Premier M *Plus* 48

CONVENTIONAL FIRE ALARM CONTROL PANEL

USER MANUAL & MAINTENANCE GUIDE

zeta®
ALARMS LIMITED

What to do if the Fire Alarm Panel shows an Alarm (Red LED)

Write down which LEDs are lit (either in the log book, or on a piece of paper for transferring to the log book later)

Follow the building procedures for fire alarm activation.

When the building has been evacuated, the sounders can be silenced by turning the key to the on position and pressing the Start/Stop Sounder button, then pressing the Silence Tone button.

If there is no sign of fire, investigate the area that reported the fire CAREFULLY. Check for a detector or a call point with its RED LED lit.

If a detector caused the alarm, look for any innocent phenomena that could have activated it (Steam, cooking food, exhaust smoke, excessive dust etc can all activate a smoke detector.). If anything is found, try to clear the room by opening a window.

If a fire is discovered, either tackle it with fire extinguishers if suitably trained, or call the fire brigade.

To reset the panel press the reset button.

If the panel goes back into alarm, silence the sounders and call the engineer.

What to do if the Fire Alarm Panel shows a Fault (Yellow LED)

Write down which LEDs are lit (either in the log book, or on a piece of paper for transferring to the log book later)

If the supply fault LED is lit, check if there is a power cut to the building. Check that the mains supply to the fire alarm has not been turned off.

All other fault indications will need the service engineer's attention. Call the engineer as soon as possible. Note that when the alarm is in a fault condition, the majority of the system will still function correctly. Extra vigilance should be paid in the area with the fault. The alarm may not be operational in this area.

Turning the key to the on position and pressing the Silence Tone button can silence the panel's internal buzzer. If the fault is INTERMITTENT, and comes and goes, the panel will buzz every time the fault happens. If this is not acceptable you may be able to disable the zone that has the fault. (see page 11)

CONTENTS

1. FIRE ALARM CONTROL PANEL SAFETY ISSUES

There is no need to open this fire alarm during normal operation. Any work carried out on this system must be performed by a competent person who is familiar with this type of system.

This equipment will operate safely provided it has been installed correctly in compliance with the Installation Manual.

It is recommended that the system is serviced frequently. It is customary to arrange a regular maintenance contract with a competent organisation. (Ask the installation company for recommendations). The system needs a thorough maintenance check annually at the very minimum.

If any part of this Fire Alarm Control Panel becomes damaged, contact the company responsible for system maintenance to arrange repair / replacement.

CE	**European Union Directives Conformance Statement** This product has been manufactured in conformance with the requirements of all applicable EU Council Directives. The Declaration of Conformance for this product is located at the following Address: GLT Exports Ltd, 72-78 Morfa Road, Hafod, Swansea, SA1 2EN, United Kingdom

2. THE PURPOSE OF A FIRE ALARM SYSTEM

A Fire Alarm System is used to provide an early warning of a fire, so that the property can be evacuated and the fire extinguished if it can be safely tackled, or the local fire brigade called, according to the company evacuation procedure.

Alarms can come from Smoke or Heat Detectors, or manually be a person operating a Manual Call Point.

Split the system into Zones, each covering a different area of a building. This will indicate which area of the system is giving the alarm (or fault).

During an alarm, the panel will start its sounders, and indicate which zone has the fire. It will also activate its auxiliary relay.

Fault Monitoring

All circuits must be checked for line integrity. If a part of the system has a problem which may affect its operation, a fault warning must be given by the fire alarm panel (LED & buzzer indication). The fault relay will also activate.

Disablements

An engineer may be required to work on part of a system, while the system is still active (e.g. extending a detection zone). During such circumstances, it would be advisable to disable that zone, so that it will not give false alarms. Similarly you may wish to disable a zone that has a fault that has not been fixed, or a zone covering an area with a temporary unusual environment, such as an area, which is dusty because of construction work etc.

