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

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

A CO Alarm is not a substitute for proper maintenance of home appliances. To help prevent CO problems and reduce the risk of CO poisoning:

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

#### **REGULATORY INFORMATION FOR** SMOKE/CO ALARMS

**REGULATORY INFORMATION FOR CO ALARMS** WHAT LEVELS OF CO CAUSE AN ALARM?

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

### **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
- If the alarm is exposed to 70 ppm if CO, IT MUST ALARM BETWEEN 60 and 240 MINUTES.
- Approximately 10% COHb exposure at levels of 10% to 95% Relative

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

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

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

#### **REGULATORY INFORMATION FOR SMOKE ALARMS** RECOMMENDED LOCATIONS FOR SMOKE ALARMS Installing Smoke Alarms in Single-Family Residences

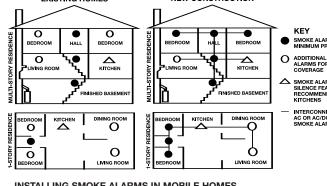
The National Fire Protection Association (NFPA), recommends one Smoke Alarm on every floor, in every sleeping area, and in every bedroom. In new construction, the Smoke Alarms must be AC powered and interconnected. See "Agency Placement Recommendations" for details. For additional cover age, it is recommended that you install a Smoke Alarm in all rooms, halls, storage areas, finished attics, and basements, where temperatures normally remain between 40°F (4°C) and 100°F (38°C). Make sure no door or other obstruction could keep smoke from reaching the Smoke Alarms.

# More specifically, install Smoke Alarms:

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

# IMPORTANT!

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



# **INSTALLING SMOKE ALARMS IN MOBILE HOMES**

For minimum security install one Smoke Alarm as close to each sleeping area as possible. For more security, put one unit in each room. Many older mobile hor (especially those built before 1978) have little or no insulation. If your mobile home is not well insulated, or if you are unsure of the amount of insulation, it is important to install units on inside walls only. Smoke Alarms should be ins where temperatures normally remain between 40°F (4°C) and 100°F (38°C).

# AGENCY PLACEMENT RECOMMENDATIONS

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

# 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

# California State Fire Marshal (CSFM)

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

experience conditions that can result in improper operation

## ABOUT SMOKE ALARMS

Battery (DC) operated Smoke Alarms: Provide protection even when , provided the batteries are fresh and correctly installed. Units are easy to install, and do not require professional installation. AC powered Smoke Alarms: Can be interconnected so if one unit senses

smoke, all units alarm. They do not operate if electricity fails. AC with battery (DC) back-up: will operate if electricity fails, provided the batteries are fresh and correctly installed. AC and AC/DC units must be installed by a qualified electrician. Smoke/CO Alarms for Solar or Wind Energy users and battery backup power systems: AC powered Smoke/CO Alarms should only be operated

with true or pure sine wave inverters. Operating this Alarm with most battery-powered UPS (uninterruptible power supply) products or square wave or "quasi sine wave" inverters will damage the Alarm. If you are not sure about your inverter or UPS type, please consult with the manufacturer to verify. Smoke Alarms for the hearing impaired: Special purpose Smoke Alarms

should be installed for the hearing impaired. They include a visual alarm and an audible alarm horn, and meet the requirements of the Americans With Disabilities Act. Can be interconnected so if one unit senses smoke, all units

Smoke alarms are not to be used with detector guards unless the combination has been evaluated and found suitable for that purpose

All these Smoke Alarms are designed to provide early warning of fires in located, installed and cared for as described in the user's manual, and if smoke reaches the Alarm. If you are unsure which type of Smoke Alarm tinstall, refer the National Fire Protection Association (NFPA) Standard 72 (National Fire Alarm Code) and NFPA 101 (Life Safety Code). National Fire tion Association, One Batterymarch Park, Quincy, MA 02269-910 Local building codes may also require specific units in new construction or in different areas of the home.

# **SPECIAL COMPLIANCE CONSIDERATIONS**

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

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

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

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

## 4. Hotels and Motels:

Also boarding houses and dormitories. This unit is suitable for use inside individual sleeping/resident rooms, provided a primary fire detection system already exists to meet fire detection requirements in common areas like obbies, hallways, or porches. Using this 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.

### **GENERAL LIMITATIONS OF SMOKE/CO ALARMS**

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

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

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

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

This Smoke/CO Alarm may not sense smoke or CO on another level of **the home.** Example: This alarm device, installed on the second floor, may not sense smoke or CO in the basement. For this reason, one alarm device may

not give adequate early warning. Recommended minimum protection is one alarm device in every sleeping area, every bedroom, and on every level of your home. Some experts recommend battery powered Smoke and CO Alarms be used in conjunction with interconnected AC powered Smoke Alarms. For details, see "About Smoke Alarms" for details.

