user

manual

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1   Introduction

1.1   Notice

- The material and instructions covered in this manual have been carefully checked for accuracy and are presumed to be correct. However, the manufacturer assumes no responsibility for inaccuracies and reserves the right to modify and revise this document without notice.

- These instructions cover the use and operation of the Fire Alarm Control Panels. The Product Manual (P/N 996-203-600-X) provides details of how to install, program and maintain the system.

  > For use with software version 1.18, or later.

- The fire alarm control panels are configured for 1, 2 or 4 loops and for use with approved and compatible analogue addressable devices.

1.2   Models

- The fire alarm control panels are available in two enclosure sizes offering 1, 2 or 4 loop variants.

- Each panel is capable of supporting up to 160 fire detection zones.
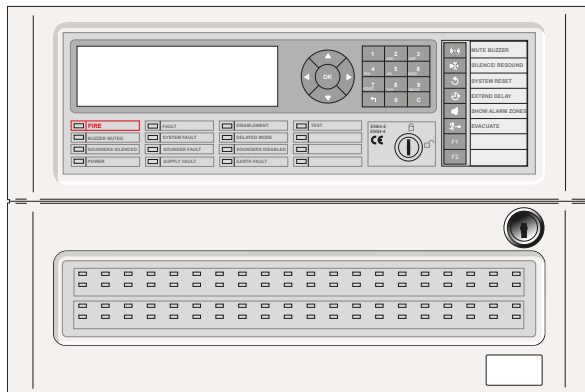
Small Enclosure
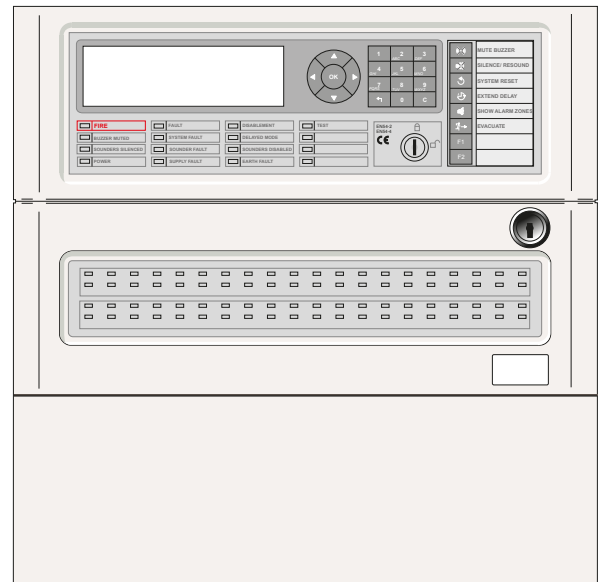
Medium Enclosure

Note: Panels shown have the optional 80 Fire Zone LEDs and keyswitches fitted.

2   User Control Levels

2.1   Level Definition

-    The fire alarm control panels have three user control levels: Level 1, Level 2 and Level 3.

-    At all three levels, the LCD is the primary indicator of the status of the installation and provides detailed information about any current fire alarm, fault, test or disablement conditions. The Zone LEDs, if fitted, indicate the location of any fire alarm.

-    USER LEVEL 1 - the LCD primary display and LED indicators are functional. The MUTE BUZZER key function is operable at this level.

-    USER LEVEL 2 - all front panel user controls are functional and some system operation parameters and functions can be changed. User Level 2 is reached either by entering a passcode from user Level 1 or using a keyswitch, if fitted and configured for this function.

-    USER LEVEL 3 - all front panel user controls are functional and full system configuration and programming is possible. User Level 3 is reached by entering a passcode from either user Level 1 or user Level 2. User Level 3 is intended for use by the system installer/ maintenance provider.

-    All of the mandatory indications that may not be suppressed during a fire alarm condition are shown using LED Indicators. If fitted, LED Indicators show fire alarms for each zone.

-    It is possible to view all other conditions such as points in fire, faults, zones in test and disablement conditions using the navigation (arrow head) keys at Level 1.

2.2   User Passcodes

-    Up to ten USER LEVEL 2 passcodes can be programmed into the panel.

-    The USER LEVEL 2 passcodes can be assigned/ changed at Level 3 by the installer/ maintenance provider. Level 2 passcodes do not allow access to Level 3 functions.

3   Controls and Indications
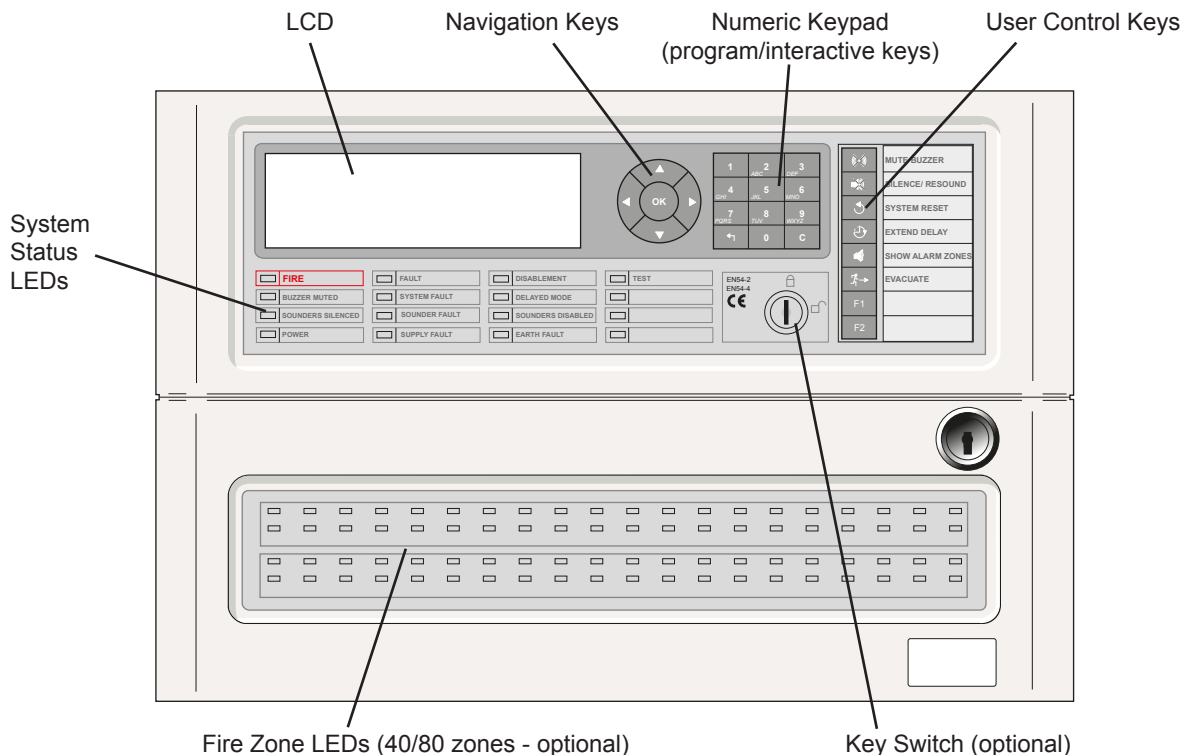
Figure 1 - Typical Controls and Indications

3.1   User Control Keys - Function Descriptions

- The user control keys are disabled at User Level 1, except for the MUTE BUZZER key function. Pressing any of the other user control keys or one of the numeric keys the LCD prompts for the entry of a User Level 2 passcode. At the prompt, enter the access level 2 passcode or operate the keyswitch, if fitted and enabled for user Level 2 access, to enable the controls keys.

Key Legend	Symbol	Function
MUTE BUZZER		Press to silence the internal buzzer.
SILENCE / RESOUND		Press to turn off ALL activated sounders. Press again to re-activate the sounders.
SYSTEM RESET		Press to cancel all alarm/fault conditions and reset the panel.
EXTEND DELAY		If the panel is configured for 2-stage delays, press to start the stage 2 delay timer to extend the investigation delay.
SHOW ALARM ZONES		Displays fire alarm information. If there is more than one zone in alarm, shows order of zones in fire.
EVACUATE		Press to turn on ALL Sounder Outputs, i.e. evacuate building manually.
FUNCTION KEY 1	F1	Function Key. User programmable; may be configured, e.g. as Bomb Alert, Class Change, Detection Mode start/stop, Disable Group(s) or Dsiable ALL Relay and Control Outputs or Fire Transmission output.
FUNCTION KEY 2	F2	Function Key. User programmable; may be configured, e.g. as Bomb Alert, Class Change, Detection Mode start/stop, Disable Group(s) or Disable ALL Relay and Control Outputs.

Table 1 - Control Key Functions

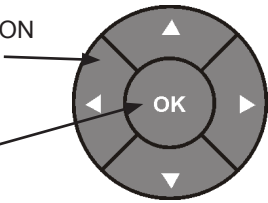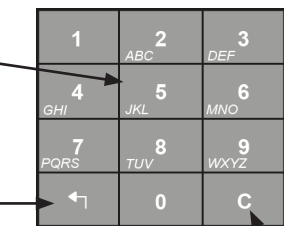| Key Legend	Function
NAVIGATION KEYS: 'OK' KEY	Press ▲, ▼, ◄ and ► keys to select and scroll through Level 1 display functions for fire, fault, disablement and test conditions. Press OK to confirm changes or select a menu option.
0 -9, A - Z KEYS EXIT KEY BACK SPACE/ DELETE KEY	Numeric keypad for entering numbers. May also be used during programming to enter letters of the alphabet for text message entry. This works in a similar fashion to a mobile telephone keypad. Press ↰ to cancel a change or return to a previous menu without changing a configuration option. Use back-space function in text editing mode. In certain menus this functions to allow the deletion of user-defined data.

