

WST-400

Wireless Smoke Detector



Visonic Ltd

Owner's Manual

1. Basic Information

- Put the detector as close to the ceiling center as possible.
- Put detectors outside of every bedroom area and on every level of your home.
- Test all detectors weekly, one at a time, by holding in each test switch button on the cover for about 20 seconds until the alarm sounds.
- If the LED on your detector flashes about 4 times per minute, it is receiving power from the power supply.
- If your alarm beeps once a minute, it needs a new battery.

2. What Smoke Detectors Do

Smoke detectors are designed to provide early warning of developing fires at a reasonable cost. They monitor the air and can sense smoke and can provide precious minutes for you and your family to escape before a fire spreads.

CAUTION: Early warning fire detection is best achieved by the installation of fire detection equipment in all rooms and areas of the household as follows: A smoke detector installed in each separate sleeping area (in the vicinity, but outside the bedroom), and 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.

3. What Smoke Detectors Cannot Do

Smoke detectors will not work without power. Battery-operated detectors will not work without batteries, with dead batteries, or if the batteries are not put in properly. AC-powered detectors will not work if their AC power supply is cut off by an electrical fire, an open fuse or circuit breaker, or for any other reason. If you are concerned about the reliability of either batteries or your AC power supply for any of the above reasons, you should install both battery and AC powered detectors for maximum safety.

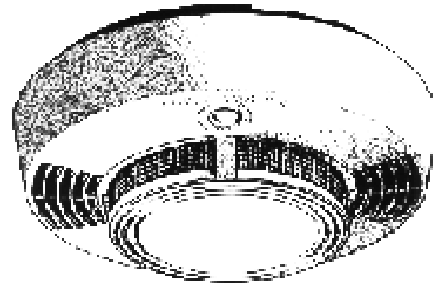
Smoke detectors may not sense fires that start where smoke cannot reach the detectors such as in chimneys, in walls, on roofs, or on the other side of closed doors. If bedroom doors are usually closed at night, detectors should be placed in each bedroom as well as in the common hallway between them.

Smoke detectors also may not sense a fire on another level of the residence or building. For example, a second-floor detector may not sense a first-floor or basement fire. Therefore, detectors should be placed on every level of a residence or building.

The horn in your detector meets or exceeds current audibility requirements of Underwriters Laboratories. However, if the detector is located outside a bedroom, it may not wake up a sound sleeper, especially if the bedroom doors are closed or only partly open. If the detector is located on a different level of the residence than the bedrooms, it is even less likely to wake up people sleeping in the bedrooms. In such cases, the National Fire Protection Association recommends that the detectors be interconnected so that all detectors sound an alarm when any one detector senses smoke.

All types of smoke detector sensors have limitations. No type of smoke detector can sense every kind of fire every time. In general, detectors may not always warn you about fires caused by carelessness and safety hazards like smoking in bed, violent explosions, escaping gas, improper storage of flammable materials, overloaded electrical circuits, children playing with matches, or arson.

Installing smoke detectors may make you eligible for lower insurance rates, but smoke detectors are not a substitute for insurance. Homeowners and renters should continue to insure their lives and property.



4. Where Smoke Detectors Should Be Located

This smoke detector should be installed in accordance with the National Fire Protection Association, Standard 74 (National Fire Protection Association, Batterymarch Park, Quincy, MA 02269). This standard means that for complete coverage, smoke detectors should be installed in all rooms, halls, storage areas, basements, and attics of a building. The minimum recommendation is one detector on each level of a building and one in every sleeping area. See how this recommendation applies in the figures below.

- Put a smoke detector in the hallway outside of every separate bedroom area (Fig. 1). Two detectors are required in homes with two bedroom areas (Fig. 2).
- Put a smoke detector on every level of a multi-level residence (Fig. 3).

