fire from a detector within 10 seconds and fire conditions originating from an MCP are reported within 1 second.

Alarm devices (sounders, strobes and beacons) are activated within 3 seconds of a MCP being operated.

3.5 Sounder and Strobe Synchronisation

The FACP supports Apollo synchronisation schemes. All loop sounders and beacons within the panel are synchronised.

4 Front Panel Control Card

The Front Panel Control Card interfaces to the Main Control Board by way of CN5, and supports;

- ➢ all the controls and functional indicators
- ➢ the FACP Reset
- ➢ the Configuration (CONFIG) control
- ➢ Serial or Parallel Printer port
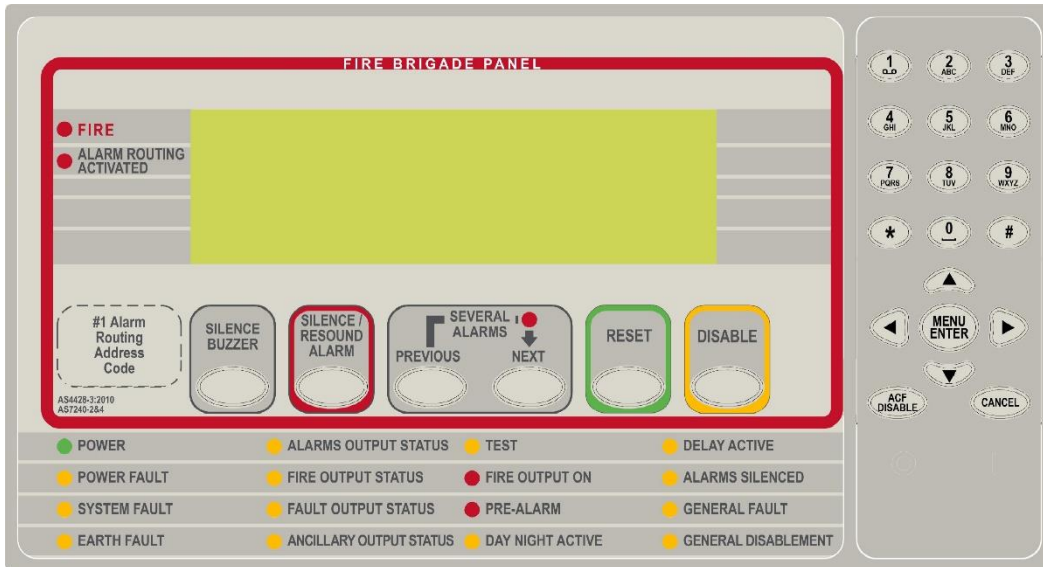
Figure 2: Front Panel Layout. #1 denotes intended area for Alarm Routing Address Code

The LCD is used to display abnormal conditions and for interrogation, control and programming activities. When the FACP is in its normal state a default screen is displayed.

Backlight (refer to AS7240:2004: 13.8.6):

In access level 2 or higher the backlight shall always be ON. Alarm, Fault and Disable information is accessed through the Main Menu.
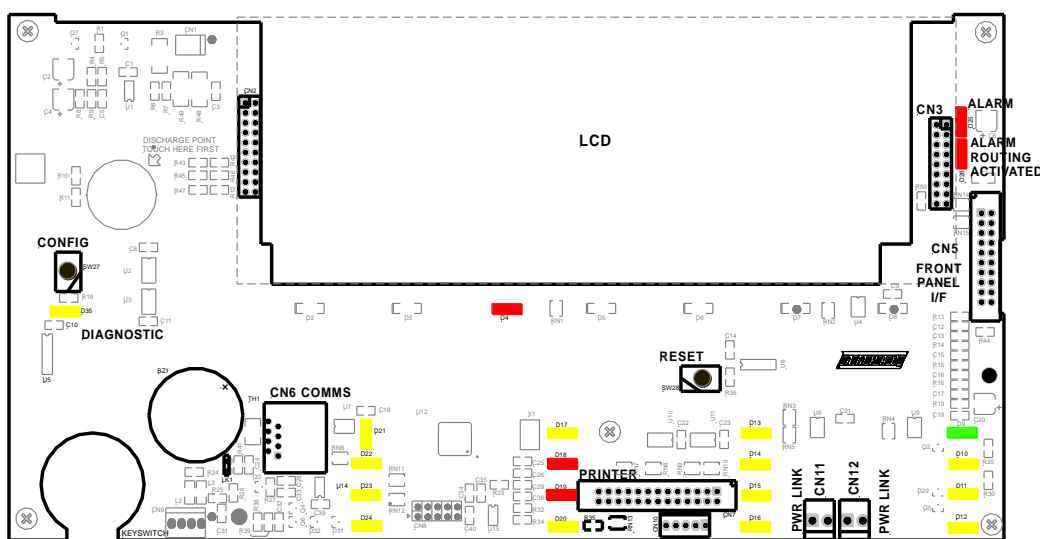
Figure 3: Control Card PCB Layout

4.1 Levels of Access

The FACP supports three levels of access.

Access Level 1 (Untrained User):

The FACP is in Access Level 1 by default.

Only the OVERRIDE, PREVIOUS, NEXT, SILENCE BUZZER and LAMP TEST controls are active.

Access Level 2 (Authorised User):

To enter Access Level 2 the user has to enter a password using the alpha numeric keys. The password entry screen will be presented if any higher access level key is pressed. Alternatively turning the Keyswitch to the ON position will force the panel into access level 2. The user is able to navigate through the menu system in access level 2 however the ENTER PASSWORD menu item will be displayed in place of the PROGRAMMING and SETUP menus.

Note: *PROGRAMMING and SETUP menus are not accessible during a Fire condition*

If ENTER PASSWORD is selected, the password entry screen will be presented allowing the user to enter the access level 3 password. The user is able to enter the password when the password screen is presented.

The access level 1 controls are active as well as SILENCE RESOUND, RESET, EVACUATE and MENU ENTER controls. All menu items are active apart from the programming menu.

Access Level 3 (Authorised Service Technician/Engineer):

All access level 1 and 2 controls, PROGRAMMING, SETUP menus and individual sounder output disable options are active.

If ENTER PASSWORD is selected, the password entry screen will be presented allowing the user to enter the access level 3 passwords.

Access Level 4 (Authorised Installer/Engineer):

Access level 4 can only be achieved by the use of the *Loopsense* configuration software, *Loopmaster* and a PC/Laptop (refer to MAN1571).

4.1.1 Passwords

The FACP will support 99 user programmable passwords. Each password includes an access level which can be either 2 or 3 corresponding to the access levels and a unique ID which ranges from 1 to 99. There is also a facility in the access level 3 SETUP menu to add, edit or delete passwords.

Note: *Onsite programming only allows for the editing of ID1 and ID2 all other ID's need to be set using the LoopMaster configuration tool*

All passwords are a 4 digit numeric entry and the system default passwords are as follows:

ID	Password	Access Level
1	3333	3
2	User Defined	User Defined

Password Conditions

1. All password IDs that have not been assigned a password are set to access level 1 to prevent false entries.
2. The entering of a password will be logged using the ID.
3. If no key is pressed for 5 minutes the access level will timeout to the default access level being 2 or 1 depending on the key-switch position.
4. The access level timeout and key-switch operations will also be logged.
5. The intervals between key presses when entering the password must not exceed 30 seconds otherwise the password entry screen will timeout returning the panel to the default access level.
6. The FACP can also be forced to the default access level by pressing the CANCEL key 4 times while default screen is displayed.

4.1.2 Misplaced Password

In the situation, where access to the panel is required, and the passwords are not available, there is a facility for the appropriate service personnel to gain access to the panel.

The procedure is as follows:

1. The password " " is entered.
2. The panel responds by displaying a unique 10 digit key
3. Contact the local Ampac Service Centre and they will issue a temporary password
4. The temporary password is entered, and access is gained to the panel. The operator can now access the password menu and set the passwords up as appropriate for the installation

The temporary password will be deleted, the next time a password is successfully entered into the FACP.

4.2 System Controls

The normal Access State of the panel is level 2 if a locked door is fitted
The front panel has 13 push button controls and an alpha numeric keypad.
Note: *Keys, when pressed, will present an audible feedback "beep" to the user.*
The Following are all accessible at access level 2 and above
SILENCE BUZZER

Silence Buzzer – Silences the panel buzzer. Buzzer is activated under the following conditions:

Alarm Buzzer -
➤ Fire condition

Fault Buzzer -
➤ Fault with loop devices
➤ Fault with the loops
➤ Fault with the fire alarm routing equipment or fault warning routing equipment
➤ Fault with alarm devices or circuit

➢ Fault with connected modules, cards and boards
➢ Fault with secondary power supply
➢ Fault with main power supply

ALARMS SILENCE / RESOUND

Available at access level 2 and above

Alarms Silence / Resound – Used to silence the alarm devices. Toggle function to resound any silenced alarm devices, if the ALARMS SILENCED indicator is lit. Only alarm devices configured with the silence-able attribute set shall respond to silence/resound.

PREVIOUS / NEXT (SEVERAL ALARMS)
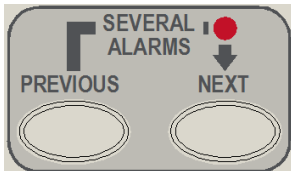
Previous / Next (Several Alarms) – Momentary push buttons, used to scroll thru the LCD display to view the previous / next available entry. The Several Alarms LED will illuminate when there is more than one zone is in fire or fire/disabled

RESET

Reset – Returns the FACP to its normal default state, by clearing all fire alarm conditions, updating the relevant indicators and outputs and clearing the system fault indicator. If fault conditions are cleared they must be re-established within 20 seconds.

DISABLE

Disable – Context sensitive toggle function to disable/enable point displayed on active status screen

ACF DISABLE

ACF Disable – Toggle function to disable/enable the designated ancillary output.

CANCEL

Cancel – Used to cancel a navigation step or entry in the MENU function

MENU / ENTER, 0-9, *, #, CANCEL and ◄ ▼ ▲ ► - Provides a means for entering the menu system, and carrying out interrogation, control and programming activities

4.3   System Indicators

● FIRE
Illuminated when one or more devices are reporting the FIRE condition or the evacuate control has been activated.

● ALARM ROUTING ACTIVATED
Illuminated when the designated FARE input is active. The indication shall remain until the fire alarm condition is reset

● POWER
Illuminated to show the presence of mains power and flashes when the mains have failed

● POWER FAULT
Illuminated when there is a fault with the power supply. Fault can be no mains, high charger voltage, low battery voltage or missing/damaged battery

● SYSTEM FAULT
Illuminated when the FACP is unable to provide mandatory functions. Indicator is latched, until cleared by the RESET control

● EARTH FAULT
Illuminated when there is an earth fault detected on the panel

● ALARMS OUTPUT STATUS
Illuminated steady if any of the alarm devices (sounders and/or strobes) have been disabled and flashes if any of the alarm devices (sounders and/or strobes) are in fault. Disable has priority over fault

● FIRE OUTPUT STATUS
Illuminated steady if the fire output has been disabled and flashes if the fire output is in fault (open or short circuit condition). Disable has priority over fault

FAULT OUTPUT STATUS Illuminated steady if the fault output has been disabled and flashes if the fault output is in fault (open or short circuit condition). Disable has priority over fault.

ANCILLARY OUTPUT STATUS Illuminated steady if the ancillary output has been disabled and flashes if the ancillary output is in fault (open or short circuit condition). Disable has priority over fault

TEST Illuminated when the panel is in the "Walk Test" mode.

FIRE OUTPUT ON Illuminated when the designated Fire Output is active. The indication remains illuminated until the alarm condition is reset

PRE-ALARM Illuminated when one or more devices are in the pre-alarm condition and not disabled

DAY NIGHT ACTIVE Illuminated when day / night facility has been enabled

DELAY ACTIVE Indicator is illuminated steady when one or more zones are configured with Investigation delays and Delay Mode is active. The indicator shall flash if any Investigation delay timer is running. If the override control or evacuate control is activated while the investigation delay timer is running, then the indicator shall go steady and the investigation zone shall enter the fire condition.

The indicator shall only be OFF if:

➢ The Delay Mode is OFF

➢ No investigation delays are configured

➢ The panel has switched to day or night mode where no delays have been configured

ALARMS SILENCED The indicator is illuminated when the sounders configured to be silence-able have been silenced in response to any activation sources, indicating the resound function is active.

GENERAL FAULT Illuminated when there are one or more faults on the system. Faults can be from the following sources

➢ Fault with loop devices

➢ Fault with the loops

➢ Fault with the fire alarm routing equipment or fault warning routing equipment

➢ Fault with alarm devices or circuit

➢ Fault with connected modules, cards and boards

➢ Fault with secondary power supply

➢ Fault with main power supply

🟡 GENERAL DISABLEMENT Indicator is illuminated when one or more zone detectors, loop devices or panel outputs are disabled.

Buzzer - To meet sound level requirements of AS7240-2:2004:85dB(A).

The Buzzer will be activated for the following conditions

- ➢ Fire – Continuous On
- ➢ Fault – 1sec On / 4.5sec Off
- ➢ Key press – Single beep
- ➢ Extended Key Press – Double Beep

KEYSWITCH (Optional)

Note: *A key switch can be fitted for panels without a front door*

Controls, Normal – Enabled (Key Switch)

Keyswitch disabled   Keyswitch enabled
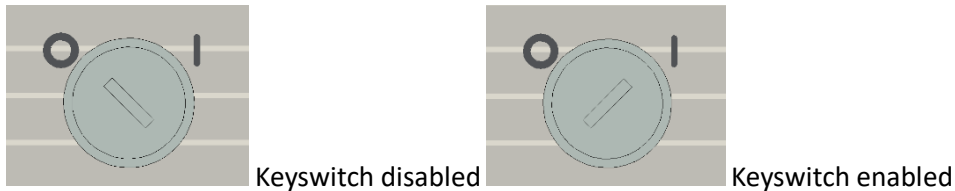
Figure 4: Keyswitch in the Disabled / Enabled Positions

If the key switch is in the OFF position (access level 1), then the PREVIOUS, NEXT and SILENCE BUZZER controls are active.

If the key switch is in the ON position (access level 2), then the SILENCE RESOUND, RESET and MENU ENTER controls are also active.

The key switch is optional. If the key switch is not used, then a pass-code is entered (using the alpha numeric keys) to gain access to level 2 or 3.

5 Displayed Conditional Responses

The action types to be supported in order of priority are:

- ➢ SYSTEM EVACUATE
- ➢ SYSTEM FIRE
- ➢ SYSTEM GENERAL FAULT
- ➢ SYSTEM PRE-ALARM
- ➢ SYSTEM EMERGENCY
- ➢ SYSTEM SECURITY
- ➢ SYSTEM USER
- ➢ SYSTEM DISABLE
- ➢ PARTIAL DISABLE
- ➢ SYSTEM NORMAL

Within each action type there can be a number of inputs types which qualify the type of input.
For example with the action type of Fire, the Input Types may be:
Heat, Photo, Multi, Ion, Duct or MCP.

