Ampac

Fire detection and evacuation solutions that save lives.

ZoneSense

Operation & Programming

MAN1564-3

A **Halma** company

Contents
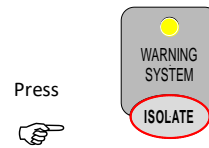
Responding To An Alarm

1. Indicators   - **Zone Alarm** Indicator (flashing)
   - **Common Alarm** Indicator (flashing)
   - First **Zone in Alarm** is Displayed on LCD.

Z7 ZONE
SEVEN

2. To Isolate External Bell   or   **To Isolate Warning System**

Press 👉

EXTERNAL
ALARM
ISOLATE

Press 👉

WARNING
SYSTEM
ISOLATE
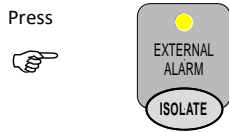
3. To Acknowledge Alarm   **4. To Isolate Alarm**

ALARM
ACK

ALARM LED goes steady

Press
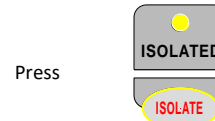
ISOLATED
ISOLATE

ISOLATED LED will be illuminated

5. To Reset Panel

REST
EXECUTE

Press

FAULT
RESET
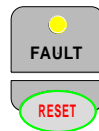
RESET
COMPLETE

1st. RESET LCD Screen Displayed   2nd. RESET LCD Screen Displayed

Isolating a Zone

(Example below isolates Zone 2)

AMPAC SU 00 : 15	Press ☞	MENU ENTER	STATUS	Press ☞	▶	FAULTS

Default Screen   Moving to the ISOLATE MENU

Press ☞   ▶   TEST

Press ☞   ▶   ISOLATES   Press ☞   MENU ENTER   ZONES ISOL'D   Press ☞   MENU ENTER   ZONE 1 ACTIVE

Moving to ZONE 2

Press ☞   ▶   ZONE 2 ACTIVE   Press ☞   ISOLATED / ISOLATE   or   ▲   to ISOLATE
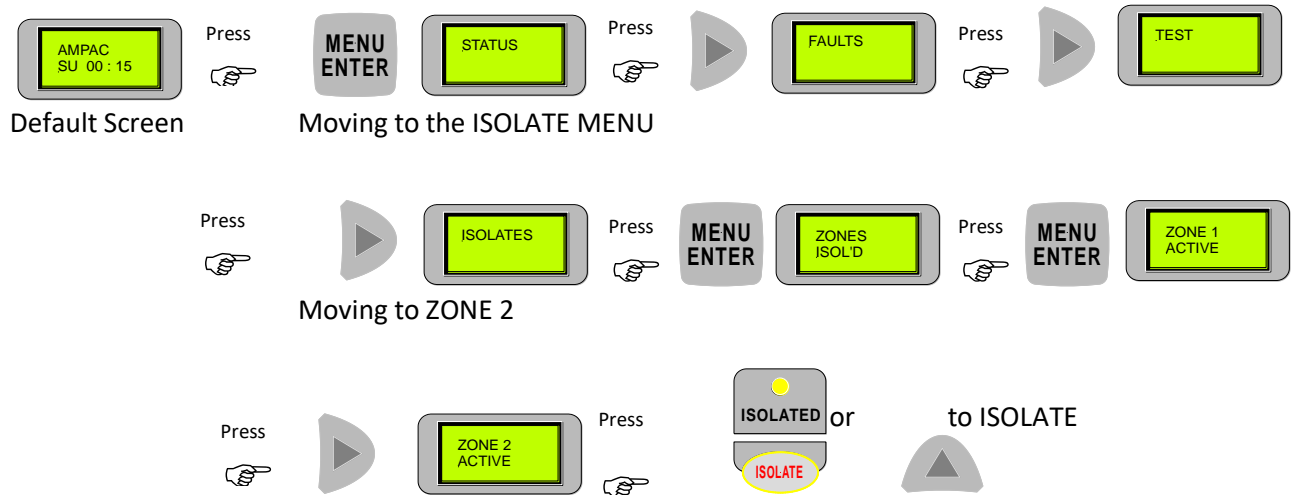
Zone 2 accessed and ISOLATED - *To* DE-ISOLATE *press the* ISOLATE *or* DOWN *button*.

Note: *If a Zone ISOLATE has been initiated the ZONE and the COMMON indicator LED's are illuminated*.

1   Introduction

Using 3 levels of access the ***ZoneSense PLUS***   Fire Alarm Control Panel (FACP) is controlled and programmed through the keypad on the front panel.

ⓘ   **Note:** *To assist in the programming process the screens or Menus presented to the operator are diagrammatically shown as an Appendix at the end of this document.*

2   Controls – Front Panel

2.1   System Controls & Indicators

The front panel controls for the ***ZoneSense PLUS*** consists of twelve push buttons and an ***optional*** Normal / Enabled key switch.
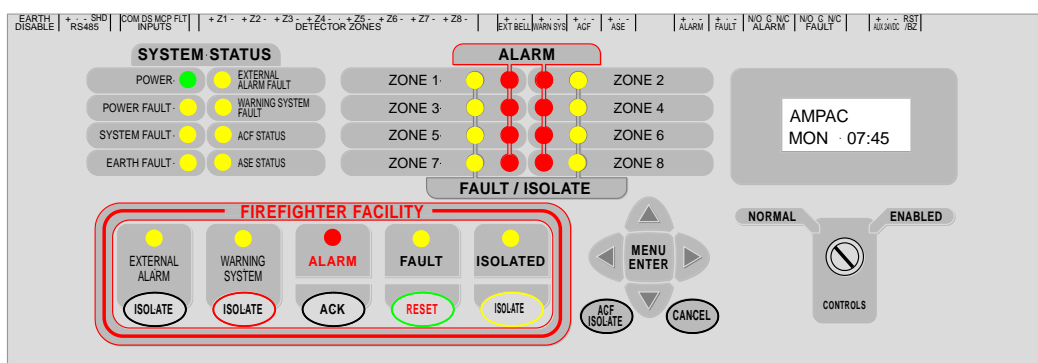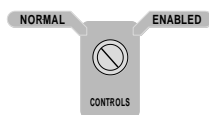

Figure 1: AS4428 8 Zone Front Panel Controls and Indicators

2.2   Levels Of Access

Access to the FACP is restricted to three levels of authorisation.

➢   Levels 1 and 2 access is normally restricted by way of keyswitch control;

Controls, Normal – Enabled (Key Switch)

AS4428 requires panel controls to be behind a 003 keyed door or enabled by a 003 key switch. Operationally the keyswitch is in NORMAL, switching to ENABLED allows access to the controls.

Note: Generally the metal cabinet models are not fitted with a front panel keyswitch as its panel controls are behind a 003 keyed door.

➢   Level 3, passwords are entered using the keys on the front panel.

Level 1: (No Password Required)

By pressing the Menu button access to Level 1 is gained to the read only FAULT, STATUS display and Password entry menu.

Level 2 (If set Pre-commissioning Password is factory set at 2222)

To gain access to the Level 2 TEST and ISOLATE MENUS a fixed 4 digit Level 2 Password or a key to the control ENABLE switch is required.

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Level3: (Pre-commissioning Password factory set at 3333)

Level 3 SYSTEM and PROGRAM menus can only be accessed by a set Level 3 password that can not be deleted.

Panels fitted with a key switch have access to level 2 with the switch enabled and then 3 via the password. Without the key switch access to level 2 is by opening the door and then to level 3 via the password.

☞   **Note:** If the keypad controls are not used for a period of 2 minutes the display will return to the default screen.

2.3   FireFighter Facility Controls

☞   **Note:**   Any of the buttons within the FireFighter Facility will act as a buzzer mute.

External Alarm Isolate Is a dedicated control used to isolate (turn off) the "External Alarms" output and is not over ridden by any other condition. The LCD Screen will display the isolate if the ISOLATES / OUTPUTS menu is selected.

Warning System Isolate Isolates (turns off) the "Warning System" output and is not over ridden by any other condition. The LCD Screen will display the WARNING SYSTEM is isolated if the ISOLATE / OUTPUTS menu is selected.

Acknowledge On Alarm the Alarm LED and Zone Alarm LED will flash and the Buzzer will sound. By pressing Acknowledge the LED's become steady, the Buzzer will be silenced and a zone/s can be Isolated or Reset.
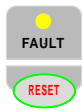
Reset The Reset is used to return the control panel back to a normal state from the fire alarm condition. The Reset button is not to be used for any other purpose and will not reset an isolated condition.

Isolate Isolates or De - isolates a Zone which has been selected using the Zone Select Menu. Inhibits Alarm and Fault signalling outputs but not LED indications generated by the corresponding zone. Isolates all acknowledged alarms in a single operation and operates the fault buzzer if an isolate condition still exists on the panel after 8 hours. The LCD screens below show an example.

| ZONES X   ISOL'D | ZONE 1 ACTIVE | ZONE 3 ACTIVE | ZONE 3 ISOL'D |

Press
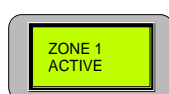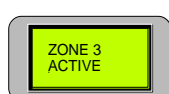
| Isolated | Enter | Move Right ▶ To Select Zone | Move Up ▲ To Isolate |

2.4 System Controls

For the purposes of this explanation the following indicators perform these functions;

MENU ENTER — **Enter** or **Menu** is used to access the various menus and sub-menus and update the program once the control settings have been set within a menu.

