AUTRO SAFE

Self Verify®

Interactive Fire Alarm System
Release 3

Operator's Handbook

Repeater Panel, BU-320

AUTRONICA

Protecting life, environment and property...

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Table of Contents

Operator's Handbook, AutroSafe Interactive Fire Alarm System, Release 3, ASAFE-FB/FE Rev. A, 010531,
Autronica Fire and Security AS

Page 1

Operator's Handbook, AutroSafe Interactive Fire Alarm System, Release 3, ASAFE-FB/FE Rev. A, 010531,
Autronica Fire and Security AS

Page 2

1. Introduction

1.1 About the Manual

This manual is intended to provide the information necessary to operate the AutroSafe Interactive Fire Alarm System from *the Repeater Panel*, BU-320.

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 Specification).

The AutroSafe Interactive Fire Alarm System comprises various *components* (see chapter 1.0). It is important that the reader gets familiarized with these, plus the different terms and abbreviations (shown in Appendix).

1.3 Reference Documentation

In addition to this handbook, the AutroSafe Interactive Fire Alarm System consists of the following documentation:

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, Information Panel (BV-320)	P-ASAFE-IN/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

Operator's Handbook, AutroSafe Interactive Fire Alarm System, Release 3, ASAFE-FB/FE Rev. A, 010531,
Autronica Fire and Security AS

Page 3

1.4 Components

The AutroSafe 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 seperate power supply.

Operator's Handbook, AutroSafe Interactive Fire Alarm System, Release 3, ASAFE-FB/FE Rev. A, 010531,
Autronica Fire and Security AS

Page 4
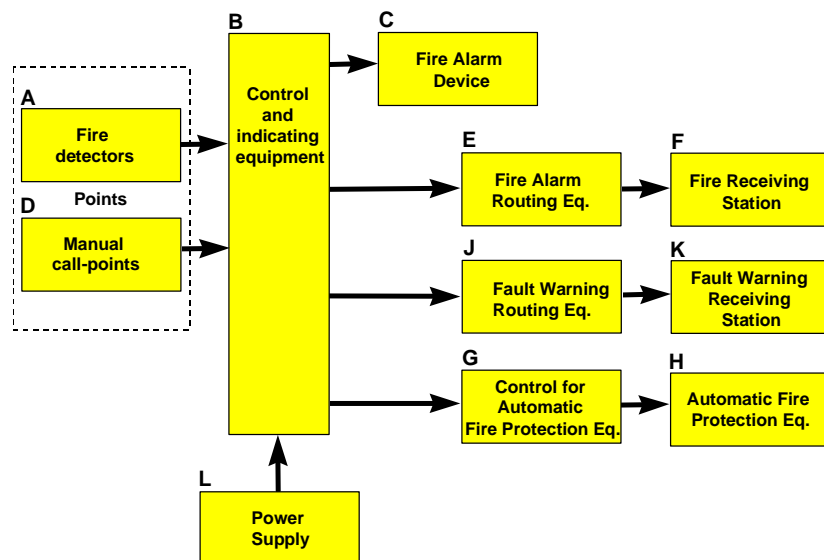
2. The Repeater Panel - Overview
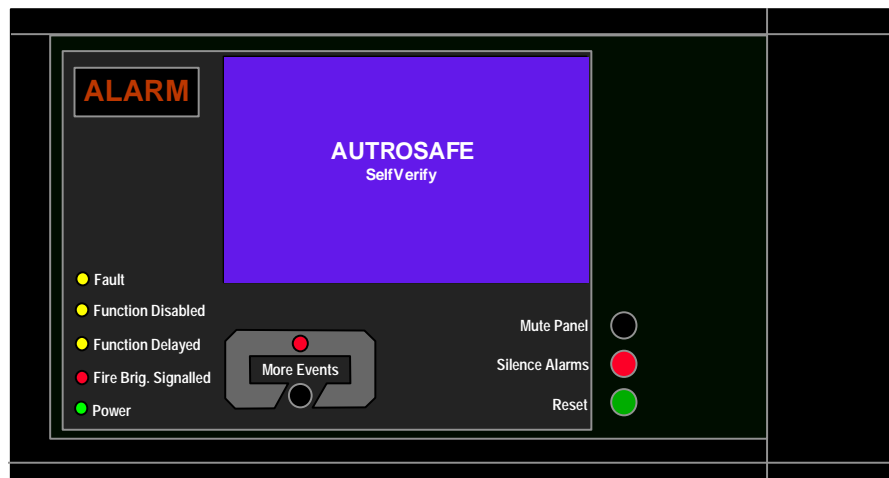
2.1 Introduction

