SYSTEM 32000

*A*NALOGUE

*A*DDRESSABLE

*F*IRE *D*ETECTION

AND *A*LARM *S*YSTEM

Operating Manual
Version 3.3X
32499 Issue 1
December 1995

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Preface

This is the first issue of Operating Manual for System 32000. This manual covers instructions for operating the equipment in a **System 32000**, both standalone and network.

There are step by step instructions on what to do in an emergency and when operating other controls.

Associated Documents

32299   User pack for System 32000 (containing Installation Design Guide and Installation Manual)

Conventions

> *NOTE :* *A note highlights important text that is normally hidden in the main text.*

> *CAUTION :* *A caution is given to prevent damage to equipment.*

> *WARNING :* *A warning is given of dangerous conditions that may result in injury or death.*

| Issue Record			
Section	Issue	Date	Comments
Prelims	1	12/95	This is the first issue of Operating Manual System 32000
1	1	12/95	
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Customer feedback

If you have any comments on this manual, then please provide them below. Post completed sheet to the address overleaf or pass on to your area sales representative.

Thanks

Your name:_____

Address:_____

_____

_____

Manual number and title_____
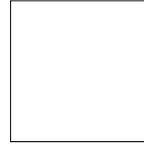
Technical Author
Gent Limited
Waterside Road
Leicester
LE5 1TN

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User Responsibility

It is recommended that the **persons responsible** for the fire alarm system should become familiar with the procedures on how to operate the controls and interprets indications given at specific products. Adequate **training** should also have been given from appointed personnel.

British Standard   If your system is designed with a **32020 Control Panel** that meets the requirements of *BS 5839:Part 4:1988,* then the use of **[Disable] [IO Line]** option under the **[Control]** menu and **[Set Clock]** option under the **[Setup]** menu using the 'Customer Password' is not recommended.

Daily

The British Standard code of practice for Fire Detection and Alarm Systems for Buildings, **BS 5839:Part1:1988**, states that the system should be inspected daily to ensure that a normal indication is given at the control and indicating equipment and that any previously indicated Fault and Warning condition has received appropriate attention.

a)   It recommends entry into the Log Book provided of all the system events for future reference. **To view past events look at the Historic Events Log.**

b)   The person inspecting the protected premise can ensure that the use of the area(s) inspected has not changed such that the detection and alarm devices have become inappropriate.

c)   The area(s) can be inspected to check that no unsafe practices that could lead to fire are being undertaken.

Weekly

At Weekly intervals a different **Fire Sensor** or **Manual Call Point** of the system should be tested to ensure the system is capable of operating under alarm condition.

a)   The operation of the **Alarm Sounders** should be checked, which also provides a regular reminder to those occupying the premises that there is a fire alarm system with a particular characteristic sound.

b)   The test should be performed at a regular time to avoid confusion between a test and a genuine fire alarm.

Quarterly

At quarterly intervals the system should be inspected and any work necessary should be performed by trained Maintenance engineer. The servicing organistion will be able to help on service and maintenance of System 32000

Battery Replacement

> **NOTE:** *Any servicing work on the 32000 System must be carried out by the servicing organisation.*

Panel Battery

Under normal operating conditions the maintenance free **lead acid** batteries in the Control Panel, Repeat Panels and Mains Powered Interface Units can have a useful life of up to 5 years from the date of manufacture.

> **NOTE:** *It is recommended that these batteries are replaced at 4 Yearly interval from the date the 32000 System is first commissioned.*

Memory Card Battery

Under normal operating conditions the **lithium** battery on the Memory Card in the Control Panel can have a useful life of up to 10 Years from the date of manufacture.

> **NOTE:** *It is recommended that the Memory Card is replaced at 10 Yearly interval from the date the 32000 System is commissioned.*

Manual Call Point

Testing a Manual Call Point

Push the test key through the hole in the underside of the call point to engage the test cam mechanism and push to operate the cam mechanism.

At this point the test key is retained in the call point and pulling it out will reset the glass.

> **NOTE:** *The appropriate sounders will be activated by this test. To silence alarms and reset see **Emergency Controls**.*

Replacing a broken Glass

WARNING: *Take appropriate precautions when clearing broken glass to prevent injury.*

NOTE: *A water resistant version of manual call points will have two gaskets, a Cover/glass gasket and a Spacer/cover gasket, which must be replaced in their respective positions.*

These procedures assume the cover on the manual call point is open and any broken glass has been cleared.
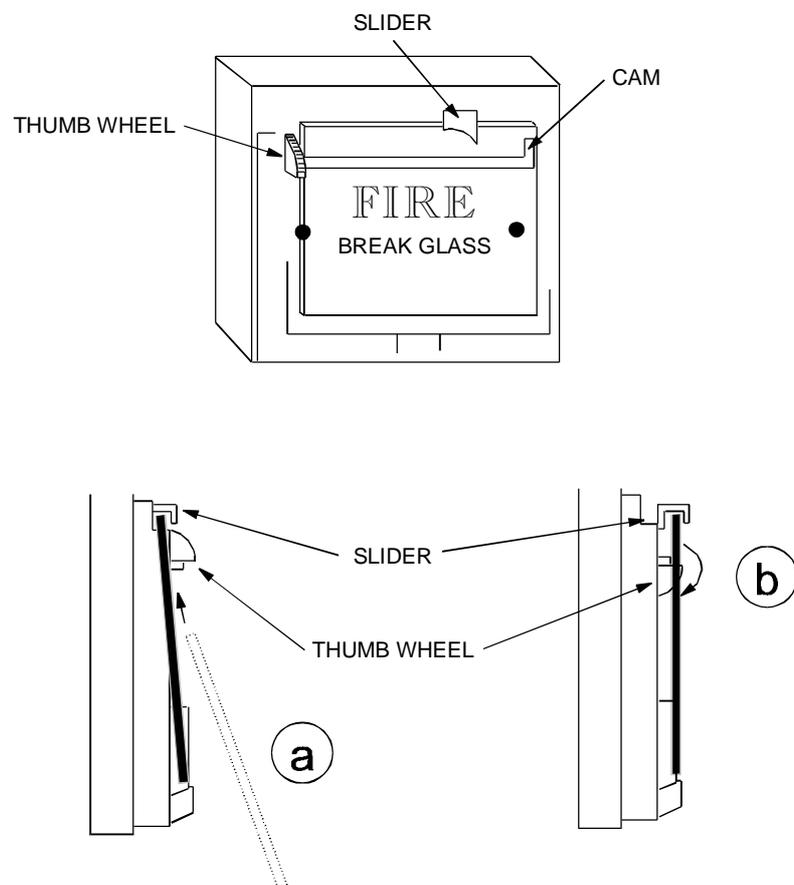
emfl216

Figure 1-1 Replacing a broken MCP glass

a) Feed the glass upward to push the cams down and fit under slider, locate bottom of glass into recess.

b) Hold the bottom of glass in position and rotate the thumbwheel quadrant to raise the top of the glass.

c) Fit the call point cover by hooking it into the top of the unit and making sure that the glass is properly seated (held down) tighten the cover fixing screw.

Installing the Printer Paper

a)   Open the control panel door using the door key.

b)   Remove the old paper roll from inside of door assembly.

c)   Fit a new paper roll.

d)   Remove the thumb screws to hinge printer board back.

e)   Insert paper into the printer, ensuring that the paper comes off the roll at the bottom and passes over the till roll bar.

FIT PAPER ROLL WITH
PAPER PASSING OVER
LOWER TILL ROLL BAR

PAPER

emfl98
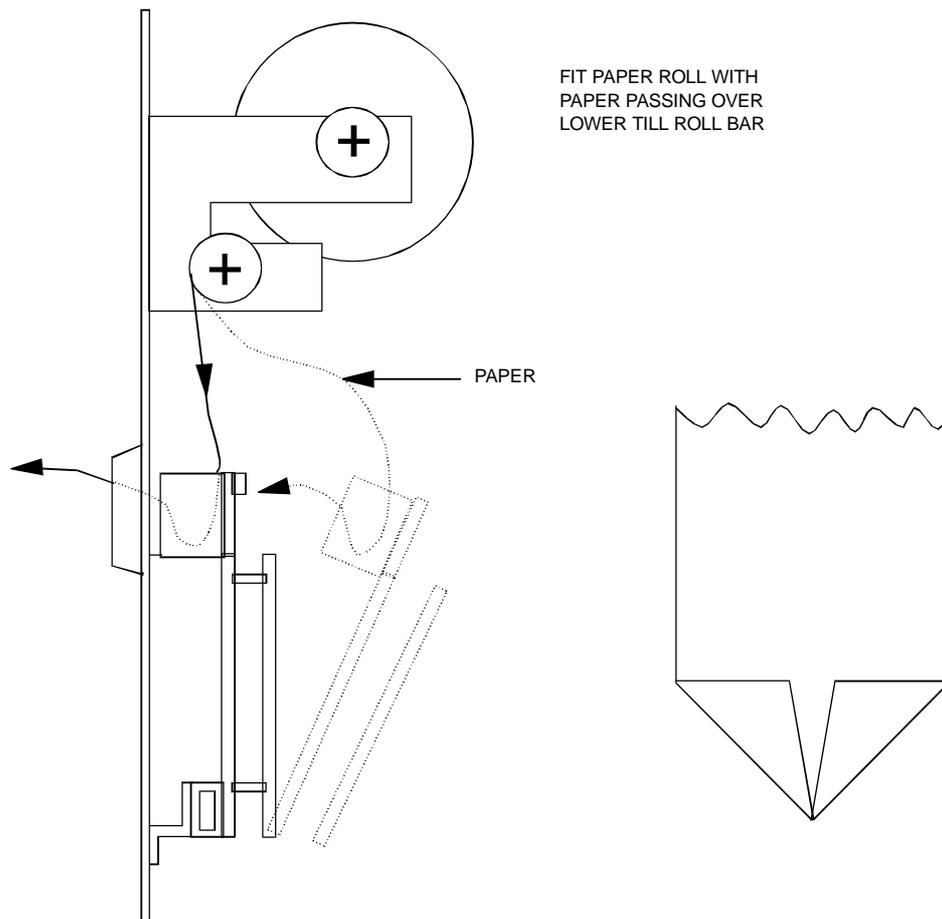
Figure 1-2 Loading the printer paper

f)   Secure the printer board by re-fitting the thumb screws.

g)   Close the control panel door and lock it with the door key.

h)   Carry out a printer paper test, see section on using the printer.

