



Operator's Handbook

Autoprime Interactive Fire Detection System



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1. Introduction

1.1 About the Handbook

This handbook provides the information necessary to operate the Autroprime Interactive Fire Detection System (hereby called **Autroprime**) from the Fire Alarm Control Panel, including;

- Fire Alarm Control Panel BS-200, BS-200L and BS-200M
- Operating Panel BS-210 (an integrated part of the Fire Alarm Control Panel)
- Repeater Panel BS-211
- Information Panel BV-210
- Fire Brigade Panel BU-210

1.2 The Reader

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

Autroprime comprises various *components* (see chapter 1.4). It is important that the reader gets familiarized with these, plus the different terms and abbreviations.

1.3 Reference Documentation

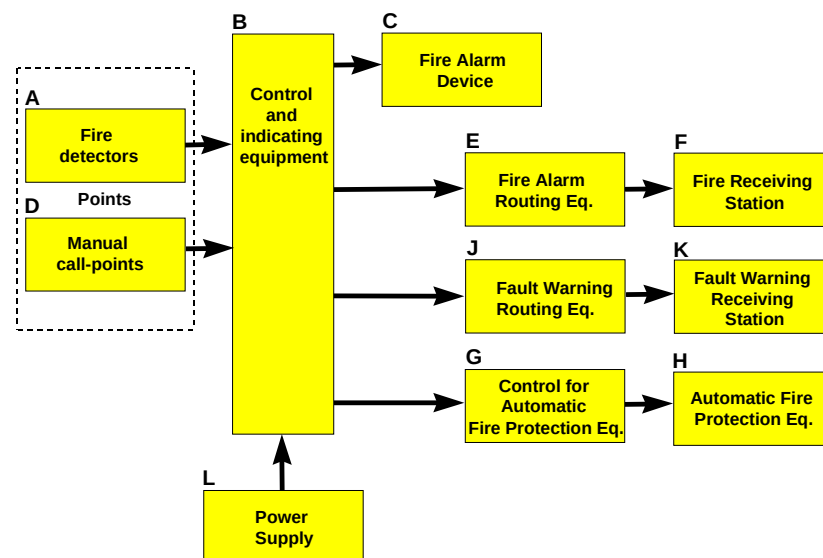
The table below shows an overview of the complete technical documentation available in several languages:

Documents	Part number	File name
System Description	116-P-APRIME2-SYSTEM/XGB	aprime2system_xgb
Getting Started	116-P-APRIME2-GESTAR/EGB	aprime2gestar_egb
Installation Handbook	116-P-APRIME2-INSTAL/DGB	aprime2instal_dgb
Connecting Loop Units	116-P-CONNECTLOOPUNIT/DGB	connectloopunit_dgb
Configuration Handbook	116-P-APRIME2-CONFIG/EGB	aprime2config_egb
Operator's Handbook	116-P-APRIME2-OPERAT/FGB	aprime2operat_fgb
User Guide	116-P-APRIME2-USERGU/LGB	aprime2usergu_lgb
Wall Chart	116-P-APRIME2-WALLCH/LGB	aprime2wallc_lgb
Menu Structure	116-P-APRIME2-MENUS/MGB	aprime2menus_mgb
Datasheet; Fire Alarm Control Panel BS-200	116-P-BS200/CGB	bs200_cgb
Datasheet; Fire Alarm Control Panel BS-200M	116-P-BS200M/CGB	bs200m_cgb
Datasheet; Repeater Panel BS-211	116-P-BS211/CGB	bs211_cgb
Datasheet; Information Panel BV-210	116-P-BV210/CGB	bv210_cgb
Datasheet; Fire Brigade Panel BU-210	116-P-BU210/CGB	bu210_cgb
Datasheet; Mimic Driver BUR-200	116-P-BUR200/CGB	bur200_cgb

1.4 Components

The Autoprime 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 giving warning of fire, for example, a sounder or visual indicator.	C
Fire Alarm Routing Equipment	FARE	Equipment routing an alarm signal from control and indicating equipment to a Fire Alarm Receiving Station.	E
Control for Fire Protection Equipment	FPE	An automatic device actuating 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 routing 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.

2. The Operator Panel

2.1 Introduction

The Operator Panel BS-210, including an upper and a lower section, is an integrated part of the Fire Alarm Control Panel BS-200, BS-200L and BS-200M. The Repeater Panel BS-211 is identical with the Operator Panel, with the exception of the alphanumeric keypad at the lower section.

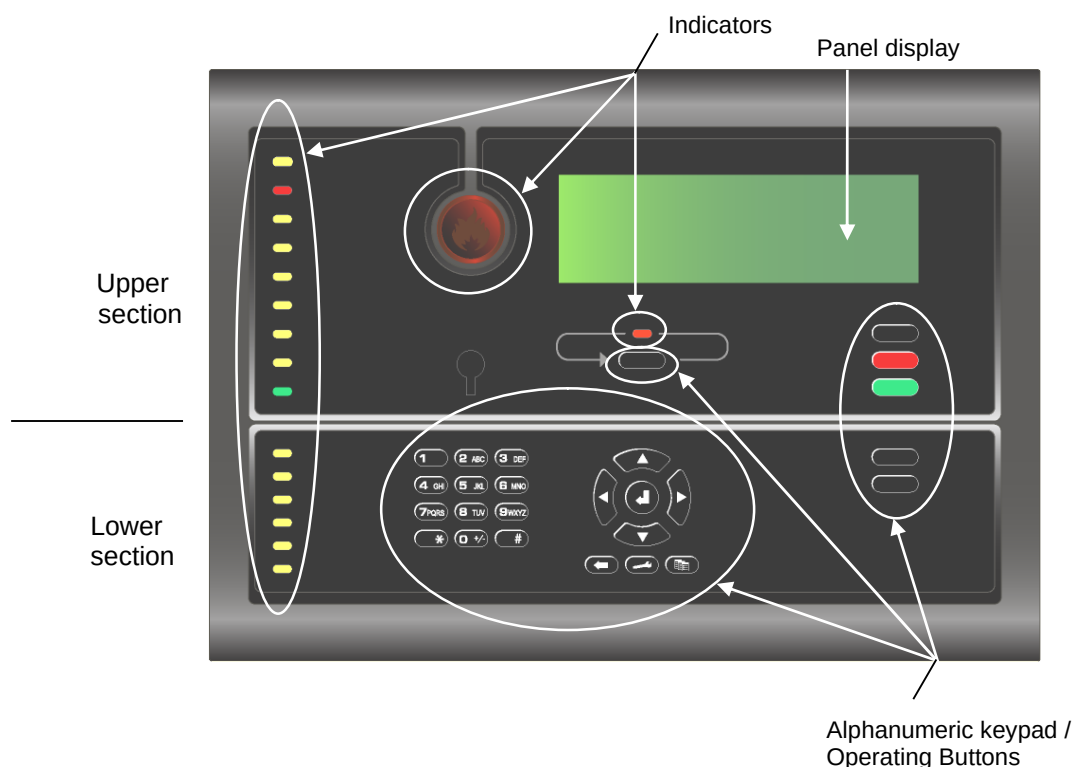
The other Autroprime panels; the Information Panel BV-210 (no operating buttons available) and the Fire Brigade Panel BU-210 consist only of the upper section of the panel.

During normal operation, the backlight in the panel display is ON. No operating buttons and indicators are visible, except for the Power indicator that always displays a steady green light when the power is ON and the

Enter-button  that is backlit.

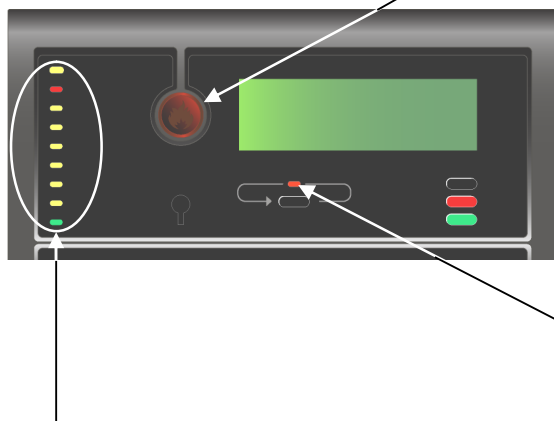
Apart from this, only indicators relevant to the actual condition are visible. For example, if a fault is present the fault indicator will have a yellow light. A backlight will appear only on buttons that are currently available (relevant to the actual condition).

The illustration below shows the Operator Panel with its panel display, operating buttons and indicators.



2.2 Indicators

2.2.1 Upper Section



The circular red alarm indicator shows that one or more detection zones are in the fire alarm state.

- **Pulsing red light:**
In the event of a fire alarm. The Fire Alarm Devices (FAD), (if any), 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.



In the event of more than one alarm. The red More Events indicator shows that several detection zones are in the fire alarm state.

	Pre Alarm	One or more detection zones are in the pre-alarm state. NOTE: The color of this indicator has changed from red to yellow in June 2026.
	Remote Call	Steady red light when the message is sent to a remote device, for example, the Fire Brigade.
	Remote Call Response	Steady yellow light when an acknowledge message is received from the remote device, for example, the Fire Brigade.
	Fault	The presence of a fault. • Pulsing light Unacknowledged fault warnings exist • Steady light All fault warnings have been acknowledged
	Disabled Function	Steady yellow light when one or more of the following components are in the disabled state: • detection zones and alarm zones • individual points • outputs and inputs • Fire Alarm Devices, Fire Alarm Routing Equipment, Fire Protection Equipment and Fault Warning Routing Equipment.
	Test Condition	Steady yellow light when one or more of the following components have been manually set to the test condition: • detection zones and alarm zones • fire alarm devices • outputs
	Supervisory Condition	The presence of an input device (for example, door control units, monitor and control units) that is in the supervisory state. • A pulsing light Unacknowledged points in Supervisory state exist • Steady light All points in Supervisory state have been acknowledged
	System Fault	Steady yellow light when a <i>system</i> fault is present.
	Power	Steady green light when power is ON.

2.2.2 Lower Section



	Delayed Activation	Steady yellow light indicates that <i>Immediate Output Actioning</i> has been changed to delayed output actioning (manually or automatically by using the Day/Night function), meaning that a delay period is active for Fire Alarm Devices (FAD), Fire Alarm Routing Equipment (FARE) and all other outputs that are connected to the detection zone of this type.
	Annunciator Fault	Pulsing yellow light when a fault is detected (and not accepted) on one or more Fire Alarm Devices (FAD). Steady yellow light when accepted. The yellow <i>Fault</i> indicator will have the identical behaviour.
	Remote Call Fault	Pulsing yellow light when a fault is detected (and not accepted) on Fire Alarm Routing Equipment (FARE). Steady yellow light when accepted. The yellow <i>Fault</i> indicator will have the identical behaviour.
	Annunciator Disabled	Steady yellow light when one or more Fire Alarm Devices are disabled. The <i>Disabled Function</i> indicator will also have a steady yellow light when one or more FADs are disabled. Disabling an alarm zone will also disable the FADs in this zone.
	Remote Call Disabled	Steady yellow light when the signal to Fire Alarm Routing Equipment (FARE) has been disabled. The <i>Disabled Function</i> indicator will also have a steady yellow light when FARE is disabled.
	Reduced Detection	Steady yellow light when a MultiSensor is switched into Operation Class "Heat Only".

2.3 The Panel Display



During normal operation, the panel display is always backlit.

The panel display has 8 lines of 40 characters.

Autroprime features a scrollbar functionality. A mark in a vertical scrollbar on the right hand side of the display gives an approximate indication of how many lines there are above and below the line which is currently highlighted. For example, if there are a total of 6 alarms (6 lines), the mark will be positioned in the middle of the scrollbar.

2.4 Operating Buttons

Only buttons that are currently available are backlit (relevant to the actual condition).