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5.1   Normal Condition.

The POWER LED is illuminated meaning the mains voltage is present, and all other indicators are off. The LCD will display the;

```
<DATE> <TIME>          ACCESS LEVEL: 2
<USER DESCRIPTOR LINE 1>
<USER DESCRIPTOR LINE 2>
<SYSTEM STATUS>      <DAY MODE-MAN I/O>
```

➢ Current date, time and access level on line 1

➢ Configured user descriptors of customer/site specific information on lines 2 and 3

➢ System status - day-night and manual I/O active information on line 4

In the above screen, ACCESS LEVEL corresponds to the currently active user access level.

In Zone mode, if there is an individual device or input that is disabled within a zone consisting of more then one input, the panel exhibits a partially disabled status and displays the following:

```
<DATE> <TIME>          ACCESS LEVEL: 2
<USER DESCRIPTOR LINE 1>
<USER DESCRIPTOR LINE 2>
PARTIAL DISABLE            DEVICE▶
```

The default screen is not displayed if there is an abnormal status present on the system. The highest priority scrollable status screen is displayed in its place.

Selecting DEVICE▶ sets the panel into device mode allowing the individual conditions to be displayed, scrolled and controlled.

Note: *Only the global disablement/re-enablement of sounders is compliant with AS7240.2. The display of individual disablements are suppressed during the alarm condition however they may be interrogated via the Menu->Display->Disable menu.*

Furthermore after any interrogation at the front panel by the user, the display reverts to the highest priority scrollable status screen or default screen 5 minutes after the last key press. The exception to this timeout is when an alarm is present on the system where the keypad timeout is 30 seconds in this case.

5.2 Fire Condition

If an input or device is activated and it is configured to generate a fire condition the FACP responds to the fire as follows, the:

- ➢ Common FIRE LED will turn on steady
- ➢ Assigned zone fire LED will illuminate
- ➢ Panel buzzer will sound continuously
- ➢ Fire condition to be reported to the LCD (time ordered buffer 100 entries deep)
- ➢ The fire event will be logged (and printed if a printer is connected)
- ➢ The panel fire output will activate
- ➢ All outputs configured to operate under a fire condition will operate
- ➢ Fire LED's on up to 10 loop devices per loop will be illuminated

The fire condition will be displayed on the LCD in the following formats.

Zone with Active Fire condition

The LCD displays the fire status screen and indicates the most recent zone in of the LCD.

```
FIRE - ORIGIN:Zzzz Recent:Zzzz TOTAL:xxx
----------------------------------------
Zzzz                    FIRE
<zone descriptor>
<date> <time>                    CONTROL*
ZONE FIRE XXX OF XXX             DEVICE▶
----------------------------------------
```

The LCD will display the zone in which the fire originated and can be scrolled through all zones in fire using the PREVIOUS and NEXT keys.

Note: *Only fires will be scrollable by default when fires are present on the system. Other events are viewable via the Display menu when fires are present.*

"CONTROL*" Indicates that the control menu hotkey is available; pressing the "*" key on the numeric keypad will allow direct entry into the control menu for the current point being displayed.

The user can perform the following actions in response to a fire:

- ➢ The SILENCE/RESOUND key is used to silence any silence-able outputs that have been activated in response to the fire condition. The ALARMS SILENCED LED will be illuminate to indicate that the sounders have been silenced and resound is available. The operation of the SILENCE key will be logged.

- ➢ The RESET key can be used to reset the fire condition. All outputs activated in response to the fire will deactivate and the panel will revert to the normal condition providing there are no other abnormal conditions present.

- ➢ The FACP also displays fires in Device mode. Pressing the "DEVICE▶" forward button allows the panel to display all the devices or inputs on the system that are in fire.

```
FIRE – ORIGIN:Zzzz Recent:Zzzz TOTAL:xxx
----------------------------------------
<point location>       FIRE
<point descriptor>               <type>
<date> <time>                  CONTROL*
FIRE XXX OF XXX                 ◄ZONE
----------------------------------------
```

Pressing the ◄ Zone back key or a keypad time out will return the panel to displaying fire in zone mode.

Use the ▲ (up) ▼ (down) arrows to cycle through the inputs and devices that are in fire.

Note: *These four (4) operations hold true for all screens displayed in this way*

Device Alarm LED activation

Due to the limited current available from the analogue loop, the number of alarm LED's allowed to be illuminated simultaneously is limited to the first 10 devices in fire on each loop; after this limit is reached any new devices in fire will not have its alarm LED illuminated until the original fires have been cleared on that loop.

5.3   Fault Condition

When the system registers a fault condition:
- ➢ General FAULT LED will be illuminated
- ➢ Corresponding front panel fault LED will illuminate
- ➢ Assigned zone fault LED will flash
- ➢ Panel buzzer will sound intermittently
- ➢ Fault condition to be reported to the LCD.
- ➢ The fault event is logged and printed
- ➢ The panel fault output will activate
- ➢ All outputs configured to operate under a fault condition will operate

The fault condition will be displayed on the LCD in the following format:

```
Zzzz                    FAULT
<zone descriptor>
<date> <time>                  CONTROL*
FAULT XXX OF XXX                DEVICE►
```

Only zoned input types shall be displayed collectively as a zone as shown. Faults originating from outputs and unzoned modules on loops, sounders, add-ons or the panel main termination board shall be displayed individually in the following format:

```
<point location>       FAULT
<point descriptor>              <type>
<date> <time>                CONTROL*
FAULT XXX OF XXX              DEVICE▶
```

If there is a fire present on the system the lower half of the screen will display the most recent zone in fire.

Selecting "CONTROL*" will allow direct entry into the control menu for the current point or zone being displayed.

Pressing the "DEVICE▶" forward button will allow the panel to display all the individual inputs, outputs and modules in fault.

```
<point location>       FAULT
<point descriptor>              <type>
<date> <time>                CONTROL*
FAULT XXX OF XXX              ◀ZONE
```

5.4 System Fault Condition

(AS7240.2:2004: 9.5, 14.4, 14.6)

The System Fault condition is activated if the FACP fails to provide mandatory functions. When a system fault condition occurs, the panel buzzer, System Fault and General Fault indicators shall be activated.

Mandatory functions failures include:

➢ Critical hardware failure on Main Termination Board (MTB) – The system fault condition is driven by hardware for this failure and can be cleared by hardware reset or power cycle of the MTB if the hardware is not damaged.

➢ Reset of the CPU on the MTB while the MTB maintains power – The panel shall re-initialise if possible and the system fault condition shall be driven by software. In this case the fault buzzer is silence-able by using the SILENCE BUZZER control and the system fault can be cleared by activating the RESET control at Access Level 2 or higher.

➢ Loss of communications with the Front Panel (FP) – The system fault condition shall be hardware driven on the FP via the software in MTB and can be cleared by hardware reset or power cycle of the FP if it is not damaged. The system fault condition is not resettable or silence-able whilst the condition is driven by hardware. Upon successful reset of the FP, the system fault condition shall remain latched and shall be driven by software. In this case the condition is silence-able at Access Level 2 by using the SILENCE BUZZER control and reset by using the RESET control.

- ➤ Memory corruption (checked hourly) – The system fault condition shall be driven by software. The panel shall be forced to diagnostics mode and all outputs shall be switched off. The system fault buzzer may be silenced in this instance by using the SILENCE BUZZER control and cleared by activating the RESET control at Access Level 2 or higher.
- ➤ Exception due to software failure in MTB – The system fault condition shall be hardware driven via software when panel reboots and can be silenced and cleared by pressing the STAR '*' key on the FP at Access Level 2. The exception codes shall be presented on the LCD for service support and the system shall remain in boot mode until resolved.

The following screen shall be presented if the system fault condition is driven by software for mandatory functions failures 2, 3 and 4 above:

```
        SYSTEM FAULT: <fault status>

           PRESS <RESET> TO CLEAR
```
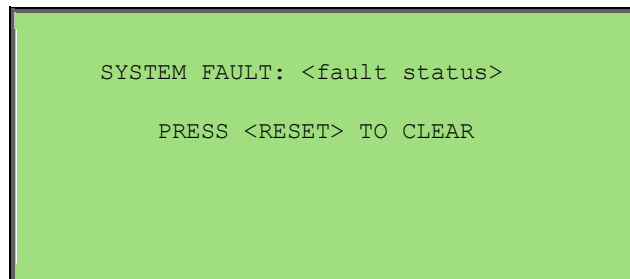
Fault statuses include:

- ➤ "REBOOT DETECTED"
- ➤ "MEMORY CORRUPTION"
- ➤ "FRONT PANEL FAIL"

If the system is forced into diagnostics mode upon a memory corruption (mandatory functions failure 4 above), the above screen shall be displayed as shown. If the panel is forced into boot mode upon a software exception (mandatory functions failure 5 above), a screen such as the following shall be presented.

```
     !EXCEPTION! – PRESS * TO SILENCE
SR = 0x200000DF PC = 0x00437283 # = 0x00
             BOOT VER: 1.01.0
```
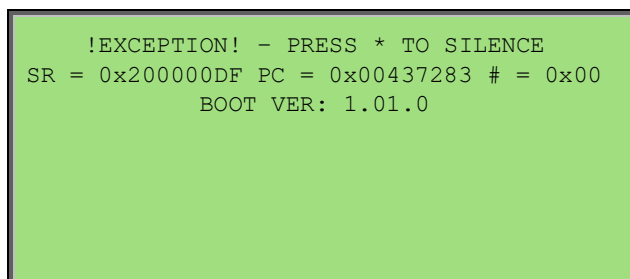
In the event of a software exception these numbers should be recorded and reported to a customer support representative.

Note: *If there is a fire present on the system the lower half of the display shows the most recent zone in fire. Selecting "CONTROL*" will allow direct entry into the control menu for the current point being displayed. Pressing the "DEVICE▶" forward button will allow the panel to display the individual devices or inputs with this condition. The same holds true for the remainder of these conditions.*

5.5 Pre-Alarm Condition

```
Zzzz                    PRE-ALARM
<zone descriptor>
<date> <time>                 CONTROL*
ZONE PRE-ALARM XXX OF XXX      DEVICE▶
```

When a Pre-Alarm event occurs, the following actions take place.

➢ The Pre-Alarm LED will operate
➢ The condition will be reported on the LCD.
➢ The event will be logged and printed
➢ All outputs configured to operate under this condition will operate

5.6 Emergency Condition

```
Zzzz                    EMERGENCY
<zone descriptor>
<date> <time>                 CONTROL*
ZONE EMERGENCY XXX OF XXX      DEVICE▶
```

When an Emergency event occurs, the following actions take place.

➢ The condition will be reported on the LCD.
➢ The event will be logged and printed
➢ All outputs configured to operate under this condition will operate

5.7 Security Condition

```
Zzzz                    SECURITY
<zone descriptor>
<date> <time>                 CONTROL*
ZONE SECURITY XXX OF XXX       DEVICE▶
```

When a Security event occurs, the following actions take place.

➢ The condition will be reported on the LCD.
➢ The event will be logged and printed
➢ All outputs configured to operate under this condition will operate

5.8 User Condition

```
Zzzz                    USER
<zone descriptor>
<date> <time>                   CONTROL*
ZONE USER XXX OF XXX            DEVICE▶
```

When a User event occurs, the following actions take place.

- ➢ The condition will be reported on the LCD.
- ➢ The event will be logged and printed
- ➢ All outputs configured to operate under this condition will operate

5.9 Disabled Condition

```
Zzzz                    DISABLED
<zone descriptor>
<date> <time>                   CONTROL*
ZONE DISABLED XXX OF XXX        DEVICE▶
```

When the user disables an input, output or zone the associated configured outputs will no longer operate and will no longer effect panel conditions. The system registers a disabled condition as follows:

- ➢ Common DISABLED LED will be illuminated
- ➢ Disabled condition to be reported to the LCD.
- ➢ The disable event will be logged and printed
- ➢ All outputs configured to operate under a disabled condition will operate

5.10 Other Conditions

The two remaining conditions are:

System

- ➢ This event is not printed or displayed on the LCD
- ➢ The event will be logged
- ➢ All outputs configured to operate under this condition will operate

Transparent

- ➢ This event is not logged, printed or displayed on the LCD
- ➢ All outputs configured to operate under this condition will operate

6 Test Functions

The FACP provides a set of diagnostic test functions that can be run on various inputs & outputs (like loops, loop devices, LED indicators, LCD display, Sounders etc) to verify whether they operate as they are intended.

The diagnostic test functions are;

- ➢ Loop test
- ➢ Lamp test
- ➢ Walk test
- ➢ Device Locator

6.1 Loop Test

Access Level 2

Loop Test is available via the [MENU ENTER] [Menu] / [2 ABC] [Control] / [3 DEF] [Panel] / [4 GHI] [Loop] menu.

Invoking the Loop Test will drive the loop firstly from side A followed by side B and count all detected devices on each side of the loop. These counts will be displayed upon completion of the test prompting the user to press CANCEL to end.

The loop test also monitors for

- ➢ Over current and short circuit in single-ended mode
- ➢ Over current, short circuit and open circuit conditions in redundant mode.

If there were any latching loop faults prior to commencement of the test these will be re-tested and cleared if no longer present.

Once the Loop Test is complete the loop is re-initialised.

6.2 Lamp Test

Access level 2 or 3

The Lamp Test is initiated by pressing and holding the "[1]" key. A fire event is recognised during the test, in which case the test will be aborted and the fire condition will be displayed.

The lamp test performs the following two tests while activating the panel's internal buzzer until the completion of the test.
- ➢ LED test – all front panel LED's shall be illuminated simultaneously. The add-ons will be sent a lamp test command to instigate their individually controlled lamp test functionality.
- ➢ LCD display – shall activate all the pixels of the LCD. The LCD backlight shall also be illuminated.

Note: *The test will not start if there a genuine alarm condition is present.*

6.3 Walk Test

Access Level 2

Walk Test and Silent Walk Test is available via the [MENU ENTER] [Menu] / [2 ABC] [Control] / [1] [Zone] Zone menu.

The purpose of the walk test is to verify the detectors, MCP's and optionally the alarm devices (sounders) are functioning as required. Once a zone has been placed in walk test, the maintenance personnel can manually activate each detector (or MCP) and check the local indicator is illuminated and the alarm devices (sounders) operate if selected.

