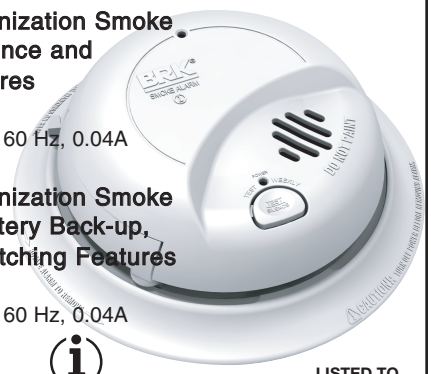
# USER'S MANUAL
## Smoke Alarms

First Alert®

AC Powered Ionization Smoke Alarm with Silence and Latching Features
**Model 9120**
Input: 120V AC ~, 60 Hz, 0.04A

AC Powered Ionization Smoke Alarm with Battery Back-up, Silence and Latching Features
**Model 9120B**
Input: 120V AC ~, 60 Hz, 0.04A



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M08-0134-004 **K1** 08/08

Models 9120
9120B

**LISTED TO UL 217 STANDARD**

**IMPORTANT! PLEASE READ CAREFULLY AND SAVE**
This user's manual contains important information about your Smoke Alarm's operation. If you are installing the Smoke Alarm for use by others, you must leave this manual — or a copy of it — with the end user.

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3901 Liberty Street Road, Aurora, IL 60504-8122
Consumer Affairs: (800) 323-9005
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## INTRODUCTION

Thank you for choosing BRK Brands, Inc. 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:***

***Smart Technology*** designed to help reduce unwanted or nuisance alarms.

***Single Button Test/Silence*** eliminates confusion. Depending on what mode 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 feature.

***Latching Alarm Indicator*** easily identifies initiating alarm even after the alarm condition has subsided.

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

***Dust Cover*** is included to keep the alarm clean during construction.

***Easy Installation/Maintenance*** features include a large opening in the mounting bracket for easy access to wiring. A battery pull tab keeps the battery fresh until the home is occupied. A Side Load Battery Drawer allows for easy battery replacement without removing the alarm from the ceiling or wall (Model 9120B only).

***Improved UV Resistance*** keeps the alarm from discoloring over time.

**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 may 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.**

## FIRE SAFETY TIPS

Follow safety rules and prevent hazardous situations: 1) Use smoking materials properly. Never smoke in bed. 2) Keep matches or lighters away from 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.

# USER'S MANUAL
## Smoke & Carbon Monoxide Alarm

First Alert®

AC Powered Smoke & Carbon Monoxide Alarm with Battery Back-up, Silence Feature and Latching Alarm

**Model SC9120B**
Input: 120V AC ~
60 Hz, 0.09A

**IMPORTANT! PLEASE READ CAREFULLY AND SAVE**
This user's manual contains important information about your Alarm's operation. If you are installing the Alarm for use by others, you must leave this manual — or a copy of it — with the end user.

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**LISTED TO UL 217 and UL 2034 STANDARDS**

Model SC9120B

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## INTRODUCTION

Thank you for choosing BRK Brands, Inc. for your Smoke and Carbon Monoxide Alarm needs. You have purchased a state-of-the-art Smoke & CO Alarm designed to provide you with early warning of a fire or Carbon Monoxide. ***Key features include:***

***Smoke & Carbon Monoxide Combination Alarm.*** One alarm protects against two deadly household threats.

***Intelligent Sensing Technology*** designed to help reduce unwanted or nuisance alarms.

***Smart Interconnect*** can be interconnected to BRK Smoke Alarms. One interconnect wire carries both smoke and CO alarm signals.

***Single Button Test/Silence*** eliminates confusion. Depending on what mode 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 feature.

***Latching Alarm Indicator*** easily identifies initiating alarm even after the alarm condition has subsided.

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

***Dust Cover*** is included to keep the alarm clean during construction.

***Easy Installation/Maintenance*** features include a large opening in the mounting bracket for easy access to wiring. A battery pull tab that keeps the battery fresh until the home is occupied. A Side Load Battery Drawer allows for easy battery replacement without removing the alarm from the ceiling or wall.

***Improved UV Resistance*** keeps the alarm from discoloring over time.

**All BRK® and First Alert® 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 photo-electric 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 may 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.**

## FIRE SAFETY TIPS

Follow safety rules and prevent hazardous situations: 1) Use smoking materials properly. Never smoke in bed. 2) Keep matches or lighters away from 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.

### BASIC SAFETY INFORMATION

**IMPORTANT!**

- **Dangers, Warnings, and Cautions alert you to important operating instructions or to potentially hazardous situations. Pay special attention to these items.**
- **This Smoke/CO Alarm is approved for use in single-family residences. It is NOT designed for marine or RV use.**

**⚠CAUTION!**

- **This combination Smoke/Carbon Monoxide Alarm has two separate alarms. The CO Alarm is not designed to detect fire or any other gas. It will only indicate the presence of carbon monoxide gas at the sensor. Carbon monoxide gas may be present in other areas. The Smoke Alarm will only indicate the presence of smoke that reaches the sensor. The Smoke Alarm is not designed to sense gas, heat or flames.**

***Continued...***

**⚠DANGER!**

**ELECTRICAL SHOCK HAZARD. Turn off the power to the area where the Smoke/CO Alarm is installed before removing it from the mounting bracket. Failure to turn off the power first may result in serious electrical shock, injury or death.**

**⚠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.**
- **Installation of this unit must conform to the electrical codes in your area; Articles 210 and 300.3 (B) of NFPA 70 (NEC), NFPA 72, NFPA 101; ICC; SBC (SBCCI); UBC (ICBO); NBC (BOCA); OTFDC (CABO), and any other local or building codes that may apply. Wiring and installation must be performed by a licensed electrician. Failure to follow these guidelines may result in injury or property damage.**
- **This unit must be powered by a 24-hour, 120V AC pure sine wave 60 Hz circuit. Be sure the circuit cannot be turned off by a switch, dimmer, or ground fault circuit interrupter. Failure to connect this unit to a 24-hour circuit may prevent it from providing constant protection. Unit may be connected to an arc fault circuit interrupter.**
- **This Smoke/CO Alarm must have AC or battery power to operate. If AC power fails and the battery is dead or missing, the alarm cannot operate.**
- **Never disconnect the power from an AC powered unit to stop an unwanted alarm. Doing so will disable the unit and remove your protection. In the case of a true unwanted alarm, use the Silence Feature (if equipped), open a window or fan the smoke away from the unit. The alarm will reset automatically when it returns to normal operation. Never remove the batteries from a battery operated unit to stop an unwanted alarm (caused by cooking smoke, etc.). Instead open a window or fan the smoke away from the unit. The alarm will reset automatically.**

**⚠CAUTION!**

- **Connect this unit ONLY to other compatible units. See "How To Install This Smoke/CO Alarm" for details. Do not connect it to any other type of alarm or auxiliary device. Connecting anything else to this unit may damage it or prevent it from operating properly.**
- **The battery compartment resists closing unless a battery is installed. This warns you the unit will not operate under DC power without a battery.**
- **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 chambers and prevent the unit from operating properly.**

# INSTALLATION

## WHERE TO INSTALL THIS ALARM

**Minimum coverage for Smoke Alarms**, as recommended by the National Fire Protection Association (NFPA), is one Smoke Alarm on every floor, in every sleeping area, and in every bedroom (See "Regulatory Information For Smoke Alarms" for details on the NFPA recommendations).

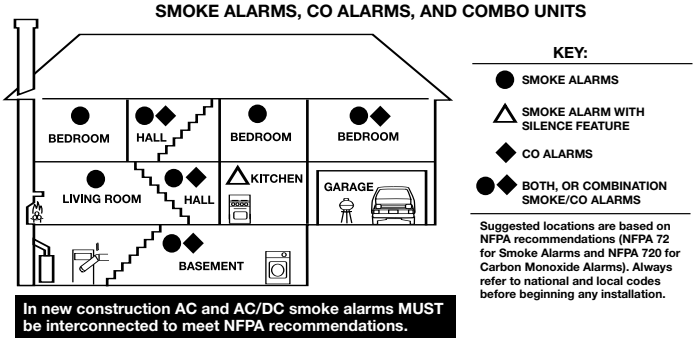
**For CO Alarms,** the National Fire Protection Association (NFPA) recommends that a CO Alarm should be centrally located outside of each separate sleeping area in the immediate vicinity of the bedrooms. For added protection, install additional CO Alarms in each separate bedroom, and on every level of your home.

**In general, install combination Smoke and Carbon Monoxide Alarms:**

- On every level of your home, including finished attics and basements.
- Inside every bedroom, especially if people sleep with the door partly or completely closed.
- In the hall near every sleeping area. If your home has multiple sleeping areas, install a unit in each. If a hall is more than 40 feet (12 meters) long, install a unit at each end.
- At the top of first-to-second floor stairs.
- At the bottom of the basement stairs.
- For additional coverage, install Alarms in all rooms, halls, and storage areas, where temperatures normally remain between 40˚ F and 100˚ F (4˚ C and 38˚ C).

**Recommended Placement**

**SUGGESTED AREAS FOR INSTALLING SMOKE ALARMS, CO ALARMS, AND COMBO UNITS**




**In new construction AC and AC/DC smoke alarms MUST be interconnected to meet NFPA recommendations.**

- When installing on the wall, the top edge of Smoke Alarms should be placed between 4 inches (102 mm) and 12 inches (305 mm) from the wall/ceiling line.
- When installing on the ceiling, place the alarm as close to the center as possible.
- In either case, install at least 4 inches (102 mm) from where the wall and ceiling meet. See "Avoiding Dead Air Spaces" for more information.

**NOTE:** For any location, make sure no door or other obstruction could keep carbon monoxide or smoke from reaching the Alarm.

***Installing Smoke/CO Alarms in Mobile Homes***

For minimum security install one Smoke/CO Alarm as close to each sleeping area as possible. For more security, put one unit in each room. Many older mobile homes (especially those built before 1978) have little or no insulation. If your mobile home is not well insulated, or if you are unsure of the amount of insulation, it is important to install units on inside walls only.

## WHERE THIS ALARM SHOULD NOT BE INSTALLED

**Do NOT locate this Smoke/CO Alarm:**

- In garages, kitchens, furnace rooms, crawl spaces and unfinished attics. Avoid extremely dusty, dirty or greasy 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 modular, mobile, or smaller homes, for example – it is recommended the Smoke/CO 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/CO Alarm is placed directly next to a fuel-burning source. Ventilate these areas as much as possible.
- Within 5 feet (1.5 meters) of any cooking appliance. In air streams near kitchens. Air currents can draw cooking smoke into the smoke sensor and cause unwanted alarms.
- In extremely humid areas. This Alarm should be at least 10 feet (3 meters) from a shower, sauna, humidifier, vaporizer, dishwasher, laundry room, utility room, or other source of high humidity.
- In direct sunlight.
- In turbulent air, like near ceiling fans or open windows. Blowing air may prevent CO or smoke from reaching the sensors.
- In areas where temperature is colder than 40˚ F (4˚ C) or hotter than 100˚ F (38˚C). These areas include non-airconditioned crawl spaces, unfinished attics, uninsulated or poorly insulated ceilings, porches, and garages.
- In insect infested areas. Insects can clog the openings to the sensing chamber.
- Less than 12 inches (305 mm) away from fluorescent lights. Electrical "noise" can interfere with the sensor.
- In "dead air" spaces. See "Avoiding Dead Air Spaces".

## AVOIDING DEAD AIR SPACES

"Dead air" spaces may prevent smoke from reaching the Smoke/CO Alarm. To avoid dead air spaces, follow installation recommendations below.

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

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

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

***Continued...***

## BEFORE YOU BEGIN INSTALLATION

This unit is designed to be mounted on any standard wiring junction box up to a 4-inch (10 cm) size, on either the ceiling or wall. Read "Where to Install This Alarm" and "Where This Alarm Should Not Be Installed " before you begin installation.

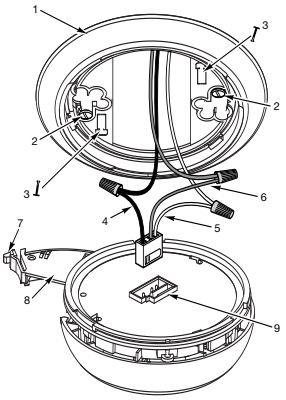
**⚠WARNING!**

- **Make sure the alarm is not receiving excessively noisy power. Examples of noisy power could be major appliances on the same circuit, power from a generator or solar power, light dimmer on the same circuit or mounted near fluorescent lighting. Excessively noisy power may cause damage to your Alarm.**

Find the pair of self-adhesive labels included with this Smoke/CO Alarm.

