MIRCOM®
Advanced Life Safety Solutions

FA-300 Series

LED Fire Alarm Control Panel

User Guide

LT-953 Rev. 0
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Introduction

About this Manual

This user's guide provides information on the main indicators and controls of the FA-300 Fire Alarm Control Panel. Specifically, with this manual you will learn about what the LEDs indicate and what the buttons on the main display do.

Refer to the **Glossary** on page 9 for an explanation of commonly used terms in this manual.

Technical Support

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

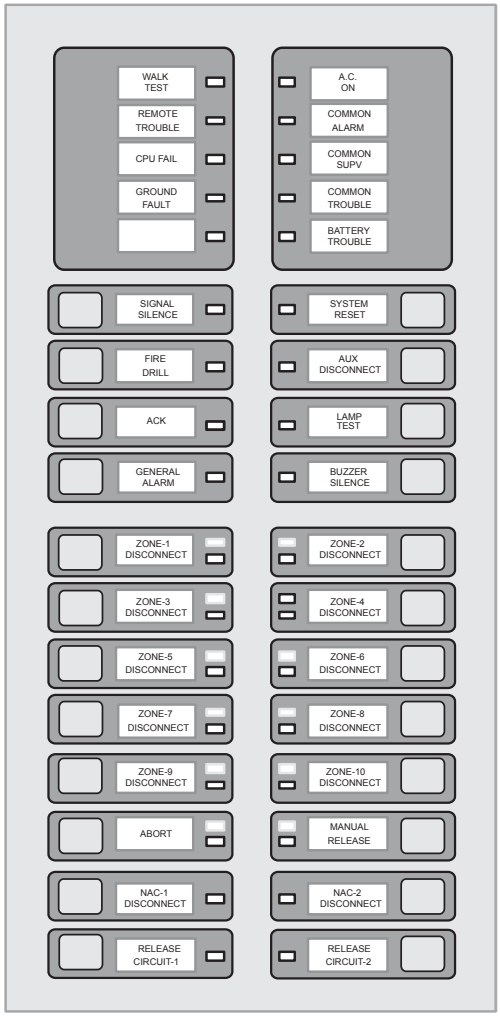
Local Phone: 905-695-3535 **Toll-Free Phone:** 1-888-449-3535

Local Fax: 905-660-4113 **Toll-Free Fax:** 1-888-660-4113

Email: techsupport@mircom.com

Main Display

Refer to the diagram below for the LED indicators and control buttons locations.



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

- 18 common LED indicators (top half of display)
- Eight common buttons (top half of display)
- Up to 12 Initiating circuit alarm LEDs and 12 initiating circuit trouble LED indicators
- Four indicating circuit LEDs (labeled NAC- Notifying Appliance Circuit)
- Up to sixteen disconnect buttons (12 for initiating circuit & four for indicating circuits)

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 minute

Paper labels for buttons and indicators

Each display is supplied with laser printable labels. These labels slide into the plastic label templates on the panel. The label paper for the main display includes English and French versions (Mircom # NP-2005.

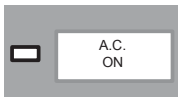
The Buzzer and LED Indicators

Common LED Indicators

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 goes away or if the Buzzer Silence Button is pressed.

AC On LED

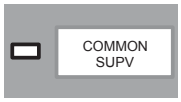


The green AC On LED illuminates steadily as long as the main power is above minimum level. The indicator turns off when the level falls below the minimum level and the panel switches to standby (battery) power.

Common Alarm LED

The red Common Alarm LED will illuminate steadily whenever there is a fire alarm. If the panel is set for two stage operation, pressing the red General Alarm button will also turn on the Common Alarm indicator. This indicator will remain on until the system is reset.

Common Supervisory LED



The amber Common 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.

Common Trouble LED

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

Remote Trouble LED

The amber Remote Trouble LED flashes at the trouble flash rate if the panel detects a trouble at the City Tie or UDACT module, communication trouble with a remote annunciator, or a local trouble at a remote annunciator.

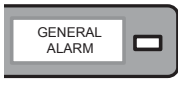
Fire Drill LED

The amber Fire Drill LED illuminates steadily after the Fire Drill button is pressed. This LED remains on until the Fire Drill button is pressed again.

Acknowledge LED

If the panel is configured as a two-stage system, the amber Acknowledge LED flashes at the fast flash rate while the Auto General Alarm timer is timing out. The Acknowledge indicator illuminates steadily when the General Alarm timer is cancelled by the pressing of the Acknowledge or Signal Silence buttons. If the Auto General Alarm timer times out and puts the panel into general alarm, this LED turns off.