Table 2 - Alphanumeric and Interactive Control Keys

3.2   Front Panel LED Indications

Indicator	Colour	Function	How to Clear
FIRE	Red	The panel has detected a fire alarm condition.	Correct the condition causing the alarm and then perform a panel reset
BUZZER MUTED	Yellow	A fault or alarm has been acknowledged and the internal buzzer silenced.	Correct the condition causing the alarm and then perform a panel reset.
SOUNDERS SILENCED	Yellow	The sounder outputs have been silenced.	Correct the alarm condition and then perform a panel reset. NOTE: Press SILENCE/RESOUND again to reactivate the sounders.
POWER	Green	STEADY: Indicates presence of power (either AC mains and/or batteries).	Not applicable.
FAULT	Yellow	The panel has detected a fault.	Correct the condition causing the fault and then perform a panel reset.
SYSTEM FAULT	Yellow	The CPU has reset or a system fault curred.	Correct the problem, if has oc-appropriate, and then perform a panel reset.
SOUNDER FAULT	Yellow	This indicates a fault with one or more of the sounder outputs.	Correct the fault condition and then perform a panel reset.
SUPPLY FAULT	Yellow	There is a problem with the power supply, battery or supply input.	Correct the fault condition and then perform a panel reset.
DISABLEMENT	Yellow	Part of the system, either input or output, has been disabled manually by the user.	Re-enable the device or devices. Refer to Disablement Function.
DELAYED MODE	Yellow	This indicates that the system is operating with delays to the sounder outputs and the delays are active (in force).	This is an automatic indication; can be cleared by the user. Refer to Detection Mode.
SOUNDERS DISABLED	Yellow	The sounders have been disabled.	Refer to Disablement Function.
TEST	Yellow	The system is in test mode. The LCD shows which zones are being tested.	Cancel / Stop test when finished.
Zone FIRE (if LEDs fitted)	Red	STEADY. The zone is in a fire alarm condition.	Correct the alarm condition and then perform a panel reset.

Table 3 - LED Functions

3.3 Status Display Indications

- The 240 by 64-pixel, graphical Liquid Crystal Display (LCD) is the primary status indicator. The LCD is illuminated to assist viewing under dim ambient light conditions.

- If the panel has one of the following conditions:

  a. Fire

  b. Fault

  c. Disablement

  d. Test

  The LCD and LED indicators show the status of the panel for each of these conditions. Events being displayed follow a priority order as listed above; indications of fire always have priority over ALL other events indicated at the panel.
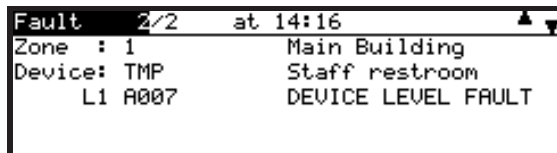
3.3.1 LCD Conditions - Normal State

- The LCD displays different information depending on the status of the panel or system. With the panel in a normal state, the LCD shows the following information: the customer-programmable graphic (or the panel default logo) plus the day of the week, date and time (24hr format), typically as shown below:

```
Tue 21/05/2013 10:49:01


         LOGO

```
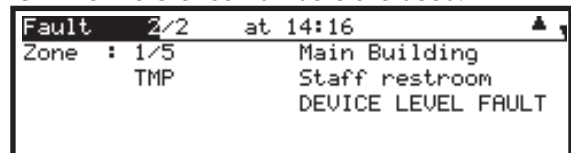
3.3.2 Loop Devices - Fault or Fire Condition

- The LCD is updated automatically to show zonal information about the latest device to enter a fault or fire condition. In the example below, fault 2 of 2 is displayed with brief details about the type of fault, the device in fault and its location.

Or when reference numbers are used:

```
Fault    2/2    at 14:16         ▲ ▼
Zone  : 1              Main Building
Device: TMP            Staff restroom
      L1 A007          DEVICE LEVEL FAULT
```

```
Fault    2/2    at 14:16         ▲ ▼
Zone  : 1/5            Main Building
        TMP            Staff restroom
                       DEVICE LEVEL FAULT
```

- Use the ▶ key to view the individual device/point details within the affected zone.

- Use the ▲ / ▼ keys to view different events in the same condition.

- Use the ⬅ key to exit the summary display.

3.3.2.1 Indication of Multiple Event Types

- When the panel has multiple event types which cannot be displayed together, pressing the ◀ and ▶ keys allow details of the 'hidden' event(s) to be viewed. The example below shows two fire events with another condition accessible using the ◀ and ▶ keys. As with single-type events the the ▲ / ▼ keys allow other events of the currently-displayed type to be viewed.

Or when reference numbers are used:

```
First Fire  Zone 1       15:08 │#Zones
Latest Fire Zone 1       15:08 │  1
Fire     2/2    at 15:10      ▲ ▼ ◀ ▶
Zone  : 1              Main Building
Device: OPT            Cloakroom
      L1 A005
```

```
First Fire  Zone 1       15:08 │#Zones
Latest Fire Zone 1       15:08 │  1
Fire     2/2    at 15:10      ▲ ▼ ◀ ▶
Zone  : 1/6            Main Building
        OPT            Cloakroom
```
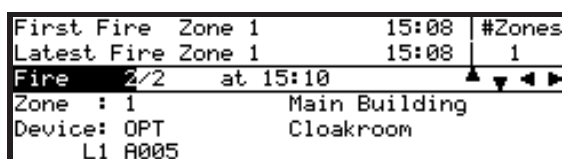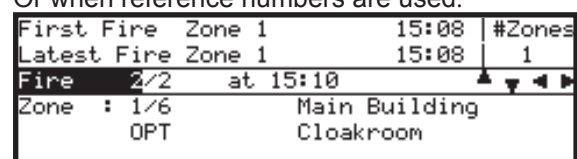
3.3.3 Non-quiescent Condition

- The LCD displays information about any of the above events using a similar layout and includes as a minimum:

  a. Zonal information

  b. Device information

  c. The number of zones in fire/fault; the first and latest event registered by the panel is displayed as well as the number of zones in fire/fault; or the number of zones/devices disabled; or zones in test.

Or when reference numbers are used:

```
First Fire  Zone 1        11:29 │#Zones
Latest Fire Zone 1        11:29 │  1
Fire    1/1    at 11:29
Zone  : 1          Main Building
Device: OPT        Cloakroom
    L1 A005
```

```
First Fire  Zone 1        11:29 │#Zones
Latest Fire Zone 1        11:29 │  1
Fire    1/1    at 11:29
Zone  : 1/6        Main Building
          OPT      Cloakroom
```

Or when reference numbers are used:

```
First Fire  Zone 1        11:29 │#Zones
Latest Fire Zone 1        11:29 │  1
Fire    3/3    at 11:35           ▲ ▼
Zone  : 1          Main Building
Device: TMP
    L1 A019
```

```
First Fire  Zone 1        11:29 │#Zones
Latest Fire Zone 1        11:29 │  1
Fire    3/3    at 11:35           ▲ ▼
Zone  : 1/10       Main Building
          TMP
```

- To view the information about one of the above displayed conditions, use the the ▲ / ▼ keys keys to view any other similar events. Use the ◄ and ► keys to change the LCD to tab between event screens, e.g. fires, faults, etc., if applicable. In the screen below two zones are in fire with the first and last zones displayed.

Or when reference numbers are used:

```
First Fire  Zone 3        12:04 │#Zones
Latest Fire Zone 1        12:04 │  2
Fire    2/2    at 12:04           ▲ ▼
Zone  : 1          Main Building
Device: OPT        Cloakroom
    L1 A005
```

```
First Fire  Zone 3        12:04 │#Zones
Latest Fire Zone 1        12:04 │  2
Fire    2/2    at 12:04           ▲ ▼
Zone  : 1/1        Main Building
          OPT      Cloakroom
```

- All of the mandatory indications that may not be suppressed during a fire alarm condition are shown using Light Emitting (LED) Indicators. Fire Alarms for each zone are shown using LED Indicators, if fitted.

- It is possible to view all other conditions such as points in fire, faults, zones in test and disablement conditions using the the ▲, ▼, ◄ and ► keys at user Level 1 (refer to Section 3.3.2.1).

- To view the information for a particular condition, use the the ▲, ▼, ◄ and ► keys to select the required condition (the highlight moves to the selected option) and then press the (OK) key to select and view further detail.

3.4   Level 2 Menu Displays

- Access Level 2 is entered either by turning the keyswitch, if fitted and configured for level 2 access, clockwise through 90° or by entering the Level 2 passcode and then pressing the (OK) key.

- If, from the Status Normal screen, if any of the navigation (arrows) keys, the (OK) key or alphanumeric keys are pressed the following panel Status menu screen is displayed:

```
[Status]        Thu 01/07/2010 12:36:23
1: Fires (0)        2: Faults (0)
3: Disabled (0)     4: In Test (0)
5: Actions
```

- At access Level 1 if the user presses the SYSTEM RESET or EVACUATE control keys the following control key function screen is displayed prompting for the entry of an access Level 2/3 passcode:

```
[Control Key Access]   05/07/10 16:47:01
Enter Level 2/3 passcode:|
or operate keyswitch
```

- If, from the Status Normal screen or the screen shown above, the keyswitch is turned clockwise, the following panel Status menu screen is displayed:

```
[U9 Status]     Thu 01/07/2010 12:36:23
1: Fires (0)        2: Faults (0)
3: Disabled (0)     4: In Test (0)
5: Actions
```

- This screen is very similar to the screen displayed without a passcode entry of keayswitch action except that the square brackets on the top line now include user access level information, i.e.'U9' or 'U0', depending on whether the a passcode (U0) or keyswitch (u9) was used.

- If menu option '5: Actions' is selected from the Status menu by entering the user Access Level 2 passcode followed by pressing the (OK) key, the Level 2 menu is displayed, as below:

```
[U0 Actions]    Thu 01/07/2010 12:36:23
1:Run Test          2:Set Clock
3:Disable/Enable    4:View
5:Detection Mode    6:Output Delays
7:Commission (L3)
```

- Use the ▲, ▼, ◀ and ▶ keys to move the highlight to any of the menu options and press the (OK) key to select or, using the numeric keypad, enter the number of the desired option.

    The 'U0 Actions' displayed in the top-left corner of the LCD the panel has entered user Access level 2 using the default access Level 2 passcode.

- If 'U9 Actions' is displayed in the top-left corner of the LCD the panel is at user Access level 2, where the key switch was used to access this menu.

- The layout of other menus is similar.

4   Level 1 Display Functions

- At user access Level 1, the panel operates in a display-only mode with the control function keys disabled, except for MUTE BUZZER.

- If one or more fire alarm, fault, test or disablement conditions exist, more information can be viewed on the LCD using the navigation keys. The LED indicators show any changes to the panel status.

Displayed Event Information

- In this mode the LCD shows a summary of the panel status including the number of zones in fire, fault, test and disablement. This replaces the 'Status Normal' LCD screen.

- Manual intervention is required for more detailed point information.

Audible Indication

- FIRE - With fire alarm event(s) the buzzer will sound continuously. It will resound automatically (if previously muted) for any new fire alarms.

- FAULT - In this condition, the buzzer will sound intermittently (1-second on/ 1-second off). It will automatically resound (if previously muted) for any new fault condition registered.

- The internal buzzer can be silenced at access Level 1 – press the ▲/▼ (MUTE BUZZER) key.