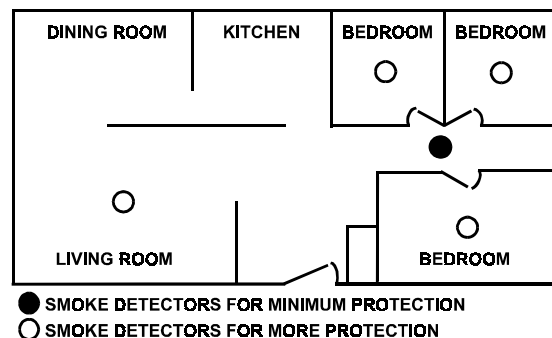


Figure 1: Recommended Smoke Detector for Single-Floor Residence with Only One Sleeping Area.

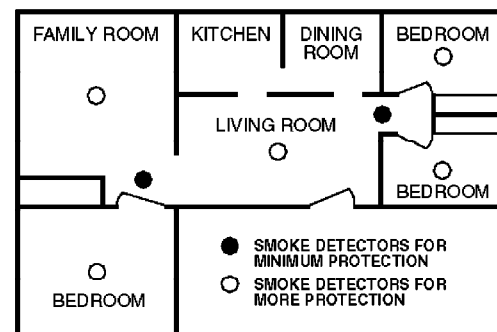


Figure 2: Recommended Smoke Detector Protection for Single-Floor Residence with More than One Sleeping Area.

- Put a smoke detector inside bedrooms where smokers sleep.
- Put a smoke detector inside every bedroom where electrical appliances (such as portable heaters or humidifiers) are operated while someone sleeps.

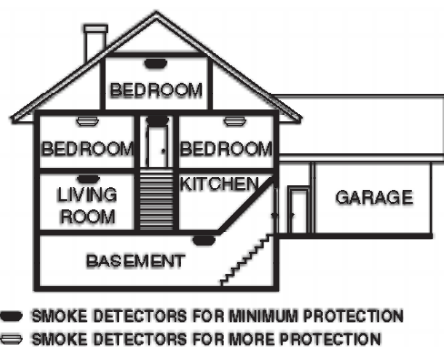


Figure 3: Recommended Smoke Detector Protection for a Multilevel Residence

- E. Put a smoke detector inside every bedroom where someone sleeps with the door closed. Smoke could be blocked by the closed door, or the alarm may not wake the sleeper if the door is closed.
- F. Put detectors as close to the center of the ceiling as possible. If this is not practical, put the detector on the ceiling, but no closer than 10 cm (4 in.) to any wall or corner (Fig. 4).

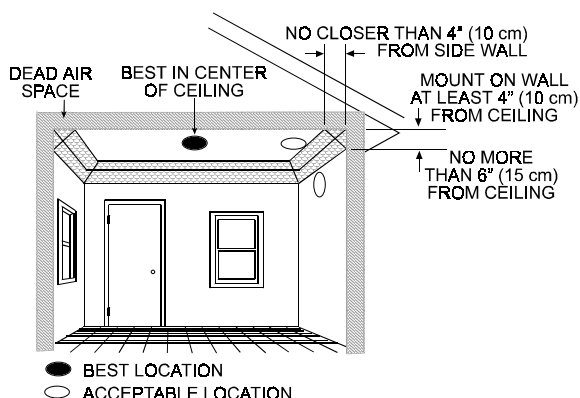


Figure 4: Recommended Smoke Alarm Mounting Locations

- G. If wall mounting is permitted by your local and state codes, put wall-mounted detectors between 10 and 15 cm (4 and 6 inches) from the ceiling (Fig. 4).
- H. Put smoke detectors at both ends of a bedroom hallway if the hallway is more than 12 m (40 ft) long.
- I. Put basement alarms at the bottom of the basement stairwell.
- J. Put second-floor alarms at the top of the first-to-second floor stairwell, as long as no other door or other obstruction blocks the path of smoke to the alarm.

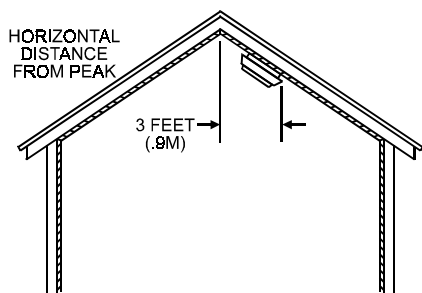


Figure 5: Recommended Smoke Alarm Mounting Locations in Rooms with Sloped, Gabled or Peaked Ceiling

- K. In rooms with sloped, peaked, or gabled ceilings, mount detectors 0.9 m (3 ft) measured horizontally from the highest point of the ceiling (Fig. 5).