Move Left allows the operator to move left through a menu or the options to be set.
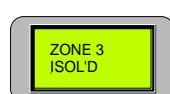
Move Right allows the operator to move right through a menu or the options to be set.

Move Up takes the cursor up through the menus and / or options.

Move Down takes the cursor down through the menus and / or options.

Cancel is used to return to the previous menu.

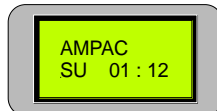**ACF Isolate**
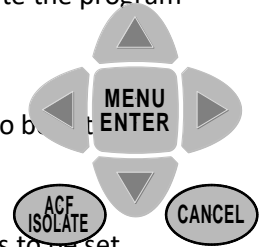
2.5 Normal Operation

During normal operation the panel LCD default screen will display a name, the day and the time.

```
AMPAC
SU   01 : 12
```

Abbreviations: SU - SUNDAY
MO - MONDAY
TU - TUESDAY
WE - WEDNESDAY
TH - THURSDAY
FR - FRIDAY
SA - SATURDAY

To access the Main Menu press **Enter**.

3 Indicators – Front Panel

All indicators are clearly visible at all times. If flashing indicators are used the on / off periods are >0.25 seconds and the flash frequencies are not less than:
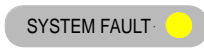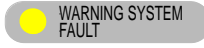
> ↓ 1Hz for Alarm indications.
>
> ↓ 0.2Hz for Fault indications.

If the same LED is used to indicate both fault and isolate conditions the LED will flash for fault and be steady for isolate with isolate having priority.

All indicators are steady unless otherwise stated.

3.1 Status Indicators

There are eight indicators within the system status area of the front panel;

Power – Green Indicates mains power is available to the FACP.

Power Fault – Yellow Common fault to either the mains or DC system power supply.

System Fault – Yellow Indicates a failure of the FACP to provide mandatory functions, (software failure).

Earth Fault – Yellow Is an indication only to warn of a fault to earth that may affect a mandatory function. A plug jumper facility is provided to disable the earth monitoring if necessary

External Bell Fault – Yellow Illuminates when an open or short circuit fault condition is detected on the external alarm circuit.

Warning System Fault – Yellow Illuminated by a fault condition of the warning system output.

ACF Status - Fault / Isolate – Yellow Illuminates when the ACF output is in fault (flashing) or isolated (steady).

ASE Status - Fault – Yellow Illuminates when a fault condition is detected on the ASE circuit.

3.2 FireFighter Facility Indicators

There are five indicators within the FireFighter Facility area of the front panel.

Alarm – Red: Alarm is a general fire indicator that flashes until all alarms have been acknowledged or isolated. Once acknowledged it is lit steady until reset.

Fault – Amber Is a general fault indicator that flashes if a fault is present on any part of the system.

Isolated – Amber Is a general isolate indicator that is illuminated if a Zone, Bell, Warning System or ACF is isolated.

External Bell Isolate – Amber Illuminated by the isolation of the "External Bell" output. This indicator is integral with the "External Bell Isolate" button.

Warning System Isolate – Amber Illuminated by the isolation of the 'Warning System" output. This indicator is integral with the "Warning System Isolate" button.

3.3   Zone Indicators

There are two indicators for each alarm zone fitted to the panel.

1.   **Zone Alarm – Red** The indicators show individual zone/s in alarm. On alarm the LED will flash until the alarm is acknowledged. Once acknowledged the LED will be continuously illuminated until the panel is reset.

8 ZONE FACP

4 ZONE FACP
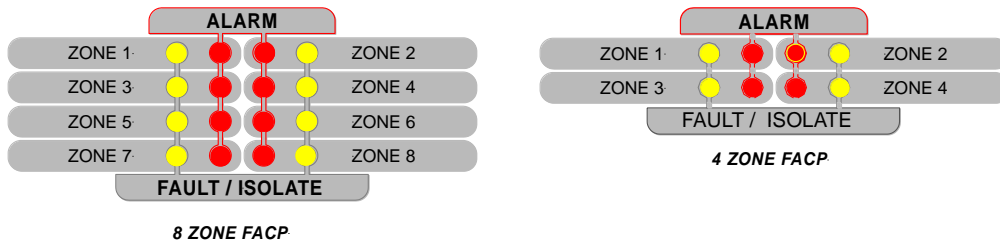
2.   **Zone Fault / Isolate – Amber**

Illuminated by;

➢   a fault condition on an individual zone (flashing);
➢   isolating a zone/s, illuminated steady unless in fault, then flashes.

A zone in fault that has already been isolated flashes at a different rate than when only in fault, the off period is the same with the on period being 3 times that of the fault flash rate.

3.4 Liquid Crystal Display

The panel is fitted with an 8 x 2 LCD. Its primary purpose is to display Zone alarm / fault / isolate information and prompts for system commands come programming. Alarm, Fault and Isolate information is accessed through the Main Menu. When the FACP is in its normal state a default screen will be displayed. Examples of LCD Displays are;
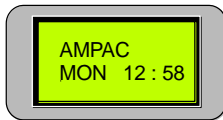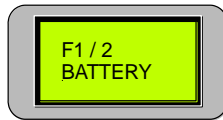
AMPAC MON 12 : 58	F1 / 2 BATTERY	F1 / 1 CHARGER
Default Screen	*Fault 1 off 2 Battery Fault*	*Fault 1 off 1 Charger or Power Fault*
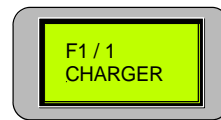
Note: *Some of the following sub-menus will not be available if the facility has not been installed, eg. Brigade, Relays, Fire Fan, Agent Release, Sounder, and / or Input boards / cards / modules. If one of the above ancillary facilities has been fitted retrospectively it must be appropriately programmed into the FACP via the SYSTEM and PROGRAM MENUS, if not a System Fault will be indicated. Once programmed into the FACP the ancillary facility is monitored in the normal way. Refer to the SYSTEM and PROGRAM MENU structure diagrams in the Appendix for more information.*

Press **ENTER** *to access* **MAIN MENU**

3.5 Main Menu

The Main Menu consists of;

		Activate Control		Level 3 Enter Password	
STATUS	**FAULTS**	**TEST**	**DISABLES**	**SYSTEM**	**PROGRAM**

Press the ▶ Move Right / ◀ Move Left key to move through the menu.

Press **Enter** *to access the sub – menus.*

▶ ***Move Right*** *to access **STATUS***

4 Level 1 Access

Is a read only menu that allows the operator to reset latched Ancillary Control Facility outputs (**IF FITTED**).

In the event an ancillary device trips out or is operated for some reason the latching control of the device has to be reset to re-establish normal functionality of that device. Press **Enter** to reset. The LCD will display the reset progress as seen below and then return to the Default Screen.

<table>
<tr><td>ACF TRIP
RESET</td><td>RESET
EXECUTE</td></tr>
</table>

> **Note:** *Use Cancel at any time to step back out of the current Menu.*

> ➢ interrogate the panel to determine the state of selected outputs; **STATUS**
> ➢ view any faults that may be present on the FACP. **FAULTS**

> **Note:** *Use Cancel at any time to step back out of the current Menu.*

4.1 STATUS

Status allows the operator to select and view the current state/operating conditions of the active components listed in the following sub-menu.

Press **Enter** to view the Status Menu. Press ▶ Move Right to move through the menu or **Enter** to access the Status sub-menus.

> **Note:** *The sub-menu headings are in Italic*.

O/Ps	Brigade	Relays	Fire Fan	Snders	I/Ps	Voltage	Software
Bell *Warn Sys* *ACF* *ASE* *Alarm* *Fault*	*Alarm 1* *Fault* *Isolate* *Bat Fail* *Alarm 2*	*Relays 1 to 8* *On* *Off* *Isolate*	*Fan 1 to 4* *On* *Off*	*Sndrs 1 to 8* *On* *Off* *Normal* *Off Fault*	*1 to 16* *On* *Off*	*Battery volts* *Charger volts* *System Volts*	*Version*
	Note: *these screens are only available if the card, module or board is fitted to the FACP and it is set to Yes in the System Menu*						

Outputs

Press **Enter** then ▶ Move Right or ◀ Move Left to view the status of the monitored *Bell, Warning System, ACF, ASE, Alarm or Fault Outputs on the Main Control Board*.

The LCD readout will indicate if the selected Output is;

On and Normal, or Off and Normal, or Off and Isolated, or On and Isolated, or Output is On and in Fault, or Off and in Fault.

<table>
<tr><td>BELL
OFF / NORMAL</td><td>WARN SYS
OFF / NORMAL</td><td>ALARM
OFF / FLT</td></tr>
</table>
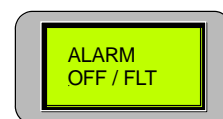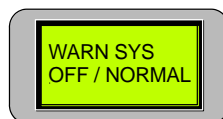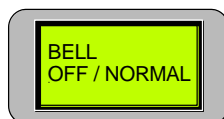
Sample Output Screens

Meaning: The O/P is either On (activated) and Normal, or Off (de- activated) and Normal, or On (activated) and Isolated, or Off (de- activated) and Isolated.