- On each label write in the phone number of your emergency responder (like 911) and a qualified appliance technician.
- Place one label near the Smoke/CO Alarm, and the other label in the "fresh air" location you plan to go if the alarm sounds.

**NOTE:** A qualified appliance technician is defined as "a person, firm, corporation, or company that either in person or through a representative, is engaged in and responsible for the installation, testing, servicing, or replacement of heating, ventilation, air conditioning (HVAC) equipment, combustion appliances and equipment, and/or gas fireplaces or other decorative combustion equipment."




**PARTS OF THIS SMOKE/CO ALARM**

| | |
|---|---|
| 1 | Mounting Bracket |
| 2 | Mounting Slot and Screw* |
| 3 | Locking Pins (break out of bracket) |
| 4 | Hot (Black) AC Wire |
| 5 | Neutral (White) AC Wire |
| 6 | Interconnect Wire (Orange) |
| 7 | Lever to Open Battery Compartment |
| 8 | Swing-Out Battery Compartment |
| 9 | Quick-Connect Power |

*Not Included

## HOW TO INSTALL THIS SMOKE/CO ALARM

**Tools you will need:** Standard Flathead screwdriver, wire strippers.

**⚠DANGER!**

**ELECTRICAL SHOCK HAZARD. Turn off power to the area where you will install this unit at the circuit breaker or fuse box before beginning installation. Failure to turn off the power before installation may result in serious electrical shock, injury or death.**

**To install this unit:**

1. Remove the mounting bracket from the base. Position the screw slots on the mounting bracket over the screws in the junction box. Tighten the screws.

**⚠WARNING!**

**Improper wiring of the power connector or the wiring leading to the power connector will cause damage to the Alarm and may lead to a non-functioning Alarm.**

2. Using wire nuts, connect the power connector to the AC power.

**STAND ALONE ALARM ONLY:**

- Connect the white wire on the power connector to the neutral wire in the junction box.
- Connect the black wire on the power connector to the hot wire in the junction box.
- Tuck the orange wire inside the junction box. **It is used for interconnect only.**

**INTERCONNECTED ALARMS ONLY:**

**Strip off about 1/2" of the plastic coating on the orange interconnect wire on the power connector.**

- Connect the white wire on the power connector to the neutral wire (usually white) in the junction box.
- Connect the black wire on the power connector to the hot wire (usually black) in the junction box.
- Connect the orange wire on the power connector to the interconnect wire in the junction box. Repeat for each unit you are interconnecting. Never connect the hot or neutral wires in the junction box to the orange interconnect wire. Never cross hot and neutral wires between interconnected Alarms.

3. Plug the power connector into the back of the Smoke/CO Alarm.
4. Position the base of the Smoke/CO Alarm over the mounting bracket and turn. The Alarm will remain secure over a wide rotation range to allow for perfect alignment. When wall mounting, this will allow fine-tuning on the positioning to compensate for out of aligned wall studs and to keep the wording level. The Alarm can be positioned over the bracket every 120°. Rotate the Alarm until aligned properly.
5. Check all connections.

**STAND ALONE ALARM ONLY:**

- If you are only installing one unit, restore power to the junction box.

**INTERCONNECTED ALARMS ONLY:**

- **If you are interconnecting multiple Smoke/CO Alarms, repeat Step 1-5 for each Smoke/CO Alarm in the series. When you are finished, restore power to the junction box.**

**⚠DANGER!**

**ELECTRICAL SHOCK HAZARD. Do not restore power until all Alarms are completely installed. Restoring power before installation is complete may result in serious electrical shock, injury or death.**

6. Make sure the Smoke/CO Alarm is receiving AC power. Under normal operation, the green indicator light will shine continuously. If the green power indicator light does not light, TURN OFF POWER TO THE JUNCTION BOX and recheck all connections. If all connections are correct and the green power indicator still does not light when you restore the power, the unit should be replaced immediately.
7. **ACTIVATING THE BATTERY BACK-UP**

   **IMPORTANT!**

   Activate the battery back-up by removing the "Pull to Activate Battery Back-Up" tab. You do not need to open the battery compartment and reposition the battery during installation. **DO NOT remove the battery activation tab until AC power is turned on to conserve battery power.**
8. **Single Station Alarms:** Test each Alarm. Press and hold the Test/Silence button until you hear the acknowledge "chirp" or the unit alarms.
   **Interconnected Alarms:** Press and hold the Test/Silence button until the unit alarms. All interconnected Alarms should sound. The other Alarms sounding only tests the interconnect signal between Alarms. It does not test each Alarm's operation. **You must test each Alarm individually to check if the Alarm is functioning properly.**

**IMPORTANT!**

If any unit in the series does not alarm during testing, TURN OFF POWER, REMOVE BATTERIES, and recheck connections. If it does not alarm when you restore power, replace it immediately.

## INSTALLATION, Continued

### SPECIAL REQUIREMENTS FOR INTERCONNECTED ALARMS

**⚠WARNING!**

- **Failure to meet any of the above requirements could damage the units and cause them to malfunction, removing your protection.**
- **AC and AC/DC Smoke/CO Alarms can be interconnected. Under AC power, all units will alarm when one senses smoke or CO. When power is interrupted, only the AC/DC units in the series will continue to send and receive signals. AC powered Smoke/CO Alarms will not operate. See "Smart Interconnect" Feature.**

Interconnected units can provide earlier warning of a Smoke/CO problem than stand-alone units, especially if the problem starts in a remote area of the dwelling. If any unit in the series senses Smoke/CO, all units will alarm. To determine which Smoke/CO Alarm initiated an alarm, refer to the table.

| **During an Alarm:** |
|---|
| On Initiating Alarm(s) – Red LED(s) flashes (flash) rapidly |
| On All Other Alarms – Red LED is Off |

| **After an Alarm (Latching):** |
|---|
| On Initiating Alarm(s) – Green LED(s) On, Red LED(s) flash once every 5 seconds |
| On All Other Alarms – Green LED(s) On, Red LED(s) is Off |

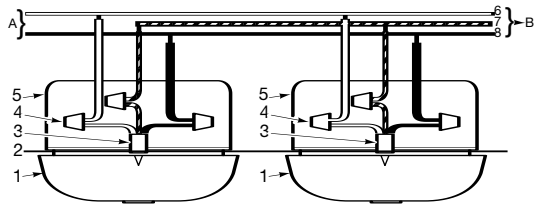
**Compatible Interconnected Units**

**IMPORTANT!**

Interconnect units within a single family residence only. Otherwise all households will experience unwanted alarms when you test any unit in the series. Interconnected units will only work if they are wired to compatible units and all requirements are met. This unit is designed to be compatible with: ***BRK Electronics®*** Smoke Alarm Models 9120, 9120B, 7010, 7010B, 7020B, 4120, 4120B, 4120SB, 4919, 2002RAC, 100S, 5919, 5919TH; ***BRK Electronics®*** Heat Alarm Models HD6135F, HD6135FB; ***BRK Electronics®*** CO Alarm Models CO5120BN, CO5120PDBN; Smoke/CO Alarm Model SC6120B, SC9120B; and ***First Alert®*** Smoke Alarm Models SA4120, SA4120B, SA4121B, SA4919B, SA100B, SC7010B, SC7010BV; Accessory devices models RM3, RM4, SL177.

**Interconnected units must meet ALL of the following requirements:**

- A maximum of 18 compatible BRK Electronics® Smoke, Heat or CO Alarms may be interconnected. No more than 12 of the 18 can be Smoke Alarms per NFPA 72.
- The same fuse or circuit breaker must power all interconnected units.
- The total length of wire interconnecting the units should be less than 1000 feet (300 meters). This type of wire is commonly available at Hardware and Electrical Supply stores.
- All wiring must conform to all local electrical codes and NFPA 70 of the National Electrical Code. Refer to NFPA 72, NFPA 101, and/or your local building code for further connection requirements.




A. Unswitched 120VAC 60 Hz source

B. To Additional Alarms, Maximum = 18 Alarms

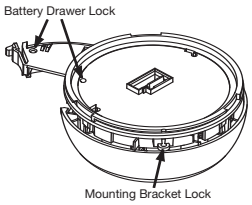
1. Smoke/CO Alarm
2. Ceiling or Wall
3. Power Connector
4. Wire Nut
5. Junction Box
6. Neutral Wire (White)
7. Interconnect Wire (Orange)
8. Hot Wire (Black)

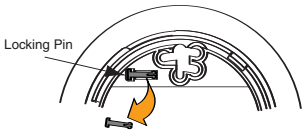
## USING THE OPTIONAL LOCKING FEATURES

**The optional locking features are designed to discourage 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/CO Alarms have two separate locking features: one locks the battery compartment, and the other locks the Smoke/CO Alarm to the mounting bracket. You can choose to use either feature independently, or use them both.

**Tools you will need:** • Needle-nose pliers or utility knife
• Standard/Flathead screwdriver.




Both locking features use locking pins, molded into the mounting bracket. Using needle nose pliers or a utility knife, remove one or both pins, depending on which locking features you use.

### THE BATTERY COMPARTMENT LOCK

**TO LOCK THE BATTERY COMPARTMENT:**

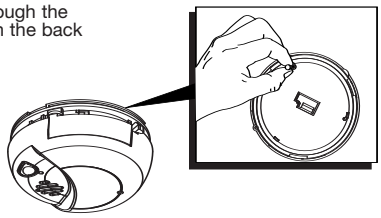
**IMPORTANT!**
Do not lock the battery compartment until you have activated the battery and tested the battery back-up.

1. Activate the battery back-up by removing the "Pull to Activate Battery Back-Up" tab. Push and hold the test button on the Smoke/CO Alarm's cover until the alarm sounds: 4 beeps, pause, 4 beeps, pause, 3 beeps, pause, 3 beeps, pause.

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

2. Using needle-nose pliers or a utility knife, detach one locking pin from the mounting bracket.

3. Push the locking pin through the black dot on the label on the back of the Smoke/CO Alarm.

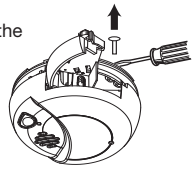


**TO UNLOCK THE BATTERY COMPARTMENT:**

**IMPORTANT!**
Once the Smoke/CO Alarm is installed, you must disconnect it from the AC power before unlocking the battery compartment.

**⚠DANGER!**
**ELECTRICAL SHOCK HAZARD. Turn off the power to the area where the Smoke/CO Alarm is installed before removing it from the mounting bracket. Failure to turn off the power first may result in serious electrical shock, injury or death.**

1. Remove the Smoke/CO Alarm from the mounting bracket. If the unit is locked to the bracket, see the section "To Deactivate the Locking Feature."
2. Disconnect the power connector by gently prying it away from the back of the Smoke/CO Alarm.
3. Insert a flathead screwdriver under the head of the locking pin, and gently pry it out of the battery compartment lock. (If you plan to re-lock the battery compartment, save the locking pin.)
4. To re-lock the battery compartment, close the battery door and reinsert the locking pin in the lock.
5. Reconnect the power connector to the back of the Smoke/CO Alarm, reattach the Smoke/CO Alarm to the mounting bracket, and restore the power.

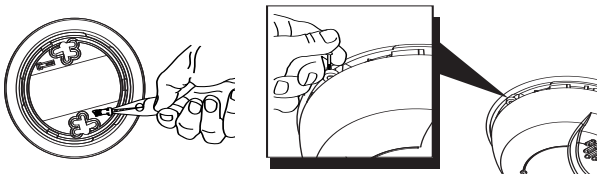


**IMPORTANT!**
When replacing the battery, always test the Smoke/CO Alarm before re-locking the battery compartment.

### THE MOUNTING BRACKET LOCK

**TO ACTIVATE THE BRACKET LOCK:**

1. Using needle-nose pliers, detach one locking pin from the mounting bracket.
2. Insert the locking pin into the lock located on the base as shown in the diagram.
3. When you attach the Smoke/CO Alarm to the mounting bracket, the locking pin's head will fit into a notch on the bracket.

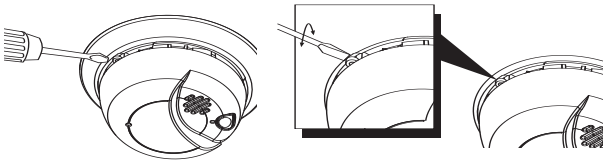


**TO DEACTIVATE THE BRACKET LOCK:**

**⚠DANGER!**
**ELECTRICAL SHOCK HAZARD. Turn off the power to the area where the Smoke/CO Alarm is installed before removing it from the mounting bracket. Failure to turn off the power first may result in serious electrical shock, injury or death.**

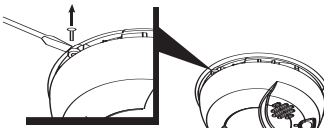
**⚠WARNING!**
**Always discharge the branch circuit before servicing an AC or AC/DC Smoke/CO Alarm. First, turn off the AC power at the circuit breaker or fuse box. Next, remove the battery from Smoke/CO Alarms with battery back-up. Finally, press and hold the test button.**

1. Insert a flathead screwdriver between the mounting bracket pin and the mounting bracket.
2. Pry the Smoke/CO Alarm away from the bracket by turning both the screwdriver and the Smoke/CO Alarm counterclockwise (left) at the same time.



