

WARNING!

- NEVER** use an open flame of any kind to test this unit. You might accidentally damage or set fire to the unit or to your home. The built-in test switch accurately tests the unit's operation as required by Underwriters Laboratories, Inc. (UL). **NEVER** use vehicle exhaust! Exhaust may cause permanent damage and voids your warranty.
- DO NOT** stand close to the alarm when the horn is sounding. Exposure at close range may be harmful to your hearing. When testing, stop away when horns start sounding.

CAUTION!

It is important to test this unit every week to make sure it is working properly. Using the test button in the recommended way to test this smoke/CO alarm.

You can test this smoke/CO alarm by pressing and holding the Test/Silence button on the Alarm cover until Alarm Voice says "Testing" (typically 3-5 seconds).

During testing, you will see and hear the following sequence:

- The Alarm Voice will say "Testing." The Horn will sound 3 beeps, pause, 3 beeps. The Alarm Voice will say "Warning, evacuate smoke in (Location, example: "Hallway"). Evacuate." The Power LED flashes Red.

- Next the Horn will sound 4 beeps, pause, 4 beeps. The Alarm Voice will say "Warning, evacuate carbon monoxide in (Location, example: "Hallway"). Evacuate." The LED flashes Red.

If the unit does not alarm, make sure the batteries are correctly installed, and test again. If the unit still does not alarm, replace it immediately.

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/CO alarm at least once a month; gently vacuum the outside of the smoke/CO alarm using your household vacuum's soft brush attachment. A can of clean compressed air (sold at computer or office supply stores) may also be used. Follow manufacturer instructions for use. Test the smoke/CO alarm. Never use water, cleaners or solvents since they may damage the unit.

- If the smoke/CO alarm becomes contaminated by excessive dirt, dust and/or grime, and cannot be released to avoid unwanted alarms, replace the unit immediately.
 - Relocate the unit if it sounds frequent unwanted alarms. See "Where This Alarm Should Not Be Installed" for details.
- CHOOSING A REPLACEMENT BATTERY:**
- Your smoke/CO alarm requires two standard AA batteries. The following batteries are acceptable as replacements:
- Evesley Eveready ES1 or Eveready MN500. 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 battery 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/CO alarm and the environment in which it is installed. All the batteries specified above are acceptable replacement batteries for this unit. Regardless of the manufacturer's suggested battery life, you MUST replace the battery immediately once the unit starts "chirping" (the "low battery warning").

WHAT YOU NEED TO KNOW ABOUT CO:

WHAT IS CO?

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

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

Common appliances are other sources of CO. If they are not properly maintained, are improperly vented, 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.

SPECIAL COMPLIANCE CONSIDERATIONS

This smoke alarm is suitable for use in apartments, condominiums, townhouses, hospitals, day care facilities, health care facilities, boarding houses, group homes and dormitories provided a primary fire detection system already exists to meet fire detection requirements in common areas like lobbies, hallways, or porches. Using this smoke alarm in common areas may not provide sufficient warning to all residents or meet local fire protection ordinances/regulations.

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

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

HUD MAP PROGRAM

Certain HUD battery powered smoke alarm appliances, especially those that fall under HUD 223J MAP (Multi-Family Accelerated Processing), may require a 10 year sealed tamper resistant battery. This alarm does not meet that requirement. Substitute First Alert SA3408.

FCC COMPLIANCE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that of the receiver.
- Consult the dealer or an experienced radio or TV technician for help.

WARNING!

Changes or modifications to the product, not expressly approved by First Alert / BRK Brands, Inc., could void the user's authority to operate the equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

WEEKLY TESTING

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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).

Moderate Exposure: Throbbing headache, drowsiness, confusion, fast heart rate.

Extreme Exposure: Convulsions, unconsciousness, heart and lung failure. Exposure to carbon monoxide can cause brain damage, death.

IMPORTANT!

