MODEL SC6120B—USER'S MANUAL

AC POWERED SMOKE AND CARBON MONOXIDE ALARM WITH BATTERY BACK-UP AND SILENCE FEATURE

Model SC6120B

PLEASE READ CAREFULLY AND SAVE:

This unit was shipped with a user's manual that contains important information about its operation. If you are installing this unit for use by others, you must leave this manual—or a copy of it—with the user.

BASIC FEATURES

- **Smoke & CO Combo Alarm**–Separate sensors detect smoke and CO. The two alarm systems work independently. However, in operation, the Smoke Alarm has priority.
- **Intelligent Sensing Technology**–Reduces the number of non-emergency or "nuisance" alarms.
- **Latching Alarm Indicator**–Identifies the initiating alarm even after the alarm condition is over or power is stopped.
- **Interconnectable**–With BRK smoke and carbon monoxide alarms.
- **Two Silence Features–**
  1. Temporarily silence the low battery chirp for up to 8 hours.
  2. Temporarily silence an unwanted alarm for several minutes.
- **Automatically** performs internal self tests.
- **Battery Compartment**–Swings out for quicker, easier battery installation.
- **AC/DC Alarm**–Operates on household voltage with a 9V battery back-up.

THE CO ALARM

The Carbon Monoxide (CO) Alarm measures CO levels in the air. It will alarm if CO levels rise quickly (if the heat exchanger on your furnace breaks, for example), or if CO is consistently present (a slow CO leak in your stove or water heater).

THE SMOKE ALARM

The Smoke Alarm monitors the air for the presence of combustion particles (produced when something burns). When enough combustion particles reach the smoke sensing chamber, it triggers an alarm.

M06-1059-001 1/02

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CHAPTER 1: INTRODUCTION

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.

⚠CAUTION!

This combination Smoke and Carbon Monoxide Alarm will only indicate the presence of smoke or CO at the sensor. Carbon Monoxide gas or smoke may be present in other areas. The unit is not designed to sense other gases, heat or flames.

IMPORTANT!

This Smoke/CO Alarm is approved for use in single-family residences. It is NOT designed for marine or RV use.

IMPORTANT!

This device is not intended to alert hearing impaired residents. Smoke alarms specifically designed for the hearing impaired, which feature devices like flashing strobe lights, are available to alert the hearing impaired in case of fire.

⚠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.

Basic safety information (continued)...

⚠WARNING!

Installation of this unit must conform to the electrical codes in your area; Article 760 of NFPA 70 (NEC), NFPA 72, NFPA 101; 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.

⚠WARNING!

This unit must be powered by a 24-hour, 120VAC 60Hz 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.

⚠WARNING!

This Alarm must have AC or battery power to operate. If the AC power fails, battery back-up will power the Alarm for 20 hours providing the 9V battery is fresh and correctly installed. If AC power fails and the battery is dead or missing, the Alarm cannot operate.

⚠WARNING!

NEVER ignore any alarm. Refer to Chapter 3 for more information on how to respond to an alarm. Failure to respond can result in injury or death.

Basic safety information (continued)...

⚠WARNING!

Never disconnect the AC power or remove the battery from the unit to stop an unwanted alarm (caused by cooking smoke, etc.). Doing so will disable the unit and remove your protection. In the case of a true unwanted smoke alarm, use the Silence Feature, open a window or fan the smoke away from the unit. The alarm will reset automatically when it returns to normal operation.

⚠CAUTION!

Connect this unit ONLY to other compatible units. See "Interconnecting Multiple Alarms" in the "How To Install This Alarm" section 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.

⚠CAUTION!

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. When testing the unit, step back when the horn starts sounding.

⚠WARNING!

The Silence Feature is for your convenience only and will not correct a problem. See Chapter 3 for details on using the Silence Feature.

Continued...

⚠WARNING!

Test this Smoke/CO Alarm once a week. If it ever fails to test correctly, have it replaced immediately! If the Alarm is not working properly, it cannot alert you to a problem.

⚠CAUTION!