2.4.1 Function Buttons



Function Buttons (upper section)			
Button		Description	Access Level
	Mute Panel (black)	Used to mute the panel.	1
	Silence (red)	Used to silence Fire Alarm Devices (FAD) and cause pulsing ALARM indicator to go steady. Pressing and holding this button down for more than 7 seconds will activate the Resound function.	2
	Reset (green)	Used to reset the system.	2

Function Buttons (lower section)			
Button	Description		Access Level
	Prolong Delay (black)	Applies to detection zones that are defined as Delayed Action Detection Zones. Used to prolong the delay period. A global functionality. The delay is divided into two delay periods, <i>Initial Delay</i>, T1 (configurable) and <i>Prolonged Delay</i>, T2 (configurable). The (T1) delay period starts when a Fire Alarm signal from a point is received. Actions will be initiated after the T1 delay period has expired. Pressing Prolong Delay will terminate T1 and the delay period T2 will start. The operation of delays to outputs for Fire Alarm Devices (FAD) apply to: • detectors and/or • signals from specific zones • manual call points and/or The operation of delays to outputs for Fire Alarm Routing Equipment (FARE) apply to: • detectors and/or • signals from specific zones	1
	Block (black)	Applies to the maritime version BS-200M only. In a SOLAS Detection Zone (<i>Safety of Life at Sea</i>), there is a two-minutes delay from when a Point enters an alarm condition until the associated Detection Zone initiates the activation of the configured Fire Alarm Devices (FADs) and outputs. During this period a countdown timer is shown on the panel display and the user is allowed to press the Block button to block the activation of FADs and/or outputs during this two minute period.	1
	Activate Outputs (black)	If one or more detection zones have entered the Fire Alarm state and are in their T1 or T2 periods (described above; Prolong Delay), the delayed actions can be immediately initiated by pressing Activate Outputs. (Activation of a manual call point will normally give immediate action, provided that no delay has been defined.	1

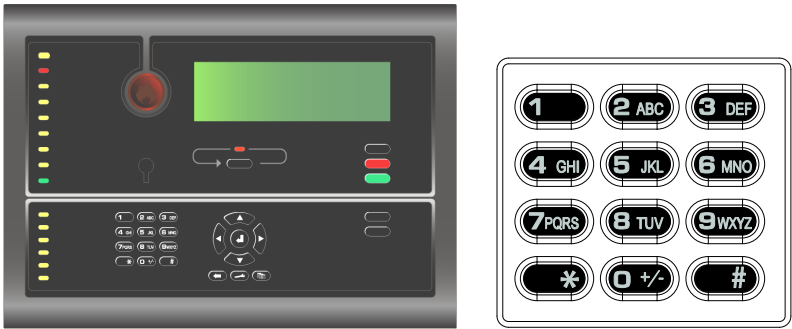
2.4.2 More Events button



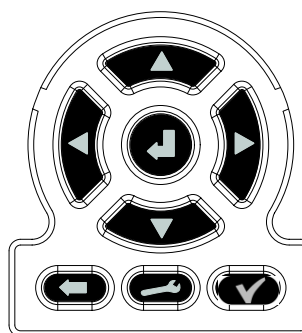
More Events button (upper section)			
Button		Description	Access Level
		More Events (black) Used to scroll downwards among events in the currently active window. Available only if there are more events to be displayed in the window than what is currently displayed (i.e. the number of lines exceeds 6). In addition, a lamp test can be performed by pressing and holding the button for at least 10 seconds. The lamp test is performed in access level 1 (without using the key).	2

2.4.3 Alphanumeric Keypad

The alphanumeric keypad includes the numbers 1 to 9, 0, the letters A to Z, plus special characters. (Note that the Repeater Panel has no alphanumeric keypad).



2.4.4 Manoeuvre and Utility Buttons



Manoeuvre and Utility Buttons (lower section)			
Button		When accessible (mode)	Description
	Select		Used to select one of several lines (items). <i>Multiselect</i> is possible by holding down the Select button and at the same time selecting all lines by scrolling with the up or down arrow buttons. It is also possible to scroll among several lines and select one-by-one by using the Select button.
	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. Pressing and holding down this button for more than 5 seconds will bring you to menu mode.
		When the cursor is on an item in a single select list.	Used to select/approve a selection (parameter) or return.
	Function	Only accessible if one or more items are selected (highlighted) in a multiple select list.	Allows you to perform a function on the selected items.
	Back / Cancel / Close		Move one level up in the menu tree. Cancel an input character (backspace).
			Used to move back one level / show previous picture if the display is not showing information on the top level.
 	Up/down arrow buttons		Used to scroll lines up or down. Used to change numerical values.
 	Left/right arrow buttons		Used to scroll to the left or to the right. Used to highlight text for copy, cut, etc.

2.5 Internal Buzzer

Each panel provides an internal buzzer which is activated as described below. If more than one condition is present simultaneously, the buzzer will reflect the condition which has the highest priority.

The internal buzzer is activated in the cases of:

- System Fault
- Alarm
- Pre Alarm
- Fault
- Supervisory

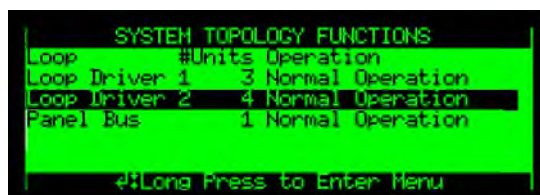
The internal buzzer can be silenced by pressing the *Mute Panel* button.

If the cause for making the buzzer signal sound is still present, the buzzer will resound after a predefined time.

3. Operation Mode

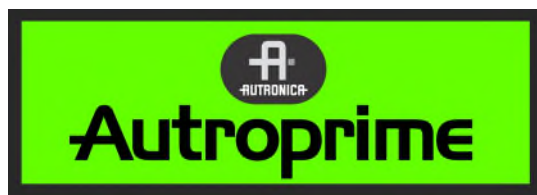
3.1 Loop Topology Presentation

When the panel is turned on and the initialization procedure is completed, the panel will recognize detectors and other loop units and the system topology is shown in the display.



3.2 The Panel's Idle State

The 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*, provided that the system is in *quiescent* condition (see below). The display appears as follows in the panel's idle state.



3.3 Conditions

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

- fire alarm condition (highest priority)
- pre alarm condition
- fault warning condition
- disablement condition
- test condition
- supervisory condition

3.4 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)
- Pre Alarm Level

Whenever a detector detects a transition from one alarm level to another (from lower level to the highest level), this event is reported to the system as a Pre Alarm or Fire Alarm signal, which in turn will initiate the appropriate actions.

3.5 Access Levels

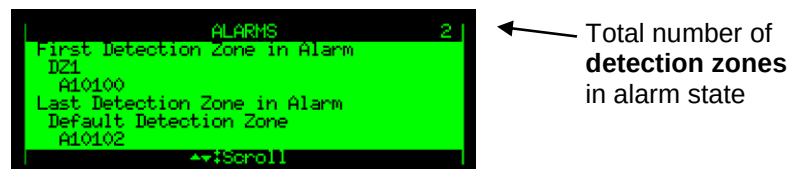
All user interface controls are classified as belonging to one of the three different access levels described below:

Access Level	Access	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. The normal operation mode is the default setting for the panel.
2	Access by key 	Accessible by persons with 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. If no action has been performed in this level within one hour the panel will either return to Access Level 1 or Access Level 2 depending on whether the key has been used.

3.6 How Events are Presented in the Display

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

The example below shows a situation where 2 detection zones are in alarm state. The first and the last detection zone are shown in the display, including information on the name of detectors and locations. The total number of zones is shown in the upper right corner of the display.



3.7 How to View Detailed Information

In order to select among *points in alarm*, for example, «In the Event of a Fire Alarm», proceed as follows:

- Scroll (up and down) with the arrow buttons   to find and select the wanted point.



- Press the Enter-button  to view detailed information. Scroll downwards to see all information, for example, the type of point (detector, manual call point) and the exact time the fire alarm condition occurred.



A black mark on the vertical scrollbar on the right side of the display indicates that you can scroll downwards (or upwards) to reveal more information. Note that this is not indicated on the illustration.

3.8 Resounding the Internal Buzzer

When 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

3.9 Resounding Fire Alarm Devices

When pressing the Silence button in the event of an alarm, all Fire Alarm Devices (FADs) will be deactivated. The red Fire Alarm indication lamp will switch from a pulsing to a steady light and the local buzzer will go off.

At this stage, the resound timer will start (if it has been configured). The resound timer will restart on each operation of the Silence button.

Holding the Silence button down for more than 5 seconds will activate the Resound function.

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

3.10 Disablement Sources

3.10.1 Overview

Autroprime supports the following *disablement sources*:

- *Individual*
A unit is disabled by an individual command issued to the specified unit. Applicable to all units with disabling capabilities.
- *Loop*
A unit is disabled by its corresponding loop being disabled. Applicable to points, FADs, FPEs and panels connected to loops (DID).
- *Detection 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.
- *Alarm Zone*
FADs in an alarm zone will be disabled.
- *Disable Input Unit*
A detection zone is disabled by a command from a Disable Input Unit. Applicable to detection zones only.
- *Modbus*

3.10.2 Point Disablements

A general rule is that a Point may be disabled by one or more disablement sources simultaneously. In order 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 the Fire Alarm Control 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.

3.11 Alarm Organization

3.11.1 Detection Zones with Different Properties

When handling events in Operation Mode, it is important to be aware of how the alarm organization is configured, that is, the system's detection zone configuration.

The system provides the following types of detection zones with different properties:

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

The property of a 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*.

3.11.2 The Actioning of Alarm Zones

The actioning of alarm zones can be controlled by detection zones, with or without Delay/Dependency properties.

For example, a detection zone in alarm can activate a number of alarm zones. The delay period before activation can be defined according to the property of the chosen detection zone type.

An alarm zone can give both an alarm signal (EVACUATE) and a neighbouring alarm zone signal (ALERT) with a different pattern.

The top-level alarm zone (default) is called the Parent Alarm Zone. A system consists of a Parent Alarm Zone, usually with several “sub-level” alarm zones in an hierarchy. Each “sub level”-alarm zone is related to a specific area of, for example, a building. If an alarm occurs in a Parent Alarm Zone, all Fire Alarm Devices (FADs) within this zone, plus all FADs belonging to all “sub-level”-alarm zones will be activated.

3.11.3 Immediate Action Detection Zones

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

Immediate Action applies to all units that can be activated by a Immediate Action Detection Zone.

3.11.4 Dependency Action Detection Zones

In areas where points may be exposed to a high level of pollution, for example, unwanted alarms may occur. In order to avoid this problem, the Dependency Action alarm organization is used.

A fire alarm signal from a *single detector* in a system defined as *Dependency Action* 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)
- Silent Alarm

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

It is also possible to configure the system in such a way that a Large Alarm will be initiated if at least two detectors in the entire system are in alarm state, regardless of which detection zone each detector belongs to.

Note that an activation of a manual call-point in a dependency action detection zone will *always* initiate actions (provided that the point has been set to Override Delay and Dependency, YES).

3.11.5 Delayed Action Detection Zones

Delays to any output depends on the Day Mode operation of the system (i.e. the LED for Delayed Action is ON). In Night Mode (i.e. the LED for Delayed Action is OFF) all outputs will be activated at first point in alarm.

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.

The purpose of this type of alarm organization is to give an immediate warning, but to delay the activation of outputs. In this way the cause of the alarm can be investigated before the system automatically initiates the evacuation of the protected premises and signals the local fire brigade.

Delayed Action is based on the first point reporting the fire. A second point in alarm in the same detection zone will not affect the delay of the connected outputs.

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) and the point(s) in this Delayed Action detection zone has been set to Override Delay and Dependency, NO.

Note that activation of a *manual call point* will normally give immediate output actioning (provided that the point has been set to Override Delay and Dependency, YES), even though the immediate output actioning has been disabled (configurable).

