

# MR-2300 Series

## LCD Fire Alarm Control Panel





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# 1.0 Introduction

## 1.1 About this Manual

This user guide provides information on the main indicators and controls of the MR-2300 Fire Alarm Control Panel. Specifically, with this manual you will learn about:

- What the LEDs on the main display indicate
- What the buttons on the main display do
- What certain common LCD screen messages mean

Refer to the **Glossary** on page 18 for an explanation of commonly used terms in this manual.

## 1.2 Technical Support

For all technical support inquiries, please contact MGC's Technical Support Department between 8 A.M. and 5 P.M. (EDT) Monday through Friday, excluding holidays.

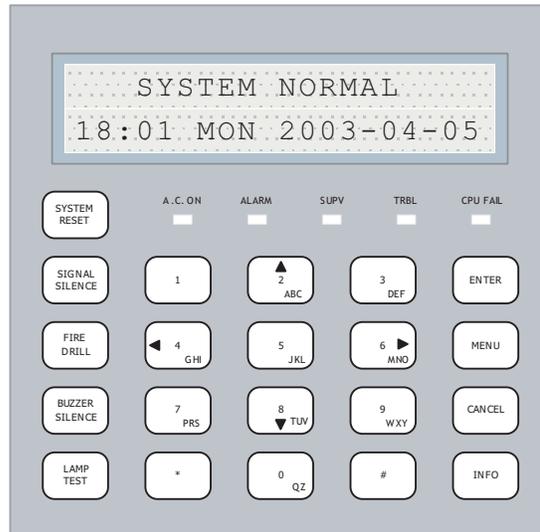
Toll-Free Phone: 1-888-SECUTRON (1-888-732-8876)

Local Fax: 905-660-4113

Toll-Free Fax: 1-888-660-4113

## 2.0 Main Display

Figure 1 shows the LCD display, LED indicators, and control buttons locations.



**Figure 1 Main Display**

The main display panel on the fire alarm control board consists of:

- Five LED indicators (located just below the LCD screen)
- Five buttons (left edge of display)
- 16 program buttons (right part of display)

LED indicators may be amber, red, or green, and may illuminate continuously (steady), or at one of two flash rates:

- **Fast flash (supervisory):** 120 flashes per minute
- **Trouble flash (trouble):** 20 flashes per minutes

## 3.0 The Buzzer and LED Indicators



Figure 2 LED Indicators

### 3.1 Buzzer

The buzzer sounds if there is a fire alarm, a supervisory alarm, or a trouble in the fire alarm system. It turns off if the condition causing the buzzer to sound is cleared or if the BUZZER SILENCE button is pressed.

### 3.2 A.C. On LED

The green A.C. On LED illuminates steadily as long as the main power is above minimum level. The indicator turns off when the level falls below the minimum level and the panel switches to standby (battery) power.

### 3.3 Alarm LED

The red Alarm LED illuminates steadily when there is a fire alarm. This indicator will remain on until the system is reset.

### 3.4 Supervisory LED

The amber Supervisory LED illuminates at the fast flash rate when there is a supervisory alarm in the fire alarm system. For non-latching supervisory alarms, the Supervisory LED will turn off when the condition causing the alarm goes away. For latching supervisory alarms, this LED remains on until the panel is reset.

### 3.5 Trouble LED

The Trouble LED flashes amber at the trouble flash rate when the panel detects any trouble condition. For non-latching trouble conditions, the Trouble LED turns off when the condition causing the alarm goes away. For latching trouble conditions, the LED remains on until the panel is reset.

### 3.6 CPU Fail LED

The CPU Fail LED flashes amber at the trouble flash rate to indicate a microprocessor failure on the main board.

## 4.0 Main Display Buttons

### 4.1 SYSTEM RESET



The SYSTEM RESET button resets the fire alarm control panel and all circuits.

### 4.2 SIGNAL SILENCE



Pressing the SIGNAL SILENCE button when the panel is in alarm deactivates any silenceable signal devices in the fire alarm system. Non-silenceable signal devices are unaffected. If you press the SIGNAL SILENCE button a second time, or if there is a subsequent alarm, the signals will re-sound. If the panel has been configured with a Signal Silence Inhibit timer, this button will not work until the timer expires. This button also does not work if you have pressed the FIRE DRILL button.