Delays

In public places, it may be desirable to delay the activation of an alarm until the responsible person has verified the cause of the alarm. (This would avoid a panic evacuation caused by a smoky room, or a maliciously activated call point.) On verification of the alarm, the sounders can be started by pressing the override button, or the panel can be reset in the case of a false alarm. If a delay has been set, it must be recorded on the system configuration chart at the back of this manual.

Power Supply Equipment- General Description.

The PREMIER M 48 FACP has an integral linear power supply capable of supplying 3 amps in total. It contains a current limited output for charging sealed lead acid batteries (7 Ah maximum). The PSE is monitored for main supply failure, the battery not taking a charge and low battery voltage. If the battery voltage drops below approximately 20VDC (a fault condition), the battery charging current will be turned off , thus stopping charging. This PSE is only capable of supplying power to the CIE, and is not designed for any other use.

3. USER RESPONSIBILITIES & MAINTAINENCE OF THE FIRE ALARM SYSTEM, INCLUDING THE FACP & ITS INTEGRAL PSE

According to the British Standard Code for Fire Detection and Alarm Systems for Commercial Buildings (BS5839: Pt 1: 2002), the owner or person having control of the premises should appoint a responsible person to oversee the effective operation of the Fire Alarm System (Clause 47.1).

Below is a summary of the main functions the "Responsible Person" is expected to carry out. This summary is not intended to replace Section seven (User responsibilities) of BS5839: Pt 1: 2002 (available from BSI, or your local library). It is meant to give a brief outline of user responsibilities for the safe upkeep of the Fire Alarm System. The number in brackets shows the relevant BS5839: Pt 1: 2002 clauses.

The responsible person must:-

1. Have sufficient authority to carry out the duties associated with being the responsible person (47.2.a)
2. Check the system at least once every 24 hours to ensure there are no faults present (47.2.b)
3. Ensure there are arrangements for testing and maintaining the system (47.2.c)
4. Ensure the log book is up to date, and available for inspection (47.2.d)
5. Instruct all relevant occupants on the basic operation of the system, including start evacuation, silence alarms, silence faults and system reset (47.2.e)
6. Take appropriate action to limit the rate of false alarms (47.2.f)
7. Ensure that all detectors and manual call points remain unobstructed at all times (47.2.g)
8. Liase with maintenance personnel to ensure that cleaning, maintenance or building work does not interfere with the functioning and reliability of the fire alarm system (47.2.h).
9. Ensure any changes to the system are recorded with updated drawings, operating instructions etc (47.2.i)
10. Ensure that there are spare parts (especially Call point elements) held on site (47.2.j.1&2)

With the PREMIER M PLUS 48 Range of Fire Alarm Panels, we recommend the following tests are carried out: -

Daily Inspection
- Check that the green Power LED is lit.
- If there are any yellow fault LEDs lit, or the green Power LED is not lit, report the fault(s) to the designated site maintenance engineer.

Weekly Test (you may wish to <u>temporarily</u> disconnect the Aux relay during the following Tests)
- Set off a manual call point or sensor to test the Fire Alarm panel responds and all the sounders activate.
- Do not test the same device each week. Test a different zone each week using a different call point or detector so that eventually, all the devices will be tested.
- Reset the System by pressing 1,2,3 (Stop sounders, Silence fault tone, Reset).
- Turn key to controls enabled. Press the LED Test button. Check that all LEDs light, and the buzzer sounds
- Check that no call points or fire detectors are obstructed in any way. (e.g. New furniture or decorations)

Quarterly Test (to be carried out by authorised service personnel only)
- Check that any servicing or repairs required by all previous logbook entries has been undertaken.
- Visual inspection of the batteries and connections. Check the alarm sounders work on battery only.
- Activate a device from each zone to test the fire alarm. (As per weekly test).

Annual Test (to be carried out by authorised service personnel only)
- Check every detector; call point, sounder and all auxiliary equipment for correct operation.
- Check Transformer output Voltage (32 VAC), Charger Voltage (28.4V off load, adjusted with VR1) & Battery Voltage (25-27V)

Every Five Years (to be carried out by authorised service personnel only)
- Carry out a complete wiring check in accordance with the testing and inspection requirements of the relevant National wiring regulations (in the UK this is the IEE Wiring Regulations). The Batteries should be replaced because SLA batteries have a working life of 5 years.