Details of walk test are as follows:

Note: *The test is not available if a fire condition existed at the panel prior to the test being invoked*

 - ➢ Individual or multiple zones can be placed under test
 - ➢ Selecting "SILENT WALK TEST" performs the test without sounding programmed sounders
 - ➢ Selecting "WALK TEST" performs the test activating associated sounders as programmed
 - ➢ If "WALK TEST" or "SILENT WALK TEST" is invoked the control will toggle to display the "REMOVE TEST" control
 - ➢ The test indicator is illuminated if one or more zones are placed under test and will remain illuminated for the duration of the test
 - ➢ When a zone is placed under test the LCD displays a zone status of "WALK TEST", "SILENT WALK TEST", or "C&E WALK TEST" depending on the type of active test
 - ➢ If a fire is registered from within a zone under test the zone status will be displayed as "WALK TEST FIRE" and sounders will sound if selected. The associated zone fire LED (if fitted) will also be illuminated
 - ➢ The common fire indicator will not be illuminated if a fire is detected from a zone under test
 - ➢ The "WALK TEST FIRE" condition will not operate the designated Fire Output/s
 - ➢ The "WALK TEST FIRE" condition will be logged and printed
 - ➢ A fire detected from within a zone will be automatically reset every 5 seconds after it is detected and associated sounders will be activated if selected for that duration. If the device within the zone remains in fire the zone will re-enter the "WALK TEST FIRE" state, otherwise the zone will be reverted to the active walk test status and the associated zone fire LED (if fitted) is extinguish
 - ➢ The test condition can be cleared by selecting "REMOVE TEST" from within the Zone Control menu for individual zones
 - ➢ Pressing the RESET key also removes all zones placed under test
 - ➢ The walk test may alternatively be initiated as a System Effect in Cause and Effects. The test will be performed on the zone designated by the Cause and Effect and the programmed Sounders activated by default. The test will end when this System Effect is de-activated in the Cause and Effect

6.4 Device Locator

Access Level 2

The Device Locator test is available via the [MENU ENTER] [Menu] / [2 ABC] [Control] / [2 ABC]

[Device] Device menu by selecting [4 GHI] [ALARM LED ON].

Device locator allows maintenance personnel to locate a particular device by forcing the device alarm LED ON. Only devices with physical alarm LED's support this test.

This is a low priority test and can only be performed on one device at a time. Once invoked the user is prompted that the alarm LED has been forced on and to press CANCEL to end.

The Alarm LED of the device will remain on throughout the duration of the test.

7 Menu Structure

7.1 Menu Layout and Navigation

The main menu for the system is as shown below. The accessibility of this menu for the three access levels is as described previously and summarised below.

Access Level 1: Menu not accessible

Access Level 2: Menu partially accessible.

The menu system is accessible except for the SETUP(*) and PROGRAMMING(*) menus, which are displayed with the suffix "(*)". Selecting these menu options at this access level, will prompt the user for a password, to allow entry into access level 3.

Access Level 3: Menu fully accessible.

"(*) "suffix on SETUP and PROGRAMMING will not be displayed indicating full access. All menu options are accessible with respect to panel configuration.

The user can navigate around the menu items using the arrow keys and to enter a selected menu item press the MENU ENTER key. Alternatively the number beside each menu item can be selected using the numeric keypad this will select and enter the respective menu item directly.

```
    MAIN MENU
1►DISPLAY            4|TOOLS
2|CONTROL            5|SETUP(*)
3|EVENTS             6|PROGRAMMING(*)
```
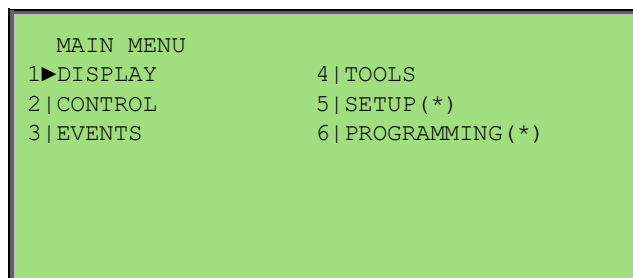
Note: *In all menu's if the Number selection is followed by a | symbol it is selectable by typing the number or using the arrow keys. If the Number selection is followed by a ':' symbol it is only selectable by typing the number*

The items available in this menu are as described below & in more detail in the following sections.

DISPLAY – This menu allows the user to view all the events that are currently active within the system. This consists of Fire, Fault, Pre-Alarm, Emergency, Security, User, Disable and Test type of events. There is also an ABOUT screen which displays software version, customer / site and PCB information.

CONTROL – This menu allows the user to view and control the various inputs & outputs from the panel, loops, add-ons and zones. Disablement, Manual I/O control, Testing and Printing can be done from this menu.

EVENTS – This menu allows the user to view, print or erase the event logs that are logged in the system

TOOLS – This menu allows the user to conduct specific Dirty Devices and Loop diagnostics tests.

SETUP – This menu allows the user to setup the system settings such as date and time, day/night, etc.

PROGRAMMING – This menu allows the user to modify the configuration of the various inputs & outputs of the panel, loops, add-ons and zones within the panel. It also provides the various Learn options such as Auto Learn.

▲ Or ▼	- Move cursor up or down
▶ Or ◀	- Move cursor Left or right
MENU ENTER	- Enter currently selected menu item
0 To 9 WXYZ	- Select and enter menu item by corresponding number
CANCEL	- Return to previous menu
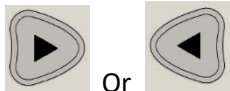
7.1.1   Generic Point Selection Screens

Within the menu system there are several instances in which points are required to be selected in order to proceed further and display and/or manipulate the selected points. Points include Zones, Loops, Devices, Device Sub-Addresses, Panel Inputs, Panel Outputs and Add-Ons.

7.1.2   Zone Point Selection

```
SELECT ZONE: XXX
<selected zone descriptor>
▶Z1      Z2      Z3      Z4      Z5
 Z6      Z7      Z8      Z9      Z10
 Z11     Z12     Z13     Z14     Z15
 Z16     Z17     Z18     Z19     Z20
 Z21     Z22     Z23     Z24     Z25
 Z26     Z27     Z28     Z29     Z30
```

Zones 1 up to 999 can be selected.

Zone Address Prefixes:
 ➢ Z - Zone configured
 ➢ X - Zone not configured

Zone Address Suffixes:
 ➢ * - Zone Disabled
 ➢ S - Zone Sounders Disabled

7.1.3 Loop Point Selection

```
SELECT LOOP: X
<selected loop descriptor>
▶L1      L2
```

Loop 1 or 2 can be selected.

This screen will be skipped if there is only one loop configured in the system except for in the programming menu where the prefix "L" next to the loop number will be replaced with an "X" if the loop is not configured and it can be selected to configure the loop. The loop number suffix "*" indicates that the loop has been disabled.

7.1.4 Loop Device Point Selection

```
SELECT DEVICE: XXX         <device type>
<selected device descriptor>
▶D1      D2      D3      D4      D5
 D6      D7      D8      D9      D10
 D11     D12     D13     D14     D15
 D16     D17     D18     D19     D20
 D21     D22     D23     D24     D25
 D26     D27     D28     D29     D30
```

Apollo device addresses 1 to 126 can be selected.

Device Address Prefixes:
 ➢ D - Device configured and fitted
 ➢ M - Missing device configured and not fitted
 ➢ T - Type mismatch configured and fitted with incorrect type
 ➢ E - Extra device not configured but fitted
 ➢ X - Device not configured and not fitted

Device Address Suffix:
 ➢ * - Device Disabled

7.1.5 Sub-Address Point Selection

```
SELECT SUB ADDRESS: X
<selected sub address descriptor>
1▶I/P1  2:I/P2  3:I/P3  4:O/P1  5:O/P2
6:O/P3
```

Apollo loop device sub-address inputs 1-3 and outputs 1-3 can be selected.

Sub-Address Prefixes:
- ➢ I/P – Sub-Address Input
- ➢ O/P – Sub-Address Output

Sub-Address Suffix:
- ➢ * - Sub-Address Disabled

7.1.6 Add-On Point Selection

```
SELECT ADD-ON: XX          <add-on type>
<selected add-on descriptor>
▶A1      A2      A3      A4      A5
A6       A7      A8      A9      A10
A11      A12     A13     A14     A15
A16      A17     A18     A19     A20
A21      A22     A23     A24     A25
A26      A27     A28     A29     A30
```

Add-On module addresses 1 up to 30 can be selected, depending on type.

Add-On Address Prefixes:
- ➢ A – Add-On configured
- ➢ X – Add-On not configured

Add-On Address Suffix:
- ➢ - Add-On Disabled

7.1.7 Panel Input Point Selection

```
SELECT INPUT: X             <input type>
<input descriptor>
▶I/P1    I/P2    I/P3    I/P4
```

Panel digital inputs 1 to 4 can be selected.

Panel Input Prefix:
- ➢ I/P – Panel Input

Panel Input Suffix:
- ➢ * - Panel Input Disabled

7.1.8 Panel Output Point Selection

```
SELECT OUTPUT: X              <output type>
<output descriptor>
▶O/P1    O/P2    O/P3    O/P4
```

4 panel Supervised Outputs:

3 Relay Outputs

2 Open Collector Outputs

2 Auxiliary Outputs can be selected.

Panel Output Prefix:

➢ I/P – Panel Output

Panel Output Suffix:

➢ - Panel Output Disabled

7.1.9 Password User ID Selection

```
SELECT USER ID: X
▶ID1    ID2
```

User IDs 1 and 2 can be selected at the panel.

8 Menu Structure and Navigation

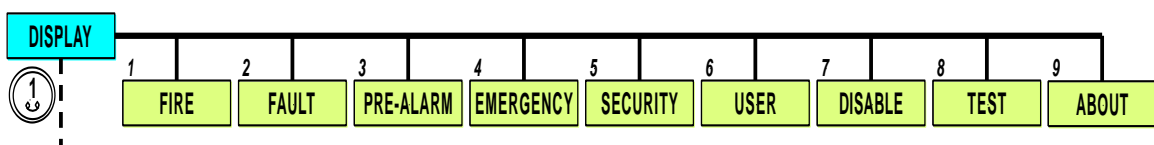ⓘ *The following should be read in conjunction with the complete "Menu Structure".*

The primary components of the Menu Structure are;

DISPLAY	CONTROL	EVENTS	TOOLS	SETUP	PROGRAMMING

The sections below have been broken down by primary component for ease of explanation

8.1 Menu > Display

ⓘ   *Pressing* ①︎ *opens the "Display" menu. Here the operator can view any of the above facilities, 1 to 8 by following the screen prompts,* ▲ *(up),* ▼ *(down), to move through the menu. To view its status on the LCD press the number associated with that facility, for example press* ③︎DEF *to view any "Pre-alarms" that may be present on the system.*

ⓘ   *This process of navigation and following the screen prompts forms the basis for accessing, viewing and / or programming.*

```
  DISPLAY MENU
1▶FIRE          xxx  6|USER          xxx
2|FAULT         xxx  7|DISABLE       xxx
3|PRE-ALARM     xxx  8|TEST          xxx
4|EMERGENCY     xxx  9|ABOUT
5|SECURITY      xxx
```

In the DISPLAY menu, the menu items consist of all the displayable system conditions.

When a display condition is selected, the status screen of the condition to be shown is displayed at the zone level initially:

```
Zzzz                    <status>
<zone descriptor>
<date> <time>                  CONTROL*
ZONE <condition> XXX OF XXX    DEVICE▶
```

Pressing the "DEVICE▶" forward button will allow the panel to display the individual devices or inputs with the associated condition.

```
 <point location>       <status>
<point descriptor>              <type>
<date> <time>                CONTROL*
<condition> XXX OF XXX         ◀ZONE
```

Note: *if there are no Zones with the selected condition and there are devices with the selected condition, the zone screen will be bypassed and the device screen will be displayed immediately.*

8.1.1 Menu > Display > About

If ABOUT is selected the following screen is presented:

```
<custom banner 1>
<custom banner 2>
<system status>
◄BACK   SOFTWARE:VX.XX.XX.XXX PCB REV:XXX
```
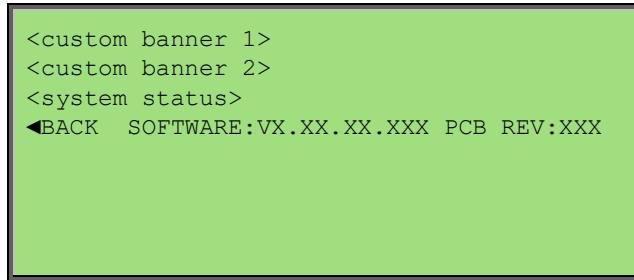
8.2 Menu > Control
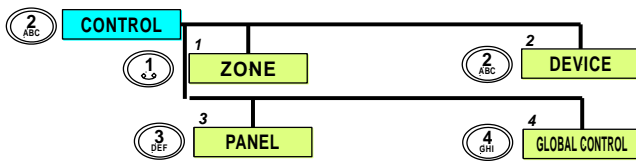
NOTE:
1: At Access Level 1, the entire menu is not accessible.
2: At Access Level 2, the PROGRAMMING & SETUP menu items are not accessible, user can access level 3 functionalities via the correct password entry.
3: At access level 3, every option is available

Pressing ② opens the "Control" menu from which the operator can select one of the "Control" functions shown above by pressing ▲ (up), ▼ (down), to move through the menu. To view its control options on the LCD press the number associated with that facility on the alpha numeric key pad or press ▶ to go directly to it.

```
 CONTROL MENU
1►ZONE            3|PANEL
2|DEVICE          4|GLOBAL CONTROL
```
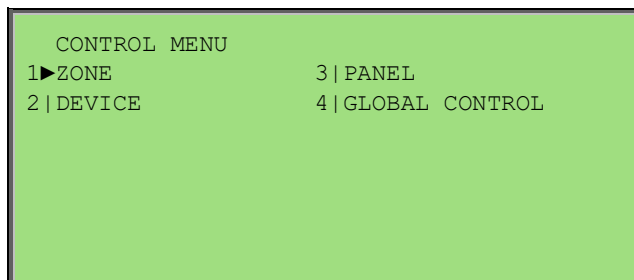
8.2.1 Menu > Control > Zone
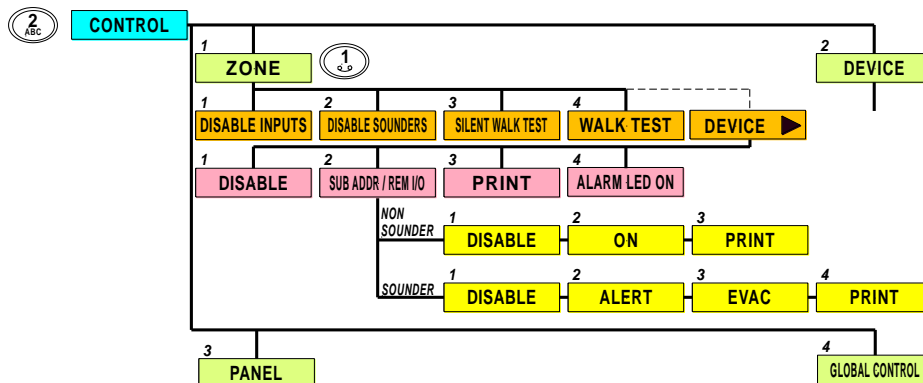
Once in the "Control" menu press (1) to open the "Zone" menu. By following the screen prompts select the type of control, 1 to 4. Once selected simply step through the menu again to implement.

```
Zzzz                <status>
<zone descriptor>
1:DISABLE INPUTS    2:DISABLE SOUNDERS
3:SILENT WALK TEST  4:WALK TEST DEVICE▶
```