Brigade

Press **Enter** then ▶ Move Right or ◀ Move Left to view the Brigade screen. Press **Enter** then ▶ Move Right or ◀ Move Left to view the Status of the *Alarm 1 & 2, Fault, Isolate and Battery Fail monitoring on the Brigade Board*.

```
┌──────────┐   ┌──────────┐   ┌──────────┐
│ ALARM    │   │ ISOLATE  │   │ BATTERY  │
│ OFF      │   │ OFF      │   │ 27.2V    │
└──────────┘   └──────────┘   └──────────┘

┌──────────┐   ┌──────────┐   ┌──────────┐
│ ALARM    │   │ ISOLATE  │   │ CHARGER  │
│ OCCURRED │   │ ON       │   │ 27.2V    │
└──────────┘   └──────────┘   └──────────┘

┌──────────┐                  ┌──────────┐
│ Z2 : ZONE│                  │ SYSTEM   │
│ 4        │                  │ 27V      │
└──────────┘                  └──────────┘
```
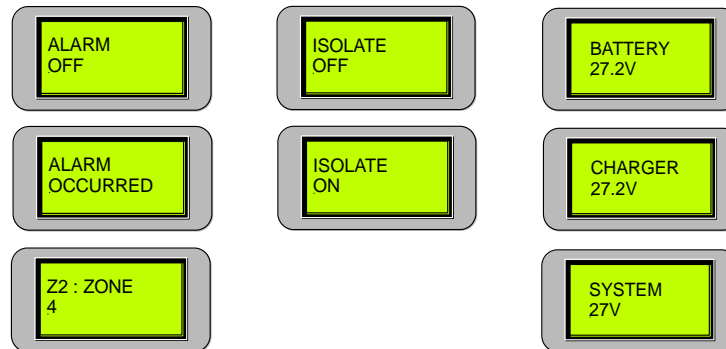
Sample Brigade Screen

Relays

Press **Enter** then ◀ Move Left or ▶ Move Right to select the required Relay (1 – 8). The LCD read out for each relay on the Relay Board will indicate if the selected relay is *On, Off or Isolated* OR Press ▶ **Move right** to access **Fire Fan**.

```
┌──────────┐   ┌──────────┐   ┌──────────┐
│ RELAY 8  │   │ RELAY 3  │   │ RELAY 6  │
│ ON       │   │ OFF      │   │ ISO      │
└──────────┘   └──────────┘   └──────────┘
```
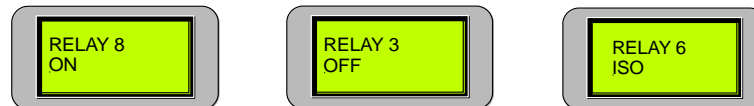
Sample Relay Screens

Meaning: A Relay is either On (activated), or Off (deactivated) or Isolated.

ⓘ   **Note:** *The relay's control function is identified in the configuration documentation*

Fire Fan

Press **Enter** then ▶ Move Right or ◀ Move Left to select view Fire Fan control status 1 to 4.

```
┌──────────┐
│ FAN 1    │
│ ON       │
└──────────┘
```
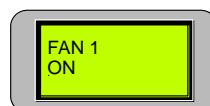
Sample Fire Fan Screen

Agent

Press **Enter** then ◀ Move Left or ▶ Move Right to select the Agent OR press ▶ **Move right** to access **Sounders.** The LCD indicates the Agent Release Board status / release progress.

```
┌──────────────┐   ┌──────────────┐   ┌──────────────┐
│ AGENT        │   │ AGENT        │   │ AGENT        │
│ NORMAL       │   │ ISOLATED     │   │ STG 1   FB   │
└──────────────┘   └──────────────┘   └──────────────┘
```

Sample Agent Normal, Isolated Release in Stage 1 Screens

Sounders

Press **Enter** then ◀ Move Left or ▶ Move Right to select the required Sounder (1–8). OR Press ▶ **Move right** to access **Voltage**. The LCD indicates if the selected Sounder Board output is;

```
┌──────────────┐   ┌──────────────┐   ┌──────────────┐
│ SOUNDER 2    │   │ SOUNDER 8    │   │ SOUNDER 7    │
│ ON / NOR     │   │ OFF / NOR    │   │ OFF / FLT    │
└──────────────┘   └──────────────┘   └──────────────┘
```
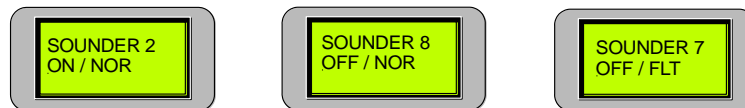
Sample Sounder Screens

Off and Normal, or Off and in Fault, or On and Normal, or On and in Fault, or Isolated and Normal, or Isolated and in Fault.

Inputs

Press **Enter** then ▶ Move Right or ◀ Move Left to view the status of each input (1 to 16) on the Input Board.

```
┌──────────────┐
│ INPUT 1      │
│ OFF / NOR    │
└──────────────┘
```
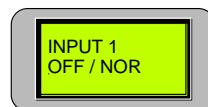
Sample Input Screens

Voltage

Press k ▶ Move right to access **Software OR** press **Enter** and the Battery Voltage will be displayed, pressing ▶ Move Right will display the Charger Voltage (≈27.2volts), pressing ▶ Move Right again will display the System Voltage.

```
┌──────────────┐   ┌──────────────┐   ┌──────────────┐
│ BATT V       │   │ CHRGR V      │   │ SYSTEM V     │
│   27.2V      │   │   27.2V      │   │   27.2V      │
└──────────────┘   └──────────────┘   └──────────────┘
```
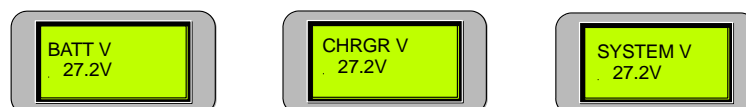
Voltage Screens

Software

Displays the installed version of software. (This is for information only)

```
SOFTWARE
Ver A1 . 2
```
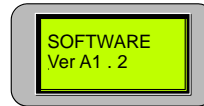
__End of Sub - Menu__

__Returning to STATUS in the Main Menu__ ▶ __Move Right__ to access __FAULTS__

4.2 Faults

Pressing **Enter** will display all faults in a sequential order. If there is more than one fault on the system the operator can scroll through each fault by using the ◀ Move Left and ▶ Right keys. Pressing **Enter** again at each Fault will display more detailed information.

Accessing information on 2 Faults

```
FAULTS
2  Flts
```

```
F 1 / 2
ZONE 7
```

```
F 2 / 2
ZONE 8
```
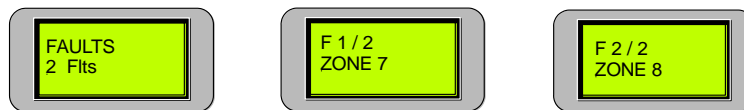
Press **Enter** ⟹ ▶ Move Right key to scroll ⟹ **Enter**

```
ZONE 7
OPEN CCT
```

```
ZONE 8
OPEN CCT
```
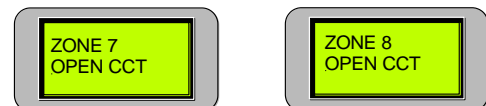
OR Enter ⇓ to view detail ⇓

LCD Screen Examples of System Status Faults

```
F 1 / 2
EXTERNAL
```

```
F 1 / 3
BATTERY
```

```
F 1 / 1
CHARGER
```
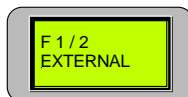
System Fault | *Battery Fault* | *Power Fault*
SYSTEM FAULT LED flashing | POWER FAULT LED | POWER FAULT LED
| POWER LED on | POWER LED off

ⓘ **Note:** *FAULT LED will be flashing (for all 3 FAULTS)*

5 Level 2 Access

At this level the operator is expected to have under gone training so as to be able to;

➢ test crucial elements of the system and;　　　　　　　**TEST**
➢ isolate dedicated facilities that may be in fault.　　　**ISOLATE**

In the Main Menu From <u>FAULTS</u>　▶ Move Right for <u>TEST</u>

5.1 Tests

Press **Enter** to access the available menus

The available menus are;

Alarm Test	Fault Test	Walk Test	Lamp Test	Battery Test	Sounder Test

ⓘ **Note:** *The Sounder Test Menu is only displayed if it is installed and set to active in the System Menu.*

To initiate one of the above tests press the ▶ Move Right / ◀ Move Left key to move through the menu. Press **Enter**, then select the Zone by using the ▲ Move Up and / or ▼ Move Down keys until the desired Zone number is displayed, press **Enter** to start the test.

