



Operator's Handbook

AutroSafe Interactive Fire Detection System



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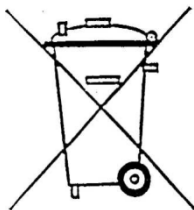


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1. Introduction

1.1 About the Handbook

This handbook provides the information necessary to operate the AutoSafe Interactive Fire Detection System, Release 4. The handbook provides the information necessary to read and interpret the visual and audible information, and the description of system operation covers all panels.

1.2 The Reader

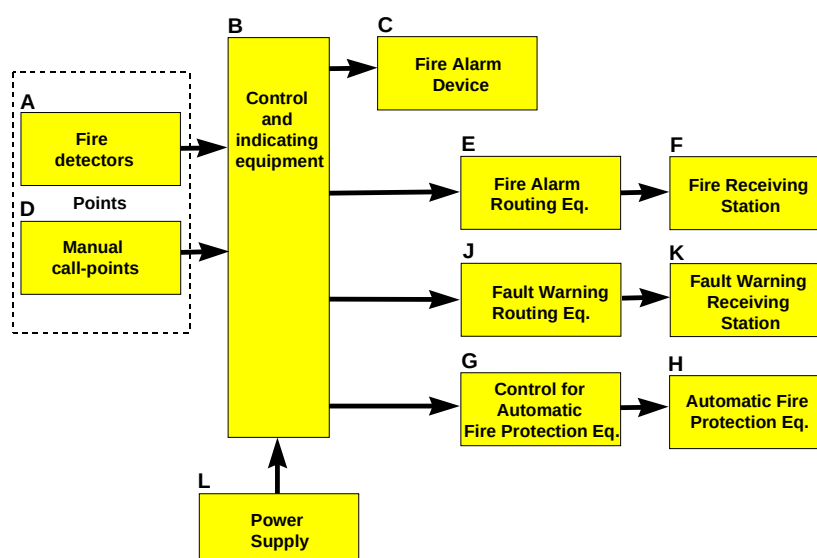
The handbook is intended to be used by the fire brigade and personnel who are responsible for operating the system. We assume the reader has the necessary basic understanding of the system concept and the term zone including, *Detection Zone*, *Alarm Zone* and *Operation Zone* (refer to System Description).

The AutoSafe Interactive Fire Alarm System comprises various *components*. It is important that the reader gets familiarized with these, plus the different terms and abbreviations..

1.3 Components

The AutoSafe Interactive Fire Alarm System comprises the following *components* (EN-54) :

Component	Abbreviation	Description	Ref.
Point	-	Detector or manual call-point.	A / D
Control and indicating equipment	c.i.e.	Equipment supplying power to, as well as accepting fault and alarm signals from detectors. Indicates an alarm condition audibly and visibly, plus the location.	B
Power Supply	-	The source of power for control and indicating equipment and for items supplied with power from such equipment.	L
Fire Alarm Devices	FAD	Equipment used to give warning of fire, for example, a sounder or visual indicator.	C
Fire Alarm Routing Equipment	FARE	Equipment used to route an alarm signal from control and indicating equipment to a Fire Alarm Receiving Station.	E
Control for Fire Protection Equipment	FPE	An automatic device used to actuate measures of fire protection after receiving a signal from control and indicating equipment (for example, fire extinguishers, ventilation controllers).	G
Fault Warning Routing Equipment	FWRE	Equipment used to route a fault warning signal from control and indicating equipment to a fault warning receiving station.	J
Fire Alarm Receiving Station	-	A centre from which the necessary fire protection measures can be initiated at any time.	F
Fault Warning Receiving Station	-	A centre from which the necessary corrective measures can be initiated.	K
Automatic Fire Protection Equipment	-	Fire control or fire fighting equipment, for example, extinguishing installation.	H



Note:

The lines linking the various components on the illustration indicate information flows, and not physical interconnections.

Item G and H and some other items may need to be provided with a separate power supply.

1.4 Reference Documentation

The table below shows an overview of the technical marketing documentation for AutoSafe Interactive Fire Detection System, Release 4.

Document Name	File name
System Description	asafesystemd_egb
Installation Handbook	asafeinstall_dgb
Commissioning Handbook	asafecommiss_egb
User Guide, Remote Access	asaferemoteac_egb
Connecting Loop Units	connectloopunit_dgb
Operator's Handbook	asafeoperate_fgb
User Guide	asafeusergui_lgb
Wall Chart	asafewallcha_lgb
Menu Structure	asafemenustr_mgb
Datasheet; Fire Alarm Control Panel BS-420	bs420_cgb
Datasheet; Operator Panel BS-430	bs430_cgb
Datasheet; Repeater Panel BU-BV-420	bubv420_cgb
Datasheet; Fire Brigade Loop Panel BU-110	bu110_cgb
Datasheet; Information Loop Panel BV-110	bv110_cgb
Datasheet; Controller BC-420	bc420_cgb
Datasheet; Controller Unit Rack BC-440	bc440_cgb
Datasheet; Power Cabinet BP-405	bp405_cgb
Datasheet; Power Unit BPS-410	bps410_cgb
Datasheet; AutoKeeper BN-180	bn180_cgb

2. Panel Overview

2.1 Introduction

2.1.1 Panel Variants

The user interface and operation of the Fire Alarm Control Panel BS-420 and the Operator Panel BS-430 are identical. The panel is therefore referred to as the *operator panel* throughout this handbook (refer to chapter 2.2).

The Repeater Panel BU-BV-420 serves as both a Fire Brigade Panel and an Information Panel.

The Fire Brigade Panel is identical to the *upper section* of the operator panel (refer to chapter 2.3).

The Information Panel serves as an *indication device only*.

The LED indicators are identical to the ones on the upper section of the operator panel, but the panel provides different buttons (refer to chapter 2.3).

In addition, AutoSafe comprises standard loop panels; the Fire Brigade Loop Panel BU-110 and the Information Loop Panel BV-110. The functionality/operation (including buttons and indication devices) of these loop panels are, with few exceptions, similar to the Fire Brigade and Information panel, respectively.

The fire alarm control panel is available in three different variants specifically designed for the onshore market (BS-420), maritime market (BS-420M) and petrochemical oil & gas market (BS-420G/BS-420G2).

Functionality:

The BS-420M, BS-420G and BS-420G2 versions meet the requirements of SOLAS Detection Zones.

Only the BS-420G and BS-420G2 versions support PowerLoop (The Autronica loop communication protocol for high power gas and flame detectors).

Name of indicators/buttons:

The name of the indicators and buttons are almost identical for all versions, with some exceptions. Refer to the description in this chapter.

2.1.2 Indication Devices

During normal operation when the power is ON, the Power indicator always displays a steady green light.

Apart from this, only indicators relevant to the actual condition are visible. For example, if a fault is present the fault indicator will have a yellow light.

2.2 Operator Panel

All alarm handling and system features can be configured, controlled and monitored from the operator panel (*Fire Alarm Control Panel BS-420 / Operator Panel BS-430*).

Each operator panel is assigned to one *Operation Zone* (refer to «Zonal Definitions» in Appendix). Relative to its own zone, an operator panel is *local*, while it is *remote* to operation zones which are not encompassed by the local zone. All events and actions occurring in a particular operation zone must be handled from a *local* operator panel.

The operator panel displays information on events occurring in all operation zones. However, the type of events and the level of details of the given information depends on which operation zone the information is related to. Local panels will list all detection zones in fire alarm state. Remote operator panels will list remote alarms only, and function as «indication only» devices.

The operator panel consists of two main sections. The upper section, and the lower section which is the *Operator Part*.

The standard onshore market version BS-420 is shown below.



2.3 Repeater Panel BU-BV-420

The Repeater Panel BU-BV-420 serves as both a Fire Brigade Panel and an Information Panel.

Settings on a dipswitch determines the type of panel. Each panel type is described in the following chapters.

2.3.1 Fire Brigade Panel

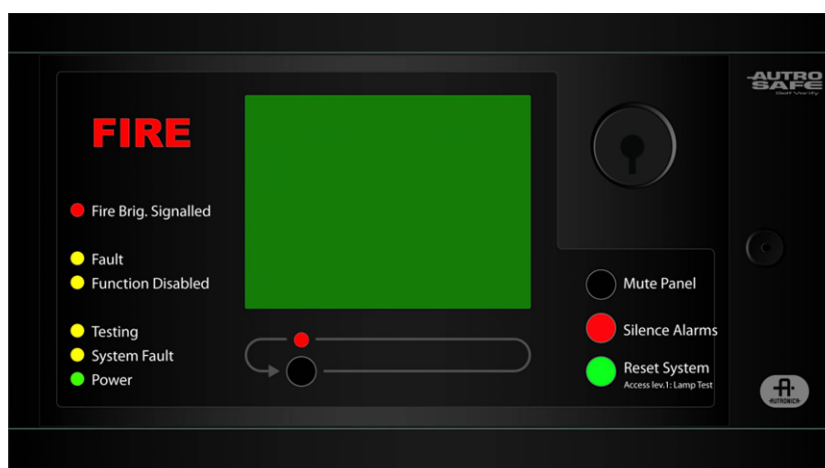
The Fire Brigade Panel is intended to give information related to fire alarms in the relevant *Operation Zone* and allow the fire brigade to operate fire alarms. The panel is identical to the *upper section* of the operator panel.

The panel is used to silence and resound sounders, and to reset fire alarms within a defined operation zone.

Each panel is assigned to one operation zone. Relative to its own zone, a panel is local while it is remote to all other operation zones. All events and actions occurring in a particular operation zone must be handled from a local panel.

The whole system can be reset from this panel, provided that the panel's relation to the operation zone is defined this way.

The panel displays information on fire alarms occurring in all operation zones. However, the level of details of the given information depends on which operation zone the information is related to.

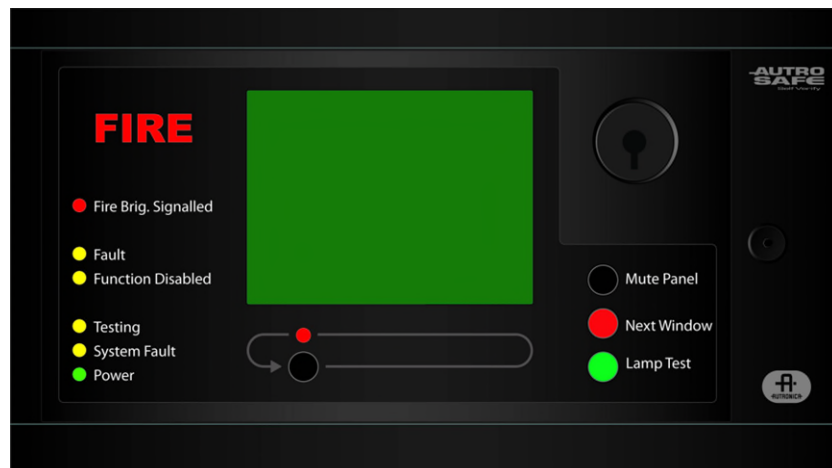


2.3.2 Information Panel

The Information Panel is intended to give additional information related to the defined *Operation Zone(s)*. The LED indicators are identical to the ones on the upper section of the operator panel, but the panel provides other buttons (Next Window and Lamp Test).

Information Panels are distributed throughout the system to give the general public information related to fire alarm situations. The panels serve as *indication devices only*.

The panel can display minimum information on fire alarms, warnings, faults, disablements and tests. No further details are available. Each of the conditions are presented in a separate condition window, in *one* mode only.



2.4 Loop Panels

2.4.1 Fire Brigade Loop Panel BU-110

From the Fire Brigade Loop Panel BU-110 it is possible to mute the panel's internal buzzer, silence/resound sounders/bells etc. and reset the system.

The panel can be configured (by means of the configuration tool) to show detection zones and point information in an alarm situation, or detection zones only.

Only points in alarm are shown in the display. Faults and disablements are indicated by LED indicators. The total number of detection zones in alarm will always be shown.

By operating the More Events Button, it is possible to scroll through and view detailed information of the first 64 alarms (or 32 first alarms, if the panel is configured to show both detection zones and points).



2.4.2 Information Loop Panel BV-110

The Information Loop Panel BV-110 serves as an indication device only. It provides information related to the defined operation zone(s).

The panel can be configured (by means of the configuration tool) to show detection zones and point information in an alarm situation, or detection zones only.

By operating the More Events Button, it is possible to scroll through and view detailed information of the first 64 alarms (or 32 first alarms, if the panel is configured to show both detection zones and points).

The panel can store up to 6 faults and 6 disablements. The total number of faults and disablements in the system will always be shown, but it is only possible to scroll through and view detailed information of the first 6 faults and disablements (using the More Events Button).

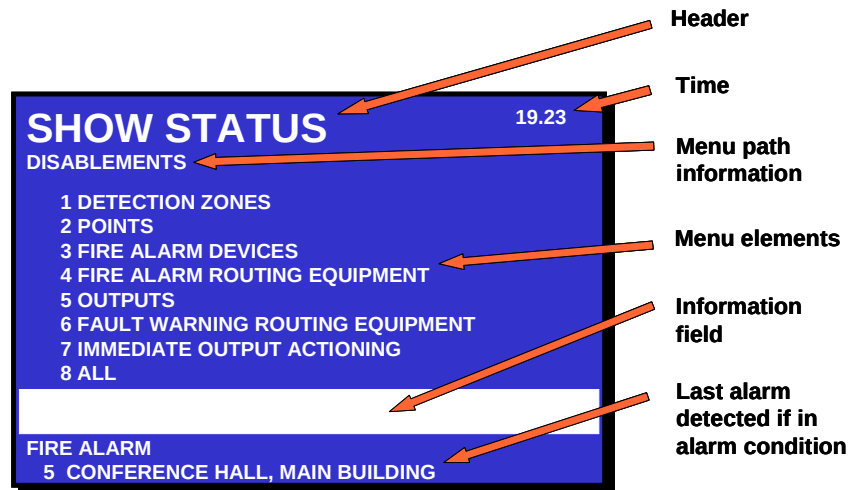


2.5 The Menu Display

2.5.1 Operator Panel

This chapter applies to the BS-420 / BS-430 panels, as well as the BU-BV-420 panels.

During Normal Operation, the backlight in the menu display is always on. The menu display has 16 lines of 40 characters. The display is divided into several display windows showing different types of information.



2.5.2 Loop Panels BU-110 and BV-110

During normal operation, the backlight in the display is always on.

The panel display has 8 lines of 40 characters.

The uppermost line shows the Header, for example ALARMS and the total number of alarms is indicated on the right hand side (inverted). The next 6 lines show alarms, including the last alarm (line 7). Line 8 shows the footer "Access Level 1" (inverted).

2.6 Adjusting Display Contrast and Backlight

2.6.1 Contrast

The display contrast can be adjusted (applies to operator panels BS-420/BS-430 with SW version 4.8.0 or later, and Repeater Panel BU-BV-420).

- To increase the contrast, press and hold down the More Events button, while pressing the red Silence Alarms button (or Next Window button) .
- To decrease the contrast, press and hold down the More Events button, while pressing the green Reset System button.

2.6.2 Backlight

The backlight can be adjusted (applies to operator panels BS-420/BS-430, Repeater Panel BU-BV-420 and loop panels BU-110 and BV-110).

Operator panels BS-420/BS-430 and Repeater Panel BU-BV-420:

In order to adjust the backlight, a small preparation may be required, depending on whether the backlight has been adjusted before or not.

- Press and hold down the Mute Panel button, while pressing the green Reset button several times

When the backlight is decreased below a certain level, the display will invert (white letters on black background). Oppositely, when it is increased beyond a certain level as described below, the letters will change to black on white background. During normal operation, the backlight will automatically adjust according to the outside light (if this is configured: "Automatic Backlight ON/OFF").

If the backlight changes at once, no preparation is required, and you can decrease and increase the backlight as described below.

- If not, press and hold down the Mute Panel button, while pressing the green Reset button until the backlight changes.

Now you can adjust the backlight as follows:

- To increase the backlight, press and hold down the Mute Panel button, while pressing the red Silence Alarms button
- To decrease the backlight, press and hold down the Mute Panel button, while pressing the green Reset System button

Loop panels BU-110 and BV-110:

- Toggle the backlight between high and low by covering the light sensor with a finger, then holding the Silence Alarm button for 5 seconds until an audible beep is heard (access level 1)

2.7 Indication Devices

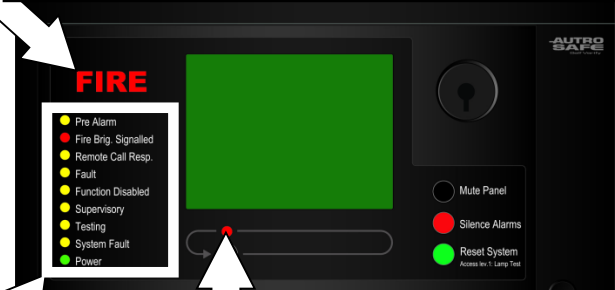
2.7.1 Upper Section

● FIRE (/ ALARM)

The red fire indicator shows that one or more detection zones within the operating zone of the Operator Panel are in the fire alarm state.

- **Blinking red light:**
In the event of a fire alarm. The Fire Alarm Devices (FAD) are still in active state.
- **Steady red light:**
All FADs activated by the fire alarm condition have been deactivated by operating the Silence Alarms button. The control and indicating equipment still remain in the fire alarm condition.

Note that there are four market variants of this panel (BS-420/BS-420M/BS-420G/BS-420G2). The Indication Devices shown in this handbook deals with the Indication devices for the standard panel BS-420.



● Prealarm.

Pulsing yellow light when one or more detection zones are in the prealarm state.

NOTE: This indicator was enabled in June 2026.

● Fire Brig. Signalled (/ Ext. Output Activated)

Steady red light when the message is sent to the Fire Brigade.

● Fault

The yellow Fault Warning indicator shows the presence of a fault within the operation zone of the operator panel.

- **Blinking light**
Unaccepted fault warnings exist.
- **Steady light**
All fault warnings are accepted.

● Function Disabled

Steady yellow light when one or more of the following components within the operation zone of the operator panel are in the disabled state:

- function delayed
- individual points
- detection zones
- alarm zones
- Fire Alarm Devices, Fire Alarm Routing Equipment, Fire Protection Equipment and Fault Warning Routing Equipment.

● Testing

Steady yellow light when one or more detection zones within the operation zone of the operator panel have been manually set to the test state.

● System Fault

Steady yellow light when a *system* fault within the operating zone of the operator panel is present.

● Power

Steady green light when power is ON.

● More Events

In the event of more than one alarm.

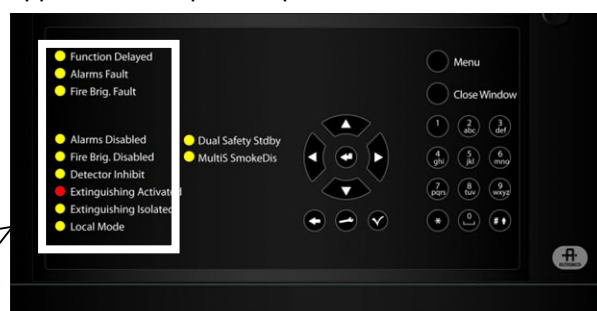
The red More Events indicator shows that several detection zones within an operating zone are in the fire alarm state.

- **Blinking red light:**
In the event of a fire alarm. The Fire Alarm Devices (FAD) are still in active state.
- **Steady red light:**
The Silence Alarms button has been pressed. All FADs activated by the fire alarm are no longer active. The control and indicating equipment still remain in the fire alarm condition.

Note that the name of the Fire Brigade Loop Panel's indicators deviate from the Fire Brigade Panel: "Fire Brigade Signalled" is "Alarm Routing Activated" "Test" is "Testing"

2.7.2 The Operator Section (lower left section)

Applies to the operator panels BS-420 / BS-430.



● Function Delayed

Steady yellow light indicates that *Immediate Output Actioning* has been disabled (manual operation in Menu Mode), i.e. a delay period is active for Fire Alarm Devices (FAD) or Fire Alarm Routing Equipment (FARE). Configurable.

● Alarms Fault

Yellow light when a fault is detected on one or more Fire Alarm Devices (FAD). The *Fault* indicator will also have a yellow light. Blinking (not accepted) / Steady (accepted).

● Fire Brig. Fault (/ Ext. Output Fault)

Yellow light when a fault is detected on Fire Alarm Routing Equipment (FARE). The *Fault* indicator will also have a yellow light. Blinking (not accepted) / Steady (accepted).

● Alarms Disabled

Steady yellow light when one or more Fire Alarm Devices are disabled. The *Function Disabled* indicator has also a steady yellow light.

● Fire Brig. Disabled (/ Ext. Output Disabled)

Steady yellow light when the signal to Fire Alarm Routing Equipment (FARE) has been disabled. The *Function Disabled* indicator has also a steady yellow light.

● Detector Inhibit

Steady yellow light if any points are inhibited.

● Extinguishing Activated

Steady red light if the extinguishing media is confirmed released.

● Extinguishing Isolated

Steady yellow light if the FIELD OVERRIDE SWITCH extinguishing media is overridden. The *Function Disabled* will also turn ON.

● Local Mode

Blinking yellow light if contact to the presentation system is lost. The *Fault* indicator will also blink and a fault message will be shown.

Both indicators will have a steady yellow light if the fault message is accepted. If a connection has been lost and is repaired again, a fault message is shown and the fault message and both indicators will blink until the fault is accepted, on which both indicators will be turned off and the fault will disappear.

2.7.3 The Operator Section (lower right section)

Applies to operator panels BS-420 / BS-430.



● Dual Safety Stdby

Applicable to systems using the Dual Safety concept; a system with redundant loop control consisting of a Primary and Secondary System.

- Steady yellow light:
The panel is in *Standby Mode*, i.e. this panel does not control the detection loops. The panel(s) in the other system controls the detection loops and is in *Active Mode*.
- Blinking light: the panel does not control all detection loops/loop units, and/or loop control is being transferred

● MultiS SmokeDis

The MultiSensor provides both smoke and heat detection. The smoke detection can be disabled, thus only heat detection is present. The indicator has the following behaviour:

- Steady yellow light:
The smoke detection is disabled.

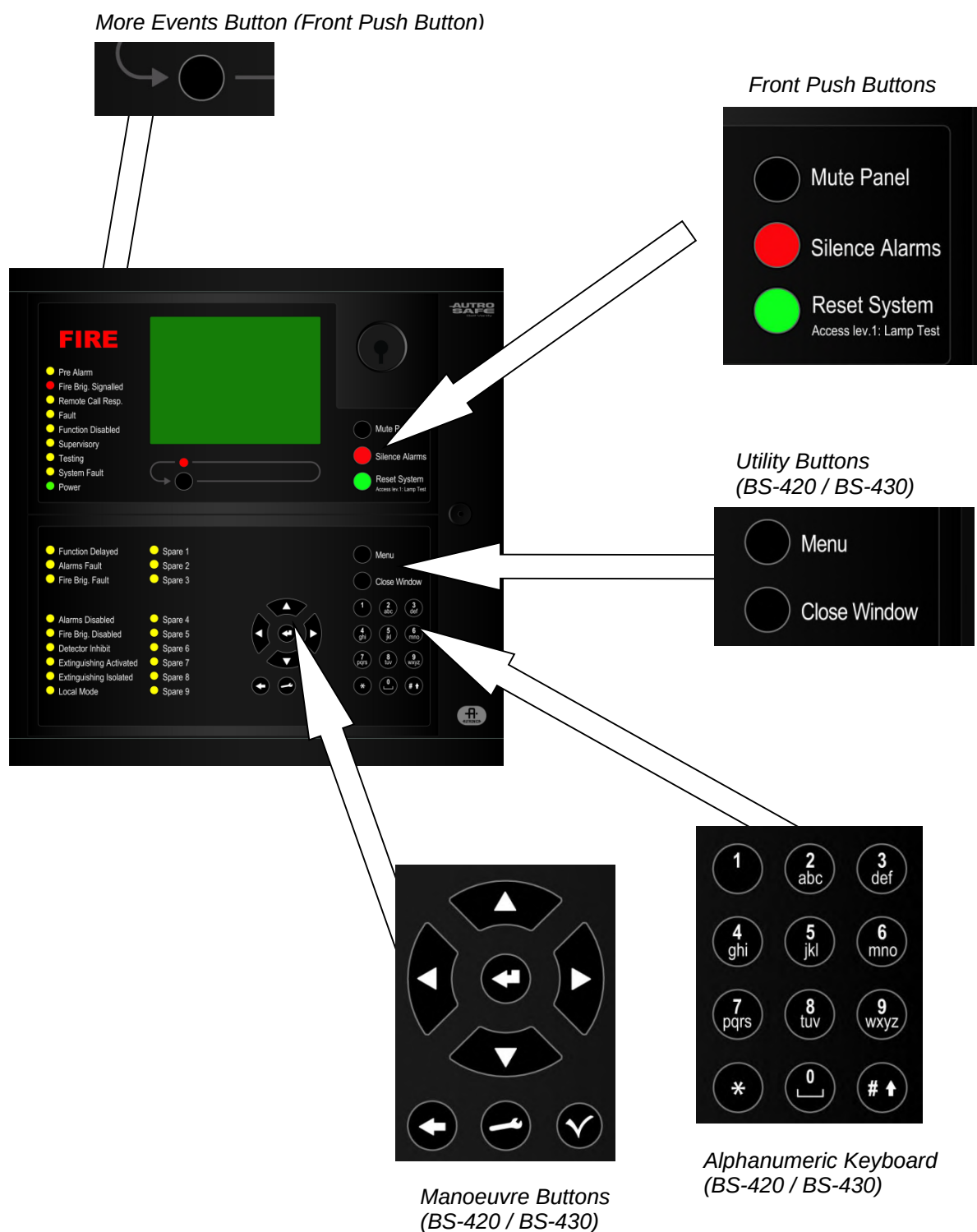
● Active Sensors

The Active Sensors LED applies to configurations with fan control functionality.

- Steady yellow light.
At least one Smoke Sensor detects smoke.

2.8 Operating Buttons

2.8.1 Operator Panels (upper and lower section) / Fire Brigade Panel (upper section)



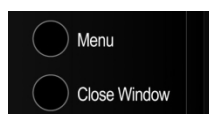
2.8.1.1 Front Push Buttons



Front Push Buttons			
Button		Designation	Access Level
	Mute Panel (black)	Used to mute the panel. Timeout. (/Mute Int. Buzzer). (Fire Brigade Loop Panel: The Mute Panel button is named Silence Buzzer. The Backlight Brightness can be toggled between high and low by holding the Silence Buzzer button for 5 seconds until audible beep (access level 1).	1
	Silence Alarms (red)	Used to silence Fire Alarm Devices (FAD) and cause lamps to go steady. Timeout.	2
	Reset System (green)	Applies to operator panel and Repeater Panel defined as a Fire Brigade Panel (switch setting). Used to reset the system. In addition, a lamp test can be performed by pressing and holding the Reset button for at least 5 seconds. The lamp test is performed in access level 1 (no use of key).	2
	More Events (black)	Used to scroll downwards among events in currently active window (scroll page by page). Possible only if there are more alarms than possible to display in the window.	2

2.8.1.2 Utility Buttons

Applies to the BS-420 / BS-430.



Utility Buttons		
Button		Designation
	Menu (black)	Used to toggle between Operation Mode and Menu Mode. Operation Mode (operate button) >> Menu Mode (operate button or time-out) >> Operation Mode.
	Close Window (black)	Used to move back one level / show previous picture if the display is not showing information on the top level.

2.8.1.3 Alphanumeric Keyboard

The alphanumeric keyboard (Fire Alarm Control Panel/Operator Panel) includes the numbers 1 to 9, the letters a to z and other feature keys (see table below).

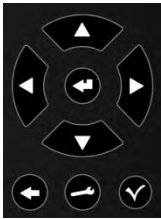
Applies to the BS-420 / BS-430.

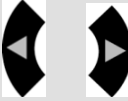


Alphanumeric Keyboard		
Button		Designation
	Star key (asterisk key)	<i>Not yet supported.</i> Special characters key.
	0 Space key	The number 0. Used to enter a space between words.
	Number sign key / Pound key Arrow up	<i>Not yet supported.</i> Used to toggle between letters and numbers. <i>Not yet supported.</i> Used to toggle between upper and lower case letters.

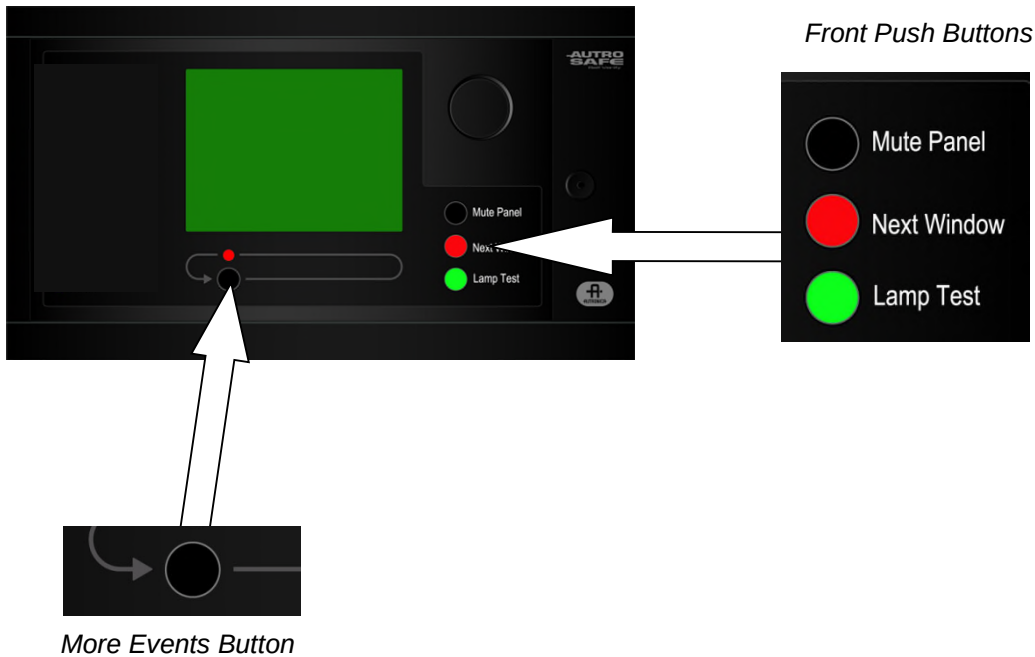
2.8.1.4 Manoeuvre Buttons

Applies to the BS-420 / BS-430.



Manoeuvre Buttons		
Button	When accessible (mode)	Description
 Enter	When the cursor is on a list item.	The properties of a selected unit is shown. The selected menu page on the display is shown if the item is a submenu. Accepts the selected function if the item is a function.
	When the cursor is on an item in a single select list.	Used to select/approve a selection (parameter) or return.
 Up/down arrow buttons		Used to scroll lines up or down. Used to change numerical values.
 Back / Cancel		Used to cancel an input character (backspace).
 Left/right arrow buttons		<i>Not yet supported.</i> Used to scroll to the left or to the right. Used to highlight text for copy, cut, etc.
 Select		<i>Not yet supported.</i>
 Function		<i>Not yet supported.</i>

2.8.2 Information Panel



Front Push Buttons			
Button		Designation	Access Level
	Mute Panel (black)	Used to mute the panel, i.e. silence the internal buzzer. Timeout. (Information Loop Panel: The Mute Panel button is named Silence Buzzer. The Backlight Brightness can be toggled between high and low by holding the Silence Buzzer button for 5 seconds until audible beep (access level 1).	1
	Next Window (red)	Used to step to the next condition window (only windows with active information are displayed). After all windows have been shown, the first window is displayed. When a timeout on no operation has been ended, the highest prioritized window is displayed.	1
	Lamp Test (green)	Used for testing the LED indicators. All indicators are lit for 5 seconds, and the LCD (display) will show a pattern to verify all pixels (will turn all white, then all black).	1
	More Events (black)	Used to scroll pages of information related to the selected condition window, if there are more events than the display can show.	1

2.9 Internal Buzzer

All panels provide a buzzer which is activated differently depending on the panel in question. See the following chapters for information on the buzzer behaviour for the different panels.