Selecting the Zone Control menu prompts the user to select the zone number using the generic zone point selection screen followed by the corresponding zone control menu:

Actions are all context sensitive.
 ➢ Disable inputs becomes enable inputs.
 ➢ Disable sounders becomes enable sounders
 ➢ Walk test will start walk test and toggle to remove test
 ➢ Silent walk test will start silent walk test and toggle to remove test

Pressing ▶ will display device (or input) within the zone; these are scrollable using ▲ ▼

Device Screens

```
Zzzz Ppp Lll Dddd.s  <status>
<device descriptor>
ACTION:<action type>   <dev type>
AVALUE:XXX I:000 O:000 DRIFT:YYY MODE:X

◀ZONE 1:DISABLE    2:SUB ADDR    3:PRINT
      4:ALARM LED ON
```

Note: *option 2 shall be SUB ADDR (Sub-Address) or REM O/P (Remote Output) depending on the type of device being displayed.*

Input Screens

```
<point location>        <status>
<point descriptor>
ACTION:<action type>
◀BACK     1:DISABLE    2:ON    3:PRINT
```

8.2.2 Menu > Control > Device
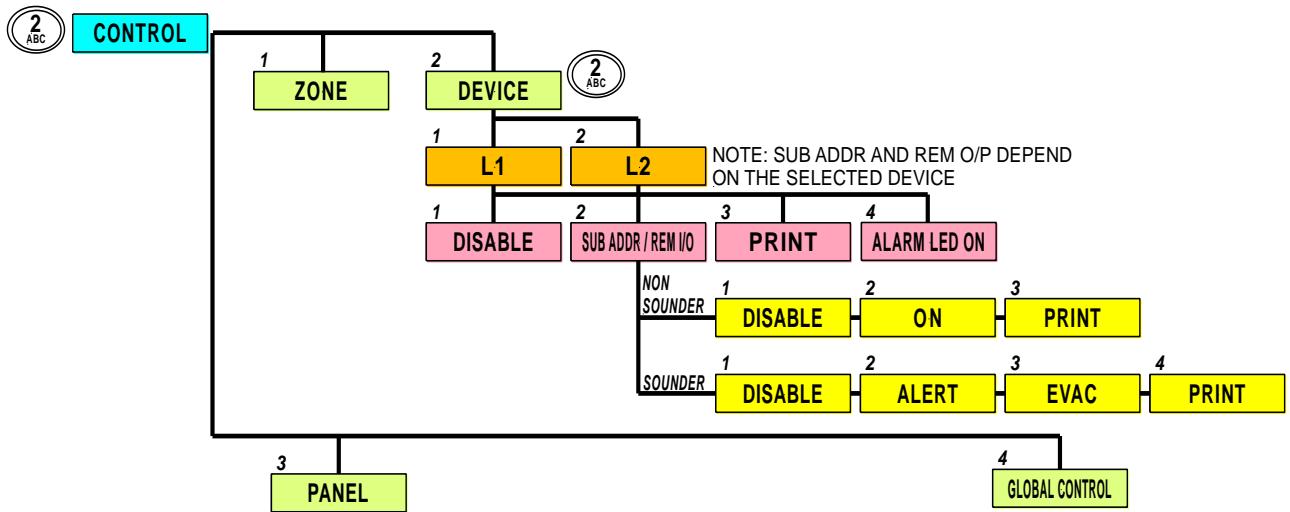
Selecting DEVICE from the control menu; the user shall be prompted to select loop and device address via generic point selection screens. The following device control menu is presented next:

```
Zzzz Ppp Lll Dddd.s  <status>
<device descriptor>
ACTION:<action type>   <dev type>
AVALUE:XXX I:000 O:000 DRIFT:YYY  MODE:X

◄BACK 1:DISABLE    2:SUB ADDR    3:PRINT
      4:ALARM LED ON
```

Selecting "2: SUB ADDR" will display the generic sub address selection screen if configured. Also "2: SUB ADDR" will be replaced with "2: REM O/P" if the context displayed is a detector.

```
<input location>         <status>
<input descriptor>
ACTION:<action type>     <dev type>
◄BACK      1:DISABLE     2:ON     3:PRINT
```

Non-Sounder Output Screens

```
<output location>        <status>
<output descriptor>
<assigned output type>  <dev type>
◄BACK      1:DISABLE     2:ON     3:PRINT
```

Sounder Output Screens

```
<output location>        <status>
<output descriptor>
<assigned output type>  <dev type>
◄BACK 1:DISABLE  2:ALERT 3:EVAC  4:PRINT
```

8.2.3   Menu > Control > Panel

NOTE: DELAY MODE (7) MENU IS ONLY AVAILABLE
IF INVESTIGATION DELAYS ARE CONFIGURED

A **Halma** company

8.2.3.1   Menu->Control->Panel->Input

```
   CONTROL PANEL MENU
1▶INPUT            5|PRINTER
2|OUTPUT           6|POWER
3|ADD-ON           7|DELAY MODE
4|LOOP
```

Use the ▼▲ arrows to display the 4 available panel inputs

```
Ppp Ii Zzzz        <status>
<input descriptor>           <type>
ACTION:<action type>
◀BACK     1:DISABLE     2:ON     3:PRINT
```

8.2.3.2   Menu > Control > Panel > Output

```
CONTROL PANEL OUTPUT MENU
1▶SUPERVISED O/P   3|OPEN COLLECTOR O/P
2|RELAY O/P        4|AUXILIARY O/P
```

8.2.3.2.1   Menu > Control > Panel > Output > Supervised O/P

Use the ▼▲ arrows to display the 4 available panel supervised outputs

Non-Sounder Outputs

```
Zzzz Ppp SUP:Oo     <status>
<output descriptor>          <type>
<assigned output type>
◀BACK     1:DISABLE     2:ON     3:PRINT
```

Sounder Outputs

```
Zzzz Ppp SUP:Oo      <status>
<output descriptor>              <type>
<assigned output type>
◄BACK 1:DISABLE  2:ALERT  3:EVAC 3:PRINT
```

8.2.3.2.2 Menu > Control > Panel > Output Relay O/P

Use the ▼▲ arrows to display the 3 available panel relay outputs

```
Zzzz Ppp SUP:Oo      <status>
<output descriptor>              <type>
<assigned output type>
◄BACK    1:DISABLE    2:ON     3:PRINT
```

8.2.3.2.3 Menu > Control > Panel > Output > Open Collector O/P

Use the ▼▲ arrows to display the 2 available panel auxiliary outputs

```
Zzzz Ppp OC:Oo      <status>
<output descriptor>              <type>
<assigned output type>
◄BACK    1:DISABLE    2:ON     3:PRINT
```

8.2.3.2.4 Menu > Control > Panel > Output > Auxiliary O/P

Use the ▼▲ arrows to display the 2 available panel auxiliary outputs

```
Zzzz Ppp AUX:Ooo     <status>
<output descriptor>              <type>
<assigned output type>
◄BACK    1:DISABLE    2:ON     3:PRINT
```

8.2.3.3   Menu > Control > Panel > Add-On

After the type of Add-On is selected using the ▼ ▲ the generic Add-On point selection screen is presented allowing the Add-On address to be selected. The Add-On control menu is then presented:

```
SELECT ADD-ON TYPE: 8-WAY RELAY


                                   CHANGE▼
◄BACK                                NEXT►



```
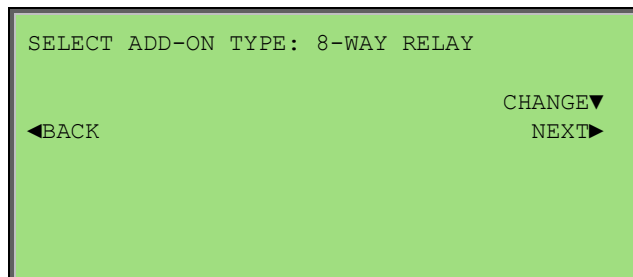
Selecting "2:I/O" will display the individual inputs and/or outputs of the add-ons. Use the ▼ ▲ arrows to display the available inputs and outputs

```
<add-on location>       <status>
<add-on descriptor>
<add-on type>           <add-on version>
◄BACK      1:DISABLE      2:I/O    3:PRINT



```

Non-Sounder Outputs

```
<add-on location>       <status>
<output descriptor>                  <type>
<assigned output type>    <add-on type>
◄BACK      1:DISABLE      2:ON       3:PRINT



```
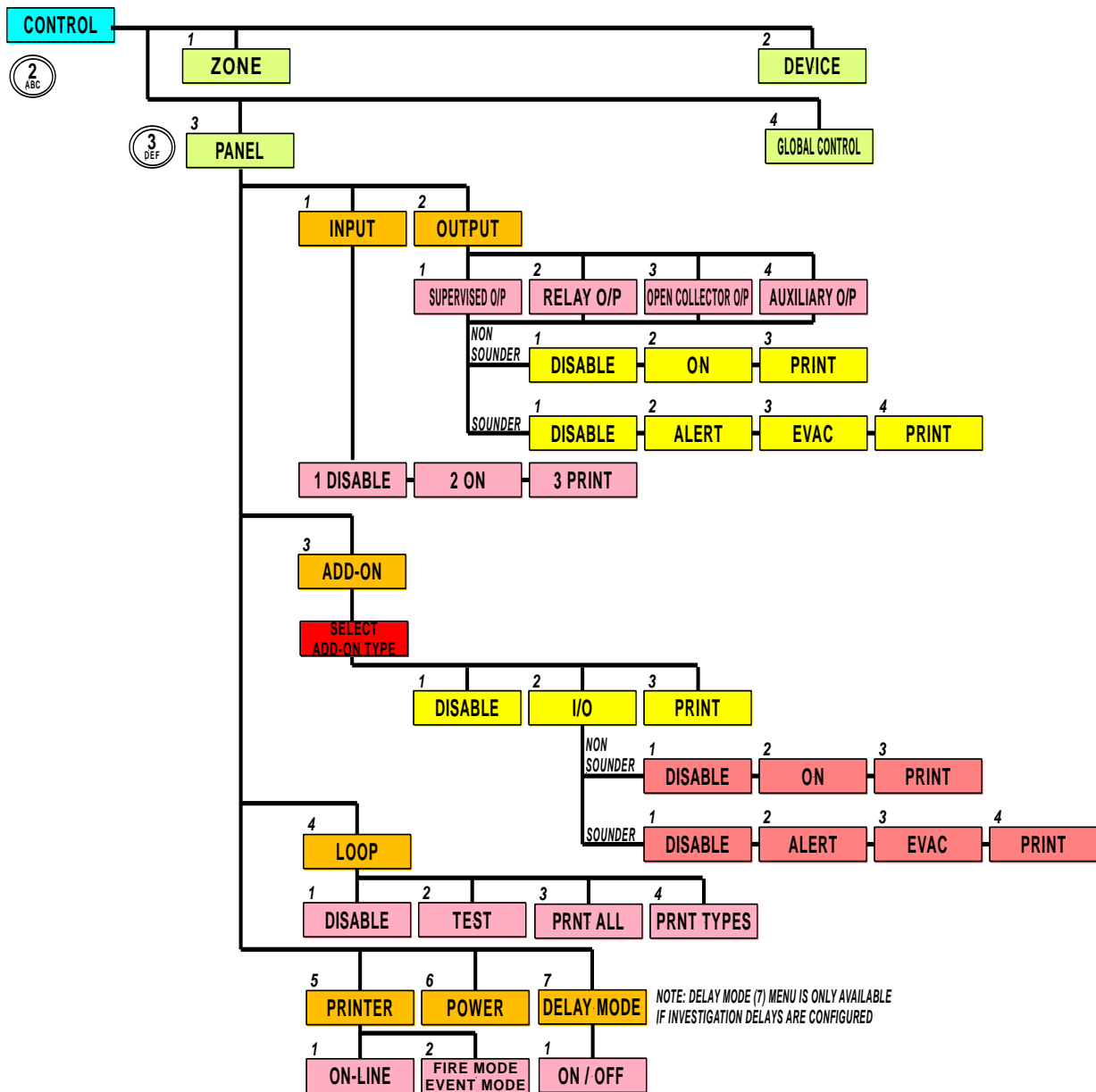
Sounder Outputs

```
<add-on location>       <status>
<output descriptor>                  <type>
<assigned output type>    <add-on type>
◄BACK 1:DISABLE  2:ALERT  3:EVAC 4:PRINT



```
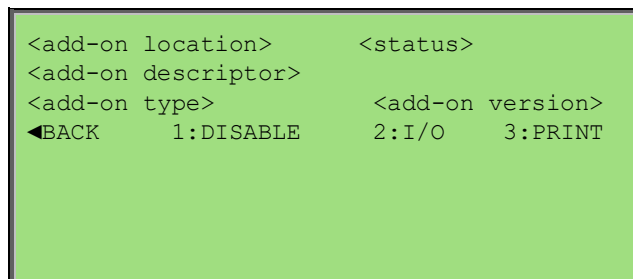
8.2.3.4   Menu > Control > Panel > Loop

Use the ▼ ▲ arrows to display the available loops

```
Pppp Lll                <status>
<loop descriptor>
<loop configuration>     <loop current>
1:DISABLE 2:TEST 3:PRNT ALL 4:PRNT TYPES
```

8.2.3.5   Menu > Control > Panel > Printer

```
PANEL PRINTER           <on-line status>
<fire/event mode>

◄BACK     1:ON-LINE    2:FIRE MODE
```

8.2.3.6   Menu > Control > Panel > Power

```
PANEL POWER
AC:xxxxxxxxx    VBATT:xx.xDC    TEMP:xxxC
BATTERY:xxxxxxxxx
◄BACK
```

AC Statuses include	BATTERY statuses include
NORMAL	NORMAL
FAIL	DAMAGED
CHRG HIGH	MISSING
CHRG LOW	CABLE FLT
	LOW