4.1   Normal Conditions

- When the system is in a normal condition, the green AC Power LED will be illuminated. The LCD will show the date and time, typically as below:

Note: The logo may have been replaced with the servicing company's logo during system commissioning.

4.2   Fire/ Fault Conditions

- If the panel detects conditions such as fire or fault events, the 'Status Normal' LCD screen is replaced by a screen which shows information about the type and number of events: the first and last zone events and the number of zones in a fire or fault condition are given.

- In the example below, the panel shows information about the second of two fire events; which are both in the same zone.

4.2.1 Fire Alarm Conditions

- If the control panel initiates an alarm condition, the FIRE LED indicator lights and, if fitted, the relevant ZONE FIRE LED indicator lights and the internal buzzer sounds. The LCD shows details of device(s) in alarm, the first and latest zones in alarm and the the number of zones in alarm.

·- Use the ▲/▼ keys to scroll through multiple events.

4.2.1.1   Zone Fire Alarms

- When the panel detects a zone alarm the LCD shows the **first and latest** zones in an alarm condition. In the example below, two fire events are in different zones, 1 and 3. The '#Zones 2' in the top-right corner of the LCD confirm that two zones with fire alarms have been detected.

Or when reference numbers are used:

```
First Fire   Zone 1        09:01 │#Zones
Latest Fire  Zone 3        09:03 │  2
Fire    2/2     at 09:03         ▲ ▼
Zone  : 3           Machine Room
Device: CO
     L1 A018
```

```
First Fire   Zone 1        09:01 │#Zones
Latest Fire  Zone 3        09:03 │  2
Fire    2/2     at 09:03         ▲ ▼
Zone  : 3/14        Machine Room
            CO
```

- The LCD shows the first and latest zone location text (20 characters maximum description).

- To view other devices (points) in alarm, press the ▲/▼ keys to scroll through the events. For example:

Or when reference numbers are used:

```
First Fire   Zone 1        09:01 │#Zones
Latest Fire  Zone 3        09:03 │  2
Fire    1/2     at 09:01         ▲ ▼
Zone  : 1           Main Building
Device: OPT         Cloakroom
     L1 A005
```

```
First Fire   Zone 1        09:01 │#Zones
Latest Fire  Zone 3        09:03 │  2
Fire    1/2     at 09:01         ▲ ▼
Zone  : 1/9         Main Building
            OPT     Cloakroom
```

- The display shows the alarm number and the total number of devices (points) in a fire alarm condition (2), the Zone number (1) and zone text (up to 20 character description), the loop number to which this device is connected (L1), the address of this device on the loop (A005) or, alternatively, the zone and reference number (1/9), the type of device (OPT), the time at which the device entered the alarm condition (09:01) and the Point Location Text (up to 20 character description) for this device.

- To view other points in fire, press the ▲/▼ keys.

  Note: The ▲▼ arrows are not shown when there is only one event.

- Press ⤺ key to exit and display the Level 1 menu options.

4.2.1.2   Override Delays

- The Connection range of control panels may be configured to operate with delays to outputs. In this case, a manual call point (MCP) is located next to the panel.

- To override any delays and immediately activate the bells and other fire alarm output devices, break the glass in the call point.

4.2.2   Fault Conditions

- If the panel detects a fault, the FAULT LED is illuminated along with other appropriate system condition LED Indicators. The internal buzzer will sound intermittently and the LCD displays information about the fault condition. Depending on the type of fault condition there may be other panel indications (see Panel Faults below).

Or when reference numbers are used:

```
Fault   3/3   at 16:50         ▲ ▼
Zone  : 3            Machine Room
Device: TMP
     L1 A019      NO REPLY FROM DEVICE
```

```
Fault   3/3   at 16:50         ▲ ▼
Zone  : 3/15         Machine Room
          TMP
                  NO REPLY FROM DEVICE
```

- To view other faults, if applicable, press the ▲ / ▼ keys to scroll through the events.

- In the example below the panel has detected 2 faults; the LCD displays details of the latest.

Or when reference numbers are used:

```
Fault   2/2   at 16:57         ▲ ▼
Zone  : 1            Main Building
Device: TMP          Staff restroom
     L1 A006      DEVICE LEVEL FAULT
```

```
Fault   2/2   at 16:57         ▲ ▼
Zone  : 1/4          Main Building
          TMP        Staff restroom
                  DEVICE LEVEL FAULT
```

- Press the ↰ key to display the access Level 1 menu.

4.2.2.1   LCD Details

- Panel faults and zone (point) faults are displayed on the LCD, in chronological sequence, in the same way as fire alarms.

- The example shown below of 'Device Level Fault' at address 4 on loop1 is indicated as fault 2 of 2. If there is more than one fault indicated, use the ▲ / ▼ keys to view the other events.

Or when reference numbers are used:

```
Fault   2/2   at 11:43         ◀ ▶
Zone  : 1            Main Building
Device: OPT
     L1 A004      DEVICE LEVEL FAULT
```

```
Fault   2/2   at 11:43         ◀ ▶
Zone  : 1/6          Main Building
          OPT
                  DEVICE LEVEL FAULT
```

- Press the ↰ key to exit the fault display information screen and return to the access Level 1 menu.

4.2.3   Test Conditions

- If zones have been configured to be in a test condition (i.e. weekly walk test), the TEST LED is illuminated.

- The LCD will show the number of active tests the panel has, as in the following example:

```
[U0 Status]      Thu 01/07/2010 12:36:23
1: Fires (0)        2: Faults (0)
3: Disabled (0)     4: In Test (2)
5: Actions          0: Log out
```

- To view more detailed information regarding the test locations either use the navigation keys to highlight option '4: In Test (n)' and then press the ⓞⓚ key to select or, using the numeric keypad, enter '4' to directly highlight the 'In Test' menu option.

- In the example below, details are displayed about the current test conditions for the two zones in test; the zones are being tested, without sounders, and the zone text is also given.

```
IN TEST
Zone  1 - 2          No Sounders
Zone  1              Main Building
Zone  2              Lab Offices
```

- Press the [←] key to exit the fault display information screen and return to the access Level 1 menu.

- If a menu option is selected where there are no current events no further information is displayed and the LCD displays an advisory message, typically as in the 'Fires' example below:

```
[Status]          Thu 01/07/2010 12:36:23
1: Fires (0)        2: Faults (0)
3: Disabled  The system has  t (1)
5: Actions   no fires present
```

4.2.4 Disablement Conditions

- If zones, input devices, output devices or other disablement conditions have been configured, the DISABLEMENT LED is illuminated along with other system condition LED indicators. The 'Status Normal' screen will now include the statement 'The system has disablements present' located at the bottom of the LCD screen. A licensed FACP will display the 'The system has disablements present' and licence confirmation messages alternately every 5 seconds.

- Refer to **Appendix 1 Disablement Conditions** for more details of disablements and how they are displayed at user access Levels 1 and 2.

- Other system-related information may also be displayed, depending upon configuration settings. If the internal buzzer has been suppressed temporarily this setting is confirmed when'BZR Suppressed' is displayed on the top line of the LCD, as shown at right.

```
              Tue 21/05/2013 10:49:01

         LOGO

   The system has disablements present.
```

```
BZR Suppressed   Tue 27/05/2014 10:10:35

         LOGO

```

- To view more information regarding the disablement conditions use the navigation keys to highlight '3: Disabled' and then press the (OK) key to select or, using the numeric keypad, enter '3' to directly select the 'Disabled' menu option.

```
Disabled   1/1
FULL  Zone  2  Lab Offices
```

- The example above shows that zone 2 has been fully disabled. Press the (OK) key to display information about the disabled device. If there is more than one disabled device, use the ▲ / ▼ keys to view the others.

Or when reference numbers are used:

```
Disabled in Zone 2      1/4        ▲▼
      L1 A012   MCP   Front Office
      L1 A015   OPT
      L1 A016   OPT
      L1 A017   CO
```

```
Disabled in Zone 2      1/4        ▲▼
D  1/2     MCP   Front Office
D  1/5     OPT   Cloakroom
D  1/7     MLT   Staff restroom
D  1/13    OPT   Machine Room
```

- Press the [←] key to exit this view and return to the access Level 1 menu.

4.3   Power Supply Fault Conditions

-    If the AC MAINS power source is interrupted or if the panel registers other fault conditions associated with its power supply, the Supply Fault LED and Fault LED Indicators will be lit. Further details of the fault can be viewed on the display.

-    The LCD's back light illumination will be turned off.

-    If both the AC MAINS input and the Battery Standby Input fail then the LCD and all LED indicators will be off.

-    Possible fault conditions are:

     a. NO MAINS SUPPLY

     b. BATTERY LOW

     c. BATTERY DISCHARGED

     d. BATTERY MISSING

     e. CHARGER FAILURE.

4.4   List of Device Abbreviations

-    The following table gives a list of the device (point) abbreviations shown on the LCD.

Abbreviation	Description
AUX	Auxiliary/Plant input action
CO	Carbon Monoxide Detector
FLM	Flame Detector
ION	Ionisation Smoke Detector
I/O	Input / Output Module
LSR	Laser Smoke Detector
MCP	Manual Call Point
MLT	Multi-Criteria Detector
MON	Monitored Input
OPT	Optical Smoke Detector
RLY	Relay
SDR	Sounder / Bell
CTL	Control Output
TMP	Temperature Detector
ZMX	Zone Monitor Module

Table 4 - Device Type Abbreviations

5   Level 2 Display/Control Functions

5.1   Display Functions

- All of the LCD and control functions available at Level 1 are also available at Level 2.

5.2   Control Functions

- The five main control keys are locked at access Level 1 (Note: MUTE BUZZER is always enabled). To enable the access Level 2 control functions, pressing the (OK) key or any of the navigation or numeric keys the LCD will display the panel Status screen:

```
[Status]       Thu 01/07/2010 12:36:23
1: Fires (0)      2: Faults (0)
3: Disabled (0)   4: In Test (0)
5: Actions
```

- Using the numeric keypad, press the '5' key. The access level entry prompt is displayed as follows:

```
[Access Level]   Thu 01/07/2010 12:38:40
Enter Level 2/3 passcode:|
or operate keyswitch
```

> **Note:** Pressing either the SYSTEM RESET or EVACUATE control key the LCD text in the square brackets changes to 'Control Key Access' and entering the passcode from here will reset the system or will display a user prompt to confirm/cancel activation of the sounder outputs.