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

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 sulting 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

you must test this device weekly. The unit should be replaced immediately f it is not operating properly This Smoke/CO Alarm is not foolproof. Like all other electronic devices this Smoke/CO Alarm has limitations. It can only detect smoke or CO that reaches the sensors. It may not give early warning of the source of smoke or CO is in a remote part of the home, away from the alarm device.

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,

TROUBLESHOOTING GUIDE		
If the Alarm	Problem	You should
The BATTERY light flashes GREEN and the horn "chirps" every 30 seconds.	Low battery warning.	Install a new 9V alkaline or lithium battery*.
Horn chirps and yellow service light blinks three times every 30 seconds.	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.
Carbon Monoxide Alarm ONLY:		
CO Alarm goes back into alarm 4 minutes after you press the Test/Silence button.	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. If not, press the Test/Silence button again and keep ventilating your home.
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."	Relocate your Alarm. If frequent alarms continue, have home rechecked 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.	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 "F	Regular Maintenance."	

# LIMITED WARRANTY

BRK Brands, Inc., ("BRK") the maker of First Alert® brand products warrants that for a period of five years from the date of purchase, this product will be free from defects in material and workmanship. BRK, at its option, will repair or replace this product or any component of the product found to be defective during the warrant 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

If you have questions that cannot be answered by reading this manual, call Consumer Affairs at 1-800-323-9005, M-F 7:30 a.m. to 5:00 p.m. (CST)

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

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

low to Obtain Warranty Service

vith respect to battery

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

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

Date Purchased:
Where Purchased:

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

Printed in Mexico M08-0015-003 **Q** 08/07

### INSTALLATION

First Alert

**USER'S MANUAL** 

SMOKE AND CARBON MONOXIDE ALARM

Carbon Monoxide and Smoke Alarm

UL 217

**UL 2034** 

Model SC01N

Features:

Separate sensors to detect smoke

Powered by a single 9V alkaline of

and CO. The two alarm systems

Flip-open battery door for easy

Large, easy-to-use Test button

IMPORTANT! PLEASE READ CAREFULLY AND SAVE.

This user's manual contains important information

about your Smoke/CO Alarm's operation

If you are installing this Smoke/CO Alarm for use by

or a copy of it—with the end user.

M08-0015-003 Q 08/07 Printed in Mexico

Where This Alarm Should NOT Be Installed

What You Need To Know About CO ......

Potential Sources of CO in the Home .

Regulatory Information for CO Alarms . . .

Regulatory Information for Smoke Alarms .

Recommended Locations for Smoke Alarms ...

How Can I Protect My Family From CO Poisoning? .....

Special Compliance Considerations ......

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All First Alert® Smoke Alarms conform to regulatory requirements.

including UL217 and are designed to detect particles of combustion. Smoke particles of varying number and size are produced in all fires.

lonization 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.

before bursting into flame. Sources of these fires may include cigarettes burning in couches or bedding.

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

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;

Keep alarms clean, and test them weekly. Replace alarms immediately if they

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

are not working properly. Smoke Alarms that do not work cannot alert you

Dangers, Warnings, and Cautions alert you to important operating instructions or to potentially hazardous situations

• This Smoke/CO Alarm is approved for use in single-family

This combination Smoke/Carbon Monoxide Alarm has two separate

alarms. The CO Alarm is not designed to detect fire or any other gas. It will only indicate the presence of carbon monoxide gas at the sensor. Carbon monoxide gas may be present in other areas. The

Smoke Alarm will only indicate the presence of smoke that reaches the sensor. The Smoke Alarm is not designed to sense gas, heat or

This Smoke/CO Alarm cannot operate without a working battery.

NEVER ignore any alarm. See "If Your Smoke/CO Alarm Sounds" for

potential problem after any alarm. Failure to do so can result in

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

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 that may make them more sensitive to carbon

monoxide may consider using warning devices which provide

audible and visual signals for carbon monoxide concentrations under 30 ppm. For additional information on carbon monoxide

and your medical condition contact your physician.

The Silence Feature is for your convenience only and will not correct a Smoke/CO problem. Always check your home for a

at the end of its service life, removes your protection.

iving the battery for any reason, or failing to replace the battery

nation on how to respond to an alarm. Failure to respond

residences. It is NOT designed for marine or RV use

of escape from an upper floor in case stairs are blocked.

Pay special attention to these items.

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

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status" and "service needed."

