SD-8-EL / SD-8-EL-F1 Smoke Detector

Introduction

The SD-8-EL / SD-8-EL-F1 Smoke Detector is designed to be mounted on ceiling or top of stairwells where smoke would concentrate to raise alarm timely and protect your home from fire hazards.

Parts Identification

1. Learn / Test Button

The Learn / Test Button is pressed in the following situations:
- ✓ Learning – In the Smoke Detector.
- ✓ To test the radio communication range.
- ✓ To test if the Smoke Detector is functioning normally.
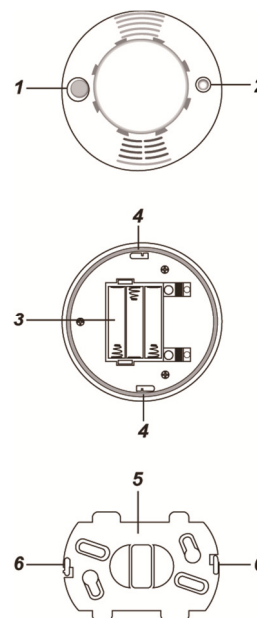- ✓ To silence the alarm

2. LED Indicator

- Flash every 30 seconds –Low Battery
- Flash when button is pressed – Transmit Signal
- Continuous Flash – Warm Up or Calibration / Alarming / Alarm Silence Mode.

3. Battery compartment

4. Mounting Hole

5. Mounting Bracket

6. Hook

Features

● *Battery*

- The Smoke Detector uses 3 AA Alkaline batteries as power supply.
- When using factory supplied batteries, the Smoke Detector has battery life expectancy of 4 years.
- When low battery voltage is detected, a low battery signal will be transmitted along with regular signal transmissions. If the battery voltage is low, the LED will flash accompanied with a Low-volume beep every 30 seconds.
- When changing batteries, remove the old batteries and press the Test button twice to fully discharge before inserting new batteries.

● *Learning / Getting Started*

Step 1.   Insert the batteries into the battery compartment with correct polarity.

Step 2.   After all 3 batteries are inserted, the Smoke Detector will sound 2 short beeps, with LED starting to flash and begin a 6-minute warming period.

Step 3.   During the 6-minute warming period, the Smoke Detector can be learnt into the Panel.
  a. Put the Control Panel into learning mode. Please refer to Control Panel manual for details.
  b. Press the Learn/Test button on the Smoke Detector. The LED will light up briefly and the Smoke Detector will sound a 2-tone beep to indicate it is transmitting signal.
  c. If the Control Panel successfully receives the signal, the panel will respond accordingly. Refer to Control Panel manual to complete learning process.

Step 4.   When the 6-minute warming period expires, the Smoke Detector will sound a short beep to indicate that the Smoke Detector is starting calibration process.
The process will be repeated every 100 secs and notified by a short beep respectively. The completion of calibration process will be notified by a 2-tone beep and the LED will be turned off.
Normally it takes about 2 ~ 16 minutes to finish calibration. However, after 16 minutes, if the Smoke Detector gives out continuous beeps instead, it indicates that the Smoke Detector has failed calibration and its batteries should be removed to silence the beeps. Then, please start from Step 1 to try again after a pause of at least 30 seconds.

<NOTE>

☞   During the calibration period, learning is disabled. If you did not finish learning (Step 3) during the 6-minute warming period, you have to wait until the calibration has been completed (Step 4) to perform learning.

Step 5.   After warming up, learning and calibration are completed, you should test the Smoke Detector's signal transmission range. Put the Control Panel into Walk Test mode and place the Smoke detector at desired mounting location, and then press the Learn/Test button to transmit signal to the Control Panel.
If the panel can receive signal normally, proceed to mount the Smoke Detector. If signal could not be received, change mounting location.