Generally, each condition may have its own *sound pattern*. If more than one condition is present simultaneously, the buzzer will reflect the condition which has the highest priority.

The buzzer can be silenced by pressing the *Mute Panel* button.

If the reason for the buzzer signal still exists, the buzzer will resound after a predefined time.

2.9.1 Operator Panel BS-420/BS-430

The internal buzzer on the BS-420/BS-430 is activated in the cases of:

- System Fault
- Faults
- Alarm
- Prealarm
- Early Warning

2.9.2 Repeater Panel BU-BV-420

The internal buzzer on the BU-BV-420 panel (configured by means of dip-switches as either an Information Panel or a Fire Brigade Panel) is activated in the cases of:

- System Fault
- Alarm

2.9.3 Fire Brigade Loop Panel BU-110

The internal buzzer on the BU-100 panel is activated in the cases of:

- Alarm
- Internal System Fault
- Communication Fault

2.9.4 Information Loop Panel BV-110

The internal buzzer on the BU-100 panel is activated in the cases of:

- Alarm
- Fault
- Internal System Fault
- Communication Fault

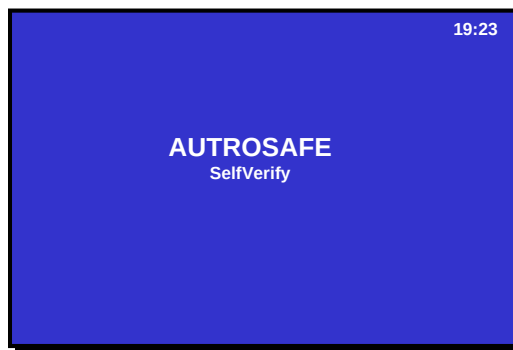
3. Operation Mode

3.1 Introduction

The operator panel can be in either *Operation Mode* or *Menu Mode*.

When no one is operating the panel and no button has been pressed, the panel will always be in *Operation Mode*.

The display may look as follows in the panel's idle state.



Note that an alarm, a disablement, test or fault will *always* be indicated on the display when such events occur.

NOTE:

All events that may occur are presented in *Operation Mode*. All handling of events, i.e. *Silence Alarms, Accept and System Reset* takes place in *Operation Mode*.

It is possible to enter *Operation Mode* in two different ways.

- initial mode (start up) - idle state
- when pressing the menu button in *Menu Mode*, which will leave menu mode from all menu levels

3.2 Conditions in Operation Mode

In Operation Mode, the system can be in *quiescent* condition (lowest priority), or the system can be in one or any combination of the following *conditions*:

- fire alarm condition (highest priority)
- fire warning condition (*including* prealarm and early warning)
- fault warning condition
- disablement condition
- test condition

3.3 Alarm Levels

A detector may signal different levels of alarm, indicating the amount of smoke or gas currently present. These are;

- Fire Alarm Level (the highest level)
- Fire Warning, *including*:
 - Prealarm Level
 - Early Warning

Whenever a detector detects a transition from one alarm level to another, this event is reported to the system as an Early Warning, Prealarm or Fire Alarm signal, which in turn will initiate the appropriate actions.

3.4 Access Levels

All user interface controls are classified as belonging to one of the four different access levels described below:

Access Level	Access Remedy	Description
1	No key or password required.	Accessible by members of the general public. All mandatory indications are visible at access level 1 without prior manual intervention.
2 	Access by key.	Accessible by persons having a specified responsibility for safety.
3	Password restricted.	Accessible by persons trained and authorized to do reconfiguration of site specific data and maintenance according to the manufacturer's published instruction.
4	Mechanical tool.	Accessible by persons doing repair work and changing firmware.

3.5 Configurable Alarm Presentations

The alarm presentation is configurable. By default alarms are presented with both zonal indication (detection zones) and point indication. An option is zonal indication only, with the possibility to view point information by operating a button (Action Digit 1: Show Points).

Chapter 3.6 deals with the default presentation of alarms.

Chapter 3.7 and 3.8 deals with the optional alarm presentation (zonal indication).

The optional alarm presentation with zonal indication is used throughout the handbook.

The different *events*, for example, «In the Event of a Fire Alarm», are presented in Operation Mode.

3.6 Alarm Presentation with Zonal and Point Indication (default)

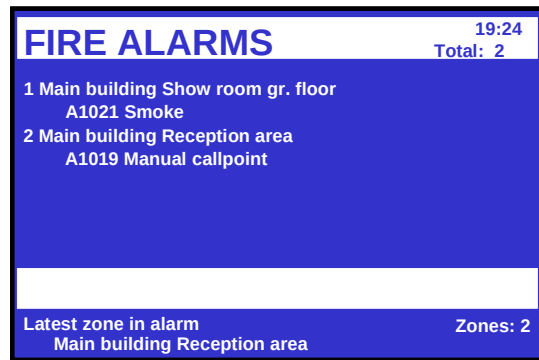
By default alarms are presented with both zonal indication and point indication.

“FIRE ALARMS” is highlighted in the upper left corner of the display.

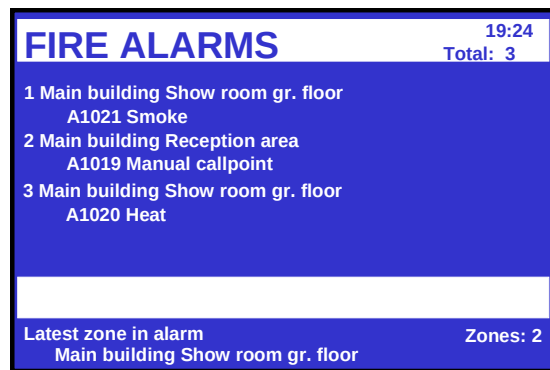
In the example below an optical smoke detector in the “Main building Show room gr. floor” (1 zone) issues an alarm signal.



A manual call point in the reception area is activated. A total of 2 alarms from 2 different zones are now shown in the display.



The heat detector in the “Main building Show room gr. floor” issues an alarm signal. A total of 3 alarms from 2 zones are shown in the display.

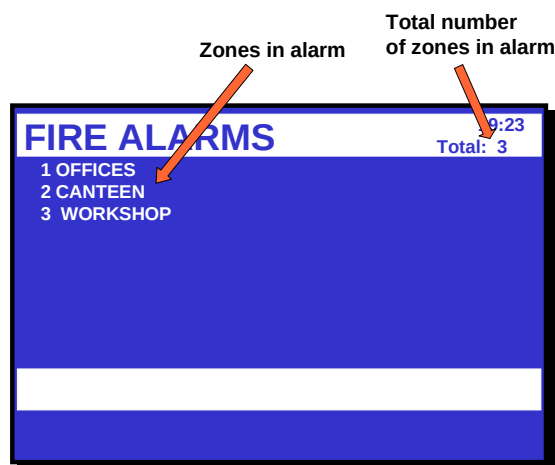


3.7 Alarm Presentation with Zonal Indication (optional)

Note that the optional alarm presentation with zonal indication is used throughout the handbook.

FIRE ALARMS, for example, is shown highlighted in the upper left corner of the display.

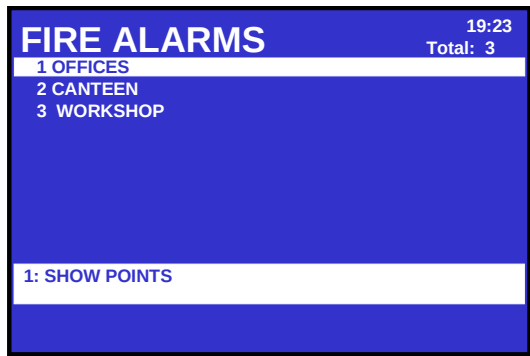
The example below shows a situation where three zones are in alarm state. The total number of zones in alarm is shown in the upper right corner.



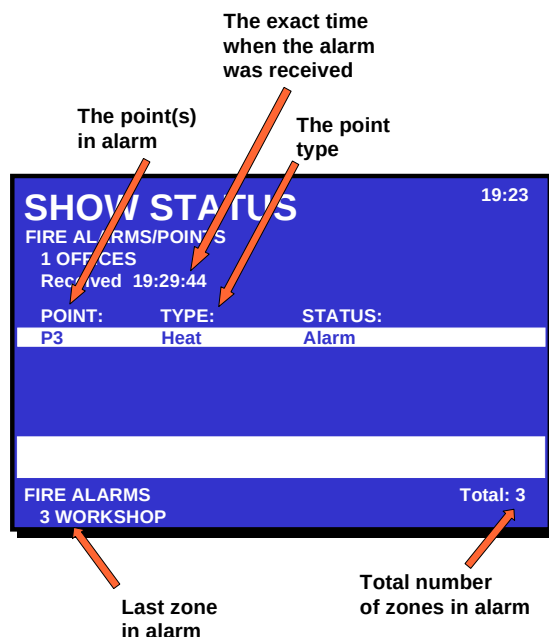
3.8 How to View Point Information

Note that the optional alarm presentation with zonal indication is used throughout the handbook. The default alarm presentation provides both zonal and point information.

To be able to select among *detection zones in alarm*, for example, «In the Event of a Fire Alarm», you simply press the ENTER button. You can now use the up/down arrow buttons to select the wanted zone.



To view *points in alarm* for the zone you have selected (highlighted), you simply press digit 1 (SHOW POINTS, see *Action Digits*, 3.10), and the following screen picture will appear (example):



Here (*in this example*) you can view the points in alarm and the type of point (detector type, manual call point). The arrow buttons are used to move up and down in the list of points.

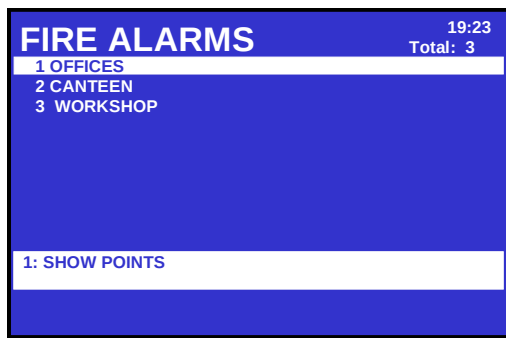
The Close Window button is used to go one step backwards (at any time).

NOTE: If you have entered SHOW STATUS for information on points in alarm, you have to press the Close Window button to re-enter Operation Mode *in order to activate the Silence Alarms button and the Reset button.*

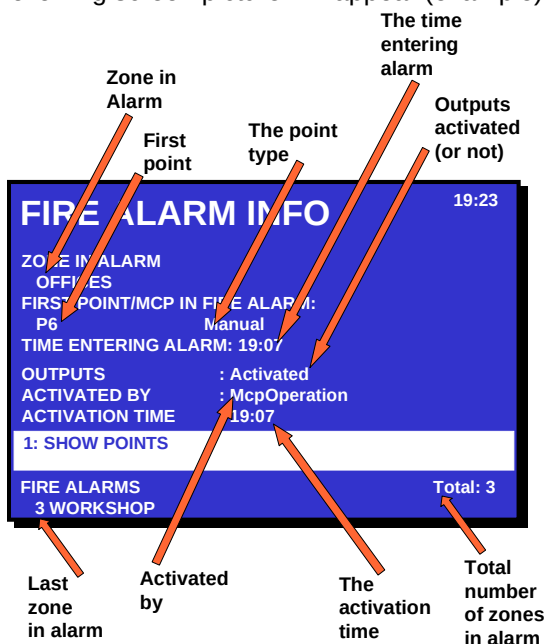
3.9 How to View Detailed Zonal Information

Note that the optional alarm presentation with zonal indication is used throughout the handbook. The default alarm presentation provides both zonal and point information.

To be able to select among zones in alarm, fault or test state, you simply press the ENTER button. You can now use the up/down arrow buttons to select the wanted zone (in this example *Fire Alarms*).



To view *detailed zonal information* for the zone you have selected (highlighted), you simply press the ENTER button once more. The following screen picture will appear (example):



Detailed zonal information will be available. In the *example* above you can view the zone in alarm, the first point in fire alarm, the time entering alarm, the activation state of outputs, what triggered the alarm (for example, Manual Call-point operation) and the activation time. You can also move directly to SHOW POINTS (press digit 1).

The Close Window button is used to go one step backwards (at any time).

NOTE: If you have entered SHOW STATUS for more detailed point information, you have to press the Close Window button to re-enter Operation Mode *in order to activate the Silence Alarms button and the Reset button.*

3.10 Action Digits in Operation Mode

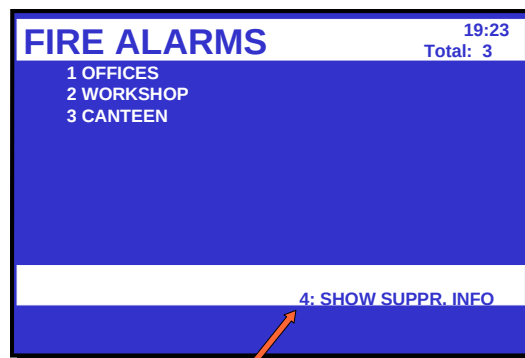
When operating in Operation Mode, special Action Digits will appear in the highlighted field (Information Field) at the lower part of the display. These digits show at any time which action the operator may perform.

Digits 1 to 4 on the alphanumeric keyboard are dedicated for the different actions (Action Digits). The type of action depends on the current state of the system.



For example, digit 1 in the event of a fire alarm (after silencing alarms) represents RESOUND.

The example below shows a situation where Action Digit 4 (SHOW SUPPR. INFO = suppressed information) is available.



Action Digit

In Appendix you will find a table providing a complete list of all *Action Digits* that may appear in *Operation Mode*.

3.11 Resounding the Internal Buzzer

After pressing the MUTE PANEL button in an alarm condition, the internal buzzer will automatically be resounded in the following cases:

- if any *new* event occurs (for example, a detection zone enters the Fire Alarm state)
- after a timeout period if the cause for making it sound is still present (configurable)

3.12 Resounding Fire Alarm Devices

When pressing the SILENCE ALARMS button in the event of an alarm, all fire alarm devices (FAD) within the operation zone of the operator panel will be deactivated. The red Fire Alarm indication lamp will switch from blinking to steady light.

At this stage, the resound timer will start. The resound timer will restart on each operation of the SILENCE ALARMS button.

To *manually* resound the alarm zones, Action Digit 1, which represents RESOUND, can be pressed.

The alarm zones are *automatically* resounded to their alarm states on timeout (configurable) of the SILENCE resound timer.

3.13 Resetting the System

In order to reset the system by pressing the RESET button, all Fire Alarm Devices (FAD) have to be silenced / deactivated using the SILENCE ALARMS button. Otherwise the reset operation will be rejected without having any effect on system behaviour (configurable).

3.14 Alarm Disablement (AlarmDisable)

If there are points within an operation zone still signalling a Fire Alarm, an alarm disablement will take effect.

Alarmdisabling may or may not be required to be confirmed by the operator (configurable).

- If confirmation is *not* required, all points still signalling a Fire Alarm, are automatically disabled.
- If confirmation is required, a list of points in alarm is presented on the display. To confirm automatic disablement, the ENTER button must be pressed within 5 seconds (configurable).

All alarm-disabled detectors can be enabled at this stage by pressing Action Digit 3, which represents REACTIVATE .

3.15 Suppressed Information

When operating in Operation Mode, the message SHOW SUPPR. INFO may appear in the highlighted field at the lower part of the display. This indicates that there are conditions that are active, but suppressed, i.e. not shown on the display.

To reveal suppressed information, Action Digit 4, representing SHOW SUPPRESSED INFO, can be pressed.

3.16 Disablement Sources

3.16.1 Overview

The AutoSafe Interactive Fire Alarm System supports the following *disablement sources*:

- **Individual**
A unit is disabled by an individual command issued to the specified unit. Applicable to all units with disable capability.
- **Loop**
A unit is disabled by its corresponding loop being disabled. Applicable to Points, FADs and FPEs connected to loops (DID, remote silence / reset).
- **Zone**
A point is disabled by a command to its corresponding detection zone, affecting all Points in the detection zone, including any manual call points. Applicable to Points only.
- **Disable Input Unit**
A point is disabled by a command from a Disablement Input Unit via its corresponding detection zone. Applicable to Points only.
- **Master Zone**
equivalent with Zone, except from that the command is issued to AutoSafe over the AutoCom connection. Applicable to Points only.

3.16.2 Point Disablements

A general rule is that a Point may be disabled by one or more disablement sources simultaneously. To be enabled, the Point must be enabled from all these disablement sources.

Example:

A Point is disabled from a Zone (Detection Zone disable command issued from an Operator Panel) and from a Disable Input Unit. For the Point to become enabled, a DZ enable command must be issued from the Operator Panel and the Restore button on the Disable Input Unit must be pressed.

Exceptions to this general rule is as follows:

- *Individual* enablements will override and remove all other disablements but Loop disablements. The reason for this is that an individual Point disablement should be regarded as a sort of service command used in exceptional circumstances, disabling of Points is usually done via its Detection Zone.
- *Master Zone* enablements will override and remove all Master Zone, Zone and Disablement Input Unit disablements.

3.16.3 Other Unit Disablements

Other units (than Points) are only affected by *Individual* and *Loop* disablements.

Note that in contrast to Point disablements, there is no memory in the system in conjunction with *Loop* disable / enable operations: When a loop is disabled and then enabled, any disablements which may have existed before the loop disable will be lost. In other words, *all* loop units (except Points which have this memory function, see above) will be enabled when enabling the corresponding loop.

3.17 Alarm Handling - A Typical Situation

The handling of a fire situation will typically contain the following phases:

- One or more detection zones are issuing Prealarm signals (Accept).
- One or more of these detection zones will go into Fire Alarm, activating Fire Alarm Devices (FAD) and Fire Protection Equipment (FPE).
- When the operator has investigated the cause of the alarm, the activated Fire Alarm Devices (FAD) may be deactivated when the situation is under control (Silence Alarms).
- If the deactivation of the Fire Alarm Devices (FAD) shows to be erroneous, the Fire Alarm Devices (FAD) may be resounded (Resound).
- After silencing the Fire Alarm Devices (FAD), the system may be reset. Reset will delete all indications of the fire situation and, if physically possible, deactivate the Fire Protection Equipment (FPE) (Reset).
- The reset operation includes alarm disabling of all those points within the operation zone of the operating panel still signalling Fire Alarm (must be confirmed by the operator). Alarm disabling may later be cancelled and the points made to retransmit their alarm level (Reactivate).

3.18 Different Types of Detection Zones

3.18.1 Introduction

When handling events in Operation Mode, it is important to be aware of differences regarding the detection zone configuration (configured by using the AutoSafe Configuration Tool).

The type of the specific detection zone as well as the type of point (detector or manual call point) will determine how the system responds to the signal - with respect to *action*.

The system has the following types of detection zones:

- *Immediate Action* detection zone
- *Coincidence Action* detection zone
- *Delayed Action* detection zone
- *Delayed Coincidence* detection zone
- SOLAS (Safety of Life at Sea) detection zone

3.18.2 Immediate Action Detection Zones

A signal from an *Immediate Action* detection zone, will initiate all actions immediately, without any delay.

Immediate Action applies to:

- Fire Alarm Devices (FAD)
- Fire Alarm Routing Equipment (FARE)
- Fire Protection Equipment (FPE)

3.18.3 Coincidence Action Detection Zones

A fire alarm signal from a *single detector* in a *Coincidence Action* detection zone, will initiate *no* actions, i.e. there will be no *actioning of outputs* to;

- Fire Alarm Devices (FAD)
- Fire Alarm Routing Equipment (FARE)
- Fire Protection Equipment (FPE)
- *provided that FAD, FARE and FPE are set to Qualified Action (see next page)*

At least two detectors in the same detection zone must be in alarm state before actions are initiated.

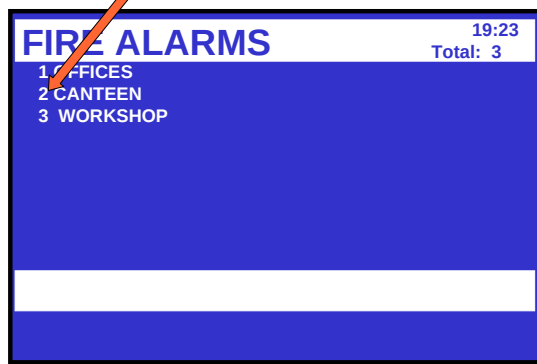
Note that an activation of a manual call-point in a coincidence action detection zone will *always* initiate actions.

In the display, the alarm number for a detection zone will remain steady until a new point in the same zone enters alarm state.

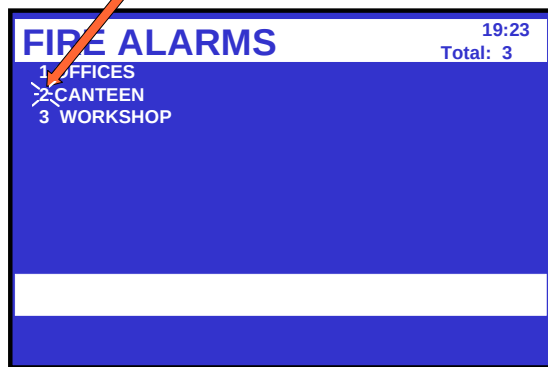
Note that the optional alarm presentation with zonal indication is used throughout the handbook.

In the example below, the detection zone 2 CANTEEN is configured as a zone with coincidence action.

Steady number (2) if only one detector in this zone is in alarm state.



Blinking number (2) if two or several points or one manual call point in the same zone are in alarm state.



3.18.4 Delayed Action Detection Zones

When the operator panel receives a fire alarm signal from a point in a Delayed Action detection zone (configurable), the actioning of outputs to Fire Alarm Devices (FAD) and/or Fire Alarm Routing Equipment (FARE) can be delayed.

In an alarm situation, the actioning of outputs will be delayed when;

- the detection zone has been defined as a Delayed Action detection zone (configurable)
- the point(s) in this Delayed Action detection zone has been set to point delay ON (the default configuration)
- *Immediate Output Actioning* has been disabled (in the Disable menu, refer to *How to Disable Immediate Output Actioning*, page 79).
- the actual FAD / FARE has been set to *Qualified Action* (configurable)

Note that activation of a *manual call-point* will normally (point delay OFF) give immediate output actioning even though the immediate output actioning has been disabled (configurable).

The operation of delays to outputs to Fire Alarm Devices (FAD) and Fire Alarm Routing Equipment apply to:

- detectors and/or
- manual call-points and/or
- signals from specific zones

The delay is divided into two delay periods, *Initial delay*, T1 (configurable) and *Prolonged Delay*, T2 (configurable).

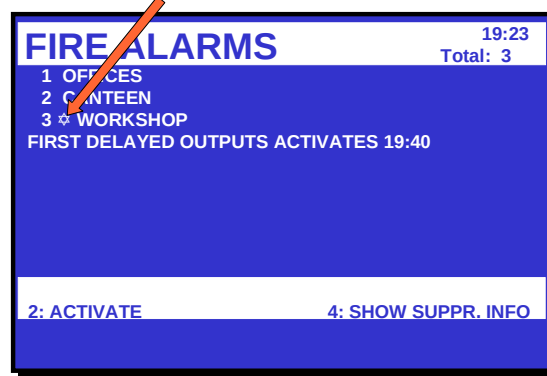
The (T1) delay period is started when a Fire Alarm signal from a point is received. Actions will be initiated after the T1 delay period has expired. Pressing Action Digit 4, which represents PROLONG DELAY, will terminate T1 and the delay period T2 will start.

If one or more Delayed Action detection zones have entered the Fire Alarm state and are in their T1 or T2 periods, the delayed actions can be immediately initiated by pressing Action digit 2, which represents ACTIVATE. Activation of a manual call point with the Operation Zone will also give immediate action.

In the display, a detection zone with its outputs delayed is indicated by the character star in front of the zone text. The time for the first delayed action is also displayed.

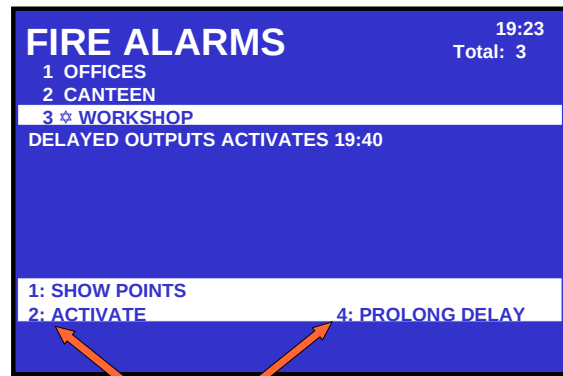
Note that the optional alarm presentation with zonal indication is used throughout the handbook.

Delayed Action Indication (☆)



After pressing the ENTER button and selecting the delayed action zone, you can;

- press Action Digit 1 to *show the points in alarm*
- press Action Digit 2 to *activate the alarm*
- or
- press Action Digit 4 to *prolong the delay*.



Action Digits

3.18.5 Delayed Coincidence Detection Zones

Detection zones configured as *Delayed Coincidence Detection Zones* have the following properties:

In Day Mode (Immediate Output Actioning is disabled), outputs that are configured to be activated by these detection zones will operate according to their actual configuration, i.e. *Silent Alarm*, *Small Alarm* or *Large Alarm* as follows:

When a fire alarm signal from the first detector in alarm is received, the following will occur:

1. The detection zone will enter the *Silent Alarm* state, and all FPE outputs configured to be activated on Silent Alarm will be activated. The (T1) delay period will start.
2. When the T1 delay period expires, the detection zone will enter the *Small Alarm* state. All FPE outputs configured to be activated on Small Alarm will be activated. The (T2) delay period will start.
3. When the T2 delay period expires, the detection zone will enter the *Large Alarm* state. All FPE outputs configured to be activated on Large Alarm will operate.

Note that, at any time, if an alarm from a second detector within the same detection zone is received, the detection zone will always enter the Large Alarm State. This will mean that all (not yet activated) FPE's configured to be activated on Silent, Small and Large Alarm will be activated.

Pressing the reset button during a delay period will terminate the delay period (T1 or T2).

In Night Mode (Immediate Output Actioning is enabled), outputs are always activated on the first detector in alarm and the system will always enter the Large Alarm state. As with Day Mode this will mean that all (not yet activated) FPE's configured to be activated on Silent, Small and Large Alarm will operate.

Note that when a *manual call-point* (point delay OFF) is activated, or when a Heat Detector (point delay OFF) sends an alarm signal, a Delayed Coincidence detection zone will always enter the Large Alarm state directly, regardless of Day or Night Mode.

In an alarm situation, the actioning of outputs will behave as described above, provided that;

- the detection zone has been defined as a Delayed Coincidence detection zone (configurable)
- and*
- the point(s) in this Delayed Action detection zone has been set to point delay ON (the default configuration)

3.18.6 Solas Detection Zones

When the operator panel receives a fire alarm signal from a point in a SOLAS - *Safety of Life at Sea* - detection zone (configurable), all actions will be initiated after a programmed delay has expired.

The (T1) delay period is started when a signal from a point is received. Pressing Action digit 4, which represents BLOCK ALARM, will terminate the delay period and block the alarm for an indefinite period of time.

SOLAS applies to fire Alarm Devices (FAD), Fire Alarm Routing Equipment (FARE) - detectors only, and Fire Protection Equipment (FPE) - option.

4. About «In the Event of....»

The subsequent chapters - *In the event of....* - deal with different events that may occur;

Chapter	In the event of....
Chapter 5	a fire alarm
Chapter 6	a fire alarm with alarm delay (in a <i>Delayed Action</i> detection zone - immediate output actioning disabled)
Chapter 7	a fire warning (prewarning/early warning)
Chapter 8	faults

The list above covers the most common events. In addition to these, a great number of combinations of events may, of course, occur.

The *operational information* included in chapter 3, plus the *overview of buttons and indicators* in chapter 2, are intended to provide the information necessary to successfully operate the AutoSafe Interactive Fire Alarm System. As additional help, messages in the *Information Field* will tell you at any time what options you have.

Note that the optional alarm presentation with zonal indication is used throughout the handbook.

For each event there is an *overview of all indications* on the panel, plus the necessary *actions to take*. All alarm handling and display pictures shown in the subsequent chapters are based on the following:

- The system is in *Operation Mode*.
- To operate the panel, *Access Level 2* is required. This means that the person who operates the panel, must use a key before the panel can be operated. This is indicated with a key. 
- The examples show a system that is configured to immediately trigger Fire Alarm Routing Equipment and send a message to a Fire Receiving Station (Fire Brigade) *in the event of a fire alarm*. The *Fire Brig. Signalled* indicator will thus come on.
- As you proceed through the steps in the different events, the comments field will, when necessary, provide additional information and show the different options you have.
- In many cases, several display pictures will be shown when a command has been executed. These quick changes from one display picture to another are indicated with an arrow. 
- The table for the different procedures is divided into four columns with the following headings;

Step	Actions to be taken	Display Indication	Audible Indication
------	---------------------	--------------------	--------------------

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5. In the Event of a Fire Alarm

Note that the optional alarm presentation with zonal indication is used throughout the handbook.

5.1 Indications in the Event of a Fire Alarm

One or several fire detectors or manual call points in one or several detection zones are signalling a Fire Alarm.

The following shows the indications on the Operator Panel in the event of «Fire Alarm» within the *operation zone* of the panel.

The text display indicates the detection zones in alarm state and their location. In addition, the following information is shown by operating the menu:

- detailed zonal information
- information on the specific points in alarm

The red Fire indicator is blinking.

The Fire Brig. Signalled indicator has a steady red light.

The More Events indicator is blinking in the event of several alarms.



The internal buzzer is activated.

Default pattern on the sound:
1 sec. ON, 1 sec. OFF

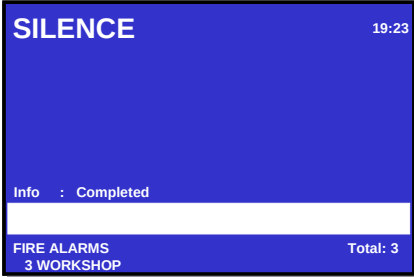
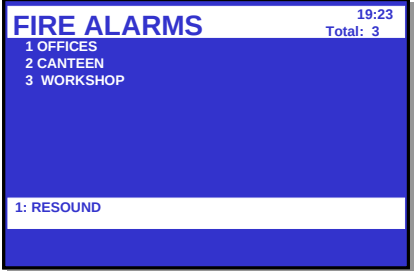
Activated functions:

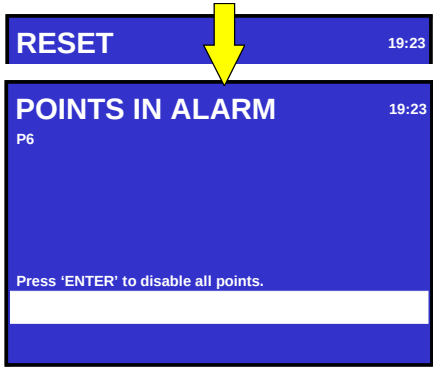
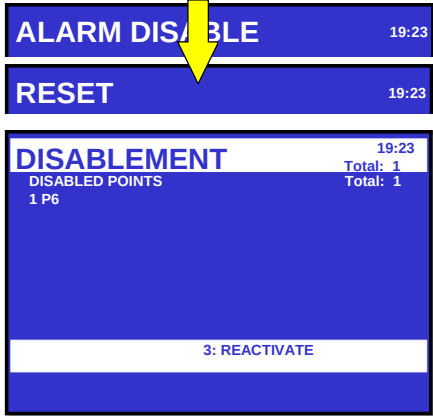
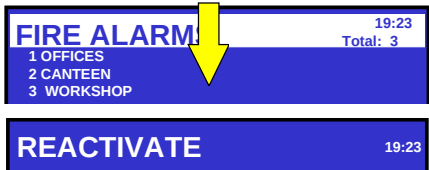
A message is sent to the Fire Brigade.