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can result in injury or death.

properly, it cannot alert you to a probler

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work independently

lithium battery

# WHERE TO INSTALL THIS ALARM

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

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

NOTE: For added protection, install an additional Smoke/CO Alarm at least

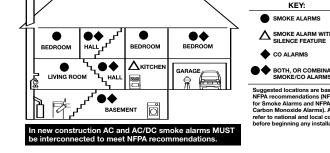
20 feet (6 meters) away from the furnace or fuel burning heat source where possible. In smaller homes or in manufactured homes where this distance cannot be maintained, install the Alarm as far away as possible from the furnace or other fuel burning source. Installing the Alarm closer than 20 feet (6 meters) 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

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



- When installing on the wall, the top edge of Smoke Alarms should be placed between 4 inches (102 mm) and 12 inches (305 mm) from the wall/ceiling line.
- When installing on the ceiling, place the alarm as close to the center
- In either case, install at least 4 inches (102 mm) from where the wall and ceiling meet. See "Avoiding Dead Air Spaces" for more information. NOTE: For any location, make sure no door or other obstruction could keep carbon monoxide or smoke from reaching the Alarm.

# Installing Smoke/CO Alarms in Mobile Homes

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

#### WHERE THIS ALARM SHOULD NOT BE INSTALLED Do NOT locate this Smoke/CO Alarm:

- In garages, kitchens, furnace rooms, crawl spaces and unfinished attics. Avoid extremely dusty, dirty or greasy areas.
- Where combustion particles are produced. Combustion particles form when something burns. Areas to avoid include poorly ventilated kitchens, garages, and furnace rooms. Keep units at least 20 feet (6 meters) from the sources of combustion particles (stove, furnace, water heater, space heater) if possible. In areas where a 20-foot distance is not possible – in modular, mobile, or smaller homes, for example - it is recommended the Smoke Alarm be placed as far from these fuel-burning sources as possible. The placement recommendations are intended to keep these Alarms at a reasonable distance from a fuel-burning source, and thus duce "unwanted" or "nuisance" alarms. Unwanted alarms can occur a Smoke Alarm is placed directly next to a fuel-burning source. Ventilate these areas as much as possible.
- Within 5 feet (1.5 meters) of any cooking appliance. In air streams near kitchens. Air currents can draw cooking smoke into the smoke sensor
- 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 turbulent air, like near ceiling fans or open windows. Blowing air may prevent CO or smoke from reaching the sensors.
- In areas where temperature is colder than 40°F (4°C) or hotter than 100°F (38°C). These areas include non-airconditioned crawl spaces, unfinished attics, uninsulated or poorly insulated ceilings, porches, and garages.
- In insect infested areas. Insects can clog the openings to the sensing chamber. • Less than 12 inches (305 mm) away from fluorescent lights. Electrical
- "noise" can interfere with the sensor. In "dead air" spaces. See "Avoiding Dead Air Spaces"

# AVOIDING DEAD AIR SPACES

"Dead air" spaces may prevent smoke from reaching the Smoke/CO Alarm To avoid dead air spaces, follow installation recommendations below On ceilings, install Smoke/CO Alarms as close to the center of the ceiling as ssible. If this is not possible, install the Smoke/CO Alarm at least 4 inches

(102 mm) from the wall or corner. For wall mounting (if allowed by building codes), the top edge of Smoke/CO Alarms should be placed between 4 inches (102 mm) and 12 inches (305 mm) from the wall/ceiling line, below typical "dead air" spaces 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.

# **HOW TO INSTALL THIS ALARM**

# IMPORTANT!

This combination Smoke/CO Alarm was designed to be mounted on the ceiling or wall. It is not a tabletop device. You must install this device on the ceiling or wall as outlined below. Read "Where To Install This Alarm" before

# Tools you will need: pencil, drill with 3/16" or 5mm drill bit, PREPARE YOUR ALARM LABELS

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

- On each label write in the phone number of your emergency responder (like 911) and a qualified appliance technician. • Place one label near the Smoke/CO Alarm, and the other label in the
- "fresh air" location you plan to go if the alarm sounds. **NOTE:** A qualified appliance technician is defined as "a person, firm, corporation, or company that either in person or through a representative, is

### bustion equipment. ACAUTION!

. Do not connect this unit to any other alarm or auxiliary device. It is a single-station unit that cannot be linked to other devices Connecting anything else to this unit may prevent it from working properly.

engaged in and responsible for the installation, testing, servicing, or replace-

ment of heating, ventilation, air conditioning (HVAC) equipment, combustior appliances and equipment, and/or gas fireplaces or other decorative com-

- Do not install this unit over an electrical junction box. Air currents around junction boxes can prevent smoke from reaching the sensing chamber and prevent the unit from alarming. Only AC power units are intended for installation over junction boxes. 1. Hold base firmly and twist the mounting
- 2. Hold the mounting bracket against the ceiling (or wall) and use a pencil to mark the center of each mounting slot.
- 3. Put the unit where it won't get covered

it from the unit.

