ZITON

ZP3 Fire Alarm Control Panel User Guide

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Firmware compatibility

For control panels with firmware version 4.0 or later.

Conformity

CE

European Union directives

2014/30/EU (EMC Directive): This device is in compliance with the essential requirements and other relevant provisions of Directive 2014/30/EU.



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Contact information and product documentation

For contact information or to download the latest product documentation, visit firesecurityproducts.com.

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Important information

This is the user guide for the ZP3 Fire Alarm Control Panel. Read these instructions and all related documentation entirely before operating this product.

Firmware compatibility

Information in this publication covers control panels with firmware version 4.0 or later.

This publication must not be used as a guide for operation of control panels with an earlier software version.

Product warnings and disclaimers

These products are intended for sale to and installation by qualified professionals. KGS Fire & Security cannot provide any assurance that any person or entity buying its products, including any “authorized dealer” or “authorized reseller”, is properly trained or experienced to correctly install fire and security related products.

For more information on warranty disclaimers and product safety information, please check https://firesecurityproducts.com/policy/product-warning/ or scan the QR code:

Advisory messages

Advisory messages alert you to conditions or practices that can cause unwanted results. The advisory messages used in this document are shown and described below.

WARNING: Warning messages advise you of hazards that could result in injury or loss of life. They tell you which actions to take or to avoid in order to prevent the injury or loss of life.

Caution: Caution messages advise you of possible equipment damage. They tell you which actions to take or to avoid in order to prevent the damage.

Note: Note messages advise you of the possible loss of time or effort. They describe how to avoid the loss. Notes are also used to point out important information that you should read.

List of abbreviations and acronyms

Abbreviation	Definition
DC	Direct current
GND	Ground
GUI	Graphical user interface
LCD	Liquid crystal display
LED	Light emitting diode
mA	Milliampere
PC	Personal computer
RMC	Remote manned centre
RX	Receive
SW	Switch
TX	Transmit
V	Volts

System overview

Introduction

The ZP3 is a complete intelligent fire detection system designed to protect life and property. Each system is an individual design, based upon modular ZP components. The control panel detects the presence of smoke or fire, raises alarms, and accurately indicates the location of the fire. Depending on the features built into the system, it can also:

- Raise local and remote alarms
- Call the fire brigade
- Activate building systems (including automatic fire extinguishing systems)

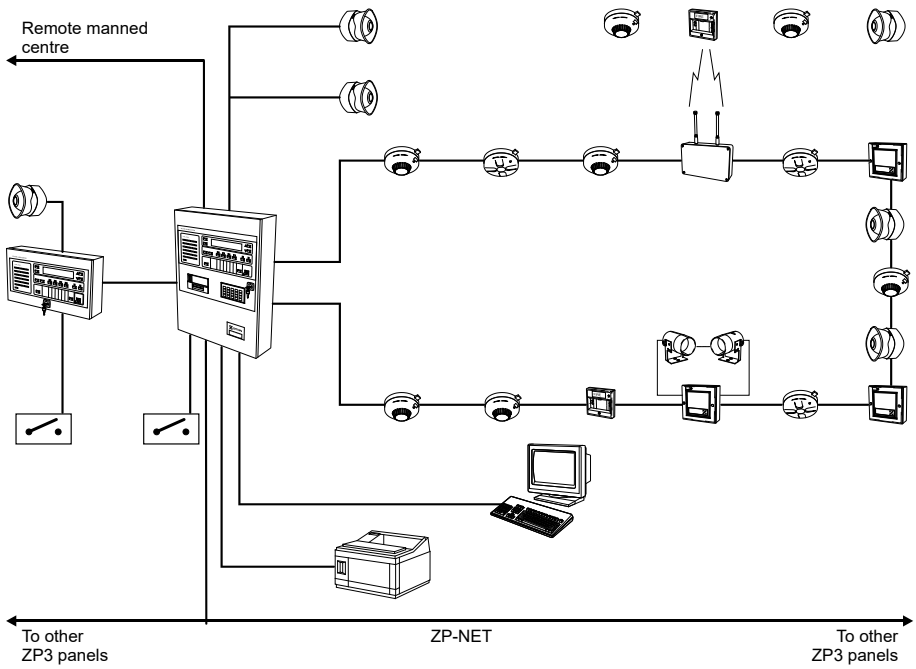
The system can prevent the spread of smoke, gases, and fire, and display the alarm situation graphically on a computer.

The ZP3 Fire Alarm Control Panel is the main component of a ZP3 system. Figure 1 below shows a typical fire detection system schematic.

Various devices can connect to the control panel, these include:

- Fire detectors
- Smoke detectors
- Manual call points
- Alarm sounders
- Local and remote indicating panels
- Graphics display computers
- LED mimic panels
- Other devices

Figure 1: Typical ZP3 system schematic



Product range

The ZP3 Fire Alarm Control Panel range includes the models shown in the table below.

Model	Description
71305N	ZP3-1L Fire Alarm Control Panel (Red)
71401N	ZP3-2L Fire Alarm Control Panel (English)
71403N	ZP3-2L Fire Alarm Control Panel (Spanish)
71405N	ZP3-2L Fire Alarm Control Panel (Red)
71501N	ZP3-4L Fire Alarm Control Panel (English)
71503N	ZP3-4L Fire Alarm Control Panel (Spanish)
71505N	ZP3-4L Fire Alarm Control Panel (Red)

Basic system features

The system incorporates a wide range of features and capabilities, including:

- Proven system of automatic contamination adjustment for each sensor. This recalibrates each sensor as it becomes contaminated, and provides a constant sensitivity even when sensors are dirty.
- Each sensor is individually adjustable for sensitivity, including different sensitivities for day and night operation.
- Selectable alarm verification allows the time integration of each sensor to be set. Analogue sensors provide prealarm, alarm, service, and diagnostic alarms.
- The panel continuously checks every sensor for contamination, with automatic alarm.
- The system supports both fire and non-fire monitoring functions, e.g. door open, fault alarms, etc.
- The ZP-loop provides for addressable loop-powered sounders, reducing wiring.
- Each panel supports up to 50 zones, optionally 128. Built-in zone LEDs display up to 50 zones, and extender panels provide LED display for up to 128 zones.
- Each panel has the capacity for 896 programmable inputs and outputs, which can be located with the panel, or remotely via serial connection.
- Flash memory retains all programming and data, even if the panel is powered down.

Operation

The panel incorporates a simple and effective operator interface that includes a 160-character LCD display. Together with zone LEDs and function LEDs, these indications give a clear and unambiguous indication of all alarms and reports. All control functions are menu driven, and three access levels are protected by passwords. A Help button provides quick access to operating instructions.

Sensors and devices

A full range of single and combination analogue addressable sensors, including wired and radio sensors, is supported. Manual call points meet UK preferences, and respond in less than 3 seconds. A range of input and output interface units allows the connection of third-party equipment to the addressable ZP-loop.

The following features are contained in panel software SW71910 version 3.07 or later:

- Fast sounder responses
- Type 54 emulation

Fast sounder responses

The panel now has a response time of less than 3 seconds for call point operation. This is in compliance with the BS 5839-1 specification.

For a guaranteed sounder response time of less than 3 seconds from a mapped call point input, the user must adhere to the following:

- The call point must be a version three type (ZP785-3).
- The sounder and the call point must be on the same panel. This means that the detection zone and alarm zone must be serviced by the same panel.
- For the output mapping the sounder output device must be defined as a sounder type with the call point being the input trigger.
- For a ZP755 line sounder used as a behind detector sounder the output address must be tagged as an SAB (sounder alarm base).

Type 54 emulation

Type 54 emulated devices improve functionality: A type 54 emulated device can be mapped to disable any other line device. This is reported on the panel as an event and updated in the Event archive.

Supported sensors and devices

The ZP3 panel, when fitted with the software shown in the specification supports the following sensors and devices.

