



D8024 Analog Fire Alarm Control Panel

Operator's Guide

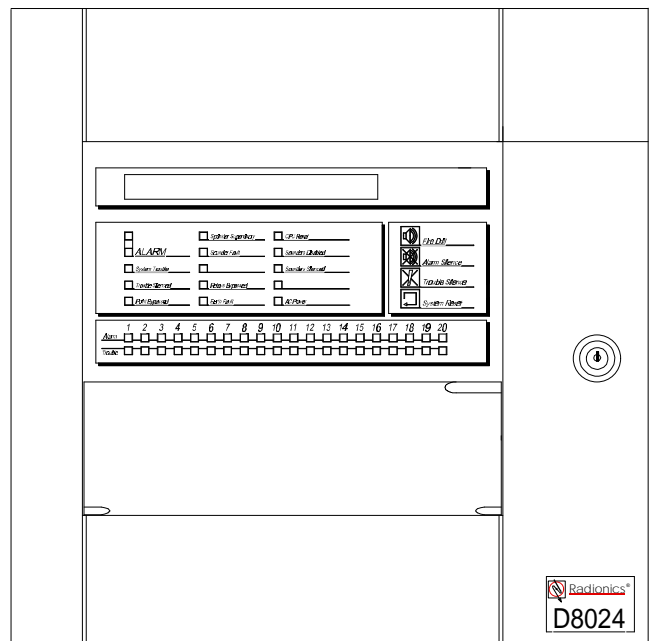
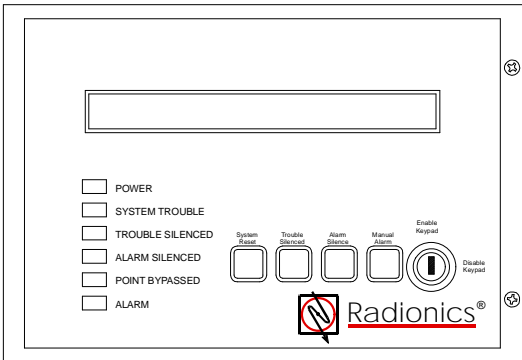


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Operator's Manual

1.0 Notice

- The material and instructions covered in this manual have been carefully checked for accuracy and are presumed to be reliable. However, the manufacturer assumes no responsibility for inaccuracies and reserves the right to modify and revise this document without notice.
- These instructions are the Operator's Manual at the Display, Control, and Limited Programming Levels of operation. See the Installation Manual for information on installation and powering the D8024 Fire Alarm Control Panel (FACP). See the Programmer's Guide for information on programming and Level Three operation of the system

2.0 Warnings and Cautions



These instructions contain procedures to follow in order to avoid injury and damage to equipment.

3.0 FCC Notices

Part 15

- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates, uses and can radiate radio frequency energy, and, if not installed in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:
 1. Reorient or relocate the receiving antenna.
 2. Increase the separation between the equipment and the receiver.
 3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 4. Consult the dealer or an experienced radio/TV technician for help.

4.0 UL/NFPA Notices

- UL listed for NFPA 72, Local.
- All references to NFPA and related requirements are based upon compliance with the 1993 edition of NFPA 72, National Fire Alarm Code. Since installation specifications are nearly always based upon a specific edition of a standard that has been legally adopted by the Authority Having Jurisdiction (AHJ), earlier editions of NFPA standards will generally apply. Consult with the appropriate AHJ for confirmation.

5.0 Control Levels

5.1 Level Distinction

- The D8024 has three available control levels. At all three levels the LED Display indicates condition, the ZONE/AREA LEDs indicate location, and detailed alarm/trouble information is displayed alphanumerically.
- Control Level One, the Display Level, inhibits the system control keys, limiting the front panel function to annunciation.
- Control Level Two, the Controller Level, allows system control for Fire Drill, Alarm Silence, Trouble Silence, and System Reset; and allows Test and Enable/Disable operations, but does not allow access to configuration or programming functions. At Level Two, the Alphanumeric Display becomes interactive and prompts for system checks, log functions, and key status. Level Two is reached by entering a pass code from Level One.
- Control Level Three, the Programmer's Level, allows full system configuration information and is used to program the system or modify the program. Level Three is reached by passcode from Levels One or Two. See the *Analog Fire Alarm Control Panels Programming Guide* (P/N: 38789B) for more information on Control Level Three.