Control and indicating equipment

This control and indicating equipment covered in this manual include:
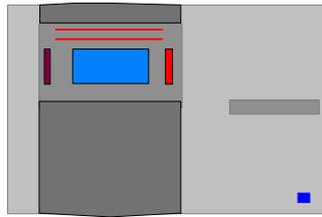
FIRE CONTROL
PANEL
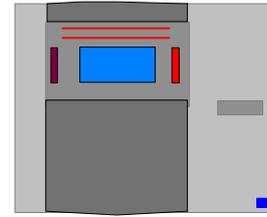
REPEAT PANEL

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Figure 2-1 Control and indicating equipment

☐   32020 Fire alarm control panel

☐   32520 Fire alarm repeat panel

Visual and audible Indications

**Control &
Repeat panels**
The indications given of events are means of messages on a **display/ screen** (Liquid Crystal Display - LCD), accompanied with illumination of appropriate colour coded **light** and an audible sound from within the panel given by a two tone buzzer. An event that results in a Fire, Fault or Warning condition would automatically activate these indications.

Normal Condition

**Control &
Repeat panels**
A normal operating condition is when there is no fire, fault, warning or test condition present and the mains and standby power supplies to the equipment remains healthy. Under these conditions the display shows a **Panel Healthy** message and the green **Power** light is lit.
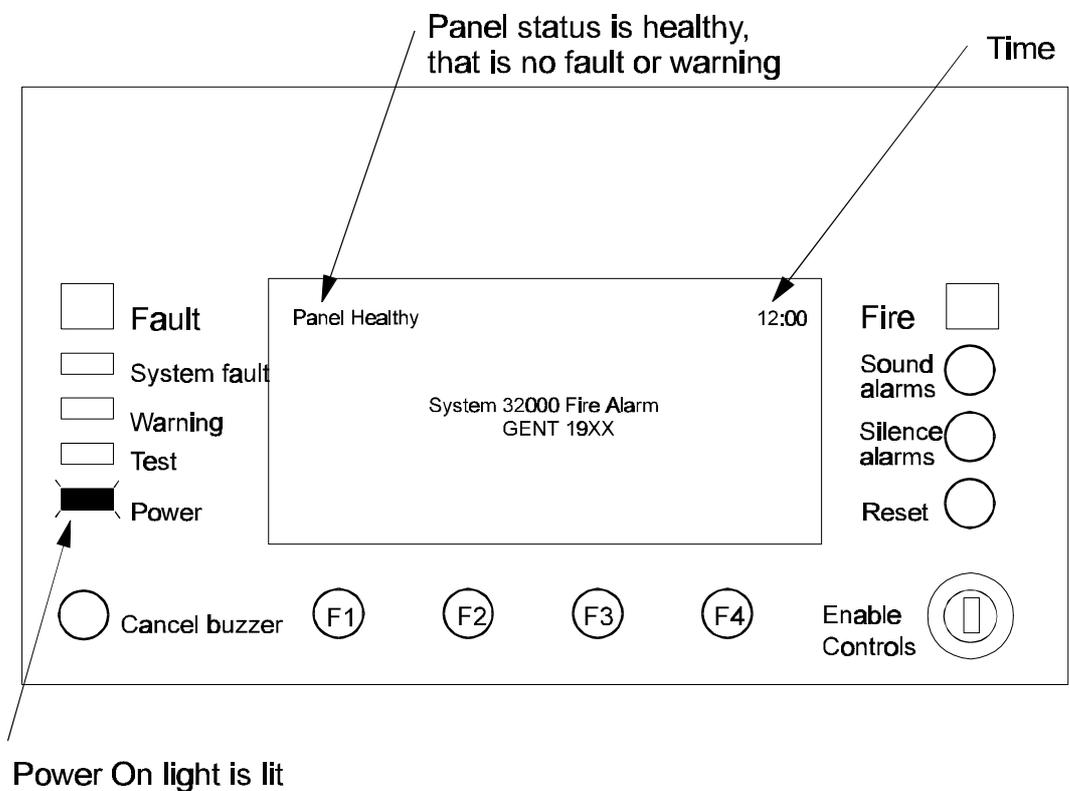
emfl44

Figure 2-2 Normal indications

Quick Reference

All events must be recorded in the Log Book.
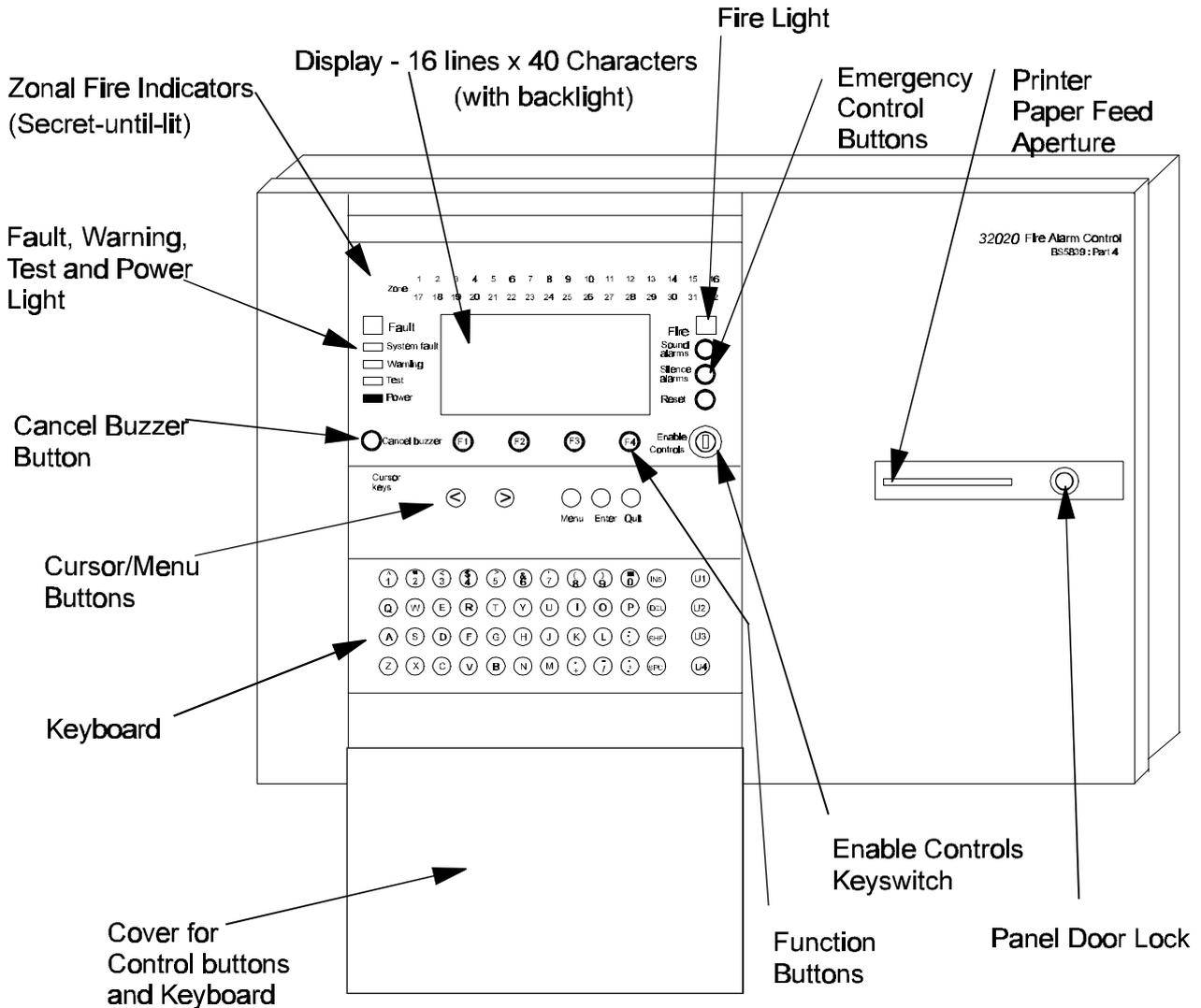
Figure 3-1 Control Panel

emfl45

NOTE: *The Repeat panel facia is the same as the Control panel facia (above), with the exception that the Repeat panel has no printer.*

NOTE: *All customer controls described in this manual are accessible by using an Enable Controls key. The key which opens the door should be accessible to persons responsible for the fire alarm system.*

Fire Alarm

Manual call of fire
An alarm of fire can be raised by operating a manual call point.

a)   Goto the nearest manual call point that is located away from the fire hazard.

b)   Press hard with thumb onto the centre of the glass.

