Radionics®

D9024, D10024 Analog Fire Alarm Control Panels
Operator's Guide
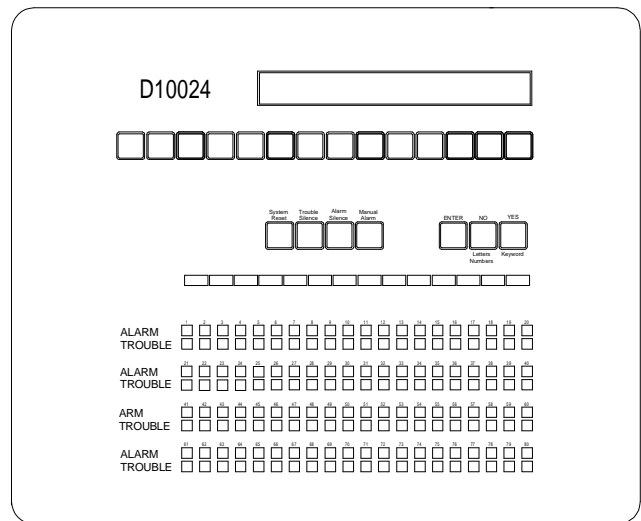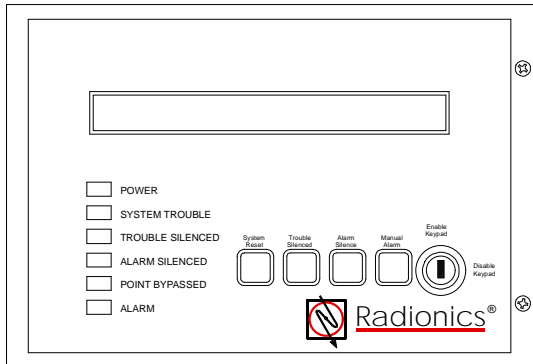
D10024

POWER
SYSTEM TROUBLE
TROUBLE SILENCED
ALARM SILENCED
POINT BYPASSED
ALARM

Radionics®

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Operator's Guide

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 D9024 and D10024 Fire Alarm Control Panels (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.

WARNING

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   Controls and Displays

- The D9024 and D10024 control panels have two rows of control keys and three display areas. The upper row of keys, the **Alphanumeric Keys**, normally function as number keys. They can be toggled to **Letter Keys** by pressing the Letters/Numbers Key in the Control Keys 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. The **Control Keys** row contains the four **System Control Keys** and three **Program/Interactive Keys**.

- 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 is a row of LEDs that indicate the type of system event and status. See Table 1 for the functions of the system event and status LEDs.

- The lower display area is the ZONE/AREA LED display that indicates the location and type (alarm or trouble) of event. The D9024 can have up to 40 zones. The D10024 can have up to 80.
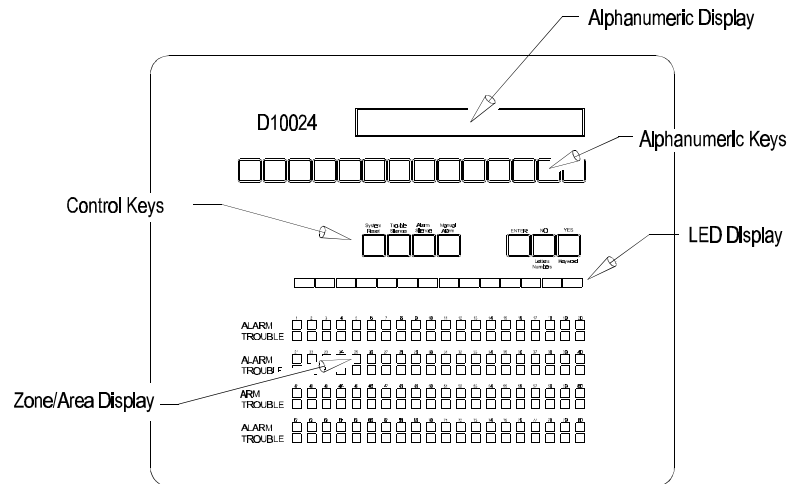

Figure 1: D10024 Front Panel Display

Table 1: System Event and Status LEDs

System Event and Status LED	Function
Alarm	An input point is in alarm state, or has latched into an alarm state. This clears when the system is reset.
System Trouble	There is a fault in the system: SLC wiring, power fault, etc. This clears when the fault has been corrected.
Trouble Silenced	The annunciation of a fault condition has been manually silenced by an operator. this clears when the fault condition has been corrected, or another fault occurs.
Point Bypassed	One or more inputs have been disabled manually by an operator. This clears when the point(s) are returned to service.
Earth Fault	The system has a short circuit to a foreign ground, such as an SLC conductor shorted to a heating duct. This clears when the fault has been corrected.
Sounder Fault	This indicates a wiring fault with a notification appliance circuit. It clears when the fault has been corrected.
Sprinkler Supervisory	This indicates a special type of alarm, usually indicating an unsafe condition with a fire suppression system. It clears when the system has been reset.
CPU Reset	The system detected an improper operation of the CPU, and has restarted it automatically. It clears when the system is reset by the operator.
Alarm Silenced	Notification circuits have been manually turned off by an operator, but the system is still in an alarm state. This clears when the system is reset.
AC Power	Indicates that acceptable AC line power is present.

