apollo

51000-355 / 51000-357 Wireless Smoke Heat Alarm Installation Guide

ATTENTION: This manual should be read prior to use and retained for further information.

GENERAL INFORMATION

The Wireless Smoke Heat Alarm is a 3xAAA battery powered wireless detector intended for use with a compatible wireless alarm system. The detector has a built-in wireless transmitter, which communicates with the control panel. When smoke is detected, the alarm sounds a loud local alarm and the built-in transmitter sends a signal to the control panel. The Wireless Smoke Heat Alarm contains an integrated fixed 41°F temperature freeze sensor that will send a warning signal based on temperature detected. This detector is designed to provide protection with 70-foot spacing capability.

The detector can send alarm, tamper and battery condition messages to the system's receiver. Refer to the wireless system's instruction for the maximum number of transmitters that can be supported.

CONTENTS OF BOX:

• Wireless Smoke Heat Alarm with base

- Installation guide (APD0601)
- Pack of screws and anchors
- Labels or decals as appropriate
- 3 AAA PC2400 Duracell Procell batteries (1.5V 1100mAh) or 3 AAA Energizer E92 batteries (1.5V 1100mAh)

The Wireless Smoke Heat Alarm contains a sounder which generates the ANSI S3.41 temporal 3 pattern in an alarm condition. In alarm, a message is also sent to the control panel and the detector's ID is displayed at the console. During an alarm condition, pressing the detector's hush button will silence the sounder (see table below). The mounting base installation is simplified by the incorporation of features compatible for both drywall fasteners (not supplied) and other methods.

Tricolored LED (red, yellow, green) and a sounder on the detector provide local visual and audible indication of the detector's status as listed in Table 1.

During initial power-up the LED blinks alternately red, yellow then green. It takes about 8 seconds for the detector to stabilize.

After power-up has completed and the detector is functioning normally, the green LED blinks once every 12 seconds.

Detector Trouble: When the detector has a general fault, the yellow LED blinks once every four seconds and there is a chirp every 48 seconds. After 12 hours the panel will display a loss of supervision message.

Status	LEDs	Sounder (do not pulse the sounder and LED concurrently)
Normal	Green flash every 12 seconds	Off
Heat Alarm	Red flash every 1 second	ANSI S3.41 temporal 3
Heat Test	Red flash every 1 second	ANSI S3.41 temporal 3
Smoke Alarm	Red flash every 1 second	ANSI S3.41 temporal 3 (press button to hush for 5-10 minutes)
Smoke Test	Red flash every 1 second	ANSI S3.41 temporal 3 (press button to hush for 5-10 minutes)
Test Alarm	Red flash every 1 second	ANSI S3.41 temporal 3
Freeze Warning	3 yellow flashes every 4 seconds	Off
Detector Trouble	Yellow flash every 4 seconds	One chirp every 48 seconds
Low Battery	Yellow flash every 12 seconds	One chirp every 48 seconds (press button to hush for 12 hours)
Detector Dirty	Yellow flash every 8 seconds	One chirp every 48 seconds
Power-up	Red, yellow, green flash sequence	One chirp at the end of power-up sequence
Tamper	Red, yellow, green flash sequence every 12 seconds	Off

Detector Dirty Feature: When the detector has been contaminated, the yellow LED blinks once every 8 seconds and there is a chirp every 48 seconds. Refer to MAINTENANCE section for cleaning your alarm. After 12 hours the panel will display a loss of supervision message.

Low Battery Detection: The Wireless Smoke Heat Alarm is powered by 3 AAA Duracell Procell or 3 AAA Energizer E92 batteries (included). The detector regularly checks for a low battery. If a low battery is detected, the transmitter sends a low battery message to the control panel, which displays the detector's ID at low battery. In addition, the yellow LED of the detector will blink every 12 seconds. The detector's sounder will chirp every 48 seconds (yellow LED continues to blink) until the batteries are replaced. Pressing the hush button will silence the chirps for 12 hours, if no other trouble conditions exist. The batteries should be replaced WHEN the chirps begin. Be sure to replace the batteries with fresh ones.

Table 1. Detector status and indication

BATTERY INSTALLATION AND REPLACEMENT

To replace the batteries:

- 1. Remove the detector from its mounting base by twisting the detector counterclockwise. Remove and dispose of the batteries according to your local regulations.
- 2. To ensure proper power-down sequence, wait a minimum of 20 seconds before installing new batteries.
- 3. Install 3 new AAA batteries (available from your local Duracell or Energizer dealer) in the battery compartment. Follow the polarity diagram inside the compartment. If the batteries are incorrectly inserted please remove gently with a non-conductive tool and correctly reinsert
- 4. Reinstall the detector onto the mounting base by turning the detector clockwise until the mating marks align.
- 5. After the power-up sequence the green LED should blink about once every 12 seconds to indicate normal operation. If the batteries are not installed correctly, the detector will not operate and the batteries may be damaged. If the detector does not power-up, check for correct batteries installation and for a fully charged batteries.
- 6. Test the detector (as described later).

