



Fire Alarm Control Panel AFP-3030

Operations Manual New Zealand Edition

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Installation Precautions

Adherence to the following will aid in problem-free installation with long-term reliability:

WARNING - Several different sources of power can be connected to the fire alarm control panel. Disconnect all sources of power before servicing. Control unit and associated equipment may be damaged by removing and/or inserting cards, modules, or interconnecting cables while the unit is energized. Do not attempt to install, service, or operate this unit until manuals are read and understood.

Verify that wire sizes are adequate for all initiating and indicating device loops. Most devices cannot tolerate more than a 10% voltage drop from the specified device voltage.

Like all solid state electronic devices, this system may operate erratically or can be damaged when subjected to lightning induced transients. Although no system is completely immune from lightning transients and interference, proper grounding will reduce susceptibility. Overhead or outside aerial wiring is not recommended, due to an increased susceptibility to nearby lightning strikes. Consult with the Technical Support Department if any problems are anticipated or encountered.

Disconnect AC power and batteries prior to removing or inserting circuit boards. Failure to do so can damage circuits.

Remove all electronic assemblies prior to any drilling, filing, reaming, or punching of the enclosure. When possible, make all cable entries from the sides or rear. Before making modifications, verify that they will not interfere with battery, transformer, or printed circuit board location.

Do not tighten screw terminals. Over-tightening may damage threads, resulting in reduced terminal contact pressure and difficulty with screw terminal removal.

This system contains static-sensitive components. Always ground yourself with a proper wrist strap before handling any circuits so that static charges are removed from the body. Use static suppressive packaging to protect electronic assemblies removed from the unit.

Follow the instructions in the installation, operating, and programming manuals. These instructions must be followed to avoid damage to the control panel and associated equipment. FACP operation and reliability depend upon proper installation.

The equipment must be correctly programmed and installed to suit the specific application. Please ensure correct operational parameters are set prior to commissioning. If further details on programming options are required, please consult the programming manual or contact our helpful technical support personnel.

EMC Warning:

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Electromagnetic Interference (EMI) tests are performed in accordance with Class A requirements of AS/NZS CISPR 22:2009

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Section 1: General Information

1.1 Related Documents

The table below provides a list of documents referenced in this manual, as well as documents for selected other compatible devices.

Off-line Programming Utility	Document Number
VeriFire Tools Programming Utilities	Available for download: www.notifier.com.au
Fire Alarm Control Panel (FACP) and Main Power Supply Installation	Document Number
AFP-3030 Installation, Programming, and Operations Manuals (NZ)	DOC-01-037 DOC-01-038 DOC-01-039
NPS (Notifier Power Supply) Installation Sheet	DOC-03-057
Battery Connection Installation Kit	DOC-03-046
Networking	Document Number
Noti•Fire•Net Version 5.0 & Higher Manual	51584
High-Speed Notifier Network Manual	54013
HS-NCM Installation Document	54014
System Components	Document Number
SGD Interface Board Installation Sheet	DOC-03-067
Zone Mimic Manual	DOC-01-028
ACM-8RA Installation Sheet	DOC-03-052
Intrinsically Safe Barrier Manual	DOC-01-029
Annunciator Name Plate Installation Sheet	DOC-03-060
Extinguishing Agent release Module Manual	DOC-01-005
DA Series BOWS Manual	DOC-01-004
DVC Digital Voice Command Manual	52411
DVC-RPU Manual	50107425-001
DAA2 and DAX Amplifiers Manual	53265
DAL Devices Reference Document	52410
Mass Notification Systems Configuration, Programming and Operations Manual	LS10063-000NF-E
Annunciator Control System Manual	15842
LCD2-80 Manual	53242
LDM Series Lamp Driver Annunciator Manual	15885
SCS Smoke Control Manual (Smoke and HVAC Control Station) Manual	15712
First Command Manual	LS1001-001NF-E
XP10-M Ten Input Monitor Module Installation Document	I56-1803
XP6-C Supervised Control Module Installation Document	I56-1805
XP6-MA Six Zone Interface Module Installation Document	I56-1806
XP6-R Six Relay Control Module Installation Document	I56-1804
FSA-8000 FAAST Intelligent Aspiration Sensing Technology Document	I56-3903
SLC-IM Manual	LS10026-000NF-E

Table 1.1 Related Documents

1.2 About This Manual

The following graphics appear in the manual to indicate a caution, a warning, or a note.



CAUTION:
INFORMATION ABOUT PROCEDURES THAT COULD CAUSE PROGRAMMING ERRORS, RUNTIME ERRORS, OR EQUIPMENT DAMAGE.



WARNING:
INFORMATION ABOUT PROCEDURES THAT COULD CAUSE IRREVERSIBLE DAMAGE TO THE CONTROL PANEL, IRREVERSIBLE LOSS OF PROGRAMMING DATA OR PERSONAL INJURY.



NOTE: Information that highlights an important part of the preceding or subsequent text or illustration.

1.3 Introduction to the Control Panel

The AFP-3030 is an intelligent Fire Alarm Control Panel (FACP) with features suitable for most applications.

There are two basic configuration options for the AFP-3030.

With Display

In this configuration, the panel comes fitted with a front display/keypad, which allows programming and viewing options at the panel. This manual gives operating instructions using the front display/keypad.

Displayless Mode

In Displayless Mode, no keypad/display is fitted at the panel, and it is controlled by remote annunciators. VeriFire™ Tools programming is required. Refer to VeriFire™ Tools for information on programming without an AFP-3030 display/keypad. A PC is required when using VeriFire™ Tools.

1.4 Operating Features

- Alarm Verification selection, to reduce unwanted alarms
- Output Delay Time
- Silence Inhibit timer and Auto Silence timer for Notification Appliance Circuits (NACs)
- Programmable Signal Silence, System Reset, and Alarm Activate functions through monitor modules
- Automatic time-of-day and day-of-week control functions, with holiday option
- Intelligent Sensing with nine field-adjustable Pre-Alarm levels with programmable Control-By-Event (CBE)
- Operate automatic smoke or heat detector sounder/relay base on action Pre-Alarm level, with general evacuation on alarm level
- Centralized voice paging and audible alarm signalling options
- Programmable Control-By-Event control of outputs from individual alarm or supervisory addressable devices
- Networks with other FACP's and equipment for large applications
- Automatic detector sensitivity adjustments based on programmable building occupancy schedules
- Compatible with Mass Notification Systems

1.4.1 The Display/Keypad

The display/keypad provides an easy-to-use keypad and large LCD (liquid crystal display) that simplifies the programming process.

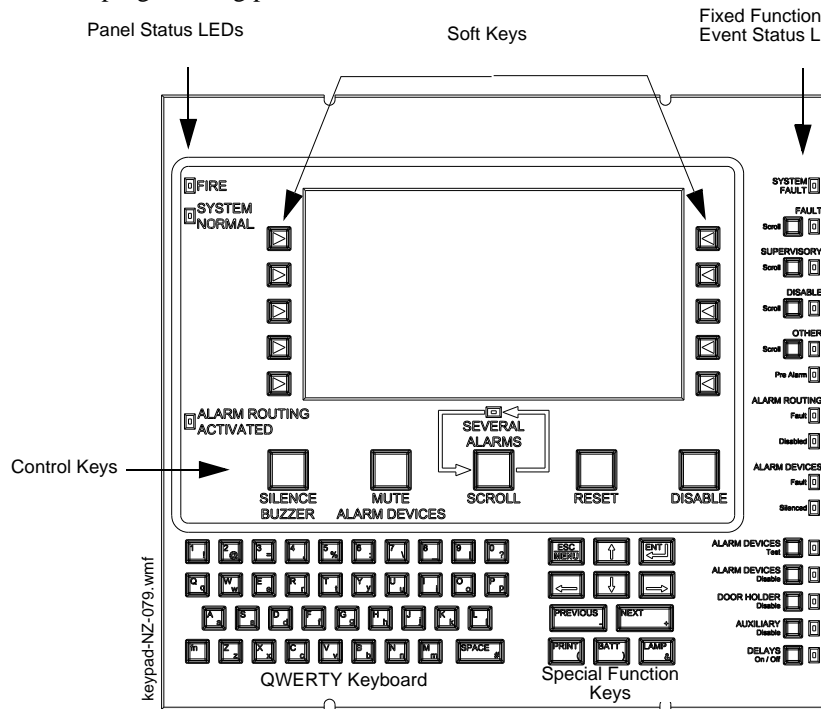


Figure 1.1 The Display/Keypad

The Liquid Crystal Display

The display is 40 characters wide by 16 lines. It displays all programming screens, as well as events, history, device and other information.

Fields may be entered or changed and commands may be issued on the display using the keypad.

The Keypad

The keypad has several types of keys, described below.

The keypad consists of several types of keys: alphanumeric, control keys, soft keys, and fixed function keys.

■ Keypad

The alphanumeric portion of the keypad is in standard QWERTY format. This keypad is functional mainly when an entry is requested by the system. Otherwise, pressing these keys results in no entry.

■ Soft Keys

The ten keys to the left and right of the display function to select commands that appear on the display. Each screen has different information, and each key changes function to suit the screen. Beneath each screen in this manual is a description of the function of each soft key.

■ Fixed Function Keys

The nine keys aligned along the upper right edge of the keypad/display are fixed function keys.

- FAULT SCROLL
- SUPERVISORY SCROLL
- DISABLE SCROLL
- OTHER SCROLL

Event Keys: Scroll through a list of events of these types, each of which will appear on the display once the associated button is pushed. The **OTHER EVENT SCROLL** key also scrolls through CO Alarm and Prealarm events.

ALARM DEVICES TEST - Press

this key to place all devices designated as Alarm Devices into test mode. When alarm devices are placed in test, the fire panel will display, "Starting Alarm Devices Test", the LED next to the Alarm

Devices Test key will illuminate, and Special Function Zone 7 will activate. When in test, all devices designated as Alarm Devices will either be forced on or set back to automatic. Pressing the Alarm Devices Test key again will display, “Stopping Alarm Devices Test” on the fire panel, return the Alarm Devices to their original state prior to the test, turn off the Alarm Test LED, and deactivate Special Function Zone 7.

ALARM DEVICES DISABLE - Press this key to disable all devices designated as Alarm Devices. When disabled, the Alarm Devices Disable LED will illuminate, the LED next to the Alarm Devices Disable button will illuminate, and Special Function Zone 25 will activate. When disabled, the alarm devices will not report alarm conditions to the fire panel. Pressing the Alarm Devices Disable key a second time will re-enable the devices, turn off the Alarm Devices Disable LED, and de-activate Special Function Zone 25.

DOOR HOLDER DISABLE - Press this key to disable all devices designated as door holders on the fire panel. Pressing this key a second time will re-enable the devices.

AUXILIARY DISABLE - Press this key to disable devices designated as auxiliary devices. Pressing this key a second time will re-enable the devices.

DELAYS ON/OFF - Press this key to turn on or off the delay output activations.

■ Control Keys

The five keys aligned above the QWERTY keypad, just below the LCD display, are Control function keys.

SILENCE BUZZER - Press this key to acknowledge all events on the panel and silence the panel buzzer.

MUTE ALARM DEVICES - Press this key to mute all silenceable outputs. Pressing the button a second time will not resound the outputs.

SEVERAL ALARMS - SCROLL - Press this key scroll through the events on the LCD display.

RESET - Press this key to perform a system reset. This will clear all latched alarms and other events as well as turn off event LEDs. If alarms or other off-normal events exist after reset, they will resound the system and relight the LEDs. Unacknowledged events will not prevent reset from functioning unless the panel is programmed for Receive Mode. The SYSTEM RESET key will not function if the programmable Silence Inhibit Timer is running.

The System Reset key will not immediately silence active outputs. If the Control-by-event programming conditions for the output are not met after reset, the output will deactivate. (Typically 30 seconds local, 60 seconds network.)

If both Fire and Mass Notification events exist on the fire panel at the same time, a second System Reset will need to be performed to reset the fire panel. The AFP-3030 will display MN SYSTEM RESET or FIRE SYSTEM RESET, depending on which event has priority. For information regarding event priority, refer to the *AFP-3030 Programming Manual*.

DISABLE - Press this key to disable the device listed on the screen.

If a fire alarm is present on the fire panel, the panel must be silenced before the device can be disabled.

When the panel is displaying the Alarm Screen and Disable is pressed, all active alarms will be disabled.

Pressing disable on an event screen will disable the device displayed on the screen or re-enable the device if previously disabled.

■ Special Function Keys

To the right of the QWERTY keypad are special function keys.

Arrow Keys - Pressing these keys navigates through the programming fields on a display screen by advancing or reversing the cursor position.

ESC/MENU - Press this key once to return to the previous screen when pressed in the programming menu. When not in programming, press this key to access the main menu.

ENT - Pressing this key acts as an alternative Accept button when navigating programming menus.

NEXT/PREVIOUS - Use these keys to scroll through the list of possibilities in a data field on the display screen.

PRINT - Press this key to print what is displayed on the display screen.

BATT - Press this key to display power supply battery levels on the display screen.

LAMP - Press this key to test the LED indicators on the keypad and the piezo. Pressing the key longer than 5 seconds will display firmware version numbers on the display screen.

■ LED Indicators

There are nineteen labelled LEDs on the keypad. They light to annunciate certain conditions, as described in Table 1.2 below.

LED INDICATOR	COLOR	FUNCTION
Fire	Red	Illuminates when there are fire events in the system.
System Normal	Green	Illuminates when system power is on and the system is functioning as expected. Not illuminated when: -Main Power Supply is too low -Backup battery supply is too low -Panel has a CRC Fault on firmware or database -Loses communication with another node (when in Network Display Mode) -Loses communication with the LCM -Loses communication with the ACM-PSI
Alarm Routing Equipment Act.	Red	Illuminates when the A.R.E. Alarm Routing Output is active.
Several Alarms	Red	Illuminates when more than one fire event is present on the panel.
System Fault	Yellow	Illuminates when at least one system fault exists on the fire panel.
Fault	Yellow	Illuminates when at least one fault event exists on the fire panel.
Disable	Yellow	Illuminates when at least one device on the fire panel is disabled.
Supervisory	Yellow	Illuminates when at least one supervisory event is present on the fire panel.
Alarm Routing Fault	Yellow	Illuminates when there are any device or system trouble event is present on the A.R.E. Alarm Routing Equipment
Alarm Routing Disabled	Yellow	Illuminates when at least one device or zone on the A.R.E. Alarm Routing Equipment is disabled.
Alarm Devices Silenced	Yellow	Illuminates when devices programmed as Alarm Devices are silenced.
Alarm Devices Fault	Yellow	Illuminates when any devices designated as Alarm Devices are in fault, including communication loss with the Alarm Devices or the LCM that has programming containing Alarm Devices.
Alarm Devices Test	Yellow	Illuminates when Alarm Devices are activated due to pressing the Alarm Devices Test button.
Alarm Devices Disable	Yellow	Illuminates when Alarm Devices are disabled due to pressing the Alarm Devices Disable button. Note: This LED will not illuminate if the Alarm Devices are disabled via the menus or the network.
Door Holder Disable	Yellow	Illuminates when the Door Holder devices are disabled via the Door Holder Disable button. This LED will remain lit until the Door Holder Disable button is pressed a second time to re-enable the devices.
Auxiliary Disable	Yellow	Illuminates when the Auxiliary Devices are disabled via the Auxiliary Device Disable button. This LED will remain lit until the Auxiliary Disable Button is pressed a second time to re-enable the devices.
Delays On/Off	Yellow	Illuminates when the Outputs are delayed via the Delays - On/Off button.

Table 1.2 LED Indicators (1 of 2)

LED INDICATOR	COLOR	FUNCTION
Other	Yellow	Illuminate when at least one other fault event is present on the panel.
Pre Alarm	Yellow	Illuminate when at least one prealarm event is present on the panel.

Table 1.2 LED Indicators (2 of 2)

1.5 Message Formats

This section describes the formats for system normal, device events and system events screens. For a definition of these types of events, as well as instructions for dealing with them, refer to Section 2, “Operation of the Control Panel” in this manual.

1.5.1 System Normal Screen

The System Normal message appears at the top of the display when no off-normal events exist. It consists of two lines, each 40 characters long. Line one is a custom network message. Line 2 is a standard message giving the System Normal message. The Main Menu is selectable using the lower right soft key.

Line 4 indicates the current time and date.

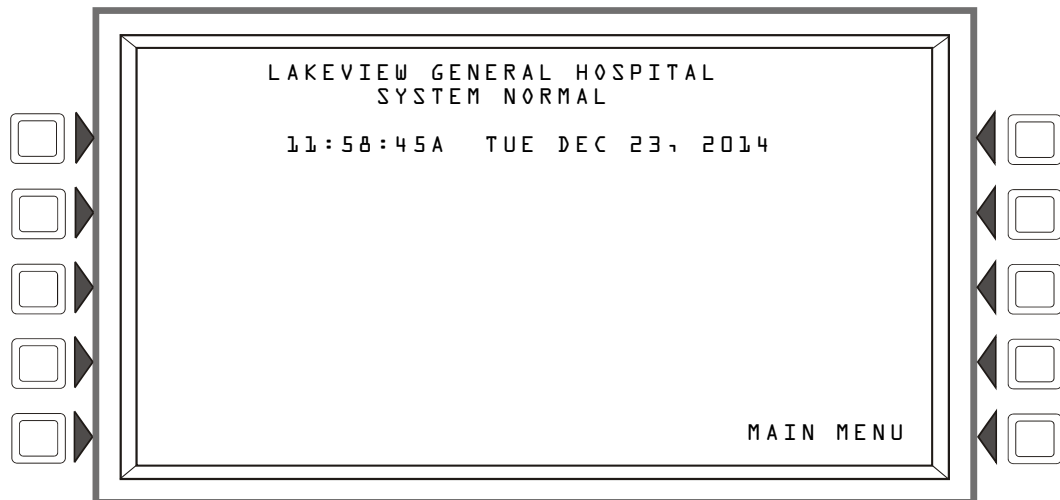


Figure 1.2 System Normal Screen

A custom graphic may be displayed below the system normal message: the graphic must be entered using VeriFire® Tools. The text “Main Menu” will overlay the graphic, if it extends into the last line of the display.

1.5.2 Event Reporting Format

The message formats used for event reporting appear at the top of the display, replacing the System Normal message. There are two basic types of message formats: point event formats, which are generated from changes in the state of SLC and panel devices, and system event formats, which are generated from system errors and faults.

Point Events Format

When a change of state occurs to an SLC or panel point device, a message is generated to the panel that displays on the top of the LCD screen, and soft keys display available functions that may be used to handle the event. The top four lines contain the event and point information. Event counts display in the next three lines, the current time and soft key information appears after the event counts.

The format of the first line will vary slightly as follows, depending on the type of event.:

Event Format (not fault or prealarm)	Line 1 Displays the type of event, and whether it has been acknowledged or cleared.	→	FIRE ALARM Z001: ZONE Z001 MONITOR Module L01M001 11:58:45A TUE DEC 23, 2014 L01M001
--------------------------------------	----------------------------------------------------------------------------------------	---	-----------------------------------------------------------------------------------------------

Event Format (fault)	Line 1 Displays FAULT, the type of fault, and whether it has been acknowledged or cleared.	→	FAULT DETECTOR FAILED TEST Z001: ZONE Z001 MONITOR Module L01M001 11:58:45A TUE DEC 23, 2014 L01M001
----------------------	-----------------------------------------------------------------------------------------------	---	---------------------------------------------------------------------------------------------------------------

Event Format (prealarm)	Line 1 Displays PREALARM, the sensitivity reading and whether it has been acknowledged or cleared.	→	PREALARM 120% OF FIRE SENSITIVITY LEVELS Z001: ZONE Z001 MONITOR Module L01M001 11:58:45A TUE DEC 23, 2014 L01M001
-------------------------	-------------------------------------------------------------------------------------------------------	---	-----------------------------------------------------------------------------------------------------------------------------

The second, third and fourth lines always contain the same device information, as follows:

Line 2 - Displays the custom label and the extended label	<table border="0"> <tr> <td>→</td> <td>FIRE ALARM</td> <td></td> </tr> <tr> <td>→</td> <td>Z001: ZONE Z001</td> <td>MONITOR</td> </tr> <tr> <td>→</td> <td>Module L01M001</td> <td></td> </tr> <tr> <td>→</td> <td>11:58:45A TUE DEC 23, 2014</td> <td>L01M001</td> </tr> </table>	→	FIRE ALARM		→	Z001: ZONE Z001	MONITOR	→	Module L01M001		→	11:58:45A TUE DEC 23, 2014	L01M001
→		FIRE ALARM											
→		Z001: ZONE Z001	MONITOR										
→		Module L01M001											
→	11:58:45A TUE DEC 23, 2014	L01M001											
Line 3 - Displays the primary zone label, the primary zone number, and the software Type ID.													
Line 4 - Displays event time, event date and device address.													
	<table border="0"> <tr> <td>Loop number</td> <td>→</td> <td>L01M001</td> </tr> <tr> <td>Detector</td> <td>→</td> <td></td> </tr> <tr> <td>Device address</td> <td>→</td> <td></td> </tr> </table>	Loop number	→	L01M001	Detector	→		Device address	→				
Loop number	→	L01M001											
Detector	→												
Device address	→												

The point event example screen below shows a fault condition that has been generated by the monitor on loop 2, address 4.

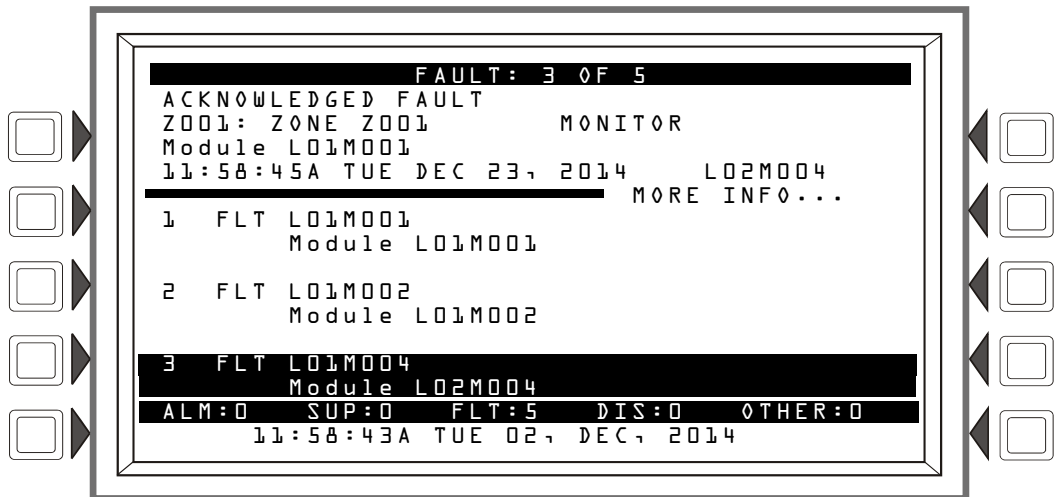


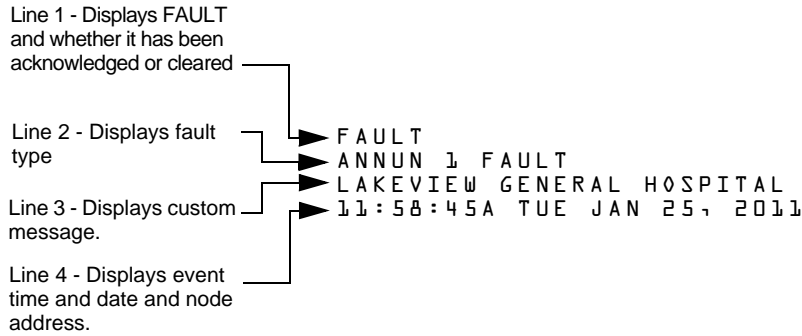
Figure 1.3 Point Event Display Example

The event counts display shows the counts for outstanding events. The date in line 16 gives the current time. The event keys may be used to display events; their functions are described in the Operation section of this manual.

System Events Format

When a system fault occurs, a message is generated to the panel that displays on the top of the LCD screen, and soft keys display available functions that may be used to handle the event.

The top four lines contain event information, and are formatted as follows:



The system fault event example screen below shows an annunciator fault condition.

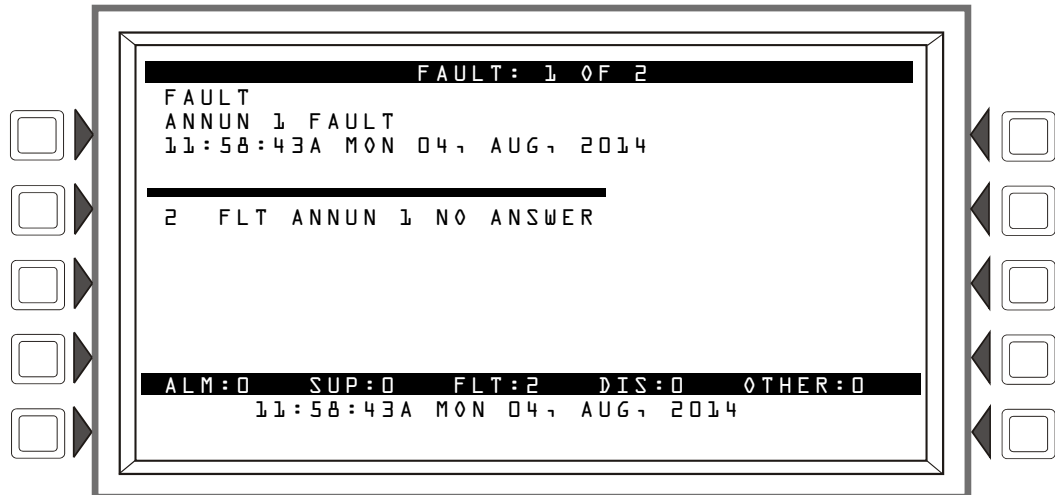


Figure 1.4 System Event Display Example

The event counts display shows the counts for outstanding events. The date in line eight gives the current time. The soft keys may be used to deal with the event; their functions are described in the Operation section of this manual.

Mass Notification Events

When a local mass notification event occurs on the fire panel, a message is generated to the panel that displays on the top of the LCD screen, and soft keys display available functions that may be used to handle the event.

