Maestro Graphics System
Version 3

User Guide

ZITON

Maestro Graphics System
User Guide Manual

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Section 1

Introduction

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1.1. System Overview

MAESTRO graphics system is a sophisticated software package providing comprehensive control and information interfaces for Ziton fire detection and alarm systems. Running on a computer workstation and interfacing directly to ZP fire detection systems, it provides the user with a central control facility, graphically displaying alarms and events.

The primary function of MAESTRO is system alarm management. In emergencies, individual alarms are usually easily handled, multiple alarms occurring simultaneously, or within short time periods are usually more difficult to assess. The immediate and correct handling of multiple alarms in fire situations can often be critical to both life safety and property loss.

MAESTRO simplifies the handling of multiple alarm situations, presenting information to the operator by clear, unambiguous maps and diagrams to enable fast and accurate decision making.

Alarms are graphically represented by maps. These are diagrams representing the floor areas and layouts of buildings, upon which the location and status of all devices connected to the fire alarm system are shown.

Alarms are brought to the attention of the MAESTRO operator both visually and audibly by means of an alarm banner display, prominently indicating the source of the alarm condition.

All devices throughout the building are represented on the map displays by icons, which change colour or appearance to indicate the precise sensor or callpoint originating the alarm or fault condition. Navigation tools provide rapid and easy movement through a variety of map structures, allowing the operator to handle multi alarm situations. A summary of all current alarms is displayed on screen at all times.

Complete ZP fire detection networks, can be controlled directly from the MAESTRO workstation, including the acceptance of active alarms, activating and silencing alarm sounders, panel resetting after fire events have been cleared and disabling and enabling individual devices.

All events and operator actions are saved to an event log, which can be viewed on screen and printed out to produce a range of event reports.

Users of the MAESTRO system are required to log on under password control. Passwords are task oriented and can be selected to suit individual operator responsibilities.

MAESTRO is simple to use and operate, providing comprehensive facilities for all aspects of fire detection and alarm system management.

1.2. System features

What it does

The full list of facilities is extensive; therefore in this introduction only the main features have been included.

The primary function of the MAESTRO system is alarm management, displaying alarms and events in a manner that enables them to be processed and handled efficiently.

Alarms and system events are received from fire alarm and other systems and presented to the operator in order of importance, for appropriate action to be taken.

Events requiring action are treated as alarms and presented to the user visually, by means of an alarm banner display and audibly by an alert tone. The source of the alarm is confirmed by a text description and the device in alarm visually displayed on a map showing its exact location.

Information only events, demanding no immediate operator action are displayed and logged for future scrutiny if required. All events are saved to current and archive event log files, from where they can be printed out in a variety of report formats.

The main features of the MAESTRO system are as follows -

- Graphic alarm display by map, showing site, zone and device.
- Alarm banner with alert tone.
- Alarm lists showing all current alarms and events categorised by type.
- Information and handling instructions for each alarm.
- Ability to operate fire panels direct from the MAESTRO workstation.
- Disablement and enablement of sensors, sounders, zones direct from the MAESTRO workstation.
- View and operate controls on the panel fascia from the workstation screen.
- Four access groups with user defined authority for each operator.
- Historical archive of all events, unlimited length.
- Ability to produce reports by event type, time period or other parameters
- Event logbook allows the operator to record all actions taken.
- Built in telephone directory of emergency numbers.

1.3. Manual contents

This publication is specifically written for users of the Ziton MAESTRO system. It is intended to be read in conjunction with a live MAESTRO workstation. The manual can be used in its entirety at system training stage, or as a document explaining any particular system detail for day to day reference.

Only a basic level of computer expertise is assumed, together with some familiarity of fire detection systems.

The sections in the document cover four main areas -

Section 2 - introduces each of the display screens and operator controls.

Sections 3 and 4 - cover the working of maps and icons.

Section 5 - describes the MAESTRO system control facilities.

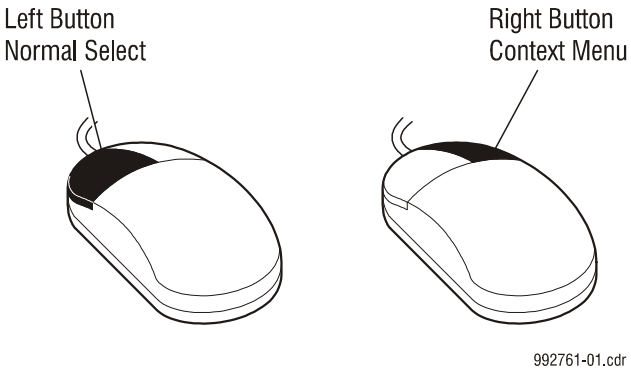
Sections 6 to 9 - cover the operation of the fire alarm system and alarm management from the MAESTRO workstation.

1.4. Operation

1.4.1. Mouse and keyboard operation

Operator input devices, into the MAESTRO system are the workstation mouse and keyboard.

The system is operated by a two button mouse, as illustrated in the diagram below.



All of the buttons displayed on workstation screens can be operated, or 'accessed' by moving and positioning the mouse cursor onto the MAESTRO screen buttons or options lists and simply clicking the left hand or right hand select buttons on the mouse. All active points on any MAESTRO screen display are operated in a similar way. This is referred to in the manual text as 'a left hand (or right hand) click of the mouse cursor'. In certain sections, where several operations of the mouse are required the above phrase is shortened to left hand (or right hand) click.

1.4.2. Running MAESTRO

Maestro is easy to switch on and use.

1. Switch the power to the workstation PC and monitor screen ON.
2. Allow time for the Windows NT system (the computer programme which operates the MAESTRO system) to boot up.
3. Enter Windows NT password. (not MAESTRO password)
4. The MAESTRO programme will then boot up and display the MAESTRO home page on the workstation screen.

1.5. Screen savers

To avoid permanent damage to the workstation PC monitor screen, a screen saver can be activated, which is displayed automatically after a pre set period of inactivity.

Touching any key on the keyboard or mouse, will immediately return the display to its normal state. Any incoming alarm condition also returns the workstation to active duty.

Screen savers are made available by selecting Start/ Settings/ Control Panel/ Display/ Screen Savers. The screen saver facility may be disabled by the user if not required.

1.6. Publications referred to in this guide

The following publications are referred to in this guide.

1. **BS 5389 : Part 1 :1988**. British Standard Fire detection and alarm systems for buildings. Code of practice for system design, installation and servicing.
2. **EN 54 : Part 2 : 1997**. Fire detection and fire alarm systems. Control and indicating equipment.
3. **Ziton Publication UD 1062A Issue 04**. ZP3 Fire detection and alarm control panel. Installation, operation and maintenance manual.

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Section 2

Screen Displays

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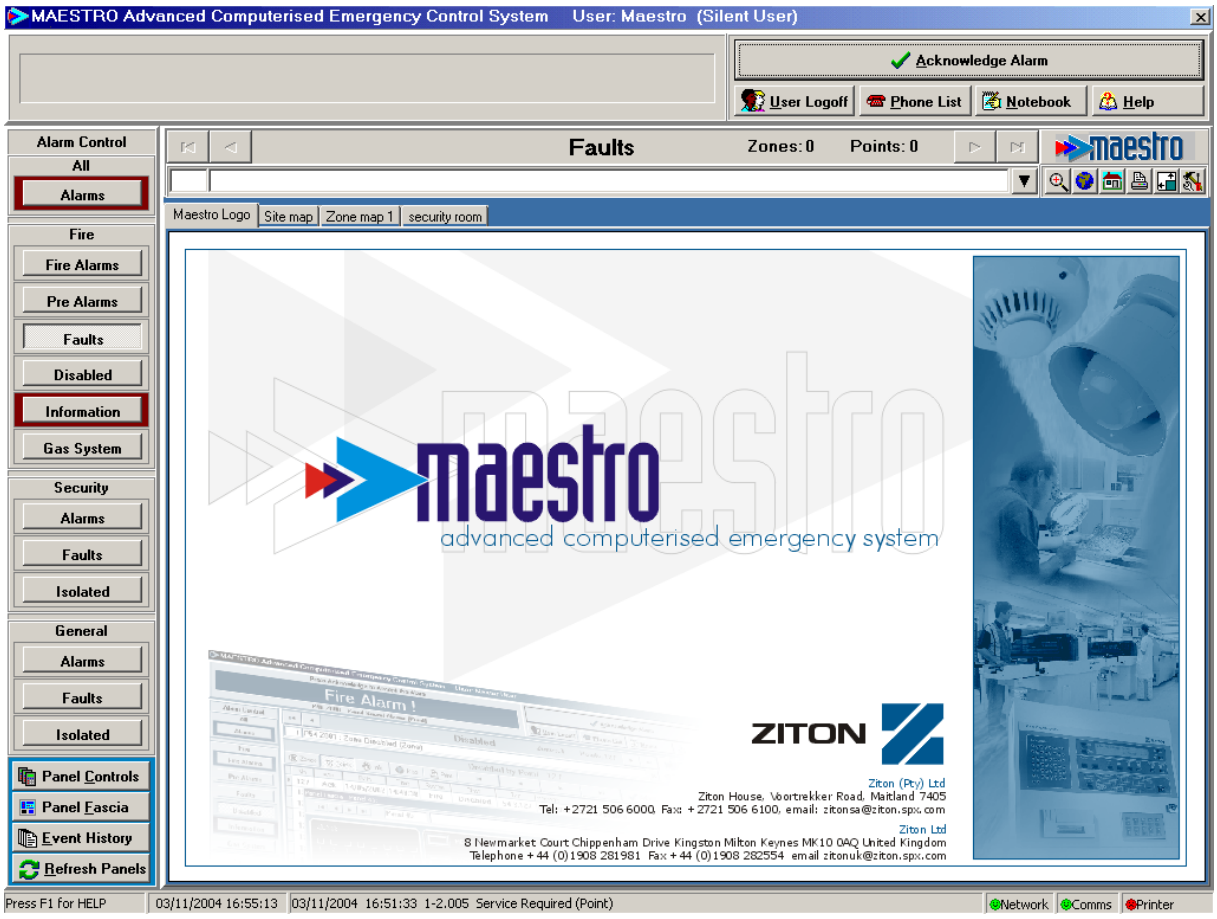
2.1. Home page

The home page is the screen display usually showing when the MAESTRO system is in the quiescent state with no events current throughout the fire detection and alarm system.

Home pages can be of a standard format and content as shown below or customised to suit a particular site and operator. Often a map showing the total site or building plan covered by the fire alarm system will be featured.

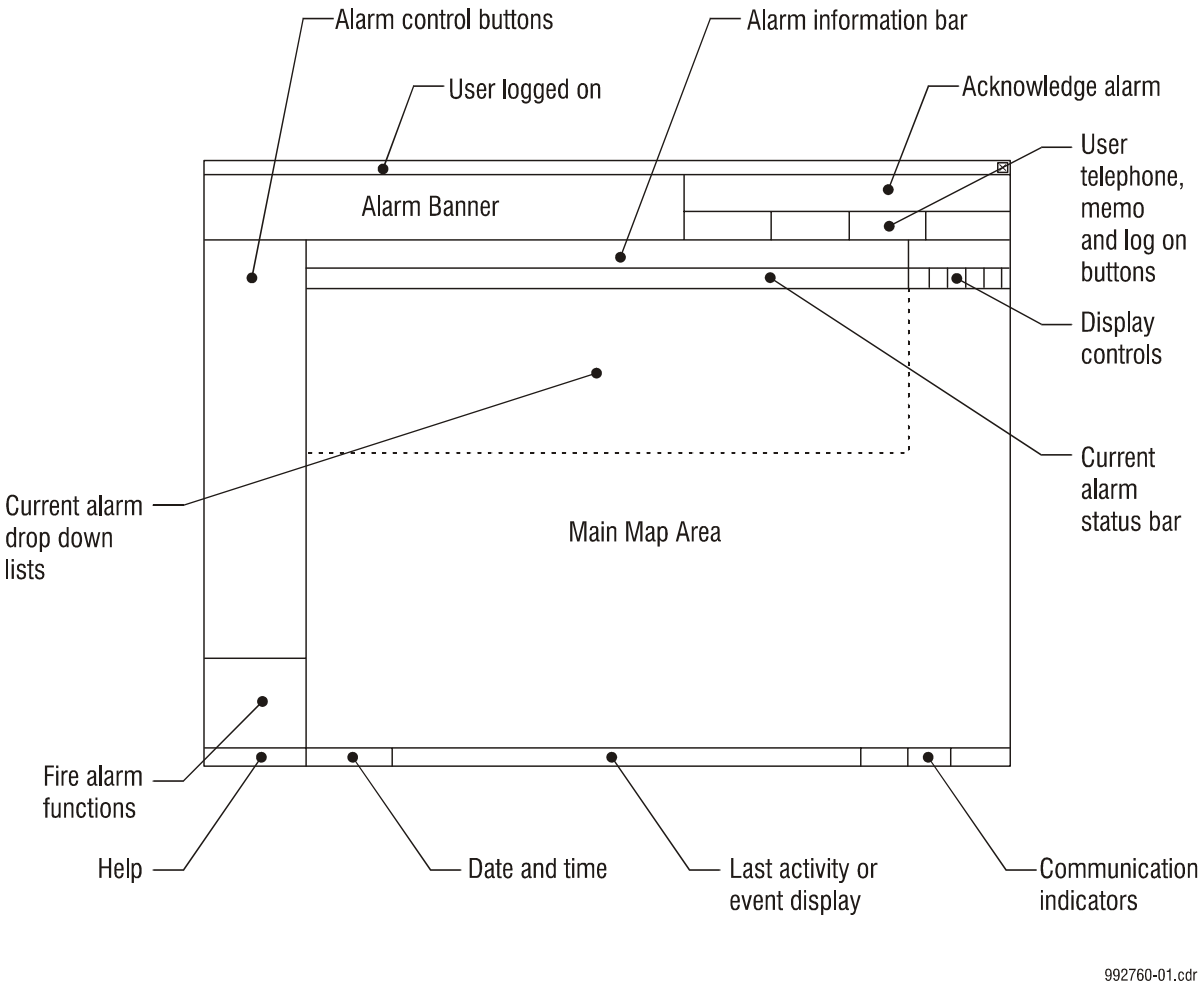


The home page display is divided into a number of screen sectors each assigned a specific control and display function. Access into the control and display sectors and the choice of options is carried out by positioning the mouse cursor and using the right or left hand click. MAESTRO often displays boxes on the screen to request for security passwords or other information, this is provided by the operator using the standard workstation PC keyboard.

Maestro Graphics System

Screen Displays

The diagram below shows the main sectors of the screen and should initially be used as a location reference.



The screen sectors and control buttons, displayed on the home page are introduced in detail in the following sections.

2.2. Main map area

The major sector of the MAESTRO display is the map area. The system uses maps of the building or site covered by the fire alarm system to provide clear locations of devices (points), zones, buildings and other important information associated with the positioning of the fire detection equipment within the protected area.

The illustration above shows a typical example of a system main map.

2.3. The alarm banner

When an alarm is received from the fire detection system, it is displayed to the operator as an alarm banner. The banner is a long narrow window located at the top left corner of the screen.

In order to provide clear and unambiguous alarm information, easily recognised by the operator all alarm types are displayed, throughout the MAESTRO system by different colour codings. In the quiescent state, with no alarms current, the alarm banner is displayed in a grey colour, on the receipt of an alarm message the banner changes as follows.

- Fire alarm Red
- Pre-alarm Orange
- Fault Active Yellow
- Disable Active Light Blue
- Information Active Brown
- Gas System Active Dark Blue

These are the standard default colours, programmed into the MAESTRO package. Colour codes for all alarm states can be user defined and are selectable at the system configuration stage. On custom designed systems therefore, colours may differ from the list above.

The colour codings are for indication only and make no difference to the operation of the MAESTRO system.

MAESTRO assigns priority levels to alarm types. These are, in order of importance -

1. Fire alarm
2. Fault active
3. Pre-alarm
4. Gas system active
5. Disable active
6. Information active

When alarm types exist simultaneously, the alarm type of the highest priority is displayed.

The alarm type is prominently displayed in large text, for example FIRE ALARM, or FAULT ALARM. Also displayed within the banner are reference details of the panel number (in multi panel systems), the fire alarm system zone number and a brief description.

Alarm banner flashes and sounds until the alarm is acknowledged by the operator, then it remains steady and the supervising tone is silenced.

On system reset the banner returns either to the next highest priority current alarm, or to it's quiescent grey colour.

With no unacknowledged alarms in the system the alarm banner returns to its quiescent grey colour.

2.4. Alarm control buttons

Alarm control buttons are positioned in a block, down the left side of the screen display and are operated by a left hand click of the mouse cursor on the selected button.

The list of buttons is designed to allow MAESTRO to control both fire detection and alarm and non fire systems, with buttons provided for fire, security and general alarm supervision. Usually, when using MAESTRO to manage a fire detection and alarm system, only the All Alarms button and the block of six Fire buttons at the top of the list will be used.

All buttons toggle, that is as each new selection is displayed, the previous one is cancelled and its button returns to the off position.

Alarm control buttons are an important part of the MAESTRO system and are used to select specific information displays and various lists by selected alarm category.

In their quiescent state the buttons are displayed with a grey boarder, but in an alarm condition the border changes colour to match the alarm colour code of the alarm banner.

2.4.1. The all alarms button

Positioned at the top of the Alarm Control buttons list, the All Alarms button is used to display lists of information containing every alarm. The colour coded boarder displayed around the button will always indicate the highest priority alarm currently in the system.

For example, if a fire alarm and fault condition occur simultaneously the All Alarms button will display a red boarder, as MAESTRO gives fire the highest priority. If the fire condition is subsequently cancelled, the boarder of the All Alarms button will change to a yellow colour, as fault is now the highest alarm priority.

If there are no alarms currently in the system, the All Alarms button boarder remains the quiescent grey colour and operating it has no effect.

The alarm control buttons panel remains on the screen display at all times, regardless of the display in other sectors.

2.4.2. The fire alarms buttons

Positioned below the All Alarms button down the left side of the screen display is a group of six Fire Alarms control buttons. These buttons are used to select alarms by type, for display in specific lists.

By left hand click of the mouse cursor on any of the active Fire Alarms buttons, a listing of all current alarms in the system is displayed.

The buttons are listed in the display in alarm priority order.

If there are no alarms currently in the system, the Fire Alarm buttons boarders remain the quiescent grey colour and operating them has no effect.

The Fire Alarm control buttons panel remains on the screen display at all times, regardless of the display in other sectors.

2.4.3. The security alarm buttons

Positioned below the block of Fire Alarms buttons down the left side of the screen display is a group of three Security Alarm control buttons. These buttons are used to display alarms, faults and disablements on sites where security (for example intruder alarm or access control) equipment is supervised by MAESTRO, either on a stand alone basis or in addition to the fire alarm system.

By left hand click of the mouse cursor on any of the active Security Alarms buttons, a listing of all current alarms in the system is displayed.

The buttons are listed in the display in alarm priority order.

If there are no alarms currently in the system, the Security Alarm buttons boarders remain the quiescent grey colour and operating them has no effect.

The Security Alarm control buttons panel remains on the screen display at all times, regardless of the display in other sectors.

2.4.4. The General alarm buttons

Positioned below the block of Security Alarms buttons down the left side of the screen display is a group of three General Alarm control buttons. These buttons are used to display alarms, faults and disablements from equipment other than fire alarm or security systems supervised by MAESTRO, either on a stand alone basis or in addition to the fire alarm and security systems.

By left hand click of the mouse cursor on any of the active General Alarms buttons, a listing of all current alarms in the system is displayed.

The buttons are listed in the display in alarm priority order.

If there are no alarms currently in the system, the General Alarm buttons boarders remain the quiescent grey colour and operating them has no effect.

The General Alarm control buttons panel remains on the screen display at all times, regardless of the display in other sectors.

2.4.5. Alarm type priority

On sites where MAESTRO is used to supervise Fire, Security and General alarm systems, the following priority is given to incoming alarms.

1. FIRE alarm
2. FIRE pre-alarm
3. SECURITY alarm
4. GENERAL alarm
5. FIRE fault
6. SECURITY fault
7. GENERAL fault
8. FIRE disabled
9. SECURITY disabled
10. GENERAL disabled
11. FIRE information
12. FIRE gas system

MAESTRO will receive alarms and list and display them in the above priority. Where fire alarm is supervised with security or general alarm only, the above order of priority is retained, without the inclusion of the non connected alarm type.

2.5. Alarms information bar

Situated centrally below the alarm banner is a second long narrow window, this is the alarms bar. The bar is an information window, coloured coded by alarm type, to provide information on the totals of current alarms for both zones (areas of the building divided up for ease of identification) and points (devices) forming the fire alarm system (sensors, callpoints, alarm outputs).

The window displays current alarm information firstly by type, (that is by its background colour), secondly by zones (the total number of zones in alarm) and also by points (the total number of devices currently active throughout the system).

The total of any alarm by type can be displayed by left hand clicking the mouse cursor on the relevant Alarm Control buttons, located in the box running down the left side of the display screen. The information bar heading and background colour changes to the alarm type selected.

Positioned at either end of the bar are navigation buttons. These are used to scroll specific zone information, in conjunction with the alarm status bar and alarm lists described in detail in Section 2.6.

2.6. Current alarm status bar

Below the alarm information window is the current alarm status bar. This is an information bar which always displays the most recent alarm, regardless of what other information is being displayed on the screen.

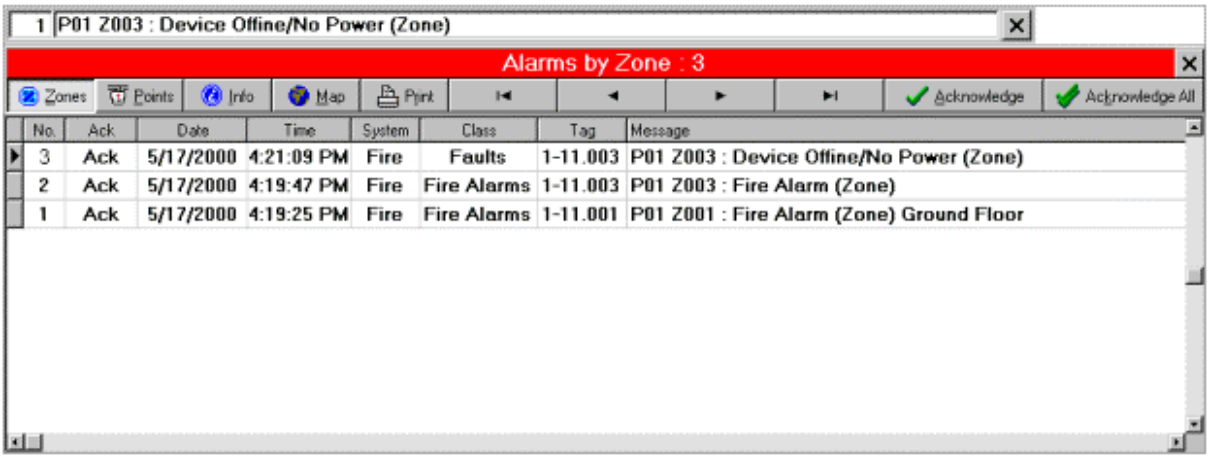
The bar is divided into three parts.

At the left end is a small window, which displays the alarm number. Alarms are numbered as received - first number 1, second number 2 and so on, for each category. When alarms of different categories are combined and displayed in the all alarms list, they may be more than one shown with the same alarm number. The majority of the bar displays panel number, zone number and a short description of the zone.

At the right end of the bar is a navigation button which by left hand clicking the mouse cursor opens the Alarm List which displays all the current alarms in the system categorized by alarm group and type. When the Alarm list is open, this button is replaced with an X to indicate that the Alarm List can be closed by left clicking the mouse on it.

2.6.1. Current Alarm List

The current alarm status bar can be extended, by means of a drop down box, to display lists of all current alarms. These lists are in order of alarms received, with the latest alarm received at the top of the list.



The lists are accessed via the navigation button on the current alarm status bar (as described in Section 2.4.). Information on individual alarms, by type, by zone and by point is provided.

Individual lists of alarms by type, or a list of all current alarms, can be selected for display by left hand clicking the mouse cursor on the relevant alarm control button located in the box running down the left side of the display screen.

Access to these lists is always available and they can be viewed from anywhere in the system without having to access menus or navigate through maps

2.6.2. Current alarms lists toolbar

Information displayed in the alarm lists is controlled and selected by using the toolbar below the alarm list heading. The following controls are accessed by left hand clicking the mouse cursor on the appropriate button in the bar.

This displays a list of zones in alarm. Within the category chosen from the alarm control buttons.

This displays a list of points (sensors, callpoints, alarm outputs) in alarm. Within the category chosen from the alarm control buttons.

This displays an information box giving details for the indicated zone or point alarm.

This shows the location of the alarm on the relevant building or site map.

Prints the displayed list.

Allows scrolling through the alarm lists. Button order is First Alarm (oldest in list), Prior Alarm, Next Alarm and Last Alarm (latest in list). These buttons scroll lists by zones or points depending upon which has been selected from the toolbar. Lists can also be scrolled by zones from the scroll buttons at the ends of the Alarm Information Bar. (Section 2.5.)

This acknowledges the currently indicated alarm in the list if not already acknowledged.

This acknowledges all unacknowledged alarms of the type selected if the list is displayed by category, or all outstanding alarms if the list has been generated via the All Alarms, alarm control button.

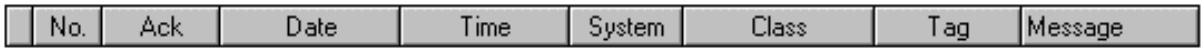
2.6.2. Current alarms lists toolbar

The current alarm is indicated by a pointer in the first column of the alarm list. Alarms can be selected in a list by a left hand click of the mouse cursor anywhere along the alarm row. The indicating pointer will move up or down the first column to the selected row, which for clear identification changes to a colour background.

To close the Current Alarms List display window, left hand click the mouse cursor on the navigation box at the right end of the Current Alarm status bar. Note the navigation box symbol toggles between an arrow and a cross, depending whether or not the alarm list is displayed.

2.6.3. Current alarm list column headings

Columns forming the current alarm list are selected at the system configuration stage from the following list.



No (alarm number)	the number of the alarm (first alarm number one).
Ack	whether the alarm has been acknowledged or not.
Date	the date the alarm was received.
Time	the time the alarm was received.

System	system type - fire, security, general.
Class	alarm class - fire alarm, fault, information etc.
Tag	the identification number of the zone and device from the MAESTRO system database.
Message	site specific details assigned to the zone or point in alarm.
Panel	identification of the panel in alarm (in multi panel systems)
Zone	zonal description
Device	device description

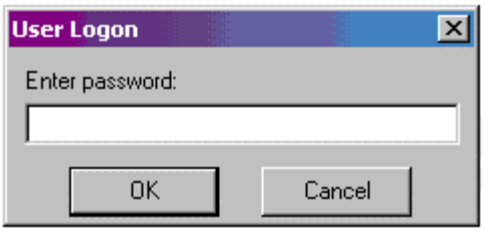
The column headings may be selected by the operator to form customised lists. This can be useful when viewing or printing off lists, where only some of the columns are relevant to site circumstances.

A default selection of six columns is programmed into the MAESTRO software based on those mostly used on sites. Additional columns can be selected by right hand clicking the mouse cursor anywhere the alarm list area and selecting columns, by a left hand click on the option, from the box displayed. This displays the above list of all columns from which options can be selected by left hand clicking the mouse cursor on selected column titles.

The default selection can be reinstated at any time by left hand clicking the mouse cursor on the Restore Defaults option from the box displayed.

2.7.1. Logging onto the MAESTRO system

Operators log on to the MAESTRO system via the user log on button, located towards the top centre right of the screen display.



A single left hand click of the mouse cursor on the button, displays the user log on, dialogue box for the operator to enter a password.

Logging on and off the MAESTRO system is explained fully in Section 5.2.

2.8. The Acknowledge alarm button

The acknowledge alarm button is a large control button located at the top right corner of the display screen and is operated by a single left hand click of the mouse cursor.

The button is used to acknowledge new alarms into the MAESTRO system, where they are accepted and actioned, or left pending as current alarms for future attention. The acknowledge alarms button remains on the screen display at all times, regardless of the display in other sectors.

Acknowledging an alarm does not affect the active control panel, it only registers the signal into the MAESTRO system.

2.9. User service buttons

The user service buttons -

are positioned directly below the Acknowledge Alarm button at the top right corner of the display screen, alongside the user log on/log off button.

The facilities are accessed by a single left hand click of the mouse cursor on the relevant button.

2.9.1. Phone list

On accessing the Phone List facility, a telephone directory is displayed, where important numbers can be stored for quick reference, either for general information, for example service support, or as back up in an emergency.

Using the Phone List is explained fully in Section 5.4.

2.9.2. Memo

The user Memo facility offers a quick method of recording details of events. On accessing the facility, a memo pad is displayed, where the user can either type in information via the workstation keyboard, or enter pre typed statements via a selection bar.

Using the Memo facility is explained fully in Section 5.5.

2.9.3. Help

A left hand click onto the help button displays a help menu from which general information can be selected.

2.10. Display controls

The display controls comprise a row of five buttons positioned directly below the MAESTRO logo towards the top right corner of the screen display.

The display controls are used to select and display the range of site, building and zone maps, covering the areas supervised by the MAESTRO system.

The facilities are accessed by a single left hand click of the mouse cursor on the appropriate button.

2.10.1. Zoom

The zoom facility provides zoom normal, zoom medium and zoom maximum and is used to magnify detailed areas of map layouts.

Using the zoom controls is explained fully in Section 4.3.4.

2.10.2. Map select

The map select button, opens a list of all available maps for display.

Using the map select button and the selection of maps in general is explained fully in Section 4.3.2.

2.10.3. Home page

The home page button returns the user to the home page at any time or position within the MAESTRO system.

Using the home page return is explained fully in Section 4.3.2.

2.10.4. Print Map

The print map button prints the currently displayed map on printers connected to the MAESTRO system

Using the print map button is explained fully in Sections 5.6 and 9.8.

2.10.5. Full screen

The full screen button enlarges the current map display to a larger area of the screen.

Using the full screen button is explained fully in Sections 5.7 and 9.8.1.

2.11. Fire alarm functions

MAESTRO allows the user to perform a wide range of panel and system functions remotely, from the control station. Controls and panel fascias can be simulated on the screen display in order to view current panel status, operate system facilities remotely or accept, process and respond to new alarm conditions as they occur.

System controls and information are accessed via the block of four control buttons positioned at the bottom left corner of the screen display. The block has a permanent blue boarder for ease of identification.

The facilities are accessed by a single left hand click of the mouse cursor on the appropriate button.

2.11.1. Panels controls

The Panels Control display provides controls for -

Accepting an alarm

Resetting panels

Silencing alarms

Sound alarms

The button display simulates the controls on the panel and are operated in an identical manner.

In multi panel systems, all operations made from the panel controls display buttons are global, that is all panels connected to MAESTRO are effected by the action.

All Panel Controls are password protected. Prior to operating any of the four controls the user is asked to provide a password. If the operators general access level allows Panel Control operation, no password is required and the dialogue box is not displayed.

Using the Panel Control buttons to perform various operations is explained fully in

Sections 6.0. and 7.0.

2.11.1.1. Panel Control Centre

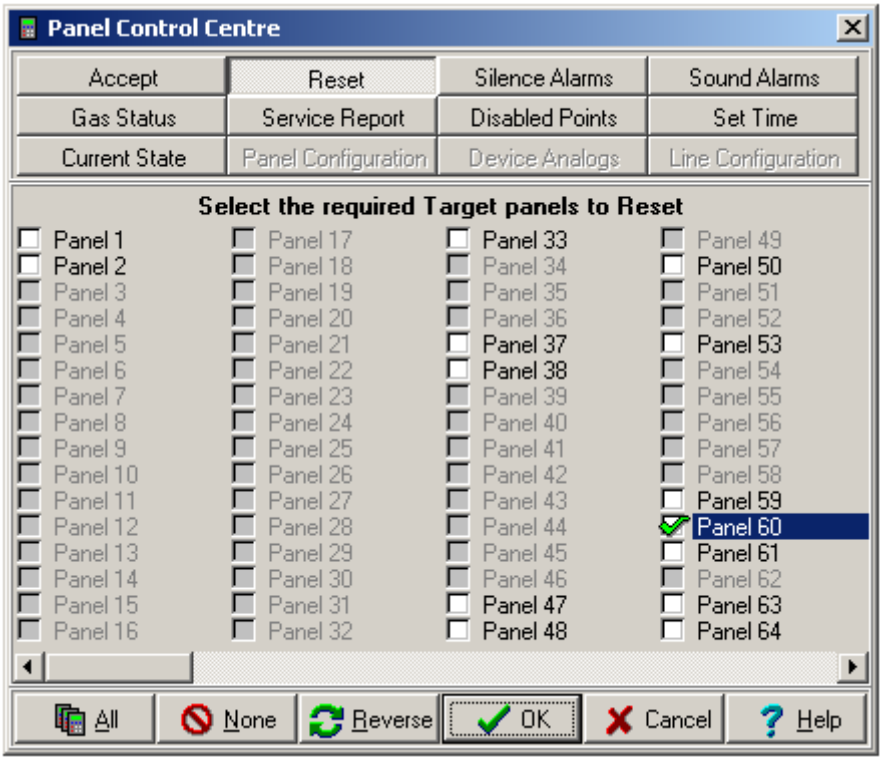
Features

- Allows Maestro to issue selected panel control.

Procedure

- Left click on the Panel Controls button (bottom left of the Home screen)

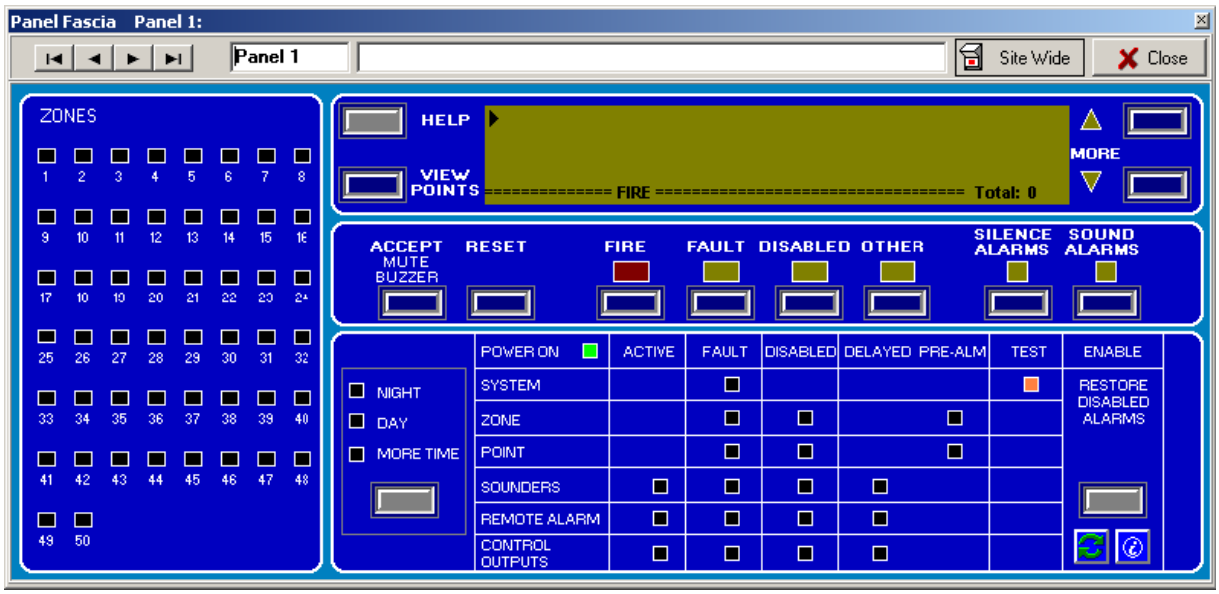
- Use a right mouse button click on the Panel Control button to launch the Panel Control Centre



2.11.2. Panel fascia

The panel fascia display facility is used to simulate the user interface of any fire alarm panel connected to the MAESTRO system. The current status of the system via the panel text display, LED indicators and control keys are displayed.