Alarm Test of each Zone

Once the test is commenced the Buzzer will turn on and off and the common Alarm and Zone Alarm LED's will flash. Press **Acknowledge,** the Buzzer will be silenced and the common Alarm and Zone Alarm LED's will be steady. Press **Reset** to return the panel to normal. The LCD will indicate the alarm has occurred and then toggle to display the Zone and descriptor of that Zone.
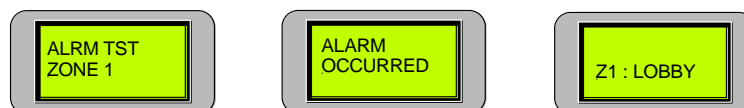
Alarm LCD Sequence

ⓘ **Note:** *If a Zone has been programmed to be;*

1. *NON LATCHING the panel will only go into alarm for 5 seconds and then automatically reset.*
2. *Self Resetting (SREST 60) the panel will go into alarm for 60 seconds and then automatically reset.*

Fault Test of each Zone

Once the test is commenced the Buzzer will rapidly turn on and off and the common Fault and Zone Fault LED's will flash. Press **Acknowledge,** the Buzzer will be silenced and the common Fault and Zone Fault LED's will continue to flash. Press **Reset** to return the panel to normal. The LCD will indicate the Fault Test has been implemented on the selected Zone.

```
FLT TST
ZONE 1
```

Fault Test Zone 1 Screen

Walk Test

ⓘ   **IMPORTANT: The Brigade, Agent Release and any other system specific signalling should be ISOLATED prior to initiating this test.**

A Walk Test, sets the Zone to Non latching and allows the technician to test detectors and MCP's on that Zone. When a detector or MCP is put into alarm the "Alarm Outputs" will operate, the corresponding "Zone Alarm" LED will flash and the buzzer will sound.

The Zone will stay in Alarm until the MCP, or detector under test is reset or, the test is aborted by pressing Cancel or, the test times out. The time out period can be set by pressing **Enter** once the Zone has been selected and using the ▲ Move Up and / or ▼ Move Down keys to select the required time for the test. The default time is 5 minutes but can be adjusted from 1 to 20 minutes by again using the ▲ Move Up and / or ▼ Move Down keys to select the required time and then pressing **Enter**.

```
WLK TST          TEST END          CANCEL
ZONE 1           5 mins            TO END
```
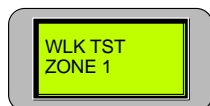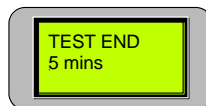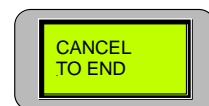
Press   **Enter**   Enter Time ▲ ▼   **Enter**

In the TEST END screen the operator has ten (10) seconds to enter the time before the test will commence OR, the test can be started by pressing **Enter**.

Only one zone at a time can be in test mode, all other zones will operate as normal.

The LCD will display which Zone is the in Walk Test mode.

Lamp Test

Press the ▶ Move Right and / or ◀ Move Left key to move to the Lamp Test menu, press **Enter** and each LED on the panel will be sequentially turned on for one second and then off again. The Buzzer will sound at the start and completion of the test.
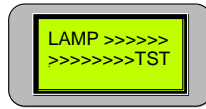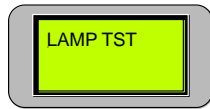
LAMP TST	LAMP >>>>>> >>>>>>>>TST	TEST............... COMPLETE
Press **Enter**	*Indicates the Test Progress*	*Test Successful*

ⓘ   **Note:** *The operator has to visually confirm each LED illuminates.*

Battery Test

Press the ▶ Move Right and / or ◀ Move Left key to move to the Battery Test menu, Press **Enter** and the Battery Test will commence, that is the Charger will be disconnected from the battery and a dummy load placed across the battery for 60 seconds. The battery voltage should be above that specified (23.5 volts) at the end of the testing period, if not a FAILED message is displayed.
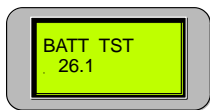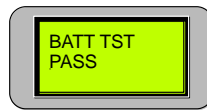
BATT TST 26.1	BATT TST PASS	BATT TST FAIL
Battery Test Underway	*Test Successful*	*Battery Failure*
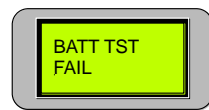
Sounder Tests of each Sounder Press the ▶ Move Right and / or ◀ Move Left key to move to the Sounder Test menu, press **Enter**, then select the Sounder by using the ▲ Move Up and / or ▼ Move Down keys until the desired Sounder number is displayed, press **Enter** to start the test and **Cancel** to turn it off.
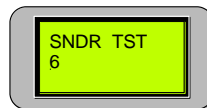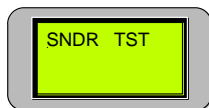
SNDR TST	SNDR TST 6
Press **Enter**	▶ ◀ Sounder 6 Selected

Enter to Start
Cancel to Stop

Back in the Main Menu From <u>TEST</u> Move Right to <u>ISOLATES</u>

5.2   Isolates

To display the number of Isolates press **Enter** to access the menus then ◀ Move Left or ▶ Move Right to select the required menu. The number of isolates will be displayed for each step.

Zone [Main Brd]	Monitored Outputs	Relay [Relay Brd]	Sounder [Sndr Brd]			
Zones 1 to 8 are Active or Isolated	[Main Brd]	Relays 1 to 8 are Active or Isolated *Only available if relays and or sounders are installed*	Sounders 1 to 8 are Active or Isolated			
	Bell	Warn Sys	ACF	ASE	Alarm	Fault

ⓘ   **Note:** *The Relay and Sounder Isolate Menus are only displayed if the boards are installed in the FACP and set to active in the System Menu.*

Main Control Board Zone, Relay Board or Sounder Board Isolates

Press **Enter** and use the ◀ Move Left or Move Right keys to select the Zone, Relay or Sounder number then the ▲ Move up to key isolate or ▼ Move Down key to make active (set) the required Zone, Relay or Sounder.
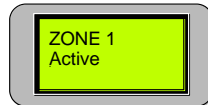
ZONES X ISOL'D	ZONE 1 Active	ZONE 1 Isolated
Press **Enter**	◀ ▶ Select Zone Number	set, ▼ Active or ▲ Isolated
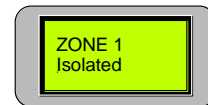
ⓘ   **Note:** *X denotes the Zone number, substitute Relay or Sounder for those menus.*

If a Zone or Zones are Isolated the Isolate LED for that Zone and the common Isolated LED will be illuminated. If a Relay or Relays, Sounder or Sounders are isolated only the common Isolate LED will be illuminated. The Isolate can be deactivated by pressing ISOLATE / DE-ISOLATE while in the Output menu or repeating the steps above to de-isolate (make Active) individual Zones.

Main Control Board Outputs Isolates

Press **Enter** to access the Isolate – Main Control Board Monitored Outputs sub-menus as seen below

Bell	Warn Sys	ACF	ASE	Alarm	Fault

Use the ▶ Move Right or ◀ Move Left keys to select the required menu and the ▲ Move Up key to Isolate or ▼ the Move Down key to active.
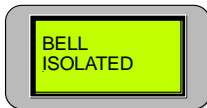
If the:

- ➢ Bell is Isolated the External Bell LED will be illuminated.
- ➢ Warning System is Isolated the Warning System LED will be illuminated.
- ➢ ACF is Isolated the ACF Fault / Isolate LED will be illuminated.
- ➢ ASE, Alarm or Fault Output is Isolated the common Isolated LED will be illuminated.

Press **Cancel** to back out of the Isolate Menu to the Main Menu.

Move Right to Enter the PASSWORD for level 3 Access

Wait for the screen to return to ACF TRIP and use ▶ Move Right to scroll to the **SYSTEM** or **PROGRAM** Menu

ⓘ **Reminder: Press ENTER at the end of each selection to update the program.**

6 Level 3 Access Programming

Level 3 is a technical level that allows a technician to;

➢ initialise the FACP so it is capable of recognising how the system is constructed; and   **SYSTEM**

➢ program how it will present information as well as how it will react to a change of state of an input and / or output.   **PROGRAM**

6.1 Password Entry

Returning to Faults in the Main Menu, Move Right for Password Entry to Level 3. OR if entering the programming from the Default Screen press the ◀ Move Left key to directly access from the ACF Reset Menu.

Press **Enter** and a flashing cursor will appear below the word PASSWORD. By using the ▲ Move up and ▼ Move down keys the number on the screen will be incremented accordingly. Once the first password number has been set use the ▶ Move right key to move to the next number to be set. This operation has to be repeated four times as the PASSWORD is a four digit code. If a number is incorrect it can be changed by using the ◀ Move Left and ▶ Right keys to position the cursor over the incorrect number. Once the four numbers have been set pressing **Enter** initiates the verification of the PASSWORD that has been entered. An incorrect PASSWORD will be displayed as REJECTED and return the operator to the first menu of Level 1 access.

ENTER PASSWORD	PASSWORD 0000	PASSWORD ACCEPTED
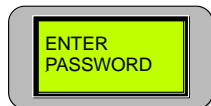
        Press   **Enter**   Enter **Password** Correct Password Entry

If the PASSWORD is accepted the screen will display ACF TRIP RESET. Use the ▶ Right keys to move through the menu to SYSTEM OR PROGRAM.