Automatic fire detection
A fire event is automatically detected and alarms are automatically actioned by the control panel.

FIRE Condition

To silence alarms press the *Silence Alarms* button.

To reset the system press the *Reset* button.

> **NOTE:** *Excess heat and smoke must be cleared from the fire sensors initiating the Fire conditions. Where a Manual Call Point glass has been broken this must be replaced.*

The indications are automatically cancelled when the system is RESET.

FAULT Condition

Press the *Cancel Buzzer* button.

All fault repair should be undertaken by engineers responsible for maintaining the Fire Alarm System.

If necessary contact your servicing organisation for advice.

WARNING Condition

A warning condition occurs when there is a disablement within the fire alarm system.

Removal of warning condition should be undertaken by engineers responsible for maintaining the Fire Alarm System.

Actioning Alarm

Sound Alarms

To sound all alarms in an emergency press the *Sound Alarms* button.

Silence Alarms

With the emergency over the alarms can be silenced, press the *Silence Alarms* button.

Other controls

Also covered in more depth in further sections of this manual.

Testing the Display and Indicators

Press the *menu* button and then select **[Test/Eng] and [Disp Test]**.

Master Alarms

Press the *menu* and select **[Control].**

To start/stop the **Master alarms** press **[Start MA] or [Stop MA] and** then select **[Enter]**.

Zone Alarms

Press the *menu* and then select **[Control]**, **[UserCode]** and enter 'access code' and then press *Enter* button.

Select **<etc>**, **[Zone]** and input a Zone number .

To sound zone alarm, select **[Action]** and then **[Alert] or [Evacuate]; OR**

to stop Zone alarms select **[Off]** and the appropriate signal to stop **[All]** or **[Alert]** or **[Evacuate]**. Select **[Enter]**.

NOTE: Silence Alarms may also be used to stop Zone alarms. This will stop ALL zones plus the master alarms.

Menu Tree

[Control]	[Setup]	[Info]	[Test/Eng]
Start MA		Fire	DispTest To test all LEDs and display
Stop MA	Set Clock	Fault	New Pass
Enable ⎫ Outstation, IO Line, Zone, Master Alarm	Modify ⎫ Label: Outstation, IO Line, Zone, Local, Custom	Warning	
Disable ⎭	Enter ⎭	Events	
Zone Action: Evac, Alert or Off	Save	Label	
Printer On / Off		CardStat	
		Status Outstation, Zone or Fireplan	
		SubFault	
		Loop Map	
		TimeAvg	

emfl215

Figure 3-2 Quick reference menu tree

Emergency Controls

Fire Alarm

Manual call of fire

An alarm of fire can be raised by operating a manual call point.

a)   Goto the nearest manual call point that is located away from the fire hazard.

b)   Press hard with thumb onto the centre of the glass.

> **NOTE:** *The glass will crack vertically (due to a small score on its reverse side) and collapse into the call point.*

> **NOTE:** *A clear label will hold the broken glass together to prevent injurious splinters.*

Automatic fire detection

A fire event is automatically detected by the Control Panel using data from the sensors and fire inputs from interface units in a standalone system.

An alarm is automatically actioned by the control panel based on preconfigured system setup.

FIRE Condition


```
    Zone        1
```

```
┌─────────────────────────────────────────────────┐
│  1st Fire: Chemical Store (Block 1)        12:00 │
│                                                   │
│                                                   │
│   First fire occurred at                          │
│   Time 12:01.01 Mon 1st January 19XX             │
│                                                   │
│                                                   │
└─────────────────────────────────────────────────┘

      (F1)       (F2)       (F3)       (F4)
```

Fire ■

Sound alarms ○

Silence alarms ○ ⟵ Press to Silence alarms

Reset ○ ⟵ Press to Reset the System

Enable Controls (⬚) ⟵ Operate the keyswitch first
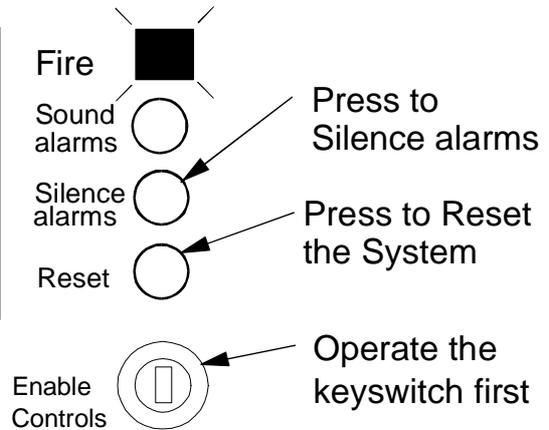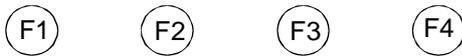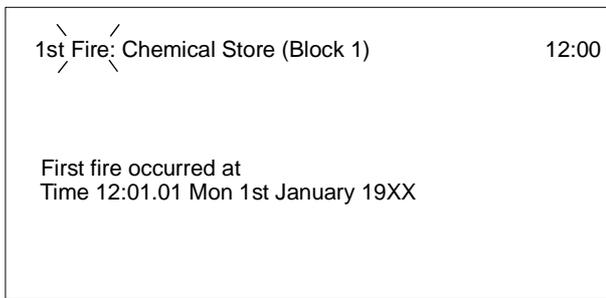
fl48

Figure 4-1 Fire indications and controls

To Silence Alarms

With the emergency over and to silence alarms :

Press the *Silence Alarms* button. Notice the alarms are **silenced** and the **fire buzzer** gives an intermittent sound and the display gives an 'Alarm Silenced' message.

To Reset the System

Resetting the system

Prior to resetting the Fire Alarm System, any excess heat and smoke must be cleared from the fire sensors initiating the Fire conditions. Where a Manual Call Point glass has been broken this must be replaced.

With the alarm activating device cleared for normal operation:

Press the *Reset* button. Notice the display provides the following message 'Sounders stopped System being Reset - please wait....'. The indications prior to the fire condition are resumed after a short delay.

Fire Indications

A fire condition occurs when a fire has been detected in the system.

☐   System Alarms are activated automatically

☐   The Panel provides the following indications:

- Display shows time, date and location of fire event(s).
- Red zone light is lit
- Internal Fire Buzzer is active
- Printer provides a listing of events if it is On.

Multiple Fires   The '1st fire' message is given at the top of the display. For multiple fires, all 'New Fire' information events will appear beneath the '1st Fire'. The display will scroll the information automatically should there be more fires then can appear on the display.

The second line on the display will show NewFire information. Every four seconds the **NewFire** text will toggle to show the new fire number, e.g. **Fire n**.

NOTE: *If device label is not setup then the display shows the device (outstation) and loop number (plus the node and domain numbers if the fire is from another panel on the network).*

Fire detection and indication   Fire events are automatically detected by the Control Panel using data from the Fire Sensing devices, Manual Call Points and interface fire inputs in the Standalone Fire Alarm System.

NOTE: *To prevent operator confusion, **Fault and Warning events** are not displayed by the Control panel during a Fire Condition. Messages and light indications are inhibited until after the incident is over and the system is reset.*

Log Book   All fire events must be recorded in the **Log Book** provided.

Control Menu

NOTE: *When the Control Panel is in a Fire Condition, the only other menu accessible is the [CONTROL] menu.*

The **[Control]** menu provides the controls for Master Alarms, Zone Alarms, Auxiliary Relays etc, see OTHER CONTROLS part of this manual. However the disabling and enabling functions are only accessible during non-fire conditions.

Fire Events Log   Each Fire event is automatically logged in the **Fire Events Log** at the Control Panel and these events can be recalled using the **[Info]** menu. This menu is only accessible in non-fire condition.

FAULT Condition
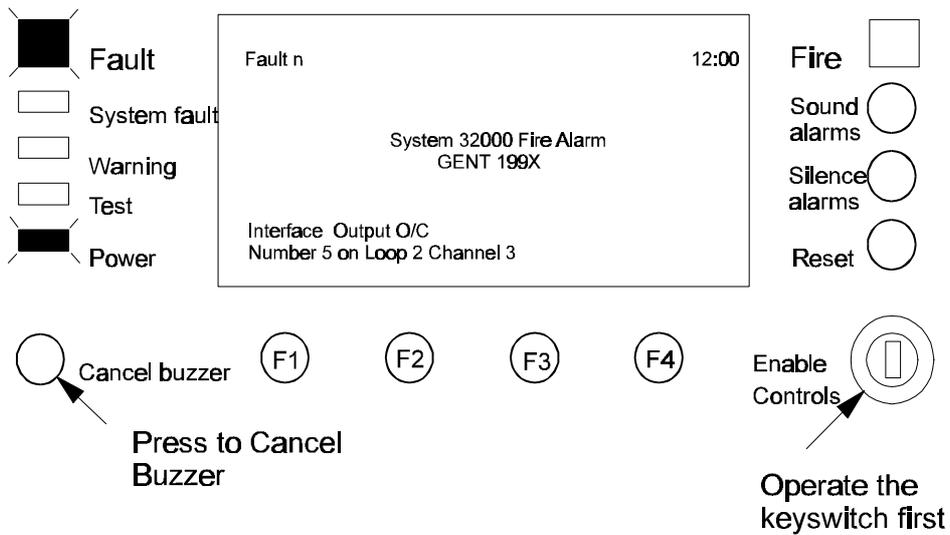
emfl49   Figure 4-2 Fault indications and controls

To Cancel the Fault Buzzer

Press the *Cancel Fault Buzzer* button to stop the fault buzzer from sounding.