4. PANEL INDICATIONS & CONTROLS
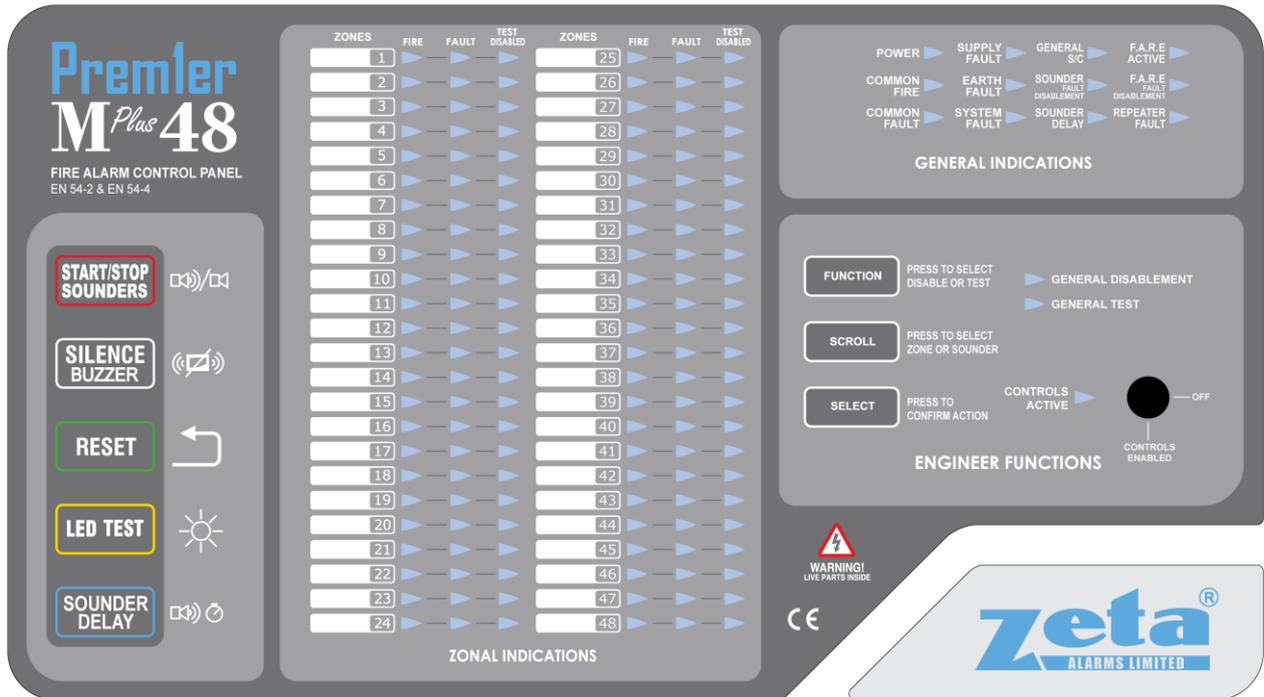
Two levels of control are available to the User(s) of this Fire Alarm Panel.

4.1 GENERAL CONTROLS

When the Panel is in its Normal state, the indicator lights on the front of the enclosure give a comprehensive overview of the System's current status. Any Fire and Fault conditions are clearly displayed, and any disablements highlighted. For detailed descriptions of what each indicator means, please refer to the table on the opposite page.

The only functions that can be performed by the User when the Panel is in its Normal state are:

- Overriding any Delays, which may have been programmed into the Panel by pressing the Sounder Override button.

- Putting the Panel into the Accessed state – see below.

4.2 ACCESSED CONTROL (AVAILABLE TO AUTHORISED USERS ONLY)

To avoid unauthorised changes to critical parts of the Fire Alarm System, controls such as silencing the Sounders, resetting an Alarm condition and implementing Disablements are only accessible via a secure method of entry which puts the panel into the Accessed state.

To put the Panel into the Accessed State: Turn the key to the control enable position (please note the key should not be removed when in this position). To leave the Accessed state, turn the key back to the off position.