Do not paint over the Smoke/CO Alarm. Paint may clog the openings to the sensing chamber and prevent the sensors from operating properly.

⚠CAUTION!

DO NOT spray cleaning chemicals or insect sprays directly on or near the Smoke/CO Alarm. Doing so may permanently damage the Alarm. DO NOT expose the Alarm to strong fumes. For example, painting or fumigating.

ALARM SPECIFICATIONS

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

Power: Powered by 120VAC. The 9V battery back-up provides 8 hours of standby and sounds alarm for 12 hours with fresh battery. When AC power is on, green light (LED) shines continuously. Under battery power, green light flashes once a minute.

Malfunction: Horn chirps and green light blinks 3 times (in rapid succession) every minute.

Supply Voltage: 120VAC 60Hz, 0.09A

Warranty: 5-year limited warranty.

Continued...

THE SMOKE ALARM

During Alarm: Repeating Horn Pattern: 3 beeps, pause, 3 beeps, pause, until silence button is pressed, smoke dissipates, or power is lost.

- **Stand-alone unit:** Red **Smoke** light (LED) flashes once per second.
- **Interconnected series:** Red **Smoke** light (LED) flashes once per second on the initiating Alarm. Red lights (LED) on all other alarms will not flash.

Standards: Underwriters Laboratories Inc. Single and Multiple Station Smoke Alarms 217.

THE CARBON MONOXIDE ALARM

Gas Detection at Typical Temperature and Humidity Ranges: The CO Alarm is not formulated to detect CO levels below 30 ppm typically. UL tested for false alarm resistance to Methane (500 ppm), Butane (300 ppm), Heptane (500 ppm), Ethyl Acetate (200 ppm), Isopropyl Alcohol (200 ppm) and Carbon Dioxide (5000 ppm). Values measure gas and vapor concentrations in parts per million.

Required Alarm Levels: Before 10% COHb exposure at levels of 30% to 70% Relative Humidity (RH). 400 ppm CO between 4 and 15 minutes;150 ppm CO between 10 and 50 minutes; 70 ppm CO between 60 and 240 minutes. The unit is designed not to alarm when exposed to a constant level of 30 ppm for 30 days.

During Alarm: Repeating Horn Pattern: 4 beeps, pause, 4 beeps, pause, until CO level falls below 70 ppm, silence button is pressed, or power is lost.

- **Stand-alone unit:** Red **CO** light (LED) flashes once per second.
- **Interconnected series:** Red **CO** light (LED) flashes once per second on the initiating Alarm. Red lights (LED) on all other Alarms will not flash.

Continued...

Specifications (continued)...

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, 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.

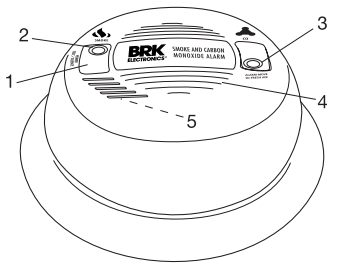
This CO Alarm is designed to alert you to a potentially dangerous build-up of CO over time. It cannot fix a CO problem, and it cannot identify a specific source of CO. The company shall not be obligated to pay for any carbon monoxide investigation or service call conducted by a Fire Department, or licensed investigator or repairman, arranged by the homeowner in response to an alarm.

⚠WARNING!

This product is intended for use in ordinary indoor locations of family living units. It is not designed to measure CO levels in compliance with Occupational Safety and Health Administration (OSHA) commercial or industrial standards. Individuals with medical conditions may consider using warning devices which provide audible and visual signals for carbon monoxide concentrations under 30 ppm.

HOW YOUR SMOKE/CO ALARM WORKS

THE COVER OF YOUR SMOKE/CO ALARM



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

CHAPTER 2: 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 Chapter 8 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.

NOTE: For added protection, install an additional Smoke/CO Alarm at least 20 feet (6 meters) away from the furnace or fuel burning heat source where possible. In smaller homes or in manufactured homes and RV's where this distance cannot be maintained, install the Alarm as far away as possible from the furnace or other fuel burning source. Installing the Alarm closer than 20 feet will not harm the Alarm, but may increase the frequency of nuisance alarms.