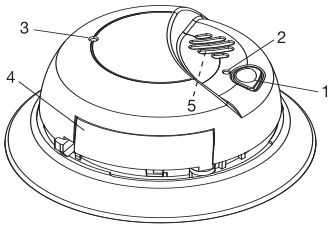
**TO PERMANENTLY REMOVE THE BRACKET LOCK:**

Insert the flathead screwdriver between the locking pin and the lock, and pry the pin out of the lock.



## HOW YOUR SMOKE/CO ALARM WORKS

### THE COVER OF YOUR SMOKE/CO ALARM




1. Test/Silence Button: Press and hold to activate test, or to silence the alarm.
2. POWER Light (GREEN)/ SMOKE ALARM Light (RED)
3. CO ALARM Light (RED)
4. Battery Drawer
5. (Behind the Cover) Alarm Horn: 85dB audible alarm for test, alarm, and unit malfunction warning.

## UNDERSTANDING THE LIGHT AND HORN PATTERNS

| Condition | LED (Red or Green Lights) | Horn |
|---|---|---|
| POWER UP | Green LED flashes ON once, then shines continuously | Horn remains silent |
| DURING TESTING | Smoke & CO Red LEDs flash once every second during their respective repetitive horn patterns | Horn pattern: (Smoke) 3 beeps, pause, 3 beeps, pause; (CO) 4 beeps, pause, 4 beeps, pause |
| LOW OR MISSING BATTERY | Green LED flashes (with horn) | Horn "chirps" about once a minute |
| ALARM CONDITION Interconnected Series of Smoke/CO Alarms | Smoke or CO Red LED flashes rapidly on the unit that triggered the alarm. LEDs on the other alarms in an interconnected series will not flash. | Horn pattern: (CO) 4 beeps, pause, 4 beeps, pause repeating on all CO Alarms and "Smart Interconnect" Alarms; (Smoke) 3 beeps, pause, 3 beeps, pause repeating on all Smoke, Heat, and "Smart Interconnect" Alarms |
| IN ALARM SILENCE MODE | Red Smoke or CO LED flashes once every second on initiating unit | Horn remains silent: CO for 4 minutes; Smoke for up to 15 minutes. Horn will sound if Smoke or CO levels increase. |
| "LATCHING" ALARM INDICATOR | Red Smoke and/or CO LED flashes once every 5 seconds | Horn remains silent |
| MALFUNCTION | Green LED flashes 3 times synchro-nized with 3 rapid chirps | Horn sounds 3 consecutive rapid chirps every minute |

## IF YOUR SMOKE/CO ALARM SOUNDS

### WHAT TO DO FIRST–IDENTIFY THE TYPE OF ALARM

| Type of Alarm | What You See and Hear |
|---|---|
| Carbon Monoxide (CO) | **CO Light:** Flashing RED **Horn:** 4 beeps, pause, 4 beeps, pause |
| Smoke | **Smoke Light:** Flashing RED **Horn:** 3 beeps, pause, 3 beeps, pause |

### WHAT TO DO IF CARBON MONOXIDE IS DETECTED

**"ALARM-MOVE TO FRESH AIR"**

**If you hear the alarm horn sound 4 beeps, pause, 4 beeps, pause, and the RED CO light is flashing, move everyone to a source of fresh air.**

**⚠WARNING!**

**Actuation of your CO Alarm indicates the presence of carbon monoxide (CO) which can kill you. In other words, when your CO Alarm sounds, you must not ignore it!**

**IF THE CO ALARM SOUNDS:**

1. Operate the Test/Silence button.
2. Call your emergency services, fire department or 911. Write down the number of your local emergency service here:

   _____

3. Immediately move to fresh air—outdoors or by an open door or window. Do a head count to check that all persons are accounted for. Do not re-enter the premises, or move away from the open door or window until the emergency services responder has arrived, the premises have been aired out, and your Smoke/CO Alarm remains in its normal condition.
4. After following steps 1-3, if your Smoke/CO Alarm reactivates within a 24-hour period, repeat steps 1-3 and call a qualified appliance technician to investigate for sources of CO from fuel-burning equipment and appliances, and inspect for proper operation of this equipment. If problems are identified during this inspection have the equipment serviced immediately. Note any combustion equipment not inspected by the technician, and consult the manufacturers' instructions, or contact the manufacturers directly, for more information about CO safety and this equipment. Make sure that motor vehicles are not, and have not, been operating in an attached garage or adjacent to the residence. Write down the number of a qualified appliance technician here:

   _____

### WHAT TO DO IF SMOKE IS DETECTED

**If you hear the alarm horn sound 3 beeps, pause, 3 beeps, pause and the RED SMOKE light is flashing, smoke has been detected. Evacuate everyone from the building.**

**⚠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 disconnect the AC power to quiet an unwanted alarm. Disconnecting the power disables the Alarm so it cannot sense smoke. This will remove your protection. Instead, open a 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.**

**⚠DANGER!**

- **ELECTRICAL SHOCK HAZARD: Attempting to disconnect the power connector from the unit when the power is on may result in electrical shock, serious injury or death.**

When an interconnected system of AC powered units is in alarm, the alarm indicator light on the unit(s) that initiated the alarm will blink rapidly. It will remain OFF on any remaining units.

If the unit alarms, get everyone out of the dwelling immediately.

If the unit alarms and you are certain that the source of smoke is not a fire—cooking smoke or an extremely dusty furnace, for example—open a nearby window or door and fan the smoke away from the unit. Use the Silence Feature to silence the Alarm. This will silence the alarm, and once the smoke clears the unit will reset itself automatically.

## 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 "General Limitations of Smoke/CO Alarms" for details.**

## "SMART INTERCONNECT" FEATURE

This Alarm includes "Smart Interconnect" which enables the Alarm to be interconnected with other BRK Smoke, Heat, and "Smart Interconnect" CO Alarms. When smoke is detected, all Alarms will sound the smoke horn pattern. When CO is detected, "Smart Interconnect" Alarms will sound the CO horn pattern. Alarms that do not have the "Smart Interconnect" Feature will remain silent during a CO alarm.

## USING THE SILENCE FEATURE

**⚠WARNING!**

**NEVER disconnect the power to your Smoke/CO Alarm to silence the horn—use the Silence Feature. Disconnecting the Smoke/CO Alarm removes your protection! If the unit will not silence or if it stays in silence mode continuously, it should be replaced immediately.**

- The Silence Feature is intended to temporarily silence the horn while you identify and correct the problem. Do not use the Silence Feature in emergency situations. It will not correct a CO problem or extinguish a fire.
- To use the Silence Feature, press the Test/Silence button until you hear the acknowledge "chirp" or until the horn is silent.
- If the Test/Silence button is pressed while the Smoke/CO Alarm is in the silence mode, the alarm will start sounding again.

**To silence Alarms in an interconnected series:**
To silence an interconnected series of Smoke/CO Alarms, you must press the Test/Silence button on the initiating alarm (The unit with the flashing red light; the red light will be off on all other Alarms.). If you press the Test/Silence on any other Alarm, it will only silence that unit, not the whole interconnected series.

### WHEN THE SMOKE ALARM IS SILENCED...

The Smoke Alarm will remain silent for up to 15 minutes and then return to normal operation. If the smoke has not cleared within the silence period or if smoke increases to a critical level during the silence period, the unit will go back into alarm.

**⚠WARNING!**

**Use the Silence Feature only if you are certain of the source of smoke. If you are not certain of the source or a fire starts while you are clearing smoke, evacuate the house immediately. Not responding to an alarm can result in property loss, injury, or death.**

### WHEN THE CO ALARM IS SILENCED...

The CO Alarm will remain silent for 4 minutes. While the Alarm is silenced, it will continue to monitor the air for CO. After 4 minutes, if CO levels remain potentially dangerous the horn will start sounding again.

**IMPORTANT!**

The Silence Feature is intended to temporarily silence the Alarm horn. It will not correct a CO problem.

### LOW BATTERY SILENCE FEATURE

This Silence Feature can temporarily quiet the low battery warning "chirp" for up to 8 hours if AC power is present. Press the Test/Silence button on the Alarm cover until you hear the acknowledge "chirp". Once the low battery warning "chirp" silence feature is activated, the unit continues to flash the green light once a minute for 8 hours. After 8 hours, the low battery "chirp" will resume. The Alarm will continue to operate as long as AC power is supplied. However, **replace the battery as soon as possible,** to maintain protection in event of a power outage.

## THE "LATCHING ALARM" INDICATOR:

**The Latching Alarm Indicator** is activated after an Alarm is exposed to alarm levels of smoke or carbon monoxide. This feature will only work with AC power. After smoke or CO levels drop below alarm levels, the red smoke or CO LED will begin to flash once every 5 seconds. It will continue to flash or "latch" until you clear it by testing the alarm.

This feature helps emergency responders, investigators, or service technicians identify which unit(s) in your home were exposed to alarm levels of smoke or carbon monoxide. This can help investigators pinpoint the source of smoke or CO.

**Interconnected Alarms.** Latching Alarm Indicator shows which Alarm(s) in the series were exposed to alarm levels of smoke or carbon monoxide.

The Latching Alarm Indicator stays ON until you clear it, so it can alert you to an alarm that occurred while you were away from home, even though smoke or CO present in the air has dropped below alarm levels.

## 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). NEVER use vehicle exhaust! Exhaust may cause permanent damage and voids your warranty.**
- **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.**

**⚠CAUTION!**

**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/CO Alarm.**

1. Push and hold the Test/Silence button on the cover until you hear a "chirp." The "chirp" marks the start of the self-test sequence.
2. During testing, you will hear a loud, repeating horn pattern: 3 beeps, pause, 3 beeps, pause, while the red smoke LED flashes. Then you will hear a loud, repeating horn pattern: 4 beeps, pause, 4 beeps, pause, while the red CO LED flashes.
3. When testing a series of interconnected units you must test each unit individually. Make sure all units alarm when each one is tested.

**If the Smoke/CO Alarm does not test properly:**

1. Make sure the AC power is applied and battery is fresh and installed correctly.
2. Be sure the alarm is clean and dust-free.
3. Test the unit again.

If the Smoke/CO Alarm is still not working properly, replace it immediately. Refer to the "Limited Warranty" at the end of this manual.

**⚠WARNING!**

**If there is still a problem, do not try to fix the Alarm yourself. This will void your warranty!**

## REGULAR MAINTENANCE

**⚠WARNING!**

**Use only the replacement batteries listed below. The unit may not operate properly with other batteries. Never use rechargeable batteries since they may not provide a constant charge.**

This unit 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/CO Alarm at least once a month; gently vacuum the outside of the Smoke/CO Alarm using your household vacuum's soft brush attachment. Test the Smoke/CO Alarm. Never use water, cleaners or solvents since they may damage the unit.
- If the Smoke/CO 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 "Where This Alarm Should Not Be Installed" for details.
- When the battery back-up becomes weak, the Alarm will "chirp" about once a minute (the low battery warning). This warning should last 7 days, but you should replace the battery immediately to continue your protection. **This Alarm must have AC or battery power to operate. If AC power fails, and the battery is dead or missing, the Alarm cannot operate.**

**⚠WARNING!**

**DO NOT spray cleaning chemicals or insect sprays directly on or near the Alarm. DO NOT paint over the Alarm. Doing so may permanently damage the Alarm.**

### CHOOSING A REPLACEMENT BATTERY:

Your Smoke/CO Alarm requires one standard 9V battery. The following batteries are acceptable as replacements: Duracell #MN1604, (Ultra) #MX1604; Eveready (Energizer) #522. **These batteries are available at many local retail stores.**

**IMPORTANT!**

Actual battery service life depends on the Smoke/CO Alarm and the environment in which it is installed. All the batteries specified above are acceptable replacement batteries for this unit. Regardless of the manufacturer's suggested battery life, you MUST replace the battery immediately once the unit starts "chirping" (the "low battery warning").

# WHAT YOU NEED TO KNOW ABOUT CO

## WHAT IS CO?

CO is an invisible, odorless, tasteless gas produced when fossil fuels do not burn completely, or are exposed to heat (usually fire). Electrical appliances typically do not produce CO.