- Using the numeric keypad enter the access Level 2 passcode (for example, the default passcode is 1234). As each digit is entered a '*' character is displayed and the flashing cursor moves to the right. When all four digits have been entered, press the (OK) key. If an incorrect digit is entered, just press the [C] key to clear any incorrect entries and then simply try again. Do not press the [↰] key as this will take you out of the passcode entry screen and re-display the previous screen information. Alternatively, turn the keyswitch clockwise, if fitted and configured for this purpose, through 90°.

- If the passcode is correct the LCD displays the access Level 2 panel Status menu, as below:

```
[U0 Actions]      Wed 23/02/2011 12:32:20
1:Run Test       2:Set Clock
3:Disable/Enable 4:View
5:Detection Mode 6:Pattern Delays
7:Commission (L3)
```

- Level 2 access using a passcode will remain available for 10 minutes (programmable up to 60 mins). At the end of this period the LCD re-displays the Status Normal screen.

- Press the required control key to perform the desired action.

- When prompted for entry, if the passcode is entered incorrectly, or not entered at all and allowed to time out, the display will show this message briefly:

```
[Access Level]   Mon 05/07/2010 16:58:24
Enter Level 2/3 passcode:****
ERROR C8B0E488: INCORRECT PASSCODE !!!
```

- Press the [↰] key to go back to the panel Status menu screen.

> **Note:** The eight-character number on the bottom line is a control code and is only relevent to access Level 3 use.

- Alternatively, if the keyswitch option is fitted and programmed to enable Level 2 access, insert the key and turn clockwise through 90° to enable access Level 2 Control functions.

5.2.1 SILENCE/RESOUND

- To silence the sounder outputs press the SILENCE/ RESOUND key. To re-activate all silenced sounder outputs press the SILENCE/ RESOUND key again.

5.2.2 SYSTEM RESET

- To reset the panel from a fire alarm or fault condition, firstly correct and rectify the problem and then press the SYSTEM RESET key. To prevent fault conditions from faulty devices being registered disable the device – refer to the Disable/Enable Menu.

5.2.3 EXTEND DELAY

- If the system is programmed to operate with the Delayed Day Mode function the panel will indicate the alarm but will not immediately activate the outputs (sounders or relays). Press the EXTEND DELAY key to acknowledge the alarm and enter the Investigation Phase – refer to **Section 6 Delayed Mode Operation** for further information.
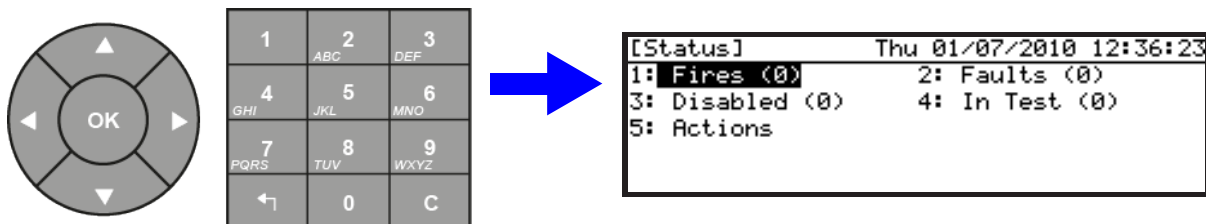
5.2.4 SHOW ALARM ZONES

- When the panel has more than one zone in fire, pressing SHOW ALARM ZONES causes the details per event to be replaced by a list of all zones in alarm.

5.2.5 EVACUATE

- To activate all sounder outputs and evacuate the building press the EVACUATE key.

5.3   Level 2 Menu Functions

-    Press any of the panel keys shown below to display the access Level 1 menu functions.

```
[Status]        Thu 01/07/2010 12:36:23
1: Fires (0)        2: Faults (0)
3: Disabled (0)     4: In Test (0)
5: Actions
```

-    To access the Level 2 menus press '5' on the numeric keypad and then enter the access Level 2 passcode followed by pressing the (OK) key.

```
[Access Level]   Thu 01/07/2010 12:38:40
Enter Level 2/3 passcode:|
or operate keyswitch
```

-    Alternatively, if the optional keyswitch is fitted and configured to enable Level 2 access, insert the key and turn 90° clockwise before selecting any of the Level 2 Menu options. Pressing '5' will display the access Level 2 menu. When the keyswitch is used the L2 menu is the same except that 'U0' in the square brackets is replaced by 'U9', as shown below:

```
[U9 Actions]     Wed 23/02/2011 12:32:20
1:Run Test          2:Set Clock
3:Disable/Enable    4:View
5:Detection Mode    6:Pattern Delays
7:Commission (L3)
```
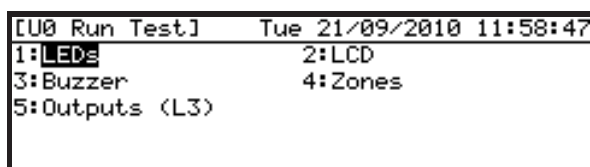
Function	Description
Run Test	Allows the user to test parts of the system. The following tests can be performed:
	LEDs - to test the LED indicators. The test automatically tests all status indicators and each zone LED, if fitted, in turn.
	LCD - Enables the LCD to be put through a number of pattern tests.
	Buzzer - Allows the internal buzzer to tested.
	Zones - Used when a 'Walk Test' on one or more zones is to be performed. If the test is performed 'With Sounders' all sounder outputs will be activated in continuous mode regardless of pattern logic.
	Outputs - Used to test the relay and sounder outputs (not available for access Level 2 users).
Set Clock	To change the date and time displayed and used by the panel in recording event information.
Disable/Enable	To disable zones, devices, groups, outputs, detection mode, output delays and local inputs. Allows the cancellation of buzzer suppression when active.
View Mode	To view devices, log, faults and other system status conditions.
Detection Mode	Turns on or off the detection mode function.
Pattern Delays	Turns on or off the phased evacuation delays (using patterns).
Commission (L3)	This option requires the entry of the access Level 3 passcode and is not available to access Level 2 users.

Table 5 - User Menu Functions

- When using a passcode, access to Level 2 menu functions will automatically be cancelled after 10 minutes (default) if no buttons are pressed. It will be necessary to re-enter the passcode to re-enable the Level 2 menu functions. Access using the keyswitch does not time out and the access Level 2 menus will still be accessible. The keyswitch must be turned in an anti-clockwise direction to cancel out of access Level 2.

- Press the ⬑ key to manually exit the access Level 2 Actions menu and re-display the panel Status menu. Using the numeric kepypad, press the '0' key to log out of access Level 2 and return the panel to the Status Normal screen.

5.3.1 Run Test

- To display the Run Test menu ensure that the Run Test menu option is highlighted and press the (OK) key, or, using the numeric keypad, press '1'. The Test menu is displayed as below:

```
[U0 Run Test]     Tue 21/09/2010 11:58:47
1:LEDs            2:LCD
3:Buzzer          4:Zones
5:Outputs (L3)
```

- Using the menu it is possible to perform tests of the following:

    a. The panel's LEDs

    b. The LCD

    c. The internal buzzer

    d. The detection and alarm initiating devices connected to the signalling loop (i.e. Zone Walk Test)

    e. The sounder outputs and other alarm condition output devices connected to the system (access Level 3).

5.3.1.1   LED Test

- To perform the LEDs test ensure that menu option '1: LEDs' is highlighted then press the (OK) key. Alternatively, using the numeric keypad, press '1'.

- To terminate the test, press the ⬑ key.

- The panel will cycle through all of the System Status LED Indicators and through all of the Zone FIRE LED Indicators, if fitted. The test will automatically stop after 60 seconds.

5.3.1.2   LCD Test

- To test the LCD ensure that menu option '2: LCD' is highlighted then press the (OK) key. Alternatively, using the numeric keypad, press '2'.

- To terminate the test, press ⬑ key.

- The LCD will flash all displayable characters in all positions of the display. The test will stop automatically after 60 seconds.

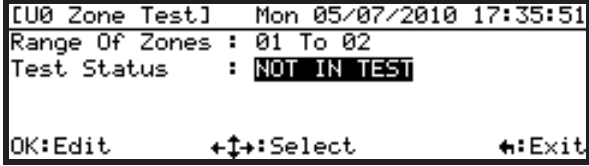#### 5.3.1.3   Audible Indicator (Buzzer) Test

- To test the LCD ensure that menu option '3: Buzzer' is highlighted then press the (OK) key. Alternatively, using the numeric keypad, press '3'.

- To terminate the test, press ⬑ key.

- The buzzer will sound intermittently. The test will stop automatically after 60 seconds.

- Testing of the buzzer may still be performed while suppressed (Engineer's mute function).

5.3.1.4 Zones Test

- When zones have been configured to be in a test condition (i.e. weekly walk test), the TEST LED is illuminated.

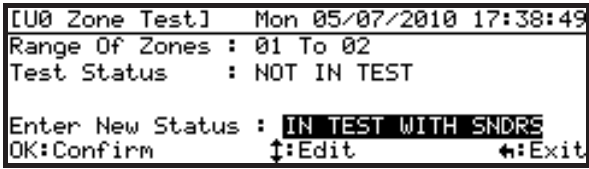- The test condition must be cancelled manually.

5.3.1.4.1 Introduction

- To test one or more Zones (Walk Test) ensure that the menu option '4: Zones' is highlighted then press the (OK) key. Alternatively, using the numeric keypad, press the '4' key. The following screen is displayed:

```
[U0 Zone Test]   Mon 05/07/2010 17:35:51
Range Of Zones : 01 To 02
Test Status    : NOT IN TEST


OK:Edit        ←↕→:Select        ←:Exit
```

- The Run Test screen allows the user to select one zone or a range of zones to be put into test mode. Then the type of test, with sounders or without sounders, needs to be selected. In the example below, zones 1 and 2 have been selected for testing **with** bells/sounders; these will ring for a few seconds whenever a device is tested.

```
[U0 Zone Test]   Mon 05/07/2010 17:38:49
Range Of Zones : 01 To 02
Test Status    : NOT IN TEST

Enter New Status : IN TEST WITH SNDRS
OK:Confirm       ↕:Edit         ←:Exit
```

5.3.1.4.2 Configuring / Stopping Individual Zone Tests

- When the screen is first displayed, a flashing cursor is placed immediately to the right of the first zone in a range of zones that may be specified for purposes of testing. The first use of this test menu both zones are specified as '1', i.e. no range of zones. To change the zone, or to specify a range of zones to be tested, use the ◄ or ► keys to move the cursor and the ▲ and ▼ keys to edit the zone, select the desired zone(s) to be tested.