### 4.3 FIRE DRILL



Pressing the FIRE DRILL button simulates a fire alarm by activating the fire alarm signals without transmitting an alarm to the central station. To cancel the fire drill, press the button again. If the fire alarm system goes into a real alarm while you are performing a fire drill, this button will not turn off the signals or operate any programmed relays.

### 4.4 LAMP TEST



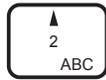
Pressing and holding the LAMP TEST button causes all the front panel LEDs to illuminate. The screen displays the software version and the buzzer sounds. Use this button to test that the LCD display and all LEDs on the main display are working. If you hold the LAMP TEST button for more than ten seconds, the common trouble is activated.

### 4.5 BUZZER SILENCE



Pressing the BUZZER SILENCE button while the buzzer is sounding silences the buzzer. The buzzer will resound if there is a subsequent event. Pressing the button when the buzzer is not sounding has no effect.

## 4.6 The Up and Down Arrow Buttons



Use these buttons to scroll through any events listed on the screen. The up arrow moves to the next listed condition and the down arrow moves to the previously listed condition.

## 4.7 INFO



Press the INFO button while there is a message on the screen to view additional information.

## 4.8 ENTER, MENU, and CANCEL

The ENTER, MENU, and CANCEL buttons are used by technicians to program the fire alarm control panel.

## 5.0 Disconnecting and Reconnecting a Circuit (Zone)

You can disconnect and reconnect detection and signal circuits (zones) from the panel using the bypass options in the menu.

To select the bypass options, you must be in the Command Menu. To enter the Command Menu, press .

### 5.1 To Disconnect (Bypass) a Circuit

#### Step 1: Enter your passcode

Enter the passcode

1. Enter your passcode.
2. Press ENTER. 

#### Step 2: Select the Bypass Menu

- Bypass Det Zone - ↓

1. Use the up and down arrow buttons   to scroll down to "Bypass Det Ckt" or "Bypass NAC Ckt".
2. Press ENTER. 
3. Use the up and down arrow buttons to select the circuit that you want to disconnect.
4. Press ENTER. 

#### Step 3: Select "BYPASSED"

Zone-1 [ ] BYPASSED ↓

1. Use the up and down arrow buttons   to scroll the cursor to "Bypassed".
2. Use the right arrow button  to change the selection to "X". The "X" indicates that the option is selected.
3. Press ENTER. 
4. Press CANCEL  twice to return to the main menu.

If you have disconnected (bypassed) a circuit, a trouble message appears on the display and disappears when the circuit is reconnected.

## To Reconnect (Unbypass) a Circuit

### Step 1: Enter your passcode

Enter the  
passcode

1. Press MENU.
2. Enter your passcode.
3. Press ENTER. 

### Step 2: Select the Bypass menu

- Unbypass Det  
Zone - ↓

1. Use the up and down arrow buttons   to scroll down to “Bypass Det Ckt” or “Bypass NAC Ckt”.
2. Press ENTER. 
3. Use the up and down arrow buttons to select the circuit you want to reconnect.
4. Press ENTER. 

### Step 3: Select UNBYPASSED

Zone-1  
[ ] UNBYPASSED ↓

1. Use the up and down arrow buttons   to scroll the cursor to “Unbypassed”.
2. Use the right arrow button  to change the selection to “X”. The “X” indicates that the option is selected.
3. Press ENTER. 
4. Press CANCEL  twice to return to the main menu.

# 6.0 Understanding On-screen Messages

The screen of the fire alarm control panel displays messages regarding system events. System events display on the screen in a queue. Events in this queue are listed on the screen in order of priority: alarms are of highest priority, followed by supervisory, trouble, and monitor conditions. If the same type of event happens more than once (for example, two trouble conditions occur) they will be listed in the order of the most recent event to the least recent event. If an alarm, supervisory, or trouble condition occurs, their respective LED will flash