The format of the first line will vary slightly as follows, depending on the type of event.:

Event Format (not fault or supervisory) Line 1 —> MN ALARM
 Displays the type of event, and whether it has been acknowledged or cleared.
 SECURITY OFFICE MAIN BLDG
 FIRST FLOOR ZF20 MN MON
 11:58:45A TUE JAN 22, 2013 L03M002

Event Format (fault) Line 1 —> MN FAULT
 Displays MN FAULT, and whether it has been acknowledged or cleared.
 DETECTOR FAILED TEST
 SECURITY OFFICE MAIN BLDG
 FIRST FLOOR ZF22 MN MON
 11:58:45A TUE JAN 22, 2013 L03M003

Event Format (supervisory) Line 1 —> MN SUPERVISORY
 Displays MN SUPERVISORY and whether it has been acknowledged or cleared.
 SECURITY OFFICE MAIN BLDG
 FIRST FLOOR ZF21 MN SUPL
 11:58:45A TUE JAN 22, 2013 L03M004

The second, third and fourth lines always contain the same device information, as follows:



Refer to Figure 1.3 on page 7 for an example of a Point Event Display.

If the fire panel is ALL SYSTEMS NORMAL and a Mass Notification event occurs over the network on a MNS mapped node, the panel will display NETWORK MN ACTIVE. Refer to VeriFire Tools for MN Mapping information.

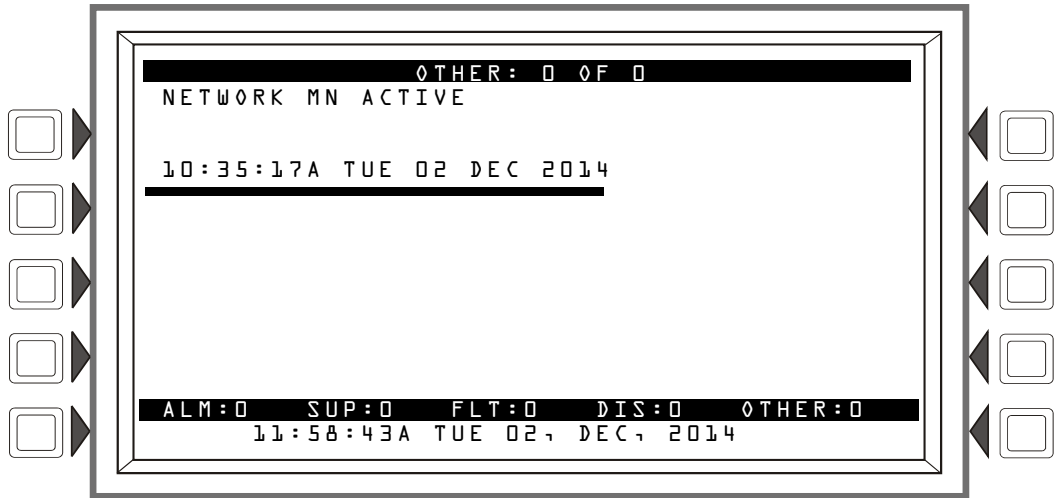


Figure 1.5 Network Mass Notification Event Example

1.6 Navigating Menu and Programming Screens

The Main Menu (refer to Figure 1.6) leads to screens with various menu options. Choices may be made from the menu screens by pressing the soft key closest to the menu option.

Field information may be added/modified using the keypad and special function keys.

Arrow keys on the keypad can be used to navigate between fields on a screen if there are no soft keys to select the fields.

Pressing a BACK soft key on a screen returns the programmer to the previous screen without saving the information entered.

Pressing an ACCEPT soft key will save information entered on the screen. It may also return to the previous screen and/or perform other functions as described in the soft key section for each screen.

When the panel can not read a specified point (that is, if the point entered on the screen for processing does not exist in the panel's programming) it will display an error screen for several seconds, then return to the screen where the address was entered. The user must check his input and investigate the state of the point.

1.7 The Main Menu

The Main Menu screen is the means by which the programmer can access displays, history information, printing and programming menus. This screen is accessible from the System Normal Screen (Refer to Figure 1.2), and from most other screens by pressing the BACK soft key until it displays.

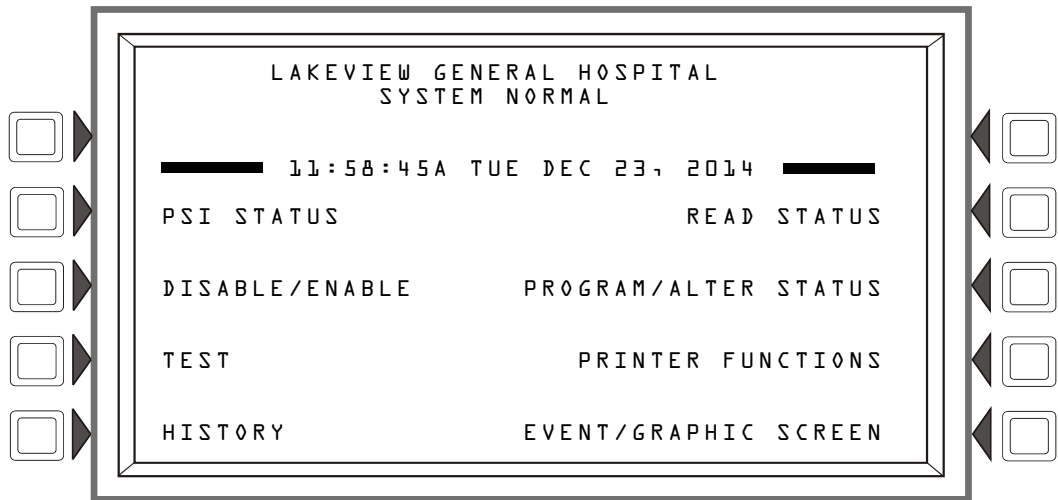


Figure 1.6 Main Menu Screen

Soft Keys

Pressing the soft keys brings the user to the screens described below.

1.7.1 Event List

If there are no events active on the fire panel, pressing the Event/Graphic Screen soft key on the Main Menu screen will display the Graphic Screen.

Pressing the soft key to the left of the Event/Graphic Screen message on the Main Menu brings up the Event List screen if there are any events active on the fire panel. This screen will automatically display if an off-normal event requiring acknowledgement occurs, unless the panel is in programming mode. Fire alarm events will display even in programming mode.

Line 1 displays the type of event list currently displayed. Line 15 displays the current counts of off-normal events in five categories. The counts include both acknowledged and unacknowledged events. Line 16 contains the current date and time.

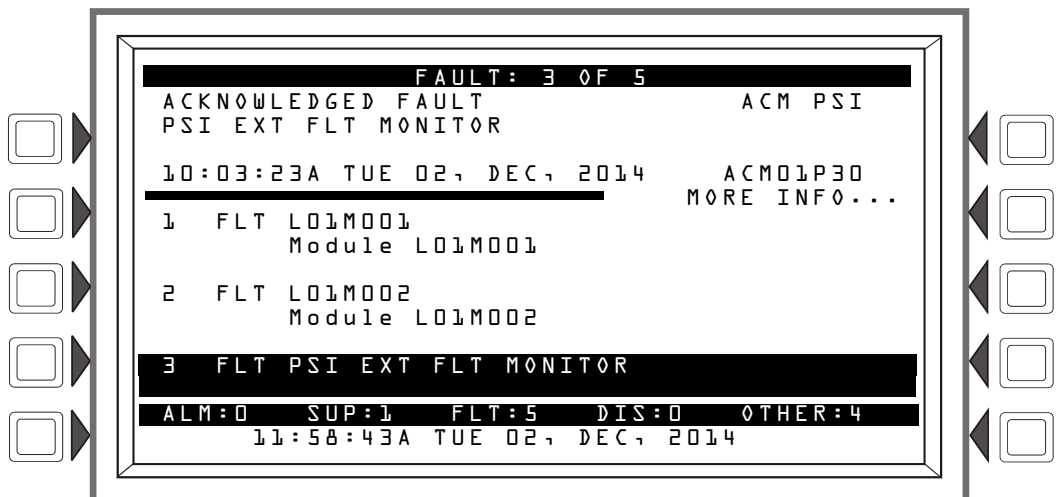


Figure 1.7 Events Count Display Screen

Soft Keys

MORE INFO - Press this key to go to the MORE INFORMATION screen, described in Section 1.7.2 below. This button will not display if no off-normal events exist.

Pressing an Event key shows off-normal events simultaneously by event type. The currently selected event is shown at the top, and three are shown in the list below it. Events will be listed with unacknowledged events first in reverse chronological order (oldest events at the top to newest events at the bottom), followed by acknowledged events in reverse chronological order.

- Using the Next/Previous special function keys will scroll to the next/previous page of the list and replace the event at the top of the screen with the event at the cursor's location on the next/previous screen.
- Using the Up/Down arrow keys will scroll the cursor through the three events below, replacing the event at the top of the screen with the currently highlighted event. Continuing past the third event will scroll through the remaining list.
- Pressing one of the fixed function Event keys will cause the first event of that type (e.g., supervisory, fault, etc.) to display at the top, and subsequent events of that type to display in sequence below it. If there are no events of the type, the following screen will be displayed:



Figure 1.8 No Event List Screen

1.7.2 More Information

Pressing the More Information soft key displays a screen that contains additional information about the event shown in the top four lines.

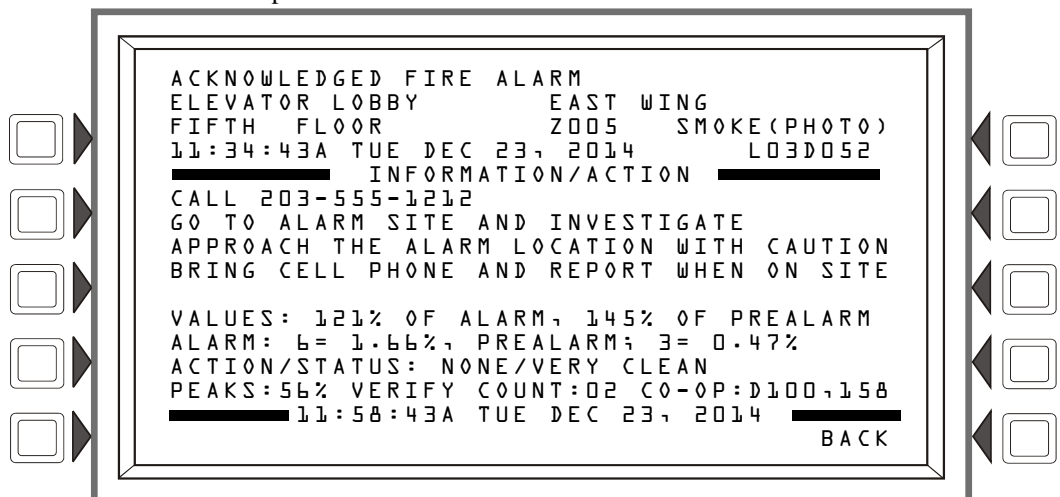


Figure 1.9 More Information Screen

Display

Lines 1 through 4 - Event information

Line 5 - Screen title

Lines 6 through 9 - The Custom Action Message programmed for the point in alarm

Line 10 - blank

Line 11 and 14 - These lines exist only for smoke/heat detectors.

Line 11

VALUES:

The screen displays the Alarm and Prealarm values that are in effect when more information is requested. For example, if occupied settings are in effect, occupied values will display.

121% OF ALARM - This field gives the detector reading as it relates to its preprogrammed alarm level value (indicated in the next line on the screen). The example above shows the detector exceeding the alarm level by 21%.

Note: For Beam detectors in CLIP mode, the alarm value will always equal zero (0)% when it is not in alarm or 100% when it is in alarm.

145% OF PREALARM - This field gives the detector reading as it relates to its preprogrammed prealarm level value (indicated in the next line on the screen). The example above shows the detector exceeding the prealarm level by 45%.

Line 12

The screen displays the Alarm and Prealarm levels that are in effect when more information is requested. For example, if unoccupied settings are in effect, they will display.

ALARM: 6 = 1.66% - Six is the preprogrammed alarm level value for this detector: its value is 1.66%, indicating the percent per foot obscuration value assigned to level 6.

PREALARM: 3 = 0.47% - Three is the preprogrammed alarm level value for this detector: its value is 0.47%, indicating the percent per foot obscuration value assigned to level 3.

Line 13

ACTION/STATUS: NONE/VERY CLEAN - This displays the maintenance status of the device. The message that appears in this field depends on the drift compensation value. A detector will automatically compensate for environmental contaminants and other factors over time, until the tolerance value has been exceeded. The FACP will signal a fault condition when this level has been reached. Refer to the following table for messages and required action.

Message	Drift Compensation %	Description
None/Very Clean	Less than 50	No action necessary. The detector readings are near ideal.
None/Fairly Clean	50 - 69	No action necessary. The detector will activate at the selected sensitivity level.
Needs Cleaning	70 - 79	Clean the detector soon. The detector may cause a false alarm because it has reached the drift compensation tolerance value.
Needs Immediate Cleaning	80 - 100	Clean immediately! The detector is a false alarm risk. The drift compensation tolerance value has been exceeded.

For FSC-851 IntelliQuad detectors in CLIP mode, the status will display as None/Very Clean until it displays Needs Immediate Cleaning. No intermediate levels are displayed.

Line 14

PEAKS: 56% - This value represents the highest percent per foot obscuration reading taken by this detector. It can be a historical figure, and does not necessarily represent the highest reading for this particular alarm. Re-initializing the detector would reset this value to zero.

VERIFY COUNT: 02 - This displays the number of times the detector has gone into alarm. This count aids in differentiating false alarms from actual alarms by showing repeated alarm events that have come into the device. In this example, the detector has gone into alarm two times since the verification count was begun. The FACP will signal a fault condition when the verify count is exceeded. Displays as **COUNT** for FSC-851 IntelliQuad and aspiration detectors.

CO-OP: D100, 15B - Indicates the address(es) of any detector(s) linked with the detector that's in alarm for Co-operative Multi-alarm Sensing. This field does not display for Acclimate, FSC-851 IntelliQuad, FCO-851 detectors, Beam detectors or Heat detectors.

CO: - FSC-851 IntelliQuad and FCO-851 detectors only, FlashScan only - Carbon Monoxide reading in parts per million.

TEMP: - Displays degrees Centigrade for Acclimate, FSC-851, FCO-851, heat, and aspiration detectors

Line 15 - The current time and date are displayed in this line.

Line 16

BACK - Press to return to the previous screen.

1.7.3 History Display (History Select Screen)

The History Select screen allows the user to select a type of history file to view, and to set time/date or point range viewing parameters. The particular menu items will not appear on the History Display screen if no associated events are in the queue.

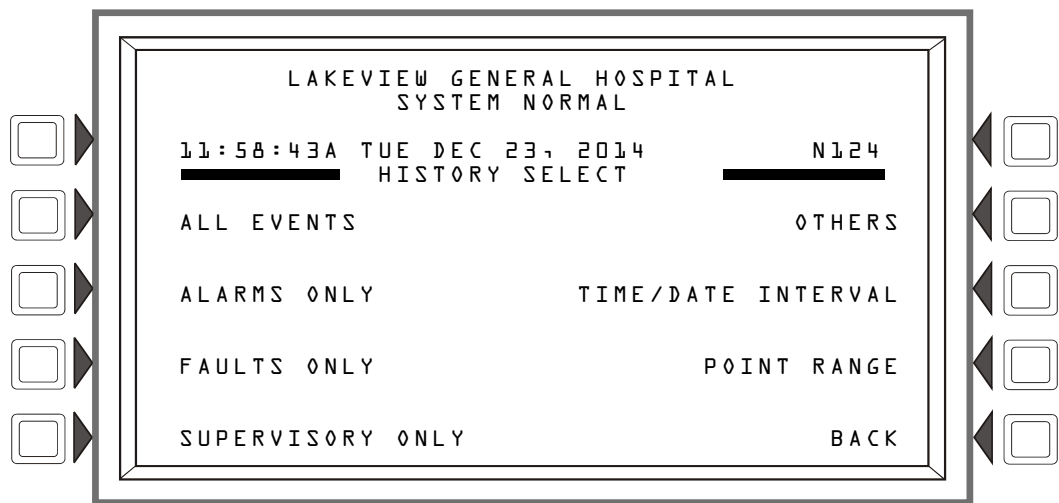


Figure 1.10 History Display Select Screen

Soft Keys

ALL EVENTS, ALARMS ONLY, FAULTS ONLY, SUPERVISORY ONLY, AND OTHERS - Pushing the associated soft key selects the type of history to be viewed.

TIME/DATE INTERVAL - Sets a time/date interval of events to be displayed.

POINT RANGE - Sets a range of points for which events will be displayed.

Refer to the section Section 4, “Viewing and Printing History Information”, on page 52 for a full description of History Select.

1.7.4 Read Status

Pressing the Read Status soft key brings up screens to view the present status of points, zones, and other system information. Refer to the section Section 3, “Read Status”, on page 40 for a full description of Read Status.

1.7.5 Program/Alter Status

Pressing the Program/Alter Status soft key brings up screens for panel programming, point programming, autoprogramming, clear programming, altering the status of points, walk test, and other information. A password is required. Refer to this panel’s programming manual for information on these functions.

1.7.6 Printer Functions

Pressing the Printer Functions soft key brings up screens to print reports. Refer to Section 5, “Printing Reports”, on page 56 for descriptions and illustrations. This key will appear only if a printer has been selected through programming. Refer to this panel’s programming manual for information on printer selection.

Section 2: Operation of the Control Panel

2.1 Overview

The control panel periodically checks for events. An event can be any change in the status of a device, a transfer of information between a device and the FACP, or a transfer of information between two devices. Some events are considered background events and are not seen by the user. The events that are of primary concern to the operator are those identified as off-normal events. An off-normal event is an event which indicates activity or change in condition that requires the attention and/or response of an operator. Examples of possible off-normal events are:

- Activation or change in condition of a monitoring device such as a detector or module
- System faults, such as battery problems, device supervision problems, etc.

When there are no off-normal events, the panel displays the System Normal screen (refer to Figure 2.1). When there is an off-normal event, the panel will display it (for event formats, refer to Section , “Point Events Format”, on page 6). The action required will vary according to the type of event.

2.1.1 System Normal

The system operates in System Normal mode when no alarms or faults exist. In this mode, the control panel displays a System Normal message as follows

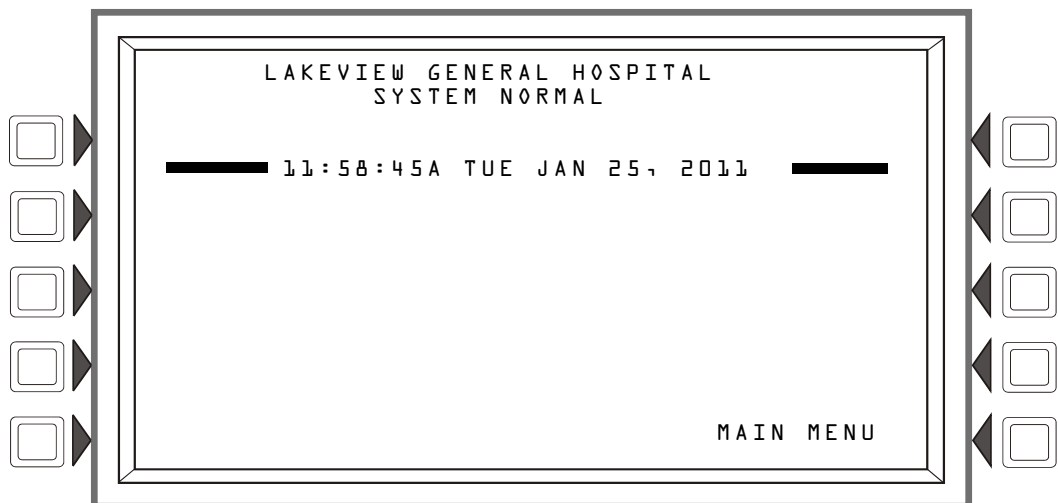


Figure 2.1 System Normal Screen

The control panel performs the following functions at regular intervals:

- Polls all SLC devices to check for valid replies, alarms, faults, circuit integrity, and supervisory signals, etc.
- Checks power supply faults and batteries
- Refreshes the panel display and updates time
- Scans for any panel screen, keypad, and Control Key entries
- Performs a detector automatic test operation
- Tests system memory
- Monitors for microcontroller failure

No action is required of the operator when the panel is operating in Normal mode.

2.1.2 Acknowledging an Event

When the panel detects an off-normal event and the information is displayed on-screen, use the SILENCE BUZZER key to respond to new alarm or fault signals. When this key is pressed, the control panel does the following:

- It silences the piezo sounder on the panel if it is enabled
- It transfers the event to the history buffer
- If the panel is networked, it will send a network message.

Alarms and all types of off-normal events are block acknowledged: these events are acknowledged all at the same time, with a single stroke to the SILENCE BUZZER key.

2.2 Fire Alarm Event

2.2.1 How the Control Panel Indicates a Fire Alarm

When an initiating device (detector or monitor module) activates, the control panel does the following:

- Produces a steady audible tone (if the piezo is enabled)
- Activates the System Alarm relays
- Illuminates the FIRE LED
- Displays the FIRE ALARM Events List with the first fire alarm in the top section of the display containing a Type Code that indicates the type of device that activated the fire alarm, and other information specific to the device. The message occupies the second and third lines of the screen, replacing the System Normal message as shown in Figure 2.2 below. Refer to “Point Events Format” on page 6 for a full description of each message field
- Sends an Alarm message to the History buffer and installed printer and annunciators
- Latches the control panel in alarm. (You cannot return the control panel to normal operation until you correct the alarm condition and reset the control panel)
- Initiates any Control-By-Event actions
- Starts timers (such as Silence Inhibit, Auto Silence)
- Activates the general alarm zone (Z000)



NOTE: If a monitor module programmed with a WATERFLOW Type Code initiates a fire alarm, the control panel disables the MUTE ALARM DEVICES key and the Auto Silence Timer.

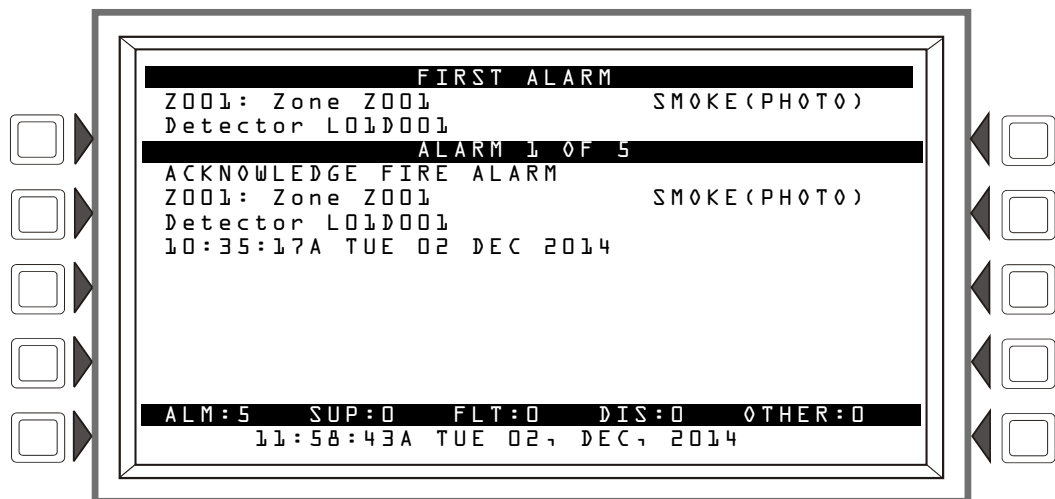


Figure 2.2 Fire Alarm Message Display Example

2.2.2 How to Respond to a Fire Alarm

If the control panel indicates a fire alarm, the operator can do the following:

- To silence the panel sounder:
Press the **SILENCE BUZZER** key. The local sounder will silence. The control panel will send an acknowledge message to the panel display, history buffer, installed printers and annunciators.
 - To silence any activated outputs that are programmed as silenceable:
Press the **MUTE ALARM DEVICES** key. **ALARM DEVICES SILENCED** LED light steady. The control panel sends a Signal Silenced message to the History buffer, installed printers and annunciators.
1. Check the Alarm message for its location and type. Press the **MORE INFORMATION** soft key to display the **MORE INFORMATION** screen and view additional information on the device and possibly preprogrammed text for recommended action. (Refer to Figure 1.9 on page 11 for an example of the this screen and an explanation of its fields.)
 2. Correct the condition causing the alarm.
 3. When the alarm condition is corrected, press the **RESET** key to return the control panel to normal operation (indicated by the “System Normal” message). The control panel sends a “System Normal” message to the panel display, History buffer and installed printer.
If both fire and mass notification events are present on the fire panel at the same time, a second System Reset will need to be performed to reset the fire panel. The panel will display **MN SYSTEM RESET** or **FIRE SYSTEM RESET**, depending on which event has priority. Refer to the *AFP-3030 Programming Manual* for event priority programming information.

2.2.3 Interpreting Type ID Codes

The Type ID code that displays in the fire alarm message is related to the type and function of the point that initiates the fire alarm. For example, a monitor module with a **PULL STATION** Type ID code means that the monitor module connects to a manual pull station. If the Type ID code is unfamiliar, refer to Appendix A, “Software Type ID Codes”, on page 63. This appendix is an alphabetical list of Type ID codes with an explanation of each.

2.3 System or Point Fault Event

2.3.1 How the Control Panel Indicates a System or Point Fault

A system or point fault occurs when the control panel detects an electrical or mechanical fault. The panel will react differently depending on whether or not there are higher priority unacknowledged events.

When no higher priority unacknowledged events are exist, the control panel:

- Produces a pulsed audible tone (if the piezo is enabled)
- Activates the Fault relay
- Illuminates the **SYSTEM FAULT** or **FAULT LED**
- Displays a Type Code that indicates the type of device with a fault (if a point fault)
- Displays **FAULT** in the upper left corner of the panel display and, if a point fault, the type of fault and information specific to the device. (A system and a point fault message are shown in the figures below)
- Sends a Fault message to the history buffer, installed printer and annunciators

When an unacknowledged event with a higher priority exists, the control panel retains the indications of the higher priority event (the message, lit LED, audible tone, etc.) while activating the Fault relay, illuminating the **SYSTEM FAULT** or **FAULT LED**, and sending a Fault message to the history buffer, installed printer and annunciators.