All main panel control functions become available to the MAESTRO user.



In multi panel systems, panels can be selected by number from 1 to 64 from the panel selection bar running across the top of the simulation display.

All Panel Fascia functions are password protected. Prior to operating any of the Panel Fascia controls the user is asked to provide a password. If the operators general access level allows Panel Fascia operation, no password is required and the dialogue box is not displayed.

Using the Panel Fascia simulation to perform various operations is explained fully in Sections 6.0. and 7.0.

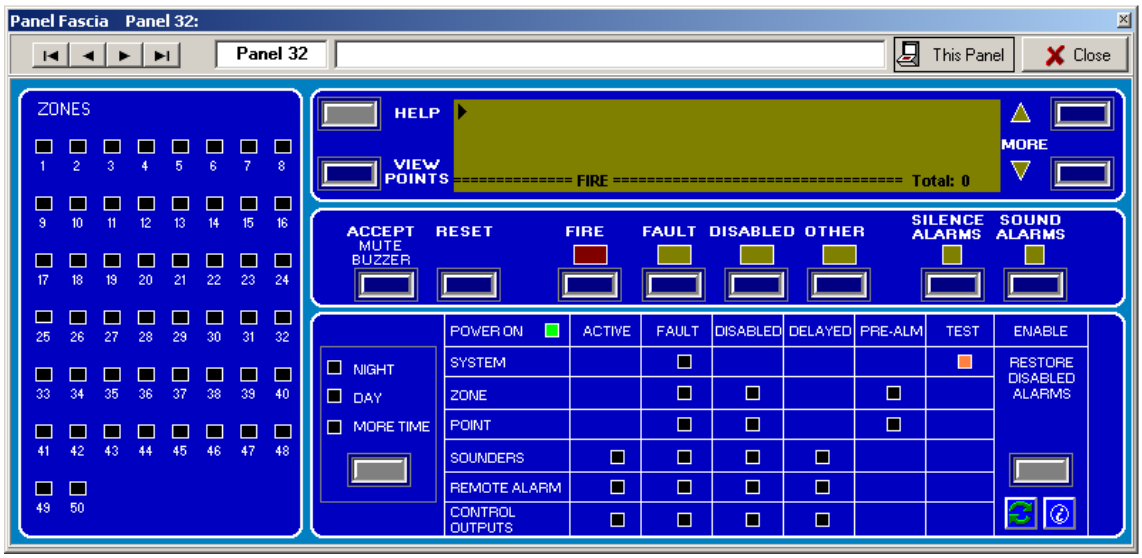
Features

- Live simulation of the actual fascia showing all panel indications.
- Views: 1) This Panel and 2) Site Wide (default)
- Shortcut to the navigation card (refer section 1.2.2).

2.11.2.1. Local Panel fascia

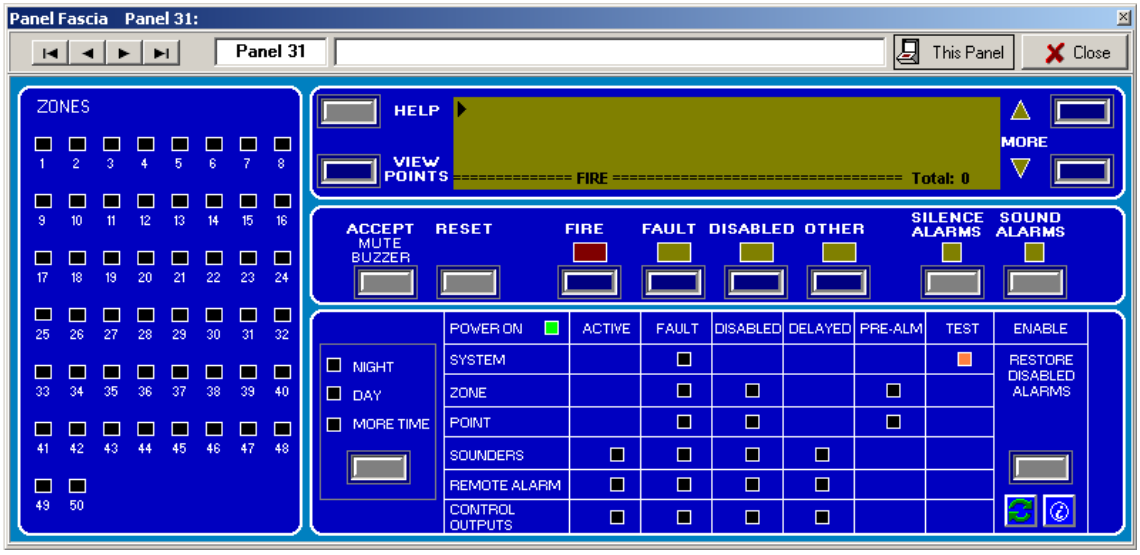
Procedure

- Left click on the Panel icon (site map)
- Depending on the control type of the selected panel fascia icon one of the following panel fascias will be displayed.



Panel Fascia (control)

Note: control keys (Accept, Reset, Silence and Sound Alarms) enabled.



Panel Fascia (non-control)

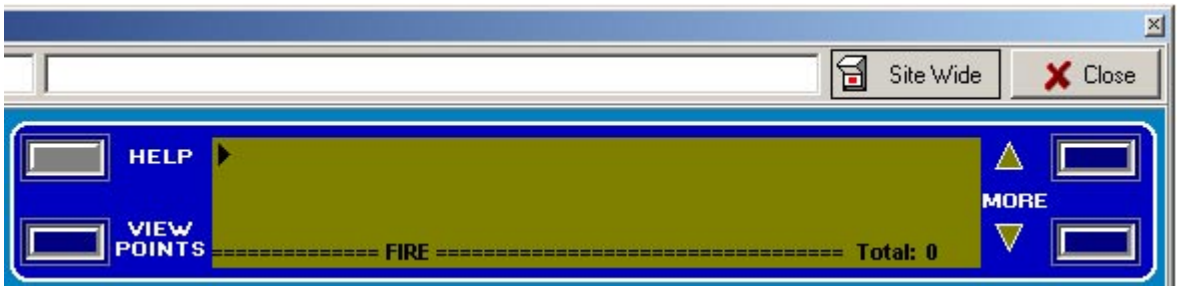
Note: control keys (Accept, Reset, Silence and Sound Alarms) greyed out.

- The Site Wide fascia view will be displayed (default).

2.11.2.2. Site Wide and This Panel fascia views

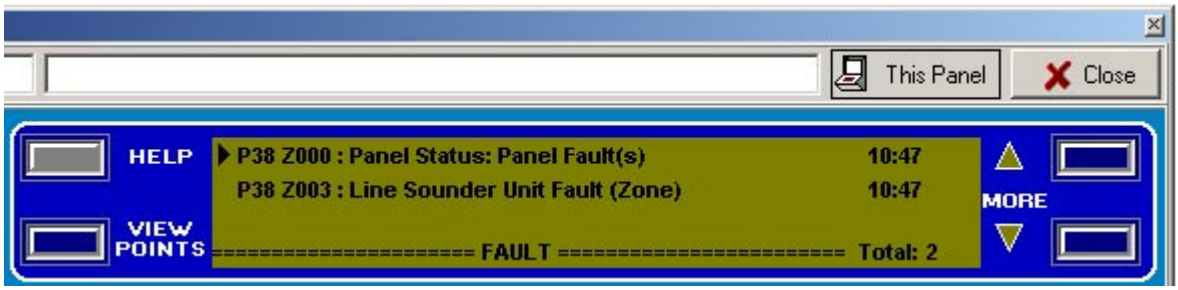
Site Wide fascia view (default)

This fascia displays all network events.



This Panel fascia view

This fascia displays events on the selected panel.



Procedure

- Left click on the Panel Fascia button (bottom left of the Home screen)

- The fascia will reflect the setting of the panel icon ie. control or non-control.
- Two view options available are:
  i. site wide (default)
  ii. this panel
- Click on the Site Wide/This panel button (top, right section of the fascia form) to toggle between fascia views.

2.11.3. Event history

The event history button provides access to the system event log. Both current and archived records are available to the user.

Event logs can be displayed or printed out in the form of various reports.

Date	Time	Tag	Zone	Event Type	Description
5/17/2000	11:56:49 A	0-0.001	0	System Startup	Maestro Client 1 Connected
5/17/2000	11:57:27 A	1-11.001	1	Fire Alarm (Zone)	Ground Floor
5/17/2000	11:57:31 A	1-1.003	1	Fire Alarm (Point)	
5/17/2000	11:58:51 A	0-0.000	0	Reset Panel Command Issued	User Control by Installation User from Maestro Client 1
5/17/2000	11:58:57 A	1-0.000	0	Panel Reset	

The event log, archiving and producing lists and reports is explained fully in Sections 8.0. and 9.0.

2.11.4. Refresh panels

The lower button in the fire alarm functions block is the refresh panels facility.

Maestro communicates continuously with all control panels connected to the workstation. From time to time, particulary after a Panel Reset, some low priority information is delayed to allow all alarms in the system to be timeously received and handled. These low priority alarms, such as device or zone disables and service conditions, are only sent later in status update messages. These messages can be requested at any time by aleft hand click of the mouse cursor on the refresh panels button

The refresh facility operates only with ZP3 control panels.

2.12. General information bar

The general information bar runs horizontally across the bottom of the screen display and is divided into the following sections.

2.12.1 Help

A permanent message, directing the user to a help menu via the workstation keyboard F1 function key, is located in the bottom left corner of the information bar.

This facility is under development and is not yet available to the user.

2.12.2. Current date and time

Current date and time are always displayed in the second box from the left corner.

This is the reference used by MAESTRO in all event recording, alarm list displays and archive logs.

2.12.3. Last event line

The last event line runs centrally across the bottom of the display screen.

The latest system action or event is always displayed in the line together with the time and date of receipt.

2.12.4. Communications indicators

Positioned in the bottom right corner of the screen display are three communications indicators, which monitor -

all connections between equipment connected to the MAESTRO control station.

the serial communications connecting the MAESTRO control station with the fire alarm panel, or panels.

the connection between the MAESTRO control station and printer hardware.

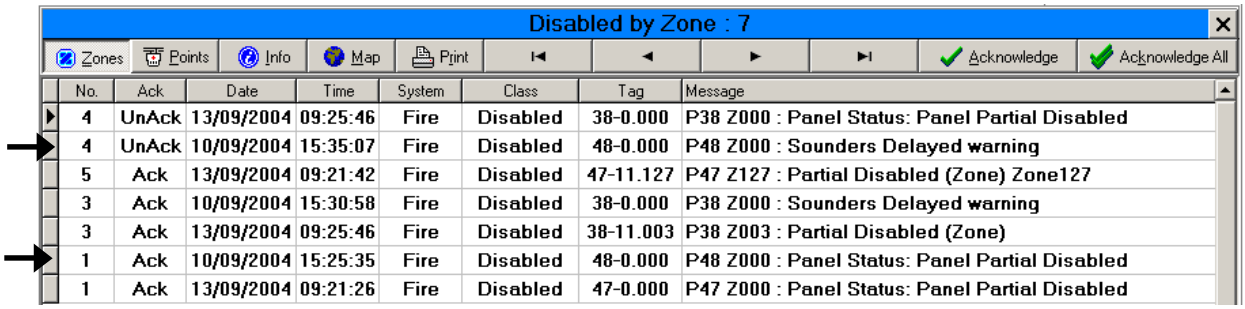
Whilst running the system with full communications the indicators are illuminated green, but change to red to signal a communications fault.

2.13. EN54 specification

- EN54 specification – if a sounder has a day/night delay, the panel must indicate a panel sounder delay warning. This also applies to sounder delays configured in I/O mapping.
- Maestro complies with the above specification. Panel icons that have sounder delays are indicated by a blue panel icon. There may not be any physical devices disabled. This is because the specification requires that mapped delays are indicated as a panel system disablement.
- This may be confirmed by viewing the alarm list. Eg. Panel 48 has a sounder delay warning, which is associated with the panel partial disable.

Procedure

1. Open the alarm list for disablements and click on the zone tab.
2. The message “Sounders Delayed warning” will be displayed if the sounder has a day/night delay



Maestro Graphics System

User Guide Manual

Section 3

Icons

UD1265.3
Issue 4
10/01/2005

3.1. Icon types

The position, type and current state of each system component is represented on MAESTRO maps by icons. This allows immediate identification of any device on any MAESTRO map.

An icon is a small symbol depicting either a fire alarm zone or a fire alarm device, its type and location within the building. Different device types are represented by different icons.

3.1.1. Zone icons

Zone icons are used to identify zonal areas of the building and to depict which zone or zones have initiated alarm conditions. On the zone map, the zone icon will usually be located within the boundary of the zone.

The following illustration shows the standard MAESTRO zone icon.

Zones normally contain a number of system points or devices, (sensors, manual callpoints, sounders and interface units) and the zone icon will change its appearance to depict either -

1. A change in state of the zone as a whole, for example all points disabled during a service visit.
2. A change in state of any individual point within the zone for example a sensor changing from quiescent into an alarm state.

The current state of any zone in the system is depicted by the following standard icon colours -

Normal	Green
Fire	Red
Pre alarm	Orange
Service	Olive
Fault	Yellow
Disabled	Blue
Partial disable	Blue/Green
Gas in Zone	Red with Exclamation mark

In the normal state the zone icon is depicted in solid green, but on an alarm condition changes to display the appropriate alarm colour. The zone icon will flash on alarm and will remain flashing until the alarm condition is accepted by the MAESTRO operator, (or remotely by personnel at the control panel). Upon acceptance the icon is displayed in a steady state, in the appropriate alarm colour.

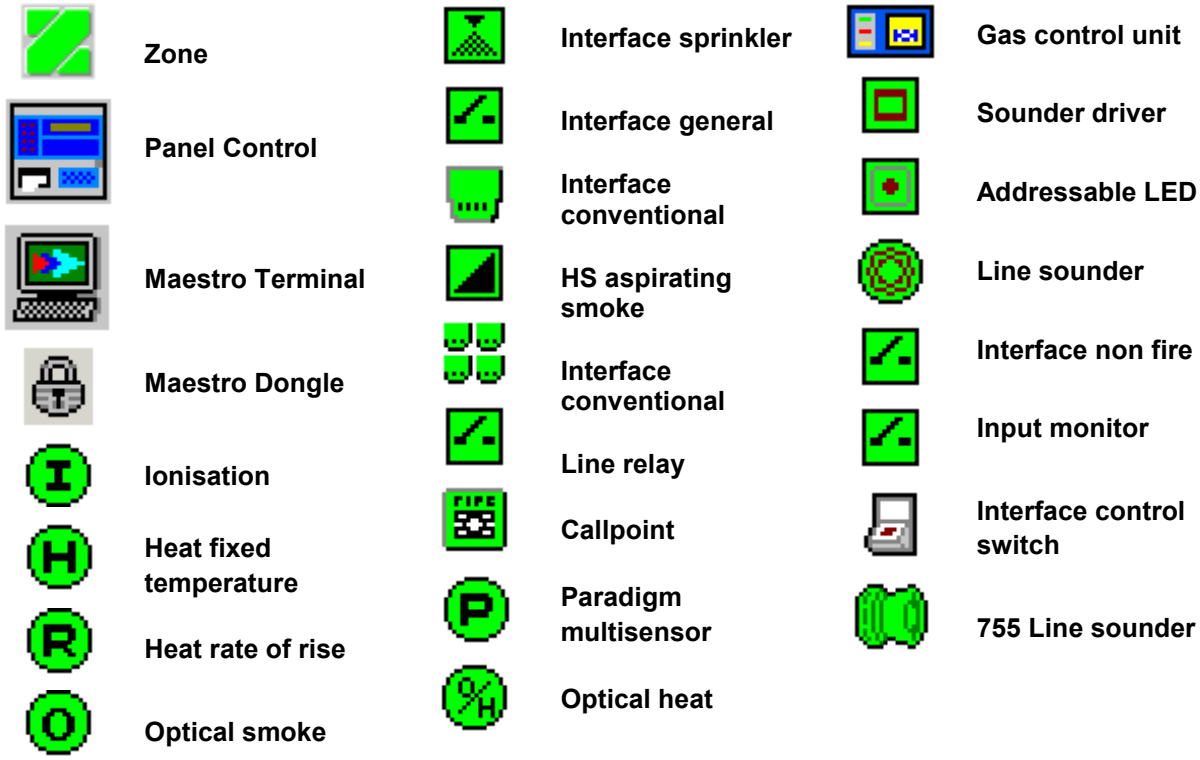
The zone icon remains displayed in its alarm colour until the alarm condition changes, (for example when a sensor changes state from pre alarm to full alarm) or upon system reset, when the icon reverts to its normal green colour.

3.1.2. Point icons

Point icons are used to identify the position, type and condition of individual system components (sensors, callpoints, sounders) and to display which items have initiated alarm conditions.

Point icons may appear on either zone maps or point maps. On zone maps, point icons will appear in the positions of each system component. Zone icons will be located within the boundary of the zone.

The following MAESTRO point icons are used to depict system equipment –



The above illustration shows the range of standard MAESTRO icons depicting hard wired components. Similar standard icons are used to depict other component types, for example radio fire alarm equipment and intrinsically safe systems

In order to provide signals onto the fire alarm system, from other associated equipment, standard interface units can be programmed to emulate the inputs of a number of devices. Emulated devices are displayed in the MAESTRO system via a range of emulated device icons.

The status of any point in the system is displayed by the colour of the relevant point icon. For example when a sensor changes from quiescent into an alarm state, the point icon will change from green (the normal or quiescent state) to red to signify a fire alarm condition.

The current state of any point in the system is depicted by the following standard icon colours -

Normal	Green
Fire	Red
Pre alarm	Orange
Service	Olive
Fault	Yellow
Disabled	Blue

In the normal state the point icon is depicted in a solid green colour, but on an alarm condition changes to display the appropriate alarm colour. The point icon will flash on alarm and will remain flashing until the alarm condition is accepted by the MAESTRO operator, (or remotely by personnel at the control panel). Upon acceptance the icon is displayed in a steady state, in the appropriate alarm colour.

The point icon remains displayed in its alarm colour until the alarm condition changes, (for example when a sensor changes state from pre alarm to full alarm) or upon system reset, when the icon reverts to its normal green colour.

Where zone icons and point icons appear on the same map, both the individual point and its associated zone icon will change to the appropriate alarm colour, on the change of state of any individual point.

3.1.3. Custom icons

Custom icons can be originated from the MAESTRO commissioning programme, enabling non standard designs to be incorporated. A wide range of colours is also available which can be chosen at the systems configuration stage.

Non standard icon shapes and colours do not affect the system operation. All MAESTRO systems provide the same information and control regardless of icon design.

3.2. Tagging

Each individual zone and every device is assigned a unique identification tag by the MAESTRO system. This tag enables the operations part of MAESTRO to locate information from its databases for every zone and device connected to the system or fire alarm network.

The tag comprises a series of three numbers (for example) -

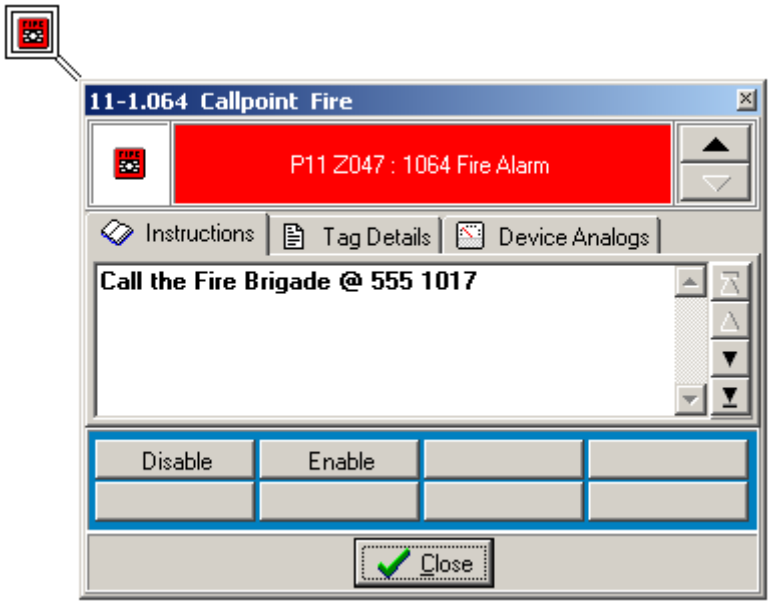
7- 4. 109

The first number identifies the panel to which the device is connected. In single panel systems the number will usually be number 1. although a panel can be assigned any number up to 64. The second number signifies the loop or line number the tagged zone or device is connected to and the final numbers designates the components address number.

For identification purposes, device tags may be displayed in a number of MAESTRO operations, such as in alarm lists, device information cards and archive reports.

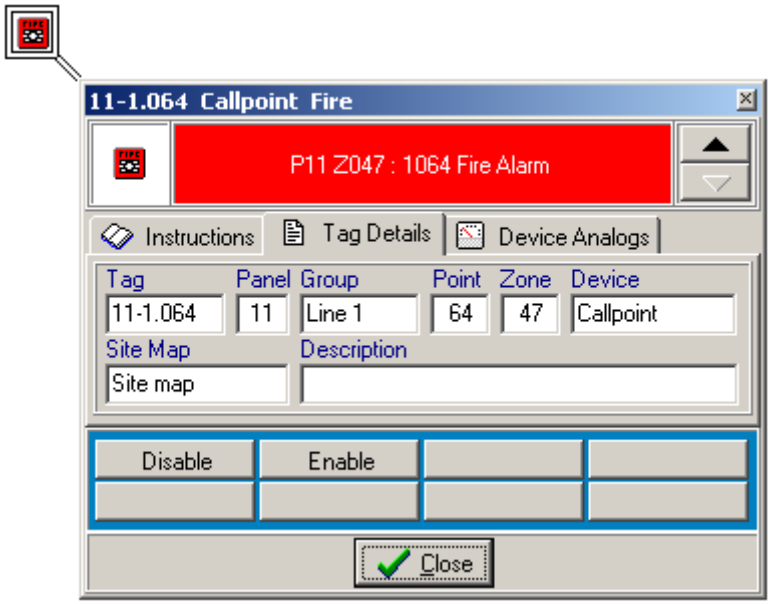
3.3. Information cards

Information displayed directly on maps is intentionally kept as brief as possible, in order to provide uncluttered icon displays. Full information on each device is provided by individual information cards, which can be displayed by a left hand click of the mouse cursor on the zone or device icon.

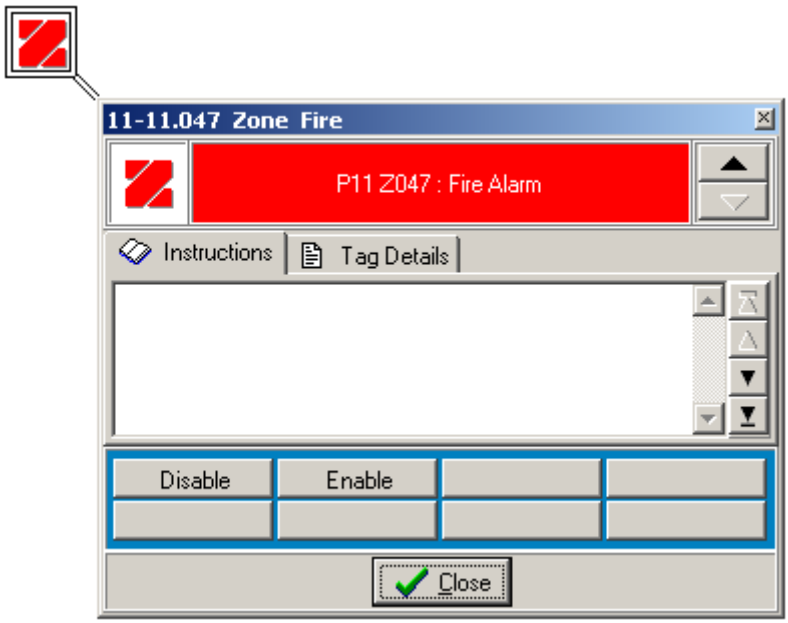


Icons

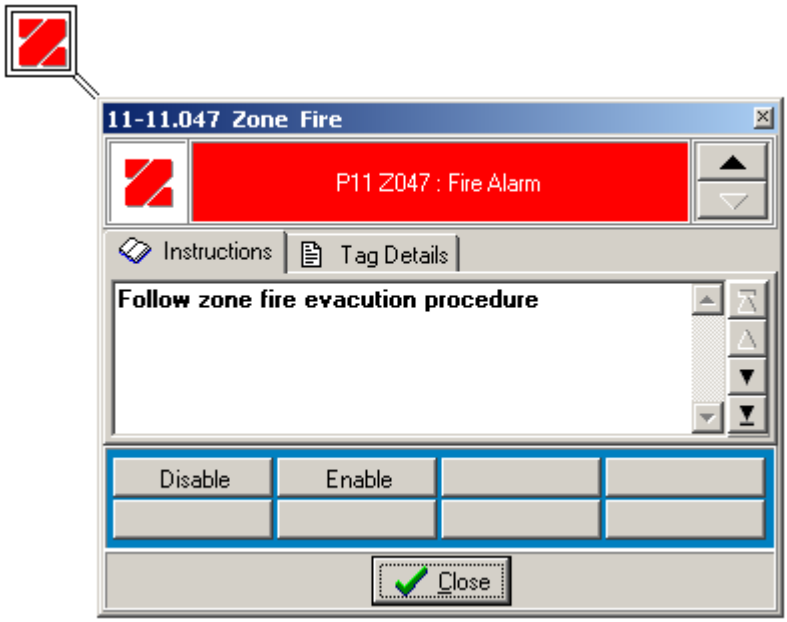
The following information is displayed. Tag number, Panel number, Group (for example the loop to which the point is connected, or the zone is part), Point number, Zone number, Device type description, Site map location and Point or zone location.



Information cards are programmed at the system configuration stage, with separate information for different alarm conditions. The following illustration shows a zone information card for both normal and fire condition.



Icons



All information is customised during the site database development at system configuration stage.

Facilities directly available from any information card are -

1. Panel control. Certain panel control functions are available directly from the panel control information card. (see Section 6.3.1.)
2. Disable and enable the zone or device. This is operated by left hand click of the mouse cursor on the appropriate button positioned at the bottom right of the information card. Disabling a zone or point from the information card adds the disablement to the current alarms list and the event log.
3. Navigate map level. The operator can move the main display up or down the map levels (where appropriate) by a left hand click of the mouse cursor on the up and down arrow buttons positioned at the top right of the information card.

Maestro Graphics System

User Guide Manual

Section 4

Maps

UD1265.4
Issue 4
10/01/2005

4.1. Maps

The MAESTRO system is based on displaying the current state of the fire detection and alarm system on a series of easily understood site maps.

The series of maps covering the system will of course be different for each site. There is no limit to the number of maps, which can be incorporated into a MAESTRO system, (subject to the available hard disc space of the workstation computer).

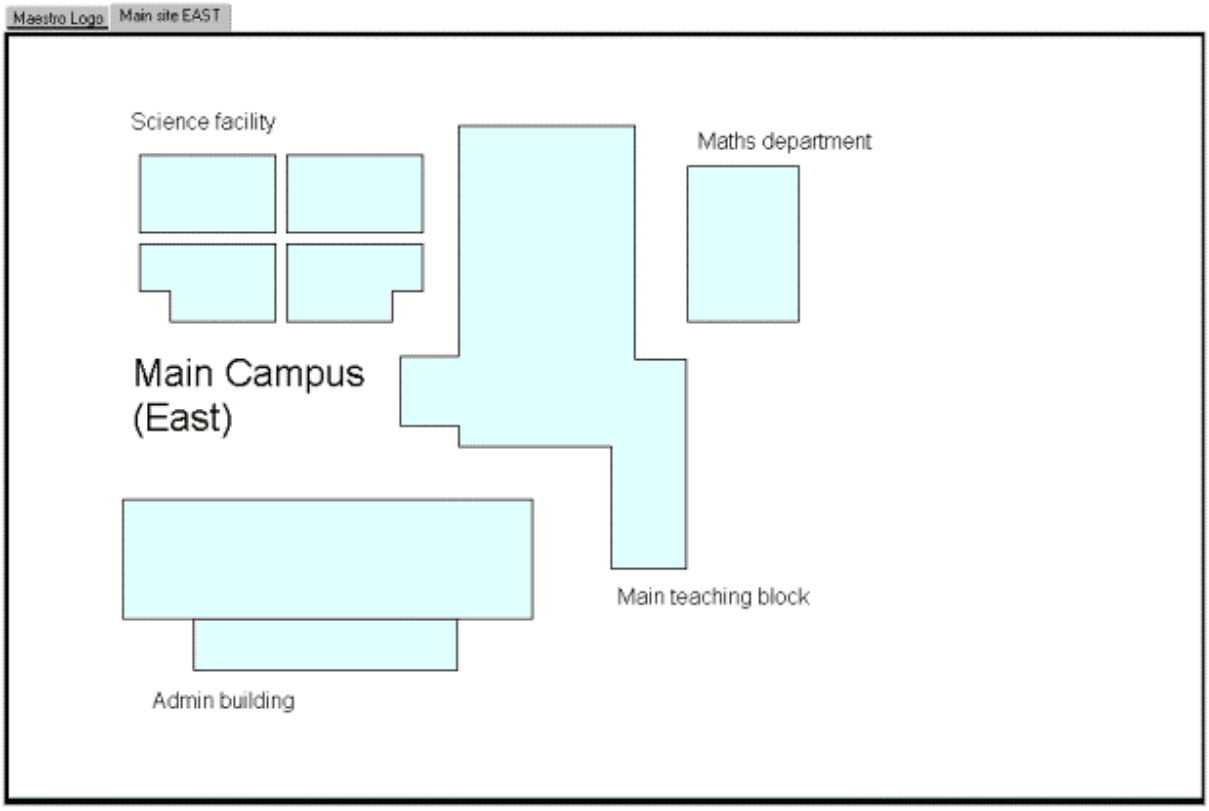
Maps are categorised into four types -

4.1.1. Level 1. site maps

Level 1. site maps usually portray the complete site layout, showing buildings and areas covered by the different fire detection and alarm systems, connected to the MAESTRO system. This map allows the operator to view the entire building or site on a single screen, providing initial guidance and alarm information. The main site map can also assist the operator in directing emergency personnel to the alarm location.

The level one site map will usually be displayed as a plan view. However in some applications, for example high-rise buildings the level one map may be configured as an elevation, showing all floors of the building.

On very large sites, covering several complex areas there may be more than a single level one map.



4.1.2. Front page or home map

The most common type of level one map is the front page or home map. This is the main screen display normally showing when the system is in the quiescent state with no alarms current.

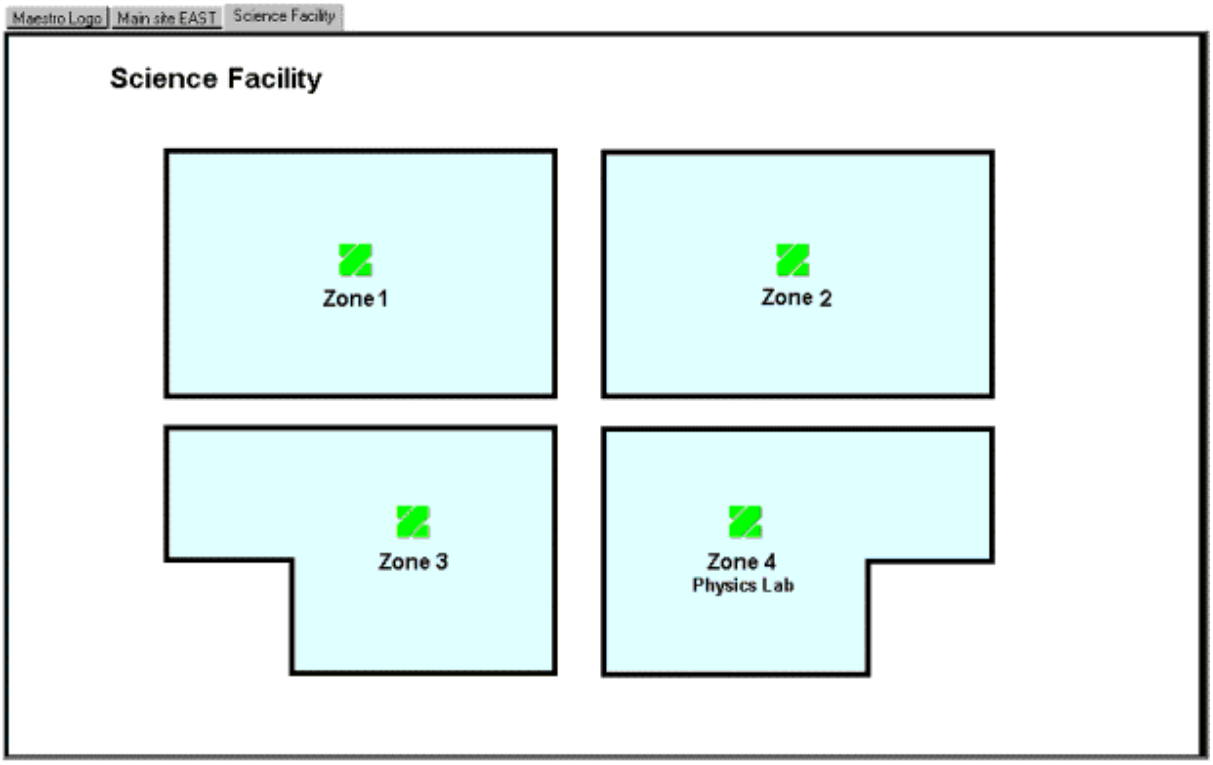
Front-page maps may advertise the company or organisation operating the site, or display the system site address or title.

It is not uncommon for the front page map to double as the main site map, displaying both site title and site map.

4.1.3. Level 2. zone maps

Level 2. zone maps display the system as individual fire alarm zones. Each map may contain a part zone, a complete zone or several zones, dependent upon zone size and detail.