Table 1: Supported sensor and device models

Number	Description
A45E-2	Single interface module
A51E-1	High voltage relay module
A60E-2	Line isolator module
A50E-2	Line relay module
A70E-2	Conventional interface module
ZP710	Ionization smoke sensor
ZP732	Combination smoke/thermal sensor
ZP730	Optical smoke sensor
ZP720-2	Thermal sensor (Grade 2)
ZP720-3	Thermal sensor (Class A1)
ZP785-2	Manual “breakglass” call point (indoor)
ZP785-3	Manual “breakglass” call point (indoor, 3 second response)
ZP787	Manual “breakglass” call point (outdoor)
ZP740	Interface unit, multifunction (fire/non-fire/security)
ZP745	Interface unit
ZP750	Loop relay
ZP755	Loop sounder
ZP755W	Weatherproof horn sounder
ZP755H	Horn sounder
ZP755V-2	Addressable stand-alone beacon
ZP755BV-3	Addressable sensor base sounder/beacon
ZP756	Loop sounder with base
ZP753	Loop remote LED
ZP470	Loop radio communication module
ZR430-1	Wireless (radio) optical smoke sensor [1]
ZR420-1	Wireless (radio) thermal smoke sensor [1]
ZR432-2	Wireless (radio) combination sensor [1]
ZR485	Wireless (radio) call point
ZR440	Wireless (radio) interface I/O unit
ZP710ex	Intrinsically-safe smoke sensor
ZP720ex	Intrinsically-safe thermal sensor
ZP786ex	Intrinsically-safe call point
ZP740ex	Intrinsically-safe interface unit

Number	Description
ZP3-ECU	Extinguishing control units
ZS200	High sensitivity aspirating smoke detectors
ZX832	Multisensor fire detector (optional)

[1] Used with the ZP471A and ZP472A Radio interface units only (see “Total Loss of Power alarm” on page 6).

Later versions of firmware may support additional or different devices. If in doubt, check with your local supplier.

Maintenance features

A range of maintenance features simplifies and improves system maintenance. These include status reports, contamination and near-service reports, operational statistics, and a zone walk test and sounder test. The system can manually disable zones or individual points for maintenance purposes.

Remote diagnostics

Remote diagnostics is available as an option, enabling some or all maintenance functions to be carried out from a remote location.

Automatic diagnostics

Automatic diagnostics continuously monitor the system for correct operation, features include:

- Automatic checking of wiring and points
- Corrupt data detection
- Disconnection of faulty or corrupt zones
- Automatic testing of sensor operation
- Verification of sensor or zone location

Sensors are automatically subjected to a self-test at regular intervals, and vital elements of the system, such as the software configuration data and running data, are verified every hour.

Total Loss of Power alarm

The control panel is fitted with a Total Loss of Power alarm feature. This feature is a prewired, independent circuit that turns on the Common Fault and System Fault LEDs and sounds a buzzer in the event of total loss of power. This condition occurs when the mains power has been lost and the battery has been depleted to the extent that load shedding has occurred, prior to the entire panel being shut down. In this state, the display is shut down, the fault LEDs are on, and the panel buzzer is sounding.

Accessories and peripherals

In addition to the ZP-loop devices, a range of accessories and peripheral devices is available to provide all the elements of a complete system. The ZP3 panel, supports the following accessories and peripherals.

Table 2: Supported accessory and peripheral models

Number	Description
ZP3-RDU	Remote display unit (mini or full function)
ZP3-RAC	Remote I/O accessory cabinet
ZP3-RL8	Addressable relay board, 8-way
ZP3-MA8	Addressable sounder driver board (monitored), 8-way
ZP3-MIP8	Addressable input board, 8-way
ZP3-OP24	Addressable transistor output board, 24-way
ZP3-SCB-D	Control bus driver board
ZP3-SCB-R	Control bus receiver board
ZP3-NET1	Network driver board, single
ZP3-AB232	Serial communications board, RS-232
ZP3FBR-2-B1	Fireman’s interface panel (Swedish)
ZP3FBR-2-R1	Fireman’s repeater panel
ZP3AB-NLM2	Network loop monitor
ZP471A	Radio loop module (receive only)
ZP472A	Radio loop module (transmit and receive)
ZPR868-H	4-loop Radio Loop Module (HUB)
ZPR868	Addressable 868 MHZ Radio Loop Module (RLM)
ZPR868-C	Ziton Protocol 868 MHZ Radio Cluster Communicator (RCC), 24VDC

Later versions of firmware may support additional or different devices. If in doubt, check with your local supplier.

Day/night capability

Day/night control provides separate programmes for day and night modes. Different sensor sensitivity, alarm selection, alarm evaluation delays, and fire brigade responses can be configured.

Configuration

A programming or configuration utility allows any “cause-and-effect” requirement to be configured. Each panel can have up to 896 physical outputs that are software linked to as many as 2,000 inputs in any arrangement. All functions are 100% field programmable. Programming can be done directly using the ZP3 panel, or via a software configuration package, i.e. Planner. Flash memory retains all programming and data, even if the panel is powered down.

Communication and integration

Multiple communication capability allows the panel to connect to printers, colour graphic computers, building management systems, remote mimics and text displays, radio pagers, and other systems. Simple integration into third-party systems is possible.

Peer-to-peer networking

The ZP3 peer-to-peer network enables up to 255 stand-alone systems (verified up to 100 panels per system) to be integrated to provide system-wide alarm reporting, coordinated evacuation, cause-and-effect functionality, and control, for large systems and multiple-building sites.

The maximum number of panels supported by each software version is listed in Table 3 below.

Table 3: Maximum panels supported

Panel software	Maximum panels
Version 1	32
Version 2	64
Version 3	255
Version 4	255

Principle of operation

Sensing devices, e.g. heat and smoke detectors, manual call points, etc. are grouped into zones, and programmed with text labels to indicate their location.

The control panel continually checks each fire or smoke sensor, call point, or other device attached to the ZP-loop, every 2 seconds. The precision data collected is analyzed to indicate the amount of smoke, heat, and combustion products in the proximity of devices. The active scanning process by the ZP3 panel constantly updates this information. This provides an accurate picture of the area being monitored by the sensors, enabling the software to make intelligent decisions about the presence of fire, as indicated by heat, smoke, or invisible products of combustion.

After making a decision that a fire exists, the system initiates an alarm at the control panel, displays the exact location by means of illuminated LEDs and LCD text displays, and illuminates the LEDs on the initiating sensors or call points. Depending upon how the particular system has been configured, it can also issue preprogrammed commands to operate area sounders, call the fire brigade, activate building controls such as air-conditioning shutdown, or to take other actions. In addition it commands remote display panels to display the location and status of alarms, and to carry out programmed control functions. A very large system consists of several panels communicating with each other. These panels can be programmed to display alarms from other panels or areas, and to automatically carry out commands issued by other panels.

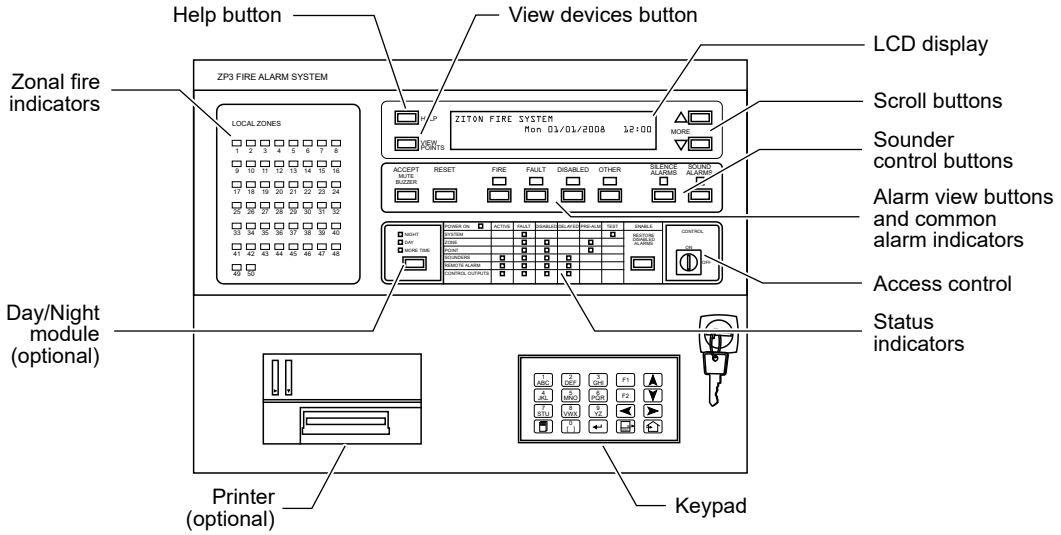
The complete system is actively monitored on a continuous basis. Self-maintenance and diagnostics are built-in, and the sensors, devices, and field wiring are continuously checked for correct operation. Any faults found are automatically reported.

