



Carbon Monoxide Alarms User's Guide



MODEL 7200 - PLUG-IN WITH 10-YEAR
SEALED BATTERY BACK-UP



MODEL 7000 - 10-YEAR SEALED
BATTERY OPERATED

ATTENTION: Please thoroughly read this User's Guide, which should be saved for future reference and passed on to any subsequent owner. This Guide contains important information about your carbon monoxide (CO) alarm's operation.

¡En Español!

La configuración predeterminada de la alarma es inglés. Si presiona el botón "Estado" dos veces, la notificación idioma se cambiará al español.

Si desea ver esta guía en español, visite www.knox.com/safety



Intertek

Conforms to UL STD 2034
5020949

Part no. OPE-KXSFTY-0528

ABOUT THIS CO ALARM

Model 7000 – Battery (DC) powered unit features a sealed-in, non-removable / non-replaceable battery.

Model 7200 – Direct Plug-In (AC) unit 120VAC~, 60Hz, 0.01A, 3V with a sealed-in, non-removable / non-replaceable lithium battery for backup.

Once each model reaches the end of its service life, or after 10-years – whichever comes first – the unit will alert you that it needs to be replaced, and you will need to install a new CO alarm.

Sensor:

Electrochemical

Sensor life:

10 years

Alarm Response Times:

CO sensor will not alarm to levels of CO below 30 ppm and will alarm in the following time range when exposed to the corresponding levels of CO

- 70 ppm CO Concentration 60 –240 minutes
- 150 ppm CO Concentration 10 –50 minutes
- 400 ppm CO Concentration 4 –15 minutes

Product Warranty:

10-Year product life and warranty

Temperature:

Operating range shall be between 40°F and 100°F (4°C and 38°C)

Humidity:

Operating range shall be 10% -95% non-condensing relative humidity.

Audible Alarm:

85dB at 10', piezoelectric sounder

Separate speaker produces directions in the event of a status change.

See “Alarm Notifications” section for additional details.

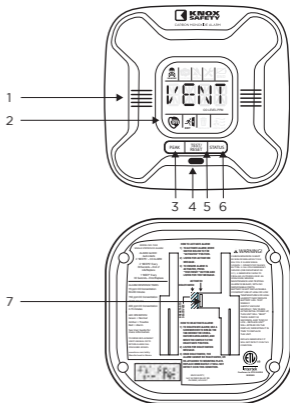
Display:

Digital display produces directions in the event of a status change.

See “Alarm Notifications” section for additional details.

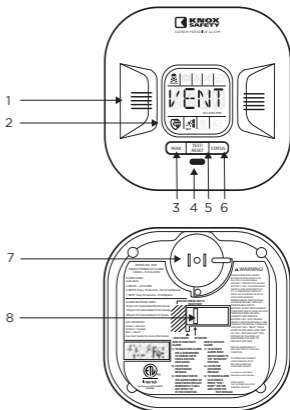
Parts of Your CO Alarm - Model 7000

1. Alarm horn/Speaker (behind cover) - communicates alerts
2. Display - for change in status messages and alerts
3. Peak Button - registers highest level of CO detected
4. LED
5. Test/Reset button - use for weekly testing or to temporarily reset/silence notifications
6. Status - provides audible and visual confirmation of unit status
7. Activation and Deactivation Tab - on the rear of the unit