ⓘ   **Note 1:** *The operator has 10 seconds to complete Password entry. Failure to enter the Password in this time results in the panel reverting to the default screen.*

ⓘ   **Note 2:**   *The System and Program Menus are not accessible if an Alarm condition exists even if the correct Password is entered.*

6.2   System

After entering the Level 3 Password and moving to the SYSTEM menu press **Enter** and the;

1. Zone ISOLATE LED's will illuminate;

2. common ISOLATED LED will flash; and the

3. LCD will display;

| SYSTEM DISABLED | | BUZZER |
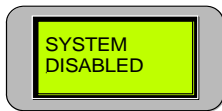
SYSTEM DISABLED   And then   BUZZER
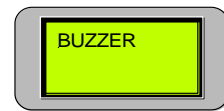
Ignoring Buzzer, Mimic and Code menus (explained below) use the ▶ Move Right or ◀ Move Left keys to move through the menu and the ▲ Move Up key to set YES or ▼ Move Down key to set No. Yes meaning the facility / board / card has been fitted to the FACP and will be programmed in the Programming Menu, No meaning it has not been fitted and will not appear in the Programming Menu.

| ERTH NO | | BRIGADE YES | | RLY CARD YES |
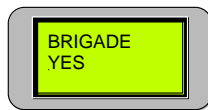
Typical Screen examples of the System Menu

Buzzer	**Earth Mon**	**Brigade**	**Relay Board**	**Fire Fan**
Resound Y/N	*Y/N*	*Y/N*	*Y/N*	*Y/N*
Alarm Buzzer Y/N				

Sndr Card	**Ind Card**	**Switch**	**I/P Card**	**Mimic**	**Code**
Y/N	*Y/N*	*Y/N*	*Y/N*	*Set Number*	*AS4428*
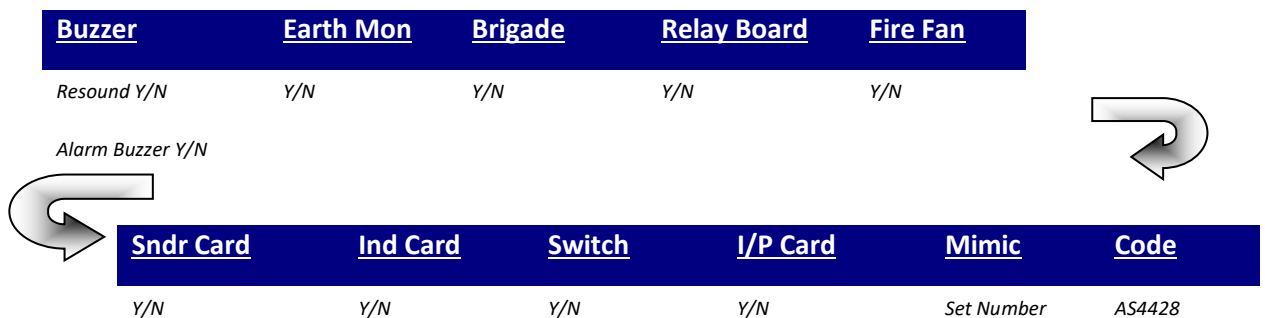
Buzzer is the only option that has a sub-menu where the operator is required to make a selection from the options offered.

Buzzer

Press **Enter** to access the Sub – Menu then the ◀ Move Left or ▶ Move Right key to select either; **Resound**, **Alarm** or **Alarm Buzzer** then **Enter**. Set the **Resound**, **Alarm** by using the ▲ Move Up key to *Yes* (activate on alarm) or ▼ Move Down key for *No* (not activate on alarm).

RESOUND
YES
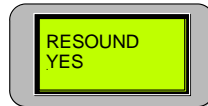
ALARM
YES

Resound Set to YES   Alarm Set to YES

LED Annunciator Master (LAM)

This tells the FACP how many LAMs are on the system hence how many to look for. Set the number by using the ▼ Move Down and / or ▲ Move Up keys to increment to the desired number 0 to 8 (maximum of 8).

LAM
8
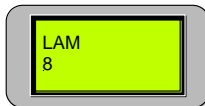
Code

Code is the National Standard the Panel complies with. This is factory set and can not be altered.

CODE
AS4428
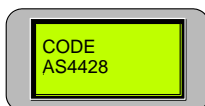
Back out to the Main Menu using the CANCEL key and move from the **SYSTEMS** Menu to the **PROGRAM** Menu using the ▶ Move Right key. When the CANCEL key is pressed the LCD will display;

SYSTEM
ENABLED
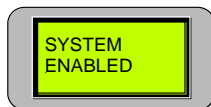
for one second and all the Isolate LED's will be turned off.

6.3 Program

ⓘ **Reminder:** *From the Zones Menu use the ▶ Move Right key to advance through the **PROGRAM** Menu.*

Pressing Enter to access the Program Menu will again disable the panel and the LED's will illuminate as they did in the Systems Menu.

The **PROGRAM** Menu consists of;

Zones	Clock	MCP Zone	Outputs	Relays	Fire Fan

	Sounders	Indicate	Display	Zone Labels	EOL	Zone S/C
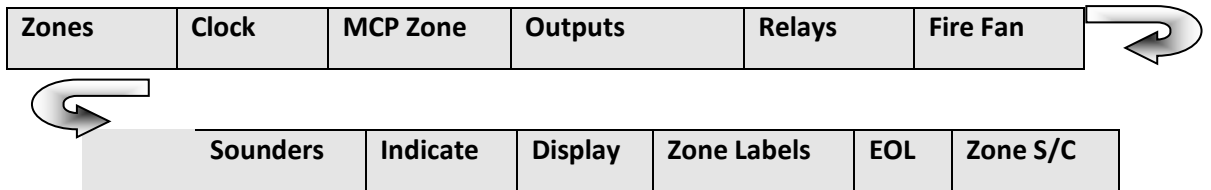
Zones

Press **Enter** and the Zones Menu will be displayed on the LCD screen. Pressing **Enter** again will access the Zones sub menu where first the ▶ Move Right and ◀ Move Left keys are used to select the Zone number and the ▲ Move Up and

```
ZONE 2        ZONE 4        ZONE 6
NORMAL        AVF           AGENT 1
```
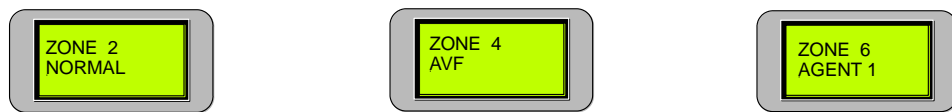
Samp

le Zone Screens

▼ Move Down keys are used to set the functions within that Zone. The functions are;

Normal

Normal is selected if the Zone is required to initiate an alarm and latch until reset.

AVF

If AVF, (Alarm Verification Facility) is set active a delay and re-sampling period is initiated to confirm an alarm condition actually exists on that Zone.

Non Latch

Non Latch if set will initiate an alarm only when the Zone is in alarm.

SRESET 60

Resets the Zone 60 seconds after the Zone comes out of alarm.

ⓘ **Reminder:** *Press Cancel to return to the Zones Menu and then ▶ Move Right to access the Clock menu.*

Clock

To set the day and time press **Enter** and the day will be highlighted. Use the ▲ Move Up or ▼ Move Down keys to step through the days of the week, then the ▶ Move Right key to access the hours and minutes. To access each digit use the ▶ Move Right and ◀ Move Left keys and to increment each digit use the ▲ Move Up and ▼ Move Down keys. Press **Enter** to set the time and then ▶ Move Right To access the MCP Zone Menu.

CLOCK
FR   11 : 21
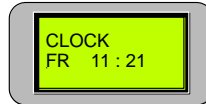
MCP Zone

Press **Enter** to assign the MCP to a Zone using the ▲ Move Up and / or ▼ Move Down keys to select the Zone, (1- 8) that the MCP will be assigned to then **Enter** to update the Program.

MCP ZONE
2
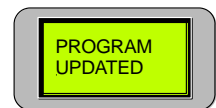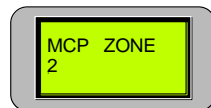
PROGRAM
UPDATED

Press **Cancel** to return to the MCP Zone menu and then ▶ Move Right to access the Outputs Menu.

Outputs

To assign Zones that will activate the monitored outputs press **Enter** and a sub menu will be made available for programming. The default condition for each output is all Zones will activate all outputs. The sub menu consists off;

Outputs							
Bell	**Warn Sys**	**ACF**	**ASE**	**Alarm**	**BGD ALM1**	**BGD ALM2**	**RST/BZ**
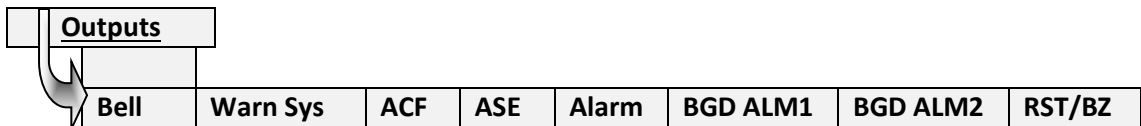
To move through the sub menu use the ▶ Move Right and ◀ Move Left keys. For each output press **Enter**, then the ◀ Move Left and ▶ Move Right to select the Zones that will operate or not operate that output. Pressing the ▲ Move Up key will set the Zone to activate the output and the ▼ Move Down key will set the selected Zone so it does not activate the output.

WARN SYS
12345678

WARN SYS
12........... 78
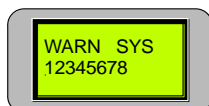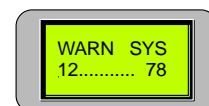
All 8 Zones Selected   Zones 1,2,7 and 8 Selected

Press **Enter** to Update the Program then Cancel to return to the Sub Menu and the ▶ Move Right and or ◀ Move Left keys to move through it. Repeat the above procedure to set or change the other Outputs as required.

Set the **Reset / Buzzer output** option so as the output acts as a Reset or Buzzer function as per the system design configuration.

