

Recommended locations for Smoke Alarms

Where to Place Smoke Alarms

Installing Smoke Alarms in Single-Family Residences

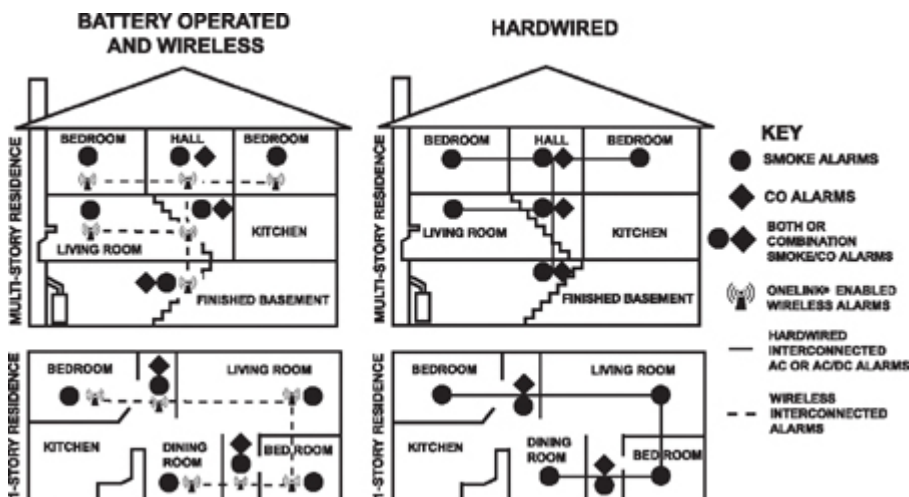
The National Fire Protection Association (NFPA), recommends one Smoke Alarm on every floor, in every sleeping area, and in every bedroom. In new construction, the Smoke Alarms must be AC powered and interconnected. See “Agency Placement Recommendations” for details. For additional coverage, it is recommended that you install a Smoke Alarm in all rooms, halls, storage areas, finished attics, and basements, where temperatures normally remain between 40° F (4° C) and 100° F (38° C). Make sure no door or other obstruction could keep smoke from reaching the Smoke Alarms.

More specifically, install Smoke Alarms:

- On every level of your home, including finished attics and basements.
- Inside every bedroom, especially if people sleep with the door partly or completely closed.
- In the hall near every sleeping area. If your home has multiple sleeping areas, install a unit in each. If a hall is more than 40 feet long (12 meters), install a unit at each end.
- At the top of the first-to-second floor stairway, and at the bottom of the basement stairway.

IMPORTANT! Specific requirements for Smoke Alarm installation vary from state to state and from region to region. Check with your local Fire Department for current requirements in your area.

It is recommended AC or AC/DC units be interconnected for added protection.



INSTALLING SMOKE ALARMS IN MOBILE HOMES

For minimum security install one Smoke Alarm as close to each sleeping area as possible. For more security, put one unit in each room. Many older mobile homes (especially those built before 1978) have little or no insulation. If your mobile home is not well insulated, or if you are unsure of the amount of insulation, it is important to install units on inside walls only. Smoke Alarms should be installed where temperatures normally remain between 40° F (4° C) and 100° F (38° C).

AGENCY PLACEMENT RECOMMENDATIONS

NFPA 72 (National Fire Code) Chapter 11 “For your information, the National Fire Protection Association's Standard 72 reads as follows:

11.5.1 One- and Two-Family Dwelling Units.

11.5.1.1 Smoke Detection. Where required by applicable laws, codes, or standards for the specified occupancy, approved single- and multiple-station Smoke Alarms shall be installed as follows: (1) In all sleeping rooms. Exception: Smoke Alarms shall not be required in sleeping rooms in existing one- and two-family dwelling units. (2) Outside of each separate sleeping area, in immediate vicinity of the sleeping rooms. (3) On each level of the dwelling unit, including basements. Exception: In existing one- and two family dwelling units, approved Smoke Alarms powered by batteries are permitted.

A.11.8.3 Are More Smoke Alarms Desirable? The required number of Smoke Alarms might not provide reliable early warning protection for those areas separated by a door from the areas protected by the required Smoke Alarms. For this reason, it is recommended that the householder consider the use of additional Smoke Alarms for those areas for increased protection. The additional areas include the basement, bedrooms, dining room, furnace room, utility room, and hallways not protected by the required Smoke Alarms. The installation of Smoke Alarms in kitchens, unfinished attics, or garages is not normally recommended, as these locations occasionally experience conditions that can result in improper operation.”