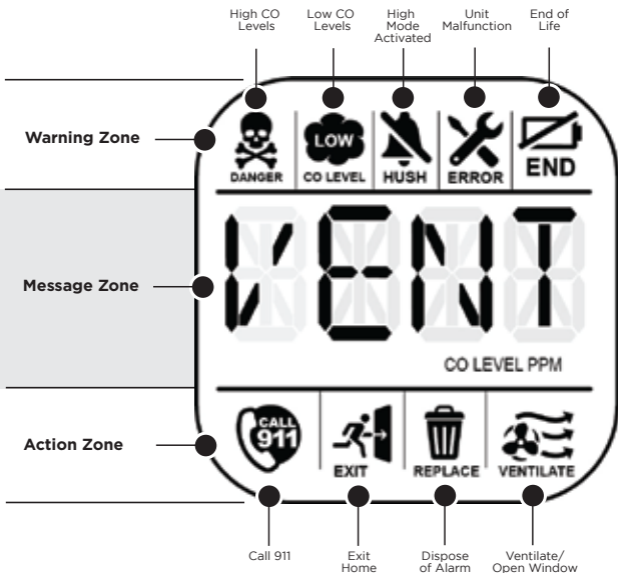


Parts of Your CO Alarm - Model 7200

1. Alarm horn/Speaker (behind cover) - communicates alerts
2. Display - for change in status messages and alerts
3. Peak Button - registers highest level of CO detected
4. LED
5. Test/Reset button - use for weekly testing or to temporarily reset/silence notifications
6. Status - provides audible and visual confirmation of unit status
7. Rotating AC Plug - on the rear of the unit.
8. Activation and Deactivation Tab - on the rear of the unit



READING THE DIGITAL DISPLAY



The icons and the language displayed on the screen provide a description of the changes in alarm status, and direction in case of an emergency:

- Top portion of display provides alarm alert status
- Bottom portion can provide instructions on how to react to a warning
- Center will scroll important messages about the status of your alarm

See "**ALARM NOTIFICATIONS**" for more information.

WHERE TO INSTALL YOUR CO ALARM



IN A SINGLE-LEVEL HOME: Install at least one CO alarm near or within each separate sleeping area. For added protection, install an additional CO alarm at least 20 feet (6 meters) away from the furnace or fuel burning heat source.

IN A MULTI-LEVEL HOME: Install at least one CO alarm near or within each separate sleeping area. For added protection, install at least one CO alarm on each level of the home. If you have a basement, install that CO alarm at the top of the basement stairs. For added protection, install an additional CO alarm at least 20 feet (6 meters) away from the furnace or fuel burning heat source.

IN A MOBILE HOME: Install CO alarms on inside walls ONLY. Uninsulated outside walls and roofs of mobile homes often transfer heat and cold from outdoors.

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 in alarms in each separate bedroom, and install one on every level of your home. If your hallway is longer than 40 feet (12 meters), bedroom CO alarm at BOTH ends of the hallway.

WHERE THIS CO ALARM SHOULD NOT BE INSTALLED

- In garages, kitchens, furnace rooms, or in any extremely dusty, dirty or greasy areas.
- Closer than 20 feet (6 meters) from a furnace or other fuel burning heat source, or fuel burning appliances like a water heater.
- Within 5 feet (1.5 meters) of any cooking appliance. In extremely humid areas. This alarm should be at least 10 feet (3 meters) from a bath or shower, sauna, humidifier, vaporizer, dishwasher, laundry room, utility room or other source of high humidity.
- In areas where temperature is colder than 40° - (4.4° C) or hotter than 100° F (37.8° C). These areas include unconditioned crawl spaces, unfinished attics, uninsulated or poorly insulated ceilings, porches, and garages.
- In turbulent air, like near ceiling fans, heat vents, air conditioners, fresh air returns, or open windows. Blowing air may prevent CO from reaching the sensors.
- In direct sunlight.
- More than 6 feet (1.8 meters) off the ground.

For your records, please record:

Date Purchased: _____

Where Purchased: _____

Date Installed:

_____/_____/_____ Month/Year

Replace alarm 10 years after installation

Please write the date in the space provided

_____/_____/_____ Month/Year

HOW TO INSTALL THIS ALARM - MODEL 7200

*NOTE - READ "WHERE TO INSTALL YOUR CO ALARM" PRIOR TO INSTALLATION

Prior to installation, find the pair of self-adhesive labels included with this CO alarm. On each label write in the phone number of your emergency responder (e.g., 911) and a qualified appliance technician. Place one label near the CO alarm, and the other label in the "fresh air" location you plan to go if the alarm sounds.

