



SMOKE DETECTORS

IONIZATION VS. PHOTOELECTRIC

There has recently been a great deal of discussion concerning the preference of either an ionization or photoelectric smoke detector. In an effort to clarify some of the facts about each detector, Assistant Fire Marshal Michael Bartlett researched and compiled a report entitled "Smoke Detector Type and Operation." The following information was taken from his report:

Residential fire deaths have decreased steadily as the number of homes with smoke alarms has increased. Reports from the National Fire Protection Association on residential fire deaths show that people have nearly a 50 percent better chance of surviving a fire if their house has the recommended number of smoke alarms.

The average size home or apartment needs more than one smoke alarm. National fire safety standards recommend a minimum of one alarm on each level of the home, one alarm outside the bedroom area and one alarm in each bedroom.

The question remains, what type of smoke detector is better: ionization or photoelectric?

How they work

Ionization detectors contain a tiny mass of Americium-241, which is a source of alpha radiation. The principle of using a small amount of radioactive material to ionize the air between two differently charged electrodes is to sense the presence of smoke particles. The radiation passes through an ionization chamber, which is an air-filled space between two electrodes, and permits a small constant current to flow between the electrodes. Any smoke that enters the chamber absorbs the alpha particles which reduces the ionization and interrupts this flow of current, setting off the alarm.

Photoelectric detectors use the principle of utilizing a light source and a photosensitive sensor. When smoke particles enter the light path, some of the light is scattered by reflection and refraction onto the sensor. In other words, when smoke blocks the light beam, the reduction in light reaching the photocell sets off the alarm.

Ionization vs. Photoelectric

Ionization

- Least expensive
- Can detect particles of smoke too small to be visible
- Warns when batteries are low or failing
- Better response to flaming fires

Photoelectric

- Uses a light sensor
- Quick to detect slow burning, smoky fires
- Less sensitive to false alarms from cooking and bathroom steam than ionization
- Faster response to smoldering fires

BOTH ionization and photoelectric are effective smoke sensors and must pass the same tests to be certified as a listed Underwriters Laboratory (UL). The number of alarms a home has is more important than the type.

Installing several smoke alarms of each type will provide better coverage in the extreme cases of long-term smoldering or fast flaming fires. Most importantly enough alarms should be installed in the proper locations.



DAYLIGHT SAVINGS

March 9th begins Daylight Savings time. Don't forget to "Spring Forward" and set your clock an hour ahead.



Daylight Savings time is also a great time for changing the batteries in the smoke detectors in your home.

Birthdays

- 3/2-Kyle Cobb
- 3/4-Jimmy Barrett
- 3/4-Tim Swann
- 3/6-Greg Robinson
- 3/7-Larry Shelton
- 3/9-Steve Thompson
- 3/10-Britt Gammon
- 3/14-Thomas Adams
- 3/15-Doug English
- 3/15-Ben Thorpe
- 3/19-Billy Vinson
- 3/20-Lucas Dearden
- 3/21-Eugene Todd
- 3/22-Alan Farrar
- 3/23-Logan Gill
- 3/23-Randy Rae
- 3/25-David Cranford
- 3/25-Scott Duncan
- 3/28-Mike Adams

SPECIAL PRESENTATION

Photos provided by: AFM Nora Smith



Assistant Fire Marshal Peas accepts the award presented by Emmett Turner for Tennessee's Fire and Public Safety Educator of the Year.



Peas is congratulated by his co-workers, Assistant Chief Ken Honeycutt and Assistant Fire Marshal Nora Smith.

NASHVILLE—On February 11, 2008 MFD Assistant Fire Marshal Carl Peas accepted his award for Tennessee Fire Safety Public Educator of the Year. The award was presented by Emmett Turner of the State Fire Marshal's office. The presentation was held at the Sheraton Music City in downtown Nashville.

HONOR GUARD BELL



In January 2008, The Murfreesboro Fire Department's Honor Guard mounted a bell that once topped a 1960's model Peter Pirsch fire engine. The bell is a momentous symbol of fire-fighting's historical past. In contrast with today's use of electronic sirens, the engines of old used this type bell as an emergency alarm.

The Honor Guard will utilize the bell for commemorating fallen firefighters during memorial services. Members of the Honor Guard will ring the bell three times at graveside. The tolling of the bell represents the deceased's "last call."



Murfreesboro Fire Department Honor Guard member Jeff Irvin and Chief David Baxter with the 1960's Peter Pirsch bell that will be used for commemorating fallen firefighters during memorial services.

"No act of kindness, no matter how small, is ever wasted."

 Aesop



March Anniversaries

24 YEARS

Jack Black

17 YEARS

Laurie Alsup

9 YEARS

Michael Bartlett

Blake Insell

Jeff Irvin

David Sloan

4 YEARS

Dale Bilbrey

Bo Jones

Joe Pennington

Shan Womack

2 YEARS

Alan Farrar

1 YEAR

Ashley McDonald

CONGRATULATIONS

TO OUR NEW HONOR GUARD MEMBERS:

JEFF WRIGHT

JOEL PATNODE

LANCE SUTTON

DOUG INGLISH

DAVID CRANFORD

RANDY SHAW

BEN THORPE

MIKE ADAMS

