



Smoke Detectors

Ionization vs Photoelectric

All smoke detectors are NOT created equally. While many of the ionization detectors are less expensive, they don't protect you as well as the photoelectric versions. There are many documented cases where the ionization detectors did not set off the alarm until AFTER the fire department arrived or were set off at all.

We've put together some quick stats for those of you who like facts & figures! **United States: (2005-2009)**

- 96% of homes have smoke alarms.
- Ionization type smoke alarms are installed in 90% of homes.
- 20% of these smoke alarms don't work because of missing, disconnected or dead batteries.
- People were most likely to disconnect batteries because of nuisance false alarms.
- 73% of nuisance false alarms were due to cooking.
- 24% of home fire deaths occurred in homes in which smoke alarms were present but failed to operate.

With these stats in mind, consider these:

- **Photoelectric** smoke alarms reduce nuisance false alarms like those from cooking by an average of 72%!
- **Photoelectric** smoke alarms are, on average, 77% less likely to be disabled for any reason than ionization smoke alarms!

Sources:

- *"NFPA: Smoke Alarms in US. Home Fires" Marty Ahrens Issued: September 2011*
- *Ionization and photoelectric smoke alarms in rural Alaskan homes Thomas M Fazzini, Injury Prevention Specialist, ¹ Ron Perkins, Director, and David Grossman, Co-Director'*
- King County, Washington by the Harborview Injury Prevention and Research Center 2000-2002
- US Experience With Smoke Alarms And Other Fire Detection Alarm Equipment; NFP A2004
- www.photoelectricsaves.com

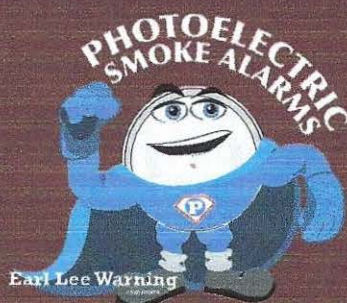
Download the sources here: [NFP ASmokeAlarmsAhrens20 11 Alaska Study King County, Washington by the Harborview Injury Prevention and Research Center 2000-2002 US EXPERIENCE WITH SMOKE ALARMS AND OTHER FIRE DETECTION ALARM EQUIPMENT NFP A2004](#)

For additional information, or to schedule an inspection, please call Jeff @ (608) 434-0790

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Smoke Detectors

Photoelectric smoke detectors should be placed, at a minimum, on every floor level including the basement, inside every sleeping room, and outside of every sleeping area of all dwellings.



SAVE MORE LIVES

Interconnected **photoelectric** smoke detectors, either wired or wireless, should be strongly considered. With interconnected detectors, when one smoke detector sounds, all other smoke detectors in the home sound as well, which creates an early warning to occupants in all areas and allows a as much time as possible to escape.

To aid in choosing the correct smoke detector, consumers should look for the word "**photoelectric**" or a "**P**" symbol on the packaging or description of smoke detectors.

NEOFPA

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The Details

Sensor Types

There are three types of sensor technology used in smoke detectors: photoelectric, ionization and a combination or dual sensor that incorporates both sensors in one smoke detector.

Photoelectric is the sensor of choice. It responds faster (sometimes tens of minutes faster) than the other types of smoke detectors to smoldering fires that cause the most injuries and deaths in homes. It is also less prone to nuisance false alarms from cooking and steam.

Smoke detectors should bear the label of an approved testing agency (UL or FM). To aid in choosing the correct smoke detector, or to determine which type you have in your home, look for the word "**photoelectric**" or a "**P**" symbol on the detector, the packaging, or the description of the smoke detector.



Power Types

Battery-powered detectors typically use standard 9 volt or AA batteries. Detectors with **long-life lithium batteries** may hold their charge up to 10 years. **Hardwired** detectors are wired to the home 110 volt electrical service (with battery back-up). Battery-powered detectors are readily available and can be installed by a homeowner or tenant. Hardwired detectors must be installed by a qualified electrician but can be easily replaced by the homeowner at the end of their service life or if faulty.

Locations

Photoelectric smoke detectors should be placed, at a minimum, on every level of the home including the basement, outside every sleeping area and in every bedroom. Smoke detectors should be mounted on the ceiling or high on the wall (smoke rises). Always follow the manufacturer's instructions. Additional smoke detectors can be added to increase your protection.

Testing and Maintenance

- Test each smoke detector monthly by pushing the button.
- Replace 9 volt and AA batteries in smoke detectors twice a year. (*Remember: change your clocks, change your batteries.*)
- If the alarm "chirps," warning that the battery is low, replace the battery right away.
- All smoke detectors have a recommended service life of 10 years. Replace your smoke detectors at this time or sooner if they are not functioning properly.
- Vacuum or dust out cobwebs that have accumulated in smoke detectors at least once per year.

Additional Tips

- In the event of a false alarm, **never** remove the battery or disconnect the power source. Simply fan the smoke or steam away from the smoke detector until the alarm stops. Some detectors have a button you can push to temporarily silence the alarm.
- If a contractor or supplier is installing your smoke detector, make sure you are provided with the manufacturer's instructions.
- Many communities provide free smoke detectors and batteries to residents who cannot afford them, and may install them for you if you require assistance. Check with your local fire department.
- Smoke alarms are one component of a complete home fire escape plan. Have a plan and practice it.