Fault Indications

A fault condition occurs when there is a failure within the system that usually requires rectification action.

☐   The Panel provides the following indications:

- Display shows the location of latest fault event
- Amber Fault light is lit
- Internal Fault Buzzer is active
- Printer provides a listing of events if it is On.
- Total number of active faults in the system appears in the top left of the display.

> **NOTE:** The **Fault** light will give a flashing indication when the Control panels mains supply is unhealthy and the the **Power** light is Off.

> **NOTE:** If the device label is not setup then the display shows the device outstation and loop number (plus the node and domain numbers if the fault is from another panel on the network).

Action to Rectify a Fault Event

a)   Read the message display for information on the fault event.

b)   Take necessary rectification action. All fault repair should be undertaken by Engineers responsible for maintaining the Fire Alarm System.

c)   If necessary contact our servicing organisation for advice.

d)   All fault events should be recorded in the **Log Book** provided.

Fault detection and indication

Fault events are automatically detected by the Control Panel using data from the System and the Panel itself. Usually a fault event is generated as a result of abnormal performance for the System.

> ***NOTE:*** *To prevent operator confusion, Fault events are detected by the Control panel during a Fire Condition, however their indications are inhibited until after the incident is over and the system is reset.*

Multiple Faults

The number 'n' following the 'Fault' on top left of the display, shows how many active fault events there are present in the Fire Alarm System.

Fault Events

Each Fault event is automatically logged in the Historic Events Log at the Control Panel and these events can be recalled using the **[Info]** menu. This menu is only accessible in non-fire conditions.

> ***NOTE:*** *The information in the active [Fault] events log is automatically cancelled when the condition is removed.*

During Fire conditions

> ***NOTE:*** *The messages and light indication of **fault**s are inhibited during a fire condition.*

Typical Fault Conditions

Event	Meaning	Action
Mains failed	The mains supply to the control panel has failed	Restore the mains supply to the control panel
Battery discharged *n*	The battery supply to the control panel has been fully discharged	Check the battery and replace it if necessary
Master Alarm(s) open circuit or short circuit *n*	There is an open or short circuit fault on the master alarm wiring	Check the wiring and remove the fault.
Wiring changed short circuit at card *n*	There is a short circuit on the loop *n* wiring	Identify the outstation (device) where a cable fault has occurred and remove the fault.
Interface input Open/Short circuit	There is an open or short circuit on the input line of an interface	Locate and remove the wiring fault
Outstation Mains failed	There is a mains supply failure at an interface unit or a repeat panel.	Check the fuse and mains supply to the equipment.
Outstation Battery discharged	The battery supply at an interface unit or a repeat panel is fully discharged	Check the battery and replace it if necessary
Chamber removed	Device not working as chamber (bottom section) is missing.	Check the indicated device and replace chamber.

Table 4-1 Typical faults

WARNING Condition
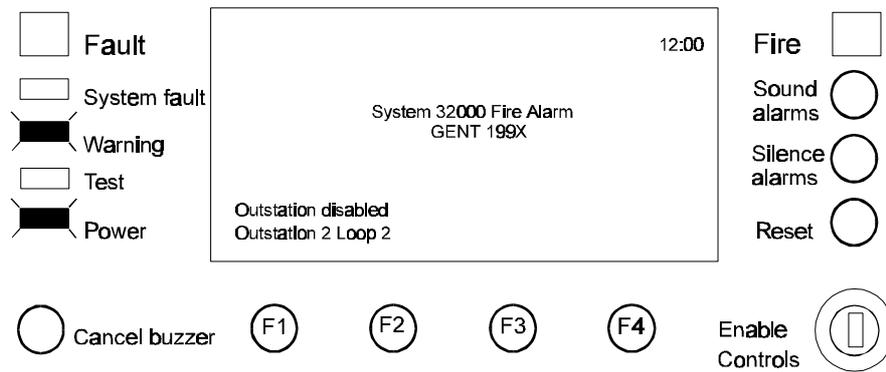
emfl50

Figure 4-3 Warning Indications

Warning Indications

A warning condition occurs when there is a disablement within the fire alarm system.

☐ The Control Panel provides the following indications:

- Display shows latest warning event

- Amber Warning light is lit

- Internal **Warning Buzzer** is active (an intermittent beep can be heard)

- Total number of active warning in the system appears in the top left of the display.

NOTE: The warning light will give a flashing indication when the control panels mains supply is unhealthy and the the Power light is Off.

Action to Remove a Warning Event

a)   Read the message display for information on the warning event.

b)   Take necessary rectification action. All warning rectification should be undertaken by Engineers responsible for maintaining the Fire Alarm System.

c)   If necessay your servicing organisation should be contacted for advice , section Viewing current warning events.

d)   All warning events should be recorded in the **Log Book** provided.

Warning detection and indication

Warning events are automatically detected by the Control Panel using data from the system. Usually a warning event is generated if there has been a disablement of any part of the system.

> *NOTE: To prevent operator confusion, Warning events are detected by the Control panel during a Fire Condition, however their indications are inhibited until after the incident is over and the system is reset.*

Multiple Warnings

The number 'n' following the 'Warning' on top left of the display, shows how many active warning events there are present in the Fire Alarm System.

Warning Events

Each Warning event is automatically logged in the Historic Events Log at the Control Panel and these events can be recalled using the **[Info]** menu. This menu is only accessible during non-fire conditions.

> *NOTE: The information in the active **Warning** events log is automatically cancelled when the condition is removed.*

During Fire conditions

> *NOTE: Messages and light indication of **warnings** are inhibited during a fire condition.*

Typical Warning Conditions

Event	Meaning	Action
Outstation disabled at card *n*	The device connected to the loop circuit have been manually or automatically disabled	If manually disabled then investigate and, if appropriate, re-enable the outstation
Alarm zone disabled at card *n*	The sounders in a zone on loop *n* have been manually or automatically disabled	If manually disabled then investigate and, if appropriate, re-enable the sounders
Disabled Relay *n*	The relay *n* in the control panel has been manually or automatically disabled	If manually disabled then investigate and, if appropriate, re-enable the aux relay
Master alarms disabled	The master alarms have been manually or automatically disabled	If manually disabled then investigate and, if appropriate, re-enable the master alarms

Table 4-2 Typical warnings

Global Alarms

Sound Alarms

Figure 4-1 Sound alarms
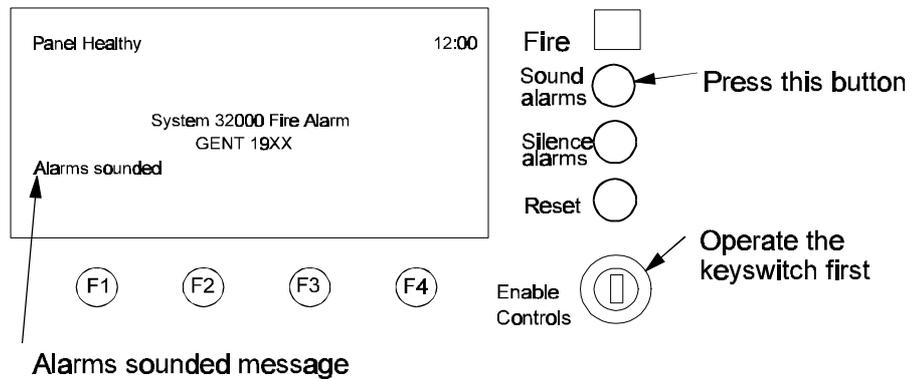
emfl46

To sound all alarms of the Fire System in an emergency:

Press the *Sound Alarms* button. Notice, the alarms of the fire system are sounding and the display gives the an 'Alarms sounded' message, plus the internal buzzer sounds.