Although each system is unique, the basic principles of operation apply to each. This manual describes the basic operating principles. To fully understand your particular system, obtain a copy of the system specification and become familiar with how the system is designed to react in the event of a fire alarm.

Panel fascia

The system is operated by means of the controls and indicators on the ZP3 panel Fascia as shown in Figure 2 below. In some systems, the operator controls the system from a Remote Display Unit and not from the panel fascia. This is identical to the control panel, but is usually located in some other area, such as a control room. Effectively the Remote Display Unit is a repeater, which operates in the same manner as the fire panel.

Figure 2: Fire control panel fascia panel layout



Alarm controls and indicators

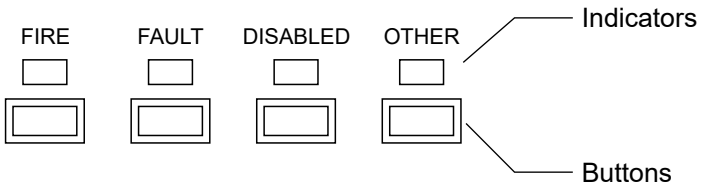
Alarm view buttons

As shown in Figure 3 below, there are four *alarm view* buttons located below the LCD display, directly below the four *common alarm indicators,* they are:

- Fire
- Fault
- Disabled
- Other

The relevant common alarm indicator illuminates when an alarm is received, and the zonal details are simultaneously displayed on the LCD display.

Figure 3: Alarm view buttons and common alarm indicators



Where more than one type of alarm is present simultaneously, then the highest priority alarm displays automatically. The priority order is:

1. Fire
2. Fault
3. Disabled
4. Other

To view other categories of alarm, press the relevant button as described below. After viewing lower-priority alarms using the alarm view buttons, the system times out and automatically returns to the current highest priority alarm.

Fire button

A fire alarm is the highest priority and is automatically displayed, by zone, on the LCD display. The top line indicates Fire Alarm, and the word “Fire” is displayed on the bottom line directly above the common Fire indicator. If you have been viewing other types of alarm (see below), and wish to return to the fire alarm screen, press the Fire button.

Fault button

Press the Fault button to view any fault alarms in the system (the common Fault indicator is illuminated). The top line indicates Fault Alarm, and the word “Fault” is displayed on the bottom line directly above the common Fault indicator. The fault alarm is displayed by zone.

Disabled button

Press the Disabled button to view disabled zones (the common Disabled indicator is illuminated). The top line indicates Disabled, and the word “Disabled” is displayed on the bottom line directly above the common Disabled indicator. The details are displayed.

Other button

Press the Other button to view any other alarms in the system (the common Other indicator is illuminated). The top line indicates Other, and the word “Other” is displayed on the bottom line directly above the common Other indicator. The alarm is displayed by zone or by category.

Common alarm indicators

As shown in Figure 3 on page 10, there are four *common alarm indicators* on the panel, they are:

- Fire
- Fault
- Disabled
- Other

These are used to indicate the presence of an alarm in any of the four categories. The most important of these is the fire alarm indicator. The others draw attention to alarms of lesser importance.

Fire indicator

The Fire indicator illuminates when any fire alarm is received by, or is currently present, in the system. The indicator flashes for a new alarm, and becomes steady after an alarm has been accepted. New alarms must be responded to immediately. Other indicators identify the location of the alarm, and are described later in this document. This indicator is normally off.

Fault indicator

The Fault indicator illuminates when any fault alarm is received by, or is currently present, in the system. Other indicators identify the location and type of fault. Fault alarms have different levels of severity; some may take the complete system out of operation, some may take only a small part of the system out of operation, while others may simply report a condition that needs attention. Refer to “Types of fault” on page 24 for more details. This indicator is normally off.

Disabled indicator

The Disabled indicator illuminates when any part of the system (for example, a zone, a fire sensor, a sounder, or a connection to the fire brigade) is deliberately disabled. Other indicators identify the location of the disabled devices; these will be described later in this manual. This indicator is normally off.

Other indicator

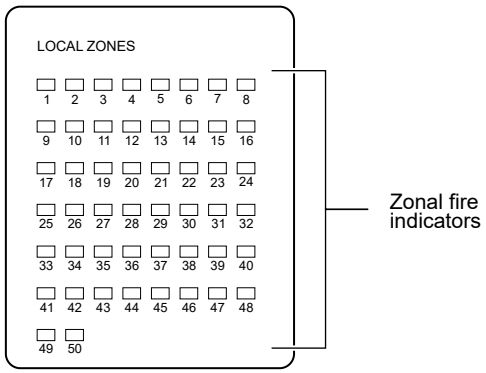
The Other indicator illuminates to identify the presence of any alarm that does not fall into one of the above groups. For example, this could be an alarm that a fire door is unlocked, or that air conditioning is shut down, or a prealarm, etc. Other indicators identify the nature of the alarm, and are described later in this manual. This indicator is normally off.

Zonal fire indicators

See Figure 4 below. In addition to the common alarm indicators, by default alarms are indicated by means of zonal fire indicators, and by means of text messages on the LCD display, which also shows other information. Alternatively the LED can be programmed as required. For more information, see “I/O Mapping” in the *Installation, Commissioning and Maintenance Manual*.

Zonal fire indicators are red, and are located on the left side of the fascia. When an alarm is received from a sensor, the Zone indicator illuminates to identify which zone has initiated the alarm. This immediately identifies the location of the fire. The Zone indicator flashes for a new alarm, and becomes steady after an alarm has been accepted. The zonal fire indicators make it possible to quickly determine the zones in an alarm condition, and to identify which are new alarms and which have been previously accepted. Zone indicators are normally off.

Figure 4: Zonal fire indicators



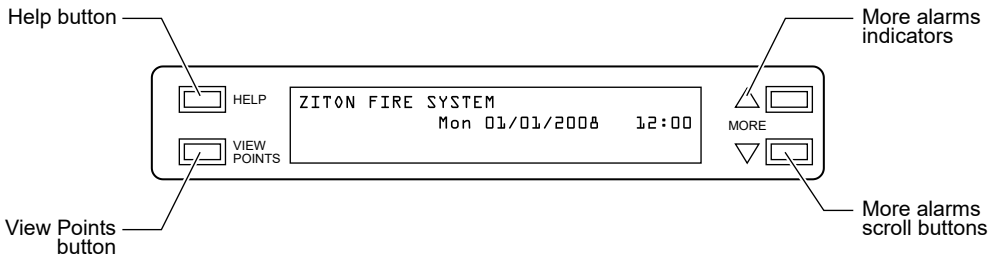
LCD display

The LCD display automatically indicates an alarm with a text message, which identifies the zone in which the alarm occurred. The LCD display can show two alarms simultaneously. When more than two alarms are present at the same time, they can be scrolled using the Up and Down scroll buttons. An indicator illuminates to indicate that more alarms exist than are visible on the screen. The LCD display can also be used for other functions, which are described later in this manual.

Navigation buttons

See Figure 5 below. The following control buttons are used to navigate through the system during an alarm of any type.

Figure 5: Navigation buttons



Scroll buttons

Press the Up or Down scroll buttons to manually scroll through a list of alarms on the LCD display. When more alarms are received (by zone) than can be displayed on the LCD display, then the More indicators illuminate to indicate that extra alarms are waiting to be viewed.

Press the Up button (next to the More Δ indicator) to scroll upwards through the list; press the Down button (next to the More ∇ indicator) to scroll downwards through the list.

View Points button

Press the View Points button to access the Device screen, which shows the alarms by device (point), together with their address, location, device type, the nature of the alarm, and the programmed device message.

