

**SHSDT-1  
Wireless RF  
Smoke Detector**

**Owners Manual**

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## **INTRODUCTION**

The SHSDT-1 is an advanced smoke detector with wireless RF transmission capability specifically designed as an accessory smoke detector that can be integrated with the NeighborLink-1 system.

Basically the smoke detector is designed to sense smoke that comes into the detector chamber. It does not sense gas, heat, or flame. This smoke detector is designed to give early warning of developing fires by giving off the alarm sounds from its built-in alarm horn, and if integrated with NeighborLink-1 system, it will simultaneously activate the NeighborLink-1 system as well. It can provide precious time for you and your family to escape before a fire spreads. However, the smoke detector makes such pre-warning of fire accident possible, only if the detector is located, installed, and maintained properly as described in this Owners Manual.

MODEL: SHSDT-1

FCC ID : K4ESHSDT-1

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. 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 UNDESIRE OPERATION.

## Product Information

- Operates on 9-volt battery.
- Equipped with a loud 85 decibel (at 10 ft.) alarm.
- Equipped with a wireless RF transmitter that uses 315MHz radio band for transmission.
- Red LED indicator light flashes once every 45 seconds during operation (in ready mode).

## Choosing a location

Smoke detectors should be installed in accordance with the NFPA Standard 74 as stated on page 5 of this manual (National Fire Protection Association, Batterymarch Park, Quincy, MA 02169). For complete coverage in residential units, smoke detectors should be installed in all rooms, halls, storage areas, basements, and attics in each family living unit. Minimum coverage is one detector on each floor and one in each sleeping area.

Here, we have useful tips for you:

- Install a smoke detector in the hallway outside every separate bedroom area, as shown in Fig. 1. Two detectors are required in homes with two bedroom areas, as shown in Fig. 2.
- Install a smoke detector on every floor of a multi-floor home or apartment, as shown in Fig. 3.
- Install a minimum of two detectors in any household.
- Install a smoke detector inside every bedroom.
- Install smoke detectors at both ends of a bedroom hallway if the hallway is more than 40 feet (12 meters) long.
- Install basement detectors at the bottom of the basement stairway.

Fig.1 - Locations for placing smoke detectors for single residence with only one sleeping area.

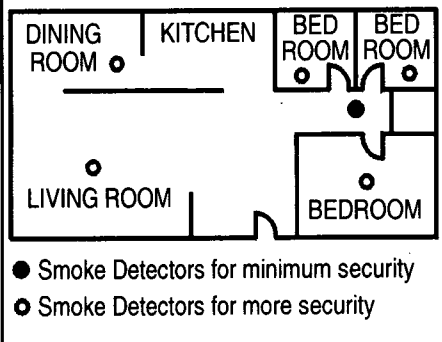


Fig.2 - Locations for placing smoke detectors for single floor residence with more than one sleeping area.

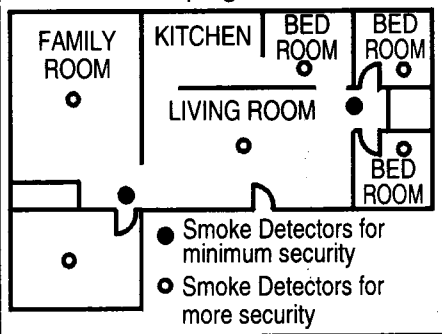


Fig.3 - Locations for placing smoke detectors for a multi-floor residence.

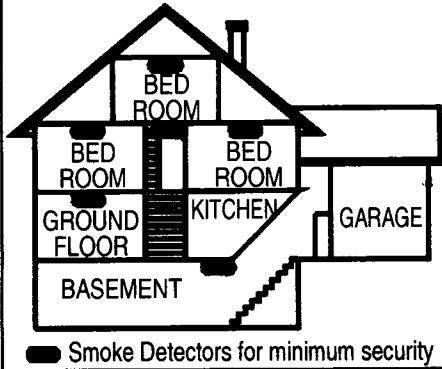
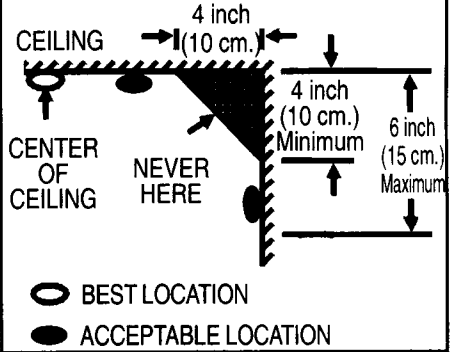