6.0   Control Levels

6.1   Level Distinction

- The D9024 and D1 0024 have 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 control functions, 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, or, if the panel is in a secure area, can be made the standard level by enabling the front panel keys.

- 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 pass code from Level Two. See the *Analog Fire Alarm Control Panels Programming Guide* (P/N: 38789B) for more information on Control Level Three.

6.2   Pass Codes

- Pass codes are programmable. The Level Two pass code 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.

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 pass code.

7.1   Power Conditions

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

- If the 120 V 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 red Alarm LED at the left of the indicator display flashes 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. Level Two is reached by entering the Level Two pass code.

8.1   Power Conditions

- The D9024 and D10024 supervise their AC power supply and the standby batteries.

Power Failure Signal

- If the 120 V 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

- To silence the panel buzzer, press the Trouble Silence Key. The amber Trouble Silenced LED will light.

- When the 120 V 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, 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 section 8.4, "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 LED at the left of the LED Display flashes 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, press the Fire Drill Key. The panel will activate system notification appliances. The red Alarm LED at the left of the LED Display flashes and the internal buzzer sounds. The Alphanumeric Display indicates a "Fire Test."
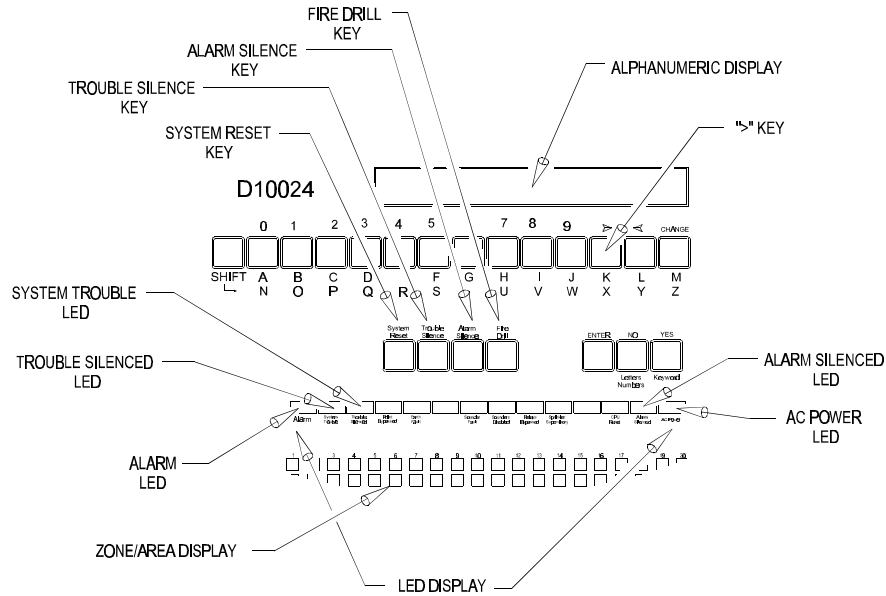
Figure 2: Level Two Controls

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 Silenced LEDs will go out and the Alphanumeric Display will return to normal.

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

- To return the system to Level Two, press the **>** Key, and select 5) Disable from the Alphanumeric Display. Select 3) Keys from the display. The display will return to normal. Press the Fire Drill key to verify that the keys are disabled. The display will prompt, "do you want to enable the Control Keys?" Press the **No** key. The display will return to normal.

8.4   Operator's Menu

- Pressing the **>** Key will open the Operator's Menu, Main Level, on the Alphanumeric Display. The first option, 1) Commission, is not available to Level Two Operators. See the *Analog Fire Alarm Control Panels Programming Guide* (P/N: 38789B) for commissioning and programming information. The other options on the Main Level permit tests and enabling/disabling of various system functions.
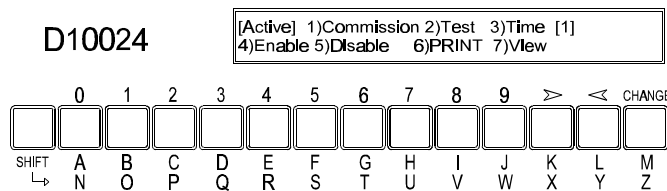

Figure 3: Operator's Menu, Main Level

System Tests

- Select the second option, 2) Test, Key from the Main Level Menu to open the Test Menu. This allows the operator to test:

    - the LEDs on the Front Panel Display.

    - the devices connected to the system.