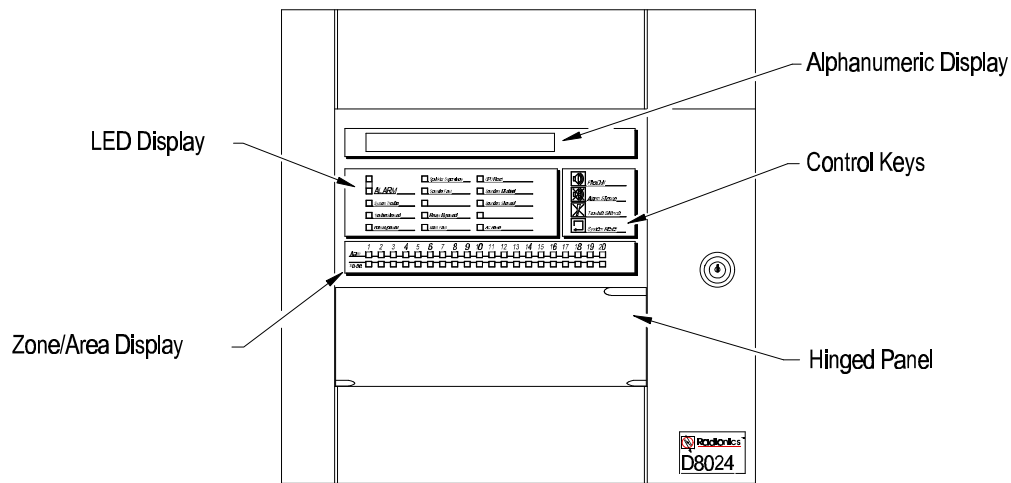


Figure 1: D8024 Fire Alarm Control Panel

5.2 Passcodes

- Ten passcodes are available for D8024 Controllers. Passcodes are programmable. The Level Two passcode is assigned or changed from Level Three and will not allow access to Level Three. See the *Analog Fire Alarm Control Panels Programming Guide* (P/N: 38789B) for details.

6.0 Controls and Displays

- The D8024 control panel has two rows of control keys. The vertical row of Control Keys contains the four System Control Keys for Fire Drill, Alarm Silence, Trouble Silence, and System Reset. Opening the hinged panel below the Zone/Area Display provides access to the Alphanumeric Keys and the three Program/Interactive Keys.

Table 1: Control Key Functions

Key Label	Function
Fire Drill	Turns on ALL Notification Appliances.
Alarm Silence	Press to Silence all Notification Appliances. Press again to activate all Notification Appliances.
Trouble Silence	Acknowledges events and silences the internal buzzer.
System Reset	Cancels all alarm conditions and resets the panel.

- The Alphanumeric Keys normally function as number keys. They can be toggled to Letter Keys by pressing the Change Key at the right end of the alphanumeric key row. The Shift Key at the left end of the Alphanumeric Keys toggles between upper and lower row of letters. Hold the Shift Key while entering another key to enter the bottom letter.

Table 2: Alphanumeric and Program/Interactive Key Functions

Key Label	Function
Shift	Shows user options on Alphanumeric Display. Used in programming to allow letters N to Z.
0,1,2,3,4,5,6,7,8 9	Press to Silence all Notification Appliances. Press again to activate all Notification Appliances.
>,<	Scrolls through fires/faults on the Alphanumeric Display.
Change	Changes a display option.
Enter	Enters the selection.
No	To answer No or terminate an option.
Yes	To answer Yes or step through an option.