- To select a test function again use the ◄ or ► keys to move the cursor so that the 'NOT IN TEST' is highlighted and then use the ▲ and ▼ keys to select either 'IN TEST WITH SNDRS' or 'IN TEST - NO SNDRS' and then press the (OK) key. The cursor returns to the first zone position.

- Selecting either of these test options the TEST LED will illuminate.

5.3.1.4.3 Stopping ALL Zone Tests

- To stop all zone (walk) tests immediately use the ▲ and ▼ keys to select 'NOT IN TEST' and then press the (OK) key. The TEST LED extinguishes.

- To exit the Zone Test screen press the ⬅ key. The Run Test menu is displayed.

5.3.1.5 Outputs Test (Access Level 3)

- This menu option is not available for users at access Level 2. An access Level 3 passcode is required. Refer to the Product Manual for more information.

- The Fire Transmission output, if disabled, cannot be tested.

5.3.2 Set Clock

- From the Access Level 2 menu, use the navigation keys to highlight option '2: Set Clock' and press the (OK) key to select. Alternatively, using the numeric keypad press the '2' key. The 'Set Clock' screen is displayed, as follows:

```
[U0 Set Clock]        21/02/11 14:36:05
Time:|14:28    (hh:mm)
Date:21/02/11 (dd/mm/yy)


OK:Confirm  ←↕→:Select  0-9:Edit  ←:Exit
```

> **Note:** The 1-loop panel will not show the current time and date from power up and dashes will appear in the editable fields, as shown above. The 2/4-loop panels will display current time and date values and these may not, therefore, require editing.

5.3.2.1   Change the Time/Date

- The time and date may be changed using the screen above by entering numeric values in the 'Time' and/or 'Date' entry fields. A time and/or date must be entered in full (see below).

- By default, the cursor is placed in the 'Time' edit field (24hour clock) at the first 'hour' edit field. Use the numeric keypad to enter the current time; when a value is entered the cursor moves automatically to the right. To change an entered value, press the C key to move the cursor to the left; the previously-entered value is replaced by the flashing cursor and the user may now enter a new value.

- Zeros (0) must be entered in all fields in order to move the cursor to the next entry field. A value must be entered in each field, although just changing the time the date does not also need to be edited - just leave the entry fields blank - and *vice versa*.

- An invalid entry is rounded down to the maximum value which is valid for that specific field and the cursor moves to the right. For example, the user will not be permitted to enter a value greater than '3' in the first 'hours' field; doing so this value is rounded down to '2' automatically.

- To move between the date and time entry fields use the ▲ or ▼ keys.

5.3.3 Disable/Enable Functions

- From the Access Level 2 menu, use the navigation keys to highlight option '3 Disable/Enable' and press the (OK) key to select. Alternatively, using the numeric keypad press the '3' key. The 'Disable/Enable' menu is displayed as follows:

```
[U0 Disable/Enable]  15/05/2013 18:11:04
1:Zone            2:Devices
3:Groups          4:Outputs
5:Local Inputs    6:Buzzer
```

- This menu allows the user to enable or disable:

1	Each Zone fully	Disables the inputs of the devices in the zone. Any outputs in the zone will still activate as programmed.
2	Individual Devices / Points	Disables both the inputs and outputs of the device*.
3	Groups	Disables both the inputs and outputs of the devices in the group*.
4	Outputs	Disables the selected output types so that they will not activate.
5	Local Inputs	Disables the panel's in-built inputs.
6	Buzzer	Cancels any muting or suppression of the internal buzzer. Option is only visable (and selectable) during programmed periods of buzzer muting or suppression.

* Individual sounder type outputs can only be disabled using this option if this function has been configured during panel commissioning.

It is possible to disable individual zones, devices, groups or outputs prior to testing/ maintenance to prevent unwanted activation of bells or other outputs.

If a device is faulty or if it is reporting a fire condition erroneously, the device can be disabled to prevent this condition from being registered by the panel. In this case, first disable the device (or zone, group, input or output as required), then press the SYSTEM RESET key to clear the latched fault or fire condition. Note: If the condition still exists when the disablement is cleared, i.e. re-enabled, the fire or fault will be registered.

5.3.3.1   Disable/Enable Full Zones

-    It is possible to disable each zone individually.

-    To disable or enable a full zone, press '1' and the display shows:

```
[U0 Disable/Enable]  05/07/2010 18:11:04
Select Zone:   ◀ ▶:Page   0-9:Zone No
01:Main Building        :Fully enabled
02:Lab Offices          :Fully enabled
03:Machine Room         :Fully enabled
04:Server Room          :Fully enabled
```

-    Use the ▼ and ▲ keys to highlight the zone to be disabled and then press the ⟨ок⟩ key. Alternatively, using the numeric keypad, press the number of the zone. Note: If the zone number being selected is 10 or higher, enter the first digit quickly followed by the second digit. For example to enter zone 23, using the numeric keypad, pressing the '2' key the highlight moves to zone 2. Pressing the '3' key within 2 seconds will now highlight zone 23 and not zone 3.

-    Use the ◀ or ▶ keys to go quickly to an alternative zone listing than the one currently displayed.

-    With the zone to be disabled/ enabled now selected using either method above, the LCD now prompts the user to confirm a disable or enable action. The current status of the zone is given as in the example below:

```
[U0 Disable/Enable]    21/02/11 14:41:46
03:Zone 3              :Fully enabled
Disable Zone 03?


OK:Confirm                      ↰:Cancel
```

Note: The status of unconfigured zones is not displayed.

-    Press the ⟨ок⟩ key to confirm the action. Press the ↰ key to cancel. The user is returned to the Zone Disable/Enable menu screen.

-    To select another zone to be disabled/enabled repeat the procedure described above.

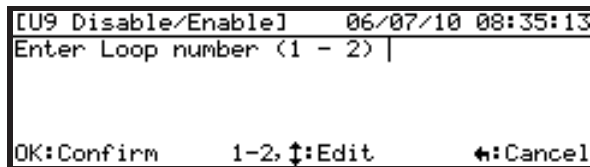-   Press the ↰ key to return to the acess Level 2 user menu.

Note: Entering the disable/enable zone menu screen may indicate that a zone has been 'Part Disabled'. This condition results from one or more devices/points having been disabled individually. The zone disable/enable function only allows a zone to be fully disabled or re-enable a zone to the partial disablement condition (the panel remembers the individual devices that have been disabled).

5.3.3.1.1   Re-enablement of Zones Fully Disabled by Device

-    Zones can be fully disabled either through the zone selection option or by the individual disablement of all devices allocated to the zone. With the latter method the panel still indicates a fully-disabled zone even though the devices on the zone were disabled individually. However, in this case the fully-disabled zone cannot be re-enabled using the Disable/Enable menu option **1: Zones** and requires every device on the zone to be re-enabled individually through the **2: Devices** option.

5.3.3.2   Disable/Enable Individual Devices /Points

-    Individual detection devices can be disabled.

-    To disable or enable a device, press '2'; if the panel is equipped with more than 1 loop the display prompts the user to select the loop that contains the device, as in the example below:

```
[U9 Disable/Enable]      06/07/10 08:35:13
Enter Loop number (1 - 2) |



OK:Confirm      1-2,↕:Edit        ←:Cancel
```

-    Using the ▼ and ▲ keys, select the loop that contains the device to be disabled or enabled and then press the ⊙OK key. *All devices on the selected loop and their current status are listed*.

-    The device at the first address on the loop is highlighted. Either press the ⊙OK key to change its disabled/enabled status or, using the ▼ and ▲ keys, select a device at another address. If the address of the device is known then, using the numeric keypad, enter this value to select it.

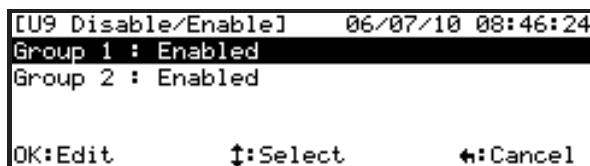   **Note:** the LCD will only list devices that are connected to the panel.

-    Press the ↰ key to return to the Disable/Enable menu.

     Note: A zone will only be fully enabled/ disabled if all of the devices within the zone are enabled/ disabled.

     Note: Sounder type outputs can only be disabled using this option if this function has been configured during panel commissioning.

5.3.3.3   Disable/Enable Groups

-    A number of devices may have been configured to belong to a group. This function allows all of the devices within this group to be disabled or enabled with one action rather than having to disable or enable each individual device.

-    To disable or enable a group of devices, press '3' and the display shows the first available group and its current enable/disable state. For example:

```
[U9 Disable/Enable]      06/07/10 08:46:24
Group 1 : Enabled
Group 2 : Enabled


OK:Edit          ↕:Select        ←:Cancel
```

-    The first group is highlighted. Use the ▼ and ▲ keys to select Group 2

-    Press the ⊙OK key to change the enable/disable state of the group. The new status is shown on the display as 'Enabled' or 'Disabled' as appropriate and the user is then taken back to the previous screen.

-    Press the ↰ key to return to the Disable/Enable menu.

     Note: A zone will only be fully enabled or disabled if all of the devices within the zone are enabled or disabled. The devices included in a group are programmed in the 'Commission' menu options.

     Note: Sounder type outputs can only be disabled using this option if this function has been configured during panel commissioning.

5.3.3.4   Disable/Enable Specific Output Circuits

-    It is possible to disable outputs to fire alarm devices (sounders/ bells) independently.

-    It is possible to disable the fault output independently.

-    It is possible to disable other outputs independently.

-    To disable or enable a type of output circuit, press '4' and the display shows a menu of the types of outputs. For example:

```
[U9 Disable/Enable]    13/09/13 08:56:47
1:Sounders           2:Fault Relays
3:Others             4:Fire Transmission
5:Extinguish System
```

-    It is possible to enable or disable:

   1. ALL Sounder Type Outputs.

   2. ALL Fault Relay Type Outputs.

   3. ALL Other Relay and Control Type Outputs

   4. Fire transmission routing outputs

   5. Fire protection (Extinguishing) equipment outputs.

-    Press '1', '2' or '3' as required. The LCD shows the following if the outputs are currently enabled:

```
[U9 Disable/Enable]    06/07/10 08:59:35
Disable ALL Sounder Outputs



OK:Confirm                    ←:Cancel
```

```
[U9 Disable/Enable]    06/07/10 09:01:50
Disable ALL Fault Relay Outputs


OK:Confirm                    ←:Cancel
```

Note: With the System IO PCB configured disablement of 'Fault Relays' also disables the Fault Routing output.

```
[U9 Disable/Enable]    06/07/10 09:03:44
Disable ALL Relay and CTL outputs


OK:Confirm                    ←:Cancel
```

```
[U0 Disable/Enable]    13/09/13 10:36:24
Disable Fire Transmission Outputs?


OK:Confirm                    ←:Cancel
```

Note: Fire Transmission output(s) cannot be disabled while in test mode.

```
[U0 Disable/Enable]    13/09/13 10:36:52
Disable Extinguishing System Outputs?


OK:Confirm                    ←:Cancel
```
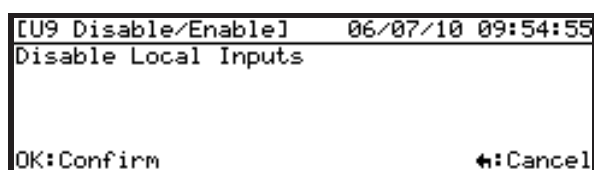
Note: Extinguishing System output(s) cannot be disabled when in alarm state.