General Alarm LED

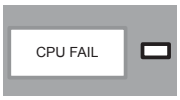


If the panel is configured as a two-stage system, the red General Alarm LED illuminates steadily when the General Alarm button is pushed, a General Alarm Initiating circuit is activated, or the Auto General Alarm timer times out. Once the General Alarm LED has turned on, it will stay active until the panel is reset.

Walk Test LED

The amber Walk Test indicator illuminates steadily to indicate that the panel is in walk test mode. If the panel is left in this mode for over an hour with no operator activity, the panel will return to normal and the Walk Test indicator will turn OFF.

CPU Fail LED



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

Auxiliary Disconnect LED

The amber Auxiliary Disconnect LED flashes at the trouble rate when the Auxiliary Disconnect button is pressed. It turns off when the Auxiliary Disconnect button is pressed a second time. When on, the Auxiliary Disconnect LED signifies that auxiliary alarm relay and relay adder modules (if disconnect is enabled) are not activated. If installed and enabled, the city tie module and the smart relay annunciator relays are also inactive.

Signal Silence LED

The Signal Silence indicator flashes amber at the trouble rate when indicating circuits are silenced either by the Signal Silence button or by the Auto Signal Silence timer. It turns off when the signals are re-sounded by a subsequent alarm or when the panel is reset.

Battery Trouble LED

The amber Battery Trouble LED flashes at the trouble rate when the battery is either low or disconnected.

Ground Fault LED

The amber Ground Fault LED flashes at the trouble rate when the ground fault detector detects a ground fault on any field wiring. It turns off when the ground fault is cleared.

System Reset LED

The amber System Reset LED illuminates for a short time when the System Reset button is pressed.

Alarm Circuit Indicators

This operation applies to Initiating Circuits configured as Verified Alarm, Non-Verified Alarm, Water flow Alarm, Sprinkler Alarm, or General Alarm Circuits. The following table summarizes the indications at different events:

Event	Circuit Trouble LED	Configuration
Open circuit or (Style D)/(Class A) trouble	Flashes at the trouble rate (amber)	Verified Alarm Non-Verified Alarm Water Flow Alarm Sprinkler Alarm General Alarm
Disconnected	Flashes at the trouble rate (amber)	
Circuit in Alarm	OFF	
Event	**Circuit Trouble LED**	**Configuration**
Circuit in Alarm	Steady (red)	
Pre-alarm	Fast flash rate (red)	Verified Alarm Sprinkler Alarm Water flow Alarm
Active circuit reconnected	OFF	

Supervisory Circuit Indicators

This operation applies to initiating circuits configured as latching or non-latching supervisory circuits. The following table summarizes the indications in response to different events:

Event	Circuit Trouble LED	Configuration
Open circuit or (Style D)/(Class A) trouble	Flashes at the trouble rate (amber)	Latching Sup. Non-Latching Sup.
Disconnected	Flashes at the trouble rate (amber)	
Circuit in Alarm	OFF	
Event	**Circuit Trouble LED**	**Configuration**
Circuit in Alarm	Steady (amber)	Latching Sup. Non-Latching Sup.
Active circuit reconnected	Fast flash rate (amber)	

Monitor Circuit Indicators

This operation applies to initiating circuits configured as monitor circuits. The following table summarizes the indications in response to different events:

Event	Circuit Trouble LED	Configuration
Open circuit or (Style D)/(Class A) trouble	Flashes at the trouble rate (amber)	Monitor
Disconnected	Flashes at the trouble rate (amber)	
Circuit Active	OFF	
Event	**Circuit Trouble LED**	**Configuration**
Circuit Active	Steady (amber)	Monitor
Active circuit reconnected	Fast flash rate (amber)	

Trouble-only Circuit Indicators

This operation applies to initiating circuits configured as Trouble-Only Circuits. The following table summarizes the indications in response to different events:

Event	Circuit Trouble LED	Configuration
Open circuit or (Style D)/(Class A) trouble	Flashes at the trouble rate (amber)	Trouble Only
Disconnected	Flashes at the trouble rate (amber)	
Short Circuit	Flashes at the trouble rate (amber)	

Signal Circuit Indicators

This operation applies to indicating circuits of any type. The Circuit Trouble Indicator flashes amber at the Trouble Rate to indicate short-circuit or open-circuit trouble, or if the circuit is Disconnected.