The fire alarm condition activates Fire Alarm Devices (sounders and visual indicators).

5.2 Actions to be Taken in the Event of a Fire Alarm

Step	Actions to be taken	Display Indication	Audible Indication
1	Follow all precautions described in the local fire instructions, step by step. 		All fire alarm devices connected to the alarm zones (which are connected to the detection zones in alarm) are activated (sounders and visual indicators). The internal buzzer on the operator panel is turned on.
<i>Comments:</i> The red <i>FIRE</i> indicator starts to blink. The red <i>Fire Brig. Signalled</i> indicator is lit. When several zones are in alarm state, the More Events indicator is lit.			
2	To silence the internal buzzer, press the black Mute Panel button 		The internal buzzer on the operator panel is turned off.
3	Press  and observe the zone(s) in alarm state in the display.		
<i>Comments:</i> The first detection zone will be highlighted instead of the heading FIRE ALARMS. In this example, a total of 3 zones are in alarm state. If you want to view detailed zonal/point information for each of the zones before investigating the scene(s), go to step 5. If not, investigate the scene(s), then go directly to step 9. If the message «SHOW SUPPR. INFO» is shown in the lower right corner, one or several fire warnings, disablements, tests or faults exist. To view suppressed information, press Action Digit 4 (SHOW SUPPR. INFO).			
4	Investigate the scene(s) and carry out the necessary actions.		
5	To select a zone, scroll with the arrow buttons  		
6	To view detailed zonal information, press 		
7	To view points in alarm, press Action Digit 1 (SHOW POINTS).		
8	To go two steps backwards, press the black Close Window button  twice.		

Step	Actions to be taken	Display Indication	Audible Indication
<i>Comments:</i> If you want to view detailed information for another zone, select the other zone in step 5, repeat step 6, 7 and 8, then go to step 9. If not, go directly to step 9.			
9	To silence all alarms, press the red Silence Alarms button.  	 	All Fire Alarm Devices (FAD) are deactivated.
<i>Comments:</i> The red <i>FIRE</i> indicator goes steady. To <i>manually</i> resound the alarm zones at this stage, Action Digit 1 (RESOUND) can be pressed. The alarm zones are <i>automatically</i> resounded to their alarm states on timeout of the silence resound timer. When the fire is extinguished and all necessary repair work is implemented (smoke is exhausted, new glass replaced in the manual call-points, etc.), the system should be returned to normal operating mode. The SILENCE ALARMS button has to be pressed before pressing the RESET button. Otherwise the reset operation will be rejected without having any effect on system behaviour.			
10	Press the green Reset button. 		All audible indicators on all panels within the operation zone of the operator panel are turned off.
<i>Comments:</i> If there are no points signalling a fire alarm, the system is reset. The red <i>FIRE</i> indicator goes off. The red <i>Fire Brig. Signalled</i> indicator goes off. The panel enters its idle state. 			
<i>If there are points still signalling an alarm when the system is reset, go to the next page.</i> 			

Step	Actions to be taken	Display Indication	Audible Indication
	The point(s) still in alarm will be shown on the display. If no actions are taken, the points still signalling alarm will automatically be <i>reactivated</i> after a predefined timeout. If you want to <i>disable</i> the point(s) - for example, a manual call-point -still signalling alarm, go to step 11. The points can also be reactivated (step 12) at any time after the disablement (ALARMDISABLE) has taken place.		
11	To disable all points still signalling alarm, press 		
Comments: The red <i>Fire Brig. Signalled</i> indicator goes off. The yellow <i>Function Disabled</i> indicator is lit. All point(s) still signalling alarm are disabled. To reactivate the point(s), you have to press Action Digit 3 (REACTIVATE).			
12	To reactivate the point(s), press Action Digit 3.		The point(s) will again signal alarm. The internal buzzer on the operator panel is turned on.
Comments: The yellow <i>Function Disabled</i> indicator goes off. The red <i>FIRE</i> indicator starts to blink. The red <i>Fire Brig. Signalled</i> indicator is lit.			
13	To reset the system, repeat step 9 and 10 (Press the red Silence Alarms button and the green Reset button).		
Comments:  If there are no points signalling a fire alarm, the system is reset. The red <i>FIRE</i> indicator goes off. The red <i>Fire Brig. Signalled</i> indicator goes off. The panel enters its idle state			

6. In the Event of a Fire Alarm - with Alarm Delay

Note that the optional alarm presentation with zonal indication is used throughout the handbook.

6.1 Indications - Fire Alarm with Alarm Delay

A point set to Delayed Action (configurable) is sending an alarm signal from a Delayed Action detection zone in a situation where *Immediate Output Actioning* has been disabled, i.e. the alarm delay has been activated.

NOTE:

An alarm from a *manual call-point* is normally configured to give immediate actioning on the alarm outputs even though *Immediate Output Actioning* has been disabled.

The following shows the indications on the Operator Panel in the event of «Fire Alarm with Alarm Delay» within the *operation zone* of the panel.

The text display indicates the detection zones in alarm state and their location. In addition, the following information is shown by operating the menu:

- detailed zonal information
- information on the specific points in alarm

The red Fire indicator is blinking.

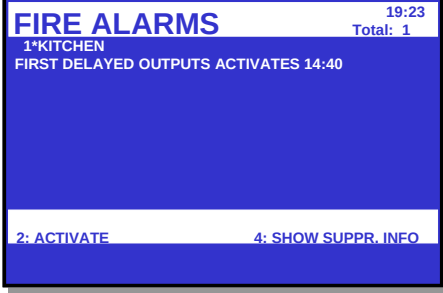
The Function Disabled indicator has a steady yellow light.

The Function Delayed indicator has a steady yellow light.

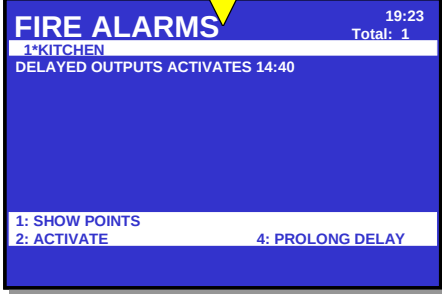
The internal buzzer is activated.
Default pattern on the sound:
1 sec. ON, 1 sec. OFF



6.2 Actions to be Taken - Fire Alarm with Alarm Delay

Step	Actions to be taken	Display Indication	Audible Indication
1	Follow all precautions described in the local fire instructions, step by step. 		The internal buzzer on the operator panel is turned on.
Comments: The red <i>FIRE</i> indicator starts to blink. The <i>FUNCTION DELAYED</i> and <i>FUNCTION DISABLED</i> indicators have a steady yellow light indicating that <i>Immediate Output Actioning</i> has been disabled (manual operation in Menu Mode). In this example, one point in a Delayed Action detection zone is signalling an alarm. The message «SHOW SUPPR. INFO» is shown in the lower right corner, indicating that a disablement exists (<i>Immediate Output Actioning</i> has been disabled). One or several fire warnings, tests or faults may also exist. To view suppressed information, press Action Digit 4 (SHOW SUPPR. INFO).			
2	To silence the internal buzzer, press the black Mute Panel button 		The internal buzzer on the operator panel is turned off.
3	Press  and observe the zone(s) in alarm state in the display.		
Comments: If you want to view detailed zonal/point information, go to step 4. If not, go directly to step 8.			
4	To select a zone (if there are several zones), scroll with the arrow buttons  		
5	To view detailed zonal information, press 		
6	To view points in alarm, press Action Digit 1 (SHOW POINTS).		
7	To go two steps backwards, press the black Close Window button  twice.		
Comments: If you want to view detailed information for another zone, select the other zone in step 4, repeat step 5, 6 and 7, then go to step 8. If not, go directly to step 8.			



Step	Actions to be taken	Display Indication	Audible Indication
		If you want to prolong the delay, you can press Enter, then Action Digit 4 (PROLONG DELAY). The T1 period will terminate, and the T2 period will start. If you do not want to prolong the delay period, go directly to step 9.	
8	To Prolong the delay period, press  for the selected zone, then Action Digit 4 (PROLONG DELAY).	  	
9	Investigate the scene(s) and carry out the necessary actions.		

10	The next step in the procedure will depend on whether or not there really is a fire. Follow 11a if there is <u>not</u> a fire - or follow 11b if there really <u>is</u> a fire.
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11a	If there is not a fire, press the green Reset button.   
	<i>Comments:</i> The red <i>FIRE</i> indicator goes off. The display indicates that Immediate Output Actioning has been disabled within the operation zone of the panel.

11b	If there really is a fire, press Action Digit 2 (ACTIVATE) or activate the nearest manual call-point to activate the alarm.  Implement the necessary measures.	 All fire alarm devices within the operation zone of the panel (sounders and visual indicators) are activated.
	<i>Comments:</i> The red <i>Fire Brigade Signalled</i> indicator is lit. If the delay time expires, all fire alarm devices within the alarm zones assigned to the actual detection zones (sounders and visual indicators) will automatically be activated.	

Step	Actions to be taken	Display Indication	Audible Indication
12b	To silence all alarms, press the red Silence Alarms button. 		All Fire Alarm Devices (FAD) are deactivated.
Comments: The red <i>FIRE</i> indicator goes steady. To <i>manually</i> resound the alarm zones at this stage, Action Digit 1 (RESOUND) can be pressed. The alarm zones previously in alarm state are <i>automatically</i> resounded to their alarm state on timeout of the silence resound timer. When the fire is extinguished and all necessary repair work is implemented (smoke is exhausted, new glass replaced in the manual call-points, etc.), the system should be returned to normal operating mode. The SILENCE ALARMS button has to be pressed before pressing the RESET button. Otherwise the reset operation will be rejected without having any effect on system behaviour.			
13b	Press the green Reset button. 		All audible indicators within the operation zone of the operator panel are turned off.
Comments: If there are no points signalling a fire alarm, the system is reset. The red <i>FIRE</i> indicator goes off.  The red <i>Fire Brig. Signalled</i> indicator goes off. If there are points still signalling a fire alarm, refer to step 10 in the procedure described in chapter 5.2.			

7. In the Event of a Fire Warning

Note that the optional alarm presentation with zonal indication is used throughout the handbook.

7.1 Indications in the Event of a Fire Warning

A fire detector in one of the detection zones has entered Fire Warning state (Prealarm or Early Warning).

The following shows the indications on the Operator Panel in the event of Fire Warning (Prealarm or Early Warning) within the *operation zone* of the panel.

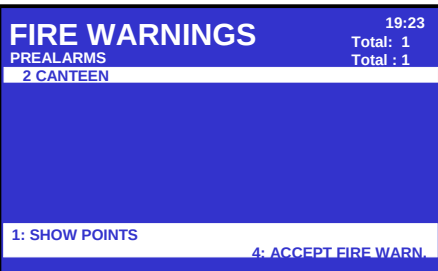
The text display indicates the number of detection zones/detectors in this state, plus their location.



The internal buzzer is activated.
Default pattern on the sound:
0,5 sec. ON, 3,5 sec. OFF

Activated functions:
The Fire Warning state will **not** activate Fire Alarm Devices (sounders and visual indicators).

7.2 Actions to be Taken in the Event of a Fire Warning

Step	Actions to be taken	Display Indication	Audible Indication
1	Follow all precautions described in the local fire instructions, step by step. 		The internal buzzer on the operator panel is turned on.
2	To silence the internal buzzer, press the black Mute Panel button 		The internal buzzer on the operator panel is turned off.
3	Press  and observe the zone(s) in fire warning state in the display.		
<i>Comments:</i> In this example, only 1 zone is in Prealarm state (2 CANTEEN is blinking). If you want to view detailed zonal/point information for this zone before investigating the scene, go to step 5. If not, investigate the scene, then go directly to step 9.			
4	Investigate the scene and carry out the necessary actions.		
5	To select a zone (if there are several zones), scroll with the arrow buttons  		
6	To view detailed zonal information, press 		
7	To view points in fire warning state, press Action Digit 1 (SHOW POINTS).		
8	To go two steps backwards, press the black Close Window button  twice.		
<i>Comments:</i> If there are several zones in Fire Warning state, and you want to view detailed information for another zone, select the other zone in step 5, repeat step 6, 7 and 8, then go to step 9. If not, go directly to step 9.			

Step	Actions to be taken	Display Indication	Audible Indication
9	To accept the Prealarm, press Action Digit 4 (ACCEPT FIRE WARNING). 		
<i>Comments:</i> In this example, only 1 zone is in Prealarm state. If there are several fire warnings, each one can be accepted in turn. Fire warnings that are accepted, will no longer blink in the display. This allows you to see on the screen whether a detection zone in Fire Warning state is accepted or not. When the situation is under control (smoke is exhausted, new glass replaced in the manual call-points, etc.), the system should be returned to normal operating mode.			
10	Press the green Reset button. 		
<i>Comments:</i> The panel enters its idle state. 			

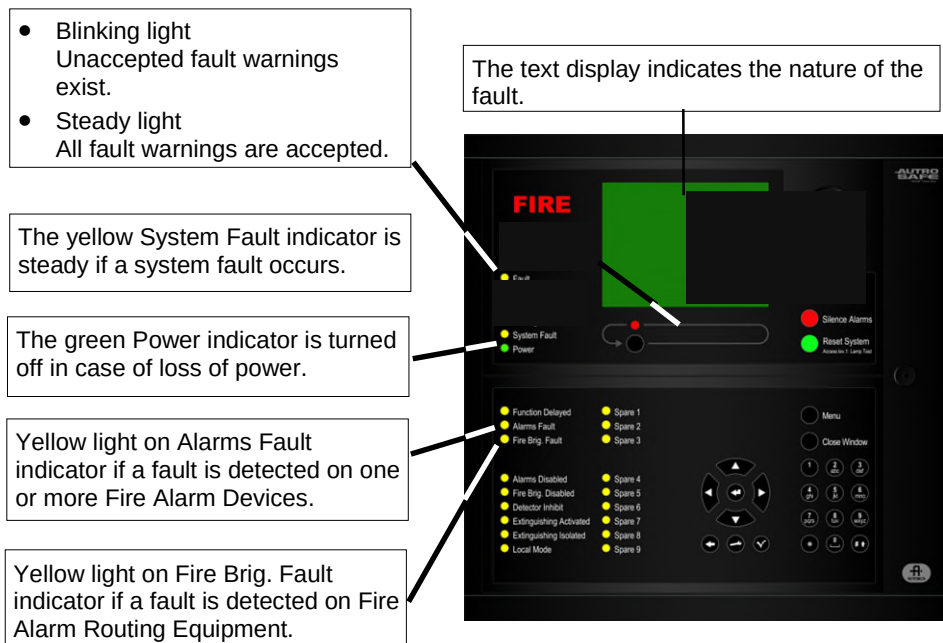
8. In the Event of Faults

Note that the optional fault presentation with zonal indication is used in this chapter. Faults are presented with point indication as default.

8.1 Indications in the Event of Faults

A fault is indicated by one of the components (fire detectors, external equipment or other faults).

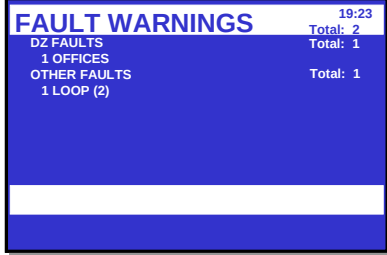
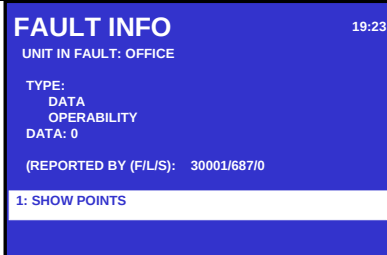
The following shows the indications on the Operator Panel in the event of Faults within the *operation zone* of the panel. Note that all possible fault indications are shown in the presentation below.

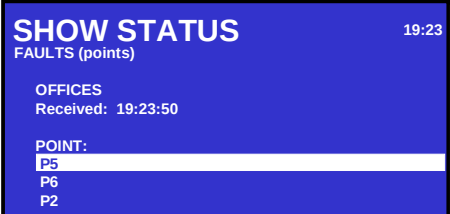
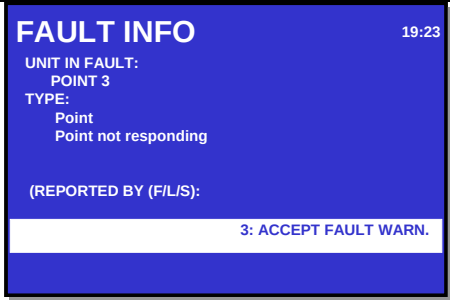
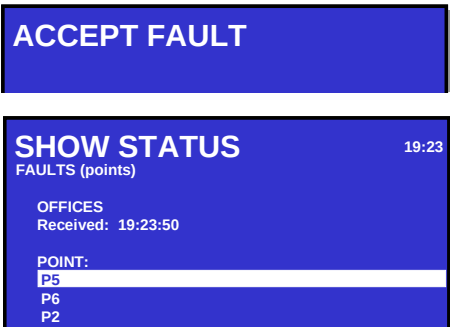


Activated functions:

- The output line from the control and indication equipment is activated.

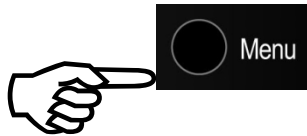
8.2 Actions to be Taken in the Event of Faults

Step	Actions to be taken	Display Indication	Audible Indication
1	Notify service/technical personnel. 		The internal buzzer on the operator panel is turned on.
<i>Comments:</i> The yellow FAULT indicator starts to blink.			
2	Press  and observe the fault warnings in the display.		
<i>Comments:</i> In this <i>example</i> , points in detection zone (1 OFFICES) are in fault warning state. Both the detection zone and the related loop, are registered as fault warnings (Total 2). NOTE: An audible indication of loss of POWER <i>cannot</i> be silenced.			
3	Make service/technical personnel investigate the scene(s) and carry out the necessary actions.		
4	To select a fault warning (if there are several fault warnings), scroll with the arrow buttons  		
5	To view detailed information for the selected fault warning (in this example, «OFFICES»), press 		
<i>Comments:</i> Note that other types of faults are operated differently than what is described in this <i>example</i> . A Fire Alarm Device (FAD) in fault warning state, for example, can be accepted at this stage by pressing Action Digit 3 (ACCEPT FAULT WARNING). If you want to view detailed information on other fault warnings, you have to press the CLOSE WINDOW button, then repeat step 5 and 6. If you want to accept each fault warning in turn, go directly to step 7.			

Step	Actions to be taken	Display Indication	Audible Indication
6	To view all points in fault warning state within the selected detection zone, press Action Digit 1 (SHOW POINTS).		
<i>Comments:</i> In this example, detection zone «OFFICES» is selected. All points in fault warning state within this zone are shown.			
7	Select the point to be accepted by scrolling with the arrow buttons (if there are several points in fault warning state), then press 		
8	To accept the selected point, press Action Digit 3 (ACCEPT FAULT WARNING) 		
<i>Comments:</i> In this example, point P5 in the selected detection zone is accepted. If there are several points in fault warning state in this detection zone, each one can be accepted in turn by repeating step 6, 7 and 8. Fault warnings that are accepted, will no longer blink in the display. This allows you to see on the screen whether a fault warning is accepted or not. A fault that has been repaired is indicated with a star on the display (for example, 1*OFFICES). When all fault warnings are accepted, the yellow <i>Fault</i> indicator will switch from blinking to steady light. If all faults are repaired and accepted, the panel will enter its idle state. If all fault warnings are accepted, but one or several faults are still not repaired, the panel will return to its idle state as soon as the remaining faults are repaired. In some cases it may be necessary to reset the system to remove fault warnings. If the system detects any irregularity on the loop topology (for example, two detectors have changed places or are removed), the panel will enter its idle state as soon as the detectors are in placed in their correct positions according to the configuration.			
			

9. Menu Mode

9.1 How to Enter Menu Mode



To enter the *Menu Mode* from operation mode or the panel's idle state, the Menu button must be pressed. The menu has 5 different menu selections, including SHOW STATUS, DISABLE, ENABLE, SYSTEM and SERVICE.

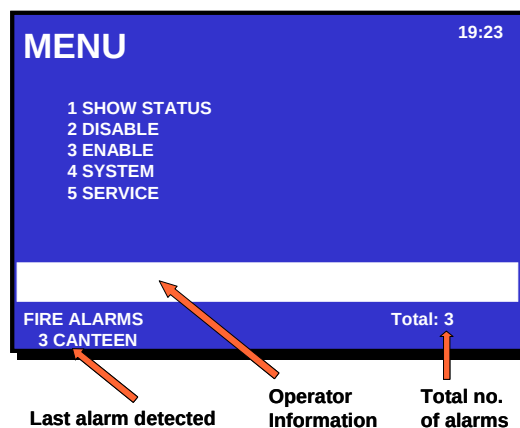
NOTE:

If an alarm condition occurs when you are in Menu Mode, you have to press the Menu button to re-enter Operation Mode *in order to activate the Silence Alarms button and the Reset button.*

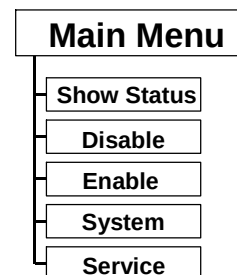
9.2 The Menu Mode Display

In Menu Mode the display only needs one window showing the selected part of the system menu. The *information field* at the lower part of the display is reserved to give the operator information on the different actions that can be performed from the alphanumeric keyboard (*Action Digits*), or short fault messages. This field is always *highlighted*.

If there is an alarm condition, the *last alarm detected* and the *total number of present alarms* will be shown below the information field.



Main Menu Structure



9.3 Buttons Used to Operate the Menu

In addition to the Menu button, the following buttons are used during operation (refer to chapter 2.8):

- the alphanumeric key pad (digits 0 to 9)
- the ENTER button 
- the up/down arrow buttons  
- the Close Window  button used to move back one level / show previous picture (if the display is not showing information on the top level)
- the Back/Cancel button  used to cancel an input character (backspace).

If no button is operated within a preconfigured timeout (operation mode / menu mode 25 seconds) or the menu button is operated, the menu will be terminated and the operator panel will re-enter operation mode.

9.4 Action Digits in Menu Mode

9.4.1 Introduction

When operating in Menu Mode, special Action Digits will appear in the highlighted information field at the lower part of the display. These digits show which action the operator may perform.

Digits 1 to 4 on the alphanumeric keyboard are dedicated for the different actions (Action Digits).

9.4.2 Action Digits Table

The *Action Digits* in Menu Mode are listed in the table below.

Action Digits			
Action	Digit	When action is available	Used to.....
ENABLE		Available in the Show Disablement Menu.	enable the selected disabled component.
PRINT DATA		Optional. Available in the Show Status Menu (optional).	print the selected data.
READ FORWARD		Available in the Log Menu.	read the selected events forward page by page (if more than one page).
READ BACKWARDS		Available in the Log Menu.	read the selected events backwards page by page (if more than one page).

9.5 How to Operate in Menu Mode

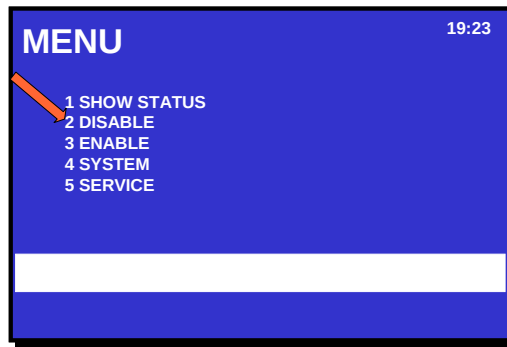
All menu selections represent a digit. To enter a menu selection, you simply have to press the corresponding digit. Then you can either;

- use the keyboard to enter text into an input field
- or

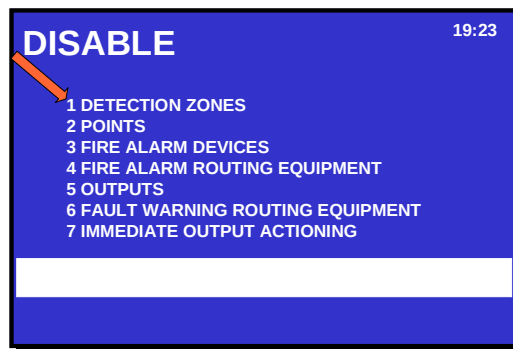
- press the ENTER button and use the up/down arrows to move the cursor to the desired selection.

9.6 Example - How to Disable Detection Zones

- From the top level of the Menu, press, for example, digit 2 to select DISABLE



- Press digit 1 to select DETECTION ZONES.



- Now, you can either;
 - a) Use the keyboard to enter text into the input field.
 - or
 - b) Press the ENTER button, then use the up/down arrows to move the cursor to the desired selection in the selection field.
- Refer to the two subsequent chapters.

9.6.1 Using the Keyboard to Enter Text into the Input Field

In this *example*, we are looking for OFFICE, and only one selection starts with an «O».

- Press 3 times on the alphanumeric button 6 (which includes the letters mno) to enter an «O».

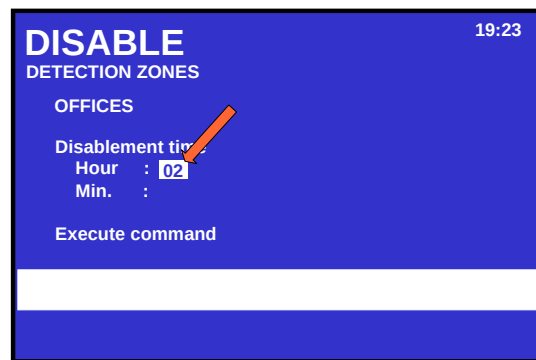
1 st	=m
2 nd	=n
3 rd	=o
4 th	=6



The display will change as soon as the letter «0» is entered. Only selections starting with the letter «0» will be listed (in this example, only OFFICES).



- Press the ENTER button to accept the selection.
- Use the numeric buttons to enter numbers in the input field (hour and minute) and accept with the ENTER button - (to cancel an input value, press the CANCEL button).



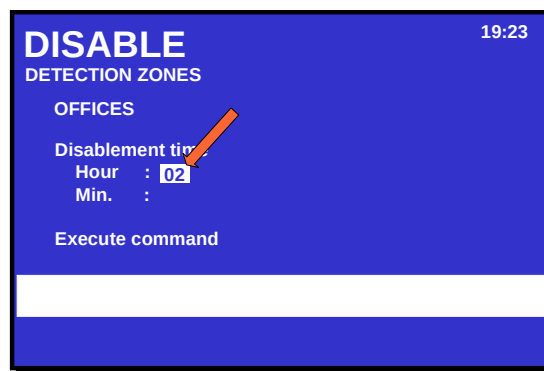
9.6.2 Using the Up/Down Arrows in the Selection Field

In this example, we want to select OFFICES by using the up/down arrows in the selection field.

- Press the ENTER button, then use the arrow buttons to move up and down. (In this example the first selection KITCHEN is highlighted and the arrow down button is used to select OFFICES).



- Press the ENTER button to select OFFICES, and use the numeric buttons to enter numbers in the input field - (to cancel an input value, press the Cancel button).



- When all values have been entered, press the ENTER button to accept.

10. Show Status

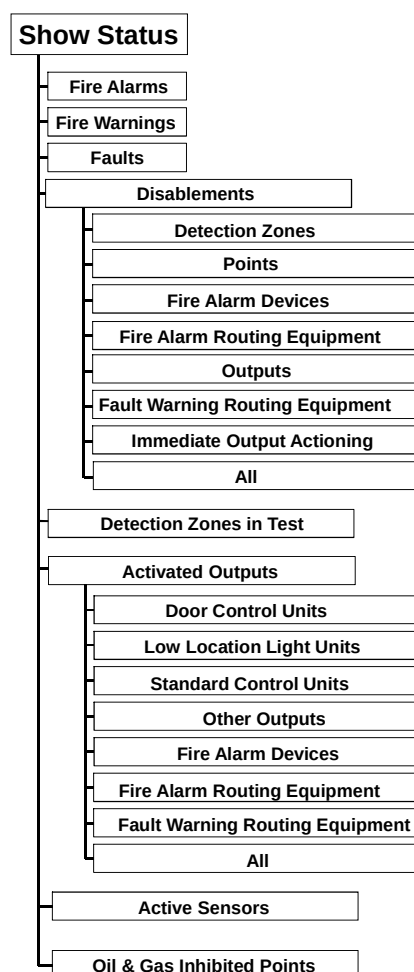
10.1 Introduction

The Show Status menu is accessed from the main menu *in Menu Mode*.

The menu gives the current status of the following conditions:

- Fire Alarms
- Fire Warnings
- Faults
- Disablements
- Detection Zones in Test
- Activated Outputs
- Active Sensors
- Oil & Gas Inhibited Points

10.2 Show Status Menu

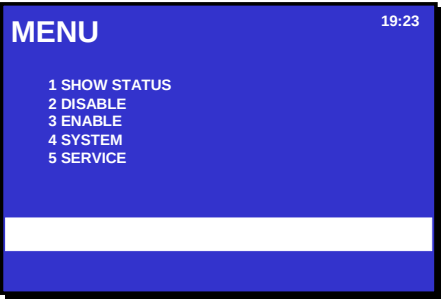
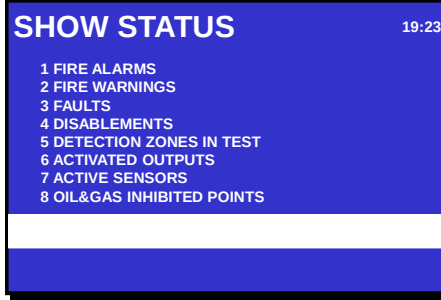


10.3 Show Status - Fire Alarms

This menu gives detailed information on the current status of fire alarms in the system. It provides the following information:

- the location
- the exact time of activation
- an identification of the detectors (address)
- the type of detectors (optical, heat, etc.)
- all detectors in alarm
- all activated outputs

The *example* below describes how to view the current status of fire alarms.

