



Battery Operated

Carbon Monoxide Alarm

User's Guide

**Battery operated CO alarm
without Digital display**

**MODEL: KN-COB-B
ASSEMBLY: 9C05**

**Battery operated CO alarm
With Digital Display and
Peak Level memory**

**MODEL: KN-COPP-B
ASSEMBLY: 900-0146**

***For questions concerning your Carbon Monoxide Alarm,
please call our Consumer Hotline at 1-800-654-9677.***

Please have the following information ready when calling:

CO Alarm Model Number (Located on the back of alarm):
CO Alarm Assembly Number (Located on back of alarm):
Date of Manufacture (Located on back of alarm):
Date of Purchase:
Where Purchased:

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

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Thank you for the purchase of your new Kidde carbon monoxide alarm. If you have any questions about the operation or setup of your CO alarm, feel free to call our Consumer Hotline at 1-800-654-9677.

Carbon Monoxide Overview

Your new Kidde Carbon Monoxide (CO) Alarm is a sophisticated instrument that has been carefully designed and tested to detect CO build up in a residential environments.

CO cannot be seen, smelled or tasted and can be fatal. The build up of CO in the blood is called the carboxyhemoglobin level and interferes with the body's ability to supply itself with oxygen. Depending on the concentration, carbon monoxide can kill in minutes.

The most common sources of CO are malfunctioning, or misuse of, gas appliances used for heating and cooking, vehicles engines, electric generators, blocked chimneys or flues, portable fuel burning heaters, fireplaces, fuel powered tools and operating a grill in an enclosed space.

Indications of CO poisoning include symptoms similar to the flu, but with no fever. Other symptoms include dizziness, fatigue, weakness, headache, nausea, vomiting, sleepiness and confusion. Everyone is susceptible to the danger of CO, but unborn babies, small children, pregnant women, senior citizens and people with heart or respiratory problems may experience symptoms sooner. Each year a qualified technician should inspect and clean your heating system, vents, chimney, and flues.

Your new Kidde CO alarm has a five year limited warranty. Please take a few minutes to thoroughly read the user's guide and familiarize yourself and your family with its operation. Your Kidde CO alarm was designed to detect carbon monoxide gas from ANY source of combustion. It is NOT designed to detect smoke, fire or any other gases. If you have any questions please call our Consumer Hotline at 1-800-654-9677.

This manual and the products described are copyrighted, with all rights reserved. Under these copyright laws, no part of this manual may be copied for use without the written consent of Kidde. If you require further information, contact our Consumer Hotline, or write to us at:

Kidde

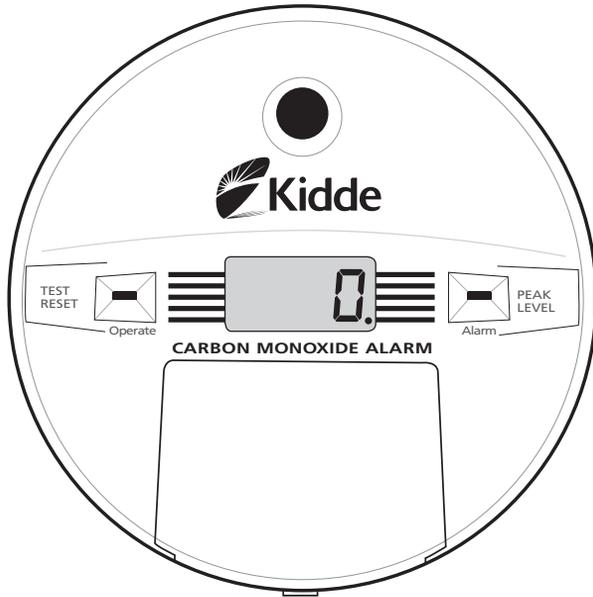
1394 South Third Street, Mebane, NC 27302