- with dust when you drill the mounting holes 4. Using a 3/16-inch (5 mm) drill bit, drill a hole through each pencil mark.
- 5. Insert the plastic screw anchors into the holes. Tap the screw anchors gently with a hammer, if necessary, until they are flush with the ceiling or

7. Screw the mounting bracket to the ceiling

6. Line the mounting bracket up over the

the unit cannot receive battery power.

NOTE: The unit may beep briefly when you

battery power.

AWARNING!

Type of Alarm

Smoke

Low Battery

Service

AWARNING!

must not ignore it!

IF THE CO ALARM SOUNDS:

RESPONDING TO AN ALARM

AWARNING!

AWARNING!

AWARNING!

operation.

Alarms" for details.

iniury or death.

WHAT TO DO IN CASE OF FIRE

dressed or collect anything.

Take short, shallow breaths.

Give your address, then your name.

**USING THE SILENCE FEATURE** 

cover of the Smoke/CO Alarm for 3 seconds.

The Smoke Alarm will remain silent

for 8 minutes, then return to normal

If the smoke has not cleared-or

will go back into alarm.

1. Operate the Test/Silence button.

number of your local emergency service here:

Carbon Monoxide (CO)

install the battery. This is normal.

you the unit will not operate without a battery.

The GREEN Light flashes about every

30 seconds when the unit is receiving

The battery door will not close unless a battery is installed. This warns

Align the tabs on the base with the tabs on the mounting bracket. Turn the base until it snaps into place.

11. Test the Smoke/CO Alarm. See "Weekly Testing" for details.

IF YOUR SMOKE/CO ALARM SOUNDS

What You See

and Hear

IF THE CO ALARM SOUNDS

10. If the cover does not line up the way you wanted, adjust it by slowly

WHAT TO DO FIRST-IDENTIFY THE TYPE OF ALARM

Battery Light: Flashing GREEN

Service Light: Flashing YELLOW Horn: 3 quick chirp

every 30 seconds

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

2. Call your emergency services, fire department or 911. Write down the

3. Immediately move to fresh air—outdoors or by an open door or window

4. After following steps 1-3, if your CO Alarm reactivates within a 24-hour

out, and your CO Alarm remains in its normal condition.

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

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

adjacent to the residence. Write down the number of a qualified appliance

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

information about CO safety and this equipment. Make sure that motor vehicles are not, and have not, been operating in an attached garage or

If the unit alarms and you are not testing the unit, it is warning you

of a potentially dangerous situation that requires your immediate attention. NEVER ignore any alarm. Ignoring the alarm may result in

Never remove the batteries from a battery operated Smoke Alarm to stop an unwanted alarm (caused by cooking smoke, etc.). Removing batteries disables the alarm so it cannot sense smoke, and removes

your protection. Instead open a window or fan the smoke away from

. If the unit alarms get everyone out of the house immediately.

• Feel doors with the back of your hand before opening them

Cover your nose and mouth with a cloth (preferably damp).

and do a head count to make sure everybody got out safely.

• Contact your Fire Department for ideas on making your home safer.

Alarms have various limitations. See "General Limitations of Smoke/CO

Never remove the batteries to quiet an unwanted alarm. Removing the

identify and correct the problem. Do not use the Silence Feature in emergency

The Silence Feature is intended to temporarily silence the horn while you

To use the Silence Feature, press and hold the Test/Silence button on the

When the Smoke Alarm is Silenced When the CO Alarm is silenced

• Call the Fire Department as soon as possible from outside.

• Meet at your planned meeting place outside your home

Never go back inside a burning building for any reason.

batteries disables the alarm and removes your protection.

situations. It will not correct a CO problem or extinguish a fire.

• Get out of the house as quickly as possible. Don't stop to get

If a door is cool, open it slowly. Don't open a hot door. Keep doors and windows closed, unless you must escape through them.

• Don't panic; stay calm. Follow your family escape plan

the unit. The alarm will reset automatically

What You See and Hear

CO Light: Flashing RED

Horn: 4 beeps,

Smoke Light:

Horn: 3 beeps

pause, 4 beeps, pause

pause, 3 beeps, pause

Indicates: You Should...

Maintenance."

"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.