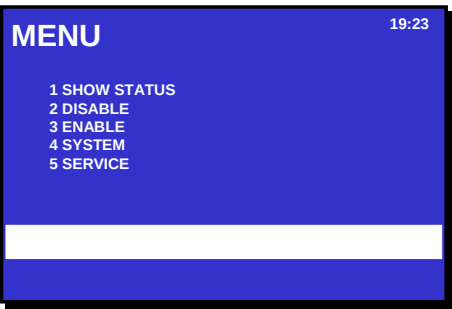
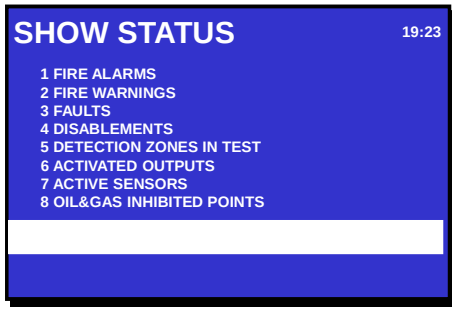
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SHOW STATUS, press 1.	
3	To select FIRE ALARMS, press 1.	
4	To move the cursor to the desired selection, scroll with the arrow buttons 	
5	To view detailed zonal information for the selected detection zone, press 	
6	To view point(s) in alarm for the selected detection zone, press Action Digit 1 (SHOW POINTS).	
7	To return (each step backwards), press the Close Window button 	

10.4 Show Status – Fire Warnings

This menu gives detailed information on the current status of Fire Warnings (Prealarms / Early Warnings) in the system. It provides the following information:

- the location
- the exact time of activation
- an identification of the detectors (address)
- the type of detectors (optical, heat, etc.)
- all detectors in Fire Warning

The *example* below describes how to view the current status of Fire Warnings.

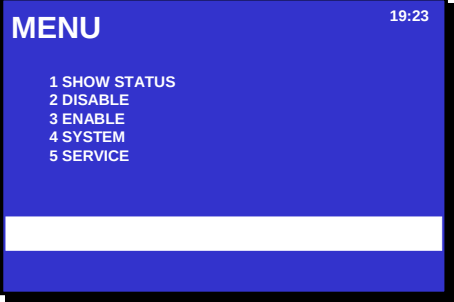
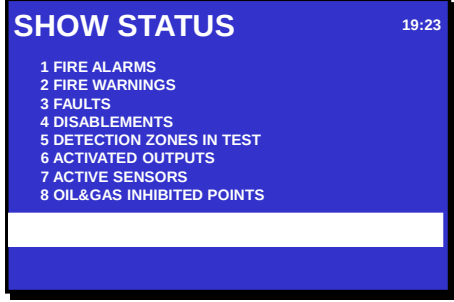
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SHOW STATUS, press 1.	
3	To select FIRE WARNINGS, press 2.	
4	To move the cursor to the desired selection, scroll with the arrow buttons 	
5	To view detailed zonal information for the selected detection zone, press 	
6	To view point(s) in Fire Warning for the selected detection zone, press Action Digit 1 (SHOW POINTS).	
7	To return (each step backwards), press the Close Window button 	

10.5 Show Status - Faults

This menu gives detailed information on the current status of faults in the system. It provides the following information:

- the location
- an identification of the address
- the nature of the fault
- a detailed text

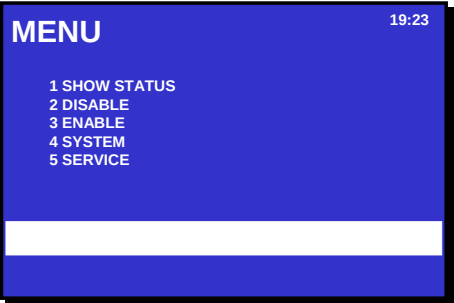
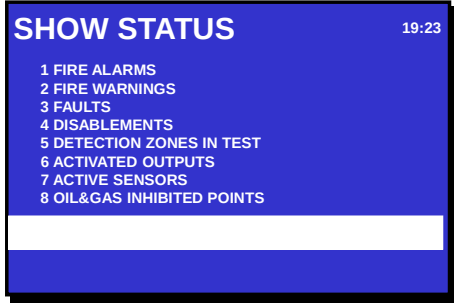
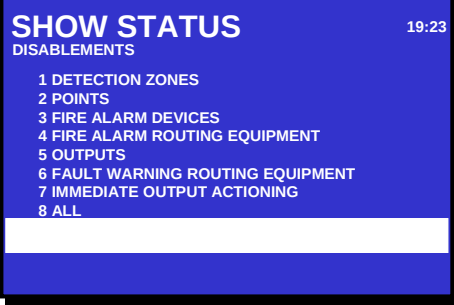
The *example* below describes how to view the current status of faults.

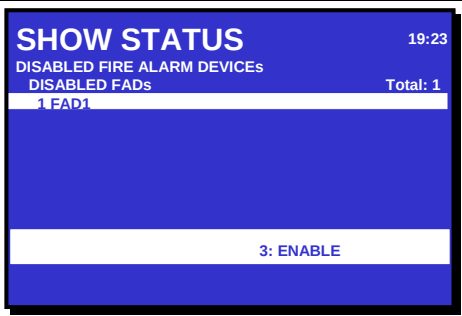
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SHOW STATUS, press 1.	
3	To select FAULTS, press 3.	
4	To move the cursor to the desired selection, scroll with the arrow buttons 	
5	To view detailed zonal information for the selected detection zone, press 	
6	To view point(s) in fault state for the selected detection zone, press Action Digit 1 (SHOW POINTS).	
		<i>Comments:</i> Step 5 and 6 apply to Fault Warnings related to Detection Zone / Points. The operator must in this case always go via Detection Zone in order to accept the fault warning (point).
7	To return (each step backwards), press the Close Window button 	

10.6 Show Status - Disablements

This menu gives detailed information on the current status of the disablements in the system. It provides detailed information on the disablement of the following:

- Detection Zones
- Points (fire detectors, manual call points)
- Fire Alarm Devices (FAD)
- Fire Alarm Routing Equipment (FARE)
- Outputs (FPE)
- Fault Warning Routing Equipment (FWRE)
- Immediate Output Actioning
- All

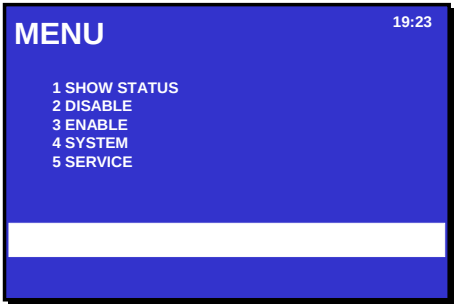
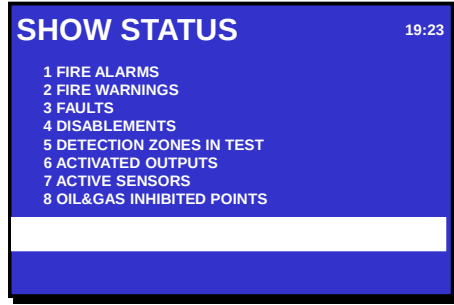
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SHOW STATUS, press 1.	
3	To select DISABLEMENTS, press 4.	
The 3 steps above will lead you to Show Status - Disablements, where you can continue viewing the status of the disablements (1-8), shown on the following page (step 4). 		

Step	Actions to be taken	Display Indication
4	To select, press the relevant number (1-8). 1 Detection Zones 2 Points 3 Fire Alarm Devices 4 Fire Alarm Routing Equipment 5 Outputs 6 Fault Warning Routing Equipment 7 Immediate Output Actioning 8 All	
5	To move the cursor to the desired selection, scroll with the arrow buttons 	
6	To select and observe the status (in this example menu selection 3; Fire Alarm Devices is selected), press 	
7	If you want to enable the component, press Action Digit 3 (ENABLE), then  If not, go to step 8.	
8	To return (each step backwards), press the Close Window button 	

10.7 Show Status - Detection Zones in Test

This menu gives detailed information on the zones in test mode.

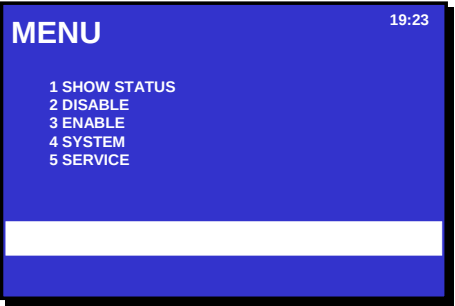
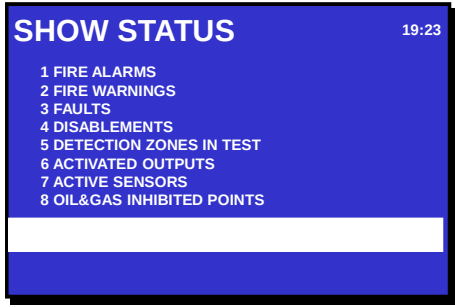
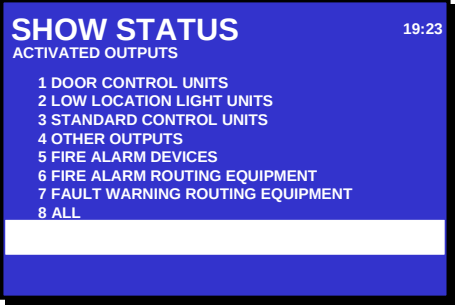
The *example* below describes how to view the current status of zones in test mode.

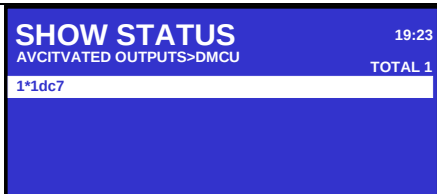
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SHOW STATUS, press 1.	
3	To select DETECTION ZONES IN TEST, press 5.	
4	To move the cursor to the desired selection, scroll with the arrow buttons 	
5	To view detailed zonal information for the selected detection zone, press 	
6	To view point(s) in test for the selected detection zone, press Action Digit 1 (SHOW POINTS).	
7	To return (each step backwards), press the Close Window button 	

10.8 Show Status – Activated Outputs

This menu gives detailed information on activated outputs.

The *example* below describes how to view the current status of activated outputs.

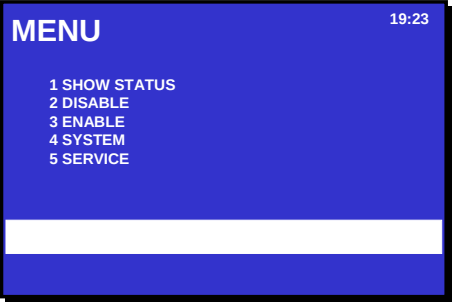
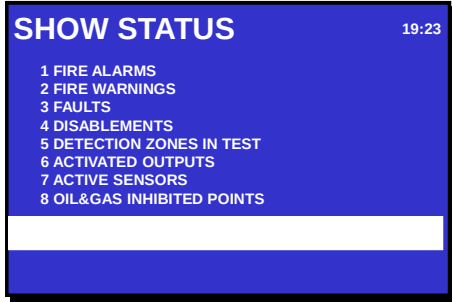
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	 The MENU screen shows a blue background with white text. The title 'MENU' is at the top left, and the time '19:23' is at the top right. Below the title is a list of options: 1 SHOW STATUS, 2 DISABLE, 3 ENABLE, 4 SYSTEM, and 5 SERVICE. A white horizontal bar is at the bottom.
2	To select SHOW STATUS, press 1.	 The SHOW STATUS screen shows a blue background with white text. The title 'SHOW STATUS' is at the top left, and the time '19:23' is at the top right. Below the title is a list of options: 1 FIRE ALARMS, 2 FIRE WARNINGS, 3 FAULTS, 4 DISABLEMENTS, 5 DETECTION ZONES IN TEST, 6 ACTIVATED OUTPUTS, 7 ACTIVE SENSORS, and 8 OIL&GAS INHIBITED POINTS. A white horizontal bar is at the bottom.
3	To select ACTIVATED OUTPUTS, press 6.	 The SHOW STATUS ACTIVATED OUTPUTS screen shows a blue background with white text. The title 'SHOW STATUS' is at the top left, and the time '19:23' is at the top right. Below the title is the subtitle 'ACTIVATED OUTPUTS'. Below the subtitle is a list of options: 1 DOOR CONTROL UNITS, 2 LOW LOCATION LIGHT UNITS, 3 STANDARD CONTROL UNITS, 4 OTHER OUTPUTS, 5 FIRE ALARM DEVICES, 6 FIRE ALARM ROUTING EQUIPMENT, 7 FAULT WARNING ROUTING EQUIPMENT, and 8 ALL. A white horizontal bar is at the bottom.
The 3 steps above will lead you to Show Status – Activated Outputs, where you can continue viewing the status of the activated outputs (1-5), shown on the following page (step 4). 		

Step	Actions to be taken	Display Indication
4	To select, press the relevant number (1-8). 1 Door Control Units 2 Low Location Light Units 3 Standard Control Units 4 Other Outputs 5 Fire Alarm Devices 6 Fire Alarm Routing Equipment 7 Fault Warning Routing Equipment 8 All	
5	To move the cursor to the desired selection, scroll with the arrow buttons 	
6	To select and observe the status (in this example menu selection 1; door control units is selected), press 	
7	To return (each step backwards), press the Close Window button 	

10.9 Show Status - Active Sensors

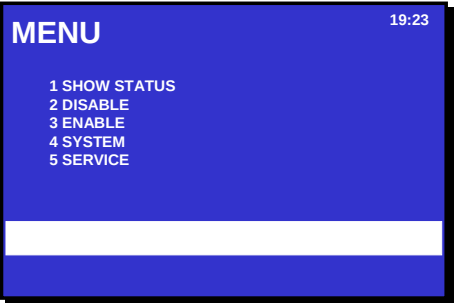
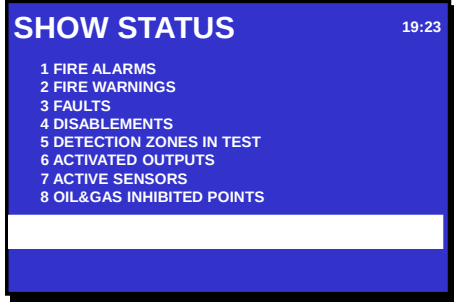
This menu is specifically related to fan control functionality where smoke sensors are used (a smoke sensor is a detector that is defined as a “Smoke Sensor” in the configuration, meaning that the detector cannot be used for regular fire alarms). When a “smoke sensor” detects smoke it will become active (Active Sensors).

By operating the menu (1 Show Status, 7 Active Sensors) a list of all active Smoke Sensors (those which have detected smoke) will be shown.

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SHOW STATUS, press 1.	
3	To select ACTIVE SENSORS, press 7.	
4	If there are several active smoke sensors, use the arrow buttons to scroll through the list of points. 	

10.10 Show Status - Oil & Gas Inhibited Points

This menu is specifically related to the Oil & Gas Market, and gives detailed information on the Oil & Gas inhibited points.

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SHOW STATUS, press 1.	
3	To select OIL & GAS INHIBITED POINTS, press 8.	
4	To move the cursor to the desired selection, scroll with the arrow buttons  	
5	To view detailed zonal information for the selected inhibited point, press 	
6	To view inhibited point(s) for the selected detection zone, press Action Digit 1 (SHOW POINTS).	
7	To return (each step backwards), press the Close Window button 	

11. Disabling

11.1 General

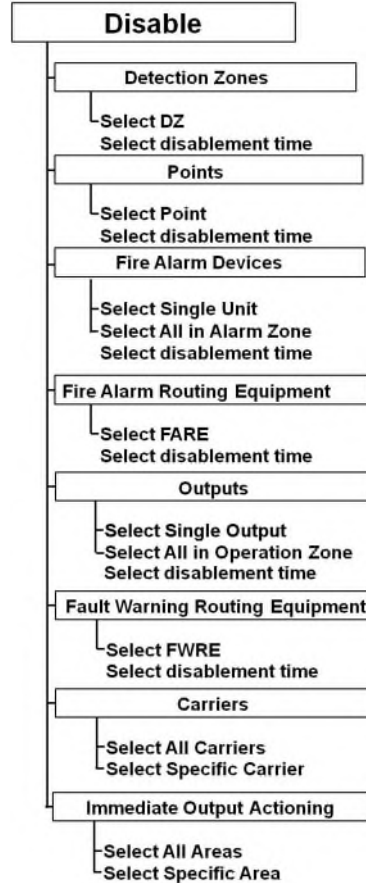
From the Disable menu you can disable the following:

- Detection Zones
- Points (fire detectors, manual call points)
- Fire Alarm Devices (FAD)
- Fire Alarm Routing Equipment (FARE)
- Outputs
- Fault Warning Routing Equipment (FWRE)
- Carriers
- Immediate Output Actioning

When disabling components, a *disablement time* is given. The disablement time can be increased for already disabled components by entering the disable menu.

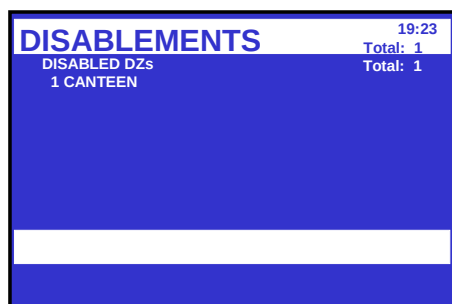
For information on *Disablement Sources*, refer to chapter 3.16.

11.2 Disable Menu



11.3 Indications on the Operator Panel

When one or several disablements exist, the *Function Disabled indicator* on the Operator Panel will show a yellow steady light. The panel's display will indicate that a disablement exists (as shown in the example below).



11.4 Disabling Activated / Deactivated Components

When you disable an *active* component, for example, a sounder issuing an alarm signal, the component will immediately switch to the OFF state without any user notification and/or confirmation cause.

A disablement of a *deactivated* component, for example, a sounder not issuing an alarm signal, will have no immediate effect on system operation.

Both activated and deactivated disabled components will remain switched off until enabled.

11.5 Disabling Detection Zones

When you disable a *Detection Zone* - *all* points within the specified detection zone will be disabled. A detection zone will not be indicated as disabled unless *all* points within the zone have been disabled.

A *disablement time* can be set. When the disablement time expires, the detection zone will automatically be enabled. The detection zone can also be enabled manually from the Enable Menu.

11.6 Disabling Points

When you disable a *Point* (fire detectors / manual call-points), no alarm signal or fault signal from this point will be sent in the event of an alarm / fault.

A *disablement time* can be set. When the disablement time expires, the point(s) will automatically be enabled. The point(s) can also be enabled manually from the Enable Menu.

If *all* points in a detection zone are disabled, the detection zone will be indicated as disabled. If at least one point within this detection zone is enabled *manually*, the detection zone will be indicated as enabled. If the points are given different disablement times, the detection zone will be *automatically* indicated as enabled when the *first* point is enabled (i.e. when the point with the shortest disablement time is enabled).

11.7 Disabling Fire Alarm Devices

When you disable a *Fire Alarm Device* (FAD), the output which controls the FAD will be disabled. The FAD will thus give no audible indication.

You can disable a single unit (FAD) / alarm circuit, or all units (FADs) in a selected Alarm Zone.

A *disablement time* can be set. When the disablement time expires, the FAD(s) will automatically be enabled. The single FAD or all FADs in a selected Alarm Zone can also be enabled manually from the Enable Menu.

11.8 Disabling Fire Alarm Routing Equipment

When you disable *Fire Alarm Routing Equipment* (FARE), the output which controls such equipment will be disabled. In the event of an alarm, no fire alarm signals / fault signals will be sent to the fire brigade.

A *disablement time* can be set. When the disablement time expires, the Fire Alarm Routing Equipment will automatically be enabled. The equipment can also be enabled manually from the Enable Menu.

11.9 Disabling Outputs

When you disable outputs which control Fire Protection Equipment (FPE), in the event of an alarm / fault, no signals will be sent to trigger the equipment. You can disable a single output, or all outputs in the Operation Zone.

A *disablement time* can be set. When the disablement time expires, the outputs which control Fire Protection Equipment will automatically be enabled. The outputs can also be enabled manually from the Enable Menu.

11.10 Disabling Fault Warning Routing Equipment

When you disable *Fault Warning Routing Equipment* (FWRE), the output which controls such equipment will be disabled. In the event of a fault, no fault warning signals will be sent to, for example, the security firm.

A *disablement time* can be set. When the disablement time expires, the Fault Warning Routing Equipment will automatically be enabled. The equipment can also be enabled manually from the Enable Menu.

11.11 Disabling Carriers

A Carrier is a loop unit hosting one or several subunits.

When you disable a *Carrier*, the Carrier itself and all its subunits (functions) will be disabled. It is also possible to select and disable one or several subunits belonging to a Carrier.

Enablement can be performed manually from the Enable Menu, or will occur automatically when a defined *disablement time* expires.

When the Enable command is executed or the disablement time expires, the Carrier and all its subunits (functions) will be enabled - with the exception of subunits that have been disabled from other disablement sources, for example, by means of a disable input device. The subunits that have been disabled from other sources must also be enabled by means of the same sources.

11.12 Disabling Immediate Output Actioning

In an alarm situation, the actioning of outputs in a Delayed Action detection zone can be delayed (refer to *Delayed Action* detection zones, page 41). To achieve a delay, *Immediate Output Actioning* must be disabled.

It is possible to disable immediate output actioning for *all Day / Night areas* or for *selected Day / Night areas*.

Note: A Day / Night area encompasses one or more detection zones within the same operation zone.

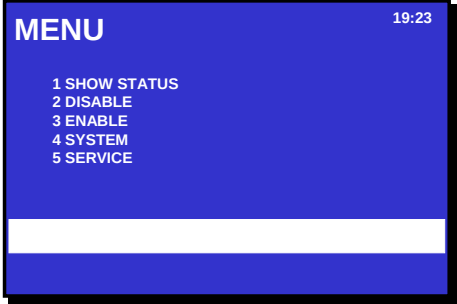
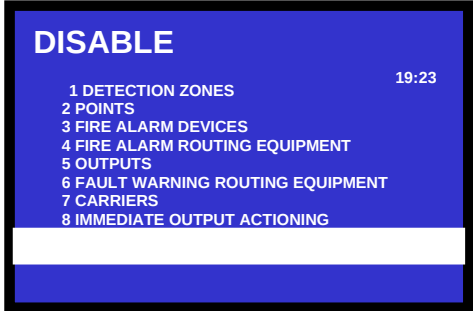
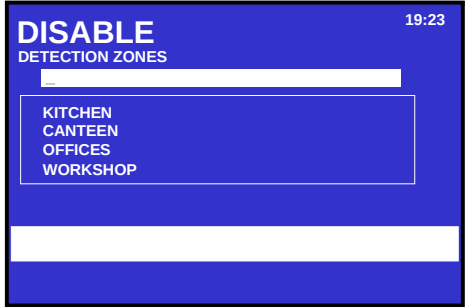
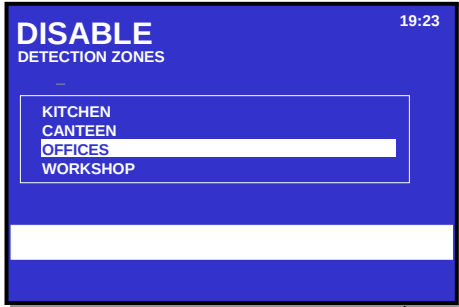
The delay affects the actioning of outputs to Fire Alarm Devices (FAD), Fire Alarm Routing Equipment (FARE) and/or Fire Protection Equipment (FPE).

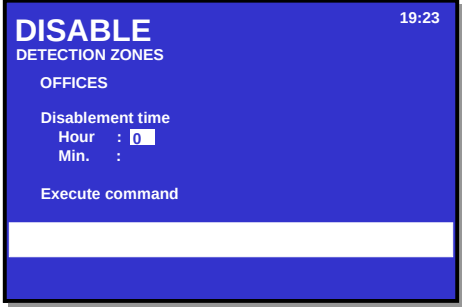
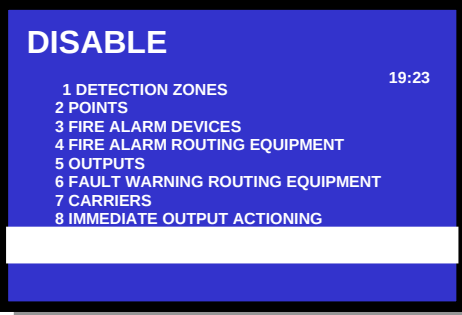
Note that an alarm from a *manual call-point* will normally (point delay OFF) give immediate output actioning even though the immediate output actioning has been disabled.

The function is useful in situations where you want to *disable immediate output actioning* at special periods to avoid causing any unnecessary disturbance.

11.13 How to Execute Commands from the Disable Menu

The *example* below shows how to disable a *Detection Zone*. The similar procedure applies to all other selections (1-7).

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select DISABLE, press 2.	
3	To select, press the relevant number, in this example 1 (DETECTION ZONES).	
4	Use the keyboard to enter text into the input box - OR, - as shown in this example: press  then move the cursor to the desired selection (OFFICES) by scrolling with the arrow buttons 	

Step	Actions to be taken	Display Indication
5	Press 	
6	Enter hours, then press 	
7	Enter minutes, then press 	
8	To execute the command, press 	
9	To return to the DISABLE menu immediately, press the Close Window button 	
		Comments: If the Close Window button is not pressed, the DISABLE menu will appear automatically after a short moment.

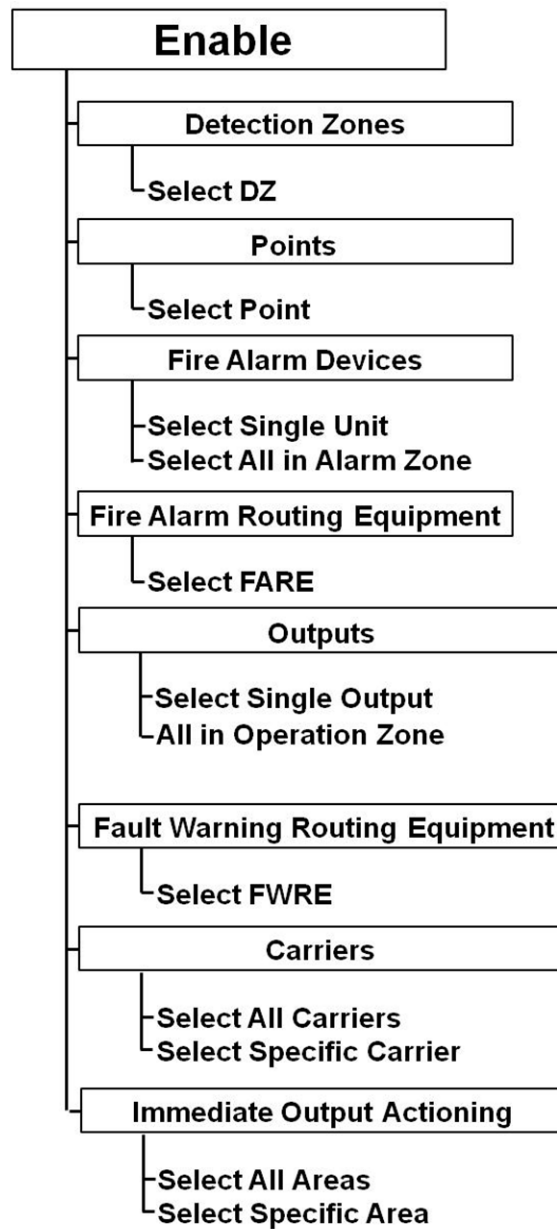
12. Enabling

12.1 General

From the Enable menu you can enable the following:

- Detection Zones
- Points (fire detectors, manual call points)
- Fire Alarm Devices (FAD)
- Fire Alarm Routing Equipment (FARE)
- Outputs
- Fault Warning Routing Equipment (FWRE)
- Carriers
- Immediate Output Actioning

12.2 Enable Menu



12.3 Enabling Activated / Deactivated Components

Setting the arm state of a disabled *deactivated* component to ENABLED will have no immediate effect on system operation. The component will remain deactivated until its activation state is set to an active state (on alarm or on command).

12.4 Enabling Detection Zones

When you enable a *Detection Zone* - all points within the specified detection zone will be enabled - except for those that are individually disabled as described in the subsequent chapter. A detection zone will not be indicated as enabled unless *at least one point* within the zone is enabled.

12.5 Enabling Points

When a *Point* (fire detectors / manual call-points) is enabled (manually or when the disablement time expires), alarm signals will be sent from this point in the event of an alarm.

If *all* points in a detection zone are disabled, the detection zone will be indicated as disabled. If at least one point within this detection zone is enabled, the detection zone will be indicated as enabled. If the points are given different disablement times, the detection zone will be *automatically* indicated as enabled when the *first* point is enabled (i.e. when the point with the shortest disablement time is enabled).

12.6 Enabling Fire Alarm Devices

When you enable a *Fire Alarm Device (FAD)*, the output which controls the FAD will be enabled. The FAD will now give an audible indication.

You can enable a single unit (FAD) / alarm circuit, or all units (FADs) in a selected Alarm Zone.

12.7 Enabling Fire Alarm Routing Equipment

When you enable *Fire Alarm Routing Equipment* (FARE), the output which controls such equipment will be enabled. In the event of an alarm, fire alarm signals may be sent to the fire brigade (configurable).

12.8 Enabling Outputs

When you enable outputs which control *Fire Protection Equipment* (FPE), in the event of an alarm, signals will be sent to trigger the equipment. You can enable a single output, or all outputs in the Operation Zone.

12.9 Enabling Fault Warning Routing Equipment

When you enable *Fault Warning Routing Equipment* (FWRE), the output which controls such equipment will be enabled. In the event of a fault, fault warning signals will be sent to, for example, the security firm.

12.10 Enabling Carriers

A Carrier is a loop unit hosting one or several subunits.

When you enable a *Carrier* manually or when a disablement time has been set and expires, the Carrier itself and all its subunits (functions) will be enabled - with the exception of subunits (functions) that have been disabled from other disablement sources, for example, by means of a disable input device. The subunits that have been disabled from other sources must also be enabled by means of the same sources.

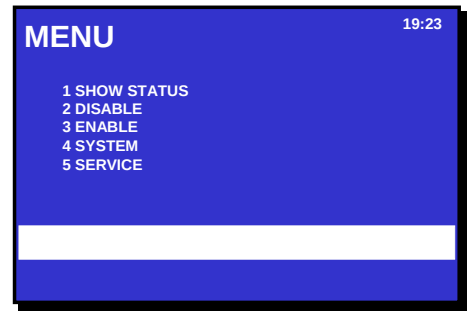
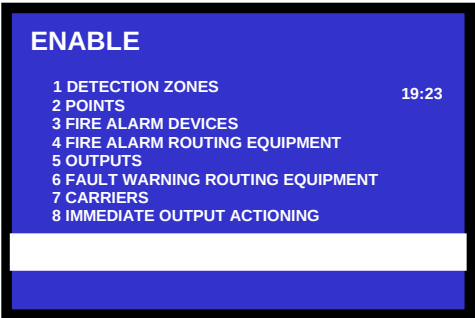
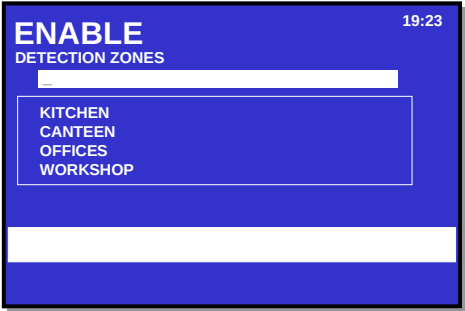
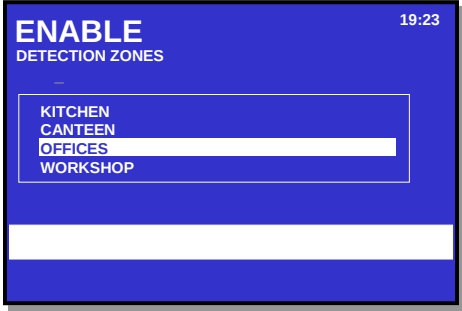
12.11 Enabling Immediate Output Actioning

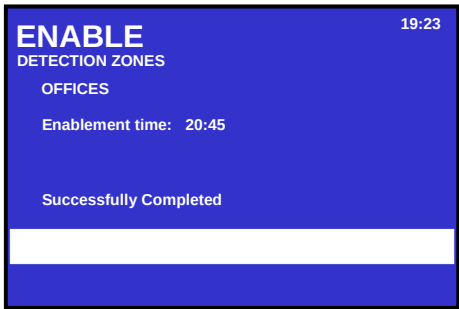
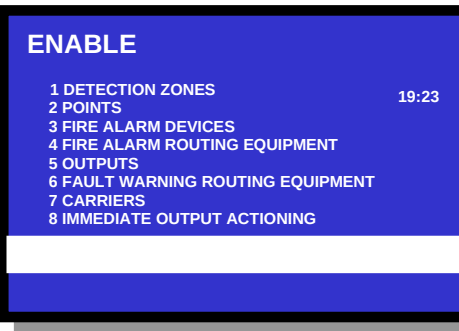
When enabling *Immediate Output Actioning*, there will be no delay on the actioning of outputs to Fire Alarm Devices (FAD) and/or Fire Alarm Routing Equipment (FARE) in zones configured as *Delayed Action Detection Zones*, *Delayed Coincidence Detection Zones* or *SOLAS Detection Zones*.

