

# GX32 Battery Powered Fire Alarm System

## Installation

It is assumed that installers are familiar with installing cables and fixing the various components etc.. The system is battery powered and presents no electrical risk to either installers or users. Callpoint/Sounder units are generally fitted at a height of 1.2m AFL. Remove the front cover and glass and separate the back box. Pre-drill the back boxes if necessary to take the interconnection cable. Fit the back boxes to the wall and introduce the cable. Strip the sheathing and cores as necessary.

Start connecting at the remote End of Line unit and work back towards the control panel. Connect the **Amber** and **Blue** of the cable to **PA** and **PB** respectively. Fit a link in the terminals marked EOL. Connect the battery. The unit should bleep. This will be repeated every 10 secs.. Re-assemble the unit onto the back box. Refit the glass - the sounder will give a double whoop within 10 secs. to confirm correct installation. Refit and secure the front cover. If on fitting the glass and cover a long tone followed by double bleeps every 5 secs. this indicates that there is a problem on the previous section. This could be: a short or open circuit on the cable, a reverse connection, no battery in the previous unit or no EOL link fitted.

At the next unit connect the **Amber** and **Blue** of the cable from the End of Line unit to **EA** and **EB** respectively of this unit. Connect the **Amber** and **Blue** of the cable leading towards the control panel to **PA** and **PB** respectively. Reassemble the unit as above and check for the double whoop on this unit.

Repeat the above procedure at each unit. Do **NOT** start to connect the next call point until you have heard the double whoop confirmation. At the control panel connect **Amber** and **Blue** to **EA** and **EB** respectively. Ensure that the keyswitch is in the **RESTART** position. Connect the batteries (observe the correct polarity). The green system healthy LED should start to flash within 10 - 15 secs.. Fit the control panel front onto its back box. If the green LED does not flash check the batteries and cable connections in the control and the first call point.

## Testing the system

Turn the keyswitch to **TEST MODE**. The sounder will give a low pitch bleep every 5 secs. Insert the black test key in the underside of the call point to displace the glass. Only the control sounder will sound. Remove the test key. While still in **TEST MODE** visit each call point in turn. Inserting the black test key sounds only the sounder of the call point being tested. When all call points have been tested switch the control to the **RESTART** position.

## Fault Finding

Fault indication is given audibly and visually at the control and can be caused by exhausted or partially exhausted batteries, cable connections or cable damage. If fault indication occurs on installation or on extending the system it could be that the end of line link is not fitted or two have been fitted.

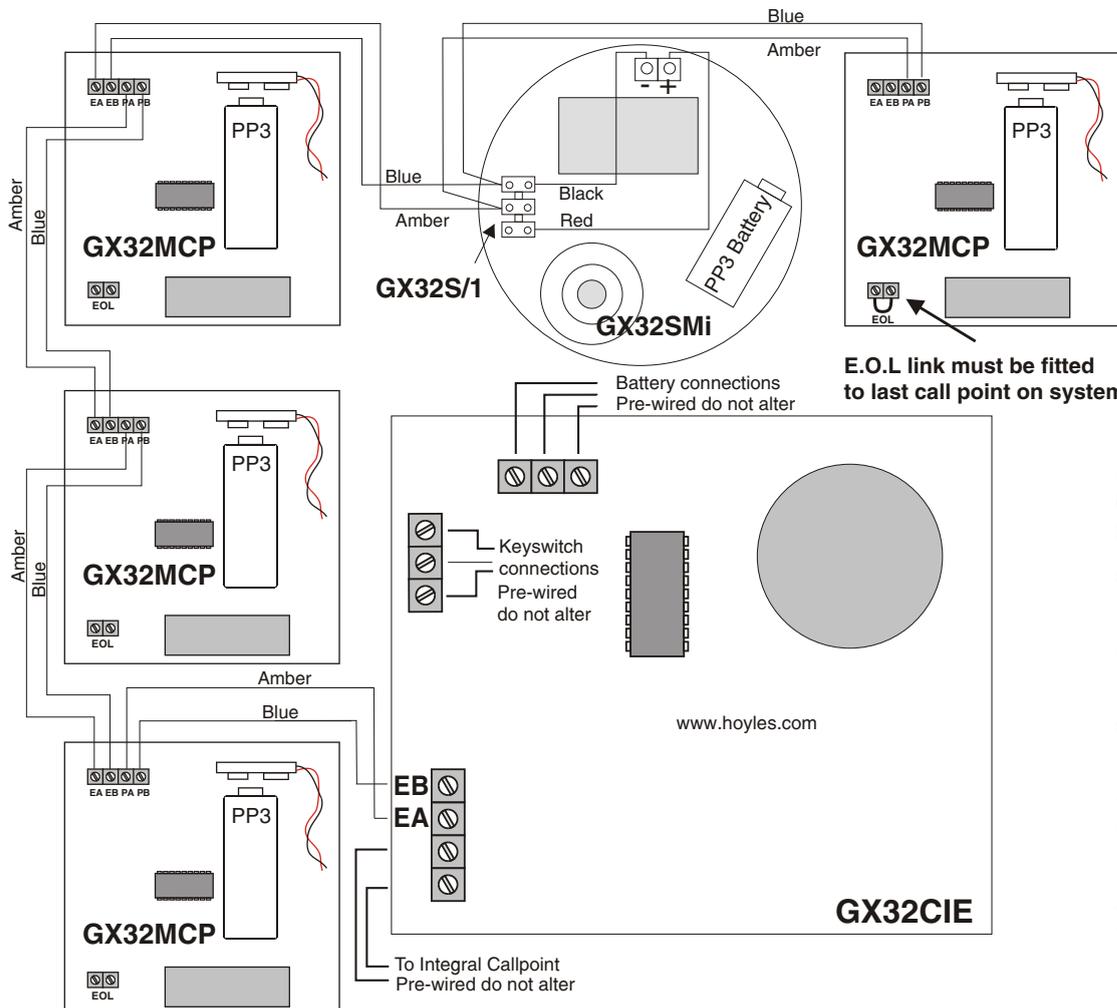
Switch to **TEST MODE**, any call point with a partially exhausted battery will give a single high pitched bleep at 5 sec. intervals. Remove the callpoint and replace the battery while in **TEST MODE**. **All Callpoint and Control panel batteries should be changed.**

