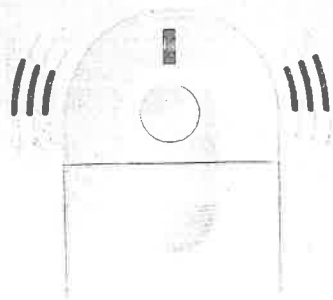




Smoke and Carbon Monoxide Alarm User Guide

Model: KN-COSM-IBACA (900-0119)



120 V AC Operated with 2-AA Front-Loading Battery Backup

⚠ ATTENTION: Please take a few minutes to thoroughly read this user guide, which should be saved for future reference and passed on to any subsequent owner.

User Guide P/N 2544-7202-04 EN 04/2020

Features

- Loud 85 decibel alarm.

What to do When the Alarm Sounds!

Carbon Monoxide Alarm Procedure



WARNING: Activation of the CO Alarm indicates the presence of Carbon Monoxide (CO) which can kill you.

If the alarm sounds 4 quick "beeps", 5 seconds off:

- 1) Immediately move to fresh air – outdoors or by an open door/window. Do a head count to check that all persons are accounted for. Do not re-enter the premises nor move away from the open door/window until the emergency services responders have arrived, the premises have been aired out, and your alarm remains in its normal condition.

- 2) Call your local emergency service, (fire department or 911)

PHONE NUMBER:

Never restart the source of a CO problem until it has been corrected. Never ignore the sound of the alarm!

If the alarm is sounding, pressing the test/reset button will terminate the alarm. If the CO condition that caused the alert in the first place continues, the alarm will reactivate. If the unit alarms again within six minutes, it is sensing high levels of CO which can quickly become a dangerous situation.

Features

What to do When the Alarm Sounds!

NEVER IGNORE THE SOUND OF THE ALARM!

Determining what type of alarm has sounded is easy with your Combination Smoke/CO Alarm. The voice message warning system will inform you of the type of situation occurring. Refer to the Features section on pages 4-5 for a detailed description of each alarm pattern.

What To Do If The Alarm Sounds When the smoke alarm sounds:

Smoke alarms are designed to minimize false alarms. Cigarette smoke will not normally set off the alarm, unless the smoke is blown directly into the alarm. This unit contains nuisance alarm protection, which will reduce the impact of cooking particles. However, large quantities of combustible particles from spills or broiling could still cause the unit to alarm. Careful location of the unit away from the kitchen area will give the maximum nuisance alarm protection. Combustion particles from cooking may set off the alarm if located too close to the cooking area. Large quantities of combustible particles are generated from spills or when broiling. Using the fan on a range hood which vents to the outside (non-recirculating type) will also help remove these combustible products from the kitchen.

If the alarm sounds, check for fires first. If a fire is discovered follow these steps. Become thoroughly familiar with these items, and review with all family members!

- Alert small children in the home. Children sleep very sound and may not be awakened by the sound of the smoke alarms.
- Leave immediately using one of your planned escape routes (see page 26). Every second counts, don't stop to get dressed or pick up valuables.

Features

Smoke Alarm

What to do When the Alarm Sounds!

- Before opening inside doors look for smoke seeping in around the edges, and feel with the back of your hand. If the door is hot use your second exit. If you feel it's safe, open the door very slowly and be prepared to close immediately if smoke and heat rush in.
- If the escape route requires you to go through smoke, crawl low under the smoke where the air is clearer.
- Go to your predetermined meeting place. When two people have arrived one should leave to call 911 from a neighbor's home, and the other should stay to perform a head count.
- **Do not reenter under any circumstance until fire officials say that it is safe to do so.**
- **There are situations where a smoke alarm may not be effective to protect against fire as noted by the NFPA Standard 72. For instance:**
 - Smoking in bed
 - Leaving children unsupervised
 - Cleaning with flammable liquids, such as gasoline
 - Fires where the victim is intimate with a flaming initiated fire; for example, when a person's clothes catch fire while cooking
 - Fires where the smoke is prevented from reaching the detector due to a closed door or other obstruction
 - Incendiary fires where the fire grows so rapidly that an occupant's egress is blocked even with properly located detectors