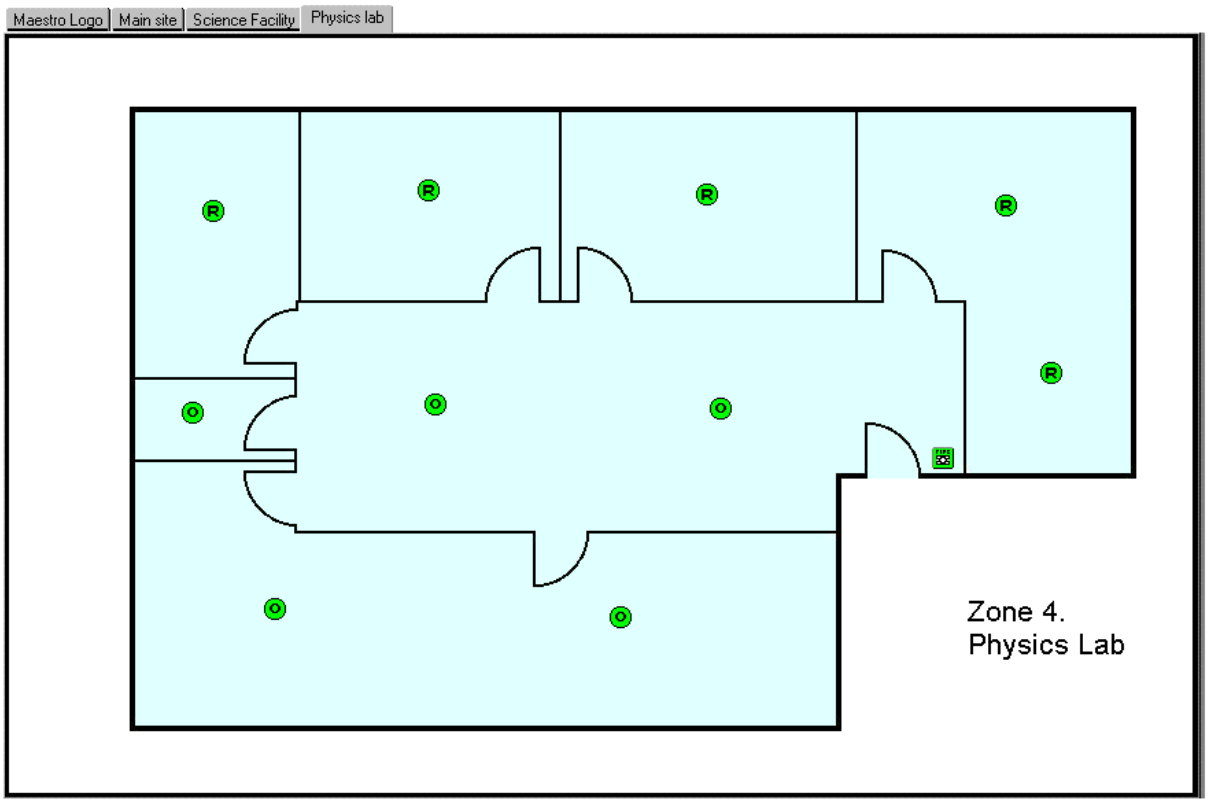
Buildings or area portrayed on the site map at level one, will be broken down into the relevant number of fire alarm zones and displayed at level two usually by several zone maps.



4.1.4. Level 3. point maps

Level 3. point maps display the location and status of each individual point or fire alarm system component.

The details of each zone area portrayed on the zone map at level two, is again displayed either as a total zone showing individual devices, or where a large quantity of devices is located in a small zonal area, as a series of level three, point maps.



4.2. Icons on maps

Zone icons and icons depicting points may appear on maps at any of the three map levels. Usually only the zone icons will appear on the zone maps at level two and points on the points maps at level three.

On smaller sites the zone layouts, with their zone icons, may be incorporated onto the level one site map, with points being shown at level two. In some buildings alarm situations may be easier to understand with both zone and point icons shown together, on zone maps at level two.

Icons are positioned onto maps at the system configuration stage and are located to make the identification of alarm status in any zone, or point as clear as possible.

MAESTRO complies fully with the European Standard EN 54 giving direct primary alarm and fault display by zone. In any alarm condition, the map containing the zone icon is automatically displayed by MAESTRO. The operator can then obtain detailed device information if necessary, by accessing the relevant point map.

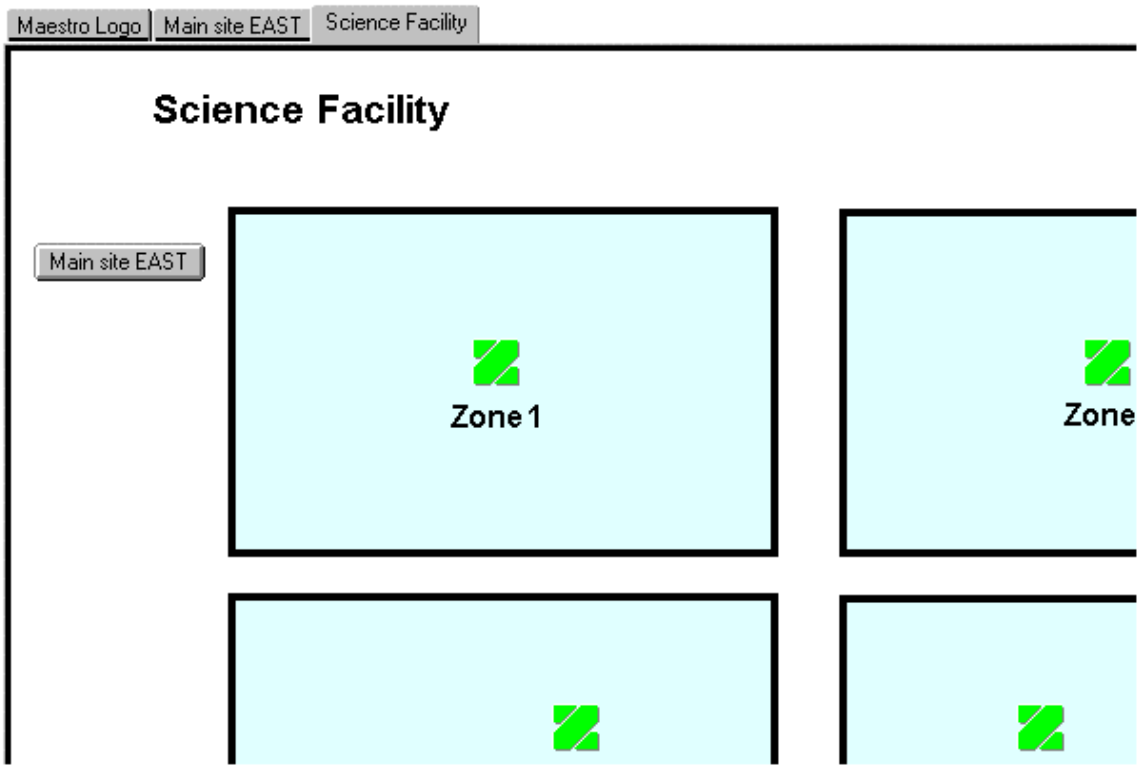
4.3. Navigating around maps

In alarm conditions MAESTRO automatically locates the zone in alarm and displays the relevant zone map. Further information on the point or device in alarm can then be accessed by the operator via the map navigation facilities.

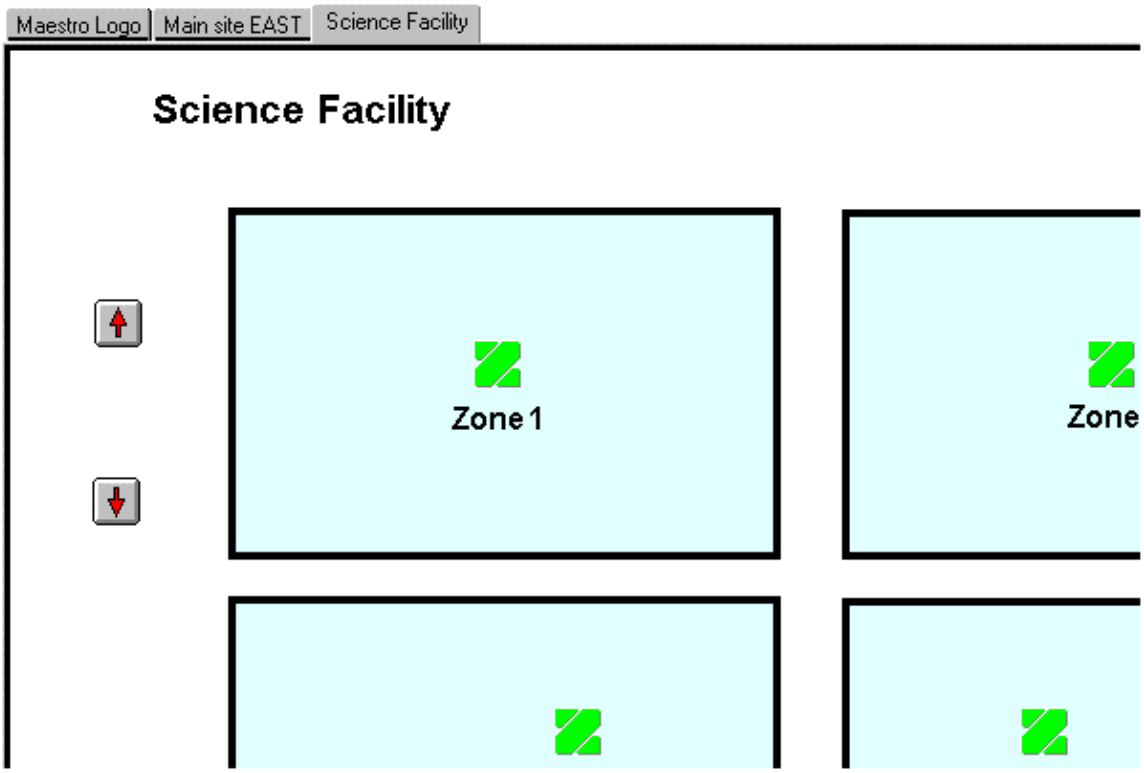
There are three methods available for moving or navigating from map to map, any one, or all three may be in use in any one MAESTRO system.

4.3.1. Map page and map navigation buttons

1. Map page buttons are positioned on maps to enable the operator to quickly move from one map to another. Each map button carries the title of its destination map and is activated by a left hand click of the mouse cursor.



2. Map navigation buttons are positioned on maps to enable the operator to move either across maps at the same level, or up and down the map levels themselves. Each navigation button carries a arrow symbol, indicating the direction of map travel and is activated by a left hand click of the mouse cursor.



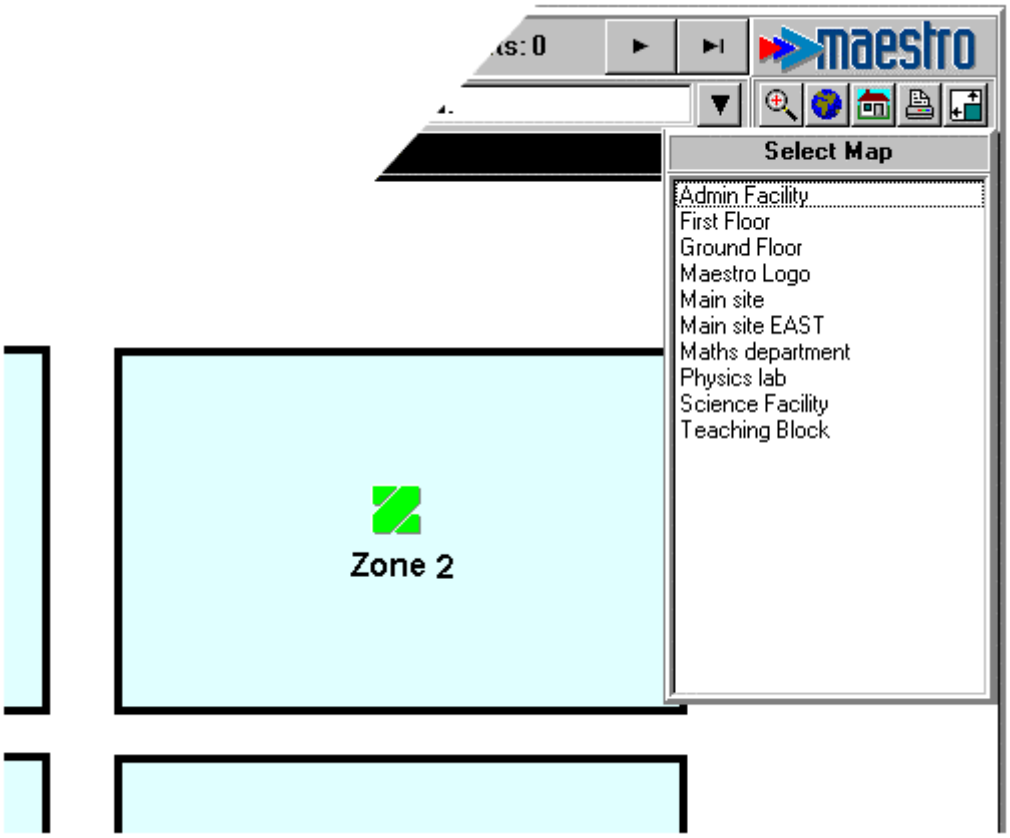
Both map page and map navigation buttons may be featured in the same MAESTRO system and may appear on the same map pages.

4.3.2. Map directory

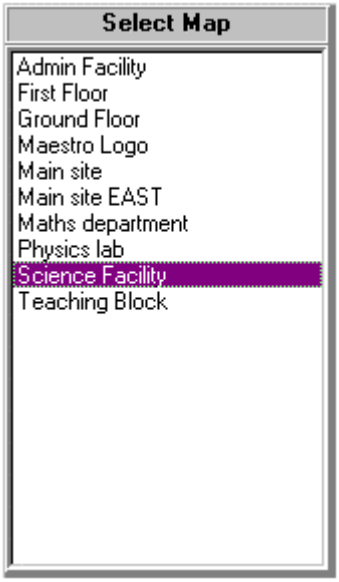
MAESTRO maintains the full list of all maps programmed into its database at system configuration stage. Any map, at any time can be viewed by -

1. A left hand click of the mouse cursor on the map select button, located in the row of display controls, positioned directly below the MAESTRO logo towards the top right corner of the screen display.

By operating the map select feature, a drop down list of maps is displayed. Any map can be selected by a left hand click of the mouse cursor on the required map name. This feature is always available regardless of which map or screen display is occupying the main map area.



2. The drop down list of maps can also be accessed at any time by a right hand click of the mouse cursor anywhere on the main map area. A display controls list is shown, from which the select map option can be chosen. By left hand click of the mouse cursor on any title from the list, the required map is displayed.



Once a map is displayed, the operator is then free to navigate around the other opened maps by means of the map select button, map navigation button or drop down map list options.

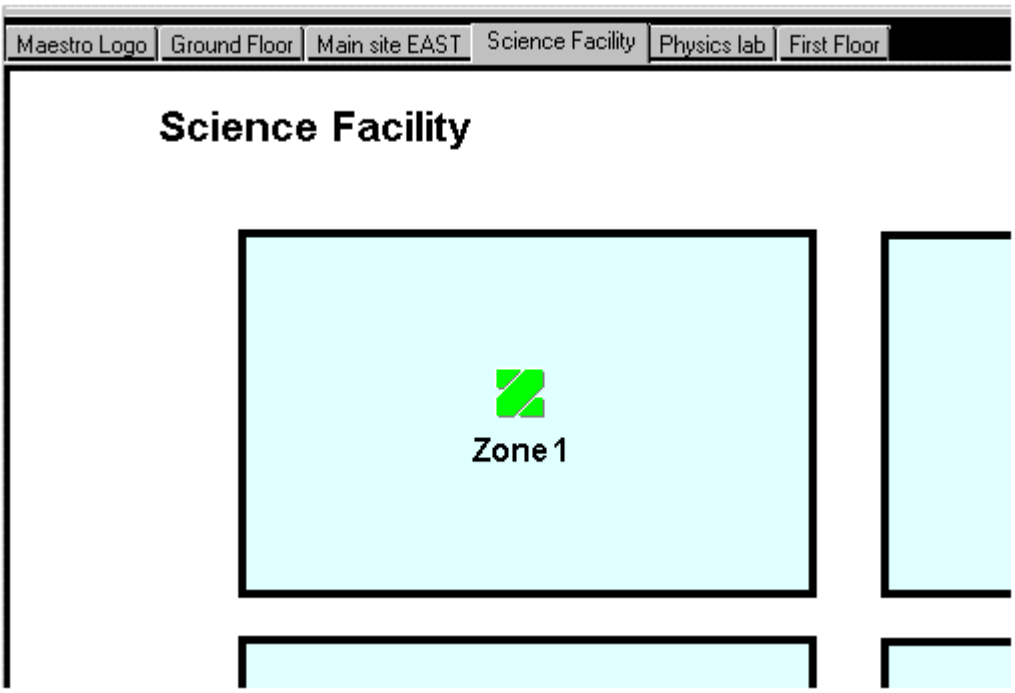
The operator can revert back to the front or home map at any time by either -

1. A right hand click of the mouse cursor anywhere on the main map area and then left hand click the close map option from the display controls list.

2. A left hand click of the mouse cursor on the home page button, located in the row of display controls, positioned directly below the MAESTRO logo towards the top right corner of the screen display.

4.3.3. Map page tabs

Each time a map is opened, its map page tab is displayed, filed along the top of the main map area. The most recent map opened usually appears at the right hand end of the map tab row. Up to 10 maps may be opened at a time. Attempting to open another map will cause the oldest open map to be closed.



Any opened map can be displayed by a left hand click of the mouse cursor onto the appropriate map page tab.

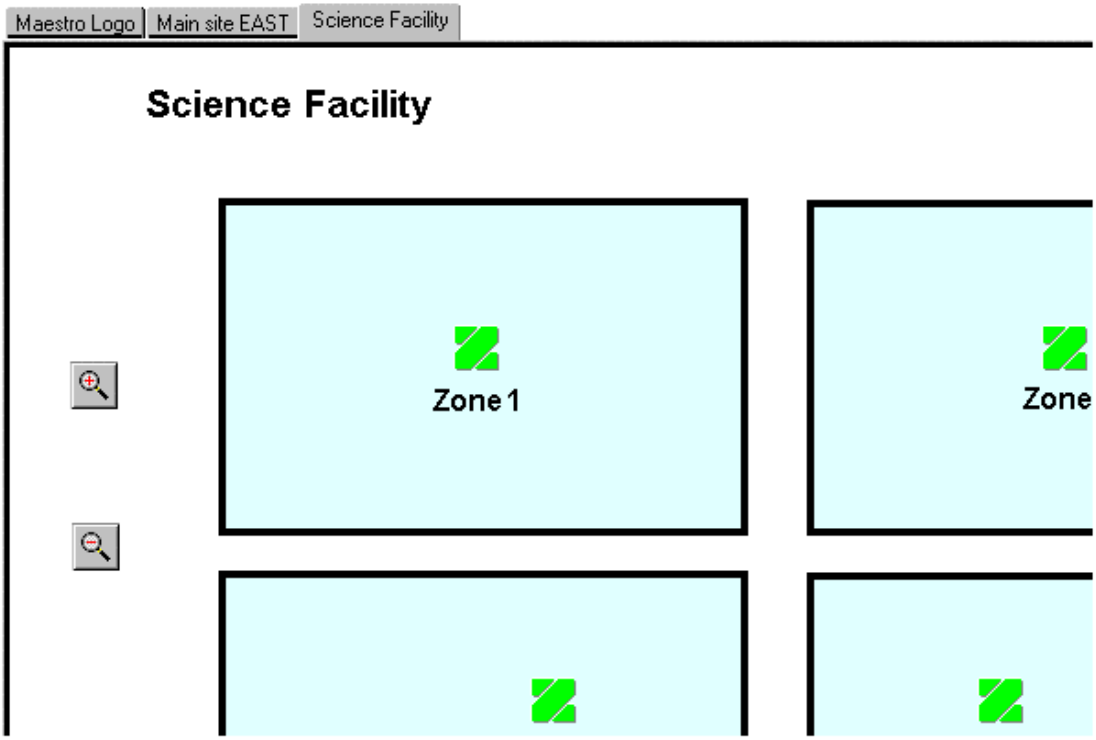
Once any map is displayed, the operator is then free to navigate around other maps opened by map page tabs, map select button, map navigation buttons or drop down map list options.

The front or home page can also be recalled, by a left hand click of the mouse cursor onto the home map page tab.

4.3.4. Map zoom facility

The zoom facility enables the MAESTRO operator to magnify map detail. The facility is available in three levels of zoom, at any map level and may be accessed in several ways.

1. Map zoom buttons, positioned on maps enable the operator to move up and down map levels. Each zoom button carries the zoom down (+), or zoom up (-) symbol and is activated by a left hand click of the mouse cursor. These Zoom icons open additional maps which may show more detail than the current map.



2. The map zoom facility may be accessed by a left hand click of the mouse cursor on the map zoom button, located in the row of display controls, positioned directly below the MAESTRO logo towards the top right corner of the screen display.

   Operation of the button displays a drop down options box allowing the user to select minimum, medium or maximum zoom facility. These zoom buttons redraw the current map at greater levels of magnification without necessarily increasing the amount of detail shown.

   Both map zoom buttons and the map zoom facility may be featured in the same MAESTRO system and operate on the same map pages.

3. The map zoom facility can also be accessed at any time by a right hand click of the mouse cursor anywhere on the main map area. A display controls list is shown, from which the select zoom level option can be chosen. By left hand click of the mouse cursor on any of the three zoom levels, the required map magnification is obtained.

The operator can revert back to the original map zoom level at any time by -

1. A left hand click of the mouse cursor on the zoom out buttons placed directly on map pages.
2. A left hand click of the mouse cursor on the appropriate map zoom button, from the drop down list, located below the row of display controls
3. A right hand click of the mouse cursor anywhere on the main map area and then left hand click the map zoom level option from the display controls list.

Scroll bars are provided down the right and along the bottom of all enlarged map displays, for moving around magnified map images.

4.4. Alarm display sequences

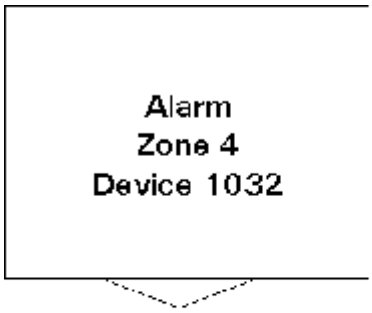
On the receipt of an alarm condition MAESTRO automatically displays the map containing the zone icon in alarm, regardless at which map level the zone is shown.

If the points or devices in the zone in alarm are displayed on a map at a lower map level, this map can be accessed by a left hand click of the mouse cursor on the map page button, or map navigation button, for the map where the points are shown.

Map sequences vary from site to site, each designed to provide information in the optimum format for particular site management. The following illustrations show the basic and hence most popular operational set ups for organising the map sequence.

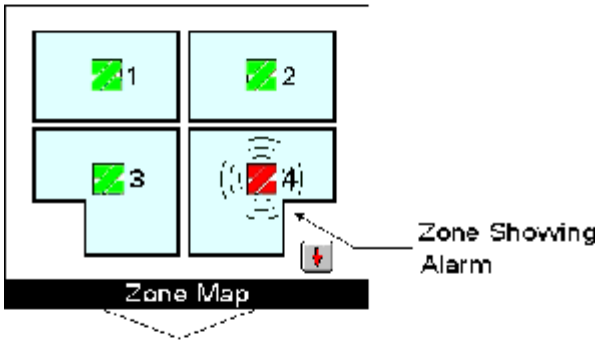
1. Primary alarm by zone, secondary alarm by device. (Where the entire zone is shown on a single device map)

1.1. Alarm occurs.

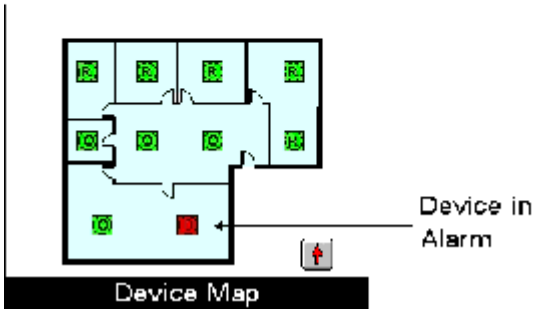


1.2. Zone map displayed automatically.

1.3. Click on zone icon, then map navigation button.

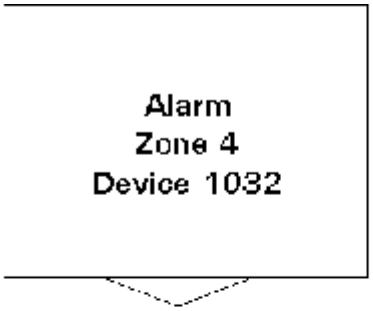


1.4. Device map displayed, with device shown in alarm.



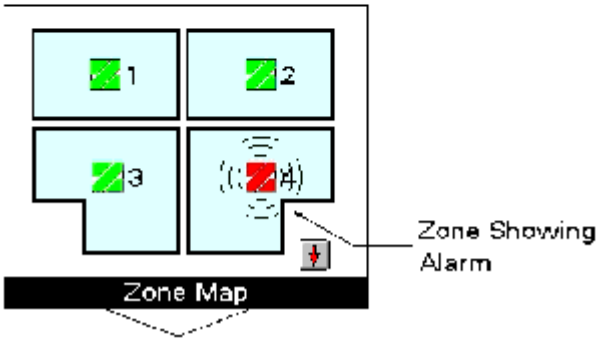
2. Primary alarm by zone, secondary alarm by device. (Where the zone is divided amongst several device maps)

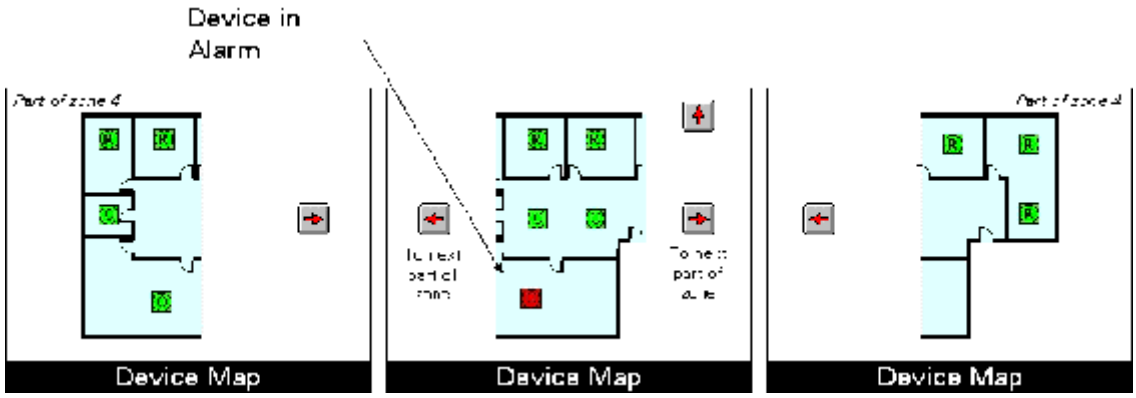
2.1. Alarm occurs.



2.2. Zone map displays automatically.

2.3. Click on zone icon, then map navigation button



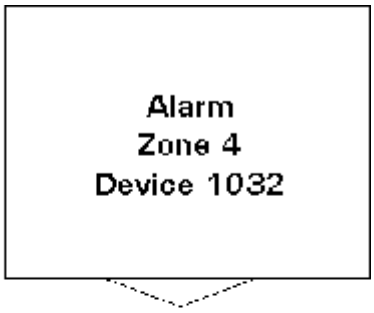


2.4. The first device map displayed.

2.5. Click on navigation buttons to view across whole zone for device in alarm.

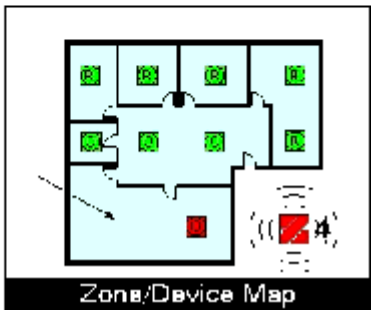
3. Primary alarm by zone and by device.

3.1. Alarm occurs



3.2. Combined zone/device map displays automatica

Device in Alarm



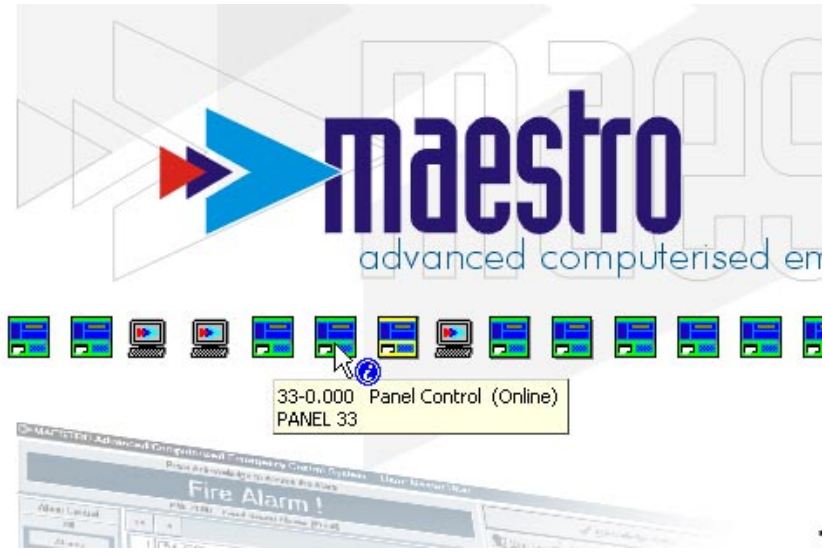
Note: When zone and device (points) icons are displayed on the same map, in an alarm condition both change to the alarm colour code, but only the zone icon flashes.

4.5. Maestro Navigation

The user may navigate the map using one of the following methods

- Map labels
- Information card
- Navigation Icons
- From the Current Alarm List

4.5.1. Panel icon and hint pop-up



An Information Cursor (blue information symbol) and hint pop-up is displayed when the mouse cursor is positioned over any icon.

The purpose of the information cursor is to draw the user's attention to the following navigation options, which are presented when clicking on the relevant mouse button.

- Navigation by map label (ie. to site map, zone map or point map)
- Information and Navigation card

The hint pop-up displays the following information:

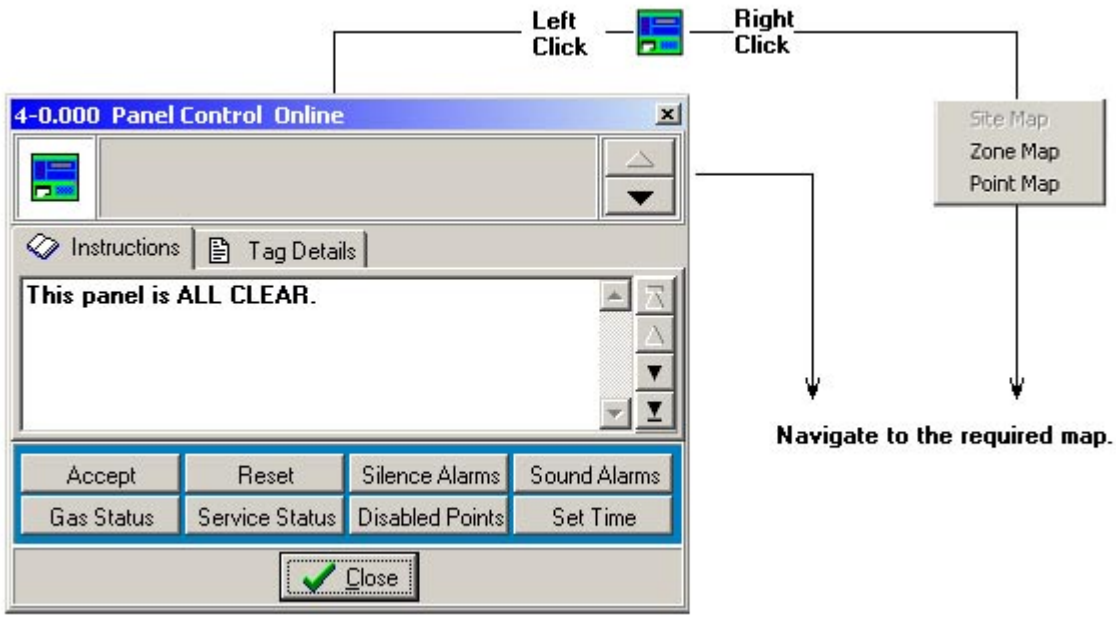
- Panel number and Tag
- Device Type (eg. Panel Control)
- Current Status (eg. Online)
- Device Name or description (eg. PANEL 33)

There are 4 panel map icon types.

Hint pop-up message	Panel Icon
Panel	
Panel control	
Panel fascia	
Panel control fascia	

4.5.2. Navigation using the panel icon

The diagram below illustrates the various options that are available to the user when navigating using the panel icon.



4.5.2.1. Navigation by Map labels

Procedure

To display a map proceed as follows

- Right click on the required icon.
- A pop-up menu with three options will be presented: 1) Site Map, 2) Zone Map and 3) Point Map. In the example below, the Site Map option is unavailable.
- Left click on the required map option.

