FIRE AND SECURITY

AUTRO SAFE
Self Verify®

Interactive Fire Alarm System
Release 3

Operator's Handbook

Information Panel, BV-320

Protecting life, environment and property...

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1. Introduction

1.1 About the Manual

This manual is intended to provide the information necessary to read and intepret the visual and audible information given by the *Information Panel*, BV-320, used in the AutroSafe Interactive Fire Alarm System.

1.2 The Reader

The handbook is intended to be used by the fire brigade and personnel who are responsible for operating the system, plus the general public.

1.3 Reference Documentation

In addition to this manual, the AutroSafe Interactive Fire Alarm System consists of the following manuals:

Handbook	Item Number
System Specification	P-ASAFE/XE
Installation Handbook, Fire Alarm Control Panel (BS-310/320) / Controller (BC-320)	P-ASAFE-FA/DE
Installation Handbook, Operator Panel (BS-330)	P-ASAFE-OP/DE
Installation Handbook, Repeater Panel (BU-320) / Information Panel (BV-320)	P-ASAFE-RI/DE
Installation Handbook, Battery Cabinet (SY-310)	P-ASAFE-BC/DE
Commissioning Handbook	P-ASAFE/EE
Operator's Handbook, Fire Alarm Control Panel (BS-310/320) / Operator Panel (BS-330)	P-ASAFE-FO/FE
Operator's Handbook, Repeater Panel (BU-320)	P-ASAFE-FB/FE
Shortform User Guide	P-ASAFE-SH/LE
Shortform Configuration Guide (for the AutroSafe Demo Board)	P-ASAFE-SH/VE
Wall Chart	P-ASAFE-WE/LX
Wall Chart	P-ASAFE-CH/LX
Menu Structure	P-ASAFE/MX
User Guide, Loop Diagnostic Tool, AS-2000	P-ASAFE-AS/FE
User Guide, Loop Simulator Tool	P-ASAFE-LS/FE
User Guide, Loop Calculator Tool	P-ASAFE-LC/FE
User Guide, Merge Tool	P-ASAFE-MT/FE
User Guide, Power Calculator Sheet	P-ASAFE-PC/FE

2. The Information Panel - Overview

2.1 Introduction

The Information Panel is intended to give additional information related to the defined *Operation Zone(s).*

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.*

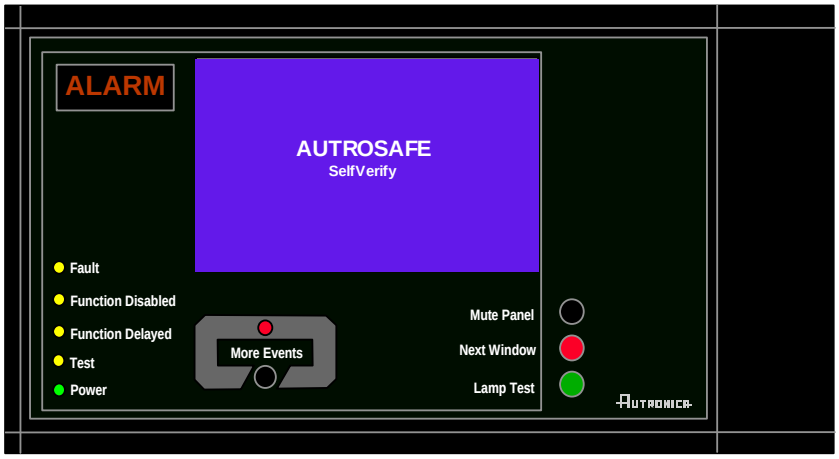
The panel can display minimum information on fire alarms, warnings, faults, disablements and tests. No further details are available. Each of the conditions are presented in a separate condition window, in *one* mode only.

Each panel offers a MORE EVENTS button for scrolling through pages of information related to the selected condition window, if there are more events than the display can show.

The MUTE PANEL button is used to silence the internal buzzer.

The NEXT WINDOW button is used to step to the next 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.