A system fault message is shown in Figure 2.3, and a point fault is shown in Figure 2.4. Refer to Section 1.5.2, “Event Reporting Format”, on page 6 for identification of each message field.

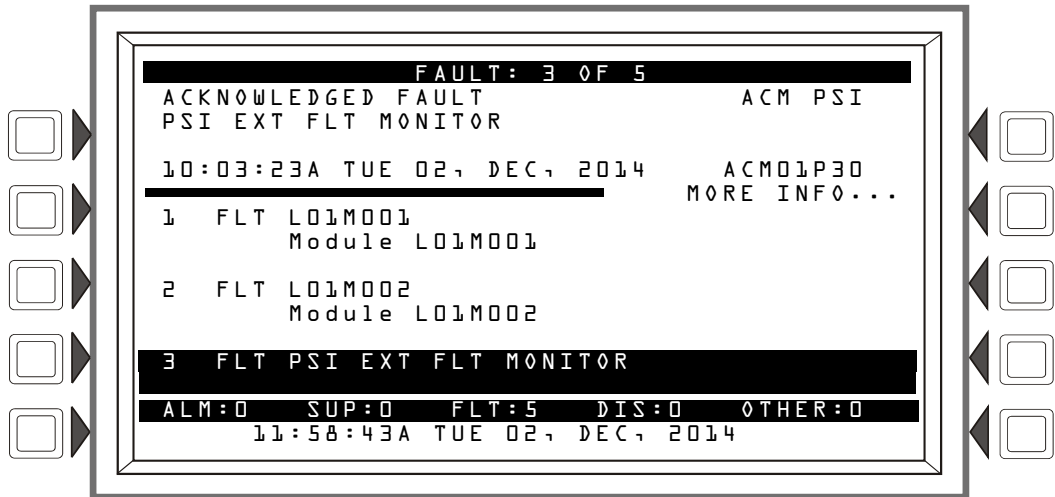


Figure 2.3 Sample Message for System Fault

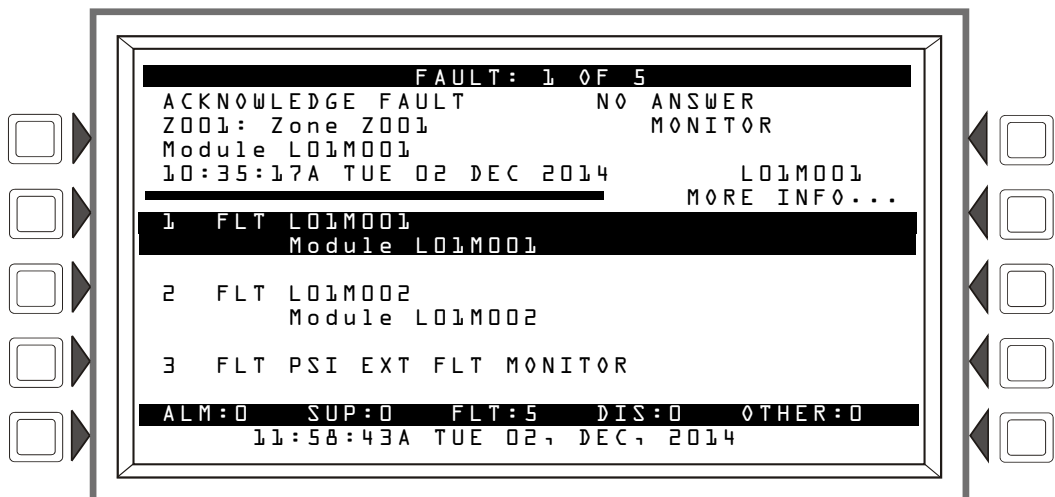


Figure 2.4 Sample Message for Point Fault

2.3.2 How to Respond to a System or Point Fault

If the control panel indicates a fault, the operator can do the following:

1. Press the SILENCE BUZZER key to silence the panel sounder.
The control panel sends an acknowledge message to the History buffer, installed printers and annunciators.
2. Check the fault message for an indication of the fault.
 - Refer to Table 2.1 or Table 2.2 below for point and system fault explanations, if necessary.
 - Press the MORE INFO soft key to display the MORE INFORMATION screen and view additional information on the device and possibly preprogrammed text for recommended action. (Refer to Figure 1.9 on page 11 for an example of the this screen and an explanation of its fields.)
3. Correct the condition causing the fault. If the fault clears, the control panel sends a Clear Fault message to the History buffer, installed printers and annunciators.

If all faults clear and no supervisory signals or fire alarms exist, the control panel does the following:

- Returns to Normal operation (indicated by the “System Normal” message)

- Sends a “System Normal” message to the panel display, History buffer, installed printers and annunciators
- Restores faults automatically - even if faults are not acknowledged

2.3.3 Fault Types

There are a variety of point or system fault types that may appear in the fault message. The tables below give lists of the faults and indications of their cause.

Point (Device) Faults

A message from the “Fault Type” column in Table 2.1, “Point (Device) Faults,” on page 19 will appear in the upper right corner of the panel display when a point (device) fault occurs. Use this table to help determine what the fault is.

POINT FAULTS		
FAULT TYPE	FAULT DESCRIPTION	ACTION
AC FAILURE	The main or auxiliary power supply has lost AC power.	Determine whether there is an AC power loss or whether the power supply and wiring is correct.
ALIGNMENT MODE	A beam detector is in configuration mode.	No action is necessary, as the fault will clear when the configuration is complete. However, the detector will not detect a fire while this fault exists.
AMPLIFIER LIMIT	The DAL device is overloaded,	Remove outputs to lower the load on the speaker circuits. Press reset when done.
AMPLIFIER SUPERVISION	The amplifier’s internal supervision on the DAL device is not working,	Call Technical Services.
ANALOG OUTPUT \times FAULT	A fault has occurred on the DVC-AO analog output \times (1-4). The analog output is configured for Style 7, but no audio signal is returned.	Investigate and fix.
ASPIRATOR FAULT	There is a problem with the FAAST detector.	Replace the FAAST detector.
AUDIO LIBRARY CORRUPT	The Audio Library is corrupt.	The database must be re-downloaded, or all programming must be cleared and re-entered. if the fault does not clear, call Technical Services.
AUDIO LIBRARY INCOMPATIBLE	The Audio Library is not compatible with the programming database.	Download the correct application or version.
AUTOLEARN FAILURE	The Autolearn function has failed to complete.	Refer to the associated detector’s product guide for additional information.
AUXIN FAULT	This fault will be generated when the auxiliary input on the DVC is supervised (as determined by VeriFire Tools programming) and insufficient signal is detected on the input.	Check the DVC wiring and source.
BATTERY HIGH	The power supply’s battery charge is too high.	Check the batteries for problems. Replace batteries if necessary.
BATTERY LOW	The power supply’s battery charge is low, or the RFX device’s battery charge is low.	Check the batteries for problems. Replace batteries if necessary.
BEAM BLOCKED	Something has come between the detector’s beam and its reflector.	Investigate and clear the blockage.
BRAND MISMATCH	The brand of this SLC device is incompatible with this FACP system.	Replace with compatible device.
BUZZER OFF	The DVC’s piezo is disabled.	Re-enable the piezo at switch 5.
CHARGER FAULT*	The power supply’s battery charger is not working properly.	Correct the fault.
CO 6 MONTHS	The CO (carbon monoxide) detection element on a detector has six months left to expiration.	Replace the detector.
CO EXPIRED	The CO (carbon monoxide) detection element on a detector has expired.	Replace the detector.
CO FAULT	The CO element on a detector is not working properly. This fault is generated for FlashScan mode only.	Replace the detector.
COMM LOSS	Communication has been lost between the FMM-4-20 module and its 4-20 mA sensor.	Check connections between the FMM-4-20 module and the 4-20 mA sensor.
CONFIGURATION FAULT	A problem has occurred after the configuration was sent from the PipeIQ to the FAAST detector.	Re-download the configuration.
DAL DOWNLOADING	The DVC is currently downloading to a DAL device.	n/a
DAL DUAL ADDRESS CONFLICT	More than one DAL device has the same address.	Re-address DAL device(s).
DAL NO ANSWER	The DAL device is not communicating.	The DAL device address will display at the panel or network annunciator. Investigate and fix.

Table 2.1 Point (Device) Faults (1 of 3)

POINT FAULTS		
FAULT TYPE	FAULT DESCRIPTION	ACTION
DAP PORT α FAILURE	Digital Audio Port α (A or B), wire or fibre, is not communicating due to a break in the connection, a short, or faulty hardware.	Locate and fix the break or short. If the problem is not a short or break, call technical Services.
DATABASE CORRUPTED	The database that houses the DVC/DAL devices programming is corrupt.	The database must be re-downloaded or all programming must be cleared and re-entered. If the fault still does not clear, call Technical Services.
DATABASE INCOMPATIBLE	The programming database version is not compatible with the application version.	The correct application or version must be downloaded.
DET FAILED TEST	This detector has failed the FACP's periodic detector test for alarm capabilities.	The detector should be removed and replaced by an authorized service representative.
DETECTOR FAULT	The detector unit has detected a fault condition.	Check wiring and air flow to the unit. Refer to the detector's product guide for additional information.
DEVICE INHIBIT	The FMM-4-20 module is in a self-calibration state.	No action is required.
DUAL ADDRESS	There is more than one device of a single type (detector or module) with the same SLC address. A detector and a module can share the same address on an SLC, but two detectors, or two modules, can not. Note that some addressable devices (e.g. certain power supplies and RFXs) may not appear to be detectors or modules, but are addressed on the SLC as such.	Readdress the incorrect device.
DVC COMM LOSS	The DAL device is not in communication with the DVC.	The DVC will generate a DAL NO ANSWER error to the panel or network annunciator for investigation.
EXTERNAL RAM ERROR	The internal RAM test failed on the DVC or DAL device.	Call Technical Services.
FAULT1	An FMM-4-20 module threshold fault as determined in point programming.	Refer to the <i>AFP-3030 Programming Manual</i> .
FAULT2	An FMM-4-20 module threshold fault as determined in point programming.	Refer to the <i>AFP-3030 Programming Manual</i> .
FFT FAULT	There is a short or open on the FFT riser.	Check the 4-wire switch is correctly set and that there is an end-of-line resistor in place for 2-wire operation.
FILTER FAULT	The device's air filter needs to be replaced.	Refer to the related device's product guide for air filter replacement procedures.
FLASH IMAGE FAULT	The DVC or DAL device software is corrupt.	Re-download the panel code software from VeriFire Tools. If the fault still does not clear, call Technical Services.
GENERAL FAULT	The power supply is not working properly.	Check the battery for problems. Replace battery if necessary.
GROUND FAULT	There is a ground fault on the main, auxiliary, or DAL device power supply.	Locate and correct the fault.
GROUND FAULT PORT α	A ground fault has occurred on the Digital Audio Port (DAP) α . Wire versions only.	Locate and correct the fault.
HIGH FLOW	Air flow to the device is too high.	Inspect the pipes for damage.
INCORRECT POSITION	The address of the detector does not match that of the sounder base it is plugged into.	Correct the addressing error. Re-install the device in its original physical position on the loop.
INITIALIZATION MODE	A beam detector is running through its initialization sequence.	The detector will not detect a fire until the initialization process is complete and this fault has cleared.
INVALID RESPONSE	The device has returned a response to the panel that the panel did not expect.	Check the device for functionality, addressing and wiring.
IR FAULT	The infrared element is not working properly on a FSC-851 detector. This fault is generated for FlashScan mode only.	Replace the detector.
LOADING...NO SERVICE	The DVC or DAL device is in bootloader mode. The DVC/DAL device is NOT providing fire protection communication while this fault is active.	Proper authorities should be notified while this fault is active so that other means of protection can be supplied, if necessary.
LOCAL MIC FAULT	The local microphone is in fault. There is no communication, or paging has been enabled for over 28 seconds and no signal has been received.	Investigate whether the mic is plugged into the DVC, or whether there is a problem with the handset.
LOCAL PHONE FAULT	The local FFT handset is in fault. There is either a failure with the local handset, or paging from FFT has been enabled for over 28 seconds and no signal has been received.	Investigate whether the handset is plugged into the DVC, or whether there is a problem with the handset.
LOW FLOW	Air flow through the pipe is too low.	Inspect the pipes for damage or clogging.
LOW TEMPERATURE	The temperature read by a Heat+ or Acclimate™+ detector is too low.	Raise the heat in the area of the detector.
LOW THRESHOLD	The detector chamber reading is too low; the detector is not operating properly.	The detector must be removed and replaced by an authorized service representative.
MAINTENANCE REQ	The detector is dirty and needs cleaning	Clean the detector.
MAINT URGENT	The detector requires cleaning immediately. It is a false alarm risk.	Clean the detector immediately.
MISMAT HDWE TYPE	The programming information in the panel's database for this device does not match the type of device at the address specified.	Correct programming.

Table 2.1 Point (Device) Faults (2 of 3)

POINT FAULTS		
FAULT TYPE	FAULT DESCRIPTION	ACTION
MOD EXT PWR LOSS	The control module or sounder base has lost external power.	Determine whether there is a DC power loss.
NCM COMM LOSS	Communication has been lost between the fire panel or DVC and the NCM/HS-NCM (Network Communication Module).	Investigate cause and restore communication.
NETWORK FAIL PORT \underline{x}	Communication lost between the Noti•Fire•Net port \underline{x} and corresponding node.	Investigate cause and restore communication.
NO ANSWER	The device (module or detector) is not responding to the poll. Either the device is not working or it is not connected properly.	Determine whether the device is functional, and connected and addressed properly on the SLC.
NO THRESHOLDS PROGRAMMED	No threshold parameters have been programmed for the FMM-4-20 module.	Refer to the <i>AFP-3030 Programming Manual</i> .
NORMAL	Indicates activated monitor module set to monitor fault condition.	Correct fault condition.
NVRAM BATT FAULT	The Battery backup and or clock backup is low.	Replace the battery.
OPEN CIRCUIT	The module device has an open circuit on its supervised wiring.	Check the connections from the module to the input or output device to which it is wired.
OPEN ON \underline{x}	There is an open on speaker circuit \underline{x}	Locate and fix the open.
OVER RANGE	The FMM-4-20's 4-20 mA sensor has exceeded 20 mA.	Determine if the sensor is functional and correctly installed.
POWER FAULT	The GPI (General Purpose Input) on the detector has detected a closure of the contact it is monitoring.	Inspect the local Vesda power supply and correct the condition.
POWER SUPPLY FAULT	There is a communication failure with the fire panel or DAL device power supply.	If the power supply is onboard, service is required. If the power supply is standalone, investigate the cause at the power supply.
PRIMARY \underline{x} SUPERVISION FAULT	Internal supervision is not working on the primary amplifier at address \underline{x} (one through four).	Call Technical Services.
REMOTE MICROPHONE FAULT	The remote microphone is in fault. It is installed and supervised, but no signal is coming from it.	Investigate and fix.
RFX COMM LOSS	Communication has been lost with an RFX device	Check the RFX to determine the problem.
SCANNER FAULT	The scanner unit has detected a problem.	Inspect the unit's valve for possible jam and correct the condition.
SECURITY TAMPER	An RFX device has been removed from its base.	Check the RFX device for tampering.
SELF TEST FAILED	Diagnostic test failed.	Call Technical Services.
SERVICE MODE	The FAAST is in Service Mode.	n/a
SHORT CIRCUIT	The module device has a short circuit on its supervised wiring.	Check the connections from the module to the input or output device to which it is wired.
SHORT ON \underline{x}	There is a short on DAA speaker circuit \underline{x} .	Locate and fix the short.
SOFTWARE MISMATCH	The software installed on a device is incompatible with the fire alarm control panel, or devices installed on the system are programmed with software that is incompatible with each other.	LCM software may need to be updated.
SOUNDER NO ANSWER	The sounder base is no longer communicating with the loop card.	Investigate and fix.
THERM. FAULT	The thermistors are not functioning properly on a FSC-851 detector. This fault is generated for FlashScan mode only.	Replace the detector.
TIME BASE FAULT	The time needs to be set on the FAAST detector.	Use PipeIQ to download the FAAST configuration.
UNDER RANGE	The FMM-4-20's 4-20 mA sensor has dropped below 4 mA.	Determine if the sensor is functional and correctly installed.
VERIFY OVER MAX	This detector or FZM-1 monitor module, which has been programmed to participate in alarm verification, has gone into and come out of its programmed verification limit without going into alarm. Either something is wrong with the detector or there is a condition nearby (such as someone smoking) that causes it to go into verification frequently.	Check the detector and the conditions nearby to determine the problem.
WIRING FAULT	The detector has discovered a fault in the VESDAnet wiring.	Inspect the VESDAnet wiring and correct the condition.

Table 2.1 Point (Device) Faults (3 of 3)

* This fault may be fire panel or backup battery related. Test and replace backup batteries if necessary.

System Faults

A message from the “Fault Type” column in Table 2.2 will appear in the second line on the left of the panel display when a device fault occurs. Use this table to help determine the cause of the fault.

SYSTEM FAULTS	
FAULT MESSAGE TYPE	FAULT DESCRIPTION
AA FAULT BUS FAIL	The AA Fault Bus has failed. Investigate and fix.
AC FAIL	Loss of AC power. Investigate whether there is an AC power loss, or whether the power supply is correctly installed and wired.
ADV WALK TEST	There is an Advanced Walk Test in progress.
AMPLIFIER LIMIT	The DAA is overloaded. Remove outputs to lower the load on the speaker circuits. Press reset when done.
AMPLIFIER SUPERVISION	The amplifier’s internal supervision is not working. Call Technical Services.
AMPLIFIER FAULT	The DAA is in fault. The output is overloaded or the amplifier is damaged. Remove outputs to determine if the DAA was overloaded. If it still does not work, call Technical Services.
ANALOG OUTPUT \underline{x} FAULT	A fault has occurred on DVC-AO analog output x (1 - 4). The analog output is configured for Style 7, but no audio signal is returned. Investigate and fix.
ANNUN \underline{x} NO ANSWER	The annunciator at address \underline{x} is not responding.
ANNUN \underline{x} FAULT	The annunciator at address \underline{x} is in fault.
ANNUN \underline{x} TYPE MISMATCH	The annunciator at address \underline{x} does not match the annunciator type programmed at that address. Investigate and fix.
AUDIO LIBRARY CORRUPTED	The DVC’s audio library is corrupted. Re-create and/or re-download an intact database.
AUDIO LIBRARY INCOMPATIBLE	The audio library version is incompatible with the database and/or the application version.
AUXIN FAULT	Generated when the auxiliary input is supervised (as determined in VeriFire® Tools programming) and no signal is coming from the input. Check wiring and source.
BACKUP AMP \underline{x} FAIL	The Backup Amp at address \underline{x} has failed. Call Technical Services.
BACKUP AMP \underline{x} HARDWARE FAIL	The Backup Amp at address \underline{x} has had a hardware failure. Call Technical Services.
BACKUP AMP \underline{x} LIMIT	The Audio Circuit of the Backup Amplifier at address \underline{x} has been overloaded or shorted so the Audio Signal has been attenuated. Check wiring and source and ensure that there are no shorts.
BACKUP AMP \underline{x} OVERCURRENT	The Backup Amplifier at address \underline{x} has overloaded and shut down. Check the total Load calculations for the DS-AMP and/or DS-BDA and ensure the total values do not exceed 120 watts.
BACKUP AMP \underline{x} NOT INSTALLED	The Backup Amplifier that is programmed at address \underline{x} is not communicating with the DS-AMP. Ensure the ribbon and power cables are properly attached to the DS-AMP and DS-BDA. If there is no Backup Amplifier at that address, remove the Backup Amplifier from programming.
BACKUP AMP \underline{x} TRIP	The DS-BDA at DS-BUS address x (1-4) is drawing more current from the power supply than expected and has been disabled. Refer to the DVC manual for additional troubleshooting.
BASIC WALK TEST	A Basic Walk Test is in progress.
BATTERY	The power supply’s battery voltage is too high or too low. Check the batteries for problems. Replace batteries if necessary.
BUZZER OFF-LINE	The piezo is disabled.
CHARGER FAIL*	The power supply’s battery charger is not functioning. Investigate and correct.
CLOSED POS. LOOP \underline{x}	There is an open circuit on the positive side of loop \underline{x} . Closed wiring is a supervised method of communicating with addressable devices. If the control panel detects a fault (open only), it will drive both ends of the loop, maintaining communication in an unsupervised method. The latching fault will display on the panel as a Closed fault until you correct the condition and press reset.
CLOSED NEG. LOOP \underline{x}	There is an open circuit on the negative side of loop \underline{x} . Closed wiring is a supervised method of communicating with addressable devices. If the control panel detects a fault (open only), it will drive both ends of the loop, maintaining communication in an unsupervised method. The latching fault will display on the panel as a Closed fault until you correct the condition and press reset.
CLOSED SHORT LOOP \underline{x}	Closed wiring is a supervised method of communicating with addressable devices. If the control panel detects a fault (open or short), it will drive both ends of the loop, maintaining communication in an unsupervised method. The latching fault will display on the panel as a Closed fault until you correct the condition and press reset.
CORRUPT LOGIC EQUAT	The database that houses the panel’s logic equations is corrupt. It must be re-downloaded, or all programming must be cleared and re-entered.
DAA ADDRESS CONFLICT	More than one DAA has the same address. Readdress DAA(s).
DAA DOWNLOAD IN PROGRESS	A DAA download is in progress.
DAA NO ANSWER	A DAA is not responding. Investigate and fix.
DAL DEVICE NO ANSWER	The DAL device is not communicating with the fire panel. Check wiring and source.
DAP PORT \underline{x} FAILURE	Digital Audio Port \underline{x} (A or B) is not communicating due to a break in the connection, a short, or faulty hardware. Locate and fix the break or short. If the problem is not a short or break, call Technical Services.
DATABASE CORRUPTED	The DVC database programming file is corrupted. Re-download or re-recreate & download an intact database.
DATABASE INCOMPATIBLE	The DVC database programming file is incompatible with the application version.
DIGIN FAULT	The DAA has determined that its DVC has stopped transmitting audio data to the Digital Audio Loop (DAL), even though the loop is still functional. Update code, ensure all code on the DAL is compatible. If the DVC still does not transmit digital audio data, call Technical Services.
DISPLAY COMM LOSS	Communication with the keypad display has been lost. Check cable connection, investigate and fix.

Table 2.2 System Faults (1 of 3)

SYSTEM FAULTS	
FAULT MESSAGE TYPE	FAULT DESCRIPTION
DISPLAY NODE LIMIT EXCEEDED	The number of display nodes on the network has been exceeded. This fault will only be displayed if at least one of the AFP-3030s on the network are in Network Display Mode and the total number of display nodes has exceeded 25. Remove one or more display nodes to correct this fault. (Display nodes include NCA-2, a Gateway node, or an AFP-3030 in Network Display Mode.)
DOOR INTERLOCK FAULT	A fault has occurred on the door interlock. Investigate and fix.
DSBUS <u>x</u> AC FAIL	The DSBUS at address <u>x</u> has lost AC power. Check wiring and source.
DSBUS <u>x</u> COMMFAIL	The DSBUS at address <u>x</u> is not communicating with the fire panel. Check wiring and source.
DSBUS <u>x</u> HIGH BATT	The battery voltage for the DSBUS at address <u>x</u> has exceeded 28 V. If the batteries are shared, ensure that only one power supply is charging the batteries. Remove the batteries and measure the charging voltage from the supply to ensure it is not exceeding 27.6 V. Call Technical Services.
DSBUS <u>x</u> LOW BATT	The battery voltage for the DSBUS at address <u>x</u> has fallen below 20.4 V. Charge or replace batteries.
DSBUS <u>x</u> SELF TEST FAIL	A device on the DSBUS at address X has failed self test. Reboot the device. If this does not repair it, update the software of the device. If the self test fail fault continues to be displayed, call Technical Services.
EPROM ERROR	The application and/or boot code is corrupt. Service required.
EXTERNAL RAM ERROR	The external RAM test failed. Service required.
FLASH IMAGE ERROR	The software is corrupt. Re-download the panel code software from VeriFire® Tools. If the fault does not clear, call Technical Services.
FFT FAULT	There is a short or open on an FFT riser on a Digital Audio Loop. Check that the DVC's 4-wire switch is set properly and that there is an end-of-line resistor in place for 2-wire operation.
GROUND FAULT	A ground fault has occurred within the panel.
GROUND FAULT LOOP <u>x</u>	There is a ground fault on loop <u>x</u> .
GROUND FAULT PORT <u>x</u>	A ground fault has occurred on DAP <u>x</u> (A or B).
HARDWARE MISMATCH	The device installed does not match what was previously installed. Install the correct device.
INTERNAL RAM ERROR	The internal RAM test failed. Service required.
INVALID NODE TYPE MAPPED	An invalid node type has been mapped to the AFP-3030 for Network Display Mode. Check network mapping and correct. Refer to the <i>AFP-3030 Programming Manual</i> for valid network types.
LCD80 SUPERVISORY	Communication has been lost with an LCD-80.
LOADING...NO SERVICE	A program or database download is in progress. The panel is NOT providing fire protection during the download. Proper authorities should be notified while a download is in progress so that other means of fire protection can be supplied.
LOCAL MIC FAULT	The DVCs local microphone is in fault. There is no communication, or paging has been enabled for over 28 seconds and no signal has been received. Investigate whether the mic is plugged into the DVC, or whether there is a problem with the local mic.
LOCAL PHONE FAULT	The DVC's local FFT handset is in fault. There is no communication, or paging has been enabled for over 28 seconds and no signal has been received. Investigate whether the handset is plugged into the DVC, or whether there is a problem with the handset.
LOOP <u>x</u> - <u>x</u> COMM FAILURE	Loops <u>x</u> and <u>x</u> are not responding. The LCM and LEM for those loops must be serviced.
MANUAL MODE ENTERED	An annunciator has been placed in manual mode.
MODBUS COMMUNICATIONS FAULT	The VESDA Gateway can not communicate with the HLI, the HLI may be damaged or not powered, or the VESDA Gateway may be damaged.
NCM COMM LOSS	Communication is lost between the AFP-3030 or DVC and the network communications module.
NCM CONNECTION LIMIT EXCEEDED	More than two panels have been connected to a high-speed network communications module.
NCM SNIFFER MODE ACTIVE	The network is in diagnostic mode.
NETWORK FAIL PORT <u>x</u>	Communication lost between NCM Port <u>x</u> and corresponding node.
NETWORK INCOMPATIBILITY	An incompatible product exists on this network.
NETWORK MAPPING LIMIT EXCEEDED	More than 1 fire panel or more than 4 DVCs has been mapped to the AFP-3030 for Network Display Mode. Check network mapping and correct.
NFN PAGING CHANNEL LIMIT EXCEEDED	Multiple paging sources are attempting to page over the NFN, exceeding the limit of one (1). reduce the number of paging sources to clear this fault.
24HR REMINDER	This message occurs every day at 11 am if any faults exist.
NVRAM BATT FAULT	Battery backup and/or clock backup is low. Replace battery.
NO DEV. INST ON L1	No devices are installed on the system.
NO POWER SUPPLY INST	The address of the main power supply has not been entered.
OPEN SHORT <u>x</u> LOOP <u>x</u>	Service required. Call Technical Services.
PANEL DOOR OPEN	The panel door is open.
PHONE CHANNEL LIMIT EXCEEDED	The DVC has allocated all it's phone channels to DAAs but there are still phones ringing in requesting more channels
POWER SUPPLY FAULT	There is a communication failure with the DAA onboard power supply. Call Technical Services.
PRIMARY AMP <u>x</u> FAIL	The Primary Amp at address <u>x</u> has failed. Call Technical Services.
PRIMARY AMP <u>x</u> HARDWARE FAIL	The Primary Amp at address <u>x</u> has had a hardware failure. Call Technical Services.
PRIMARY AMP <u>x</u> LIMIT	The Audio Circuit of the Primary Amplifier at address <u>x</u> has been overloaded or shorted so the Audio Signal has been attenuated. Check wiring and source and ensure that there are no shorts.