The operation of delays to outputs for Fire Alarm Devices (FAD) apply to:

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

The operation of delays to outputs for Fire Alarm Routing Equipment (FARE) apply to:

- detectors and/or
- signals from specific zones

The delay is divided into two delay periods, *Initial delay*, T1 (configurable) and *Prolonged Delay*, T2 (configurable). The default value for T1 is 1 minute and 2 minutes for T2.

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 PROLONG DELAY, will terminate T1 and the delay period T2 will start.

T1 for different detection zones may start at different times, however, when Prolong Delay has been pressed, T2 for all detection zones will start at the same time.

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 the Activate Outputs button. Activation of a manual call point will also give immediate action (provided that the point has been set to Override Delay and Dependency, YES).

3.11.6 Delayed Dependency Detection Zones

Detection zones configured as *Delayed Dependency Detection Zones* have the following properties in Day and Night Mode:

In Day Mode, 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:
 - o 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.
 - o 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.
 - o 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 means that all (not yet activated) FPEs configured to be activated on Silent, Small and Large Alarm will be activated.

In Night Mode, 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 means that all (not yet activated) FPEs configured to be activated on Silent, Small and Large Alarm will operate.

Note that when a point sends an alarm signal, and this point has been set to Override Delay and Dependency, YES, the Delayed Dependency detection zone will enter the Large Alarm state directly, regardless of Day or Night Mode.

3.11.7 SOLAS Detection Zones

Note: Applies to Fire Alarm Control Panel BS-200M only.

A detection zone configured as SOLAS Detection Zone (*Safety of Life at Sea*), has a two-minute delay from when a Point enters an alarm condition until the associated Detection Zone initiates the activation of the configured Fire Alarm Devices (FADs) and outputs.

During this period a countdown timer is shown in the panel display and the user has the ability to block the activation of FADs and/or outputs during the two minute period.

The Activate Outputs button can be used to activate the FADs and outputs that are in this two minute transition period or that have previously been blocked.

It is also possible to configure a SOLAS Detection Zone to immediately activate certain FADs and outputs, without the two minute delay. These FADs and outputs will thus start to operate at the moment the first Point in a Detection Zone enters the Alarm condition.

The Silence button can be used to control the FADs independently of the Block operation. The Silence function will affect all FADs that have been activated.

Autoprime also has a Resound function that will reverse the effect of Silence.

3.11.8 Silent, Small and Large Alarm – Overview

A few differences can be found in national guidelines regarding alarm organization and output delays. To be able to meet these guidelines you can select between different types of detection zones and control the activation of outputs.

Three “levels” have been defined regarding the progress of a fire alarm situation that can be utilized to activate outputs. If delays are activated, the normal situation will be that all activations will take place at the ‘Large Alarm’ level, both signalling the fire brigade (FARE), sounders (FADs) and any other delayed output (FPE). Activating outputs (FPE) at other levels may be obtained selecting these levels through configuration.

Onboard (BSA-200) outputs may be configured to be dedicated outputs for the Silent alarm and Small alarm levels. In this case they will only be activated at these levels.

The table on the next page indicates which levels are available for different types of detection zones.

Silent Alarm

Any fire alarm signal will be indicated at the panel without any delay, and this is the Silent Alarm level. An output may be configured to be activated at this level, as an example to trigger a coded message through a voice alarm system or an output to make on site technical personnel aware of the situation.

The delay timer T1 will be started and a countdown timer will be shown in the display. For a Delayed detection zone the operator may now initiate a prolonged T2 period.

Small Alarm

In the case of a Delayed Dependency detection zone there is an automatic transfer from the initial T1 delay period to the prolonged T2 delay period. When this transfer occurs the level will be increased to Small Alarm. Looking at a shopping centre this level may be used for another voice alarm message making the employees start the preparations for an evacuation. The display will show the T2 countdown.

(Small alarm level is also shown for Delayed and Dependency zones, but should not be used as an activation criteria for outputs.)

Large Alarm

The table below shows that this level is the last one (or only) for all types of detection zones. There are different ways of getting to this level, either elapsed timers (T1 and/or T2), a second alarm signal or a panel operation. If not configured otherwise, all outputs will be activated at this level, fire brigade (FARE), sounders (FAD) and any other outputs (FPE).

	Silent Alarm	Small Alarm	Large Alarm
Immediate Action Detection Zone			x
Delayed Action Detection Zone	x		x
Dependency Action Detection Zone	x		x
Delayed Dependency Detection Zone	x	x	x
SOLAS Detection Zone	x		x

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 pre-alarm
Chapter 8	faults
Chapter 9	supervisory condition

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

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 operating 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 *Remote Call* 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.

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 red Alarm indicator is pulsing.

The total number of Detection Zones.

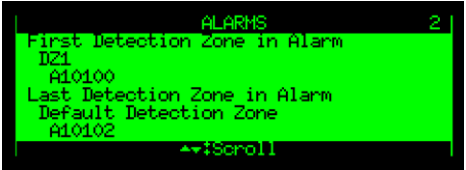
The text display presents the first and last (if several) detection zones in alarm state and their location. By operating the menu, detailed information is available.

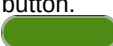
The red More Events indicator is pulsing if several detection zones are signaling a Fire Alarm.

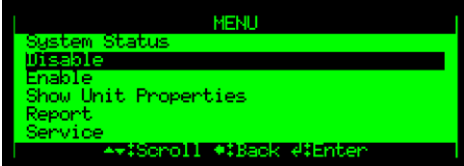
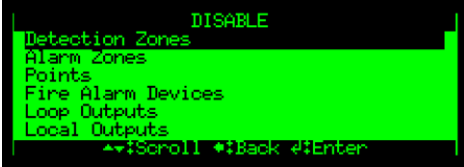
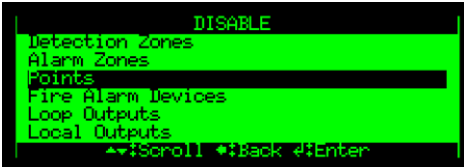
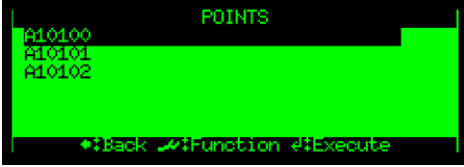
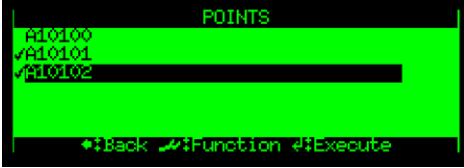
The internal buzzer is activated. The fire alarm condition activates Fire Alarm Devices (sounders, bells, visual indicators, etc.). "

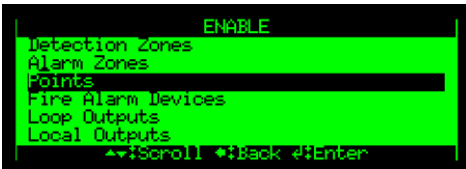
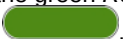
Only the operating buttons that are available and relevant to the current state are backlit.

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 first detection and last detection zone (if several) and points in alarm are highlighted in the display. The total number of detection zones in alarm state is shown in the uppermost right corner of the display. The red Alarm indicator is pulsing. If an output to Fire Alarm Routing Equipment is configured and applied, the red Remote Call indicator will also be pulsing. When several zones are in alarm state, the More Events indicator is pulsing.			
2	To silence the internal buzzer, press the black Mute Panel button. 		The internal buzzer on the operator panel is turned off.

Step	Actions to be taken	Display Indication	Audible Indication
3	Use the arrow down (/arrow up) button and scroll to observe the detection zones and point(s) in alarm state. 		
<i>Comments:</i> In this example, a total of 2 detection zones are in alarm state. If you want to view detailed zonal/point information for each zone before investigating the scene(s), go to step 5. If not, investigate the scene(s), then go directly to step 7.			
4	Investigate the scene(s) and carry out the necessary actions.		
5	To select a point, scroll with the arrow up/down buttons. 		
6	To view detailed point information, press  then scroll downwards  to see all information.	 	
<i>Comments:</i> If you want to view detailed information for another point; move back using the Cancel button , then select another point in step 5 and repeat step 6. If not, go directly to step 7.			
7	To silence all alarms, press the red <i>Silence</i> button. 		All Fire Alarm Devices (FAD) are deactivated. The Alarm indicator goes steady.
<i>Comments:</i> The red <i>Alarm</i> indicator goes steady. To <i>manually</i> resound the alarm zones at this stage, press and hold down the Silence button at least 10 seconds (see countdown of seconds on display). Configurable: A timer begins to count down. 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 operation mode (step 8).			
8	Press the green <i>Reset</i> button. 		All audible indicators on all panels in the system are turned off.

Step	Actions to be taken	Display Indication	Audible Indication
If no points are signalling an alarm, the system is reset and the display will return to its idle state.			
<i>Comments:</i> The red <i>Alarm</i> indicator goes off. The red <i>Remote Call</i> indicator goes off (if a FARE output is configured and applied).			
If there are points still signalling an alarm when the system has been reset, go to step 9.			
The point(s) still in alarm are 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 9.			
9	To enter menu mode, press and hold down  for a few seconds.		
10	Scroll downwards  to select <i>Disable</i> , then press 	 	
11	Scroll downwards  to select <i>Points</i> (if, for example, one or several points are to be disabled), then press 	 	
12	To select a specific point, scroll with the arrow up/down buttons to highlight this point.   To multiselect several consecutive points in the list that are to be disabled, press and hold down the Select  button and at the same time scroll with the arrow up or down button (a mark will appear to the left of	 	

Step	Actions to be taken	Display Indication	Audible Indication
	each the selected points). To multiselect points one-by-one, press the Select button to mark a point, then scroll to another point in the list and press the Select button once more to mark the next one.		
13	Press the <i>Function</i> button  , then press  twice.		
14	Use the alphanumeric keypad to select the desired Disable Time Span (for example, 02:00 hours/minutes), then press  twice to execute the command.		
<i>Comments:</i> The yellow <i>Disabled Function</i> indicator is lit. All selected points still signalling alarm are disabled. Although points have been disabled, the system will still be in alarm state.			
To reactivate the point(s), you have to <i>enable</i> the points that have been disabled.			
15	Press  to move back to the first level of the Menu Mode. Repeat the procedure similar to step 12 to 16, but <i>enable</i> instead of disable the points. (Points can also be enabled from the Disablement window).		The point(s) will again signal alarm (if reset has not been applied to points in alarm). The internal buzzer on the operator panel is turned on.
<i>Comments:</i> The yellow <i>Disabled Function</i> indicator goes off. The red <i>Alarm</i> indicator starts to pulse. The red <i>Remote Call</i> indicator is lit (if a FARE output is configured and applied).			
16	To reset the system, press the green <i>Reset</i> button  .		
<i>Comments:</i> If there are no points signalling a fire alarm, the system is reset. The panel enters its idle state. The red <i>Alarm</i> indicator goes off. The red <i>Remote Call</i> indicator goes off (if a FARE output is configured and applied).			

Step	Actions to be taken	Display Indication	Audible Indication
applied).			

6. In the Event of a Pre Alarm

6.1 Indications in the Event of a Pre Alarm

A detector in one of the detection zones has entered Pre Alarm state.



The yellow Pre Alarm indicator is pulsing.

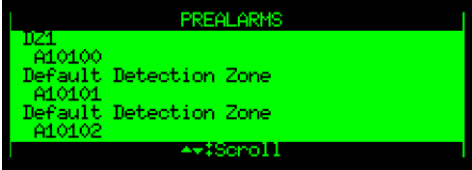
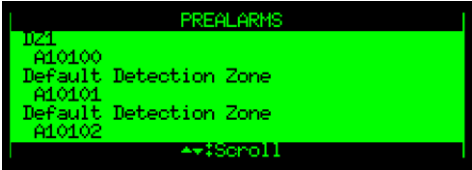
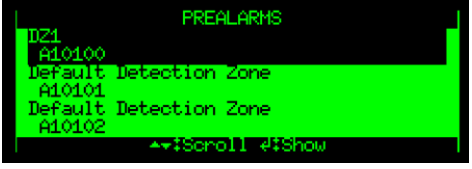
The text display presents the detection zone(s) in Pre Alarm state and their location. By operating the menu, detailed point information is available.