Consumer Hotline: 1-800-654-9677

www.kiddeus.com

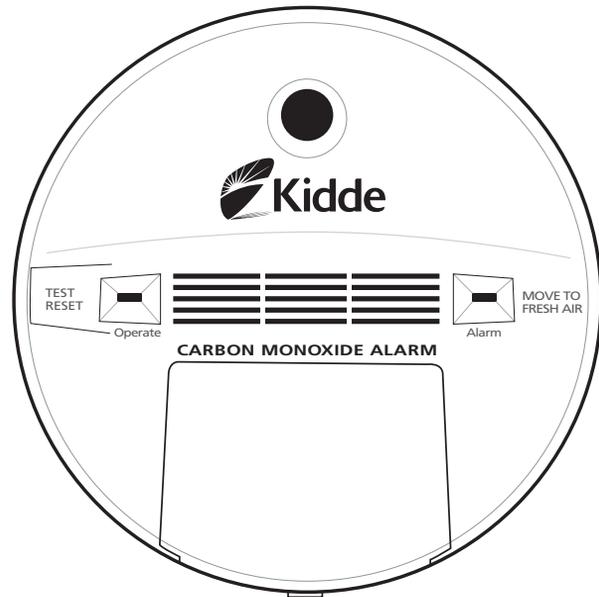
Kidde Product View

900-0146 Digital display model



Kidde Product View

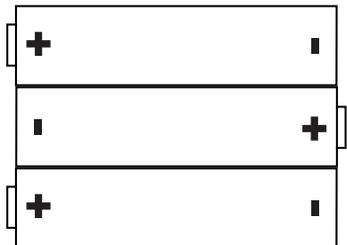
non-digital 9CO5 model



Quick Set Up

Remove the three enclosed AA batteries and install them into the battery well. Carefully place the red battery warning flags into the battery well. Observe the battery polarity markings at the bottom of the battery well. After approximately 30 seconds, your CO alarm will begin monitoring for CO.

Your Kidde CO Alarm is now operational.



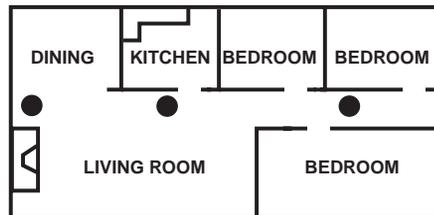
Installation Instructions

Installation Location

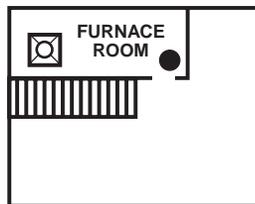
When choosing your installation locations, make sure you can hear the alarm from all sleeping areas. If you install only one carbon monoxide alarm in your home, install the alarm near bedrooms, not in the basement or furnace room.

Recommended Locations

Upper Levels of Home



Basement Levels of Home



- If you have only one alarm, place it near sleeping areas.
- Position near fuel burning appliances, near fireplaces, furnace or hot water heater.

Installation Instructions

Mounting

1. Using the template provided (see page 25). Mark the location on wall.
2. Insert the two screws provided until the screw heads are approximately 1/8" from wall. (If mounting in plaster board or drywall, drill 3/16" hole and use the plastic anchors provided.)
3. Hook the Kidde CO Alarm unit over the screws onto keyholes in back of unit.

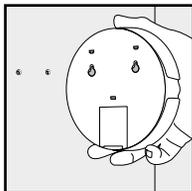


Figure 1

The digital model may also be placed on a tabletop. Simply fold out the stand located on the back of the unit and place in a location that is easily visible.

Two self adhesive labels are included with the CO alarm. Add the phone number of your emergency service provider in the space provided. Place one label next to the alarm and one label near a fresh air source such as a door or window.

Where To Install Your Kidde CO Alarm

The following suggestions are intended to help you with the placement and installation of your Kidde CO Alarm.

- When wall mounting, place out of the reach of children. Under no circumstance should children be allowed to handle the CO alarm.
- Install in a sleeping area.
- Placing at eye level allows for optimum monitoring of the digital display.
- Insure that all vents of the unit are unobstructed.
- For tabletop mounting we recommend the unit be placed no higher than three feet from the floor.

WARNING: The installation of this device should not be used as a substitute for proper installation, use, and maintenance of fuel-burning appliances, including appropriate ventilation and exhaust systems.

Installation Instructions (cont.)