**These fuels include:** Wood, coal, charcoal, oil, natural gas, gasoline, kerosene, and propane.

Common appliances are often sources of CO. If they are not properly maintained, are improperly ventilated, or malfunction, CO levels can rise quickly. CO is a real danger now that homes are more energy efficient. “Air-tight” homes with added insulation, sealed windows, and other weatherproofing can “trap” CO inside.

## SYMPTOMS OF CO POISONING

These symptoms are related to CO POISONING and should be discussed with ALL household members.

**Mild Exposure:** Slight headache, nausea, vomiting, fatigue (“flu-like” symptoms).

**Medium Exposure:** Throbbing headache, drowsiness, confusion, fast heart rate.

**Extreme Exposure:** Convulsions, unconsciousness, heart and lung failure. Exposure to Carbon Monoxide can cause brain damage, death.

### IMPORTANT!

This CO Alarm measures exposure to CO over time. It alarms if CO levels are extremely high in a short period of time, or if CO levels reach a certain minimum over a long period of time. The CO Alarm generally sounds an alarm before the onset of symptoms in average, healthy adults.

Why is this important? Because you need to be warned of a potential CO problem while you can still react in time. In many reported cases of CO exposure, victims may be aware that they are not feeling well, but become disoriented and can no longer react well enough to exit the building or get help. Also, young children and pets may be the first affected. The average healthy adult might not feel any symptoms when the CO Alarm sounds. However, people with cardiac or respiratory problems, infants, unborn babies, pregnant mothers, or elderly people can be more quickly and severely affected by CO. If you experience even mild symptoms of CO poisoning, consult your doctor immediately!

## FINDING THE SOURCE OF CO AFTER AN ALARM

Carbon monoxide is an odorless, invisible gas, which often makes it difficult to locate the source of CO after an alarm. These are a few of the factors that can make it difficult to locate sources of CO:

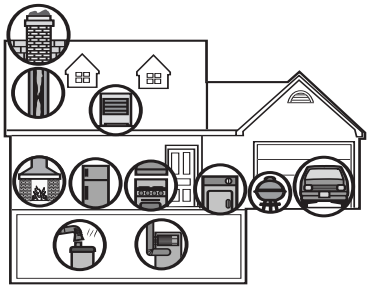
- House well ventilated before the investigator arrives.
- Problem caused by “backdrafting.”
- Transient CO problem caused by special circumstances.

Because CO may dissipate by the time an investigator arrives, it may be difficult to locate the source of CO. **BRK Brands, Inc. shall not be obligated to pay for any carbon monoxide investigation or service call.**

## POTENTIAL SOURCES OF CO IN THE HOME

**Fuel-burning appliances like:** portable heater, gas or wood burning fireplace, gas kitchen range or cooktop, gas clothes dryer.

**Damaged or insufficient venting:** corroded or disconnected water heater vent pipe, leaking chimney pipe or flue, or cracked heat exchanger, blocked or clogged chimney opening.



**Improper use of appliance/device:** operating a barbecue grill or vehicle in an enclosed area (like a garage or screened porch).

**Transient CO Problems:** “transient” or on-again-off-again CO problems can be caused by outdoor conditions and other special circumstances.

**The following conditions can result in transient CO situations:**

1. Excessive spillage or reverse venting of fuel appliances caused by outdoor conditions such as:
   - Wind direction and/or velocity, including high, gusty winds. Heavy air in the vent pipes (cold/humid air with extended periods between cycles).
   - Negative pressure differential resulting from the use of exhaust fans.
   - Several appliances running at the same time competing for limited fresh air.
   - Vent pipe connections vibrating loose from clothes dryers, furnaces, or water heaters.
   - Obstructions in or unconventional vent pipe designs which can amplify the above situations.
2. Extended operation of unvented fuel burning devices (range, oven, fireplace).
3. Temperature inversions, which can trap exhaust close to the ground.
4. Car idling in an open or closed attached garage, or near a home.

These conditions are dangerous because they can trap exhaust in your home. Since these conditions can come and go, they are also hard to recreate during a CO investigation.

## HOW CAN I PROTECT MY FAMILY FROM CO POISONING?

A CO Alarm is an excellent means of protection. It monitors the air and sounds a loud alarm before Carbon Monoxide levels become threatening for average, healthy adults.

**A CO Alarm is not a substitute for proper maintenance of home appliances.**

To help prevent CO problems and reduce the risk of CO poisoning:

- Clean chimneys and flues yearly. Keep them free of debris, leaves, and nests for proper air flow. Also, have a professional check for rust and corrosion, cracks, or separations. These conditions can prevent proper air movement and cause backdrafting. Never “cap” or cover a chimney in any way that would block air flow.
- Test and maintain all fuel-burning equipment annually. Many local gas or oil companies and HVAC companies offer appliance inspections for a nominal fee.
- Make regular visual inspections of all fuel-burning appliances. Check appliances for excessive rust and scaling. Also check the flame on the burner and pilot lights. The flame should be blue. A yellow flame means fuel is not being burned completely and CO may be present. Keep the blower door on the furnace closed. Use vents or fans when they are available on all fuel-burning appliances. Make sure appliances are vented to the outside. Do not grill or barbecue indoors, or in garages or on screen porches.
- Check for exhaust backflow from CO sources. Check the draft hood on an operating furnace for a backdraft. Look for cracks on furnace heat exchangers.
- Check the house or garage on the other side of shared wall.
- Keep windows and doors open slightly. If you suspect that CO is escaping into your home, open a window or a door. Opening windows and doors can significantly decrease CO levels.

**In addition, familiarize yourself with all enclosed materials. Read this manual in its entirety, and make sure you understand what to do if your CO Alarm sounds.**

# REGULATORY INFORMATION FOR SMOKE/CO ALARMS

## REGULATORY INFORMATION FOR CO ALARMS

### WHAT LEVELS OF CO CAUSE AN ALARM?

Underwriters Laboratories Inc. Standard UL2034 requires residential CO Alarms to sound when exposed to levels of CO and exposure times as described below. They are measured in parts per million (ppm) of CO over time (in minutes).

**UL2034 Required Alarm Points*:**

- If the alarm is exposed to 400 ppm of CO, IT MUST ALARM BETWEEN 4 and 15 MINUTES.
- If the alarm is exposed to 150 ppm of CO, IT MUST ALARM BETWEEN 10 and 50 MINUTES.
- If the alarm is exposed to 70 ppm if CO, IT MUST ALARM BETWEEN 60 and 240 MINUTES.

* Approximately 10% COHb exposure at levels of 10% to 95% Relative Humidity (RH).

The unit is designed not to alarm when exposed to a constant level of 30 ppm for 30 days.

### IMPORTANT!

CO Alarms are designed to alarm before there is an immediate life threat. Since you cannot see or smell CO, never assume it’s not present.

- An exposure to 100 ppm of CO for 20 minutes may not affect average, healthy adults, but after 4 hours the same level may cause headaches.
- An exposure to 400 ppm of CO may cause headaches in average, healthy adults after 35 minutes, but can cause death after 2 hours.

**Standards:** Underwriters Laboratories Inc. Single and Multiple Station carbon monoxide alarms UL2034.

According to Underwriters Laboratories Inc. UL2034, Section 1-1.2: “Carbon monoxide alarms covered by these requirements are intended to respond to the presence of carbon monoxide from sources such as, but not limited to, exhaust from internal-combustion engines, abnormal operation of fuel-fired appliances, and fireplaces. CO Alarms are intended to alarm at carbon monoxide levels below those that could cause a loss of ability to react to the dangers of Carbon Monoxide exposure.” This CO Alarm monitors the air at the Alarm, and is designed to alarm before CO levels become life threatening. This allows you precious time to leave the house and correct the problem. This is only possible if Alarms are located, installed, and maintained as described in this manual.

**Gas Detection at Typical Temperature and Humidity Ranges:** The CO Alarm is not formulated to detect CO levels below 30 ppm typically.

**Audible Alarm:** 85dB minimum at 10 feet (3 meters).

## REGULATORY INFORMATION FOR SMOKE ALARMS

### RECOMMENDED LOCATIONS FOR SMOKE ALARMS

**Installing Smoke Alarms in Single-Family Residences**

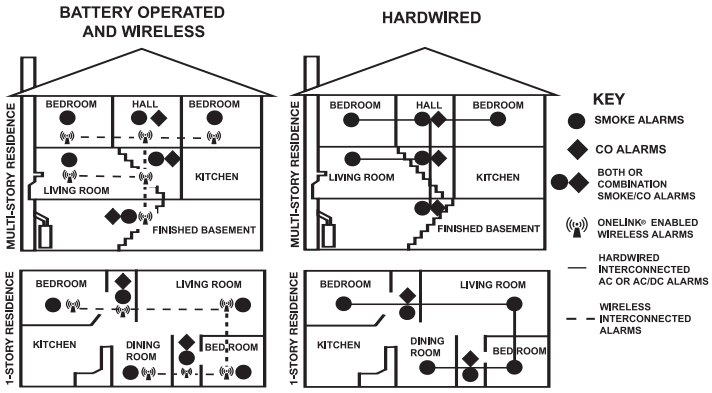
The National Fire Protection Association (NFPA), recommends one Smoke Alarm on every floor, in every sleeping area, and in every bedroom. In new construction, the Smoke Alarms must be AC powered and interconnected. See "Agency Placement Recommendations" for details. For additional coverage, it is recommended 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.

**More specifically, install Smoke Alarms:**

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




## INSTALLING SMOKE ALARMS IN MOBILE HOMES & RVS

For minimum security install one Smoke Alarm as close to each sleeping area as possible. For more security, put one unit in each room. Many older mobile homes (especially those built before 1978) have little or no insulation. If your mobile home is not well insulated, or if you are unsure of the amount of insulation, it is important to install units on inside walls only. Smoke Alarms should be installed where temperatures normally remain between 40˚ F (4˚ C) and 100˚ F (38˚ C). **WARNING: Test units used in RVs after the vehicle has been in storage, before every trip, and once a week while in use. Failure to test units used in RVs as described may remove your protection.**

**IMPORTANT!**

This equipment should be installed in accordance with NFPA (National Fire Protection Association) 72 and 101. National Fire Protection Association, One Batterymarch Park, Quincy, MA 02269-9101. **Additional local building and regulatory codes may apply in your area. Always check compliance requirements before beginning any installation.**

## AGENCY PLACEMENT RECOMMENDATIONS

**NFPA 72 (National Fire Code)**

Smoke Alarms shall be installed in each separate sleeping room, outside each sleeping area in the immediate vicinity of the bedrooms and on each additional story of the family living unit, including basements and excluding crawl spaces and unfinished attics.

In new construction, Alarms shall be so arranged that operation of any one Alarm shall cause the operation of all Alarms within the dwelling.

**Smoke Detection-Are More Smoke Alarms Desirable?** The required number of Smoke Alarms might not provide reliable early warning protection for those areas separated by a door from the areas protected by the required Smoke Alarms. For this reason, it is recommended that the householder consider the use of additional Smoke Alarms for those areas for increased protection. The additional areas include the basement, bedrooms, dining room, furnace room, utility room, and hallways not protected by the required Smoke Alarms. The installation of Smoke Alarms in kitchens, attics (finished or unfinished), or garages is not normally recommended, as these locations occasionally experience conditions that can result in improper operation.

**California State Fire Marshal (CSFM)**

Early warning detection is best achieved by the installation of fire detection equipment in all rooms and areas of the household as follows: A Smoke Alarm installed in each separate sleeping area (in the vicinity, but outside bedrooms), and Heat or Smoke Alarms in the living rooms, dining rooms, bedrooms, kitchens, hallways, finished attics, furnace rooms, closets, utility and storage rooms, basements, and attached garages.

## ABOUT SMOKE ALARMS

**Battery (DC) operated 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. However, they do not provide interconnected functionality.

**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 if electricity fails, provided the batteries are fresh and correctly installed. AC and AC/DC units must be installed by a qualified electrician.

**Wireless Interconnected Alarms:** Offer the same interconnected functionality as with hardwired alarms, without wires. Units are easy to install and do not require professional installation. They provide protection even when electricity fails, provided the batteries are fresh and correctly installed.

**Smoke Alarms for Solar or Wind Energy users and battery backup 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. These units 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 the Alarm. If you are unsure which type of unit to install, refer to NFPA (National Fire Protection Association) 72 (National Fire Alarm Code) and NFPA 101 (Life Safety Code). National Fire Protection Association, One Batterymarch Park, Quincy, MA 02269-9101. Local building codes may also require specific units in new construction or in different areas of the home.