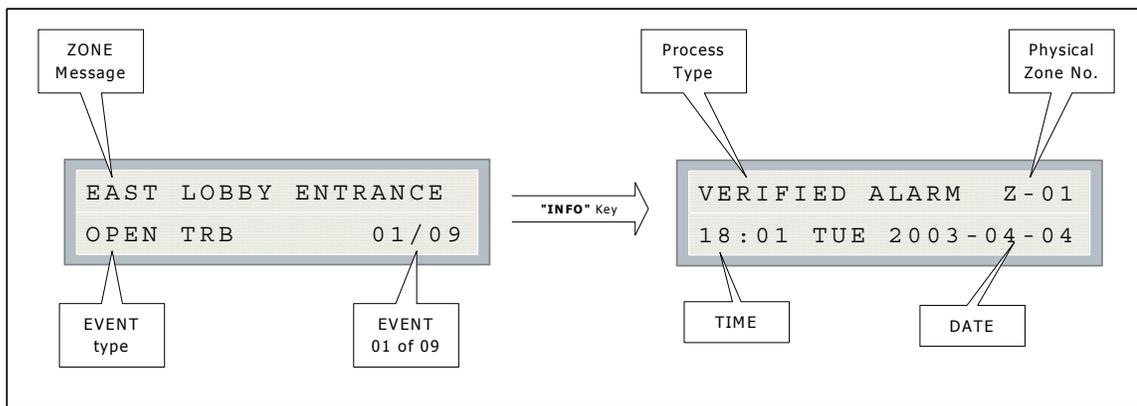
Scroll through the events by using the  and  arrow buttons. If you need more information about a displayed event, press .



**Note:** For monitor events, the display shows the word BUILDING.

## 6.1 Example 1 (detection circuit)

Figure 3 indicates that event 1 of 9 is an open trouble at the East Lobby Entrance. When  is pressed, the screen shows that the process type is a verified alarm on Z-01 and the event occurred on Tuesday April 4, 2003 at 18:01.



**Figure 3 Verified Alarm Example**

## 6.2 Example 2 (indicating circuit):

Figure 4 indicates that event 2 of 9 is a short trouble at the East Wing Lobby. When INFO is pressed, the screen shows that the process type is silenceable on NAC-1 and the event occurred on Tuesday February 2, 2003 at 18:01.

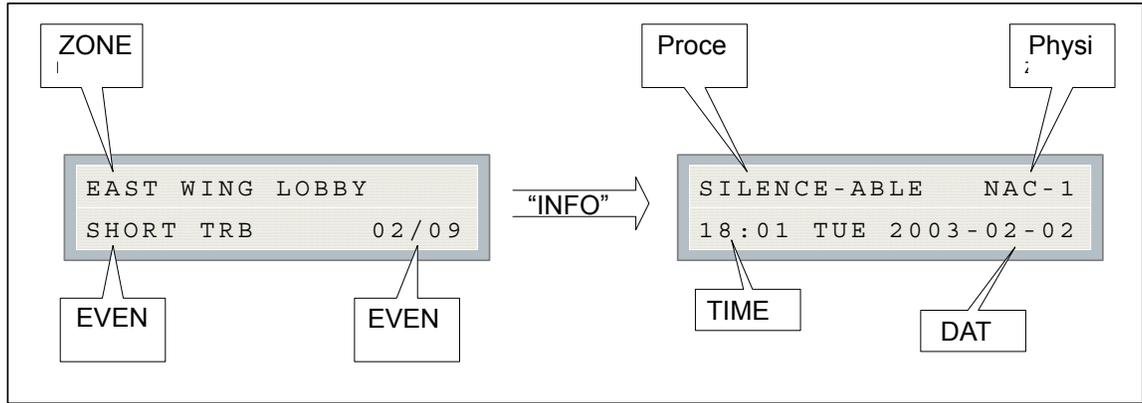


Figure 4 Silenceable Signal Example

## 6.3 Common Messages

Common system messages are outlined below.

### 6.3.1 AC Power Fail

The "AC Power Fail" message indicates that the power has dropped below the minimum level and the system is running on backup battery power. The trouble is removed when the power returns to the normal value.