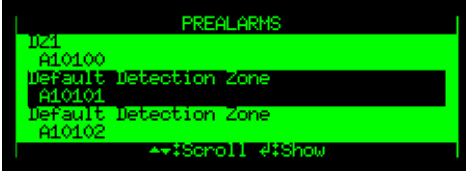
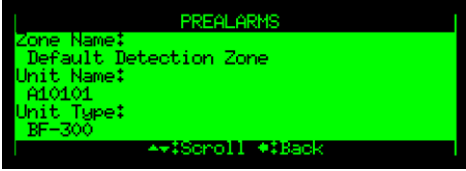
The red More Events indicator is pulsing if several detection zones are signaling a Pre Alarm.

The internal buzzer is activated.

Only the operating buttons that are available and relevant to the current state are backlit.

6.2 Actions to be Taken in the Event of a Pre Alarm

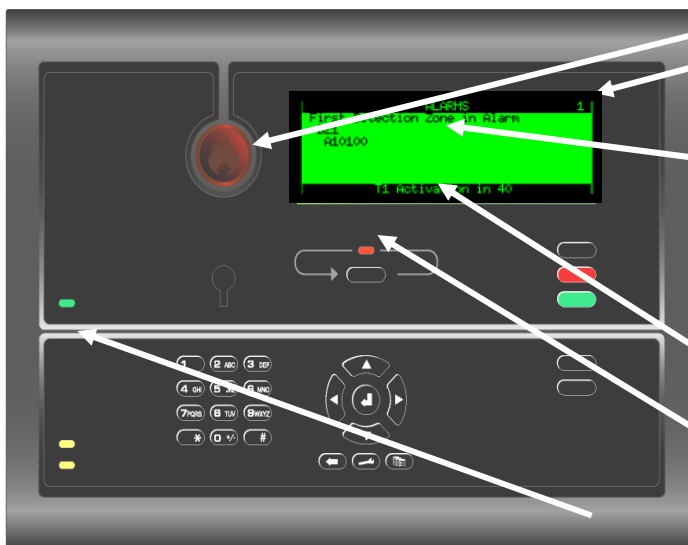
Step	Actions to be taken	Display Indication	Audible Indication
1	Follow all precautions described in the local fire instructions, step by step. 		The internal buzzer on the operator panel is turned on.
Comments: The detection zone(s) and point(s) in pre alarm state are highlighted in the display. The yellow <i>Pre Alarm</i> indicator is pulsing. When several zones are in pre-alarm state, the More Events indicator is pulsing.			
2	To silence the internal buzzer, press the black <i>Mute Panel</i> button. 		The internal buzzer on the operator panel is turned off.
3	Use the arrow down (/arrow up) button and scroll to observe the points(s) in Pre Alarm state.		

Step	Actions to be taken	Display Indication	Audible Indication
	 		
	<i>Comments:</i> In this example, a total of 3 points are in Pre Alarm state. If you want to view detailed point information before investigating the scene(s), go to step 5. If not, investigate the scene(s), then go directly to step 7.		
4	Investigate the scene(s) and carry out the necessary actions.		
5	To select a point, scroll with the arrow up/down buttons.  		
6	To view detailed point information, press  then scroll downwards  to see all information.	 	
	<i>Comments:</i> If you want to view detailed information for another point; move back using the Cancel button  , then select another point in step 5 and repeat step 6. If not, go directly to step 7.		
7	To acknowledge a Pre Alarm, press the red <i>Silence</i> button. 		
	<i>Comments:</i> 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 (step 8).		
8	Press the green <i>Reset</i> button. 		
	<i>Comments:</i> The yellow <i>Pre Alarm</i> indicator goes off, and the panel enters its idle state.		

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

7.1 Indications - Fire Alarm with Alarm Delay

A point is sending an alarm signal from a Delayed Action detection zone and the system is set to Day Mode (alarm delay is active). NOTE: An alarm from a *manual call point* is normally configured to give immediate actioning on the alarm outputs even though the system is set to Day Mode provided that the point has been set to Override Delay and Dependency (YES).



The red Alarm indicator is pulsing.
The total number of detection zones in alarm state.

The text display presents the detection zone(s) in alarm state and their location. By operating the menu, detailed information is available.

The remaining time of the delay period (countdown T1).

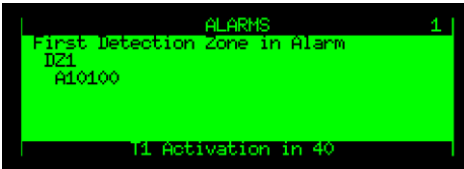
The red More Events indicator is pulsing if several detection zones are signaling a Fire Alarm with delay.

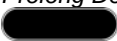
The Delayed Activation indicator has a steady yellow light.

Only the operating buttons that are available and relevant to the current state are backlit.

The internal buzzer is activated.

7.2 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. No fire alarm devices are activated (sounders and visual indicators).
<i>Comments:</i> The first detection zone and point(s) in alarm (and last detection zone, if several) are highlighted in the display. The total number of detection zones in alarm state is shown in the upper right corner of the display. The delay period T1 is counted down, the remaining time is shown on the bottom line. The red <i>Alarm</i> indicator is pulsing. If an output to Fire Alarm Routing Equipment is configured and applied, the red Remote Call indicator will also be pulsing. When several zones are in alarm state, the More Events indicator is pulsing.			
2	To silence the internal buzzer, press the black <i>Mute Panel</i> button. 		The internal buzzer on the operator panel is turned off.

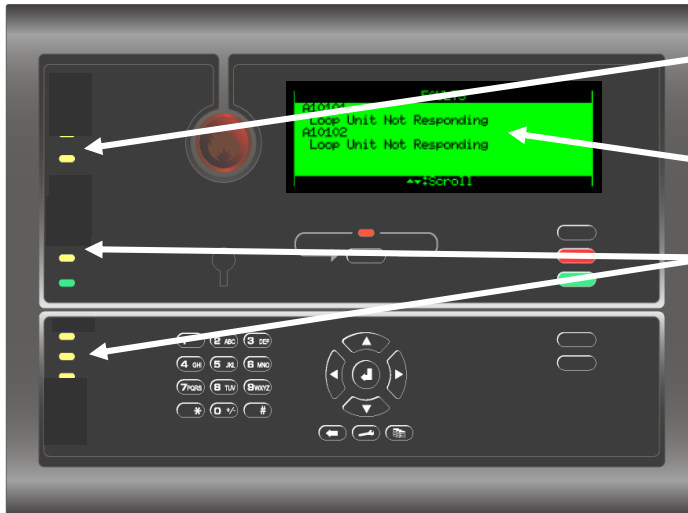
Step	Actions to be taken	Display Indication	Audible Indication
3	Use the arrow down (/arrow up) button and scroll to observe the point(s) in alarm state.		
<i>Comments:</i> In this example, 1 point is in alarm state. If you want to view detailed point information before investigating the scene, continue with the next step. If not, investigate the scene, then go directly to step 7.			
4	To view detailed point information, press  then scroll downwards  to see all information.	 	
<i>Comments:</i> If you want to view detailed information for another point (if any); move back using the Cancel button , then select another point in step 3, repeat step 4.			
<i>Comments:</i> The delay is divided into two delay periods, <i>Initial Delay</i>, T1 (configurable) and <i>Prolonged Delay</i>, 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 Prolong Delay will terminate T1 and the delay period T2 will start. T1 for different detection zones may start at different times, however, when Prolong Delay has been pressed, T2 for all detection zones will start at the same time.			
<i>Comments:</i> If you want to prolong the delay, go to step 5. If you do not want to prolong the delay go directly to step 6.			
5	To prolong the alarm delay, press the <i>Prolong Delay</i> button 		
<i>Comments:</i> T2 will start to count down.			
6	Investigate the scene(s), and carry out the necessary actions.		
<i>Comments:</i> The next action depends on whether or not there really is a fire. If there is not a fire, go to step 10 (press the green Reset button). If there really is a fire, continue with the next step.			
7	To activate the outputs, press the <i>Activate Outputs</i> button  or the nearest manual call point (provided that the point has been set to Override Delay and Dependency YES).		All fire alarm devices (sounders and visual indicators) that are configured to be activated are activated.

Step	Actions to be taken	Display Indication	Audible Indication
8	Carry out the necessary actions.		
9	To silence all alarms, press the red <i>Silence</i> button. 		All Fire Alarm Devices (FAD) are deactivated.
<i>Comments:</i> The red <i>Alarm</i> indicator goes steady. To <i>manually</i> resound the alarm zones at this stage, press and hold down the Silence button at least 5 seconds. Configurable: A timer begins to count down. The alarm zones can be <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 operation mode.			
10	Press the green <i>Reset</i> button. 		All audible indicators on all panels in the system are turned off.
If no points are signalling an alarm, the system is reset and the display will return to its idle state.			
<i>Comments:</i> The red <i>Alarm</i> indicator goes off. The red <i>Remote Call</i> indicator goes off (if a FARE output is configured and applied).			

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).



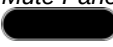
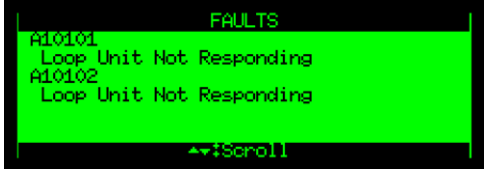
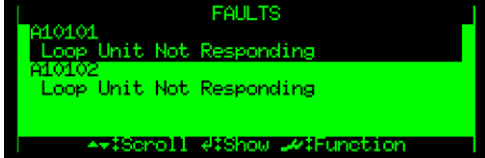
The yellow Fault indicator is pulsing.

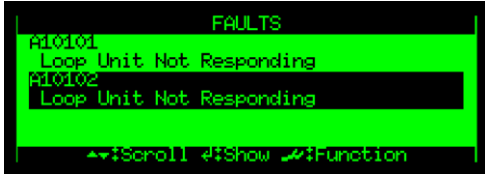
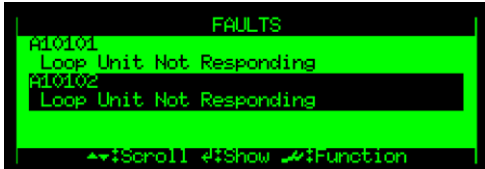
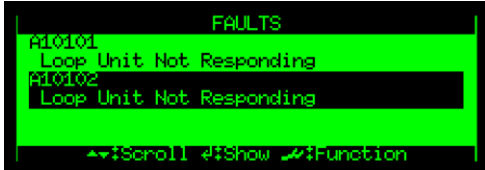
The text display indicates the nature of the fault. By operating the menu, detailed information is available.

Depending on the nature of the fault, and if configured and applied, one or several of the following yellow indicators may be pulsing:

Only the operating buttons that are available and relevant to the current state are backlit.

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 if necessary. 		The internal buzzer on the operator panel is turned on.
<i>Comments:</i> The yellow <i>Fault</i> indicator is pulsing. Depending on the nature of the fault, and if configured and applied, the following indicators will be pulsing; <i>System</i> , <i>Annunciator</i> or <i>Remote Call Fault</i> .			
2	To silence the internal buzzer, press the black <i>Mute Panel</i> button. 		The internal buzzer on the operator panel is turned off.
3	Use the arrow down (/arrow up) button and scroll to observe the points in Fault state I (if several).		