8.2.3.7   Menu > Control > Panel > Delay Mode

This menu is only accessible if investigation delays have been configured and the panel is in the day or night modes in which delays are configured

```
INVESTIGATION DELAY MODE: ON


◄BACK             1:OFF
```
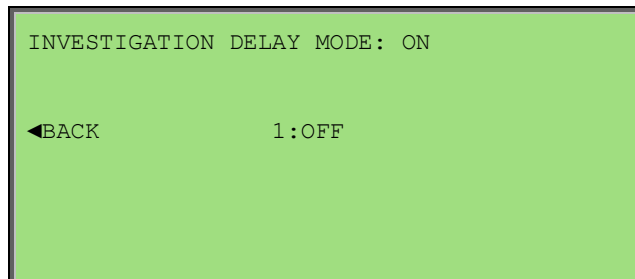
8.2.4   Menu > Control > Global Control


```
 GLOBAL CONTROL MENU
1►DISABLE SOUNDERS   4|REMOVE MANUAL I/O
2|ENABLE SOUNDERS    5|REMOVE WALK TESTS
3|GLOBAL ENABLE
```
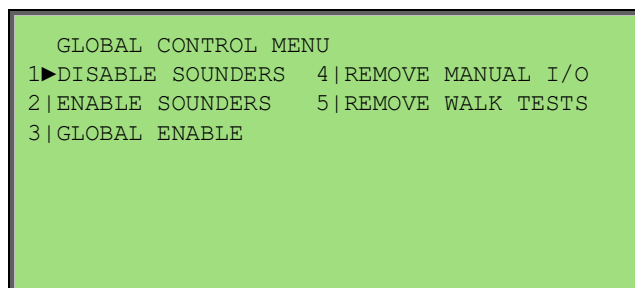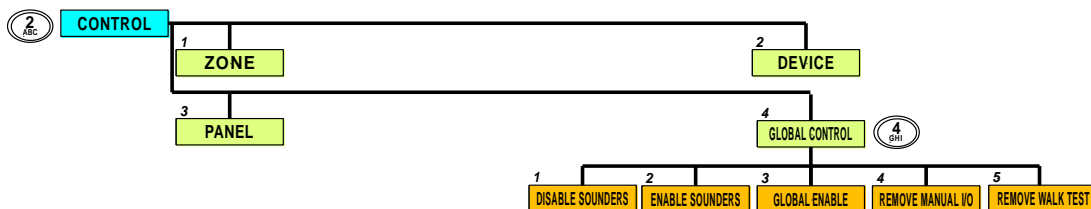
8.3   Menu > Events
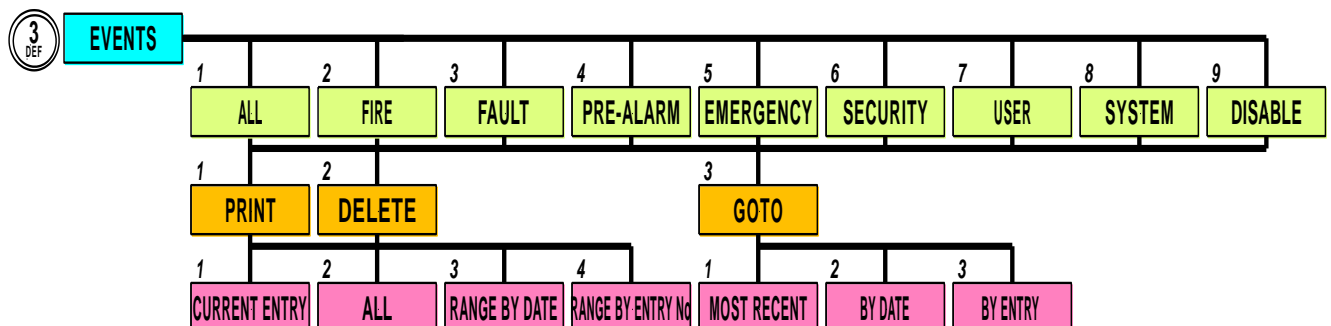
The user can select to view any individual event type or all event types; revealing the following event screen:

```
  EVENTS MENU
1▶ALL          XXX    6|SECURITY    XXX
2|FIRE         XXX    7|USER        XXX
3|FAULT        XXX    8|SYSTEM      XXX
4|PRE-ALARM    XXX    9|DISABLE     XXX
5|EMERGENCY    XXX
```

```
<event type>   xxx/yyy   <date>  <time>
<location>             <status>
<descriptor>                    <user id>
◀BACK     1:PRINT    2:DELETE    3:GOTO
```

8.3.1 Menu > Events > Print

```
  PRINT <event type> EVENTS
1▶CURRENT ENTRY      3|RANGE BY DATE
2|ALL                4|RANGE BY ENTRY
```

8.3.2 Menu > Events > Delete

```
  DELETE <event type> EVENTS
1▶CURRENT ENTRY      3|RANGE BY DATE
2|ALL                4|RANGE BY ENTRY
```

8.3.3 Menu > Events > Goto

```
   GOTO <event type> EVENTS
1▶MOST RECENT
2|BY DATE
3|BY ENTRY
```

8.4 Menu > Tools
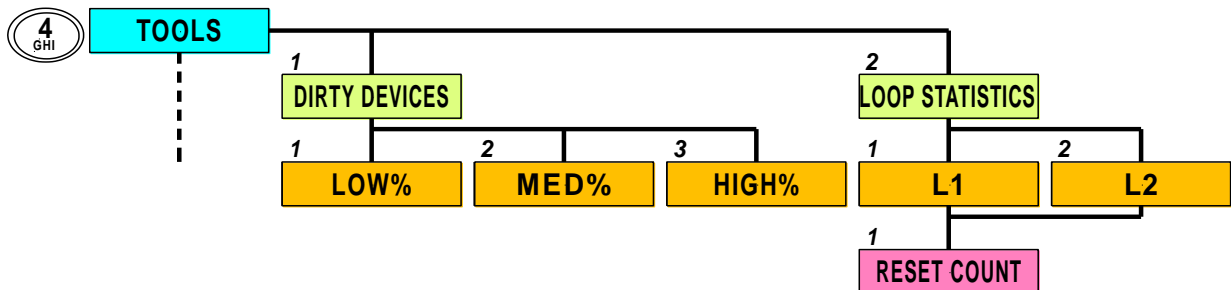

```
   TOOLS MENU
1▶DIRTY DEVICES
2|LOOP STATISTICS
```

8.4.1 Menu > Tools > Dirty Devices

The compensation threshold level can be set to the default Low, Medium or High percentage. The selected default Low, Medium or High compensation threshold is displayed, and an asterisk appears next to the current selection where the medium threshold is the default.

Only those devices which have a drift percentage higher than the threshold will be displayed.

If there are no dirty devices on the system found at the selected drift threshold the following screen is presented:

```
         NO DIRTY DEVICES FOUND
        AT SELECTED DRIFT THRESHOLD

◄BACK     1:005%    2*040%    3:080%
```

If devices are found with drift percentage values higher than the selected drift percentage threshold then the following screen is displayed:

Use the ▼ ▲ arrows to display the dirty devices. The control menu hotkey * can be used for direct access into the control menu for the current device being displayed.

```
Zzzz Ppp Lll Dddd.s  <status>
DRIFT LEVEL: XXX
DIRTY DEVICES XXX OF XXX       CONTROL*
◄BACK     1:005%    2*040%    3:080%
```

8.4.2 Menu > Tools > Loop Statistics

If 2 loops are available, selecting LOOP STATISTICS allows the user to select which loop they would like to view using the loop selection screen followed by the loop statistics menu screen:

This screen shows the number of bad polls and a percentage of bad/good polls from the date and time. "1: RESET COUNT" will reset the bad poll count and display new datum.

Noise level is the average level of noise on the loop. The noise status displayed shall be GOOD, FAIR or BAD based on the preset thresholds.

```
BAD POLLS:xxxxxxxx (xx.xx%)  <loop no.>
SINCE DD/MM/YYYY HH:MM:SS
LOOP NOISE LEVEL:xxmA - <noise status>
◄BACK         1:RESET COUNT
```

8.5   Menu > Setup
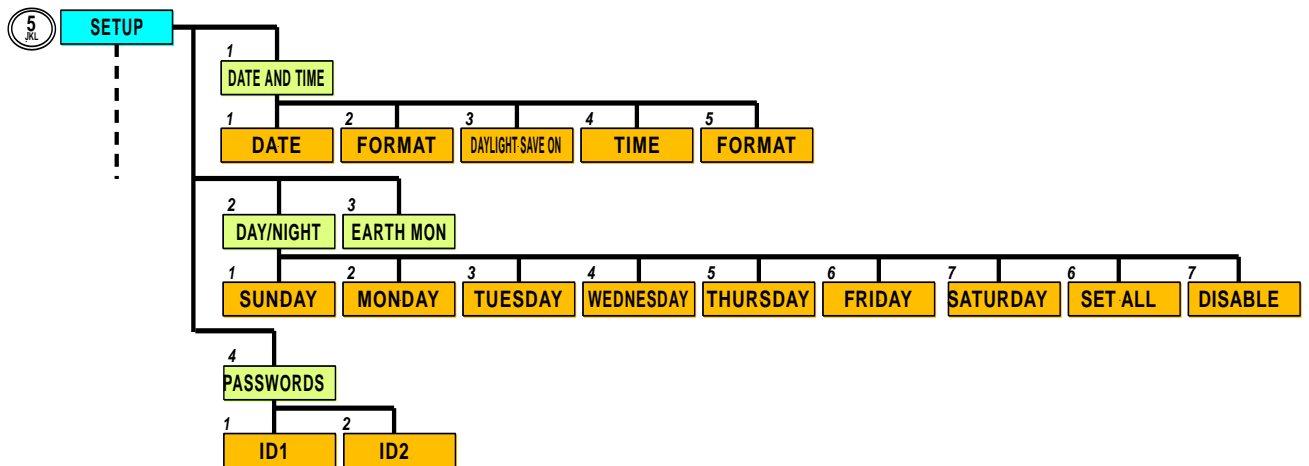
This menu is only accessible at access level 3. If the active access level is less than 3 the user will be prompted to enter password before allowing access to this menu.

```
   SETUP MENU
1▶DATE AND TIME     3|EARTH MONITORING
2|DAY/NIGHT         4|PASSWORDS
```

8.5.1   Menu > Setup > Date and Time

```
   DATE AND TIME MENU
1▶DATE  :01/01/2008 4|TIME  :10:05:33
2|FORMAT:DD/MM/YYYY 5|FORMAT:24 HOUR
3|DAYLIGHT SAVE ON
```

The date format can be changed by selecting 2, the time format can be changed by selecting 5 and the daylight savings mode can be tuned on or off by selecting 3.

8.5.2 Menu > Setup > Date and Time > Date

```
FORMAT: DD/MM/YYYY
CURRENT: 01/01/2008
    NEW: _
▲DEL                         APPLY▶
```

8.5.2.1 Menu > Setup > Date and Time > Time

```
CURRENT: 10:05:34
    NEW: _

▲DEL                         APPLY▶
```

8.5.3 Menu > Setup > Day/Night

```
DAY/NIGHT MENU        <disabled status>
1▶SUNDAY          6|FRIDAY
2|MONDAY          7|SATURDAY
3|TUESDAY         8|SET ALL
4|WEDNESDAY       9|DISABLE
5|THURSDAY
```

Day/Night mode can be enabled or disabled by selecting 9. The <disabled status> shall toggle accordingly as this is selected.

8.5.3.1 Menu > Setup > Day/Night > Day

```
DAY/NIGHT SETTINGS - SUNDAY
CURRENT - DAY: HH:MM  NIGHT: HH:MM
    NEW - DAY: _      NIGHT:      DEL▲
◀BACK             APPLY▼        NEXT▶
```

Back will return to day/night menu or previous day if not on first day selected.

Next will proceed to the day/night settings for each of the remaining six days in sequence after which it will return to the day/night menu.

Pressing APPLY will set the CURRENT day/night settings to the new value and clear the new values to allow re-editing.

Cancel returns to the day/night menu on any day.

Selecting "8|SET ALL" from the Day/Night menu shall present the user with a screen similar to that above. The settings applied on this screen will be applied to all days of the week.

8.5.4 Menu > Setup > Earth Monitoring

```
EARTH MONITORING: ENABLED
-ENSURE EARTH MONITORING LINK IS FITTED-
                               CHANGE▼
◄BACK                          APPLY►
```
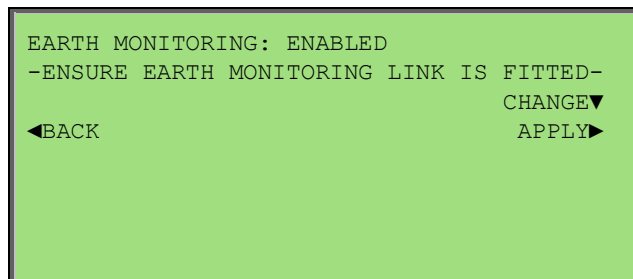
Note: *LINK instructions*

Press CHANGE▼ to toggle between enabled and disabled

8.5.5 Menu > Setup > Password

Selecting the password menu reveals the generic password user ID selection screen followed by the following:

Use ▼arrow to move edit point. Only password IDs 1 and 2 are editable at the panel. All other IDs need to be configured using the PC configuration tool.
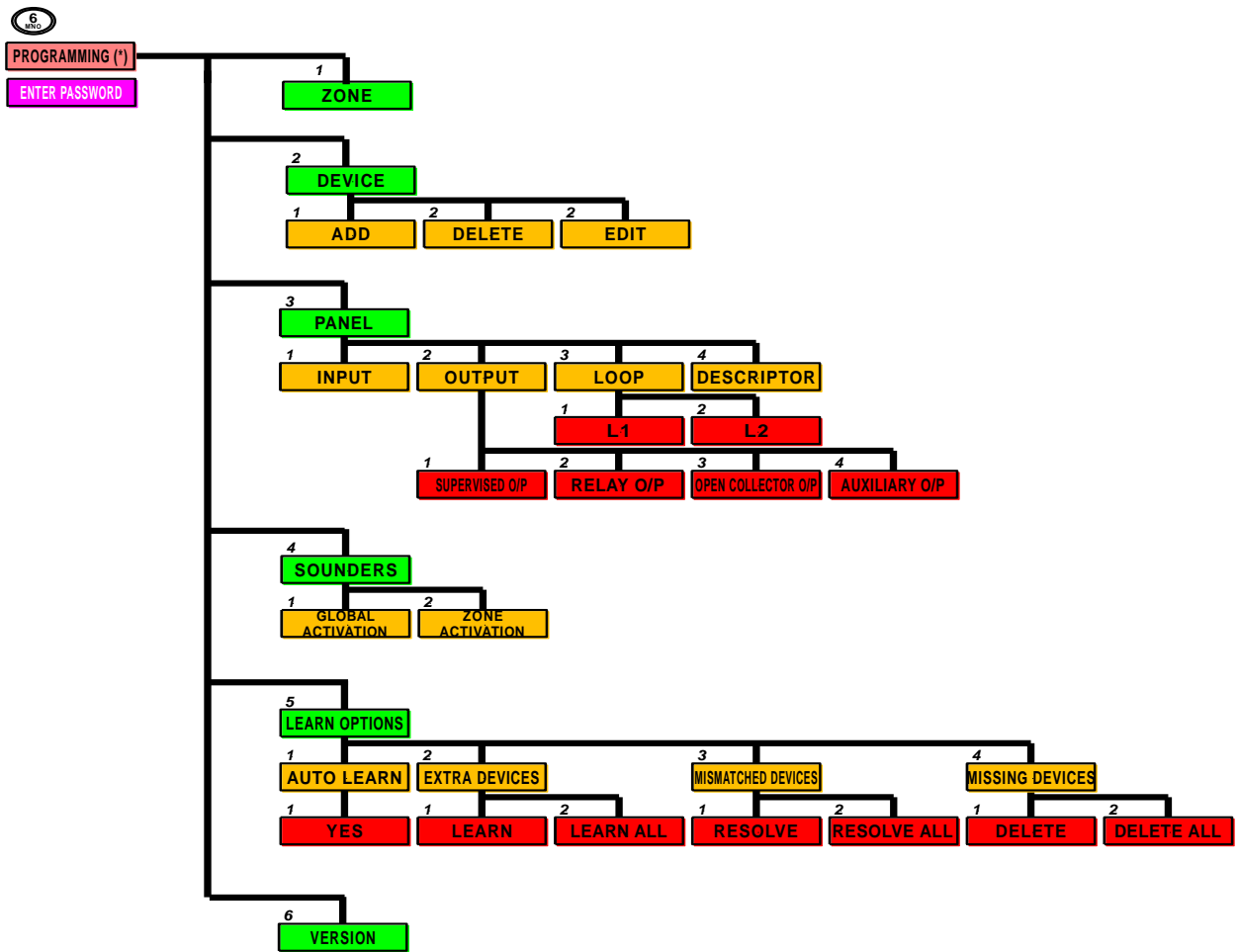
```
        ADD/EDIT PASSWORD
ID              ►: 01
ACCESS LEVEL   : 2              DEL▲
PASSWORD       : 2222           SAVE►
```

