

**First Alert**  
WIRELESS INTERCONNECT BATTERY OPERATED SMOKE ALARM

WIRELESS INTERCONNECT Enabled  
Voice with Programmable Location

Two Latching Features  
Optipath 360 Technology™

Two Silence Features

Printed in Mexico  
M08-0194-007 K1 5/16

CONFORMS TO  
UL STD 217

Model SA511

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All First Alert™ and BRK™ Smoke Alarms conform to regulatory requirements, including UL217 and are designed to detect particles of combustion. Smoke particles of varying number and size are produced in all fires.

Ionization technology is generally more sensitive than photoelectric technology at detecting small particles, which tend to be produced in greater amounts by flaming fires, which consume combustible materials rapidly and spread quickly. Sources of these fires may include paper burning in a wastebasket, or a grease fire in the kitchen.

Photoelectric technology is generally more sensitive than ionization technology at detecting large particles, which tend to be produced in greater amounts by smoldering fires, which smolder for hours before bursting into flame. Sources of these fires may include cigarettes burning in couches or bedding.

For maximum protection, use both types of smoke alarms on each level and in every bedroom of your home.

## INTRODUCTION

Thank you for choosing First Alert™ for your Smoke Alarm needs. You have purchased a state-of-the-art Smoke Alarm designed to provide you with early warning of a fire. Key features include:

- WIRELESS INTERCONNECT Enabled.** Alarm automatically communicates with other WIRELESS INTERCONNECT enabled alarms when installed.

- Exclusive Voice Warning with Location.** Will tell you the preprogrammed location of the initiating unit and danger detected. Programmable up to 11 locations (ex. "basement"). When alarms sound, if programmed for basement it will say "Warning, evacuate, smoke in basement" along with all other installed WIRELESS INTERCONNECT Voice alarms.

- Spread Spectrum Horn Tone.** Lower and varying horn frequency makes it easier for elderly with normal age related hearing loss to hear horn. Sweeps through the 2200 – 3400 Hz range.

- RF Interconnect.** Reliable and secure radio frequency communication between alarms. 915MHz frequency with 65,000 security codes and 3 channel frequency hopping.

- Optipath 360 Technology™.** Provides 360 degrees of direct access to the smoke sensor.

- Single Button Test/Silence.** Eliminates confusion. Depending on what made the alarm is in, pushing the button provides different functions such as testing the alarm, silencing the alarm, re-testing the alarm when in silence and clearing the Latching features.

- Two Silence Features.** Temporarily silence low battery chipr for up to eight hours before replacing low battery or silence an unwanted alarm for several minutes.

- Two Latching Features.** Alarm Latch: Easily identifies initiating alarm even after alarm condition has subsided. Low Battery Latch: Identifies which unit is in low battery condition.

- Perfect Mount System.** Includes a gasketless base for easy installation and a mounting bracket that keeps the alarm secure over a wide rotation range to allow for perfect alignment.

## FIRE SAFETY TIPS

Follow safety rules and prevent hazardous situations: 1) Use smoking materials properly. Never smoke in bed. 2) Keep matches out of reach of children. 3) Store flammable materials in proper containers. 4) Keep electrical appliances in good condition and don't overload electrical circuits. 5) Keep stoves, barbecue grills, fireplaces and chimneys grease- and debris-free. 6) Never leave anything cooking on the stove unattended. 7) Keep portable heaters and open flames, like candles, away from flammable materials. 8) Don't let rubbish accumulate.

Keep alarms clean, and test them weekly. Replace alarms immediately if they are not working properly. Smoke Alarms that do not work cannot alert you to a fire. Keep at least one working fire extinguisher on every floor, and an additional one in the kitchen. Have fire escape ladders or other reliable means of escape from an upper floor in case stairs are blocked.

## BEFORE YOU INSTALL THIS SMOKE ALARM

**Important!** Read "Recommended Locations for Smoke Alarms" and "Locations to Avoid for Smoke Alarms" before beginning. This unit monitors the air, and when smoke reaches its sensing chamber, it alarms. It can give you more time to escape before fire spreads. This unit can ONLY give an early warning of developing fires if it is installed, maintained and located where smoke can reach it, and where all residents can hear it, as described in this manual. This unit will not sense gas, heat, or flame. It cannot prevent or extinguish fires.