Silence Alarms

Figure 4-2 Silence Alarms
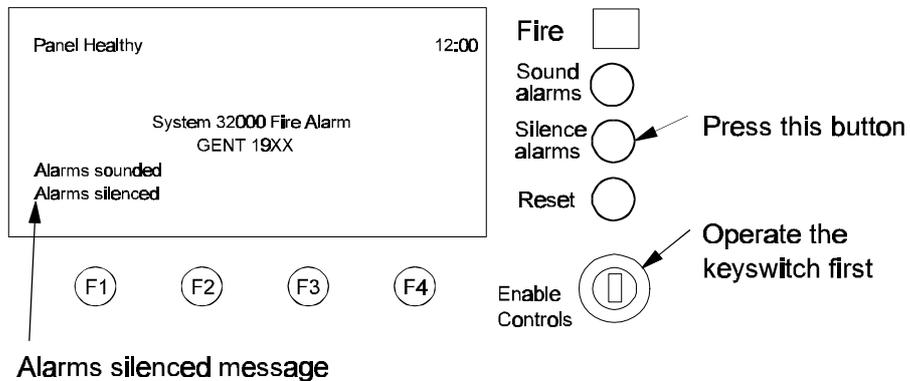
emfl47

With the emergency over the alarms can be silenced:

Press the *Silence Alarms* button. Notice, the alarms of the fire system are silenced and the display gives the 'Alarms silenced' message, plus the internal buzzer is silenced.

> **NOTE:** *The printer will list this event if it is switched On.*

Master Alarms

The Master alarms are bells, sounders or other equipment which **always** operate in the event of a **fire**. These are normally installed near the control panel. The fire buzzer in the control panel will operate with the Master alarms, however in some applications the master alarms are not used.

To manually switch On or Off the Master alarms, plus internal (FIRE) buzzer.

a)   Press the *Menu* button and then the *F1* button to select **[Control].**

b)   To start or stop the Master Alarm sounders:

To start the Master alarms:
Press the *F1* key to select **[Start MA].** This prompts a message on the display 'Start Master Alarms'.

To stop the Master alarms:
Press the *F2* key to select **[Stop MA]**. This prompts a message on the display 'Stop Master Alarms'.

c)   Press the *F2* key to select **[Enter]**. Notice the alarm action has been processed and a message appears on the display reading 'Master Sounder on/off'. Note also the internal buzzer sounds.

> *NOTE: Silence alarms will also stop the Master Alarms.   This will also stop ALL the sounders.*

Zone Alarms

There can be up to 32 zones per panel. A zone can have fire sensors, manual call points, alarm sounders or interface units.

 To manually switch a Zone to sound Alert, Evacuate or Stop.

a)   Press the *Menu* button and then the *F1* button to select **[Control]**.

> *NOTE: If **[Usercode]** prompt is not displayed then the following step can be ignored.*

b)   Press the *F4* button to select **[UserCode]**. Notice a message on the display 'Enter access code' followed by a flashing cursor. Use the keyboard to input your access code and then press the *Enter* button.

c)   Press the *F4* button to select **<etc>.**

d)   Press the *F1* key to select **[Zone]**. Notice 'Zone' followed by a flashing cursor on the display. Use the keyboard to input a Zone number or range (1-32).

e)   Press the *F2* button to select **[Action].**

f)   To action Zone alarms:

To action Zone alarms Alert or Evacuate.
Press the *F2, or F3* button to select **[Alert]** or **[Evacuate].** Notice
Alert or Evacuate appears on the display.

To stop Zone alarms
Press the *F1* button to select **[Off]**. Notice 'Off From' appears on the
display.

Press the *F1* button to select **[All]**, to stop all zone alarm signals or
press *F2, or F3* button to stop zone alarms **[Alert]** or **[Evacuate].**

g)   Press the *F2* button to select **[Enter].** Notice the selected action has
been processed and a 'Zone actioned' message appears on the display.

Other Controls
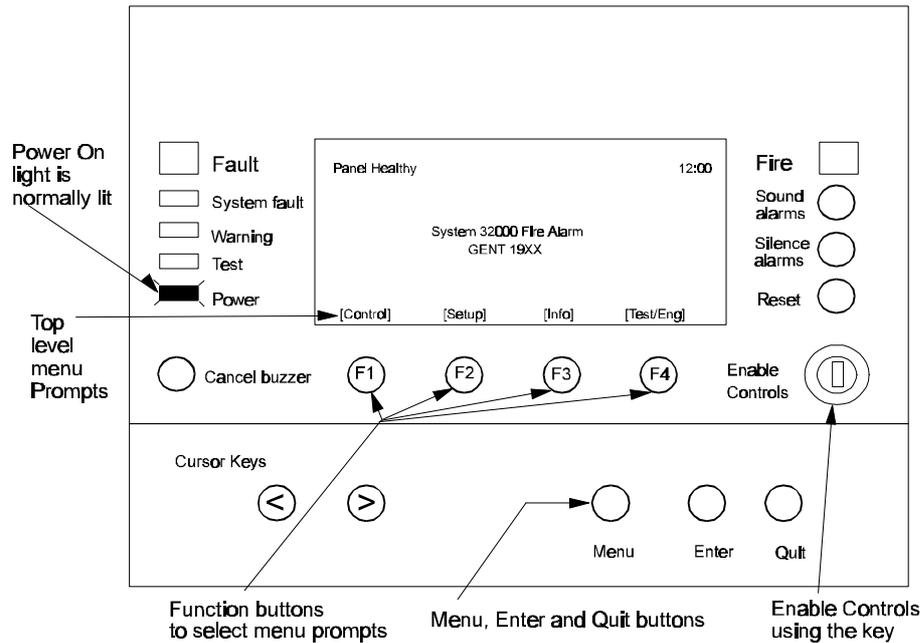
Figure 5-1 Top level menu

The *Menu* button at the panel provides access to all *menu* options that are available under **[Control], [Set Up]**, **[Info]** and **[Test/Eng]** menus.

Function buttons
The menu prompts appear on the bottom line of the Display, above the **function buttons** to prompt the user to make a selection. The top level menu selection can be made by pressing one of the function button *F1* to *F4*, which displays further sub level menu options for selection. When all the entries are made the action is carried out.

Top level menu
Press the *Menu* button to display the top level menu.

To Quit the Menu
At any time it is possible to quit the Menu by pressing Quit.

If the time taken between key presses exceeds 5 minutes, the equipment will automatically remove the display and give a System status indications.

Params
The **{Params}** prompt is a 'HELP' facility that provides information to the user regarding the input data.

> **NOTE:** *Most functions under the top level menus are protected with an access code entry. The code is programmed during commissioning of the system and is passed on to the site persons responsible for the Fire Alarm System.*

Password access
Where an access code is not set up, there is an open entry to operate controls under **[User Code]** and the instructions for entering access code are not applicable.

Testing the Display and Indicators

This facility allows automatic tests to be performed on the Lights, Display and the integral Buzzer.

a)   Press the *Menu* button and then the *F4* button to select **[Test/Eng].**

b)   Press the *F1* button to select **[Disp Test]**. Notice the automatic tests are conducted.

Test Indications   ☐   Lights are lit for approximately 2 seconds.

☐   Display clears for approximately 2 seconds and then give a system status message.

☐   Buzzer sounds a dual tone for approximately 2 seconds.

Setting the System Clock

> **CAUTION:** *Incorrectly setting the system clock will give incorrect event time information.*

The system clock is maintained by the control panel. The Time, Date, Month and Year can be set or adjusted .

a)   Press the *Menu* button and then the *F2* button to select **[Set up].**

b)   Press the *F4* button to select **[UserCode].** Notice 'User Code' followed by a flashing cursor appears on the display. Use the keyboard to input your access code and then press the *Enter* button.

c)   Press the *F1* button to select **[Set Clock**]. This provides a display of the system clock. Notice the 'Hour' digits are flashing and requires setting.

d)   Press the *F2 or F3* button to **[Retard]** or **[Advance]** to a desired

emfl52
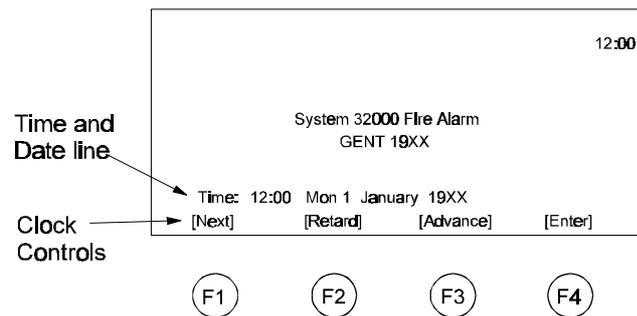
Figure 5-2 Set clock display

setting. A rapid change will occur with a continuous button press and a single step change with each individual button press.

e)   Press the *F1* button to select **[Next]**. Notice the 'Minute' digits are now flashing.

f)   Follow the procedure in d) to adjust the Minutes setting.

g)   Press the *F1* button to select **[Next].** Notice the 'Date' digits are now flashing.

h)   Follow the procedure in d) to adjust the date setting. Notice days are automatically adjusted.

i)   Press the *F1* button to select **[Next].** Notice the 'Month' is now flashing.

j)   Follow the procedure in d) to adjust the Month setting.

k)   Press the *F1* button to select **[Next]**. Notice the 'Year' is now
        flashing.

l)   Follow the procedure in d) to adjust the Year setting.

m)   Press the button *F4* to select **[Enter].** Notice the display now shows
        the new time and date.

NOTE: *All equipment displaying the clock and date information will*
update themselves with the new entries.

Viewing the current Fire Log

The **[Fire]** events log has the capability of storing up to **100** previous fire event information. The logged information can be either called to the display or printed.