Screen Showing the Output Set to Reset

If the output is used set as a Reset or Buzzer function by using the ▲ Move Up for Buzzer or ▼ Move Down keys for Reset. Press **Enter** to update the program

Relays

Press **Enter** then use the ▶ Move Right and / or ◀ Move Left keys to select a relay that will be operated by the selected functions in the sub - menu . Press **Enter** to access the sub – menu then ▶ Move Right and /or ◀ Move Left keys to toggle through the sub - menu structure. The sub menu consists off;

Zone Alarm	Zone Fault	Zone Isolate	Input	Switch	*Reset*	*ACF Isolate*

For:

Zone Alarm	Zone Fault	Zone Isolate	Input	Switch

Press **Enter** then ▶ Move Right and /or ◀ Move Left keys to select the *Zone Alarm / Fault / Isolate, Input or Switch* then **Enter**. Use the ▶ Move Right and / or ◀ Move Left keys to select the Zones and the ▲ Move Up or ▼ Move Down keys to set it to be active or in-active.

Active meaning the *Zone Alarm / Fault / Isolate, Input or Switch* will operate the Relay where
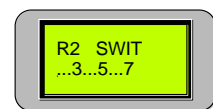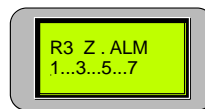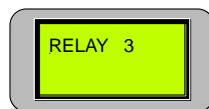
as in–active will prevent them from operating that relay.

Press **Enter** to update the Program and the **Cancel** to back out to the previous menu.

For

Reset	*ACF Isolate*

Press **Enter** then the ▶ Move Right and /or ◀ Move Left keys to select *Reset* or *ACF Isolate* then the ▲ Move Up or ▼ Move Down keys to set for *Yes* or *No*.

Yes sets the Relays to be reset or isolated when the Reset and / or ACF Isolate buttons are pressed.
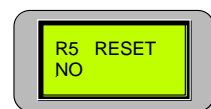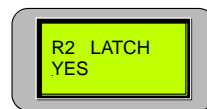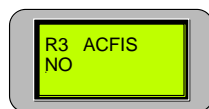
Press **Enter** to update the Program and **Cancel** to back out to the previous Menu.

Fire Fan
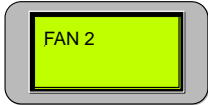
FAN 2

The sub menu consists of;

Alarm	Inhibit	Function	*Latch*	*ACF Isolate*

For:

Alarm	Inhibit

Press **Enter** then use the ▶ Move Right and / or ◀ Move Left keys to select the Fire Fan that will be controlled by the selected functions in the sub - menu .

Press **Enter** to access the sub – menu then ▶ Move Right and /or ◀ Move Left keys to toggle through the sub - menu structure. Press **Enter** then ▶ Move Right and /or ◀ Move Left keys to select the *Zone/s* that will activate or deactivate the control when it is in alarm or inhibited. Use the ▲ Move Up or ▼ Move Down keys to set it to active or in-active. Active meaning the Zone will operate the control where as in–active will prevent that Zone from having control.

ALARM
2...................

INHIBIT
3.................

For:
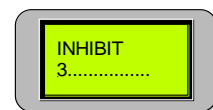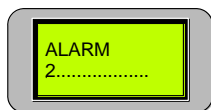
Function

Press **Enter** and the cursor will flash over the number 0,1 or 2, then press the ▲ Move Up or ▼ Move Down keys to select the required Function. Selection relies on how the inputs / outputs have been physically wired from the Fan Termination Board as outlined below.

0: equates to a 3 wire Start / Stop, Run & Common.

1: equates to a 4 wire Start / Stop, Run, Stop & Common.

2: equates to a 5 wire Start / Stop, Run, Stop, Fault & Common.

FUNCTION 2
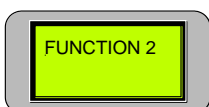
Press **Enter** to update the Program and then **Cancel** to back out of the Menu.

For:

Latch	*ACF Isolate*

Press **Enter** and the cursor will flash over YES or NO and then the ▲ Move Up key for Yes to set the card to be latching or ▼ Move Down key for No to set the card for non-latching on alarm.

```
LATCHING
YES
```

```
LATCHING
NO
```

Press **Enter** to update the Program and **Cancel** to back out of the Menu.

ACF Isolate

Press **Enter** and the cursor will flash over YES or NO and then the ▲ Move Up or ▼ Move Down keys to

```
ACF ISOL
YES
```

```
ACF ISOL
NO
```

set the card to be isolated or not isolated by the ACF key, that is Yes or No.

Press **Enter** to update the Program and **Cancel** to back out of the Menu.

Sounders

Press **Enter** then use the ▶ Move Right and ◀ Move Left keys to select a sounder. Press **Enter** again and use the ▶ Move Right and ◀ Move Left keys to select a Sounder, Press **Enter** again and the ▲ Move Up

```
SOUNDERS
```

```
SOUNDER 4
..........4..........
```

```
SOUNDER 3
...2...4...6.........
```
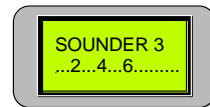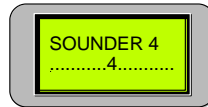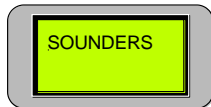
and ▼ Move down keys to set that Sounder to a Zone to activate or not activate the selected sounder.

Press **Enter** to update each Program and **Cancel** to back out of the Menu.

Indicate

If a General Indicator Card is selected via the System Menu then all the tri-coloured LED's default to red. To alter the colour of the LED select Indicate then press **Enter**. The LCD will display "Style 1"

Use the ▲ Move Up and the ▼ Move Down keys to scroll through the different styles.

```
STYLE 1
```

STYLE 1 LED's
all Red

| Window for Slip In Label RED | 🔴 | RED | 🔴 |

STYLE 2 LED's
Red (left)
Yellow (right)

| RED | 🔴 | YELLOW | 🟡 |

STYLE 3 LED's
Row 1 Both Red
Row 2 Both Yellow
Row 3 Both Green
Other rows follow
the same pattern

RED	🔴	RED	🔴
YELLOW	🟡	YELLOW	🟡
GREEN	🟢	GREEN	🟢
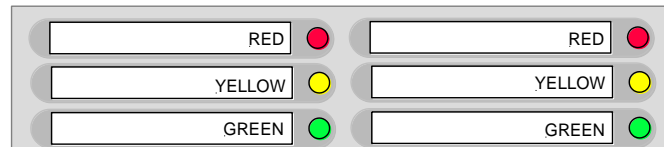
Examples of the different " Styles " available through the Indicate Menu are shown above. Note only the top display is shown in the first 2 examples where as the first 3 top displays are shown in Style 3

Once the "Style has been selected press **Enter** to update the Program and **Cancel** to back out of the Menu.

Display

To set the message, FACP or company name press **Enter** and use the ▶ Move Right and ◀ Move Left keys to move through the word to select a letter and the ▲ Move Up and the ▼ Move Down keys to move through the alphabet. A maximum of 16 characters are available for this message.

```
AMPAC
   < INFO  >
```
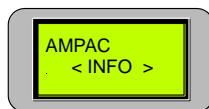
Press **Enter** to update each Program and **Cancel** to back out of the Menu.

Zone Labels

To name the Zones press **Enter** then the ▶ Move Right and / or the ◀ Move Left keys to select a Zone. Press **Enter** and use the ◀ Move left and / or ▶ Move Right keys to move the cursor through the structure of the word and the ▲ Move Up and ▼ Move Down keys to move through the alphabet.

```
Z LABELS            ZONE 1             Z1  :  LOBBY
```
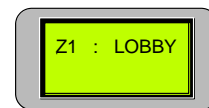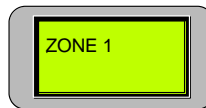
Press **Enter** to update each Program and **Cancel** to back out of the Menu.

EOL (END OF LINE)

Press **Enter** and use the ▲ Move Up and ▼ Move Down keys to select the EOL option. The options are CAP 10∝f, RES 3K3 (AS factory default value), 4K7, 6K8 and 10K.

```
EOL                 EOL                EOL
CAP 10uF            RES 3K3            RES 4K7
```
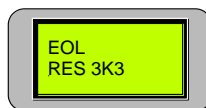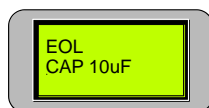
Press **Enter** to update each Program and **Cancel** to back out of the Menu.

Zone S/C

Press **Enter** and use the ▲ Move Up or ▼ Move Down key to set the panel to initiate either an Alarm or

```
ZONE S/C                               ZONE S/C
ALARM                                  FAULT
```
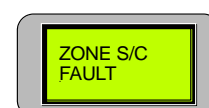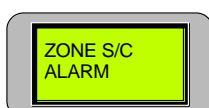
Fault when a Zone short circuited condition exists.

Press **Enter** to update each Program and **Cancel** to back out of the Menu.

7 Appendix A: AS 4428 Menu Structure & Programming

STATUS	FAULTS	TESTS	ISOLATE	SYSTEM	PROGRAM

Status

FOR FULL INSTALLATION
DETAILS REFER TO
MAN1565
ZONESENSE PLUS "ADD ON's"

Faults

LEGEND:

MENU ENTER — PRESS ENTER TO GO TO MENU

◄► — PRESS TO VIEW DETAILS OF EACH FAULT

CANCEL — PRESS CANCEL AT ANY TIME TO BACK OUT OF THE MENU OR STOP TEST

FAULTS 2 Flt/s → F 1 / 2 FIRE FAN → F 2 / 2 FIRE CTRL

FIRE FAN MISSING

FAN CTRL MISSING

EXAMPLE OF 2 FAULTS PRESENT ON THE SYSTEM. IF NO ARE NO FAULTS ON THE SYSTEM THE LCD DISPLAYS THIS SCREEN WHEN [MENU ENTER] IS PRESSED.