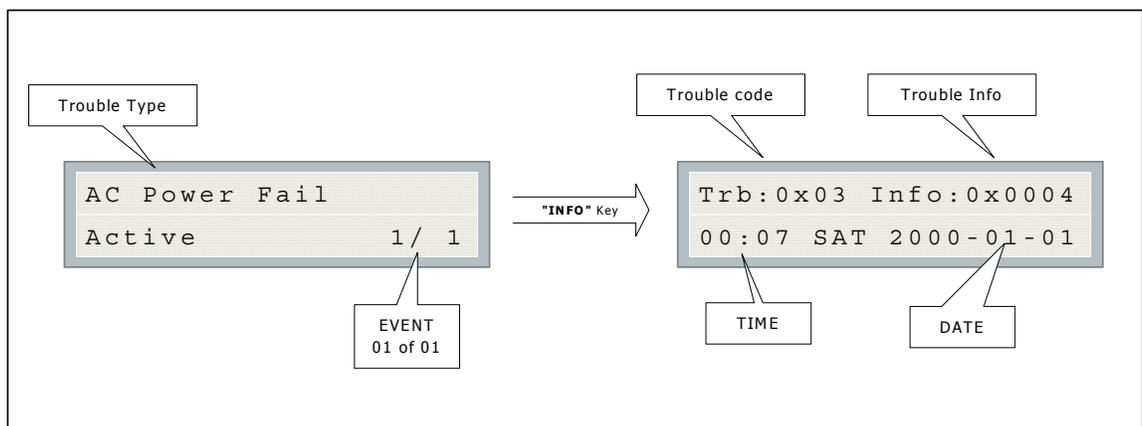
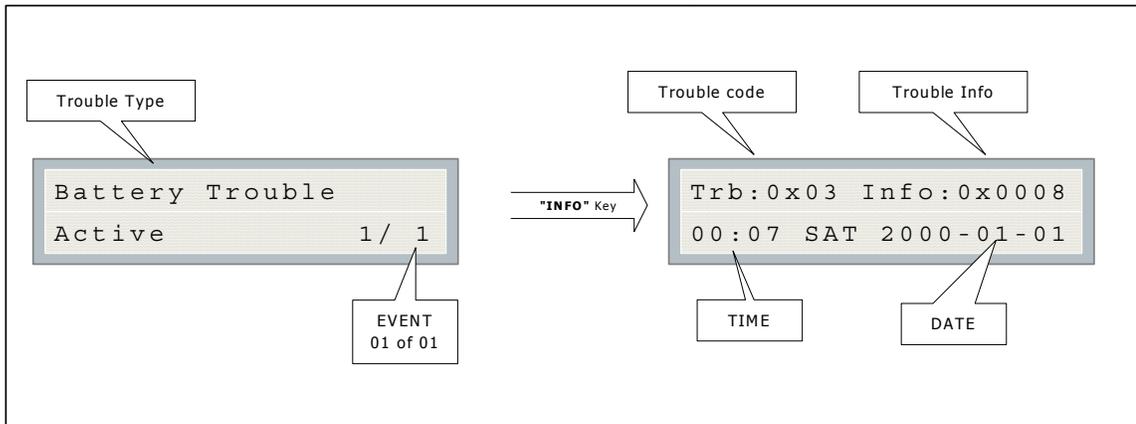


Figure 5 AC Power Fail

### 6.3.2 Battery Trouble

The “Battery Trouble” message indicates that the battery voltage has dropped below the minimum value. The trouble is restored when the voltage returns to the normal value.