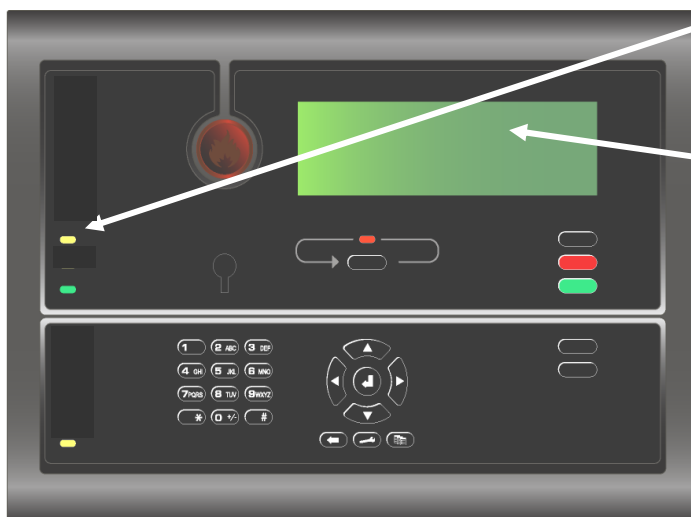
Step	Actions to be taken	Display Indication	Audible Indication
			
	<i>Comments:</i> In this example, a total of 2 points are in Fault state. If you want to view detailed information for each point in Fault state before investigating the scene(s), continue with the next step. If not, go directly to step 6.		
4	To select a point, scroll with the arrow up/down buttons. 		
5	To view detailed information for a selected point, press  then scroll downwards  to see all information.		
	<i>Comments:</i> If you want to view detailed information for another point; move back using the Cancel button , then select another point in step 4, repeat step 5. If not, go directly to the next step. Fault messages provide the following information: 1. A description of the fault. 2. A suggestion on how to solve the problem. 3. The time of event.		
6	Investigate the scene(s) and carry out the necessary actions.		
	<i>Comments:</i> Now you may acknowledge either each fault one by one (<i>Acknowledge</i>), or you can acknowledge all faults (<i>Acknowledge All</i>).		
7	To acknowledge the fault(s), move back one level using the  Cancel button		
	<i>Comments:</i> Faults can be acknowledged from the detailed information window as well.		
8	Scroll to select the desired point, press the <i>Function</i> button  then select <i>Acknowledge</i> to acknowledge the selected fault or <i>Acknowledge all</i> to acknowledge all		

Step	Actions to be taken	Display Indication	Audible Indication
	faults.  Press		
<i>Comments:</i> When a fault is acknowledged, an asterisk (*) appears to the left of the acknowledged point. When all faults have been acknowledged, the yellow <i>Fault</i> indicator and all other fault indicators will go steady. When all faults have been repaired, the system can be reset.			
9	Press the green <i>Reset</i> button. 		
<i>Comments:</i> The yellow Fault indicator and all other fault indicators go off, and the panel enters its idle state (if faults have been repaired).			

9. Supervisory

9.1 Indications during Supervisory

The system indicates the activation of an input device, for example, a door control unit.



The Supervisory indicator has a steady yellow light.

The text display indicates the activation of an input device. By operating the menu, detailed information is available.

Only the operating buttons that are available and relevant to the current state are backlit.

9.2 Actions to be Taken during Supervisory

Step	Actions to be taken	Display Indication	Audible Indication
1	Notify service/technical personnel if necessary. 		The internal buzzer on the operator panel is turned on.
<i>Comments:</i> The yellow <i>Supervisory</i> indicator is pulsing.			
2	To silence the internal buzzer, press the black <i>Mute Panel</i> button. 		The internal buzzer on the operator panel is turned off.
<i>Comments:</i> In this example, one point is in a Supervisory state.			
3	Use the arrow down button to scroll downwards 		
4	To view detailed information for the		

Step	Actions to be taken	Display Indication	Audible Indication
	selected point, press  then scroll downwards  to see all information.		
5	Investigate the scene(s) and carry out the necessary actions.		
<i>Comments:</i> Now you may acknowledge the point in Supervisory state (<i>Acknowledge</i>).			
6	To acknowledge the point in Supervisory state, move back one level using the Cancel button 		
<i>Comments:</i> The point in Supervisory state can be acknowledged from the detailed information window as well.			
7	Scroll to select the desired point, press the <i>Function</i> button  then select <i>Acknowledge</i> to acknowledge the selected point.  Press		
<i>Comments:</i> When the point is acknowledged, an asterisk appears to the left of the point. The yellow <i>Supervisory</i> indicator will go steady. The system can now be reset.			
8	Press the green <i>Reset</i> button. 		
<i>Comments:</i> The yellow Supervisory indicator goes off, and the panel enters its idle state.			

10. Menu Mode

10.1 Menu Structure

The Menu Structure is accessed when entering Menu Mode. The Menu Structure for Autroprime Interactive Fire Detection System (including all access levels) is found in Appendix.

10.2 How to Enter Menu Mode



NOTE:
The *Silence* button and the *Reset* button can be operated both in Menu Mode and in Operation Mode.

- To enter the *Menu Mode* from operation mode or the panel's idle state, press and hold down the Enter button  for a few seconds.

The number and type of menu selections that appear in the display in Menu Mode depends on the current access level (1, 2 or 3).

If the panel is set to access level 1 (no key or password), the following is shown in the display:



If the panel is set to access level 2 (the key is turned clock-wise), six different menu selections are shown in the display, including *System Status*, *Disable*, *Enable*, *Show Unit Properties*, *Report* and *Enter Service Mode*. If the panel is set to access level 3 (Service Mode is entered using a password), the seventh menu selection *Exit Service Mode* is shown in the display.



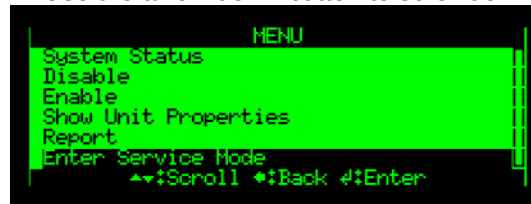
If no button is operated within a preconfigured timeout, the menu will be terminated and the operator panel will re-enter operation mode.

- To manually re-enter operation mode, press and hold down the Enter button  for a few seconds.

10.3 How to Enter Service Mode

Service Mode is entered from the main menu.

- Use the arrow down button to scroll down and select *Enter Service Mode*.

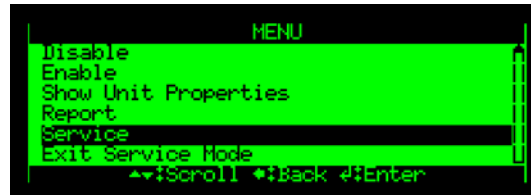


- Press Enter twice, then use the alphanumeric keypad and type the password that has been selected during commissioning (4 characters).



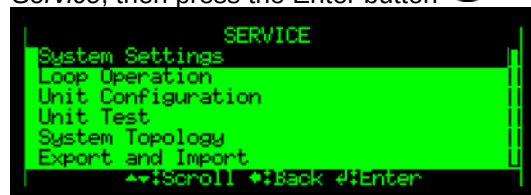
- To accept the password, press Enter once more.

The menu selections *Service* and *Exit Service Mode* now appear in the display.



To enter the *Service* menu, use the arrow down button to scroll down and select

Service, then press the Enter button



11. System Status

11.1 Introduction

NOTE:
Access Level 1
(no key or
password
required).

The System Status menu is accessed from the main menu in *Menu Mode*. The System Status Menu is accessed with access level 1 (no key or password required).

The menu gives the current status of the following conditions:

- Alarms
- Pre Alarms
- Faults
- Disabling
- Tests
- Supervisory
- Activated Outputs/Inputs

11.2 System Status Menu

System Status - Show Alarms - Show Pre Alarms - Show Faults - Show Disabling - Show Tests - Show Supervisory - Show Activated Outputs/Inputs	- Door Control Units - Standard Control Units - Activated Fire Alarm Devices - Other Outputs - Activated Inputs - All Outputs/Inputs by Type - All Outputs/Inputs by Time
---	---

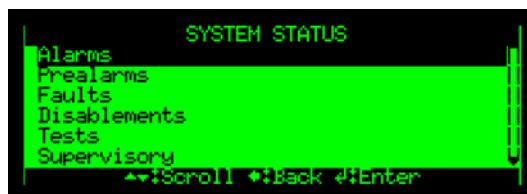
11.3 Example – System Status, Alarms

In this example, we assume that 3 points are in alarm state.

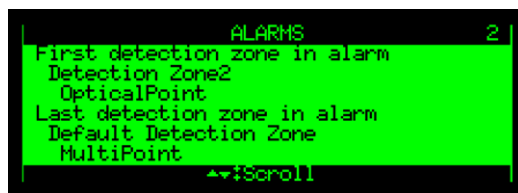
- To enter the *Menu Mode* from operation mode or the panel's idle state, press and hold down the Enter button  for a few seconds.



- To enter the System Status menu, press the Enter button 

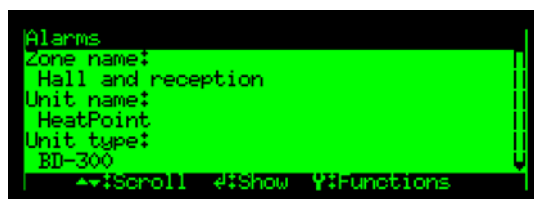


- To select Alarms, press the Enter button 



The total number of detection zones (in this example, 2) in alarm state is shown in the upper right corner of the display.

- Use the arrow down button to scroll down and select a detection zone.
- To view detailed information for a point, press 



- Use the arrow down button to scroll down and view all information.



- To return to Operation Mode, press and hold down the Enter button  for a few seconds.

12. Disabling

12.1 Introduction

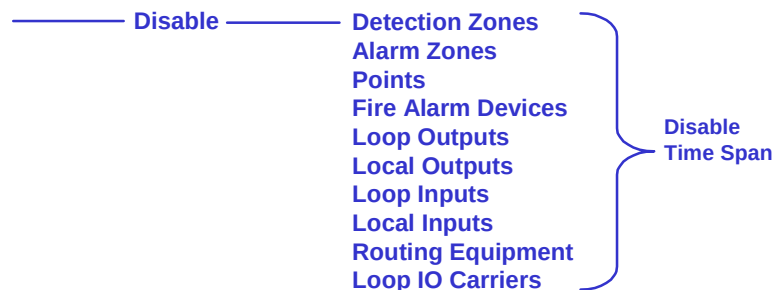
NOTE:
Access Level 2
(access by key).

From the Disable menu you can disable the following:

- Detection Zone
- Alarm Zone
- Point (detectors, manual call points)
- Fire Alarm Device (FAD)
- Loop Outputs
- Local Outputs
- Loop Inputs
- Local Inputs
- Routing Equipment (FARE/FWRE)
- Loop IO Carriers

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

For information on *Disabling Sources*, refer to chapter 3.10.



12.2 Disable Menu

12.3 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.

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

12.5 Disabling Alarm Zones

When you disable an Alarm Zone *all* Fire Alarm Devices (FADs; sounders, bells etc.) within the specified alarm zone will be disabled. An alarm zone will not be indicated as disabled unless *all* Fire Alarm Devices (FADs) within the alarm zone have been disabled.

A *disable time span* can be set. When the *disable time span* expires, the alarm zone will automatically be enabled. The alarm zone can also be enabled manually from the Enable Menu (or disablement window).

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

12.7 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 *disable time span* can be set. When the *disable time span* 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.

12.8 Disabling Outputs (Loop Outputs/Local 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. (Note that local outputs are not necessary related to FPE). You can disable a single output, or several outputs.

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

12.9 Disabling Inputs (Loop Inputs/Local Inputs)

When you disable inputs, the signals from external equipment to the inputs you disable will not be received by the panel/system and no actions will be taken (for example, activation of general alarm or external day/night activation). You can disable a single input or several inputs.