Features

- Loud 85 decibel alarm.
- Permanent independent smoke and carbon monoxide sensors.
- **Smoke alarm takes precedence** when **both** smoke and carbon monoxide are present.
- Powered by 120V AC (60 Hz, 45 mA max) wire-in connector and two AA battery backup.
- Interconnectable to other Kidde smoke and CO alarms (see page 16 for details).
- Alarm/Voice message warning system that alerts you of the following conditions in the manner described below, thus eliminating any confusion over which alarm is sounding:

FIRE: The alarm/voice pattern is three long alarm beeps followed by the verbal warning message "FIRE!" This pattern is repeated until the smoke is eliminated. The red LED light will flash while in alarm/voice mode.

CARBON MONOXIDE: The alarm/voice pattern is four short alarm beeps followed by the verbal warning message "WARNING! CARBON MONOXIDE!". This continues until the unit is reset or the CO is eliminated. While powered by battery only, after four minutes the alarm/voice pattern will sound once every minute. The red Light Emitting Diode (LED) light will flash while in alarm/voice mode.

LOW BATTERY: When the batteries are low and need replacing the red LED light will flash and the unit will "chirp" one time, followed by the warning message "LOW BATTERY." This cycle will occur once every minute and will continue for at least seven days. Under battery power, the "LOW BATTERY" voice only occurs once every 15 minutes.

- Voice Message System that alerts user to the following conditions:

– Only for smoke alarm Hush

System announces "HUSH MODE ACTIVATED" when the unit is first put into HUSH Mode.

– Only for smoke alarm Hush

System announces "HUSH MODE CANCELLED" when unit resumes normal operation after Hush Mode has been cancelled.

– Only if button is pushed

System announces "CARBON MONOXIDE PREVIOUSLY DETECTED" when the unit has detected CO concentrations of 100 ppm or higher.

– System announces "PUSH TEST BUTTON" when the unit is powered up, reminding user to activate the Test Button.

- End of Life Hush. At end of product life, the button can be pushed to silence the end of life "chirp" for approximately 3 days at a time, for a maximum of 30 days life extension.
- One "chirp" every 30 seconds coupled with a green LED flash twice a second is an indication that the alarm is malfunctioning. If this occurs call the Product Support Line at 1-800-880-6788.
- Test/Reset button performs functions. (See page 15).
- HUSH Control Feature that silences the unit during nuisance alarm situations (see pages 16-17).
- Peak Level Memory Feature which alerts user when the unit has detected CO concentrations of 100 ppm or greater (see page 17).
- Alarm Memory Feature that gives visual indication when an alarm has sensed a hazardous condition.
- Green and red LED lights that indicate normal operation and alarm status (see page 18 for details).
- Tamper Resist Feature that deters children and others from removing the alarm (see page 19).
- Battery reminder flag that prohibits installation when batteries are not present.

Smoke Alarm

The smoke alarm monitors the air for products of combustion that are produced when something is burning or smoldering. When smoke particles in the smoke sensor reach a specified concentration, the alarm/voice message warning system will sound, and be accompanied by the flashing red LED light. The smoke alarm takes precedence when both smoke and carbon monoxide are present.

WARNING: PLEASE READ CAREFULLY AND THOROUGHLY

NFPA 72 states: Life safety from fire in residential occupancies is based primarily on early notification to occupants of the need to escape, followed by the appropriate egress actions by those occupants. Fire warning systems for dwelling units are capable of protecting about half of the occupants in potentially fatal fires. Victims are often intimate with the fire, too old or young, or physically or mentally impaired such that they cannot escape even when warned early enough that escape should be possible. For these people, other strategies such as protection-in-place or assisted escape or rescue are necessary.