A double high pitched bleep every 5 secs. indicates that there is a cable fault between the bleeping unit and the next unit towards the end of line. This could also indicate a totally exhausted battery in the next unit.

Any battery replacements or cabling alterations should be done with the keyswitch in **TEST MODE** otherwise it will be necessary to follow the installation procedure above.

If only part of the system is sounding as a fire condition and it is not possible to silence it from the control this would indicate that a cable has been damaged and it is not possible for the silence signal to be received. In this case it will be necessary to remove the batteries from the sounding call points and follow the installation procedure above.

**NOTE:** The GX32CIE is not able to silence smoke alarms that are still sensing smoke. If it is not possible to silence the call points beyond this detector this would indicate that some of the batteries are approaching the battery fail point. It will be necessary to clear the smoke first.



## NOTE

Smoke alarms, where fitted, can only be used between callpoint/ /sounder units. Only one can be fitted between each as shown. Thus 32 smoke alarms would require 32 callpoint/sounder units.

Smoke alarms cannot be used at the end of line.

Smoke alarms are provided with a GX32S/1 termination unit to provide the necessary termination resistance for the GX32 system

**E.O.L link must be fitted to last call point on system**

GX32 is available in kit form but individual components can be purchased as required.

## GX32KIT400

1 x Gx32CIE Control Panel  
4 x Gx32MCP Callpoint/sounders  
GX32CAB140 140m twin cable  
4 x CABCLIP5RBK 100 cable clips

## GX32KIT402

1 x Gx32CIE Control Panel  
4 x Gx32MCP Callpoint/sounders  
2 x GX32SMi Ionisation smoke alarms  
GX32CAB140 140m twin cable  
4 x CABCLIP5RBK 100 cable clips

All kits and individual items are supplied with batteries and fixing screws etc..



**Hoyles Electronic Developments Ltd**

T. 01744 886600 E. sales@hoyles.com  
F. 01744 886607 W. www.hoyles.com

# GX32 Fire Alarm System

## 1. Overview

The GX32 fire alarm system has been designed to meet the requirements of the Work Place regulations for electrically powered fire alarm systems. As a manual system the GX32 complies with BS5839 Pt.1 AppG and also BS5839 Pt.6 Grade C for battery powered smoke alarms when used with the optional interlinkable smoke alarms.

Because each Callpoint/Sounder has its own battery and comprehensive cable monitoring between all units, the system sections will continue to function individually even if the cables are cut or short-circuited. For this reason more economical cable can be used than is possible with conventional fire alarm systems.

Battery life is approximately 12 months but will depend upon usage. A battery fault monitor is incorporated in each Callpoint/Sounder and the Control Panel.

Up to 32 GX32MCP Callpoint/Sounders can be connected to a GX32CIE. The system must be connected as shown in the accompanying wiring diagram. It is **NOT** possible to use spur wiring. The polarity of the wiring is important.

A battery fault in any callpoint/sounder will be reported as a fault to the GX32CIE. However although the GX32SMi smoke alarms have a battery fault this will only give local warning it will **NOT** be reported to the GX32CIE.

## 2. Specifications.

### GX32CIE Control Panel

#### Enclosure:

- The unit is housed in a plastic enclosure. IP51
- Dimensions 156 x 120 x (55-65) mm.