NOTE: *The newest fire is always event number* **1** *and the oldest fire can be event number* **100.**

The logged information consists of time and date of each fire event together with label of the device initiating the fire detection. Further information may appear and can include outstation number (if its label is not set up), loop number, zone number, plus panel number for a network system.

a) Press the *Menu* button and then the *F3* button to select **[Info].**

b) **To display the event(s):**
    Press the *F1* button to select **[Display]**. Notice 'Display' appears on the display.

    To print the event(s):
    Press the *F2* button to select **[Print].** Notice 'Print' appears on the display.

c) Press the F1 button to select **[Fire].** Notice 'Fire' followed by a flashing cursor appears on the display.

d) Use the keyboard to input a fire event number or range (1-100).

e) Press the *F2* button to select **[Enter]**. Notice the requested logged information is either displayed or printed.

NOTE: *With the printer switched Off, step b) and PRINT procedures are not applicable.*

Viewing the current Fault Log

The current **[Fault] events log** is held at each microprocessor controlled card. The logged information can be either printed or displayed.

The logged information consists of time and date of each fault event and the label of the device, if applicable. This data is automatically cancelled from the log when the condition is removed.

a)   Press the *Menu* button and then the *F3* button to select **[Info].**

b)   **To display the event(s):**
Press the *F1* button to select **[Display]**. Notice 'Display' appears on the display, only if the printer is switched On.

      To print the event(s):
Press the *F2* button to select **[Print].** Notice 'Print' appears on the display.

c)   Press the *F2* button to select **[Fault].**

d)   **Local System Fault:**
Press the *F2* button to select **[Enter]**. Notice the requested logged information is either displayed or printed.

      Card Fault:
Press the *F3* button to select **[Card].** Notice 'On Card' followed by a flashing cursor appears on the display. Use the keyboard to input a card number or range (0-15) and then press *F2* to select **[Enter]**.

      Panel Fault

      Press the *F4* button to select [Panel]. Enter the panel number using the keyboard and press the *Enter* button.

e)   Press the *F2 or F3* button to select **[Previous]** or **[Next]** Fault. The events can be scrolled through to the desired fault event.

NOTE: With the printer switched Off, step b) and PRINT procedures are not applicable.

Viewing the current Warning log

The current **[Warning] events log** is held at each microprocessor controlled card. The logged information can be either printed or displayed.

The logged information consists of time and date of each warning event together with a message. This data is automatically cancelled from the log when a warning condition is removed.

a)   Press the *Menu* button and then the F3 button to select **[Info].**

b)   **To display the event(s):**
        Press the *F1* button to select **[Display].** Notice 'Display' appears on the display.

        To print the event(s):
        Press the *F2* button to select **[Print]**. Notice 'Print' appears on the display, only if the printer is switched On.

c)   Press the *F3* button to select **[Warning].**

        If printing the event(s):
        Notice 'Print Warning' followed by a flashing cursor appears on the display.

d)   **Local System Warning:**
        Press the *F2* button to select **[Enter]**. Notice the most recent logged information is either displayed or printed.

        Card Warning:
        Press the *F3* button to select **[Card].** Notice 'On Card' followed by a flashing cursor appears on the display. Use the full keyboard to input a Card number or range (0-15) and then press the *F2* button to select **[Enter].** Notice the requested logged information is either displayed or printed.

        Panel Warning

        Press the *F4* button to select [Panel]. Enter the panel number using the keyboard and press the *Enter* button.

e)   For displayed events press the *F2 or F3* button to select **[Previous]** or **[Next]**. The events can be scrolled through to the desired warning information.

NOTE: With the printer switched Off, step b) and PRINT procedures are not applicable.

Viewing the Historic Log

The **[Historic] events log** has the capability of storing up to 255 previous local event messages. The logged information can be printed or displayed.

NOTE: *The newest event is always event number **1** and the oldest can be event number **255**.*

The logged information consists of the time and date of each event together with a message.

a)   Press the *Menu* button and then the *F3* button to select **[Info].**

b)   **To display the event(s):**
        Press the *F1* button to select **[Display].** Notice 'Display' appears on the display.

        To print the event(s):
        Press the *F2* button to select **[Print]**. Notice 'Print' appears on the display, only if the printer is switched On.

c)   Press the *F4* button to select **<etc>.**

d)   Press the *F1* button to select **[Events].** Notice 'Events' followed by a flashing cursor appears on the display.

e)   Use the keyboard to input an event number or range (1-255).

f)   Press the *F2* button to select **[Enter]** and notice the requested logged information is either displayed or printed.

NOTE: *With the printer switched Off, step b) and PRINT procedures are not applicable.*

Changing the UserCode Password

A **password** is required to gain access to options under **[UserCode]** . A new password can be created or a previously created one can be changed.

A password access prevents unauthorised use of options under **[UserCode]**, that exist in the **[Control], [Set Up]**, **[Info]** and **[Test/Eng]** menus.

> *NOTE: The password can be up to 15 characters in length..*

a)   Press the *Menu* button and then the *F4* button to select **[Test/Eng].**

b)   Press the *F4* button to select **[UserCode].**

c)   Use the keyboard to input your existing access code and then press the *Enter* button.

d)   Press the *F4* key to select <etc>, until 'newpass' is displayed.

e)   Press the *F1* button to select **[New Pass].** Notice a message on the display 'Enter new access code' with a flashing cursor above it.

f)   Use the keyboard to input a new access code and then press the *Enter* button. Notice 'New access code set up' appears on the display.

> *NOTE: Changes to the User Code password at the Control panel is stored on Card O, the card must therefore be backed-up to the Memory Card. If this is not done then the previous password will be restored when a reset is performed.*

> *NOTE: It is not possible to backup the passwords at repeat panel.*

Using the Printer (not available at repeat panel)

The integral **printer** normally provides a listing of system events. The listing is performed automatically upon occurrence of each event, assuming the printer is switched On.

> **NOTE:** *If the printer is switched On permanently, then it will printout occurrence of every event. To prevent waste of paper it may be appropriate to print only when necessary.*

A printout is provided when the **[Print]** option has been selected after entering **[Info]** menu.

Switching the Printer On and Off

If the printer is On then it can be switched Off, or it can produce an automatic paper feed or an automatic printer test. If however the printer is Off then it can only be switched On.

a)   Press the *Menu* button and then the *F1* button to select **[Control].**

b)   Press the *F4* button to select **[UserCode].** Notice a flashing cursor and a   message on the display 'Enter access code'.

c)   Use the keyboard to input your access code and press *Enter* button.

d)   Press the *F4* button twice to select **<etc>**.

e)   Press the *F1* button to select **[Printer].** Notice 'Printer' appears on the display.

f)   **To switch On the Printer**:
Press the *F3* button to select **[On]** and then the *F2* button to select **[Enter].** Notice 'Printer is on' appears on the display to show the action has been successfully carried out. Also notice the printer provides a listing of this event.

To action an Automatic Paper Feed:
Press the *F2* button to select **[Paper Fd]** and notice the messages and the menu prompts are cleared. The printer then performs eight line feeds.

To conduct a Printer Test:
Press the *F1* button to select **[Test].** Notice the messages and menu prompts are cleared. A listing is provided by the printer of all the alphanumeric characters it can print..

To switch Off the Printer:
Press the *F3* button to select **[Off]** and then the *F2* button to select **[Enter].** Notice 'Printer is off' appears on the display to confirm the action has been successful. Also notice the printer provides a listing of this event.

Editing Label Information (not available at repeat panel)

A **label** is used to identify the location a system device such as an Outstation like a fire sensor, alarm sounder, manual call point, repeat panel, and interface unit - including input/output lines. A label of up to 32 alphanumeric characters can be given to a system device, however for a Manual Call Point there can only be up to 28 characters.

A label can be created using **[Enter]** and a previously created label can be modified using **[Modify].** Use the Information menu to check any previously entered label.

> *NOTE: After they are set up, all labels should be saved onto the Memory Card.*

Outstation Label

An outstation is a system device like a fire sensor, manual call point, interface unit, repeat panel or alarm sounder.

a) Press the *Menu* button and then the *F2* button to select **[Set Up].**

b) Press the *F4* button to select **[UserCode]**. Notice a message on the display 'Enter access code', followed by a flashing cursor.

c) Use the keyboard to input your access code and then press the *Enter* button.

d) Press the *F4* button once to select <etc>.

e) **To modify an existing label:**
Press the *F1* button to select **[Modify**] and notice 'Modify' appears on the display.

To enter a new label:
Press the *F2* button to select **[Enter]** and notice 'Enter' appears on the display.

f) Press the *F1* button to select **[Label]** and notice 'Label' appears on the display.

g) Press the *F3* button to select **[Outstatn].** Notice 'OutStatn' followed by a flashing cursor appears on the display.

h) Use the keyboard to input an outstation number or range (1-200).

i) Press the *F2* button to select **[Loop].** Notice 'Loop' followed by a flashing cursor on the display.

j) Use the full keyboard to input a loop number or range (1-2).

k) Press the *F2* button to select **[Enter].**

If modifying a label:
Notice the previous label appears on the display with a flashing first character to prompt the modification.
Use the left and right arrow buttons to move the cursor to the text to be edited.

If entering a new label:
Notice the flashing cursor for entry of label information.

l)   Use the keyboard to input a label and then press the *Enter* button. Notice a message on the display 'Card n Set Up'.