*NOTE: ACTIVATE ALARM PRIOR TO PLUGGING INTO OUTLET

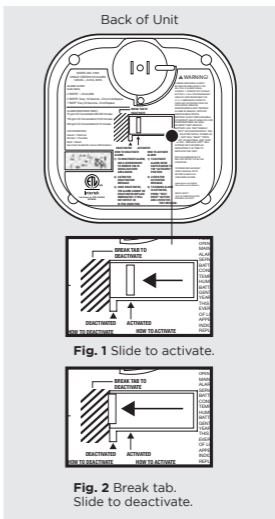
1. Activating the Battery. Move the activation switch to the ACTIVATED position. If necessary, you may use a small tool to help activate switch if needed. Once unit is activated, it cannot be turned off, only permanently deactivated. (Fig. 1)

***NOTE: Alarm will beep and will announce that it has been activated, both audibly and visually. Please follow those directions.**

2. Test the CO alarm by pressing the "Test/Reset" button.
3. This alarm should be installed in a standard 120V non-switchable outlet. If the outlet is mounted horizontally, the plug may be rotated 90° for installation.

***NOTE: Do not rotate the alarm while it is plugged in, as it may cause damage to the unit.**

4. To minimize the risk of permanent damage, this alarm should not be plugged into an outlet which is higher than 6 feet (1.8 meters) from the floor.



HOW TO PERMANENTLY DEACTIVATE THIS ALARM

*NOTE - DEACTIVATION IS PERMANENT, AND CANNOT BE REVERSED

This CO alarm contains a sealed-in, non-replaceable / non-removeable battery. Once it reaches the end of its service life, or after 10 years, whichever comes first, the unit will alert you that it needs to be replaced, and you will need to install a new CO alarm.

5. You can permanently deactivate the unit by using a tool to break the tab underneath the cross-hatched area and moving the activation switch to the DEACTIVATED position. (Fig. 2)

HOW TO INSTALL THIS ALARM - MODEL 7000

*NOTE - READ "WHERE TO INSTALL YOUR CO ALARM" PRIOR TO INSTALLATION

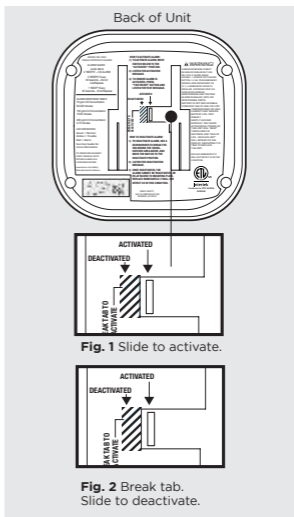
Prior to installation, find the pair of self-adhesive labels included with this CO alarm. On each label write in the phone number of your emergency responder (e.g., 911) and a qualified appliance technician. Place one label near the CO alarm, and the other label in the "fresh air" location you plan to go if the alarm sounds.

*NOTE: ACTIVATE ALARM PRIOR TO ATTACHING MOUNTING BRACKET

1. Activating the Battery. Move the activation switch to the ACTIVATED position. If necessary, you may use a small tool to help activate switch if needed. Once unit is activated, it cannot be turned off, only permanently deactivated. (Fig. 1)

***NOTE: Alarm will beep and will announce that it has been activated, both audibly and visually. Please follow those directions.**

2. Test the CO alarm by pressing the "Test/Reset" button.
3. This alarm can be mounted to a wall or can be used with the included stand to rest on a tabletop - see "INSTALLATION OF ALARM BRACKET AND DESK STAND" for additional details.
4. To minimize the risk of permanent damage, this alarm should not be mounted to the wall or rest on a surface which is higher than 6 feet (1.8 meters) from the floor.



HOW TO PERMANENTLY DEACTIVATE THIS ALARM

*NOTE - DEACTIVATION IS PERMANENT, AND CANNOT BE REVERSED

This CO alarm contains a sealed-in, non-replaceable / non-removeable battery. Once it reaches the end of its service life, or after 10 years, whichever comes first, the unit will alert you that it needs to be replaced, and you will need to install a new CO alarm.

5. You can permanently deactivate the unit by using a tool to break the tab underneath the cross-hatched area and moving the activation switch to the DEACTIVATED position. (Fig. 2)

INSTALLATION OF ALARM BRACKET AND DESK STAND - MODEL 7000 ONLY

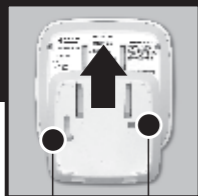


FIGURE A

#2

#1



FIGURE B



FIGURE C

*NOTE: ACTIVATE ALARM PRIOR TO ATTACHING MOUNTING BRACKET












FOR TABLE-TOP USE

1. Align bracket with the rear of alarm (FIGURE A), and slide guides up until they snap into place.
2. Align holes on the base of the bracket with posts of desk stand (FIGURE B), and slide alarm and bracket onto these posts until they snap into place (FIGURE C).
3. Place on horizontal surface which is no more than 6 feet (1.8 meters) from the floor.