- Smoke alarms are devices that can provide early warning of possible fires at a reasonable cost; however, alarms have sensing limitations. Ionization sensing alarms may detect invisible fire particles (associated with fast flaming fires) sooner than photoelectric alarms. Photoelectric sensing alarms may detect visible fire particles (associated with slow smoldering fires) sooner than ionization alarms. Home fires develop in different ways and are often unpredictable. For maximum protection, Kidde recommends that both Ionization and Photoelectric alarms be installed.
- A battery powered alarm must have a battery of the specified type, in good condition and installed properly.
- Smoke alarms must be tested regularly to make sure the batteries and the alarm circuits are in good operating condition.
- Smoke alarms cannot provide an alarm if smoke does not reach the alarm. Therefore, smoke alarms may not sense fires starting in chimneys, walls, on roofs, on the other side of a closed door or on a different floor.

Features

- If the alarm is located outside the bedroom or on a different floor, it may not wake up a sound sleeper.
- The use of alcohol or drugs may also impair one's ability to hear the smoke alarm. For maximum protection, a smoke alarm should be installed in each sleeping area on every level of a home.
- Although smoke alarms can help save lives by providing an early warning of a fire, they are not a substitute for an insurance policy. Home owners and renters should have adequate insurance to protect their lives and property.

Carbon Monoxide (CO) Alarm

The Carbon Monoxide (CO) alarm monitors the air for the presence of CO. It will alarm when there are high levels of CO present, and when there are low levels of CO present over a longer period of time (see below for alarm times). When a CO condition matches either of these situations, the alarm/voice message warning system will sound, and be accompanied by the flashing red LED light. The carbon monoxide sensor uses an electrochemical technology.

 **CAUTION:** This alarm will only indicate the presence of carbon monoxide gas at the sensor. Carbon monoxide gas may be present in other areas.

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

CO Alarm Response Times

Never restart the source of a CO problem until it has been fixed. NEVER IGNORE THE ALARM!

The CO sensor meets the alarm response time requirements as follows:
At 70 PPM, the unit must alarm within 60-240 minutes.
At 150 PPM, the unit must alarm within 10-50 minutes.
At 400 PPM, the unit must alarm within 4-15 minutes.

Alarm Removal

IF TAMPER RESIST FEATURE HAS BEEN ACTIVATED, REFER TO TAMPER RESIST FEATURE DESCRIPTION ABOVE FOR REMOVAL INSTRUCTIONS.

Remove the alarm from the mounting bracket by rotating the alarm in the direction of the "OFF" arrow on the cover.

If any form of battery failure is detected the red LED light will flash and the unit will "chirp" one time, followed by the warning message "LOW BATTERY". This cycle will occur once every minute, and will continue for at least seven days. On battery power, the "LOW BATTERY" voice occurs once every 15 minutes.

If the red LED light flashes along with a chirp every 30 seconds, and is not followed by the voice message "LOW BATTERY" as described above, and if the green LED flashes twice per second (AC power only) your unit has malfunctioned. Call our toll free Product Support Line at 1-800-880-6788 for instructions on how to return the unit.

BATTERY INSTALLATION AND REMOVAL

To replace or install the batteries slide the battery door in the direction indicated on the cover of the alarm.

When installing new batteries into the carrier, make sure that the polarity matches the markings printed on the inside of the battery compartment, press the battery reminder finger down into the battery compartment and install the battery (see Figure 6). Completely slide the battery door to the closed position. A missing or improperly installed battery will prevent the battery door from closing and result in improper alarm operation.



SLIDE

OPEN

INSERT

FIGURE 5

Battery Replacement

Replace batteries with one of the following approved brands: **Energizer E91**. These batteries can be purchased at your local retailer.

WARNING: Use only the batteries specified. Use of different batteries may have a detrimental effect on the Smoke/CO alarm. A good safety measure is to replace the batteries twice a year, at the same time. A good safety measure is to replace the batteries twice a year, at the same time you change your clocks for daylight saving time.

IMPORTANT: Constant exposures to high or low humidity may reduce battery life. A good safety measure is to replace the battery at least once a year, or at the same time as you change your clocks for daylight saving time.



FIGURE 6

Battery finger

Alarm Replacement

End of Life Notification

Ten (10) years after unit is first powered, this alarm will beep two times every 30 seconds to indicate it is time to replace the alarm.