**Understand The Different Type of Smoke Alarms**  
Battery powered or electrical? Different Smoke Alarms provide different types of protection. See "About Smoke Alarms" for details.

**Know Where To Install Your Smoke Alarms**  
Fire Safety Professionals recommend at least one Smoke Alarm on every level of your home, in every bedroom, and in every bedroom hallway or separate sleeping area. See "Recommended Locations For Smoke Alarms" and "Locations To Avoid For Smoke Alarms" for details.

**Know What Smoke Alarms Can and Can't Do**  
A Smoke Alarm can help alert you to fire, giving you precious time to escape. It can only sound an alarm once smoke reaches the sensor. See "Limitations of Smoke Alarms" for details.

**Check Your Local Building Codes**  
This Smoke Alarm is designed to be used in a typical single-family home. It alone will not meet requirements for boarding houses, apartment buildings, hotels or motels. See "Special Compliance Considerations" for details.

- ▲ WARNING!**  
This unit will not alert hearing impaired residents. It is recommended that you install special units which use devices like flashing strobe lights to alert hearing impaired residents.

- Unit will not operate without battery power. The Smoke Alarm cannot work until you install the batteries in the correct position (Match "+" to "+" and "-" to "-").

- This Smoke Alarm has a battery drawer which remains closing unless batteries are installed.

- ▲ CAUTION!**  
Do not install this unit over an electrical junction box. Air currents around junction boxes can prevent smoke from reaching the sensing chamber and prevent the unit from alarming. Only AC powered units are intended for installation over junction boxes.
- Do not stand too close to the unit when the alarm is sounding. It is loud to wake you in an emergency. Exposure to the horn at close range may harm your hearing.
- Do not paint over the unit. Paint may clog the openings to the sensing chamber and prevent the unit from operating properly.

## STEP BY STEP GUIDE TO PROGRAMMING THIS ALARM FOR FIRST TIME AND WHEN CHANGING BATTERIES

Action:	Alarm Will Say:	
1. Insert batteries (2, AA batteries).	<p>"Welcome, First Alert Smoke Alarm."</p> <p>"No location programmed" if <b>first time</b> or "Location, example: 'Basement' location programmed" when changing batteries.</p> <p>"Select location, press and hold test button now."</p>	
2. Press & Hold Test Button if you would like to program the location or change the location of the Alarm. Release button after Alarm responds.	<p>"To save location, press and hold test button after location is heard." Alarm will speak list of locations (see below).</p>	
3. After you hear the location of where you are placing the Alarm, Press & Hold the Test Button.	<p>"Location, example: 'Basement' location saved."</p> <p>If no location is chosen: "No location saved."</p>	
Your Alarm has now been programmed for the location of your choice. Available locations:		
Basement	Kitchen	Child's Bedroom
Living Room	Dining Room	Master Bedroom
Family Room	No Location	Guest Bedroom
Office	Hallway	Utility Room

## ADDING AND LINKING ADDITIONAL WIRELESS INTERCONNECT ALARMS

**NOTE:** Steps 1 through 3 below need to be completed within two minutes. If more than two minutes pass, the Green power LED will stop blinking. Simply open the battery drawer of the second Alarm and repeat steps 1 through 3.

- Press and hold the test button and then close the battery drawer.
- Once you hear the unit chirp, release the test button. The Green power LED will start to blink indicating the WIRELESS INTERCONNECT Alarm is waiting for program data from one of the other setup WIRELESS INTERCONNECT Alarms.
- Press and hold the test button on the first Alarm, until the second Alarm chirps and its Green power LED stops blinking. Then release the test button.
- Press and hold the test button on the first Alarm, until the second Alarm chirps and its Green power LED stops blinking. Then release the test button.
- If you purchased a Talking Smoke Alarm, you will now be prompted to set the Alarm's location. Follow the directions given by the Alarm.
- If you have purchased the hardwired battery back-up WIRELESS INTERCONNECT Alarm, you can now connect the hardwired Alarm by installing the three-wire connector on the ceiling to the Alarm.
- Repeat steps 1-6 for additional WIRELESS INTERCONNECT Alarms.

You have now successfully linked your new WIRELESS INTERCONNECT Alarm. To add additional Alarms at a later time, follow steps 1 through 6.