Table 2.2 System Faults (2 of 3)

SYSTEM FAULTS	
FAULT MESSAGE TYPE	FAULT DESCRIPTION
PRIMARY AMP \underline{x} OVERCURRENT	The Primary Amplifier at address \underline{x} has overloaded and shut down. Check the total Load calculations fir the DS-AMP and/or DS-BDA and ensure the total values do not exceed 120 watts.
PRIMARY AMP \underline{x} TRIP	The DS-BDA at DS-BUS address x (1-4) is drawing more current from the power supply than expected and has been disabled. Refer to the DVC manual for additional troubleshooting.
PRINTER OFF LINE	Communication loss with printer. Restore power and/or printer's online status.
PRINTER PAPER OUT	Add paper.
PROGRAM CORRUPTED	The database that houses the panel's programming is corrupt. It must be re-downloaded, or all programming must be cleared and re-entered. Service required.
PROG MODE ACTIVATED	A user is currently using the panel's programming menus.
REMOTE DISPLAY \underline{x} NO ANSWER	The remote display at address \underline{x} is not responding.
REMOTE DISPLAY \underline{x} FAULT	The remote display at address \underline{x} is in fault.
REMOTE MIC FAULT	The DVC's remote microphone is in fault. It is installed and supervised, but no signal is coming from it. Investigate and fix.
SELF TEST FAILED	Diagnostic test failed. Call Technical Services.
SOFTWARE MISMATCH	LCM and/or LCD-160 software does not match the version number expected by the panel; and/or the NCM is not network version 5.0; and/or one or more DAAs has a software revision that does not match other DAA software revisions. Update software as necessary.
SYSTEM INITIALIZATION	One or more devices (detectors or modules) can not report activation. This can occur following system startup, when exiting Walk Test, following an autoprogram, or following a device fault of No Response. Will clear when all un-initialised devices are initialized.
VESDA FAULT	A fault has occurred on a VESDA node. Possible faults may include: Communication failure on the VESDA detector loop, incompatible VESDA software versions, or a VESDA configuration error.
* This fault may be fire panel or backup battery related. Test and replace backup batteries if necessary.	

Table 2.2 System Faults (3 of 3)

2.3.4 Interpreting Type ID Codes

The Type ID code that displays in a point fault message is related to the type and function of the point that initiates the fault. For example, a monitor module with a PULL STATION Type ID code means that the monitor module connects to a manual pull station. If the Type ID code is unfamiliar, refer to Appendix A, “Software Type ID Codes”, on page 63. This appendix is an alphabetical list of Type ID codes and an explanation of each.

2.4 Prealarm Event

The Pre-alarm function is used to receive an early warning of potential or incipient fire conditions. The Pre-alarm function provides one of two settings as follows:

- Alert – a non-latching setting that causes a Prealarm when a detector reaches its programmed Pre-alarm sensitivity threshold. Non-latching means the condition will automatically restore to normal once the detector’s obscuration readings drop below its Prealarm threshold.
- Action – a latching setting that causes a Prealarm when a detector reaches its programmed Pre-alarm level. Latching means the condition will not restore itself to normal once the detector’s obscuration readings drop below its Prealarm threshold. The panel must be reset.

Alert and Action settings are set individually with detector point programming. Individual detector sensitivity threshold settings can have a value of one through nine, and are set by the programmer. A sensitivity threshold setting of zero indicates the detector does not participate in prealarm.

For more detailed information on Prealarm, refer to this panel’s programming manual.

2.4.1 How the Control Panel Indicates a Prealarm

When a detector activates a Prealarm, the control panel does the following if there are no higher priority unacknowledged events:

- Pulses the panel sounder (if the piezo is enabled)
- Illuminates the OTHER LED
- Displays PREALARM in the upper left corner of the LCD, as well as the sensitivity reading, the type code and other information specific to the detector as shown in Figure 2.5.
- Sends a Prealarm message to the History buffer, installed printer and annunciators.

When an unacknowledged event with a higher priority exists, the control panel retains indications of the higher priority event (the message, lit LED, audible tone, etc.) while illuminating the OTHER LED and sending a Prealarm message to the History buffer, installed printer and annunciators.

The Prealarm screen display is the same for both alert and action conditions. Following is a sample screen for a Pre-alarm message.

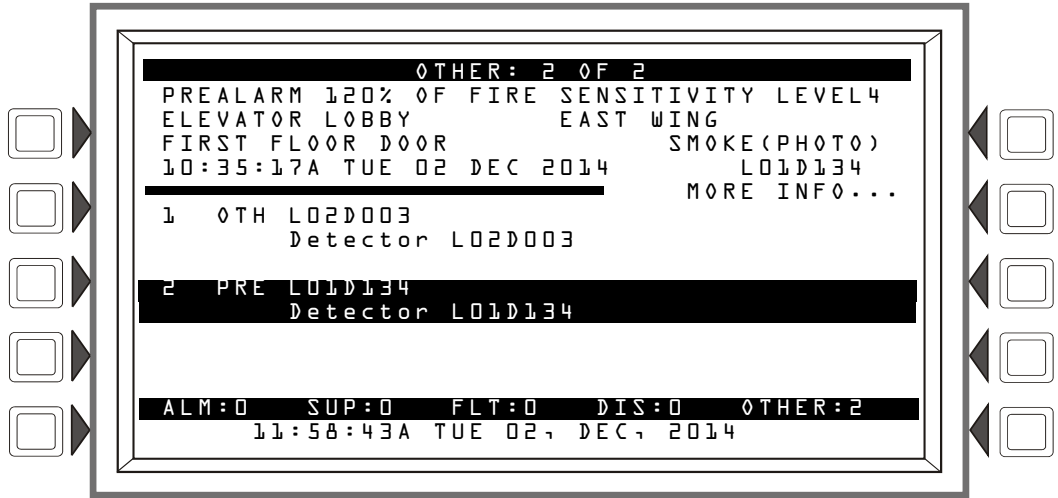


Figure 2.5 Sample Prealarm Message

2.4.2 How to Respond to a Prealarm Warning

If the control panel indicates a Prealarm, the operator can do the following:

1. Press the SILENCE BUZZER key to acknowledge the Prealarm.
2. Press the MORE INFO soft key to display the MORE INFORMATION screen and view additional information on the device and possibly preprogrammed text for recommended action. (Refer to Figure 1.9 on page 11 for an example of this screen and an explanation of its fields.)
3. Investigate and correct the condition causing the Prealarm.

NOTE: An Alert Prealarm automatically restores to normal when the detector obscuration reading drops below the programmed prealarm level.

4. Press the RESET key if the Prealarm message does not clear when the condition causing it is cleared.

A subsequent alarm condition for this detector clears the Action indication from the panel display.

2.4.3 Interpreting Type ID Codes

The Type ID code that displays in a prealarm message is related to the type and function of the detector point that initiates the prealarm. For example, a detector with a SMOKE(PHOTO) Type ID code means that the detector is a photoelectric type detector. If the Type ID code is unfamiliar, refer to Appendix A, “Software Type ID Codes”, on page 63. This appendix is an alphabetical list of Type ID codes and an explanation of each.

2.5 Supervisory Signal Event

2.5.1 How the Control Panel Indicates an Active Supervisory

The system indicates a Supervisory alarm when a monitor module point programmed with a supervisory Type Code activates. The panel will react differently depending on whether or not there are higher priority unacknowledged events.

When no higher priority unacknowledged events exist, the control panel:

- Produces a warbling audible tone (if the piezo is enabled)
- Activates the Supervisory relay
- Illuminates the SUPERVISORY LED (yellow)
- Displays a Type Code that indicates the type of supervisory signal being generated
- Displays SUPERVISORY in the upper left corner of the panel display along with information specific to the device
- Sends a Supervisory message to the History buffer, installed printer and annunciators.

When an unacknowledged event with a higher priority exists, the control panel retains the indications of the higher priority event (the message, lit LED, audible tone, etc.) while activating the Supervisory relay if it is selected for supervision, flashing the SUPERVISORY LED, and sending a Supervisory message to the history buffer, installed printer and annunciators. If there are silenced alarms (the ALARM DEVICES SILENCED LED is lighted), a Supervisory alarm will resound the panel sounder.

Following is a typical supervisory message that would appear on a panel display:

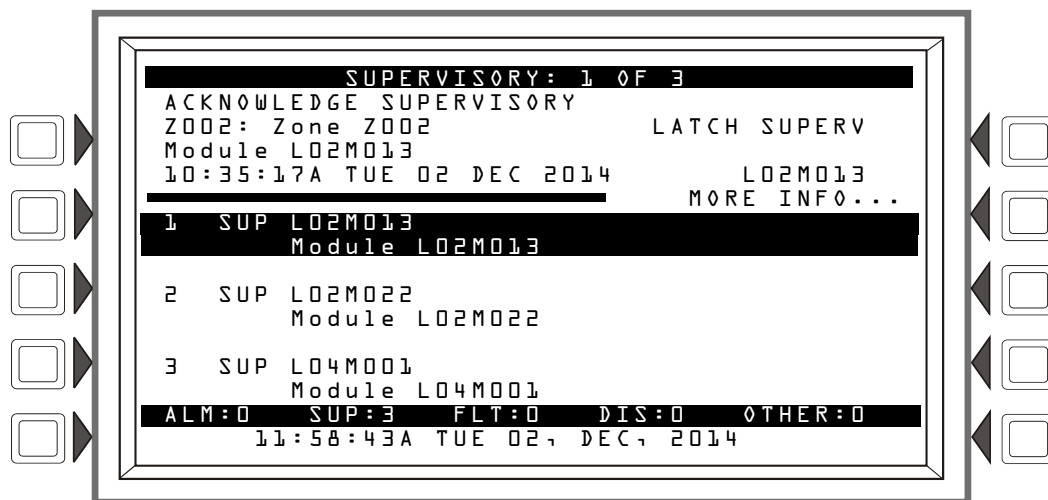


Figure 2.6 Sample Supervisory Message

2.5.2 How to Respond to an Active Supervisory

If the control panel indicates a Supervisory condition, the operator can do the following:

1. Press the SILENCE BUZZER key to acknowledge the Supervisory message.
2. Press the MORE INFO soft key to display the MORE INFORMATION screen and view additional information on the device and possibly preprogrammed text for recommended action. (Refer to Figure 1.9 on page 11 for an example of this screen and an explanation of its fields.)
3. Investigate and correct the condition causing the Supervisory.



NOTE: A supervisory condition caused by a device with a “tracking” type code automatically clears and restores the panel to normal when the condition causing its activation disappears.

4. Press the RESET key to clear any supervisory condition caused by a device with a latching type code: the supervisory will not automatically clear when the condition causing it is cleared. Latching supervisory type codes are WATERFLOW S, LATCH SUPERV, and SPRINKLR SYS.

The panel will send a system normal message to the History buffer, installed printer and annunciators.

2.5.3 How to Interpret Type Codes

The Type Code that displays in the Supervisory message indicates the function of the point that initiates the Supervisory. For example, a monitor module with a WATERFLOW S Type Code means that the module monitors the state of a waterflow switch. If the Type ID code is unfamiliar, refer to Appendix A, “Software Type ID Codes”, on page 63. This appendix is an alphabetical list of Type ID codes and an explanation of each.

2.6 CO Alarm Event

2.6.1 How the Control Panel Indicates a CO Alarm

When a CO alarm occurs on a detector or monitor module with a CO type code, the control panel does the following:

- Produces a pulsed audible tone (if the piezo is enabled)
- Illuminates the OTHER LED (yellow)

- Displays CO ALARM in the upper left corner of the display, a Type Code that indicates the type of device that activated the CO alarm, and other information specific to the device.
- Sends a CO Alarm message to the History buffer and installed printer and annunciators
- Latches the control panel in CO alarm. (You cannot return the control panel to normal operation until you correct the alarm condition and reset the control panel)
- Initiates any Control-By-Event actions. Activates CBE position 4.
- Activates Special Function Zone 18 (ZF18)

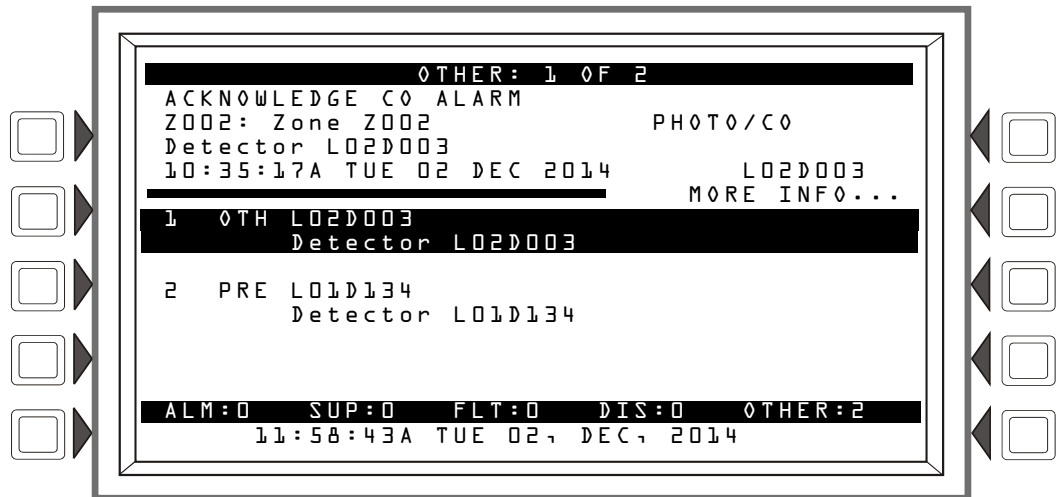


Figure 2.7 CO Alarm Message Display Example

2.6.2 How to Respond to a CO Alarm

If the control panel indicates a fire alarm, the operator can do the following:

- To silence the panel sounder:

Press the **SILENCE BUZZER** soft key. The local sounder will silence and the **OTHER LED** will change from flashing to steady. The control panel will send an acknowledge message to the panel display, history buffer, installed printers and annunciators.
- To silence any activated outputs that are programmed as silenceable:

Press the **MUTE ALARM DEVICES** key. **ALARM DEVICES SILENCED LED** lights steady. The control panel sends a Signal Silenced message to the History buffer, installed printers and annunciators.
- 5. Check the Alarm message for its location and type. Press the **MORE INFO** soft key to display the **MORE INFORMATION** screen and view additional information on the device and possibly preprogrammed text for recommended action. (Refer to Figure 1.9 on page 11 for an example of the this screen and an explanation of its fields.)
- 6. Correct the condition causing the CO alarm.
- 7. When the CO alarm condition is corrected, press the **RESET** key to return the control panel to normal operation (indicated by the “System Normal” message). The control panel sends a “System Normal” message to the panel display, history buffer and installed printer.

2.6.3 Interpreting Type ID Codes

The Type ID code that displays in the CO alarm message is related to the type and function of the point that initiates the CO alarm. For example, a monitor module with a **CO MONITOR** Type ID code means that the monitor module monitors a conventional CO detector. If the Type ID code is unfamiliar, refer to Appendix A, “Software Type ID Codes”, on page 63. This appendix is an alphabetical list of Type ID codes with an explanation of each.

2.7 CO Prealarm Event

The CO Pre-alarm function is used to receive an early warning of potential or incipient CO conditions.

2.7.1 How the Control Panel Indicates a CO Pre-alarm

When a detector activates a CO Pre-alarm, the control panel does the following if there are no higher priority unacknowledged events:

- Pulsed the panel sounder (if the piezo is enabled)
- Illuminates the OTHER LED (yellow)
- Displays CO PREALARM in the upper left corner of the LCD, the type code and other information specific to the detector as shown in Figure 2.8.
- Sends a CO Pre-alarm message to the History buffer, installed printer and annunciators.
- Activates CBE position 5.
- Activates Special Function Zone 19 (ZF19)

When an unacknowledged event with a higher priority exists, the control panel retains indications of the higher priority event (the message, lit LED, audible tone, etc.) while flashing the OTHER LED and sending a CO Prealarm message to the History buffer, installed printer and annunciators.

The following is a sample screen for a CO Pre-alarm message.

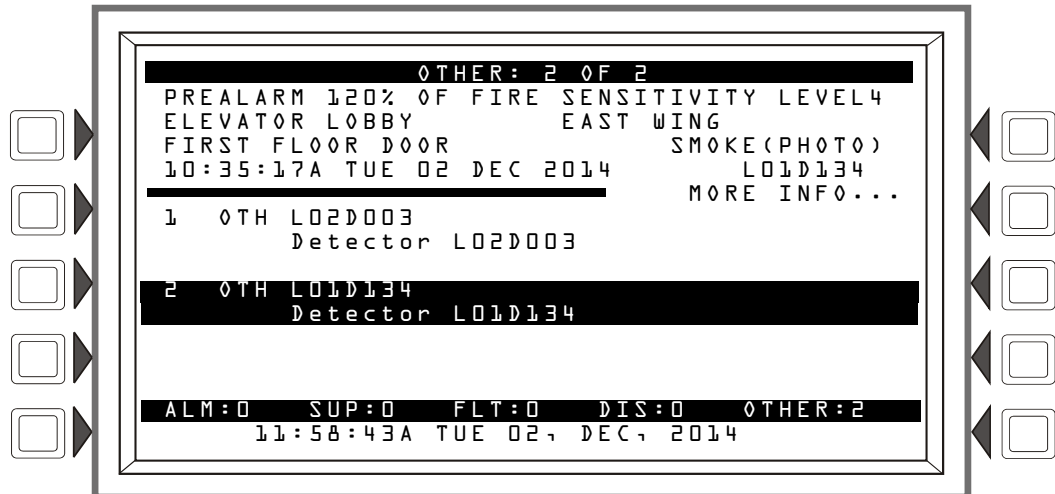


Figure 2.8 Sample CO Prealarm Message

2.7.2 How to Respond to a CO Pre-Alarm Warning

If the control panel indicates a Prealarm, the operator can do the following:

1. Press the SILENCE BUZZER key to acknowledge the CO Prealarm.
2. Press the MORE INFO soft key to display the MORE INFORMATION screen and view additional information on the device and possibly preprogrammed text for recommended action. (Refer to Figure 1.9 on page 11 for an example of this screen and an explanation of its fields.)
3. Investigate and correct the condition causing the CO Prealarm.

2.7.3 Interpreting Type ID Codes

The Type ID code that displays in a CO prealarm message is related to the type and function of the detector point that initiates the CO prealarm. For example, a detector with a PHOTO/CO Type ID code means that the detector is a photo/CO type detector. If the Type ID code is unfamiliar, refer to Appendix A, “Software Type ID Codes”, on page 63. This appendix is an alphabetical list of Type ID codes and an explanation of each.

2.8 Mass Notification Alarm Event

2.8.1 How the Control Panel Indicates a Mass Notification Alarm

When an Mass Notification initiating device (monitor module) activates, the control panel does the following:

- Produces a steady audible tone (if the piezo is enabled)
- Does not activate the System Alarm relay(s).
- Illuminates the OTHER LED
- Displays MN ALARM in the upper left corner of the display, a Type Code that indicates the type of device that activated the alarm, and other information specific to the device. The message occupies the top four lines of the screen, replacing the System Normal message as shown in Figure 2.9 below. Refer to “Mass Notification Events” on page 8 for a full description of each message field
- Sends an MN Alarm message to the History buffer and installed printer and annunciators
- Latches the control panel in MN alarm. (You cannot return the control panel to normal operation until you correct the alarm condition and reset the control panel). If a fire condition is present on the control panel, a second system reset may be required to clear the MN alarm, depending on MN Priority programming. Refer to the *AFP-3030 Programming Manual*.
- Activates any devices programmed as General Pending
- Activates special zone ZF20.
- Initiates any Control-By-Event actions
- Does not activates the general alarm zone (Z000) or any devices programmed as General Alarm or Alarm Pending
- Does not cause any devices programmed as “Resound on Fire” to resound.

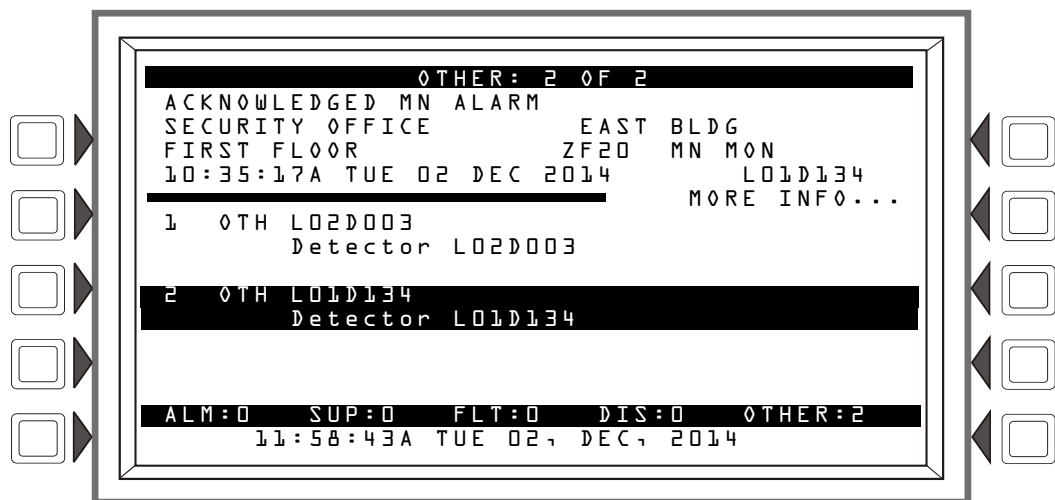


Figure 2.9 Mass Notification Alarm Message Display Example

2.8.2 How to Respond to an MN Alarm

If the control panel indicates a MN alarm, the operator can do the following:

1. To silence the panel sounder:
Press the SILENCE BUZZER key. The local sounder will silence. The control panel will send an acknowledge message to the panel display, history buffer, installed printers and annunciators. If more than one MN alarm is present on the control panel, Acknowledge must be pressed for each alarm.
2. To silence any activated outputs that are programmed as silenceable:

Press the **MUTE ALARM DEVICES** key. **ALARM DEVICES SILENCED LED** light steady. The control panel sends a Signal Silenced message to the History buffer, installed printers and annunciators.

NOTE:

If MN events have priority over fire events, any active silenceable devices that were activated by the fire event will silence when the MN Alarm occurs.

If fire events have priority over MNS events, silenceable outputs will remain active when an MN Alarm occurs until **MUTE ALARM DEVICES** is pressed or a system reset is initiated.

3. Check the MN Alarm message for its location and type. Press the **MORE INFO** soft key to display the **MORE INFORMATION** screen and view additional information on the device and possibly preprogrammed text for recommended action. (Refer to Figure 1.9 on page 11 for an example of the this screen and an explanation of its fields.)
4. Correct the condition causing the MN alarm.
5. When the alarm condition is corrected, press the **RESET** key to return the control panel to normal operation (indicated by the “System Normal” message). The control panel sends a “System Normal” message to the panel display, History buffer and installed printer. If both fire and MN alarms are present on the control panel and MN events have priority over fire events, the initial reset will clear the MN alarm from the control panel. If fire has priority over MN events, a second reset must be initiated to clear the MN alarm from the panel.

2.8.3 Interpreting Type ID Codes

The Type ID code that displays in the fire alarm message is related to the type and function of the point that initiates the fire alarm. For example, a monitor module with a **MN MON** Type ID code means that the monitor module connects to a mass notification device. If the Type ID code is unfamiliar, refer to Appendix A, “Software Type ID Codes”, on page 63. This appendix is an alphabetical list of Type ID codes with an explanation of each.

2.9 Mass Notification Supervisory Event

An MN Supervisory point event will occur when a monitor module programmed with an MN supervisory type code activates.

2.9.1 How the Control Panel Indicates an MN Supervisory Point Event

The panel will react differently depending on whether or not there are higher priority unacknowledged events.

When no higher priority unacknowledged events are exist, the control panel:

- Produces a warbling audible tone (if the piezo is enabled)
- Activates the Supervisory relay and any devices programmed as General Supervisory and General Pending
- Illuminates the **SUPERVISORY LED** (yellow) on the fire panel and any annunciator points programmed for general supervisory
- Displays a Type Code that indicates the type of supervisory signal being generated
- Displays **MN SUPERVISORY** in the upper left corner of the panel display along with information specific to the device
- Sends a MN Supervisory message to the History buffer, installed printer and annunciators.
- Activates special zone ZF21
- Does not cause any devices programmed for “Resound on Supervisory” to resound
- Does not suppress any fire events regardless of MN/Fire priority programming

When an unacknowledged event with a higher priority exists, the control panel retains the indications of the higher priority event (the message, lit LED, audible tone, etc.), flashing the **SUPERVISORY LED**, and sending a Supervisory message to the history buffer, installed printer and annunciators. If there are silenced alarms (the **ALARM DEVICES SILENCED LED** is lighted), a Supervisory alarm will resound the panel sounder.