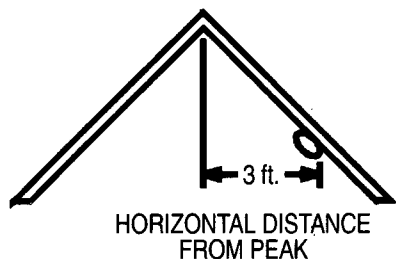
Figure 4 - Recommended best and acceptable locations to mount smoke detectors.



**NOTE:** This detector is not meant to be used in non-residential buildings. Warehouses, industrial or commercial buildings, and special purpose non-residential buildings require special fire detection and alarm systems. This detector alone is not a suitable substitute for complete fire detection systems for places where many people live or work, such as hotels, motels, dormitories, hospitals, nursing homes or group homes of any kind.

- Install additional detectors in your living room, dining room, family room, attic, utility and storage rooms.
- Install smoke detectors as close to the center of the ceiling as possible. If this is not practical, put the detector on the ceiling, no closer than 4 inches (10 cm) from any wall or corner, as shown in Fig. 4.
- If ceiling mounting is not possible and wall mounting is permitted by your local and state codes, put wall-mounted detectors between 4 and 6 inches (10 ~ 15 cm) from the ceiling, also see Fig. 4.
- If some of your rooms have sloped, peaked, or gabled ceilings, try to mount detectors 3 feet (0.9 meter) measured horizontally from the highest point of the ceiling as shown in Fig. 5.

Figure 5 - Recommended location to mount Smoke Detectors in rooms with sloped, gabled or peaked ceiling



**NOTE:** As required by the California State Fire Marshall

*"Early warning fire detection is best achieved by the installation of fire detection equipment in all rooms and areas of the household as follows: (1) A smoke detector installed in each separate sleeping area (in the vicinity, but outside of the bedrooms), and (2) Heat or smoke detectors in the living rooms, dining rooms, bedrooms, kitchens, hallways, attics, furnace rooms, closets, utility and, storage rooms, basements and attached garages."*

For your information, NFPA Standard 74, Section 2-4 reads as follows:

*"2-4.1.1 Smoke detectors shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms and on each additional story of the family living unit including basements and excluding crawl spaces and unfinished attics.*

*The provisions of 2-4.1.1 represent the minimum number of detectors required by this standard. It is recommended that the householder consider the use of additional smoke detectors for increased protection for those areas separated by a door from the areas protected by the required smoke detectors under 2-4.1.1 above. The recommended additional areas are living room, dining room, bedroom(s), kitchen, attic (finished or unfinished), furnace room, utility room, basement, integral or attached garage, and hallways not included in 2-4.1.1 above. However, the use of additional detectors remains the option of the householder."*  
We recommend complete coverage and use of additional smoke detectors.

### ***Restricted location to mount a smoke detector.***

False alarms take place when smoke detectors are installed in a location where smoke is commonly present. To avoid false alarms, do not install smoke detectors in the following locations;

- Kitchens with few windows or poor ventilation, garages where there may be vehicle exhaust, near furnaces, hot water heaters, and space heaters.
- Do not install smoke detectors less than 20 feet (6 meters) away from places where combustion particles are normally present, like kitchens. To prevent false alarms, provide good ventilation in such places.
- In damp or very humid areas, or near bathrooms with showers. Moisture in humid air can enter the sensing chamber, then turns into droplets upon cooling, which can cause false alarms. Install smoke detectors at least 10 feet (3 meters) away from bathrooms.
- In very low or high temperature areas, including unheated buildings or outdoor rooms. If the temperature goes above or below the operating range of smoke detector, it will not work properly. The temperature range for your smoke detector is 32°F to 95°F (0°C to 35°C).
- In very dusty or dirty areas, dirt and dust can build up on the detector's sensing chamber, to make it overly sensitive. Additionally, dust or dirt can block openings to the sensing chamber and keep the detector from sensing smoke.
- Near fresh air vents or areas like air conditioners, heaters or fans and drafts that can drive smoke away from smoke detectors.

