

FirstAlert® USER'S MANUAL

WIRELESS INTERCONNECT AC POWERED SMOKE ALARM WITH BATTERY BACK-UP

IMPORTANT! PLEASE READ CAREFULLY AND SAVE.

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

FC CONFORMS TO MODEL UL STD 217 SAS20

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

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

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

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

FIRE SAFETY TIPS

Follow safety rules and prevent hazardous situations: 1) Use smoking materials properly. Never smoke in bed. 2) Keep matches or lighters away from children; 3) Store flammable materials in proper containers; 4) Keep electrical outlets 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 away from flammable materials; 8) Don't let rubbish accumulate.

Keep alarms clean, and test them weekly. Replace alarms immediately if they are not working properly. Smoke Alarms that do not work cannot alert you to a fire. Keep at least one working fire extinguisher on every floor, and install one in the kitchen. Always have 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" below before beginning. This unit monitors the air, and when smoke reaches its sensing chamber, it alarms. It can give you more time to escape before fire spreads. This unit can ONLY give an early warning of developing fire. It is not fire rated, maintained and located to protect against fire. It is not a fire extinguisher, and it does not provide any means of escape from a fire. It is not a fire extinguisher, and it does not provide any means of escape from a fire. It is not a fire extinguisher, and it does not provide any means of escape from a fire.

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.

CAUTION!

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

WARNING! This unit must be powered by a 24-hour, 120VAC pure sine wave 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.

This Smoke Alarm must have AC or battery power to operate. If the AC power fails, battery back-up will allow the alarm to sound for at least 4 minutes. If AC power fails and the battery is weak, protection should last for at least 7 days. If AC power fails and the battery is weak, protection should last for at least 7 days. If AC power fails and the battery is weak, protection should last for at least 7 days.

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.

This Smoke Alarm has a battery drawer which rests closing unless a battery is installed. This warns you the unit will not operate under DC power without a battery.

Do not stand too close to the unit when the alarm is sounding. Standing in an emergency in your exposure to the horn at close range may harm your hearing.

Do not paint over the unit. Paint may clog the openings to the sensing chambers and prevent the unit from operating properly.

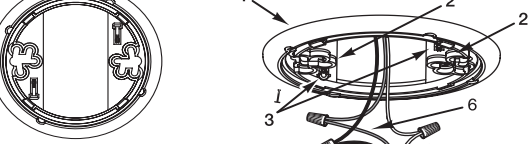
HOW TO INSTALL THIS SMOKE ALARM

This Smoke Alarm is designed to be mounted on any standard wiring junction box up to a 4-inch (10 cm) size, on either the ceiling or wall (if allowed by local codes). Read "Recommended Locations for Smoke Alarms" and "Locations to Avoid for Smoke Alarms" before you begin installation. Tools you will need: • Needle-nose pliers • Standard flathead screwdriver • Phillips screwdriver.

WARNING! Make sure the Alarm is not receiving excessively noisy power. Examples of noisy power can be major appliances on the same circuit, warning 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 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
- Quick-Connect Power Connector
- Turn this way to remove from bracket
- Turn this way to attach to bracket
- Slide-Out Battery Drawer

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, turn POWER OFF first. Simply pry the power connector between the power connector and the security tab inside the power input block. Gently pry back the tab and pull the connector free.

QUICK INSTALLATION INSTRUCTIONS

Easily expand an existing interconnected 120V AC hardwired system by simply replacing one Alarm in the series with the First Alert® Model SAS20. Then add additional battery-operated Alarms to expand the system with no additional electrical work.

- Insert the batteries into the battery drawer of the first Alarm and close the drawer.
- The Alarm will sound with a chirp.
- If you purchased the Talking Smoke and Carbon Monoxide Alarm, you will now be prompted to set the Alarm's location. Follow the directions given by the Alarm.
- NOTE: Steps 4 through 6 need to be completed within two minutes. If more than two minutes pass, the Green power LED will stop blinking. Simply open the battery drawer of the second Alarm and repeat steps 4 through 6.
- Insert the batteries into the battery drawer of the next Alarm. DO NOT touch the flame. Sources of these fires may include cigarettes burning in couches or bedding.
- Press and hold the test button and then close the battery drawer.
- Once you hear the unit chirp, release the test button. The Green power LED will start to blink indicating the WIRELESS INTERCONNECT Alarm system is working properly. If you are interconnecting more than one Smoke Alarm, you MUST read "Special Requirements For Interconnected WIRELESS INTERCONNECT Alarms." You have now successfully linked your new WIRELESS INTERCONNECT Alarms. To add additional Alarms at a later time, follow steps 4 through 9.
- Press and hold the test button on the first Alarm, until the second Alarm chirps and its Green power LED stops blinking. Then release the test button.
- If you purchased the Talking Smoke and Carbon Monoxide Alarm, you will now be prompted to set the Alarm's location. Follow the directions given by the Alarm.
- If you purchased the hardwired battery back-up WIRELESS INTERCONNECT Alarm, you can now connect the hardwired Alarm by installing the power connector on the ceiling of the Alarm.
- Repeat steps 4-9 for additional WIRELESS INTERCONNECT Alarms.
- Repeat steps 4-9 for additional WIRELESS INTERCONNECT Alarms. To add additional Alarms at a later time, follow steps 4 through 9.