REPLACE IMMEDIATELY! IT WILL NOT DETECT CO IN THIS CONDITION.

End of Life Hush can be activated by pushing the test button to silence the End of Life chirp for approximately 3 days at a time for a maximum of 30 day life extension.

General Maintenance

To keep your Smoke/CO Alarm in good working order, please follow these simple steps:

- Verify the unit's alarm and LED lights operation by pushing the test/reset button once a week.
- Remove the unit from mounting bracket and vacuum the alarm cover and vents with a soft brush attachment once a month to remove dust and dirt. REINSTALL IMMEDIATELY AFTER CLEANING AND THEN TEST USING THE TEST/RESET BUTTON!
- Never use detergents or other solvents to clean the unit.
- Avoid spraying air fresheners, hair spray, or other aerosols near the Smoke/CO Alarm.

Do not paint the unit. Paint will seal the vents and interfere with the sensor's ability to detect smoke and CO. Never attempt to disassemble the unit or clean inside. This action will void your warranty.

Move the Smoke/CO Alarm and place in another location prior to performing any of the following:

- Staining or stripping wood floors or furniture
- Painting or wall papering
- Using adhesives

Storing the unit in a plastic bag during any of the above projects will protect the sensors from damage. Do not place near a diaper pail.

WARNING: Reinstall the Smoke/CO Alarm as soon as possible to assure continuous protection.

When household cleaning supplies or similar contaminants are used, the area must be well ventilated. The following substances can effect the CO sensor and may cause false readings and damage to the sensor:

Methane, propane, iso-butane, iso-propanol, ethyl acetate, hydrogen sulfide, sulfide dioxides, alcohol based products, paints, thinner, solvents, adhesives, hair spray, after shave, perfume, and some cleaning agents.

Carbon Monoxide Safety Information

General CO Information

Carbon monoxide (CO) is a colorless, odorless, and tasteless poison gas that can be fatal when inhaled. CO inhibits the blood's capacity to carry oxygen.

Possible Sources

CO can be produced when burning any fossil fuel: gasoline, propane, natural gas, oil and wood. It can be produced by any fuel-burning appliance that is malfunctioning, improperly installed, or not ventilated correctly. Possible sources include furnaces, gas ranges/stoves, gas clothes dryers, water heaters, portable fuel burning space heaters, fireplaces, wood-burning stoves and certain swimming pool heaters. Blocked chimneys or flues, back drafting and changes in air pressure, corroded or disconnected vent pipes, and a loose or cracked furnace exchanger can also cause CO. Vehicles and other combustion engines running in an attached garage and using a charcoal/gas grill or hibachi in an enclosed area are all possible sources of CO.

The following conditions can result in transient CO situations: Excessive spillage or reverse venting of fuel-burning appliances caused by 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), negative pressure differential resulting from the use of exhaust fans, simultaneous operation of several fuel-burning appliances competing for limited internal air, vent pipe connections vibrating loose from clothes dryers, furnaces, or water heaters, obstructions in, or unconventional, vent pipe designs which can amplify the above situations, extended operation of unvented fuel-burning devices (range, oven, fireplace, etc.), temperature inversions which can trap exhaust gasses near the ground, car idling in an open or closed attached garage, or near a home.

CO Safety Tips

Every year have the heating system, vents, chimney and flue inspected and cleaned by a qualified technician.

Carbon Monoxide Safety Information

Always install appliances according to manufacturer's instructions and adhere to local building codes. Most appliances should be installed by professionals and inspected after installation. Regularly examine vents and chimneys for improper connections, visible rust, or stains, and check for cracks in furnace heat exchangers. Verify the color of flame on pilot lights and burners is blue. A yellow or orange flame is a sign that the fuel is not burning completely. Teach all household members what the alarm sounds like and how to respond.

Symptoms of CO Poisoning

Initial carbon monoxide poisoning symptoms are similar to the flu with no fever and can include dizziness, severe headaches, nausea, vomiting and disorientation. Everyone is susceptible but experts agree that unborn babies, pregnant women, senior citizens and people with heart or respiratory problems are especially vulnerable. If symptoms of carbon monoxide poisoning are experienced seek medical attention immediately. CO poisoning can be determined by a carboxyhemoglobin test.