- The upper display, the Alphanumeric Display, is an illuminated two-line, 80-character, LCD display that gives detailed information on system events and status, and displays interactive prompts.
- The middle display, the LED Display, indicates the type of system event and status.

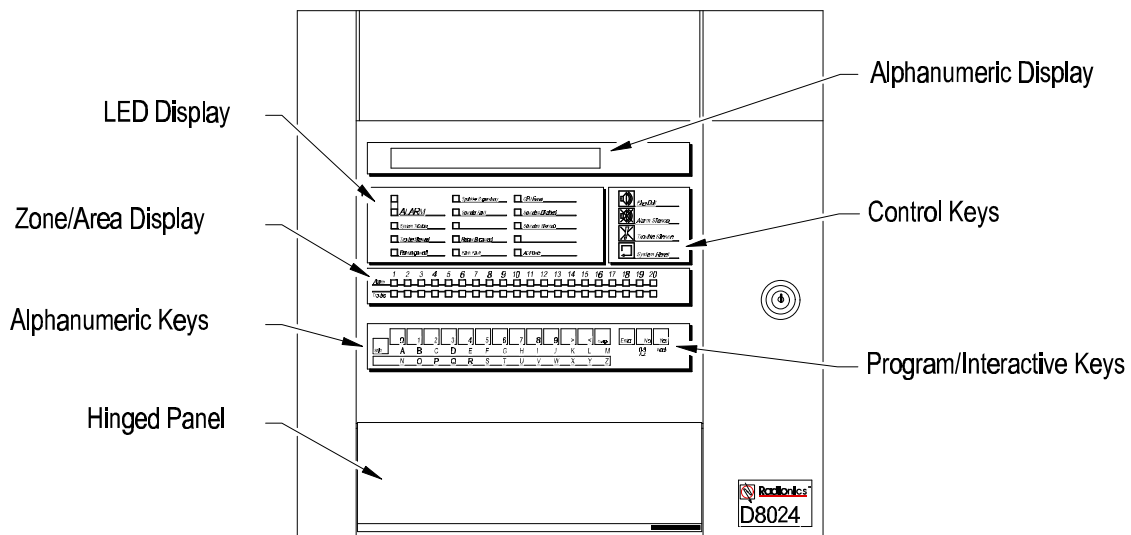


Figure 2: D8024 Front Panel Display, Hinged Panel Open

- The lower display, the ZONE/AREA LED Display, indicates the location and type (alarm or trouble) of event. The D8024 can have up to 20 zones.

7.0 Level One (Display) Functions

- At Level One, the Control Panel functions as an annunciator, and the Control Keys are disabled. Pressing any of the Control Keys will result in a series of interactive messages on the Alphanumeric Display which end in a prompt for a Level Two passcode.

7.1 Power Conditions

- When the system is being powered by 120V AC, the green AC Power LED at the lower right of the LED Display will be lit. The normal Alphanumeric Display will alternate between a time and date message and a system status message.