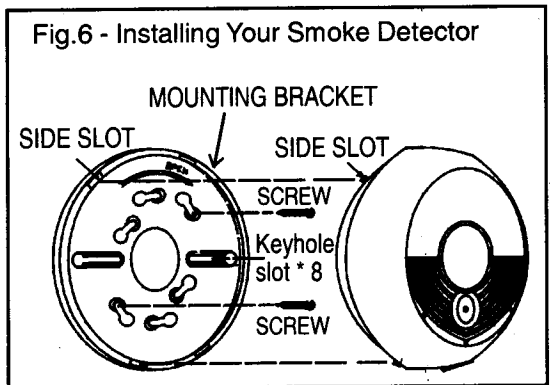
- Dead air spaces are often at the top of a peaked roof, or in the corners between ceilings and walls. Dead air may prevent smoke from reaching a detector. See Figures 4 and 5 for recommended mounting locations.
- In insect-infested areas. If insects enter a detector's sensing chamber, they may cause a false alarm. Where bugs are a problem, get rid of them before putting up a detector.
- Near fluorescent lights, electrical "noise" from fluorescent lights may cause false alarms. Install smoke detectors at least 5 feet (1.5 meters) from such lights.

- WARNING:**
1. Never remove batteries from a battery-operated detector to stop a false alarm. Open a window or fan the air around the detector to get rid of the smoke. The alarm will turn itself off when the smoke is gone. If false alarms persist, clean the detector as described on page 8 "Taking Care of Your Smoke Detector"
  2. Do not stand close to the detector when the alarm is sounding. The alarm is loud in order to wake you in an emergency. Too much exposure to the horn at close range may be harmful to your hearing.

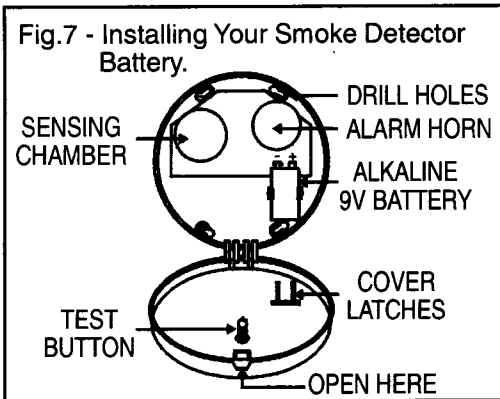
## **INSTALLING YOUR SMOKE DETECTOR**

After choosing the proper location, install your smoke detector as follows;

1. At the place where you are going to install the detector, draw a horizontal line about six inches long.
2. Remove the mounting bracket of the smoke detector which is located at the bottom of the unit by rotating it counterclockwise (see Fig. 6).
3. Place the bracket on top of the horizontal line you drawn so that the two longest slot holes are aligned on the line. In each of keyhole slots, draw a mark to indicate the location of the mounting plugs and screws.
4. Put the detector away to prevent it from getting plaster dust on it when you drill holes for mounting. Using a 3/16-inch (5mm) drill bit, drill two holes at the marks and insert the plastic wall plugs.
5. Using the two screws and plastic wall plugs (all supplied), secure the bracket to the wall.



6. Line up the side slot of the bracket and the detector. Push the detector onto the mounting bracket and turn it clockwise to fix it into place. Pull outward on the detector to make sure it is securely attached to the mounting bracket.



## **INSTALLING THE BATTERY**

The procedures to install the battery are listed as follows:

- (1). To power Smoke detector requires an alkaline 9-volt battery (supplied).
- (2). Match terminals on the end(s) of the battery with opposite terminal connections on the detector. Make sure the polarity of the alkaline battery correspond with the polarity shown on the detector's printed circuit board, see Fig.7.
- (3) When terminals are properly matched, push battery firmly in until it snaps and cannot be shaken loose.