Where NOT To Install Your Kidde CO Alarm

- Do not install in dead air spaces such as peaks of vaulted ceilings, or gabled roofs.
- Do not install in turbulent air from ceiling fans. Do not place near fresh air vents or close to doors and windows that open to the outside.
- Keep the CO alarm away from excessively dusty, dirty, or greasy areas such as kitchens, garages and furnace rooms. Dust, grease and household chemicals can affect the sensor.
- Keep out of damp and humid areas such as the bathroom. Avoid spraying aerosols near the CO alarm.
- Do not install in areas where the temperature is below 40 degrees Fahrenheit (4.4° Celsius) or hotter than 100 degrees Fahrenheit (37.8° Celsius) during use. This unit can be stored to -10 degrees Fahrenheit without harm to the alarm but it must be above 40 degrees Fahrenheit for use.
- Do not place behind curtains or furniture. CO must be able to reach the sensor for the unit to accurately detect CO.
- DO NOT locate Alarm within 5 feet (1.5 meters) of any cooking appliance.
- **Be aware** that certain conditions can result in transient CO situations, such as: i) Excessive spillage or reverse venting of fuel-burning appliances caused by: 1) outdoor ambient conditions, such as wind direction and/or velocity, including high gusts or wind and insufficient draft in vent pipes; 2) negative pressure differential resulting from the use of exhaust fans; 3) simultaneous operation of several fuel-burning appliances competing for limited internal air; 4) loose vent pipe connections from fuel-fired appliances; 5) obstructions, or unconventional vent pipe designs which can amplify the above situations; 6) poorly designed and maintained chimneys and/or vents; ii) extended operation of unvented fuel-burning devices (range, oven, fireplace, etc.); iii) temperature inversions which can trap exhaust near the ground; and iv) car idling in an open or closed attached garage, or near a home.

Features and Operation of Digital Display Model

Your new Kidde Battery Powered CO Alarm utilizes sophisticated electronic components to protect you and your family from the dangers of CO.

Unique features include a digital display capable of displaying CO concentrations in (PPM) Parts Per Million and the highest levels of CO detected. Familiarize yourself with these features:

Digital Display Backlight Feature

To help see the displayed reading in the dark, a backlight appears when the peak level button is pressed.

Digital Display - Shows CO level in PPM

Your Kidde CO alarm continuously displays a digital readout of the CO level in Parts Per Million (PPM). The digital display is capable of detecting and displaying readings between 30 and 999 (PPM). **A reading of 0 PPM is expected under normal conditions** (see figure 2).



Figure 2

You will become accustomed to glancing at the display in much the same manner as you look at a thermometer or clock. The unit will not automatically display reading below 30 PPM. However, readings between 11 and 999 PPM will be stored in the Peak Level Memory.

Features and Operation of Digital Display Model (cont.)

Other Possible Displays and Their Meanings

The following symbols will appear on the display during normal or error operations, and are explained below.

Normal Operation

Normal operation (see figure 3) with a full battery. The dot in the lower right corner cycles on and off every 5 seconds. If CO is present the display will indicate the reading in Parts Per Million (PPM).



Figure 3

Normal Operation following Power-up or Reset

Figure 4 shows the normal display immediately after installing batteries or after the test/reset button is pressed. The display should change to the normal display (see figure 3) approximately 30 seconds after pressing the test/reset button. (see Test/Reset Button page 13).



Figure 4

If the test/reset button is pressed, the alarm will sound. The display will show a number during the time that the alarm is sounding. This number is a normal part of the test function, and does not indicate a CO reading.

Peak Level Display

When the peak level button is pressed and held, the display shows the highest CO reading taken by the CO alarm since its last peak level reset or power-up (Example shown in Figure 5). The backlight will illuminate for several seconds after the peak level button is pressed to help see the reading.

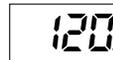


Figure 5

Although the peak level feature will display levels below 30 PPM, these levels will not result in an alarm no matter how long the device is exposed to these levels.

Peak Level Display (Cont.)