Information on how to use the accessed control can be found on Pages 8 to 11 of this User Manual.

4.3 SUMMARY OF LED COMBINATIONS AND THEIR MEANING

Use the table below to determine the condition of the panel.

LEDs LIT	LED CONDITION	PANEL STATUS
POWER	STEADY GREEN	The panel is supplied with power, and has no faults / fires (System Normal)
COMMON FLT ONLY	STEADY YELLOW	Problem with keyswitch connections
COMMON FLT & SUPPLY FLT	STEADY YELLOW STEADY YELLOW	There is a problem with either the mains supply or the battery backup
COMMON FLT & EARTH FLT	STEADY YELLOW STEADY YELLOW	There is a wiring problem. One of the cables is touching the earth screen.
COMMON FLT & ZONAL FLT	STEADY YELLOW STEADY YELLOW	There is an open circuit fault in the wiring of the zone indicated.
COMMON FLT & ZONAL FLT & GEN S/C	STEADY YELLOW FLASHING YELLOW FLASHING YELLOW	There is a short circuit fault in the wiring of the zone indicated.
COMMON FLT & SND FLT	STEADY YELLOW STEADY YELLOW	There is an open circuit fault in the wiring of one or both of the sounder circuits
COMMON FLT & SND FLT & GEN S/C	STEADY YELLOW FLASHING YELLOW FLASHING YELLOW	There is a short circuit fault in the wiring of one or both of the sounder circuits
COMMON FLT & SYSTEM FLT	STEADY YELLOW STEADY YELLOW	A processor fault has occurred. To reset, turn keyswitch on then back off. If problem persists, consult your dealer.
COMMON FIRE ONLY	STEADY RED	A manual evacuation has occurred. The sounders will be active.
COMMON FIRE & ZONE FIRE & F.A.R.E. ACTIVE	STEADY RED STEADY RED STEADY RED	A fire has occurred in the zone indicated. The sounders will be active. The F.A.R.E output will be active.
COMMON FIRE & ZONE FIRE & F.A.R.E. ACTIVE GEN DISABLE & DEL	STEADY RED STEADY RED STEADY RED STEADY YELLOW STEADY YELLOW	A fire has occurred in the zone indicated. The F.A.R.E output will be active. The sounders have a delay set, and will become active after the programmed delay. To override the display, press delay override.
GEN DISABLE	FLASHING YELLOW (FAST – 4 HZ)	The panel is ready for selecting disable or test mode
GEN DISABLE ZONE FAULT ZONE DISABLE	FLASH 3-0-3-0 YELLOW FLASH 3-0-3-0 YELLOW FLASH 3-0-3-0 YELLOW	The user is scrolling through zones to select which one to disable/or user has just enabled the zone.
GEN DISABLE ZONE FAULT ZONE DISABLE	STEADY YELLOW STEADY YELLOW STEADY YELLOW	The indicated zone is disabled.
GEN DISABLE DEL	STEADY YELLOW STEADY YELLOW	The Sounders are delayed by the amount set on the Rotary switch SW1
GEN TEST ZONE FAULT ZONE TEST	FLASH 3-0-3-0 YELLOW FLASH 3-0-3-0 YELLOW FLASH 3-0-3-0 YELLOW	The user is scrolling through zones to select which one to Test.
GEN TEST ZONE FAULT ZONE TEST	STEADY YELLOW STEADY YELLOW STEADY YELLOW	The indicated zone is in Test Mode.