-    Press the (ok) key to disable the output. The DISABLEMENT LED illuminates for all outputs. If the sounder outputs are disabled the SOUNDERS DISABLED LED illuminates also.

-    Press the ← key to return to the Disable/Enable menu without making a change.

- To re-enable any disabled outputs repeat the procedure described above for each option. The LCD screens are the same except the user is now asked to 'Enable' the outputs rather than 'Disable' them.

- The DISABLEMENT LED extinguishes; if the sounder outputs are enabled the SOUNDERS DISABLED LED also extinguishes.

- Press the ⬑ key to return to the Disable/Enable menu without making a change.

5.3.3.5   Disable/Enable Local Inputs

- The local inputs comprise the front panel keyswitch (if fitted), the front panel function keys (F1 & F2), monitored input circuits and panel state inputs. The installer will have programmed the operation of these inputs.

- To disable/ enable all local inputs, press the '7' key and the LCD prompts for the appropriate action, depending on the current state. For example:
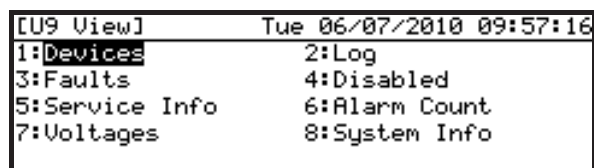
```
[U9 Disable/Enable]      06/07/10 09:54:55
Disable Local Inputs



OK:Confirm                          ⬑:Cancel
```

- Press the (OK) key to disable/ enable these input circuits, as appropriate.

- Press the ⬑ key to cancel and make no changes.

5.3.4   View

- To display the View Menu, press the '4' key and the LCD displays the following options.

```
[U9 View]          Tue 06/07/2010 09:57:16
1:Devices          2:Log
3:Faults           4:Disabled
5:Service Info     6:Alarm Count
7:Voltages         8:System Info
```

- It is possible to view:

    1. The current analogue value and other operating parameters for an individual loop device.

    2. The Event Log.

    3. Any Faults registered.

    4. Any Disablements.

    5. Service Information.

    6. The Alarm Counter.

    7. Operating voltages and other panel diagnostic information.

    8. The software part numbers and versions of the software installed in the panel and loop drivers. The panel serial number can also be displayed.

5.3.4.1   View Devices

- This function shows the information returned from the selected signalling loop device and is updated each time it is polled. The information presented is in a different format for each protocol.

- As each device status is 'viewed', the device LED for that address is illuminated – this can be a useful means of identifying individual devices on the system.

- Press the '1' key to select the Devices option. The LCD prompts for selection of the required signalling loop, showing the number of loops available, as follows (unless it is a 1-loop panel, in which case it immediately shows the first device on the loop):

```
[U9 Devices]        Tue 06/07/2010 10:00:47
Enter Loop number (1 - 2) |



OK:Confirm      1-2,↕:Edit           ←:Cancel
```

- Enter the required signalling loop number using the numeric keys and then press the (OK) key to select. The display then shows the information for the first four device addresses on the loop.

Or when reference numbers are used:

```
[U0 Devices]     Wed 22/05/2013 11:28:56
L1 Select Device: ◄ ►:Page 0-9:Addr
S009 OPT   32% Z1    E000
S010 OPT   33% Z1    E000
S011 OPT   32% Z1    E000
S012 OPT   32% Z1    E000
```

```
[U9 Devices]     Tue 09/12/2014 16:25:38
P1   L1 Select Device: ◄ ►:Page 0-9:Addr
 1/1   OPT  33% E000
 1/3   OPT  33% E000
 1/5   OPT  33% E000
 1/6   MLT  Lv0 E000
```

- Press the (OK) key to display information about the highlighted device or, using the ▼ and ▲ keys, select a device at another address on the loop, or zone and reference number, and press the (OK) key to select.

- The user is presented with information related to the specific device. The presented device information is only meaningful to the service engineer and, therefore, no further details are provided here.

Or when reference numbers are used:

```
[U9 Devices]     Tue 06/07/2010 10:09:29
Loop:1     Zone:1
Sensor:001  Main Reception
Type:OPT    Level:033%
PW1:289 2:289 3:589 4:0790 5:0889 ←:Exit
```

```
[U9 Devices]     Tue 09/12/2014 16:29:53
Panel:1   Loop:1 Device:  1/5
Sensor:011  Main Reception
Type:OPT    Level:033%
PW1:149 2:147 3:455 4:0406 5:0452
```

- The display shows, as in the example above, the loop number (L1), the address of the device, the type of device (OPT), the current status analogue values.

- Press the ⟵ key to exit the device information screen and return to the listed loop devices.

- Press the ⟵ key again to return to the View menu.

5.3.4.2   View the Event Log

- Press the '2' key to view the Log. Alternatively, use the ▲, ▼, ◄ or ► keys to highlight 'Log' and press the (OK) key.The LCD displays the latest entry in the log, for example:

```
[U9 Event Log 001/569]     22/07/10 14:31
LEVEL 2 ACCESS START
Keyswitch


```

- The latest entry is always indexed as entry '001'. The log has a maximum capacity of 999 entries.

- Press the ▲ and ▼ keys to view the other log entries.

- Press the ⟵ key to exit the event log screen and return to the View menu.

5.3.4.3   View Faults

- Press the '3' key to select ViewFaults. Alternatively use the ▲, ▼, ◄ or ► keys to highlight 'Faults' and press the (OK) key. The LCD shows the first fault condition, for example:

Or when reference numbers are used:

```
[U9 Faults    1/1    at 11:44]   11:45
Zone  : 3          Machine Room
Device: MLT
      L1 A021       DEVICE LEVEL FAULT

```

```
[S1 Faults    1/1    ]     09/12/14 16:40
Device: 3/12        Machine Room
       MLT
                    DEVICE LEVEL FAULT

```

- Press the ▲, ▼ keys to view other faults, if applicable.

- If there are no fault conditions present selecting 'Faults' an overlay message is displayed to advise the user that the system has no faults present.

- Press the [↰] key to exit the 'Faults' screen and return to the View menu.

5.3.4.4   View Disablements

- This function allows the user to find information about any current disablement conditions. Press the '4' key to select the 'Disabled' option. The LCD displays details of any disablements present. For example:

Typical Zone Disablement:

```
[U9 Disabled    2/2    at 11:49]  11:50
Zone: 03              Machine Room
DISABLE FULL ZONE


```

Typical Outputs Disablement:

```
[U9 Disabled    2/2    at 11:54]  11:54
DISABLE ALL RELAYS



```

- Press the ▲, ▼ keys to view other disablements.

- Press the [↰] key to exit the 'Disabled' screen and return to the View menu.

5.3.4.5   View the Alarm Count

- The counter is incremented every time the panel enters the fire alarm condition.

- It is possible to view the current alarm count status. The counter cannot be reset.

- Press the '6' key to select the Alarm Count option. The LCD displays the total number of times that the panel has entered the fire alarm condition. For example:

```
[U9 Alarm Count] Tue 06/07/2010 12:08:55
Current Alarm Count is     8



                                 ←:Exit
```

- Press the [↰] key to exit the 'Alarm Count' screen and return to the View menu.

5.3.4.6 View Voltages

- Press the '7' key to select the View Voltages option. The LCD displays a number of voltage values and analogue values (relevant to access level 3 use). The first screen is displayed with 'DC Volts' highlighted.

```
[U9 Voltages]     Tue 06/07/2010 12:12:19
DC Volts             = 23.9 Volts
Charger              = 26.2 Volts
Battery Volts        = 26.3 Volts
Earth (Analogue)     =  241 Counts
Sounder1 (Analogue)  =  167 Counts
```

- Press the ▼ key to view the other voltages and analogue values, for example:

```
[U9 Voltages]     Tue 06/07/2010 12:14:24
Sounder2 (Analogue)  =  167 Counts
Mon Input1 (Analogue)=  230 Counts
Mon Input2 (Analogue)=  231 Counts
Battery Wiring (Res) =  370 mOhms
```

- Press the ⬅ key to exit the 'Voltages' screen and return to the View menu.

Signal	Description	Value	Normal/ Range
DC VOLT	Measurement of the PSU DC supply Voltage	Volts	24 (19-28)
CHARGER	Measurement of the Charger Output Voltage	Volts	27 (20-29)
BATTERY VOLTS	Measurement of the Battery Voltage	Volts	24 (19-28)
BATTERY WIRING	Measurement of the battery wiring resistance[1]	mOhms	381 (200-500)
MONITORED INPUT 1	Measurement of the input signal condition	Count	248 (75-560)
MONITORED INPUT 2	Measurement of the input signal condition	Count	248 (75-560)
SOUNDER 1	Measurement of the output wiring condition	Count	190 (170-210)
SOUNDER 2	Measurement of the output wiring condition	Count	190 (170-210)
EARTH	Measurement of the earth condition	Count	270 (240-300)
Measurement readings shown are for indicative purposes only.			
[1] The measurement reading depends also on battery capacity and condition.			

Table 6 - Voltage / Analogue Value Readings

5.3.4.7 View System Info

- Press the '8' key to select the 'System Info' option. The LCD displays the panel's serial number, part number and version of the software installed in the panel. It also shows the loop driver protocol and software version loaded into the signalling loop driver circuit. For example:

Or with optional-fit equipment configured for use:

```
[U9 System Info]        10/05/13 15:19:11
Serial Number :4294967295
Main Processor:993-758-602     1.16B
Loop          :Sys-Sen         9.00
```

```
[S1 System Info] Tue 09/12/2014 16:42:53
Serial Number :4294967295
Main Processor:993-758-602     1.16
Loop          :Sys-Sen        10.00
Network        :993-756-V01 ver 02a
System IO Card:993-782 V01.03A
```

- Press the ⬅ key to exit the 'System Info' screen and return to the View menu.
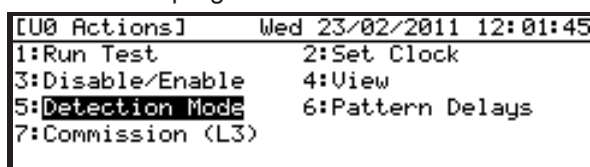
5.3.5 Disable/ Enable Detection Mode

- It is possible to manually override (turn on/off) detection mode delays.