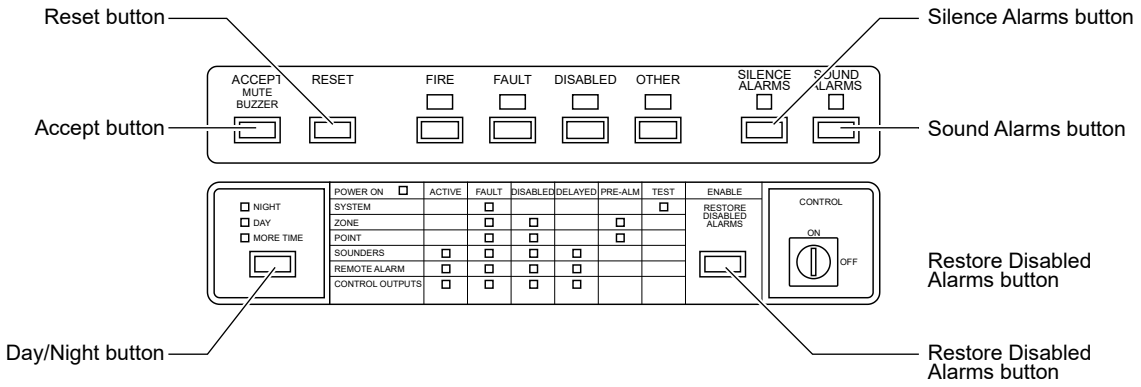
Help button

Press the Help button to display on-screen operating instructions for the ZP3 panel. Scroll through these instructions using the Up or Down buttons.

Main operating controls

See Figure 6 below. Five main controls are used to operate the system. Each button is described below.

Figure 6: Main operating controls



Accept button

Press the Accept button after receipt of an alarm. This causes the illuminated indicators to go steady, and silences the panel buzzer.

Reset button

Press the Reset button to clear all alarms from the system and restore the panel to a normal state with no alarms.

All displayed alarms are removed, and all illuminated indicators are switched off. Sounders (unless programmed to be dynamic) are switched off, and the remote manned centre alarm is restored to a normal state with no alarms. If any sensors, call points, or other devices still sense fire, smoke or a fault, then the panel returns to an alarm condition.

Silence Alarms button

Press the Silence Alarms button to silence (turn off) the sounders.

An alarm condition activates certain sounders throughout the building. Which sounders are activated depends on the configuration of your system. After pressing the Silence Alarms button, the Sounders Silenced indicator above the button illuminates.

Sound Alarms button

Press the Sound Alarms button to activate all the sounders in the building.

This can be done, for example, to sound a general alert or to restore sounders that were silenced.

Restore Disabled Alarms button

In Software version 3.10 and earlier, press the Restore Disabled Alarms button to restore disabled sounders.

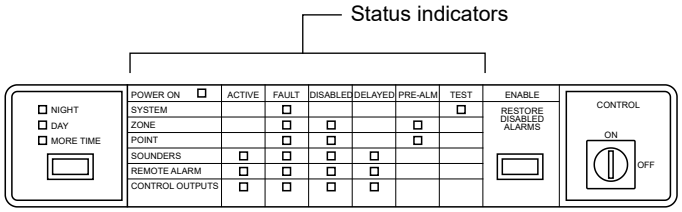
In Software version 3.11 and later: press the Restore Disabled Alarms Button to toggle between Disable All Sounders and Enable All Sounders, as indicated by the Sounders Disabled LED.

Maintenance staff can disable alarm sounders for routine maintenance. If a fire alarm occurs while these devices are disabled, the sounders do not work. Pressing the Restore Disabled Alarms button to enter the Enable All Sounders state, cancels (overrides) any programmed delays, and lets the system respond to the alarm immediately. (Pressing this button doesn't create an alarm, but simply restores alarm devices to let them operate correctly during an alarm.)

Status indicators

See Figure 7 below. The status indicators provide a comprehensive overview of the current status of the complete fire detection system.

Figure 7: Status indicators



The status indicators categorize the system into the elements shown in Table 4 below.

Table 4: System categorization

Name	Description
System	The panel, including the CPU.
Zone	A grouping of sensors or other line devices.
Point	A single line device, such as a sensor, call point, or sounder.
Sounders	Alarm devices, including electronic sirens, bells, etc.
Remote alarm	Alarm to a Remote Manned Centre (RMC), such as a Fire Brigade.
Control outputs	Output devices internally mapped as Control Outputs used to control building systems such as extinguishing control systems, air conditioning systems, etc.

The status indicators are organized into the columns shown in Figure 7 on page 15, and the conditions shown in Table 5 below are indicated.

Table 5: Status indicator conditions

Indicator	Remarks
Power On	Indicates that the panel has power, either from the mains or from the standby battery.
Active	Indicates that a sounder, remote alarm, or extinguishing system has been activated.
Fault	Indicates that a fault condition has been detected on a device or output. A system fault indicates that a major fault exists in the panel.
Disabled	Indicates that a device or output has been deliberately disabled.
Delayed	Indicates that the activation of a sounder, remote alarm, or control output has occurred, but that the actual operation of the output is in a delayed state.
Prealarm	Indicates that a zone or sensor is in a prealarm condition. [1]
Test	Indicates that the panel is in a test mode, which can be initiated either manually or automatically, or that the commissioning key is ON.

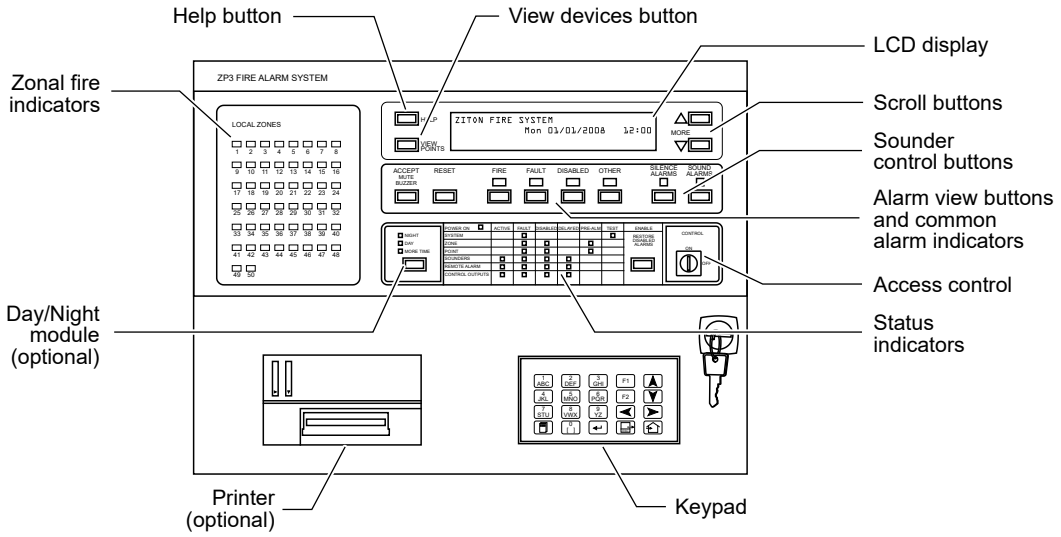
[1] If the system is set up for coincidence detection (two active detectors are required to raise an alarm) then this LED indicates when one of these detectors is active. A fire alarm is triggered if a second detector confirms the condition.

Display of alarms

Overview

See Figure 8 below. Alarms are indicated both audibly and visibly on the fascia of the panel (or remote display panel). Audible indication is by means of a built-in panel buzzer. Visible indication is by means of illuminated LED indicators and descriptive text on the LCD display.

Figure 8: ZP3 Fire panel controls and indicators



Fire alarms

Fire alarms are shown by means of the common Fire LED, the Zone LEDs, and the LCD display. The operation of functions arising from the fire alarm, such as sounders, control outputs, or remote manned centre alarms, is shown by means of the status indicators.

Fault alarms

Fault alarms are shown by means of the common Fault LED and the LCD display. The operation of functions arising from the fault alarm, such as control outputs, or remote manned centre alarms, is shown by means of illuminated status indicators.