Smoke Detector placement and installation

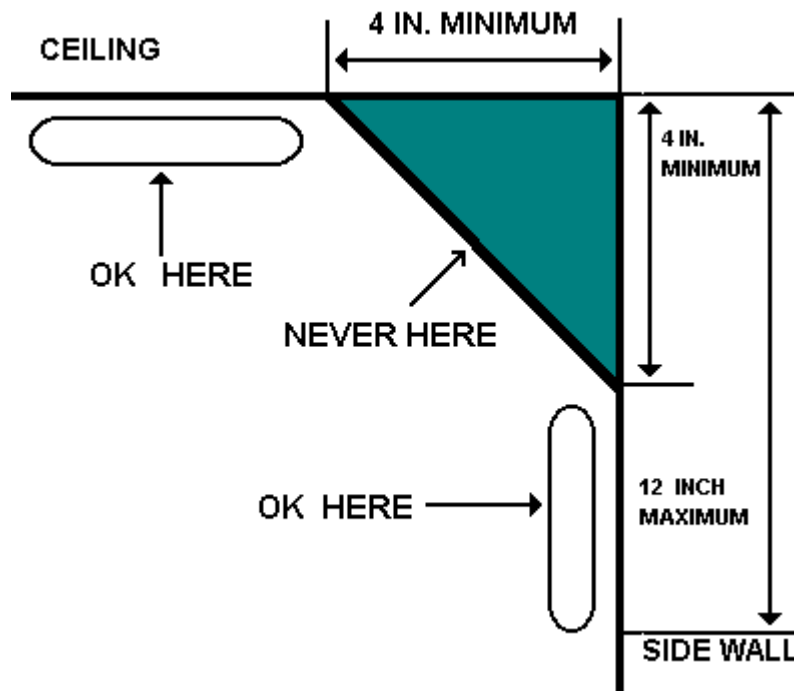
The placement of smoke detectors is very important. Sleeping areas need the most protection. One detector in a short hallway outside the bedroom area is usually adequate. Hallways longer than 30 feet should have one detector every 30 feet. A smoke detector should be installed in every room that will be occupied.

Be sure to keep the detector away from fireplaces and wood stoves to avoid false alarms. Place smoke detectors at the top of each stairwell and at the end of each long hallway. Smoke rises easily through stairwells. If you should put a smoke detector in your kitchen, be sure to keep it away from cooking fumes or smoking areas.

Proper mounting of a smoke detector also is important. You can mount many detectors by yourself, but those connected to your household wiring should have their own separate circuit and be installed by a professional electrician. If you mount your detector on the ceiling, be sure to keep it at least 18 inches away from dead air space near corners. If you mount it on the wall, place it four to 12 inches below the ceiling and away from corners. Keep them high because smoke rises.

Never place them any closer than three feet from an air register that might re-circulate smoke. Don't place them near doorways or windows where drafts could impair the detector operation. Don't place them on an uninsulated exterior wall or ceiling. Temperature extremes can affect the batteries.

Installation:

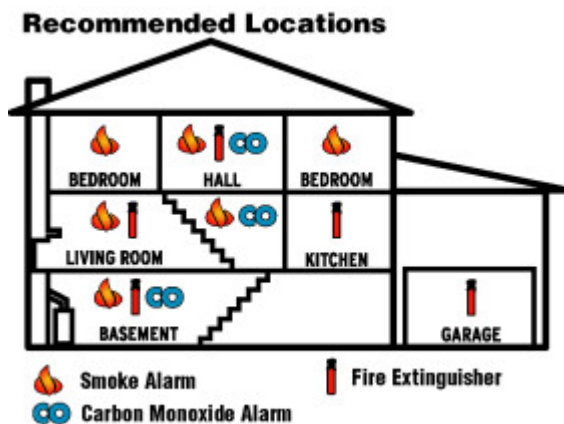


- Do not place a detector closer than 3 feet from an air register that might re-circulate smoke.
- Make sure smoke detectors are at least 18 inches from a corner.
- Do not place a unit on an uninsulated exterior wall or ceiling.
- Place smoke detectors at least 3 feet from ceiling fans.

There are two basic types of smoke detectors:

1. Ionization detectors - Ionization detectors contain radioactive material that ionizes the air, making an electrical path. When smoke enters, the smoke molecules attach themselves to the ions. The change in electric current flow triggers the alarm. The radioactive material is called americium. It's a radioactive metallic element produced by bombardment of plutonium with high-energy neutrons. The amount is very small and not harmful.
2. Photoelectric detectors - This type of detectors contain a light source (usually a bulb) and a photocell, which is activated by light. Light from the bulb reflects off the smoke particles and is directed towards the photocell. The photocell then is activated to trigger the alarm.

Keeping smoke detectors in good condition is easy. Always follow the manufacturer's instructions. Be sure to replace the batteries every year or as needed. Most models will make a chirping, popping or beeping sound when the battery is losing its charge. When this sound is heard, install a fresh battery, preferably an alkaline type.



Place smoke detectors, carbon monoxide detectors and fire extinguishers in strategic spots around your home

Read Your Manual

First things first: **Read your manual.** All smoke alarms and, carbon monoxide detectors work differently, and you really, really need to understand how your model works. Make sure you buy fresh batteries (check the expiration) for your smoke alarms. Once they're installed, hit the tester button. Depending on the alarm, you'll hear short beeps, long beeps, or a prolonged beep to let you know that they're working.

Smoke alarms save lives, but only if they're working properly. Test monthly!

Test Your Smoke Detectors

Your alarms are pretty self-sufficient, but you should do regular testing and seasonal battery refreshes. I like to test my smoke alarms about once a month, typically in conjunction with another sporadic chore, like window washing. You should also swap out old batteries for new at least once a year. At our house, we do it twice a year, whenever we're turning our clocks back/forward for Daylight Saving's. Partnering our smoke alarm duties with other uncommon tasks helps jog our memory, so we can stay safe.