Following is a typical MN supervisory message that would appear on a panel display:

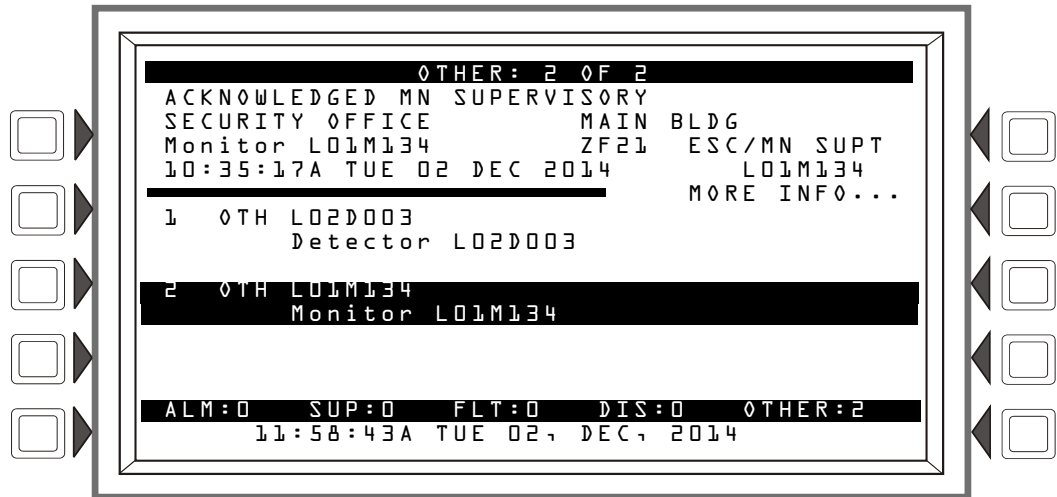


Figure 2.10 Sample MN Supervisory Point Message

2.9.2 How to Respond to an Active MN Supervisory

If the control panel indicates a MN Supervisory condition, the operator can do the following:

1. Press the SILENCE BUZZER key to acknowledge the MN Supervisory event, steady the SUPERVISORY LED, and silence the panel sounder. An acknowledge message is sent to the remote annunciators, history buffers, installed printers, and CRT-2s
2. Press the MORE INFO soft key to display the MORE INFORMATION screen and view additional information on the device and possibly preprogrammed text for recommended action. (Refer to Figure 1.9 on page 11 for an example of this screen and an explanation of its fields.)
3. Investigate and correct the condition causing the Supervisory.
4. **For tracking MN Supervisory events:** If the supervisory condition was initiated by a device that is programmed with an MN supervisory type code that tracks, the panel will return to Systems Normal once the condition has been corrected.
For latching MN Supervisory events: If the supervisory condition was initiated by a device that is programmed with an MN supervisory type code that latches upon activation or a General MN Supervisory event occurs, press the RESET key to clear the event.

The panel will send a system normal message to the History buffer, installed printer and annunciators.

2.9.3 How to Interpret Type Codes

The Type Code that displays in the MN Supervisory message indicates the function of the point that initiates the MN Supervisory. For example, a monitor module with a ESC/MN SUPT Type Code means that the module monitors the state of a mass notification device. If the Type ID code is unfamiliar, refer to Appendix A, “Software Type ID Codes”, on page 63. This appendix is an alphabetical list of Type ID codes and an explanation of each.

2.10 Mass Notification Fault Event

2.10.1 How the Control Panel Indicates a Mass Notification Fault

A mass notification fault point activates when a device programmed as MN Fault activates due to an electrical short or open. The panel will react differently depending on whether or not there are higher priority unacknowledged events.

When no higher priority unacknowledged events are exist, the control panel:

- Produces a pulsed audible tone (if the piezo is enabled)

- Flashes the SYSTEM FAULT LED on the fire panel and any annunciator points programmed for general fault
- Displays a Type Code that indicates the type of device with a fault
- Displays FAULT in the upper left corner of the panel display the type of fault and information specific to the device.
- Sends a Fault message to the history buffer, installed printer and annunciators
- Activates special zone ZF22
- Activates the Fault relay and any devices programmed as General Fault and General Pending
- Does not cause any devices programmed as “Resound on Fault” to resound
- Sends a Fault message to the proprietary receiver via the network, if applicable

When an unacknowledged event with a higher priority exists, the control panel retains the indications of the higher priority event (the message, lit LED, audible tone, etc.) illuminating the SYSTEM FAULT LED, and sending a Fault message to the history buffer, installed printer and annunciators.

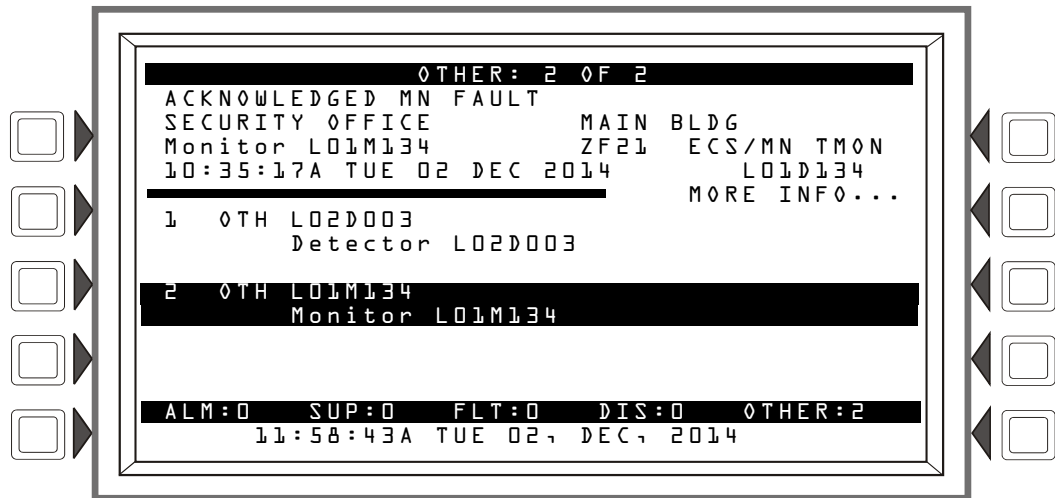


Figure 2.11 Sample Message for MN Fault

2.10.2 How to Respond to a Mass Notification Fault

If the control panel indicates a fault, the operator can do the following:

1. Press the SILENCE BUZZER key to silence the panel sounder.
The control panel sends an acknowledge message to the History buffer, installed printers and annunciators.
2. Check the fault message for an indication of the fault.
Press the MORE INFO soft key to display the MORE INFORMATION screen and view additional information on the device and possibly preprogrammed text for recommended action. (Refer to Figure 1.9 on page 11 for an example of the this screen and an explanation of its fields.)
3. Correct the condition causing the fault. If the fault clears, the control panel sends a Clear Fault message to the History buffer, installed printers and annunciators.

If all faults clear and no supervisory signals or fire alarms exist, the control panel does the following:

- Returns to Normal operation (indicated by the “System Normal” message)
- Sends a “System Normal” message to the panel display, History buffer, installed printers and annunciators
- Restores faults automatically - even if faults are not acknowledged

2.11 Disabled Points Event

The control panel indicates disabled points by displaying a screen for each disabled detector, monitor module, and control/relay module. Disabled points do not cause an alarm or any Control-by-event activity. If more than one point is disabled, the control panel automatically displays each point in the sequence in which the point was disabled.



CAUTION:

WHEN A ZONE IS DISABLED, ANY INPUT AND OUTPUT DEVICES MAPPED TO THE ZONE ARE DISABLED IF THE ZONE IS THE POINT'S PRIMARY ZONE. (THE PRIMARY ZONE IS THE ZONE IN THE FIRST POSITION OF THE ZONE MAP.)

When one or more points are disabled, the control panel does the following:

- Holds all disabled output points in the off-state
- Illuminates the DISABLE LED
- Sends a Disabled Point message to the History buffer, installed printer and annunciators
- Displays a message for each disabled point, with **DISABLED** in the upper left corner of the LCD as well as other information about the point.

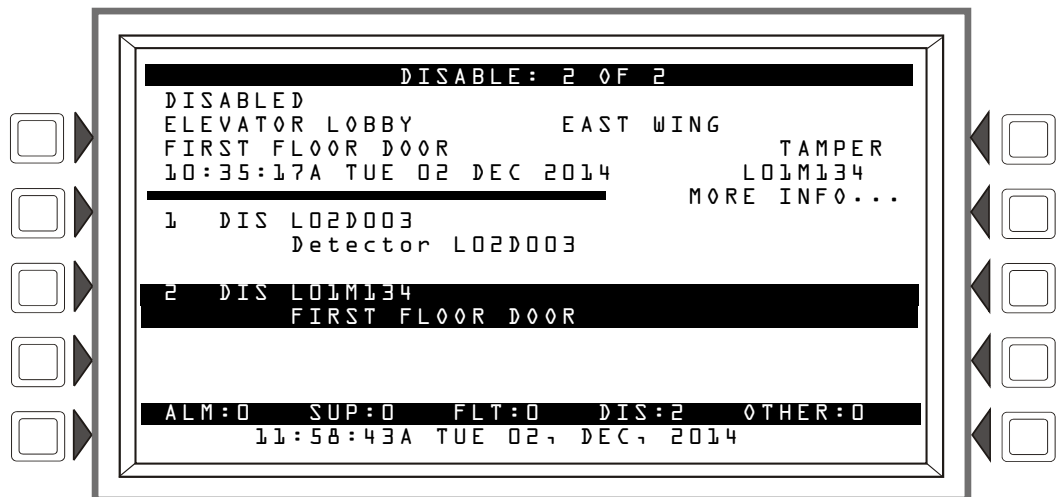


Figure 2.12 Sample Disabled Point Message

2.12 Active Event

2.12.1 How the Control Panel Indicates an Active Fire Control Point

A point with a Type ID of FIRE CONTROL is used for air handler shutdown, intended to override normal operating automatic functions.

Activation of a FIRE CONTROL point causes the control panel to do the following:

- Initiates the monitor module Control-by-Event
- Send a message to the panel display, History buffer, installed printer and annunciators
- Does NOT light an indicator at the control panel
- Displays **ACTIVE** in the upper left corner of the LCD, as well as a FIRE CONTROL Type Code and other information specific to the device

2.12.2 How the Control Panel Indicates an Active Non-fire Point

A point with a Type ID of NON-FIRE is used for energy management or other non-fire situations. NON-FIRE point operation does not affect control panel operation, nor does it display a message at the panel LCD. Activation of a NON-FIRE point activates CBE—but does not cause any indication

on the control panel. For example, you can program a NON-FIRE point to turn lights in a zone to a lower setting when activated. In this case, when the point activates the control panel activates the point's CBE to turn the lights down without any audio or visual indication on the control panel.

2.13 Operation of Special System Timers, Output Delay Time, and Heavy Loads Output Delay

2.13.1 System (Panel) Timers

There are user-programmable time delays for four specific functions: Alarm Verification, AC Fail, Silence Inhibit, and Auto Silence. Refer to this panel's programming manual for instructions on viewing or modifying these values. (They may be viewed only in programming mode.)

Alarm Verification Timer (VERIFY TIME)

A timer that directs the control panel to ignore a fire alarm for a smoke detector, programmed for Alarm Verification, while the Alarm Verification Timer is counting. The timer value can be set from 0-60 seconds, and may not exceed 30 seconds for ULC installations. Table 2.3 contains a summary of how the Alarm Verification Timer works.

If this event occurs	The control panel does this
A second fire alarm occurs while the Alarm Verification Timer is counting	Ignores the Alarm Verification Timer and alarms are reported by the panel for both detectors.
The Alarm Verification Timer elapses and a fire alarm still exists	Activates the fire alarm
The Alarm Verification Timer expires and a fire alarm no longer exists	The control panel returns to normal operation and increments the verification counter

Table 2.3 Alarm Verification Timer Operation

AC Fail Delay Timer

This timer delays the time from the start of AC failure to when the fault is reported. The timer value may be set to none, or from 1-12 hours. A value of "none" will cause immediate notification. The onboard fault relay and municipal box output will activate when the countdown is complete. Note that this panel notifies the central station communicator as soon as AC failure occurs, and the central station communicator follows its own programmed schedule for reporting the failure.

Silence Inhibit Timer

This timer disables the MUTE ALARM DEVICES and RESET key function for the programmed time (MM:SS seconds) when a fire alarm occurs. A Silence Inhibit Timer starts at the first fire alarm. A panel reset is required to re-enable this timer. It can be set with a value from 0 (the timer is disabled) to 5 minutes.

Auto Silence Timer

This timer functions like pressing the MUTE ALARM DEVICES key. When the Auto Silence Timer reaches its programmed value (0, 10 minutes, 15 or 20 minutes, with the setting = 20 for Canadian installations), the control panel automatically shuts off all active outputs programmed as silenceable.

2.13.2 Output Delay Time

Output Delay Time is a feature that initially delays activation of outputs with ZF0 in their zone map until the Output Delay Timer has expired. This feature allows for the initial sounding of outputs only in specific areas, monitored by qualified personnel. To participate in Output Delay Time, inputs and outputs must include Special Zone ZF0 in their zone map. The Output delay Timer is programmed to a value from 60 to 180 seconds.

How the Panel Indicates a Output Delay

When an initiating device participating in Output Delay goes into alarm, the panel LCD displays a fire alarm message. (Refer to Section 2.2, “Fire Alarm Event”, on page 16.) If a second alarm occurs while the Output Delay timer is counting down, the control panel aborts the Output Delay timer countdown and activates all programmed outputs. The fire alarm LED flashes and the panel sounder pulses a steady tone. The control panel latches until the alarm is corrected and the SYSTEM RESET key is pressed to reset the panel.

How to Respond to a Output Delay Alarm

Once the Output Delay timer has begun counting down, the operator has the duration of the count-down time to respond to the alarm before the control panel automatically activates all outputs with ZF0 in their zone map and CBE linkage to the alarm. The operator can reset the panel if the alarm is determined false.

2.13.3 Heavy Loads Output Delay

The NAC Outputs on the control panel’s PSI board and modules programmed as ALARM DEV Type ID code are automatically delayed for 2 seconds.

Heavy loads, such as alerting devices that use the same power source as the control panel, shall be used with heavy load output delays to meet Standards requirements.

2.14 Direct Brigade Access (DBA) Event

2.14.1 How the Control Panel Indicates a DBA point is active



NOTE: To activate the NAC outputs on the PSI from a DBA activation, logic zone 920 must be included in their CBE.

The panel uses Logic Zone ZL920 to determine if a point with Type ID of DBA is activated. Activation of a DBA point causes the control panel to do the following:

- Logic Zone ZL920 is activated.
- The MUTE ALARM DEVICES button will not silence the alarm devices.
- The Silence Alarms Bulgin Switch will not silence the alarm devices.
- If the Silence Alarms Bulgin Switch is restored from silence while Logic Zone ZL920 is active, the active alarms will not be disabled.
- The OPERATION LED on the keypad will be off.
- The SYSTEM NORMAL LED on the ACM-ZM will be off.
- If the alarm devices are disabled, the alarm devices will not activate. When the alarm devices are enabled, the alarm devices will activate if Logic Zone ZL920 is still active.
- Does not light the ALARM DEVICES TEST LED on the keypad.
- The ALARM DEVICES TEST button will be disabled.
- The ALARM DEVICES DISABLE button will still disable the alarm devices.

2.15 Complementary Features

2.15.1 Door Switch

The door switch alerts Building Managers that the SGD has been isolated and/or the panel has been silenced; in such a scenario, there is the possibility that building occupants and the Fire Brigade will not be made aware of an emergency.

An Interlock Fault will arise if:

- The panel is silenced, and/or;

- The SGD device has been isolated

while the outer door is closed, thereby preventing alarms being resounded on the panel and the SGD from being de-isolated.

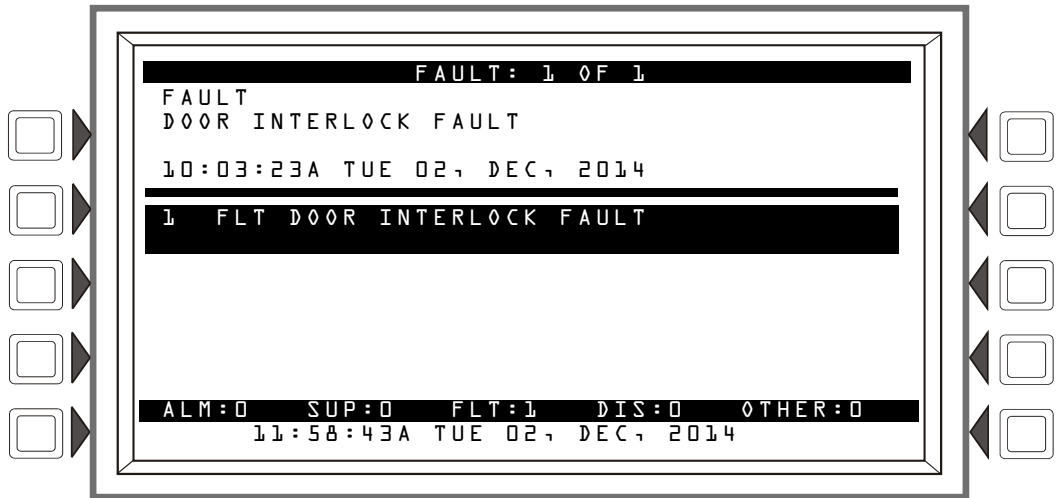


Figure 2.13 Sample Door Interlock Fault

If the outer door is left open, a Door Open supervisory event will be added to the panel.

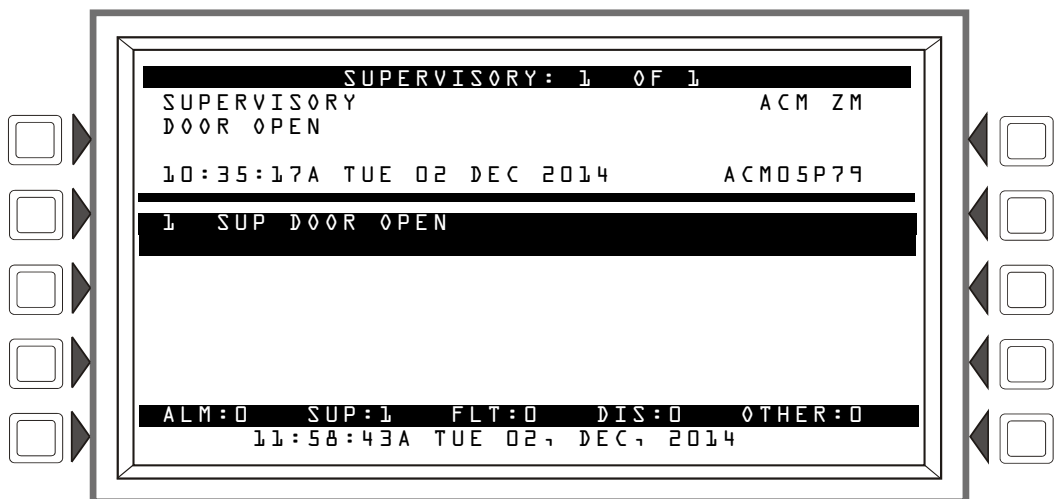


Figure 2.14 Sample Supervisory Door Open Message



NOTE: The Door Open supervisory event will always reference the point address AxxP079 by default, where 'xx' is the module address of the ACM-ZM.

2.15.2 Bulgin Switches



NOTE: The Bulgin Switches can only be operated with Bulgin Switch keys. The Bulgin Switch keys cannot be removed if the Bulgin Switches are in the active (ON) position.

By default, the keyholes in the Silence Alarms and Evacuate Bulgin Switches are in the upright (OFF) position, as shown in Figure 2.15:

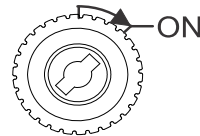


Figure 2.15 Bulgin Switches in their default (OFF) position

Silence Alarms Bulgin Switch

Turning the Silence Alarms switch ON (as shown in Figure 2.16):

- When there is one or more active alarm on the panel: the sounders are silenced and the active zones are isolated. Returning the Silence Alarms switch from ON to the OFF position will then disable all active alarms on the panel.
- When there are no active alarms on the panel: causes a Brigade Silence Fault (see Figure 2.17.) Return the Silence Alarms switch from ON to the OFF position to clear the fault.



**SILENCE ALARMS
BRIGADE USE ONLY**

Figure 2.16 Silence Alarms Bulgin Switch in the ON position

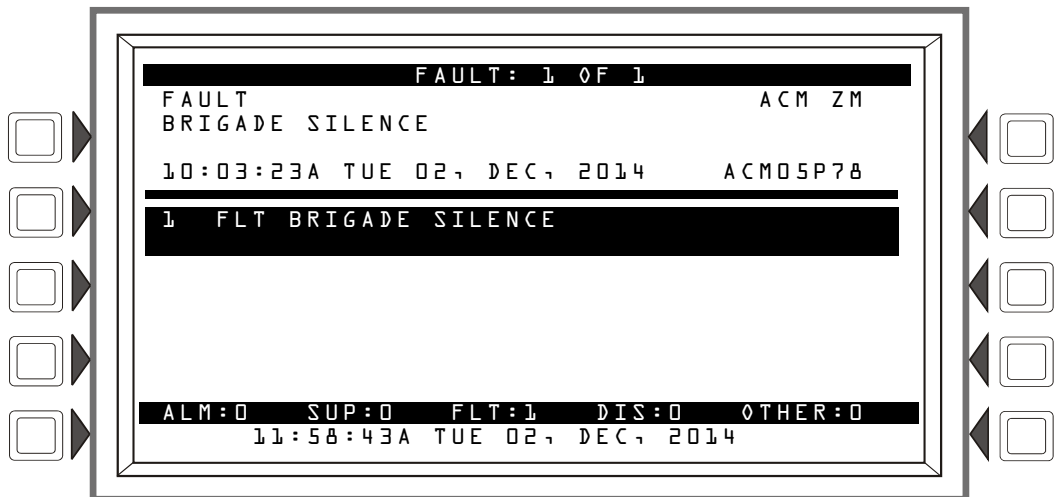
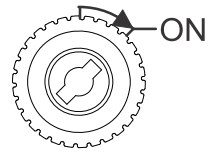


Figure 2.17 Sample Brigade Silence Fault

Evacuation Bulgin Switch

Turning the Evacuation switch ON, as shown in Figure 2.18, will activate all alarm devices on the panel, and create a Trial Evacuation supervisory event (see Figure 2.19.) Returning the switch from ON to the OFF position deactivates all alarm devices on the panel, and clears the Trial Evacuation supervisory event.



EVACUATION

Figure 2.18 Evacuation Bulgin Switch in the ON position

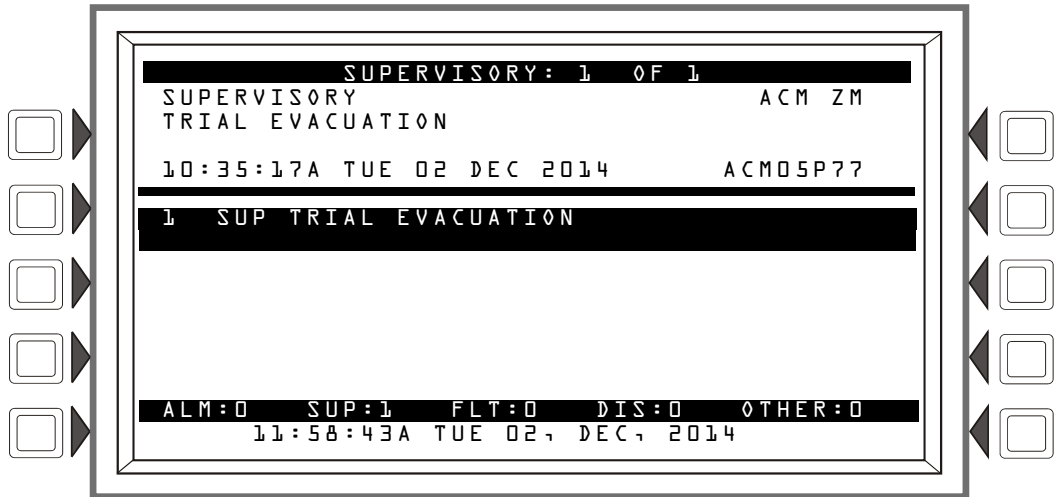


Figure 2.19 Sample Trial Evacuation Event

Section 3: Read Status

This section contains instructions and screen illustrations for Read Status functions and menus using the AFP-3030 display.

Read Status allows viewing of detailed device status information without entering a password or halting full fire protection. Information can be viewed while a fire alarm or fault condition exists. Read Status screens are refreshed periodically with up-to-date information.

Read Status can be reached from the Main Menu screen, which is accessible from the System Normal screen and from most other screens by pressing the BACK soft key until it displays. (Refer to Figure 1.6 for an illustration of the Main Menu screen.)

Press the READ STATUS soft key on the Main Menu screen to bring up the following screen.

3.1 Point Select Screen

When READ STATUS is pressed at the Main Menu, the following screen appears.

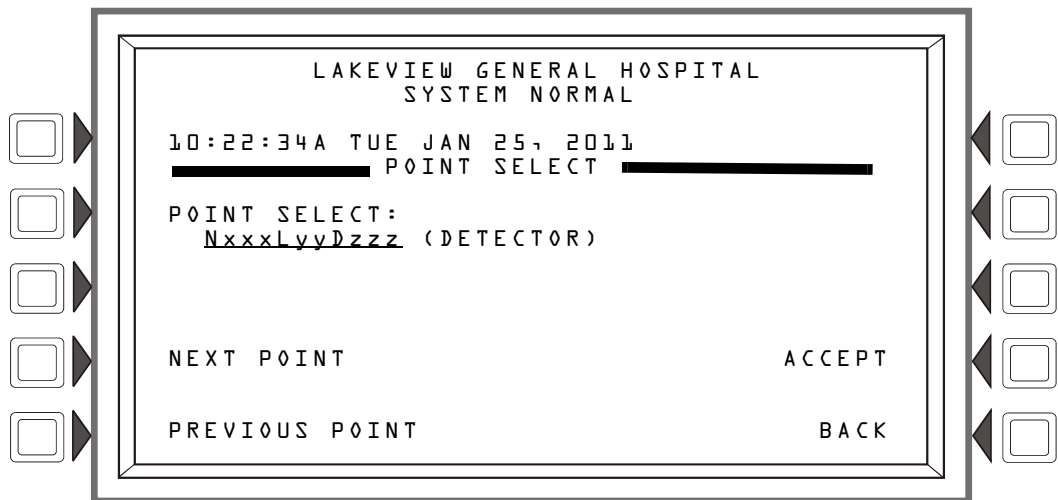


Figure 3.1 Point Select Screen for Read Status

Soft Keys

POINT SELECT - Pressing this soft key scrolls through the various device types. The types and their address formats are illustrated in Table 3.1, “Address Formats,” on page 40.