4.4 CHECKING THE PANELS INDICATION LEDS

Turn the key switch to "Controls Enabled" position then press the LED test button. All the LEDs on the front panel will light, and the panel's internal buzzer will also sound. If any LED Does not light up, Report the fault to the engineer

5. THE FIRE CONDITION

5.1 HOW THE PREMIER M 48 INDICATES AN ALARM
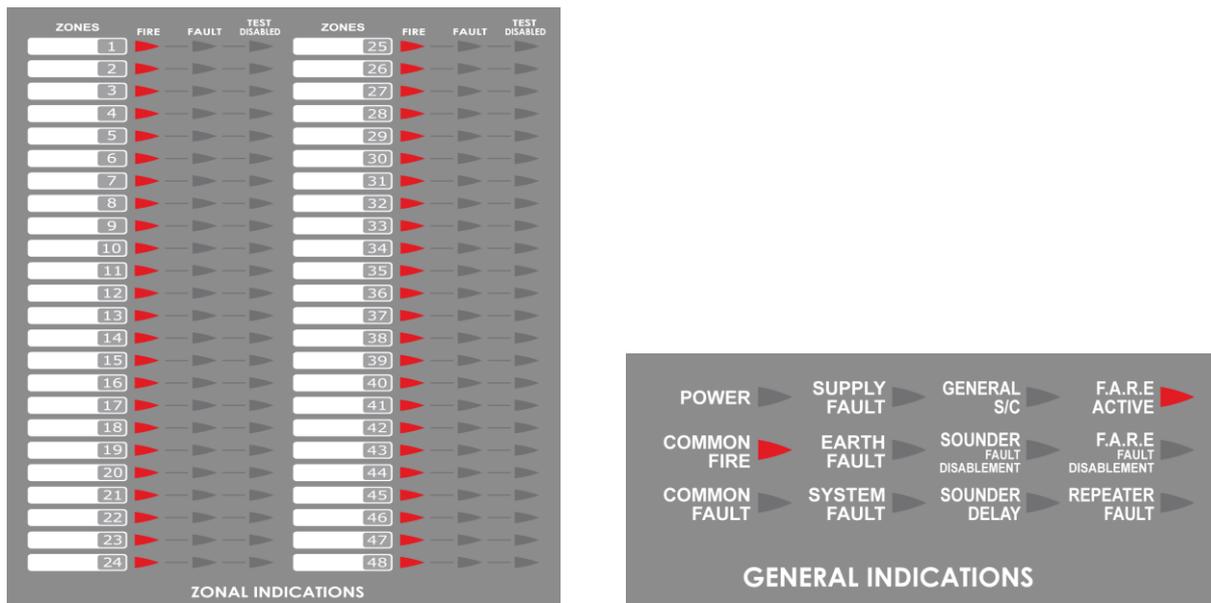
When the PREMIER M 48 Fire Alarm Panel is set into alarm by a Detector or Manual Call Point located in a zone that is not already in alarm it will: -

- Light the General Fire LED and appropriate Zone Fire LED(s) on the front of its enclosure
- Sound Internal buzzer
- Start the Alarm Sounder s, F.A.R.E. and Auxiliary RELAY outputs, (<u>provided</u> there is no Delay set on the sounders).
  The building evacuation procedure should now be followed.

  IMPORTANT NOTE: If a zone has been disabled, it cannot be triggered into Alarm. This should be remembered when disabling part of the system. (see Disabling zones or sounders later in this manual).

5.2 TO TURN OFF THE ALARM SOUNDERS

- The Alarm Sounders may be silenced by turning the control key to "Control Enable" position and momentarily pressing the Start/Stop button.

The Alarm Sounders will cease to sound but the light(s) for the Zone(s) in Alarm and the red General Fire light will stay lit. The Auxiliary Fire relay will remain active. (The Panels internal buzzer can also be silenced by pressing the Silence int flt button (button 2)).

5.3 A SECOND ALARM SIGNAL FROM A NEW DETECTION ZONE

If another detection Zone is activated after the Alarm Sounders have been silenced, the panel will: -

- Restart the sounders
- Light the Zone Fire LED(s) for any new Zone(s) in alarm
- Keep the light(s) for the previous Zone(s) in fire, and General Fire lit.

5.4 TURNING ON THE ALARM SOUNDERS FROM THE FACP (I.E. TO EVACUATE THE BUILDING).

- With the control key in "Controls Enabled" position, momentarily pressing the Start/Stop will cause the Alarm sounders to sound.

  Pressing the Start/Stop button again will Silence the Alarm Sounders.