FAULTS NO FAULTS

Test

LEGEND:

MENU ENTER — PRESS ENTER TO START TEST

▲▼ — PRESS TO INCREMENT UP DOWN ZONE NUMBER TO BE TESTED

CANCEL — PRESS CANCEL AT ANY TIME TO BACK OUT OF THE MENU OR STOP TEST

ALARM TEST | ZONE 1 TEST | ZONE 2 TEST | ZONE 3 TEST | ZONE 4 TEST | ZONE 5 TEST | ZONE 6 ACTIVE | ZONE 7 ACTIVE | ZONE 8 ACTIVE

PRESS ENTER TO TEST

FAULT TEST | ZONE 1 TEST | ZONE 2 TEST | ZONE 3 TEST | ZONE 4 TEST | ZONE 5 TEST | ZONE 6 TEST | ZONE 7 TEST | ZONE 8 TEST

WALK TEST | ZONE 1 TEST | ZONE 2 TEST | ZONE 3 TEST | ZONE 4 TEST | ZONE 5 TEST | ZONE 6 TEST | ZONE 7 TEST | ZONE 8 TEST

EXAMPLE OF TESTING ZONE 4

WALK TST ZONE 4 --- CANCEL TO END --- TEST END 5MIN SEC

LAMP TEST | LAMP>>>> TEST>>>> --- TEST.... COMPLETE

PRESS ENTER TO START TEST (TEST PERFORMED FOR TIMEOUT) PRESS CANCEL TO HALT

BATTERY TEST | BATT 60s 26.8 V --- BATT TST PASS

SOUNDER TEST IS ONLY AVAILABLE IF SOUNDERS ARE INSTALLED AND SET IN THE SYSTEM MENU

SOUNDER TEST | SNDR 1 TEST | SNDR 2 TEST | SNDR 3 TEST | SNDR 4 TEST | SNDR 5 TEST | SNDR 6 TEST | SNDR 7 TEST | SNDR 8 TEST

Isolate

ISOLATE	LEGEND:	PRESS ENTER TO ACCESS MENU
		PRESS CANCEL AT ANY TIME TO BACK OUT OF THE MENU
		PRESS MOVE FORWARD / BACKWARD THROUGH THE MENU
		PRESS TO ISOLATE PRESS TO MAKE ACTIVE

ZONES 0 ISOL'D — ZONE 1 ACTIVE — ZONE 2 ACTIVE — ZONE 3 ACTIVE — ZONE 4 ACTIVE — ZONE 5 ACTIVE — ZONE 6 ACTIVE — ZONE 7 ACTIVE — ZONE 8 ACTIVE

EXAMPLE OF ISOLATING ZONE 1

OUTPUTS 0 ISOL'D — BELL ACTIVE — WARN SYS ACTIVE — ACF ACTIVE — ASE ACTIVE — ALARM ACTIVE — FAULT ACTIVE

THESE SCREENS WILL DISPLAY THE NUMBER OF ISOLATES 0 TO 8

RELAYS 0 ISOL'D — RELAY 1 ACTIVE — RELAY 2 ACTIVE — RELAY 3 ACTIVE — RELAY 4 ACTIVE — RELAY 5 ACTIVE — RELAY 6 ACTIVE — RELAY 7 ACTIVE — RELAY 8 ACTIVE

EXAMPLE OF ACTIVATING RELAY 2

NOTE: THESE MENUS ARE ONLY AVAILABLE IF RELAYS & SOUNDERS HAVE BEEN CHANGED TO YES IN THE SYSTEM MENU

SOUNDERS 0 ISOL'D — SNDR 1 ACTIVE — SNDR 2 ACTIVE — SNDR 3 ACTIVE — SNDR 4 ACTIVE — SNDR 5 ACTIVE — SNDR 6 ACTIVE — SNDR 7 ACTIVE — SNDR 8 ACTIVE

System (Password required)

ENTER PASSWORD → SYSTEM → BUZZER → RESOUND YES / NO → ALARM YES / NO

FACTORY DEFAULT PASSWORD IS 3333

EXAMPLE OF ENTERING PASSWORD 3333

MENU ENTER

PASSWORD 0000

PASSWORD 3000

PASSWORD 3300

PASSWORD 3330

PASSWORD 3333

MENU ENTER

PASSWORD ACCEPTED

SYSTEM

BUZZER

EARTH MON YES / NO

BRIGADE YES / NO

RELAYS YES/ NO

FIRE FAN YES / NO

SOUNDERS YES / NO

INDICATE YES / NO

SW INDIC YES / NO

INPUTS YES / NO

LAM 0 TO 8

CODE AS4428

EXAMPLE
SET RESOUND TO YES THEN MOVE TO ALARM

YES

UPDATE PROGRAM

MOVE TO ALARM YES / NO

NOTES:
TO ADD OR DELTE FROM THE SYSTEM SET TO YES OR NO AND THEN GO TO THE PROGRAM MENU TO SET THE OPERATIONAL PARAMETERS

IF THESE OPTIONS ARE NOT SET TO YES THEY WILL NOT APPEAR IN THE TEST, STATUS OR PROGRAM MENU

FOR FULL INSTALLATION DETAILS REFER TO MAN1565 ZONESENSE PLUS "ADD ON's"

FACTORY SET CAN NOT BE CHANGED

LEGEND:

PRESS ENTER TO ACCESS MENU AND UPDATE PROGRAM OR CHANGE MENU

PRESS: MOVE FORWARD OR BACKWARD THROUGH THE MENU

PRESS THESE KEYS TO SET YES / NO

PRESS MOVE FORWARD THROUGH THE MENU

PRESS CANCEL AT ANY TIME TO BACK OUT OF THE MENU

Program

PROGRAM

Agent Notes: If only one trigger zone is allocated a zone then the system will be activated by one zone only. Any trigger zone may be allocated to any zone. However when a trigger zone has been allocated eg T1 to zone 1 then only the remaining trigger zones T2, T3 or T4 are each available to be allocated one of the remaining detector zones.

If multiple trigger zones are allocated eg T1 - Z1, T2 - Z2, T3 - Z3 then any one zone in alarm will operate the first stage and any other zone in alarm will operate the second stage.

ZONES → **SELECT ZONE 1 - 8 NORMAL** → **AVF** → **NON LATCH** → **SREST 60** → **AGENT T1** → **AGENT T2** → **AGENT T3** → **AGENT T4**

1 TO 8

LEGEND:

ACF ISOLATE — PRESS ACF TO ISOLATE CIRCUITS EXTERNAL TO FACP

CANCEL — PRESS CANCEL AT ANY TIME TO BACK OUT OF THE MENU

MENU ENTER — PRESS ENTER TO GO TO SUB MENU, SET MENU OR UPDATE PROGRAM

PRESS MOVE FORWARD / BACKWARD THROUGH THE MENU

PRESS MOVE FORWARD THROUGH THE MENU

CLOCK → **SELECT DAY TIME** → CHANGE DAY TIME / MOVE THROUGH DAY TIME

MCP ZONE Z# → **MCP ZONE Z#** → ASSIGN MCP TO A ZONE (8 / 1)

OUTPUTS → **SELECT BELL ZN 1 TO 8** → **SELECT WARN SYS ZN 1 TO 8** → **SELECT ACF ZN 1 TO 8** → **SELECT ASE ZN 1 TO 8** → **SELECT ALM OUT ZN 1 TO 8** → **SELECT BGD ALM 1 ZN 1 TO 8** → **SELECT BGD ALM 2 ZN 1 TO 8** → **RESET BUZZER**

1 TO 8 ON/OFF UPDATE MENU
EXAMPLE OF ACTIVATING ZONE TO TURN ON/OFF SELECTED OUTPUT

RESET / BUZZER

RELAYS → **SELECT RELAY 1 TO 8** → **R# Z-ALRM 1 TO 8** → **R# Z-FLT 1 TO 8** → **R# Z-ISOL 1 TO 8** → **R# I/P 1 TO 8** → **R# SWITCH 1 TO 8** → **RESET** → **ACF ISOL**

1 TO 8 ON/OFF UPDATE MENU
CANCEL BACKOUT OF MENU
YES / NO **LATCH**

FIRE FAN → **SELECT FAN 1,2,3,4** → **ALARM ZN 1 TO 8** → **INHIBIT ZN 1 TO 8** → **FUNCTION 3,4,5 WIRE** → **LATCH YES / NO** → **ACF ISOL YES / NO**

1 TO 4 ON/OFF UPDATE MENU
3/4/5 *EXAMPLE OF SELECTING FUNCTION WIRE TO BE USED*

NOTE:
THESE MENUS ARE ONLY AVAILABLE IF RELAYS, FIRE FAN, SOUNDERS HAVE BEEN CHANGED TO YES IN THE SYSTEM MENU
FOR FULL INSTALLATION DETAILS REFER TO MAN1565, ZONESENSE PLUS "ADD ON's"

SOUNDERS → **SET SNDR # 12345678** → **SET ZONE # 12345678**

INDICATE STYLE → **SELECT STYLE #X** → SET STYLE FROM 1 TO MAX AVAILABLE IN MODULE (MAX / 1)