8.6 Menu > Programming

This menu is only accessible at access level 3. If the active access level is less than 3 the user will be prompted to enter password before allowing access to this menu.

```
   PROGRAMMING MENU
1▶ZONE              4|SOUNDERS
2|DEVICE            5|LEARN OPTIONS
3|PANEL             6|VERSION
```
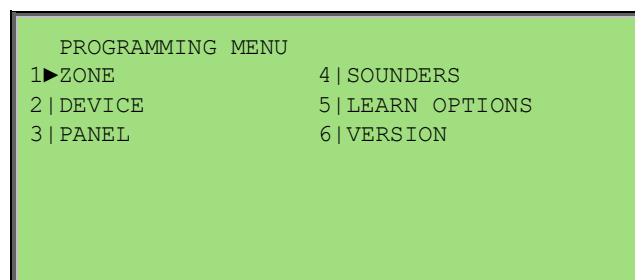
The programming menu is divided into a series of programming wizards. Each individual programmable attribute will be displayed on each screen of the wizard and navigation and editing options are displayed.

If any changes to the configuration are made during the course of the programming a DO YOU WANT TO SAVE screen is displayed:

```
CHANGES MADE
DO YOU WANT TO SAVE?

◄BACK              1:YES
```
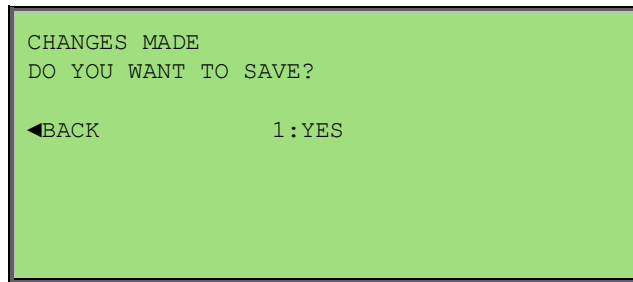
If no changes were made a NO CHANGES MADE splash screen will be displayed for a short period before returning to the menu.

8.6.1 Menu > Programming > Zone

```
EDIT DESCRIPTOR
<descriptor>_
#CLEAR                         DEL▲
◄BACK                          NEXT►
```
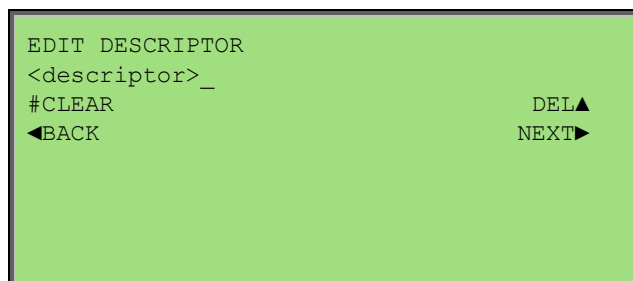
When this is selected the user is presented with the generic zone number selection screen followed by the EDIT DESCRIPTION screen. Use the alpha-numeric keys to key in descriptor characters. Pressing next (or enter) will update the programming.

For day and night mode, choices are:

```
INVESTIGATE        (Timeout 1 / DAY MODE
ZONE CONFIGURATION: INVESTIGATION
                              CHANGE▼
◄BACK                          NEXT►
```
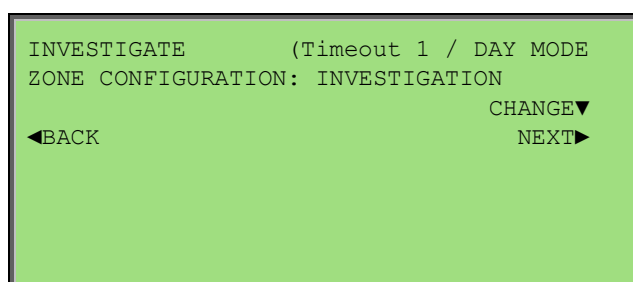
1. NORMAL   (No Timeout)
3. INVESTIGATE (Timeout 1, Timeout 2, MCP Override, Inhibit Sounders, Inhibit Fire Outputs)
4. DEPENDANCY A   (Timeout 1)
5. DEPENDANCY B   (Timeout 1)
6. DEPENDANCY C   (Inhibit Sounders, Inhibit Fire Outputs)

```
DAY MODE            <zone configuration>
EDIT ZONE TIMEOUT 1: 60    (1-180 SECS)
#CLEAR
◄BACK                           NEXT►
```

Pressing next (or enter) will update the programming and prompt for respective timeout settings.
Pressing next (or enter) will update the programming and prompt for respective timeout 2 setting.

```
DAY MODE            <zone configuration>
EDIT ZONE TIMEOUT 2: 300   (1-420 SECS)
#CLEAR
◄BACK                           NEXT►
```

Pressing next (or enter) will update the programming and prompt for MCP override setting.

```
DAY MODE            <zone configuration>
MCP OVERRIDE: ENABLED
                             CHANGE▼
◄BACK                           NEXT►
```

Press change ▼ to DISABLE. Pressing next ► (or enter) will update the programming and prompt for Inhibit sounders setting.

```
DAY MODE            <zone configuration>
INHIBIT SOUNDERS: ENABLED
                             CHANGE▼
◄BACK                           NEXT►
```

Press change ▼ to DISABLE. Pressing next ► (or enter) will update the programming and prompt for Inhibit fire outputs setting.

```
DAY MODE            <zone configuration>
INHIBIT FIRE OUTPUTS: ENABLED
                             CHANGE▼
◄BACK                           NEXT►
```

Press change ▼ to DISABLE. The screens are then repeated for night mode. Then the user will be prompted to save changes if required.

8.6.2   Menu > Programming > Device

```
DEVICE MENU
1▶ADD
2|DELETE
3|EDIT
```

The user may choose to Add, Delete or Edit devices. Once selected, the user will be prompted to select the loop and device to which to perform the selected action using the generic point selection screens.

8.6.2.1   Menu > Programming > Device >Add

```
SELECT DEVICE TYPE: <device type>

                          CHANGE▼
◀BACK                       NEXT▶
```

In this wizard the user can scroll ▼ through, (press next▶) the desired device type to be added. The user is also prompted to save changes if required.

8.6.2.2   Menu > Programming > Device > Delete

Once selected the device location and type shall be displayed:

```
Zzzz Ppp Lll Dddd.s   <device type>


◀BACK                       DELETE▶
```

The user shall then be prompted to save changes if required.

8.6.2.3   Menu > Programming > Device > Edit

```
SELECT DEVICE TYPE: <device type>

                                           CHANGE▼
◄BACK                                       NEXT►
```
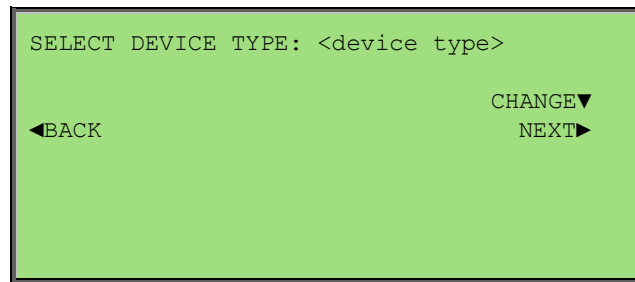
Once the device is selected firstly the device type can be changed:
If the device type is changed the following confirmation screen is presented:

```
WARNING: SETTINGS WILL BE DEFAULT
EXCEPT ZONE NUMBER AND DESCRIPTOR
PROCEED WITH CHANGE
◄BACK              1:YES
```
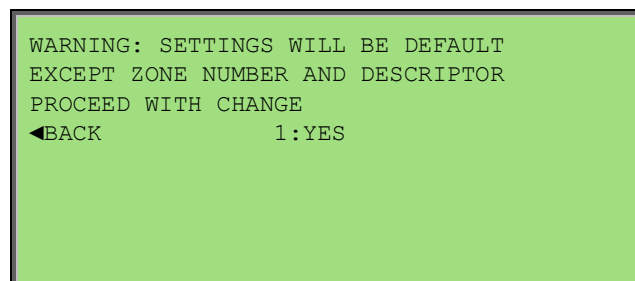
Confirming this will change the device type. As each device type has a different set of configurable attributes only the device descriptor and zone number are common hence all other configurable attributes for the given device are set to their default value when the device type is changed.

```
EDIT DESCRIPTOR
<descriptor>_
#CLEAR                                      DEL▲
◄BACK                                      NEXT►
```
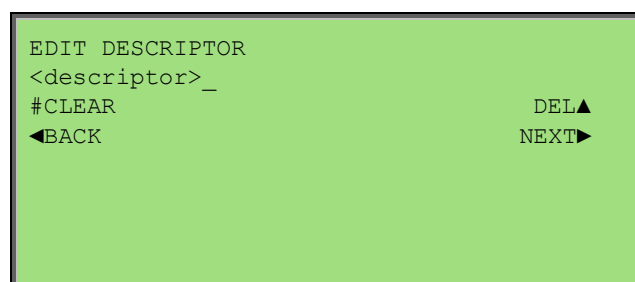
Edit the descriptor using the alphanumeric keys. Press NEXT► to go to the next field.

```
ENTER ZONE NUMBER: X

#CLEAR                                      DEL▲
◄BACK                                      NEXT►
```
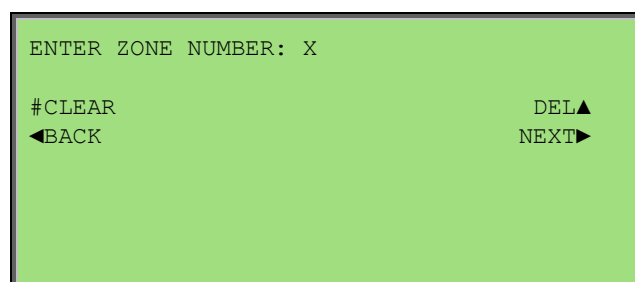
The zone number may then be changed:

```
EDIT ACTION TYPE: FIRE

                              CHANGE▼
◀BACK                          NEXT▶
```

Press CHANGE▼ to browse through the available action types. Press NEXT▶ to go to the next field.

```
INPUT TYPE: NON-LATCHING

                              CHANGE▼
◀BACK                          NEXT▶
```

Press CHANGE▼ to browse through the available latching state options. Press NEXT▶ to go to the next field.

```
EDIT PRE-DELAY: 0   (0-90 seconds)

#CLEAR                           DEL▲
◀BACK                          NEXT▶
```

Key-in the new pre-delay value for the selected field. Press NEXT▶ to go to the next field.

```
DAY SENSITIVITY: 100   (80-120%)

#CLEAR                           DEL▲
◀BACK                          NEXT▶
```

Press NEXT▶ to enter the sensitivity mode of the device. For non Discovery devices the following screens are presented:

```
NIGHT SENSITIVITY: 100   (80-120%)

#CLEAR                           DEL▲
◀BACK                          NEXT▶
```

If the device type is changed this confirmation screen is displayed:

```
TYPE: <device type>
1 DEVICE
2►SUB ADDRESS
                              NEXT►
```

If the device type has sub-address inputs or outputs this screen is displayed next:

```
SELECT SUB ADDRESS: 1
<selected sub address descriptor>
1►I/P1  2:I/P2  3:I/P3 4:O/P1  5:O/P2
6:O/P3
```

Select 2 SUB ADDRESS and pressing NEXT► displays the generic sub-address selection screen:

```
EDIT DESCRIPTOR
LOOP 1 DEVICE 1 INPUT 1_
#CLEAR                      DEL▲
◄BACK                       NEXT►
```

Select one of the sub inputs and press enter to edit the input configuration.

```
ENTER ZONE NUMBER: 1_

◄BACK                       NEXT►
```

Press NEXT► to go to the next field.

```
EDIT ACTION TYPE: FIRE

                            CHANGE▼
◄BACK                       NEXT►
```

Press NEXT► to go to the next field.

```
INPUT TYPE: NON-LATCHING

                                         CHANGE▼
◄BACK                                      NEXT►
```

Press NEXT► to go to the next field.

```
EDIT CONTACT STATE: NORMALLY OPEN

                                         CHANGE▼
◄BACK                                      NEXT►
```

```
SUPERVISED: ENABLED

                                         CHANGE▼
◄BACK                                      NEXT►
```

Press NEXT► to go to the next field.

```
EDIT PRE-DELAY: 0   (0-90 seconds)

#CLEAR                                       DEL▲
◄BACK                                      NEXT►
```

Press NEXT► to go to the next field.

The user is then prompted to save any changes that may have been made.