  Note: If the Alarm Sounders have been disabled, pressing the Stop/Start button will have no effect.

5.5 RESETTING THE PANEL

- Check the cause of the alarm activation. If the cause of the alarm was an activated call point, reset it (if resettable type), or fit a new glass element (if glass type). If the cause of the alarm was by detector activation (e.g. cooking smoke), the smoke will have to be cleared from the room before the panel can be reset. Reset the panel by pressing the reset button after the sounders and panel buzzer have been silenced.
- If the call point is still active, or the detector is still smoky, this will cause another alarm straight after the panel is reset, so will set off the alarm bells again.

6. THE FAULT CONDITION

6.1 DIFFERENT TYPES OF FAULT

The fire alarm monitors itself, and any equipment connected to it, for any faults that can occur. If a fault occurs, the Panel responds by activating its Internal buzzer and lighting the General Fault light and any other Fault light(s) relevant to the particular fault. The Panel's Fault relay will also activate. Typical faults are described below: -
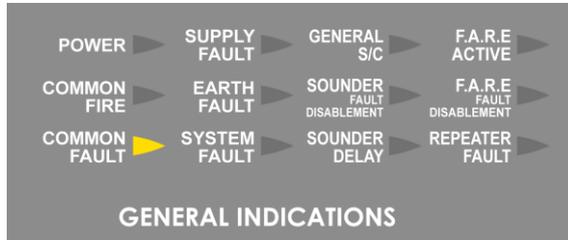
Common Fault

The Common Fault LED is a common indicator that lights when there is a Fault on any part of the Fire Alarm Systems. It is usually lit in tandem with at least one other fault light which conveys more precise information on the type of Fault detected.
If this light is lit by itself, it indicates a keyswitch fault.

Zone Fault

The relevant Zone Fault light flashes when there is a wiring problem on a Zone or detector has been removed from its base. It should be noted that any alarms raised on the fault zone(s) may not be recognised by the Fire Alarm Panel until the Fault Conditions have been cleared. It can take up to 60 seconds from repairing a fault for the display to clear.
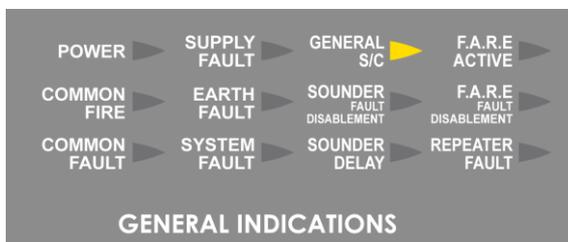
Short Circuit Fault

If the Fault is a short circuit fault, then the S/C LED will be lit. This GEN S/C LED will be lit for S/C faults on the zone and sounder circuits. It can take up to 10 seconds from repairing a fault for the display to clear.
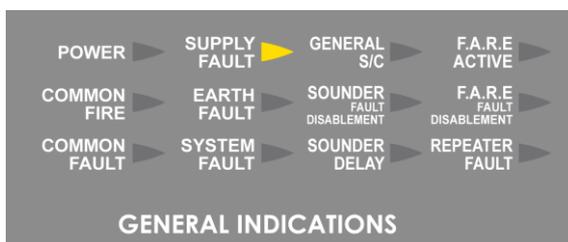
Power Supply Fault

The Power supply Fault light flashes when the Mains supply has failed or the standby batteries or its charger is faulty. If the mains supply fails, the panel will only operate for the standby period dictated by the size of the batteries fitted. If the batteries or charger fails at the same time as the Mains, the Panel will be inoperative.
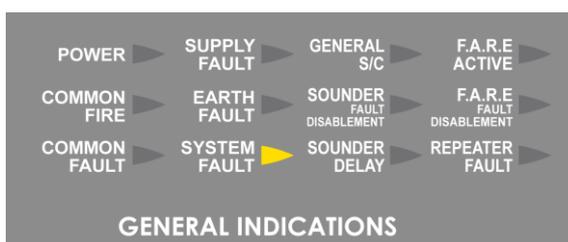
System Fault