Input/Output Line label

Each input/output line of an interface unit can be given a label and a previously entered label can be modified.

a)   Follow the **Outstation label** procedure **a) to f)** .

b)   Press the *F2* button to select **[IO Line]**. Notice 'IO Line' followed by a flashing cursor on the display.

c)   Using the keyboard enter an input/output number or range (1-4).

d)   Follow the **Outstation label** procedure **g) to l).**

Zone label

Each **Zone** can be given a label and a previously entered label can be modified.

a)   Follow the **Outstation label** procedure **a) to f)** .

b)   Press the *F4* button once to select **<etc>.**

c)   Press the *F1* button to select **[Zone]**. Notice 'Zone' followed by a flashing cursor appears on the display.

d)   Using the keyboard enter a number or range (1-32).

e)   Follow the **Outstation label** procedure **k) to l).**

Local panel label

Each control panel can be given a label and a previously entered label can be modified.

a)   Follow the **Outstation label** procedure **a) to f)** .

b)   Press the *F4* button once to select **<etc>.**

c)   Press the *F2* button to select **[Local]**. Notice 'local' appears on the display.

d)   Follow the **Outstation label** procedure **k) to l).**

Custom Label

A custom label for each panel may be set up. This appears below the 'System 32000 Fire Alarm' message under normal conditions.

a)   Follow the Outstation label procedure a) to f).

b)   Press the *F4* button once to select **<etc>**.

c)   Press the *F3* button to select **[Custom]**. Notice 'Custom' appears on the display.

d)   Follow the Outstation Label procedure k) to l).

Viewing Labels (not available at repeat panel)

The identification **label** given to each system device, such as an Outstation like a fire sensor, alarm sounder, manual call point, repeat panel, and interface unit - including input/output lines, plus zone and local panel labels can be checked. The information can either be displayed or printed.

> *NOTE: With printer switched Off, step b) and PRINT procedures are not applicable.*

Outstation Label

a)   Press the *Menu* button and then the *F3* button to select [Info].

b)   A label can be displayed or printed.

To display an outstation label:
Press the *F1* button to select **[Display].** Notice 'Display' appears on the display.

To print an outstation label:
Press the *F2* button to select **[Print]**. Notice 'Print' on the display

c)   Press the *F4* button to select **<etc>** and then the *F2* button to select **[Label]**. Notice 'Label' appears on the display.

d)   Press the *F3* button to select **[OutStatn]**. Notice 'Outstatn' followed by a flashing cursor appears on the display.

e)   Use the full keyboard to input an outstation number or range (1-200).

f)   Press the *F2* button to select **[Loop]**. Notice 'Loop' followed by a flashing cursor appears on the display.

g)   Use the full keyboard to input a loop number or range (1-2).

h)   Press the *F2* button to select **[Enter]**. Notice the selected label information is either displayed or printed.

Input/Output line Label

An interface unit has four input/output lines. Each line can be given a label that appears on the display during an event.

a)   Follow the procedure for **Outstation label** from **a) to c)**.

b)   Press the *F2* button to select **[IO Line]**. Notice 'IO Line' followed by a flashing cursor on the display.

c)   Use the keyboard to enter an input/output number or range (1-4).

f)   Press the *F2* button to select **[Outstatn]**. Notice 'Outstatn' followed by a flashing cursor on the display.

g)   Follow the procedure for **Outstation label** from **e) to h)**.

Zone label   a)   Follow the procedure for **Outstation label** from **a) to c)**.

                     b)   Press the *F4* button once to select <etc>.

                     c)   Press the *F1* key to select **[Zone]** and notice 'Zone' followed by a
                            flashing cursor appears on the display.

                     d)   Use the full keyboard to input a Zone number or range (1-32).

                     e)   Press the *F2* key to select **[Enter].** Notice the selected label
                            information is either displayed or printed.

Local Panel   a)   Follow the procedure for **Outstation label** from **a) to c)**.
label
                     b)   Press the *F4* button once to select **<etc>**.

                     c)   Press the *F2* key to select **[Local]**, notice 'Local' appears on the
                            display.

                     d)   Press the *F2* key to select **[Enter].** Notice the selected label
                            information is either displayed or printed.

Saving changes to the Memory Card (not available at repeat panel)

Any changes made to Labels or Password should be saved in the Memory Card.

a)   Press the *Menu* button and then the *F2* button to select **[Set Up]**.

b)   Press the *F4* button to select **[UserCode].** Notice a flashing cursor and a message on the display 'Enter access code'.

c)   Use the full keyboard to input your access code and then press the *Enter* button.

d)   Press the *F4* button once to select **<etc>.**

e)   Press the *F3* button to select **[Save].** Notice 'Save All Data To RAM Card' appears on the display.

f)   Press the *F2* button to select **[Enter].**

g)   Observe confirmation messages as each card is backed up.

> **NOTE:** *The changes can only be saved onto the Memory Card if no warnings are present on the system.*

Enabling or Disabling Parts of the System

To manually **enable or disable** the operation of outstations, interface input lines, zones, relays, and card communications.

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*CAUTION: It is **only** possible to disable a Manual Call Points (MCP) by disabling the MCP outstation. Disabling MCP is however, not recommended.*

Enable/Disable Outstations

a)   Press the *Menu* key and then the *F1* button to select **[Control].**

b)   Press the *F4* button to select **[UserCode]**. Notice a flashing cursor and a message on the display 'Enter access code'.

c)   Use the keyboard to input your access code and then press the *Enter* button.

d)   To disable or enable an outstation.

      To disable:
      Press the *F2* button to select **[Disable]**. This puts a 'Disable' on the display.

      To enable:
      Press the *F1* button to select **[Enable]**. This puts an 'Enable' on the display.

e)   Press the *F1* button to select **[OutStatn].** Notice 'Outstatn' followed by a flashing cursor appears on the display.

f)   Use the keyboard to input an outstation number or range (1-200).

g)   Press the *F2* button to select **[Loop]**. Notice 'Loop' followed by a flashing cursor on the display.

h)   Use the keyboard to input a loop number or range (1-2).

i)   Press the *F2* button to select **[Enter].** Notice the action has been processed and confirmed by a message either: 'Outstation(s) enabled' or 'Outstation(s) disabled'.

NOTE: Upon disablement of any system equipment the warning light will be lit and the internal buzzer will sound intermittently

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Enable/Disable Input/Output Line(s)

There are four input/output lines on an interface unit and each line can be disabled or enabled.

> **CAUTION:** *An output line of an interface unit is assigned to a zone. The output line can only be disabled by disabling that zone (using disable zone sounders), which has the effect of also disabling all other sounders and output lines in the zone.*

a)   Follow the procedure to **enable/disable outstation** from **a) to d).**

b)   Press the *F2* button to select **[IO Line]**. Notice 'IO Line' followed by a flashing cursor appears on the display.

c)   Use the keyboard to input IO line number or range (1-4).

d)   Press the *F2* button to select **[OutStatn].** Notice 'OutStatn' followed by a flashing cursor appears on the display.

e)   Use the keyboard to input an outstation number or range (1-200).

f)   Press the *F2* button to select **[Loop]**. Notice 'Loop' followed by a flashing cursor on the display.

g)   Use the keyboard to input a loop number or range (1-2).

h)   Press the *F2* button to select **[Enter].** Notice the action has been processed and a message appears on the display 'IO line disabled/enabled at Card n'.

> **NOTE:** *The warning light will be lit upon disablement of any system equipment and the internal buzzer sounds intermittently.*

Enable/Disable Relays

The Fire and Fault relays in the control panel can be disabled or enabled.

a)   Follow the procedure to **enable/disable outstation** from **a) to d).**

b)   Press the *F4* button twice to select **<etc>** and then press the *F2* button to select **[Relay]**. Notice 'Relay' followed by a flashing cursor appears on the display.

c)   Use the keyboard to input relay number or range (1-2).
      1 = Fire Relay; 2 = Fault Relay.

d)   Press the *F2* button to select **[Enter].** Notice the action has been processed. Notice the action has been processed and a message appears on the display 'Relay n disabled/enabled'.

> **NOTE:** *The warning light will be lit upon disablement of any system equipment and the internal buzzer sounds intermittently.*

**Enable/Disable
Master Alarm**

There are two master alarm circuits in the control panel whose operation can be disabled or enabled.

a)   Follow the procedure to **enable/disable outstation** from **a) to d).**

d)   Press the *F4* button twice to select **<etc>** and then press the *F1* button to select **[MAlarm]**. Notice'Master Alarms' appears on the display.

c)   Press the *F2* button to select **[Enter].** Notice the action has been processed and a message appears on the display 'Master sounder disabled/enabled'.

NOTE: The warning light will be lit upon disablement of any system equipment and the internal buzzer sounds intermittently.

**Enable/Disable
Zone**

There can be up to 32 zones used in a fire alarm system. The zone operation can be disabled in one of three ways:

☐   Sounders- disables all sounders and interface outputs in the zone.

☐   Sensors- disables all automatic detection in the zone.

☐   All- disables both the above categories.

NOTE: Disabling a zone does not disable manual call points in the zone. Therefore, a fire alarm can still be manually raised in a disabled zone.