4.5.2.2. Navigation card

Features

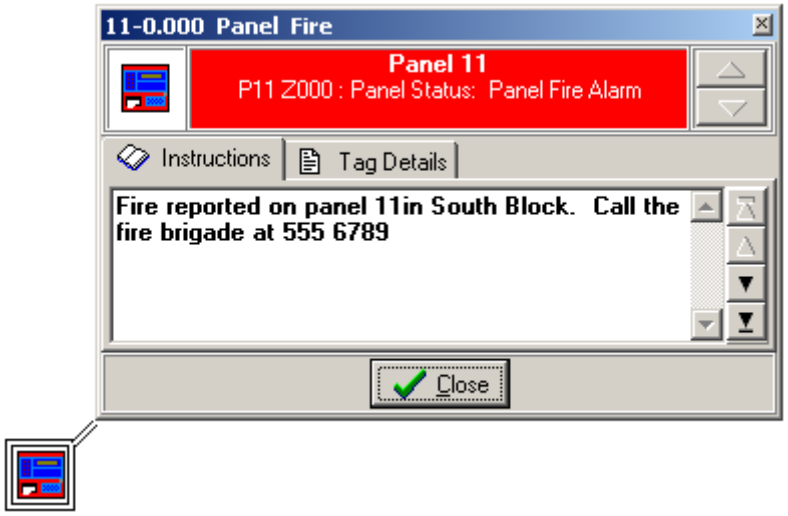
- The card contains an instruction tab, which displays information about the point in alarm.
- Additional Tag details are available, click on the Tag Details tab.
- If control of the panel (or field device) is permitted, the available control options are shown.
- For certain device types an Analogue Tab is available allowing the analogue values of the field device to be viewed.
- 30 seconds time out – after 30 seconds the navigation card will be closed if no activity on the card occurs

Navigation card types

The navigation card types are:

1. Control
2. Non-control

Control

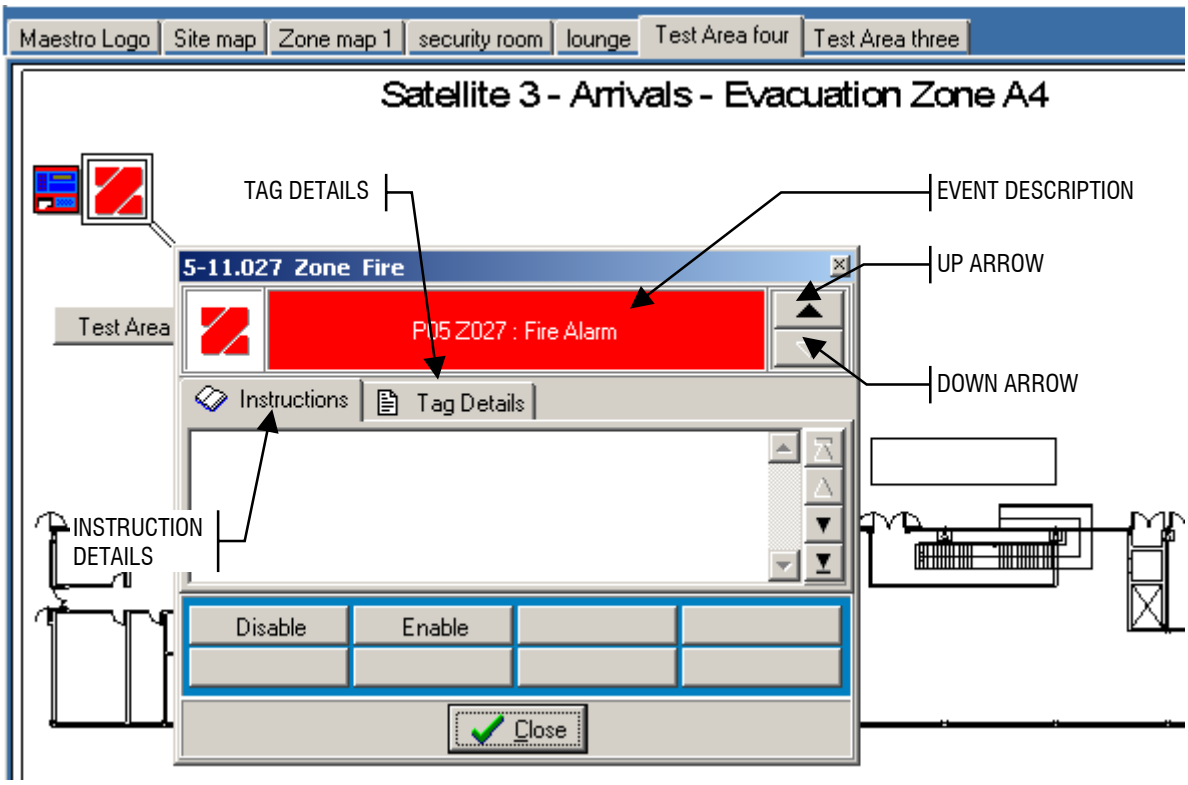


Non-control

Navigation card usage

Illustrated below is a navigation card displayed on a point map.

- A connecting line joins the navigation card and associated map icon.
- The Up/Down arrow buttons may be used to navigate site, zone and point maps.



Procedure

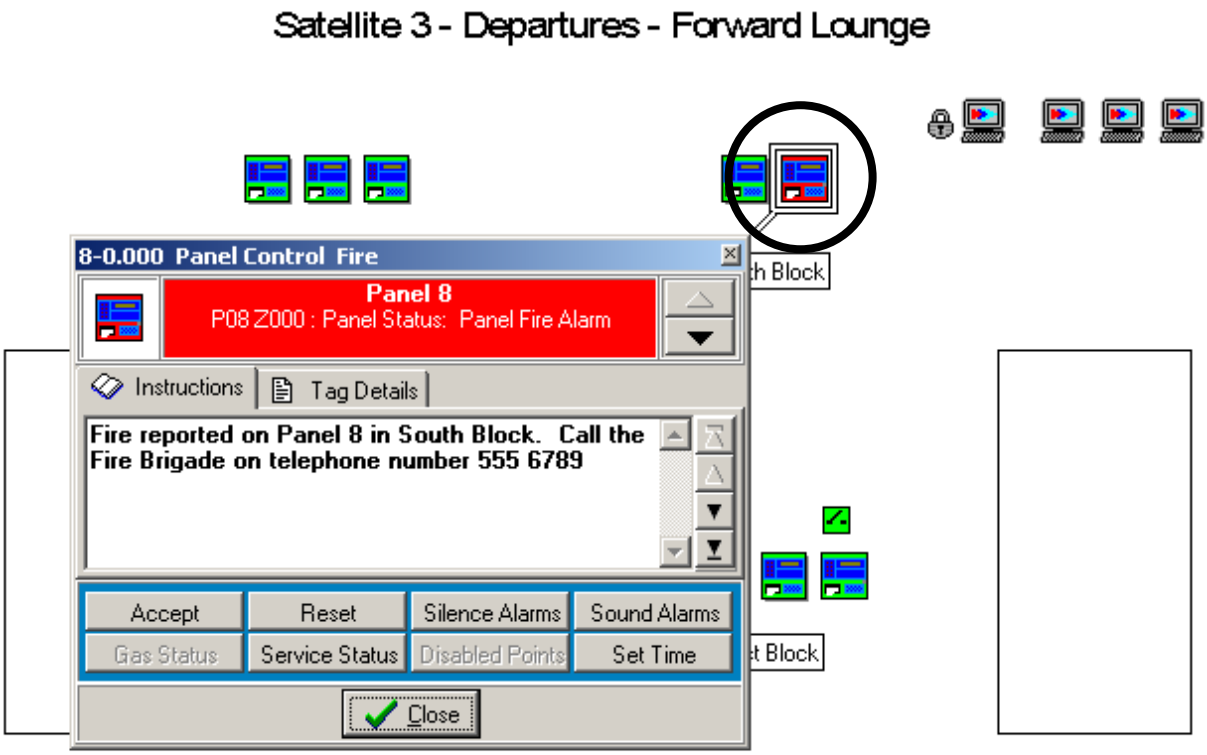
Method 1 (Applies to Zone and Device Icons, and Panel or Panel Control Icons)

- Left click on the icon to display the Information card.
- The type of Information card displayed will depend on the panel control type selected.

Method 1 - Example

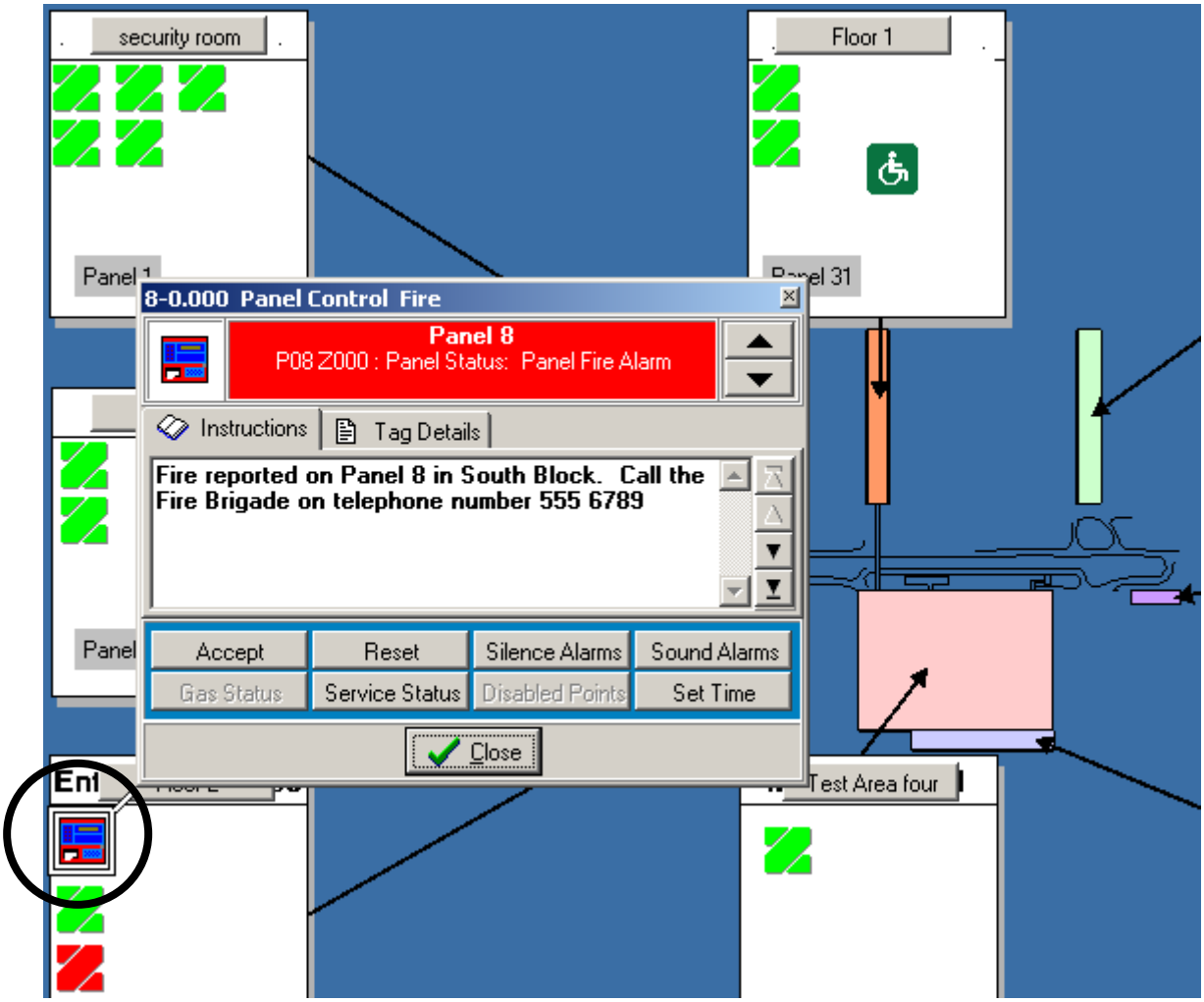
Following is a suggested method for the configuration of the map database. Icons are repeated on the lower level maps to facilitate downward navigation from a higher level map. The navigation card will attach to the repeated icon on the lower level map. If the icon is not repeated on the map the navigation card will default to the position as defined in the 'miscellaneous settings' tag information position setting.

The first screenshot illustrates a navigation card opened off a panel icon (circled) on a site map.



Site map

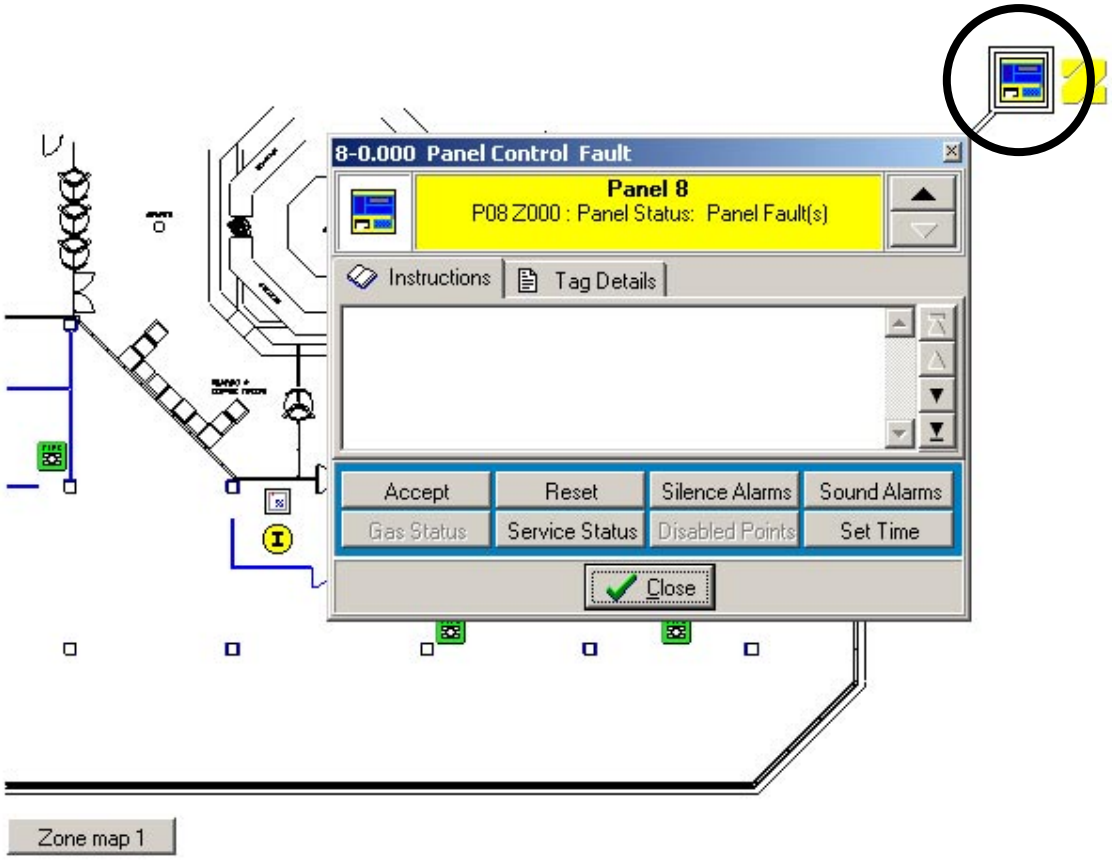
The user may navigate the zone map using the navigation card's down arrow button.



Zone map

Note: the panel icon displayed on the zone map.

The user may navigate the point map using the navigation card's down arrow button.



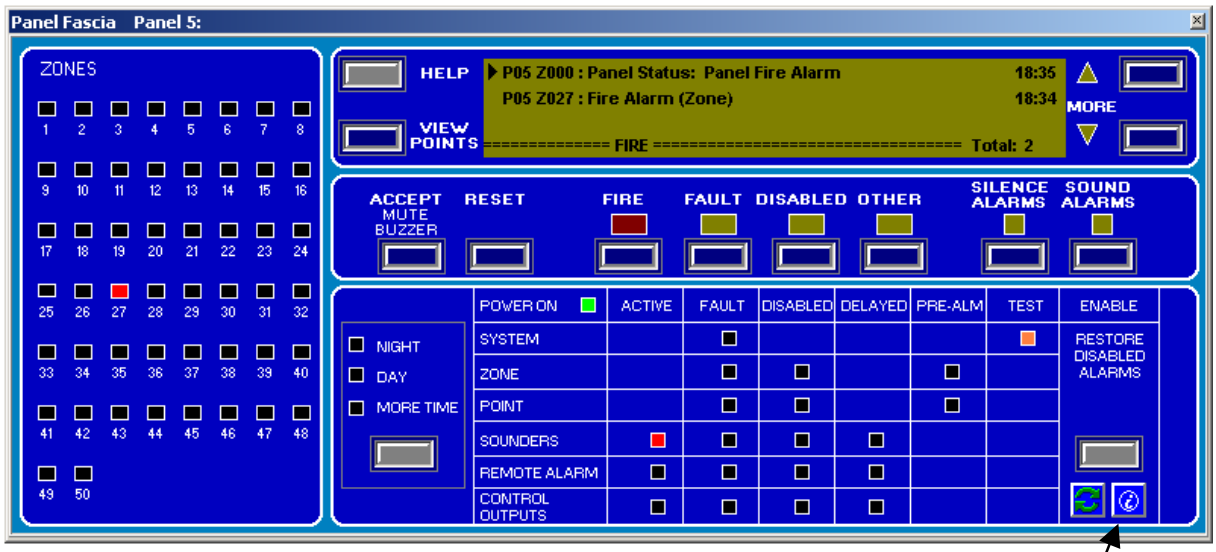
Point map

Note: the panel icon and zone icon displayed on the point map.

After navigating to the point map, the navigation card may obscure the tag with the alarm condition. The navigation card may be repositioned by dragging it. This should be done to ensure that all icon conditions are viewed.

Method 2 (Applies only the Panel Fascia or Panel Fascia Contol icons)

- Left click on the panel fascia icon to display the panel fascia.
- Left click on the Information icon (panel fascia card) to display the navigation card.



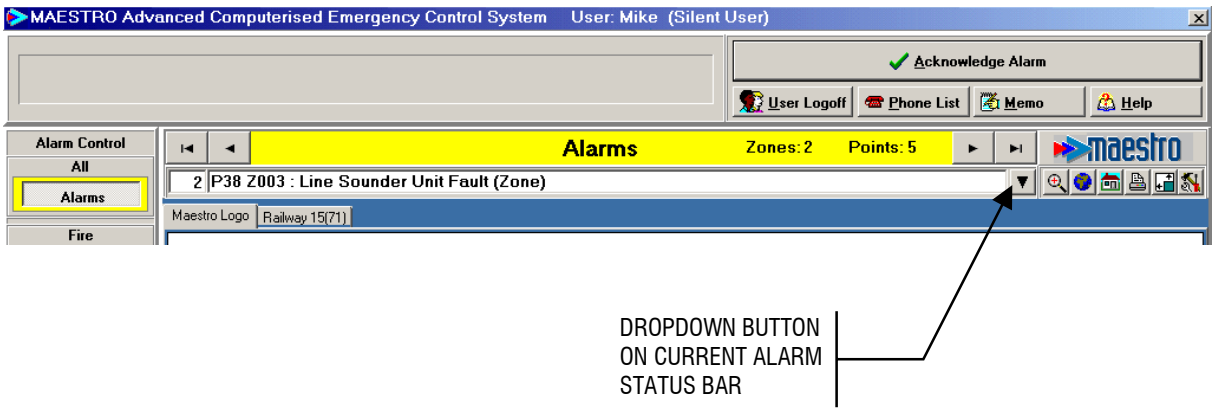
Panel Fascia Card

INFORMATION ICON

4.5.2.3 Navigating using the Alarm control buttons and information dropdown list

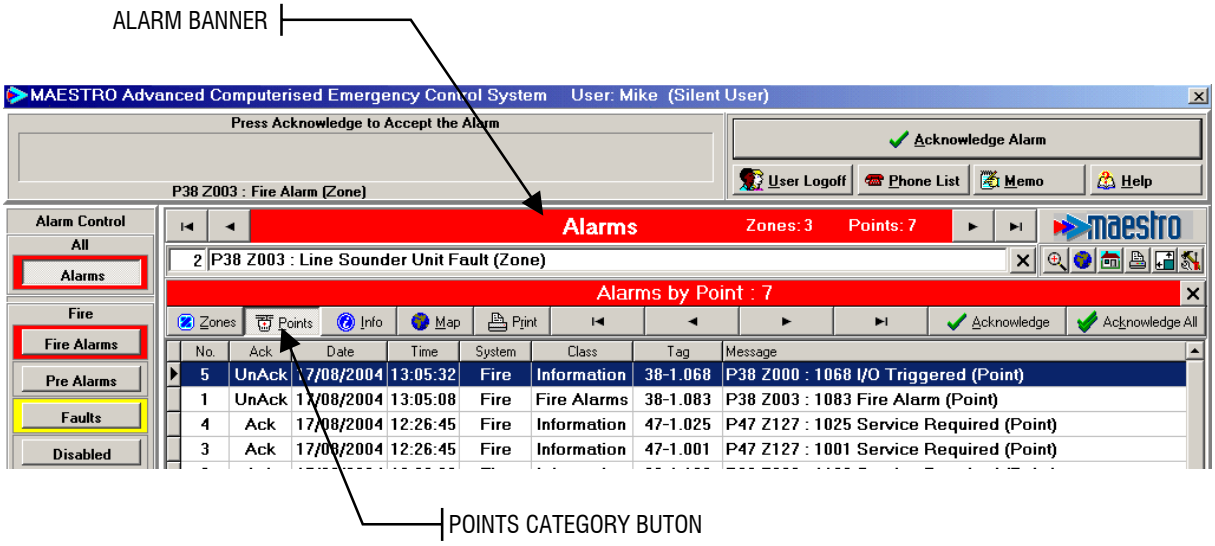
Procedure

1. Left click on the Alarm List dropdown button to display the alarm list.
2. Use the Alarm control buttons (left side of the screen) to select the information that you want to display. For example, the All Alarms button is used to display lists of information containing every alarm.



DROPDOWN BUTTON ON CURRENT ALARM STATUS BAR

3. Click on the relevant alarm category button (i.e. zones or points), on the Current alarm list toolbar. For example, clicking on the Points button will display a list of points in alarm within the category chosen from the alarm control buttons.



4. Double click on the relevant record in the filtered list to view its respective zone map, or left click the Map button on the Current Alarm List toolbar.

Refer to section 7.4 for more information on the usage of the information card.

Maestro Graphics System

User Guide Manual

Section 5

Operator System Display Facilities

UD1265.5
Issue 4
10/01/2005

MAESTRO has been designed to provide a simple method of managing fire detection and alarm systems on all types of sites and in a wide variety of applications.

In order to offer the system designer maximum flexibility and the operator the widest choice of system management, MAESTRO provides an extensive range of features. The following sections of this manual cover in detail all the available system facilities.

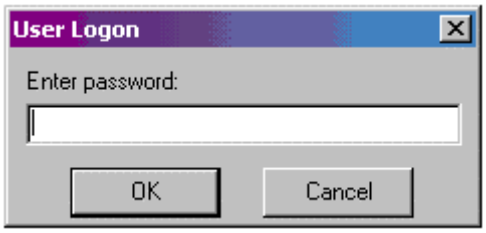
5.1. System access

5.1.1. Passwords

In order to maintain a high level of operator security, most MAESTRO system facilities are password protected.

Passwords may be up to a maximum of any ten upper or lower case characters and/or numbers and spaces, which are keyed into the system via the computer keyboard. Passwords are case sensitive and are initially programmed into MAESTRO via the commissioning facilities.

The operator will be prompted by MAESTRO when a password is required in order to access a particular area of information or perform specific systems tasks.

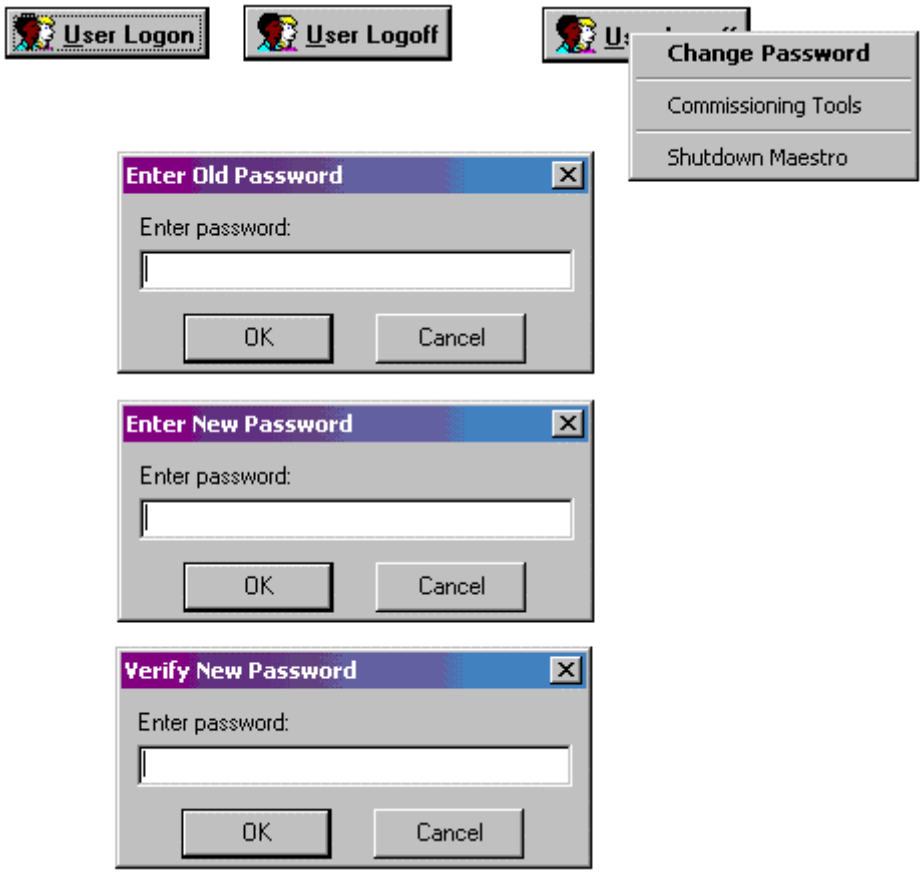


System access is not based upon hierarchical levels. Access to different control functions can be selected to suit individual operator responsibilities, rather than an ascending range of inflexible, predetermined levels.

Facility access can be increased or decreased as personnel responsibilities or site usage change.

5.1.2. Changing a password

Operator passwords can be changed, by logging onto the MAESTRO system, right hand clicking the mouse cursor on the log on/log off button. Left hand clicking the mouse cursor on the change password option selected from the displayed options box. The operator is prompted to enter the current password via a dialogue box. Once entered subsequent boxes are displayed for entry and verification of the new password.



Once a password change is verified MAESTRO displays a reminder that any future access can only be made using the new password.

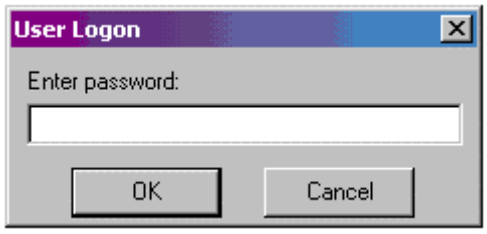
Passwords can also be changed by directly accessing the user database, (where access level allows) and amending the relevant information, displayed in the heading of the particular user's file.

5.2. User log on and log off

5.2.1. Log on

Operators log on to the MAESTRO system via the user log on button, located towards the top centre right of the screen display.

A single left hand click of the mouse cursor on the button, displays the user log on, dialogue box for the operator to enter a password.



Once the password has been entered and accepted, the users identity is displayed on the narrow coloured bar across the top of the screen.

The user log on title, displayed on the button changes to user log off, in anticipation of the operator completing work and exiting the system.

On logging onto the MAESTRO system, all facilities authorised by the password become automatically accessible to the user. Where attempts are made to access facilities outside the users authority, a dialogue box either confirms the denial of access, or provides space for an alternative password.

All user log ons are recorded in the system events log.

5.2.2. Log off

Users log off the system by a single left hand click of the mouse cursor on the user log off button. The log off, confirmation, dialogue box is then displayed and by a single left hand click of the mouse cursor on the YES button, the user is logged off by the MAESTRO system.

The users name is no longer displayed at the left hand end of the display bar running across the top of the screen.

All user log offs are recorded in the system events log.

5.3. System shutdown

The MAESTRO system can be shut down by the operator, provided the shutdown function is included within the password authority.

A left hand click of the mouse cursor on the exit button located in the top right corner of the screen, displays a password box. By entering the operator password the system is closed down.

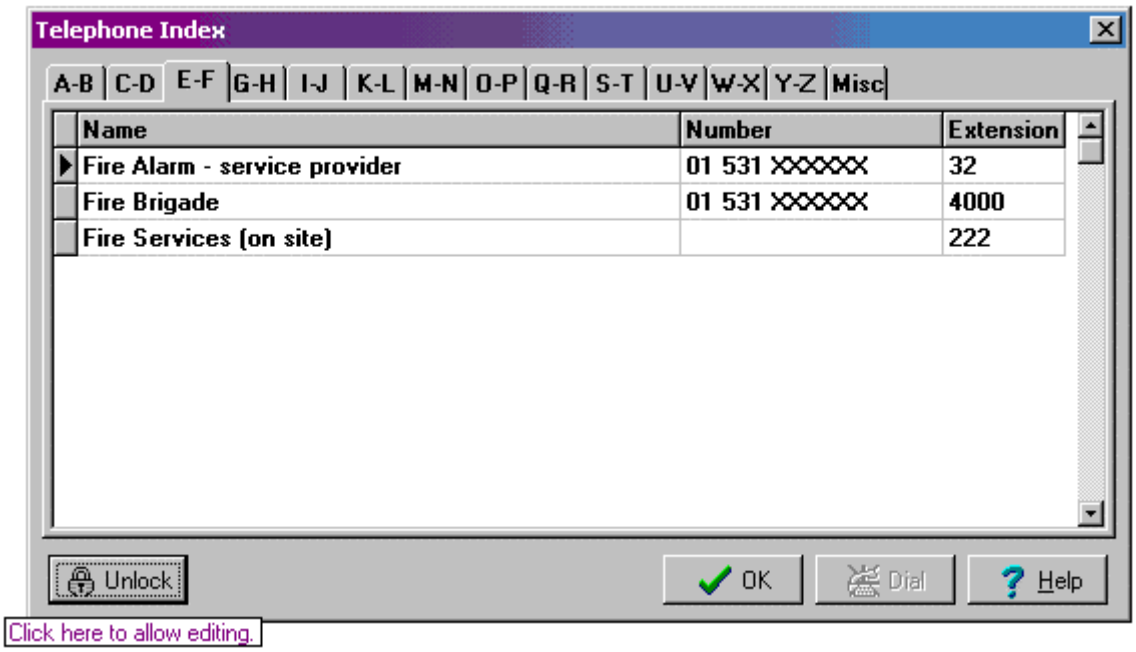
All shutdowns are recorded in the system events log.

5.4. Telephone list

A telephone index is included within the MAESTRO operating facilities, allowing the user to store important telephone numbers, for example the Fire Services, local fire fighting personnel or service engineering support.

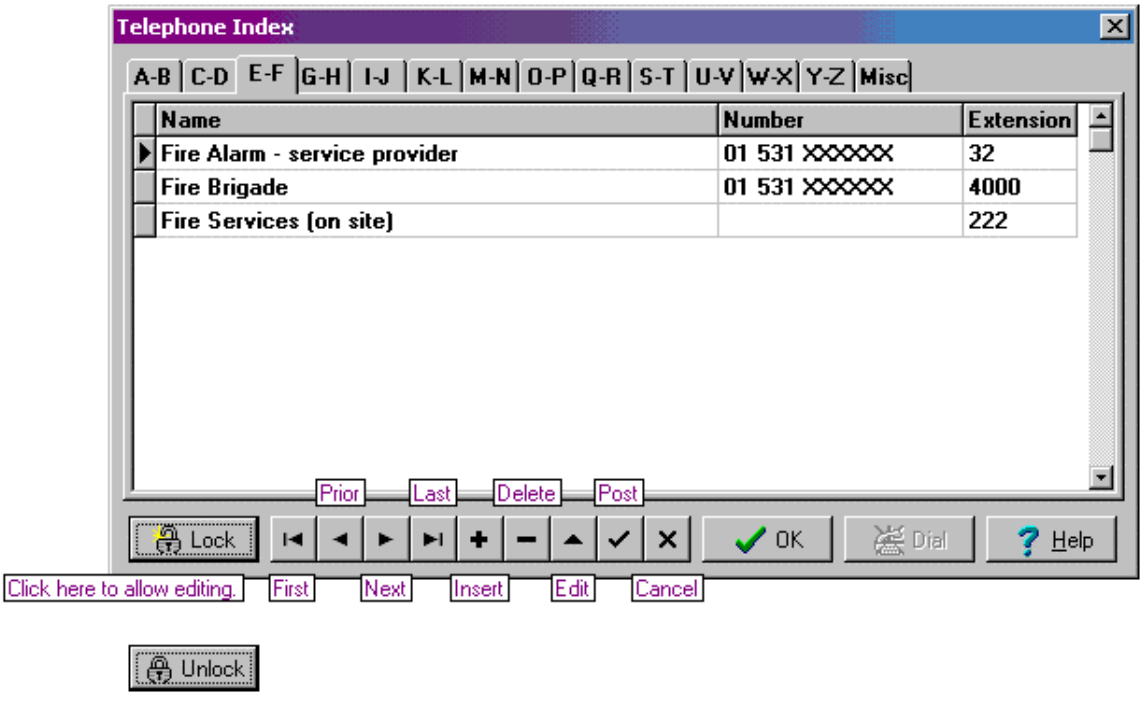
The list is accessed by a left hand click of the mouse cursor on the Phone List button, located towards the top right corner of the screen.

The list can be read by left hand clicking the mouse cursor on appropriate alphabetical tabs positioned at the top of the list display.



List content can be edited, by a left hand click of the mouse cursor on the unlock button, located at the bottom left corner of the list display. The list contents are password protected to prevent unauthorised editing of important numbers. Clicking onto the unlock button will prompt the user for a password if not already logged on.

Unlocking the list will display a row of editing and navigation buttons, positioned along the bottom of the list display.



The editing facilities are operated by a left hand click of the mouse cursor on the appropriate button. Existing enteries in the list can be selected for editing by a left hand click on the entry row. The selected entry is highlighted and the arrow in the narrow column at the left hand edge of the display moves to the chosen item.

Telephone numbers are filed alphabetically on list pages. The lists can be scrolled using the scroll bar located down the right hand edge of the display.

A left hand click of the mouse cursor on the OK button exits the telephone list facility.

A direct dial out facility is also included enabling numbers to be automatically dialled from the MAESTRO work station, (subject to the facility being installed).

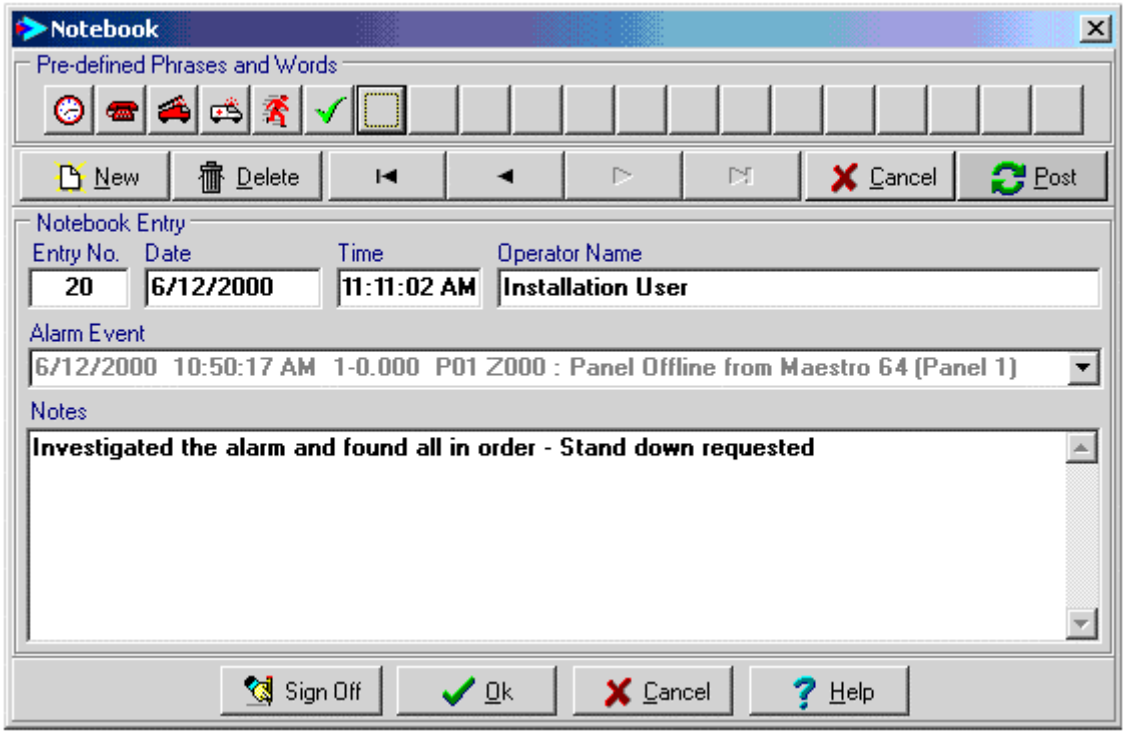
5.5. Memo

The MAESTRO memo facility provides an integrated fire alarm system logbook allowing the operator to enter, via the keyboard, all relevant data and alarm information.