## WHAT YOU WILL SEE AND HEAR WITH THIS ALARM

**Under Normal Operations**  
Voice: Silent  
Horn: Silent  
Power LED: Flashes Green once/minute

**When You Test the Alarm**  
Voice: "Testing." Horn: 3 beeps, pause, 3 beeps. Voice: "Warning, evacuate smoke in [Location, example: 'Basement']. Evacuate."  
Smoke LED: Flashes Red in sync with the horn pattern

**If Battery Becomes Low**  
Voice: "Replace battery in [Location, example "Basement]." Repeated every 5 hours  
Horn: chirps once a minute  
Power LED: Flashes Green On for 2 seconds/Off for 2 seconds. Low Battery Latch is now engaged.

**If Alarm Is Not Operating Properly (MALFUNCTION SIGNAL)**  
Voice: "Detector error in [Location, example "Basement"]. please see manual." Repeated every 5 hours  
Horn: Three rapid chirps every minute  
Smoke LED: Flashes approximately once a minute

**Smoke is Detected**  
Horn: 3 beeps, pause, repeating 3 times  
Voice: "Warning, evacuate smoke in [Location, example: "Basement"]. Evacuate."  
Smoke LED: During Alarm: Flashes Red in sync with the horn pattern. After Alarm: Flashes Red On for 2 seconds/Off for 2 seconds. Smoke Alarm Latch is now engaged.

**Smoke Alarm is Silenced**  
Horn: Off  
Smoke LED: Flashes Red

## WIRELESS OPERATION

**First Alert™** WIRELESS INTERCONNECT Technology is the easy, cost-effective way to provide your family with whole-home safety. All WIRELESS INTERCONNECT Alarms communicate with each other without wires or connectors. When one Alarm sounds, they all sound. This provides your family with an earlier warning of potential danger, and gives you more time to react.

The communication distance (range) between any two WIRELESS INTERCONNECT Alarms is typically 50 feet (15 meters) inside of a home. Some features of a home, such as the number of floors, number/size of rooms, furniture and types of building materials used may reduce the range of the Alarms. Examples include: suspended ceilings, ductwork, large metallic appliances (refrigerators) and metal studs. A feature of WIRELESS INTERCONNECT Alarms is that they operate as a mesh network. All Alarms will repeat any alarm signal that is received to all other WIRELESS INTERCONNECT Alarms. Interference from structural conditions can be overcome by adding a proper operation of any wireless device will vary depending on its surroundings. It is very important that each Alarm is tested individually before and after installation to make sure that all Alarms respond properly.

- The WIRELESS INTERCONNECT Alarms are not to be used outdoors or to transmit between buildings.** The Alarms will not communicate properly under these conditions.
- Metal objects and metallic wallpaper may interfere with signals from wireless Alarms.** Alarms should be tested after changes to your home such as remodeling, moving furniture, and with metal doors opened and closed.

Your First Alert™ WIRELESS INTERCONNECT Smoke Alarm will automatically communicate potential fires with all other First Alert™ WIRELESS INTERCONNECT Smoke Alarms.

**▲ CAUTION!**  
Changes or modifications not expressly approved by BRK Brands, Inc. could void the user's authority to operate the equipment.

## HOW TO INSTALL THIS SMOKE ALARM

### THE PARTS OF THIS SMOKE ALARM

- TOOLS YOU WILL NEED:**  
This unit is designed to be mounted on the ceiling, or on the wall if necessary.
- Pencil
  - Drill with 3/16" (5 mm) drill bit
  - Phillips screwdriver
  - Hammer
  - Pliers to activate optional "tamper-resistant" locking features

**IMPORTANT!**  
If you want to lock the battery drawer, or lock the Smoke Alarm to the mounting bracket, please read the "Optional Locking Features" section before you begin installation.

- Test/Silence button
- Battery drawer
- Power indicator LED
- Smoke Alarm LED

### FOLLOW THESE SIMPLE STEPS!

- Hold base firmly and twist the mounting bracket counterclockwise to separate it from the base.
- Hold the mounting bracket against the ceiling (or wall) so the vertical mounting slot is aligned in the 12 o'clock position and trace around the inside of the mounting slots (vertical and horizontal mounting).
- Put the unit where it won't get covered with dust when you drill the mounting holes.
- Using a 3/16" (5 mm) drill bit, drill a hole through the center of the oval outlines you traced.
- Insert the plastic screw anchors (in the plastic bag with screws) into the holes. Tap the screw anchors gently with a hammer, if necessary, until they are flush with the ceiling or wall.
- Line the mounting bracket up over the plastic screw anchors.
- Screw the mounting bracket to the ceiling or wall through the mounting slots using the two screws provided.
- Attach the Smoke Alarm to the mounting bracket. Line up the guides on the alarm's base with the guides on the mounting bracket. When guides are lined up, turn the base clockwise (right) until it snaps into place.