Disabled alarms

Events such as zones, sensors, or sounders being disabled are shown by means of the common Disabled LED and the LCD display. The LCD display can be cleared with the Reset button, but as long as the devices remain disabled, the common Disabled indicator remains lit. Illuminated status indicators indicate details of the disabled devices.

Other alarms

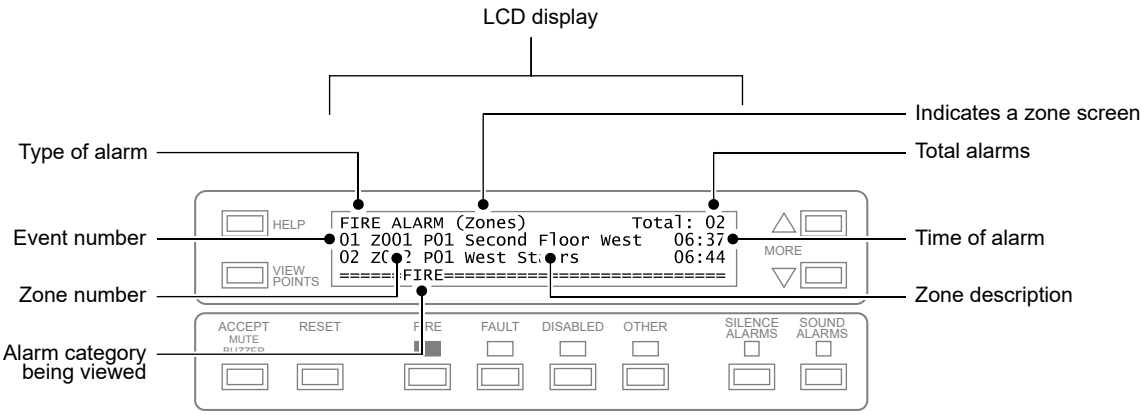
Alarms that don’t fall into any of the above three categories (for example, prealarms) are shown by means of the common Other LED and the LCD display. Applicable details of the alarms are shown by means of illuminated status indicators.

LCD display

Overview

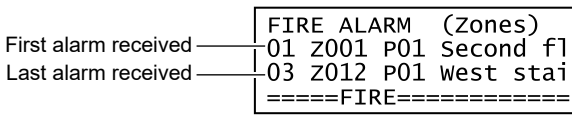
The control panel uses a carefully structured reporting system for alarms, faults, and other events. Information is displayed on a 160-character LCD display as shown in Figure 9 below. The display has two alarm screens; the *zone screen,* which shows alarms by zone, and the *point screen,* which shows alarms by device. The zone screen displays automatically, and the point screen is accessed manually. All events are prioritized and the system provides simple operation.

Figure 9: LCD display - overview



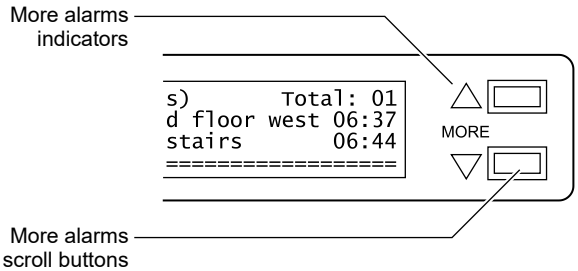
Alarms by zone

Alarms are first displayed by zone, with a zone message identifying the location. Two zones are always visible, the second line shows the first alarm received, and the third line shows the last alarm received.



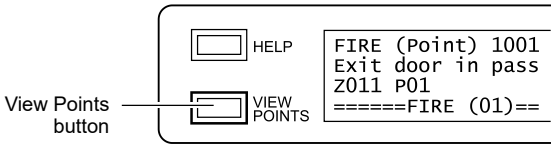
Scrolling alarms

If the system has more than two zones in alarm, then one of the More LEDs illuminates, and you can scroll through the alarms using the scroll buttons. After scrolling, the system reverts to the first and last alarm display, after a timeout (zone mode).



Alarms by device

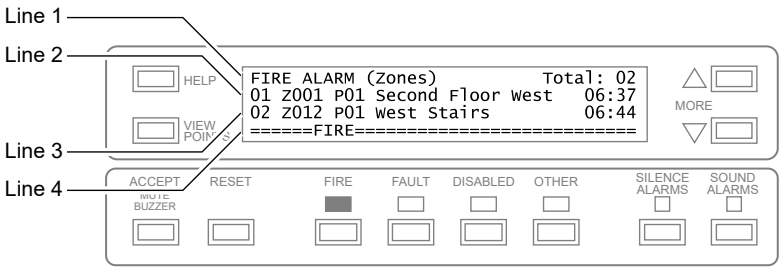
Press View Points to see current alarms by device. The device screen displays the exact address of the device, and a message with its exact location.



Zone screen

The following paragraphs describe how to read the LCD display when it indicates an alarm. The Zone Screen shown in Figure 10 below indicates automatically when an alarm is received.

Figure 10: Typical zone screen



Line 1: Alarm information

- The left side of the line indicates the type of alarm that exists, for example “FIRE”, “FAULT”, “DISABLED”, or “OTHER”.
- The word *Zones* indicates that you are viewing the zone screen.
- The right side of the line shows the total number of current zone alarms (events), for example “02”.

Line 2: Details of first alarm

- The event number is shown on the left side of the line.
- The remainder of the line gives the description of the zone.
- The time of the alarm, for example 06:37, is shown at the end of the line (optional).

Note: In the default zone display, line 2 shows the first alarm received, as indicated by the event number 01. When manually scrolling, the alarm shown in line 2 changes to the next or previous event.

Line 3: Details of other alarms

- The event number is shown on the left side of this line.
- The remainder of the line gives the description of the zone, for example the location.
- The time of the alarm, for example 06:44, is shown at the right side of the line (optional).

Note: In the default zone display, line 3 shows the last alarm received.

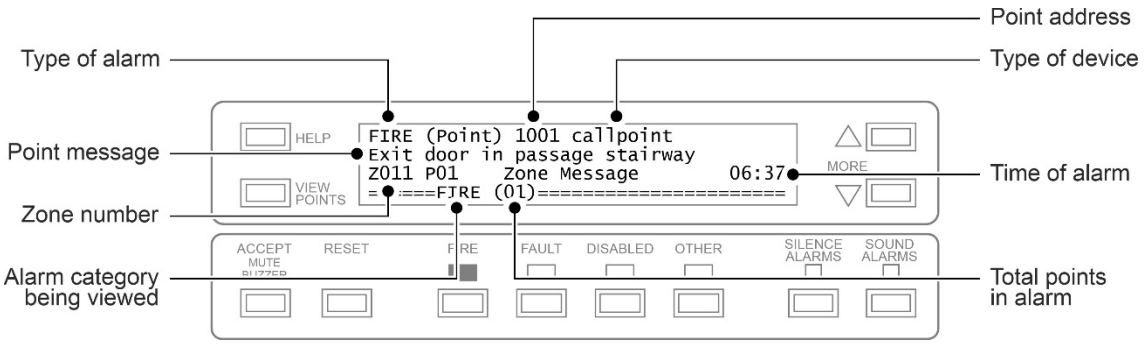
Line 4: Confirms type of alarm shown

The type of alarm, for example “FIRE”, is shown above the associated common alarm indicator and alarm view button.

Point screen

The following paragraphs describe how to how to read the LCD display when it is switched to the Point Screen. This screen (see Figure 11 below), is manually accessed by pressing the View Points button in order to see the device that caused the alarm.

Figure 11: Typical point screen



Line 1: Alarm and device information

- The type of alarm that exists, for example “FIRE”, “FAULT”, “DISABLED”, or “OTHER” is displayed at the beginning of the line.
- The word Point indicates that you are viewing the point screen.
- The address of the device (or point) is given, for example “1001”.
- The type of device is shown at the end of the line, for example “call point”.

Line 2: Device location

Line 2 displays the exact location of the device (point), for example “Exit door in passage stairway”.

Line 3: Zone details

- The zone number for this device is displayed at the beginning of the line, for example “Z001”, followed by the zone message for that location.
- The time of the alarm (optional) is displayed at the end of the line.