FOLLOW THESE INSTALLATION STEPS

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

CAUTION!

ELECTRICAL SHOCK HAZARD. Turn off power to the area where you will install the 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.

- Remove the mounting bracket from the base, and attach it to the junction box.
- Using wire nuts, connect the power connector to the household wiring.

STAND-ALONE ALARM ONLY:

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

INTERCONNECTED UNITS ONLY:

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

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

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.

Continued above...

OPTIONAL LOCKING FEATURES

The 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 • Standard flathead screwdriver.

Both the battery and the Alarm have locking pins, which are molded into the mounting bracket. Using needle-nose pliers, 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 installed the battery and tested the battery back-up.

- Push and hold Test/Silence button until the alarm sounds: 3 beeps, pause, 3 beeps, pause.

IMPORTANT!

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

- Using needle-nose pliers, detach one locking pin from the mounting bracket.
- Push the locking pin through the hole near the battery drawer on the back of the Smoke Alarm.



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

INSTALLATION STEPS, Continued

STAND-ALONE ALARM ONLY:

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

INTERCONNECTED UNITS ONLY:

- If you are interconnecting multiple Smoke Alarms, repeat steps 4-9 for each Smoke Alarm in the series. When you are finished, restore power to the junction box.

CAUTION!

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

- 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.
- Test each Smoke Alarm. Press and hold the Test/Silence button until the unit alarms. When testing a series of interconnect units you must test each unit individually. Make sure all units alarm when each one is tested.

CAUTION!

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.

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 early 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 is in alarm, see table:

On Initiating Alarms	Red LED flashes rapidly
On All Other Alarms	Red LED is Off

IMPORTANT!

Interconnect units within a single family residence only. Otherwise all households will experience unwanted alarms when you test any unit in the series. Interconnect 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, 9120 series; **BRK Electronics®** Smoke Alarm Models 100S, 4120 series, 9120 series; **7010 series; BRK Electronics®** Heat Alarm Models HD6135F, HD6135FB; **Smoke/CO Alarm Models** SC6120B, SC9120B, CO Alarm Model C05120B; **Reliable Fire Alarms** FMA series.

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 length 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.

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

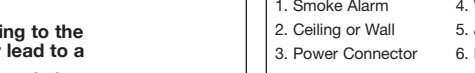
- Connect the white wire on the power connector to the neutral wire in the junction box.
- Connect the black wire on the power connector to the hot wire in the junction box.
- Connect the orange wire on the power connector to the interconnect wire in the junction box. Repeat for each unit you are interconnecting.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

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 arm can be positioned over the bracket every 90°. Turn the Smoke Alarm clockwise (right) until the unit is in place.

Check all connections.

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



Continued above...

UNDERSTANDING THE INDICATOR LIGHTS AND ALARM HORN PATTERNS

AC Power	All Models	DC Power
Normal Operation	Constant Green LED No Audible Alarm	Green LED Off No Audible Alarm
Test Condition	Constant Green LED Rapidly Flashing Red LED	Green LED Off Rapidly Flashing Red LED
Alarm Condition* (Initiating Unit)	Constant Green LED Rapidly Flashing Red LED	Green LED Off Rapidly Flashing Red LED
Silence Mode	Rapidly Flashing Red LED	Rapidly Flashing Red LED
Low Battery	Alarm "chirp" approx. once/minute	Alarm "chirp" approx. once/minute
Malfunction	3 rapid "chirps" every minute; LED flashes approx. once a minute	3 rapid "chirps" every minute; LED flashes approx. once a minute

NOTE: When power is applied, unit(s) may alarm momentarily. *When a Smoke Alarm in an interconnected series triggers an alarm, its red LED will flash rapidly. The red LEDs will remain OFF on any remaining Alarms. This feature helps responders identify which unit(s) triggered the alarm.

WEEKLY TESTING

WARNING!

