



# Home Tips®



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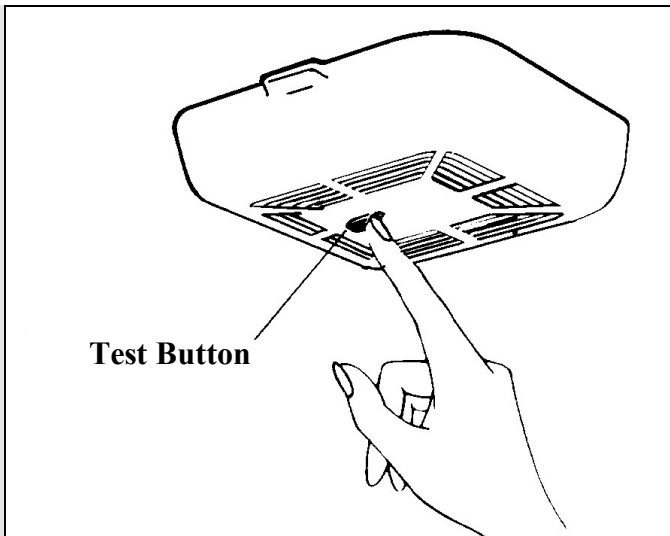
## Q & A

### Smoke Detector Problems?

*We recently had a small fire in our home and our smoke detector failed to work. How can we guard against this happening again in the future and is it true that some detectors will not detect all types of fires?*

It is estimated that fully one third of the smoke detectors installed in homes will not warn people about a fire because the smoke detectors have dead or missing batteries.

To help people tell if their smoke detector has power, most detectors have a small red light that blinks intermittently if it is functioning properly. Also, new smoke detectors are required to beep or chirp if they sense their batteries are low. Most detectors also come with a test switch that is supposed to be tested monthly. Many people never test their detectors. One reason is because they are installed on the ceilings which is not readily accessible. We recommend installing them on the hall wall as high as you can reach. This way, when you walk down the hall, they can be easily tested.



Another problem is smoke detectors that have the batteries removed. Because smoke detectors must be very sensitive, they are often triggered by cooking food. Finding no other way to silence the blaring alarm, many people resort to removing the battery. The battery is not replaced and the smoke detector becomes useless. Never, never, never remove a battery! If this is a problem in your home, we recommend replacing the detector with a new one that has a “mute” or

“silence” button. When activated the mute button will temporarily suppress the alarm.

The best way to combat dead or missing batteries, is to avoid dependence on batteries altogether and connect the smoke detector directly to the house’s electrical power supply. The wired direct smoke detectors have a battery backup in case of power failure.

All in all, smoke detectors are very simple machines. To perform their job of saving lives, however, some attention must be given to their maintenance. Batteries are the most critical part of a functioning detector. They should be replaced every six months. Also, a smoke detector should be vacuumed every month to keep dust out. If it is over 10 years old, a smoke detector should be replaced.

**Some detectors will not work for all fires!** When buying a new smoke detector, one can choose between two basic types:

#### IONIZATION SMOKE DETECTORS

Ionization smoke detectors are by far the most common both in the home and on the store shelves. They work by using a small amount of radioactive material (too small to pose a health hazard) to make the air within the detector conduct electricity. Any smoke that enters the detector will block the electricity thereby causing the detector to trigger its alarm.

#### PHOTOELECTRIC SMOKE DETECTORS

Photoelectric smoke detectors work by a different process. Inside these detectors a small light shines a focused beam of light past a sensor. When smoke enters the smoke detector, the smoke particles reflect some of the light into this sensor. Detecting the light, the photosensor triggers the alarm.

Because these two types of detectors work because of different principles, they are sensitive to different types of smoke. Photoelectric smoke detectors are best at sensing a smoldering, smoky fire like that from a fireplace or from burning upholstery and curtains. Ionization smoke detectors, on the other hand, are best at sensing fire which burns with little smoke such as from burning grease or cleaning products. For the best protection a house should be equipped with both types of detectors so that many types of fire can be quickly detected. Be sure to install one in each bedroom, outside the bedrooms in the hallway, and one on each level of the house including the basement.

Some retailers are now carrying a combination detector that is both Ionization and Photoelectric. No one I contacted had the combination ones in stock, but did expect delivery in a month or two. Be sure both are listed on the packaging or ask a sales person for help.