  Detection Modes can be Stage 1/ Stage 2 Investigation Mode (see Section 6) or Sensitivity Mode (detector sensitivity is adjusted at certain times of the day) or Alarm Verification Mode (the signals from smoke detectors must be verified after a programmed period of time before a fire alarm is raised). All of these modes are useful in reducing false alarms and will have been programmed by the commissioning engineer to suit the requirements/ use of the building. The overall aim of using one or these modes is to avoid evacuation of the building or calling out the fire brigade because of a false alarm.
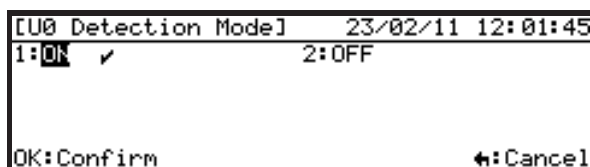
- The normal activation of these modes is based on a '7-day' clock timer to be active at specific times of day or night. The clock timers can be overridden to turn on/ off the operation manually. Starting the detection mode will activate the function until it is next scheduled to turn off automatically. Ending the detection mode will de-activate the function until it is next scheduled to turn on automatically.

  Note: If there are no 7-day timers programmed, the enable/ disable function simply turns on/ off the detection mode programmed.

```
[U0 Actions]      Wed 23/02/2011 12:01:45
1:Run Test          2:Set Clock
3:Disable/Enable    4:View
5:Detection Mode    6:Pattern Delays
7:Commission (L3)
```

- To end (disable) or start (enable) the operation of the detection mode, press the '5' key and the display prompts for whether the detection mode should be started or ended, depending in its current operational state. If detection mode is enabled, as in the example below, use the numeric keypad and press the '2' key to highlight 'OFF' and then press the (OK) key to disable Detection Mode:
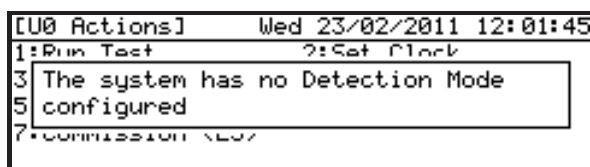
```
[U0 Detection Mode]   23/02/11 12:01:45
1:ON   ✔            2:OFF



OK:Confirm                      ←:Cancel
```

- Conversely, if detection mode is disabled, use the nuneric keypad and press the '1' key to highlight 'ON' and then press the (OK) key to enable Detection Mode:

```
[U0 Detection Mode]   23/02/11 12:01:45
1:ON                2:OFF   ✔



OK:Confirm                      ←:Cancel
```

- The detection modes available are programmed in the Level 3 Commissioning Mode Functions. If there are no detection modes configured, this option has no effect and the following advisory text is displayed:

```
[U0 Actions]      Wed 23/02/2011 12:01:45
1:Run Test          2:Set Clock
3| The system has no Detection Mode
5| configured
7:Commission (L3)
```

- Press the (OK) key to start/ end the function, as appropriate.

- Press the (←) key to cancel and make no changes.

- The 'DELAYED MODE' LED Indicator will illuminate when the detection mode is currently active and will turn off when not currently active.

5.3.6 Disable/ Enable Pattern Delays

- Delays to sounder and other outputs may have been programmed as part of a 'phased evacuation plan' for the building.

  ! These delays should not normally be turned off (disabled), as this will compromise the effective, safe evacuation of the building in the event of a fire.

- To disable or enable the operation of any pattern output delays, press the '6' key and the LCD prompts for whether the delays should be disabled/ enabled, depending on the current operational state. To disable delays, for example, the LCD displays this prompt:

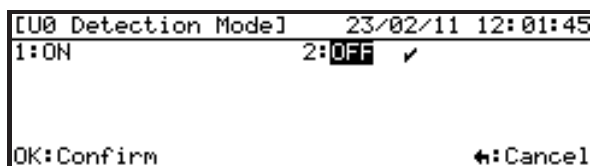```
[U0 Actions]   Wed 23/02/2011 12:00:38
1:Run Test   2:Set Clock
3:Disable/Enable   4:View
5:Detection Mode   6:Pattern Delays
7:Commission (L3)
```

- The delays are programmed in the Level 3 Commissioning Mode Functions. If there are no Pattern Delays configured, this option has no effect.

- Press the ⓞ key to disable/ enable these delays, as appropriate.

```
[U0 Pattern Delays]     23/02/11 12:02:17
1:ON    ✔           2:OFF



OK:Confirm                      ←:Cancel
```

- Press the [←] key to cancel and make no changes.

6   Delayed Day Mode Operation

- The panel may have been configured to operate in a delayed day mode during daytime.

- If this is the case, during this time high sensor signals received from a detector will generate a fire alarm indication on the panel LCD, internal buzzer and LED indicators but delay the ringing of the sounders. The panel will initiate a full fire alarm condition, as well as calling the fire brigade, if no action is taken on this warning within a specified period.

- If a second device indicates a fire alarm (from the same or another zone), the delayed day mode function will be overridden and the panel will initiate a full fire alarm condition immediately or, alternatively, call the fire brigade.

- This function is only available for use at Level 2 if delayed day mode was configured at Level 3 by the installer/ maintenance provider.

- The delayed day mode may have been configured to only operate at specified times of the day.

- When the Delayed Day Mode Function is in the active period the Delayed Mode LED is lit.

6.1   Stage 1

- When a fire alarm condition is detected during delayed day mode, the internal buzzer will sound. The sensor location (including zone location and point location text) is shown on the display together with a warning that the panel has entered stage 1 of a delayed alarm. The time remaining to acknowledge the alarm is indicated and counts down from the programmed limit.

- The LCD displays the zone in fire device details:

Or when reference numbers are used:

```
FIRE     1/1        Stage1 TIME : 57s
Zone  : 1           Main Building
Device: OPT         Main Reception
      L1 A001
Press ← to view L1 Menu
Press EXTEND DELAY key to start stage 2
```

```
FIRE     1/1        Stage1 TIME : 57s
Zone  : 1/6         Main Building
         OPT        Main Reception

Press ← to view L1 Menu
Press EXTEND DELAY key to start stage 2
```

- If the warning is not acknowledged by pressing EXTEND DELAY within the time allowed for stage 1, then a full fire alarm condition will be raised and the sounder outputs will activate.

- Press EXTEND DELAY within the time allowed to enter the stage 2 (investigation phase) of the delayed alarm.

- Press MUTE BUZZER to silence the internal buzzer.

- Press the ⬜ key to see the access Level 1 menu screen if it is necessary to view other event conditions during the delay period.

```
First Fire  Zone 1          12:15 |#Zones
Latest Fire Zone 1          12:15 |   1
[Menu L1]        Fri 02/07/2010 12:15:19
1. Fires (1)        2. Faults (0)
3. Disabled (0)     4. In Test (0)
5. Access Level 2/3
```

- Enter the number of the desired option to view details of the event(s). In the example below the 'Fires' option was selected.

Or when reference numbers are used:

```
FIRE     1/1        Stage2 TIME : 81s
Zone  : 1           Main Building
Device: OPT         Main Reception
      L1 A001
Press ← to view L1 Menu
```

```
FIRE     1/1        Stage2 TIME : 81s
Zone  : 1/6         Main Building
         OPT        Main Reception

Press ← to view L1 Menu
```

6.2   Stage 2

- The stage 2 timer commences counting down as soon as the EXTEND DELAY key is pressed.

- If the panel is not reset using the SYSTEM RESET key within the time allowed, then a full fire alarm condition will be raised and the sounder outputs and fire alarm transmission output will activate.

Or when reference numbers are used:

```
FIRE     1/1        Stage2 TIME :116s
Zone  : 1           Main Building
Device: OPT         Main Reception
      L1 A001
Press ← to view L1 Menu
```

```
FIRE     1/1        Stage2 TIME :116s
Zone  : 1/6         Main Building
        OPT         Main Reception