## SPECIAL COMPLIANCE CONSIDERATIONS

**⚠WARNING!**

**This unit alone is not a suitable substitute for complete fire detection systems in places housing many people—like apartment buildings, condominiums, hotels, motels, dormitories, hospitals, long-term health care facilities, nursing homes, day care facilities, or group homes of any kind—even if they were once single-family homes. It is not a suitable substitute for complete fire detection systems in warehouses, industrial facilities, commercial buildings, and special-purpose non-residential buildings which require special fire detection and alarm systems. Depending on the building codes in your area, this unit may be used to provide additional protection in these facilities.**

**The following information applies to all four types of buildings listed below:**

In new construction, most building codes require the use of AC or AC/DC powered Smoke Alarms only. AC, AC/DC, or DC powered Smoke Alarms can be used in existing construction as specified by local building codes. Refer to NFPA 72 (National Fire Alarm Code) and NFPA 101 (Life Safety Code), local building codes, or consult your Fire Department for detailed fire protection requirements in buildings not defined as "households."

**1. Single-Family Residence:**
Single family home, townhouse. It is recommended this unit be installed on every level of the home, in every bedroom, and in each bedroom hallway.

**2. Multi-Family or Mixed Occupant Residence:**
Apartment building, condominium. This unit is suitable for use in individual apartments or condos, provided a primary fire detection system already exists to meet fire detection requirements in common areas like lobbies, hallways, or porches. Using this unit in common areas may not provide sufficient warning to all residents or meet local fire protection ordinances/regulations.

**3. Institutions:**
Hospitals, day care facilities, long-term health care facilities. This unit is suitable for use in individual patient sleeping/resident rooms, provided a primary fire detection system already exists to meet fire detection requirements in common areas like lobbies, hallways, or porches. Using this unit in common areas may not provide sufficient warning to all residents or meet local fire protection ordinances/regulations.

**4. Hotels and Motels:**
Also boarding houses and dormitories. This unit is suitable for use inside individual sleeping/resident rooms, provided a primary fire detection system already exists to meet fire detection requirements in common areas like lobbies, hallways, or porches. Using this unit in common areas may not provide sufficient warning to all residents or meet local fire protection ordinances/regulations.

## GENERAL LIMITATIONS OF SMOKE/CO ALARMS

This Smoke/CO Alarm is intended for residential use. It is not intended for use in industrial applications where Occupational Safety and Health Administration (OSHA) requirements for Carbon Monoxide Alarms must be met. The Smoke Alarm portion of this device is not intended to alert hearing impaired residents. Special purpose Smoke Alarms should be installed for hearing impaired residents (CO Alarms are not yet available for the hearing impaired).

**Smoke/CO Alarms may not waken all individuals.** Practice the escape plan at least twice a year, making sure that everyone is involved – from kids to grandparents. Allow children to master fire escape planning and practice before holding a fire drill at night when they are sleeping. If children or others do not readily waken to the sound of the Smoke/CO Alarm, or if there are infants or family members with mobility limitations, make sure that someone is assigned to assist them in fire drill and in the event of an emergency. It is recommended that you hold a fire drill while family members are sleeping in order to determine their response to the sound of the Smoke/CO Alarm while sleeping and to determine whether they may need assistance in the event of an emergency.

**Smoke/CO Alarms cannot work without power.** Battery operated units cannot work if the batteries are missing, disconnected or dead, if the wrong type of batteries are used, or if the batteries are not installed correctly. AC units cannot work if the AC power is cut off for any reason (open fuse or circuit breaker, failure along a power line or at a power station, electrical fire that burns the electrical wires, etc.). If you are concerned about the limitations of battery or AC power, install both types of units.

**This Smoke/CO Alarm will not sense smoke or CO that does not reach the sensors.** It will only sense smoke or CO at the sensor. Smoke or CO may be present in other areas. Doors or other obstructions may affect the rate at which CO or smoke reaches the sensors. If bedroom doors are usually closed at night, we recommend you install an alarm device (Combination CO and Smoke Alarm, or separate CO Alarms and Smoke Alarms) in each bedroom and in the hallway between them.

**This Smoke/CO Alarm may not sense smoke or CO on another level of the home.** Example: This alarm device, installed on the second floor, may not sense smoke or CO in the basement. For this reason, one alarm device may not give adequate early warning. Recommended minimum protection is one alarm device in every sleeping area, every bedroom, and on every level of your home. Some experts recommend battery powered Smoke and CO Alarms be used in conjunction with interconnected AC powered Smoke Alarms. For details, see “About Smoke Alarms” for details.

**Smoke/CO Alarms may not be heard.** The alarm horn loudness meets or exceeds current UL standards of 85 dB at 10 feet (3 meters). However, if the Smoke/CO Alarm is installed outside the bedroom, it may not wake up a sound sleeper or one who has recently used drugs or has been drinking alcoholic beverages. This is especially true if the door is closed or only partly open. Even persons who are awake may not hear the alarm horn if the sound is blocked by distance or closed doors. Noise from traffic, stereo, radio, television, air conditioner, or other appliances may also prevent alert persons from hearing the alarm horn. This Smoke/CO Alarm is not intended for people who are hearing impaired.

**The Alarm may not have time to alarm before the fire itself causes damage, injury, or death, since smoke from some fires may not reach the unit immediately. Examples of this include persons smoking in bed, children playing with matches, or fires caused by violent explosions resulting from escaping gas.**

**This Smoke/CO Alarm is not a substitute for life insurance.** Though this Smoke/CO Alarm warns against increasing CO levels or the presence of smoke, BRK Brands, Inc. does not warrant or imply in any way that they will protect lives. Homeowners and renters must still insure their lives.

**This Smoke/CO Alarm has a limited life.** Although this Smoke/CO Alarm and all of its parts have passed many stringent tests and are designed to be as reliable as possible, any of these parts could fail at any time. Therefore, you must test this device weekly. The unit should be replaced immediately if it is not operating properly.

**This Smoke/CO Alarm is not foolproof.** Like all other electronic devices, this Smoke/CO Alarm has limitations. It can only detect smoke or CO that reaches the sensors. It may not give early warning of the source of smoke or CO is in a remote part of the home, away from the alarm device.

## TROUBLESHOOTING GUIDE

**⚠DANGER!**

**ELECTRICAL SHOCK HAZARD. Turn off the power to the area where the Alarm is installed BEFORE removing it from the mounting bracket or checking any electrical connections! Failure to turn off the power first may result in serious electrical shock, injury or death.**

| If your Alarm does this... | It means... | You should... |
|---|---|---|
| Green light is OFF. Unit will not alarm when you press the Test/Silence button. | Unit may not be receiving any power. | Check the AC power supply. Make sure the power connector is securely attached to the alarm. Make sure a fresh 9V battery is installed to power the battery back-up*. |
| Green light flashes ON, once a minute (horn is silent). | Alarm is not receiving AC power. | Unit is operating on battery back-up. Check the AC power supply. |
| Once a minute, the Green light flashes and the horn “chirps”. | Low battery warning. Battery is low or missing. | Replace the battery, avoid interrupting AC power. |
| Once a minute, the alarm sounds 3 quick “chirps”, and the green light flashes quickly three times. | **MALFUNCTION SIGNAL.** Unit needs to be replaced. Based on self-diagnostic tests, the unit has detected a fault. | Units under warranty should be returned to manufacturer for replacement. See “Limited Warranty” for details. |
| Alarm goes back into alarm after you pressed the Test/Silence button to silence an alarm. | Smoke and/or CO levels are still potentially dangerous. | Refer to “If Your Smoke/CO Alarm Sounds” for details on how to respond to an alarm. If anyone is feeling ill, EVACUATE your home immediately and call 911. |
| Alarm sounds frequently even though no high levels of smoke or CO are revealed in an investigation. | The Alarm may be improperly located. Refer to “Where to Install This Alarm.” | Relocate your alarm. If frequent alarms continue, have home rechecked for potential problems. You may be experiencing an intermittent smoke or CO problem. |

*For a list of acceptable replacement batteries, see “Regular Maintenance.”

If you have any questions that cannot be answered by reading this manual, call Consumer Affairs: 1-800-323-9005.

## LIMITED WARRANTY

BRK Brands, Inc., ("BRK") the maker of BRK® brand and First Alert® brand products, warrants that for a period of five years from the date of purchase, this product will be free from defects in material and workmanship. BRK, at its option, will repair or replace this product or any component of the product found to be defective during the warranty period. Replacement will be made with a new or remanufactured product or component. If the product is no longer available, replacement may be made with a similar product of equal or greater value. This is your exclusive warranty.

This warranty is valid for the original retail purchaser from the date of initial retail purchase and is not transferable. Keep the original sales receipt. Proof of purchase is required to obtain warranty performance. BRK dealers, service centers, or retail stores selling BRK products do not have the right to alter, modify or any way change the terms and conditions of this warranty.

This warranty does not cover normal wear of parts or damage resulting from any of the following: negligent use or misuse of the product, use on improper voltage or current, use contrary to the operating instructions, disassembly, repair or alteration by anyone other than BRK or an authorized service center. Further, the warranty does not cover Acts of God, such as fire, flood, hurricanes and tornadoes or any batteries that are included with this unit.

BRK shall not be liable for any incidental or consequential damages caused by the breach of any express or implied warranty. Except to the extent prohibited by applicable law, any implied warranty of merchantability or fitness for a particular purpose is limited in duration to the duration of the above warranty. Some states, provinces or jurisdictions do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state or province to province.

**How to Obtain Warranty Service**

**Service:** If service is required, do not return the product to your retailer. In order to obtain warranty service, contact the Consumer Affairs Division at 1-800-323-9005, 7:30 AM - 5:00 PM Central Standard Time, Monday through Friday. To assist us in serving you, please have the model number and date of purchase available when calling.
**For Warranty Service return to:** BRK Brands, Inc., 25 Spur Drive, El Paso, TX 79906

**Battery:** BRK Brands, Inc. make no warranty, express or implied, written or oral, including that of merchantability or fitness for any particular purpose with respect to battery.

**For your records, please record:**

**Date Purchased:** _____

**Where Purchased:** _____

**Date Installed:** _____/_____**Month/Year**

**Replacement date is five years after installation:** _____/_____
**Month/Year**

**NOTE: End of Life Signal — Once the unit reaches the end of its lifecycle, the MALFUNCTION SIGNAL will sound once a minute to indicate the need to immediately replace the Alarm.**

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First Alert® is a registered trademark of the First Alert Trust.

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# Troubleshooting Guide - Smoke Alarms

**Smoke Alarms • Carbon Monoxide Alarms • Heat Alarms • Fire Extinguishers**

## Smoke Alarm Troubleshooting Guide for Contractor and Builder Service Managers

### Why can smoke alarms go into alarm when no smoke is present?

**Any of these situations can cause unwanted alarms:**

- **Cover or sensor chamber is covered by dust or dirt.**
  Alarms may look clean, but dust can accumulate inside the cover, especially in newly built homes. Gently vacuum smoke alarms regularly using the soft brush attachment. Be sure electricians install the provided dust cover to keep alarm clean during construction.
- **Insects covered or clogged the sensor chamber.**
  Clean the smoke alarm with the soft brush attachment on your vacuum.
- **Alarm was triggered from another part of the home.**
  In a system of interconnected AC or AC/DC alarms, the unit triggering the alarm is in another part of the home - smoke may be present, but you can't see it.
- **Power interruptions to AC/DC smoke alarms.**
  Smoke alarms may alarm briefly when power is interrupted, then restored. Power interruptions are common in areas where utility companies switch grids in the early hours of the morning.
- **A loose electrical connection on AC or AC/DC smoke alarms.**
  In AC or AC/DC smoke alarms, a loose hot wire connection can intermittently disconnect power to the smoke alarm. The effect is the same as a power failure. When power is restored, the units may alarm briefly. Note: A loose or disconnected neutral wire may cause the alarm to chirp or go into alarm. For residential applications, connecting stranded 18 AWG wire from the smoke alarm to solid 14 AWG wire can be difficult. Be sure wire is making a reliable connection.
- **When the furnace is turned on for first use:**
  - Oil and residue is present on and in furnaces and ductwork from the factory to protect the metal surfaces. This can cause smoke to be emitted for a period of time and possibly set off smoke alarms.
  - Dirt, drywall dust and construction debris is often present in ductwork. First use of the furnace can cause fine particles to be blown through the house possibly causing nuisance alarms. This is why the homeowner may be in the house for several months without incident and why nuisance alarms tend to increase during the Fall.
- **Humidity-**
  Ionization smoke alarms are more susceptible to nuisance alarms when placed near a bathroom or other potentially high humidity area.
- **Near Cold Air Returns**
  Smoke alarms placed near a cold air return are more susceptible to nuisance alarms because dusty air can be blown through the alarm sensing chamber.
- **Smoke alarm may need to be relocated.**
  If possible, install smoke alarms at least 20 feet from appliances like furnaces and ovens, which produce combustion particles. Alarms should be at least 10 feet from high humidity areas like showers and laundry rooms, and at least 3 feet from heat/AC vents and fluorescent lights whenever possible. In areas where a 20-foot (6 meter) distance is not possible – in modular, 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.