FOR WALL MOUNTING

1. Prior to mounting, choose a location on the wall. Do not install the alarm closer than 4 inches (102 mm) from ceiling, or more than 6 feet (1.8 meters) from the floor.
2. Place the mounting bracket (FIGURE A) on the wall, and use the screws and anchors provided to secure it - mount through screw hole #1 before #2 to ensure proper alignment.
3. Align bracket with the rear of the alarm, and slide alarm down over guides until it snaps into place.

ALARM NOTIFICATIONS

Unit Status	Scrolling Display	Icons	LED Status	Alarm Sound	Voice Message
Alarm condition: Dangerous concentrations of CO detected	DANGEROUS CO LEVEL: XXX PPM -EVACUATE IMMEDIATELY		Red LED flashes 4 times, one second off, repeating	4 quick beeps, voice message, 4 quick beeps, no voice, repeating	"Dangerous Level of Carbon Monoxide detected! Evacuate immediately. Dial 911! Press status button to repeat this message"
Alarm condition in "Hush" Mode: "Test/Reset" button has been pressed	HUSHED-DANGEROUS CO LEVEL: XXX PPM -EVACUATE IMMEDIATELY		Red LED flashes 4 times, one second off, repeating	None -unit is hushed until CO reaches dangerous levels (and returns to alarm), or 6 minutes elapses (and returns to normal state)	"Your alarm is in Hush mode. If the level of Carbon Monoxide reaches dangerous levels, your unit will go back into alarm. Please follow those directions. Press status button to repeat this message"
End of Unit Life (10 years after power up)	END OF LIFE -PLEASE DEACTIVATE AND REPLACE UNIT IMMEDIATELY		Amber LED flashes three times every 60 seconds	Three quick beeps, every 60 seconds	"Your unit has come to the end of its usable life. Replace unit immediately. Unit will not respond to CO. Press status button to repeat this message"
End of Unit Life in "Hush" Mode - "Test/Reset" Button has been pressed	HUSHED-END OF LIFE- PLEASE DEACTIVATE AND REPLACE UNIT IMMEDIATELY		Amber LED flashes three times every 60 seconds	None -unit is hushed for 12 hours, then will return to alarm	"Your unit is in Hush mode. It has come to the end of its usable life. Replace unit immediately. Unit will not respond to CO. Press status button to repeat this message"
Unit Error -Unit has gone into error for noted reason	-ERROR -SPECIFIC ERROR INDICATED- PLEASE DEACTIVATE AND REPLACE UNIT IMMEDIATELY		Amber LED blinks twice every 60 seconds	Two quick beep every 60 seconds	"Your unit has experienced an error. Replace unit immediately. Unit will not respond to CO. Press status button to repeat this message."
Peak Level Memory activated: Highest concentration of CO detected is displayed	PEAK LEVEL OF XXX PPM CO DETECTED		None	None	"Your unit is not currently in alarm but has previously detected carbon monoxide -the peak level detected is visible on the display. You may want to check for a potential source of carbon monoxide. If your unit detects a dangerous level of carbon monoxide -it will go into alarm. Please follow those directions. To reset your unit, press and hold the peak button."
Low Battery	LOW BATTERY -REPLACE UNIT		Amber LED flashes once every 60 seconds	One quick beep every 30 seconds	"The batteries in your unit are low. Replace unit immediately. Press status button to repeat this message"
Low Battery in "Hush" mode: "Test/Reset" Button has been pressed	HUSHED-LOW BATTERY -REPLACE UNIT		Amber LED flashes once every 60 seconds	None -unit is hushed for 12 hours, then will return to alarm	"Your unit is in Hush mode. The batteries in your unit are low. Replace unit immediately. Press status button to repeat this message"
Normal Operation: Subsequent "Status" Button press	FINE -NORMAL OPERATION		Green LED flashes ONCE every 30 seconds.	None	"Your Alarm will need to be replaced in "- years and "-- months> Press status button to repeat this message."
Low Level Warning (>70 PPM Before Alarm): Low or mid level concentrations of CO detected	CO LEVEL: XXX PPM - VENTILATE (30 PPM or greater displayed)		Red LED flashes 2 times every 10 seconds	2 quick beeps every 10 seconds, repeating	"Low Level of Carbon Monoxide detected. Seek fresh air or open a window. Press and hold the test button to hush this alert. If alert recurs, or if unit goes into full alarm, please follow those directions. Press status button to repeat this message"
Low Level Warning (>70 PPM Before Alarm) in "Hush" mode: "Test/Reset" Button has been pressed	HUSHED-CO LEVEL: XXX PPM -VENTILATE (30 PPM or greater displayed)		Red LED flashes 2 times every 10 seconds	None -unit is hushed until CO reaches dangerous levels (and returns to alarm), or 6 minutes elapses (and returns to normal state)	"Your alarm is in Hush mode. If the level of Carbon Monoxide reaches dangerous levels, your unit will go back into alarm. Please follow those directions. Press status button to repeat this message"