Line 4: Confirms type of alarm shown

- The type of alarm, for example “FIRE”, is shown above the associated common alarm indicator and alarm view button.
- The figure in brackets, for example “01”, indicates the total number of points in alarm.

Operator response

Fire alarms

A fire alarm displays on the panel as described in Table 6 below. The actions carried out upon receipt of a fire alarm depend upon the fire alarm procedures at the site where the alarm occurred. The following are generic guidelines only.

Table 6: Fire alarms — annunciation and alarm

Description	Remarks
Common Fire LED	Illuminated.
Zone LED	Illuminated, indicating which zone is in alarm. This is the default, but is configurable.
Text display	Zone screen showing details of the zone in alarm.
Panel buzzer	Sounding intermittently.
Building sounders	Sounding, if configured to operate.
Auxiliary functions	Active, if configured to operate (e.g. calling a remote manned centre, shutting down air conditioning, etc.).
Status indicators	Illuminated for functions configured to operate. The LEDs indicate the activated functions, such as remote manned centre, sounders, etc.
Delayed functions	Delayed LED illuminated for those functions that are configured for delayed operation. These could be sounders, remote centre alarms, or control functions.

Operator action

1. Press the Accept button to acknowledge the alarm.

   This silences the panel buzzer, and causes the flashing alarm indicators to go steady.

   Do not press the Reset or Silence Alarms buttons.

2. Identify the zone from which the alarm originated, and then check the area (zone) to ascertain the extent of the problem.

   For example, telephone the zone fire marshal, check the points in the zone, or send someone to the area.

   During this time the sounders in the area will be sounding.

3. Press the Silence Alarms button to silence the building sounders.

   Only press the Silence Alarms button once you are sure that the situation is under control, or that the people from the area have been evacuated.

4. If the sounders were switched off inadvertently, press the Sound Alarms button to switch the sounders on.
5. After the alarm, restore the devices that initiated it, and then press the Reset button.

   For example, remove smoke from the detectors or replace the glass in a call point. When you press Reset, the system restores to its normal state.

Fault alarms

A fault alarm displays on the panel as described in Table 7 below. The actions carried out upon receipt of a fault alarm depend upon the procedures at the site where the system is installed. The following are generic guidelines only.

Table 7: Fault alarms — annunciation and alarm

Description	Remarks
Common Fault LED	Illuminated.
Text display	Zone screen showing details of the zone or category with the fault, and a general description of the fault.
Panel buzzer	Sounding continuously.
Building sounders	Not sounding. Fault alarms are treated as a general alarm.
Auxiliary functions	Active, if configured to operate (e.g. advising a remote manned centre, calling maintenance staff, etc.).
Status indicators	Illuminated to indicate the affected system element. In addition, the LEDs indicate which functions have been activated, such as advising the remote manned centre, etc.
Delayed functions	Delayed LED illuminated for those functions that are programmed to operate in response to the fault alarm, and are configured for delayed operation. These could be remote centre alarms or control functions.

Types of fault

The panel continuously monitors both itself and all external wiring and devices for abnormal conditions. Faults can be categorized as shown in Table 8 below.

Table 8: Fault alarms — types of fault

Category	Description
Serious faults	A system fault that takes the entire system out of operation, such as a processor failure. This requires immediate action.
Limited faults	A fault that takes a small part of the system out of operation. This needs to be repaired within the same day. Examples of limited faults are; a damaged cable, or a mains failure where the batteries operate the system for the rest of the day.

Operator action

1. Press the Accept button to acknowledge the alarm.

   This silences the panel buzzer, and causes the flashing alarm indicators to go steady.

   Do not press the Reset or Silence Alarms buttons.
2. Call maintenance personnel to fix the fault.
3. Record the action taken in the logbook.
4. Press the Reset button after the fault has been rectified.

The system restores to normal.

Disabling system elements

Zones, sensors, call points, sounders, control outputs, outputs, and remote manned centre alarms can be manually disabled for maintenance or other purposes. When disabled, the condition reports on the panel as described in Table 9 below. Disablement is normally carried out by maintenance personnel, and can only be done by personnel with a level 2 access (or higher). In certain cases, where a specific part of a system is regularly disabled at certain times, the system is sometimes set up to allow the operator to carry out the disablement, usually with a key switch.

Table 9: Disablement - annunciation and alarm

Description	Remarks
Common Disabled LED	Illuminated.
Text display	Zone screen showing details of the affected zone.
Status indicators	Illuminated to indicate the system element that is disabled.

Types of disablement

Disablements of the system can be categorized as shown in Table 10 below.

Table 10: Disabling system elements — types of disablement

Category	Description
Devices	Disabling input devices such as zones, sensors, manual breakglass call points, etc. Provided that the number of devices disabled is sufficiently small, and that the relevant staff are aware of the situation and are in control, this type of disablement is usually considered acceptable.
Sounders and RMC	Disabling sounders or the remote manned centre alarms, This type of disablement is considered very serious, and some authorities do not approve of this practice. If sounders are disabled for any reason, they must be enabled again as soon as possible.

Operator action

1. Press the Disabled button to view disabled zones.

   The screen shows disabled or partly disabled zones.

2. Scroll with the Up and Down buttons to view all the disablement messages.

   Status LED indicators indicate which system elements are disabled.

3. If a fire alarm occurs while sounders are disabled, press the Restore Disabled Alarms button. This restores any disabled sounders. Continue to press this button to toggle between Enable All Sounders and Disable All Sounders.

The auto-enable feature (also called *disable for a period*) is detailed in Table 11 below.

Table 11: Auto-enable (disable for a period)

Menu path	Maintenance > Edit or View Disabled (Points, Zones)
Purpose	This menu lets you temporarily disable an address in half hour intervals. This allows multiple zones and line input devices to be disabled but not panel or panel bus outputs. After the period expires, the address enables again automatically. The menu allows the user to select Auto Enable, after a disablement period configurable from 30 minutes to 12 hours.
Points	To auto enable any point select Edit Disabled from the Maintenance menu. Select the point to be auto enabled and select Auto, using the arrows to scroll up or down to set the required time period. Use the scroll feature to display the next or previous point to be disabled. Use the Enter key to confirm the selection.
Zones	To auto enable zones select Edit Disabled from the Maintenance menu. Select the zones to be auto enabled and select Auto, using the arrows to scroll up or down to set the required time period. Use the Enter key to confirm the selection.
	Notes: The disabled status can be overridden by: • A local enable event from the local panel • A remote enable event from a remote panel via the peer-to-peer network • A change over from day to night mode may extend the disabled period to coincide with the Disable by Night option. In the case of dual or multiple sensor detectors, both smoke and heat elements are disabled.

Other alarms

Alarms that are not categorized as fires, faults, or disablements are shown as Other alarms, and are displayed on the panel as described in Table 12 below. The actions carried out upon receipt of one of these alarms are determined by two things; the nature of the alarm and the procedures at the site where the system is installed. The following are generic guidelines only.

Table 12: Other alarms — annunciation and alarm

Description	Remarks
Common Other LED	Illuminated.
Text display	Zone screen showing details of the zone or element with the alarm, and a general description of the alarm.
Panel buzzer	Sounding continuously.
Building sounders	Not sounding (typically). Depends on your system configuration.
Auxiliary functions	Active, if configured to operate (e.g. calling a remote manned centre, calling maintenance staff, etc.).
Status indicators	Illuminated to show the affected system element. In addition, the LEDs indicate which functions are active.
Delayed functions	Delayed LED illuminated for those functions that are programmed to operate in response to the alarm, and are configured for delayed operation. These could be remote centre alarms or control functions.

Types of alarm

Other alarms can be categorized as shown in Table 13 below).

Table 13: Other alarms — types of alarm

Category	Description
Prealarms	Prealarms and alert alarms from smoke sensors and high-sensitivity detectors.
Security alarms	Alarms from security interface devices.
Non-fire alarms	Alarms from interface devices used for monitoring non-fire functions.
Service	Services, maintenance, and preservice indications.

Operator action

1. Press the Accept button to acknowledge the alarm.

   This silences the panel buzzer, and causes the flashing alarm indicators to go steady.