● *Installation*

- It is recommended that the installation site be in the center area of the ceiling, with at least 60 cm distance from wall or obstacles.
- Do not locate the detector in the following locations:
  - ➢ Kitchen or Garage – Smoke from cooking or vehicle might cause false alarm.
  - ➢ Near a ventilating fan, florescent lamp or air-conditioning equipment – air drafts from them may affect the sensitivity of the detector.
  - ➢ Near ceiling beams or over a cabinet – stagnant air in these areas may affect the sensitivity of the detector.
 - ➢ In the peak of an "**A**" frame type of ceiling.
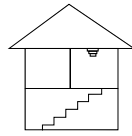
At the top of a stairway
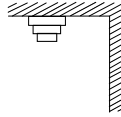
At least 60 cm from the wall

Step 1. Use the mounting bracket as template to mark the two mounting holes. Drill holes in mounting location and insert wall plugs if needed.

Step 2. Screw the mounting bracket into marked location with the two hooks facing downward.

Step 3. Locate the single line mark on the detector and line it up with one of the hook of the bracket. Fit the Smoke Detector onto the hooks on the bracket, then rotate the detector counter-clockwise to lock into place. The installation is now completed.
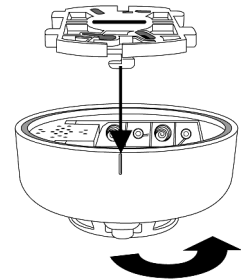
● *Testing the Smoke Detector*

Press the Learn/Test button on the Smoke Detector to test if the Smoke Detector is functioning normally.
- If the Smoke Detector functions normally, the LED will turn on briefly, and the Smoke Detector will sound a 2-tone beep.
- If the buzzer sounds 3 times of 2-tone beep, which means the "**Optical Chamber**" on the Smoke Detector is either dirty or out-of-order.
- If the LED fails to light up and no beep is sounded, it means the Smoke Detector is either out-of-order or its batteries are exhausted.

● *Supervisory Signal*

- After installation, the Smoke Detector will automatically transmit Supervisory Signals periodically to the Control Panel at intervals of 30~50 minutes randomly.
- If the Control Panel has not received the signal from the Smoke Detector for a preset period of time, the Control Panel will consider the particular Smoke Detector out of order and react according to panel setting.

● *Smoke Detection*

- Once the concentration of the smoke exceeds the set threshold value, the Smoke Detector will transmit alarm signal to the Control Panel and activates buzzer to sound continuous alarm for 10 seconds. The LED will flash rapidly.
- Once a Smoke Alarm Signal has been transmitted, the Smoke Detector will continue to perform follow-up checks and send alarm signals every 2 minutes if the smoke concentration continues to exceed alarm threshold. This 2-minute cycle will be repeated until the smoke concentration returns to normal. The alarm can also be stopped manually by using the "**Alarm Silence**" function.

● *Alarm Silence*

- Once the alarm is sounding, pressing the Learn/ Test button will put the Smoke Detector into Alarm Silence mode for 10 minutes and the alarm will be stopped.
- During this 10-minute Alarm-Silence period, the LED will flash every second.
- When the 10-minute period expires, the Smoke Detector will sound a 2-tone beep and then returns to normal operation mode. If the Smoke concentration is still over alarm threshold value, the Smoke Detector will start the alarm again.

● *Recalibration*

As the operation condition of the smoke detector may vary after being installed for some time, you may wish to recalibrate the smoke detector to take a new smoke detection threshold value and ensure optimal performance of the smoke detector. To do this,
- Press and hold the Learn/Test button for 10 seconds until the LED starts to flash. The Smoke Detector will sound 2 short beeps, and then follow the process described in calibration process in Learning/Getting Started section to take the new reference value
- Whenever the batteries are removed and reinserted, the Smoke Detector will also recalibrate according to previous instruction.

● *Auto-Calibration*

- After first installation, the Smoke Detector will perform auto-calibration after 4 hours. Afterwards it will perform auto-calibration once every month. During the auto-calibration process, the Smoke Detector will not emit any sound. Each calibration sampling process takes 2 minutes, if the process fails, it will be retried for a maximum of 5 times. If the 5th retry fails, the LED will flash rapidly and the Smoke Detector will send calibration failure code to the Control Panel.
- The LED flashing can be cancelled by removing and reloading the batteries, or manually starting the calibration process. However if the manual calibration fails again, the Smoke Detector will emit continuous beeps. In this case you need to remove and reload the batteries to stop the beeping sound (please wait for 30 seconds after removing batteries before reloading them).

<NOTE>

☞ When auto calibration fails, the smoke alarm function will still work normally using previous alarm threshold value.