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).

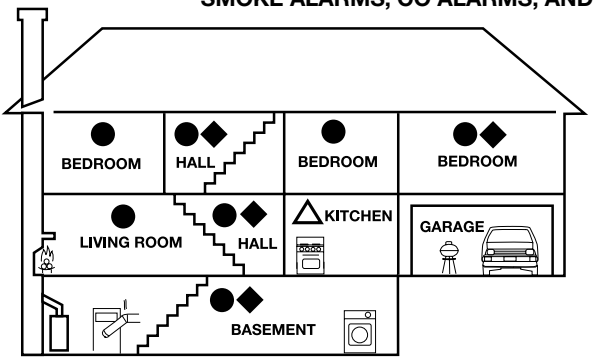
Recommended Placement

- When installing on the wall, the top edge of Smoke/CO Alarms should be placed between 4 inches (102 mm) and 6 inches (152 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.

RECOMMENDED PLACEMENT

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



KEY:

- **SMOKE ALARMS**
- **SMOKE ALARM WITH SILENCE FEATURE**
- **CO ALARMS**
- **BOTH, OR COMBINATION SMOKE/CO ALARMS**

Suggested locations are based on NFPA recommendations (NFPA 72 for Smoke Alarms and NFPA 720 for Carbon Monoxide Alarms). Always refer to national and local codes before beginning any installation.

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

This combination Smoke/CO Alarm can be interconnected with all compatible AC and AC/DC Smoke Alarms and other same-model Smoke/CO Alarms. It is not recommended that you interconnect this Smoke/CO Alarm with other-model AC or AC/DC CO Alarms.

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 NOT TO INSTALL THIS ALARM

Do NOT locate this Smoke/CO Alarm:

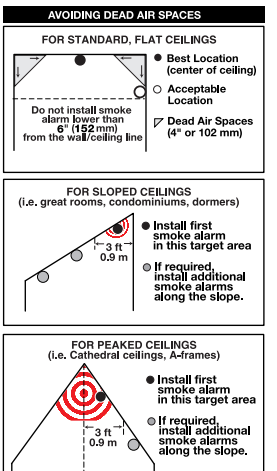
- In garages, kitchens, furnace rooms, crawl spaces and unfinished attics. Avoid extremely dusty, dirty or greasy areas.
- Where combustion particles (formed when something burns) are produced. Avoid poorly ventilated kitchens, garages, and furnace rooms. Keep this Smoke/CO Alarm at least 20 feet (6 meters) from a furnace or other fuel burning heat source, or fuel burning appliances (water heater, stove, vehicle, furnace) whenever possible.
- Within 5 feet 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.
- 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. Extreme temperatures may shorten component or battery life.
- 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.

AVOIDING DEAD AIR SPACES

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

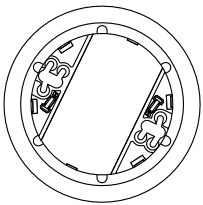
On ceilings, install Smoke/CO Alarms as close to the center of the ceiling as possible. If this is not possible, install the Smoke/CO Alarm at least 4 inches (102 mm) from the wall or corner.

On a peaked, gabled, or cathedral ceiling, install 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.

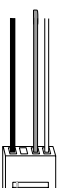


For wall mounting (if allowed by building codes), the top edge of Smoke/CO Alarms should be placed between 4 inches (102 mm) and 6 inches (152 mm) from the wall/ceiling line, below typical “dead air” spaces. **NOTE:** Position the battery drawer, marked “THIS SIDE UP”, so it faces the ceiling.

IMPORTANT INSTALLATION PARTS



The Mounting Bracket: To remove the mounting bracket from the Smoke/CO Alarm base, hold the alarm base firmly and twist the mounting bracket off. 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/CO Alarm. It supplies the unit with AC power.