The Repeater 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 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.

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Autronica Fire and Security AS

Page 5

2.2 Indication Devices

Text Display - See chapter 2.3.

🔴 **ALARM**

The red alarm indicator shows that one or more detection zones within the operating zone of the Repeater 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.
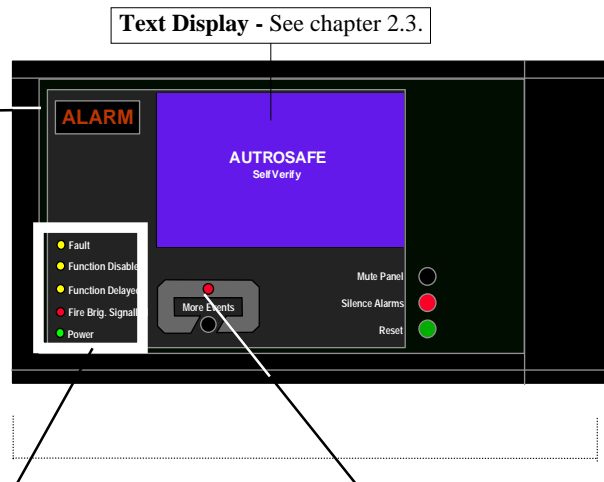
🟡 **Fault**

The yellow Fault Warning indicator shows the presence of a fault within the operation zone of the Repeater 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 Repeater Panel are in the disabled state:

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

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

🔴 **Fire Brig. Signalled**
Steady red light when the message is sent to the Fire Brigade.

🟢 **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 there are several national variants of this panel. The Indication Devices shown in this handbook deals with the Indication Devices for the standard panel.

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Page 6

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 sections showing different types of information.

The picture below shows the information that is displayed in the event of a fire alarm.

Header **Detection Zone(s)** **Time**

Total number of fire alarms

FIRE ALARMS 19:23
1 OFFICES Total: 1

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Autronica Fire and Security AS

Page 7

2.4 Operating Buttons

Front Push Buttons

Mute Panel
(black)

Silence Alarms
(red)

Reset
(green)

More Events
(black)

Front Push Buttons			
Button		**Designation**	**Access Level**
	Mute Panel (black)	Used to mute the panel. Timeout.	1
	Silence Alarms (red)	Used to silence Fire Alarm Devices (FAD) and cause blinking serial numbers and lamps to go steady. Timeout. Also used to resound (repress the SILENCE ALARMS button) after the silence function has been activated	2
	Reset (green)	Used to reset the system. Can also be used as an accept of alarm (points) disablement, if points are still in alarm when RESET is activated. If the button is pressed more than 5 seconds, a lamp test is performed (Access Level 1, no key or password required).	2
	More Events (black)	Used to scroll downwards among alarms in window (scroll page by page). Possible only if there are more alarms than possible to display in the window.	1

Operator's Handbook, AutroSafe Interactive Fire Alarm System, Release 3, ASAFE-FB/FE Rev. A, 010531, Autronica Fire and Security AS

Page 8

2.5 Internal Buzzer

Each Repeater 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 operator 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.