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

FINDING THE SOURCE OF CO AFTER AN ALARM

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

- House well ventilated before the investigator arrives.
- Problem caused by "backdrafting".

- Transient CO problem caused by special circumstances.

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

POTENTIAL SOURCES OF CO IN THE HOME

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

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

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

Transient CO Problems: "hazards" or on-again-off-again CO problems can be caused by outdoor conditions and other special circumstances.

The following conditions can result in transient CO situations:

- 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 around vented fuel pipe designs which can amplify the above situation.
- Extended operation of unvented fuel burning devices (range, oven, fireplace).
- Temperature inversions, which can trap exhaust close to the ground.
- Car idling in an open or closed attached garage, or near a home.

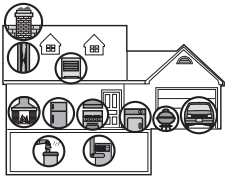
These conditions are dangerous because they can trap exhaust in your home. Since these conditions can come and go, they are also hard to recreate during a CO investigation.

HOW CAN I PROTECT MY FAMILY FROM CO POISONING?

A CO alarm is an excellent means of protection. It monitors the air and sounds a loud alarm before carbon monoxide levels become threatening for average, healthy adults. A CO alarm is not a substitute for proper maintenance of home appliances.

TO HELP PREVENT CO PROBLEMS AND REDUCE THE RISK OF CO POISONING:

- Clean chimneys and flues yearly. Keep them free of debris, leaves, and nests for proper air flow. Also, have a professional check for rust and corrosion, cracks, or separation.
- Check and repair all movement of exhaust air movement or exhaust chimneys. Have a professional check for rust and corrosion, cracks, or separation.
- Test and maintain all fuel-burning equipment annually. Many local gas or oil companies and HVAC companies offer appliance inspections for a nominal fee.



HOW CAN I PROTECT MY FAMILY FROM CO POISONING? (CONTINUED)...

- 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 light. 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 outdoors, or in garages or on screen porches.
- Check for exhaust backflow from CO sources. Check the draft hood on an operating furnace for a backdraft. Look for cracks on furnace heat exchangers.
- Check the house or garage on the other side of shared wall.
- Keep windows and doors open slightly. If you suspect that CO is escaping into your home, open a window or a door. Opening windows and doors can significantly decrease CO levels.

In addition, remember to read the manual to the alarm. It contains information on how to use the alarm properly, and make sure you understand what to do if your CO alarm sounds.

REGULATORY INFORMATION FOR SMOKE/CO ALARMS

REGULATORY INFORMATION FOR CO ALARMS

WHAT LEVELS OF CO CAUSE AN ALARM?

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

UL2034 Required Alarm Points:

- If the alarm is exposed to 400 ppm of CO, IT MUST ALARM BETWEEN 4 AND 15 MINUTES.
- If the alarm is exposed to 150 ppm of CO, IT MUST ALARM BETWEEN 10 AND 30 MINUTES.
- If the alarm is exposed to 70 ppm of CO, IT MUST ALARM BETWEEN 60 AND 240 MINUTES.

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

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

IMPORTANT!

CO alarms are designed to alarm before there is an immediate life threat. Since you cannot see or smell CO, never assume it's not present. An exposure to 100 ppm of CO for 20 minutes may not affect average, healthy adults, but after 4 hours the same level may cause headaches.

An exposure to 400 ppm of CO may cause headaches in average, healthy adults after 35 minutes, but can cause death after 2 hours.

Standards: Underwriters Laboratories Inc. Single and Multiple Station Carbon Monoxide Alarms UL2034.

According to Underwriters Laboratories Inc. UL2034, Section 1.1, 2: "Carbon monoxide alarms covered by these requirements are intended to respond to the presence of carbon monoxide from sources such as, but not limited to, exhaust from internal-combustion engines, abnormal operation of fuel-fired appliances, and fireplaces. CO alarms are intended to alarm at carbon monoxide levels below that could cause a loss of ability to react to the dangers of carbon monoxide exposure." This CO alarm monitors the air at the alarm, and is designed to alarm before CO levels become life threatening. This allows you precious time to leave the house and correct the problem. This is only possible if alarms are located, installed, and maintained as described in this manual.