Type	Address Format*	
Detector	NxxxLyDzzz	L = Loop, yy = Loop number (1-10) D = Detector, zzz = Detector address (1-159)
Module	NxxxLyMzzz	L = Loop, yy = Loop number (1-10) M = Module, zzz = Module address (1-159)
General Zone	NxxxZyyy	Z = Zone, yyy = General Zone number (0-999)
Logic Zone	NxxxZLyyyy	ZL = Logic Zone, yyyy = Logic Zone number(1-1000)
Annunciator Point	NxxxAxxPyy	A = Annunciator, xx = ACS address (1-32), P = Point, yy = Point address (1-96)
PAM (Prioritized Audio Matrix)	NxxxlyyyyAzzSn	N indicates Node number, xxx = DVC/DVC-EM Node number, l indicates audio input number, yyyy = audio input number, A indicates DAA-5025 or DAA-5070 Audio Amplifier, zz = DAA address (01 through 32), S indicates DAA speaker circuit, n = DAA speaker circuit (A, B, C or D).
Release Zone	-	Not used.
Special Function Zone	NxxxZFxx	ZF = Special Function Zone, x = Special Function Zone number (00, 01 - 07, 09 - 22)
Fault Zone	NxxxZTyyy	ZT = Fault Zone, yyy = Fault Zone number (1-100)

Table 3.1 Address Formats (1 of 2)

Type	Address Format*	
DAA Speaker CKT	NxxxAyySn	N indicates Node number, xxx = DVC/DVC-EM Node number, A indicates DAA-5025 or DAA-5070 Audio Amplifier, yy = DAA address (01 through 32), S indicates Speaker circuit, n = Speaker circuit number (1-4).
* The Nxxx preface to all the above address formats refers to the node number, where N = node, xxx = the network node number.		

Table 3.1 Address Formats (2 of 2)

Enter an address to view its attributes (the cursor will be in the underlined section).

NEXT POINT/PREVIOUS POINT - Press to view next or previous point.

ACCEPT - Press to accept the displayed point for further viewing.

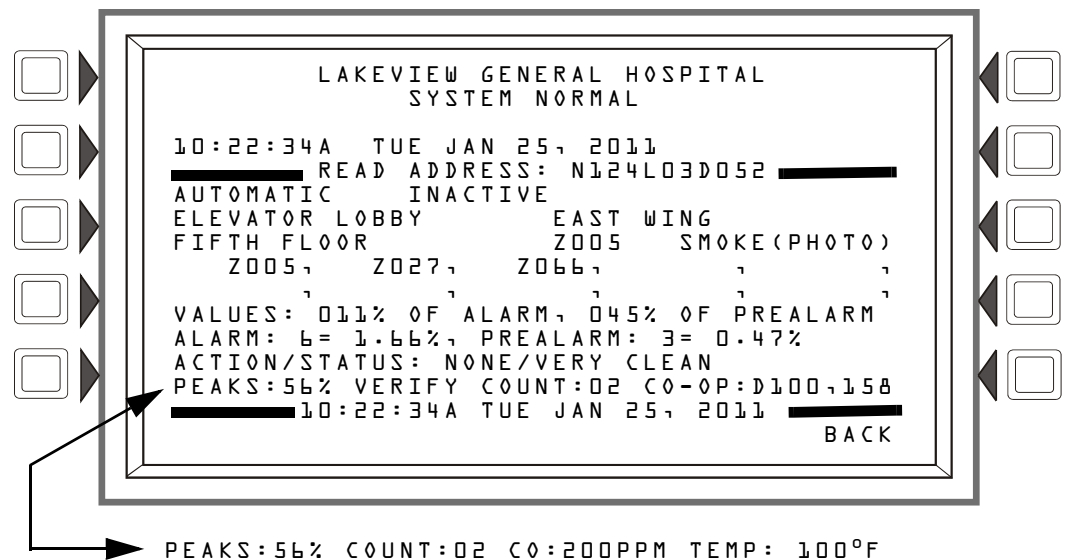
Pressing the ACCEPT soft key on the Point Select Screen will display the information that corresponds to the chosen point. Each point type has its own screen.



NOTE: The first four lines of the display may indicate an alarm for a point unrelated to the requested point information displayed below them.

3.2 Smoke Detector

When a detector address is entered into the Point Select Screen and the ACCEPT soft key is pressed, the following screen will display if the detector is a smoke detector.



For FSC-851 detectors, the values appear in line 14 above. Refer to More Information on page 11 for explanation of fields.

Figure 3.2 Smoke Detector Screen - Read Status

Display

Lines 1- 4 - This could display any current event message, or, as in this example, the System Normal message.

Line 5 - This line contains the screen title and the address of the point being read.

The area between the separator lines, lines 6-14, shows all information concerning the selected point, which is N124L03D052 in the above example.

Line 6 - Line 6 displays two statistics that display for inputs (detectors and modules) and zones; in the above example they are:

AUTOMATIC INACTIVE

The first field displays the point control. There are three designations that could appear in this field

Point Control Designation	Description
AUTOMATIC	The point is being controlled automatically by the panel.
DISABLED	The point has been disabled by an outside source.
FAULT	The point is in a fault state and is no longer functioning automatically.

The second field displays the point status. There are three designations that could appear in this field.

Point Status Designation	Description
INACTIVE	The point is currently reporting no events.
ACTIVE	The point is currently in an off-normal status.
PREALARM	The point is currently in a prealarm status.

The device is a detector (an input device) so by referring to the descriptions below, it can be determined that the point is in a normal state.

Inputs: (detectors, monitor modules, zones)

If the point is not in fault or disabled, and the point is automatically controlled by the panel, the display will be one of the following:

```

AUTOMATIC    INACTIVE
AUTOMATIC    ACTIVE
AUTOMATIC    PREALARM

```

If the point is disabled, the display will be one of the following. The Fault Status field will appear if the point is in fault.

```

DISABLED     INACTIVE    <Fault Status>*
DISABLED     ACTIVE      <Fault Status>*
DISABLED     PREALARM   <Fault Status>*

```

If the point is in fault, the display will read:

```

FAULT       INACTIVE    <Fault Status>*
FAULT       ACTIVE      <Fault Status>*
FAULT       PREALARM   <Fault Status>*

```

*The field <Fault Status> will contain one of the device fault messages listed in Table 2.1, "Point (Device) Faults," on page 19.

Line 7 - The custom label for this point.

Line 8 - Continuation of the point's custom label, first zone, and device type.

Lines 9,10 - a display of all the zones that contain the current point being read. These lines will have values in them only if the device is a detector.

Lines 11 through 14 - These lines display only if the device being read is a smoke, heat, or aspiration detector. Refer to Section 1.7.2, "More Information", on page 11 for an explanation of these fields.

Line 16 - B A C K - Press to return to the previous screen.

3.3 Heat Detector

When a detector address is entered into the Point Select Screen and the ACCEPT soft key is pressed, the following screen will display if the detector is a heat detector.

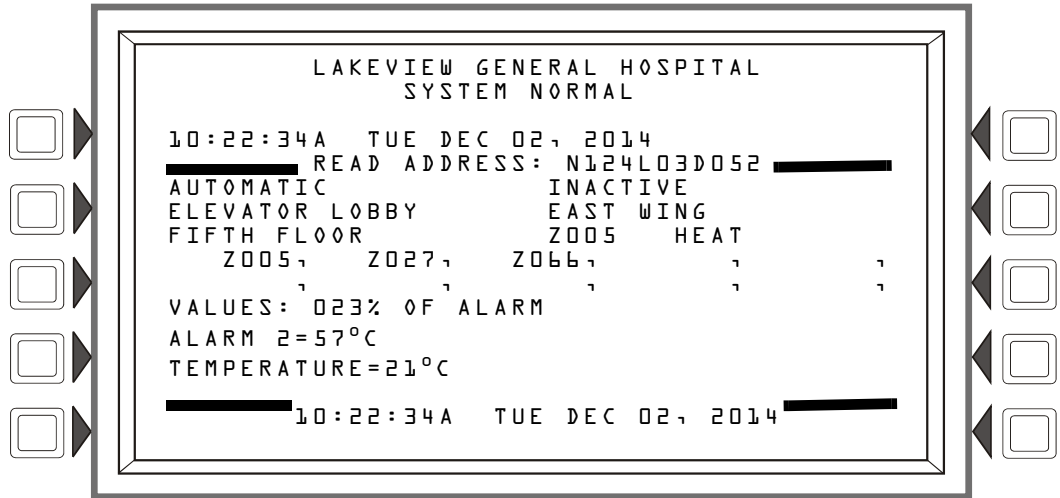


Figure 3.3 Heat Detector Screen - Read Status

Display

Lines 1 through 10 - Refer to the descriptions in Section 3.2, “Smoke Detector”, on page 41.

Line 11 - VALUES - This field indicates the percentage of alarm value being read by the detector.

Line 15 - The current time and date are displayed in this line.

Line 16 - Press BACK to return to the previous screen.

3.4 Photo/CO Detector

When a detector address is entered into the Point Select Screen and the ACCEPT soft key is pressed, the following screen will display if the detector is a smoke detector.

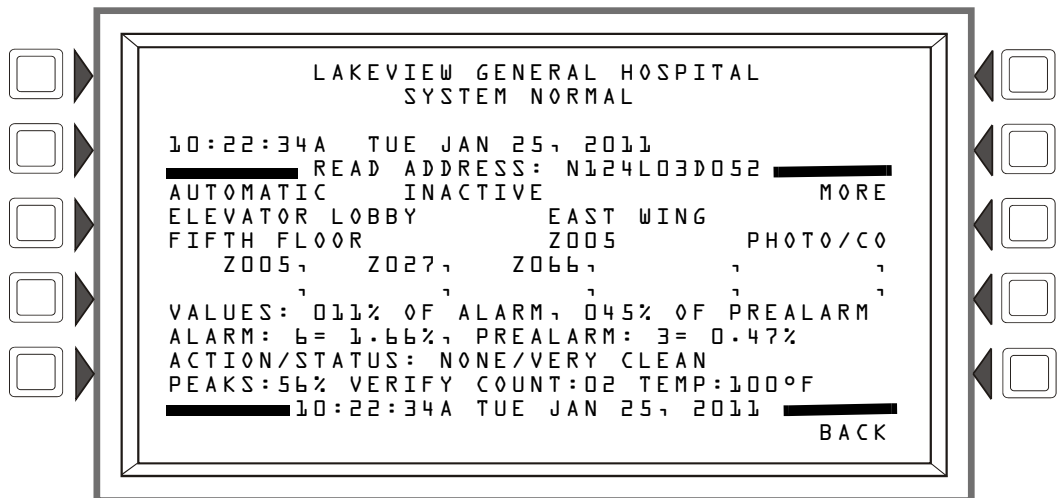


Figure 3.4 Photo/CO Smoke Detector Screen - Read Status

Display

Lines 1 through 5 - Refer to the descriptions in Section 3.2, “Smoke Detector”, on page 41.

Line 6 - Refer to the description for Status in Section 3.2, “Smoke Detector”, on page 41. The MORE option will only be displayed when performing a Read Status on a Photo/CO detector. Refer to the MORE option screen below for further details.

Lines 7 through 14 - Refer to the descriptions in Section 3.2, “Smoke Detector”, on page 41.

Line 15 - The current time and date are displayed in this line.

Line 16 - Press BACK to return to the previous screen.

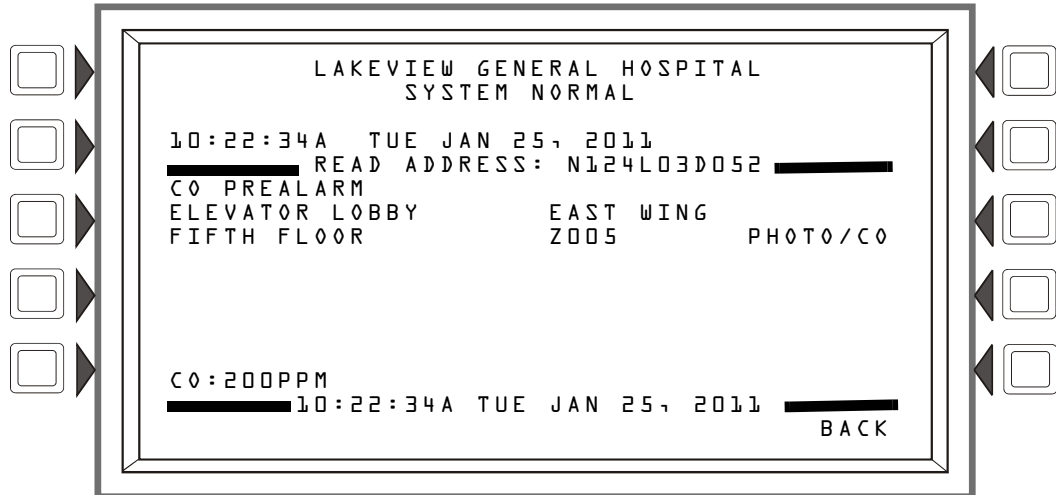


Figure 3.5 Photo/CO Smoke Detector Screen (2) - Read Status

Lines 1 through 13 - Refer to the descriptions in Section 3.2, “Smoke Detector”, on page 41.

Line 14 - CO - This field represents the level of Carbon Monoxide for the device. The value is in parts per million.

Line 15 - The current time and date are displayed in this line.

Line 16 - Press BACK to return to the previous screen.

3.5 Aspiration Detector

When a detector address is entered into the Point Select Screen and the ACCEPT soft key is pressed, the following screen will display if the detector is an aspiration detector.

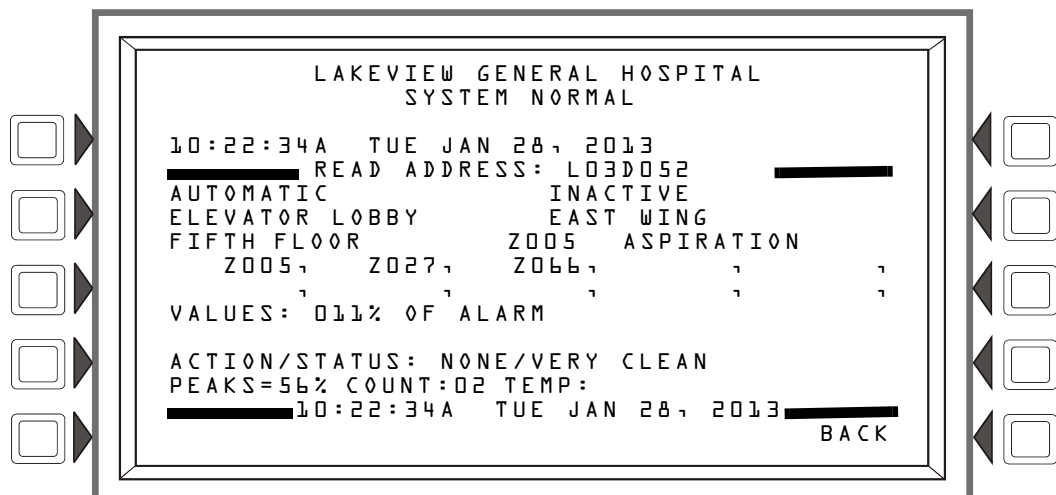


Figure 3.6 Aspiration Detector Screen - Read Status

Display

Lines 1 through 14 - Refer to the descriptions in Section 3.2, “Smoke Detector”, on page 41.

Line 15 - The current time and date are displayed in this line.

Line 16 - Press B A C K to return to the previous screen.

3.6 Monitor Module

When a module address is entered into the Point Select Screen and the ACCEPT soft key is pressed, the following screen will display if the point is a monitor module.

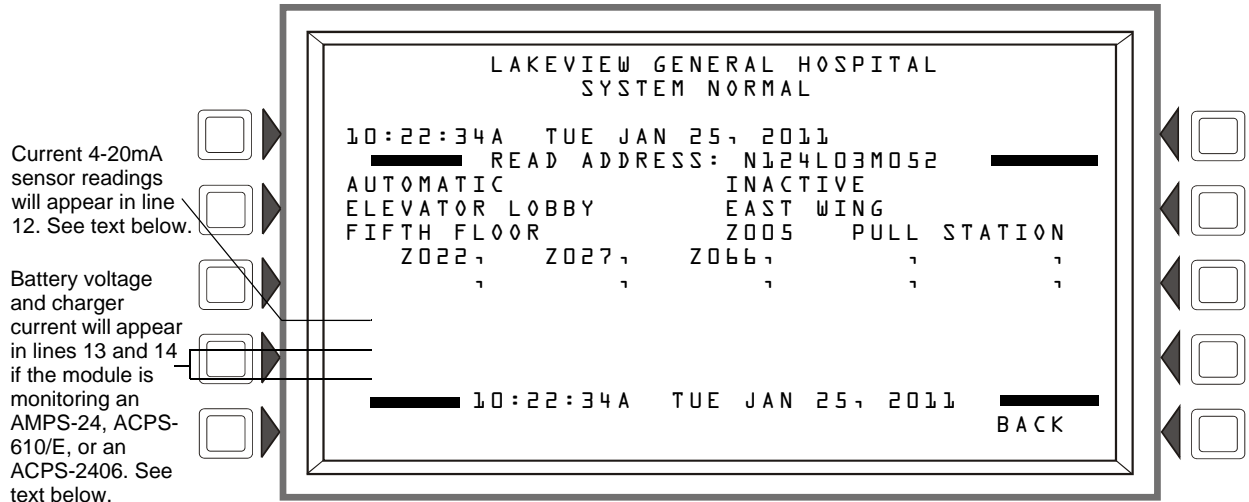


Figure 3.7 Monitor Module Screen - Read Status

Display

Lines 1 through 10 - Refer to the descriptions in Section 3.2, “Smoke Detector”, on page 41.

Line 12 - When a Read Status is performed on an FMM-4-20 module, the current 4-20 mA sensor’s reading will be displayed in the units specified in point programming.

Lines 13 and 14 - When a module is monitoring an AMPS-24, ACPS-610/E, or an ACPS-2406, information will appear in these lines in the following format.

BATTERY VOLTAGE: 27.9 VOLTS
 CHARGER CURRENT: 0.0 AMPS

Line 15 - The current time and date are displayed in this line.

Line 16 - Press B A C K to return to the previous screen.

3.7 Control Module

When a module address is entered into the Point Select Screen and the ACCEPT soft key is pressed, the following screen will display if the module is a control module.

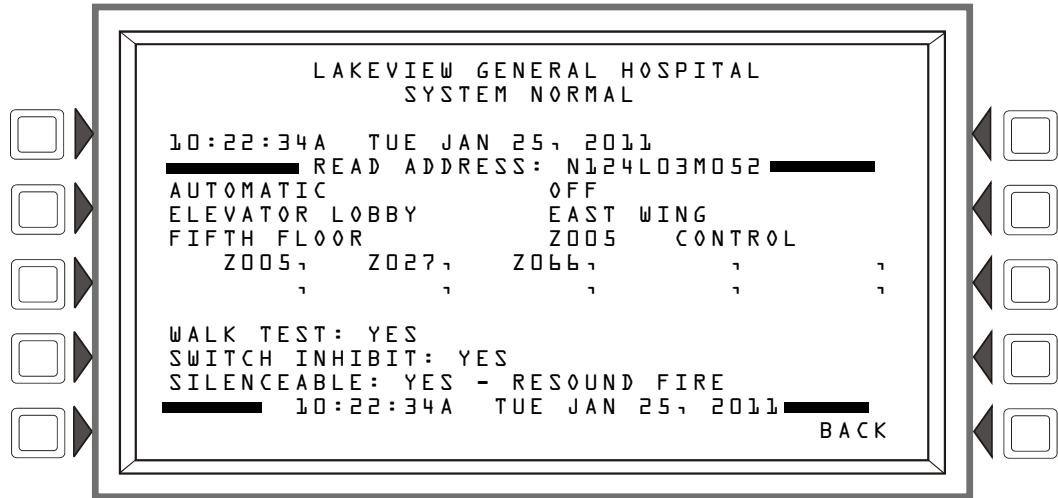


Figure 3.8 Control Module Screen - Read Status

Display

Lines 1 through 10 - Refer to the descriptions in Section 3.2, “Smoke Detector”, on page 41 with the exception of line 6, which is described below.

Line 6 - This line displays statistics that display for control module output points; in the above example they are:

```
AUTOMATIC OFF
```

The first field displays the point control. There are four designations that could appear in this field

Point Control Designation	Description
AUTOMATIC	The point is being controlled automatically by the panel.
MANUAL	The point has been forced into manual control state by an outside source.
DISABLED	A status change other than a change to MANUAL control has caused the point to go off automatic control.
FAULT	

The second field displays the point status. There are three designations that could appear in this field.

Point Status Designation	Description
OFF	The point is currently not activated.
ON	The point is currently activated.
OFF-HOOK	The telephone point is currently off-hook.

The device is a control module (an output device) so by referring to the descriptions below, it can be determined that the point is in a normal state.

Outputs: (Control Modules)

If the point is not in fault or disabled and the status is Automatic, the display will read:

```

AUTOMATIC OFF
AUTOMATIC ON
AUTOMATIC OFF-HOOK
  
```

If the point has been forced into a manual control state, the display will read as follows. <Fault Status> will appear when there is a point fault.

```
MANUAL OFF <Fault Status>*
```

MANUAL	ON	<Fault Status>*
MANUAL	OFF-HOOK	<Fault Status>*

If the point is disabled, the display will read as follows. <Fault Status> will appear when there is a point fault.

DISABLED	OFF	<Fault Status>*
DISABLED	ON	<Fault Status>*
DISABLED	OFF-HOOK	<Fault Status>*

If the point is in fault, the display will read:

FAULT	OFF	<Fault Status>*
FAULT	ON	<Fault Status>*
FAULT	OFF-HOOK	<Fault Status>*

*The field <Fault Status> will contain one of the device fault messages listed in Table 2.1, "Point (Device) Faults," on page 19.

Line 11 - blank.

Line 12 - WALK TEST - Displays YES if the device sounds during audible Walk Test.

Line 13 - SILENCEABLE - Displays YES if the operator can manually silence an activated output. The output resounds for fire.

Line 14 - SWITCH INHIBIT: YES - Displays YES if the operator can not manually activate an output.

Line 15 - The current time and date are displayed in this line.

Line 16 - Press BACK to return to the previous screen.

3.8 General Zone

When a general zone address is entered into the Point Select Screen and the ACCEPT soft key is pressed, the following screen will display:

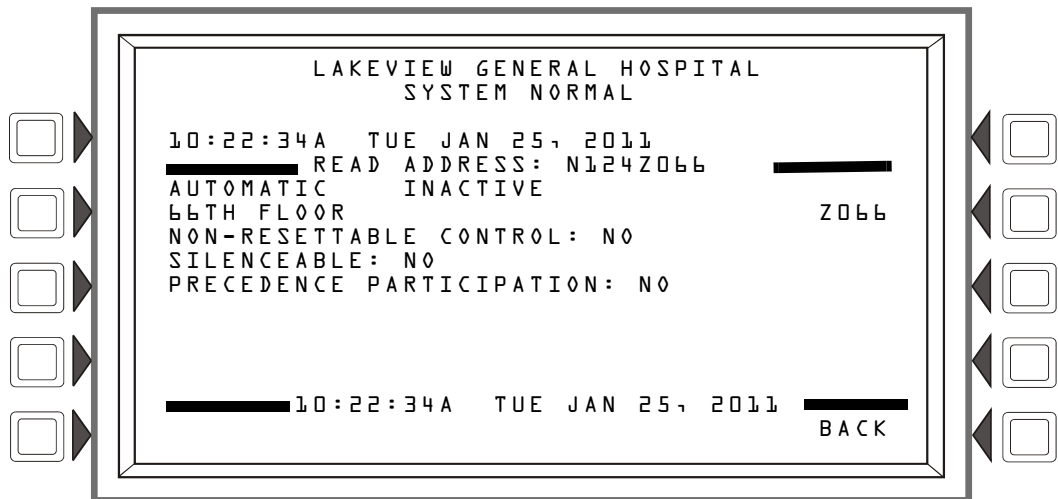


Figure 3.9 General Zone Screen - Read Status

Display

Lines 1 through 7 - Refer to the descriptions in Section 3.2, "Smoke Detector", on page 41.

Line 8 - The non-resettable control setting for this zone is displayed on this line.

Line 9 - The silenceable setting for this zone is displayed on this line.

Line 15 - the current time and date

3.9 Logic Zone

When a logic zone address is entered into the Point Select Screen and the ACCEPT soft key is pressed, the following screen will display:

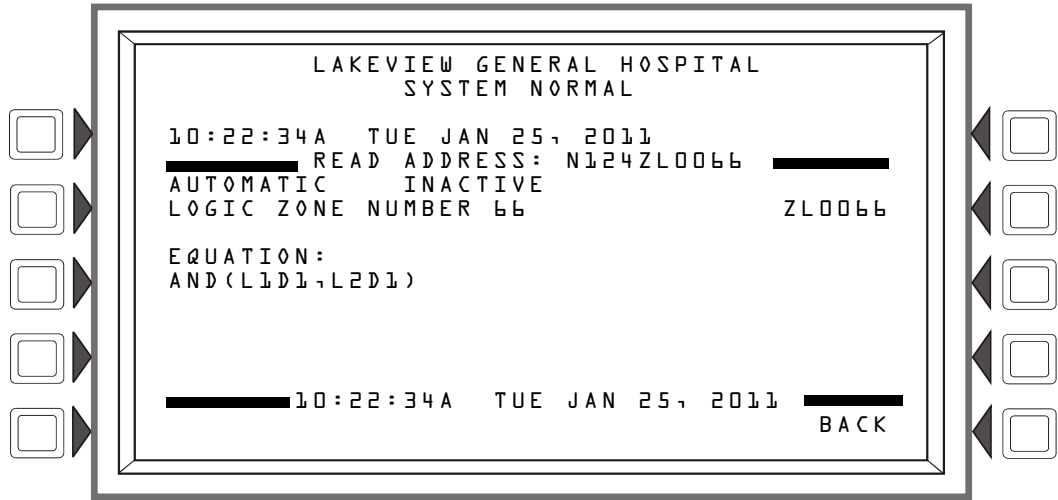


Figure 3.10 Logic Zone Screen - Read Status

Display

Lines 1 through 6 - Refer to the descriptions in Section 3.2, “Smoke Detector”, on page 41.