**NOTE:** Once the Smoke Alarm is snapped onto the mounting bracket, you can rotate the Smoke Alarm to adjust the alignment.

- Test the Smoke Alarm. See "Weekly Testing."

## WEEKLY TESTING

- ▲ WARNING!**  
**NEVER use an open flame of any kind to test this unit.** You might accidentally damage or set fire to the unit or to your home. The built-in test switch accurately tests the unit's operation as required by Underwriters Laboratories, Inc. (UL).
- If the Alarm ever fails to test properly, replace it immediately.** Products under warranty may be returned to the manufacturer for replacement. See "Limited Warranty" for details.
- DO NOT stand close to the alarm when the horn is sounding.** Exposure at close range may be harmful to your hearing. When testing, step away when horn starts sounding.

It is important to test this unit every week to make sure it is working properly. Using the test button is the recommended way to test this Smoke Alarm. Press and hold the test button on the cover of the unit until the alarm sounds (the unit may continue to alarm for a few seconds after you release the button). If it does not alarm, make sure the unit is receiving power (LED will flash approximately once a minute indicating it has power) and test it again. If it still does not alarm, replace it immediately. During testing you will hear a loud, repeating horn pattern: 3 beeps, pause, 3 beeps, pause.

## REGULAR MAINTENANCE

This Alarm has been designed to be as maintenance free as possible, but there are a few simple things you must do to keep it working properly.

- Test it at least once a week.
- Clean the Smoke Alarm at least once a month; gently vacuum off any dust using your household vacuum's soft brush attachment, and test the Smoke Alarm after cleaning. Never use water, cleaners or solvents since they may damage the unit.
- If the Smoke Alarm becomes contaminated by excessive dirt, dust and/or grime, and cannot be cleaned to avoid unwanted alarms, replace the unit immediately.
- Relocate the unit if it sounds frequent unwanted alarms. See "Locations to Avoid For Smoke Alarms" for details.
- When the battery becomes weak, the Smoke Alarm unit will "chirp" approximately once a minute (the low battery warning). This low battery warning should last for up to 7 days, but you should replace the battery immediately to continue your protection.

**Choosing a replacement battery:**  
Your Smoke Alarm requires 2 "AA" batteries. Energizer E91 or Duracell MN1500. These batteries are available at many local retail stores.

- ▲ WARNING!**  
Always use the exact batteries specified by this User's Manual. DO NOT use rechargeable batteries. Clean the battery contacts and also those of the device prior to battery installation. Install batteries correctly with regard to polarity (+ and -).

- Please dispose of or recycle used batteries properly, following any local regulations. Consult your local waste management authority or recycling organization to find an electronics recycling facility in your area. DO NOT DISPOSE OF BATTERIES IN FIRE. BATTERIES MAY EXPLODE OR LEAK.**

- ▲ WARNING!**  
Keep battery out of reach of children. In the event a battery is swallowed, immediately contact your poison control center, your physician, or the National Battery Ingestion hotline at 202-625-3533 as serious injury may occur.

## IMPORTANT!

Actual service life depends on the Smoke Alarm and the environment in which it is installed. All the batteries specified above are acceptable replacement batteries for this unit.

**To replace the batteries (without removing Alarm from the ceiling or wall):**

- Open the battery compartment.
- Press tabs A and B as shown in the diagram and remove each battery.
- Insert the new batteries, making sure they snap completely into the battery compartment. Match the terminals on the ends of the batteries with the terminals on the unit.
- Close the battery compartment, and then test the unit by pressing the Test/Silence button.

## IF THIS SMOKE ALARM SOUNDS RESPONDING TO AN ALARM

During an alarm, you will hear a loud, repeating horn pattern: 3 beeps, pause, 3 beeps, pause. The red LED will flash rapidly.