**Smoke Alarms • Carbon Monoxide Alarms • Heat Alarms • Fire Extinguishers**

# Smoke Alarm Troubleshooting Guide for Contractor and Builder Service Managers

## Why do smoke alarms chirp intermittently?

The "chirp" will only be caused by issues surrounding the battery or miss wiring. However, a homeowner may confuse the chirp with an intermittent alarm. Try and get the homeowner to be specific as to what they are hearing. A “chirp” will have a higher pitched tone and sound in equal intervals about once every minute. An intermittent alarm will be random, sound usually for several seconds and have a lower pitched tone. Any of these situations can cause unwanted chirps:

- **Battery pull-tab is still in the alarm.**
  The battery pull-tab must be removed after AC power is provided to the alarm.
- **The Battery Drawer is open.**
  The battery drawer must be completely closed for the battery to make contact with the terminals.
- **Low battery.**
  As the battery in a smoke alarm becomes weak, the smoke alarm will "chirp" about once a minute to alert you that the battery needs to be replaced. Note: Only the alarm with a low battery will chirp. No signal is sent through the interconnect wire. The other alarms will be silent.
- **Tip for Facility Managers**.
  During the moving season, inform Facility Managers who maintain apartment buildings that if they are shutting down power to unoccupied apartment units, to be sure to open the battery drawer on alarms to keep the battery from draining. Remind them that if they restore power temporarily (e.g. to show the unit) the alarm will chirp if the drawer is open. The alarm now thinks there is no battery. This is also important for single-family houses that will be unoccupied for extended periods.
- **Battery is present but part of the terminal is obstructed.**
  The battery may not be fully making contact with the terminals in the alarm. Check to be sure the battery pull-tab or some other obstruction is completely removed.
- **A different device or appliance.**
  Security systems, monitors, carbon monoxide alarms, and other devices have similar low battery or alert signals.
- **How long will a battery last in a smoke alarm?**
  A fresh carbon zinc battery in the 9120B will last up to one year; depending on how fresh it was before it was installed and when it was activated. UL 217 mandates that the battery in a backup mode only need to last for 24 hours in standby condition and thereafter be able to be in alarm for at least 4 minutes. As a rule of thumb in smoke alarms, alkaline batteries will last for about 1-2 years and Lithium batteries for 6 years plus.
  The SC9120B battery will last for about 20 to 30 days. UL 2034 states that the battery should last for 7 days in standby condition and thereafter be able to be in alarm for at least 4 minutes.
- **Why does the alarm chirp when power is disconnected and the battery is removed?**
  The circuitry of the alarm contains capacitors that store energy. You must press and hold the test button to dissipate the capacitor. You will hear a steadily weakening sound until it is silent.

**⚠DANGER!**

**ELECTRICAL SHOCK HAZARD. Turn off the power to the area where the Smoke Alarm is installed before removing it from the mounting bracket. Failure to turn off the power first may result in serious electrical shock, injury or death.**

**⚠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.**
- **Installation of this unit must conform to the electrical codes in your area; Articles 210 and 300.3 (B) of NFPA 70 (NEC), NFPA 72, NFPA 101; ICC; SBC (SBCCI); UBC (ICBO); NBC (BOCA); OTFDC (CABO), and any other local or building codes that may apply. Wiring and installation must be performed by a licensed electrician. Failure to follow these guidelines may result in injury or property damage.**
- **This unit must be powered by a 24-hour, 120V AC pure sine wave 60 Hz circuit. Be sure the circuit cannot be turned off by a switch, dimmer, or ground fault circuit interrupter. Failure to connect this unit to a 24-hour circuit may prevent it from providing constant protection. Unit may be connected to an arc fault circuit interrupter.**
- **This Smoke Alarm must have AC or battery power to operate. If the AC power fails, battery back-up will allow the alarm to sound for at least 4 minutes. If AC power fails and the battery is weak, protection should last for up to 7 days. If AC power fails and the battery is dead or missing, the alarm cannot operate.**
- **Never disconnect the power from an AC powered unit to stop an unwanted alarm. Doing so will disable the unit and remove your protection. In the case of a true unwanted alarm open a window or fan the smoke away from the unit. The alarm will reset automatically when it returns to normal operation. Never remove the batteries from a battery operated unit to stop an unwanted alarm (caused by cooking smoke, etc.). Instead open a window or fan the smoke away from the unit. The alarm will reset automatically.**

**⚠CAUTION!**

- **Connect this unit ONLY to other compatible units. See "How To Install This Smoke Alarm" for details. Do not connect it to any other type of alarm or auxiliary device. Connecting anything else to this unit may damage it or prevent it from operating properly.**
- **The battery compartment resists closing unless a battery is installed. This warns you the unit will not operate under DC power without a battery.**
- **Do not paint over the unit. Paint may clog the openings to the sensing chamber and prevent the unit from operating properly.**

## HOW TO INSTALL THIS SMOKE ALARM

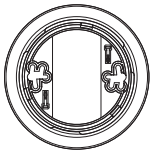
This Smoke Alarm is designed to be mounted on any standard wiring junction box to a 4-inch (10 cm) size, on either the ceiling or wall. Read "Recommended Locations For Smoke Alarms" and "Locations to Avoid For Smoke Alarms" before you begin installation.
**Tools you will need: • Needle-nose pliers or utility knife • Standard Flathead screwdriver.**

**⚠WARNING!**

**Make sure the Alarm is not receiving excessively noisy power. Examples of noisy power could be major appliances on the same circuit, power from a generator or solar power, light dimmer on the same circuit or mounted near fluorescent lighting. Excessively noisy power may cause damage to your Alarm.**

### THE PARTS OF THIS SMOKE ALARM

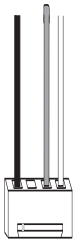
**The Mounting Bracket:**
To remove the mounting bracket from the Smoke Alarm base, hold the Smoke Alarm base firmly and twist the mounting bracket counterclockwise.
The mounting bracket installs onto the junction box. It has a variety of screw slots to fit most boxes.

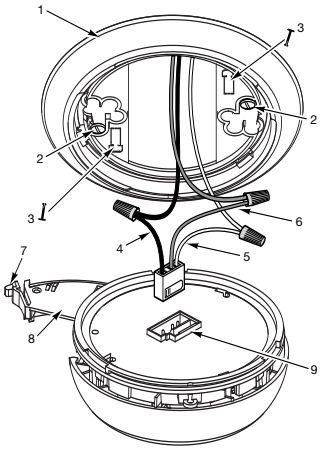


**The Power Connector:**
The power connector plugs into a power input block on the Smoke Alarm. It supplies the unit with AC power.

- The black wire is "hot."
- The white wire is neutral.
- The orange wire is used for interconnect.

If you need to remove the power connector, insert a flat screwdriver blade between the power connector and the security tab inside the power input block. Gently pry back the tab and pull the connector free.






| The Parts of This Unit | |
|---|---|
| 1 | Mounting Bracket |
| 2 | Mounting Slots |
| 3 | Locking Pins (break out of bracket) |
| 4 | Hot (Black) AC Wire |
| 5 | Neutral (White) AC Wire |
| 6 | Interconnect (Orange) Wire |
| 7 | Latch to Open Battery Compartment |
| 8 | Swing-Out Battery Compartment |
| 9 | Quick-Connect Power Connector |

## FOLLOW THESE INSTALLATION STEPS

The basic installation of this Smoke Alarm is similar whether you want to install one Smoke Alarm, or interconnect more than one Smoke Alarm. If you are interconnecting more than one Smoke Alarm, you MUST read "Special Requirements For Interconnected Smoke Alarms" below before you begin installation.

**⚠DANGER!**

**ELECTRICAL SHOCK HAZARD. Turn off power to the area where you will install this unit at the circuit breaker or fuse box before beginning installation. Failure to turn off the power before installation may result in serious electrical shock, injury or death.**

1. Using wire nuts, connect the power connector to the household wiring.

**⚠WARNING!**

**Improper wiring of the power connector or the wiring leading to the power connector will cause damage to the Alarm and may lead to a non-functioning Alarm.**

**STAND-ALONE ALARM ONLY:**

- Connect the white wire on the power connector to the neutral wire in the junction box.
- Connect the black wire on the power connector to the hot wire in the junction box.
- Tuck the orange wire inside the junction box. It is used for interconnect only.

**INTERCONNECTED UNITS ONLY:**

**Strip off about 1/2" (12 mm) of the plastic coating on the orange wire on the power connector.**

- Connect the white wire on the power connector to the neutral wire in the junction box.
- Connect the black wire on the power connector to the hot wire in the junction box.
- Connect the orange wire on the power connector to the interconnect wire in the junction box. Repeat for each unit you are interconnecting. Never connect the hot or neutral wires in the junction box to the orange interconnect wire. Never cross hot and neutral wires between Alarms.

2. Remove the mounting bracket from the base, and attach it to the junction box.
3. Plug the power connector into the back of the Smoke Alarm.
4. Position the base of the Smoke Alarm over the mounting bracket and turn. The Alarm will remain secure over a wide rotation range to allow for perfect alignment. When wall mounting, this will allow fine-tuning on the positioning to compensate for misaligned wall studs and to keep the wording level. The Alarm can be positioned over the bracket every 120°. Rotate the Alarm until aligned properly.
5. Check all connections.

**STAND-ALONE ALARM ONLY:**

- If you are only installing one Smoke Alarm, restore power to the junction box.

**INTERCONNECTED UNITS ONLY:**

- **If you are interconnecting multiple Smoke Alarms, repeat steps 1-5 for each Smoke Alarm in the series. When you are finished, restore power to the junction box.**

**⚠DANGER!**

**ELECTRICAL SHOCK HAZARD. Do not restore power until all Smoke Alarms are completely installed. Restoring power before installation is complete may result in serious electrical shock, injury or death.**

6. Make sure the Smoke Alarm is receiving AC power. Under normal operation, the Green power indicator light will shine continuously.
7. If the Green power indicator light does not light, **TURN OFF POWER TO THE JUNCTION BOX** and recheck all connections. If all connections are correct and the Green power indicator still does not light when you restore the power, the unit should be replaced immediately.
8. **Single Station Alarms:** Test each Smoke Alarm. Press and hold the Test/Silence button until the unit alarms.
   **Interconnected Alarms:** Press and hold the Test/Silence button until the unit alarms. All interconnected Alarms should sound. The other Alarms sounding only tests the interconnect signal between Alarms. It does not test each Alarm's operation. **You must test each Alarm individually to check if the Alarm is functioning properly.**

**⚠DANGER!**

If any unit in the series does not alarm, **TURN OFF POWER** and recheck connections. If it does not alarm when you restore power, replace it immediately.

9. For new construction, place supplied dust cover over Alarm to prevent damage from dust and construction debris. When construction is complete, remove cover.

**⚠WARNING!**

**Smoke will not be able to reach smoke sensor while cover is in place. Cover must be removed!**

### SPECIAL REQUIREMENTS FOR INTERCONNECTED SMOKE ALARMS

**⚠WARNING!**

- **Failure to meet any of the above requirements could damage the units and cause them to malfunction, removing your protection.**
- **AC and AC/DC Smoke Alarms can be interconnected. Under AC power, all units will alarm when one senses smoke. When power is interrupted, only the AC/DC units in the series will continue to send and receive signals. AC powered Smoke Alarms will not operate.**

Interconnected units can provide earlier warning of fire than stand-alone units, especially if a fire starts in a remote area of the dwelling. If any unit in the series senses smoke, all units will alarm. To determine which Smoke Alarm initiated an alarm, see table:

**During an Alarm:**

| | |
|---|---|
| On Initiating Alarm(s) | Red LED(s) flashes (flash) rapidly |
| On All Other Alarms | Red LED is Off |

**After an Alarm (Latching):**

| | |
|---|---|
| On Initiating Alarm(s) | Green LED(s) On for 2 seconds/Off for 2 seconds |
| On All Other Alarms | Green LED(s) On, Red LED(s) is Off |

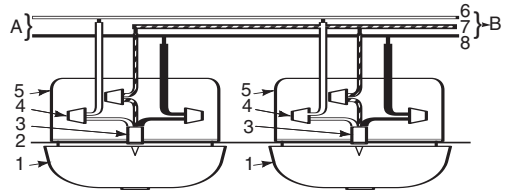
**Compatible Interconnected Units**

**IMPORTANT!**

Interconnect units within a single family residence only. Otherwise all households will experience unwanted alarms when you test any unit in the series. Interconnected units will only work if they are wired to compatible units and all requirements are met. This unit is designed to be compatible with: ***First Alert®*** Smoke Alarm Models SA4120, SA4121B, SA100B and ***BRK Electronics®*** Smoke Alarm Models 9120, 9120B, SC6120B, SC9120B, 7010, 7010B, 100S, 4120, 4120B, 4120SB, RM3 (Relay Module); ***BRK Electronics®*** CO Alarm Models CO5120BN, CO5120PDBN; ***BRK Electronics®*** Heat Alarm Models HD6135F and HD6135FB.