8.6.2.5   Menu > Programming > Device > Edit – Sub Output

```
EDIT DEVICE TYPE: <device type>

                                         CHANGE▼
◄BACK                                      NEXT►
```

Once the device is selected firstly the device type can be changed:

```
WARNING: SETTINGS WILL BE DEFAULT
EXCEPT ZONE NUMBER AND DESCRIPTOR
PROCEED WITH CHANGE
◄BACK            1:YES
```

If the device type is changed this confirmation screen is displayed:

```
TYPE: <device type>
1 DEVICE
2►SUB ADDRESS
                        NEXT►
```

If the device type has sub-address inputs or outputs the following screen is displayed next:

```
SELECT SUB ADDRESS: 4
<selected sub address descriptor>
1:I/P1  2:I/P2  3:I/P3 4►O/P1  5:O/P2
6:O/P3
```

Select 2 SUB ADDRESS and pressing NEXT► displays the generic sub-address selection screen:

```
EDIT DESCRIPTOR
LOOP 1 DEVICE 1 OUTPUT 1_
#CLEAR                    DEL▲
◄BACK                     NEXT►
```

Select one of the sub outputs and press enter to edit the output configuration.

```
ENTER ZONE NUMBER: 1_

◄BACK                     NEXT►
```

Press NEXT► to go to the next field.

```
FIXED ACTIVATION: NONE

                                     CHANGE▼
◄BACK                                  NEXT►
```

Press NEXT► to go to the next field.

```
GLOBAL ACTION: <action type>
                 ENABLED
                                     CHANGE▼
◄BACK                                  NEXT►
```

Press NEXT► to go to the next field.

```
ZONE ACTION: <action type>
                 ENABLED
                                     CHANGE▼
◄BACK                                  NEXT►
```

Press CHANGE▼ to enable or disable the displayed global action. Press NEXT► to go to the next global action setting.

```
NORMALLY ENERGISED: DISABLED

                                     CHANGE▼
◄BACK                                  NEXT►
```

Press CHANGE▼ to enable or disable the displayed zone action. Press NEXT► to go to the next zone action setting.

```
RESPOND TO ALERT/EVAC: ENABLED

                                     CHANGE▼
◄BACK                                  NEXT►
```

Press NEXT► to go to the next field.

```
RESPOND TO CLASS CHANGE: ENABLED


                                  CHANGE▼
◄BACK                               NEXT►
```

Press NEXT► to go to the next field.

```
EDIT POST-DELAY: 0   (0-999 seconds)

#CLEAR
◄BACK                               NEXT►
```

Press NEXT► to go to the next field.

The user is then prompted to save any changes if they have been made.

8.6.3   Menu > Programming > Panel

```
PANEL MENU
1►INPUT              3|LOOP
2|OUTPUT             4|DESCRIPTOR
```

Panel Inputs, Outputs, Loops and normal screen descriptors can be programmed from this menu.

8.6.3.1   Menu > Programming > Panel > Input

```
SELECT INPUT: 1        PANEL INPUT
<input descriptor>
►I/P1    I/P2    I/P3    I/P4
```

The user may select 1 of 4 panel inputs.

```
EDIT DESCRIPTOR
DIGITAL INPUT 1_
#CLEAR                        DEL▲
◄BACK                         NEXT►
```

Select desired input and press enter to edit it configuration settings.

```
ENTER ZONE NUMBER: 1_

#CLEAR                        DEL▲
◄BACK                         NEXT►
```

Press NEXT► to go to the next field.

```
EDIT ACTION TYPE: FIRE

                           CHANGE▼
◄BACK                        NEXT►
```

Press NEXT► to go to the next field.

```
INPUT TYPE: NON-LATCHING

                           CHANGE▼
◄BACK                        NEXT►
```

Press NEXT► to go to the next field.

```
EDIT CONTACT STATE: NORMALLY OPEN

                           CHANGE▼
◄BACK                        NEXT►
```

Press NEXT► to go to the next field.

```
SUPERVISED: ENABLED



                                   CHANGE▼
◄BACK                                NEXT►
```

Press NEXT► to go to the next field.

```
EDIT PRE-DELAY: 0   (0-90 seconds)

#CLEAR                               DEL▲
◄BACK                                NEXT►
```

The user shall then be prompted to save any changes if they have been made.

8.6.3.2   Menu > Programming > Panel > Output

```
PANEL OUTPUT MENU
1►SUPERVISED O/P   3|OPEN COLLECTOR O/P
2|RELAY O/P        4|AUXILIARY O/P
```

The user may select between the four types of panel outputs.

```
SELECT OUTPUT: X          <output type>
<output descriptor>
►O/P1    O/P2    O/P3    O/P4
```

There are 4 Supervised Outputs, 3 Relay Outputs, 2 Open Collector Outputs and 2 Auxiliary Outputs to choose from. Depending on the output type selected, the number of available outputs shall be displayed on the generic output point selection this screen

Press enter to edit the selected output configuration settings.

```
EDIT DESCRIPTOR
<output descriptor>_
#CLEAR                               DEL▲
◄BACK                                NEXT►
```

Press NEXT► to go to the next field

```
ENTER ZONE NUMBER: 1_

#CLEAR                        DEL▲
◄BACK                        NEXT►
```

Press NEXT► to go to the next field.

```
FIXED ACTIVATION: NONE

                          CHANGE▼
◄BACK                        NEXT►
```

Press NEXT► to go to the next field

```
OUTPUT TYPE: SOUNDER

                          CHANGE▼
◄BACK                        NEXT►
```

Press CHANGE▼ to enable or disable the displayed global action.

```
GLOBAL ACTION: <action type>
              ENABLED
                          CHANGE▼
◄BACK                        NEXT►
```
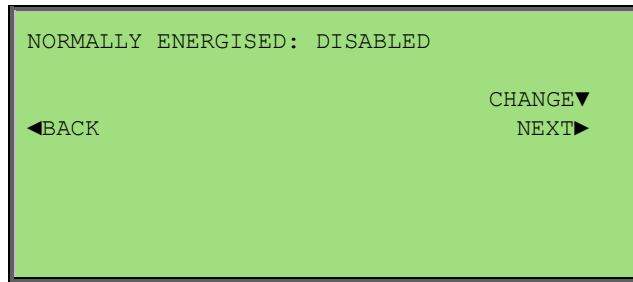
Press NEXT► to go to the next field.

Press CHANGE▼ to enable or disable the displayed zone action.

```
ZONE ACTION: <action type>
              ENABLED
                          CHANGE▼
◄BACK                        NEXT►
```
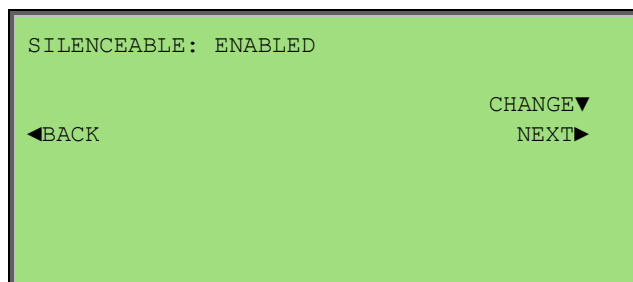
Press NEXT► to go to the next zone action setting.

Press CHANGE▼ to enable or disable the displayed zone action.
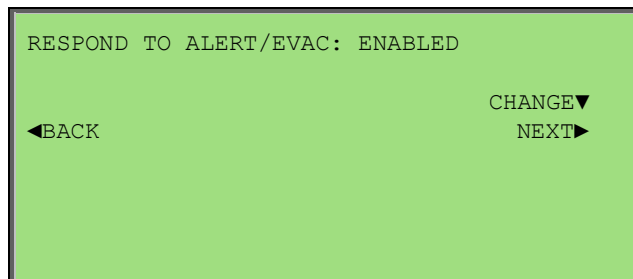
```
NORMALLY ENERGISED: DISABLED


                                    CHANGE▼
◄BACK                                 NEXT►



```

Press NEXT► to go to the next field.

Press CHANGE▼ to enable or disable the displayed zone action.

```
SILENCEABLE: ENABLED


                                    CHANGE▼
◄BACK                                 NEXT►



```

Press NEXT► to go to the next field.

```
RESPOND TO ALERT/EVAC: ENABLED


                                    CHANGE▼
◄BACK                                 NEXT►



```

Press NEXT► to go to the next field.

```
RESPOND TO CLASS CHANGE: ENABLED


                                    CHANGE▼
◄BACK                                 NEXT►



```
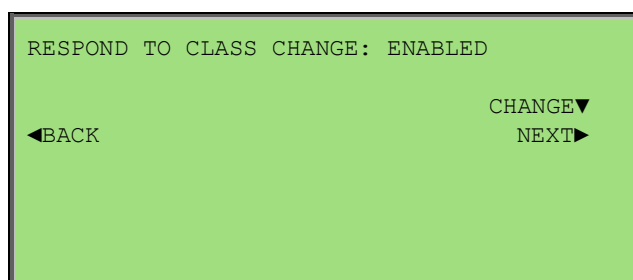
Press NEXT► to go to the next field.

The user is then prompted to save any changes that may have been made.

```
EDIT POST-DELAY: 0   (0-999 seconds)

#CLEAR
◄BACK                              NEXT►
```

The user is then prompted to save any changes that may have been made.

8.6.3.3   Menu > Programming > Panel > Loop

```
SELECT LOOP: X
<selected loop descriptor>
►L1        L2
```

If there is more then one loop the user is prompted to select the loop using the generic loop selection screen.

```
EDIT DESCRIPTOR
LOOP 1_
#CLEAR                              DEL▲
◄BACK                              NEXT►
```

Press enter to edit the selected Loop configuration settings.

```
LOOP X TERMINATION: SINGLE-ENDED

                                 CHANGE▼
◄BACK                              NEXT►
```

Press NEXT► to go to the next field.

The user is then prompted to save any changes that may have been made.

8.6.3.4   Menu > Programming > Panel > Descriptor

```
EDIT CUSTOM BANNER 1
AMPAC TECHNOLOGIES PTY. LTD._
#CLEAR                          DEL▲
◄BACK                          NEXT►
```
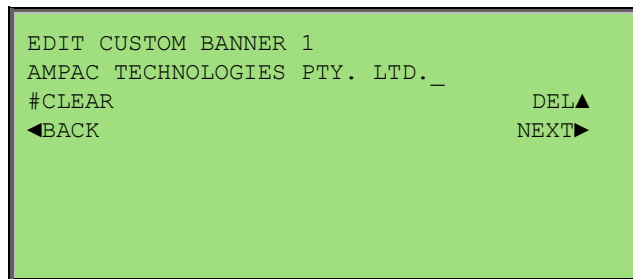
The user may modify the two descriptors displayed on the normal screen

```
EDIT CUSTOM BANNER 2
LOOPSENSE (C) 2008_
#CLEAR                          DEL▲
◄BACK                          NEXT►
```
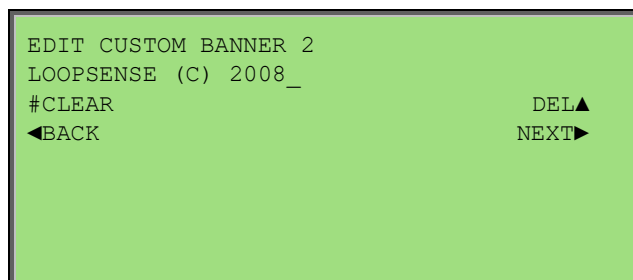
Press NEXT► to go to the next descriptor.

The user is then prompted to save any changes that may have been made.

8.6.4   Menu > Programming > Sounders

```
SOUNDER MENU
1►GLOBAL ACTIVATION
2|ZONE ACTIVATION
```
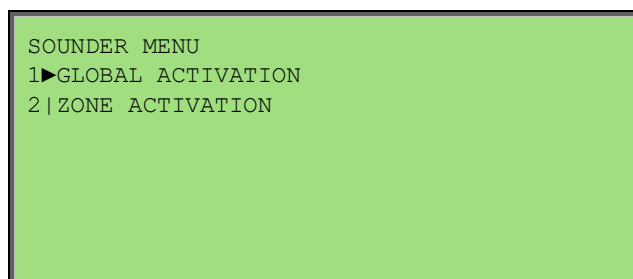
This menu allows programming of the Zone and Global activation settings for sounders.

8.6.4.1   Menu > Programming > Sounders > Global Activation

```
GLOBAL <action type>
ACTIVATION MODE: EVACUATE
                             CHANGE▼
◄BACK                          NEXT►
```
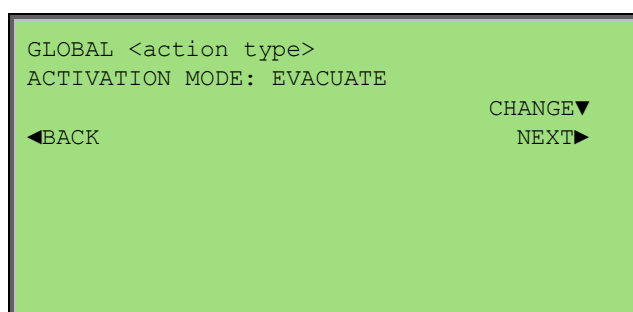
The activation mode for each Global action type can be selected.

The activation mode choices are:

- ➢ EVACUATE
- ➢ ALERT
- ➢ ALERT TIMEOUT EVACUATE
- ➢ DELAYED

```
GLOBAL <action type>
ACTIVATION DELAY: 30      (0-999 SEC)
#CLEAR                           DEL▲
◄BACK                           NEXT►
```

The activation mode screens are repeated for all action types in which the delays can be edited

The user is then prompted to save any changes that may have been made.

8.6.4.2   Menu > Programming > Sounders > Zone Activation

```
SELECT ZONE: XXX
<selected zone descriptor>
►Z1       Z2      Z3      Z4      Z5
 Z6       Z7      Z8      Z9      Z10
 Z11      Z12     Z13     Z14     Z15
 Z16      Z17     Z18     Z19     Z20
 Z21      Z22     Z23     Z24     Z25
 Z26      Z27     Z28     Z29     Z30
```

The user is first prompted to select the Zone number to be configured.
Press enter to continue.
The activation mode for each Zone action type can then be selected.

```
ZONE <action type>
ACTIVATION MODE: EVACUATE
                            CHANGE▼
◄BACK                          NEXT►
```

The activation mode choices are:

- ➢ EVACUATE
- ➢ ALERT
- ➢ ALERT TIMEOUT EVACUATE
- ➢ DELAYED

```
ZONE <action type>
ACTIVATION DELAY: 30  (0-999 SEC)
#CLEAR                         DEL▲
◄BACK                          NEXT►
```

The activation mode screens are repeated for all action types in which the delays can be edited.

The user is then prompted to save any changes that may have been made.

8.6.5 Menu > Programming > Learn Options

```
LEARN OPTIONS MENU
1►AUTO LEARN       3|MISMATCHED DEVICES
2|EXTRA DEVICES    4|MISSING DEVICES
```

Auto Learn can be used to learn all Loops, Loop Devices, Panel Inputs and outputs connected to the system and store the default configuration for all these points

Mismatched Devices is used to resolve any detected loop devices that do not match the configuration

Extra Devices is used to learn any newly detected loop devices that do not exist in the configuration

Missing Devices is used to remove any device that exist in the configuration but are removed from physical connection to the loop

8.6.5.1   Menu > Programming > Learn Options > Auto Learn

```
AUTO LEARN
CONFIGURATION WILL BE CHANGED
ARE YOU SURE?
◄BACK           1:YES
```

Selecting Auto Learn firstly prompts for confirmation.

Select 1 to confirm.

While the Auto Learn sequence is initialising all system functions cease, and the panel is prepared for Auto Learn.

```
AUTO LEARN
INITIALISING PLEASE WAIT

◄BACK                          NEXT►
```
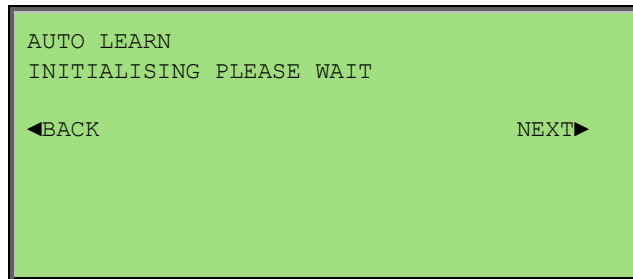
The Auto Learn in Progress screen is displayed while all devices are learnt.