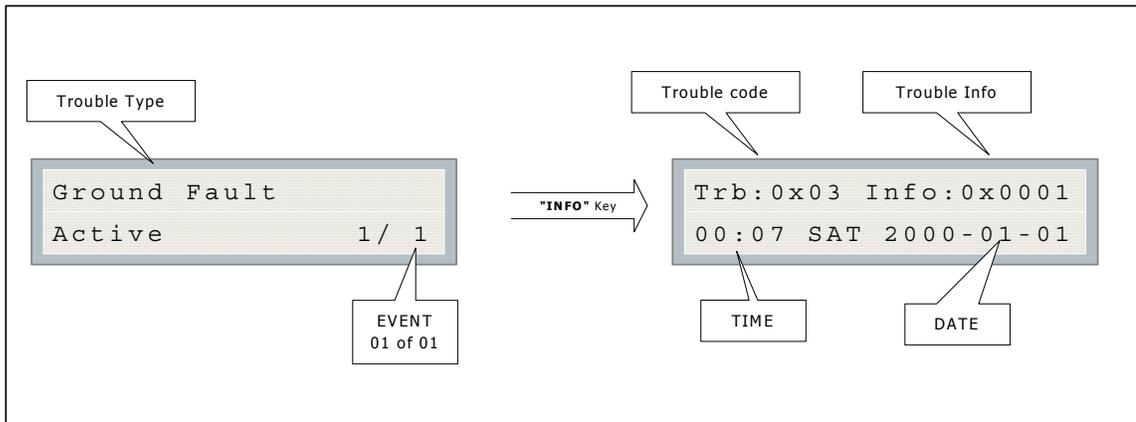
**Figure 6 Battery Trouble**



**Note:** The trouble code is a reference code for trained service personnel only.

### 6.3.3 Ground Fault

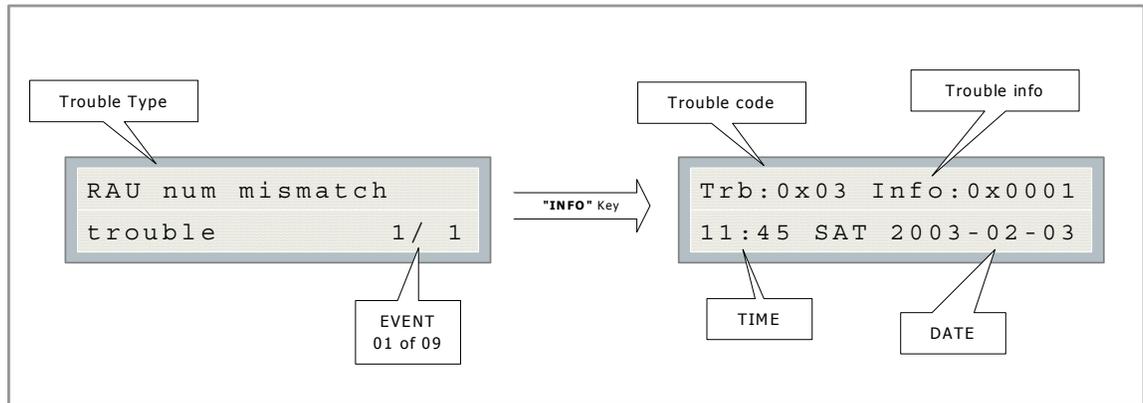
The “Ground Fault” message indicates that there is a short in the electrical connection between the metal chassis of the panel and the earth.



**Figure 7 Ground Fault**

### 6.3.4 RAU num mismatch

The “RAU num mismatch” message can display for one of two reasons: either the main panel and annunciator failed to communicate with each other or an unconfigured remote annunciator is communicating with the main panel. In both the cases, the following trouble message is displayed:



**Figure 8 RAU num mismatch**



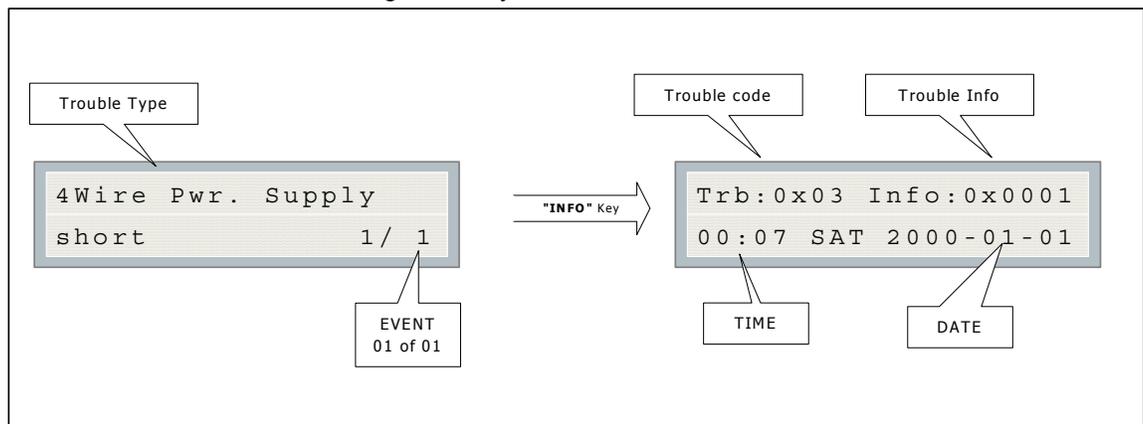
**Note:** The trouble code is a reference code for trained service personnel only.