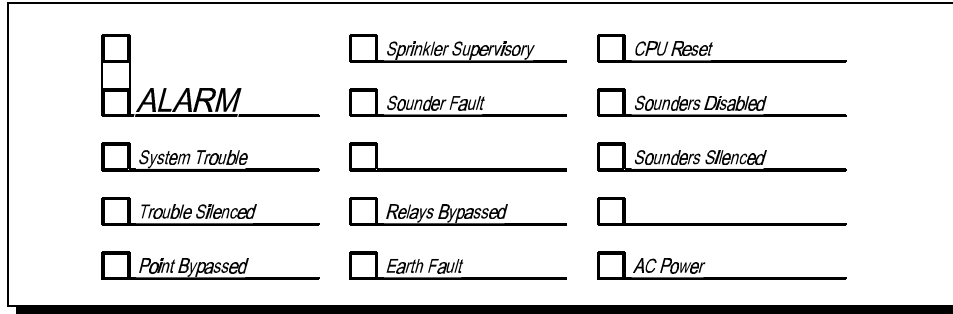


Figure 3: LED Display

- If the 120V AC power source is interrupted, the AC Power LED will flash, the panel buzzer will sound, and the System Trouble and the Earth Fault LEDs will light. The illumination will go out on the Alphanumeric Display, and the Display will show an “AC Fail” message and provide information about the failure, the status of the standby batteries, and will show the telephone number for service. Pressing the Trouble Silence Key will silence the panel buzzer.

7.2 Trouble Conditions

- If a device fails to respond, is disabled, the response is not within normal parameters, or the system detects a fault, the amber System Trouble or Fault LEDs will light. The amber Trouble LED in the ZONE/AREA section of the panel will light to indicate the location, the panel’s internal buzzer will sound, and the Alphanumeric Display will provide detailed information. If more than one fault is present, the display will automatically scroll through the first four.

7.3 Alarm Conditions

- The two red Alarm LED’s at the left of the LED Display flash to indicate the system has detected a fire condition. The ZONE/AREA Alarm LED(s) lights, indicating the alarm location(s), and the Alphanumeric Display provides detailed information. If more than one fire is present, the display will automatically scroll through the first four.

8.0 Level Two (Controller) Functions

- At Level Two, the Control Panel functions as a Controller (see 5.1 Level Distinction, page 4). To enable the Control Keys (to enter Level Two), open the hinged panel and press the Shift Key. The alphanumeric display prompts:

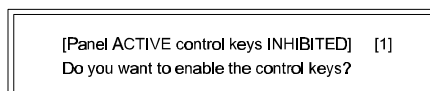


Figure 4: Level Two Entry Menu One

- Press the **Yes** Key. The display shows Level Two Entry Menu Two.

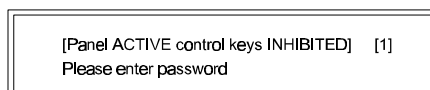


Figure 5: Level Two Entry Menu Two

- Enter the 4-digit level two passcode. The Display shows Main Menu.

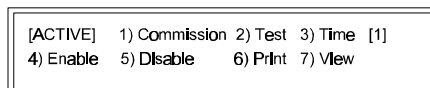


Figure 6: Main Menu

- The D8024 has ten Level Two passcodes available. Level Two passcodes are assigned from Level Three, the programmer’s level. Press Key 4 on the Alphanumeric Key row. The display shows the Enable Menu.

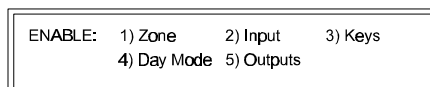


Figure 7: Enable Menu

- Press Key 3 on the Alphanumeric Key row. The display returns to Main Menu. The Control Keys are now enabled for the amount of time programmed into the panel. At the end of the programmed time period the panel will automatically inhibit the Control Keys.

8.1 Power Conditions

- The D8024 supervises its AC power supply and the standby batteries

Power Failure Signal

- If the 120V AC power source is interrupted, the AC Power LED will flash, the panel buzzer will sound, and the amber System Trouble and Earth Fault LEDs will light. The illumination will go out on the Alphanumeric Display, and the Display will show an "AC Fail" message and provide information about the failure and the status of the standby batteries. If the standby batteries fail, the AC Power LED will go out.

Power Failure Signal Response

- To silence the panel buzzer, enter Level Two, enable the Control Keys and press the **Trouble Silence** Key. The amber Trouble Silenced LED will light.
- When the 120V AC power is restored, the green AC Power LED stops flashing and remains on, and the System Trouble and Earth Fault LEDs go out. The amber CPU Reset LED lights while the system resets itself and goes out when the reset is complete. The Alphanumeric Display returns to normal.