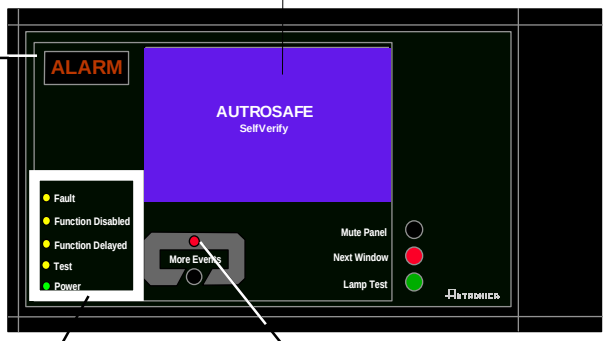
A LAMP TEST button is used for testing the LED indicators. All indicators are lit for 5 seconds, and the LCD (display) will turn all white, then all black.



2.2 Indication Devices

2.2.1 Upper Section

Text Display - See chapter 2.3.



ALARM
The red alarm indicator shows that one or more detection zones within the operating zone of the Information 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.

Fault

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

Function Delayed
Steady yellow light indicates that a delay period is active for Fire Alarm Devices (FAD) or Fire Alarm Routing Equipment (FARE). Configurable.

Test
Steady yellow light indicates that the system or part of it is in Test Mode.

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.

2.3 The Display

During Normal Operation, the back light in the display is always on.

The display has 16 lines of 40 characters and is divided into several display windows showing different types of information.

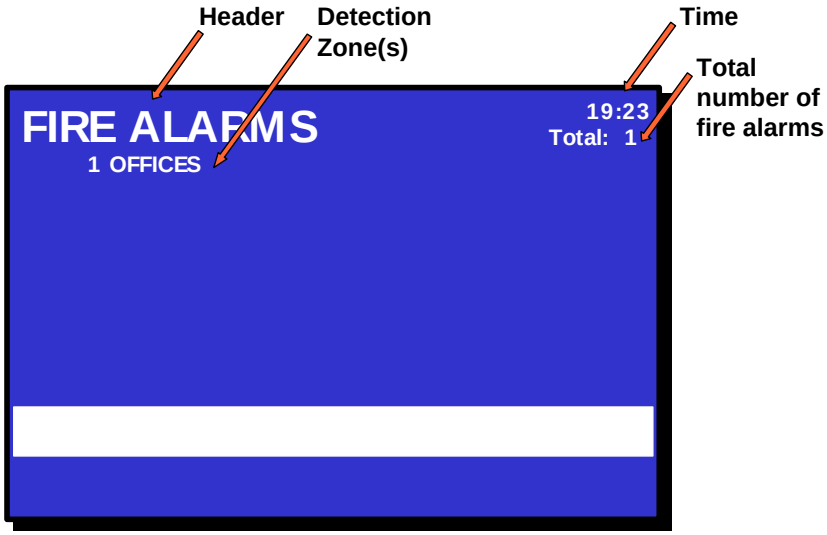
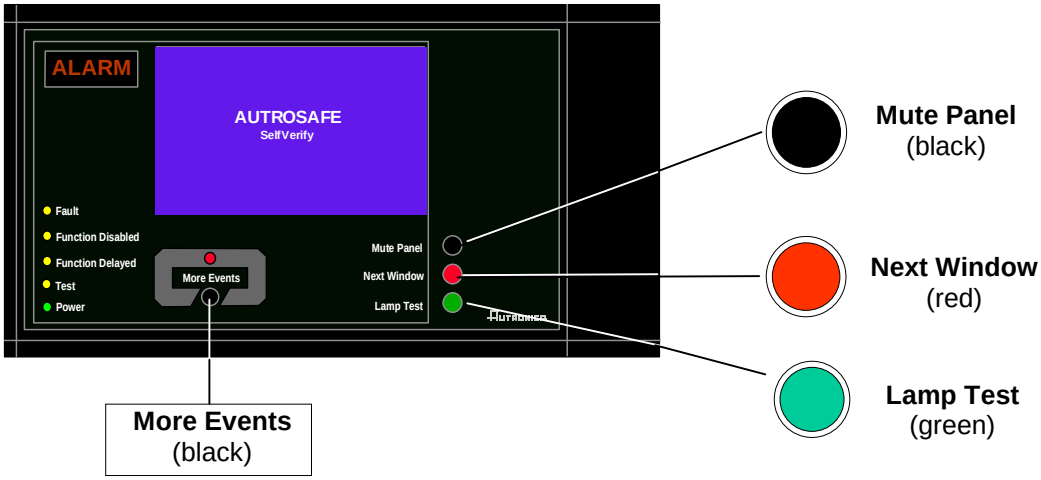


Figure 2-2: The Display

2.4 Front Push Buttons



Front Push Buttons			
Button		**Designation**	**Access Level**
	Mute Panel (black)	Used to mute the panel. Timeout.	1
	Next Window (red)	Used to step to the next condition window (only windows with active information are 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.	1
	More Events (black)	Used to scroll pages of information related to the selected condition window.	1

2.5 Internal Buzzer

Each Information Panel provides a buzzer which is activated as described below. Each condition may have its own *sound pattern*. If more than one condition is present simultaneously, the state of the panel and the buzzer signal will be decided. The buzzer will reflect the condition which has the highest priority.