- The black wire is "hot."
- The white wire is neutral.
- The white/gray stripe wire is used for interconnect.

⚠DANGER!

ELECTRICAL SHOCK HAZARD. Turn off the power to the area where the 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.

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.

LOCKING FEATURES

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

These Alarms have two separate locking features: one to lock the battery compartment, and the other to lock the 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

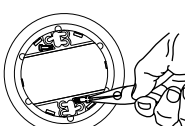
IMPORTANT!

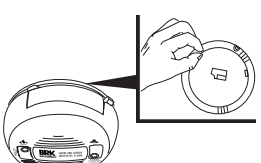
This step should not be done until installation is complete and AC power can be turned on as soon as possible to conserve battery power. Activate the battery and test the battery back-up before locking the battery compartment.

1. Activate the battery back-up by removing the "Pull to Activate Battery Back-Up" tab.
2. Push and hold Test/Silence button until the alarm sounds.

If the unit does not alarm during testing, install a new battery and test again. If the alarm still does not sound, 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/CO Alarm.





TO UNLOCK THE BATTERY COMPARTMENT

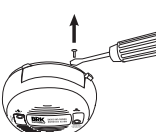
IMPORTANT!

Once the 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 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 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/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 relock the battery compartment, save the locking pin.)



4. To relock the battery compartment, close the battery drawer and reinsert locking pin in lock.

Continued ...

Unlock the Battery Compartment (continued)...

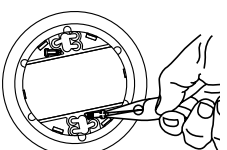
5. Reconnect the power connector to the back of the Alarm, reattach the Alarm to the mounting bracket, and restore the power as soon as possible to conserve battery power.

IMPORTANT!

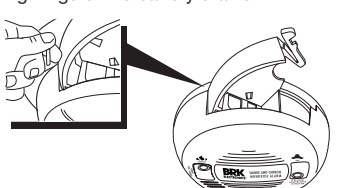
When replacing the battery, always test the Alarm after relocking the battery compartment.

TO LOCK THE MOUNTING BRACKET

1. Using needle-nose pliers, detach one locking pin from the mounting bracket.



2. Insert the locking pin into the lock located on the pivoting hinge of the battery drawer.



3. When you attach the 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 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.

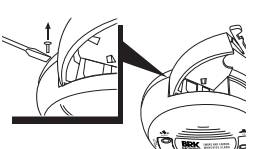
⚠DANGER!

Always discharge the branch circuit before servicing an AC or AC/DC Alarm. First, turn off the AC power at the circuit breaker or fuse box. Next, remove the battery from Alarms with battery backup. 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.

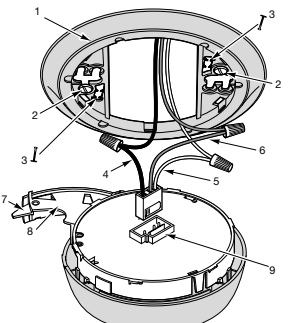
2. Pry the Alarm away from the bracket by turning both the screwdriver and the Alarm counterclockwise (left) at the same time.

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



HOW TO INSTALL THIS ALARM

This unit is designed to be mounted on an standard wiring junction box up to a 4-inch size on either the ceiling or wall. Read "Where to Install Alarms" and Where Not to Install Alarms" before you begin installation. If a junction box is not already in place, install one using standard #12 or #14 gauge solid copper (wire) Appliance Wiring Material (AWM).



The Parts Of This Unit

1. Mounting Bracket
2. Mounting Slots
3. Locking Pins (Break Out Bracket
4. Hot (Black) Wire
5. Neutral (White) AC Wire
6. White/Gray Stripe Interconnect Wire
7. Latch to Open Battery Compartment
8. Swing-Out Battery Compartment
9. Quick-Connect Power Connector

INSTALLING A SINGLE (STAND-ALONE) ALARM

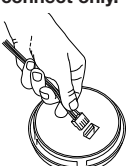
Tools you will need: Standard/Flathead screwdriver.