A *disable time span* can be set. When the *disable time span* expires, the signals from external equipment to the inputs will automatically be enabled, i.e. received by the panel/system.

12.10 Disabling Routing Equipment

When you disable Routing Equipment, including *Fire Alarm Routing Equipment* (FARE) and/or *Fault Warning Routing Equipment* (FWRE), the output which controls such equipment will be disabled.

Fire Alarm Routing Equipment (FARE): In the event of an alarm, no fire alarm signals/fault signals will be sent to the fire brigade.

Fault Warning Routing Equipment (FWRE): In the event of a fault, no fault warning signals will be sent to, for example, the security firm.

A *disable time span* can be set. When the *disable time span* expires, the Routing Equipment which is disabled will automatically be enabled. The equipment can also be enabled manually from the Enable Menu.

12.11 Disabling Loop IO Carriers

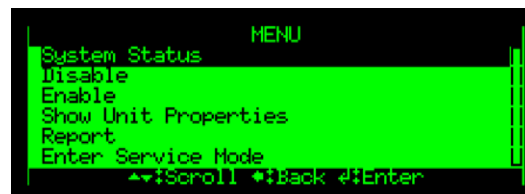
You can disable a single Loop IO Carrier, or all Loop IO Carriers.

A *disable time span* can be set. When the *disable time span* expires, the Loop IO Carriers will automatically be enabled. The single Loop IO Carrier or all Loop IO Carriers can also be enabled manually from the Enable Menu.

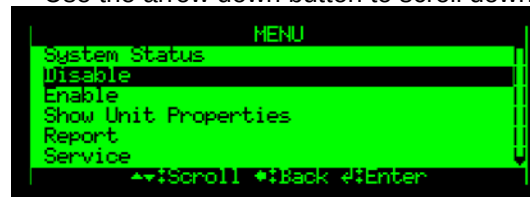
12.12 Example – How to Disable a Detection Zone

The *example* below shows how to disable a *Detection Zone*. The similar procedure applies to all other selections.

- To enter the *Menu Mode* from operation mode or the panel's idle state, press and hold down the Enter button  for a few seconds.



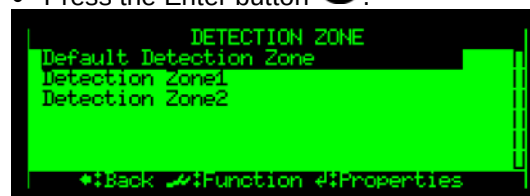
- Use the arrow down button to scroll down and select Disable.



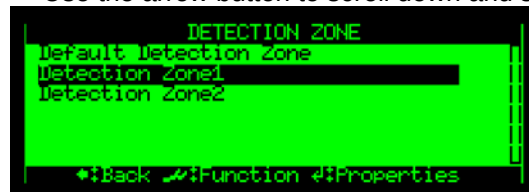
- Press the Enter button .



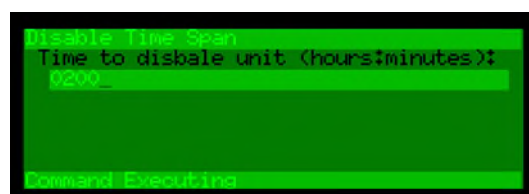
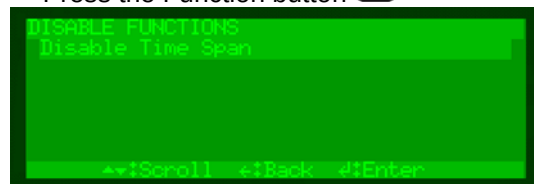
- Press the Enter button .



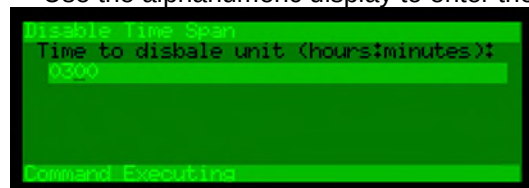
- Use the arrow button to scroll down and select, for example, "Detection Zone1".



- Press the Function button .



- Press the Enter button .
- Use the alphanumeric display to enter the disable time span (hours:minutes).



- To accept the disablement, press the Enter button  twice.

Note that the yellow *Disabled Function* indicator is lit (steady yellow light).

The detection zone and all points within this detection zone are disabled.

After a period of time, the display will enter operation mode. The disabled detection zones are shown in the display.

13. Enabling

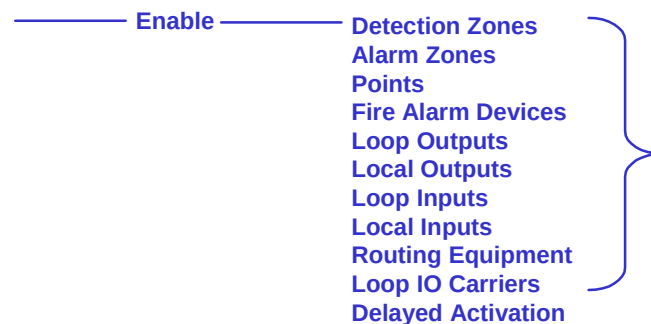
13.1 Introduction

From the Enable menu you can enable the following components:

- Detection Zone
- Alarm Zone
- Point (detectors, manual call points)
- Fire Alarm Device (FAD)
- Loop Outputs
- Local Outputs
- Loop Inputs
- Local Inputs
- Routing Equipment (FARE/FWRE)
- Loop IO Carriers

It is also possible to change the time span for the component.

In addition, it is possible to use the command enable *Delayed Activation*, meaning that you can enable (or disable) all delays that are defined in the system.



13.2 Enable Menu

13.3 Enabling 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).

13.4 Enabling Detection Zones

When you enable a *Detection Zone*, all points within the specified detection zone will be enabled.

13.5 Enabling Alarm Zones

When you enable an *Alarm Zone* all Fire Alarm Devices (FADs; sounders, bells etc.) within the specified alarm zone will be enabled, except for those that are individually disabled as described in the chapter 13.6 “Enabling Points”. An alarm zone will not be indicated as enabled unless *all* Fire Alarm Devices (FADs) within the alarm zone have been enabled.

13.6 Enabling Points

When a *Point* (fire detectors/manual call points) is enabled (manually or when the *disable time span* expires), alarm signals will be sent from this point in the event of an alarm, provided that there is no disable source for the point.

13.7 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 if it is still active.

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

13.8 Enabling Outputs (Loop Outputs/Local Outputs)

When you enable outputs which control *Fire Protection Equipment* (FPE), signals will be sent to trigger the equipment upon the activation of an output (caused by an alarm signal, input signal or output signal). You can enable a single output.

13.9 Enabling Inputs (Loop Inputs/Local Inputs)

When you enable inputs, the signals from external equipment to the inputs you enable will be received by the panel/system and actions will be taken (for example, activation of general alarm or external day/night activation). You can enable a single input or several inputs.

13.10 Enabling Routing Equipment

When you enable *Fire Alarm Routing Equipment* (FARE) and/or *Fault Warning Routing Equipment* (FWRE), the output which controls such equipment will be enabled.

Fire Alarm Routing Equipment (FARE): In the event of an alarm, fire alarm signals may be sent to the fire brigade (configurable).

Fault Warning Routing Equipment (FWRE): In the event of a fault, fault warning signals will be sent to, for example, the security firm.

13.11 Enabling Loop IO Carriers

You can enable a single Loop IO Carrier, or all Loop IO Carriers.

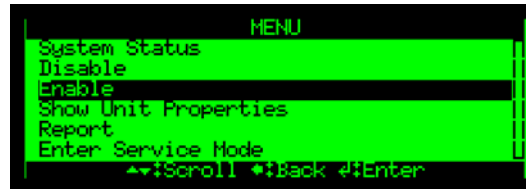
13.12 How to Execute Commands from the Enable Menu

The *example* below shows how to enable a *Detection Zone*. The similar procedure applies to all other selections (except Enable Day Night Mode, see next chapter). Note that points can also be enabled from the Disablement window.

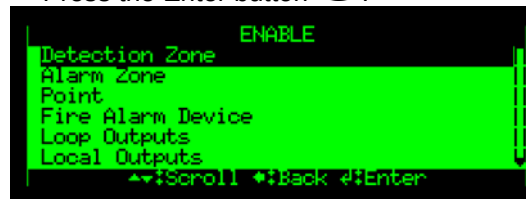
- To enter the *Menu Mode* from operation mode or the panel's idle state, press and hold down the Enter button  for a few seconds.



- Use the arrow down button to scroll down and select Enable.



- Press the Enter button .



- Press the Enter button .
- Only disabled detection zones are shown (if any are disabled).
- Use the arrow button to scroll down and select, for example, "Detection Zone1".
- To mark the selected detection zone, press the Select button .
- Press the Function button .
- Press Enable (you can also change the disable time span).
- To accept, press the Enter button  twice.

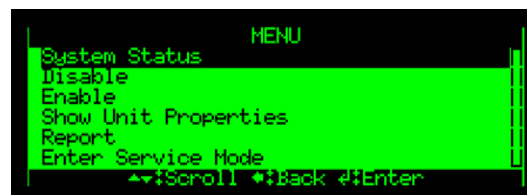
13.13 Enabling Delayed Activation

The command Enable Delayed Activation (YES/NO) allows you to enable or disable all delays that are configured in the system. The default value is NO.

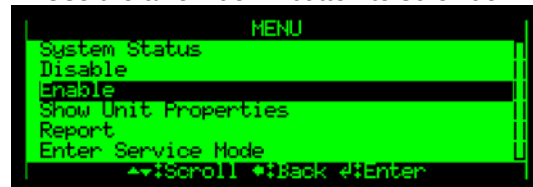
- If Enable Delayed Activation is set to NO, all delays will be disabled (i.e. immediate actioning).
- If Enable Delayed Activation is set to YES, the system will delay the activation of outputs from points (set to "Override Delay and Dependency NO") in detection zones configured as Delayed Action Detection Zones or Delayed Dependency Detection Zones.
- If Day Mode Operation Times are configured or the property for an onboard input is set to Day/Night Mode, the system will automatically change the default value NO to YES when the new configuration is saved and the system is restarted, i.e. all delays will be automatically enabled.
 - o If Enable Delayed Activation is set to NO, all delays will be disabled (i.e. immediate actioning).
 - o If Enable Delayed Activation is set to YES all delays are again enabled and controlled by Day Mode Operation Times or Day/Night inputs.

The *example* below shows how to enable delayed activation.

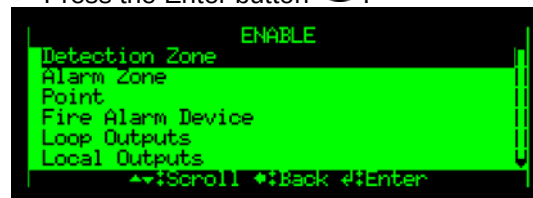
- To enter the *Menu Mode* from operation mode or the panel's idle state, press and hold down the Enter button  for a few seconds.



- Use the arrow down button to scroll down and select Enable.



- Press the Enter button .



- Use the arrow down button to scroll down to Delays.
- Press the Enter button  twice.
- Use the right arrow button to select YES or NO, then press Enter.
- To confirm, press Enter once more.

14. Show Unit Properties

14.1 Introduction

NOTE:
Access Level 2
(access by key).