The internal buzzer is controlled by hardware. It is activated in the cases of:

- System Fault
- Alarm
- Prealarm
- Fault
- Early Warning (*not yet implemented*)

The buzzer can be silenced by pressing the *Mute Panel* button. One exception is the buzzer signal indicating System Fault which can *not* be silenced.

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

3. Operation Mode

3.1 Introduction

The Information Panel operates in *Operation Mode*, and will automatically enter this mode after startup. The display may look as follows in the panel's idle state.

Figure 3-1: The idle display

Note that if the system is in several conditions at the same time, only *one* condition - the one with the highest priority - is shown in the display.

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 several *conditions*. The table below shows the different conditions, and if / how the conditions are indicated on the Information Panel.

Conditions	Indication on display	Indicators that are lit (see also chapter 2.2)
fire alarm condition (highest priority)	Yes.	ALARM indicator and Fire Brig. Signalled indicator. More Events indicator if more than one fire alarm.
fire warning condition (*including* prealarm)	Yes.	No indicators are lit - no indication.
fault warning condition	Yes.	Fault indicator.
disablement condition	Yes.	Function Disabled indicator.
Included in disablement: Immediate actioning disabled condition	Yes.	Function Delayed indicator
test condition	Yes.	Test indicator.

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
  - (the lowest level Early Warning is not yet implemented)

Whenever a detector detects a transition from one alarm level to another, this event is reported to the system as an Early Warning (not yet implemented), 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 different access levels. To operate the Information Panel, Access Level 1 is required.

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.
4	Mechanical tool.	Accessible by persons doing repair work and changing firmware.

3.5 How Events are Presented in the Display

The different *events*, for example, «In the Event of a Fire Alarm», are presented. FIRE ALARMS, for example, is shown 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.

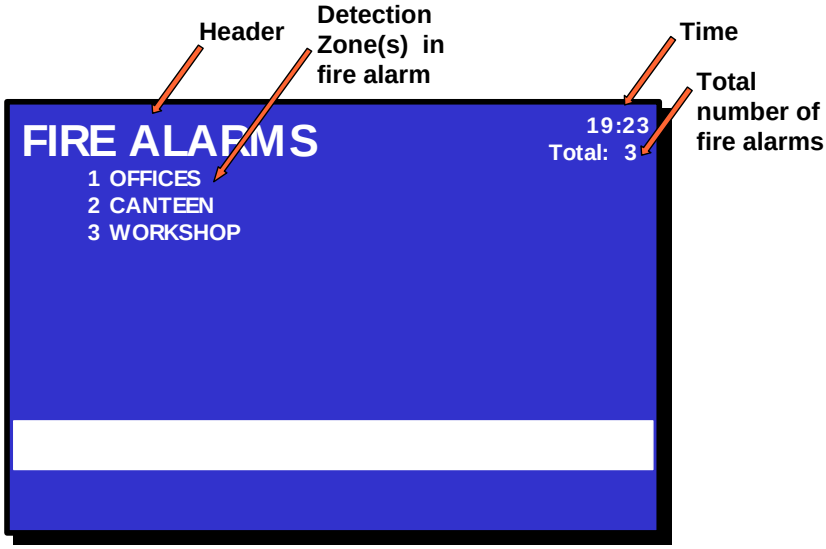


Figure 3-2: How events are presented

3.6 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.

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 *Delayed Action* detection zone - immediate output actioning disabled)
Chapter 7	a fire warning
Chapter 8	faults

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 interpret the information shown on indicators and in the display, plus the audible indication.

As the Information Panel is an *indication* device, i.e. "read only", all alarm handling is performed by means of the Fire Alarm Control Panel (BS-320), the Operator Panel (BS-330) or the Repeater Panel (BU-320). Therefore, the following descriptions include only details on how the Information Panel's display, indicators and audible indication changes during the alarm handling.