NEVER use an open flame of any kind to test this unit. You might accidentally damage or set fire to the unit or to your home. The built-in test switch accurately tests the unit's operation as required by Underwriters Laboratories, Inc. (UL).

If the Alarm ever fails to test properly, replace it immediately. Do not use a fire extinguisher to extinguish the alarm. Ignoring the alarm may result in injury or death.

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.

If the unit alarms and you are not testing the unit, it is warning you of a potentially dangerous situation that requires your immediate attention. This is very important that each Alarm is tested individually before and after installation to make sure that all Alarms respond properly under these conditions.

Metal objects and metallic wallpaper may interfere with signals from wireless alarms. Alarms should be tested after changes to your home such as remodeling, moving furniture, and with metal doors opened and closed.

YOUR SMOKE ALARM WILL AUTOMATICALLY COMMUNICATE WITH ALL OTHER FIRST ALERT® WIRELESS INTERCONNECT SMOKE ALARMS.

CAUTION!

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

IF THIS SMOKE ALARM SOUNDS RESPONDING TO AN ALARM

During an alarm, you will hear a loud, repeating horn pattern: 3 beeps, pause, 3 beeps, pause.

WARNING!

If the unit alarms and you are not testing the unit, it is warning you of a potentially dangerous situation that requires your immediate attention. This is very important that each Alarm is tested individually before and after installation to make sure that all Alarms respond properly under these conditions.

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.

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During testing, you will hear a loud, repeating horn pattern: 3 beeps, pause, 3 beeps, pause.

If the unit alarms and you are not testing the unit, it is warning you of a potentially dangerous situation that requires your immediate attention. This is very important that each Alarm is tested individually before and after installation to make sure that all Alarms respond properly under these conditions.

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.
- Clean the Smoke Alarm at least once a month; gently vacuum the outside of the Smoke Alarm using your household vacuum's soft brush attachment. Test the Smoke Alarm. Never use water, cleaners or solvents since they may damage the unit.
- If the Smoke Alarm becomes contaminated by excessive dirt, dust and/or grime, and cannot be cleaned to avoid unwanted alarms, replace the unit immediately.
- Relocate the unit if it sounds frequent unwanted alarms. See "Locations to Avoid for Smoke Alarms" for details.
- When the battery back-up becomes weak, the Smoke Alarm will "chirp" about once a minute (the low battery warning). This warning should last 8 hours, but you should replace the batteries immediately to continue your protection.

Choosing a replacement battery:

Your Smoke Alarm requires 2 "AA" Duracell MN1500 batteries. These batteries are available at many local retail stores.

WARNING!

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

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

WARNING!

Keep battery out of reach of children. In the event a battery is swallowed, immediately contact your poison control center, your physician, or the National Battery Ingestion hotline at 202-625-3333 as serious injury may occur.

IMPORTANT!

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

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

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

Locking Features, Continued

TO LOCK THE MOUNTING BRACKET

- Using needle-nose pliers, detach one locking pin from mounting bracket.
- Insert the locking pin into the lock located opposite from the battery drawer as shown in the diagram.

TO DEACTIVATE THIS FEATURE:

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

IF YOU SUSPECT A PROBLEM

Smoke Alarms may not operate properly because of dead, missing or weak batteries, a build-up of dirt, dust or smoke on the alarm cover, or installation in an improper location. Clean the Smoke Alarm as described in "Regular Maintenance," and install a fresh battery, then test the Smoke Alarm again. If it fails to test properly when you use the test button, or if the problem persists, replace the Smoke Alarm immediately.

- If you hear a "chirp" approximately once a minute, replace the batteries.
- If you experience frequent non-emergency alarms (like those caused by cooking smoke), relocate the unit to a new location.
- If the alarm sounds when no smoke is visible, try cleaning or relocating the Smoke Alarm. The cover may be dirty.
- If the alarm does not sound during testing, make sure it is receiving AC power from the household current.

WARNING!

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

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/Silence button for 5-10 seconds to discharge the branch circuit.

- 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.

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

UNDERSTANDING THE INDICATOR LIGHTS AND ALARM HORN PATTERNS

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Normal Operation	Constant Green LED No Audible Alarm	Green LED Off No Audible Alarm
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Malfunction	3 rapid "chirps" every minute; LED flashes approx. once a minute	3 rapid "chirps" every minute; LED flashes approx. once a minute

NOTE: When power is applied, unit(s) may alarm momentarily. *When a Smoke Alarm in an interconnected series triggers an alarm, its red LED will flash rapidly. The red LEDs will remain OFF on any remaining Alarms. This feature helps responders identify which unit(s) triggered the alarm.

WEEKLY TESTING

WARNING!