From the Show Unit Properties menu you can view properties for the following units:

- Detection Zones
- Alarm Zones
- Points (fire detectors, manual call points)
- Fire Alarm Devices (FAD)
- Loop Outputs
- Local Outputs
- Loop Inputs
- Local Inputs
- Loop IO Carriers
- Mimic Panels
- Activation Groups
- External Interfaces
- Detection Loops
- Operator Panels

— Show Unit Properties —

- Detection Zones
- Alarm Zones
- Points
- Fire Alarm Devices
- Loop Outputs
- Local Outputs
- Loop Inputs
- Local Inputs
- Loop IO Carriers
- Mimic Panels
- Activation Groups
- External Interfaces
- Detection Loops
- Operator Panels

14.2 Show Unit Properties Menu

14.3 Detection Zones

Using the Enter button  after selecting a detection zone reveals the following properties:

- name of the detection zone
- alarm organization:
 - Immediate Action Detection Zone
 - Dependency Action Detection Zone
 - Delayed Action Detection Zone
 - Delayed Dependency Detection Zone
 - SOLAS (Safety of Life at Sea) Detection Zone

Using the Function button  after selecting a detection zone gives the following menu selections:

- Show Member Points
- Show Connected Units

14.4 Alarm Zones

The top-level Alarm Zone (default) is called the Parent Alarm Zone. A system consists of a Parent Alarm Zone, usually with several “sub-level” alarm zones in an hierarchy. Each “sub level”-alarm zone is related to a specific area of, for example, a building. If an alarm occurs in a Parent Alarm Zone, all Fire Alarm Devices (FADs) within the Parent Alarm Zone, plus all FADs belonging to all “sub-level”-alarm zones will be activated.

Using the Enter button  after selecting an alarm zone reveals the following properties:

- name of the Alarm Zone

Using the Function button  after selecting an alarm zone gives the following menu selections:

- Show Member Fire Alarm Devices
- Show Neighbour Alarm Zones
- Show Activating Detection Zones

14.5 Points

Using the Enter button  after selecting a point reveals the following properties:

- name of the point
- override Delay and Dependency (YES or NO)
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) and the point(s) in this Delayed Action detection zone has not been set to Override Delay and Dependency, i.e. set to No.
- performance class day setting (Normal 1, Normal 2; Industrial; depending on the type of detector)
- operation class day setting (MultiSensor with heat, MultiSensor only, Heat only)
- performance class night setting (Normal 1, Normal 2; Industrial)
- operation class night setting (MultiSensor with heat, MultiSensor only, Heat only)

Using the Function button  after selecting a point gives the following menu selections:

- Show Connected Units

14.6 Fire Alarm Device

Using the Enter button  after selecting a fire alarm device reveals the following properties:

- Name of the Fire Alarm Device
- Unit function
- Hardware Type

Using the Function button  after selecting a fire alarm device gives the following menu selections:

- Show Connected Units

14.7 Loop Outputs

Using the Enter button  after selecting a loop output reveals the following properties:

- Name
- Unit function

Using the Function button  after selecting a loop output gives the following menu selections::

Not applicable to Fire Alarm Devices, Fire Alarm Routing Equipment and Fault Warning Routing Equipment:

- Show Activating Detection Zones
- Show Activating Points
- Show Activating Inputs
- Show (activating) Activation Groups
- Show Activaing Outputs

Not applicable to Fire Alarm Routing Equipment and Fault Warning Routing Equipment:

- Show Connected Units

14.8 Local Outputs

Using the Enter button  after selecting a local output reveals the following properties:

- Name
- Unit function
 - o Fire Alarm Device (FAD)
 - o Fire Alarm Routing Equipment (FARE)
 - o Fault Warning Routing Equipment (FWRE)
 - o Disable Out
 - o General Output
 - o RESET Out
 - o Silent Alarm Output
 - o Silence Out
 - o Small Alarm Output

Using the Function button  after selecting a local output gives the following menu selections (note that the menu selections are not applicable to all outputs):

Not applicable to Fire Alarm Devices, Fire Alarm Routing Equipment and Fault Warning Routing Equipment:

- Show Activating Detection Zones
- Show Activating Points
- Show Activating Inputs
- Show (activating) Activation Groups
- Show Activating Outputs

Not applicable to Fire Alarm Routing Equipment and Fault Warning Routing Equipment:

- Show Connected Units

14.9 Loop Inputs

Using the Enter button  after selecting a loop input reveals the following properties:

- Name
- Unit function

Using the Function button  after selecting a loop input gives the following menu selections:

- Show Connected Units

14.10 Local Inputs

Using the Enter button  after selecting a local input reveals the following properties:

- Name
- Unit function
 - Day/Night Input
 - User Configurable Input
 - Morse Input
 - Mute FAD Input
 - Reset in Input
 - Silence in Input
 - FARE Feedback
 - Activate All Alarms
 - FWRE (only monitored inputs if disconnected from output)
- Supervisory (Yes/No)
- Supervisory Text (for some inputs)

Using the Function button  after selecting a local input gives the following menu selections:

- Show Connected Units

14.11 Loop IO Carriers

Using the Enter button  after selecting a Loop IO Carrier reveals the following properties:

- Name
- Function/switch
- Unit function
- Production number
- Hardware type

Using the Function button  after selecting a local input gives the following menu selections:

- Show All Carrier Units
- Show Carrier Points
- Show Carrier Inputs
- Show Carrier Outputs

14.12 Mimic Panels

Using the Enter button  after selecting a mimic panel (if any) reveals the following properties:

- Name
- Panel Type

Using the Function button  after selecting a unit gives the following menu selections:

- Show Mimic Boards
- Show Mimic Inputs
- Show Mimic Outputs

14.13 Activation Groups

Points and general outputs can be assigned to Activation Groups (configurable). An Activation Group can be configured to trigger an output in the event of an alarm. An output unit connected to this output will then initiate a signal to activate external equipment, as for example, doors, sprinkler systems, ventilation valves, horns and fire lights.

Using the Enter button  after selecting an activation group reveals the following properties:

- The name of the local output
- Activate group on Unit State:
meaning which alarm level the points within this activation group will react to (pre-alarm or alarm).
- Activation Group Dependency:
meaning how many points within this activation group that must be in alarm state before actions are initiated (1-5 and All).

Using the Function button  after selecting an activation group gives the following menu selections:

- Show Member Points
- Show Connected Units

14.14 External Interfaces

External Interfaces include the following:

- Serial Port Settings
- IP Address Settings (Ethernet)
- ESPA
- MODBUS
- VDR (Voyage Data Recorder)
- Show Remote Access

14.14.1 Serial Port Settings

Using the Enter button  after selecting serial port settings reveals the following properties:

- bits per second
- word length
- parity
- stop bits
- hardware interface (RS-232, etc.)

14.14.2 IP Address Settings (Ethernet)

Using the Enter button  after selecting IP Address Settings reveals the following properties:

- own IP address
- gateway IP address
- subnet mask

14.14.3 ESPA Interface Settings

Using the Enter button  after selecting ESPA interface settings reveals the following properties:

Show Settings

- name
- port (not in use, serial or TCP/IP)
- port number
- restore factory settings or not (No/Yes)
- display size (default 128), then press Enter.
- line length (default 12)
- alphabet type (7 bits, 8 bits, or GSM)
- fault detail (Yes/No)
- startup message

Show Events

- alarm
- pre-alarm
- fault
- supervisory
- startup
- test

Show Receivers

- user name
- receiver number
- show (events)

14.14.4 MODBUS Interface Settings

Using the Enter button  after selecting MODBUS interface settings reveals the following properties:

Show Settings

- name
- port (not in use, serial or TCP/IP)
- TCP/IP address
- port number
- mode (slave or master)
- restore factory settings or not (Yes/No)
- slave address (default 128)
- slave ID (default 12)
- Handshake (Yes/No)
- Report Fault (Yes/No)
- Fault Timer (default 10 seconds)

Show Status Registers

- start address
- number of registers

Show Command Registers

- start address

14.14.5 Voyage Data Recorder (VDR)

Using the Enter button  after selecting Voyage Data Recorder settings reveals the following properties:

- name
- port (not in use, serial or TCP/IP)
- port number (default 0)
- restore factory settings or not (Yes/No)
- log volume mini (Yes/No)
- active time (default 4 minutes),
determines how often a message is sent to the VDR to ensure that there is a proper communication between the system and the VDR.
- update time (default 120 minutes),
determines how often the VDR receives a full update of all fires and fault statuses.

14.14.6 Show Remote Access

Using the Enter button  after selecting Show Remote Access gives the following alternatives:

- Show Server and Web Access
- Show User Management
- Show Clients
- Show Client Proxy Server

14.15 Detection Loops

Using the Enter button  after selecting a detection loop reveals the following properties:

- name
- limit for maximum loop current
- measured loop current
- loop resistance –wire
- loop resistance +wire

14.16 Operator Panels

Using the Enter button  after selecting an operator panel reveals the following properties:

- name
- panel type

15. Report

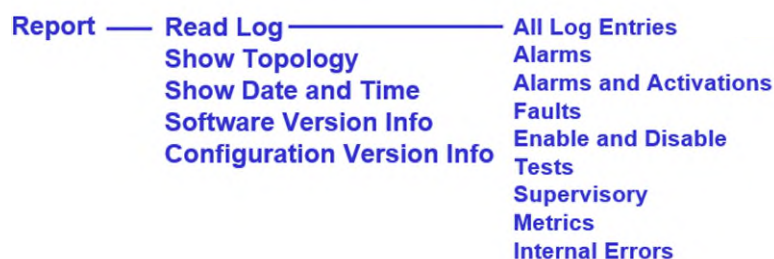
15.1 Introduction

NOTE:
Access Level 2
(access by key).

The Report menu provides the following submenus:

- Read Log
- Show Topology
- Show Date and Time
- Software Version Information
- Configuration Version Information

15.2 Report Menu



15.3 Read Log

To be able to analyse system behaviour for service and maintenance purposes, a number of events are recorded and can be viewed from the Read Log menu, including:

- All Log Entries
- Alarms
- Alarms and Activation
- Faults
- Enable and Disable
- Tests
- Metrics
- Supervisory
- Internal Errors

Most of the events are self-explanatory, except for Metrics which is described in the example in the next chapter 15.3.1.

15.3.1 Metrics

The Metrics log contains the following metrics:

1

Each time the system starts, a «metrics» log entry is created per loop providing the number of loops of different types, for example:

<Class = Metrics: Reason = Loop Units: Info = Loop_1: Phys = 127, Cpu = 0, Csu = 0, Psv = 59, Pnosv = 48, Inp = 6, Out = 6, Fad = 8>

Loop_1:	Metrics for Loop 1
phys = 127	means 127 physical loop units
Cpu = 0	means 0 Carrier Physical Units (BN-303/304/305)
Csu = 0	means 0 Units of Carrier Logical Units (BN-303/304/305)
Psv = 59	means 59 units of the type (alarm provider) supporting SV (self verify)
Pnosv = 48	means 48 units of the type (alarm provider) that do not have SV (self verify)
Inp = 6	Means 6 units of type Input
Out = 6	Means 6 Output types
Fad = 8	Means 8 units of FAD type

2

Each time a Self Verify is carried out (10 min after startup, + daily at 10 am)

<Class = Metrics: Reason = SV Result: Info =
 [Loop1 Exe = 2: Pnosv = 48, Psv = 59 / Ok = 59 To = 0 Rej = 0 Dis = 0]
 [Loop2 Exe = 2: Pnosv = 49, Psv = 58 / Ok = 58 To = 0 Rej = 0 Dis = 0]

Exe = 2	means Run No. 2 of SV test
Pnosv = 48	means 48 units of the type (alarm provider) that do not have SV (self verify)
Psv = 59	means 59 units of the type (alarm provider) supporting SV (self verify)
Ok = 59	means that 59 Points had status OK on SV test
To = 0	means that 0 Points had status timeout (timeout, error message) on SV test
Rej = 0	means that 0 Points had Status Rejected on SV test
Dis = 0	means that 0 Points had Status Disabled (now switched) now SV test was run

15.4 Show Topology

This menu provides detailed information on the topology of the panel bus and a selected loop.

From the Service Menu, perform the following:

- Use the arrow down button to scroll downwards to System Topology, then press Enter.
A list appears, including all loops and the panel bus.
- Use the arrow button to select the panel bus or the loop you want to view.
- Press the Function button 
- Select Show Topology (the uppermost selection), then press Enter.