5. Where Smoke Detectors Should Be Located in Mobile Homes and RV's

In mobile homes and recreational vehicles built after about 1978 that were designed and insulated to be energy-efficient, smoke

detectors should be installed as described in the section above. In older mobile homes and RV's that have little or no insulation compared to today's standards, uninsulated metal outside walls and roofs can transfer heat and cold from outdoors, making the air right next to them hotter or colder than the rest of the inside air. These layers of hotter or colder air can prevent smoke from reaching a smoke alarm. Therefore, put smoke detectors in such units only on inside walls, between 10 and 15 cm (4 and 6 inches) from the ceiling. If you are not sure about the insulation level in your mobile home or RV, or if you notice that the walls or ceilings are unusually hot or cold, put the alarm on an inside wall.

Minimum protection requires one alarm as close to the sleeping area as possible. For better protection, put one detector in each room, but first read Section 6 - "Where Smoke Detectors Should Not be Put".

6. Where Smoke Detectors Should Not Be Put

Nuisance alarms are caused by placing alarms where they will not operate properly. To avoid nuisance alarms, do not place detectors:

- A. In or near areas where combustion particles are normally present such as kitchens; in garages where there are particles of combustion in vehicle exhausts; near furnaces, hot water heaters, or gas space heaters. Install detectors at least 6 m (20 ft) away from kitchens and other areas where combustion is normally present.
- B. In air streams passing by kitchens. Figure 6 shows how a detector can be exposed to combustion particles in normal air movement paths, and how to correct this situation.
- C. In damp or very humid areas, or next to bathrooms with showers. The moisture in humid air can enter the sensing chamber as water vapor, then cool and condense into droplets that cause a nuisance alarm. Install alarms at least 1.5 m (5 ft) away from bathrooms.
- D. In very cold or very hot environments, or in unheated buildings or outdoor rooms, where the temperature can go below or above the operating range of the detector. Temperature limits for proper operation are 4° to 38°C (40° to 100°F).
- E. In very dusty or dirty areas. Dust and dirt can build up on the detector's sensing chamber and make it overly sensitive, or can block openings to the sensing chamber and keep the detector from sensing smoke.
- F. Near fresh air inlets or returns or excessively drafty areas. Air conditioners, heaters, fans, and fresh air intakes and returns can drive smoke away from smoke detectors, making the detectors less effective.

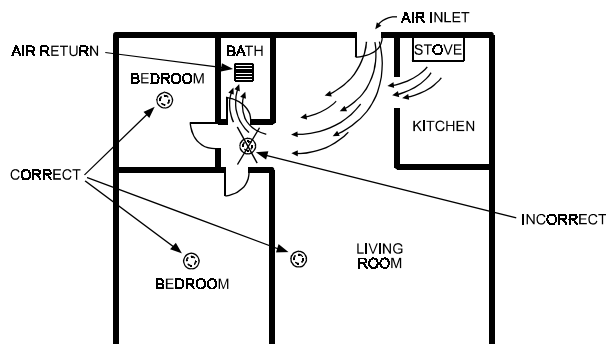


Figure 6: Recommended Smoke Alarm Locations to Avoid Air Streams with Combustion

- G. In dead air spaces 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.
- H. In insect-infested areas. If insects enter a detector's sensing chamber, they may cause a nuisance alarm. Get rid of the bugs before installing detectors where bugs are a problem.
- I. Near fluorescent light fixtures. Electrical "noise" from nearby fluorescent light fixtures may cause a nuisance alarm. Install detectors at least 3 m (10 ft) away from such light fixtures.

7. How the Smoke Alarm Should Be Put Up

After you have read the sections on "Where Smoke Detectors Should Be Located" and "Where Smoke Detectors Should Not Be Put" (Sections 4-6), you should have decided where to install this alarm.