Gas Detection at Typical Temperature and Humidity Ranges: The CO alarm is not formulated to detect CO levels below 30 ppm typically. UL tested for toxic gas resistance to Methane (500 ppm), Butane (200 ppm), Heptane (500 ppm), Ethyl Acetate (200 ppm), Isopropyl Alcohol (200 ppm) and Carbon Dioxide (2000 ppm). Values measure gas and vapor concentrations in parts per million.

Audible Alarm: 65 dB minimum at 10 feet (3 meters).

REGULATORY INFORMATION FOR SMOKE ALARMS

RECOMMENDED LOCATIONS FOR SMOKE ALARMS

Installing Smoke Alarms in Single-Family Residences The National Fire Protection Association (NFPA), recommends one smoke alarm on every floor, in every sleeping area, and in every bedroom. In new construction, the smoke alarm must be AC powered and interconnected. See "Agency Placement Recommendations" for details. For additional coverage, it is recommended that you install a smoke alarm in all rooms, halls, storage areas, finished attics, and basements, where temperatures normally remain between 40° F (4° C) and 104° F (32° C). Make sure no door or other obstruction could keep smoke from reaching the smoke alarm.

More specifically, install smoke alarms:

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

IMPORTANT!

Specific requirements for smoke alarm installation vary from state to state and from region to region. Check with your local Fire Department for current requirements in your area. **It is recommended AC or AC/DC units be interconnected for added protection.**

TROUBLESHOOTING GUIDE		
IF THE ALARM...	PROBLEM...	YOU SHOULD...
Horn "chirps" about once per minute. Voice: "Replace battery in (Location)." every 5 hours	Low battery warning.	Install two new AA batteries*.
Horn sounds three "chirps" every minute. Voice: "Detector error in (Location, example: "Hallway")." please see manual "Repeated errors" every 3 hours; LED has 3 Green flashes with "chirps".	Malfunction signal. Device is not working properly, and needs to be replaced.	Units under warranty should be returned to manufacturer for replacement. See "Limited Warranty" for details.
The light flashes GREEN and the horn sounds 5 "chirps" every minute. Voice: "Detector error in (Location, example: "Basement")." please see manual "Repeated errors" every 3 hours.	END OF LIFE SIGNAL. Alarm needs to be replaced.	Immediately replace the alarm.
CARBON MONOXIDE ALARM ONLY: CO alarm goes back into alarm 4 minutes after you Silence it.	CO levels indicate a potentially dangerous situation.	IF YOU ARE FEELING SYMPTOMS OF CO POISONING, EVACUATE your home and call 911 or the Fire Department. Refer to "If The CO Alarm Sounds" for details.
CO alarm sounds frequently even though no high levels of CO are revealed in an investigation.	The CO alarm may be improperly located. Refer to "Where to install This Alarm" for details.	Relocate your alarm. If frequent alarms continue, have home checked for potential CO problems. You may be experiencing an intermittent CO problem
SMOKE ALARM ONLY: Smoke alarm sounds when no smoke is visible.	Unwanted alarm may be caused by non-emergency source like cooking smoke.	Silence alarm using Test/Silence button; clean the alarm's cover with a soft, clean cloth. If frequent unwanted alarms continue, relocate your alarm. Alarm may be too close to a kitchen, cooking appliance, or steamy bathroom.
*For a list of acceptable replacement batteries, see "Regular Maintenance."		
If you have questions that cannot be answered by reading this manual, call Consumer Affairs at 1-800-323-9005		

HOW CAN I PROTECT MY FAMILY FROM CO POISONING? (CONTINUED)...

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