It is possible to enable immediate output actioning for *all Day / Night areas* or for *selected Day / Night areas*.

12.12 How to Execute Commands from the Enable Menu

The *example* below shows how to enable a *Detection Zone*. The similar procedure applies to all other selections (1-7).

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select ENABLE, press 3.	
3	To select, press the relevant number, in this example 1 (DETECTION ZONES).	
4	Use the keyboard to enter text into the input box - OR ,- as shown in this example: press  then move the cursor to the desired selection (OFFICES) by scrolling with the arrow buttons  	

Step	Actions to be taken	Display Indication
5	Press 	
6	To execute the command, press 	
7	To return to the ENABLE menu immediately, press the Close Window button 	
		<i>Comments:</i> If the Close Window button is not pressed, the ENABLE menu will appear automatically after a short moment.

13. System Menu

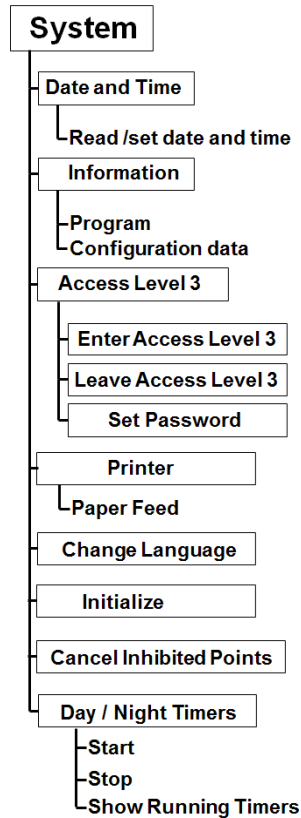
13.1 Introduction

The System Menu allows authorized personnel to:

- set/change date and time
- view the current program version and project information (identification, customer name, version of site configuration data and configuration tool)
- enter or leave access *level* 3 (to reconfigure or maintain site specific data), set/change password
- printer; feed paper
- change language (toggle between English / local language)
- manually initialize the AutoSafe Interactive Fire Alarm System
- cancel inhibited points
- start / stop automatic Day / Night Operation, show timers

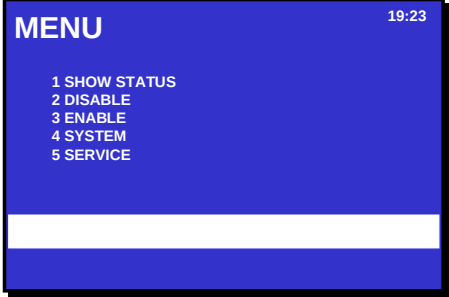
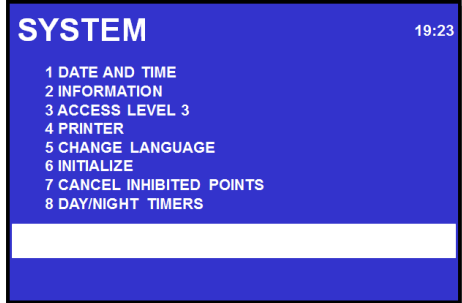
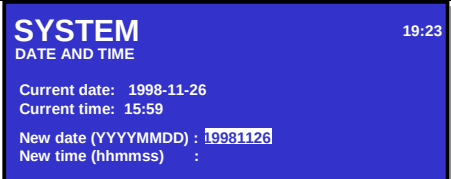
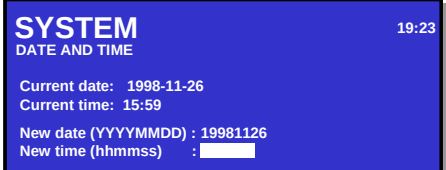
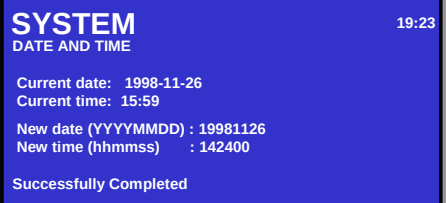
Only users with access level 2 (key), 3 (password restricted) or a higher access level are allowed to do changes in the system menu.

13.2 System Menu



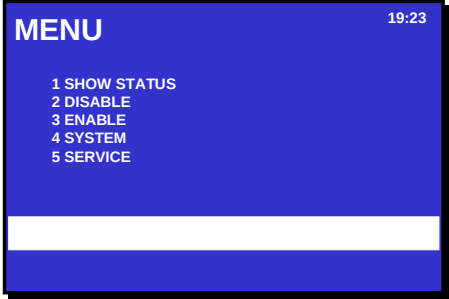
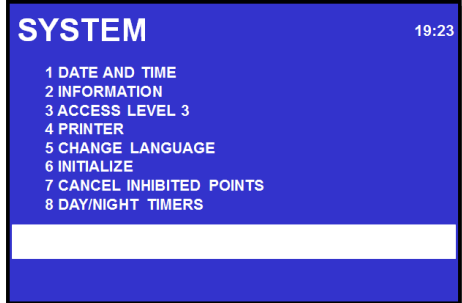
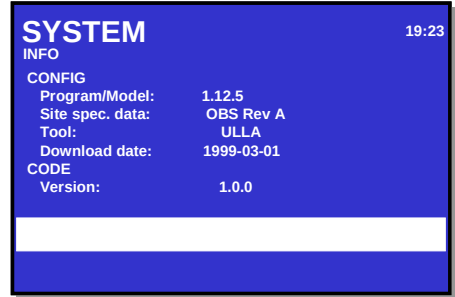
13.3 How to Set / Change Date and Time

The procedure below describes how to set / change date and time.

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	 The display shows the MENU screen with the following options: 1 SHOW STATUS, 2 DISABLE, 3 ENABLE, 4 SYSTEM, 5 SERVICE. The time 19:23 is displayed in the top right corner.
2	To select SYSTEM, press 4.	 The display shows the SYSTEM screen with the following options: 1 DATE AND TIME, 2 INFORMATION, 3 ACCESS LEVEL 3, 4 PRINTER, 5 CHANGE LANGUAGE, 6 INITIALIZE, 7 CANCEL INHIBITED POINTS, 8 DAY/NIGHT TIMERS. The time 19:23 is displayed in the top right corner.
3	To select DATE AND TIME, press 1.	 The display shows the SYSTEM DATE AND TIME screen. It displays the current date and time: Current date: 1998-11-26, Current time: 15:59. It also displays the new date and time: New date (YYYYMMDD) : 19981126, New time (hhmmss) : . The time 19:23 is displayed in the top right corner.
		<i>Comments:</i> The date will appear automatically. If the wrong date appears, you can overwrite with the correct date.
4	If necessary, enter the correct date (8 digits; YYYYMMDD), then press 	 The display shows the SYSTEM DATE AND TIME screen. It displays the current date and time: Current date: 1998-11-26, Current time: 15:59. It also displays the new date and time: New date (YYYYMMDD) : 19981126, New time (hhmmss) : . The time 19:23 is displayed in the top right corner.
5	Enter the correct time (6 digits; hhmmss), then press  twice.	 The display shows the SYSTEM DATE AND TIME screen. It displays the current date and time: Current date: 1998-11-26, Current time: 15:59. It also displays the new date and time: New date (YYYYMMDD) : 19981126, New time (hhmmss) : 142400. The time 19:23 is displayed in the top right corner. The screen also displays "Successfully Completed".

13.4 How to View Current Program Version

The procedure below describes how to view the current program version.

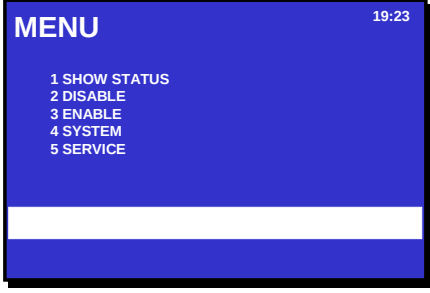
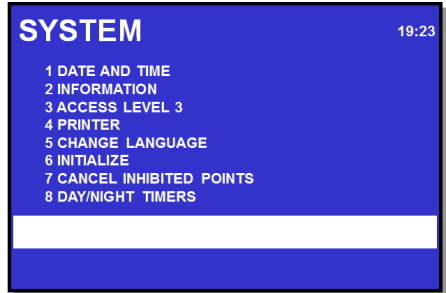
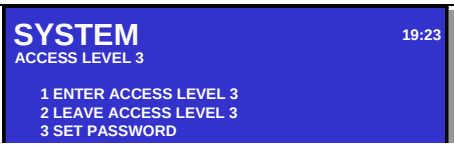
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SYSTEM, press 4.	
3	To select INFORMATION, press 2.	

13.5 How to Enter Access Level 3 / Set Password

13.5.1 Introduction

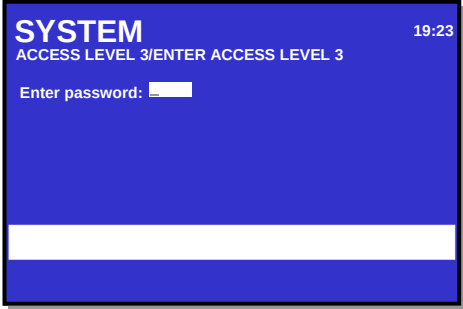
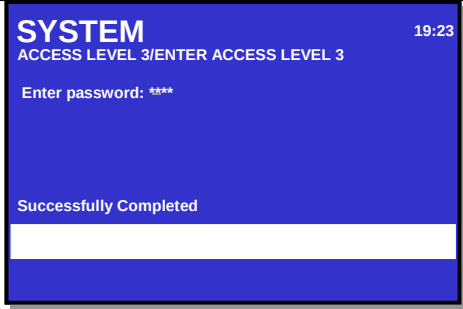
This menu describes how to enter/leave Access Level 3 and to set a new password (requires Access Level 3). All user interface controls are classified as belonging to one of the four different access levels described below:

Access Level	Access Remedy	Description
1	No key or password required.	Accessible by members of the general public. All mandatory indications are visible at access level 1 without prior manual intervention.
2 	Access by key.	Accessible by persons having a specified responsibility for safety.
3	Password restricted.	Accessible by persons trained and authorized to do reconfiguration of site specific data and maintenance according to the manufacturer's published instruction.
4	Mechanical tool.	Accessible by persons doing repair work and changing firmware.

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SYSTEM, press 4.	
3	To select ACCESS LEVEL 3, press 3.	
<i>Comments:</i> From here you can enter / leave access level 3, or set a new password (see the next steps on the following pages). 		

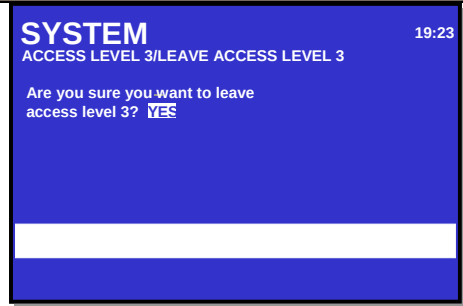
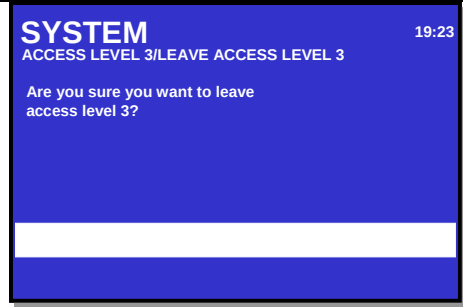
13.5.2 Enter Access Level 3

.....continued from previous page.

Step	Actions to be taken	Display Indication
4	To enter ACCESS LEVEL 3, press 1.	
5	Enter the password, then press  twice.	

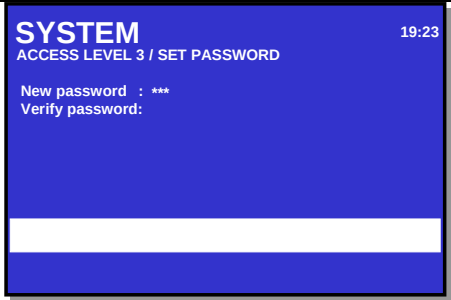
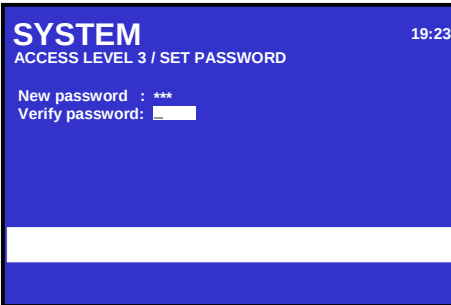
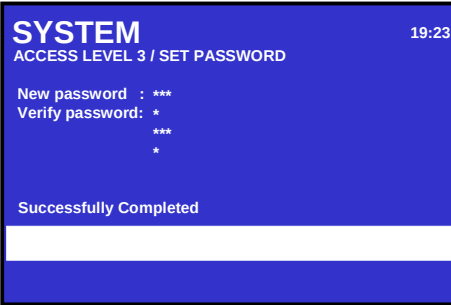
13.5.3 Leave Access Level 3

.....continued from previous page

Step	Actions to be taken	Display Indication
4	To enter LEAVE ACCESS LEVEL 3, press 2.	
5	Press 	

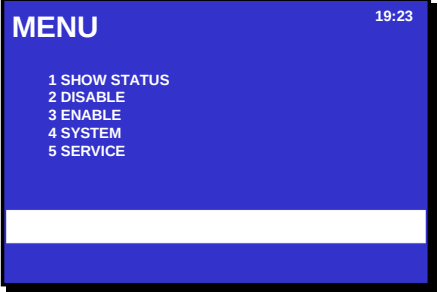
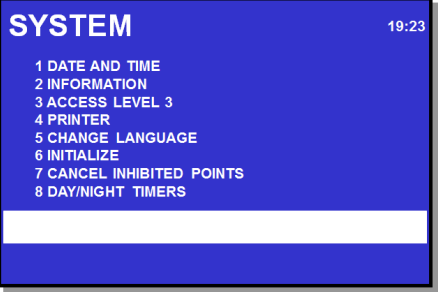
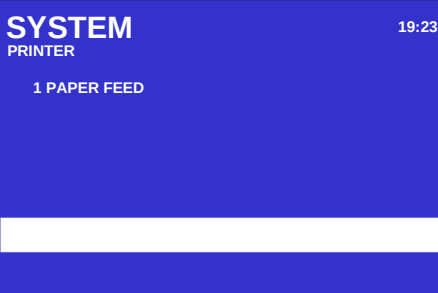
13.5.4 Set (or Change) Password

.....continued from step 3 (ACCESS LEVEL 3).

Step	Actions to be taken	Display Indication
4	To set password, press 3.	
5	Enter new password, then press 	
6	Verify by entering the new password, then press  twice.	

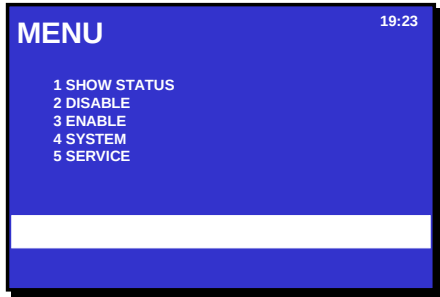
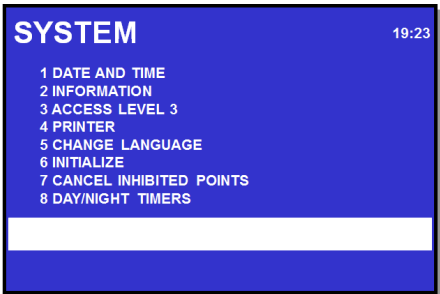
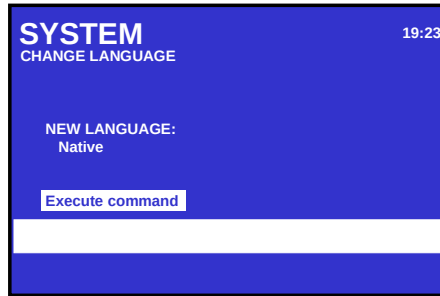
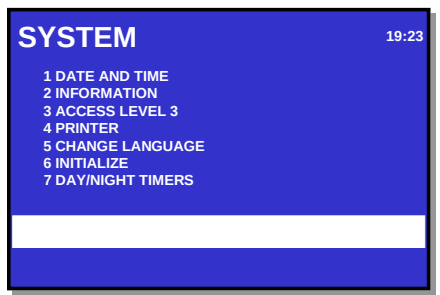
13.6 How to Feed Paper

The procedure below describes how to feed the paper.

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SYSTEM, press 4.	
3	To select PRINTER, press 4.	
4	To feed paper, press 1.	

13.7 How to Change Language

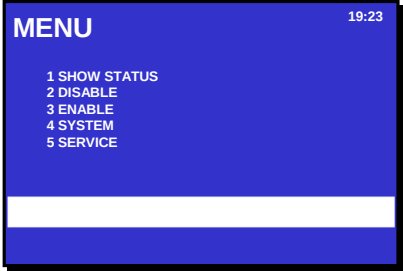
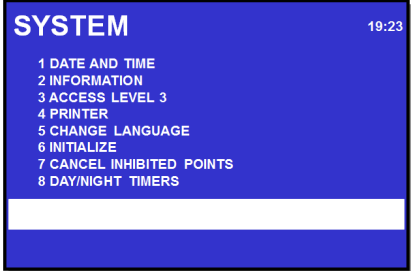
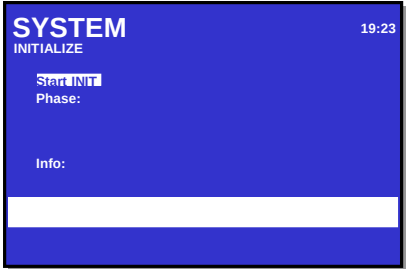
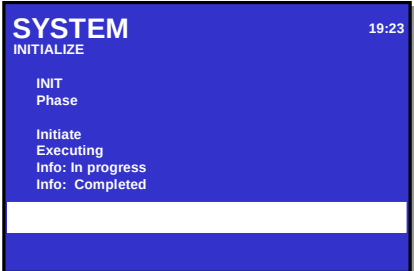
This menu allows you to determine the language which is to be used (English / local language) for a panel. A change in language has to be done locally on each panel.

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SYSTEM, press 4.	
3	To select CHANGE LANGUAGE, press 5.	
4	To accept the language, press 	
<i>Comments:</i> The System Menu will after a few seconds appear in the native language (shown in English above).		

13.8 How to Initialize the Fire Alarm System

The AutoSafe Interactive Fire Alarm System is automatically initialized when the panel is turned on. However, in certain cases it may be necessary to *manually* initialize the panel.

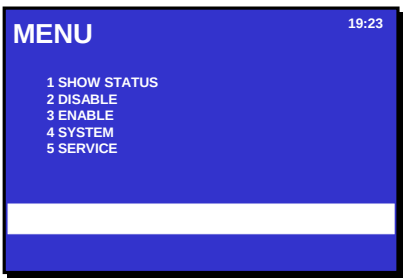
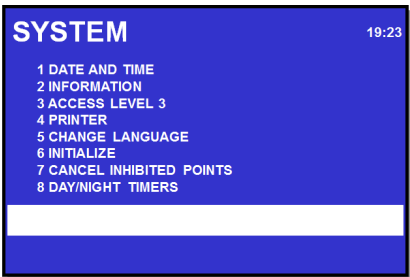
The procedure below describes how to manually initialize the fire alarm system.

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SYSTEM, press 4.	
3	To select INITIALIZE, press 6.	
4	To start the initialization, press 	
		Comments: The initializing procedure will start, and is completed when the message «Completed» is shown in the display. To return the System Menu, press the Close Window button.

13.9 Cancel Inhibited Points

In an alarm situation, an inhibited point will not signal alarms to outputs, but only present alarms, prealarms and early warnings on all panels and AutoCom as usual (see Service Menu, Inhibit Point, chapter 14.10.1).

The purpose of this command is to globally cancel the automatic inhibit that can be configured to be active after system startup/init.

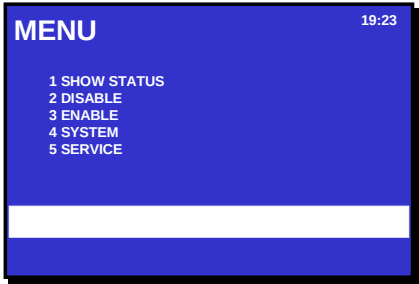
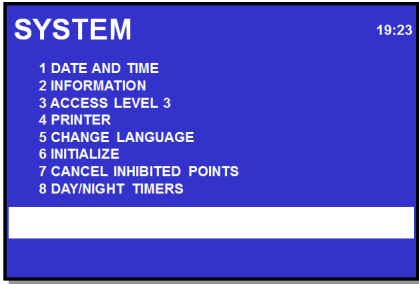
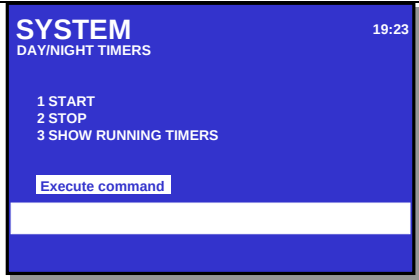
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SYSTEM, press 4.	
3	To select CANCEL INHIBITED POINTS, press 7.	

13.10 Day / Night Timers

13.10.1 Starting / Stopping Automatic Day / Night Operation from the Control Panel

From the Control Panel, it is possible to Start or Stop the automatic day / night operation in the System Menu. After activation (Start) of the automatic day/night operation, the affected Operation Zones will be set to their correct state (Disabled or Enabled Immediate Output Actioning) according to the specified schedules.

After deactivation (Stop) of the automatic day/night operation, the affected Operation Zones will be left in its current state in respect to Disabled/Enabled Immediate Output Actioning

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SYSTEM, press 4.	
3	To select DAY/NIGHT TIMERS, press 8.	
4	To select, press the relevant number (1-3): 1. Start 2. Stop 3. Show Running Timers	
5	Press 	
<i>Comments:</i> The initializing procedure will start, and is completed when the message «Completed» is		

Step	Actions to be taken	Display Indication
		shown in the display. To return the System Menu, press the Close Window button.

13.10.2 Overriding Automatic Day / Night Operation from the Control Panel

It is possible to override the automatic day / night operation from the control panel by stopping the Day / Night Timers, and then issuing Enable / Disable Immediate Output Actioning commands manually.

14. Service Commands

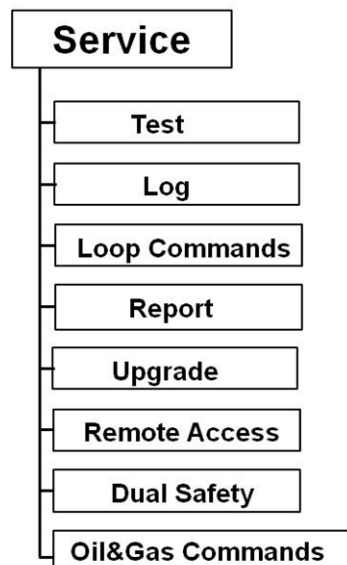
14.1 Introduction

From the operator panel you can perform service commands. To use the Service Commands, access level 3 is required.

Access Level	Access Remedy	Description
3	Password restricted.	Accessible by persons trained and authorized to do reconfiguration of site specific data and maintenance according to the manufacturer's published instruction.
4	Mechanical tool.	Accessible by persons doing repair work and changing firmware.

14.2 Service Menu

The Service Menu includes the following submenus:



Note that the Oil&Gas Commands apply only to oil&gas systems.

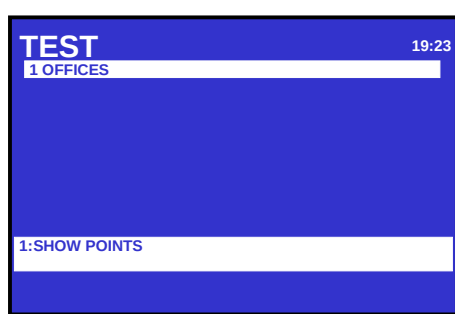
14.3 Testing

The Test Menu allows you to test Detection Zones (detectors and manual call-points) and Outputs.

14.3.1 Testing Detection Zones

14.3.1.1 Indications on the Operator Panel

During testing, the *Testing indicator* on the Operator Panel will show a yellow steady light. The panel's display will always indicate that a test is being performed (as shown in the example below). The zones in test mode are also shown.

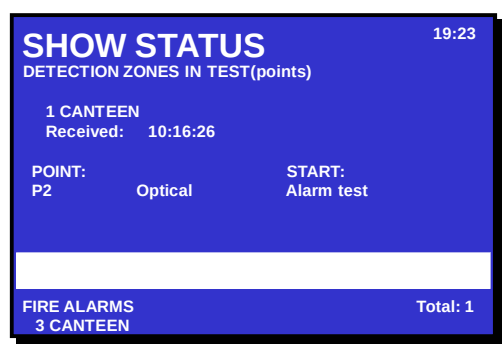


14.3.1.2 Entering Test Mode

To be able to manually test points (detectors or manual call-points) without automatic actioning of Fire Protection Equipment (FPE), Fire Alarm Routing Equipment (FARE) or Fire Alarm Devices (FAD), *detection zones* can be set in *test mode* (ENTER TEST MODE). If a detection zone has been set to test mode, *any* point connected to this zone can be tested (with, for example, test gas) without automatic actioning (i.e. audible indication) from sounders, bells, etc.

In the SHOW STATUS menu (main menu selection 1), you can now verify that a point you have tested (for example, a detector you have tested with test gas) operates properly - without audible indication.

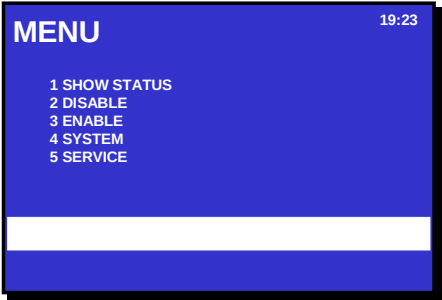
As shown on the example below, a message on a status line will appear (Alarm test), indicating that the alarm signal has been sent from the tested point (in this example, P2, optical detector).

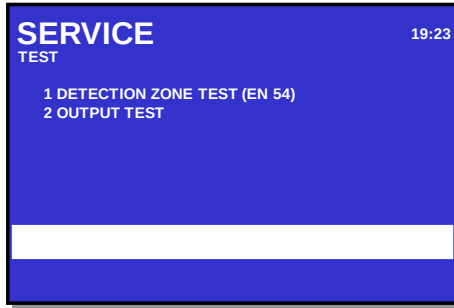
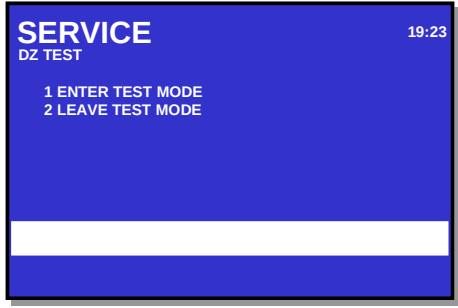
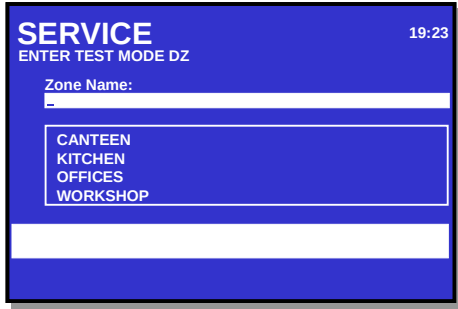
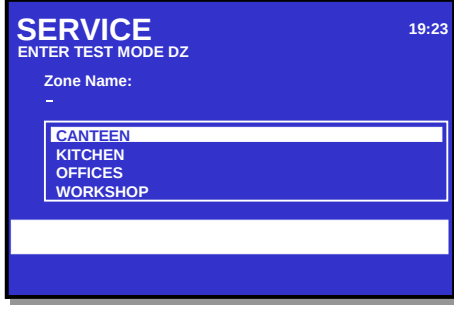


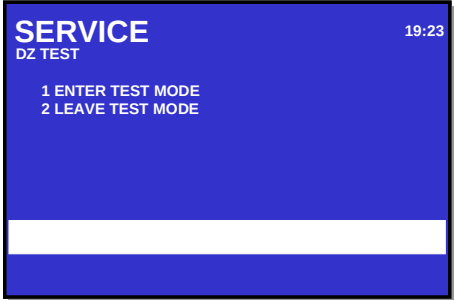
The zones in test mode will always appear on the display. From here, you can also enter the SHOW STATUS menu directly.

In test mode, the automatic timeout (default 25 seconds in operation mode / menu mode) is 20 times the default timeout (i.e. up to 500 seconds) provided that no alarms occur within the timeout period.

The procedure below describes how to set a detection zone in test mode.