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Autronica Fire and Security AS

Page 9

3. Operation Mode

3.1 Introduction

The Repeater Panel operates in *Operation Mode*, and will automatically enter this mode after startup

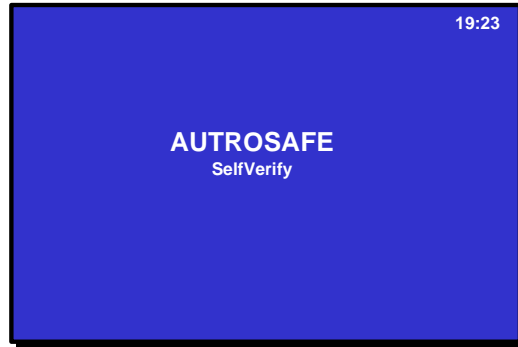The display may look as follows in the panel's idle state.

Figure 3-1: The idle display

3.2 Conditions in Operation Mode

In Operation Mode, the *system* can be in quiescent condition (lowest priority), or in one or any combination of several conditions. The table below shows the different conditions, and if / how the conditions are indicated on the Repeater 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.
fault warning condition	No indication.	Fault indicator.
disablement condition	No indication.	Function Disabled indicator.
Included in disablement: Immediate actioning disabled condition	No indication	Function Delayed indicator and Function Disabled indicator
fire warning condition (*including* prealarm)	No indication.	No indicators are lit - no indication.
test condition	No indication.	No indicators are lit - no indication.

Note that only *fire alarms* are indicated on the Repeater Panel's display.

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Autronica Fire and Security AS

Page 10

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)

Note that only the Fire Alarm Level is indicated on the Repeater Panel BU-320.

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 Repeater Panel, Access Level 2 is required. (To mute the internal buzzer, Access Level 1 or higher 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.
2	Access by key.	Accessible by persons having a specified responsibility for safety.
4	Mechanical tool.	Accessible by persons doing repair work and changing firmware.

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Autronica Fire and Security AS

Page 11

3.5 How Fire Alarms are Presented in the Display

Fire alarms are presented in Operation Mode. FIRE ALARMS 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.

Header　**Detection Zone(s) in fire alarm**　**Time**　**Total number of fire alarms**

```
FIRE ALARMS                    19:23
      1 OFFICES                Total:  3
      2 CANTEEN
      3 WORKSHOP
```

Figure 3-2: How fire alarms are presented

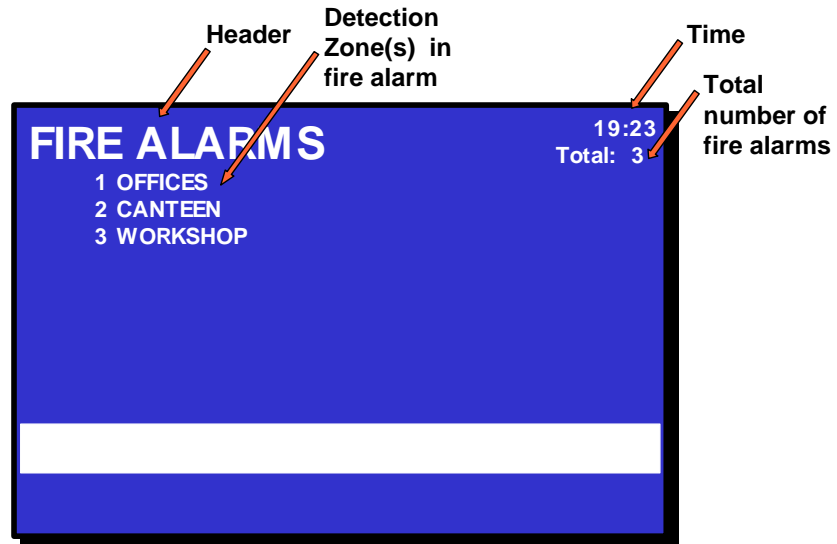*Operator's Handbook, AutroSafe Interactive Fire Alarm System, Release 3, ASAFE-FB/FE Rev. A, 010531,*
Autronica Fire and Security AS

Page 12

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* fire alarms occur (for example, if a detection zone enters the Fire Alarm state)
- after a timeout period if the cause for making it sound is still present.