The memo facility is accessed by a left hand click of the mouse cursor of the memo button located towards the top right corner of the screen display.

The memo is a notepad type, index card system which prompts the user, by a series of pre typed entries, to record all actions taken in response to system events.

Each memo subject can be transferred by the operator directly from the current alarm list. A series of pre typed phrases can be selected, to form the record or if preferred the operator can type in individual messages.



Date, time and operator identity are automatically completed and each memo is numbered once posted into the MAESTRO system. The following pre typed messages can be added by a left hand click of the mouse cursor on the appropriate button from the row located at the top of the notepad display.

Current time and date.

Telephoned

Called the FIRE BRIGADE.

Called the paramedics.

Issued the EVACUATE command.

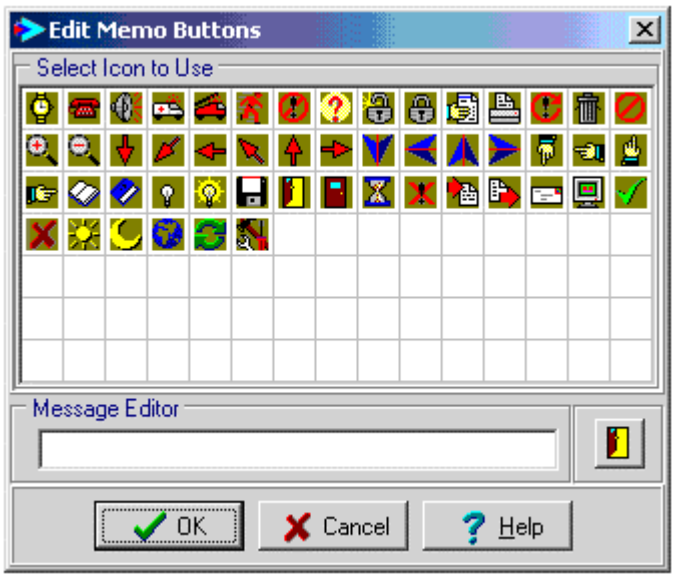
Investigated the alarm and found all in order - stand down requested.

The buttons 8 to 20 shown blank allow the users to add their own pre typed messages, to the memo facility.

Any vacant button can be selected by left hand clicking onto it. A dotted margin appears to identify the selected button. By right hand clicking onto the selected button, the Edit Button/Delete option box is displayed.

Clicking onto the Edit Button button displays the library of pre typed message icons, from which any suitable design can be chosen by again clicking onto the selection.

The icon design appears in the window to the right of the message editor, onto which the corresponding pre typed message can be typed.



The message and its icon can be saved or cancelled by clicking onto the OK or Cancel buttons located at the bottom of the Notebook display.

Pre typed messages and their icon buttons can be deleted by right hand clicking onto the button, then a left hand click onto the Delete title in the options box displayed. A dialogue box is shown, in order for the user to confirm the deletion.

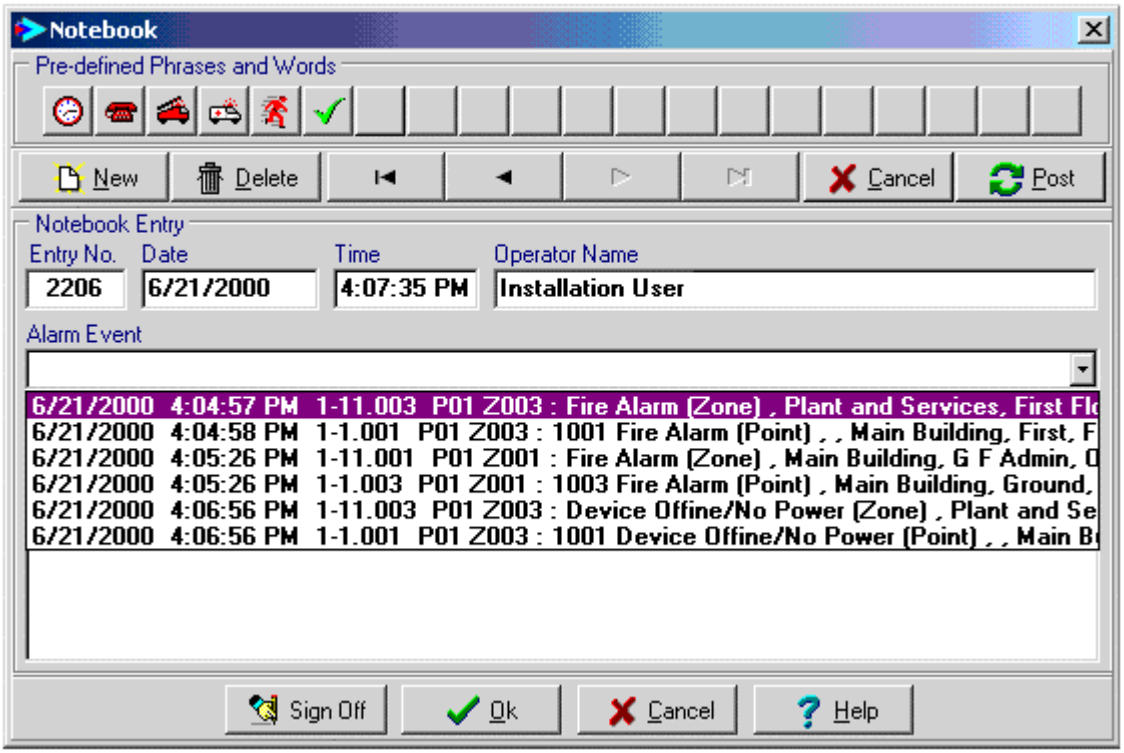
Any icon design based on a 16 x 16 pixel area and imported as a bit map file, can be assigned to the vacant buttons. This requires access to the commissioning programme and is usually completed at system configuration stage.

To produce a memo record from the MAESTRO alarm display.

1. Left hand click of the mouse cursor on the New button located towards the top left corner of the memo display.

2. The current alarm details will automatically be displayed in the Memo pad Alarm Event window.

Left hand click on the Alarm Event navigation button at the right hand end of the Alarm Event bar, displays a drop down list of all current alarms.



To select any alarm from the list as the title for a memo, left hand click anywhere on the chosen option. The list is no longer displayed and the selected alarm appears as a title in the alarm event window.

The memo message can then by completed using either the pre typed phrases, the operators own input via the workstation keyboard, or a combination of both.

By a left hand click of the mouse cursor, on the Sign Off button, located at the bottom left corner of the memo pad display, completed messages can be signed off, (making them 'read only' and therefore impossible to subsequent editing).

By a left hand click on the Post button, located towards the top right corner of the memo display, completed memos, or changes to current messages, can be posted to the MAESTRO memory, where they are stored to disc.

Previously posted memos are recorded and filed by MAESTRO in chronological order and can be recalled via the memo pad navigation buttons located at the top of the memo display, directly beneath the row of icons for selecting pre typed phrases.

Unposted memos can be deleted or cancelled by a left hand click of the mouse cursor on the appropriate button.

Cancels editing prior to changes in memos being posted.

A left hand click on the OK button closes the memo facility down.

5.6. Print page facility.

The MAESTRO operator can print the displayed map at any time by a left hand click of the mouse cursor on the Print Page button, located in the row of control buttons directly below the MAESTRO logo, towards the top right of the screen display.

Dependent upon the printer type connected to the MAESTRO system and printer communications software in operation, an appropriate options box is displayed to enable the user to produce an immediate hard copy of the map display.

Only maps can be printed by this facility.

5.7. Enlarge screen area

A left hand click of the mouse cursor on the Enlarge Screen Area button, located in the row of control buttons directly below the MAESTRO logo, towards the top right of the screen display, enlarges the main map area to fill the entire display screen.

This facility presents a larger map area, enabling the operator to view and print off a clear, magnified image, featuring only map details.

The alarms information bar and current alarms status bar (with its drop down list facility), together with the map navigation buttons remain across the top of the screen at all times.

Maestro Graphics System

User Guide Manual

Section 6

Controlling The Fire Alarm System

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10/01/2005

The most important function of MAESTRO, especially on large systems, is the ability to provide the day to day, site wide, monitoring and control of the total fire alarm system or network from one central location.

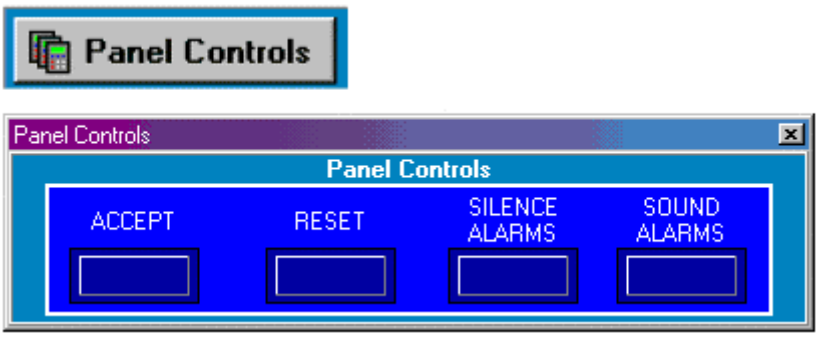
MAESTRO can provide facilities for the remote operation of a range of system facilities, from starting and silencing alarm sounders, to disabling and enabling individual devices or complete zones.

Full indication of current system status is also displayed on a panel by panel basis by user interface simulations, allowing the user to view and operate the actual panel controls, directly from the MAESTRO workstation.

6.1. Panel controls box

The panel controls box provides the operator with the major fire alarm panel controls.

The display is accessed by a left hand click of the mouse cursor on the Panel Controls Button in the block of four control buttons located at the bottom left corner of the screen display.

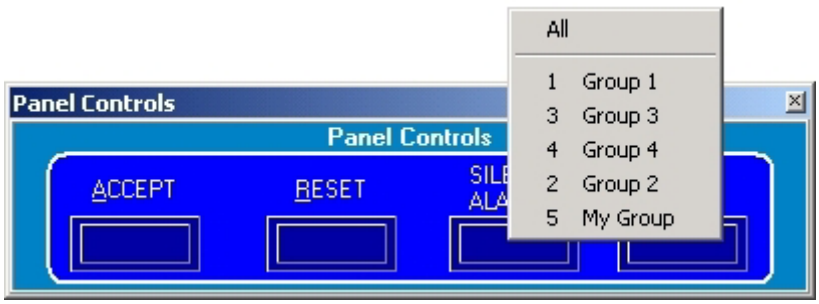


The box is displayed showing four control keys each operated by a left hand click of the mouse cursor.

All Panel Controls are password protected. Prior to operating any of the four controls the user is asked to provide a password. If the operators general access level allows Panel Control operation, no password is required and the dialogue box is not displayed.

The Accept, Reset, Silence Alarms and Sound Alarms panel controls can be sent to selected panel groups.

Right click on the panel control button (Accept, Reset, Silence Alarm and Sound Alarms) to select panel groups to which the command must be sent.



Important - the facilities provided by the Panel Control Box are global that is, in systems where more than one control panel is connected to the MAESTRO work station, operation of the panel control box keys effects all panels.

The following control facilities are available -

Accept

This accepts all alarm types received by the control panel, displayed via the MAESTRO system. By operating the Accept key on the MAESTRO display, the alarm is accepted by the panel (exactly as if the Accept key on the panel had been operated).

Reset

This resets panels connected to the MAESTRO system, returning them to the quiescent or normal state after an alarm condition or system event. On operation of the Reset key, panels connected to MAESTRO are reset (exactly as if the Reset keys on the panels had been operated).

Silence Alarms

This silences all alarms operating from panels connected to the MAESTRO system. The facility does not reset the system or any outputs operated by alarm inputs. The system can only be returned to the normal condition by operating the Reset key in the panel controls display.

Sound Alarms

This sounds all alarms on all panels connected to the MAESTRO workstation. The facility provides evacuation in all areas covered by the fire alarm system. The Sound Alarms key also provides a resound facility, enabling the alarms to be resounded after a system reset.

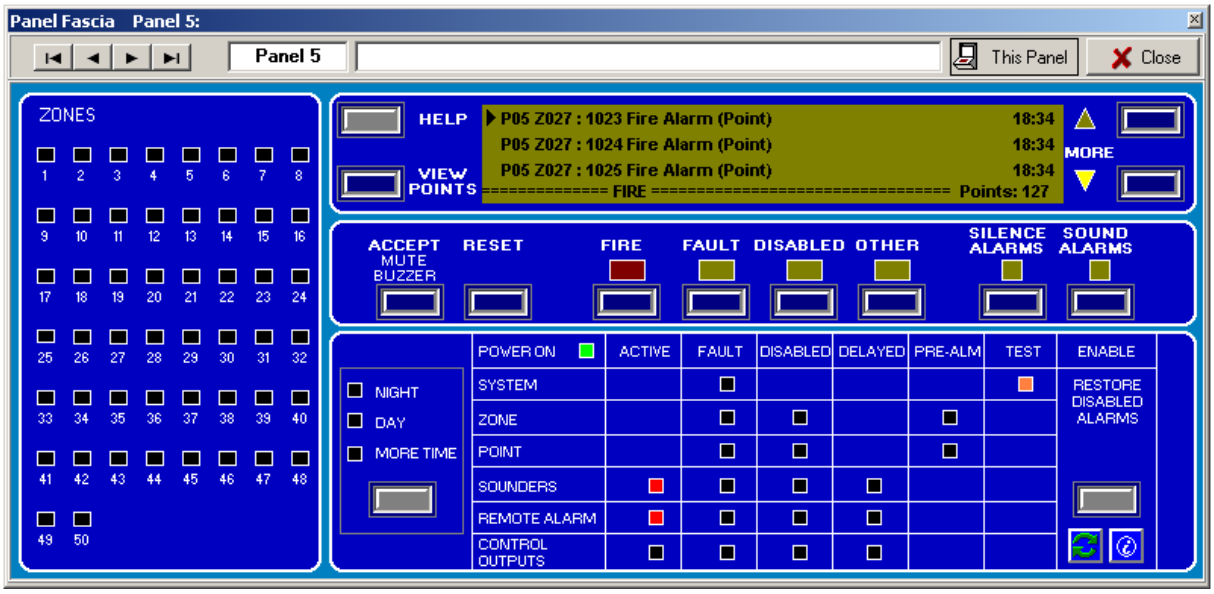
Exit from the Panel Control Box facility is completed by a left hand click on the exit button positioned in the top right corner of the panel control box display.

6.2. Panel fascia simulation

The panel facia simulation provides a replica of the controls and indications of up to 64 panels connected to the MAESTRO system.

The simulation is accessed by a left hand click of the mouse cursor on the Panel Fascia Button in the block of four control buttons located at the bottom left corner of the screen display.

Each panel fascia shows the current status of all zones and the devices connected to it. Text messages displayed on the panel are also simulated on the MAESTRO panel fascia display.



All controls buttons shown on the fascia simulation in blue are active. Non-active control buttons are shown as Grey. By a left hand click of the mouse cursor on the appropriate button, the panel function is activated (duplicating exactly the action of pressing the button on the actual panel).

All Panel Fascia control functions are password protected. Prior to operating any of the Panel Fascia controls the user is asked to provide a password, if this has not already been entered. If the operators general access level allows Panel Fascia operation, no password is required and the password dialogue box is not displayed.

The fascia simulation is divided into six separate sections -

6.2.1. Common alarm indicators and alarm view buttons

The fascia shows four common alarm indicators, which illuminate when an alarm is present at the panel.

Common Fire Indicator

This indicator illuminates when any fire alarm is received, or is currently present in the system. The indicator flashes for a new alarm and becomes steady after an alarm has been accepted. In the systems quiescent or normal state this indicator is off.

Common Fault Indicator

This indicator illuminates when any fault is received, or is currently present in the system. The indicator flashes for a new fault and becomes steady after a fault has been accepted. In the systems quiescent or normal state this indicator is off.

Common Disabled Indicator

This indicator illuminates when any part of the system (for example a zone, a fire sensor, a sounder or a connection to the fire brigade) has intentionally been disabled. In the systems quiescent or normal state this indicator is off.

Other Information Indicator

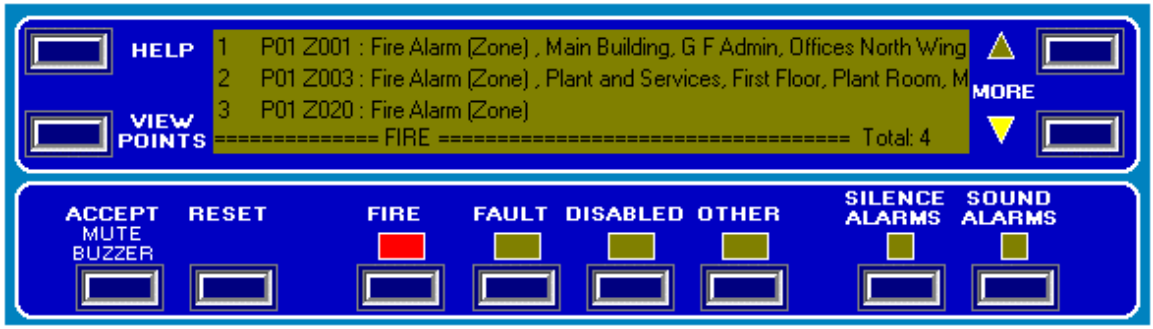
This indicator illuminates to identify the presence of any alarm type that does not fall into one of the above groups. This could be an alarm generated by a non fire event, for example, that a fire door is unlocked, or that an air extract system is shut down. In the systems quiescent or normal state this indicator is off.

Located below each of the four common alarm indicators are four corresponding Alarm View Buttons. When an alarm is received the relevant Common Indicator illuminates (as described on page 6-5) and the zonal details are automatically displayed on the simulations L.C.D. text screen. Where more than one type of alarm is present, the alarm with the highest priority is displayed. The priority order is from left to right that is Fire, Fault, Disabled and Information.

Alarms in any category can be viewed by a left hand click of the mouse cursor on the appropriate Alarm View Button.

View Fire Alarms Button

As the highest priority alarm, the details of a fire will always be automatically displayed, by zone, on the simulation L.C.D. text screen.



The display lists up to three alarms in the selected alarm category. Alarms are listed and numbered in chronological order. Where more than three alarms of the same type exist simultaneously the total list can be scrolled, by the More Alarms Buttons, described in Section 6.2.4.

On the bottom line the alarm type is displayed, as a pointer, directly above the relevant indicator. The total number of current alarms of the type being displayed is also shown on the bottom line, at the right of the text display.

After viewing lower priority alarms, the text display can be returned to the fire alarm screen by a left hand click of the mouse cursor on the View Fire Alarm Button.

View Fault Alarms Button

To view any faults in the system (the Common Fault indicator will be illuminated), a left hand click of the mouse cursor on the View Fault Alarms button displays the fault information. The top line indicates details of the fault condition and on the bottom line the word fault is displayed, as a pointer, directly above the fault indicator. Fault information is displayed by zone.

View Disabled Button

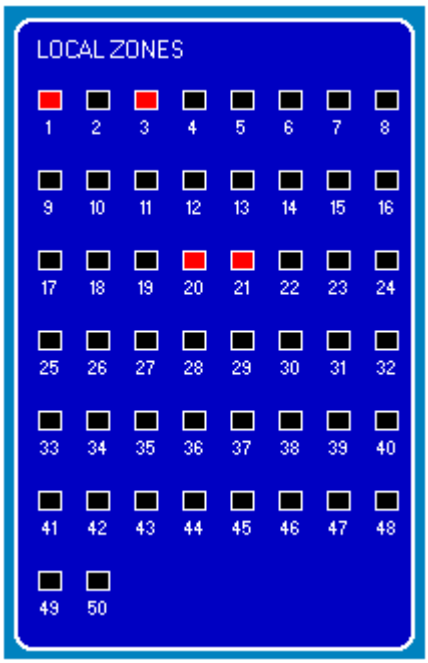
To view any disabled zones (the Common Disabled indicator will be illuminated), a left hand click of the mouse cursor on the View Disabled button displays the disabled zones information. The top line indicates details of the disabled condition and on the bottom the word disabled is displayed, as a pointer, directly above the disabled indicator. Disabled information is displayed by zone.

View Other Button

To view any other alarm conditions (the Common Info indicator will be illuminated), a left hand click of the mouse cursor on the View Info button displays the alarm condition information. The top line indicates details of the alarm condition and on the bottom the word info is displayed, as a pointer, directly above the info indicator. The alarm is displayed by zone or by category.

6.2.2. Zone fire alarm indicators

In addition to the information provided on the text screen, zones in fire are indicated by separate, LED indicators grouped in the Local Zones panel and located down the left side of the fascia display.



Fire alarms are indicated by red LED simulation. The display provides indication for up to 50 zones (for each panel).

6.2.3. Navigation Buttons

The following navigation control buttons appear either side of the text display screen, are operated by a left hand click of the mouse cursor and are used to provide further alarm information.

View Points Button

To comply with European Standard EN 54 the control panel display (and hence the fascia simulation) always shows alarms and primary alarm information by zone. To view alarms by device (or point), left hand click the mouse cursor on the View Points Button located to the lower left of the text display.

The display shows the panel number, zone number and device number together with a device description.

To return to the zone screen, left hand click the mouse cursor on the appropriate Alarm View Button.

More Alarms Buttons

The More Alarms Buttons, positioned to the right of the text screen, can be used to manually scroll through any of the alarm lists. The first three alarms received in the same alarm category, are numbered and displayed on the text screen. When more than three alarms in the same category are present at the same time, the more alarms indicator illuminates to indicate that other alarms are waiting to be viewed.

A left hand click of the mouse cursor on the up button scrolls upwards through the list. A left hand click on the down button scrolls downwards through the list.

Help Button

At the time of producing this publication, the help facility is under development and is not available to the user.

6.2.4. Main Operating Controls

Four control keys, operated by a left hand click of the mouse cursor, are simulated on either side of the four alarm view buttons.

Accept (Mute Buzzer)

This accepts all alarm types received by the selected control panel, displayed by the MAESTRO system. By operating the Accept key on the MAESTRO display, the alarm is accepted by the panel (exactly as if the Accept key on the panel had been operated) and the supervisory buzzer in the MAESTRO workstation is muted.

Reset

This resets the selected panel, returning it to the quiescent or normal state after an alarm condition or system event. On operation of the Reset key, the panel is reset (exactly as if the Reset key on the panel had been operated).

Silence Alarms

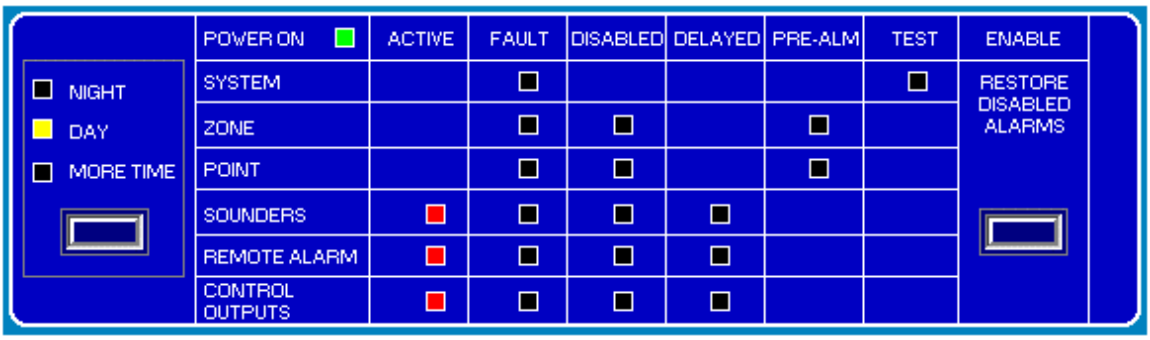
This silences all alarms operating from the selected panel. The facility does not reset the system or any outputs operated by alarm inputs. As with operation directly from the control panel the system can only be returned to the normal condition by operating the Reset key in the display.

Sound Alarms

This sounds the alarms on the selected panel. The facility provides evacuation in all areas covered by the fire alarm system. The Sound Alarms key also provides a resound facility, enabling the alarms to be resounded after a system reset.

6.2.5. Status Indicators

The system status indicators are displayed as a LED matrix, occupying the lower area of the fascia simulation. It provides a comprehensive overview of the current status of the selected panels fire detection system.



Running down the left side of the centre area of the display, the system is categorised into the following elements.

System	The panel and the complete system.
Zone	A grouping of sensors, manual callpoints or other line devices.
Point	A single line device, for example sensor, callpoint or sounder.
Sounders	Alarm devices, including electronic sirens and bells.
Remote alarm	Alarm to a Remote Manned Centre (RMC) for example the Fire Brigade.
Control outputs	A signal to other fire protection systems, for example fixed gaseous or water extinguishing installations.

The LED display is organised into columns indicating the following status for each of the above system elements.

Power on	Indicates that the simulated panel has power, either from a mains supply or from its 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 control panel.
Disabled	Indicates that a device or output has been intentionally 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.
Pre-alarm	Indicates that a zone or sensor is in a pre-alarm condition.
Test	Indicates that the panel is in a test mode.

6.2.6. Day, night, more time indications

Located to the left of the status indicator matrix, the Night and Day indicators confirm if the selected panel has Night time or Day time settings.

Daytime settings are usually applied to the panel when buildings are occupied, or 'manned'. Settings may include such facilities as alarm delays for evacuation programmes, or changes of sensitivity of specified sensors.

Night time settings are usually applied to the panel when the building is unoccupied, or 'unmanned'. Settings may include the return to normal from day time settings or the change from a delayed evacuation to an immediate general alarm.

The control panel is usually programmed to switch between day and night operation automatically during system commissioning stage.

Located below the night/day indicators, the More Time button and indicator allows the MAESTRO operator to extend an alarm delay by a pre programmed period of time. This function is non-operative in this release of the Maestro Software.

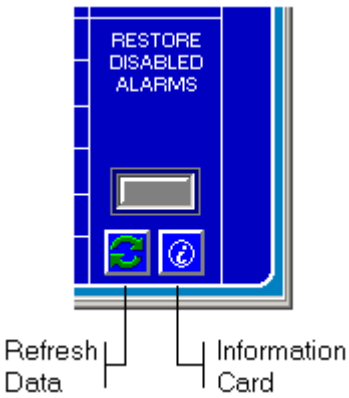
6.2.7. Restore disabled alarms

The restore disabled alarms button is located to the right of the status indicator matrix.

This function is non-operative in this release of Maestro

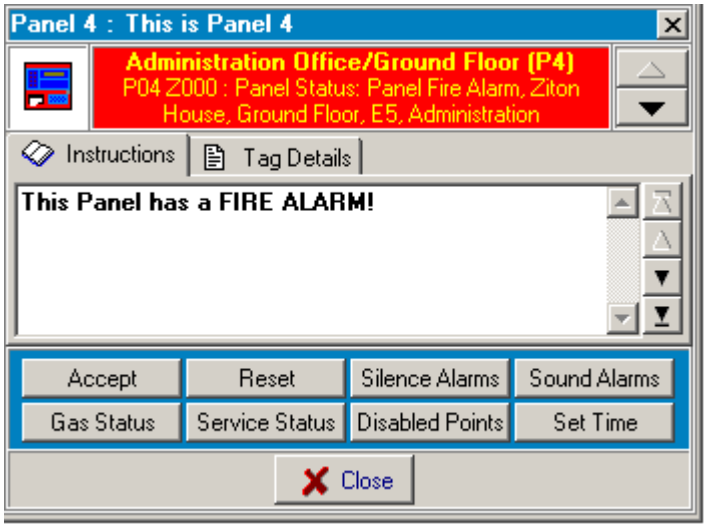
6.2.8. Refresh data button

The Refresh Data button sends a request message to the specific panel (or all panels if Site Wide is enabled) to permit the data displayed on the fascia view to be updated.



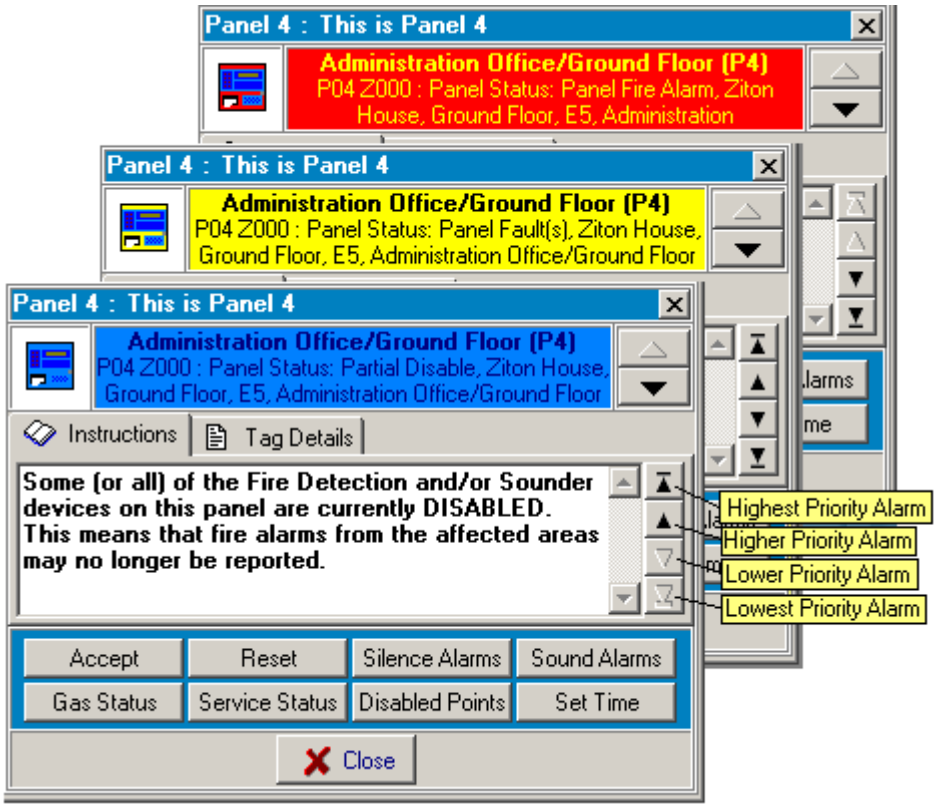
6.2.9. Display Information Card

The Display Information Card button displays the Information Card usually displayed whenever an Icon is clicked on. The card shows details of all the Panel Alarm states for the selected panel.



6.2.10. Multiple Alarms Information

If there is more than a single alarm condition at the selected panel, for example a Fire alarm, one or more Fault alarms and some disabled elements, the alarm conditions may all be viewed by scrolling up or down using the alarm scroll buttons to the right of the Instructions display area.



6.2.11. ZP3 operating manual

The sections on operating the fire alarm system from the panel fascia simulation, reflects in outline the ZP3 panel operating instructions, contained in Publication UD1062A. Section O Pages 1 to 19.

Some of the panel operations are introduced in greater detail in the above section of the ZP3 manual, care must be taken however as due to the scaled down size of the MAESTRO panel fascia simulation some aspects, for example text displayed on the simulated LCD display may not be identical in every case.

Note: Some system control facilities available directly from the ZP3 control panel are not available via the MAESTRO system.

Where MAESTRO is operated with ZC5 control panels, all panel facilities may not be available to the user.

6.3. System control via information cards

A range of system control functions is available directly from map displays, via icon information cards (see section 3.3.).

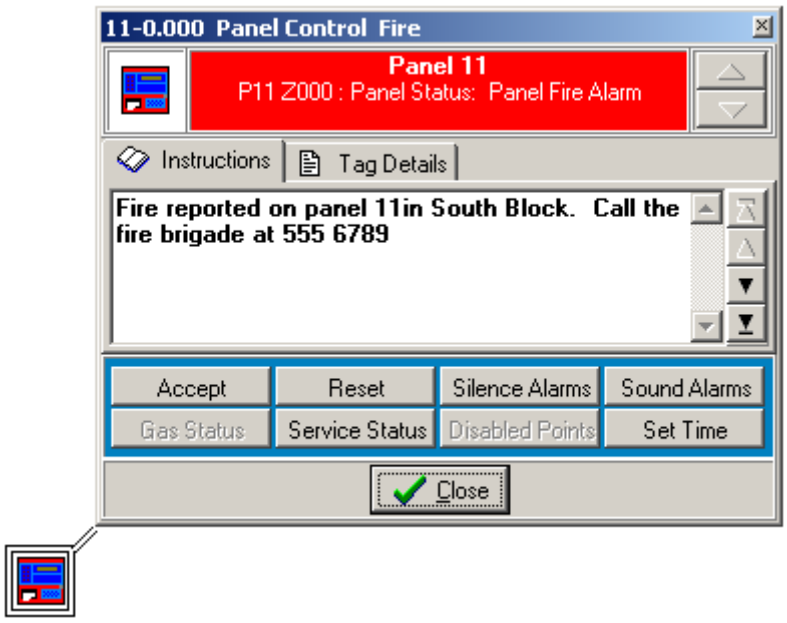
6.3.1. Panel icon

Information can be obtained on the status of any panel by a left hand click of the mouse cursor onto the relevant Panel Icon. An information card is displayed providing the operator with panel details and alarm state messages.

6.3.2. Panel controls icon

The major panel control functions can be operated directly from MAESTRO map displays. The Panel Control icon is usually displayed at map level one and has the same appearance as the Panel icon.

By a left hand click of the mouse cursor on the Panel Control icon, the panel information card is displayed.



Facility control buttons are shown grouped into two rows below the card text message.

Where operator access is denied, or facilities are not available on the panel the control buttons will not actively be displayed.

The following facilities are available and accessed by a left hand click on the appropriate button -

Accept

This accepts all alarm types received by the control panel, displayed via the MAESTRO system.

Reset

This resets the panel returning it to the quiescent or normal state after an alarm condition or system event.

Silence Alarms

This silences all alarms operating from the panel. This facility does not reset the system or any outputs operated by alarm inputs. As with operation directly from the control panel the system can only be returned to the normal condition by operating the Reset facility button.

Sound Alarms

This sounds all alarms connected to the panel. The facility provides evacuation in all areas covered by the fire alarm panel sounders. The Sound Alarms facility button also provides a resound facility, enabling the alarms to be resounded after a system reset.

Gas status

A request for current information on the gas status of all gas control units will be sent to the panel by MAESTRO and their icons updated.