USING THE RESET/HUSH FEATURE

WARNING! The Reset/Hush feature is for your convenience only and will not correct a CO problem. Always check your home for a potential problem after any alarm. Failure to do so can result in injury or death.

The Reset/Hush feature is intended to temporarily silence your CO alarm's alarm horn while you correct the problem - it will not correct a CO problem. While the alarm is hushed it will continue to monitor the air for CO.

To activate the Reset/Hush feature:
Press the "Test/Reset" button until the horn is silent.

Once you activate the Reset/Hush feature the hushed cycle will last approximately 6 minutes.

***NOTE:** After the initial 6-minute hushed cycle, the CO alarm re-evaluates present CO levels. If CO levels remain potentially dangerous - or start rising higher - the horn will start sounding again.

HUSHING THE END-OF-LIFE SIGNAL

The "Test/Reset" button can also be used to temporarily hush the End-of-Life signal. When unit reaches its end-of-life, it will announce that it needs to be replaced, and will beep twice every 30 seconds. By pressing the "Test/Reset" button, these beeps can be hushed for up to 7 days, for a period of 12 hours after each button press.

USING THE PEAK LEVEL MEMORY FEATURE

The peak level memory feature lets you check the highest level of CO recorded by your alarm.

If the digital display reads “PEAK”, press the “Peak” button once and your unit will display the peak level of CO recorded since the last time it was reset.

While your unit is not currently in alarm it has previously detected carbon monoxide - the peak level detected is visible on the display. You may want to check for a potential source of carbon monoxide. If your unit detects a dangerous level of carbon monoxide - it will go into alarm. Please follow those directions.

To clear the Peak level memory, press the “Peak” button a second time.

If you plan to call someone to investigate a potential CO problem, do not clear the peak level until the investigation has been completed.

CHANGING THE LANGUAGE FROM ENGLISH TO SPANISH

Your alarm can provide audio and visual notifications in both English and Spanish. The default setting for the alarm is English.

If you press the “Status” button twice, the notification language will be changed to Spanish.

To return to English, repeat that process.

If you have questions that cannot be answered by reading this manual, please contact our Customer Service Team at 800-552-5669.

TESTING AND MAINTENANCE

WEEKLY TESTING

WARNING!

- Test this alarm once a week. If the alarm ever fails to test correctly, have it replaced immediately! If the alarm is not working properly, it cannot alert you to a problem.
- 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. You can test this CO alarm by pressing the Test/Reset button. The alarm will announce that it is about to perform a test. Then, the horn will sound: 4 beeps, announce "Dangerous Level of Carbon Monoxide detected! Evacuate immediately. Dial 911! Press status button to repeat this message," then 4 more beeps. If the unit does not alarm, make sure it has been activated correctly and test again. If the unit still does not alarm, replace it immediately.

WARNING!