DISPLAY ######## → **EDIT TEXT**

Z LABELS → **SELECT ZONE** → **EDIT TEXT**

TO EDIT DISPLAY TEXT USE — TO MOVE THROUGH THE ALPHABET / NUMBERS — TO MOVE THROUGH THE WORD

EOL 10uf → **EOL RES 3K3** → **EOL RES4K7** → **EOL RES 6K8** → **EOL RES 10K**

AS FACTORY DEFAULT

ZONE S/C → **ZONE ALARM** → **ZONE FAULT**

8 Appendix B: AS4428 ABS Front Panel Configuration Labelling

ZONE	CONFIGURATION	BELL	WARN SYS	ACF	ASE	ALARM	B ALARM 1	B ALARM 2		RELAY 1	RELAY 2	RELAY 3	RELAY 4	RELAY 5	RELAY 6	RELAY 7	RELAY 8		SOUNDER 1	SOUNDER 2	SOUNDER 3	SOUNDER 4	SOUNDER 5	SOUNDER 6	SOUNDER 7	SOUNDER 8		FAN 1	FAN 2	FAN 3	FAN 4	
1	NORM / AVF / NON / SELF / AT1 / AT2 / AT3 / AT4									A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I															
2	NORM / AVF / NON / SELF / AT1 / AT2 / AT3 / AT4									A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I															
3	NORM / AVF / NON / SELF / AT1 / AT2 / AT3 / AT4									A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I															
4	NORM / AVF / NON / SELF / AT1 / AT2 / AT3 / AT4									A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I															
5	NORM / AVF / NON / SELF / AT1 / AT2 / AT3 / AT4									A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I															
6	NORM / AVF / NON / SELF / AT1 / AT2 / AT3 / AT4									A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I															
7	NORM / AVF / NON / SELF / AT1 / AT2 / AT3 / AT4									A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I															
8	NORM / AVF / NON / SELF / AT1 / AT2 / AT3 / AT4									A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I	A/F/I															

EOL VALUE	3K3 / 4K7 / 6K8 / 10K / CAP
MCP ZONE	1 / 2 / 3 / 4 / 5 / 6 / 7 / 8
No LAMs	1 / 2 / 3 / 4 / 5 / 6 / 7 / 8

AMPAC

INPUT SWITCH									
ACF ISOL	Y /-N	Y /-N	Y /-N	Y /-N	Y /-N	Y /-N	Y /-N	Y /-N	
RESET	Y /-N	Y /-N	Y /-N	Y /-N	Y /-N	Y /-N	Y /-N	Y /-N	
LATCHING	Y /-N	Y /-N	Y /-N	Y /-N	Y /-N	Y /-N	Y /-N	Y /-N	

AGENT RELEASE	SOLENOID / PYROGEN / METRON
AUTO DELAY - SECS	0 / 15 / 30 / 60 /
MANUAL DELAY - SECS	0 / 15 / 30 / 60 /
PRESSURE SWITCH	NO / NC / NA
No Of LCS'S	1 / 2 / 3 / 4

				INHIBIT ZONES
3 / 4 / 5	3 / 4 / 5	3 / 4 / 5	3 / 4 / 5	FUNCTION
Y /-N	Y /-N	Y /-N	Y /-N	LATCHING
Y /-N	Y /-N	Y /-N	Y /-N	ACF ISOLATE

FOR FULL INSTALLATION DETAILS OF ZONESENSE PLUS "ADD ON's" REFER TO MAN1565

Instructions to Installer

A, B, D, F & H Using a permanent marking pen cross out the conditions that do not apply.

**C, E, & G** Using a permanent marking pen cross (X) the box for the option that is set for the Zone.

A Indicates the configuration of each Zone Normal (NORM), AVF, Non-latching (NON), Self resetting (SELF) Agent Trigger/s AT1 / AT2 / AT3 / AT4.

B Indicates what EOL value has been selected, what Zone has the FACP MCP been mapped to, and the number of Mimics controlled by the FACP.

C Indicates what Zones controls what Main Card Outputs.

D Indicates if Zone Alarm (A), Fault (F) or Isolate (I) controls the designated relay, as well as any 16 input or Card input or, any switch / indicator switches and if the ACF Isolate, Reset function or Latching is set.

E Indicates what Zones control what Sounders.

F Indicates the type of Agent Release fitted, the type and duration of delay and the number of Local Control Stations fitted. *(Not Applicable)*

G Indicates what Zone/s activates what Fan/s.

H Indicates what Zone/s Inhibit what Fan/s and the type of wire Function and whether or not latching and / or ACF Isolate is set.

9 Appendix C: Simple Example Wiring Diagram of a Basic FACP
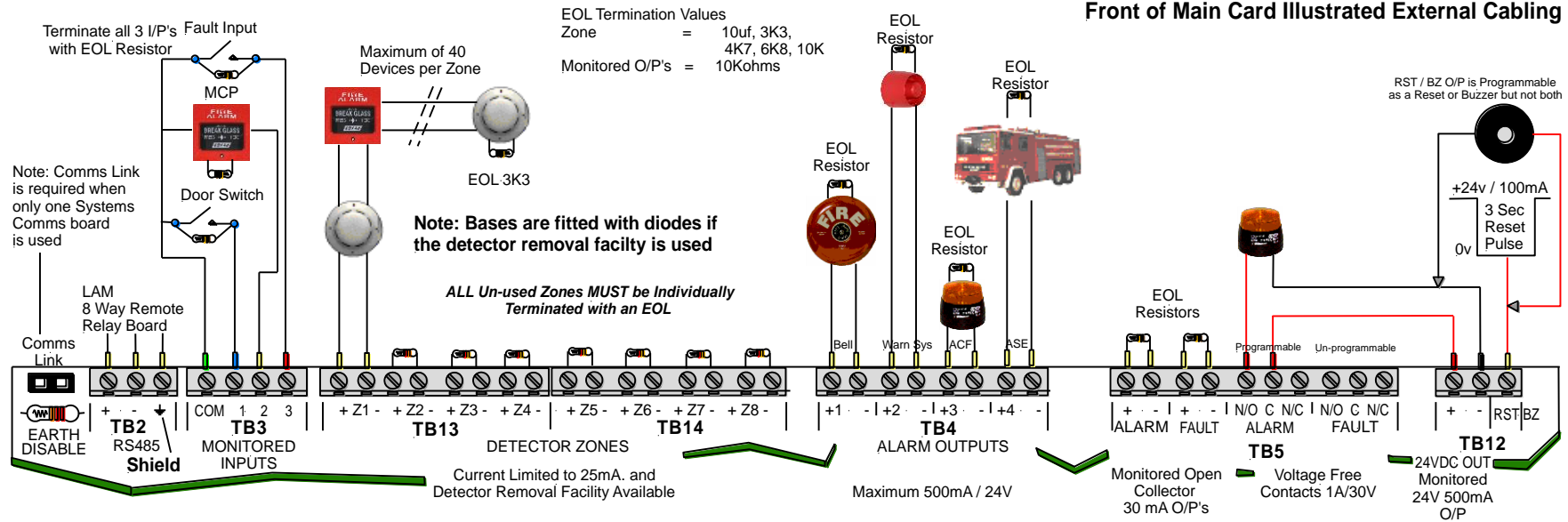
Power Supply / Main Board Internal Wiring

Rear of Main Card

Power Supply Unit (PSU)

Front of Main Card Illustrated External Cabling
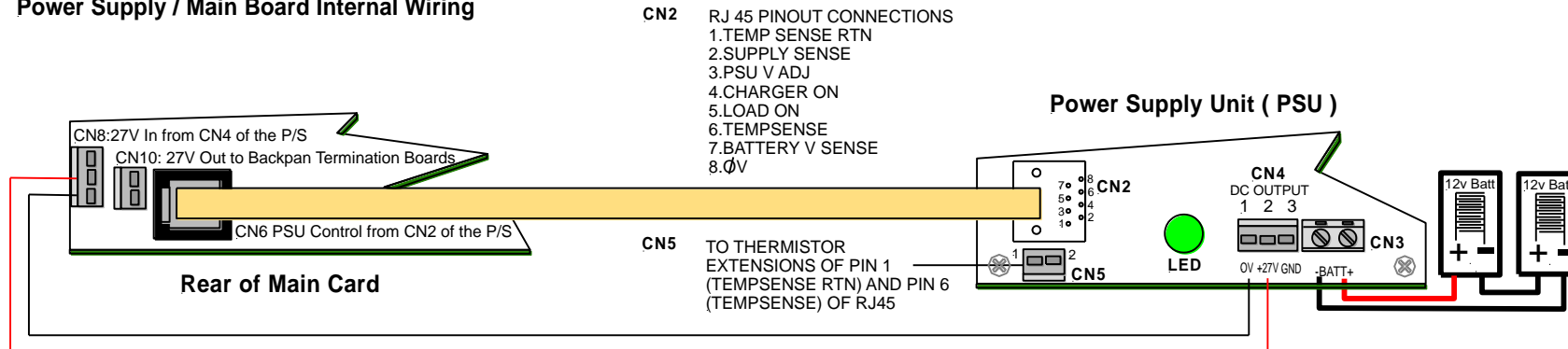
IMPORTANT; ON COMPLETION OF THE INSTALLATION FILL IN THE CONFIGURATION LABEL

UNCONTROLLED DOCUMENT

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