**Interconnected units must meet ALL of the following requirements:**

- A maximum of 18 compatible units may be interconnected (Maximum of 12 Smoke Alarms).
- The same fuse or circuit breaker must power all interconnected units.
- The total length of wire interconnecting the units should be less than 1000 feet (300 meters). This type of wire is commonly available at Hardware and Electrical Supply stores.
- All wiring must conform to all local electrical codes and NFPA 70 (NEC). Refer to NFPA 72, NFPA 101, and/or your local building code for further connection requirements.




A. Unswitched 120VAC 60 Hz source

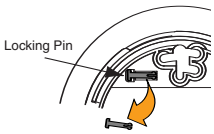
B. To additional units; Maximum = 18 total (Maximum 12 Smoke Alarms)

| | | |
|---|---|---|
| 1. Smoke Alarm | 4. Wire Nut | 7. Interconnect Wire (Orange) |
| 2. Ceiling or Wall | 5. Junction Box | 8. Hot Wire (Blk) |
| 3. Power Connector | 6. Neutral Wire (Wht) | |

## OPTIONAL LOCKING FEATURES

**The optional locking features are designed to discourage 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 or utility knife • Standard Flathead screwdriver.

Both locking features use locking pins, which are molded into the mounting bracket. Using needle nose pliers or a utility knife, remove one or both pins from the mounting bracket, depending on how many locking features you want to use.

### IMPORTANT!

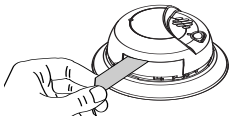
**To permanently remove either lock insert a flathead screwdriver between the locking pin and the lock, and pry the pin out of the lock.**

## TO LOCK THE BATTERY COMPARTMENT

**(Model 9120B Only)**

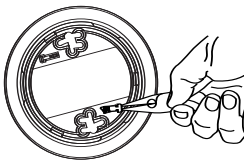
**Do not lock the battery compartment until you have activated the battery and tested the battery back-up.**

1. Activate the battery back-up by removing the "Pull to Activate Battery Back-Up" tab.
2. Push and hold test button until the alarm sounds: 3 beeps, pause, 3 beeps, pause.

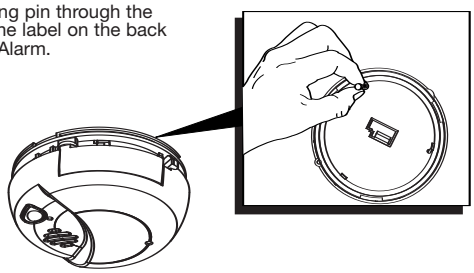


### IMPORTANT!

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



3. Using needle-nose pliers or a utility knife, detach one locking pin from the mounting bracket.
4. Push the locking pin through the black dot on the label on the back of the Smoke Alarm.



## TO UNLOCK THE BATTERY COMPARTMENT

**(Model 9120B Only)**

### IMPORTANT!

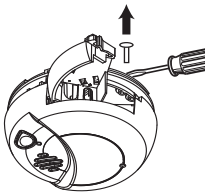
Once the Smoke Alarm is installed, you must disconnect it from the AC power before unlocking the battery compartment.

### ⚠DANGER!

**ELECTRICAL SHOCK HAZARD. Turn off the power to the area where the Smoke Alarm is installed before removing it from the mounting bracket. Failure to turn off the power first may result in serious electrical shock, injury or death.**

### ⚠WARNING!

**Always discharge the branch circuit before servicing an AC or AC/DC Smoke Alarm. First, turn off the AC power at the circuit breaker or fuse box. Next, remove the battery from Smoke Alarms with battery back-up. Finally, press and hold the test button for 5-10 seconds to discharge the branch circuit.**



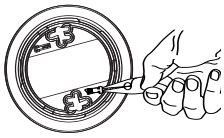
1. Remove the Smoke Alarm from the mounting bracket. If the unit is locked to the bracket, see the section "To Unlock the Mounting Bracket."
2. Disconnect the power connector by gently prying it away from the back of the Smoke Alarm.
3. Insert a flathead screwdriver under the head of the locking pin, and gently pry it out of the battery compartment lock. (If you plan to relock the battery compartment, save the locking pin.)
4. To relock the battery compartment, close the battery door and reinsert locking pin in lock.
5. Reconnect the power connector to the back of the Smoke Alarm, reattach the Smoke Alarm to the mounting bracket, and restore the power.

### IMPORTANT!

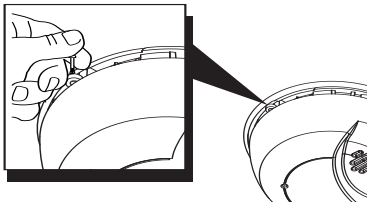
When replacing the battery, always test the Smoke Alarm before relocking the battery compartment.

## TO LOCK THE MOUNTING BRACKET

1. Using needle-nose pliers or utility knife, detach one locking pin from mounting bracket.



2. Insert the locking pin into the lock located on the base 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.



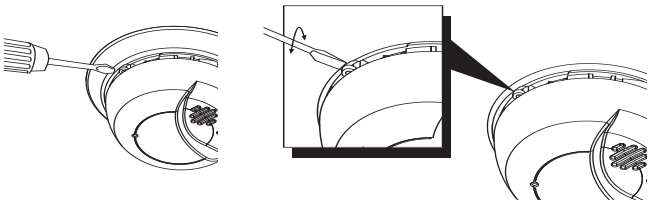
## TO UNLOCK THE MOUNTING BRACKET

### ⚠DANGER!

**ELECTRICAL SHOCK HAZARD. Turn off the power to the area where the Smoke Alarm is installed before removing it from the mounting bracket. Failure to turn off the power first may result in serious electrical shock, injury or death.**

### ⚠WARNING!

**Always discharge the branch circuit before servicing an AC or AC/DC Smoke Alarm. First, turn off the AC power at the circuit breaker or fuse box. Next, remove the battery from Smoke Alarms with battery back-up. Finally, press and hold the test button for 5-10 seconds to discharge the branch circuit.**



1. Insert a flathead screwdriver between the mounting bracket pin and the mounting bracket.
2. Pry the Smoke Alarm away from the bracket by turning both the screwdriver and the Smoke Alarm counterclockwise (left) at the same time.

## UNDERSTANDING THE INDICATOR LIGHTS AND ALARM HORN PATTERNS

| Condition | LED (Red or Green Lights) | Horn |
|---|---|---|
| Normal Operation (AC Power) | Green LED ON; flashing Red LED once/minute | No Audible Alarm |
| Normal Operation (DC Power – 9120B only) | Green LED OFF; Red LED flashes once/minute | No Audible Alarm |
| DURING TESTING | Red LED flashes once every second | Horn pattern: 3 beeps, pause, 3 beeps, pause |
| LOW OR MISSING BATTERY (9120B only) | Red LED flashes once/minute | Horn "chirps" once/minute |
| ALARM CONDITION Smoke Initiating Device | Red LED flashes rapidly on the unit that triggered the Alarm. | Horn pattern: 3 beeps, pause, 3 beeps, pause repeating on all Alarms |
| ALARM CONDITION Interconnect Alarm | Red LED on the other Alarms in an interconnected series will be OFF. | Horn pattern: 3 beeps, pause, 3 beeps, pause repeating on all Alarms |
| IN SILENCE MODE | Red LED flashes once every 10 seconds | Horn remains silent for up to 10 minutes. Horn will sound if smoke levels increase. |
| "LATCHING" ALARM INDICATOR | Green LED ON for 2 seconds/OFF for 2 seconds, repeatedly until reset, on initiating unit(s). | Horn remains silent |

## 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 you choose to use an aerosol smoke product to test the Smoke Alarm, be certain to use one that has been Listed to Underwriters Laboratories, Inc. Safety Standards, and use it only as directed. Use of non-UL Listed products or improper use of UL Listed products may affect the Smoke Alarm's sensitivity.**

**⚠CAUTION!**

**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 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.**

When testing a series of interconnected units you must test each unit individually. Make sure all units alarm when each one is tested.

## REGULAR MAINTENANCE

**⚠WARNING!**

**Use only the replacement batteries listed below. The unit may not operate properly with other batteries. Never use rechargeable batteries since they may not provide a constant charge.**

This unit 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 the outside of the Smoke Alarm using your household vacuum's soft brush attachment. Test the Smoke Alarm. 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 back-up becomes weak, the Smoke Alarm will "chirp" about once a minute (the low battery warning). This warning should last 7 days, but you should replace the battery immediately to continue your protection.

**Choosing a replacement battery:**

Your Smoke Alarm requires one standard 9V battery. The following batteries are acceptable as replacements: Duracell #MN1604, (Ultra) #MX1604; Eveready (Energizer) #522, Eveready (Energizer) #1222. You may also use a Lithium battery like the Ultralife U9VL-J for longer service life between battery changes. **These batteries are available at many local retail stores.**

**IMPORTANT!**

Actual battery 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. Regardless of the manufacturer's suggested battery life, you MUST replace the battery immediately once the unit starts "chirping" (the "low battery warning").

# 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.**

**⚠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 disconnect the AC power to quiet an unwanted alarm. Disconnecting the power disables the Alarm so it cannot sense smoke. This will remove your protection. Instead open a 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.**

**⚠DANGER!**

- **ELECTRICAL SHOCK HAZARD: Attempting to disconnect the power connector from the unit when the power is on may result in electrical shock, serious injury or death.**

When an interconnected system of AC powered units is in alarm, the alarm indicator light on the unit(s) that initiated the alarm will blink rapidly. It will remain OFF on any remaining units.

If the unit alarms and you are certain that the source of smoke is not a fire—cooking smoke or an extremely dusty furnace, for example—open a nearby window or door and fan the smoke away from the unit. Use the Silence Feature to silence the alarm. This will silence the alarm, and once the smoke clears the unit will reset itself automatically.

## 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 on this unit can temporarily quiet an unwanted alarm for up to 10 minutes.

**⚠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-alarm 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. 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.**

**IMPORTANT!**

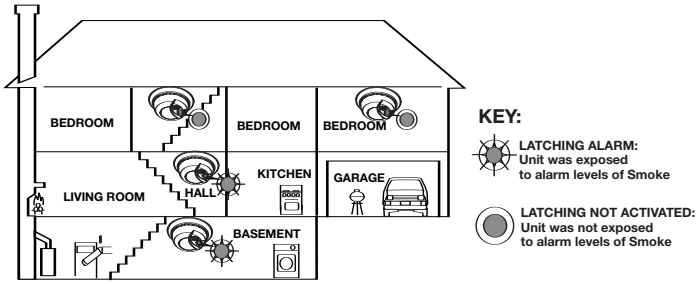
**To silence Smoke Alarms in an interconnected series:**

1. To silence multiple alarms in an interconnected series, you must press the Test/Silence button on the unit(s) that initiated the alarm.

   **NOTE:** The red LED on the initiating alarm will flash rapidly. The red LED will be Off on all other non-initiating alarms. No audible sound will be heard. The unit will exit "silence mode" in approximately 10 minutes.

2. While the unit is in "silence mode", pressing and holding the Test/Silence button for approximately 10 seconds will test the unit. After testing, the unit will re-enter "silence mode" and the 10-minute timer is reset.

## "LATCHING ALARM" INDICATOR




**The Latching Alarm Indicator** is automatically activated after an Alarm is exposed to alarm levels of smoke. After smoke levels drop below alarm levels, the green LED will be On for 2 seconds/Off for 2 seconds, repeatedly. This feature helps emergency responders, investigators, or service technicians identify which unit(s) in your home were exposed to alarm levels of smoke after the condition has subsided. The Latching Alarm Indicator stays ON until you reset it by pressing the Test/Silence button. The Latching Alarm Indicator is also reset when AC and DC power is removed from the Alarm.

## 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/Silence button, or if the problem persists, replace the Smoke Alarm immediately.