8.2 Trouble Conditions

- The system responds to other-than-normal conditions, which are not alarm conditions, by sounding the internal buzzer and initiating a Trouble Condition.

Trouble Signals

- If a device fails to respond, is disabled, the response is not within normal parameters, or the system detects a fault, the amber System Trouble or Fault LED will light. In addition, the amber Trouble LED in the ZONE/AREA section of the panel will light to indicate the location, the panel's internal buzzer will sound, and the Alphanumeric Display will provide detailed information.

Trouble Signal Response

- To acknowledge the event, enter Level Two, enable the Control Keys, and press the **Trouble Silence** Key to mute the internal buzzer (under certain circumstances, the system may override the mute). The amber Trouble Silenced LED lights to indicate that condition. The system will not allow a reset until the problem is corrected. If necessary, the system allows disabling of individual devices and zones. See page 10, "Enable/Disable Functions", of this guide. After correcting the problem, press the System Reset Key. The amber Trouble Silenced LED goes out and the Alphanumeric Display returns to normal.

8.3 Alarm Conditions

- The panel will signal an alarm if it detects an Alarm condition or a Fire Drill test.

Alarm Signals

- If the control panel initiates an alarm condition, the red Alarm LEDs at the left of the LED Display flash to indicate the system has detected a fire condition and has activated the system notification appliances, the internal buzzer sounds, ZONE/AREA Alarm LED(s) light indicating the event location, and the Alphanumeric Display provides detailed information.
- To test the alarm system, enter Level Two, enable the Control Keys, and press the **Fire Drill** Key. The panel will activate system notification appliances. The red Alarm LEDs at the left of the LED Display flash and the internal buzzer sounds. The Alphanumeric Display indicates a "Fire Test."

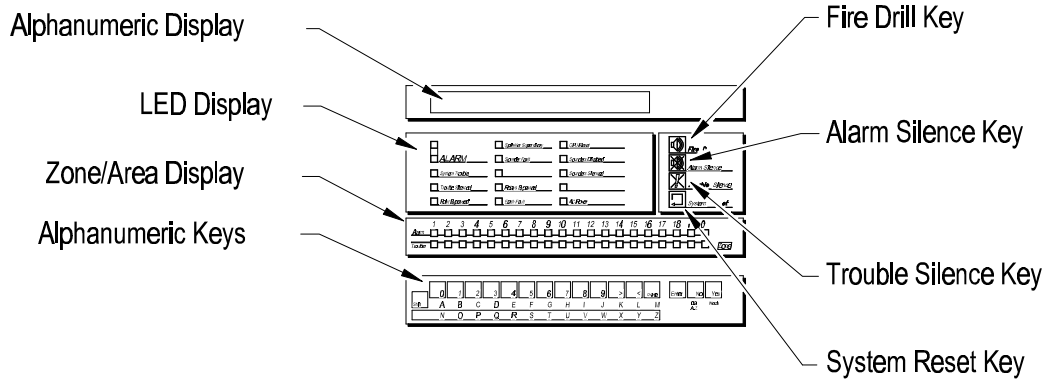


Figure 8: Level Two Controls

Alarm Signal Response

- Press the **Alarm Silence** Key to turn off notification appliances external to the panel. The Alarm Silenced LED will light. Pressing the **Alarm Silence** Key again turns on the external notification appliances.
- Press the **Trouble Silence** Key to turn off the panel buzzer. The amber Trouble Silenced LED will light.
- Press the **System Reset** Key to reset the system. The Alarm and Trouble Silenced LEDs will go out and the Alphanumeric Display will return to normal.



The panel will not accept a reset from an Alarm condition until the notification appliances have been silenced.

- To return the system to Level One, press the **Shift** Key, and select 5) Disable from the Alphanumeric Display. Select 3) Keys from the display. The panel will briefly display the Level Two Entry Menu Two and then revert to the normal display (alternating between a time and date display and a system status message). Press the **Fire Drill** Key to verify that the keys are disabled.