3.7 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.

Depending on the current alarm situation, the alarm zones are *automatically* resounded to their alarm states on timeout (configurable) of the SILENCE resound timer, or they can be manually resounded to their alarm states when repressing the SILENCE ALARMS button.

3.8 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.

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Autronica Fire and Security AS

Page 13

3.9 Alarm Disablement (AlarmDisable)

If there are points within an operation zone still signalling a Fire Alarm after the reset button has been pressed, 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 Reset button must be pressed within 5 seconds (configurable).

The alarmdisabled detectors *cannot* be reactivated with the Repeater Panel. This can be done by means of the Fire Alarm Control Panel BS-320 or Operator Panel BS-330.

Operator's Handbook, AutroSafe Interactive Fire Alarm System, Release 3, ASAFE-FB/FE Rev. A, 010531,
Autronica Fire and Security AS

Page 14

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)

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 AutroSafe Interactive Fire Alarm System by means of the Repeater Panel.

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:

- 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.

- 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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Page 15

5. In the Event of a Fire Alarm

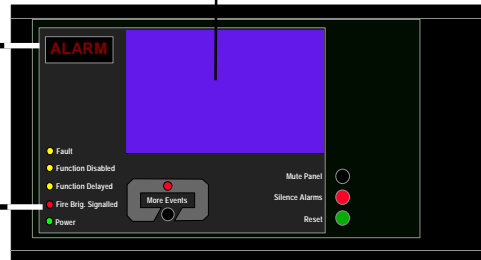## 5.1 Indications in the Event of a Fire Alarm

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 Repeater 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.

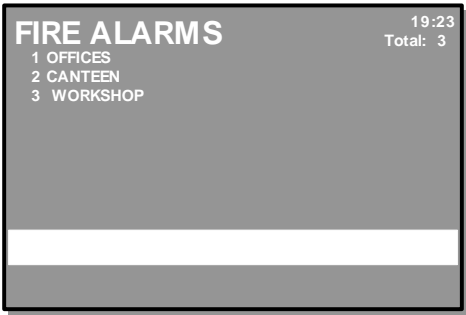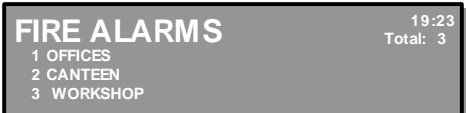The Fire Brig. Signalled indicator has a steady red light.

ALARM

Fault
Function Disabled
Function Delayed
Fire Brig. Signalled
Power

More Events

Mute Panel
Silence Alarms
Reset
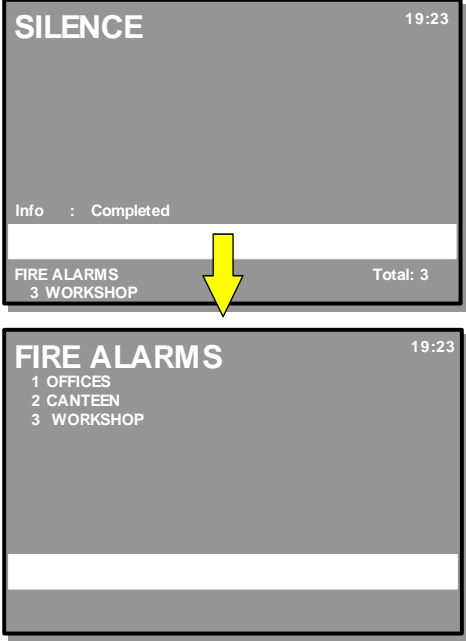
The internal buzzer is activated.

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).