To mount the alarm on the ceiling (or wall), please follow these steps:

- Place the alarm against the ceiling (or wall) where you want the alarm to be. (For wall mounting, position the alarm so that the indicator light will be at the bottom where it will be easiest to see.)
- Turn the alarm over and remove the mounting bracket by turning it counterclockwise. Hold the bracket against the ceiling (or wall) with a pencil, trace around the inside of the two screw slots (Fig. 7).

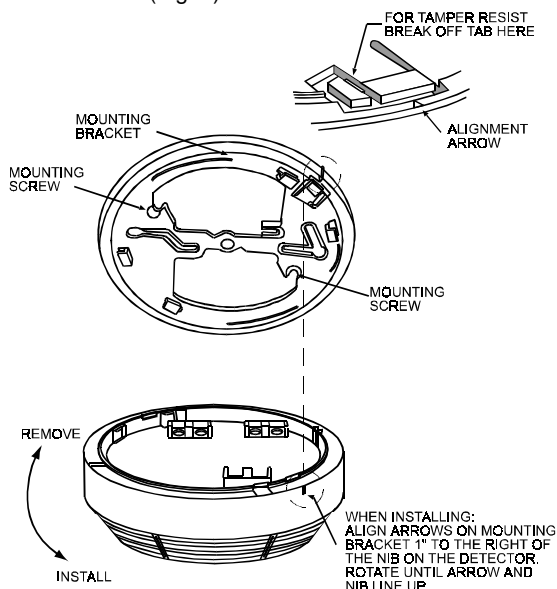


Figure 7: Installation

- Put the alarm where it won't get dust on it from the holes to be drilled in the ceiling (or wall).
- Using a 5 mm (3/16 inch) drill bit, drill holes approximately in the centers of the two slots outlined on the ceiling (or wall).
- Push the plastic screw anchors (in the package with the screws) into the holes so that the tops are flat against the ceiling (or wall).
- Using the two screws, tightly fasten the mounting bracket to the ceiling (or wall).
- Insert the battery into the brackets by pushing the top of the battery down into the cavity and snapping the battery into place. (The positive or male terminal goes closest to the center of the alarm.)

CAUTION: The battery must be inserted correctly or alarm will not work.

- Depress the test button on the cover, and hold it in for up to 20 seconds or until the alarm horn sounds. The horn should sound a loud pulsating alarm and the indicator light should flash rapidly. This indicates that the alarm is working properly. If the alarm horn does not sound, check to make sure the battery is inserted correctly.
- Mount the alarm by aligning the locating nibs on the cover with the arrows on the mounting bracket and turning the alarm clockwise until a positive snap is felt.
- Retest the alarm to make sure it works. Press the test button and hold it down for up to 20 seconds until the alarm horn sounds.

8. Tamper Resistant Mounting

The alarm mounting may be made tamper-resistant by breaking off the plastic tab as shown in the Figure 7. To release an alarm mounted in this way, push-up on the locking tab with a small screwdriver while turning the alarm counter-clockwise.

THE WST-400 CONSISTS OF A SMOKE DETECTOR MANUFACTURED BY A WELL KNOWN SMOKE DETECTOR COMPANY, AND THE WIRELESS TRANSMITTER MANUFACTURED BY VISONIC LTD.

IT IS THE INSTALLING COMPANY'S RESPONSIBILITY TO INVESTIGATE THE REGULATIONS SET FORTH BY ANY LOCAL, STATE OR OTHER AUTHORITY HAVING JURISDICTION PERTAINING TO WIRELESS SMOKE DETECTOR USE AND INSTALLATION.

9. How to Tell if the Detector is Working Right

The alarm horn and the indicator light on your smoke alarm let you know whether the alarm is working right. Table 1 below will help you determine the alarm's status.