8.4 System Operation

- Pressing the **Shift** Key from the normal display will open Main Menu on the Alphanumeric Display. The first option, 1 Commission, is not available to Level Two Operators. See the Programmer's Guide for commissioning and programming information. The other options on the Main Level permit tests and the setting, enabling, and disabling of various system functions.

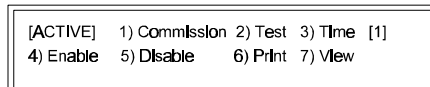


Figure 9: Main Menu

System Tests

- Select the second option, 2) Test, from the Main Menu to open the Test Menu. This allows the operator to test:
 - The LEDs on the Front Panel Display
 - The alphanumeric (Liquid Crystal) display
 - Detection and alarm initiating devices connected to the polling circuit
 - Notification Appliance and other alarm condition devices connected to the system.

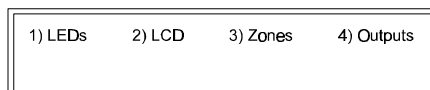


Figure 10: Test Menu

- If no action is taken, the display reverts to the normal display after one minute.

LEDs Test

- Select the first option, 1) LEDs, by pressing the 1 Key. The panel will flash all LEDs on the LED Display and step through all the Alarm and Trouble LEDs in the ZONE/AREA Display. On completion of the test, press **No** to return the display to Main Menu.

LCD Test

- Select the second option, 2) LCD, from the Test Menu by pressing the 2 Key. The Alphanumeric Display will flash all characters in all spaces on the alphanumeric display and return to Main Menu.

Zones Test

- Select the third option, 3) Zones, from the Test Menu by pressing the 3 Key. The Zones Test allows the operator to test devices on the polling circuit(s) and peripheral device circuit(s) without having to reset the panel after each device is tested.



If no action is taken within one minute, the display reverts to the normal display. Press the > Key to restore the test display.

- The panel displays Zone Test Menu One.



Figure 11: Zone Test Menu One

- Press the **Yes** Key to activate notification appliances briefly as each device is tested, or press the **No** Key to bypass the indicator test. The panel displays Zone Test Menu Two.

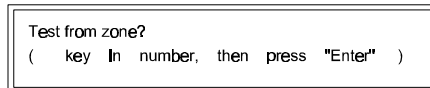


Figure 12: Zone Test Menu Two

- Enter the number of the first zone to be tested. The panel displays Zone Test Menu Three. If, for example, "12" were keyed in, the display would show:

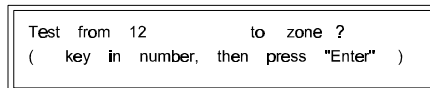


Figure 13: Zone Test Menu Three

- If "15" were keyed in, the panel would display the Walk Test Mode as follows:

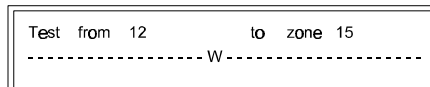


Figure 14: Zone Test Menu Four

- The "w" moving across the lower line alternates with a "Press NO to EXIT" message.



Once the display indicates the panel is in the Walk Test Mode, the display will not revert to normal. The panel will terminate the test and sound the panel buzzer if there is no activity for a 20-minute period.

- The operator may test devices within the zone parameters shown on the display. The panel responds to each test by:
 - Displaying an activation message on the Alphanumeric Display
 - Entering the activation in the Event Log
 - Lighting the Alarm LED in the ZONE/AREA Display

- Sounding the panel buzzer
- Lighting the LED at the device in alarm.
- After a few seconds, the panel will automatically reset and turn off the device LED. The panel allows up to one minute for smoke devices to clear. The operator may now test the next device.
- If the panel detects an alarm condition in a zone other than those being tested, all notification appliances and relays will activate as programmed. Notification appliances will continue to operate until silenced from the panel.
- Terminate the Walk Test by pressing the **No** Key. The display will return to Main Menu.