Event	Circuit Trouble LED	Configuration
Open Circuit	Flashes at the trouble rate (amber)	Signal
Disconnected	Flashes at the trouble rate (amber)	
Short Circuit	Flashes at the trouble rate (amber)	

Main Display Buttons

System Reset Button

The System Reset button resets the fire alarm control panel and all circuits.

Signal Silence Button

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 times out. This button also does not work if you have pressed the Fire Drill button.In a two stage system, if the Auto General Alarm timer has timed out, this button also performs the same function as the Acknowledge button.

Fire Drill Button

Pressing the Fire Drill button will simulate 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 activate any programmed relays.

Acknowledge Button

If the panel is *not* configured for two-stage operation, this button is not active. If the panel is configured for two-stage operation, pressing the Acknowledge button while the Auto General Alarm timer is timing (there is an alarm in the panel, but it is still in the first stage), the timer is cancelled and the amber Acknowledge LED illuminates steadily.

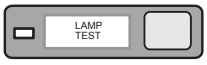
General Alarm Button (or Info button for single stage system)

If the panel is *not* configured for two-stage operation, this button does nothing. If the panel is configured for two-stage operation, pressing the General Alarm button immediately sends the panel into second stage general alarm. It will also re-activate the signals if they have been silenced during general alarm. The general alarm condition remains active until the panel is reset.

Auxiliary Disconnect Button

Pressing the Auxiliary Disconnect button activates the auxiliary disconnect function. Pressing the button again de-activates this function.

Lamp Test Button



Pressing and holding the Lamp Test button causes all front panel LEDs to illuminate and sounds the buzzer. Use this button to test that all LEDs in the main display are working. If you hold the Lamp Test button for more than ten seconds, the Trouble LED will illuminate.

Buzzer Silence Button

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.

Circuit (Zone) Disconnect Buttons

Circuit (zone) disconnect buttons are provided for all initiating and indicating circuits on the fire alarm control panel. These buttons are located beside their respective indicating LEDs.

Pressing a circuit disconnect button disconnects that circuit from the system and turns on its trouble indicator. While a circuit is disconnected, the panel will ignore all changes in the status (alarms and troubles) of that circuit. Circuit disconnect buttons are toggle switches; therefore, pressing an activated button a second time will reconnect the circuit.

Disconnecting an active latching initiating circuit such as alarms, water-flow alarm, sprinkler alarm, general alarm, and latching supervisory does not affect its status until the panel is reset. Disconnecting active non-latching initiating circuits including non-latching supervisory and trouble-only causes them to behave as if the alarm situation has disappeared. Disconnecting an active indicating circuit immediately deactivates the circuit.

When an initiating circuit disconnect button is pressed a second time, the panel checks the state of the circuit. If the circuit is active and will cause a false alarm, the Status LED flashes for ten seconds at the fast flash rate (red for alarm or amber for supervisory) without processing the input. If the circuit is not re-disconnected by then, it will be processed as a new input.

Glossary

Alarm Condition	Occurs when devices such as detectors, pull stations, or sprinklers are activated. In a single stage system, this condition will activate all signalling devices throughout the building. In a two stage system, this condition will activate an alert signal and the General Alarm timer.
Circuits	Refers to an actual electrical interface and can be 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	120 flashes per minute is the rate at which an LED will flash to indicate a supervisory alarm.
General Alarm Timer	In a two stage system, the general alarm timer begins timing when the panel is in the alert stage. When the general alarm timer times out, the system will go into a general alarm, where all signals in the building will sound.
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, or sprinkler 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 FA-300 are coloured either amber, red, or green. When lit, LEDs provide information regarding 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, will cause a condition on the panel that will be 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 (e.g. fan damper relays, etc.).
Remote Annunciator	A device that visually indicates, either by LCD or LEDs, the floor or zone where the alarm originated.
Single Stage System	A type of fire alarm system that immediately sounds all the signals throughout the building when an alarm is detected in any part of the system.
Silenceable Circuit	A signal circuit that can be silenced by pressing the Signal Silence button.

Supervisory Condition	Occurs when the sprinkler system is disconnected or turned off.
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	20 flashes per minute is the rate at which an LED will flash to indicate a trouble condition.
Two Stage System	A type of fire alarm system that causes an alert signal to sound when an alarm is detected in any part of the system. An alert signal advises designated persons of a fire emergency. If the alert signal is not acknowledged within five minutes of its initiation, an alarm (evacuation) signal will automatically sound throughout the building.
Walk Test	A test performed by a technician to ensure that each detection device is connected to the panel and working properly.
Zones	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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