### 6.3.5 4Wire Pwr. Supply

The "4Wire Pwr. Supply" message indicates that the panel has detected a short on a four-wire smoke supply the power is cut off and a trouble message is generated. Press System Reset



to restore the power the system. If the short is removed, the panel will return to normal; otherwise the trouble message will stay.



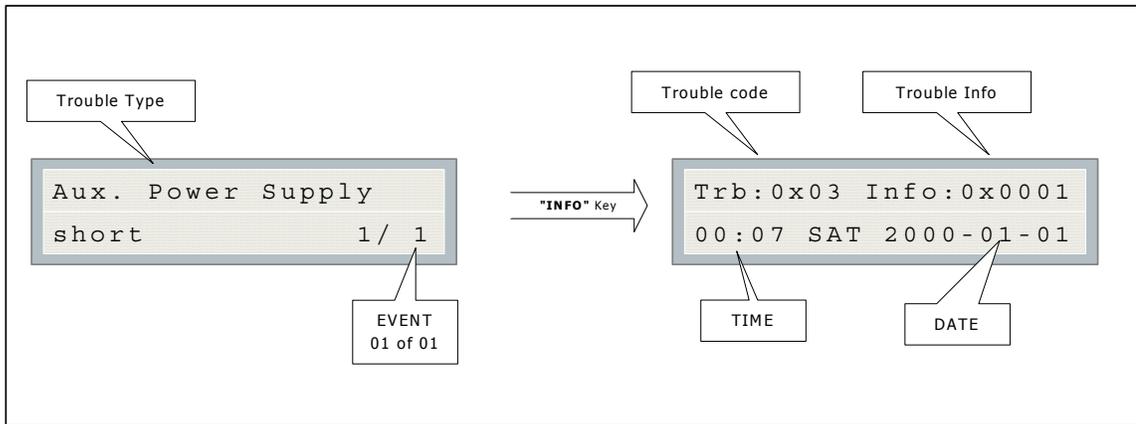
**Figure 9 4Wire Pwr. Supply**

### 6.3.6 Supervised Aux-supply

The "Aux. Power Supply" message indicates that the panel has detected a short on the auxiliary power supply (battery backup) and has cut it off. Press System Reset



to restore the power the system. If the short is removed, the panel will return to normal; otherwise the trouble message will stay.



