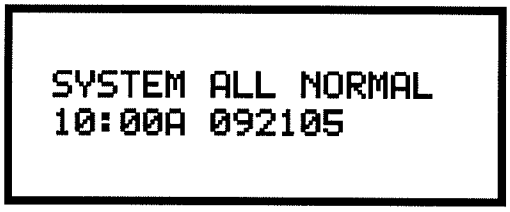
1.3 Controls and Indicators

LCD Display

The FACP uses an 80-character (4 lines X 20 characters) high viewing angle LCD display. The display includes a long life LED backlight that remains illuminated. If AC power is lost and the system is not in alarm, the LED backlight will turn off to conserve batteries.



LED Indicators

LED indicators are provided to annunciate the following conditions:

- AC Power (green)
- Fire Alarm (red)
- Supervisory (yellow)
- Trouble (yellow)
- Alarm Silenced signals (yellow)

Key Panel

Mounted on the main circuit board, the key panel includes a window for the LCD display and LED indicators as listed above. The key panel, which is visible with the cabinet door closed, has 25 keys, including a 16 key alpha-numeric pad similar to a telephone keypad.

Function keys:

- Acknowledge/Step
- Alarm Silenced
- Drill (Manual Evacuate)
- Reset (lamp test)

Service/program keys:

- Keys labeled 1 to 9
- * key
- # key
- 0 (recall) key
- 1st Event key
- Clear key
- Escape key
- Mode key
- Four cursor keys (up, down, left and right)
- Enter key

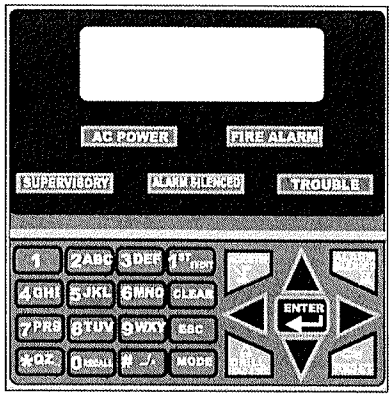


Figure 1.1 Membrane/Display Panel

Local Piezo Sounder

A piezo sounder provides separate and distinct pulse rates for alarm, trouble and supervisory conditions.

1.4 Circuits

SLC Communication Loop

One SLC loop is provided on the FACP main circuit board. The SLC loop, configurable for NFPA Style 4, 6 or 7, provides communication to addressable detectors, monitor (initiating device) and control (output device) modules. Refer to the SLC Wiring manual for information on wiring devices.

Reference Manual

SECTION 4 Operating Instructions

4.1 Panel Control Buttons

4.1.1 Acknowledge/Step

The first press of the *Acknowledge/Step* button silences the piezo sounder, changes flashing indicators/LEDs to steady and also changes the status field on the LCD display from capital letters to small letters. When the piezo is silenced, an *acknowledge* message is sent to the printer and the history file. *Acknowledge* also sends a *silence piezo* command to the optional annunciators connected to the FACP.

When more than one event exists, the first press of the Acknowledge/Step button functions as described in the preceding paragraph. Subsequent pressing of the button *steps* through each off-normal active event, with alarm events having a higher priority than trouble and supervisory events.

4.1.2 Alarm Silence

The *Alarm Silence* button performs the same functions as Acknowledge/Step. In addition, if an alarm exists, it turns off all silenceable NACs (Notification Appliance Circuits) and causes Alarm Silenced indicator to turn on. It also sends an 'alarm silenced' message to the printer, history file and optional annunciators. A subsequent new alarm will resound the system NACs. *Note that the Alarm Silenced indicator is turned off by pressing the Reset button, the Drill button or subsequent activation of the NACs.*

4.1.3 Drill/Hold 2 Sec

When the *Drill* button is held for a minimum of two seconds (time required to prevent accidental activations), the FACP turns on both main panel NAC outputs and all silenceable circuits such as control modules that are programmed as silenceable, and turns off the Alarm Silenced indicator if it was previously on. The *EVAC IN SYSTEM* message is shown on the LCD display. The same message is sent to the printer and history file. The *Alarm Silence* button can be used to turn off all silenceable NAC outputs following activation by the *Drill* button.