EQUATION: The logic equation for this logic zone is displayed here

Line 15 - Current time and date.

3.10 Special Function Zone

When a special function zone address is entered into the Point Select Screen and the ACCEPT soft key is pressed, the following screen will display:

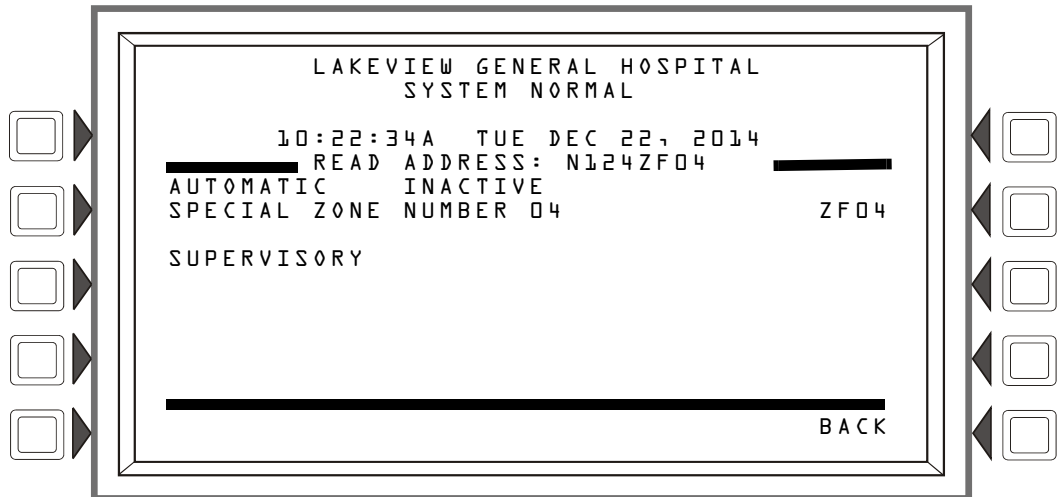


Figure 3.11 Special Function Zone Screen - Read Status

Display

Lines 1 through 6 - Refer to the descriptions in Section 3.2, “Smoke Detector”, on page 41.

Line 7 - The special zone number and function is displayed here.

3.11 Fault Zone

When a Fault zone address is entered into the Point Select Screen and the ACCEPT soft key is pressed, the following screen will display:

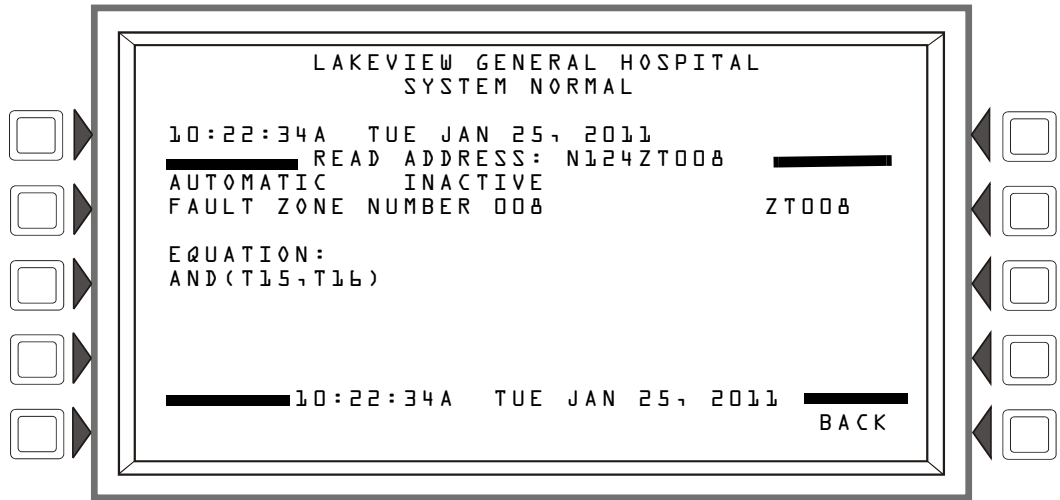


Figure 3.12 Fault Zone Screen - Read Status

Display

Lines 1 through 6 - Refer to the descriptions in Section 3.2, “Smoke Detector”, on page 41.

EQUATION: The equation for this Fault zone is displayed here.

Line 15 - Current time and date.

3.12 Annunciator

When an annunciator address is entered into the Point Select Screen and the ACCEPT soft key is pressed, the following screen will display if the point is a monitor module.

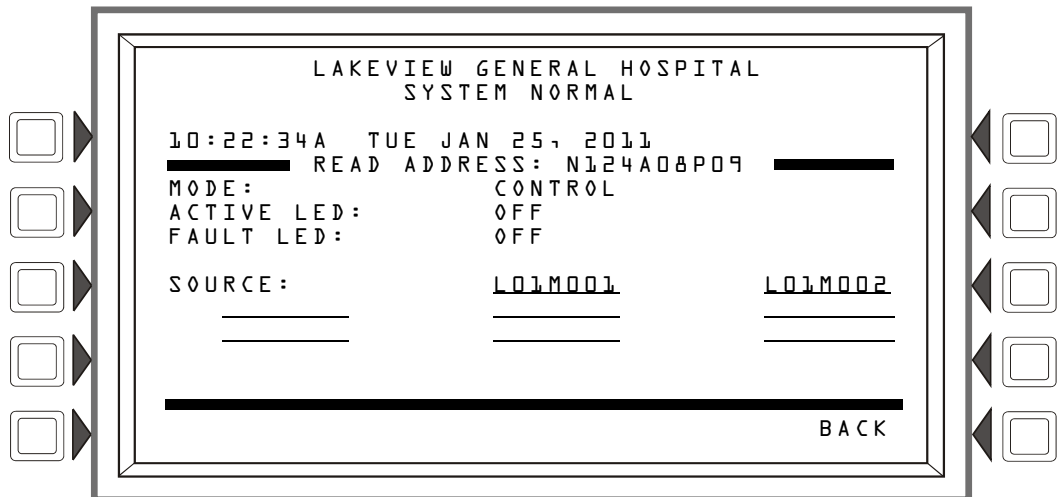


Figure 3.13 Annunciator Screen - Read Status

Display

Lines 1- 4 - This could display any current event message, or, as in this example, the System Normal message

Line 5 - Screen title and the address of the point being read.

Line 6 - Displays the annunciator mode.

Line 7 - Displays the state of the active LED.

Line 8 - Displays the state of the fault LED.

Line 10 - Displays the annunciator source(s).

3.13 DAA Speaker Circuit

When a DAA Speaker circuit address is entered into the Point Select Screen and the ACCEPT soft key is pressed, the following screen will display.

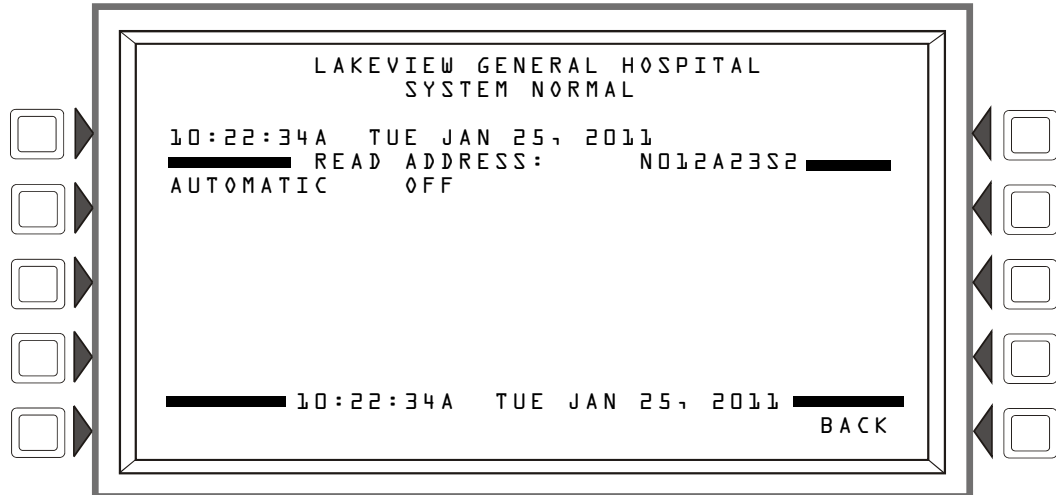


Figure 3.14 Speaker Point - Read Status

Lines 1- 4 - This could display any current event message, or, as in this example, the System Normal message

Line 5 - Screen title and the address of the point being read.

Line 6 - Refer to the line 6 description in “Control Module” on page 46 for explanations of the messages that can appear in this line.

3.14 PAM Points

When a PAM (Prioritized Audio Matrix) address is entered into the Point Select Screen and the ACCEPT soft key is pressed, the following screen will display.

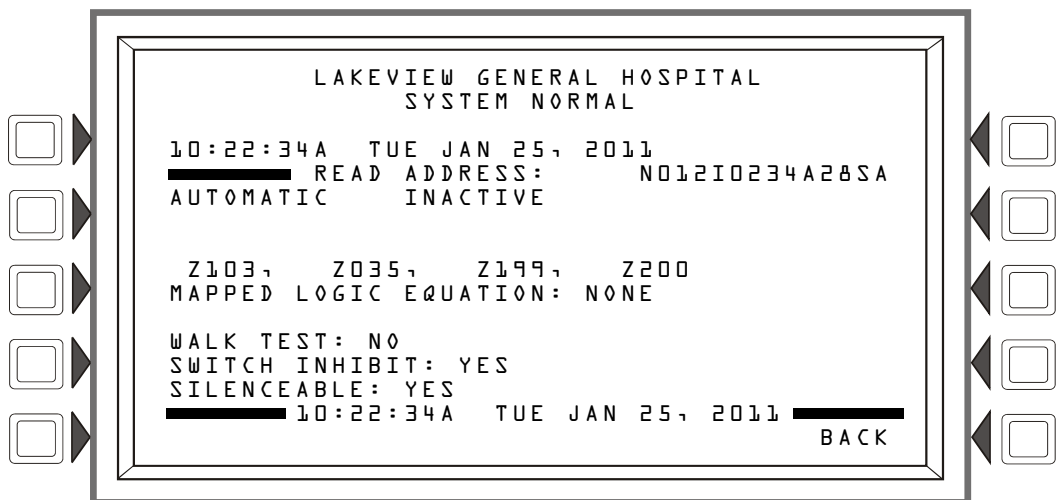


Figure 3.15 PAM (Prioritized Audio Matrix) Point - Read Status

Lines 1 - 6 - Refer to the line 6 description in “Smoke Detector” on page 41

Line 9 - DVC General Zone Map.

MAPPED LOGIC EQUATION: - The logic equation associated with this PAM point is displayed here, or NONE if there is no associated equation.

WALK TEST: - The screen will display the PAM point's programmed setting for Walk Test participation (Yes or No).

SWITCH INHIBIT: - The screen will display the PAM point's programmed setting for Switch Inhibit (Yes or No).

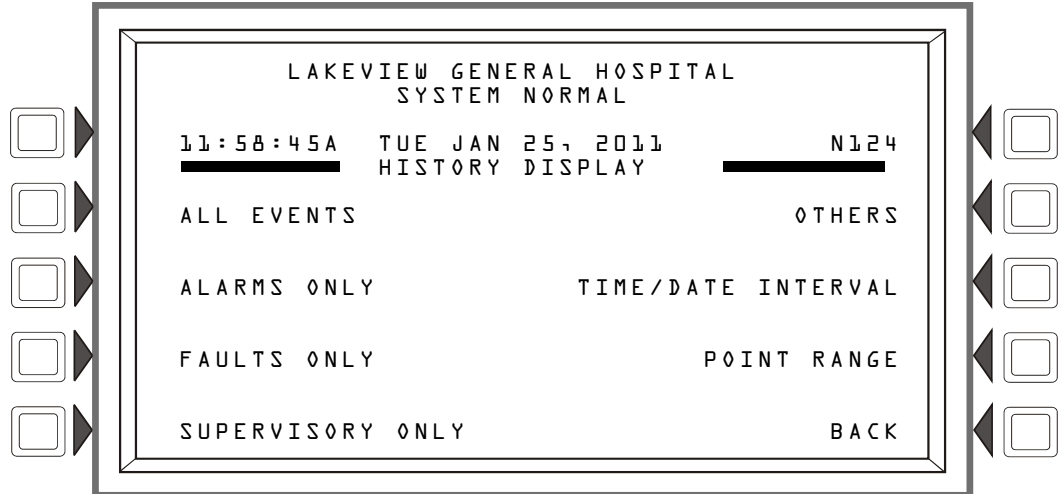
SILENCEABLE: - The screen will display the PAM point's programmed Silenceable setting (Yes or No).

Section 4: Viewing and Printing History Information

The control panel maintains a history file of alarm, fault, and supervisory events, each with a time/date stamp. An alarm history is maintained in a buffer that can include up to 1000 events. All events, including alarms, are included in a 4000-event buffer. History events may be viewed on-screen, and a printed list may be generated.

To choose a history display screen:

Press the HISTORY DISPLAY soft key at the Main Menu. The following menu screen titled History Display will appear.



Press the soft key for the type of event history desired to view all of those types of events that are in the history buffer,

OR

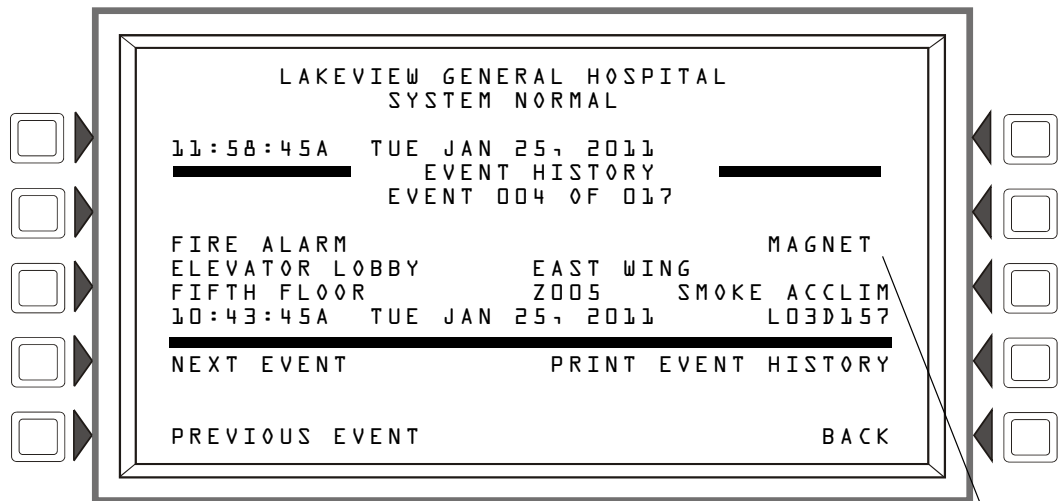
Press the TIME/DATE INTERVAL or POINT RANGE soft key to choose limiting parameters for what will display on-screen.

The following sections illustrate and explain the history displays.

4.1 Events History

Pressing a soft key on the History Select screen will display the history for whatever event type chosen. The OTHER softkey will display disable, prealarm, active, and active outputs events. If the ALL EVENTS soft key is pressed, any events in the history file will display, no matter what the type.

The screen below is an example of what displays when the ALL EVENTS soft key is pressed. The displayed fields are the same for each event type.



MAGNET indicates that the device event occurred due to a magnet activation.

Figure 4.1 Event History Screen

Display

Lines 1-4: Displays any current event message, or, as in this example, the System Normal message

Line 5: Screen title. It will vary depending on the history type chosen for viewing. For example, it will display ALARM HISTORY if the ALARMS ONLY soft key is pressed at the History Select screen.

Line 6: Queue location of event that is described in lines 8-11: In the above example, the fire alarm is the fourth of 17 events in the history file.

Lines 8 through 11 give more information about the event. Refer to Section 1.5.2, “Event Reporting Format”, on page 6 for an explanation of these fields.



NOTE: If an Acclimate™ Detector activates, the event history screen will display whether it was due to heat or smoke. This will be shown in Line 8 and will also show in a printed history report.

Soft Keys

NEXT EVENT - Press to view next event (In the above example, event 005 of 017).

PREVIOUS EVENT - Press to view previous event (In the above example, event 003 of 017).

PRINT “xxx” HISTORY - Press to print the history for the event(s) chosen. (In the above example, all 17 events). The report will look like this:

```
*****EVENT HISTORY*****
FAULT
TM4 NO ANSWER                08:52:05P SAT MAR 5, 2011

ACK FAULT
TM4 NO ANSWER                08:53:35P SAT MAR 5, 2011

CLEAR FAULT
TM4 NO ANSWER                08:54:05P SAT MAR 5, 2011

*****
```

4.2 Time and Date Range Selection for All Events

Pressing the Time/Date Interval soft key on the History Select screen displays the Time & Date Range Select screen. This screen allows for selection of a time period that defines the range of events to be viewed and/or printed.

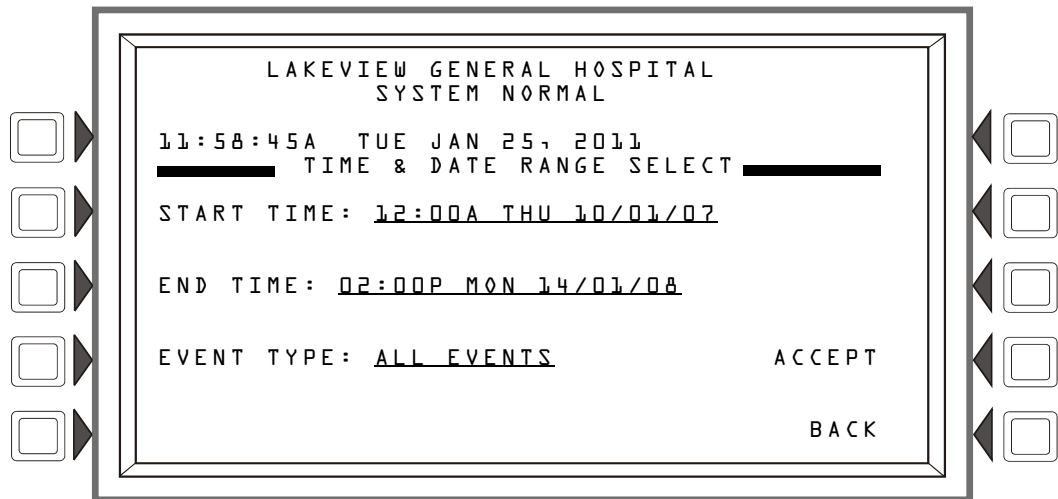


Figure 4.2 Time & Date Range Select Screen

Display

See description in Section 4.1, “Events History”, on page 52 for lines 1-5.

Soft Keys

START TIME: - Use the keypad to enter a start time for event viewing in the following format:

HH:MMA/P DDD DD/MM/YY

END TIME: - Use the keypad to enter an end time for event viewing.

EVENT TYPE: - Press this soft key to scroll through the following: ALL EVENTS, ALARMS ONLY, FAULTS ONLY, SUPERVISORY ONLY, OTHER ONLY. Stop scrolling at the desired event type.

ACCEPT: - When entries are made, press this soft key to proceed to the All Events in Interval Screen.

All Events in Interval Screen

This screen is the same as the Event History screen, except for its title. Refer to Figure 4.1 on page 53.

4.3 Point Range Select for All Events in Range

Pressing the Point Range soft key on the Local History Select screen displays the Point Range Select screen. This screen allows for selection of a beginning and an end point that defines the range of events to be viewed and/or printed.

Range is selected in the following order:

1. Loop 1 Detectors
2. Loop 2 Detectors, etc....
3. Loop 10 Detectors
4. Loop 1 Modules
5. Loop 2 Modules, etc. ...

This FACP can have up to 10 loops, which would all follow the above order for range selection.

20. Loop 10 Modules

The range selected below includes all supervisory event types for every point: the selection begins with the first detector on loop one and ends with the last module on loop 10.

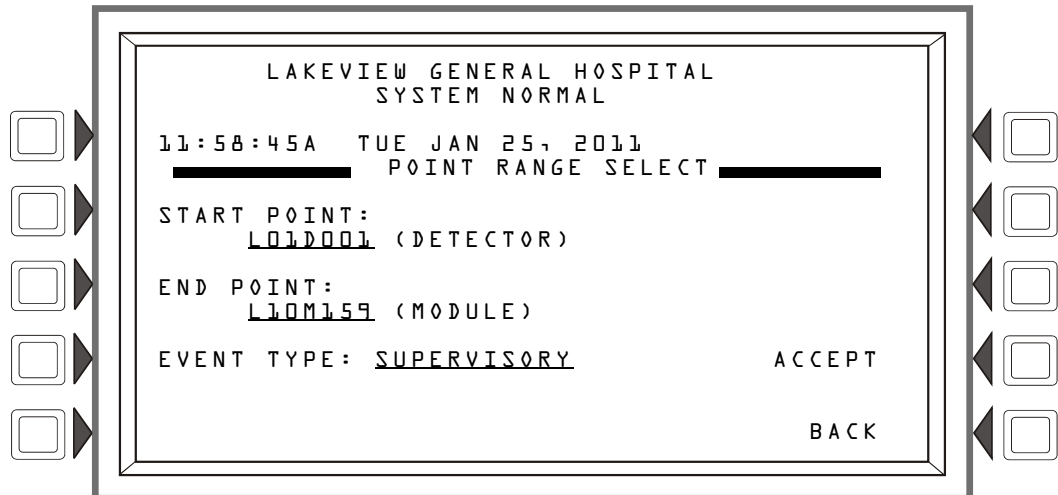


Figure 4.3 Point Range Select Screen

Display

See description in Section 4.1, “Events History”, on page 52 for lines 1-5.

Soft Keys

START POINT: - Press this key to scroll through the list of various device types: the format will change for each device. Stop at the desired format/device type, then use the keypad to enter a start point for event viewing.

END POINT: - Press this key to scroll through the list of various device types: the format will change for each device. Stop at the desired format/device type, then use the keypad to enter an end point for event viewing.

EVENT TYPE: - Press this soft key to scroll through the following: ALL EVENTS, ALARMS ONLY, FAULTS ONLY, SUPERVISORY ONLY, OTHER ONLY. Stop scrolling at the desired event type.

ACCEPT: - When entries are made, press this soft key to proceed to the All Events in Range Screen.

All Events in Range Screen

This screen is the same as the Event History screen, except for its title. Refer to Figure 4.1 on page 53.

Section 5: Printing Reports

A variety of reports can be generated and printed from the AFP-3030. Reports listing all event, alarm, fault, or supervisory history can be generated from the history screens in Section 4, “Viewing and Printing History Information”, on page 52. The following section describes how to print programming, Walk Test, and active point information.



NOTE: Report formats are shown below as printed by an 80-column printer. When these reports are printed on a Keltron, which is a 40-column printer, the formats are the same except they are displayed on two lines instead of one.

5.1 Printer Functions Screen

The following screen displays when the Printer Functions soft key is pressed at the Main Menu. This key will appear only if a printer has been selected through programming.

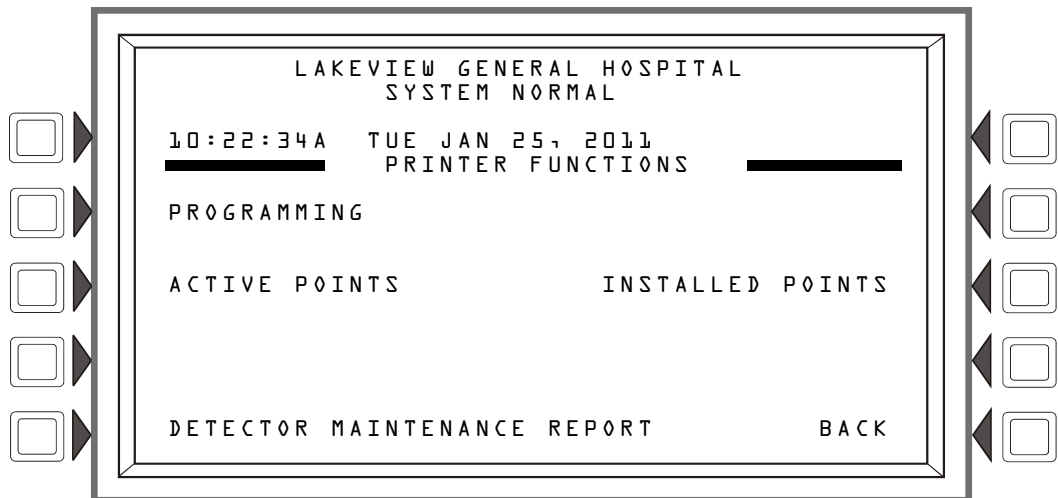


Figure 5.1 Printer Functions Screen

Soft Keys

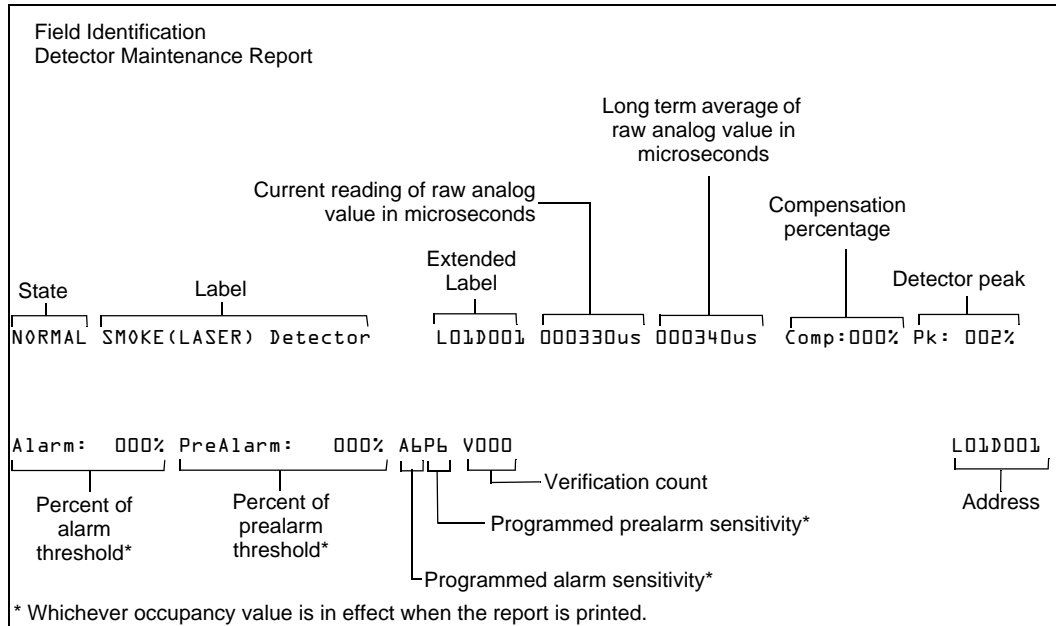
PROGRAMMING: Press this soft key to display the Print Programming Menu screen.