Table 1: DETECTOR STATUS

Alarm Status	Electronic Horn	Indicator Light
Functioning Normally	Silent	Flashing about 4 Times per minute
Low Battery or Alarm Malfunction. Replace Battery	Beeping Once per Minute	Flashing about 4 Times per minute
Sounding Alarm; Detecting Smoke	On Continuously (Steady Pulse)	Flashing Rapidly
Sounding Alarm; Smoke Sensed by a Connected Detector	On Continuously (Steady Pulse)	Flashing about 4 times per minute

Note: The alarm will automatically turn off when the smoke in the air is completely gone. If the alarm is caused by a nuisance condition such as cooking smoke, open a window or fan the air around the alarm to remove the smoke. Do not disconnect the battery; this will remove your protection.

10. How to Take Care of Your Detector

Your smoke detector has been designed to be as maintenance-free as possible. To keep your detector in good working order, you must:

- Test the detector weekly** by pressing on the test switch for up to 20 seconds until the alarm sounds.

WARNING: In RV's, test the detector after storage and before each trip.

WARNING: Never use an open flame of any kind to test your detector. You may ignite and damage the alarm as well as your home. The built-in test switch accurately simulates smoke and tests all alarm functions, as required by Underwriters' Laboratories of Canada.

- Replace the battery once a year or **immediately when the Low Battery "beep" signal sounds once per minute.** The Low Battery signal should last at least 30 days.

This detector uses standard nine-volt batteries. The detector will work properly with the following batteries:

Eveready #552

Duracell #MN1604

WARNING: Do not use any other kind of battery. The detector may not operate properly with other batteries. If you experience repeated nuisance alarms, check the alarm location under "Where Smoke Detectors Should Not Be Put."

Move your detector if it is not properly located and clean it as described below. Improperly located and dirty detectors are the major cause of nuisance alarms.

- Vacuum the dust off the detector sensing chamber at least once a year.** This can be done when you remove the detector to replace the battery. **Remove the battery before cleaning.** Use a soft brush attachment and carefully remove any dust on the openings of the sensing chamber at the top of the detector and the openings between the base and the cover. Replace the battery after cleaning.

- Clean the detector's cover when it becomes dirty. First remove the battery. Then hand wash the cover with a cloth dampened with mild soapy water, rinse it with a cloth

dampened with clear water, and dry it with a **lint-free** cloth. **Be careful not to get any water into the openings where it can get on the detector components.** Replace the battery.

- E. Test the detector after closing the cover whenever you have opened it to replace the battery or clean it.**

WARNING: If the detector does not work properly, make sure that the battery is fresh and is connected correctly, and that the openings to the sensing chambers are clean. If there is still a problem, **do not try to fix the detector yourself.** This will void your warranty. Send the detector to Visonic Inc., 10 Northwood Drive, Bloomfield CT 06002. Enclose a note describing what is wrong with the detector in the package with the detector.

11. What Else Can You Do to Make Your Family Safer From Fires

Putting up smoke detectors is just the first step in a protecting your family from fires. You also must reduce the chances that fires will start in your home and increase your chances of safely escaping if one does start. To have an effective fire safety program:

- A. Install smoke detectors properly following the instructions in this manual. Keep your smoke detectors clean and replace the batteries when required. Test your detector weekly and repair or replace it when it no longer functions.** As with any electronic product, smoke detectors have a limited life, and detectors that don't work cannot protect you.

- B. Follow safety rules and prevent hazardous situations.**

1. Use smoking materials properly; never smoke in bed.
2. Keep matches and cigarette lighters away from children.
3. Store flammable materials in proper containers and never use them near open flames or sparks.
4. Keep electrical appliances and cords in good working order and do not overload electrical circuits.
5. Keep stoves, fireplaces, chimneys, and barbeque grills grease-free and make sure they are properly installed away from combustible materials.
6. Keep portable heaters and open flames such as candles away from combustible materials.
7. Do not allow rubbish to accumulate.

- C. Develop a family escape plan and practice it with your entire family, especially small children.**

1. 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.
2. Teach children what the smoke alarm signal means, and that they must be prepared to leave the residence by themselves if necessary. Show them how to check to see if doors are hot before opening them, how to stay close to the floor and crawl if necessary, and how to use the alternate exit if a door is hot and should not be opened.
3. Decide on a meeting place a safe distance from your house and make sure that all your children understand that they should go and wait for you there if there is a fire.
4. Hold fire drills at least every 6 months to make sure that everyone, even small children, knows what to do to escape safely.
5. Know where to go to call the fire department from outside your residence.
6. Provide emergency equipment such as fire extinguishers and teach your family to use this equipment properly.