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Autronica Fire and Security AS

Page 16

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

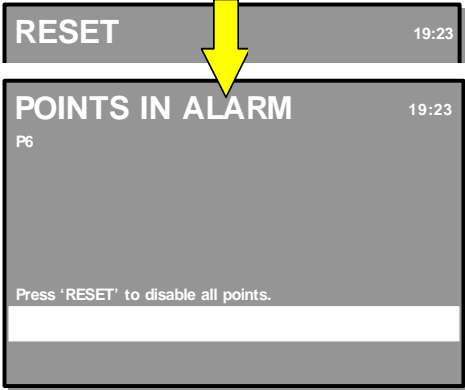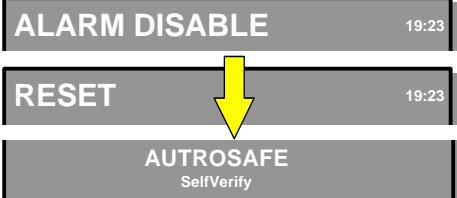| Step	Actions to be taken	Display Indication	Audible Indication
1	Follow all precautions described in the local fire instructions, step by step.	**FIRE ALARMS** 19:23 Total: 3 1 OFFICES 2 CANTEEN 3 WORKSHOP	All fire alarm devices connected to the alarm zones (which are connected to the detection zones in alarm) are activated (sounders and visual indicators). The internal buzzer on the Repeater Panel is turned on.
	Comments:	The red *FIRE* indicator starts to blink. The red *Fire Brig. Signalled* 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 ●	**FIRE ALARMS** 19:23 Total: 3 1 OFFICES 2 CANTEEN 3 WORKSHOP	The internal buzzer on the Repeater 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.	**FIRE ALARMS** 19:23 Total: 3 1 OFFICES 2 CANTEEN 3 WORKSHOP	
	Comments:	In this example, a total of 3 zones are in alarm state.	
4	To silence all alarms, press the red Silence Alarms button. ●	**SILENCE** 19:23 Info : Completed FIRE ALARMS Total: 3 3 WORKSHOP **FIRE ALARMS** 19:23 1 OFFICES 2 CANTEEN 3 WORKSHOP	All Fire Alarm Devices (FAD) are deactivated.
	Comments:	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. 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.	

Operator's Handbook, AutroSafe Interactive Fire Alarm System, Release 3, ASAFE-FB/FE Rev. A, 010531,
Autronica Fire and Security AS

Page 17

Step	Actions to be taken	Display Indication	Audible Indication
		By means of the SILENCE button, you can manually resound the alarm zones at this stage.	
5	Press the green Reset button.	**RESET**　　　　　　19:23 Info　:　Completed	The audible indicator on all panels within the operation zone of the Repeater Panel is turned off.
	Comments:	If there are no points signalling a fire alarm, the system is reset. The red *FIRE* indicator goes off. The red *Fire Brig. Signalled* indicator goes off. The panel enters its idle state. **AUTROSAFE** **SelfVerify**	
If there are points still signalling an alarm when the system is reset, continue as follows:			
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 *reactivated* after a predefined timeout. *If you want to disable the point(s)* - for example, a manual call-point -still signalling alarm, go to step 6.		**RESET**　　　　　　19:23 **POINTS IN ALARM**　　19:23 P6 Press 'RESET' to disable all points.	
6	To disable all points still signalling alarm, press the green Reset button.	**ALARM DISABLE**　　19:23 **RESET**　　　　　　19:23 **AUTROSAFE** **SelfVerify**	
	Comments:	The red *Fire Brig. Signalled* indicator goes off. The yellow *Function Disabled* indicator is lit. The display on the Fire Alarm Control Panel BS-320, Operator Panel BS-330 or Information Panel BV-320 will indicate the points that have been disabled. By means of the Fire Alarm Control Panel BS-320 or Operator Panel BS-330, you can; reactive the points (press Action Digit 1: Reactivate) or enable the points that have been disabled (select the point and press Action Digit 3: Enable).	

Operator's Handbook, AutroSafe Interactive Fire Alarm System, Release 3, ASAFE-FB/FE Rev. A, 010531,
Autronica Fire and Security AS

Page 18

In the Event of a Fire Alarm - with Alarm Delay

5.3 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 the *Immediate Output Actioning* has been disabled.