The System Fault LED lights when the Panel's micro-processor has Reset, typically after excessive electrical interference, or if the contents of its memory have been corrupted. This fault can only be cleared by turning the key switch from off position to control enable position and then back to the off position again. If the fault re-occurs within two minutes, this is indicative of a corrupt memory and expert advice should be sought.
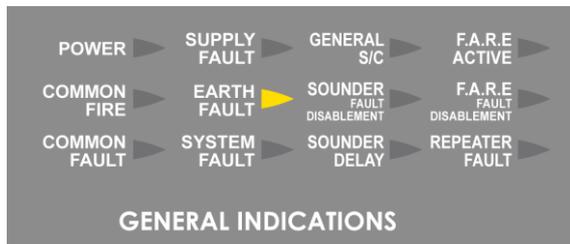
Earth Fault

The Earth Fault light flashes when the panel detects an earth fault (short circuit to earth) on the wiring to any part of the control panel.
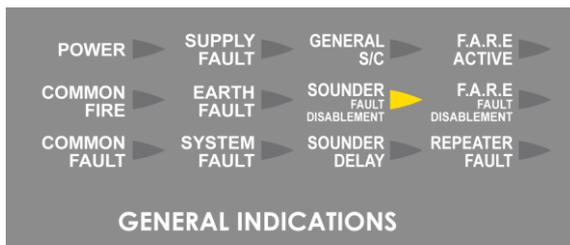

Common Sounder Fault

The Sounder status light flashes when there is a wiring fault on the Sounder Circuits. Depending on where the fault has occurred, one or all of the Alarm Sounders may no longer be operative. If the fault is a short circuit fault, then the S/C LED will also be lit.
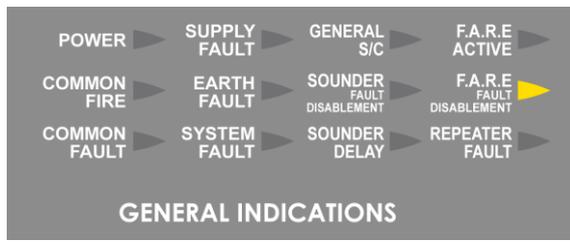
F.A.R.E. Fault

The F.A.R.E. status LED lights when there is a wiring fault on the F.A.R.E. Circuit.
If the fault is a short circuit fault, then the S/C LED will also be lit.
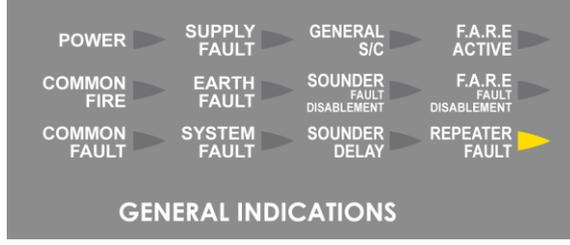
Repeater Fault

The Repeater fault LED Lights when the panel can not communicate with a serial repeater connected to the panel.

On power up, the panel looks for a signal from a repeater. If it does not see one, it assumes there is no repeater connected.

If the panel sees a repeater, but then looses its signal, it will show a repeater fault.

6.2 WHAT TO DO IF A FAULT CONDITION OCCURS

If a fault occurs, the responsible person should:

- Turn keyswitch to Controls enabled and press **silence fault tone** button to silence the fault buzzer.
- Write down the fault (s) in the Log Book. Take appropriate action to correct the fault (Usually by contacting the service engineer)

On the PREMIER M 48 panel, the fault indications (except system fault) are non latching. That is, when the fault has been cleared, the fault indication will turn off. When all faults have been cleared, the panel will return to its quiescent (normal) condition.
In the event of multiple faults, when a fault has been rectified the indicator light for that Fault is automatically turned off. If all Faults are cleared, the General Fault light will go out and the Panel's Internal Sounder will be silent (if not already muted).