12. What to Do if there is a Fire in Your Home

- A.** Don't panic; stay calm. Your safe escape may depend on thinking clearly and remembering what you have practiced.
- B.** Get out of the house following a planned escape route as quickly as possible. Do not stop to collect valuables or to get dressed.
- C.** Open doors carefully only after feeling them to see if they are hot. Do not open a door if it is hot; use an alternate escape route.
- D.** Stay close to the floor; smoke and hot gases rise.
- E.** Cover your nose and mouth with a cloth, wet if possible, and take short shallow breaths.
- F.** Keep doors and windows closed unless you open them to escape.
- G.** Meet at your prearranged meeting place after leaving the house.
- H.** Call the Fire Department as soon as possible from outside your house. Give the address and your name.
- I.** Never re-enter a burning building.

Contact your local Fire Department for more information on making your home safer from fires and about preparing your family's escape plans.

WARRANTY

Visonic Ltd. and/or its subsidiaries and its affiliates ("the Manufacturer") warrants its products hereinafter referred to as "the Product" or "Products" to be in conformance with its own plans and specifications and to be free of defects in materials and workmanship under normal use and service for a period of twelve months from the date of shipment by the Manufacturer. The Manufacturer's obligations shall be limited within the warranty period, at its option, to repair or replace the product or any part thereof. The Manufacturer shall not be responsible for dismantling and/or reinstallation charges. To exercise the warranty the product must be returned to the Manufacturer freight prepaid and insured.

This warranty does not apply in the following cases: improper installation, misuse, failure to follow installation and operating instructions, alteration, abuse, accident or tampering, and repair by anyone other than the Manufacturer.

This warranty is exclusive and expressly in lieu of all other warranties, obligations or liabilities, whether written, oral, express or implied, including any warranty of merchantability or fitness for a particular purpose, or otherwise. In no case shall the Manufacturer be liable to anyone for any consequential or incidental damages for breach of this warranty or any other warranties whatsoever, as aforesaid.

This warranty shall not be modified, varied or extended, and the Manufacturer does not authorize any person to act on its behalf in the modification, variation or extension of this warranty. This warranty shall apply to the Product only. All products, accessories or attachments of others used in conjunction with the Product, including batteries, shall be covered solely by their own warranty, if any. The Manufacturer shall not be liable for any damage or loss whatsoever, whether directly, indirectly, incidentally, consequentially or otherwise, caused by the malfunction of the Product due to products, accessories, or attachments of others, including batteries, used in conjunction with the Products.

The Manufacturer does not represent that its Product may not be compromised and/or circumvented, or that the Product will prevent any death, personal and/or bodily injury and/or damage to property resulting from burglary, robbery, fire or otherwise, or that the Product will in all cases provide adequate warning or protection. User understands that a properly installed and maintained alarm may only reduce the risk of events such as burglary, robbery, and fire without warning, but it is not insurance or a guarantee that such will not occur or that there will be no death, personal damage and/or damage to property as a result.

The Manufacturer shall have no liability for any death, personal and/or bodily injury and/or damage to property or other loss whether direct, indirect, incidental, consequential or otherwise, based on a claim that the Product failed to function. However, if the Manufacturer is held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty or otherwise, regardless of cause or origin, the Manufacturer's maximum liability shall not in any case exceed the purchase price of the Product, which shall be fixed as liquidated damages and not as a penalty, and shall be the complete and exclusive remedy against the Manufacturer.

Warning: The user should follow the installation and operation instructions and among other things test the Product and the whole system at least once a week. For various reasons, including, but not limited to, changes in environmental conditions, electric or electronic disruptions and tampering, the Product may not perform as expected. The user is advised to take all necessary precautions for his /her safety and the protection of his/her property.

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