⚠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, follow these steps:

1. Remove the mounting bracket from the base, and attach it to the junction box.
2. Using wire nuts, connect the power connector to the household wiring.
   - Connect the White wire on the power connector to the neutral (White) wire in the junction box.
   - Connect the Black wire on the power connector to the hot wire (Black) in the junction box.
   - **Tuck the White/Gray Stripe wire inside the junction box. It is used for interconnect only.**
3. Plug the power connector into the back of the Smoke/CO Alarm.
4. Position the base of the Alarm over the mounting bracket and turn. The Alarm can be positioned over the bracket every 60º. Turn the Alarm clockwise (right) until the unit is in place.
   NOTE: For Wall Mounting, position the battery drawer, marked "THIS SIDE UP", so it faces the ceiling.



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

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⚠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.

Make sure the unit is receiving AC power. Under normal operation, the Green power 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.

INTERCONNECTING MULTIPLE ALARMS

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

On Initiating Alarms	Red LED(s) Flashes Rapidly
On All Other Alarms	Red LED is Off

All wiring must conform to all local electrical codes and Article 760 of the National Electrical Code (NFPA 70). Refer to NFPA 72, Chapter 2 and/or your local building code for further connection requirements.

Continued ...

⚠WARNING!

AC and AC/DC 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 alarms will not operate.

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 SC6120B, 4120, 4120B, 4120SB, 4919, 2002RAC, 100S, 5919, 5919TH; ***BRK Electronics®*** Heat Alarm Models HD6135F, HD6135FB; ***BRK Electronics®*** CO Alarm Models SC6120B; and ***First Alert®*** Smoke Alarm Models SA4120B, SA4121B, SA4919B, SA100B.

NOTE: In case of fire or smoke, all compatible models listed above will alarm. In response to a carbon monoxide situation, only the combination Smoke/CO Alarm will alarm.

Interconnected units must meet ALL of the following requirements:

- A maximum of 18 Alarms may be interconnected. (Maximum of 12 can be Smoke Alarms)
- The same fuse or circuit breaker must power all interconnected units.

Continued ...

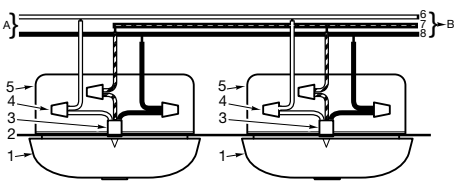
Interconnecting Multiple Alarms (continued)...

- The total length of wire interconnecting the units should be less than 1000 feet (300 meters). The interconnect wire should be #18 gauge or larger, rated at least 300V.
- If an interconnect wire is not already part of your household wiring, you will need to install one. This type of wire is commonly available at Hardware and Electrical Supply stores.

⚠WARNING!

Failure to meet any of the above requirements could damage the units and cause them to malfunction, removing your protection.

Interconnecting Multiple Smoke/CO Alarms



A Unswitched 120V AC 60 Hz Source

B To Additional Units Maximum = 18 (Max. 12 Smoke Alarms)

1 Smoke/CO Alarm

2 Ceiling or Wall

3 Power Connector

4 Wire Nut

5 Junction Box

6 Neutral (White) AC Wire

7 Interconnect Wire (White/Gray Stripe)

8 Hot (Black) AC Wire

Interconnecting Multiple Alarms (continued)...

1. Remove mounting bracket from the base. Position screw slots on mounting bracket over screws in the junction box. Tighten screws.
2. Strip off about 1/2" (12 mm) of the plastic coating on the white/gray stripe wire on the power connector.
3. Using wire nuts, connect the power connector to the household wiring.
   - 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 white/gray stripe wire on the power connector to the interconnect wire in the junction box. Repeat for each unit you are interconnecting.
4. Plug power connector into the back of the Alarm.
5. Position the base of the Alarm over the mounting bracket and turn. The Alarm can be positioned over the bracket every 60°. Turn the unit clockwise (right) until the unit is in place. **NOTE:** For Wall Mounting, position the battery drawer, marked "THIS SIDE UP", so it faces the ceiling.