Press ← to view L1 Menu
```

- Investigate the cause of the fire alarm signal.

- If the fire alarm is found to be a false alarm, press the SYSTEM RESET key within the time allowed thereby resetting the panel.

- If the fire alarm is found to be genuine, activate a call point to override the remaining delays if possible (in any case, the panel will automatically sound the alarms at the end of the stage 2 period).

- Press the MUTE BUZZER key to silence the internal buzzer.

- Press the ⬐ key to see the access Level 1 menu screen if it is necessary to view other event conditions during the stage 2 period.

> **Manual Call Points will always generate an immediate fire alarm condition regardless of any delayed day mode settings.**

7 Keyswitch and Function Key Operation

- The optional keyswitch and the function keys (F1 and F2) may have been configured to perform a dedicated function as described below. If the installer/ commissioning engineer has configured any of these functions, he will have explained and demonstrated these functions to you.
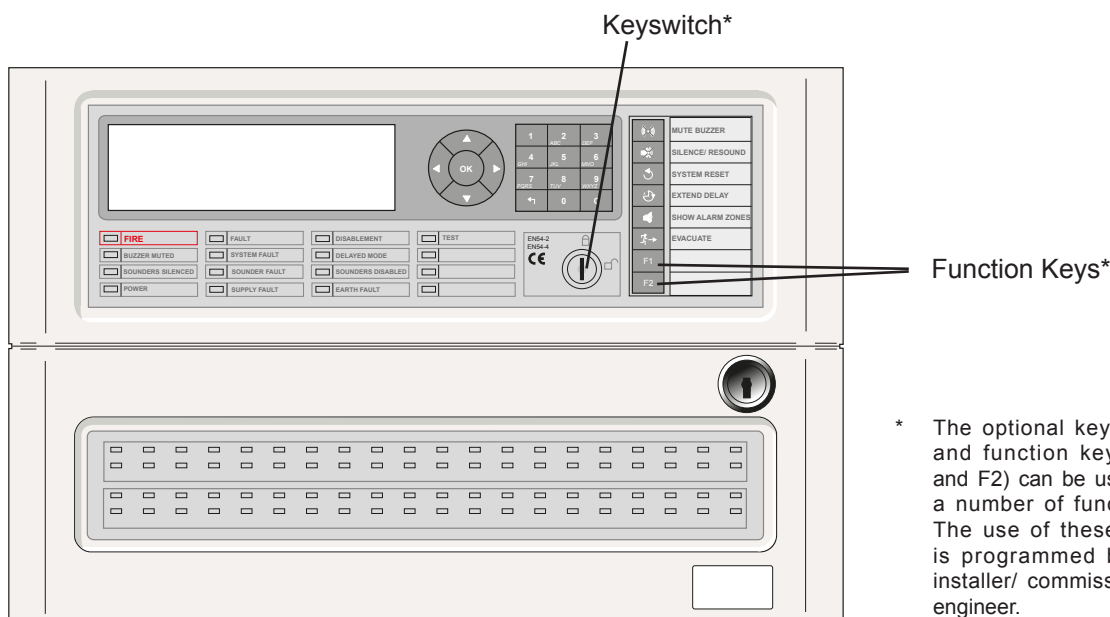
Keyswitch*

Function Keys*

* The optional keyswitch and function keys (F1 and F2) can be used for a number of functions. The use of these keys is programmed by the installer/ commissioning engineer.

Figure 2 - Keyswitch and Function Keys

7.1 Keyswitch

- The keyswitch can be used to enable Level 2 access, provide a 'class change' input or provide a 'bomb alert' input.

- If the function of the keyswitch is to provide Level 2 access, insert the key and turn clockwise. All Level 2 functions are now available and the entry of the passcode is not requested. The key is trapped in the lock, while in this position, and cannot be removed. To turn off Level 2 access, turn the key anti-clockwise and remove.

- If the keyswitch has been programmed for 'class change' or 'bomb alert' functions, insert the key and turn clockwise. The sounders/ bells will ring as programmed while the key is in this position. Turn the key anti-clockwise and remove to silence the sounders/ bells.

7.2 Function Keys

- The function keys (F1 & F2) can be programmed to act as a 'class change' input or a 'bomb alert' input, to switch the detection mode on/ off, Transparent action, Disable Group or Disable ALL Relay and control outputs. The function keys require Level 2 access and the display will prompt for entry of the passcode before the action is performed (alternatively, insert and turn the key if the keyswitch is programmed to provide Level 2 access).

- For class change and bomb alert, press the button once to turn on the sounders/ bells and then press the button again to turn off the sounders / bells.

- For 'detection mode' use, each press will turn on (start) or turn off (end) the operation of the detection mode function (refer to **Section 5.3.5 Disable/ Enable Detection Mode** for further information).

8 Level 3 Programmer Functions

- Refer to the Product Manual (996-203-60n-X) for complete information on installation, commissioning and programming the fire alarm control panels.

9 Maintenance/ Inspection

- The Equipment Owner shall ensure that a periodic Inspection and Servicing Maintenance Schedule be followed. The implementation of a maintenance contract with a 3rd party approved Fire Alarm Service and Maintenance Company is recommended.

- The aim is to provide a complete check and test of the entire fire alarm system within a 12-month period.

- The Equipment Owner shall appoint a single, named Responsible Person to oversee all aspects related to the fire alarm system, including record keeping, testing and false alarm management. Refer to the standard for a complete list of the Responsible Person's recommended duties.

- In accordance with best practice, the Responsible Person should maintain a log book to record all events resulting from or affecting the system. The log book should be kept in a place accessible to authorized persons (preferably near the main panel).

- All events should be properly recorded (events include real and false fire alarms, faults, pre-alarm warnings, tests, temporary disconnection's and service visits). A brief note of any work carried out or outstanding should be made.

9.1 Inspection / Testing

- It is recommended that the Responsible Person undertakes the following test schedule.

9.1.1 Daily Attention

- Check the following:

    1. The panel should indicate normal operation & if not the fault should be recorded in a log book & reported to the servicing organisation.

    2. Any faults previously reported have received attention.

9.1.2 Weekly Attention

- Check the following:

    1. Every week, at approximately the same time each week, a manual call point should be operated during normal working hours. Check that the system responds to the fire alarm and turns on appropriate alarm outputs. Where permissible, any link to the fire brigade or remote manned centre should also be operated.

    2. A different manual call point shall be used each week so that ALL manual call points are exercised in rotation.

9.1.3 Monthly Attention

- Check the following:

    1. Any stand-by generators should be started and fuel levels checked.

9.2   Log Book Examples

-        Example pages are provided below and can be photocopied to produce a suitable log book. The sample below is for reference data (e.g. the name of the responsible person), while the sample on the next page is for the entry of event information.

REFERENCE DATA

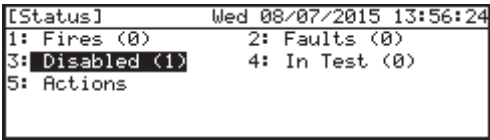|		
Site Name and Address:		
Site Telephone Number:		
Responsible Person:	Date	
	Date	
	Date	
	Date	
The system was installed by:		
	Date	
And is maintained under contract by:		
	Until	
Contact Telephone Number:	if Service is Required.	

Table 7 - Logbook Reference Data

EVENT DATA

| Date	Time	Counter Reading	Event	Action Required	Date Completed	Initials

Appendix 1- Disablement Conditions

1.1   User Access Level 1 Screen Information

- Whenever disablement conditions exist on the system the Status Normal screen displays the message 'The system has disablements present.'. Further information about all current disablement(s) may be obtained using the user access Level 1 Status menu as shown below:

```
[Status]        Wed 08/07/2015 13:56:24
1: Fires (0)        2: Faults (0)
3: Disabled (1)     4: In Test (0)
5: Actions
```
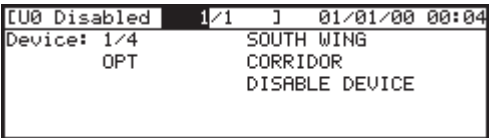
- Status menu option **3: Disabled** shows that there is currently a disablement count of '1'. To view more information regarding the disablement condition(s), either use the navigation keys to move the highlight to option **3: Disabled (n)** and press the (OK) key or, using the numeric keypad, press the '3' key to directly select this menu option.

- The **Disabled** menu screen is displayed now; the user is presented with options to select either 'Show All Disablements (n)' to list all zone disablements on the system or where partial zone disablement conditions exist, to list these instead.

- The **Disabled** menu screen in this working example shows that option 1 of 2 in the list is currently selected, i.e. '1/2':

Selected item highlighted   Total items in list

```
Disabled   1/2              ▲ ▼ ◀ ▶
Show All Disablements (1)
PART  Zone   1              SOUTH WING
```
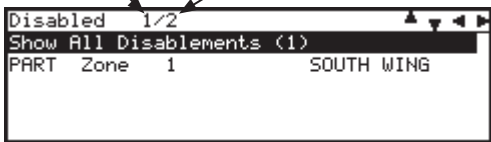
- With this option highlighted press the (OK) key to select 'Show All Disablements (n)' to view all current disablement events. Individual disablement events may then be viewed, as in the example below of the disablement of an optical device (OPT) on zone 1:
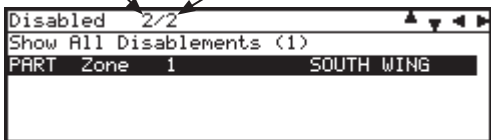
```
[U0 Disabled   1/1  ]  01/01/00 00:04
Device: 1/4         SOUTH WING
        OPT         CORRIDOR
                    DISABLE DEVICE
```

- For multiple disablement events use the ▲/▼ keys to select and view their details.

1.1.1 Selecting Individual Zones

- To view information relating to zones with partial or full disablement, press the [↰] key to return to the **Disabled** menu screen.

Selected item highlighted   Total items in list

```
Disabled   2/2              ▲ ▼ ◀ ▶
Show All Disablements (1)
PART  Zone   1              SOUTH WING
```

- Use the navigation keys to select from the list of disabled zones the one to be viewed. Press the (OK) key. Details of the disabled devices in the selected zone may now be viewed. In these examples zone 1 is partially disabled, only one device, an optical sensor, has been disabled.

```
Disabled in Zone 1     1/1      ◀ ▶
D  1/4    OPT   CORRIDOR
```
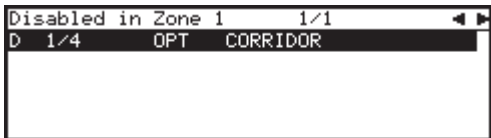
1.2 User Access Level 2 Screen Information

- After entering either a user access Level 2/3 passcode select opton **4: View** from the **Actions** menu. Then, using the navigation keys to highlight option **4: Disabled** and pressing ⓞⓚ key or by using the numeric keypad, enter '4' to select option **4: Disabled** directly.

```
[U0 View]        Wed 08/07/2015 15:09:39
1:Devices        2:Log
3:Faults         4:Disabled
5:Service Info   6:Alarm Count
7:Voltages       8:System Info
```

- A list of disablement items is displayed; the first item listed is 'Show All Disablements' with a count of disablement events, '(1)' in this example, followed by a list of disabled zones with an indication of their disabled status: partial or full. In the example shown here zone 1 has a partial disablement status and there are no active full zone disablements:

Selected item highlighted   Total items in list

```
[U0 Disabled   1/2   ]           15:09
Show All Disablements (1)
PART  Zone   1            SOUTH WING
```

- Select the first option 'Show All Disablements' to view ALL the disablement events. Selection of individual disablement events may be carried out from this screen, in this example only the partially-disabled zone 1 is available for selection and shows that the zone only has one disabled optical (OPT) sensor, as shown below:

```
[U0 Disabled   1/1   ]  01/01/00 00:04
Device: 1/4       SOUTH WING
        OPT       CORRIDOR
                  DISABLE DEVICE
```

- For multiple disablement events use the ▲/▼ keys to select and view their details.

1.2.1 Selecting Individual Zones

- To view information relating to zones with partial or full disablement, press the ↰ key to return to the **Disabled** menu screen.

Selected item highlighted   Total items in list

```
[U0 Disabled   2/2   ]           15:13
Show All Disablements (1)
PART  Zone   1            SOUTH WING
```

- Use the navigation keys to select from the list of disabled zones the one to be viewed. Press the ⓞⓚ key. Details of the disabled devices in the selected zone may now be viewed. In these examples zone 1 is partially disabled, only one device, an optical sensor, has been disabled.

```
[U0 Disabled in Zone 1    1/1   ]
D  1/4     OPT   CORRIDOR
```