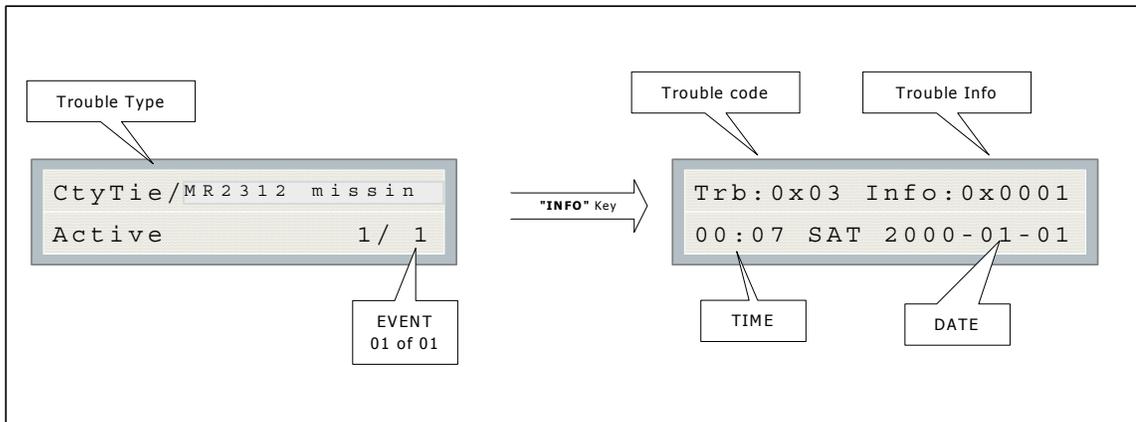
**Figure 10 Aux. Power Supply**



**Note:** The trouble code is a reference code for trained service personnel only.

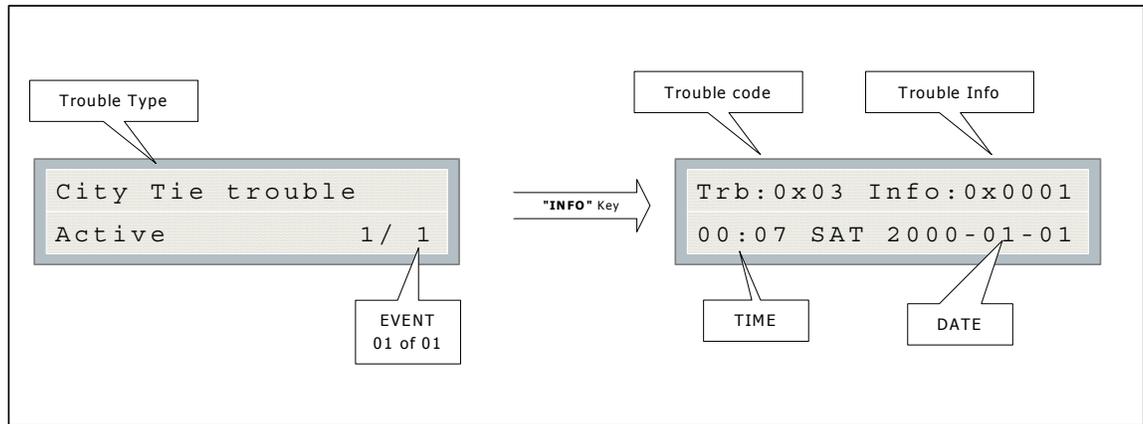
### 6.3.7 City tie Polarity reversal - MR-2300-PR/Relay module

The “CtyTie/MR2312 missin” message below indicates that the city tie, polarity reversal module or the relay module is not plugged in.



**Figure 11 CtyTie/MR2312 missing**

The “City Tie trouble” message below indicates that the panel detects an open on the city tie output.



**Figure 12 City Tie trouble**



**Note:** The trouble code is a reference code for trained service personnel only.

## 7.0 Glossary

### Alarm Condition

Occurs when devices such as detectors, pull stations, or sprinklers are activated. In a single stage system, this condition activates all signalling devices throughout the building. In a two stage system, this condition activates an alert signal and the General Alarm timer.

### Circuits

Refers to an actual electrical interface and is classified as initiating (detection), indicating (signal), or relay. The terms “circuit” and “zone” are often used interchangeably in the fire alarm industry.

### Fast Flash Rate

An LED flashes at 120 flashes per minute to indicate a supervisory alarm.

### Indicating Circuit

A circuit in a fire alarm system that is connected to audible or visual signalling devices.

### Initiating Circuit

A circuit in a fire alarm system that is connected to detectors, pull stations, sprinklers, or water flow switches.

### Latching Circuit

A circuit that, when activated, will cause a condition on the panel that cannot be cleared until the panel is reset.

### LED

The light-emitting diodes (LEDs) of the MR-2300 are colored either amber, red, or green. When lit, LEDs provide information about the status of the panel.

### Monitor Condition

Occurs when dampers open or close, when supply and return fans are running, etc.

### Non-latching Circuit

A circuit that, when activated, causes a condition on the panel that is cleared once the circuit is deactivated. This term is used to describe supervisory and trouble circuits.

### Non-Silenceable Circuit

A signal circuit that cannot be silenced by pressing the SIGNAL SILENCE button.

## **Relay Circuit**

A circuit in a fire alarm system that connects relay devices (for example, fan damper relays).

## **Remote Annunciator**

A device that visually indicates, either by LCD or LEDs, the floor or zone where the alarm originated.

## **Silenceable Circuit**

A signal circuit that can be silenced by pressing the SIGNAL SILENCE button.

## **Supervisory Condition**

Occurs when the system detects open circuits, short circuits, and grounds. A supervisory condition is one that would interfere with the operation of the fire alarm system.

## **Trouble Condition**

Occurs when an abnormal condition such as a problem in the wiring, battery or power circuits exists in the fire alarm system.

## **Trouble Flash Rate**

An LED flashes at 20 flashes per minute to indicate a trouble condition.

## **Walk Test**

A test performed by a technician to ensure that each detection device is connected to the panel and working properly.

## **Zone**

A fire alarm protected area that consists of at least one circuit. The terms “circuit” and “zone” are often used interchangeably in the fire alarm industry.



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