For each event there is an *overview of all indications* on the panel. In addition, each event deals with the necessary *actions to take* - which besides general precautions described in the local fire instructions - are limited.

All display pictures shown in the subsequent chapters are based on the following:

- 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 table for the different procedures is divided into four columns with the following headings;

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

5. In the Event of a Fire Alarm

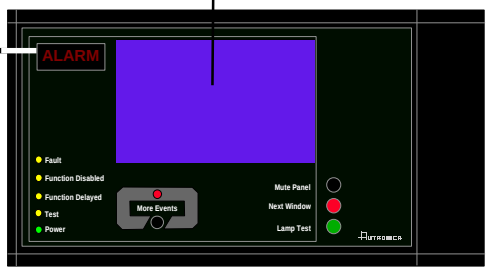
5.1 Indications in the Event of a Fire Alarm

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 Information 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.

The red Alarm indicator is blinking.

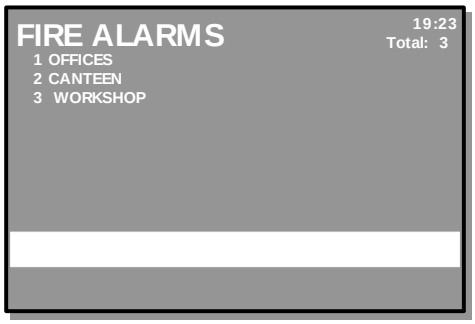
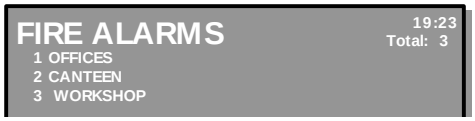
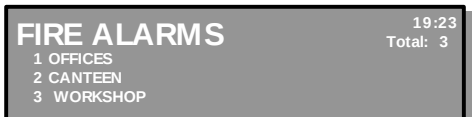


The internal buzzer is activated.

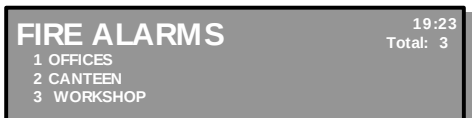
Default pattern on the sound:
1 sec. ON, 1 sec. OFF

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 Information Panel is turned on.
	Comments:	The red *FIRE* indicator starts to blink. 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 Information Panel is turned off.
3	Observe the zone(s) in alarm state in the display. Investigate the scene(s) and carry out the necessary actions.		
	Comments:	In this example, a total of 3 zones are in alarm state.	

Further alarm handling is performed by means of BS-320/330 or BU-320.
The Information Panel's display, indicators and audible indication will be affected as follows:

	Display Indication	Audible Indication
When the alarms have been silenced:	 The red *FIRE* indicator goes steady. The alarm zones are *automatically* resounded to their alarm states on timeout of the silence resound timer. When the fire is extinguished and all necessary repair work have been carried out (smoke is exhausted, new glass replaced in the manual call-points, etc.), the system should be returned to normal operating mode.	All Fire Alarm Devices (FAD) are deactivated.
When the system has been reset:	 If there are no points signalling a fire alarm, the system is reset. The red *FIRE* indicator goes off. The panel enters its idle state.	The audible indicator on all panels within the operation zone of the Information Panel is turned off.
Comments:	If there are points still signalling an alarm when the system is reset, and *no actions are taken*, the points still signalling alarm will automatically be *reactivated* after a predefined timeout. The display will indicate fire alarm as described in step 1. *If the point(s)* still signalling alarm are disabled, the panel will enter its idle state.	

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

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.

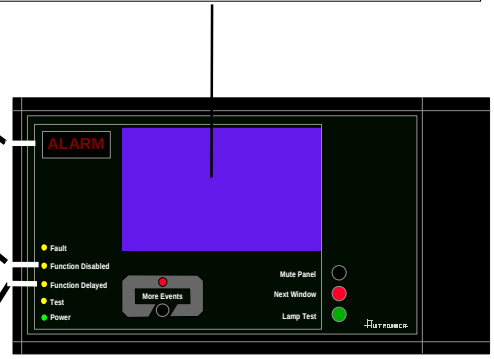
The following shows the indications on the Information Panel in the event of «Fire Alarm with Alarm Delay» within the *operation zone* of the panel.

The text display indicates the detection zones in alarm state and their location.