**NOTE:** 1. This smoke detector comes with cover latches that will prevent the smoke detector cover from closing if battery is not installed properly. This tells you that the smoke detector will not work unless the battery is properly installed. **The battery was placed deliberately inverted by the factory to keep it fresh until installation. It must be re-positioned correctly to provide DC power.**

2. When the detector battery first makes contact with the detector, the alarm horn may sound for one second. This is normal and indicates that the battery is positioned properly. Close cover, then press test button, holding it down for about 5 seconds until the horn sounds. The horn should sound a loud, pulsating alarm. This means the unit is working properly.

## **INTEGRATING YOUR SMOKE DETECTOR WITH NeighborLink-1 SYSTEM**

The SHSDT-1 smoke detector has a wireless RF transmitter function that can be used to integrate it with NeighborLink-1 system by following these simple procedures:

1. Remove the main unit of the smoke detector from its mounting bracket by turning it counter-clockwise, then place the smoke detector unit near the NeighborLink-1/4 main unit.

2. Select a channel on your NeighborLink-1/4 system to add the Smoke Detector to. (There is only one choice for the NeighborLink-1.) Press the red mode button next to the red LED of the chosen channel on the front of the NeighborLink-1/4 receiver for 3 seconds. The red LED will start to flash quickly.
3. While the red LED is flashing quickly, press the test button on the smoke detector. The red LED on the receiver will flash once and then turn off to show that the smoke detector was added to the system. (For more details, refer to page 6 “Adding Additional Transmitters” of the NeighborLink-1/4 owners manual).
4. After the NeighborLink-1/4 system learns the code of the smoke detector, test its transmission by pressing the test button of the smoke detector. The horn should sound and at the same time activate the NeighborLink-1/4 system.
5. Place the smoke detector back on its mounting bracket and test it one last time for proper operation.

## ***TESTING YOUR SMOKE DETECTOR***

Test the detector weekly by pushing firmly on the test button with your finger until the horn sounds. Testing method may take up to 20 seconds to sound the alarm horn. This is the only way to be sure that detector is working correctly. If the detector fails to respond properly, have it repaired or replaced immediately. If you suspect that your detector does not go into alarm, test it by pressing the test button with your finger to ensure if it works properly.

**WARNING:** 1. Never use an open flame of any kind to test your detector.

You may set fire or damage the detector, as well as your home. The built-in test switch accurately tests all detector functions, as required by Underwriters’ Laboratories. This is the only correct way to test the unit.

2. When the smoke detector has been integrated with the NeighborLink-1 system, please note that during smoke detector testing, the NeighborLink-1 will also be activated.

Therefore prior to testing, it is necessary to notify all NeighborLink-1 related parties that you are about to perform a test.

3. When you are not testing the unit, and the detector’s siren sounds, this means the detector has sensed smoke or combustion particles in the air. This is a warning of a possible serious situation, which requires your immediate attention.

4. Cooking smoke or a dusty furnace, sometimes called “friendly fires,” can cause unwanted false alarms. If this happens, open a window or fan the air to remove the smoke or dust.

The alarm will turn off as soon as the air is completely clear.



**Do not disconnect the battery from the detector. This will disable the detector, and it will not be able to protect you from fire.**

5. If the detector horn begins to beep once every minute, this means that the detector's battery is already weak. Replace with a new battery immediately. Keep fresh batteries on hand for this purpose.

## **TAKING CARE OF YOUR SMOKE DETECTOR**

Your smoke detector is designed to be as maintenance-free as possible. Below are tips on how to keep your detector in good working order;

- Test your smoke detector weekly by pushing the test button.
- Replace the detector battery once a year or immediately when the low battery "beep" signal sounds. The low battery "beep" should last at least 30 days.

**NOTE:** For best performance, we recommend that you only use alkaline batteries as replacement batteries in this smoke detector. The carbon zinc batteries are not acceptable. The following batteries are acceptable for proper smoke detector operation: Eveready #522, #1222, #216; Duracell #MN1604; or Gold Peak #1604P, #1604S.

- Open the cover and vacuum the dust off the detector's sensing chamber at least once a year. This can be done when you open the detector to change the battery. Remove battery before cleaning. To clean detector, use soft brush attachment to your vacuum. Carefully remove any dust on detector components, especially on the openings of the sensing chamber. Replace battery after cleaning. Test detector to make sure battery is in correctly. Check to make sure there are no obstructions inside the test button. If there is any dust in the test button, insert a toothpick from the back to the front.
- Clean detector cover when it gets dirty. First, open cover and remove battery. Hand-wash cover with cloth dampened with clean water. Dry it with lint-free cloth. Do not get any water on the detector components. Replace the battery, and close cover. Test detector to make sure that battery works correctly.