Service status

A request for current information on the service status of all devices will be sent to the panel by MAESTRO and their icons updated.

Disabled points

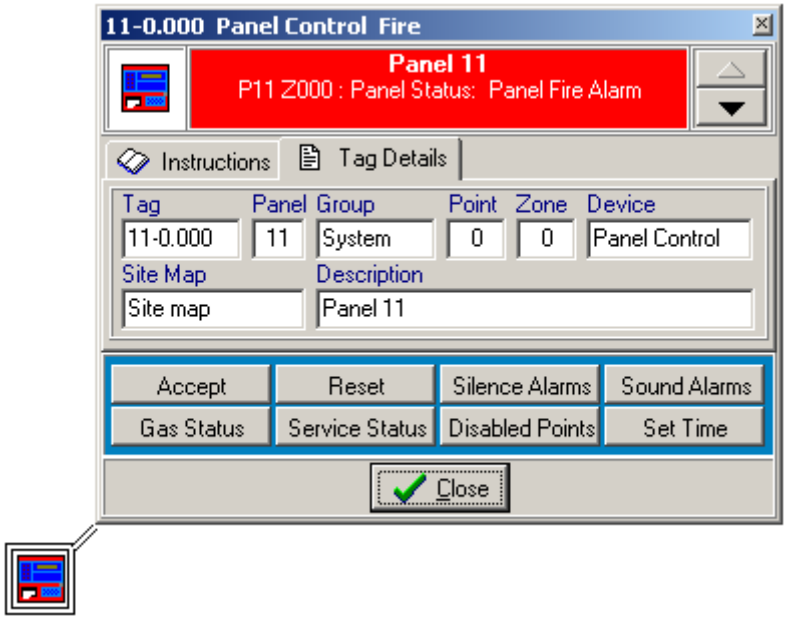
A request for current information on all disabled devices will be sent to the panel by MAESTRO and their icons updated.

Set time

This facility automatically synchronises the fire detection panel with that of the MAESTRO workstation clock.

The Panel Control information card also provides similar information and map navigation to that displayed on zone and point information cards.

Further information and instructions are accessed by a left hand click of the mouse cursor on the information button, positioned at the bottom right of the information card display.



Panel operations carried out from the Panel Control information card are included in current alarm lists and are recorded in the MAESTRO event history log.

Navigation up and down map levels is provided by a left hand click on the map navigation buttons positioned at the top right corner of the Panel Control information card.

6.3.3. Disabling and enabling zones and points.

Zones or individual devices (points) are disabled and enabled via their icon information cards.

The method for disabling via icon information cards is explained in Section 3.3. covering information cards in general.

Zones and devices disabled via information cards are displayed both on the MAESTRO current alarms lists and in the disablements category in the disablement alarms list, on the text display of the fascia simulation.

All disable and enable actions are recorded in the MAESTRO event log.

Maestro Graphics System

User Guide Manual

Section 7

Alarm Management

UD1265.7
Issue 4
10/01/2005

7.1. Alarm display

All alarm types are displayed in the MAESTRO system by the same procedure. In order to provide distinctive displays, easily recognised by the operator, all alarm types are colour coded.

Fire alarm	Red
Pre-alarm	Orange
Fault Active	Yellow
Disable Active	Light Blue
Information Active	Brown
Gas System Active	Dark Blue

These are the standard default colours, programmed into the MAESTRO package. Colour codes for all alarm states can be user defined and are selectable at the system configuration stage. On custom designed systems therefore, colours may differ from the list above.

The colour codings are for indication only and make no difference to the operation of the MAESTRO system.

With the fire alarm system in the quiescent state, control buttons, banners and list headings are normally presented with grey coloured backgrounds. These change to a specific colour to signify which alarm type has been received.

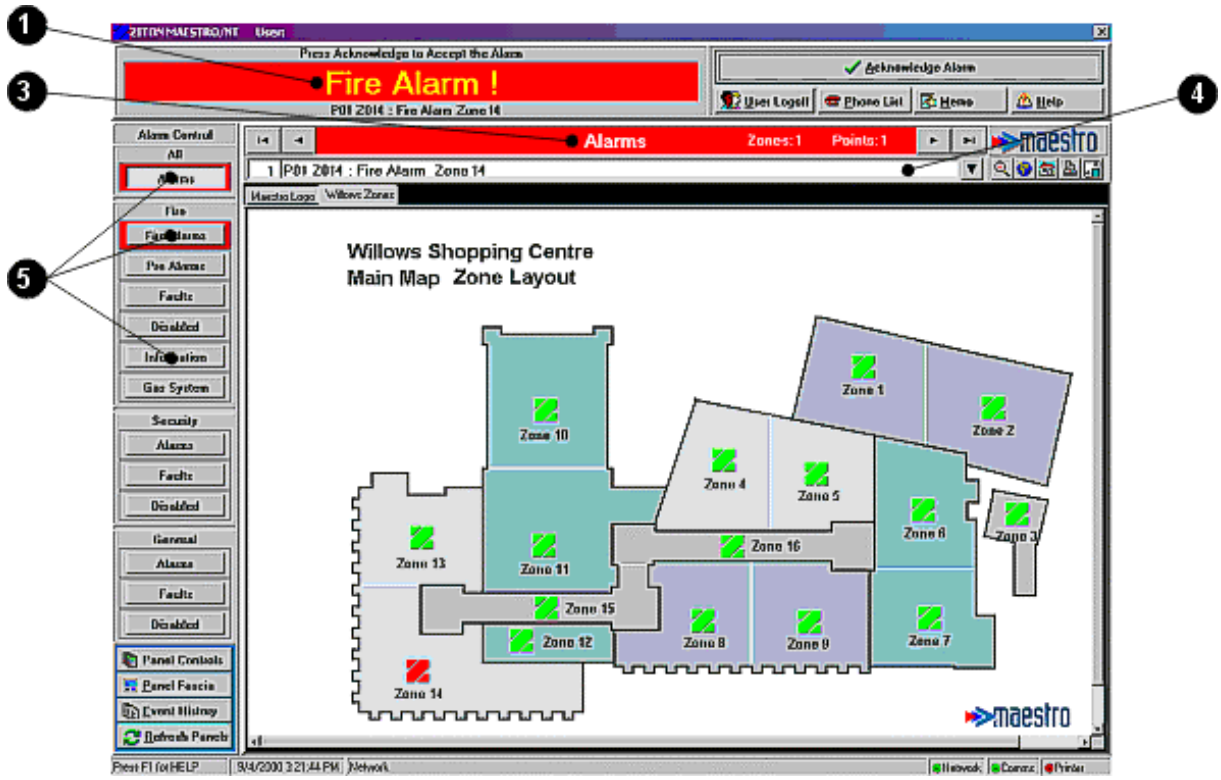
7.2. Receiving Alarm messages

7.2.1 Acknowledging an alarm

When an alarm occurs on a fire alarm system supervised by MAESTRO, the condition is displayed both visually and audibly at the workstation. In order to enter the alarm into the MAESTRO system it must first be acknowledged by the operator. This action registers the alarm in Maestro's current alarm list, where it can be processed if urgent or listed as pending if no immediate action is required.

Acknowledging an alarm does not effect the active control panel, it only registers the signal into the MAESTRO system.

Prior to alarm acknowledgement the MAESTRO display will present the following alarm information –



SECTION

1. **Alarm banner** illuminates (appropriate colour), displaying alarm type (in large letters), panel number and zone in alarm.

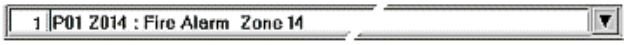
2.3

2. **Audio buzzer** sounds intermittent tone at MAESTRO control station.

3. **Alarms information bar** illuminates (appropriate colour) displaying total number of zones and points (sensors, callpoints, alarm outputs) currently in alarm or active (by alarm type).

2.5

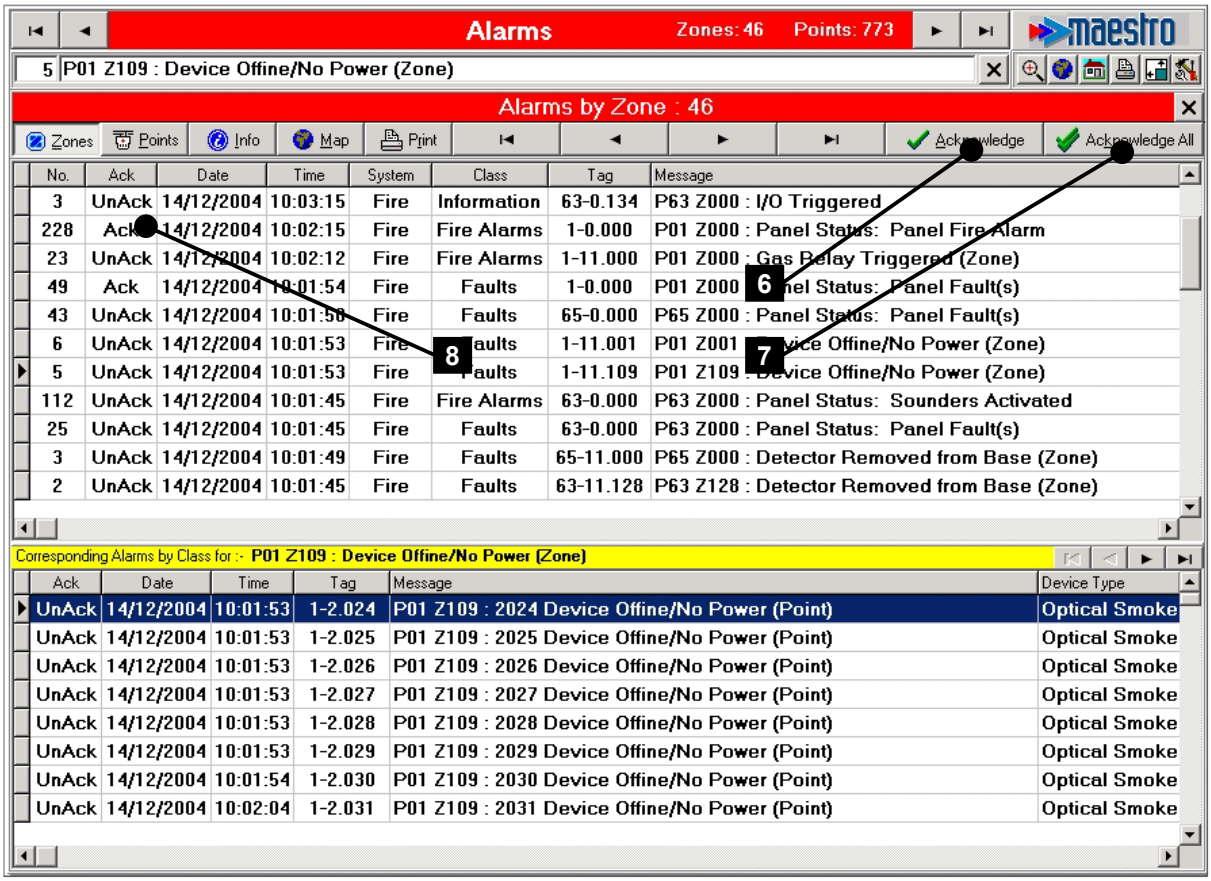
4. **Current alarm status bar** displays the latest alarm by number, alarm type, panel, zone number and description.



2.6

5. **Alarm control buttons** relevant to the alarm type, positioned down the left hand side of the screen display, are highlighted by their boarders changing to the colour code of the alarm type.

2.4



6. The alarm condition is acknowledged either by a single left hand click of the mouse cursor on the **Acknowledge Alarm** box, positioned at the top right corner of the screen display or if the drop down current alarms box is displayed, by firstly left hand clicking the mouse cursor onto the alarm in the list and then left hand clicking onto the **Acknowledge Alarm** button in the list heading.

7. All current unacknowledged alarms can be acknowledged simultaneously by a left hand click of the mouse cursor on the **Acknowledge All** button at the right hand end of the list heading.

SECTION

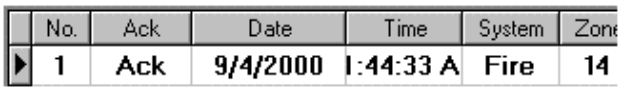
2.8

2.6.2

2.6.2

SECTION 2.6.1

8. The alarm description changes from unacknowledged to acknowledged in the current alarm drop down list.



	No.	Ack	Date	Time	System	Zone
▶	1	Ack	9/4/2000	1:44:33 A	Fire	14

9. The intermittent buzzer tone is silenced for that particular alarm. In many emergencies alarms may be received simultaneously in which case the buzzer will restart its warning tone, until all alarms are acknowledged. The audible tone is the same for all alarm types, except the fire condition for which a different, distinctive tone is provided.

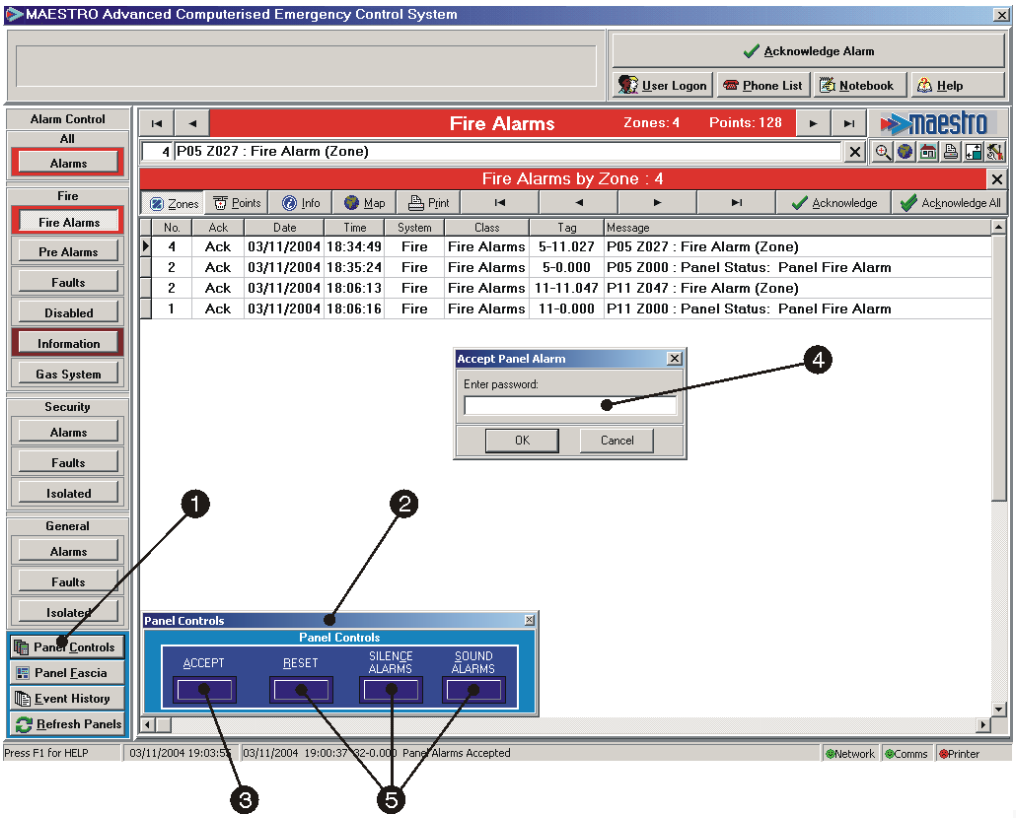
Note: Information is always available for both acknowledged and unacknowledged alarms from the current alarms bar (and drop down list).

10. **Corresponding Alarm by class (in line with EN54 specification)**. For any selected alarm in the main Alarm List, all related alarms are displayed in the 'Corresponding Alarms by Class' list. For example, if a Zone alarm is selected in the Alarm List, the Corresponding Alarm list will show all the devices in the same zone that are currently in the same alarm condition (i.e. Fire Alarm, Fault, etc.). Similarly, if a Panel Alarm is selected, the Corresponding Alarm list will show all Zone and Device alarms for the selected panel in the same alarm condition. If the highlighted alarm in the main Alarm List is a device alarm, the Corresponding Alarm list will show the corresponding Zone alarm and the Panel alarm.

7.2.2. Accepting and responding to an alarm via the panel controls buttons

Once acknowledged an alarm is accepted by the operator. On the acceptance of an alarm condition, MAESTRO becomes a live part of the fire alarm system, providing direct control of panels. MAESTRO will display panel control buttons, allowing the operator remote access to selected controls, in order to respond to the alarm condition.

The procedure for accepting and responding to alarms is as follows –



1. The alarm condition is accepted by a single left hand click of the mouse cursor on the **Panel Controls** button, positioned in the block of four buttons at the bottom left corner of the screen display.

2. A display of the **Panel control buttons** is then shown in the bottom left corner of the screen display.

SECTION

2.11.1

6.1

SECTION

3. A single left hand click of the mouse cursor on the **Accept** button, displays a password dialogue box allowing acceptance of the alarm condition.

6.1

4. To accept, enter **password**. (If operators general access level allows acceptance of alarms, no password is required and the dialogue box is not displayed).

5.1.1

5. **Reset, Silence sounders** and **Start sounders**, controls can be accessed by the MAESTRO operator using the same method.

6.1

6. To operate, left hand click the mouse cursor onto the selected **Panel control button** and enter **password**. (If operators general access level allows response to alarms, no password is required and the dialogue box is not displayed).

5.1.1

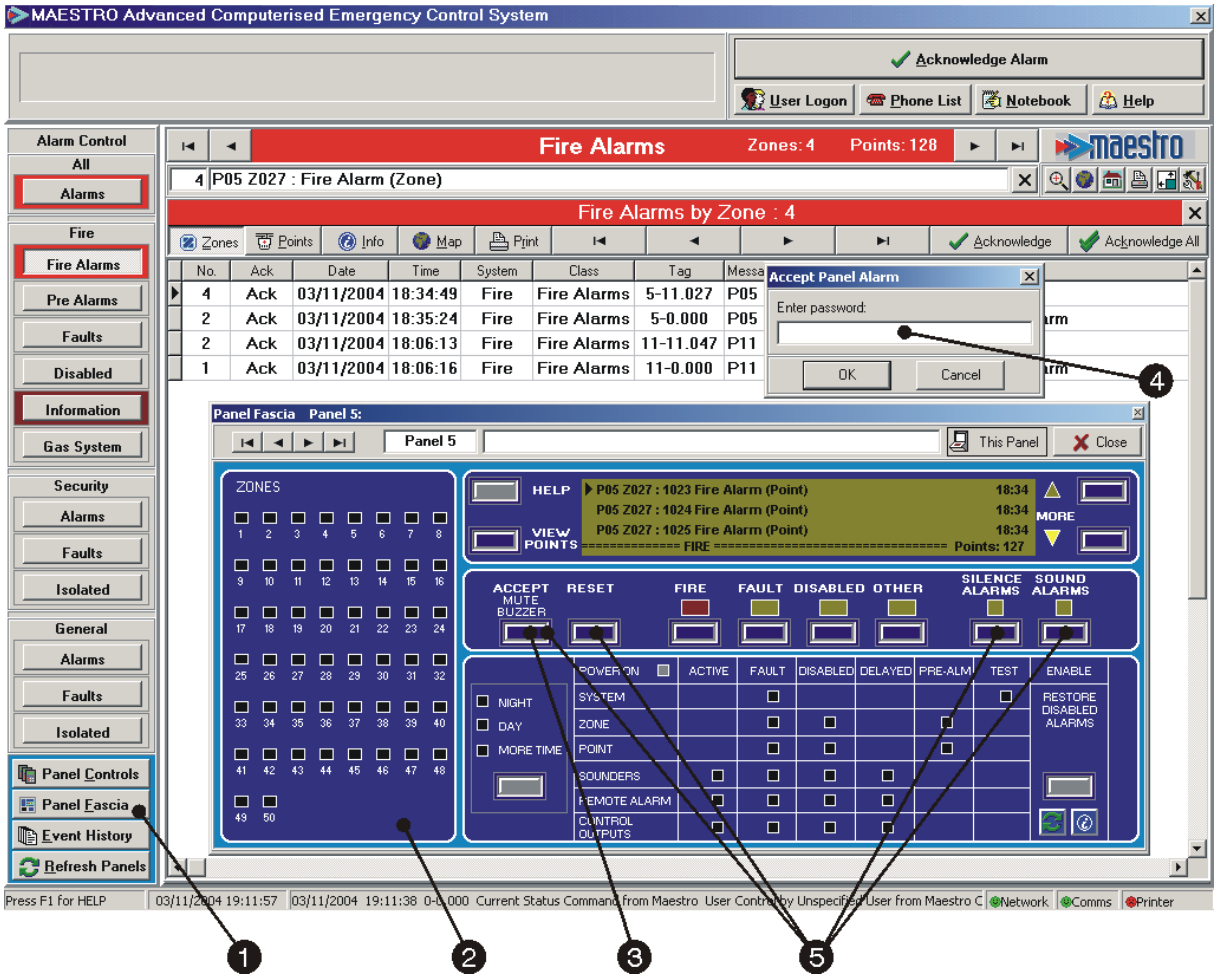
Note: On multi panel systems **the above controls operate all panels** connected to the MAESTRO system.

7.2.3. Accepting and responding to an alarm via the panel fascia display

The Panel fascia display provides a similar means of accepting and responding to incoming alarm conditions as the panel control buttons facility. The **Panel fascia** display however provides the operator with a full simulation of the fire alarm panel controls and indicators.

In multi panel systems, individual panels are selected from the **Panel fascia display** for controlling alarm responses. The control functions are particular to the selected panel and not global as with the control buttons facility.

The procedure for accepting and responding to alarms is as follows -

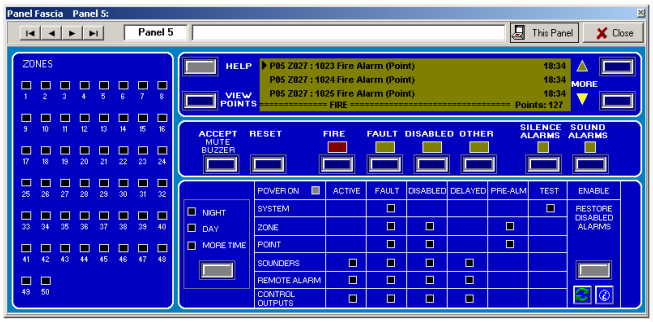


SECTION

1. The alarm condition is accepted by a single left hand click of the mouse cursor on the **Panel Fascia** button, positioned in the block of four buttons at the bottom left corner of the screen display.

2.11.2

2. A full simulation of the **Panel Fascia** is shown centrally across the screen display.



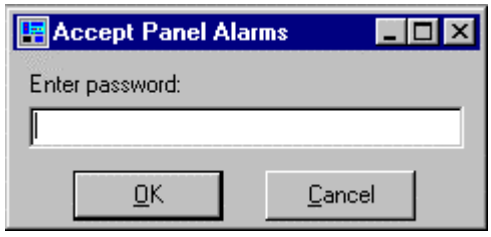
6.2

The fascia is displayed in its current state and is operated using the controls through MAESTRO in an identical manner to operating the actual panel.

3. A single left hand click of the mouse cursor on the **Accept** button, displays a password dialogue box allowing acceptance of the alarm condition

6.2.5

4. To accept, enter password. (If operators general access level allows acceptance of alarms, no **password** is required and the dialogue box is not displayed).

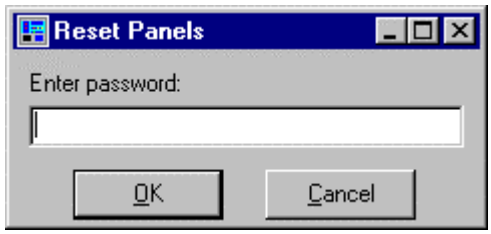


5.1.1

5. **Reset, Silence sounders** and **Start sounders**, controls can be accessed by the MAESTRO operator using the same method.

6.2.5

6. To operate, left hand click the mouse cursor onto the selected panel control button and enter **password**. (If operators general access level allows response to alarms, no password is required and the dialogue box is not displayed).



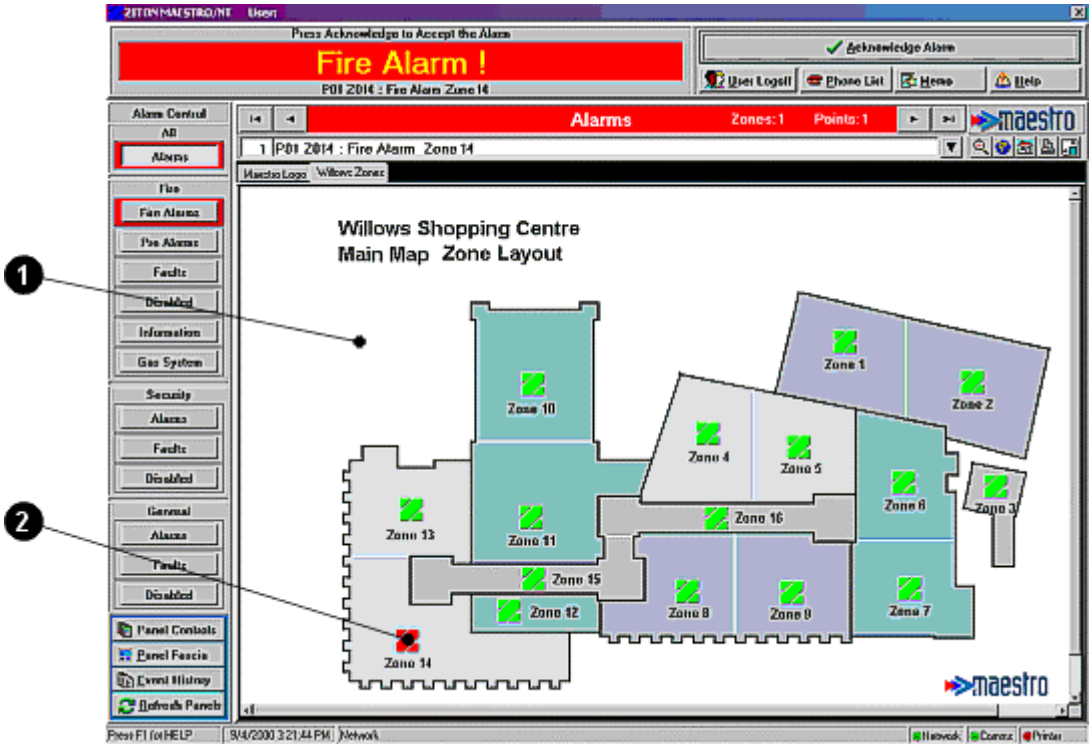
7.2.4. Accepting and responding to an alarm via map displays

MAESTRO is a graphical display system and is designed to be operated primarily by means of display maps. The management of alarms, especially during large site emergencies will usually be organised and displayed using the site or building maps programmed into the MAESTRO system.

In its quiescent state MAESTRO displays a home page, usually featuring a full site map or title page. On the receipt of an alarm the home page, main map area, changes to display the map showing the zone in alarm.

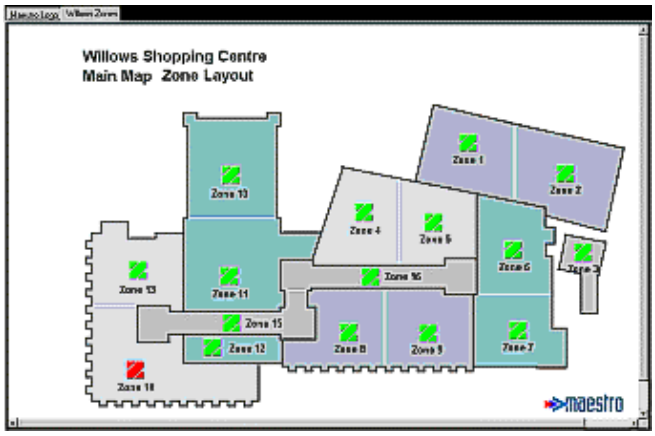
The zone map may be programmed to show the positions of points within the zone. If not, the user can navigate to the point (devices) map by one of the methods detailed in Section 4.3.

On alarm the MAESTRO display will present the following alarm information -



SECTION

1. **Main map area** changes to display the lowest level map containing the zone icon in alarm.



2.11.2

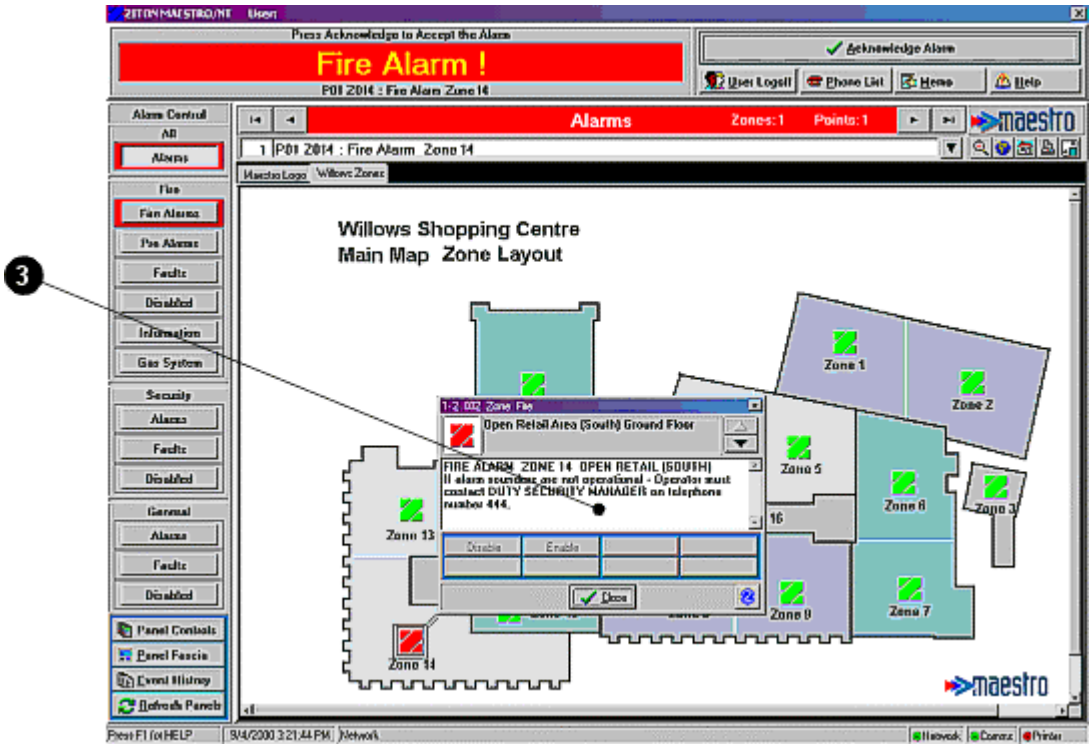
6.2

2. The **Zone icon** of the zone in alarm changes from a steady green to a flashing colour, (colour coded by alarm type), indicating the location of the alarm.

At this stage icons can be expanded by means of their information cards, to display device deta to provide emergency instruction to the MAESTRO operator.

6.2.1

Further information on zones is obtained as follows -



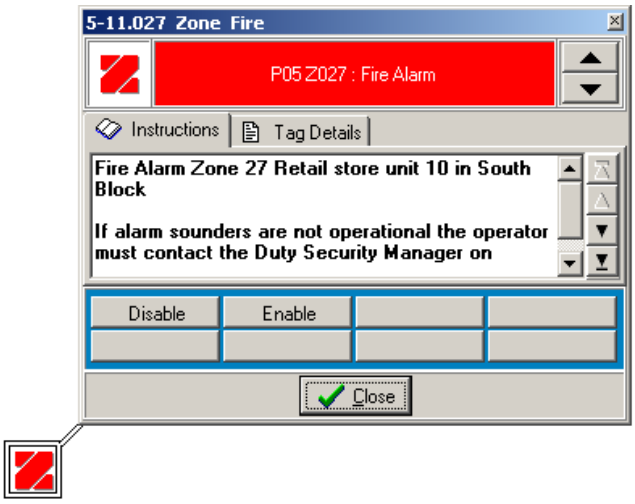
6.2.5

5.1.1

6.2.5

SECTION

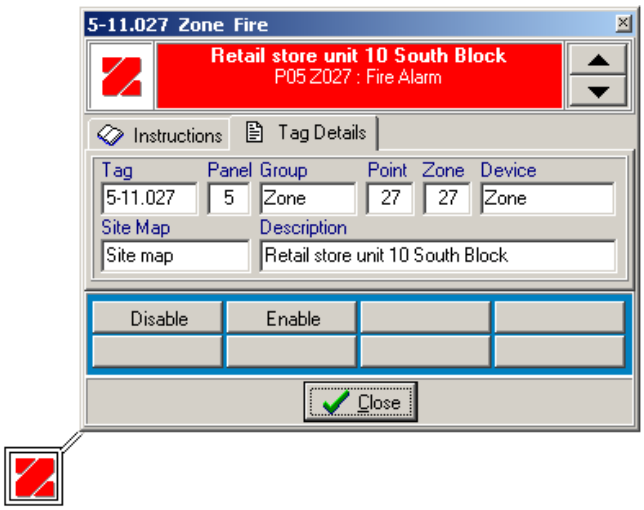
3. A single left hand click of the mouse cursor onto the **Zone icon** displays the **Zone information card**, providing zone description and fire plan instructions.



2.11.2

6.2

4. A single left hand click of the mouse cursor onto the **Information button**, located at the bottom right of the Zone **information card** displays details of the zone in alarm.