## ▲ WARNING!

- If the unit alarms and you are not testing the unit, it is warning you of a potentially dangerous situation that requires your immediate attention. NEVER ignore any alarm. Ignoring the alarm may result in injury or death.**
- Never remove the batteries from a battery operated Smoke Alarm to stop an unwanted alarm (caused by cooking smoke, etc.). Removing batteries disables the alarm as it cannot sense smoke.** Unwanted alarms may result from an open window or fan the smoke away from the unit. The alarm will reset automatically.
- If the unit alarms get everyone out of the house immediately.**

**What To Do in Case Of Fire**  
Don't panic! Stay calm. Follow your family escape plan.

- Get out of the house as quickly as possible. Don't stop to get dressed or collect anything.
- Feel doors with the back of your hand before opening them. If a door is cool, open it slowly. Don't open a hot door. Keep doors and windows closed, unless you must escape through them.
- Cover your nose and mouth with a cloth (preferably damp). Take short, shallow breaths.
- Meet at your planned meeting place outside your home, and do a head count to make sure everybody got out safely.
- Call the Fire Department as soon as possible from outside. Give your address, then your name.
- Never go back inside a burning building for any reason.
- Contact your Fire Department for ideas on making your home safer.

**▲ WARNING!**  
Alarms have various limitations. See "Limitations of Smoke Alarms" for details.

## USING THE SILENCE FEATURE

The Silence Feature can temporarily quiet an unwanted alarm for up to 15 minutes. To use this feature, press the "Push to Test/Silence" button on the cover. If the unit will not silence and no heavy smoke is present, or if it stays in silence mode continuously, it should be replaced immediately. The LED will continue to flash rapidly while in silence.

**▲ WARNING!**  
The Silence Feature does not disable the unit—it makes it temporarily less sensitive to smoke. For your safety, if smoke around the unit is dense enough to suggest a potentially dangerous situation, the unit will stay in alarm or may re-alarms quickly. If you do not know the source of the smoke, do not assume it is an unwanted alarm. Not responding to an alarm can result in property loss, injury, or death.

**OPTIONAL LOCKING FEATURES**  
The optional locking features are designed to prevent unauthorized removal of the battery or alarm. It is not necessary to activate the locks in single-family households where unauthorized battery or alarm removal is not a concern.

These Smoke Alarms have two separate locking features: one to lock the battery compartment, and the other to lock the Smoke Alarm to the mounting bracket. You can choose to use either feature independently, or use them both.

**Tools you will need: Needle-nose pliers. Standard flathead screwdriver.**

Both locking features use locking pins, which are molded into the mounting bracket. Depending on which locking features you use, remove one or both pins from the mounting bracket using needle-nose pliers.

**IMPORTANT!**  
To permanently remove either locking pin, insert a flathead screwdriver between the locking pin and the lock, and pry the pin out of the lock.

**TO LOCK THE BATTERY COMPARTMENT**  
Do not lock the battery compartment until you activate the battery and test the Smoke Alarm.

**IMPORTANT!**  
If the unit does not alarm during testing, DO NOT lock the battery compartment. Install new batteries and test again. If the Smoke Alarm still does not alarm, replace it immediately.

- Using needle-nose pliers, detach one locking pin from the mounting bracket.
- After batteries are inserted, then push the locking pin through the hole near the battery door latch on the back of the Smoke Alarm.

**TO LOCK THE MOUNTING BRACKET**  
1. Using needle-nose pliers or a utility knife, detach one locking pin from the mounting bracket.  
2. Insert the locking pin through the hole on the back of the Smoke Alarm as shown in the diagram.  
3. When you attach the Smoke Alarm to the mounting bracket, the locking pin's head will fit into a notch on the bracket.

## SILENCING THE LOW BATTERY WARNING

This silence feature can temporarily quiet the low battery warning "chirp" for up to 8 hours. You can silence the low battery warning "chirp" by pressing the Test/Silence button on the alarm cover.

Once the low battery warning "chirp" silence feature is activated, the unit continues to flash the Green light twice a minute for 8 hours. After 8 hours, the low battery "chirp" will resume. Replace the batteries as soon as possible; this unit will not operate without battery power!

To deactivate this feature: Press the Test/Silence button again. The unit will go into Test Mode and the low battery warning will resume (LED flashes and unit sounds "chirp" once a minute).