---

a)   Follow the procedure to enable/disable outstation from a) to d).

b)   Press the *F4* button to select **<etc>** and then press the *F2* button to select **[Zone]**. Notice 'Zone' appears on the display.

c)   Select the mode of disablement:

For Sounders:

Press the *F1* button to select **[Sounders]**. This puts 'Sounders In Zone' on the display followed by a flashing cursor.

For Sensors:

Press the *F2* button to select **[Sensors]**. This puts 'Sensors In Zone' on the display followed by a flashing cursor.

For All:

Press the *F3* button to select [All]. This puts 'All In Zone' on the display followed by a flashing cursor.

d)   Use the keyboard to input the required zone number (1-32).

e)   Press the *F2* button to select **[Enter]**. Note the action has been processed and a message appears on the display:

For Sounders - 'Alarm Zone n Disabled at Card x'
For Sensors   - 'Zone n Disabled'
For All   - both these messages are displayed.

NOTE: *The warning light will be lit upon disablement of any system equipment and the internal buzzer sounds intermittently.*

Viewing Card Information

The status of each **card** in the control panel, such as the Loop Processor Card, Local Controller Card, IO Card or Memory Card can be displayed or printed.

The information can be printed or displayed and includes card type, the card slot position, number of faults and warnings on it and software version number with its date of release. A loop card will have the number of outstation found and how many are T-Breakers.

Card Status Information

a)   Press the *Menu* button and then the *F3* button to select **[Info].**

b)   **To display the card status:**
      Press the *F1* button to select **[Display].** Notice 'Display' appears on the display and sub menu appears for selection.

      To print the card status:
      Press the *F2* button to select **[Print].** Notice 'Print' appears on the display.

c)   Press the *F4* button once to select **<etc>**

d)   Press the *F3* button to select **[UserCode].** Notice a flashing cursor and a message on the display 'Enter access code'.

e)   Use the keyboard to input your access code and then press the *Enter* button.

f)   Press the *F2* button to select **[CardStat].** Notice 'Card Status' followed by a flashing cursor appears on the display.

g)   Use the full keyboard to input a card number or range (0-15).

h)   Press the *F2* button to select **[Enter].** Notice the requested card status information is either displayed or printed.

> **NOTE:** *With the printer switched Off, step b) and PRINT procedures are not applicable.*

Viewing a Loop Map

The **map** information of each loop circuit can be displayed or printed. It includes the address of each device on the loop together with address of the connecting previous, next and common line (T-breaker) devices.

a)   Press the *Menu* button and then the *F3* button to select **[Info].**

b)   **To display the loop map**
      Press the *F1* button to select **[Display].** Notice 'Display' appears on the display and a new sub menu appears.

      To print the loop map
      Press the *F2* button to select **[Print].** Notice 'Print' appears on the display.

c)   Press the *F4* button once to select **<etc>.**

d)   Press the *F3* button to select **[UserCode]**. Notice a message on the display 'Enter access code' followed by a flashing cursor.

e)   Use the full keyboard to input your access code and then press *Enter* button.

f)   Press the *F4* button to select **<etc>.**

g)   Press the *F2* button to select **[Loop Map].** Notice 'Loop map' followed by a flashing cursor appears on the display.

h)   **For a complete loop map:**
      Use the keyboard to input a loop number or range (1-2) and then press the *F3* button to select **[Enter]**.

      For a range of outstations on a loop:
      Use the keyboard to input a loop number or range (1-2) and then press the *F2* button to select **[OutStatn]**. Notice 'Outstatn' followed by a flashing cursor appears on the display. Use the keyboard to input outstation number or range (1-200) and then press the *F2* button to select **[Enter].**

      Notice a loop map is either printed or displayed.

Viewing Network Map (not available at repeat panel)

The **map** information of panels and nodes can be displayed or printed. It includes the panel number relative to the network controller.

a)   Press the *Menu* button and then the *F3* button to select **[Info].**

b)   **To display the network map**
Press the *F1* button to select **[Display].** Notice 'Display' appears on the display and a new sub menu appears.

        To print the network map
Press the *F2* button to select **[Print].** Notice 'Print' appears on the display.

c)   Press the *F4* button once to select **<etc>.**

d)   Press the *F3* button to select **[UserCode]**. Notice a message on the display 'Enter access code' followed by a flashing cursor.

e)   Use the full keyboard to input your access code and then press *Enter* button.

f)   Press the *F4* button to select **<etc>.**

g)   Press the *F2* button to select **[Map]**.

h)   Press the *F2* button to select **[Net Map]** and then press the *F2* button to select **[Enter].**

        Notice a network map with panel numbers are either printed or displayed.

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Site Label Information

Site Labels

This section is for insertion of site specific LABEL and
CONFIGURATION details. A printout from the computer should be kept
here for future reference.

The information in this section should be updated whenever there is a
change to the site label or configuration.

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Log Book

Logging Events

A **Log Book** is provided with the 32022 Control Panel and 32522 Repeat Panel. It is provided to record events such as Fires, Faults and Warnings in the 32000 Fire Detection and Alarm System.

The Log Book is used by **responsible persons** and **Servicing engineer** to log any events and information of any work carried out on the system for future reference.

The cover sheet of the log book is filled in after the commissioning of the System and provides useful information such as names and telephone numbers to contact in an emergency.

Blank Log Sheets

Blank Log Sheet are included in this section which may be copied whenever the current sheet in the Log Book becomes full.

Completed Log Sheet

A completed log sheet may be hole punched and kept in this section for future reference.

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System 32000

Introduction

This section lists the commercially available parts for use in the System 32000.

Control and indicating equipment

Control Panel   * - first fix products

32020	Fire alarm Control Panel SET
	        including control panel, 1 loop card,
	        power supply, battery box and battery pack.

*32022	Fire alarm Control Panel
32334	Control panel Power supply unit
*32330	Control Panel Battery Box
13395-12	Battery pack 4 off 12V @ 7.0Ah (for Control Panel)
13390-01	Printer paper

Network

32620	Network Interface SET (including battery pack)
32622	Network Interface unit
32635	Battery pack 1 off 12v @ 7Ah (for Network Interface)

Repeat Panel

32520	Fire alarm Repeat Panel SET including repeat panel and battery pack.
32522	Fire alarm Repeat Panel
13395-01	Battery pack 1-12v @ 6.0Ah (order 2 off for Repeat Panel)

Flush Shrouds

32029	Flush shroud for 32022 Control Panel
32529	Flush shroud for 32522 Repeat Panel
32329	Combined Flush shroud for 32022 Control Panel and 32330 Battery box

Cards

	32023-01	Local controller card V3, (LCC for 32022)
	32023-11	Loop processor card V3, (LPC for 32022)
	32023-31	1-2 Loop panel RAM Card (for 32022)
	32023-21	I/O card V3 (for 32022)

32000 Sensors, terminal plate and Accessories

32000 Sensors	32715	Optical sensor
	19271-01	Replacement chamber for Optical sensor
	32775	Optical sensor sounder
	19271-01	Replacement chamber for Optical sensor sounder (as for Optical Sensor)
	32720	Heat sensor
	19272-01	Replacement chamber for Heat sensor
	32730	Ionisation smoke sensor
	19273-01	Replacement chamber for Ionisation smoke sensor
32000 Terminal Plate	32700	Terminal plate
	19279-01	Sensor semi-flush mounting kit
Slaves/ T-Breaker	32701	T-breaker Unit
	32702	Slave LED unit (Remote Fire lndicator Unit)
	32703	Slave Relay Unit
Tools	17918-26	Sensor Tool Kit
	17918-22	Chamber Extractor cup
	17918-23	Electronics module removal tool - Optical
	17918-24	Electronics module removal tool - Ionisation
	17918-25	Electronics module removal tool - Heat
Environmentally Protected	32729	EP Heat Sensor
Special sensors	32760	Duct Sensor

Alarm sounders

Sounders	32202	Alarm sounder 2-way
	32203	Alarm sounder 3-way
Environmentally Protected	32213	EP Sounder 3-way

Manual call points (MCP)

MCPs	32800	Surface mounted MCP
	32807	Surface mounted MCP keyswitch
	32842	Surface mounted MCP with cover
	32812	Surface mounted water resistant MCP
	32852	Surface mounted water resistant MCP with cover
	19289-01	MCP Semi-flush mounting kit
Environmentally Protected	32829	EP MCP surface
Spares	14112-09GR	Spare glasses (Pack of 10)

Interfaces

Mains Powered Interface	32440	Fire Alarm Interface unit - Mains powered
	19104-52	Power relay for Fire Alarm Interface - Mains powered complete with base and diode pack.
Loop Powered Interface	32450	Fire Alarm Interface unit - Loop powered
	19245-05	Line module (up to 4 can be installed in a 32450)
	19245-06	Power supply unit for Fire Alarm Interface - Loop powered (including 1 mains relay)
	19245-07	Mains relay (up to 4 used with PSU)
	32454	Keyswitch door 4-way for Fire Alarm Interface - Loop powered
	19245-02	Keyswitch assembly 2-position (used on keyswitch door)
	19245-03	Keyswitch assembly 3-position (used on keyswitch door)

Manuals & Accessories

| 32299 | System 32000 User pack (containing Planner's Guide and Installation Instructions) |
| 32499 | System 32000 Operating manual |