The following symptoms are related to CARBON MONOXIDE POISONING and should be discussed with ALL members of the household:

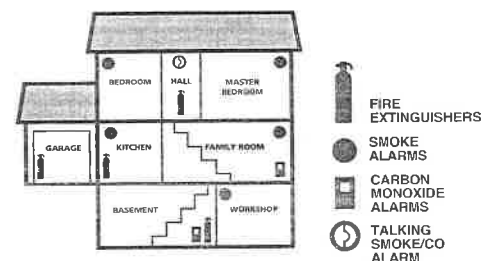
1. **Mild Exposure:** Slight headache, nausea, vomiting, fatigue (often described as "Flu-like" symptoms).
2. **Medium Exposure:** Severe throbbing headache, drowsiness, confusion, fast heart rate.
3. **Extreme Exposure:** Unconsciousness, convulsions, cardiorespiratory failure, death.

The above levels of exposure relate to healthy adults. Levels differ for those at high risk. Exposure to high levels of carbon monoxide can be fatal or cause permanent damage and disabilities. Many cases of reported carbon monoxide 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. Also, young children and household pets may be the first effected. Familiarization with the effects of each level is important.

Fire Safety Information

Escape Plan

Familiarize everyone with the sound of the smoke alarm and train them to leave the home when they hear it. Practice a fire drill at least every six months, including fire drills at night. Ensure that small children hear the alarm and wake when it sounds. They must wake up in order to execute the escape plan. Practice allows all occupants to test your plan before an emergency. You may not be able to reach your children. It is important they know what to do. Know two ways out of every room (door & window) and identify a meeting place outside the home where everyone will gather once they have exited the residence. When two people have reached the meeting place, one should leave to call 911 while the second person stays to account for additional family members.



Current studies have shown smoke alarms may not awaken all sleeping individuals, and that it is the responsibility of individuals in the household that are capable of assisting others to provide assistance to those who may not be awakened by the alarm sound, or to those who may be incapable of safely evacuating the area unassisted.

Fire Prevention

Never smoke in bed, or leave cooking food unattended. Teach children never to play with matches or lighters!

Train everyone in the home to recognize the alarm pattern, voice message warning and to leave the home using their escape plan when it's heard.

Know how to do "Stop, Drop and Roll" if clothes catch on fire, and how to crawl low under smoke.

Fire Safety Information

Install and maintain fire extinguishers on every level of the home and in the kitchen, basement and garage. Know how to use a fire extinguisher prior to an emergency. Second level and higher occupied rooms with windows, should have an escape ladder.

Industry Safety Standards

NFPA (National Fire Protection Association) Required Number of Smoke Alarms

Smoke Detection. Where required by applicable laws, codes, or standards for the specified occupancy, approved single- and multiple-station smoke alarms shall be installed as follows: (1) In all sleeping rooms. (2) Outside of each separate sleeping area, in immediate vicinity of the sleeping rooms. (3) On each level of the dwelling unit, including basements Exception: In existing one- and two-family dwelling units, approved smoke alarms powered by batteries are permitted. Check with local officials for specific regulations concerning your situation.

The required number of smoke alarms (protected areas mentioned on the previous page) might not be reliable enough to provide early warning for unprotected areas that are separated by a door. For this reason, it is recommended that the householder consider the use of additional smoke alarms for those unprotected areas, for increased protection. Additional areas include the basement, bedrooms, dining room, furnace room, utility room, and hallways not protected by the required number of smoke alarms.

The installation of smoke alarms in kitchens, attics (finished or unfinished), or garages is not normally recommended, as these locations occasionally experience conditions that can result in improper operation.

NRC

Ionization type smoke alarms use a very small amount of a radioactive element in the sensing chamber to enable detection of visible and invisible combustion products. The radioactive element is safely contained in the chamber and requires no adjustments or maintenance. This smoke alarm meets or exceeds all government standards. It is manufactured and distributed under license from the U.S. Nuclear Regulatory Commission.