The control and indication:-

- Keyswitch for TEST MODE, SILENCE and RESTART
- Break glass call point (KAC Type)
- Twin Red FIRE LEDs
- Single Amber FAULT LED
- Single Green SYSTEM HEALTHY LED (Flashing)
- Integral audible warning device 80db at 1m

#### Connections:

- Two way I/P O/P terminals for connection to first GX32MCP or smoke alarm. 1.0sqmm

#### Power Supply:

- 6 x AA alkaline cells (supplied)

#### Monitoring:

- Battery low monitor gives audible warning (two bleeps every 15 secs.) and visual FAULT LED flashing (1 sec. on 15 secs. off) Green SYSTEM HEALTHY LED ceases to flash.
- Cable short circuited gives audible warning (two bleeps every 15 secs.) and visual FAULT LED flashing (1 sec. on 15 secs. off) Green SYSTEM HEALTHY LED ceases to flash.
- Cable severed gives audible warning (two bleeps every 15 secs.) and visual FAULT LED flashing (1 sec. on 15 secs. off) Green SYSTEM HEALTHY LED ceases to flash.
- Callpoint/sounder battery low gives both audible warning (two bleeps every 15 secs.) and visual FAULT LED flashing (1 sec. on 15 secs. off) Green SYSTEM HEALTHY LED ceases to flash.
- If the keyswitch is inadvertently left in the SILENCE position an audible (rapid bleeps) and visual FAULT LED warning is given. Green SYSTEM HEALTHY LED ceases to flash.
- If the keyswitch is inadvertently left in the TEST position an audible warning is given by a single bleep every 5 secs. and the green SYSTEM HEALTHY LED ceases to flash.

### GX32MCP Callpoint / Sounder

#### Enclosure:

- The unit is housed in a red plastic enclosure. IP51 (KAC World Series Callpoint)
- Dimensions 90 x 90 x 65 (mm)

#### Control and indication:

- Breakglass (or deformable element) to active alarm
- Plastic reset key
- Piezo sounder approx 2Khz pulsed 96 db at 1m
- Facility to select end of line unit

#### Connections:

- 4 way terminal 1.0sqmm. Two for cable from direction of panel, two for cable leading towards end of line.
- 2 way terminal for link to select end of line EOL

#### Power Supply:

- 1 x PP3 Alkaline battery.

#### Monitoring:

- Battery low monitoring gives audible and visual warning at the GX32CIE. Turning GX32CIE keyswitch to TEST MODE enable location of low battery to be determined by bleeping the sounder in the defective unit.
- Cable link towards end of line is monitored. If cut or severed this is relayed to GX32CIE to give audible and visual indication. Turning GX32CIE keyswitch to TEST MODE enables the fault to be located by bleeping the sounder in the last serviceable unit.
- Cable from GX32CIE is constantly monitored for FIRE, SILENCE and TEST MODE signals

### GX32SMi Ionisation Interlinkable Smoke Alarm

#### Enclosure:

- Housed in a beige plastic enclosure
- Dimensions 110 dia x 35 (mm)

#### Control and indication:

- Red re-assurance LED flashes once every 45 secs.
- Piezo sounder approx 2Khz pulsed 96 db at 1m on detection of smoke.
- Piezo sounder bleeps periodically to warn of low battery.
- Test button to test, battery and functionality of the complete unit

#### Connections:

- Two way terminal block on smoke alarms to connect via GX32S/1 to GX32 wiring

#### Power Supply

- PP3 Alkaline battery (supplied)

#### Monitoring:

- Battery low monitor bleeps the piezo sounder. This does **NOT** signal to the GX32CIE.

### GX32SMi Optical Interlinkable Smoke Alarm

#### Enclosure:

- Housed in a beige plastic enclosure
- Dimensions 110 dia x 35 (mm)

#### Control and indication:

- Red re-assurance LED flashes once every 45 secs.
- Piezo sounder approx 2Khz pulsed 96 db at 1m on detection of smoke.
- Piezo sounder bleeps periodically to warn of low battery.
- Test button to test, battery and functionality of the complete unit

#### Connections:

- Two way terminal block on smoke alarms to connect via GX32S/1 to GX32 wiring

#### Power Supply

- PP3 Alkaline battery (supplied)

#### Monitoring:

- Battery low monitor bleeps the piezo sounder. This does **NOT** signal to the GX32CIE.

### GX32CAB140 Twin Cable

- 140 metres twin 0.5sqmm hard drawn PVC insulated (yellow & blue) and sheathed with hardened red PVC to give a finished diameter of 5mm. Outer sheath is printed with the words FIRE ALARM in black at 215mm intervals. This is **NOT** a fire resistant cable.

The GX32 system parts are available individually or in kit form. Two kits are currently available:

### GX32KIT400

- 1 x GX32CIE Control Panel
- 4 x GX32MCP Call Point / Sounders
- 1 x GX32CAB140 140metres twin red cable
- 4 x CABCLIP5RBK boxes of 100 5mm black clips

### GX32KIT402

- 1 x GX32CIE Control Panel
- 4 x GX32MCP Call Point / Sounders
- 2 x GX32SMi interlinkable smoke alarms
- 1 x GX32CAB140 140metres twin red cable
- 4 x CABCLIP5RBK boxes of 100 5mm black clips

Both the above kits include batteries and fixing screws etc...



**Hoyles Electronic Developments Ltd**

T. 01744 886600 E. sales@hoyles.com  
F. 01744 886607 W. www.hoyles.com