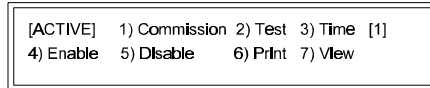


Figure 15: Main Menu

- The fourth option on the Test Menu, 4) Outputs, is not available to Level Two.

Time Setting

- Change the time displayed in the normal Alphanumeric Display by selecting option three, 3) Time, from the Operator's Menu, Main Level.

Enable/Disable Functions

- Select option four, 4) Enable, from the Operator's Menu, Main Level, to open the Enable Menu. Select option five, 5) Disable, to open the Disable Menu.

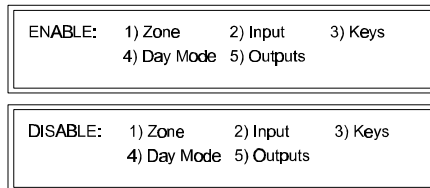


Figure 16: Enable/Disable Menus

- The Content of the two menus is identical, allowing the operator to enable or disable:
 - Zones
 - Individual devices (input)
 - Panel keys
 - Day Modes
 - Outputs: Notification Appliances (Sounders) and Relays
- Notification appliances cannot be enabled or disabled from Level Two.

Enable/Disable by Zone

- To enable or disable input signals from devices by zone, select option one, 1) Zone, from the Enable or Disable Menu. The display will prompt for the zone number. Key in the zone number and press the **Enter** Key. The display will repeat the zone number and ask "OK?" Press the **Yes** Key to confirm. The panel will enable or disable all the input devices in the selected zone.



Any disabled circuit-driven device or relay on a circuit will still operate on output as programmed. Only the input signal will be disabled.



Manual call points (alarm boxes) within the zone are not disabled.

- When a device is disabled, the amber Point Bypassed LED on the LED Display lights. The amber Trouble LED in the corresponding zone of the ZONE/AREA Display lights, and the panel displays a disable message on the Alphanumeric Display.

Enable/Disable Individual Detection Devices (Inputs)

- To enable or disable input signals from individual detection devices, select option two, 2) Input, from the Enable or Disable Menu. The display prompts for the polling circuit (loop) number (1-2). Key in the circuit number and press **Enter**. The display then prompts for the address of the device. Key in the address and press **Enter**. The display repeats the circuit number and address. Press the **Yes** Key.



Any disabled circuit-driven device or relay on a circuit will still operate on output as programmed. Only the input signal will be disabled.

Enable/Disable Panel Keys

- To enable Panel Keys, press any of the Control Keys except **No**, or press the ">" Key. The panel prompts, "Do you want to enable the control keys?" Press the **Yes** Key. The panel prompts for the pass code. Key in the Level Two pass code. The panel keys will be enabled for the programmed period of time. The display reverts to the Operator's Menu, Main Level (see Figure 3.) After one minute the display reverts to the normal display, or press the **System Reset** Key to return to the normal display. To disable Panel Keys, select option three, 3) Keys, from the Disable Menu. The display indicates that the panel keys are inhibited and then returns to the normal display. This places the panel in the Level One Control Level.

Enable/Disable Delayed Day Mode

- The Delayed Day Mode is configured from Level Three. The Delayed Day Mode causes the panel to respond to high sensor signals by sounding the panel buzzer and displaying a warning message at the Alphanumeric Display. The panel delays alarm activation for a programmed period. Configuration parameters allow variations in time of day and zones affected. The Level Two operator may enable or disable the Delayed Day Mode through the Enable or Disable Menu.
- To enable the Delayed Day Mode, select option four, 4) Day Modes, from the Enable Menu. The display will prompt for the programmed number of days. To accept as prompted, press the **Yes** Key. To change from the prompted number of days, press the **Change** Key, enter the desired number of days, and press the **Enter** Key. Enter zero (0) days to disable the Delayed Day Mode. Enter 200 days to permanently enable the Delayed Day Mode. If the Delayed Day Mode has not been programmed into the panel, pressing option four from the Enable or Disable Menu will result in a "Not available" message on the Alphanumeric Display.