ACTIVE POINTS: Press this soft key to display the Active Points Menu screen.

DETECT MAINTENANCE REPORT: Press this soft key to print a list from the printer connected to the control panel that contains the detector maintenance status for each installed addressable detector. The report looks like this:

```
*****DETECTOR MAINTENANCE*****
NORMAL SMOKE(LASER) Detector    L01D001 000330us 000340us  Comp:000% Pk: 002%
Alarm: 000% PreAlarm: 000% A6P6 V000                                L01D001

NORMAL SMOKE ACCLIM Detector    L01D002 000030us 000000us  Comp:000% Pk: 000%
Alarm: 000% PreAlarm: 000% A8P8 V000                                L01D002
```



INSTALLED POINTS: Press this soft key to display the Installed Points Menu screen.

5.2 Print Programming Menu Screen

This screen displays when the **PROGRAMMING** soft key is pressed on the **PRINTER FUNCTIONS** screen. Refer to Figure 5.1 on page 56).

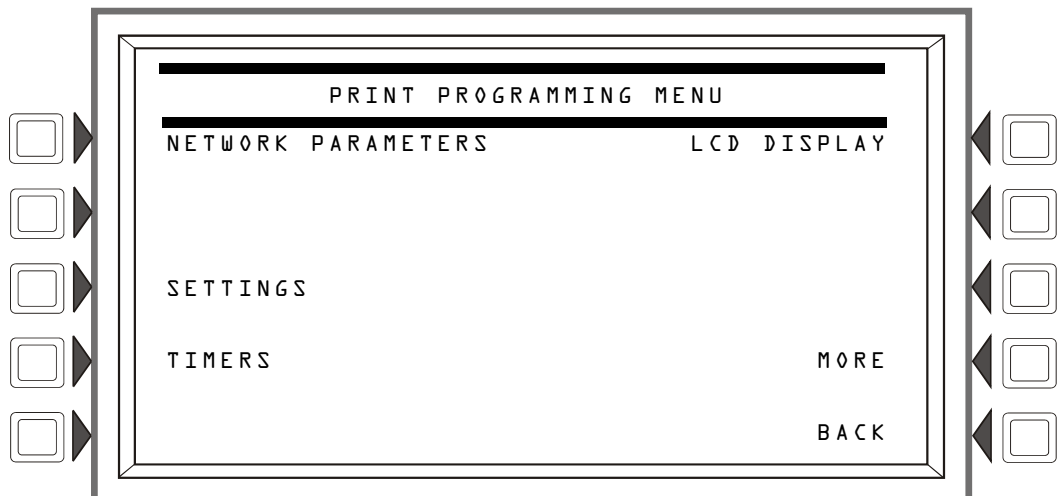


Figure 5.2 Print Programming Screen

Soft Keys

NETWORK PARAMETERS: Press to print node number, node label, Channel A and B threshold, network style. The report looks like this:

```

*****NETWORK PARAMETERS*****
NODE:NL24
NODE LABEL: LAKEVILLE GENERAL HOSPITAL
CH A. THRESHOLD:    HIGH          CH B. THRESHOLD:    HIGH
IP ACCESS:OFF
*****

```

SETTINGS: Press to print broadcast time and block acknowledge. The report looks like this:

```

*****PANEL SETTINGS*****
LOCAL CONTROL:      NO          FAULT REMINDER:    YES
PIEZO:              ON          POWER MANAGEMENT MODE:  OFF

DISPLAY ADDRESS:    YES
LCM LOCAL MODE:     NO
RAPID ALL CALL:     NO
SILENCEABLE WATERFLOW: NO
MN PRIORITY OVER FIRE: YES
SILENCE CONFIGURATION: AUDIBLE
*****

```

TIMERS: Press to print timer values for Auto Silence, Silence Inhibit, AC Fail Delay time and whether it has been enabled, Proprietary Reminder, and Remote Reminder timers. The report looks like this:

```

*****PANEL TIMERS*****
VERIFY TIME:        30          VERIFY=PREALARM:    NO
MAXIMUM VERIFICATION COUNT:  00
AC FAIL DELAY:      8 HOURS
SILENCE INHIBIT:    00:00
AUTO SILENCE:       10 MINUTES
OUTPUT DELAY TIME:  01:00
*****

```

LCD DISPLAY: Press to print information about backlight handling during fire alarm and back-light intensity. The report looks like this:

```

*****LCD DISPLAY*****
LCD INTENSITY:      040          BACKLIGHT:          ON
*****

```

5.3 Print Programming Menu Screen (2)

The second PRINT PROGRAMMING MENU screen displays when MORE is pressed at the first PRINT PROGRAMMING MENU screen:

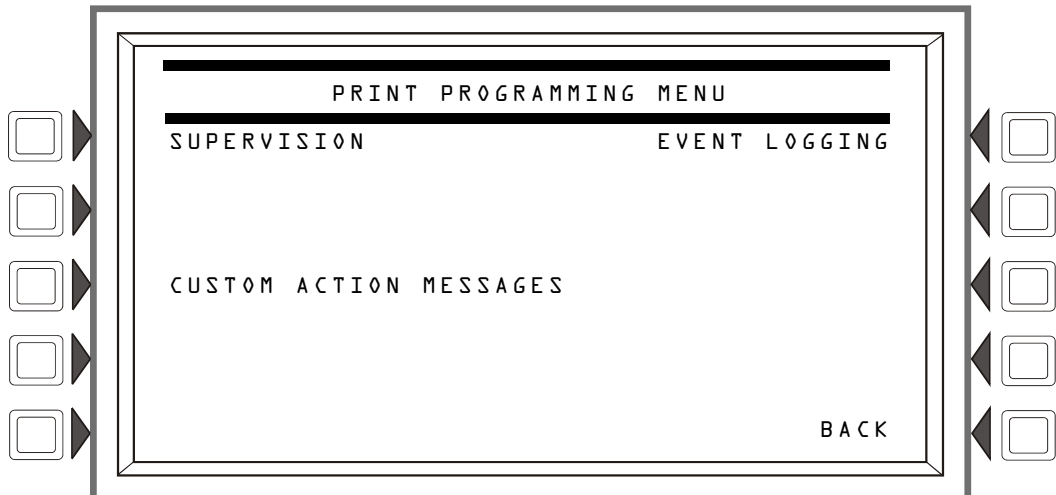


Figure 5.3 Print Programming Screen

Soft Keys

SUPERVISION: Press to print information on power supply and printer monitoring. The report looks like this:

```
*****SUPERVISION*****
MAIN PS NODE:      NO23
PRINTER:          80-column
TAMPER INPUT:     NO
AUXILIARY FAULT:  NO
*****
```

CUSTOM ACTION MESSAGES: Press to print all custom action messages (1-100). The report looks like this:

```
*****CUSTOM ACTION MESSAGE*****
CUSTOM ACTION MESSAGE: 001
GO TO ALARM SITE AND INVESTIGATE APPROACH THE ALARM LOCATION WITH CAUTION
BRING CELL PHONE AND REPORT WHEN ON SITE

CUSTOM ACTION MESSAGE: 002
CALL MANAGER WITH REPORT
*****
```

EVENT LOGGING: Press to print non-fire and output activations if these events have been chosen for logging during panel programming. The report looks like this:

```
*****EVENT LOGGING*****
NON-FIRE ACTIVATIONS:NO          OUTPUT ACTIVATIONS: NO
LOG WIRELESS STATES:NO
*****
```

5.4 Active Points Report Screen

This screen displays when the ACTIVE POINTS soft key is pressed on the PRINTER FUNCTIONS screen (refer to Figure 5.1 on page 56).

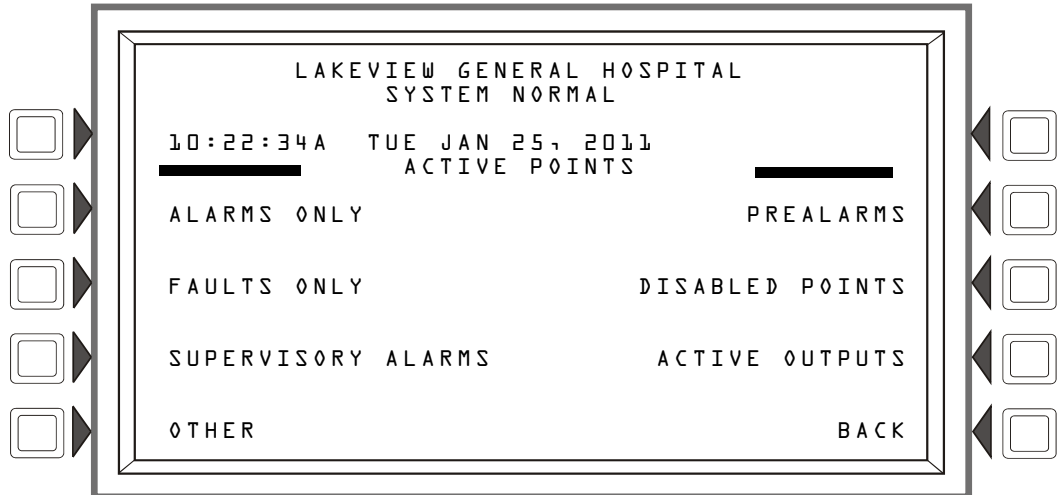


Figure 5.4 Print Active Points Screen

Soft Keys

This screen provides a menu for printing a list of *active* points for whatever type of list is chosen. The soft key will display on the screen only if there is at least one event in the queue.



NOTE: For a printed list of *history* information, refer to the history screens in Section 4, “Viewing and Printing History Information”.

5.5 Installed Points Report Screen

This screen displays when the **INSTALLED POINTS** soft key is pressed on the **PRINTER FUNCTIONS** screen (refer to Figure 5.1 on page 56)

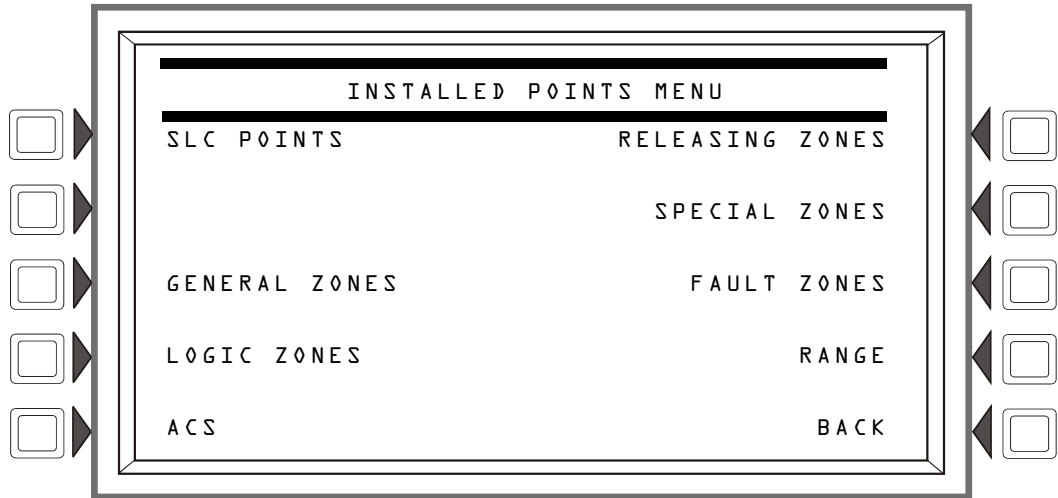
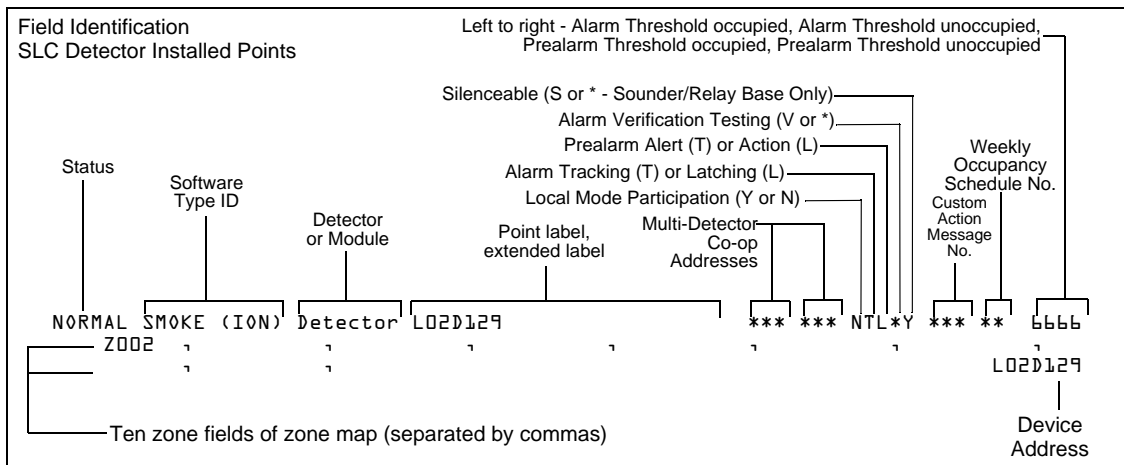


Figure 5.5 Print Programming Screen

Soft Keys

SLC POINTS: Press to print information on installed SLC points. When the soft key is pressed, a field appears to allow choice of a single SLC or ALL. Toggle until the desired choice appears in the field, then press **ACCEPT**. The report looks like this.

```
*****INSTALLED POINTS*****  
NORMAL SMOKE (ION) Detector L02D129          *** ** NTL*Y *** ** 6666  
Z002 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  
ION RELAY Module L02M005 NL * *** **  
ZL001 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  
*****
```



GENERAL ZONES : Press to print a report of installed general zones.

```

*****INSTALLED POINTS*****
ON  GENERAL ZONE General Alarm                Z000
ON  GENERAL ZONE Zone 001                     Z001
OFF GENERAL ZONE Zone 002                     Z002
*****

```

LOGIC ZONES : Press to print a report of installed logic zones.

An asterisk in this position indicates this zone appears in a point's zone map.

```

*****INSTALLED POINTS*****
ON  LOGIC ZONE  AND(Z1,NOT(L2M6))             ZL0001*
OFF LOGIC ZONE  AND(ZL10,NOT(Z75))          ZL0011
*****

```

ACS : Press to print information on the device types for addresses 1-32. The report looks like this:

Point function column Mapped point column ACS point address column

```

*****INSTALLED POINTS*****
BOARD 01: L4SYS
ALARM/FAULT
SILENCE
RESET
SUPERVISORY
BATTERY LOW
AC FAIL
MONITOR
L01D01
*****
NO0A01P01
NO0A01P02
NO0A01P03
NO0A01P04
NO0A01P06
NO0A01P07
NO0A01P08
*****

```

SPECIAL ZONES : Press to print a report of installed special zones.

An asterisk in this position indicates this zone appears in a point's zone map.

```

*****INSTALLED POINTS*****
OFF SPECIAL ZONE                                ZF0*
*****

```

FAULT ZONES : Press to print a report of installed fault zones.

```

*****INSTALLED POINTS*****
OFF FAULT ZONE  OR(ZT049,ZT050)
*****

```

RANGE: Press to bring up the following screen, which allows the programmer to choose a range of installed points to print.

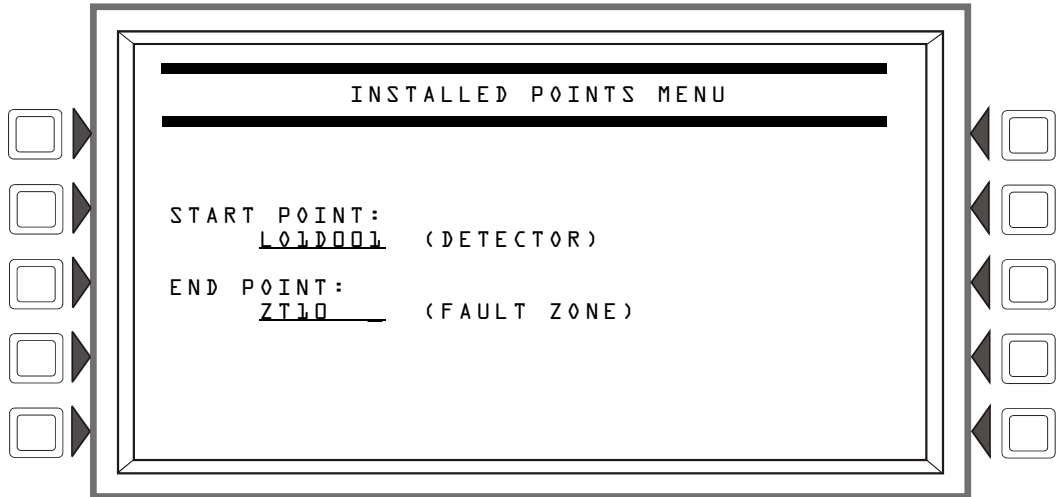


Figure 5.6 Installed Points Menu - Range

Soft Keys

START POINT: Press to place the cursor in this field, and to toggle between the choices, which appear in print order: DETECTOR (loop1, detector 1 through loop 10, detector 159), MODULE (loop 1, module 1 through loop 10, module 159), GENERAL ZONE, LOGIC ZONE, RELEASE ZONE, ACS PTS, SPECIAL ZONE, FAULT ZONE. Using the keypad, type in the start point address.

END POINT: Press to place cursor in this field, and to toggle between the choices as described above. Using the keypad, type in the end point address.

Appendix A: Software Type ID Codes

A.1 Alphabetical List

The following chart lists AFP-3030 Type ID codes in alphabetical order. These codes are assigned during programming based on the types and functions of the devices they are assigned. The codes appear in point message formats.

Software Type ID Code	Device
ABORT SWITCH	Monitor that provides an abort function for a releasing zone through connection to an abort station
ACK SWITCH	Monitor used to silence panel sounder, and to give an acknowledge message on the panel display
ACCL (P Sup)	Acclimate detector with photo activating supervisory event
ACCL+ (P Sup)	Acclimate plus detector with photo activating supervisory event
AIR REF	FSL-751 detector used to monitor air quality entering a protected area
ALARM DEV	Supervised NAC for speaker circuits.
ALARM DEV FLT	Monitoring audio equipment.
ALARMS PEND	Control module or NAC for output that will activate upon receipt of an alarm condition, and remain in the alarm state until all alarms have been acknowledged. Programmed for switch inhibit
ALARM TRACK	Supervise protected premises for all notification and evacuation.
ASPIR. (NON)	For use with an aspiration detector, reports to the fire panel as a non-fire event when its threshold is reached
ASPIR. (PRE)	For use with an aspiration detector, reports to the fire panel as a prealarm condition when its threshold is reached
ASPIR. (REF)	For use with an aspiration detector, reports to the fire panel as a non-fire activation, used as a reference for other aspiration detectors on the loop
ASPIR. (SUP)	For use with an aspiration detector, reports to the fire panel as a supervisory when its threshold is reached
ASPIRATION	For use with an aspiration detector, reports to the fire panel as a fire alarm when threshold is reached
AUXILIARY	Control output which is used with the Auxiliary Disable button
BELL CIRCUIT	Control module used with NAC with bells
blank	Operates as CONTROL with no Type ID label
CO MONITOR	Monitor Module for use with conventional CO detectors. Activation will generate a CO Alarm on the FACP.
CONTROL	Control module used with NAC
CONTROL NAC	Control module or NAC
DBA	Monitor for a Direct Brigade Access panel
DOOR HOLDER	Control output which is used with the Door Holder Disable button
ECS/MN MON	Monitor for mass notification alarms, latching
ECS/MN SUPL	Monitor for mass notification supervisory inputs, latching
ECS/MN SUPT	Monitor for mass notification supervisory inputs, tracking
ECS/MN TMON	Monitor used for mass notification fault inputs, tracking
FIRE CONTROL	Monitors non-fire activations
FMM-420	Monitors 4-20 mA industrial sensors
FORM C RESET	Control module used to interrupt 24 V power to four-wire conventional detectors for 30 seconds upon reset. Used in conjunction with a monitor module with a conventional detector Type ID
GEN ALARM	Control module, XPC-8 circuit, or XP5-C (NAC mode) configured as a Municipal Box Transmitter (MBT-1 required). This Type ID can also be used for general alarm activation. It is programmed as "switch inhibit".
GEN PEND	Control module, XPC-8 circuit, or XP5-C (NAC mode) that will activate upon receipt of an alarm and/or fault condition, and remain in the ON state until all events have been acknowledged
GEN SUPERVIS	Control module, XPC-8, or XP5-C (NAC mode) activated under any supervisory condition (includes sprinkler type). It is programmed as "switch inhibit"

Table A.1 Software Type ID Codes, Alphabetical List (1 of 3)

Software Type ID Code	Device
GEN FAULT	Control module, XPC-8, or XP5-C (NAC mode) activated under any System Fault condition. It is programmed as "switch inhibit"
HAZARD ALERT	Indicated a hazard condition, tracking
HEAT	Adjustable threshold heat detector
HEAT(FIXED)	Intelligent 135°F thermal sensor detector
HEAT(ROR)	15°F per minute rate-of-rise detector
HEAT DETECT	Monitor for conventional heat detector
HUSH BUTTON	Silences the control devices for the associated Type 5 zone
INST RELEASE	Control module used with NAC. Always non-silenceable and switch-inhibited
LATCH SUPERV	Indicates latching supervisory condition
LP PWR SOUND	Used to support intelligent powered AV devices.
MAN RELEASE	Monitor module that provides manual release for a releasing zone through connection to a pull station
MAN REL DELAY	Monitor module that provides manual release with a 10 second delay for a releasing zone through connection to a pull station
MCP	Manual fire-alarm-activating device.
MONITOR	Alarm-monitoring device
MNS CONTROL	Activates control module mass notification devices when an MNS event occurs
MNS GENERAL	Activates NAC mass notification devices when an MNS event occurs
MNS RELAY	Activates relay mass notification devices when an MNS event occurs
MNS SPEAKER	Activates speaker mass notification devices when an MNS event occurs
NAC	Supervised NAC for notification appliance.
NON (DUCTP)	Non-latching duct detector.
NON FIRE	Monitors non fire activations
NONRESET CTL	Output unaffected by "System Reset" command
P/CO (C SUP)	For use with a Photo/CO detector. If the CO element in the detector activates, a supervisory condition is generated on the fire panel. An activation via the heat or photo element of the Photo/CO detector will generate an alarm condition on the panel.
P/CO (P SUP)	For use with a Photo/CO detector. If the photo element in the detector activates, a supervisory condition is generated on the fire panel. An activation via the CO or heat element of the Photo/CO detector will generate an alarm condition on the panel.
PHOTO/CO	For use with a Photo/CO detector. Activation of the CO, photo or heat elements will generate an alarm condition on the fire panel.
POWER MONITR	Monitor for main and auxiliary power supplies
PROCESS AUTO	Indicates process condition, tracking
PROCESS MON	Indicates process condition, latching
REL AUDIBLE	Activates audio or visual devices steady when releasing starts
REL END BELL	Control module used to activate NAC audio or visual device when releasing circuits shut off
RELAY	Form-C relay control module
REL. FORM C	Form-C relay that directs outputs to perform a releasing function
RELEASE CKT	Directs outputs to perform a releasing function
RESET SWITCH	Monitor used to reset the control panel
SECOND SHOT	Monitor module that provides a second manual release for a releasing zone through connection to a pull station
SIL SWITCH	Monitor used as Signal Silence switch, turning off all activated silenceable outputs
SMOKE ACCLIM	Combination photoelectric/heat detector
SMOKE CONVEN	Conventional smoke detector attached to an FZM-1
SMOKE(DUCTL)	Duct laser smoke detector
SMOKE(DUCTP)	Duct photoelectric smoke detector
SMOKE(HARSH)	HARSH smoke detector
SMOKE(ION)	Ionization smoke detector
SMOKE(LASER)	Laser smoke detector

Table A.1 Software Type ID Codes, Alphabetical List (2 of 3)

Software Type ID Code	Device
SMOKE(PHOTO)	Photoelectric smoke detector
SPEAKER	Control module for speaker
SPRINKLR SYS	Monitor for a waterflow device
SUP L(DUCTL)	Duct laser smoke detector, latching
SUP L(DUCTP)	Photoelectric smoke detector used as a duct detector to report supervisory condition rather than alarm, latching
SUP L(LASER)	Laser smoke detector, latching
SUP L(PHOTO)	Photoelectric smoke detector, latching
SUP T(DUCTL)	Duct laser smoke detector, tracking
SUP T(DUCTP)	Photoelectric smoke detector used as a duct detector to report supervisory condition rather than alarm, tracking
SUP T(LASER)	Laser smoke detector, tracking
SUP T(PHOTO)	Photoelectric smoke detector, tracking
TAMPER	Monitor for activation of tamper switch
TRACKING SUPERV	Monitor for waterflow tamper switches for alarm points
TYPE 5 CONTRL	Used to activate control devices when Type 5 zone is active
FAULT MON	Monitor for fault inputs
WATERFLOW	Monitor for waterflow alarm switch
WATERFLOW S	Monitor for supervisory condition for activated waterflow switch
WEATHER ALRT	Monitor for weather condition, tracking

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