The topology details, including Position, Type and Info, will appear in the display. It is possible to toggle between the tagname and the production number by using the left and right arrow buttons.

15.5 Show Date and Time

The following is shown:

- current time
- current date

15.6 Software Version Information

The system software version is shown.

15.7 Configuration Version Information

The following is shown:

- site name
- site configuration version
- date
- operator name
- description
- XML format version

16. Service Commands

16.1 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.

16.2 Service Menu

The Service Menu includes a great number of submenus, allowing you to do the entire configuration and service of the Autoprime Interactive Fire Detection System.

This handbook deals with the testing of:

- Detection Zones
- Alarm Zones
- Fire Alarm Devices
- Loop Outputs
- Local Outputs
- Mimic Panels (BUR-200) - if used

For information on the configuration of the Autoprime Interactive Fire Detection System, refer to the *Configuration Handbook*.

16.3 Testing Detection Zones

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), selected *detection zones*, can be set in *test mode*. In this mode, *any* point connected to the selected detection zone(s) can be tested individually (with, for example, test gas) without automatic actioning (i.e. without audible indication) from sounders, bells, etc.

From the Service Menu, perform the following:

- Use the arrow down button to scroll downwards to Unit Test, then press Enter.
- Press Enter once more.
- Use the arrow button to select the detection zone that is to be tested. Use, if necessary, the multiselect feature to select several detection zones.
- Press the Function button .
- To start the test, press Enter.
- Press Enter once more to confirm.

- Reset all alarms BEFORE stopping the test.

- To stop the test, use the arrow button to select Stop Test, then press Enter twice.

16.4 Testing Alarm Zones

This manual test activates all Fire Alarm Devices (FADs) in a selected alarm zone (with audible indication).

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.

From the Service Menu, perform the following:

- Use the arrow down button to scroll downwards to Unit Test, then press Enter.
- Scroll down to Alarm Zone.
- Press Enter once more.
- Use the arrow button to select the Alarm Zone that is to be tested. Use, if necessary, the multiselect feature to select several alarm zones.
- Press the Function button .
- To start the test, press Enter.
- Press Enter once more to confirm.

- To stop the test, use the arrow button to select Stop Test, then press Enter twice.

16.5 Testing Fire Alarm Devices

This chapter describes how to test each Fire Alarm Device (FAD) individually.

When the test is initiated for a selected Fire Alarm Device (FAD), a test signal will be sent to the FAD.

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.

From the Service Menu, perform the following:

- Use the arrow down button to scroll downwards to Unit Test, then press Enter.
- Press Enter once more.
- Use the arrow button to select the Fire Alarm Device (FAD) that is to be tested. Use, if necessary, the multiselect feature to select several Fire Alarm Devices.
- Press the Function button .
- To start the test, press Enter.
- Press Enter once more to confirm.

- To stop the test, use the arrow button to select Stop Test, then press Enter twice.

16.6 Testing Loop Outputs

This chapter describes how to test each Loop Outputs individually. When the test is initiated for a selected loop output, a test signal will be sent to this output.

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.

From the Service Menu, perform the following:

- Use the arrow down button to scroll downwards to Unit Test, then press Enter.
 - Press Enter once more.
 - Use the arrow button to select the Loop Output that is to be tested. Use, if necessary, the multiselect feature to select several loop outputs.
 - Press the Function button 
 - To start the test, press Enter.
 - Press Enter once more to confirm.
-
- To stop the test, use the arrow button to select Stop Test, then press Enter twice.

16.7 Local Outputs

This chapter describes how to test each Local Output individually. When the test is initiated for a selected local output, a test signal will be sent to this output.

NOTE:

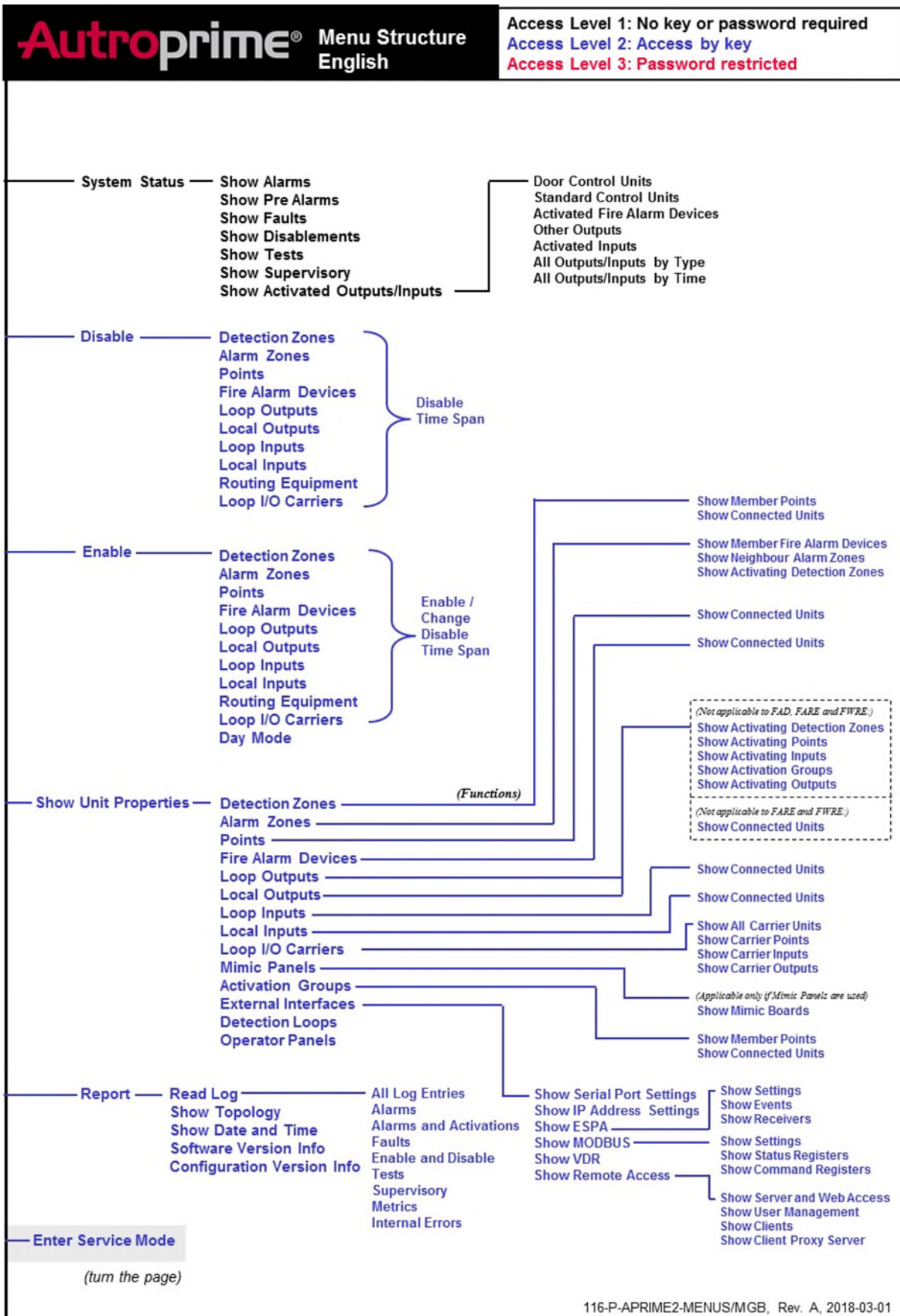
Before this test is performed, make sure that all extinguishers (or other similar equipment) that are to be tested are *disconnected*. During the test, use a measuring instrument to measure the output on the Fire Protection Equipment that is to be tested.

From the Service Menu, perform the following:

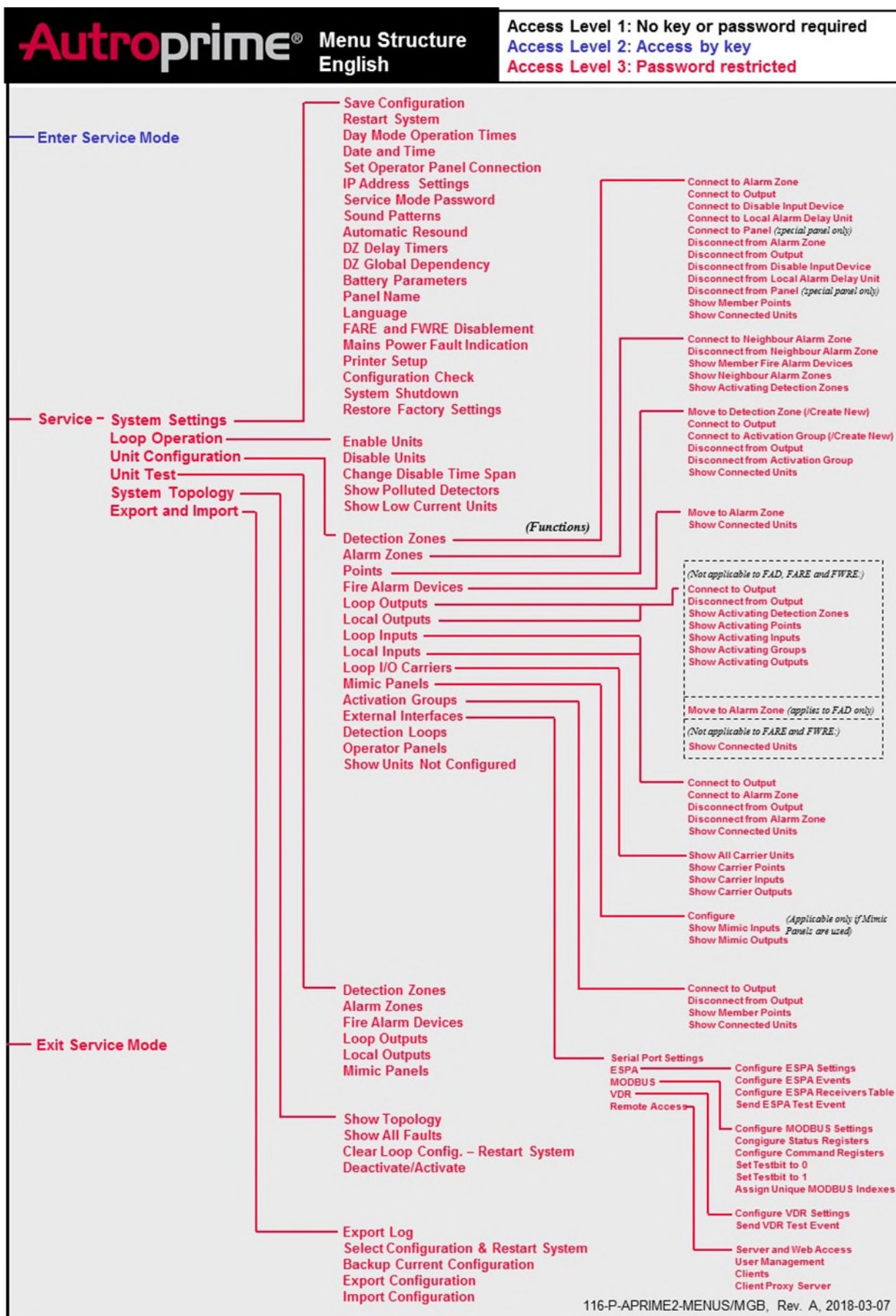
- Use the arrow down button to scroll downwards to Unit Test, then press Enter.
 - Press Enter once more.
 - Use the arrow button to select the Local Output that is to be tested. Use, if necessary, the multiselect feature to select several local outputs.
 - Press the Function button .
 - To start the test, press Enter.
 - Press Enter once more to confirm.
-
- To stop the test, use the arrow button to select Stop Test, then press Enter twice.

17. Appendix

17.1 Menu Structure



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