- If no action is taken, the display reverts to the normal display after one minute. The third option on this menu, 3) Outputs, is not available to Level Two.
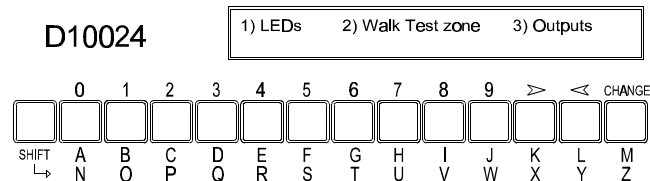
D10024 | 1) LEDs   2) Walk Test zone   3) Outputs |

```
        0    1    2    3    4    5    6    7    8    9    >    <   CHANGE
      [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ] [  ]
      SHIFT  A    B    C    D    E    F    G    H    I    J    K    L    M
       ↳     N    O    P    Q    R    S    T    U    V    W    X    Y    Z
```

Figure 4: Test Menu

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, the Display will report the results of the test and automatically revert to the normal menu after one minute. To interrupt and end the test, press the **No** Key.

Walk Test

- The Walk Test allows the operator to test the system devices without having to reset the panel after each device is tested. Select the second option, 2) Walk Test zone, by pressing the 2 Key.

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

- The display prompts, "Ring bells?" 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 display prompts, "Test from zone? (Please key in number, then press **Enter**)." Enter the number of the first zone to be tested.

- If, for example, "12" were keyed in, the display would ask, "Test from zone 12 to zone? (Please key in number, then press **Enter**)." If 15" were keyed in, the panel would display the Walk Test Mode as follows:

Test from zone 12 to zone 15

--------W---------------------------

> **IMPORTANT** **Once the display indicates the panel is in the Walk Test Mode, the display will not revert to normal. If no action is taken within 20 minutes, the panel terminates the test and sounds the panel buzzer.**

- The operator may then test devices in 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 then 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.

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.
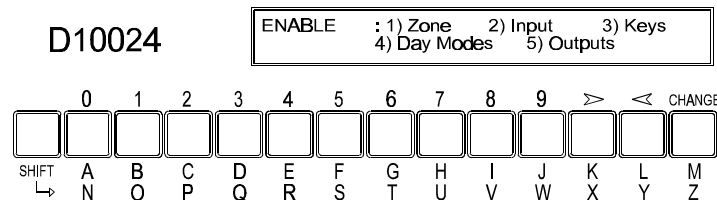

Figure 5: Enable Menu

- The content of the two menus is identical, allowing the operator to enable or disable:

  - Zones

  - Individual devices

  - Panel keys

  - Day Modes

  - Relays

- Notification appliances cannot be enabled or disabled from Level Two. See section 9. of this manual for Level Three Instruction.

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 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 (11 -5). 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 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. 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 display reverts to the Operator's Menu, Main Level. (See Figure 3.) After one minute the display reverts to the normal display.

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

- Select Relays, option two.

- 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.

IMPORTANT   **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 two. 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.
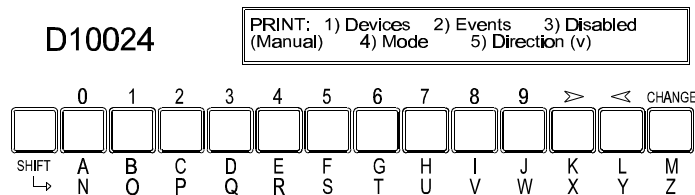

Figure 6: Print Menu

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 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**.
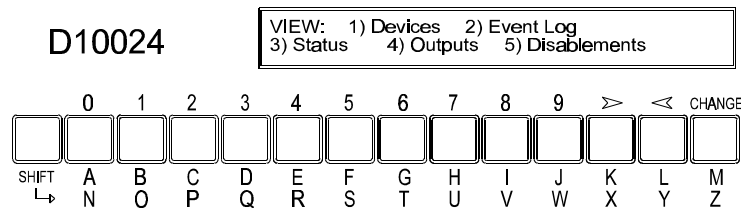

Figure 7: View Menu

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 Status

- Option three on the View Menu displays system status. This is the same display as the normal Alphanumeric Display without the logo. 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

- Level Three instructions within this Operator's Manual are for operations that are included in the system operation but require a Level Three passcode. See the *Analog Fire Alarm Control Panels Programming Guide* (P/N: 38789B) for complete information on commissioning and programming the Fire Alarm Control Panel.

9.1   Disable/Enable Sounders (Notification Appliances)

- All sounders (notification appliances) and relays can be disabled or enabled from the control panel during testing. Disabling notification appliances requires a Level Three pass code. No code is required to enable.

- From the Main Level of the Operator's menu, select option five, 5) Disable. The Disable Menu is displayed. Press option five, 5) Outputs. The display shows:

1) Sounders	2) Relays
ENABLED	ENABLED

- Select option 1) Sounders. The display prompts for the Level Three pass code. Enter the pass code The panel buzzer sounds, the System Trouble LED lights, and the display message indicates that the output is 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.

IMPORTANT

- 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 option one, 1) Sounders. The system will reset, and the Trouble Silenced LEDs will go out.