⚠WARNING!

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 each unit is receiving AC power. Under normal operation, the Green power indicator light will shine continuously.

Continued ...

Interconnecting Multiple Alarms (continued)...

7. Test each Alarm. Press and hold the test button until the unit alarms.

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

NOTE: When power is applied, unit(s) may alarm momentarily.

IMPORTANT!

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.

ACTIVATE THE BATTERY BACK-UP

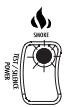
Activate the battery back-up by removing the "Pull to Activate Battery Back-Up" tab. You do not need to open the battery compartment and reposition the battery during installation.

IMPORTANT!

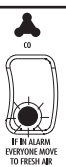
Once you remove the battery tab, test the battery back-up. Press and hold the Test/Silence button on the cover until the alarm sounds. Turn on AC power as soon as possible to conserve battery.

CHAPTER 3: 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!

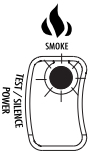
IF THE CO ALARM SOUNDS:

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 CO alarm remains in its normal condition.
4. After following steps 1-3, if your 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:

Finding the Source of CO After an Alarm

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

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!

NEVER ignore any alarm. Ignoring the alarm may result in injury or death. If the unit alarms and you are not absolutely certain of the source of the smoke, get everyone out of the house 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—use the Silence Feature to quiet the alarm, or open a nearby window or door and fan the smoke away from the unit. In most cases this will silence the alarm, and once the smoke clears the unit will reset automatically.

RESPONDING TO AN ALARM

- Don't panic; stay calm. Follow your family escape plan. Your safe escape may depend on thinking clearly and remembering what you have practiced. 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 to see if they are hot. If a door is cool, open it slowly.
- Don't open a hot door—use an alternate escape route.
- Stay close to the floor. Smoke and hot gases rise.
- Keep doors and windows closed, unless you need to escape through them.
- Meet at your planned meeting place outside your home, and do a head count to make sure everyone 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 more ideas on making your home safer and on creating your own family escape plan.

USING THE SILENCE FEATURE

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, briefly press the Test/Silence button on the cover of the Smoke/CO Alarm.

To silence Alarms in an interconnected series:

To silence all the Alarms in an interconnected series, you must press the Test/Silence button on the unit(s) that triggered the alarm.

NOTE: The red light on the initiating Alarms will flash rapidly. The red light will be off on all other Alarms.

⚠WARNING!

Never interrupt AC power or remove the battery to quiet an unwanted alarm. Disabling the Alarm removes your protection.

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.

WHEN THE CO ALARM IS SILENCED...

The CO Alarm will remain silent for 4 minutes. After 4 minutes, if CO levels remain potentially dangerous the horn will start sounding again.

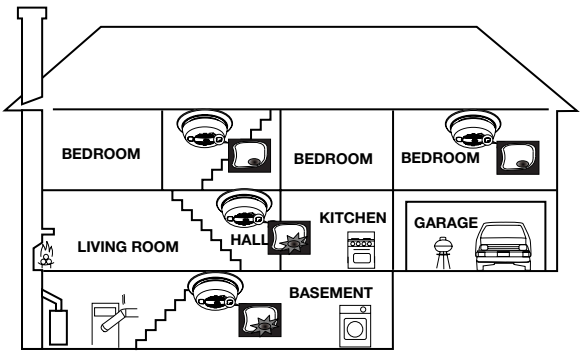
IMPORTANT!

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

LOW BATTERY SILENCE FEATURE

If AC power is on, briefly press the Test/Silence button to silence the low battery “chirp” for up to 8 hours. 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:



KEY:

LATCHING ALARM:
Unit was exposed to alarm levels of Smoke or CO

LATCHING NOT ACTIVATED:
Unit was not exposed to alarm levels of Smoke or CO

The Latching Alarm Indicator is activated after an Alarm is exposed to alarm levels of smoke or carbon monoxide. After smoke or CO levels drop below alarm levels, the red smoke or CO LED will begin to flash once every 5 seconds. For example, if CO initiated the alarm, the red “CO” LED will flash. If the Smoke Alarm initiated the alarm, the red “SMOKE” LED will flash. It will continue to flash or “latch” until you clear it using the Test/Silence button.