   Do not press the Reset button.

2. Take action appropriate for the type of alarm.

   The type of alarm determines the action to take. For example, a “Prealarm” could indicate a small quantity of smoke, and might require prompt attention.

3. Record the action taken in the logbook.
4. After resolving the alarm, press the Reset button.

The system restores to its normal state.

Operator menu

Introduction

The panel has built-in software functions for carrying out routine operator functions and system checks. These functions are accessed via the operator menu, using the panel keypad. This section describes these functions and how to use them.

When using a menu, the LCD screen displays the menu items in place of any alarms or events that would normally appear on the screen.

The operator menu is used for the following functions:

- To set the time and date
- To identify which version of software is installed in the panel
- To test the fascia illuminated LED indicators and fascia keypad
- To view or print reports of the status of the system, or individual devices
- To view or print previous alarms

Menu access

Access to the menus is via the panel keypad (see Figure 12 below). Each button is described in Table 14 below.

Keypad

Figure 12: Keypad

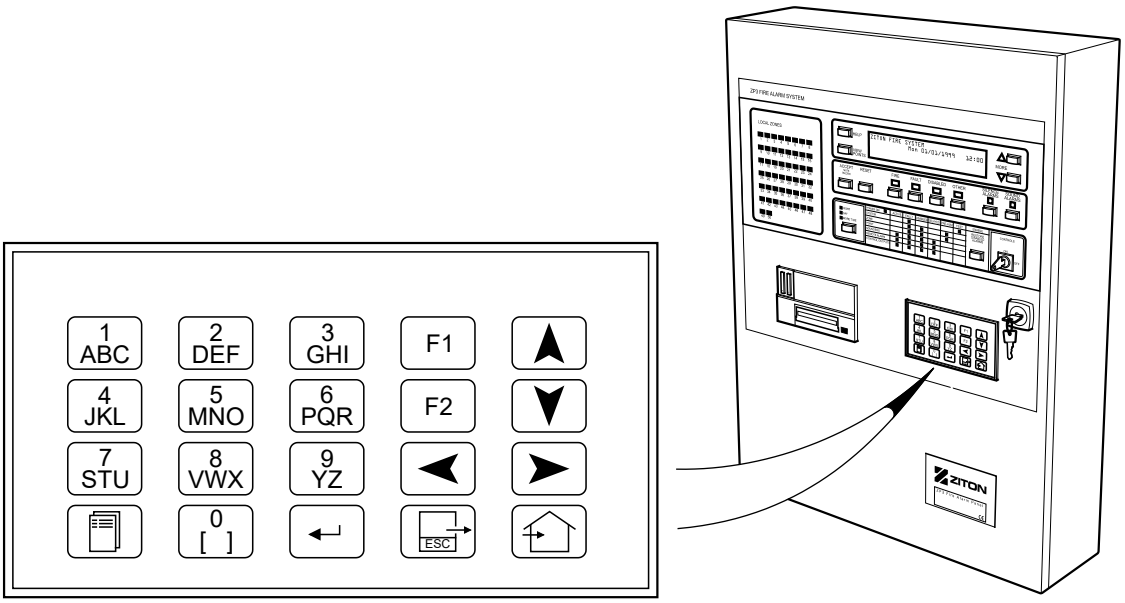


Table 14: Keypad description

Button	Name	Description
1 ABC	Numeric buttons	Used to enter the number sequences
	Menu button	Gives access to the Main Menu
	Enter button	Used to confirm data entry and save data
ESC	Escape button	Exits a function and returns to the previous level
	Home button	Exits all menus and returns to the system home screen or event screen (if an event is present)
F1 F2	Function buttons	Used within certain menus
	Navigation buttons	Used to move left, right, up, or down

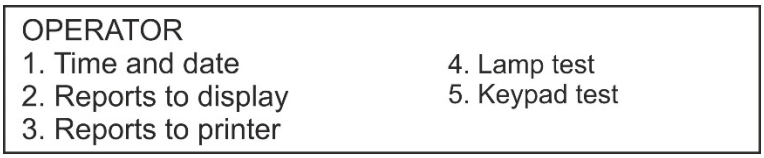
Operation

The Main Menu is the entry point to all of the user operator accessible software functions. To access the main menu:

1. Press the Menu button on the keypad. The display shows the following screen.



2. Press the 1 button on the keypad to choose the Operator item, which displays the Operator menu. The following screen appears.



The menu name is displayed on the top line, and the menu items are shown with numbers alongside. Menu items are selected by pressing the numeric button that matches the item number. Selecting a menu item may cause another menu to appear or may carry out a particular function. The operator may be prompted to enter the required information via the keypad.

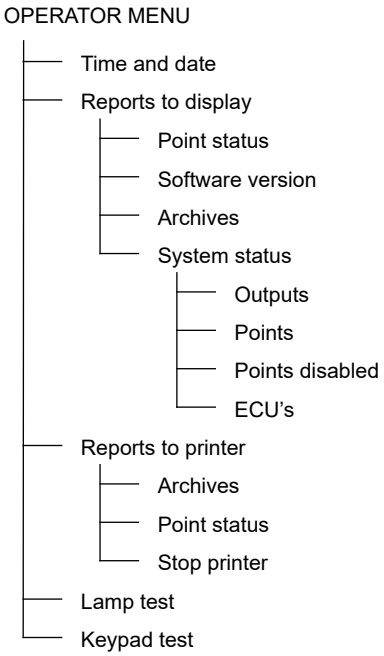
Any menu can be cancelled and the previous menu presented by pressing the Escape button. The Escape button is used to cancel or abort the current activity and return to the previous activity.

Exit the menu system completely by pressing the Home button. This returns the panel to its normal operation display or event screen. The system has a built-in time-out so that it cannot be inadvertently left in menu mode. The time-out starts from the last keypress. In a menu selection, the time-out is approximately 45 seconds, and if a software function has been started and but completed, then the time-out is 12 minutes.

Menu structure

The operator menu structure is displayed as a menu tree, and shown in Figure 13 below. Items that are grouped together are options that appear together on a menu, and items that are open-ended implement a software function.

Figure 13: Menu structure



Menu functions

The operator menu functions are described below, together with the menu path to access each menu, and an explanation of the purpose of each item.

Table 15: Time and date

Menu path	Operator > Time and date
Purpose	This menu lets you set the date and time displayed by the panel. Use the numeric buttons to enter the date and time.
Date	The current date in the system is shown. Enter the new date in DDMMYYYY format using the numeric buttons, use the up/down navigation buttons to change the day name and press Enter when complete.
Time	The current time in the system is shown. Enter the new time in 24-hour format (HHMM) and press ENTER.

Table 16: Reports to display

Menu path	Operator > Reports to display
Purpose	This menu provides a selection of reports to view on the LCD. Report messages can be scrolled manually.
Point status	This option lets you view the status report of any device attached to the panel Z-loops on the LCD. The report shows the type, sensitivity, zone, and condition of the point.
Firmware version	This option displays the panel firmware number and version on the LCD. Press F1 to see the software version of the peripheral boards.
Archives	This option lets you view previous alarms and events on the LCD screen. These events are stored as *archives* in the panel. The panel automatically stores the last 1,000 events, together with the date and time of each. The menu allows the events to be selected by date, and viewed accordingly. Use the Up or Down buttons to display the previous or next archived message or event.
System status	This option displays status information of outputs and points. Options are available to limit the report to disabled points, or Extinguishing Control Units (ECUs).

Table 17: Reports to printer

Menu path	Operator > Reports to printer
Purpose	This menu provides a selection of reports to print.
Archives	This option lets you print previous alarms and events, which are stored as *archives* in the panel. The panel automatically stores the last 484 panel events, together with the date and time of each event. These events can be selected by date. The printout includes all event types configured for the printer.
Point status	This option lets you print the status of any device attached to the panel Z-loops. The printer can also be stopped from this menu.
Stop printer	This menu option lets you end the current print operation.

Table 18: Lamp test

Menu path	Operator > Lamp test
Purpose	This function illuminates all panel fascia LEDs for a short period, including the display, allowing the operator to verify that they are functional.