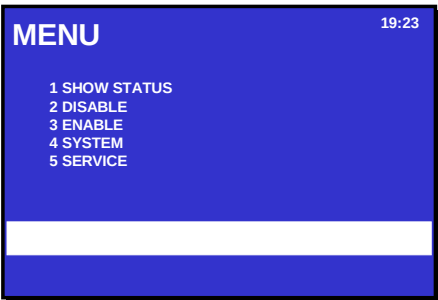
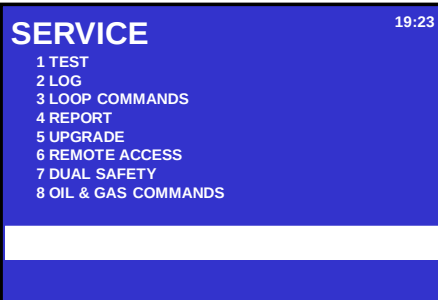
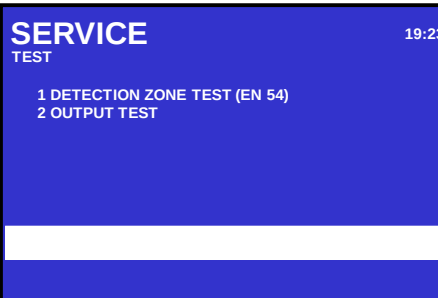
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	 

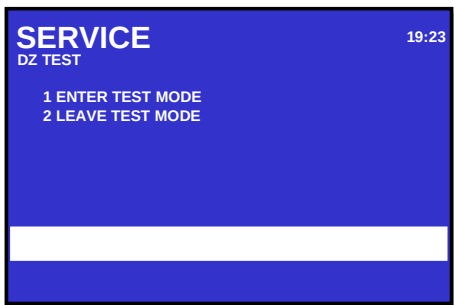
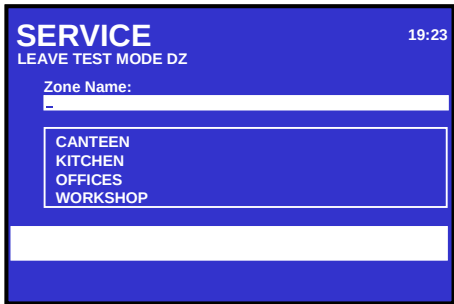
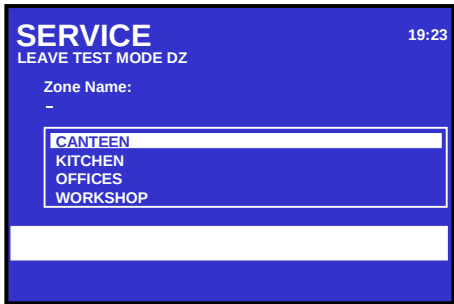
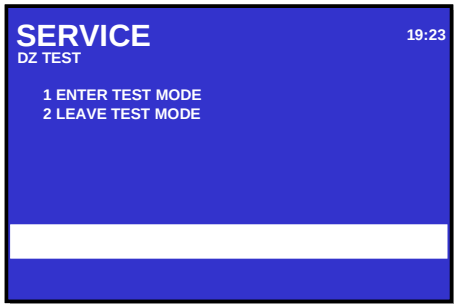
Step	Actions to be taken	Display Indication
2	To select SERVICE, press 5.	
3	To select TEST, press 1.	
4	To select DETECTION ZONE TEST, press 1.	
5	To ENTER TEST MODE, press 1.	
6	Use the keyboard to enter text into the input box - OR ,- as shown in this example: To select a Zone Name, press  then scroll downwards or upwards by pressing 	

Step	Actions to be taken	Display Indication
7	To enter Test Mode for the selected zone (in this example CANTEEN is chosen), press twice on 	

14.3.1.3 Leaving Test Mode

The procedure below describes how to leave test mode for a selected zone (LEAVE TEST MODE).

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	
3	To select TEST, press 1.	

Step	Actions to be taken	Display Indication
4	To select DETECTION ZONE TEST, press 1.	
5	To select LEAVE TEST MODE, press 2. (Only Detection Zones in Test Mode will appear in the display).	
6	Use the keyboard to enter text into the input box - OR , - as shown in this example: To select a Zone Name, press  then scroll downwards or upwards by pressing  	
7	To leave Test Mode for the selected zone (in this example CANTEEN is chosen), press twice on 	

NOTE:

To ensure that all selected detection zones leave Test Mode after carrying out this procedure, press the reset button on the front panel.

14.3.2 Testing Outputs

14.3.2.1 Manual Test ON

The subsequent chapters describe how to test;

- Fire Alarm Devices (FAD)
- Fire Alarm Routing Equipment (FARE)
- Fault Warning Routing Equipment (FWRE)
- Other Outputs

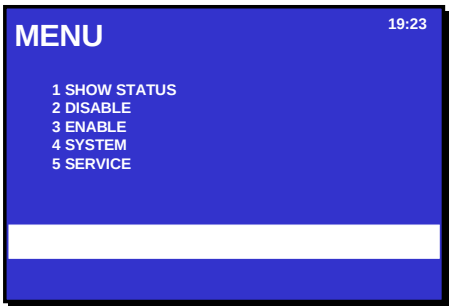
Outputs activated by “Manual Test ON” will be kept active, i.e. reset will not deactivate. An ongoing test can be terminated by use of the Manual Test OFF menu.

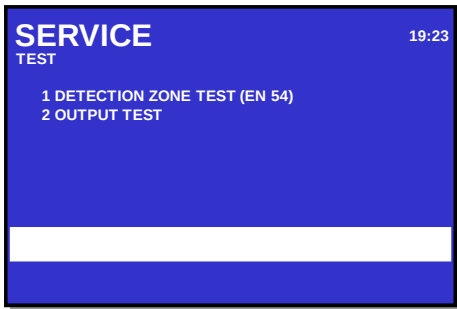
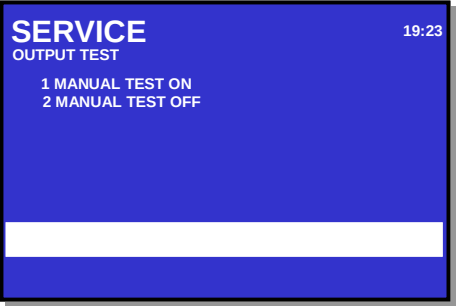
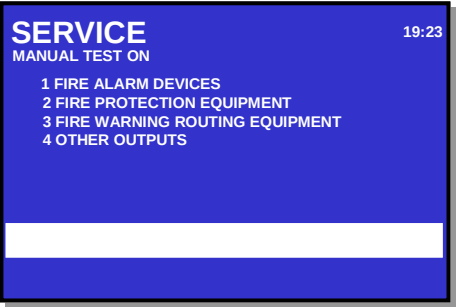
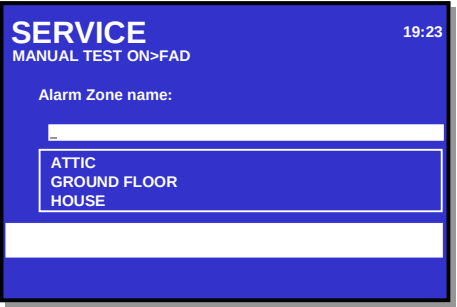
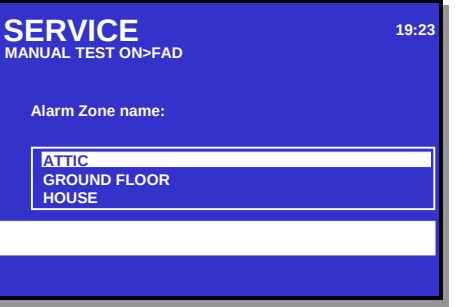
14.3.2.2 Manual Test ON- Fire Alarm Devices (FAD)

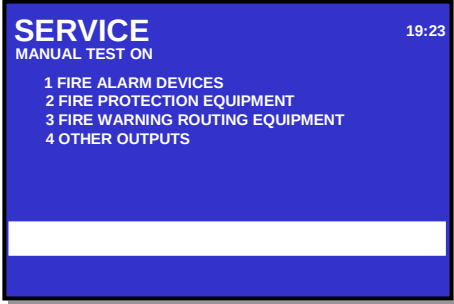
This chapter describes how to test *Fire Alarm Devices*. The test requires Access Level 3 (password restricted).

When the test is initiated, a test signal will be sent to all Fire Alarm Devices within the selected *Alarm Zone*. The duration of the signal and the interval between each signal are configurable (normally 1 second ON and 30 seconds OFF).

The test signal is given the lowest priority. In the event of an alarm, the alarm signal will thus override the test signal.

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	

Step	Actions to be taken	Display Indication
3	To select TEST, press 1.	
4	To select OUTPUT TEST, press 2.	
5	To select MANUAL TEST ON, press 1.	
6	To select FIRE ALARM DEVICES, press 1.	
7	Use the keyboard to enter text into the input box - OR , - as shown in this example: To select the Alarm Zone Name, press  then scroll downwards or upwards by pressing  	

Step	Actions to be taken	Display Indication
8	To accept the selected Alarm Zone and activate the test, press twice on 	
A test signal will be sent to all Fire Alarm Devices within the selected Alarm Zone.		

14.3.2.3 Manual Test ON- Fire Alarm Routing Equipment (FARE)

The test is similar to the test for Fire Alarm Devices (FAD) and it requires Access Level 3 (password restricted). For detailed description, refer to 14.3.2.2.

When the test is initiated, a test signal will be sent to all Fire Alarm Routing Equipment (FARE) within the *Operation Zone* (if there are several Operation Zones, the signal will be sent to FARE in all Operation Zones). The duration of the signal and the interval between each signal are configurable (normally 1 second ON and 30 seconds OFF).

The test signal is given the lowest priority. In the event of an alarm, the alarm signal will thus override the test signal.

14.3.2.4 Manual Test ON- Fault Warning Routing Equipment (FWRE)

The test is similar to the test for Fire Alarm Devices (FAD) and it requires Access Level 3 (password restricted). For detailed description, refer to 14.3.2.2.

When the test is initiated, a test signal will be sent to all Fault Warning Routing Equipment (FWRE) within the *Operation Zone* (if there are several Operation Zones, the signal will be sent to FARE in all Operation Zones). The duration of the signal and the interval between each signal are configurable (normally 1 second ON and 30 seconds OFF).

The test signal is given the lowest priority. In the event of an alarm, the alarm signal will thus override the test signal.

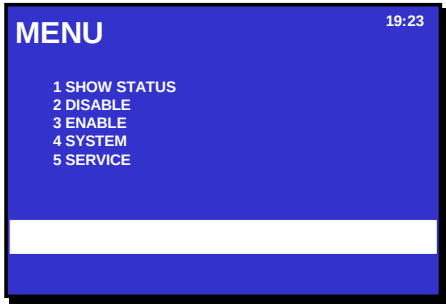
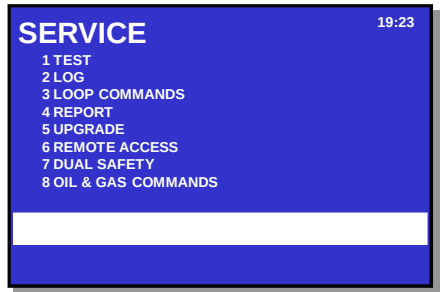
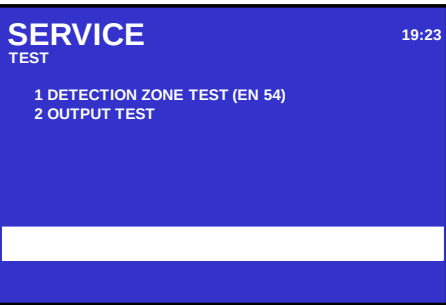
14.3.2.5 Manual Test ON - Other Outputs

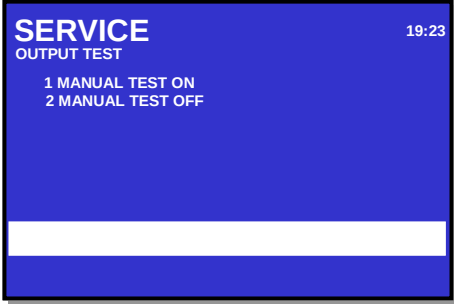
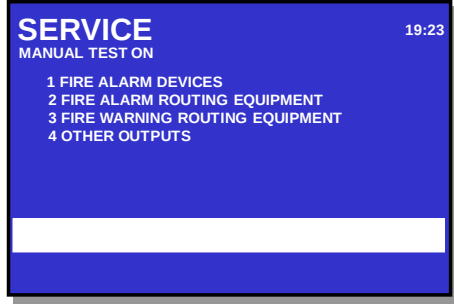
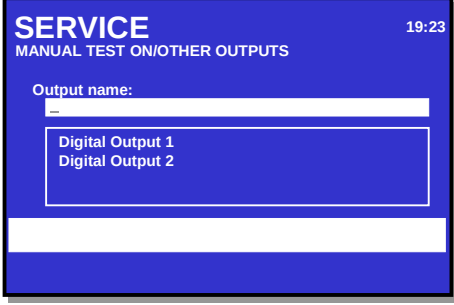
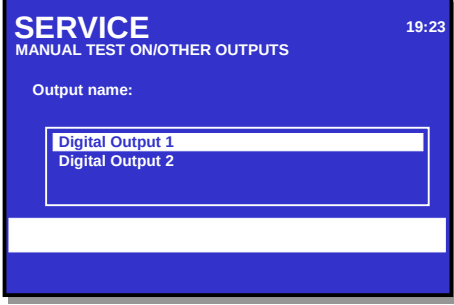
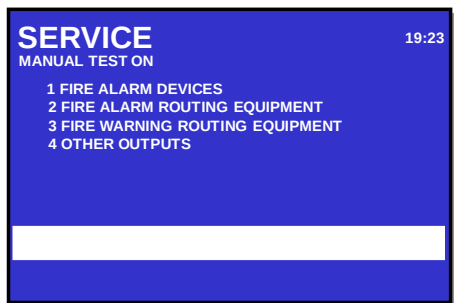
This chapter describes how to test other outputs (outputs to *Fire Protection Equipment*). The test requires Access Level 3 (password restricted).

When the test is initiated, a test signal will be sent to the selected Fire Protection Equipment.

NOTE:

Before this test is performed, make sure that all extinguishers (or other similar equipment) that are to be tested are *disconnected*. During the test, use a measuring instrument to measure the output on the Fire Protection Equipment that is to be tested.

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	 The display shows the 'MENU' screen with a list of options: 1 SHOW STATUS, 2 DISABLE, 3 ENABLE, 4 SYSTEM, 5 SERVICE. The time 19:23 is displayed in the top right corner.
2	To select SERVICE, press 5.	 The display shows the 'SERVICE' screen with a list of options: 1 TEST, 2 LOG, 3 LOOP COMMANDS, 4 REPORT, 5 UPGRADE, 6 REMOTE ACCESS, 7 DUAL SAFETY, 8 OIL & GAS COMMANDS. The time 19:23 is displayed in the top right corner.
3	To select TEST, press 1.	 The display shows the 'SERVICE TEST' screen with a list of options: 1 DETECTION ZONE TEST (EN 54), 2 OUTPUT TEST. The time 19:23 is displayed in the top right corner.

Step	Actions to be taken	Display Indication
4	To select OUTPUT TEST, press 2.	
5	To select MANUAL TEST ON, press 1.	
6	To select OTHER OUTPUTS, press 4.	
7	Use the keyboard to enter text into the input box - OR, - as shown in this example: To select an output, press  then scroll downwards or upwards by pressing  	
8	To accept the selected output and activate the test, press twice on 	
		A test signal will be sent to the selected Fire Protection Equipment.

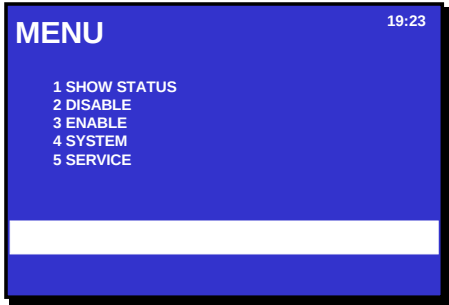
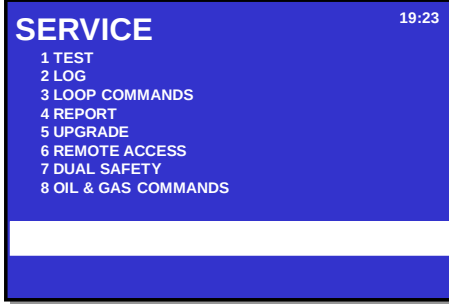
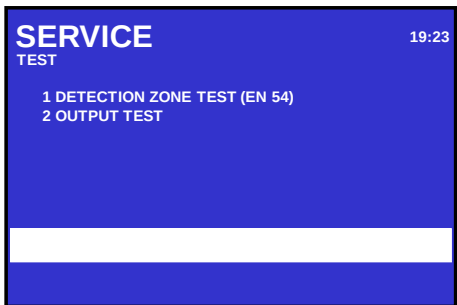
14.3.2.6 Manual Test OFF

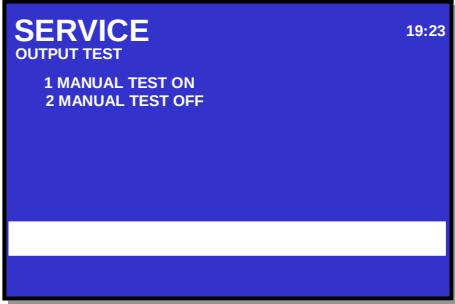
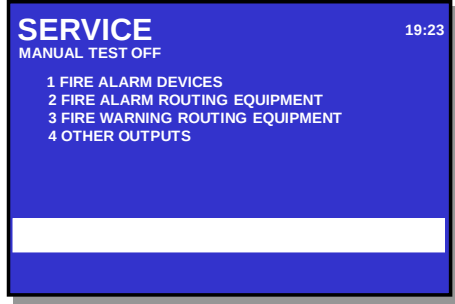
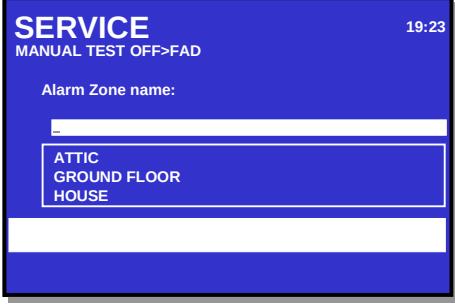
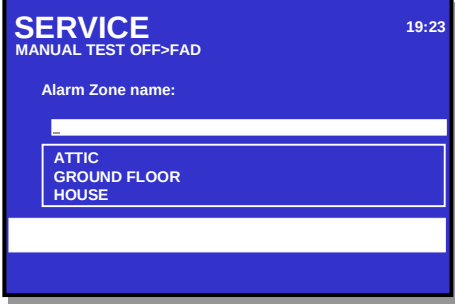
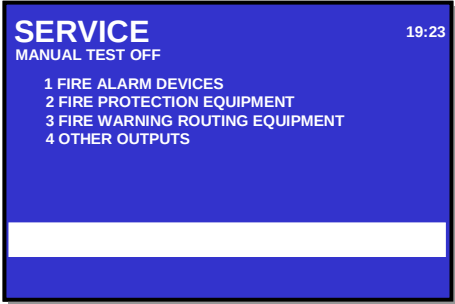
The subsequent chapters describe how to terminate an ongoing test for

- Fire Alarm Devices (FAD)
- Fire Alarm Routing Equipment (FARE)
- Fault Warning Routing Equipment (FWRE)
- Other Outputs

14.3.2.7 Manual Test OFF- Fire Alarm Devices (FAD)

This chapter describes how to terminate an ongoing test for *Fire Alarm Devices*.

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	
3	To select TEST, press 1.	

Step	Actions to be taken	Display Indication
4	To select OUTPUT TEST, press 2.	
5	To select MANUAL TEST OFF, press 2.	
6	To select FIRE ALARM DEVICES, press 1.	
7	Use the keyboard to enter text into the input box - OR, - as shown in this example: To select the Alarm Zone Name, press  then scroll downwards or upwards by pressing  	
8	To accept the selected Alarm Zone and terminate the test, press 	

14.3.2.8 Manual Test OFF - Fire Alarm Routing Equipment (FARE)

The procedure to terminate an ongoing test for *Fire Alarm Routing Equipment* is similar to the procedure for Fire Alarm Devices. For detailed description, refer to 14.3.2.7.

14.3.2.9 Manual Test OFF - Fault Warning Routing Equipment (FWRE)

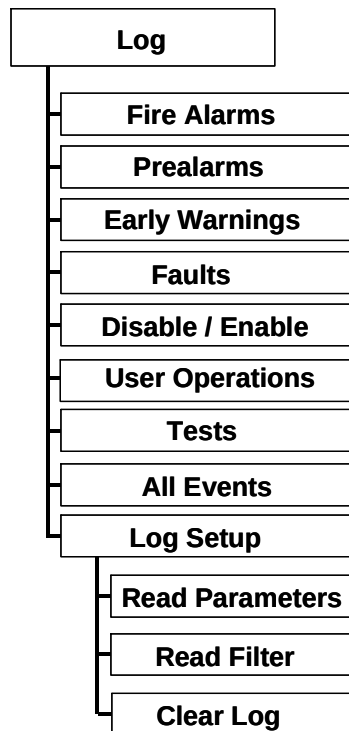
The procedure to terminate an ongoing test for *Fault Warning Routing Equipment* is similar to the procedure for Fire Alarm Devices. For detailed description, refer to 14.3.2.7.

14.3.2.10 Manual Test OFF – Other Outputs

The procedure to terminate an ongoing test for *other outputs* is similar to the procedure for Fire Alarm Devices. For detailed description, refer to 14.3.2.7.

NOTE: When the test is terminated, make sure that all extinguishers or other similar equipment are properly connected.

14.4 Event Recording – Log Menu



14.4.1.1 Events

To be able to analyse system behaviour for service and maintenance purposes, a number of events are recorded.

The table below gives an overview of these events and the detailed information that can be shown on the panel's display, or on a printout.

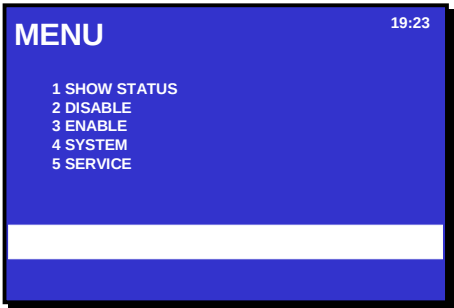
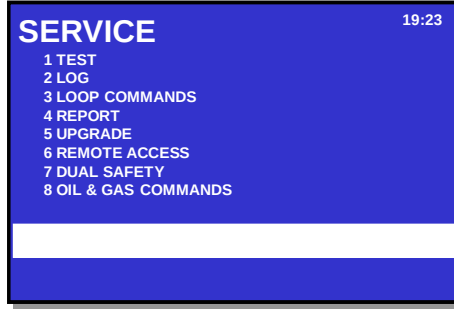
Event	Detailed Information
<i>Fire Alarms</i>	Date, time and identity of detection zones entering the Fire Alarm state.
<i>Prealarms</i>	Date, time and identity of detection zones entering the Prealarm state.
<i>Early Warnings</i>	Date, time and identity of detection zones entering the Early Warning state.
<i>Faults</i>	Date, time and identity of subject (individual component, group, zone) issuing a fault warning signal.
<i>Enable/Disable</i>	- Date, time and identity of subject (individual component, group, zone) entering the disabled state. - Date, time and identity of subject (individual component, group, zone) exiting the disabled state.
<i>User Operations</i>	- The date, time and operation zone identity of the operation of push buttons; RESET and SILENCE ALARMS. - The date, time and operation zone identity of the operation of; ALARM_DISABLE, REACTIVATE, RESOUND, INIT, ACTIVATE_ALARM, ENABLE_IMM_ACT, DISABLE_IMM_ACT, SET_TIME. - The date, time and event id (detection zone identity, fault identity etc) of all operations of ACCEPT.
<i>Tests</i>	Date, time and identity of all manually initiated tests.
<i>All Events</i>	All events
<i>Log Setup</i>	Read parameters, read filter, clear log.

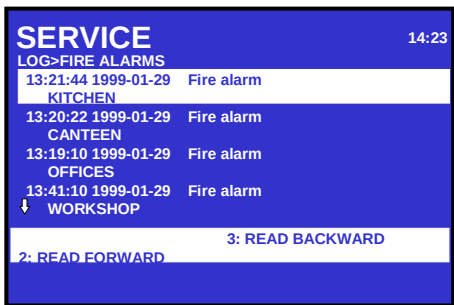
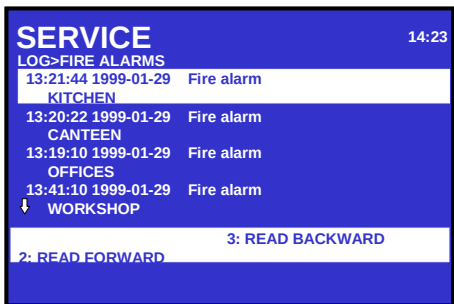
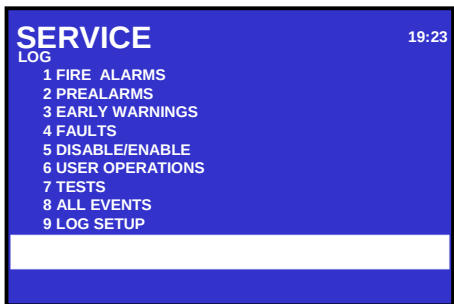
14.4.2 How to Use the Log Menu

14.4.2.1 Example Applicable for Logging Events 1 to 7

The *example* below shows how to view detailed information on Fire Alarms. The similar procedure applies to events 1 to 7 in the LOG menu:

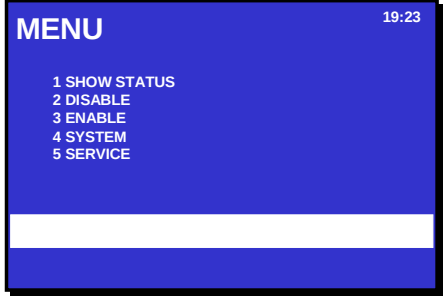
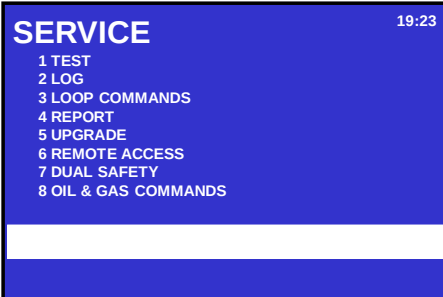
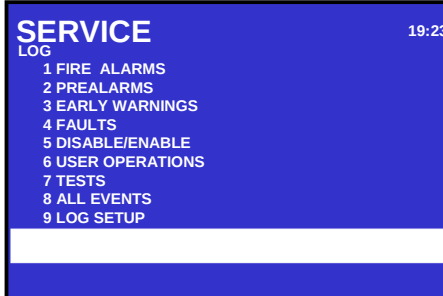
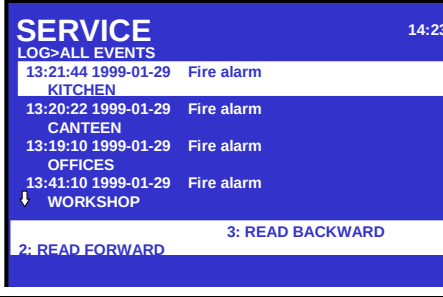
1. Fire Alarms
2. Prealarms
3. Early Warnings
4. Faults
5. Disable/Enable
6. User Operations
7. Tests

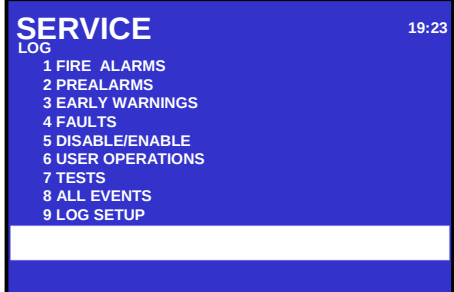
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	 The MENU screen shows a blue background with white text. At the top right is the time '19:23'. Below the title 'MENU' is a list of options: 1 SHOW STATUS, 2 DISABLE, 3 ENABLE, 4 SYSTEM, and 5 SERVICE. A white horizontal bar is at the bottom.
2	To select SERVICE, press 5.	 The SERVICE screen shows a blue background with white text. At the top right is the time '19:23'. Below the title 'SERVICE' is a list of options: 1 TEST, 2 LOG, 3 LOOP COMMANDS, 4 REPORT, 5 UPGRADE, 6 REMOTE ACCESS, 7 DUAL SAFETY, and 8 OIL & GAS COMMANDS. A white horizontal bar is at the bottom.
3	To select LOG, press 2	 The SERVICE LOG screen shows a blue background with white text. At the top right is the time '19:23'. Below the title 'SERVICE LOG' is a list of options: 1 FIRE ALARMS, 2 PREALARMS, 3 EARLY WARNINGS, 4 FAULTS, 5 DISABLE/ENABLE, 6 USER OPERATIONS, 7 TESTS, 8 ALL EVENTS, and 9 LOG SETUP. A white horizontal bar is at the bottom. An arrow points from the bottom right of this screen to the next step.

Step	Actions to be taken	Display Indication
4	To select FIRE ALARMS, press 1.	
5	To move to the next page (if there are several pages), use Action Digit 2 (READ FORWARD). To return to the previous page, use Action Digit 3 (READ BACKWARD).	
<i>Comments:</i> You can also scroll up and down with the arrow buttons (6 and 9).		
6	To return to the LOG menu, press the Close Window button 	

14.4.3 Logging All Events

The *example* below shows how to view detailed information on all events.

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	 The display shows the 'MENU' screen with a list of options: 1 SHOW STATUS, 2 DISABLE, 3 ENABLE, 4 SYSTEM, 5 SERVICE. The time 19:23 is displayed in the top right corner.
2	To select SERVICE, press 5.	 The display shows the 'SERVICE' screen with a list of options: 1 TEST, 2 LOG, 3 LOOP COMMANDS, 4 REPORT, 5 UPGRADE, 6 REMOTE ACCESS, 7 DUAL SAFETY, 8 OIL & GAS COMMANDS. The time 19:23 is displayed in the top right corner.
3	To select LOG, press 2.	 The display shows the 'SERVICE LOG' screen with a list of options: 1 FIRE ALARMS, 2 PREALARMS, 3 EARLY WARNINGS, 4 FAULTS, 5 DISABLE/ENABLE, 6 USER OPERATIONS, 7 TESTS, 8 ALL EVENTS, 9 LOG SETUP. The time 19:23 is displayed in the top right corner.
4	To select ALL EVENTS, press 8.	 The display shows the 'SERVICE LOG ALL EVENTS' screen. It lists fire alarm events: 13:21:44 1999-01-29 Fire alarm KITCHEN, 13:20:22 1999-01-29 Fire alarm CANTEEN, 13:19:10 1999-01-29 Fire alarm OFFICES, 13:41:10 1999-01-29 Fire alarm WORKSHOP. At the bottom, it shows '2: READ FORWARD' and '3: READ BACKWARD'. The time 14:23 is displayed in the top right corner.
5	To move to the next page (if there are several pages), use Action Digit 2 (READ FORWARD). To return to the previous page, use Action Digit 3 (READ BACKWARD).	 The display shows the 'SERVICE LOG ALL EVENTS' screen. It lists fire alarm events: 13:41:10 1999-01-29 Fire alarm WORKSHOP. At the bottom, it shows '2: READ FORWARD' and '3: READ BACKWARD'. The time 14:23 is displayed in the top right corner.

Step	Actions to be taken	Display Indication
		<i>Comments:</i> If the event log consists of one page or less, the READ FORWARD / BACKWARD buttons will reverse the order of the events. You can also scroll up and down with the arrow buttons (6 and 9).
6	To return to the LOG menu, press the Close Window button 	

14.4.4 The Log Setup Menu

The submenu Log Setup includes the menu selections Read Parameter, Read Filter and Clear Log.

In this menu you can determine how the information is to be presented when you enter menu selections 1-8 in the LOG menu. You can, *for example*, setup the LOG menu so that only Fire Alarms from a specific date/time will be shown when you enter LOG FIRE ALARMS (menu selection 1 in the LOG menu).