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.

Non-Interconnected or Stand-Alone Alarm
Latching Alarm Indicator shows that the unit was exposed to alarm levels 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 CO or smoke present in the air has dropped below alarm levels.

CHAPTER 4: TESTING AND MAINTENANCE

WEEKLY TESTING

⚠WARNING!

- **SMOKE ALARM: NEVER use an open flame of any kind to test the Smoke Alarm. 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.**
- **CO ALARM: NEVER use vehicle exhaust to test the CO Alarm. Exhaust may cause permanent damage and voids your warranty.**

⚠WARNING!

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/Silence button is the recommended way to test this 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

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.
- Gently vacuum off any dust on the cover at least once a month using your vacuum's soft brush attachment. Test the unit after vacuuming the cover.
- Never use water, cleaners or solvents since they may damage the unit.
- Relocate the unit if it sounds frequent unwanted alarms. See "Where Not To Install This Alarm" for details.
- When the battery back-up becomes weak, the alarm will "chirp" about once a minute (the low battery warning). You should replace the battery immediately to continue your protection.

⚠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.

IMPORTANT!

Household cleaners, aerosol chemicals, and other contaminants can affect the sensor. When using any of these materials near the Alarm, make sure the room is well ventilated.

CHOOSING A REPLACEMENT BATTERY:

Your Smoke/CO Alarm's battery back-up requires one standard 9V battery. The following batteries are acceptable as replacements. This list supplements the list on the Alarm battery door: Eveready #522 and Duracell #MN1604, MX1604 (Ultra). 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!

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

CHAPTER 5: PROTECTING YOUR 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 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 the enclosed checklist, read this manual in its entirety, and make sure you understand what to do if your CO Alarm sounds.

FROM FIRE

Putting up Smoke Alarms is just one step in protecting your family from fires. You must also reduce the chance a fire will start in your home, and have a plan for escaping safely if one does. To have a good fire safety program, you must:

- Develop a family escape plan and practice it with everyone in your family, including small children. 1) Draw a floor plan of your home and identify at least two exits from each room and one way to get out of each bedroom without opening the door; 2) Decide on a meeting place a safe distance from home and make sure everyone knows to wait there; 3) Know where to go to call the Fire Department from outside the home. 4) Make sure everyone—including all children—know what the alarm signal means and how to react to it. Teach them they must be prepared to leave the home by themselves if needed; 5) Hold fire drills every 6 months and practice how to escape safely. Show children how to check if doors are hot before opening them. Show them how to use an alternate exit if a door is hot and shouldn't be opened. Teach them to stay close to the floor and crawl if necessary.
- Install at least one Smoke Alarm on every level of your home, in every bedroom, and in every sleeping area. Keep Alarms clean, and test them weekly. Replace Smoke 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 the stairs are blocked.
- **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 container

  4) Keep electrical appliances in good condition and don't overload electrical circuits

  5) Keep stoves, barbecue grills, fireplaces and chimneys free from grease and debris

  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 allow rubbish to accumulate.

CHAPTER 6: 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.

⚠CAUTION!

Some individuals are more sensitive to CO than others, including people with cardiac or respiratory problems, infants, unborn babies, pregnant mothers, or elderly people can be more quickly and severely affected by CO. Members of sensitive populations should consult their doctors for advice on taking additional precautions.

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.

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 carbon monoxide (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.

CHAPTER 7: REGULATORY INFORMATION FOR CO ALARMS

WHAT LEVELS OF CO CAUSE AN ALARM?

Underwriters Laboratories Inc. UL2034 defines 3 specific alarm points by which all residential CO Alarms must alarm. 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 of CO, IT MUST ALARM BETWEEN 60 and 240 MINUTES.

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.

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.

Continued ...

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!