Table 19: Keypad test

Menu path	Operator > Keypad test
Purpose	This menu initiates a Keypad test. Once selected, the panel reports any button pressed on the panel via the LCD. The operator can use this function to check that the keypad is functional. Press any button twice to exit.

Operator maintenance

Overview

The owner of a fire detection system is responsible for ensuring that it is correctly maintained so that it is in proper working condition at all times. This involves arranging for the system to be checked, tested, and serviced as described in this manual.

The maintenance procedures described are Ziton recommendations. There may be additional requirements or regulations imposed by local authorities. Where this conflicts with the Ziton recommendations then the local authority regulation should be followed.

A fire alarm system must provide early and reliable warning of the outbreak of fire. To achieve this, the system remains on watch at all times, ready to activate the alarms in response to a signal from any of the sensors. Regular testing and maintenance must therefore be carried out to ensure the system is always operating correctly.

Note: The following guidelines were developed from the recommendations provided in BS 5839-1. They are intended to assist the user in understanding their responsibilities regarding the continued safe and proper operation of their fire alarm system. They do not attempt to provide detailed site-specific test and maintenance routines. We recommend that the user reads and understands the full text provided in the relevant sections of BS 5839-1.

User responsibilities

A single person should be appointed to supervise all matters relating to the fire alarm system, that is:

- Making sure the system is checked at least once every 24 hrs and that there are no faults on the system.
- Making sure the system is correctly tested and maintained in line with the recommendations of BS 5839-1.
- Making sure that appropriate records are maintained and available for inspection by the maintenance authority.
- Making sure the relevant occupants are aware of their roles and responsibilities in connection with the fire alarm system, ensuring that:
    - Occupants are instructed in the proper use of the system including how to interpret the alarm indications.
    - Occupants are familiar with the appropriate user controls including the correct use of the disablement features and understand how to avoid the generation of false alarms.

- Making sure that situations are avoided that are detrimental to the standard of protection provided by the system, for example:
  - Making sure that a clear space of at least 500 mm is preserved around and below all fire detectors.
  - Making sure that all manual call points remain unobstructed and conspicuous.
  - Making sure to communicate with those responsible for changes to, or maintenance of, the building to ensure that changes do not compromise the effectiveness of the system.
- Updating record documents and operating instructions when building changes are made.
- Making sure that the level of false alarms is minimised.
- Ensuring that the following spare parts are held on the premises:
  - Six replacement glasses and test keys for manual call points (unless the system has less than twelve manual call points, in which case only two sets of glasses and keys are required).
  - One set of spare fuses.
  - Any other spare parts recommended by the servicing agent.

Note: BS 5839-1 provides recommendations as to how these responsibilities should be discharged.

Regular procedures

The recommended routine maintenance procedures can be divided into the following categories:

- Daily checks
- Weekly checks
- Quarterly services
- Annual services

The daily and weekly checks require no technical knowledge and can often be carried out by the panel operator, or in-house maintenance staff. It is important for the person carrying out the testing to be aware of which building functions or remote alarms will be activated by the system when an alarm occurs.

An authorized Ziton servicing company, usually under maintenance contract, should carry out the quarterly and annual services. These services are not the responsibility of the operator or in-house maintenance technician, and are not covered in this manual.

Repair of faults

The system operator and in-house maintenance personnel should have the telephone number of the outside company contracted for maintenance, so that they can call them if a major fault develops which is beyond the capability of the in-house staff.

Record keeping

The operator should maintain a logbook at the control panel. A record of all alarms, events, checks, tests, and repairs should be entered in this logbook.

Routine maintenance

Note: Occupants of the building and anyone receiving remote alarm signals, such as the fire department, must be informed before starting with the test or routine maintenance. They must also be informed when the test or routine maintenance is complete. No alarms should be activated before notification has taken place.

Caution: External systems connected to the fire system, such as fire extinguishing systems, air conditioning systems, or lifts must be temporarily disabled or disconnected *before* testing or routine maintenance takes place.

WARNING: All disconnected or disabled systems must be reconnected and enabled at the end of testing.

Daily checks

Do the following checks every day:

1. Check that the green Power On indicator is illuminated. All other LEDs should be off except the common Disabled LED (depending on the system status, e.g. day mode) and the panel should be silent. The display should show the time and date only.
2. If the panel is indicating a fault alarm, contact the maintenance staff and arrange for the fault to be rectified.
3. Make sure the logbook is kept up-to-date. Check that all faults recorded in the logbook the previous day have been attended to.
4. Make sure that the correct time and date is displayed on the ZP3 panel. If not, correct the time and date as described under “Menu structure” on page 32.

Weekly checks

Notes

- Contact the alarm-receiving centre immediately before starting this test to inform them of the test thus preventing unnecessary response to an alarm.
- Refer to the appropriate section of this manual for more information about control panel operation.
- The following guidelines are based on the recommendations provided by BS 5839-1.

Caution: Before testing the operator must be aware both of the operation of all devices fitted to any auxiliary circuits and the consequences of their operation. For example a connection to call the fire brigade.

Do the following checks every week:

1. Make sure you have contacted the alarm-receiving centre informing them of this test.
2. Check that all LEDs are operational by carrying out a lamp test.

   The zones should be varied each month to ensure that they are all tested over time. The manual call points and fire detectors should be tested on a rotating basis so that all devices are checked at least once during a three-month period.

   To operate a manual call point use the test key provided. To operate a detector, use a smoke generator or heat source as appropriate for the type of detector.
3. Operate at least one device (fire sensor or call point) in each zone.
4. Make sure that the associated sounders operate.
5. Make sure that the alarm was received at the remote manned centre (if applicable).
6. Make sure that the device triggers the operation of any auxiliary equipment (if applicable)
7. Accept the alarm, and press the Silence Alarms button, make sure that the sounders silence.
8. Reset the system.
9. Make sure that the fire alarm events are recorded correctly on the ZP3 panel printer (if installed).
10. Make sure the printer (if installed) has sufficient paper, that the print ribbon is not dry and that the paper feeds correctly.

Note: If any defects are discovered during routine testing, they should be recorded in the logbook. The fault must be corrected.

Regulatory information

European standards for fire control and indicating equipment

These control panels have been designed in accordance with European EN 54-2, and EN 54-4 standards.

In addition, they comply with the following EN 54-2 optional requirements.

Table 20: EN 54-2 optional requirements

Option	Description
7.8	Output to fire alarm devices (output to C)
7.9.1	Output to fire alarm routing equipment (output to E)
7.11	Delays to outputs
7.12.2	Dependencies on more than one alarm signal (type B)
7.13	Alarm counter
8.3	Fault signals from points
8.4	Total loss of the power supply
8.9	Output to fault warning routing equipment (output to J)
9.5	Disablement of addressable points
10.	Test conditions
10.1	General requirements
10.2	Indication of the test condition
10.3	Indication of zones in the test state
11	Standardized Input/output interface

Standards for electrical safety and electromagnetic compatibility

These control panels have been designed in accordance with the following European standards for electrical safety and electromagnetic compatibility:

- EN 62368-1
- EN 50130-4
- EN 61000-6-3
- EN 61000-3-2
- EN 61000-3-3

Regulations for construction products

This section provides a summary on the declared performance according to the Construction Products Regulation (EU) 305/2011 and Delegated Regulations (EU) 157/2014 and (EU) 574/2014.

For detailed information, see the product Declaration of Performance (available at firesecurityproducts.com).

Table 21: Regulatory information

Conformity	CE
Notified/Approved body	0370
Manufacturer	KGS Electronics Sp. z.o.o., Ul. Kolejowa 24, 39-100 Ropczyce, Poland. Authorized EU manufacturing representative: KGS Fire & Security B.V., Kelvinstraat 7, 6003 DH Weert, Netherlands.
Year of first CE marking	22
Declaration of Performance number	10-3305-360-0001
Standards	EN 54-2:1997 + AC:1999 + A1:2006 EN 54-4:1997 + AC:1999 + A1:2002 + A2:2006
Product identification	See model number on product identification label
Intended use	See the product Declaration of Performance
Declared performance	See the product Declaration of Performance