## LATCHING FEATURES

**Alarm Latch** is activated after Alarm is exposed to alarm levels of smoke. After alarm levels drop below alarm levels, the "Smoke" Red LED will begin to flash On for 2 seconds/Off for 2 seconds. If unit will continue to flash or "latch" for about 15 minutes, to give you time to determine which unit initiated the alarm.

**Low Battery Latch** is activated when the Alarm is in the "low battery condition". When this occurs, the Power LED flashes Green On for 2 seconds/Off for 2 seconds for about 15 minutes. This feature is designed to help you identify which Alarm needs to have the battery replaced. Although, the Alarm will sound the low battery chirp approximately once every minute, sometimes during the initial stages of "low battery", the Alarm will chirp in greater intervals than one minute, sometimes up to several hours, until the battery reaches a steady low battery level. This innovative feature eliminates the frustration of waiting for alarm and/or identifying which unit is chirping.

## IF YOU SUSPECT A PROBLEM

- Smoke Alarms may not operate properly because of dead, missing or weak batteries, a build-up of dirt, dust or grease on the Smoke Alarm cover, or installation in an improper location. Clean the Smoke Alarm as described in "Regular Maintenance" and install a fresh battery, then test the Smoke Alarm again. If it fails to test properly when you use the test button, or if the problem persists, replace the Smoke Alarm immediately.
- If you hear a "chirp" about once a minute, replace the battery.**
- If you experience frequent non-emergency alarms (like those caused by cooking smoke), try relocating the Smoke Alarm.**
- If the alarm sounds when no smoke is visible, try cleaning or relocating the Smoke Alarm. The mounting bracket cover may be dirty.**
- If the alarm does not sound during testing, try installing a new battery, and make sure it is snapped in securely.**
- If the alarm sounds 3 rapid "chirps" every minute; LED flashes approximately once a minute. MALFUNCTION: the device is not working properly and needs to be replaced.**

Do not try fixing the alarm yourself – this will void your warranty!

If the Smoke Alarm is still not operating properly, and it is still under warranty, please see "How to Obtain Warranty Service" in the Limited Warranty.

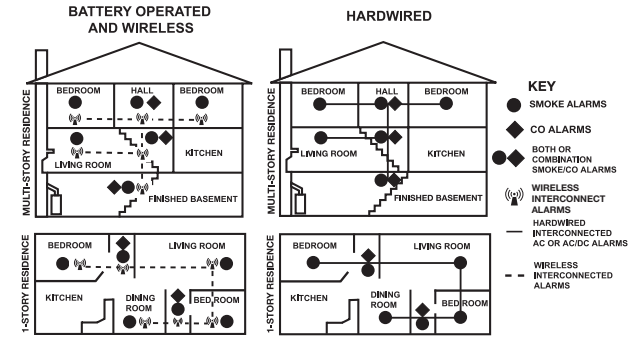
## RECOMMENDED LOCATIONS FOR SMOKE ALARMS

**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.

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



## AGENCY PLACEMENT RECOMMENDATIONS NFPA 72 Chapter 29

"For your information, the National Fire Alarm and Signaling Code, NFPA 72, reads as follows:"

- 29.5.1\* Required Detection.**
- 29.5.1.1\*** Where required by other governing laws, codes, or standards for a specific type of occupancy, approved single and multiple-station smoke alarms shall be installed as follows:
  - "In all sleeping rooms and guest rooms
  - "Outside of each separate dwelling unit sleeping area, within 21 ft (6.4 m) of any door to a sleeping room, with the distance measured along its path of travel
  - On every level of a dwelling unit, including basements
  - On every level of a residential board and care occupancy (small facility), including basements and excluding crawl spaces and unfinished attics
  - "In the living area(s) of a guest suite
  - "In the living area(s) of a residential board and care occupancy (small facility)

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## LOCATIONS TO AVOID FOR SMOKE ALARMS

For best performance, it is recommended you AVOID installing Smoke Alarms in these areas:

- Where combustion particles are produced.** Combustion particles form when something burns. Areas to avoid include poorly ventilated kitchens, garages, and furnace rooms. Keep units at least 20 feet (6 meters) from the sources of combustion particles (stove, furnace, water heater, space heater) if possible. In areas where a 20-foot (6-meter) distance is not possible – in mobile, or smaller homes, for example, it is recommended the Smoke Alarm be placed as far from these fuel-burning sources as possible. The placement recommendations are intended to keep these Alarms at a reasonable distance from a fuel-burning source, and thus reduce "unwanted" alarms. Unwanted alarms can occur if a Smoke Alarm is placed directly next to a fuel-burning source. Ventilate these areas as much as possible.
- In air streams near kitchens. Air currents can draw cooking smoke into the sensing chamber of a Smoke Alarm near the kitchen.
- In very damp, humid or steamy areas, or directly near bathrooms with showers. Keep units at least 10 feet (3 meters) away from showers, saunas, dishwashers, etc.
- Where the temperatures are regularly below 40° F (4° C) or above 100° F (37.8° C), including untreated basements, outdoor rooms, porches, or unfinished attics or basements.
- In very dusty, dirty, or greasy areas. Do not install a Smoke Alarm directly over the stove or range. Keep laundry room Smoke Alarms free of dust or lint.
- Near fresh air vents, ceiling fans, or in very drafty areas. Drafts can blow smoke away from the unit, preventing it from reaching the sensing chamber.
- In insect infested areas. Insects can clog openings to the sensing chamber and cause unwanted alarms.
- Less than 12 inches (305mm) away from fluorescent lights. Electrical "noise" can interfere with the sensor.
- In "dead air" spaces. "Dead air" spaces may prevent smoke from reaching the Smoke Alarm.

**Avoiding Dead Air Spaces**  
"Dead air" spaces may prevent smoke from reaching the Smoke Alarm. To avoid dead air spaces, follow the installation recommendations below.

On ceilings, install Smoke Alarms as close to the center of the ceiling as possible. If this is not possible, install the Smoke Alarm at least 4 inches (102 mm) from the wall or corner.

For wall mounting (if allowed by building codes), the top edge of the Smoke Alarms should be placed between 4 and 12 inches (102 and 305 mm) from the wall/ceiling line, below typical "dead air" spaces.

On a peaked, gabled, or cathedral ceiling, install the first Smoke Alarm within 3 feet (0.9 meters) of the peak of the ceiling, measured horizontally. Additional Smoke Alarms may be required depending on the length, angle, and size of the ceiling's slope. Refer to NFPA 72 for details on requirements for sloped or peaked ceilings.

## ABOUT SMOKE ALARMS

**Battery (DC) powered Smoke Alarms** provide protection even when electricity fails, provided the batteries are fresh and correctly installed. Units are easy to install, and do not require professional installation.

**AC powered Smoke Alarms** can be interconnected so if one unit senses smoke, all units alarm. They do not operate if electricity fails. **AC with battery (DC) back-up** will operate during a power outage. AC units must be installed by a qualified electrician.

**WIRELESS INTERCONNECT Smoke Alarms with battery (DC) back-up:** Interconnects with all WIRELESS INTERCONNECT enabled Smoke and Smoke/CO Alarms without wires or connectors, so when one alarm sounds, they all sound. Will operate if electricity fails, provided the batteries are fresh and correctly installed. Units are easy to install, and do not require professional installation.

**Smoke Alarms for Solar or Wind Energy users and battery back-up power systems:** AC powered Smoke Alarms should only be operated with true or pure sine wave inverters. Operating this Smoke Alarm with most battery-powered UPS (uninterruptible power supply) products or square wave or "quasi sine wave" inverters will damage the Alarm. If you are not sure about your inverter or UPS type, please consult with the manufacturer to verify.

**Smoke Alarms for the hearing impaired:** Special Purpose Smoke Alarms should be installed for the hearing impaired. They include a visual alarm and an audible alarm horn, and meet the requirements of the Americans With Disabilities Act. Can be interconnected so if one unit senses smoke, all units alarm.

**Smoke Alarms are not to be used with detector guards** unless the combination has been evaluated and found suitable for that purpose.

All these Smoke Alarms are designed to provide early warning of fires if located, installed and cared for as described in the user's manual, and if smoke reaches them. If you are unsure which type of Smoke Alarm to install, refer to Chapter 2 of the National Fire Protection Association (NFPA) Standard 72 (National Fire Alarm and Signaling Code) and NFPA 101 (Life Safety Code), National Fire Protection Association, One Batterymark Park, Quincy, MA 02269-9101. Local building codes may also require specific units in new construction or in different areas of the home.

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