- DO NOT try fixing the alarm yourself - this will void your warranty! If the CO alarm is still not operating properly, and it is still under warranty, please see "How to Obtain Warranty Service" in the Limited Warranty. Install a new CO alarm immediately.
- NEVER use vehicle exhaust to test your alarm! Exhaust may cause permanent damage and voids your warranty.

REGULAR MAINTENANCE TO KEEP THE CO ALARM IN GOOD WORKING ORDER

- Test it every week using the "Test/Reset" button.
- Vacuum the CO alarm cover once a month, using the soft brush attachment. Never use water, cleaners, or solvents, since these may damage the unit. Test the CO alarm again after vacuuming.

WARNING!

Please dispose of or recycle the alarm 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 ALARM IN FIRE. BATTERIES MAY EXPLODE OR LEAK. DO NOT spray cleaning chemicals or insect sprays directly on or near the CO alarm. DO NOT paint over the CO alarm. Doing so may cause permanent damage.

IMPORTANT!

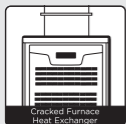
Household cleaners, aerosol chemicals, and other contaminants can affect the sensor. When using any of these materials near the CO alarm, make sure the room is well ventilated.

WHAT YOU NEED TO KNOW ABOUT CO:

WHAT IS CO? CO is an invisible, odorless, tasteless gas produced when fossil fuels do not burn completely or are exposed to heat (usually fire). Electrical appliances typically do not produce CO. These fuels include: Wood, coal, charcoal, oil, natural gas, gasoline, kerosene, and propane. Common appliances are often sources of CO. If they are not properly maintained, are improperly ventilated, or malfunction, CO levels can rise quickly. CO is a real danger now that homes are more energy-efficient. "Airtight" homes with added insulation, sealed windows, and other weatherproofing can "trap" CO inside.

NOTE: This unit is sealed. The cover is not removable

SOURCES OF CARBON MONOXIDE



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

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

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

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

The following conditions can result in transient CO situations:

- 1) Excessive spillage or reverse venting of fuel burning appliances caused by:
 - i) Outdoor ambient conditions such as wind direction and/or velocity, including high gusts of wind; heavy air in the vent pipes (cold/humid air with extended periods between cycles).
 - ii) Negative pressure differential resulting from the use of exhaust fans.
 - iii) Simultaneous operation of several fuel burning appliances competing for limited internal air.
 - iv) Vent pipe connection vibrating loose from clothes dryers, furnaces, or water heaters.
 - v) Obstructions in or unconventional vent pipe designs which amplify the above situations.
- 2) Extended operation of unvented fuel burning devices (range, oven, fireplace, etc.).
- 3) Temperature inversions which can trap exhaust gasses near the ground.
- 4) Car idling in an open or closed attached garage, or near a home.

SYMPTOMS OF CO POISONING

These symptoms are related to CO POISONING and should be discussed with ALL household members:

- **Mild Exposure:** Slight headache, nausea, vomiting, fatigue ("flu-like" symptoms).
- **Medium Exposure:** Throbbing headache, drowsiness, confusion, fast heart rate.
- **Extreme Exposure:** Convulsions, unconsciousness, heart and lung failure. Exposure to carbon monoxide can cause brain damage, death.

WARNING!

Many cases of reported CO POISONING indicate that while victims are aware they are not well, they become so disoriented they are unable to save themselves by either exiting the building or calling for assistance.

IMPORTANT!

This CO alarm measures exposure to CO over time. It alarms if CO levels are extremely high in a short period of time, or if CO levels reach a certain minimum over a long period of time. The CO alarm generally sounds an alarm before the onset of symptoms in average, healthy adults. 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 the elderly can be more quickly and severely affected by CO. If you experience even mild symptoms of CO poisoning, consult your doctor immediately!

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 screened-in porches.
- Check for exhaust backflow from CO sources.
- Check the draft hood on an operating furnace for 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 CO ALARMS

WHAT LEVELS OF CO CAUSE AN ALARM?

Underwriters Laboratories Inc. Standard UL2034 requires residential CO alarms to sound when exposed to the levels of CO and exposure times 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 50 MINUTES.
- 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 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 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: A CO alarm is not formulated to detect CO levels below 30 ppm typically. UL tested for false alarm resistance to Methane (500 ppm), Butane (300 ppm), Heptane (500 ppm), Ethyl Acetate (200 ppm), Isopropyl Alcohol (200 ppm) and Carbon Dioxide (5000 ppm). Values measure gas and vapor concentrations in parts per million.