The red Alarm indicator is blinking.

The Function Disabled indicator has a steady yellow light.

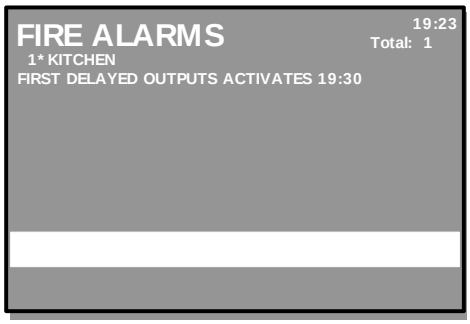
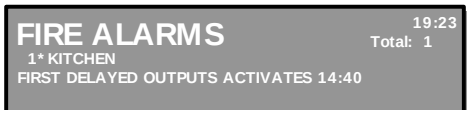
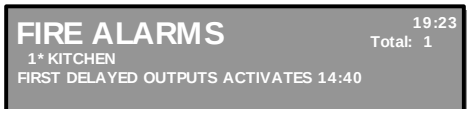
The Function Delayed indicator has a steady yellow light.



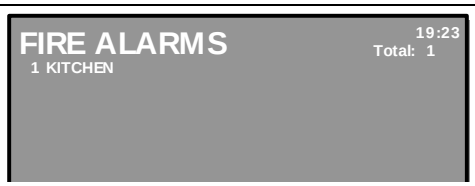
The internal buzzer is activated.

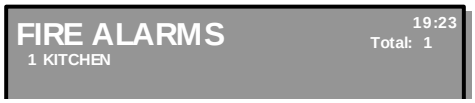
Default pattern on the sound:
1 sec. ON, 1 sec. OFF

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 Information Panel is turned on.
	Comments:	The red *FIRE* indicator starts to blink. The *FUNCTION DELAYED* and *FUNCTION DISABLED* indicators have a steady yellow light indicating that *Immediate Output Actioning* has been disabled (manual operation in Menu Mode by means of the Fire Alarm Control Panel BS-320 or the Operator Panel BS-330). In this example, *one* point in a Delayed Action detection zone is signalling an alarm.	
2	To silence the internal buzzer, press the black Mute Panel button 		The internal buzzer on the Information Panel is turned off.
3	Observe the zone(s) in alarm state in the display. Investigate the scene(s) and carry out the necessary actions.		
4	If there really is a fire, activate the nearest manual call-point.		
	Comments:	If a manual call-point is activated, all fire alarm devices within the operation zone of the Information Panel (sounders and visual indicators) are activated.	

Further alarm handling is performed by means of BS-320/330 or BU-320.
The Information Panel's display, indicators and audible indication will be affected as follows:

Further indication will depend on whether or not there really is a fire.	Display Indication	Audible Indication
If there is not a fire, and the system has been reset:	 The red *FIRE* indicator goes off.. The panel enters its idle state.	All Fire Alarm Devices (FAD) are deactivated.
If there really is a fire, and the alarm has been activated by means of the nearest manual call-point or the nearest operator panel (BS-320/330):		All fire alarm devices within the operation zone of the Information Panel (sounders and visual indicators) are activated.
Comments:	The red *Fire Brigade Signalled* 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
	When the alarms have been silenced:	 The red *FIRE* indicator goes steady. The alarm zones are *automatically* resounded to their alarm states on timeout of the silence resound timer. When the fire is extinguished and all necessary repair work have been carried out (smoke is exhausted, new glass replaced in the manual call-points, etc.), the system should be returned to normal operating mode.	All Fire Alarm Devices (FAD) are deactivated.
	When the system has been reset:	 The red *FIRE* indicator goes off. The panel enters its idle state.	The audible indicator on all panels within the operation zone of the Information Panel is turned off.

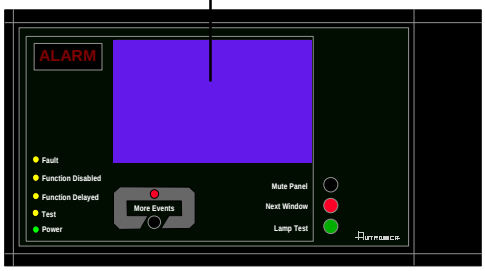
7. In the Event of a Fire Warning

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 Information 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 Information Panel is turned on.
2	To silence the internal buzzer, press the black Mute Panel button ●		The internal buzzer on the Information Panel is turned off.
3	Observe the fire warnings in the display. Investigate the scene(s) and carry out the necessary actions.		
	Comments:	In this example, only one zone is in Prealarm state (2 CANTEEN is blinking).	
4	If there really is a fire, activate the nearest manual call-point.		
	Comments:	If a manual call-point is activated, all fire alarm devices within the operation zone of the Information Panel (sounders and visual indicators) are activated.	