The following shows the indications on the Repeater 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, plus the activation time of the delayed outputs.
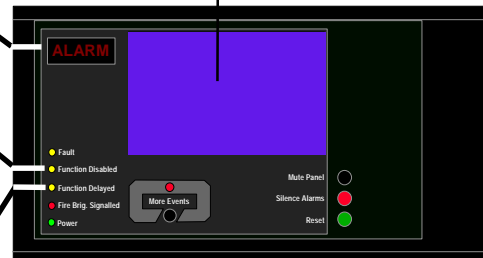
The red Alarm indicator is blinking.

The Function Disabled indicator has a steady yellow light.
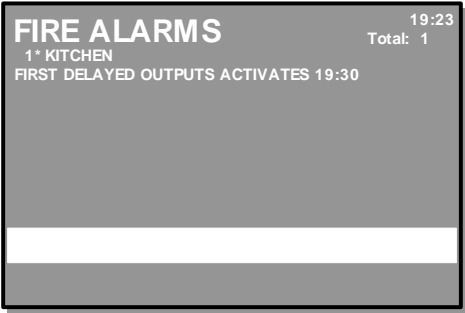
The Function Delayed indicator has a steady yellow light.
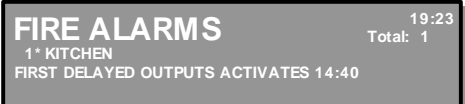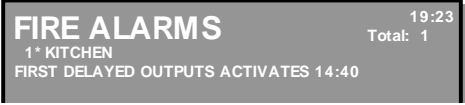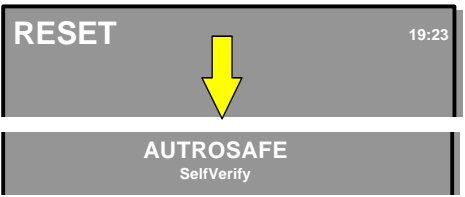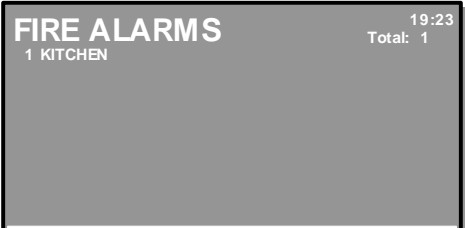

The internal buzzer is activated.

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

Operator's Handbook, AutroSafe Interactive Fire Alarm System, Release 3, ASAFE-FB/FE Rev. A, 010531,
Autronica Fire and Security AS

Page 19

5.4 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.	**FIRE ALARMS** 19:23 Total: 1 1* KITCHEN FIRST DELAYED OUTPUTS ACTIVATES 19:30	The internal buzzer on the Repeater 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 ●	**FIRE ALARMS** 19:23 Total: 1 1* KITCHEN FIRST DELAYED OUTPUTS ACTIVATES 14:40	The internal buzzer on the Repeater 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.	**FIRE ALARMS** 19:23 Total: 1 1* KITCHEN FIRST DELAYED OUTPUTS ACTIVATES 14:40	
4	The next step in the procedure will depend on whether or not there really is a fire. Follow **4a** if there is *not* a fire - or follow **4b** if there really *is* a fire.		
4a	If there is not a fire, press the green Reset button. ●	**RESET** 19:23 ↓ **AUTROSAFE** **SelfVerify**	
	Comments:	The red *FIRE* indicator goes off. The idle display is shown.	
4b	If there really is a fire, activate the nearest manual call-point or go to the nearest operator panel (BS-320/330) to activate the alarm. Implement the necessary measures.	**FIRE ALARMS** 19:23 Total: 1 1 KITCHEN	All fire alarm devices within the operation zone of the 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.	