Read Parameters

This menu selection allows you to determine the read parameters:

- Read mode, *including*; Most recent, Continue, From time
- From Date and Time
- Read Direction (forward/backwards)
- Number of Entries

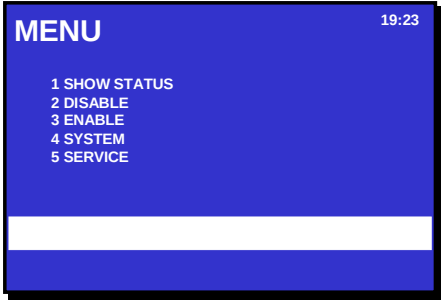
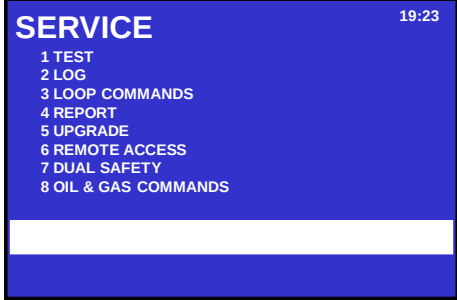
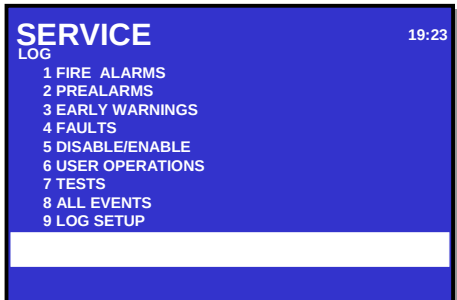
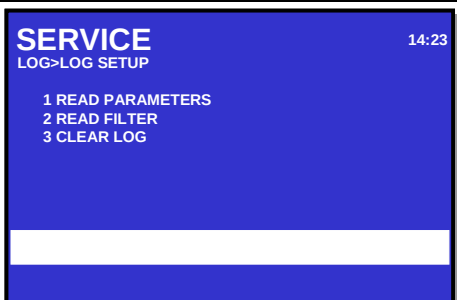
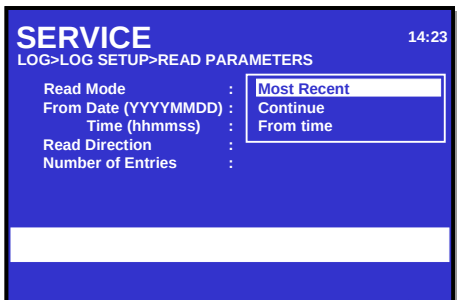
Read Filter

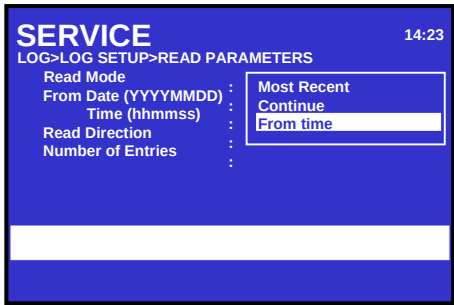
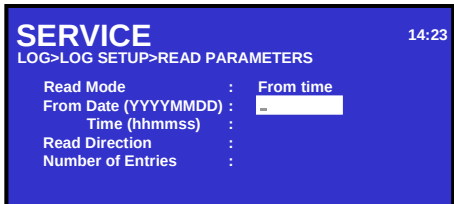
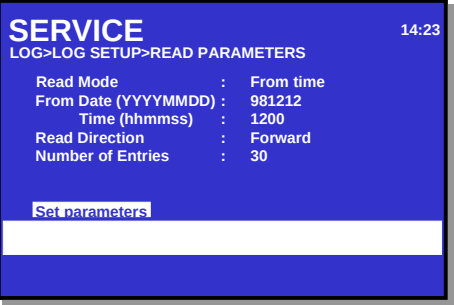
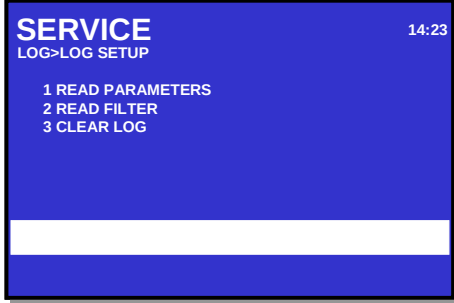
This menu selection allows you to determine the *units* that are to be logged (for example, Points, FAD, Loop units etc.).

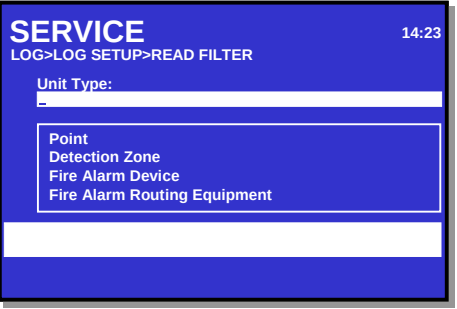
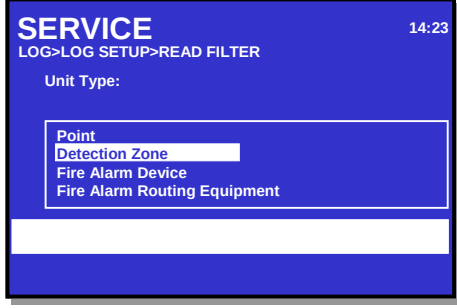
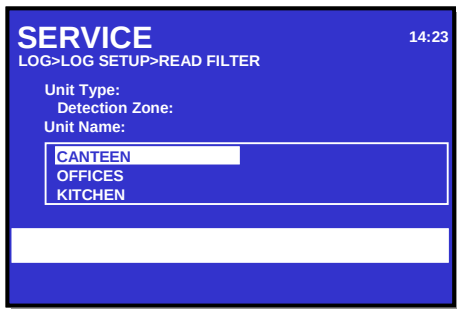
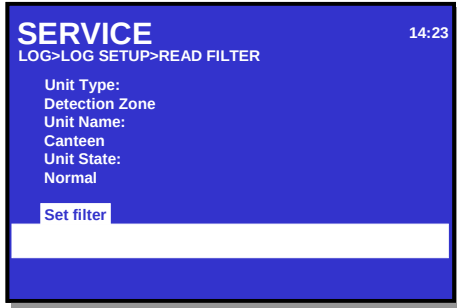
Note that when leaving the Control Menu, *Read Parameters* and *Read Filter* are reset to default values.

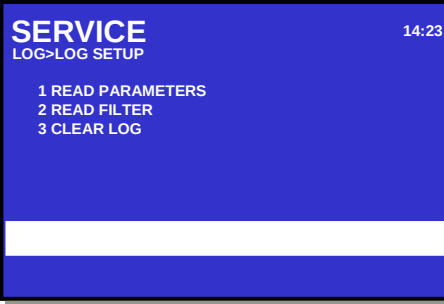
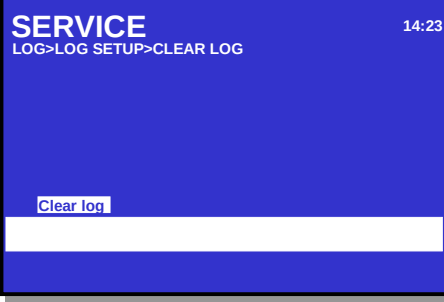
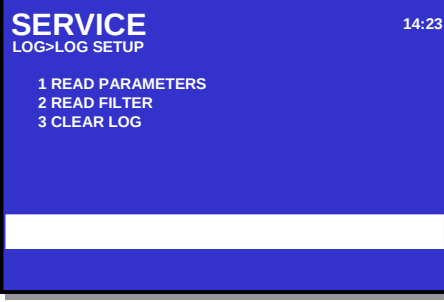
Clear Log

This menu selection allows you to clear the entire Log Menu for all events previously recorded.

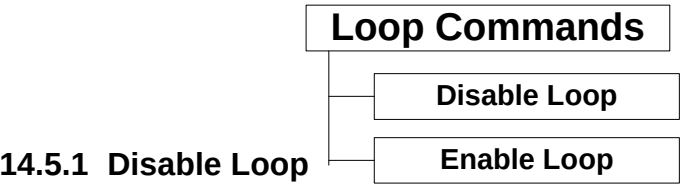
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	
3	To select LOG, press 2.	
4	To select LOG SETUP, press 9.	
		<i>Comments:</i> To enter READ PARAMETERS, go to step 5a. To enter READ FILTER, go to step 5b. To enter CLEAR LOG, go to step 5c.
5a	To enter READ PARAMETERS, press 1.	

Step	Actions to be taken	Display Indication
6a	To select the desired Read Mode (the selections are shown in the window to the right), scroll downwards or upwards by pressing 	
7a	To accept the desired Read Mode (in this example, «From time»), press 	
8a	Enter the next read parameter, then press  and repeat this step until all parameters are entered.	
9a	To accept all parameter settings, press 	
		To enter READ FILTER, go to step 5b. 

5b	To enter READ FILTERS, press 2.	
6b	Use the keyboard to enter text into the input box - OR, - as shown in this example: To select a Unit Type, press  then scroll downwards or upwards by pressing 	
Detection Zone is chosen in this example.		
7b	To accept the Unit Type, press 	
Canteen is chosen in this example.		
8b	Continue selecting <i>Unit Name</i> and the <i>Unit State</i> for the chosen Unit Type, by repeating the similar procedure.	

9b	To accept all parameter settings, press 	
To enter CLEAR LOG, go to step 4c.		
5c	To enter CLEAR LOG, press 3.	
6c	To clear the log entirely, press 	

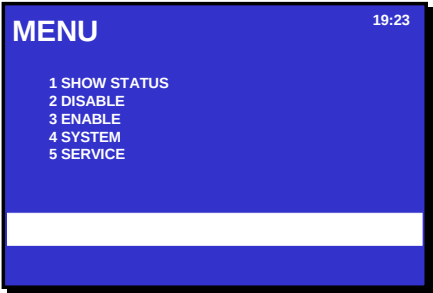
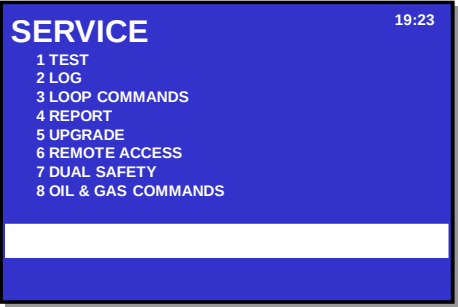
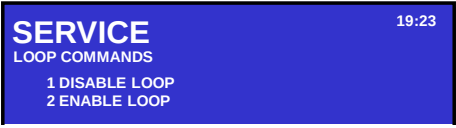
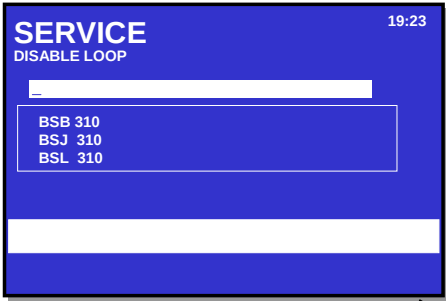
14.5 Loop Commands



14.5.1 Disable Loop

This menu allows you to disable one loop at a time without interrupting the system. This can be useful during maintenance, when detectors are changed on the loop etc.

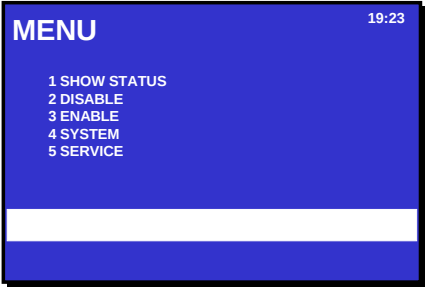
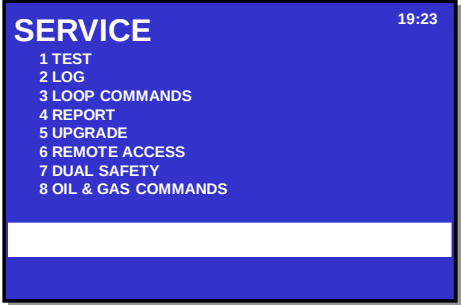
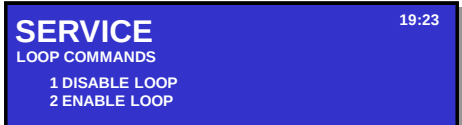
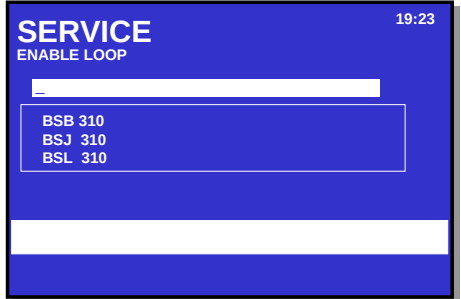
Note that only points "remember" their original Enable / Disable state.

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	
3	To select LOOP COMMANDS, press 3.	
4	To select DISABLE LOOP, press 1.	
5	Use the keyboard to enter text into the input box - OR ,- as shown in this example:	

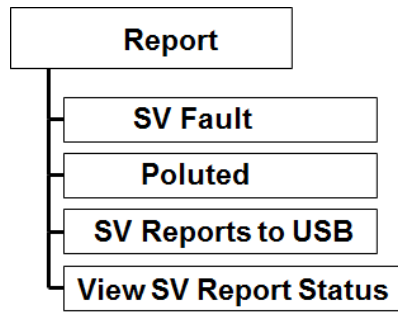
Step	Actions to be taken	Display Indication
	To select a Loop Name, press  then scroll downwards or upwards by pressing  	

14.5.2 Enable Loop

This menu allows you to enable one loop (a selected loop) at a time without interrupting the system.

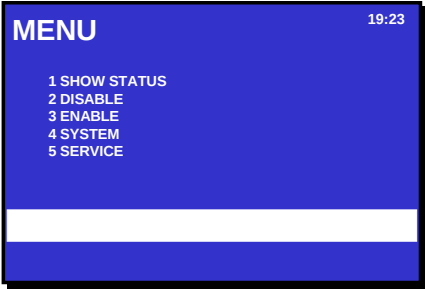
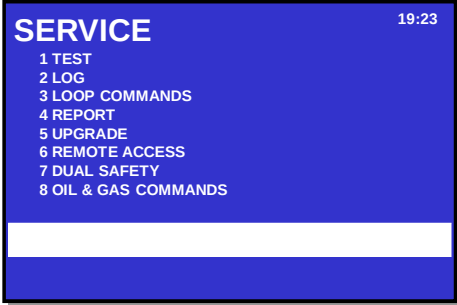
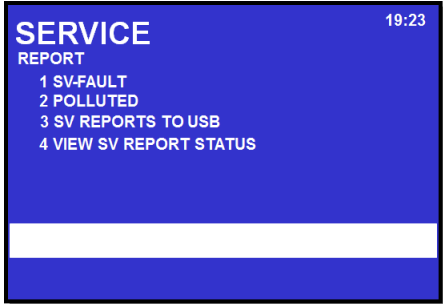
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	
3	To select LOOP COMMANDS, press 3.	
4	To select ENABLE LOOP, press 2.	
5	Use the keyboard to enter text into the input box - OR ,- as shown in this example: To select a Loop Name, press  then scroll downwards or upwards by pressing  	

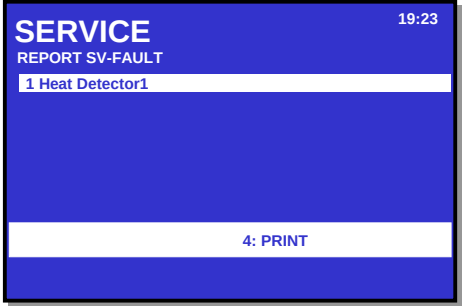
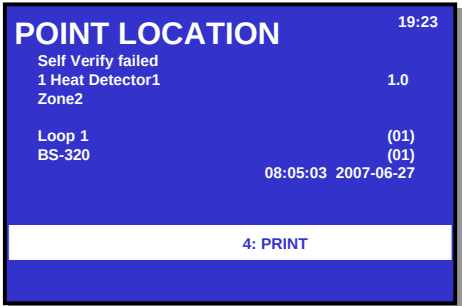
14.6 Report



14.6.1 SV-Fault

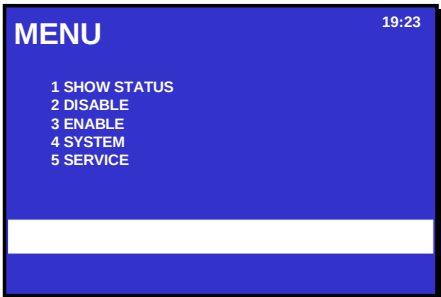
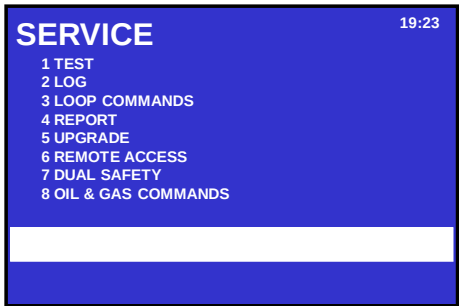
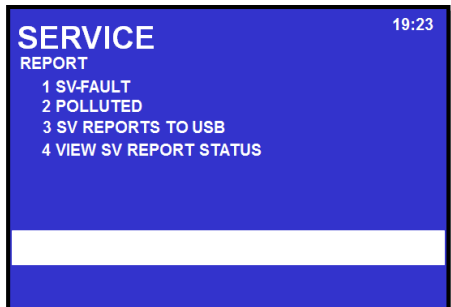
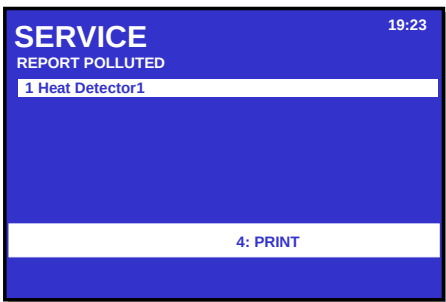
This command allows you to list all detectors that have been reported with SelfVerify fault (SV-Fault).

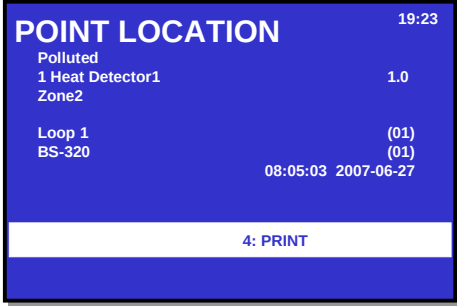
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	
3	To select REPORT, press 4	

Step	Actions to be taken	Display Indication
4	To select SV-Fault, press 1	
		<i>Comments:</i> In this example one detector has been reported with SV-Fault. Action Digit 4: Print will appear only if a printer is connected.
5	To view detailed point information for this detector, press 	
		<i>Comments:</i> The point information includes the point's tagname followed by the Loop Sequence Number (LSI), the name of the zone, the loop and its corresponding loop driver module's physical position in the module stack inside the cabinet (counted from bottom to top above the BSL-310 board), the Fire Alarm Control Panel's name and its address, and finally the exact time and date when SelfVerify failed for this point.

14.6.2 Polluted

This command allows you to list all detectors that have been reported as polluted.

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	 The screen shows the title 'MENU' and a list of options: 1 SHOW STATUS, 2 DISABLE, 3 ENABLE, 4 SYSTEM, 5 SERVICE. The time 19:23 is in the top right corner.
2	To select SERVICE, press 5.	 The screen shows the title 'SERVICE' and a list of options: 1 TEST, 2 LOG, 3 LOOP COMMANDS, 4 REPORT, 5 UPGRADE, 6 REMOTE ACCESS, 7 DUAL SAFETY, 8 OIL & GAS COMMANDS. The time 19:23 is in the top right corner.
3	To select REPORT, press 4	 The screen shows the title 'SERVICE' and the subtitle 'REPORT'. It lists options: 1 SV-FAULT, 2 POLLUTED, 3 SV REPORTS TO USB, 4 VIEW SV REPORT STATUS. The time 19:23 is in the top right corner.
4	To select Polluted, press 2	 The screen shows the title 'SERVICE' and the subtitle 'REPORT POLLUTED'. It lists '1 Heat Detector1'. At the bottom, there is a '4: PRINT' option. The time 19:23 is in the top right corner.
		<i>Comments:</i> In this example one detector has been reported as polluted 

Step	Actions to be taken	Display Indication
5	To view detailed point information for this detector, press 	
		<i>Comments:</i> The point information includes the point's tagname followed by the Loop Sequence Number (LSI), the name of the zone, the loop and its corresponding loop driver module's physical position in the module stack inside the cabinet (counted from bottom to top above the BSL-310 board), the Fire Alarm Control Panel's name and its address, and finally the exact time and date when this point was reported as polluted.

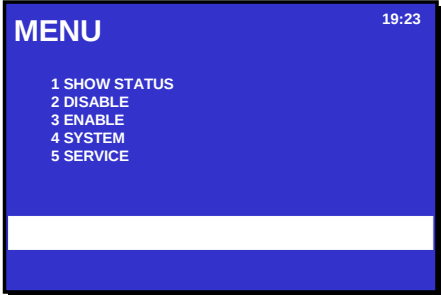
14.6.3 SV Reports to USB

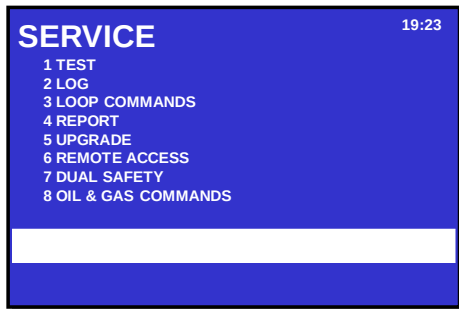
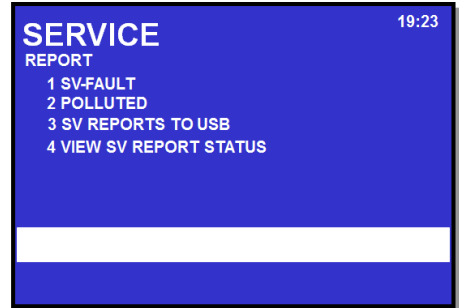
This command copies SV reports to a USB memory stick for.

- all detectors in system
- all detectors "Not OK" in system

Reports shall include:

- UnitName
- Date and time of last OK SV test
- Date and time of last SV test
- SV fault counter
- Last test result

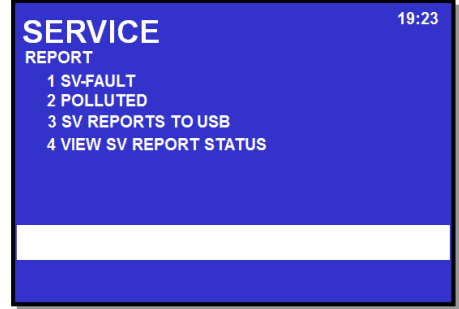
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	

Step	Actions to be taken	Display Indication
2	To select SERVICE, press 5.	
3	To select REPORT, press 4	
4	To select SV REPORTS TO USB, press 3	

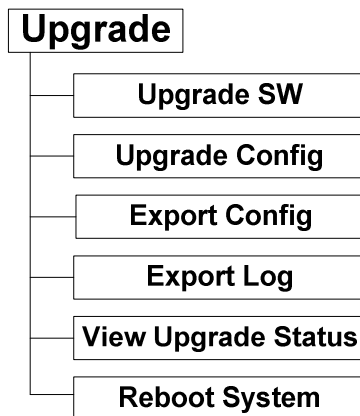
14.6.4 View SV Report Status

If reports are copied to a USB memory stick by operating the menu “SV Reports to USB”, it is possible to follow the progress by using the “View SV Report Status”. A progress counter will appear.

.....continued from step 2 in previous chapter .

3	To select REPORT, press 4	
4	To select VIEW SV REPORT STATUS, press 3	

14.7 Upgrade

**NOTE:**

When upgrading the system by means of a USB memory stick, do not remove the USB stick from the USB port until you are sure that the upgrade procedure is completed.

Enter the menu "View Upgrade Status" to follow the progress and verify that the procedure is completed.

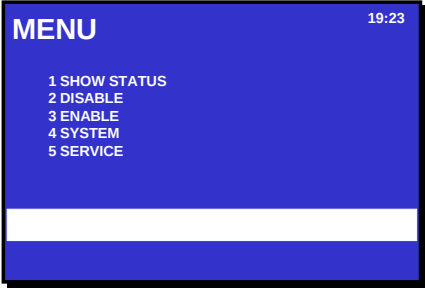
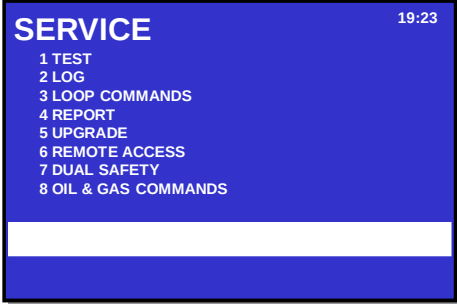
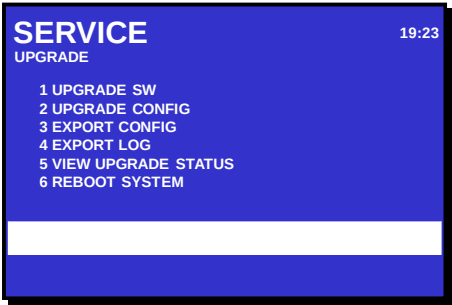
For detailed information on Upgrading procedures, refer to Commissioning Handbook.

14.7.1 Upgrade SW

This menu allows you to upgrade the system software version.

Note that before executing this command, the USB memory stick with the correct and valid system software file must be inserted into one of the USB ports. After the stick is inserted, wait at least 5 seconds before executing the command. To view the upgrade status, the View Upgrade Status command can be used.

The Reboot System command has to be run after an upgrade of the system.

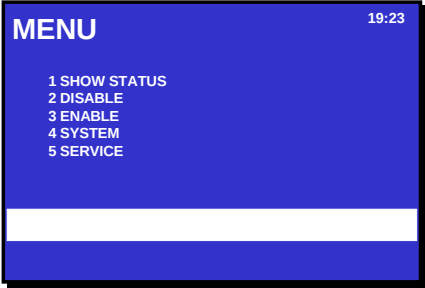
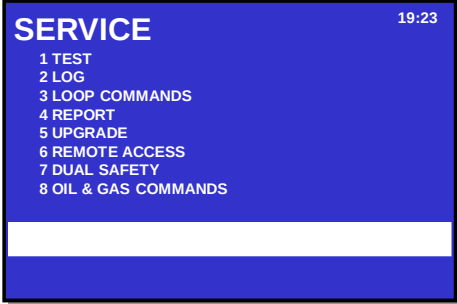
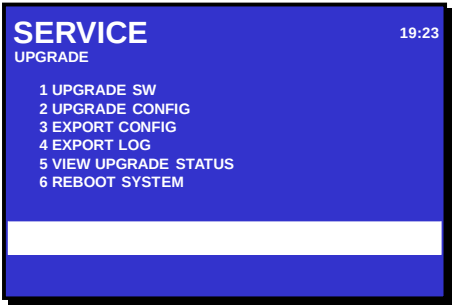
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	
3	To select UPGRADE press 5.	
4	To select UPGRADE SW, press 1.	
<i>Comments:</i> The message "SW Upgrade in progress" is shown in the display.		

14.7.2 Upgrade Config

This menu allows you to upgrade the configuration.

Note that before executing this command, the USB memory stick with the correct and valid configuration file must be inserted into one of the USB ports. After the stick is inserted, wait at least 5 seconds before executing the command. To view the upgrade status, the View Upgrade Status command can be used.

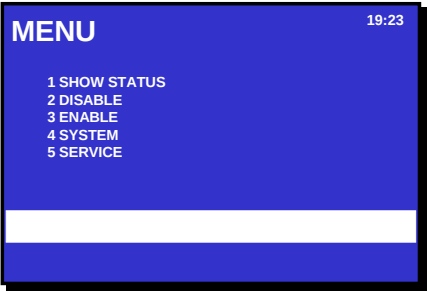
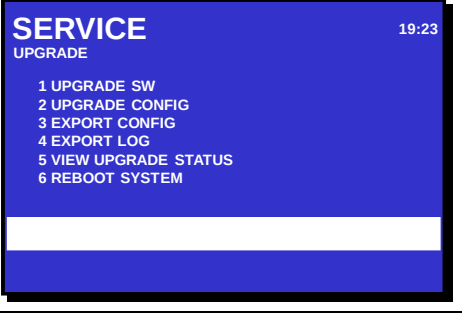
The Reboot System command has to be run after an upgrade of the system.

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	
3	To select UPGRADE, press 5.	
4	To select UPGRADE CONFIG, press 2.	
Comments: The message "Config Upgrade in progress" is shown in the display.		

14.7.3 Export Config

This menu allows you to export the configuration from the system panel to the USB memory stick (exported files).

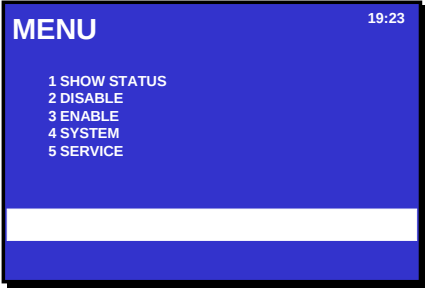
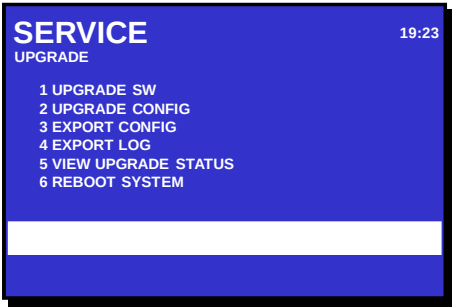
Note that before executing this command, the USB memory stick must be inserted into one of the USB ports. After the stick is inserted, wait at least 5 seconds before executing the command. To view the upgrade status, the View Upgrade Status command can be used.

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	
3	To select UPGRADE, press 5.	
4	To select EXPORT CONFIG, press 3.	
		<i>Comments:</i> The message "Config export in progress" is shown in the display.

14.7.4 Export Log

This menu allows you to export the log from the system panel to the USB memory stick (exported files).

Note that before executing this command, the USB memory stick must be inserted into one of the USB ports. After the stick is inserted, wait at least 5 seconds before executing the command. To view the upgrade status, the View Upgrade Status command can be used.

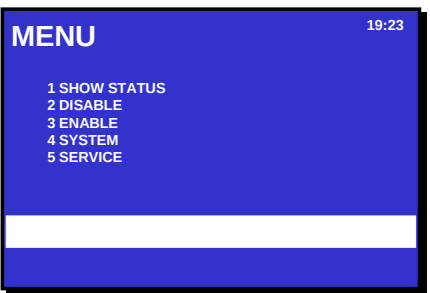
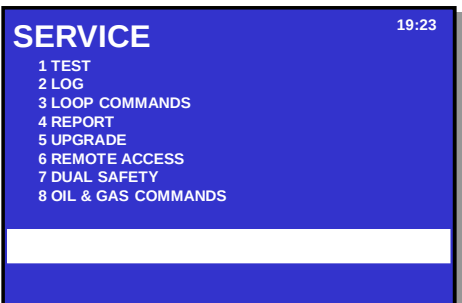
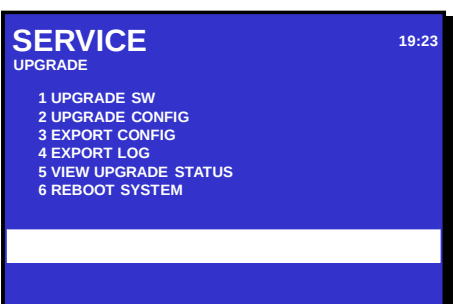
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	
3	To select UPGRADE, press 5.	
4	To select EXPORT LOG press 4.	
		<i>Comments:</i> The message "Log export in progress" is shown in the display.

14.7.5 View Upgrade Status

This menu allows you to view the status of any of the above commands, including; Upgrade SW, Upgrade Config, Export Config and Export Log.