- **If you hear a "chirp" 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 cover may be dirty.**
- **If the alarm does not sound during testing, make sure it is receiving AC power from the household current.**

### ⚠WARNING!

**Always discharge the branch circuit before servicing an AC or AC/DC Smoke Alarm. First, turn off the AC power at the circuit breaker or fuse box. Next, remove the battery from Smoke Alarms with battery back-up. Finally, press and hold the test button for 5-10 seconds to discharge the branch circuit.**

**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.

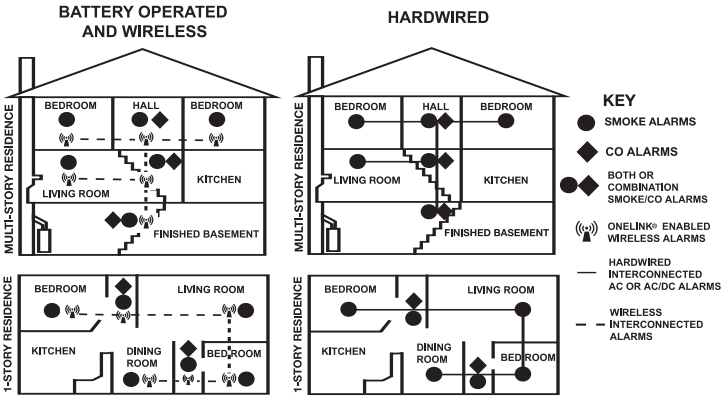
**More specifically, install Smoke Alarms:**

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

*RECOMMENDED LOCATIONS FOR SMOKE ALARMS, Continued*




## INSTALLING SMOKE ALARMS IN MOBILE HOMES & RVS

For minimum security install one Smoke Alarm as close to each sleeping area as possible. For more security, put one unit in each room. Many older mobile homes (especially those built before 1978) have little or no insulation. If your mobile home is not well insulated, or if you are unsure of the amount of insulation, it is important to install units on inside walls only. Smoke Alarms should be installed where temperatures normally remain between 40˚ F (4˚ C) and 100˚ F (38˚ C). **WARNING: Test units used in RVs after the vehicle has been in storage, before every trip, and once a week while in use. Failure to test units used in RVs as described may remove your protection.**

## AGENCY PLACEMENT RECOMMENDATIONS

**NFPA 72 (National Fire Code) Chapter 11**

"For your information, the National Fire Protection Association's Standard 72, reads as follows:

**11.5.1 One- and Two-Family Dwelling Units.**

**11.5.1.1 Smoke Detection.** Where required by applicable laws, codes, or standards for the specified occupancy, approved single- and multiple-station Smoke Alarms shall be installed as follows: (1) In all sleeping rooms. Exception: Smoke Alarms shall not be required in sleeping rooms in existing one- and two-family dwelling units. (2) Outside of each separate sleeping area, in immediate vicinity of the sleeping rooms. (3) On each level of the dwelling unit, including basements. Exception: In existing one- and two family dwelling units, approved Smoke Alarms powered by batteries are permitted.

**A.11.8.3 Are More Smoke Alarms Desirable?** The required number of Smoke Alarms might not provide reliable early warning protection for those areas separated by a door from the areas protected by the required Smoke Alarms. For this reason, it is recommended that the householder consider the use of additional Smoke Alarms for those areas for increased protection. The additional areas include the basement, bedrooms, dining room, furnace room, utility room, and hallways not protected by the required Smoke Alarms. The installation of Smoke Alarms in kitchens, unfinished attics, or garages is not normally recommended, as these locations occasionally experience conditions that can result in improper operation."

**California State Fire Marshal (CSFM)**

Early warning detection is best achieved by the installation of fire detection equipment in all rooms and areas of the household as follows: A Smoke Alarm installed in each separate sleeping area (in the vicinity, but outside bedrooms), and Heat or Smoke Alarms in the living rooms, dining rooms, bedrooms, kitchens, hallways, finished attics, furnace rooms, closets, utility and storage rooms, basements, and attached garages.

## LOCATIONS TO AVOID FOR SMOKE ALARMS

**For best performance, 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 modular, 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 (38˚ C) including unheated buildings, 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. Clean a laundry room unit frequently to keep it 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 sensing chamber.

*Continued...*

*LOCATIONS TO AVOID FOR SMOKE ALARMS, Continued*

- In insect infested areas. Insects can clog openings to the sensing chamber and cause unwanted alarms.
- Less than 12 inches (305 mm) 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 Smoke Alarms should be placed between 4 inches (102 mm) and 12 inches (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, etc. of the ceiling's slope. Refer to NFPA 72 for details on requirements for sloped or peaked ceilings.

## ABOUT SMOKE ALARMS

**Battery (DC) operated 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. However, they do not provide interconnected functionality.

**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 if electricity fails, provided the batteries are fresh and correctly installed. AC and AC/DC units must be installed by a qualified electrician.

**Wireless Interconnected Alarms:** Offer the same interconnected functionality as with hardwired alarms, without wires. Units are easy to install and do not require professional installation. They provide protection even when electricity fails, provided the batteries are fresh and correctly installed.

**Smoke Alarms for Solar or Wind Energy users and battery backup 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. These units 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 the Alarm. If you are unsure which type of unit to install, refer to NFPA (National Fire Protection Association) 72 (National Fire Alarm Code) and NFPA 101 (Life Safety Code). National Fire Protection Association, One Batterymarch Park, Quincy, MA 02269-9101. Local building codes may also require specific units in new construction or in different areas of the home.

## SPECIAL COMPLIANCE CONSIDERATIONS

**⚠WARNING!**

This Smoke Alarm alone is not a suitable substitute for complete fire detection systems in places housing many people—like apartment buildings, condominiums, hotels, motels, dormitories, hospitals, long-term health care facilities, nursing homes, day care facilities, or group homes of any kind—even if they were once single-family homes. It is not a suitable substitute for complete fire detection systems in warehouses, industrial facilities, commercial buildings, and special-purpose non-residential buildings which require special fire detection and alarm systems. Depending on the building codes in your area, this Smoke Alarm may be used to provide additional protection in these facilities.

**The following information applies to all four types of buildings listed below:** In new construction, most building codes require the use of AC or AC/DC powered Smoke Alarms only. AC, AC/DC, or DC powered Smoke Alarms can be used in existing construction as specified by local building codes. Refer to NFPA 72 (National Fire Alarm Code) and NFPA 101 (Life Safety Code), local building codes, or consult your Fire Department for detailed fire protection requirements in buildings not defined as "households."

**1. Single-Family Residence:** Single family home, townhouse. It is recommended Smoke Alarms be installed on every level of the home, in every bedroom, and in each bedroom hallway.

**2. Multi-Family or Mixed Occupant Residence:** Apartment building, condominium. This Smoke Alarm is suitable for use in individual apartments or condos, provided a primary fire detection system already exists to meet fire detection requirements in common areas like lobbies, hallways, or porches. Using this Smoke Alarm in common areas may not provide sufficient warning to all residents or meet local fire protection ordinances/regulations.

**3. Institutions:** Hospitals, day care facilities, long-term health care facilities. This Smoke Alarm is suitable for use in individual patient sleeping/resident rooms, provided a primary fire detection system already exists to meet fire detection requirements in common areas like lobbies, hallways, or porches. Using this Smoke Alarm in common areas may not provide sufficient warning to all residents or meet local fire protection ordinances/regulations.

**4. Hotels and Motels:** Also boarding houses and dormitories. This Smoke Alarm is suitable for use inside individual sleeping/resident rooms, provided a primary fire detection system already exists to meet fire detection requirements in common areas like lobbies, hallways, or porches. Using this Smoke Alarm in common areas may not provide sufficient warning to all residents or meet local fire protection ordinances/regulations.

## LIMITATIONS OF SMOKE ALARMS

Smoke Alarms have played a key role in reducing deaths resulting from home fires worldwide. However, like any warning device, Smoke Alarms can only work if they are properly located, installed, and maintained, and if smoke reaches the Alarms. They are not foolproof.

**Smoke alarms may not waken all individuals.** Practice the escape plan at least twice a year, making sure that everyone is involved – from kids to grandparents. Allow children to master fire escape planning and practice before holding a fire drill at night when they are sleeping. If children or others do not readily waken to the sound of the smoke alarm, or if there are infants or family members with mobility limitations, make sure that someone is assigned to assist them in fire drill and in the event of an emergency. It is recommended that you hold a fire drill while family members are sleeping in order to determine their response to the sound of the smoke alarm while sleeping and to determine whether they may need assistance in the event of an emergency.

**Smoke Alarms cannot work without power.** Battery operated units cannot work if the batteries are missing, disconnected or dead, if the wrong type of batteries are used, or if the batteries are not installed correctly. AC units cannot work if the AC power is cut off for any reason (open fuse or circuit breaker, failure along a power line or at a power station, electrical fire that burns the electrical wires, etc.). If you are concerned about the limitations of battery or AC power, install both types of units.

**Smoke Alarms cannot detect fires if the smoke does not reach the Alarms.** Smoke from fires in chimneys or walls, on roofs, or on the other side of closed doors may not reach the sensing chamber and set off the Alarm. That is why one unit should be installed inside each bedroom or sleeping area—especially if bedroom or sleeping area doors are closed at night—and in the hallway between them.

**Smoke Alarms may not detect fire on another floor or area of the dwelling.** For example, a stand-alone unit on the second floor may not detect smoke from a basement fire until the fire spreads. This may not give you enough time to escape safely. That is why recommended minimum protection is at least one unit in every sleeping area, and every bedroom on every level of your dwelling. Even with a unit on every floor, stand-alone units may not provide as much protection as interconnected units, especially if the fire starts in a remote area. Some safety experts recommend installing interconnected AC powered units with battery back-up (see "About Smoke Alarms") or professional fire detection systems, so if one unit senses smoke, all units alarm. Interconnected units may provide earlier warning than stand-alone units since all units alarm when one detects smoke.

**Smoke Alarms may not be heard.** Though the alarm horn in this unit meets or exceeds current standards, it may not be heard if: 1) the unit is located outside a closed or partially closed door, 2) residents recently consumed alcohol or drugs, 3) the Alarm is drowned out by noise from stereo, TV, traffic, air conditioner or other appliances, 4) residents are hearing impaired or sound sleepers. Special purpose units, like those with visual and audible alarms, should be installed for hearing impaired residents.

**Smoke Alarms may not have time to alarm before the fire itself causes damage, injury, or death, since smoke from some fires may not reach the unit immediately. Examples of this include persons smoking in bed, children playing with matches, or fires caused by violent explosions resulting from escaping gas.**

**Smoke Alarms are not foolproof.** Like any electronic device, Smoke Alarms are made of components that can wear out or fail at any time. You must test the unit weekly to ensure your continued protection. Smoke Alarms cannot prevent or extinguish fires. They are not a substitute for property or life insurance.

**Smoke Alarms have a limited life.** The unit should be replaced immediately if it is not operating properly. You should always replace a Smoke Alarm after 10 years from date of purchase. Write the purchase date on the space provided on back of unit.

## LIMITED WARRANTY

BRK Brands, Inc., ("BRK") the maker of BRK® brand and First Alert® brand products, warrants that for a period of ten years from the date of purchase, this product will be free from defects in material and workmanship. BRK, at its option, will repair or replace this product or any component of the product found to be defective during the warranty period. Replacement will be made with a new or remanufactured product or component. If the product is no longer available, replacement may be made with a similar product of equal or greater value. This is your exclusive warranty.

This warranty is valid for the original retail purchaser from the date of initial retail purchase and is not transferable. Keep the original sales receipt. Proof of purchase is required to obtain warranty performance. BRK dealers, service centers, or retail stores selling BRK products do not have the right to alter, modify or any way change the terms and conditions of this warranty.

This warranty does not cover normal wear of parts or damage resulting from any of the following: negligent use or misuse of the product, use on improper voltage or current, use contrary to the operating instructions, disassembly, repair or alteration by anyone other than BRK or an authorized service center. Further, the warranty does not cover Acts of God, such as fire, flood, hurricanes and tornadoes or any batteries that are included with this unit.

BRK shall not be liable for any incidental or consequential damages caused by the breach of any express or implied warranty. Except to the extent prohibited by applicable law, any implied warranty of merchantability or fitness for a particular purpose is limited in duration to the duration of the above warranty. Some states, provinces or jurisdictions do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state or province to province.

**How to Obtain Warranty Service**

**Service:** If service is required, do not return the product to your retailer. In order to obtain warranty service, contact the Consumer Affairs Division at 1-800-323-9005, 7:30 AM - 5:00 PM Central Standard Time, Monday through Friday. To assist us in serving you, please have the model number and date of purchase available when calling. **For Warranty Service return to:** BRK Brands, Inc., 25 Spur Drive, El Paso, TX 79906

**Battery:** BRK Brands, Inc. make no warranty, express or implied, written or oral, including that of merchantability or fitness for any particular purpose with respect to battery.

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