

This brochure is provide courtesy of **Southwest Ohio Fire Safety Council** and will assist you in selecting and installing smoke alarms.

**Working Smoke Alarms**  
**You Need Them!**  
**Please Get Them!**  
**Be Sure To Check Them!**

## Minimum Protection:

Working smoke alarms should be installed, at a minimum of:

- One on each floor level of the home (Including the basement)
- Inside each bedroom (sleeping area)
- Outside each bedroom area's entrance

There are many different kinds of smoke alarms on the market utilizing the various types of smoke detecting technology: Photoelectric, Ionization, Dual Sensor (both photoelectric & ionization) and Combination (both Smoke & Carbon Monoxide). The Southwest Ohio Fire Safety Council (SWOFSC) recommends that you purchase smoke alarms that utilize BOTH photoelectric and ionization technologies; whether they are purchased individually or in a dual sensor unit. (Be advised that the least expensive smoke alarm is not always the best purchase). Whichever type of alarm you choose, the smoke alarm(s) need to bear the label of an approved testing agency such as UL - Underwriters Laboratory. *If you have further questions, contact your local fire department.*

**REMEMBER!!! If your alarm sounds, leave immediately! Follow your "exit plan".** Smoke alarms are only one component of a complete home escape plan. Have a plan and practice it.

## Smoke Detector Types:

There are two types of sensor technology used in smoke alarms: photoelectric and ionization.

- Photoelectric (photo beam): It responds faster to smoldering fires that cause the most injuries and deaths in homes. It is also less prone to nuisance alarms from cooking and steam (from bathrooms).
- Ionization (Americium 241): It responds faster to flaming type fires. They are more prone to nuisance false alarms from cooking and steam.

There are also dual sensor and combination smoke alarms that incorporate both types of smoke sensors and/or Carbon Monoxide sensors into one alarm.

- Dual Sensor: These alarms contain a photoelectric and ionization sensor (Recommended by SWOFSC). In areas subject to nuisance alarms, such as kitchens and bathrooms, photoelectric alarms are the best choice.
- Combination: Generally refers to a device that is both a smoke alarm and carbon monoxide detector.

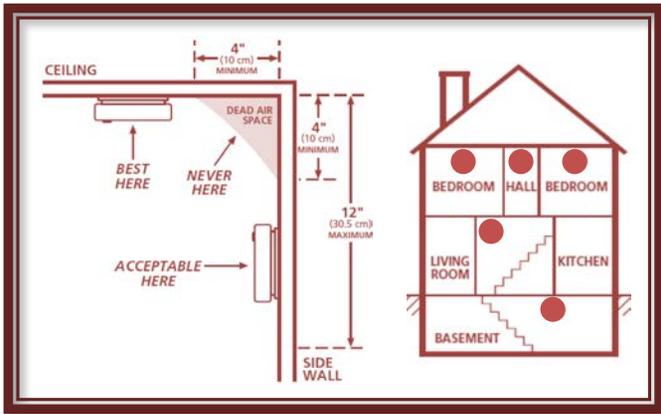
When purchasing a new smoke alarm, it can be very difficult to determine which type of sensor technology is utilized. You may find that the packaging of the smoke alarms differ between the various manufacturers. Some smoke alarm packages will have a "P" or "I" symbol indicating that the alarm is a (P)

photoelectric or an (i) ionization type unit. Some utilize the words "Photoelectric" or "Ionization". Other packages may only contain the words "...contains Americium 241" which indicate that it is an Ionization unit. While other packages may have both symbols indicating that the alarm is dual sensed (both photoelectric and ionization type unit), or are labeled for the rooms that they are to be used in: Kitchen, Hall, Bedroom, or Living room. Whichever manufacturer or type you choose, be sure to read the packaging carefully to determine the type of smoke alarm you are purchasing.

Note: There are also specialty smoke alarms for the hearing impaired (strobe light/vibrating type) and "heat alarms" which can be used in the garage, attic, or kitchen.

## Power Types:

There are two types of power supplies approved for smoke alarms: Battery or 110 Volt with battery back-up. *Battery-powered* alarms typically use a standard 9V or AA battery. Some alarms come with a 10 year, long-life lithium battery that is sealed (non-removable) in the unit. Once the battery wears out in these units, you will generally have to replace the smoke alarm. *Hardwired-110 volt-powered (with battery backup)* are wired into the home 110 volt electrical service. **Battery powered alarms are readily available and can be installed by the homeowner or tenant. Hardwired smoke alarms must be installed by a qualified electrician, but can be easily replaced by the home owner at the end of their life or if faulty. Be sure to read the box carefully for the type of power supply you are purchasing.**



### Installation Tips:

You need a smoke detector for each level, at the entrance to each sleeping area and one in each sleeping area. Smoke alarms need to be mounted on the ceiling or high on the side wall (As smoke rises). Always follow the manufacturer's instructions (normally found on the package/box or detailed on the enclosed instructions). If a contractor is installing your smoke alarm, make sure you are provided with the manufacturer's instructions after the installation.

Rooms to avoid locating smoke detectors are in the kitchen (unless the smoke alarm is approved for use in the kitchen and properly located), garages, furnace rooms, bathrooms, and unheated spaces such as attics. Smoke alarms should not be installed in rooms or spaces that can not be maintained between 40° F to 100° F. Also do not locate the smoke alarm near a fireplace or free standing wood stove.

### Additional Protection:

In new homes the building codes require the smoke alarms to be interconnected. When any of the interconnected smoke alarms are

activated all the alarms will sound, thus sounding alarms in most areas of the home. Some older homes can have interconnected smoke alarms added, but this requires special skills to do, often beyond the average home owner. The notification devices are generally a horn sound. For people with young or school age children there is also a voice activated alarm. There is research that indicates that children may not hear a normal (horn) sound that comes from a standard smoke alarm. This is one of the reasons you need to have a smoke alarm in each child's bedroom.

### Testing & Maintenance:

**Test** each smoke alarm **monthly** by pushing the test button. **Replace batteries (9V or AA) twice a year** ("change your clock, change your battery"). Vacuum or dust out cobwebs that have accumulated in the smoke alarm **yearly**. If the alarm "chirps" you need to replace the battery right away. Smoke alarms normally have a service life of 10 years; some may only be for 3 years. Smoke alarm need to be replaced at this time. Refer to the date of manufacture on the back of the alarm.



For additional information contact your local fire department or visit our web-site at [www.swofsc.org](http://www.swofsc.org)



## "Smoke Alarm Guide"

Southwest Ohio Fire



Safety Council



[WWW.SWOFSC.ORG](http://WWW.SWOFSC.ORG)