4.1.4 Reset

Pressing and releasing the *Reset* button turns off all control modules and NACs, temporarily turns off resettable power to 4-wire detectors, causes a *RESET IN SYSTEM* message to be displayed on the LCD and sends the same message to the printer and history file. It also performs a lamp test by turning on all indicators/LEDs (except the Ground LED), piezo sounder and LCD display segments after the *Reset* button is released. Any alarm or trouble that exists after a reset will resound the system.

4.2 Status Indicators and LEDs

The five status indicators which are located on the front panel and the three LEDs located on the main circuit board, operate as follows:

AC Power

AC Power indicator illuminates green if AC power is applied to the FACP. A loss of AC power will turn off this indicator.

Fire Alarm

Fire Alarm indicator flashes red when one or more alarms occur. It illuminates steady when the *Acknowledge/Step* or *Alarm Silence* button is pressed. The *Fire Alarm* indicator turns off when the *Reset* button is pressed. The indicator will remain off if all alarms have been cleared.

Supervisory

Supervisory indicator flashes yellow when one or more supervisory conditions occur, such as a sprinkler valve tamper condition. It illuminates steady when the *Acknowledge/Step* or *Alarm Silence* button is pressed. It turns off when the *Reset* button is pressed and remains off if all supervisory alarms have been cleared.

Trouble

Trouble indicator flashes yellow when one or more trouble conditions occur. It stays on steady when the *Acknowledge/Step* or *Alarm Silence* button is pressed. The indicator turns off when all trouble conditions are cleared. This indicator will also illuminate if the microprocessor watchdog circuit is activated.

Alarm Silenced

Alarm Silenced indicator illuminates yellow after the *Alarm Silence* button is pressed while an alarm condition exists. It turns off when the *Drill* or *Reset* button is pressed.

Primary Line Active

This is a red LED, located on the main circuit board, that indicates the primary phone line is active.

Secondary Line Active

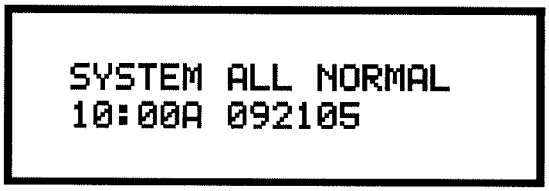
This is a red LED, located on the main circuit board, that indicates the secondary phone line is active

Kiss-off

This is a green LED, located on the main circuit board, that blinks when a Central Station has acknowledged receipt of each transmitted message or when a portion of upload or download data has been accepted from a Service Terminal

4.3 Normal Operation

With no alarms or troubles in the system, the display message is *System All Normal* along with the current time and date as shown below. To set the time and date, refer to the appropriate section in this manual.



The MS-9050UD performs the following functions at regular intervals while in Normal mode:

- ✓ Monitors AC input voltage and battery voltage
- ✓ Monitors and reports status of SLC loop, option cards and control panel
- ✓ Polls all devices on the SLC loop and flashes each device LED while checking for valid replies, alarms, troubles, etc.
- ✓ Refreshes LCD display and updates time
- ✓ Scans control panel keypad for key presses
- ✓ Performs autotest for all SLC devices
- ✓ Tests memory
- ✓ Updates and reads all communications busses (EIA-485, EIA-232, etc.)

4.4 Trouble Operation

With no alarms in the system, the detection of a trouble will cause the following:

- The piezo to pulse 1 second On and 1 second Off
- The system Trouble LED to flash one second On and one second Off
- The trouble relay to activate
- *TROUBL* with device type, noun/adjective, address and trouble description will appear on the LCD display
- The same message, along with the time and date, is sent to the optional printer and the history buffer.
- Communicate the trouble conditions to the Central Station
- Terminate upload or download communications

Note that specific troubles will initiate additional actions; for example, loss of AC power will turn off the AC Power LED, etc.