NOTE:

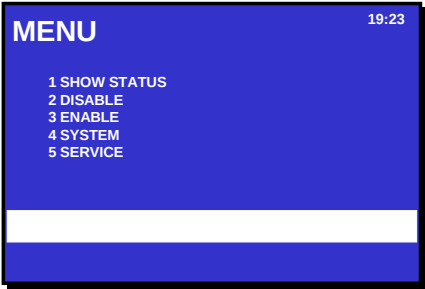
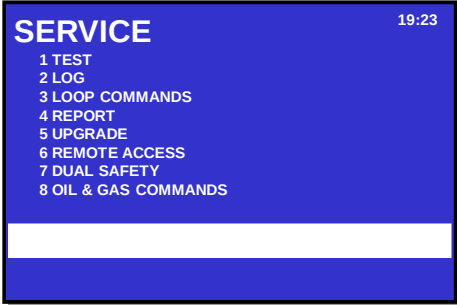
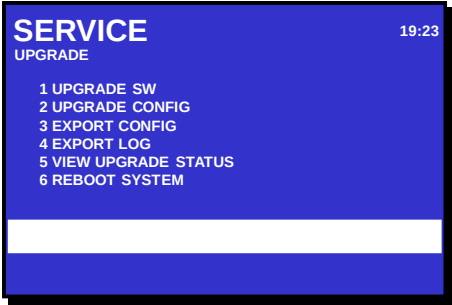
Always enter the menu “View Upgrade Status” to follow the progress and verify that the procedure is completed.

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	
3	To select UPGRADE, press 5.	
4	To select VIEW UPGRADE STATUS, press 5.	

14.7.6 Reboot System

This menu allows you to reboot all panels in the entire system. This command has to be run after an upgrade of the system.

Note that in Dual Safety systems, only panels belonging to either the Primary or Secondary system will be rebooted, depending on which system the panel in question belongs to.

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	
3	To select UPGRADE, press 5.	
4	To select REBOOT SYSTEM, press 6.	

14.8 Remote Access

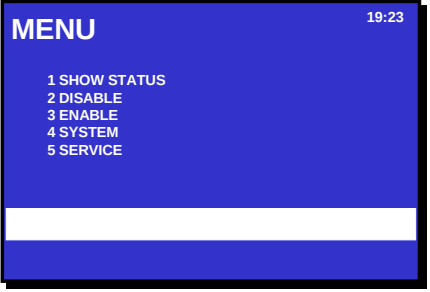
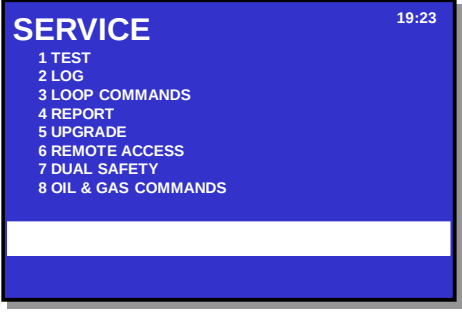
Remote Access

Web Access On

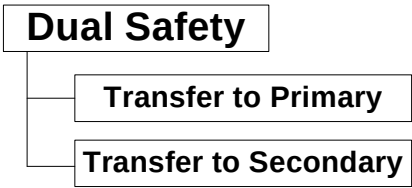
Web Access Off

This command allows you to access a web site where you can perform system service functions from a computer via the Ethernet connections.

When the necessary connections are done, you can turn web access ON and OFF by means of this command. Note that each time remote access is turned ON, it will automatically be turned OFF after a period of 12 hours (12 hours timeout).

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	
3	To select REMOTE ACCESS, press 6.	
4	To select WEB ACCESS ON, press 1, then  .	
5	To select WEB ACCESS OFF, press 2, then  .	

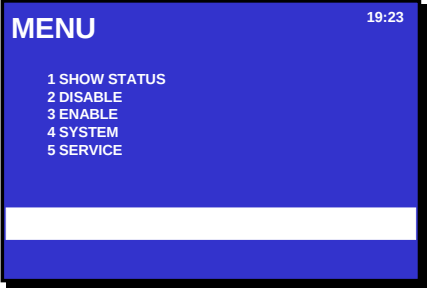
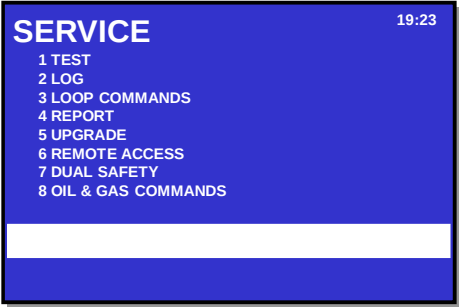
14.9 Dual Safety



14.9.1 Transfer to Primary / Secondary System

During normal operation, the Primary System is in Active Mode, i.e. the system controls the detection loops, while the Secondary System is in Standby Mode.

This command allows you to transfer the control of detection loops from the Primary System to the Secondary System (Transfer to Secondary), or vice versa (Transfer to Primary).

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	
3	To select DUAL SAFETY, press 7.	

Step	Actions to be taken	Display Indication
4	To transfer the loop control to the Secondary System, press 2, then  or to transfer the loop control to the Primary System, press 1, then  .	

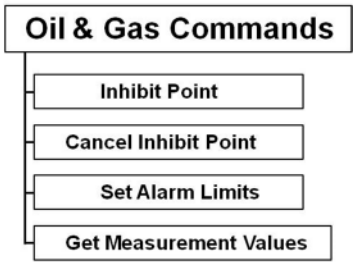
Dual Safety Sdbdy

Applicable to systems using the Dual Safety concept; a system with redundant loop control consisting of a Primary and Secondary System.

- Steady yellow light:
The panel is in *Standby Mode*, i.e. this panel does not control the detection loops. The panel(s) in the other system controls the detection loops and is in *Active Mode*.
- Blinking light: the panel does not control all detection loops/loop units, and/or loop control is being transferred. Actions must be taken.

14.10 Oil & Gas Commands

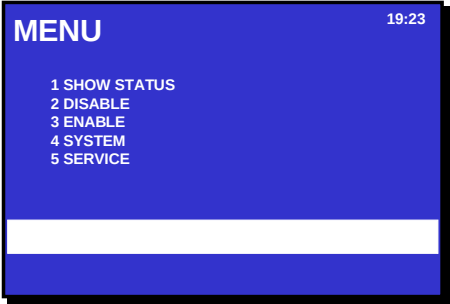
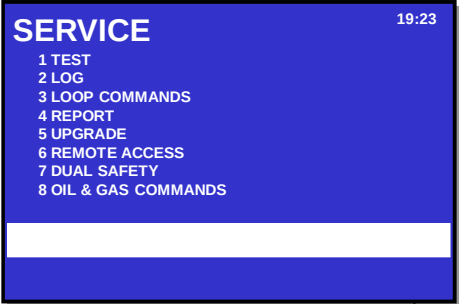
The “Oil & Gas Commands” are specifically related to the Oil & Gas Market.

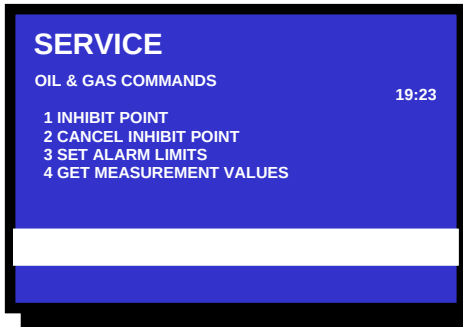
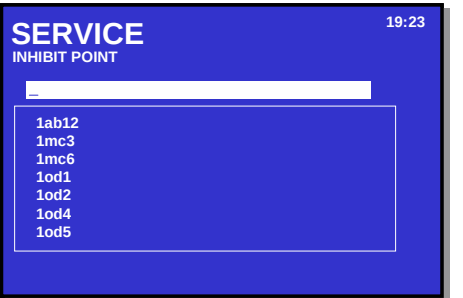
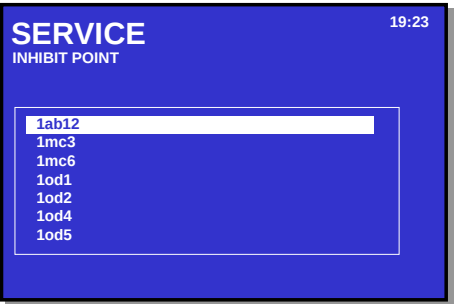
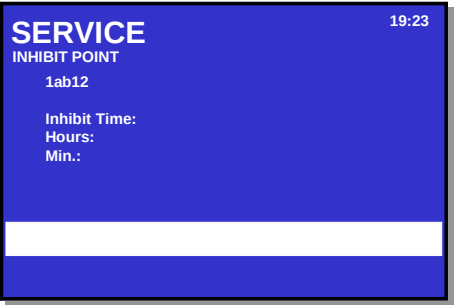
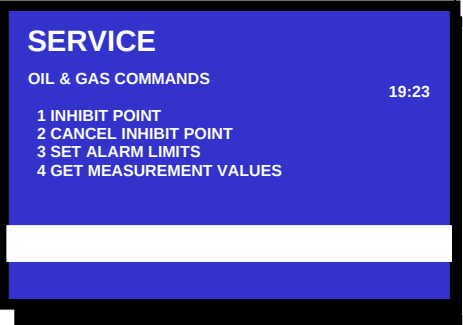


14.10.1 Inhibit Point

This menu allows you to inhibit points. When one or several points are inhibited, the point(s) will not signal alarm to outputs. An inhibited point will however present an alarm, prealarm and early warning on all panels and AutoCom as usual. This includes panel buzzer, panel LEDs and panel LCD display.

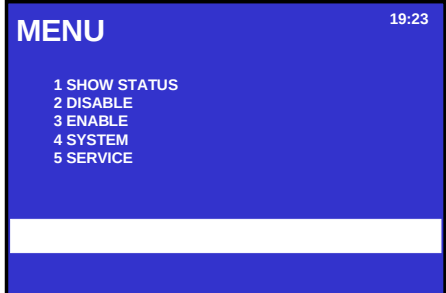
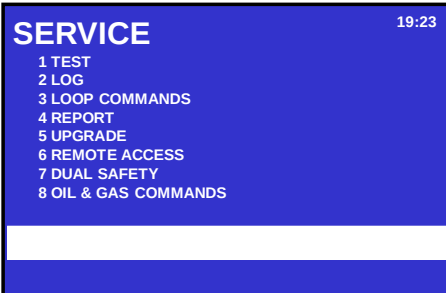
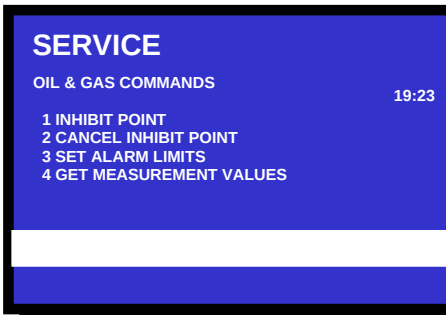
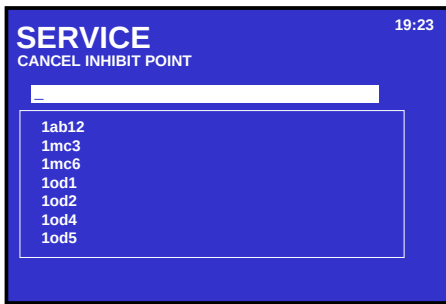
It is only possible to inhibit a unit from the panel menu or via AutoCom.

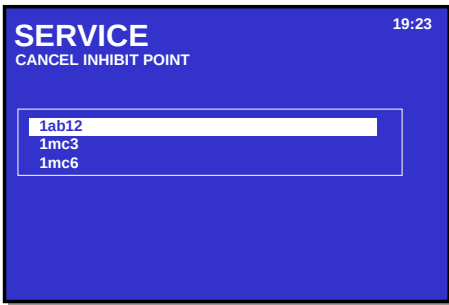
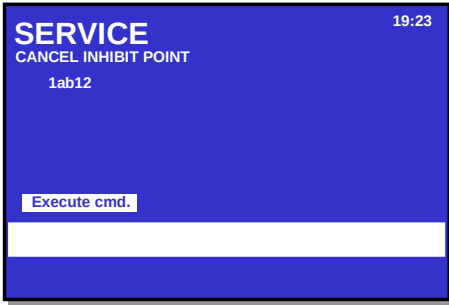
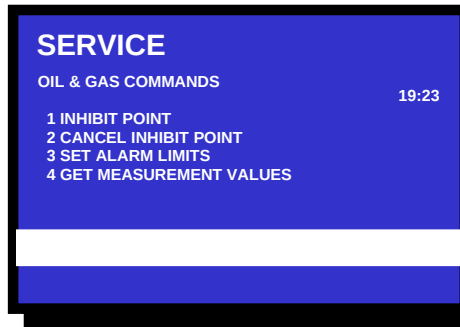
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	

Step	Actions to be taken	Display Indication
3	To select OIL & GAS COMMANDS, press 8.	
4	To select INHIBIT POINT, press 1.	
5	Use the keyboard to enter text into the input box - OR ,- as shown in this example: To select a point, press  then scroll downwards or upwards by pressing 	
6	To accept the selected point, press 	
7	Enter hours, then press  Enter minutes, then press  To execute the command (accept the inhibit time), press  once more	

14.10.2 Cancel Inhibit Point

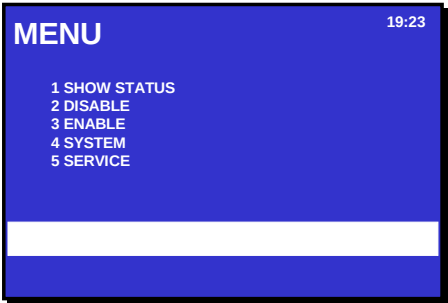
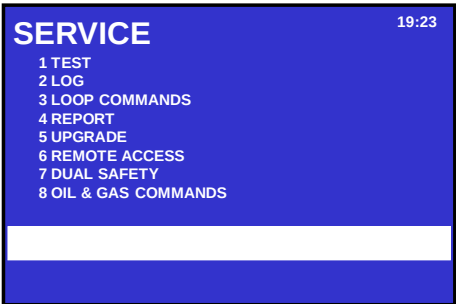
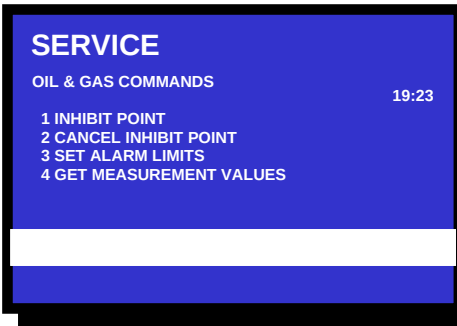
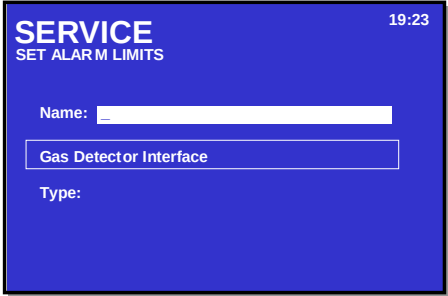
The purpose of this command is to cancel individually inhibited points that have previously been inhibited by “5-Service/8-Oil & Gas commands/1-Inhibit Point”.

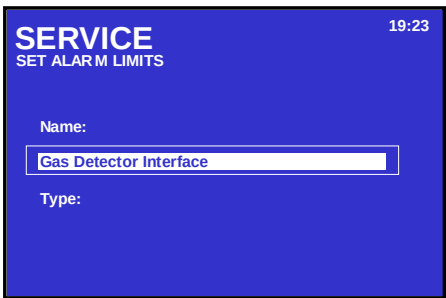
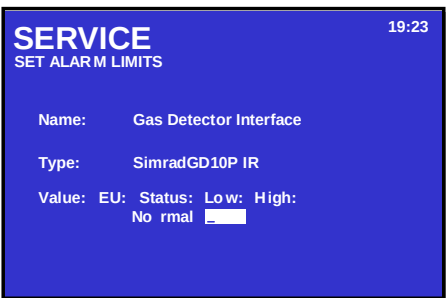
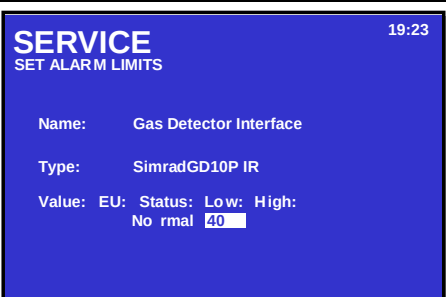
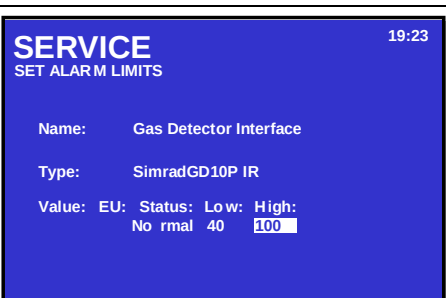
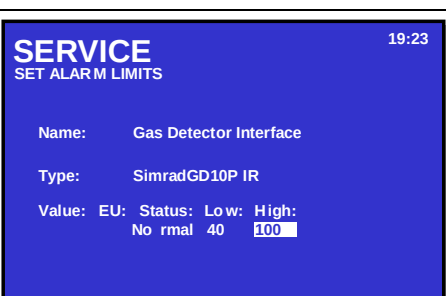
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	
3	To select OIL & GAS COMMANDS, press 8.	
4	To select CANCEL INHIBIT POINT, press 2.	

Step	Actions to be taken	Display Indication
5	Use the keyboard to enter text into the input box - OR , - as shown in this example: To select a point, press  then scroll downwards or upwards by pressing  	
6	To accept the selected point, press 	
7	To execute the command, press 	

14.10.3 Set Alarm Limits

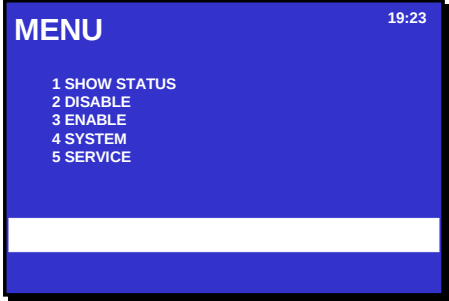
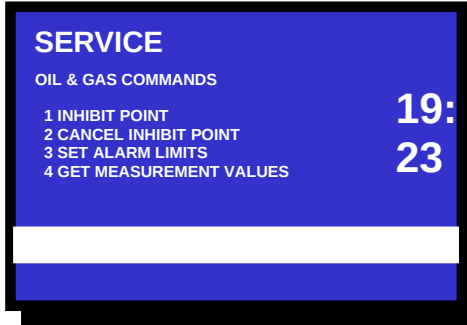
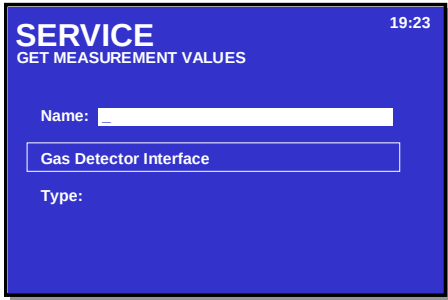
The *Set Alarm Limits* command allows you to change a gas detector's alarm limit for *Low Alarm* and *High Alarm*.

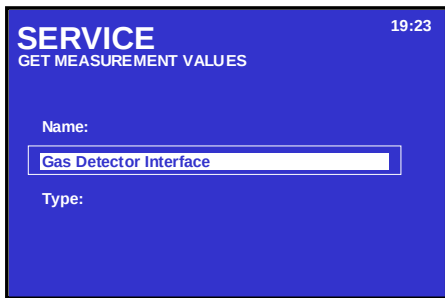
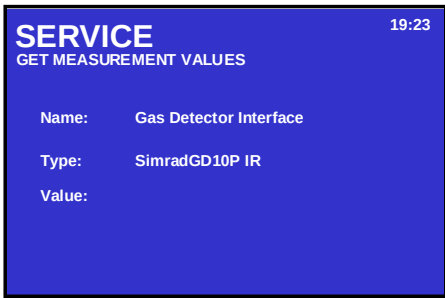
Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	
3	To select OIL & GAS COMMANDS, press 8.	
4	To select SET ALARM LIMITS, press 3.	

Step	Actions to be taken	Display Indication
5	Use the keyboard to enter text into the input box - OR ,- as shown in this example: To select a point, press  then scroll downwards or upwards by pressing 	
6	To accept the selected point, press 	
7	Use keyboard to enter low value, press 	
8	Use keyboard to enter high value, press 	
9	To execute the command (accept the high-low values for the point), press 	

14.10.4 Get Measurement Values

This menu allows you to get measurement values from gas detectors.

Step	Actions to be taken	Display Indication
1	To enter the Main Menu, press the Menu button 	
2	To select SERVICE, press 5.	
3	To select OIL & GAS COMMANDS, press 8.	
4	To select GET MEASUREMENT VALUES, press 4.	

Step	Actions to be taken	Display Indication
5	Use the keyboard to enter text into the input box - OR , - as shown in this example: To select a point, press  then scroll downwards or upwards by pressing 	
6	To accept the selected point, press 	
7	Use keyboard, press 	
8	Use keyboard, press 	
9	To execute the command (accept the measurements for the point), press 	

15. Appendix

15.1 Terms, Abbreviations/Acronyms and Definitions

Term	Abbr/ Acron	Definition
Activation		To bring a <i>component</i> into (one of) its active activation states (depending on type, a component may have several active activation states). Examples of activation are turning a fire extinguisher on and making a sounder to issue a EVACUATE or ALERT signal. Components may be activated and deactivated either on command or on alarm.
Active Mode		The AutoSafe system is in Active Mode when it controls the detection loops (see Dual Safety).
AL_Com		The Autronica loop communication protocol for detectors and I/O units.
AL_Com+		The Autronica protocol between the panel and the Loop Driver.
Alarm Zone	AZ	The geographical area throughout which Fire Alarm Devices give identical alarm signals present identical audible information in response to the same event. An alarm zone is activated by one or several Detection Zones. The alarm zone assigned to the detection zone in alarm is called the parent alarm zone. Fire Alarm Devices in a parent alarm zone will always give EVACUATE signal. To any (parent) alarm zone there may be defined a number of neighbour alarm zones. Fire Alarm Devices in neighbour alarm zones will give alert signal when its parent alarm zone gives EVACUATE signal.
AutoCom		The Autronica communication protocol between AutoSafe and AutoMaster or other third party systems.
AutoFieldBus	AFB	The Autronica serial interface and low level protocol for field devices (loop controllers and power units / AutoSafe).
AutoKeeper		A unit that controls the Loop Driver's access to the loop.
AutoMaster ISEMS		The Autronica top-level graphical presentation system. ISEMS: Integrated Safety and Emergency Management System
AutoNet		The system's local area network.
BLC-Eq		Basic Loop Controller Equipment (equipment part for all Loop Units and I/O modules, i.e. Eq-part for Loop-Ctrl, Point-Ctrl, FPE-Ctrl etc.)
Component		An assembly of one or more modules, implementing a system function. The following components are defined in the AutoSafe Interactive Fire Alarm System (also see detailed description of <i>Components</i>, Chapter 1): ■ Points (fire detectors, manual call points) ■ Detection Zones ■ Fire Protection Equipment (fire extinguishers, ventilation controllers) ■ Fire Alarm Devices (sounders, information panel, visual indicator) ■ Fire Alarm Routing Equipment ■ Fault Warning Routing Equipment ■ Operator Panels
Condition		Meaning similar to «state», but used only in conjunction with the control and indication equipment. (EN54 standard).
Control and indicating equipment	c.i.e	Equipment supplying power to, as well as accepting fault and alarm signals from detectors. A c.i.e. will indicate an alarm condition audibly as well as visibly and indicate the location of danger.
Deactivation		To bring a component into its inactive activation state (a component can have only one inactive activation state). Examples of deactivation are turning a fire extinguisher off and silencing a sounder.
Detection Loop		Loop circuit wired from the Loop Module connecting a number of fire detectors, manual call-points and other Loop Units. A detector loop is connected to control and indicating equipment.

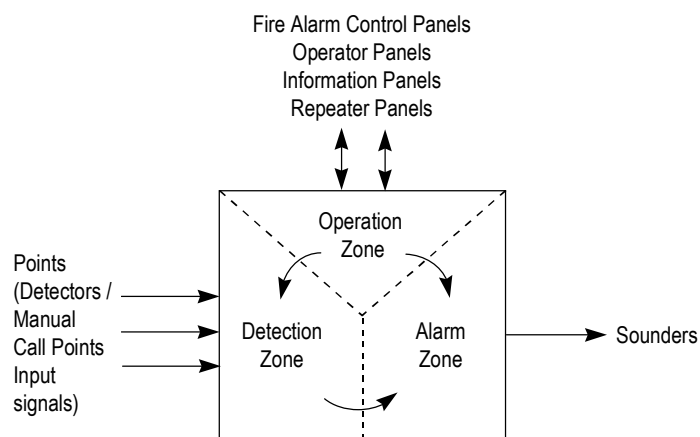
Detection Zone	DZ	One or more fire detectors and/or manual call-points logically belonging together for geographical, functional or other reasons.
Dual Safety	DS	An AutoSafe system consisting of a Primary System and a Secondary System. The purpose of the concept is to ensure that the Secondary System takes over the control of the detection loops if the Primary System is lost for any reason.
Fault Warning Routing Equipment	FWRE	Intermediate equipment which routes a fault warning signal from (B) to a fault warning signal receiving station.
Fire Alarm Device	FAD	Equipment used to give warning of fire, for example, sounder or visual indicator.
Fire Alarm Receiving Station		A centre from which the necessary fire protection measures can be initiated at any time.
Fire Alarm Routing Equipment	FARE	Intermediate equipment which routes an alarm signal from control and indicating equipment to a Fire Alarm Receiving Station.
Fire Detector		The part of an automatic fire detection system which constantly or at frequent intervals monitors suitable physical and/or chemical phenomena for detection of fires in the area under surveillance.
Fire Protection Equipment	FPE	Fire control or fighting equipment, e.g. extinguishing installation.
Loop Unit		A Point, an I/O unit or an Electronic Sounder that is connected to a detection loop.
Manual Call-Point		A device for the manual initiation of an alarm.
Operation Zone	OZ	An Operation Zone defines the scope of an Operator Panel. One operation zone may encompass one or more detection zones. Operation zones are allowed to be contained in other operation zones, building an hierarchy consisting of different levels of operation zones. Operation zones must be fully contained in each other, i.e. the operation zone can not be partly contained in (overlap) another operation zone. One operation zone may be controlled by more than one Operator Panel.
Point		A detector or a manual call point.
PowerLoop		The Autronica loop communication protocol for high power gas and flame detectors. 2-wire loop for both power and communication.
Primary System		The AutoSafe system that is designed to be in Active mode during normal operation (see Dual Safety).
Secondary System		The AutoSafe system that is designed to be in Standby mode during normal operation (see Dual Safety).
SOLAS		A program version of the AutoSafe software, specially designed for maritime application - Safety Of Life At Sea (SOLAS).
Standby Mode		The AutoSafe system is in Standby Mode when it is ready to take over the control of the detection loops if the system in Active Mode fails (see Dual Safety).
System Unit		A unit that is directly connected to AutoNet.

15.2 Zoning Concept

15.2.1 General

To describe the functional hierarchy of the system we use the term "zone". Assigning system components to zones enables hierarchical control from detection to activation of alarm. This hierarchy consists of the following zones:

- Detection Zone (DZ)
- Alarm Zone (AZ)
- Operation Zone (OZ)



15.2.2 Detection Zone

A *Detection Zone (DZ)* is defined as a zone with one or more *points* (detectors or manual call-points) that logically belong together, determined by geographical/functional parameters (for example, the sales department on the second floor).

A point can only be assigned to one detection zone, and can only refer to one specific location in the system (for example, a specific office on the second floor in a building).

The Detection Zone will be the trigger to generate outputs to the Alarm Zone.

15.2.3 Alarm Zone

An *Alarm Zone (AZ)* is activated by one or several detection zones.

Example:

An alarm from one of the devices in DZ3 will activate sounders in AZ1.

Within the same alarm zone, alarm sounders give the same audible signal.

Geographically associated alarm zones can be defined as *neighbour* zones, such that these can operate outputs for alarm zones adjacent to the incident.

15.2.4 Operation Zone

An *Operation Zone (OZ)* defines the scope of an Operator Panel.

The operation zone can cover one floor or one building, and is designed to restrict the operators' sphere of influence on the system as a whole. At least one Fire Alarm Control Panel / Operator Panel should have the overall control of the system.

Operation zones on higher levels may encompass several other operation zones.

Input / Output units (for example, Door Control Units, Sprinkler Control Units etc.) can be controlled from an Operation Zone.

An Operation Zone given these properties and necessary parameter settings is referred to as a *Control Operation Zone*.

Different day / night operation for different areas (i.e. detection zones) requires the use of several Operation Zones / sub-operation zones with different Day / Night Operation. An Operation Zone given these properties and necessary parameter settings is referred to as a *Day / Night Operation Zone*.

15.2.5 Configuration Example

An example of a typical configuration would be as follows:

- Each single room with one or several detectors is defined as a *Detection Zone*, DZ1, DZ2, etc.
- Each corridor and stairway is defined as a *Detection Zone*.
- Two main sections on each floor, divided by a fire wall, are each defined as an *Alarm Zone*, AZ1 and AZ2. These alarm zones are also defined as *neighbour* alarm zones.
- The *entire* building, controlled and monitored by a Fire Alarm Control Panel (operator panel), is defined as an *Operation Zone*, OZ.

15.3 Action Digits Table - Operation Mode

All action digits that may appear in *Operation Mode* are listed in the table below.

Action Digits			
Action	Digit	When action is available	Used to.....
ACCEPT FIRE WARNING		Available when the selected event is a non-accepted Fire Warning.	accept the selected Fire Warning.
ACCEPT FAULT WARNING		Available in the Info window when the selected event is a non-accepted Fault Warning.	accept the selected Fault Warning.
RESOUND		Available in the event of a fire alarm when alarms have been silenced.	resound all Fire Alarm Devices (FAD) related to the alarms within the operation zone of the operator panel.
REACTIVATE		Available when there exists alarm disabled points	reactivate (enable) the alarm disabled points.
ACTIVATE		Available when one or several Delayed Action detection zones have entered a fire alarm state and are in their T1 and T2 periods. (Not included in SOLAS version).	immediately activate the delayed actions of all active Delayed Action detection zones.
SHOW POINTS		Available when the selected event is a Detection Zone.	show point information.
SHOW SUPPR. INFO		Available when conditions are active, but suppressed.	show suppressed information if other conditions are active, but suppressed.
SHOW FIRE INFO		Available during a fire alarm condition when Show Suppressed Information has been pressed.	show suppressed fire information
SHOW FIRE WARNING		Available during a fire alarm condition when Show Suppressed Information has been pressed and there exists fire warnings.	show suppressed fire warnings
SHOW FAULT WARNING		Available during a fire alarm condition when Show Suppressed Information has been pressed and there exists fault warnings.	show suppressed fault warnings
SHOW DISABLEMENTS		Available during a fire alarm condition when Show Suppressed Information has been pressed and there exists disablements.	show suppressed disablements
SHOW TESTS		Available during a fire alarm condition when Show Suppressed Information has been pressed and there exists tests.	show suppressed tests
ENABLE		Available when the selected event is a disablement.	enable the disablement.

Continues on next page...

Action Digits			
Action	Digit	When action is available	Used to.....
PROLONG DELAY		Available when the selected event is a Delayed Action detection zone having entered the fire alarm condition and is in its T1 period. The T1 delay period is started when a Fire Alarm signal from a point is received. (Not included in SOLAS version).	• terminate the T1 delay period and start the T2 delay period.
BLOCK		As PROLONG DELAY above. Used in a <i>SOLAS Action detection zone</i> . The T1 delay period is started when a Fire Alarm signal from a point is received.	• terminate the T1 delay period and block the alarm for an indefinite period of time.

15.4 Menu Structure