7. DISABLEMENTS

7.1 REASONS FOR DISABLING CERTAIN PARTS OF A FIRE ALARM SYSTEM.

Certain parts of this Fire Alarm Panel can be temporarily disabled (i.e. switched off) to suit prevailing conditions. For example, if there is a risk of a False Alarm in a zone, for example, an area full of dust because of building work, it is possible for the user to disable that zone during the risk period and then enable it again afterwards. During a disablement of a zone(s), no fire or fault signal will be processed for that zone(s). Only zone(s) in a non-alarm state can be disabled, that is zones already in fire cannot be disabled.

External sounders can also be disabled as could be required in certain conditions.

7.2 TO DISABLE A ZONE AND/OR EXTERNAL SOUNDERS.

1.   Turn control key to "Controls Enable" position;

2.   Press FUNCTION switch momentarily, this will cause General Disablement LED to flash (fast). This means the panel is in disable/enable mode;

3.   Press scroll switch once and this will cause the General Disablement LED, Zone1 fault, and Zone 1 Disablement to flash (with a 3 quick flash, then off pattern);

4.   Press SELECT to disable this zone, or SCROLL to move to another zone;

5.   The scroll order is Detection Zone 1-48 (Zone fault & zone disabled LEDs on), then Common Sounders, Then F.A.R.E. circuit.

6.   Select zone to be disabled. The LEDs will now flash 3 quick flashes, then ON. This shows that this zone has been disabled.

7.   Switch controls key to off position, then both the disabled Zone Disablement LED and the General Disablement LED will remain lit (steady.

7.3 TO ENABLE A ZONE AND/OR EXTERNAL SOUNDERS.

1.   Turn key to "Controls enable" position (since a zone is already disabled at this time, the General Disablement LED with stay lit (steady);

2.   Press FUNCTION followed by SCROLL. Zone 1 LEDs will flash

3.   Press scroll switch until the LEDs are flashing at the disabled zone;

4.   Press "SELECT" and this will cause the General Disablement LED to flash (with a 3 quick flash, then off pattern);

5.   Turn control Key to "Off" position and this will turn off the General Disablement and Zone Disablement LEDs.

8. USING SOUNDER DELAYS

8.1 WHAT IS A SOUNDER DELAY

In certain circumstances it may be desirable to have a delay between the panel detecting a fire, and starting its external sounders, to allow the responsible person to check the cause of the alarm, to stop building evacuation by an obvious false alarm. If the cause of the Alarm is found to be a true fire hazard, the Delay can be overridden and the Alarm Sounders activated immediately. Alternatively, in the case of a false alarm, the Panel can be reset.

8.2 SOUNDER DELAY SETTING

On the PREMIER M 48 panel, the sounder delay is global. That is, all zones will be delayed by the same amount. The delay can be set between 1 minute and 9 minutes, by adjusting rotary switch SW1 (install manual), or the delay can be left off (sounders activate immediately), by leaving rotary switch at position 0.

8.3 HOW THE PANEL INDICATES SOUNDER DELAY

If a Delay has been programmed into the Panel, the General Disablement & SOUNDER DELAY LEDs will be lit. When a zone processes an alarm signal, the panel will indicate fire in the usual way, but the sounders will not be active until the delay period has expired. To override this delay, press Delay Override Switch, which will cause the external sounders to energise. If there is no delay programmed, the Delay Override Switch has no function.

8.4 A FIRE ALARM CONDITION ON A DELAYED PANEL

When an alarm occurs on a Delayed Panel, the panel will: -

- Light its General Fire and appropriate Fire Zone light(s)

- Sound its Internal buzzer

- Turn on the F.A.R.E. output

- Start the Delay countdown sequence

- Wait until the end of the delay, and then start the sounders.

8.5 OVERRIDING A DELAY IN THE EVENT OF A GENUINE FIRE ALARM

If on investigation the cause of the Alarm is found to be a true fire hazard, pressing the Delay Override, will active the Alarm Sounders and Outputs with immediate effect.

8.6 RESET THE SYSTEM IN THE EVENT OF A FALSE ALARM

If, on investigation, the cause of the Alarm is found to be false, turn the Key switch to the "Controls Enabled" position and press-reset button.

8.7 TO TURN OFF THE SOUNDER DELAY

To turn off the sounder delay, set the rotary switch to the 0 position.