CHAPTER 8: REGULATORY INFORMATION FOR SMOKE ALARMS

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 Marshall (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.

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.

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. If you install AC or AC/DC units, it is recommended they be interconnected for added protection.

IMPORTANT!

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 five types of buildings listed: 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 101 (Life Safety Code) or NFPA 72 (National Fire Alarm 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.
2. **Multi-Family or Mixed Occupant Residence:**
   Apartment building, condominium. This type of 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 type of 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 type of 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 type of unit in common areas may not provide sufficient warning to all residents or meet local fire protection ordinances/regulations.
4. **Hotels/Motels:**
   Also boarding houses and dormitories. This type of 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 type of unit in common areas may not provide sufficient warning to all residents or meet local fire protection ordinances/regulations.
5. **Warehouses/Commercial Buildings:**
   DO NOT use this Smoke/CO Alarm in warehouses, industrial or commercial buildings, special-purpose non-residential buildings, RVs, boats, or airplanes. This Smoke/CO Alarm is specifically designed for residential use, and may not provide adequate protection in non-residential applications.

DIFFERENT TYPES OF SMOKE ALARMS

Battery operated units: Provide protection even when electricity fails, provided the batteries are fresh and correctly installed. Units are easy to install, and do not require professional installation.

AC powered units: Can be interconnected so if one unit senses smoke, all units alarm. They do not operate if electricity fails. Units must be installed by a qualified electrician.

AC powered units with battery back-up: Can be interconnected so if one unit senses smoke, all units alarm. They will operate if electricity fails, provided the batteries are fresh and correctly installed. Units must be installed by a qualified electrician.

Units for the hearing impaired: Include a visual alarm and an audible alarm horn, and meet the requirements of the Americans With Disabilities Act. ***BRK***® Smoke Alarm model 100S is an AC powered unit that has an 85 decibel alarm and a 177 candela strobe light, which flashes rapidly when the unit is in alarm. These units can be interconnected so if one unit senses smoke, all units alarm. They do not operate if electricity fails. Units must be installed by a qualified electrician.

All these units are designed to provide early warning of fires if located, installed and cared for as described in the user's manual, and if smoke reaches them. If you are unsure which type of 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. Also check your local building codes which may also require specific units in new construction or in different areas of the home.

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 of your home.

CHAPTER 8: 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.	Unit malfunction. 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 Chapter 8 “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 Chapter 3 “If Your 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 Your 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.

CHAPTER 10: UNDERSTANDING THE LIGHT AND HORN PATTERNS

Condition	LED (Red or Green Lights)	Horn
POWER UP	Green LED flashes ON once, then shines continuously 	Horn “chirps” once 
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” 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 or Combo Alarms; (Smoke) 3 beeps, pause, 3 beeps, pause repeating on all Smoke or Smoke/CO Alarms 
IN SILENCE MODE	Red Smoke or CO LED flashes rapidly once every second 	Horn remains silent: (CO) for 4 minutes; (Smoke) for 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 synchronized with 3 rapid chirps 	Horn sounds 3 rapid chirps (“chirp-chirp-chirp”) every minute 

CHAPTER 11: GENERAL LIMITATIONS OF THIS ALARM

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).

This Smoke/CO Alarm will not work without power. This alarm requires AC power or a 9V alkaline or lithium battery to operate.

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 “Different Types of Smoke Alarms” for details.

This Smoke/CO Alarm may not be heard. The alarm horn loudness meets or exceeds the current UL standard. However, if the device 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 alarm device 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.

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.

LIMITED WARRANTY

Coverage: BRK Brands, Inc. ("BRK") the maker of BRK Electronics® brand products, warrants that for a period of 5 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 for 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 to 5:00 PM, Central Standard Time, Monday through Friday. To assist in serving you, please have the model number and date of purchase available when calling.
3920 Enterprise Court, Aurora, IL 60504-8132.

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.

Please record Date and Where Purchased:

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BRK Brands, Inc.
3901 Liberty Street Road
Aurora, IL 60504-8122

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