Further alarm handling is performed by means of BS-320/330.
The Information Panel's display, indicators and audible indication will be affected as follows:

	Display Indication	Audible Indication
When the Fire Warning(s) (Prealarm) has been accepted:	 The fire warning (Prealarm) is no longer blinking in the display.	All Fire Alarm Devices (FAD) are deactivated.
Comments:	In this example, only one zone is in Prealarm state. If there are several fire warnings, each one has to be accepted in turn by means of the BS-320/330. 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.	
When the system has been reset:	 The panel enters its idle state.	The audible indicator on all panels within the operation zone of the Information Panel is turned off.

8. In the Event of Faults

8.1 Indications in the Event of Faults

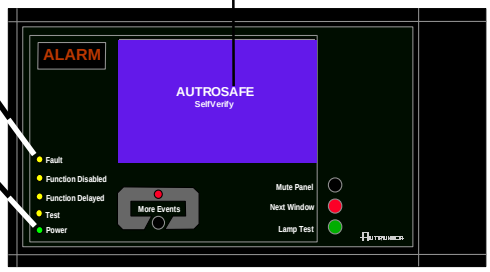
A fault is indicated by one of the components (fire detectors, external equipment or other faults).

The following shows the indications on the Information Panel in the event of Faults within the *operation zone* of the panel.

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

The text display indicates the nature of the fault.

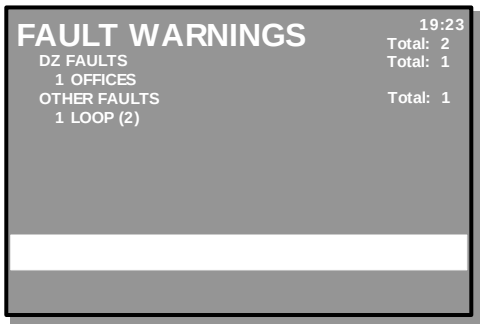
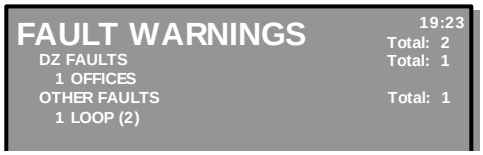
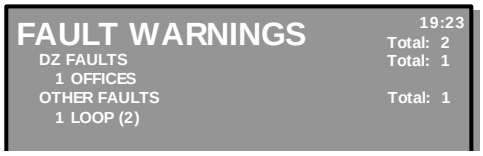
The green Power indicator is turned off in case of loss of power.



The internal buzzer is activated.
Default pattern on the sound:
System: constantly ON.
Fault: 0,5 sec. ON, 3,5 sec. OFF
Power Fault: 0,75 sec. ON, 3,25 sec. OFF

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 Information Panel is turned on.
	Comments:	The yellow *FAULT* indicator starts to blink.	
2	To silence the internal buzzer, press the black Mute Panel button ●		The internal buzzer on the operator panel is turned off.
	Comments:	NOTE: An audible indication of loss of POWER can *not* be silenced. NOTE: The internal buzzer is automatically resounded for each newly recognized fault.	
3	Observe fault warnings in the display. Make service/technical personnel investigate the scene(s) and carry out the necessary actions.		
	Comments:	In this *example*, points in detection zone (1 OFFICES) are in fault warning state. Both the detection zone and the related loop (Loop Driver Module BSD-310), are registered as fault warnings (Total 2).	

Further alarm handling is performed by means of BS-320/330.
The Information Panel's display, indicators and audible indication will be affected as follows:

	Display Indication	Audible Indication
When all fault have been accepted:		
Comments:	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 *Fault* 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.	

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10. Figure List

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11. Reader's Comments

Please help us to improve the quality of our documentation by returning your comments on this manual:

Title: *Operator's Handbook, Information Panel, BV-320*
AutroSafe Interactive Fire Alarm System, Release 3

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Your information on any inaccuracies or omissions (with page reference):

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