Operator's Handbook, AutroSafe Interactive Fire Alarm System, Release 3, ASAFE-FB/FE Rev. A, 010531,
Autronica Fire and Security AS

Page 20

Step	Actions to be taken	Display Indication	Audible Indication
5b	To silence all alarms, press the red Silence Alarms button.	**SILENCE** 19:23 Info: Completed FIRE ALARMS Total: 1 1 KITCHEN **FIRE ALARMS** 19:23 Total: 1 1 KITCHEN	All Fire Alarm Devices (FAD) are deactivated.
	Comments:	The red *FIRE* indicator goes steady. The alarm zones previously in alarm state are *automatically* resounded to their alarm state 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. 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. By means of the SILENCE ALARMS button, you can manually resound the alarm zones at this stage.	
6b	Press the green Reset button.	**RESET** 19:23 Info : Completed	The audible indicator on all panels within the operation zone of the Repeater Panel is turned off.
	Comments:	If there are no points signalling a fire alarm, the system is reset. The red *FIRE* indicator goes off. The red *Fire Brig. Signalled* indicator goes off. **AUTROSAFE** **SelfVerify** If there are points still signalling a fire alarm, refer to step 6 in the procedure described in the previous chapter.	

Operator's Handbook, AutroSafe Interactive Fire Alarm System, Release 3, ASAFE-FB/FE Rev. A, 010531,
Autronica Fire and Security AS

Page 21

6. Appendix

6.1 Terms and Abbreviations

Term / Abbreviation	Explanation
Activation	To bring a *component* 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.
Alarm Zone	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.
AUTROLON	Autronica's Local Operating 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 AutroSafe Interactive Fire Alarm System (also see detailed description of *Components,* 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 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	One or more fire detectors and/or manual call-points logically belonging together for geographical, functional or other reasons.
Domain Network	The domain network consists of a number of components, connected over AUTROLON.
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 Recieving Station	A centre from which the necessary fire protection measures can be initiated at any time.

Operator's Handbook, AutroSafe Interactive Fire Alarm System, Release 3, ASAFE-FB/FE Rev. A, 010531,
Autronica Fire and Security AS

Page 22

Term / Abbreviation	Explanation
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	Either a Point, and I/O-unit or and Electronic Sounder that is connected to a Detection Loop.
Manual Call-Point	A device for the manual initiation of an alarm.
Operation Zone	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	Detectors or manual call-points. Each point is assigned zone membership on individual basis. A point can be a member of one detection zone only. A point may signal a number of different alarm levels. A manual call-point can only signal a Fire Alarm Level. To each point there will be assigned a delay parameter, notifying whether actions to be initiated upon reception of a Fire Alarm signal from the point should be delayed or not. The delay parameter is only valid in conjunction with Delayed Action or SOLAS.
SOLAS	A program version of the AutroSafe software, spesially designed for maritime application - Safety Of Life At Sea (SOLAS).
SVD	Self Verifying Detection

Operator's Handbook, AutroSafe Interactive Fire Alarm System, Release 3, ASAFE-FB/FE Rev. A, 010531,
Autronica Fire and Security AS

Page 23

7. Index

Operator's Handbook, AutroSafe Interactive Fire Alarm System, Release 3, ASAFE-FB/FE Rev. A, 010531,
Autronica Fire and Security AS

Page 24

8. Figure List

Operator's Handbook, AutroSafe Interactive Fire Alarm System, Release 3, ASAFE-FB/FE Rev. A, 010531,
Autronica Fire and Security AS

Page 25

Operator's Handbook, AutroSafe Interactive Fire Alarm System, Release 3, ASAFE-FB/FE Rev. A, 010531,
Autronica Fire and Security AS

Page 26

9. Reader's Comments

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　　　　　　　　　　　　　　Norway

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Autronica Fire and Security AS is an international company, based in Trondheim, Norway and has a world-wide sales and service network. For more than 40 years Autronica's monitoring systems have been saving lives and preventing catastrophes on land and at sea. Autronica Fire and Security's most important business area is fire detection & security. Autronica Fire and Security stands for preservation of environment, life and property.

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