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

GENERAL LIMITATIONS OF CO ALARMS

This CO alarm is intended for residential use. It is not intended for industrial applications where Occupational Safety and Health Administration (OSHA) requirements for carbon monoxide alarms must be met. This device is not intended to alert hearing impaired residents. CO alarms are not yet available for the hearing impaired.

CO alarms may not wake all individuals.

Practice an escape plan at least twice a year, ensuring 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 awaken to the sound of the CO alarm, or if there are infants or family members with mobility limitations, make sure that someone is assigned to assist them in the event of an emergency. It is recommended that you hold a fire drill while family members are sleeping to determine in their response to the sound of the CO alarm while sleeping and decide whether or not they may need assistance in the event of an emergency.

CAUTION! This CO alarm will not sense CO that does not reach its sensor.

It will only sense CO at the sensor. CO may be present in other areas. Doors or other obstructions may affect the rate at which CO reaches the sensors. If bedroom doors are usually closed at night, we recommend installing a CO alarm in each bedroom and in the hallway between them.

This CO alarm may not sense CO on another level of the home.

Example: This alarm device, installed on the second floor, may not sense CO in the basement. For this reason, one alarm device may not give adequate early warning.

CO alarms may not be heard.

The alarm horn loudness meets or exceeds current UL standards of 85 dB at 10 feet (3 meters). However, if the 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 drinking alcoholic beverages. This is especially true if the door is closed or only partly open. Even persons who are awake may not hear the alarm horn if the sound is blocked by distance or closed doors. Noise from traffic, stereo, radio, television, air conditioner, or other appliances may also prevent alert persons from hearing the alarm horn. This CO alarm is not intended for people who are hearing impaired.

This CO alarm is not a substitute for life insurance. Though this CO alarm warns against increasing CO levels, Knox Safety, Inc. does not warrant or imply in any way that they will protect lives. Homeowners and renters must still insure their lives.

This CO alarm has a limited life.

Although this CO alarm and all its parts have passed many stringent tests and are designed to be as reliable as possible, any of these parts could fail at any time. Therefore, you must test this device weekly. The unit should be replaced immediately if it is not operating correctly.

This CO alarm is not foolproof.

Like all other electronic devices, this CO alarm has limitations. It can only detect CO that reaches the sensors. It may not give early warning of the source of CO in a remote part of the home, away from the alarm device.

Individuals with medical problems may consider using warning devices which provide audible and visual signals for carbon monoxide concentrations under 30 PPM.

WARNING

Carbon Monoxide cannot be seen or smelled but can kill you. A signal from your alarm may indicate the presence of Carbon Monoxide.

If the alarm signal sounds:

- 1) Operate the TEST/RESET button.
- 2) Call your emergency services (Fire Department or 911)
Write down the number of you Fire Department here:

Phone# _____

- 3) Immediately move to fresh air – outdoors or by an open door or window. Check to make sure that all residents are accounted for. Do not re-enter the premises or move away from the open door or window until the emergency services responder has arrived, the premises have been aired out, and your carbon monoxide alarm returns to and remains in its normal operating condition.
- 4) After following steps 1-3, if your alarm re-activates within a 24-hour period, repeat steps 1-3 and contact a qualified appliance technician to look for sources of carbon monoxide from fuel-burning 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 manufacturer's instructions or contact the manufacturer(s) directly for more information about carbon monoxide safety and this equipment. Confirm that motor vehicles are not, and have not been, operating in an attached garage or adjacent to your residence. Write down the Technician's phone number here:

Phone# _____

LOCATING THE SOURCE OF CO AFTER AN ALARM

Carbon monoxide is an odorless, invisible gas, which makes it challenging 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:

- Residence well ventilated prior to investigator arrival.
- Issue 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. Knox Safety shall not be obligated to pay for any carbon monoxide investigation or service call.

IMPORTANT WARNING STATEMENTS

WARNING!