Upon completion the panel will restart with the newly learnt configuration.

Note: *If an Auto Learn is executed the Auto-Learn Defaults for devices is outlined in section 11 Compatible Devices*

8.6.5.2   Menu > Programming > Learn Options > Extra Device

```
Zzzz Ppp Lll Dddd.s  <status>
TYPE: <detected type>
EXTRA DEVICES XXX OF XXX
◄BACK     1:LEARN    2:LEARN ALL
```
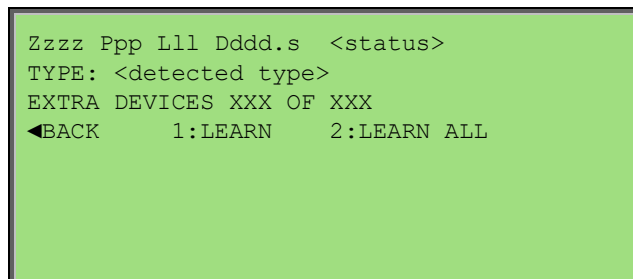
If extra devices are detected on the system, this screen is displayed. Here the user may select to learn the individual extra device currently being displayed or all extra devices detected.

If no extra devices were detected the "NO EXTRA DEVICES" screen is briefly displayed before returning to the previous menu.

8.6.5.3   Menu > Programming > Learn Options > Mismatched Devices

```
Zzzz Ppp Lll Dddd.s   <detected type>
CONFIGURED TYPE: <device type>
MISMATCHED DEVICES XXX OF XXX
◄BACK     1:RESOLVE    2:RESOLVE ALL
```
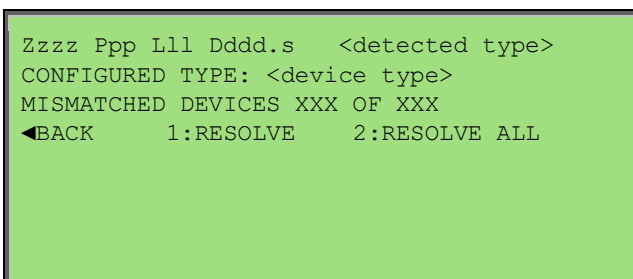
If mismatched devices are detected on the system, this screen is displayed. Here the user may select to resolve the individual device mismatch currently being displayed or all mismatched devices detected.

If no mismatched devices are detected the "NO MISMATCHED DEVICES" screen is displayed then returns to the previous menu.

8.6.5.4   Menu > Programming > Learn Options > Missing Devices

```
Zzzz Ppp Ll Dddd.s    <status>
CONFIGURED TYPE: <device type>
MISSING DEVICES XXX OF XXX
◄BACK     1:DELETE      2:DELETE ALL
```

Missing devices screen. Here the user may select to delete the individual device from the configuration currently being displayed or all missing devices.

If no missing devices were detected the "NO MISSING DEVICES" screen is displayed for a short period before returning to the previous menu.

8.6.6 Menu > Programming > Version

```
        SITE CONFIGURATION DATA
LAST MODIFIED: <date> <time>
      VERSION: <major>.<minor>
◄BACK
```

The date and time is updated by the PC configuration tool upon alteration of the configuration information when saving and is also updated at the panel when configuration changes are made via programming.

The Configuration Major Version is incremented by the PC upon alteration of the configuration information when saving. When this occurs the Configuration Minor Version shall be cleared to zero. If the Major or Minor version reaches 65535 it shall remain at this value unless reset by user intervention using the PC tool. The Configuration Minor Version shall be incremented upon alteration of the configuration at the panel via programming. Also, the major version shall default to 1 and minor version default to 0 upon auto learn at the panel

9 Event Logging

Events are logged into one of eight event type categories. Individual storage is pre-allocated for each event type amounting to a total of 1000 events:

Event Type	Maximum Capacity
Fire	100
Fault	200
Disable	100
Pre-Alarm	100
Emergency	100
Security	100
User	100
System	200

If an event exceeds the maximum capacity for that type the oldest event will be deleted allowing the most recent event to be stored.

Events that are logged may contain the following attributes:

- Event Type
- Event Status
- Date/Time of occurrence
- Event Origin
- Active Password ID (stored with event origin)
- Checksum

The system event log contains system input action type events as well as the following system events:

- Loop Test with password ID
- Walk Test with password ID
- Lamp Test with password ID
- Override key press with password ID
- Silence/Resound key press with password ID
- Reset key press with password ID
- Evacuate key press with password ID
- Access Level change with password ID

The fault event log contains input action type fault events as well as all reported faults within the FACP. The disable event log contains all reported system disables. All other event types are only logged according to their assigned input action type events.

Note: *The Transparent action type is not logged.*

The events are viewed collectively or by individual type. The events can be printed or erased by individual entry, range by date/time, range by entry number, and all by entry number. Each event type can also be disabled or enabled.

All events can be uploaded using the PC configuration software which will format the event record to be viewable using Microsoft Excel or a standard text editor.

10 Complete Menu Structure

11 Compatible Devices

Note: *If an Auto Learn is executed the Auto-Learn Defaults for devices are also listed below*

AMPAC Type Code	Auto Learn Default	Device type	Displayed type (19 Chars)	Type Desc
		Optical		
05h	✓	XP95 Optical	XP95 PHOTO	PHOTO
05h		XP95 Optical with base sounder	XP95 PHOTO + SNDR	PHOTO
05h		S90 Optical	S90 PHOTO	PHOTO
05h		Xplorer Optical	XPLORER PHOTO	PHOTO
05h		Xplorer Optical with base sounder	XPLR PHOTO + SNDR	PHOTO
05h		XP95 Beam	XP95 BEAM	PHOTO
0Dh	✓	XP95 Reflective beam	XP95 REFLECT BEAM	BEAM
105h	✓	Discovery Optical	DISC PHOTO	PHOTO
105h		Discovery Optical with base sounder	DISC PHOTO + SNDR	PHOTO
11Dh	✓	Discovery Multisensor	DISC MULTISENSOR	MULTI
11Dh		Discovery Multisensor with base sounder	DISC MULTI + SNDR	MULTI
11Dh		Discovery 0.5% Multisensor	DISC 0.5% MULTI	0.5%OB
15h	✓	XP95 Flame	XP95 FLAME	FLAME
1Dh	✓	XP95 Multisensor	XP95 MULTISENSOR	MULTI
1Dh		XP95 Multisensor with base sounder	XP95 MULTI + SNDR	MULTI
31Dh	✓	Enhanced Discovery Multisensor	EDSC MULTISENSOR	MULTI
31Dh		Enhanced Discovery Multi + base sounder	EDSC MULTI + SNDR	MULTI
		Heat Detectors		
06h	✓	XP95 Heat	XP95 HEAT	HEAT
06h		XP95 Heat with base sounder	XP95 HEAT + SNDR	HEAT
06h		S90 Heat	S90 HEAT	HEAT
06h		Xplorer Heat	XPLORER HEAT	HEAT
06h		Xplorer Heat with base sounder	XPLR HEAT + SNDR	HEAT
0Eh	✓	XP95 Hi temp	XP95 HI HEAT	HHEAT
0Eh		XP95 Hi temp with base sounder	XP95 HI HEAT + SNDR	HHEAT
0Eh		Xplorer Hi temp	XPLORER HI HEAT	HHEAT
0Eh		Xplorer Hi temp with base sounder	XPLR HI HEAT + SNDR	HHEAT
106h	✓	Discovery Heat	DISC HEAT	HEAT
106h		Discovery Heat with base sounder	DISC HEAT + SNDR	HEAT
		Ionisation		
03h	✓	XP95 Ion	XP95 ION	ION
03h		XP95 Ion with base sounder	XP95 ION + SNDR	ION
03h		S90 Ion	S90 ION	ION

103h	✓	Discovery Ion	DISC ION	ION
103h		Discovery Ion with base sounder	DISC ION + SNDR	ION
10Bh	✓	Discovery Carbon Monoxide	DISC CO	CO
10Bh		Discovery Carbon Monoxide with base sndr	DISC CO + SNDR	CO
		Manual Call Points		
07h	✓	S90 MCP	S90 MCP	MCP
11Fh	✓	Discovery MCP	DISC MCP	MCP
1Fh	✓	XP95 MCP	XP95 MCP	MCP
1Fh		XP95 Mini switch monitor with interrupt	XP95 MINI SW + INT	MCP
1Fh		Xplorer MCP	XPLORER MCP	MCP
		Sounders		
01h	✓	XP95 sounder / sounder control unit	XP95 SOUNDER	SNDR
01h		XP95 integrated base sounder	XP95 INTGR BSE SNDR	SNDR
01h		XP95 Intelligent base sounder	XP95 INTEL BSE SNDR	SNDR
01h		XP95 sounder beacon base	XP95 SND BEACN BSE	SNDR
01h		XP95 loop powered beacon	XP95 LOOP PWR BEACN	SNDR
01h		S90 sounder control unit	S90 SCU	SNDR
111h	✓	Discovery sounder beacon base/open area	DISC SOUNDER BEACN	SNDR
		I/O Units		
02h	✓	XP95 input / output module	XP95 I/O	I/O
02h		XP95 three channel input / output module	XP95 3I/O	I/O
02h		XP95 output module	XP95 OUTPUT	I/O
02h		XP95 mains switching input / output module	XP95 MAINS I/O	I/O
02h		S90 single channel I/O unit	S90 SINGLE I/O	I/O
02h		S90 3 channel I/O unit	S90 3I/O	I/O
02h		S90 3 channel analogue I/O unit	S90 3I/O + ANALOGUE	I/O
02h		S90 switch monitor unit	S90 SWITCH	I/O
02h		Xplorer output module	XPLORER OUTPUT	I/O
		Zone Monitors		
04h	✓	XP95 zone monitor	XP95 ZONE MONITOR	CONV
04h		S90 zone monitor	S90 ZONE MONITOR	CONV
0Ch	✓	XP95 switch monitor	XP95 SWITCH	SWITCH
0Ch		XP95 mini switch monitor	XP95 MINI SWITCH	SWITCH
0Ch		XP95 switch monitor plus	XP95 SWITCH PLUS	SWITCH

1Ch	✓	FastSense XP95 APIC	XP95 FASTSENSE	FSENSE
		User Defined		
08h	✓	XP95 AM	XP95 AM	AM
10h	✓	XP95 AAF	XP95 AAF	AAF

12 Certification Information

The *LoopSense* is designed and manufactured by:

AMPAC PTY LTD

    7 Ledgar Rd

    Balcatta

    WA 6021

    Western Australia

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Manufactured to: _____

Certificate of Compliance Number: _____

Equipment Serial Number: _____

Date of Manufacture: _____

13 Glossary of Terms

ACKD :   ACKNOWLEDGED

AH: AMP HOUR

ALM :   ALARM

COM :   RELAY COMMON CONTACT (WIPER)

CN :   CONNECTOR

C/O :   CHANGE OVER CONTACTS

CPU :   COMMON PROCESSOR UNIT

EOL :   END OF LINE

FACP :   FIRE ALARM CONTROL PANEL

FLT :   FAULT

GND :   GROUND (0 VOLTS) NOT EARTH

I/O :   INPUT/OUTPUT

LCD :   LIQUID CRYSTAL DISPLAY

LED :   LIGHT EMITTING DIODE

MCP :   MANUAL CALL POINT

N/C :   NORMALLY CLOSED RELAY CONTACTS

N/O :   NORMALLY OPEN RELAY CONTACTS

PCB :   PRINTED CIRCUIT BOARDS

P/S :   POWER SUPPLY

TB :   TERMINAL BLOCK

14 Address Setting

BINARY ADDRESS SETTING (APOLLO)

SERIES XP95 - ADDRESS DATA

DIL SWITCH: ON = 1 OFF = 0 ADDRESS TAG FOR DETECTORS (I/O DEVICES)

| DIL switch setting		DIL switch setting		DIL switch setting		DIL switch setting		DIL switch setting	
Addr	1234567	Addr	1234567	Addr	1234567	Addr	1234567	Addr	1234567
1	1000000	26	0101100	51	1100110	76	0011001	101	1010011
2	0100000	27	1101100	52	0010110	77	1011001	102	0110011
3	1100000	28	0011100	53	1010110	78	0111001	103	1110011
4	0010000	29	1011100	54	0110110	79	1111001	104	0001011
5	1010000	30	0111100	55	1110110	80	0000101	105	1001011
6	0110000	31	1111100	56	0001110	81	1000101	106	0101011
7	1110000	32	0000010	57	1001110	82	0100101	107	1101011
8	0001000	33	1000010	58	0101110	83	1100101	108	0011011
9	1001000	34	0100010	59	1101110	84	0010101	109	1011011
10	0101000	35	1100010	60	0011110	85	1010101	110	0111011
11	1101000	36	0010010	61	1011110	86	0110101	111	1111011
12	0011000	37	1010010	62	0111110	87	1110101	112	0000111
13	1011000	38	0110010	63	1111110	88	0001101	113	1000111
14	0111000	39	1110010	64	0000001	89	1001101	114	0100111
15	1111000	40	0001010	65	1000001	90	0101101	115	1100111
16	0000100	41	1001010	66	0100001	91	1101101	116	0010111
17	1000100	42	0101010	67	1100001	92	0011101	117	1010111
18	0100100	43	1101010	68	0010001	93	1011101	118	0110111
19	1100100	44	0011010	69	1010001	94	0111101	119	1110111
20	0010100	45	1011010	70	0110001	95	1111101	120	0001111
21	1010100	46	0111010	71	1110001	96	0000011	121	1001111
22	0110100	47	1111010	72	0001001	97	1000011	122	0101111
23	1110100	48	0000110	73	1001001	98	0100011	123	1101111
24	0001100	49	1000110	74	0101001	99	1100011	124	0011111
25	1001100	50	0100110	75	1101001	100	0010011	125	1011111
								126	0111111
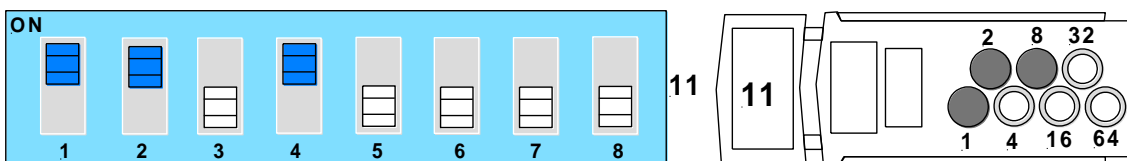
Figure 5: Switch and Xpert Card set to 11

UNCONTROLLED DOCUMENT

NOTE: Due to AMPAC's commitment to continuous improvement specifications may change without notice.