## **TIPS TO ENHANCE YOUR PROTECTION FROM FIRES**

Putting up smoke detectors is only one step in protecting your family from fires. You must also reduce the chances that fires will start in your home. And you must increase your chances of escaping safely if one does start. To have a good fire safety program you must apply the following tips to enhance your family's protection from fires:

- Install smoke detectors properly. Carefully follow all the instructions in this manual. Keep your smoke detectors clean, and test them every week.
- Remember that detectors that do not work will not alert you. Replace your

smoke detectors immediately if they are not working properly.

Follow fire safety rules, and prevent hazardous situations:

- Use smoking materials properly. Never smoke in bed.
- Keep matches and cigarette lighters away from children.
- Store flammable materials in proper containers. Never use them near open flame or sparks.
- Keep electrical appliances in good condition. Do not overload electrical circuits.
- Keep stoves, fireplaces, chimneys, and barbecue grills grease free. Make sure they are properly installed and away from any combustible materials.
- Keep portable heaters and open flames such as candles away from combustible materials.
- Do not allow rubbish to accumulate.
- Keep a supply of extra batteries on hand for your battery powered smoke detectors.
- Develop a family escape plan and practice it with your entire family. Be sure to include small children in your practice.
- Draw a floor plan of your home, and find two ways to exit from each room. There should be one way to get out of each bedroom without opening the door.
- Explain to children what the smoke detector alarm signal means. Teach them that they must be prepared to leave the home by themselves if necessary. Show them how to check to see if doors are hot before opening them. Show them how to stay close to the floor and crawl if necessary. Show them how to use the alternate exit if the door is hot and should not be opened.
- Decide on a meeting place which has a safe distance from your house. Make sure that all your children understand that they should go and wait for you there if there is a fire.
- Hold fire drills at least every 6 months to make sure that everyone, even small children, knows what to do to escape safely.
- Know where to go to call the Fire Department from outside your home.
- Provide emergency equipment, such as fire extinguishers, and teach your family to use this equipment properly.

## ***SAFETY GUIDELINES WHEN THERE'S A FIRE***

If you have made a family escape plan and practiced it with your family, you have increased their chances of escaping safely. Go over the following rules with your children each time you have fire drills. This will help everyone remember them in case of a real fire emergency.

1. Don't panic and stay calm. Your safe escape may depend on thinking clearly and remembering what you have practiced.
2. Get out of the house as quickly as possible. Follow a planned escape route. Do not stop to collect anything or to get dressed.
3. Feel the doors to see if they are hot. If they are not, open them carefully. Do not open a door if it is hot. Use an alternate escape route.
4. Stay close to the floor. Smoke and hot gases rise.
5. Cover your nose and mouth with a wet or damp cloth. Take short, shallow breaths.
6. Keep doors and windows closed. Open them only if you have to in order to escape.
7. Meet at your planned meeting place after leaving the house.
8. Call the Fire Department as soon as possible from outside your house. Give the address and your name.
9. Never go back inside a burning building. Contact your local Fire Department. They will give you more ideas about how to make your home safer from fires and how to plan your family's escape.

## **WARRANTY**

NeighborLink products are warranted against defects in material and workmanship while used in normal service for a period of one (1) year from the date of sale to the original customer. Our obligation is limited to the repair or replacement of any defective part if the unit is returned, transportation pre-paid.

## **General Specifications**

Model Number:	SHSDT-1
Detector Type:	Wireless RF Smoke Detector
Operating Voltage:	9 volt
Sensitivity	2.3+/- 1.2%/ft.
Operating Temperature	32°F to 95°F (0°C to 35°C)
Alarm Sound	85dB at 10 feet
Indicator Light	Red LED flashes once every 45 seconds in ready mode
Relative Humidity	10% to 85%
Dimension (W x H)	5.5" x 1.75" (140 x 45mm)

**Notice :**

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**IMPORTANT NOTE :**

To comply with the FCC RF exposure compliance requirements, no change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.