Enable/Disable Relays

- Select option five, 5) Disable, from the Main Level of the Operator's Menu to disable relays during testing. The panel displays the Disable Menu. Select option five, 5) Outputs. The Display Shows:

1) Sounders	2) Relays
ENABLED	ENABLED



Notification Appliances (Sounders) may not be disabled or enabled from Level Two.

- Select 2) Relays. The panel buzzer sounds, the System Trouble LED lights, and the Alphanumeric Display message indicates that the relays are disabled. Press the **Trouble Silence** Key to silence the buzzer. The Trouble Silenced LED will light.



The disabled output must be enabled before the system can be reset.

- To enable the outputs, press the **No** Key to revert to the main menu. Enter the Enable Menu by selecting option four, 4) Enable. Select option five, 5) Outputs. Select Relays, option one 1) Sounders or option 2) Relays. The system will reset, and the Trouble Silenced LED will go out. Press the **No** Key to return to the main menu.

Print Functions

- Enter the Print Menu from the Main Level of the Operator's Menu by selecting option six, 6) Print. This menu controls the operation of the front panel printer.

PRINT:	1) Devices	2) Events	5) Disabled
(-)	3) Mode	4) Setup	

Figure 17: Print Menu

Print Devices

- Option one on the Print Menu allows the operator to print out the current state and the text assigned to all devices on a polling circuit (loop).

Print Events (Event Log)

- Option two on the Print Menu allows the operator to print out the contents of the event log.

Print Mode

- Option three on the Print Menu allows the operator to toggle between manual and automatic printing. The current selection is shown on the print menu display. In Manual Mode, the printer prints only on demand. In Automatic Mode, the printer automatically prints events as they occur.

Print Direction

- Option four on the Print Menu allows the operator to change print direction on panel-mounted printers.

Print Disabled

- Option five on the Print Menu allows the operator to print the location of all disabled devices.

View Functions

- Enter the View Menu from the Main Level of the Operator's Menu by selecting option seven, 7) View. This menu displays information about the selected option on the Alphanumeric Display. After viewing an option, press the **No** Key to return to the View Menu. Press the **No** Key again to return to the Main Level of the Operator's Menu.

View Devices

- Option one on the View Menu allows the operator to view the current state and text of any one device on a circuit. Select option one, 1) Devices, from the View Menu. The display prompts for the loop (circuit) number. Key in the circuit number and press **Enter**. The display prompts for the address. Key in the address and press **Enter**.

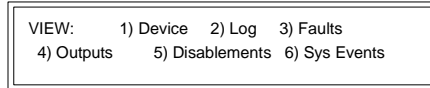


Figure 18: View Menu

View Event Log

- Option two on the View Menu allows the operator to view the Event Log. Select option two, 2) Event log, from the View Menu and press **Enter**. The display prompts a beginning entry number. The default is the latest entry. Press **Yes** to accept. Press **No** to select another entry. Use the **>/<** Keys to scroll through the log. Exit this menu by pressing the **No** key.

View Faults

- Option three on the View Menu displays the panel fault status. This is the same display as the normal Alphanumeric Display without the logo. The operator may scroll through all the faults using the **>/<** Keys. Exit this menu by pressing the **No** Key.

View Outputs

- Option four on the View Menu displays information on disabled devices.



Using the Alarm Silence Key forces all notification appliances to an OFF condition.

View Disablements

- Option five on the View Menu displays information on disabled devices.

9.0 Level Three (Programmer) Functions

- See the *Analog Fire Alarm Control Panels Programming Guide* (P/N:38789B) for complete information on commissioning and programming the Fire Alarm Control Panel. Commission, configure, networking, and certain disable options are not available to level two operators.



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