CONSTANT EXPOSURES TO HIGH OR LOW TEMPERATURES OR HIGH HUMIDITY MAY REDUCE BATTERY LIFE.



Fig 1. Wireless Smoke Heat Alarm

PROGRAMMING

Refer to the appropiate compatible control panel programming guide for the proper procedure required to enroll the wireless smoke/heat into the system.

RECOMMENDED LOCATIONS FOR SMOKE HEAT ALARM

According to National Fire Protection Association (NFPA) the major threat from fire in a dwelling unit occurs at night when everyone is asleep. The principal threat to persons in sleeping areas comes from fires in the remainder of the unit; therefore, a smoke detector(s) is best located between the bedroom areas and the rest of the unit. In units with only one bedroom area on one floor, the smoke detector(s) should be located as shown in Figure 2. In dwelling units with more than one bedroom area or with bedrooms on more than one floor, more than one smoke detector is required, as shown in Figure 3.





Fig 2. Location of the detectors in units with only one bedroom area on one floor

Fig 3. Location of the detectors in dwelling units with more than one bedroom area or with bedrooms on more than one floor

In addition to smoke detectors outside of the sleeping areas, the device should be installed on each additional story of the dwelling unit, including the basement. These installations are shown in Figure 4. The living area smoke detector should be installed in the living room or near the stairway to the upper level, or in both locations. The basement smoke detector should be installed in close proximity to the stairway leading to the floor above. Where installed on an open-joisted ceiling, the detector should be placed on the bottom of the joists. The detector should be positioned relative to the stairway so as to intercept smoke coming from a fire in the basement before the smoke enters the stairway. Smoke detectors are optional where a door is not provided between living room and recreation room (Figure 5). The smoke from a fire generally rises to the ceiling, spreads out across the ceiling surface, and begins to bank down from the ceiling. The corner where the ceiling and wall meet is an air space into which the smoke could have difficulty penetrating. In most fires, this dead air space measures about 0.1m (4in.) along the ceiling from the corner and about 0.1m (4in.) down the wall. Detectors should not be placed in this dead air space, see Figure 6, 7 and 8.

Where NOT to install the alarm:

- · Directly above a sink, cooker, stove or oven
- Do not locate detector within 5 feet (1.5 m) of any cooking appliance
- Next to a door or window that would be affected by drafts i.e extractor fan or air vent
- Outside
- Do not install in any environment that does not comply with the detector's environmental specifications
- In or below a cupboard
- Where air flow would be obstructed by curtains or furniture
- · Where dirt or dust could collect and block the sensor
- · Where it could be knocked, damaged, or inadvertently removed

This detector shall not be installed in location where the normal ambient temperature is below $40^{\circ}F$ (4.4°C) or where it exceeds $100^{\circ}F$ (37.8°C).

THIS EQUIPMENT SHOULD BE INSTALLED IN ACCORDANCE WITH NFPA 72: NATIONAL FIRE ALARM AND SIGNALING CODE.







MOUNTING THE DETECTOR

Note: These alarm devices should only be installed by a competent engineer/technician.

DO NOT attach the detector to removable ceiling panels.



Fig 9. Mounting the detector

This device should not be used with a guard.

Once a suitable location is found, mount the detector as follows:

- 1. Refer to the diagram below and install the mounting base on the ceiling or on the wall (if local ordinances permit) using screw locations as required. Use the two screws and anchors provided. Maneuver the base so the screws are at the elbow of the screw slots and secure.
- 2. Fit the detector inside the base by aligning it over the base as shown (detector's alignment notch should be slightly offset from mounting base tamper release tab), then turn the detector in a clockwise direction until it clicks into place.
- 3. Test the detector after completing the installation (as described in the TESTING THE DETECTOR section of this manual) and refer to the control system's instructions for additional information concerning the use of wireless devices.

TESTING THE DETECTOR

NOTE: Before testing, notify the central station that the detector system is undergoing maintenance in order to prevent unwanted alarms. Testing the detector will activate an alarm and send a signal to the panel. Also, the test function cannot be used if the detector has a trouble condition.

Detectors must be tested after installation and following periodic maintenance.

Testing Detector Operation

This test checks the detector's sounder, LEDs, and transmitter.

- 1. The test button is located on the detector housing.
- 2. Push and hold the test button for a minimum of 5 seconds. The alarm panel will trigger and then the detector will go into alarm. The sounder begins the temporal 3 pattern and the red LED blinks. The alarm panel's console should display the detector's name in alarm.

Smoke Test

Hold a smoldering punk stick or cotton wick at the side of the detector and gently blow smoke through the detector until the unit alarms. Canned smoke aerosol is also an acceptable method. Smoke detection testing is recommended for verifying system protection capability.

Direct Heat Method (Hair dryer of 1000-1500 watts)

Direct the heat toward the thermistor. Be sure to hold the heat source about 12 inches from the detector to avoid damage to the plastic. The detector will reset only after it has time to cool.

A detector that fails to activate with any of these tests should first be cleaned as outlined in this manual's MAINTENANCE section. If the detector still fails to activate, return for repair.