6.2.1

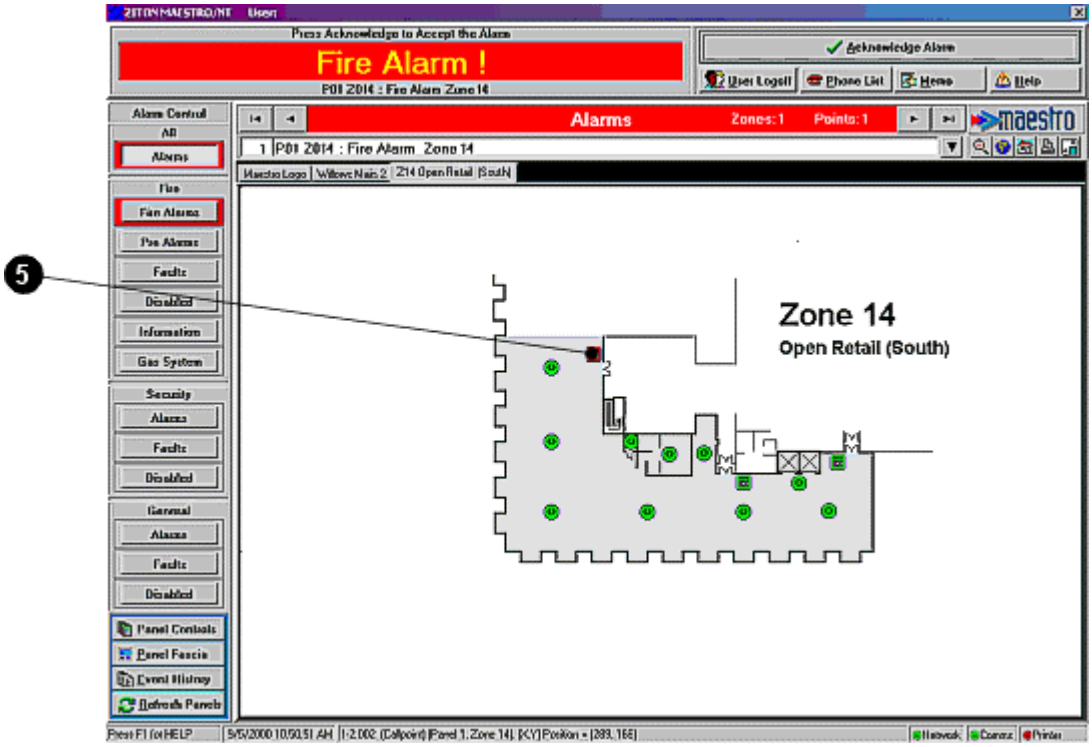
6.2.5

5.1.1

6.2.5

Further information on individual devices (points) is obtained as follows -

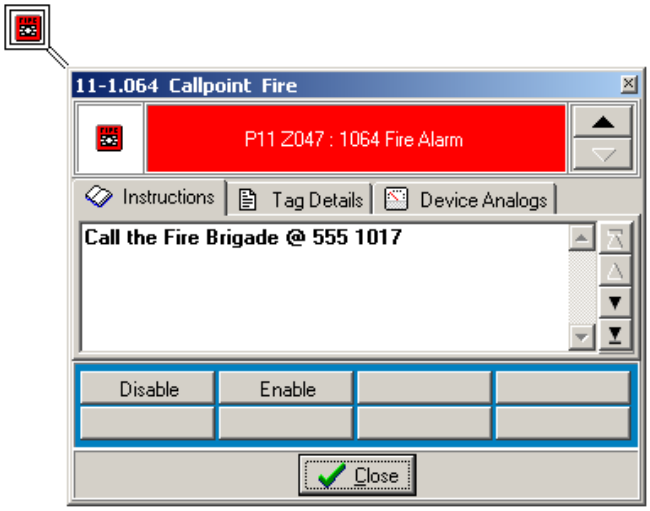
5. To view the device in alarm - (if not shown on the zone map) the operator can move from the zone map to the points map by any one of the navigation methods described in section 4. 4.1 4.3



6. The Point icon depicting the position of the callpoint, sensor or other device also changes from a steady green to an alarm colour, (colour coded by alarm type). Some point types have more than one state, for example during an alarm display a sensors condition may change from pre alarm to a full alarm. MAESTRO continuously updates all current alarms and icon colours are changed accordingly. 3.1.2

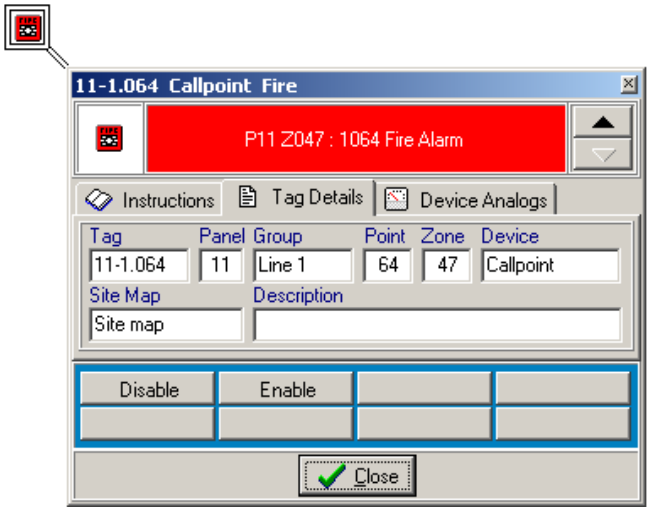
SECTION

7. A single left hand click of the mouse cursor onto the **Point icon** displays the **Point information card**, providing point description and fire plan instructions.



3.3

8. A single left hand click of the mouse cursor onto the **Information button**, located at the bottom right of the **Point information card** displays details of the point in alarm.



3.3

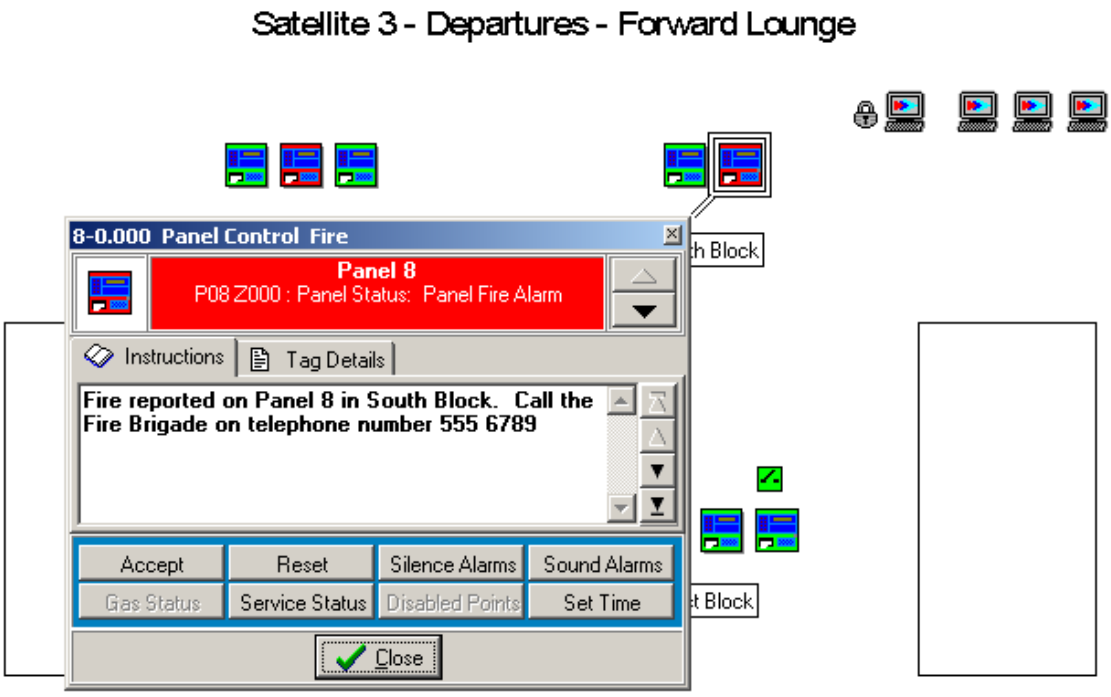
The procedure for accepting and responding to alarm conditions displayed on maps can be processed either through the Control Panel button display the Panel Fascia simulation described in Sections 7.2.2 and 7.2.3. or via Panel Control icon and information card described in Section 6.3.

7.3. Current alarm information.

Alarms are current in the system until they are cancelled either by an operator with access to reset the system locally from the control panel, or remotely by the MAESTRO operator. All current alarms, of all types and of all status within MAESTRO are held for easy reference in the current alarm information list.

Once the system has been reset, alarm information is cancelled from the current alarm list and is moved into the MAESTRO event log. At that stage the main screen reverts to its quiescent display.

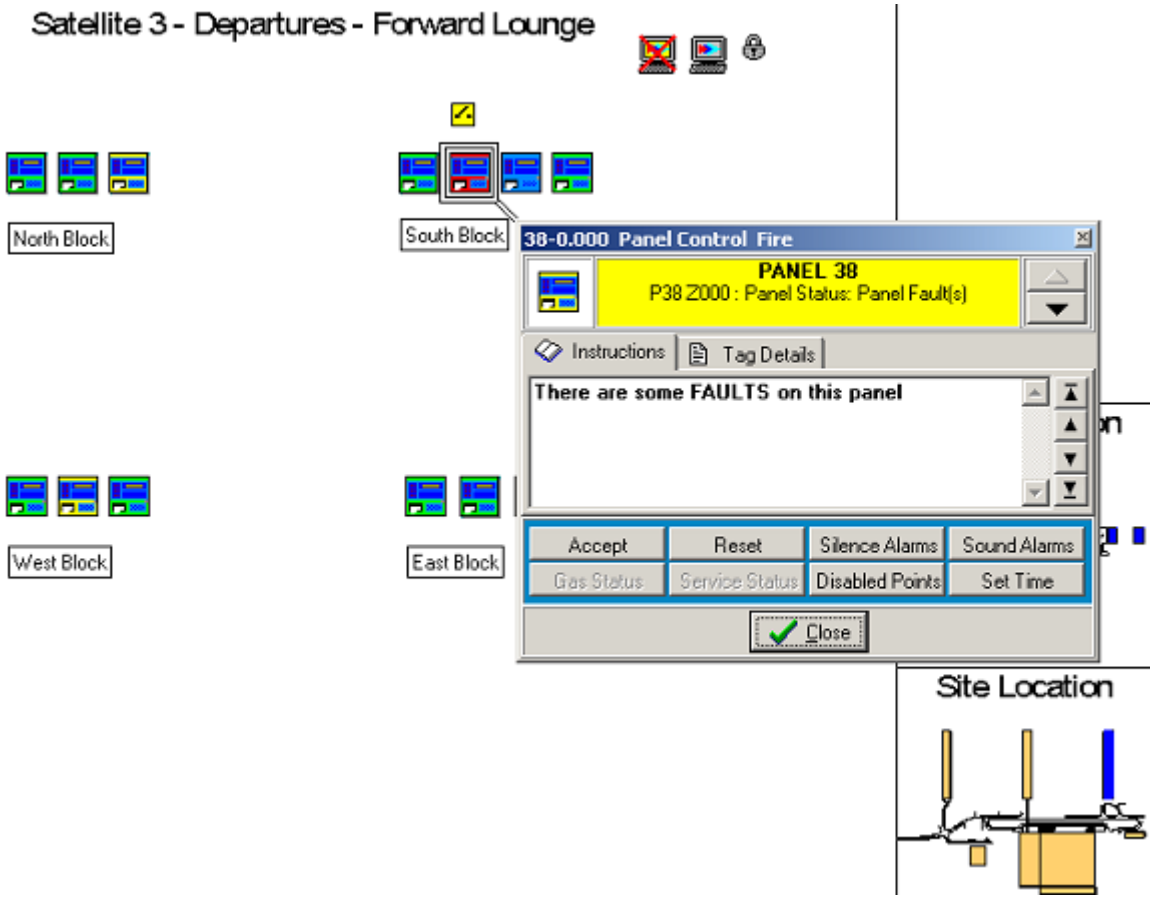
7.4. Navigation card event scrolling feature



The navigation card shown above was opened on a panel map. The fire condition is indicated by the title bar and panel icon (red).

Features

- This feature enables the user to scroll all the event conditions for a particular panel icon.
- The instructions will track the conditions being displayed.
- The forms title bar will always display the highest priority condition.
- The panel icon will always reflect the highest priority condition once all the events have been acknowledged.
- When navigating maps the highest priority condition will be the default condition.



The navigation card shown above was opened on a panel map and displays a fault condition. The highest priority condition is indicated by the title bar and panel icon.

Maestro Graphics System

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Section 8

Event History

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Event History

A most important aspect of the MAESTRO system is the ability to record and log all events from fire alarm systems and networks, especially on large sites.

MAESTRO will record every detail, of actions and system events occurring throughout the fire detection systems life. Alarms, faults, disablements of zones and devices, together with operator, fire brigade and maintenance team responses are all logged and can be presented in various formats by MAESTRO.

Events are recorded as a log, or list in chronological order and can include customised detail to suite site requirements. Six standard columns form the event log list, these can be extended by the operator to include further categories, in order to build customised event log displays.

System history can be viewed using several information filters, providing options of including every detailed event across the entire fire alarm system, or specific displays of events featuring individual zones, devices, panels or system activity in specific building areas.

In order to keep the current event log information to manageable levels, events are automatically moved to archive file after pre programmed time periods. Once archived the files remain accessible within the MAESTRO system. For long term storage archived files are sent by MAESTRO to hard disc, again after a pre programmed time period. A facility for direct download of event log information on to floppy disc is also provided.

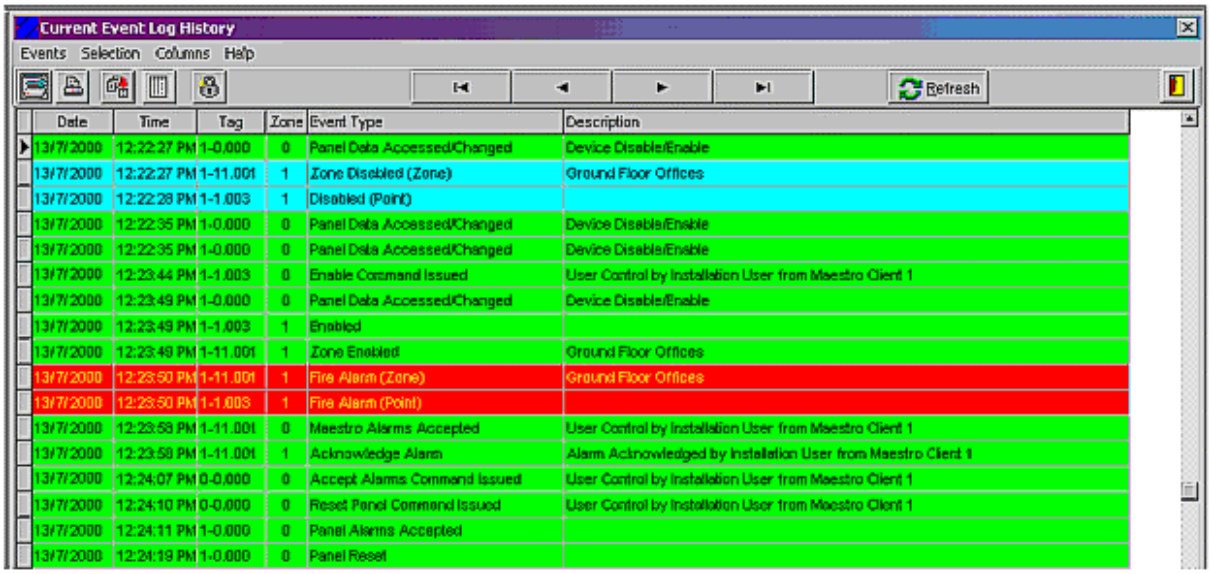
MAESTRO's event history facilities also offer a range of report formats from which individual documents can be printed to include relevant report information.

8.1. Event log display

All system events are recorded in the MAESTRO memory and are displayed chronologically as lists. MAESTRO records events initiated directly at all panels, in addition to those originated at the MAESTRO workstation. In order to produce customised event logs suitable for use in fire alarm system management over a wide range of sites, information categories can be selected in the form of columns within the event log display.

The Event log display is accessed by a left hand click of the mouse cursor on the Event History button located in the block of four control buttons at the bottom left of the main screen display.

A section from a typical event log is shown below -



8.1.1. Standard column headings

Although a range of column categories is available, on power up MAESTRO defaults to six standard columns, representing the most popular display requirement used in most fire alarm systems.

The default column headings are -

Date day/month/year or month/day/year (selectable from the workstation NT 2000 regional settings via - settings/ control panel/ regional options)

Time hours/mins/secs AM/PM (12 hour) (selectable from the workstation NT 2000 regional settings via - settings/ control panel/ regional options)

Tag zone or device identification number - see Sect 3.2.1. Tagging

Zone group of devices covering a defined part of the protected building

Event type operational activity

Description details of event

8.1.2. Additional column headings

Other column headings which can be added, either as permanent categories or used by the operator, on occasion, to provide more event details at specific times are -

Panel	the control panel number to which the zone or point originating the event is connected
Group	a number of devices defined as a group in the MAESTRO system configuration
Reference	selectable general reference category to which zones and or points may be assigned.
Building	building name
Floor	complete floor area in a multi storey building
Zone name	description of zonal area
Room	Description of room or part of building defined in the MAESTRO system configuration

Additional columns are added to the original default list, by left hand click of the mouse cursor on the columns buttons located in the row of five buttons at the top left of the event log history screen display.

On clicking the columns button a list is displayed showing all column categories.

At the top of the drop down list are options for full colour or black and white event log display. The colour option displays each event in the log with a background colour matching its alarm type colour coding (see Sect 2.3. Alarm Banner).

The top section of the list also provides an option for reverting back to the standard six default columns.

The lower part of the list features column options, for both the standard default titles and the available additional column categories.

Column titles are added to or deleted from the event history display by a left hand click of the mouse cursor on the column title. When operational a tick is displayed in front of the title in the list. Each title in the list toggles between selected and deselected by left hand click of the mouse cursor.

The order in which columns appear from right to left across the event history display can be rearranged at any time, by left hand clicking and holding the mouse cursor on the column heading and dragging the column to the desired position.

In order to utilise columns, information (for example floor or room) must be included for each zone and device in the original MAESTRO database, at system configuration stage.

Column selections will remain in the list until the MAESTRO system is powered down. On restart the event history display will revert back to the six standard default columns only, after which the selection of additional columns can again be added by the operator.

8.1.3. Events

Each event received by MAESTRO is displayed in rows, across the column layout.

The most recent event always appears at the bottom of the list, with the oldest at the top.

All events are shown with backgrounds matching their alarm type colour coding. (see section 2.3. Alarm Banner).

Navigation buttons

In order to scroll through the event list, four navigation buttons are provided at the top of the Event display.

The buttons, from left to right, allow the operator to move to, oldest event, prior event, next event and latest event. To scroll one event at a time, left hand click the mouse cursor on either the next event button (to proceed forwards through the event log), or the prior event button (to move backwards through the list). By holding the mouse cursor click, down on either button the list will scroll automatically.

The operators position in the list, at any time is shown by the pointer in the narrow column at the left edge of the event display.

Display lock button

By a left hand click of the mouse cursor on the Lock button, located at the right end of the row of five buttons, at the top left of the event log history screen display, the event screen is prevented from being automatically updated with incoming events.

Locking the display allows the user to manually scan through information in both the current and archive log displays, without the view point being constantly scrolled down to the latest incoming event.

Refresh panels button

Located at the top towards the right of the screen display, is the Refresh Panels button.

Maestro communicates continuously with all control panels connected to the control station. At certain times, on large networks MAESTRO's communications may spend short periods in priority queues, for example immediately following local panel resets.

By a left hand click of the mouse cursor on the Refresh Panels button, MAESTRO is given an immediate, current update of the status of every panel connected to the system.

The refresh facility operates only with ZP3 control panels.

Exit event log button

A left hand click of the mouse cursor on the Exit event log button located at the top right of the of the event log history screen display, closes the event log window and returns the user to the normal display.

8.1.4. Event history archives

In order to keep the current event file to manageable proportions, MAESTRO archives current event files automatically.

Events are filed on a daily basis. The time period that daily files remain in the current event log is programmable (via the MAESTRO communications programme) from 1 to 7 days.

After being held in the current event log, for the pre programmed number of days, MAESTRO automatically passes the oldest days information to the archive file on a daily basis, where it remains again for a pre programmed number of days (between 7 and 180).

The transfer of daily information from current to archive file can be programmed to take place at any time throughout the day.

Whilst in the archive file, events can be displayed, columns added or subtracted, exactly as those in the current event log. Archived events are displayed with a shadow coloured background in order to distinguish them from current information.

As daily files reach the end of the selected archived period, they are automatically sent to hard disc, again on a day by day basis. Files are held on hard disc as separate day files and are named and accessed by date. The number of archived day files held on the MAESTRO workstation depends only on available hard disc space.

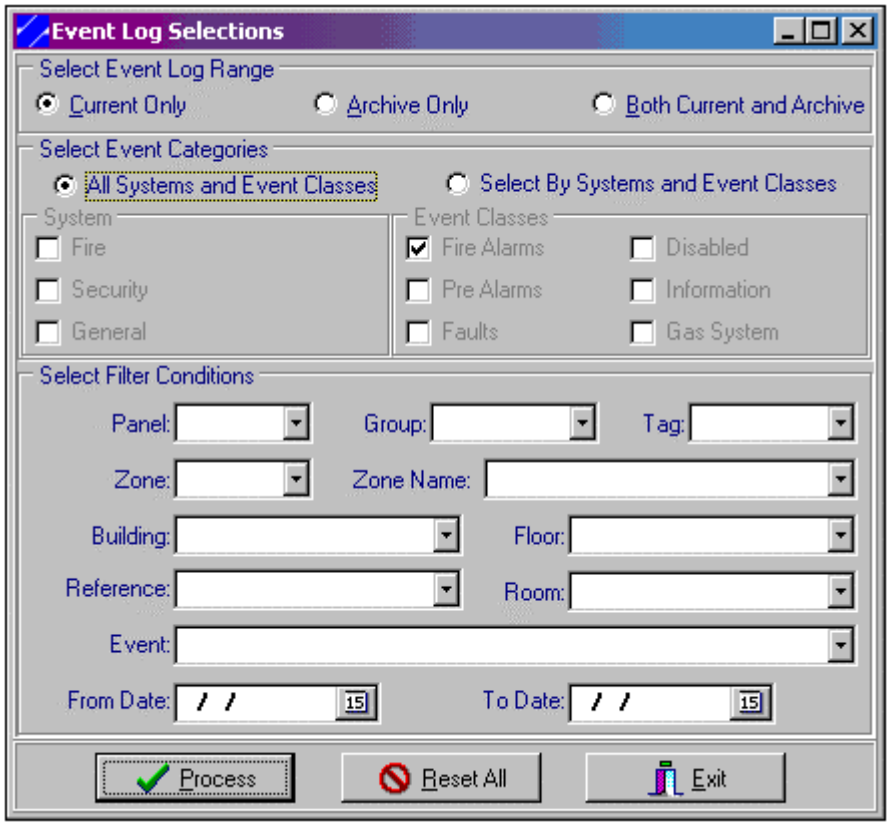
8.1.5. Filters

In order to reduce amounts of detail displayed in the event file, or to produce displays based on specific parameters only, MAESTRO features a range of easily applied information filters.

Filters can be used either on a permanent basis, or be employed by the operator to view specific time periods or event sequences.

Filter options are accessed by left hand click of the mouse cursor on the Event Log Selections button located in the row of five buttons at the top left of the event log history screen display.

The event log selections options box is divided into three main areas -



Select filter conditions (Event Log Selection)

Along the top of the selections display are three options, operated by a left hand click of the mouse cursor.

1. Current Only - limits the event log display to current events only.
2. Archive Only - limits the event log display to archived events only.
3. Both Current and Archive - includes all events from both current and archive logs. As all lists are displayed in chronological order current events are preceded by archived. Archived events are displayed in shadow colour backgrounds.

The three options are toggled by the mouse cursor that is as one selection is made others are automatically cancelled.

Select event categories

In the second section from the top Select Event Categories a choice can be made between including All Systems and Event Classes or Select By System and Event Classes.

By a left hand click of the mouse cursor on the Select by System and Event Classes button, the titles of the nine selection class windows (or filters), change from grey to blue.

Selection can be made to include the following system and event classes -

Fire, Security, General.

Fire Alarms, Pre Alarms, Faults, Disabled, Information, Gas System.

Classes are selected or deselected by a left hand click of the mouse cursor on the class selection windows. A black tick appears in the window and the window title is outlined by a dotted line, when a class is selected.

Select Filter Conditions (Event Log Selection)

The lower panel of the Event Log Selections display enables the operator to select filter conditions.

Event log displays can be produced to include events from all, or any of the following -

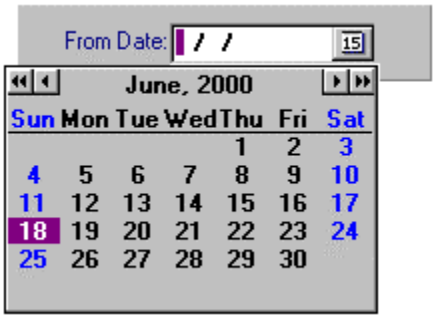
Panel, Group, Tag, Zone, Zone Name, Building, Floor, Reference, Room, Event.

By a left hand click of the mouse cursor on the navigation arrows positioned to the right of each condition window, drop down lists of available options are displayed. Any option can be chosen by clicking the mouse cursor directly onto the relevant name in the list.

Only the information and system parameters programmed originally into MAESTRO at the system configuration stage will be available as options.

Time periods for the event display can be selected by the From Date and To Date windows, located at the bottom of the Select Filter Conditions panel.

A left hand click of the mouse cursor on the calendar button positioned to the right of the From Date and To Date windows opens a current month calendar.



Select Filter Conditions (Event Log Selection)

Dates for the start and finish of an event display are selected by a left hand click of the mouse cursor on the selected date from the calendar. On selection the calendar closes and the selected date appears in the From Date or To Date window.

The current days date is always highlighted on the month calendar. Navigation buttons are provided at the top right and top left of the calendar display. Single arrow buttons scroll the calendar forward or backward by month. Double arrows scroll the display by year.

Process, reset and exit buttons

Buttons are positioned along the bottom of the Event Log Selections display for -

Process - this enables all of the chosen selections.

Reset All - this resets all the selections, clearing the Event Log Selections display.

Exit - exits the Event Log Selections display.

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Section 9

Printing and Producing Reports

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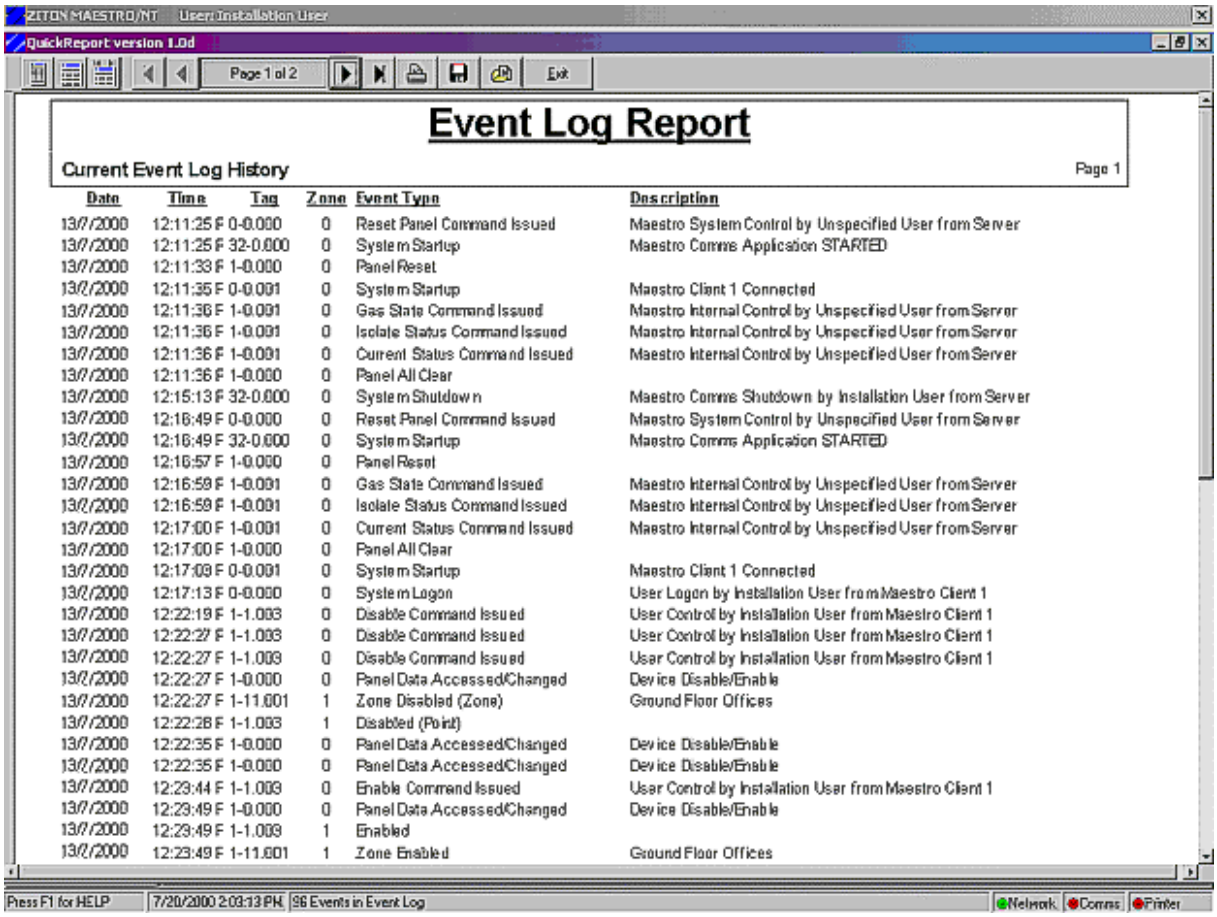
A variety of reports, system log files and fire alarm system information can be recorded, selected and printed as hard copy from the MAESTRO system.

Printed map diagrams showing individual devices can prove indispensable to both fire fighting personnel or maintenance teams on large sites. Daily records of events can be produced in the form of log book pages or if selected by device or building area only, be used in case studies for fault finding or maintenance projects.

Facilities are also provided to download reports directly onto floppy disc.

9.1. Report content

Any event log history can be printed out as a report. Categories within an event log can be selected as detailed in Sect 8.0. Event History.



MAESTRO records all event parameters in its memory, not only those displayed in the event logs in the form of selected columns. This enables reports to be produced to include information not necessarily displayed on a day to day basis.

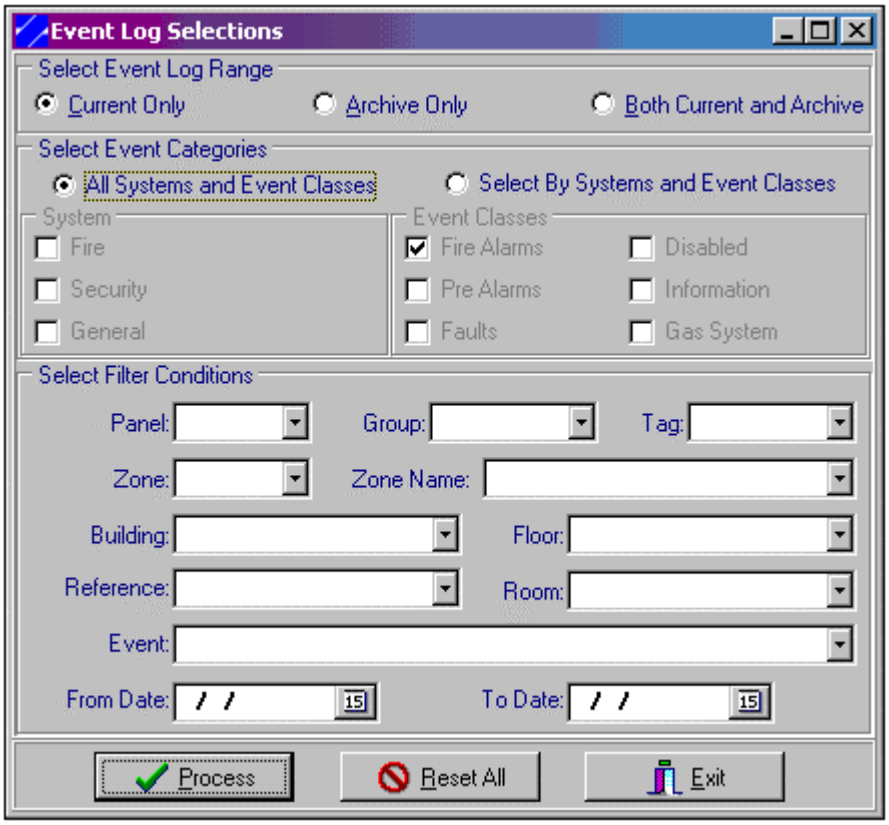
The various parameters for the retention of data must be included at the MAESTRO configuration stage. For example if the room or floor location of each point in the system is not programmed into MAESTRO initially, it cannot be displayed in event or archive files, or featured in printed reports.

9.2. Selecting column categories

Column categories forming the basis of the report structure are selected as detailed in Section 8 Event History, (see Sections. 8.1.1 and 8.1.2. Standard column headings and Additional column headings), via the select columns button and select columns list.

9.3. Selecting event log range

The user can select the event types to include in a report, in the same way as the selection of events for event log display (see Sect 8.1.5. Filters). From the Event Log Selection Box the following specific categories can be included, by a left hand click of the mouse cursor on the appropriate headings in the Event Log Selection Box -



1. **Select by date**, This allows the compilation of a report of events occurring between two selected dates.
2. **Select by tag**, This will include events for a specific point/tag number. When selected, a drop down list of all points appears below the heading. Eight point tags are displayed. Further point tags can be viewed by using the scroll bar positioned down the right side of the display list. Tags from devices where no past events have been recorded in the event log are not included in the selection list. The point or device can be selected by clicking onto the device tag number.

3. **Select by panel**, In multi panel networks, this includes events from the selected panel only.
4. **Select by group**, This selects events only from a specified group of devices and must be set up at the system configuration stage.
5. **Select by zone**, This includes events only from the nominated zone.
6. **Select by event type**, Only the events of the selected type are included in the report, for example Fire Alarms, or Disabled Devices.
7. **Select by reference**, This provides a user category to which zones and devices may be assigned.
8. **Select by building**, Events originating from a specified building only, can form the report, providing the parameter has been included in the MAESTRO database at configuration stage.
9. **Select by floor**, Events from a designated floor, in multi storey buildings can be selected, providing the parameter has been included in the MAESTRO database at configuration stage.
10. **Select by zone name**, If a zonal description has been included, for each device, at configuration stage, events from a named zone only can be selected. This is often helpful in area identification, when for example daily reports are recorded by more than one person.
11. **Select by room**, If room names have been included, for each device, at configuration stage, events from a named room or building area only can be selected. This is often helpful in area identification, when for example daily reports are recorded by more than one person.

All tagged selections will be included in the report. That is every device or point tagged by the MAESTRO system (see Sect 3.2. Tagging) can be identified by MAESTRO and included in reports, within the user selections.

9.4. Printing reports

MAESTRO provides a range of facilities for printing event information in the form of reports. A dedicated printer should be connected to the MAESTRO system, in order to enable report information to be immediately produced during site emergencies.

9.5. Print set up

A left hand click of the mouse cursor on the print set up button, located at the left of the five buttons at the top of the main Event Log History display, opens the Print Set Up options box.

Depending upon printer type and operating software, various options are available for selection.

For print options reference should be made to the printer manufacturers instructions.

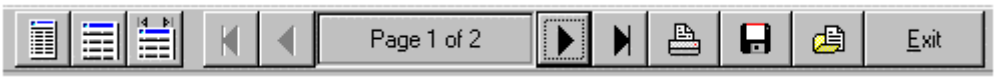
9.6. Print

The Print facility button located second from the left of the five buttons at the top of the main Event Log History display, opens the Print options box, providing options, for example, on numbers of copies of the report to be printed.

A left hand click of the mouse cursor on the OK button, located at the bottom of the Print options box opens the MAESTRO Report Display.

9.7. Report printing display

The report printing toolbar runs across the top of the Report Printing display screen.



The toolbar offers the MAESTRO user the following facilities, all of which are accessed by a left hand click of the mouse cursor onto the appropriate toolbar button.

9.7.1. Fit report in window

This facility displays the report, a whole page at a time, on the Report display screen.

9.7.2. Zoom 100 %

Any report page can be viewed full size. The page can be scrolled upwards or downwards by the scroll bar located down the right side of the screen display.