Install new 9V alkaline o

batteries, see "Regular

Device is not Working

lithium battery. For a list of

plastic screw anchors.

- or wall through the mounting slots using the two screws provided. 8. Before attaching the Alarm to the bracket. insert the 9V battery (included) into the battery compartment. Match the terminals on the end of the battery with the terminals on the unit. Match "+" to "+" and "-" to "-." Push the battery in until it snaps in
- ehicle exhaust! Exhaust may cause permanent damage and voids your warranty. DO NOT stand close to the Alarm when the horn is sounding Exposure at close range may be harmful to your hearing. When testing, step away when horn starts sounding. securely and cannot be shaken loose. If Carbon Monoxide and Smoke Alarm he battery is not snapped in completely TEST

#### ACAUTION!

**WEEKLY TESTING** 

AWARNING!

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

- First, the BATTERY (green) and SERVICE (yellow) lights will flash
- briefly—this is normal. Next, the Smoke Alarm will sound. The smoke symbol will flash, and

NEVER use an open flame of any kind to test this unit. You might

The built-in test switch accurately tests the unit's operation as required by Underwriters Laboratories, Inc. (UL). NEVER use

ly damage or set fire to the unit or to your home

you will hear this horn pattern: 3 beeps, pause, 3 beeps, pause. • Finally, the CO Alarm will sound. The CO symbol will flash, and you will hear this horn pattern: 4 beeps, pause, 4 beeps, pause.

If the unit does not alarm, make sure the battery is correctly installed, and

**NOTE:** During testing, if the yellow service light comes on and the horn "chirps" 3 times, the device should be serviced or replaced. After testing, if the horn starts to "chirp" every 30 seconds, replace the

### Use only the replace

ment batteries listed below. The unit may no operate properly with other batteries. Never use rechargeable batteries

- Clean the Smoke/CO Alarm at least once a month; gently vacuum the outside of the Smoke/CO Alarm using your household vacuum's soft brush attachment. Test the Smoke/CO Alarm. Never use water, cleaners
- and/or grime, and cannot be cleaned to avoid unwanted alarms, replace the unit immediately.

# Choosing a replacement battery:

Eveready (Energizer) #522. You may also use a Lithium battery like the Ultralife U9VL-J for longer service life between battery changes. **These batteries are** 

# IMPORTANT!

ment 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 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,

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

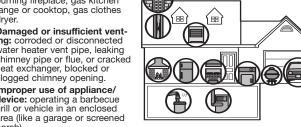
Medium Exposure: Throbbing headache, drowsiness, confusion, fast heart rate. Exposure to Carbon Monoxide can cause brain damage, death.

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

# 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

 House well ventilated before the investigator arrives. IF THE SMOKE ALARM SOUNDS • 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**



The following conditions can result in transient CO situations:

1. Excessive spillage or reverse venting of fuel appliances caused by outdoor

• Wind direction and/or velocity, including high, gusty winds. Heavy air in

Several appliances running at the same time competing for limited

• Vent pipe connections vibrating loose from clothes dryers, furnaces, or water heaters.

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.

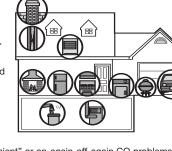
to pay for any carbon monoxide investigation or service call.

can make it difficult to locate sources of CO:

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

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



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

the vent pipes (cold/humid air with extended periods between cycles). Negative pressure differential resulting from the use of exhaust fans.

• Obstructions in or unconventional vent pipe designs which can amplify the above situations.

2. Extended operation of unvented fuel burning devices (range, oven, fireplace).

potentially dangerous the horn will continues to increase-the device start sounding again.

The CO alarm will remain silent for

After 4 minutes, if CO levels remain

test again. If the unit still does not alarm, replace it immediately.

## **REGULAR MAINTENANCE** AWARNING!

- since they may not provide a constant charge. This unit has been designed to be as maintenance-free as possible, but there
- are a few simple things you must do to keep it working properly: Test it at least once a week.
- or solvents since they may damage the unit. • If the Smoke/CO Alarm becomes contaminated by excessive dirt, dust

# Relocate the unit if it sounds frequent unwanted alarms. See "Where This Alarm Should Not Be Installed" for details.

Your Smoke/CO Alarm requires one standard 9V battery. The following batteries are acceptable as replacements: Duracell #MN1604, (Ultra) #MX1604;

# Actual battery service life depends on the Smoke/CO Alarm and the environ-

available at many local retail stores.

WHAT YOU NEED TO KNOW ABOUT CO

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.

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

**IMPORTANT!** This CO Alarm measures exposure to CO over time. It alarms if CO levels

# immediately!