MAINTENANCE

TEST ONCE A WEEK.

WARNING! USE ONLY BATTERIES SPECIFIED. USE OF DIFFERENT BATTERIES MAY HAVE A DETRIMENTAL EFFECT ON THE SMOKE ALARM.

YOUR ALARM SHOULD BE CLEANED AT LEAST ONCE A YEAR.

To clean your alarm, remove it from the mounting base. You can clean the interior of your alarm by using compressed air or vacuum cleaner hose and blowing or vacuuming through the openings around the perimeter of the alarm. The outside of the alarm can be wiped with a damp cloth.

After cleaning, reinstall and test your alarm by using the test button. If cleaning does not restore the alarm to normal operation the alarm should be replaced.

WARNING: PLEASE READ CAREFULLY AND THOROUGHLY

- NFPA 72 states: Fire-warning equipment for residential occupancies are capable of protecting about half of the occupants in potentially fatal fires. Victims are often intimate with the fire, too old or too young, or physically or mentally impaired such that they cannot escape even when warned early enough that escape should be possible. For these people, other strategies such as protection-in-place or assisted escape or rescue would be necessary.
- A battery powered alarm must have a battery of the specified type, in good condition and installed properly.
- Smoke alarms must be tested regularly to make sure the batteries and the alarm circuits are in good operating condition.
- Smoke alarms cannot provide an alarm if smoke does not reach the detector. Therefore, smoke alarms may not sense fires starting in chimneys, walls, on roofs, on the other side of a closed door or on a different floor.
- If the alarm is located outside the sleeping room or on a different floor, it may not wake up a sound sleeper.

- Studies have shown that smoke and heat alarms may not awaken all sleeping individuals, and that it is the responsibility of individuals in the household that are capable of assisting others to provide assistance to those who may not be awakened by the alarm sound or those who may be incapable of safely evacuating the area unassisted.
- The use of alcohol or drugs may also impair one's ability to hear the smoke alarm. For maximum protection, a smoke alarm should be installed in each sleeping area on every level of a home.
- Although smoke alarms can help save lives by providing an early warning of a fire, they are not a substitute for an insurance policy. Home owners and renters should have adequate insurance to protect their properties.

FAMILY ESCAPE PLAN

According to National Fire Protection Association (NFPA) there often is very little time between the detection of a fire and the time it becomes deadly. This interval can be as little as 1 or 2 minutes. Planning and practicing for fire conditions with a focus on rapid exit from the residence are important. Drills should be held so that all family members know the action to be taken.

SAFETY TIPS

- Make a home escape plan. Draw a map of your home showing all doors and windows. Discuss the plan with everyone in your home.
- Know at least two ways out of every room, if possible. Make sure all doors and windows leading outside open easily.
- Have an outside meeting place (like a tree, light pole or mailbox) a safe distance from the home where everyone should meet.
- Practice your home fire drill at night and during the day with everyone in your home, twice a year.
- Practice using different ways out.
- Teach children how to escape on their own in case you can't help them.
- Close doors behind you as you leave.

IF THE ALARM SOUNDS

- If the smoke alarm sounds, get out and stay out. Never go back inside for people or pets.
- If you have to escape through smoke, get low and go under the smoke to your way out.
- Call the fire department from outside your home. FOR MORE SAFETY INFORMATION SEE THE WEBSITE: www.nfpa.org/education.

SPECIFICATIONS

- Transmitter Frequency: 345.000 MHz (crystal controlled)
- Dimensions: Ø 5" x 2.5" high (Ø 125mm x 63mm high)
- Weight (including battery): 8.57 oz (243 g)
- Color: White
- Spacing rating: 70ft
- Audible Signal (ANSI Temporal 3): 85dBA min. in alarm
- Sensitivity: 1.26 2.39%/foot
- Operating Temperature: 40°-100°F (4.4°-37.8°C)
- Supplementary heat rating: 135°F
- Relative Humidity: 15-90% Non-Condensing
- Battery (included): Three (3) AAA PC2400 Duracell Procell or three (3) AAA Energizer E92 batteries
- Regulatory Listing: UL 217
- Warranty: Two (2) years
- Included Accessories: Mounting Hardware Package

REGULATORY INFORMATION NOTICE:

Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules and Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

This equipment has been tested and found to comply with the limits for

a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used 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 off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- · Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help

"For your information, The National Fire Alarm Code, NFPA 72, reads as follows:

"11.5.1 Required Detection."

"Where required by applicable laws, codes, or standards for a specific type of occupancy, approved single- and multiple-station smoke alarms shall be installed as follows:

- 1. In a sleeping rooms and guest rooms
- 2. Outside of each separate dwelling unit sleeping area, within 6.4 m (21 ft) of any door to a sleeping room, the distance measured along a path of travel
- 3. On every level of a dwelling unit, including basements
- 4. On every level of a residential board and care occupancy (small facility), including basements and excluding crawl spaces and unfi nished attics
- 5. In the living area(s) of a guest suite
- 6. In the living area(s) of a residential board and care occupancy.

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