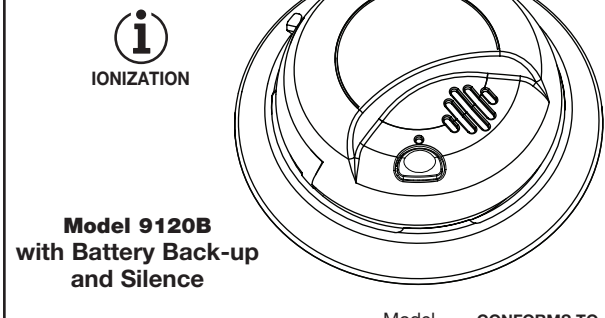


# USER'S MANUAL Smoke Alarms

**AC Powered Smoke Alarms**  
120V AC ~, 60 Hz, 0.04A



Printed in Mexico  
M08-0134-009 K1 11/15

## 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.

## 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 performs 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.

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

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Consumer Affairs: (800) 323-9005  
www.brkelectronics.com • www.firstalert.com

**All First Alert and BRK® Smoke Alarms conform to regulatory requirements, including UL217 and are designed to detect particles of combustion. Smoke particles of different number and size are produced in all fire events.**

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 long periods of time before igniting. 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. Restore 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 fires spreads. This unit can ONLY give an early warning of developing fires if it is installed, maintained and tested according to instructions and when it returns to normal operation.

**Understand the Different Type 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.

**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.

## ! 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 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 uses 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 (SBC02); UBC (ICBO); NBC (BOCA); ITFCDC (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, the battery will allow the alarm to sound if, 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 point over the unit. Paint may clog the openings to the sensing chamber and prevent the unit from operating properly.

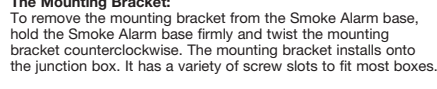
## HOW TO INSTALL THIS SMOKE ALARM

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.

## ! IMPORTANT!

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" 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.

- 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:

- 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.

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

- Remove the mounting bracket from the base, and attach it to the junction box.
- Plug the power connector into the back of the Smoke Alarm.

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.

- 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 properly installed. Restoring power before installation is complete may result in serious electrical shock, injury or death.

- Make sure the Smoke Alarm 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.

**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.

## 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

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

- Activate the battery back-up by removing the "Pull to Activate Battery Back-Up" tab.
- 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 installing a new battery and test again.** If the Smoke Alarm still does not alarm, replace it immediately.

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

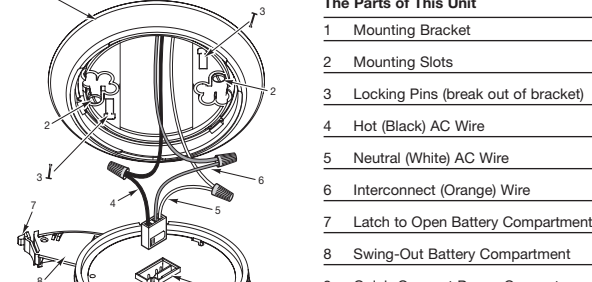
- Push the locking pin through the black dot on the label on the back of the Smoke Alarm.

## ! 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 point over the unit. Paint may clog the openings to the sensing chamber and prevent the unit from operating properly.



**The Parts of This Unit**

- Mounting Bracket
- Mounting Slots
- Locking Pins (break out of bracket)
- Hot (Black) AC Wire
- Neutral (White) AC Wire
- Interconnect (Orange) Wire
- Latch to Open Battery Compartment
- Swing-Out Battery Compartment
- Quick-Connect Power Connector

## 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 alarm's operation as required by Underwriters Laboratories, Inc. (UL).

**! 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.

## 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

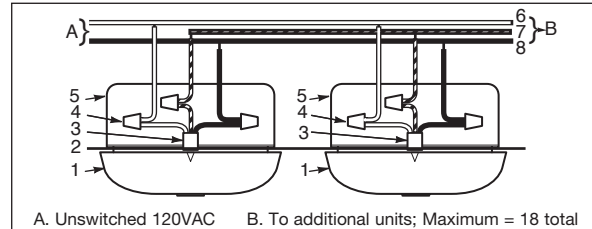
## Compatible Interconnected Units

**! 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, SA520 and **BRK® Smoke Alarm Models** 9120B, SC6120B, SC6120B, SC6120B, SC7010B, SC7010B, SC7010B, 100S, 4120, 4120B, 4120SB; **BRK® CO Alarm Models** CO5120EN, CO5120PDBN; **BRK® Heat Alarm Models** HD5132, HD5132B; **BRK® Auxiliary Devices Models** RM3 and RM4 (Relay Modules), SL177 (Strobe Light). See www.brkelectronics.com for most current interconnect list.

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.



- Smoke Alarm
- Ceiling or Wall
- Power Connector
- Wire Nut
- Junction Box
- Neutral Wire (Whit)
- Interconnect Wire (Orange)
- Hot Wire (Blk)

## ! 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 inter-connected 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.

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## ! 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.

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## ! IMPORTANT!

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

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

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