9.7.3. Zoom to paper width

This facility matches the paper width of the report to the screen display width. Entire report pages can be viewed by scrolling upwards or downwards by the scroll bar located down the right side of the screen display.

9.7.4. Page scroll buttons

A set of four page navigation buttons are provided to scroll through report pages. The left hand pair scroll backwards by page and return the user to page one of the report, whilst the right hand pair scroll forward by page and take the user to the last page of the report.

A page indicator is located between the two pairs of buttons, displaying the page number currently on the screen, together with the total number of pages in the report.

9.7.5. Print

The print button sends the report to the printer.

9.7.6. Save to disc

The operation of the button enables the user to save a report to floppy disc, as an alternative or back up to producing hard copy report print outs.

9.7.7. Load report

Reports kept on floppy disc are opened by operating the load report facility, where they can be viewed or printed off as hard copies.

9.7.8. Exit

The Exit button takes the user out of the Report Printing display, back to the Event Log screen.

The button can be operated at any time to abort the report printing process. However the cancellation of the print report command may not always be immediate, as certain printers and print operating software buffer report information.

9.8. Printing maps

Maps are printed direct from the MAESTRO main screen display. The MAESTRO operator can print the displayed map at any time by a left hand click of the mouse cursor on the Print Page button.

Dependent upon the printer type connected to the MAESTRO system and printer communications software in operation, an appropriate options box is displayed to enable the user to produce an immediate hard copy of the map display.

Only maps can be printed by this facility.

9.9. Enlarge map area

A left hand click of the mouse cursor on the Enlarge Screen Area button, located in the row of control buttons directly below the MAESTRO logo, towards the top right of the screen display, enlarges the main map area to fill the entire display screen.

This facility presents a larger map area, enabling the operator to view and print off a clear, magnified image, featuring only map details.

9.10. Printing archived reports

Archived events are printed using exactly the same methods described previously. By selecting either Archive Only or Both Current and Archive options, from the Event Log Selections box (see Sect. 8.1.5. Filters), reports containing archived events can be produced.

Where archived files have passed through the programmed archive holding period and have been sent by MAESTRO to hard disc as day files, they can be retrieved and reports printed by importing the information into a third party PC application such as Excel or Lotus 123.

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Appendix A

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Maestro Graphics System

Appendix A: What happens when…

This section summarises the sequence of actions that occur in the MAESTRO system as a result of some of the more common events in the Ziton fire detection and alarm system.

All the actions described in these summaries are covered in more detail elsewhere in this publication.

Some of the more common operator commands are also included.

A.1. When a device senses fire

This also applies to other fire events, for example a manual callpoint being activated or a sensor moving into a pre alarm state prior to the full fire condition.

1. The alarm will sound. (unless programmed not to)
2. Alarm banner changes and flashes in the colour of the alarm type.
3. Map showing zone in alarm is displayed.
4. Zone icon flashes in the colour of the alarm type.
5. If zones and points are shown on the same map the point icon in alarm also changes colour but remains steady.
6. The event will be logged in the event log.
7. The event will be printed out on the printer.
8. The event will be shown on the event log list.
9. The alarm will appear on all alarm indicators. (alarm buttons, current alarm lists)
10. The operator acknowledges the alarm and completes the operator action log. (Section 5.5.)
11. The zones alarm counter in the Alarms Information Bar will be increased by one.
12. The points alarm counter in the Alarms Information Bar will be increased by one.

A.2. When a system fault occurs

A system fault may be caused by a device, monitored wiring connections or equipment malfunction.

1. The alarm will sound. (unless programmed not to)
2. Alarm banner changes and flashes in the colour of the alarm type.
3. Map showing zone in alarm is displayed.
4. Zone icon flashes in the colour of the alarm type. If zones and points are shown on the same map the point icon in alarm also changes colour but remains steady.
5. The event will be logged in the event log.
6. The event will be printed out on the printer.
7. The event will be shown on the event log list.
8. The alarm will appear on all alarm indicators. (alarm buttons, current alarm lists)
9. The operator acknowledges the alarm and completes the operator action log. (Section 5.5.)
10. The zones alarm counter in the Alarms Information Bar will be increased by one.
11. The points alarm counter in the Alarms Information Bar will be increased by one.

A.3. When a device is disabled

1. The alarm will sound. (unless programmed not to)
2. Alarm banner changes and flashes in the colour of the alarm type.
3. Map showing zone in alarm is displayed.
4. Zone icon flashes in the colour of the alarm type. If zones and points are shown on the same map the point icon in alarm also changes colour but remains steady.
5. The event will be logged in the event log.
6. The event will be printed out on the printer.
7. The event will be shown on the event log list.
8. The alarm will appear on all alarm indicators. (alarm buttons, current alarm lists)
9. The operator acknowledges the alarm and completes the operator action log. (Section 5.5.)
10. The zones alarm counter in the Alarms Information Bar will be increased by one.
11. The points alarm counter in the Alarms Information Bar will be increased by one.

A.4. When an information alarm occurs

1. The alarm will sound. (unless programmed not to)
2. Alarm banner changes and flashes in the colour of the alarm type.
3. Map showing zone in alarm is displayed.
4. Zone icon flashes in the colour of the alarm type. If zones and points are shown on the same map the point icon in alarm also changes colour but remains steady.
5. The event will be logged in the event log.
6. The event will be printed out on the printer.
7. The event will be shown on the event log list.
8. The alarm will appear on all alarm indicators. (alarm buttons, current alarm lists)
9. The operator acknowledges the alarm and completes the operator action log. (Section 5.5.)
10. The zones alarm counter in the Alarms Information Bar will be increased by one.
11. The points alarm counter in the Alarms Information Bar will be increased by one.

A.5. When a non alarm event occurs

Non alarm events are usually issued by MAESTRO under Information headings and are programmed into the system to provide events that need no operator follow up.

1. The icon associated with the point will change colour. The map associated with the point is not displayed. The change in colour of the icon can be viewed by the operator, by accessing the points map to which the device has been allocated.
2. The alarm will appear on the alarm indicators (alarm buttons, current alarm lists).
3. The event will be logged in the event log, if the system has been configured to include non alarm events.
4. The event will be printed out on the printer, if the system has been configured to print non alarm events.
5. The event will be shown on the event log list.

A.6. When a communications error occurs

A communications error may occur between any of the main elements of the fire detection system, for example between MAESTRO and the panel, or between the master panel and a satellite panel. MAESTRO is not a part of the fire detection and alarm system; it simply taps into the systems communications

MAESTRO displays all communication errors as fault conditions.

1. The alarm will sound.
2. Alarm banner changes and flashes yellow to signal a fault condition.
3. The event will be logged in the event log.
4. The communications indicator located at the bottom right of the main screen display changes from green to red.
5. The event will be printed out on the printer.
6. The event will be shown on the event log list.
7. The alarm will appear on all alarm indicators. (alarm buttons, current alarm lists)
8. The operator will acknowledge the alarm and complete the operator action log. (Section 5.5.)
9. The zones alarm counter in the Alarms Information Bar will be increased by one.
10. The points alarm counter in the Alarms Information Bar will be increased by one.

A.7. Gas control Unit events

The states associated with Fixed Extinguishing Gas control units are shown in the table below.

State	Description	Icon colour
Auto	Gas system is in automatic mode	Blue
Manual	Gas system is in manual mode	Green
Triggered	System triggered but gas not yet released	Red
Dropped	Gas released	Red
Fault	Gas system fault	Yellow
Disabled	Gas system reporting disabled at panel	Light blue
Enabled	Gas system reporting enabled at panel	Green/Blue
Locked off	Gas system locked off at gas control panel	Grey (crossed out)
Door error	Interlocking circuit in incorrect auto/manual mode.	Violet

When the gas control unit enters one of the above states MAESTRO processes the event as follows.

Triggered and dropped states are treated as a fire alarm condition (see A.1. When a device senses fire).

Fault is treated as a fault condition (see A.2. When a system fault occurs).

Disabled is treated as other point disablements (When a point is disabled).

The other Gas Control Unit states may not be classified as alarm conditions. Although they are reported by MAESTRO, they are displayed as events only without an alarm banner.

Operator commands

The following summaries cover the main operator commands used in the MAESTRO system. Access to commands is determined by operator password authority within the system access groups. Therefore for users without the required password authority the command buttons may not be shown on the screen display.

When commands are sent to a master panel the command will effect the master panel and all satellite panels connected to it. If a command is sent to a satellite panel direct it effects only the satellite panel.

A.8. To disable or enable a device

1. Select the map on which the device icon appears.
2. Click on the device icon.
3. The information card will be displayed.
4. Left hand click the mouse cursor onto the Disable button on the information card
5. In the disabled condition the device icon changes colour to indicate the isolated status.
6. The action will be logged to the event log and shown on the Event Log List.
7. To enable a device follow points 1. to 6. above except in point 4. click the Enable button on the information card.

A.9. To disable or enable a zone

1. Select the map on which the zone icon appears.
2. Click on the zone icon.
3. The information card for the zone will be displayed.
4. Left hand click the mouse cursor onto the Disable button on the information card
5. In the disabled condition the zone icon changes colour to indicate the isolated status.
6. The action will be logged to the event log and shown on the Event Log List.
7. To enable a zone follow points 1. to 6. above except in point 4. click the Enable button on the information card.

When a zone is disabled all the devices in that zone are individually disabled. Each device will indicate its disabled status as described in Section A.8. (To disable or enable a device).

The zone will be disabled only when all devices in that zone are disabled.

A.10. Panels controls: Reset (via the Panels Control Box)

1. From the main map display, left hand click onto Panel Controls button.
2. The Panels Controls Box will be displayed.
3. Left hand click on the Accept button, then on the Reset button. A reset signal will be sent to all panels connected to the MAESTRO system.
4. When panels have been successfully reset and returned to the normal state, the panel icons will display their green colour code.
5. Both the control action and the panel resets will be logged to the event log and entered on the event log list.

This command will reset all the system points. Points still in the alarm state after the reset command will return to the alarm condition.

A.11. Panels controls: Reset (via the Panel Fascia Display)

1. From the main map display, left hand click onto Panel Fascia button.
2. The Panel Fascia simulation will be displayed.
3. Select the panel number from the Panel Selection Bar across the top of the fascia display.
4. Left hand click on the Accept button, then on to the Reset button. A reset signal will be sent to the selected panel only.
5. When the panel has been successfully reset and returned to the normal state, the panel icon will display its green colour code.
6. Both the control action and the panel resets will be logged to the event log and entered on the event log list.

This command will reset all the devices connected to the selected panel. Points still in the alarm state after the reset command will return to the alarm condition.

A.12. Panels controls: Reset (via the Panel Control Icon)

1. From the appropriate map display, left hand click onto the panel icon.
2. The panel control information card will be displayed.
3. Click onto the reset button on the information card.
4. The action will be logged to the event log and entered on the event log list.

Note: If the user authority does not allow panel reset the information card will not display the reset button facility.

A.13. Panels controls: Sound alarms (via the Panels Control Box)

1. From the main map display, left hand click onto Panel Controls button.
2. The Panels Controls Box will be displayed.
3. Left hand click on the Sound Alarms button. A sound alarms signal will be sent to all panels connected to the MAESTRO system.
4. When in the Sound Alarms mode, the MAESTRO alarms banner will display the red Fire Alarm colour code.
5. Both the control action and the panel response will be logged to the event log and entered on the event log list.

This command will sound all the system alarms.

A.14. Panels controls: Sound alarms (via the Panel Fascia Display)

1. From the main map display, left hand click onto Panel Fascia button.
2. The Panel Fascia simulation will be displayed.
3. Select the panel number from the Panel Selection Bar across the top of the fascia display.
4. Left hand click on the Sound Alarms button. A sound alarms signal will be sent to the selected panel only.
5. When in the Sound Alarms mode, the MAESTRO alarms banner will display the red Fire Alarm colour code.
6. Both the control action and the panel response will be logged to the event log and entered on the event log list.

This command will sound only the alarm devices connected to the selected panel.

A.15. Panels controls: Sound alarms (via the Panel Control Icon)

1. From the appropriate map display, left hand click onto the panel icon.
2. The panel control information card will be displayed.
3. Click onto the Sound Alarms button on the information card.
4. When in the Sound Alarms mode, the MAESTRO alarms banner will display the red Fire Alarm colour code.
5. The action will be logged to the event log and entered on the event log list.

Note: If the user authority does not allow sound alarms the information card will not display the sound alarms button facility.

A.16. Panels controls: Silence alarms (via the Panels Control Box)

1. From the main map display, left hand click onto Panel Controls button.
2. The Panels Controls Box will be displayed.
3. Left hand click on the Silence Alarms button. A silence alarms signal will be sent to all panels connected to the MAESTRO system.
4. When in the Silence Alarms mode, the MAESTRO alarms banner will display the red Fire Alarm colour code.
5. Both the control action and the panel response will be logged to the event log and entered on the event log list.

This command will silence all the system alarms. Devices in alarm and activated outputs are not Reset by the Silence Alarms command.

A.17. Panels controls: Silence alarms (via the Panel Fascia Display)

1. From the main map display, left hand click onto Panel Fascia button.
2. The Panel Fascia simulation will be displayed.
3. Select the panel number from the Panel Selection Bar across the top of the fascia display.
4. Left hand click on the Silence Alarms button. A silence alarms signal will be sent to the selected panel only.
5. When in the Silence Alarms mode, the MAESTRO alarms banner will display the red Fire Alarm colour code.
6. Both the control action and the panel response will be logged to the event log and entered on the event log list.

This command will silence all the system alarms. Devices in alarm and activated outputs are not Reset by the Silence Alarms command.

A.18. Panels controls: Silence alarms (via the Panel Control Icon)

1. From the appropriate map display, left hand click onto the panel icon.
2. The panel control information card will be displayed.
3. Click onto the Silence Alarms button on the information card.
4. When in the Sound Alarms mode, the MAESTRO alarms banner will display the red Fire Alarm colour code.
5. The action will be logged to the event log and entered on the event log list.

Note: If the user authority does not allow silence alarms the information card will not display the silence alarms button facility.

A.19. Panels controls: Mute panel buzzer (via the Panels Control Box)

1. From the main map display, left-hand click onto Panel Controls button.
2. The Panels Controls Box will be displayed.
3. Left hand click on the Accept button. An accept alarm signal will be sent to all panels connected to the MAESTRO system and all panel supervisory buzzers will be automatically muted.
4. Both the control action and the panel response will be logged to the event log and entered on the event log list.

This command will mute the buzzers of all panels connected to the MAESTRO system, by accepting the current alarm, changing them from their original sound to an occasional intermittent tone. The main system alarms and sounder circuits are unaffected.

A.20. Panels controls: Mute panel buzzer (via the Panel Fascia Display)

1. From the main map display, left hand click onto Panel Fascia button.
2. The Panel Fascia simulation will be displayed.
3. Select the panel number from the Panel Selection Bar across the top of the fascia display.
4. Left hand click on the Accept button. An accept alarm signal will be sent to the selected panel only.
5. Both the control action and the panel response will be logged to the event log and entered on the event log list.

This command will mute the selected panel buzzer, by accepting the current alarm, changing it from its original sound to an occasional intermittent tone. The main system alarms and sounder circuits are unaffected.

A.21. Panels controls: Mute panel buzzer (via the Panel Control Icon)

1. From the appropriate map display, left hand click onto the panel icon.
2. The panel control information card will be displayed.
3. Click onto the accept button on the information card.
4. An accept alarm signal will be sent to the selected panel only.
5. The action will be logged to the event log and entered on the event log list.

This command will mute the selected panel buzzer, by accepting the current alarm, changing it from its original sound to an occasional intermittent tone. The main system alarms and sounder circuits are unaffected.

Note: If the user authority does not allow alarm acceptance the information card will not display the accept button facility.

A.22. Panel controls: Service status

1. From the appropriate map display, left hand click onto the Panel icon.
2. The information card will be displayed.
3. Click onto the Service Status button on the information card. A request for the service status of all devices connected to the panel will be sent by MAESTRO. On receipt of the device information MAESTRO updates the status colour of all icons.
4. The action will be logged to the event log and entered on the event log list.

A.23. Panel controls: Gas status

1. From the appropriate map display, left hand click onto the Panel icon.
2. The information card will be displayed.
3. Click onto the Gas Status button on the information card. A request for the gas status of all gas control units connected to the panel will be sent by MAESTRO. On receipt of the gas status information MAESTRO updates the status colour of all gas status unit icons.
4. The action will be logged to the event log and entered on the event log list.

A.24. Panel controls: Disabled points

1. From the appropriate map display, left hand click onto the Panel icon.
2. The information card will be displayed.
3. Click onto the Disabled Points button on the information card. A request for a report showing the status of each device (enabled or disabled) connected to the panel will be sent by MAESTRO. On receipt of the device information MAESTRO updates the status (enabled or disabled) colour of all point icons.
4. The action will be logged to the event log and entered on the event log list.

A.25. Panel controls: Set time

1. From the appropriate map display, left hand click onto the Panel icon.
2. The information card will be displayed.
3. Click onto the Set Time button on the information card. A signal, synchronising the panel and workstation clocks will be sent to the panel by the MAESTRO system.
4. The action will be logged to the event log and entered on the event log list.

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Appendix B

UD1265.B
Issue 4
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Maestro Graphics System

Appendix B: Fire Detection Systems

Each fire detection system is customised to the specific requirements of the building being protected. The following introduction is intended to outline some of the main elements of a modern fire detection and alarm system.

Full technical detail on all equipment, introduced in this appendix, is published by Ziton in the form of comprehensive Product Data Sheets.

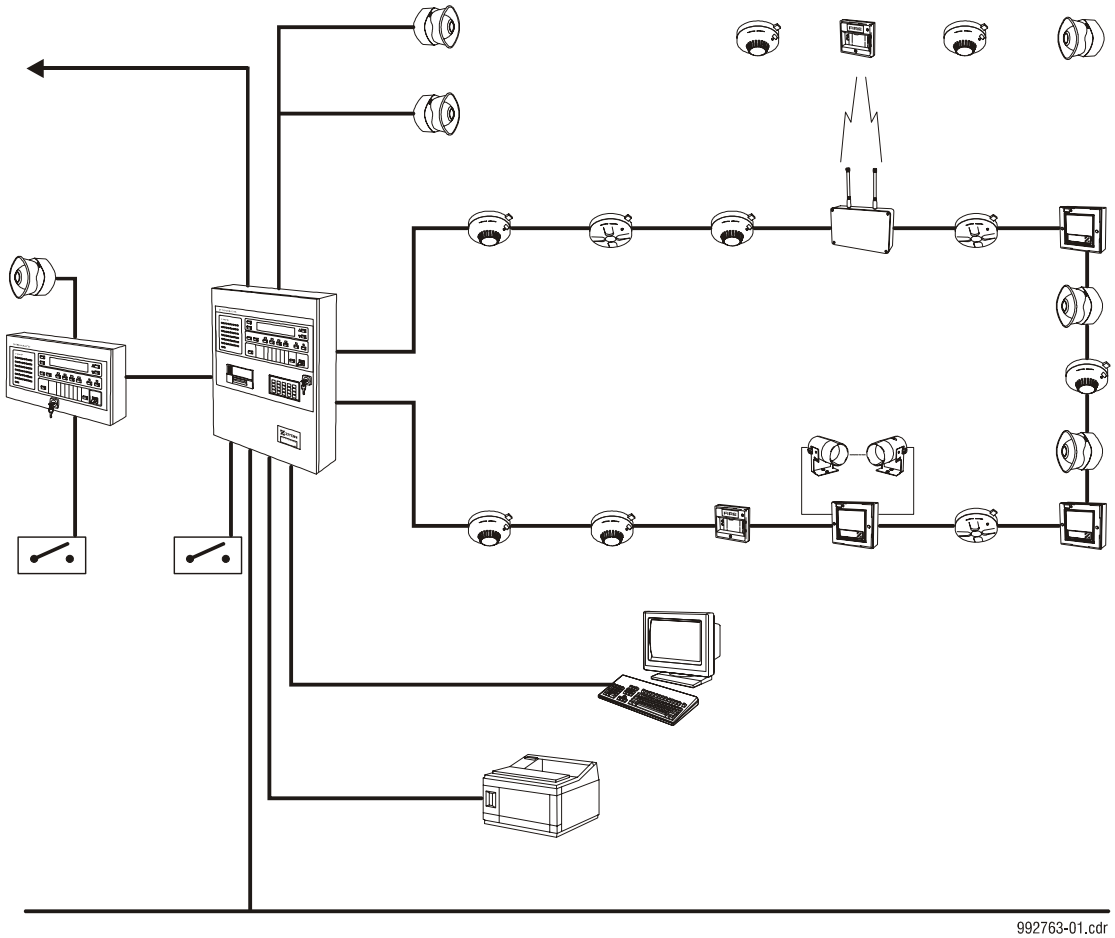
Automatic fire detection and alarm systems comprise a central control panel, remote addressable sensors, manual call points and sounders to raise the alarm. A fire detection system is installed to provide early warning of fire in order to evacuate occupants quickly and to protect both the fabric of the building and its contents from fire damage and loss.

Smoke and heat sensors installed in each room, monitor environmental conditions, sending signals to the control panel if levels of smoke and heat rise, signifying the early stages of a fire condition. Incoming signals are processed, compared with proven data on real fires and alarm outputs activated, if sensor information matches that of a possible fire condition.

Sounders switched on by the control panel, alert occupants in time for the building to be safely evacuated. Other automatic outputs may be activated to switch building systems, for example the isolation of air conditioning equipment to prevent smoke being circulated around the building escape routes.

A graphics terminal is now widely used to provide a more visual and hence user friendly operator interface with the fire alarm system.

The main elements of a fire detection and alarm system are illustrated in the following diagram.



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Appendix B: Fire Detection Systems

The main control panel will be typically located in a central location in the building for example the building supervisor's office or the site control centre.

From the control panel, the ZP address loop cables are distributed throughout the building. Smoke and heat sensors are installed in each room, along corridors and on stairwells, each device connected directly onto the ZP address loop.

Alarm sounders will also be positioned in locations, to provide adequate sound levels throughout the building, in order to alert occupants should a fire condition arise. Sounders may be directly connected to the ZP loop wiring, sharing their communications line and power supply with the smoke and heat sensors, or installed on separate circuits, run around the building from the control panel.

In order to provide a manual means of raising an alarm, manual callpoints (break glass units) will usually be located at the main exits, on corridors, stairwell landings and all general circulation areas throughout the building.

Most large fire detection systems also include a computer based, colour graphics control system such as MAESTRO. The use of MAESTRO, especially in larger installations, allows easier operator interaction with the fire detection system, especially in emergency situations..

Under alarm conditions in particular the operator is more easily able to identify the problem areas through the use of clearly defined computer displays, showing maps of the building and the positions of devices originating the alarm.

When a fire condition occurs, the smoke or heat sensor signals to the ZP control panel confirming the growing presence of smoke and heat. Prior to operating the sounders, the control panel interrogates the sensor in order to establish that the fire condition is genuine and not a false alarm.

If the fire condition is still present the ZP panel consults its database to determine which devices must be activated for that particular sensor. For example only the sounders on the same floor of the building as the sensor originating the fire condition, together with a signal to the local fire station.

The alarm will be indicated at the control panel and displayed on the MAESTRO screen as a zone alarm.

Sensors

A fire produces a range of products of combustion, including smoke and heat. The products of combustion are determined by the materials ignited and the surrounding conditions at the origin and early stages of the fire condition.

A variety of sensors is available, each designed to respond to one or more combustion products released during the incipient stages of a fire. It is therefore of major importance that the best sensor type be selected to suit each different application.

The most widely used in buildings today fall into two categories, those responding to the presence of smoke particles in the atmosphere and those based on monitoring thermal changes.

Again both categories can be divided into two basic sub groups.

Smoke sensors

Optical smoke detection is based on photoelectric principles, which depend upon smoke particles scattering an optical beam inside the sensor chamber. The light loss due to scatter is measured and converted into an electrical signal.

In the ionization type, charged particles are attracted from an ionizing source across the sensor chamber to a collector. The presence of smoke particles slows the particle stream. This change in speed is detected and amplified by the sensors electrical circuits.

In general the above sensing methods make optical detection most effective for fires likely to produce large particle smoke (more scattered light) and the ionisation principle best in application where small smoke particles may be expected (more charged particles).

Optical smoke sensing also tends to be effected less by variable building conditions, for example air movements caused by ventilation systems.

Thermal sensors

Fixed temperature sensors are designed to operate when the ambient temperature reaches a pre determined level.

Rate of rise temperature sensors measure the speed of temperature rise.

The former sensor is ideal for applications where there may be natural fluctuations in temperature and the latter for areas where the temperature is normally stable.

Thermal sensors are also widely used in areas where environmental conditions prohibit the use of smoke sensors, due to the possibility of false alarms, for example in kitchen areas and shower rooms.

Other sensor types

The above smoke and thermal sensor types represent the vast majority of units installed in buildings. In certain applications other, more specialised sensors may be necessary these can include units featuring a combination of both smoke and heat sensing principles. Other sensor types include flame detectors, designed especially for detecting and responding to energy emitted by the flame at the source of the fire.

Some specialised areas are more effectively protected by other detection system types, the more common of which are outlined later. All specialised systems are interfaced on to the ZP loop and their outputs monitored by the main ZP control panel.

Manual callpoints

Manual callpoints, sometimes referred to as break glass units provide a manual means of operating the fire detection and alarm system.

Callpoints are usually installed at the main exits from the building and at convenient points on escape routes where manual operation of the system may be required.

Each unit is given a unique address which the ZP system recognises, in order to display the exact location of the manual callpoint originating the fire condition.

Sounders

A wide range of alarm sounders are installed in fire detection and alarm systems.

British Standards recommends that the alarm warning sound should be the same throughout the building, be sufficient to be clearly heard and not be used or associated with any other warning signal.

Traditionally bells were used to provide an evacuation warning, but in most systems electronic sounders are now more popular, providing a high sound output from a small current consumption.

Sounders can be either wired directly onto and powered by the ZP loop. Loop wired sounders may be combined within the sensor base, or be installed on the loop wiring as stand alone units. In many installations sounders are powered by dedicated sounder circuits, separate from the sensor loop wiring and connected directly to alarm outputs provided within the main control panel.

Zones

For ease of identification, the floor layouts of buildings are divided into a number of separate areas termed zones. This enables fire fighting personnel, perhaps not familiar with the building, to identify more easily the position of a fire condition.

In emergency situations, building supervisors need to know the general location of a fire or fault. The directions of wiring runs, addresses and the numbers and positions of sensors often become secondary.

For example the first floor of the west wing of a hotel may be assigned the zone number twenty five. A fire in this area of the building, will be indicated as being in zone twenty five and the location of the zone clearly designated at the control panel, as being on the first floor of the west wing.

The European Standard for fire alarm control panels EN 54 Part 2 requires that in emergencies the zone area of the building must be displayed first. The exact location of the device can then be displayed subsequently as secondary information. The ZP3 system and MAESTRO comply fully with this requirement.

Day/night operation

In order to prevent the evacuation of large buildings due to false or unwanted alarms, it may be necessary to programme the system to respond differently depending upon whether the building is occupied or not.

Alarms during occupied hours may in certain cases be delayed, in order to provide a confirmation period for the building supervisor to verify that the alarm is real. During night-time hours the system can be programmed to provide an immediate response to a fire alarm.

Each sensing device may have different sensitivity settings for daytime operation. These can be automatically switched by the panel to a different level during night time hours whilst the building is unoccupied.

The input/output configuration of the system may also differ in order that all sounders operate immediately on a fire occurring at night, whilst in response to an alarm during the day (whilst the building is occupied) only selected sounders are activated.

Remote display units

Remote display units are provided to enable control and indication of the fire detection system in locations remote from the main panel.

The units are exact replicas of the main ZP panel fascia and repeat and indicate identical functions displayed on the main unit. Remote display units may be installed in building control rooms or in security centres on sites where the main control panel is centrally located. Options for control functions are also provided, in order that selected (or full) system control, can be available at the remote location.

Networked systems

Each ZP panel provides up to four address loops. For systems requiring further address loops, panels can be networked together. There are two different methods of organising ZP networks.

1. Master/satellite systems

This network configuration features a master panel with up to thirty two slave panel units connected to it. The master panel monitors and displays the status of each satellite unit in addition to monitoring all network connections. Network operations for example data flow are monitored and controlled by the master panel.

2. Peer to peer systems

This network configuration consists of up to thirty two panels and other network devices such as MAESTRO systems connected together to form one large fire alarm control facility. In addition to its own, each panel can display the condition and status of other panels. Inputs from sensors on one panel can operate the alarm circuits and outputs on others.

Special detection systems

Aspirating high sensitivity smoke detectors

In certain areas where it would be inappropriate to install hard wired, point type sensors, aspirating systems are often used.

Small bore plastic tubing installed around the protected area extracts air samples, which are drawn through and analysed by a central detector unit.

Aspiration detection is usually of high sensitivity enabling small concentrations of smoke to be a correctly detected and hence are ideal for areas where high air speeds may be expected.

Systems are often installed where point type sensors would be inappropriate, for example in applications such as large cinema or theatre auditoriums or high glass atrium locations where the installation and maintenance of point type units would be difficult.

Linear beam detectors

Linear beam detectors are used to sense both heat and smoke in high open areas, for example industrial manufacturing, or warehousing premises.

An infrared beam is projected across the protected area from a transmitter to receiver. The units are installed just below ceiling height. When smoke from a fire passes through or obscures the beam, the frequency of the beams signal is effected and the change identified by the receiver. Up to a maximum span of one hundred and fifty metres can be protected by a single beam set.

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Appendix C

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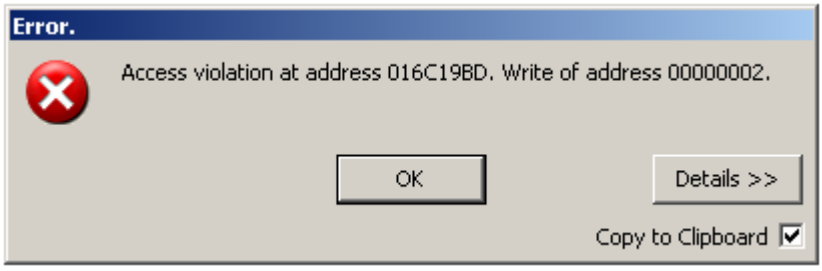
Advanced Exception Reporter

In any computer based system the possibility that an error can occur is always present. Through careful development and extensive testing, Ziton has endeavoured to reduce the risk of errors to an acceptable minimum consistent with the needs and expectations of a Life Safety system. However, it is still possible that unexpected problems can occur. In order to track and record all unexpected errors Maestro contains a sophisticated error trapping mechanism that will record all salient details when an unexpected error occurs.

Features

- Pop-up display
- Displays Windows operating system and hardware resource issues
- Generates a fully detailed exception report



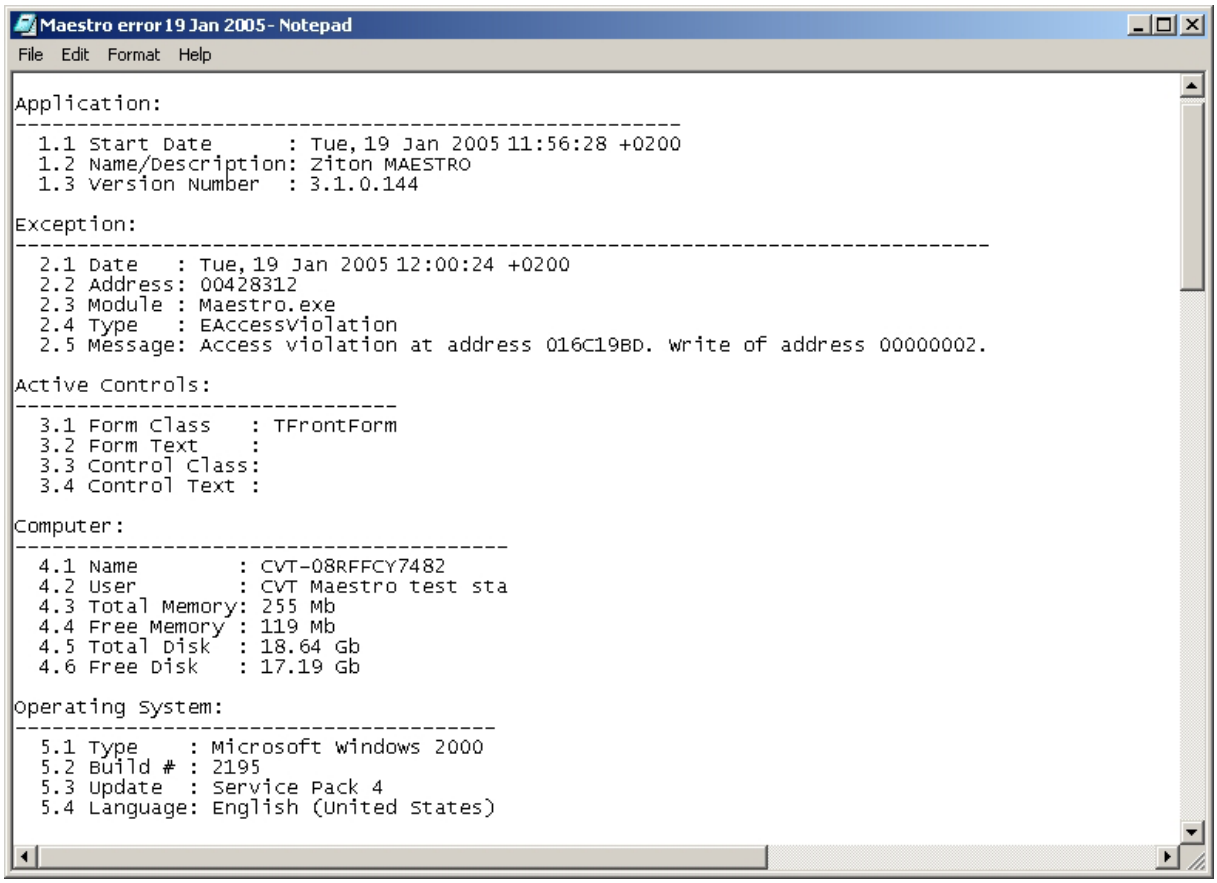
Procedure

1. Select the “Copy to Clipboard” tick box.
2. A confirmation dialog box will be displayed. Click on the OK button.
3. Open a text editor eg. Notepad
4. Paste the clipboard contents into the text file.
5. Save the text file and e-mail it to the relevant agent. If this is a new report type the agent will forward the details to the Ziton Engineering department.
6. Close Maestro GUI and then close Maestro Comms. Open Maestro Comms and then open the Maestro GUI. This allows Maestro to verify and correct the database structure.

Note: Exceptions reported by Maestro do not imply that the Maestro software is compromised. It should not be necessary to reinstall Maestro.

- Advanced Exception Reporter is used to facilitate future development.
- Once a report has been supplied to the agent the significance of the problem can be relayed to the user.

Appendix C: Advanced Exception Reporter



Typical exception report details showing all relevant information pertaining to an unexpected exception.