This CO alarm is approved for use in single-family residences. It is NOT designed for marine or RV use. This carbon monoxide alarm is designed to detect carbon monoxide gas from ANY source of combustion. This CO alarm is not designed to detect smoke, 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 installation of this alarm is not a substitute for proper installation, use, and maintenance of fuel-burning appliances, including ventilation and exhaust systems. It does not prevent CO from occurring, nor can it solve an existing CO problem.

This carbon monoxide alarm will not sense smoke, fire, or any poisonous gas other than carbon monoxide even though carbon monoxide can be generated by fire. For this reason, you must install smoke alarms to provide early warning of fire and to protect you and your family from fire and its related hazards.

Audible and Visual notifications from this alarm alert you to essential directions or potentially dangerous situations. Please be aware and take note of these notifications. See "ALARM NOTIFICATIONS" to better understand this alarm. Failure to respond can result in injury or death.

This CO alarm will not operate without battery power. It will not operate until the battery has been activated – see "HOW TO INSTALL YOUR CO ALARM" for activation instructions. The reset/silence features of this alarm are designed for your convenience and provide you with time to correct a potential issue. They will not correct a problem. See "USING THE RESET FEATURES" for details.

Always check your home for a potential problem after any alarm. Failure to do so can result in injury or death. Test this CO alarm once a week. If the alarm ever fails to test correctly, have it replaced immediately! If the alarm is not working properly, it cannot alert you to a problem. See "TESTING AND MAINTENANCE" for more information. 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.

LIMITED WARRANTY

Knox Safety, Inc. ("Knox Safety") warrants that, for a period of ten (10) years from the date of purchase, this product will be free from defects in material and workmanship. Knox Safety, at its option, will repair or replace this product or any component of the product found to be defective during the warranty period. Replacement will be made with a new or re-manufactured product or component. If the product is no longer available, replacement may be made with a similar product of equal or greater value. Knox Safety's liability hereunder is expressly limited to such replacement or repair as set forth above. This is your exclusive warranty. This warranty is valid for the original retail purchaser from the date of initial retail purchase and is not transferable. Keep the original sales receipt. Proof of purchase is required to obtain warranty service. Knox Safety dealers, service centers, or retail stores selling Knox Safety products do not have the right to alter, modify or in any way change the terms and conditions of this warranty. This warranty may not be amended or altered without the written confirmation of Knox Safety. This warranty does not cover, and shall be void with respect to, (a) normal wear of parts or (b) damage resulting from any of the following: negligent use or misuse of the product, tampering of the product, neglect, improper installation, operation in environmental conditions in excess of Knox Safety's specifications, use on improper voltage or current, use contrary to the operating instructions, disassembly, other causes not arising from defects in material and workmanship, or repair or alteration by anyone other than Knox Safety or an authorized service center. Further, the warranty does not cover Acts of God, including but not limited to, flood, earthquakes, hurricanes, tornadoes or as a result of pandemics or endemics. Knox Safety shall not, under any circumstance, be liable (whether in contract, or in tort (including negligence)) for any incidental, consequential or special damages (even if such damages were foreseeable or if Knox Safety has been informed of their potential) including without limitation re-procurement costs, lost revenues, lost profits or loss of data costs, 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. In such states, provinces or jurisdictions, Knox Safety's entire liability is limited to the full extent permitted by law. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state or province to province.

HOW TO OBTAIN WARRANTY SERVICE

If service is required, do not return the product to your retailer. In order to obtain warranty service, contact the Customer Service Team at 1-800-552-5669. To assist us in serving you, please have the model number and date of purchase available when calling. For Warranty Service return to: Knox Safety, Inc., 1601 W. Deer Valley Rd., Phoenix, AZ 85027

Your Knox Safety carbon monoxide alarm is not a substitute for property, disability, life or other insurance of any kind. Any such insurance coverage is your responsibility.

DISPOSAL

Waste electrical products should not be disposed of with regular household waste. Please recycle where facilities exist. Check local requirements for disposal of Lithium metal electronic devices. The alarm should be deactivated before disposal. See, "How To Permanently Deactivate This Alarm". You can also return your alarm to US for disposal. For return address see above. Please include a note confirming the product is being returned for disposal. Visit www.knox.com/safety for more information.