The peak level feature is helpful in identifying low level CO occurrences below 30 PPM. Although the unit will not automatically display levels below 30 PPM, it will detect and store these readings in memory. By pressing the peak level button, concentration levels as low as 11 and up to 999 PPM will be displayed.

Concentrations of CO between 0 and 30 PPM can often occur in normal, everyday conditions. Concentrations of CO below 30 PPM may be an indication of a transient condition that may appear today and never reappear. Just a few examples of conditions and/or sources that may cause low level readings are heavy automobile traffic, a running vehicle in an attached garage, an appliance that emits CO when starting up, a fire in a fireplace or charcoal in a nearby barbecue. A temperature inversion can trap CO generated by traffic and other fuel burning appliances causing readings of CO.

Some CO conditions may start out as low level leaks but could develop into CO concentrations that could become harmful. If this happens, the CO alarm will detect the dangerous level and alarm, notifying you and others of the conditions. DO NOT ignore high concentration readings above 30 PPM or a CO alarming device that is in alarm. Refer to page 18 for more details.

Resetting the Peak Level Reading

To reset or clear the peak level reading, press and hold the peak level button and then press and hold the test/reset button at the same time. The number on the display will return to 0 PPM. CO concentrations displayed below 30 PPM in memory are for reference only and the accuracy of the concentration shown may not be as accurate as noted on page 26.

Note: The peak level reading will also be reset when the batteries are removed.

Unit Malfunction

In the rare event that your alarm malfunctions, it will alert you with a short “chirp” and the red LED will flash once every 30 seconds. The digital model will display “Err” as shown in Fig. 6.

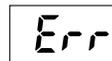


Figure 6

Seven years after initial power up, this unit will "chirp" every 30 seconds to indicate that it is time to replace the alarm. The unit will not detect CO in this condition. Please replace immediately.

Note: Your Kidde CO Alarm will NOT monitor CO levels while an error warning is being displayed.

Low Battery

If the batteries become “low”, the alarm will alert you with a short “chirp” and the red LED will flash once every 30 seconds for up to 7 days. The digital models will display “Lb” as shown in Fig. 7.

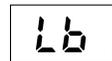


Figure 7

Features and Operation of Digital Display and Non-digital Display Models (cont.)

Test/Reset Button

The test/reset button is used to test the unit's electronics and to reset the unit during alarm.

Test the unit:

To test, press the test/reset button. ***Test the unit weekly!*** The unit will perform a self diagnostic test by cycling through the alarm pattern.

Familiarize yourself and family members with the alarm pattern. A CO alarm is 4 short beeps – followed by 5 seconds of silence – followed by 4 short beeps. This cycle will repeat in the event of a CO alarm. This cycle will continue for the first 4 minutes of a CO alarm and then change to one cycle every one minute until the device is reset or the CO is eliminated.

Note: For Digital Display Models

After the test/reset button is pressed, numbers appear on the display. These are not CO readings and are part of the internal testing process. Ignore these numbers !

Due to the loudness of the alarm we suggest you place your fingers over the sounder opening when testing your Kidde CO Alarm.

Reset

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 CO alarm sounds again within six minutes, it is sensing high levels of CO which can quickly become a dangerous situation.

If this happens follow *What To Do If The Alarm Sounds* on pages 18-20. Reactivation times depend on the amount of CO that caused the CO alarm to initially alarm and the amount of CO present after resetting the alarm.

Features and Operation of Digital Display and Non-Digital Display Models (cont.)

Lights

Red Alarm Light

- The red light flashing once every 30 seconds, accompanied by the alarm “chirp”, indicates the batteries need to be replaced, or the unit has malfunctioned (see figure 8).
- 4 quick flashes with alarm – followed by 5 seconds off – followed by 4 quick flashes with alarm (repeating pattern) indicates the presence of carbon monoxide. Refer to pages 18-20 for instructions on *What to do if the Alarm Sounds*.

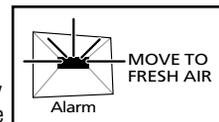


Figure 8

Green Operate Light

The green light indicates the unit is functioning properly (see figure 9). The green light will flash every 30 seconds indicating a CO reading is being taken and when any button is pressed.

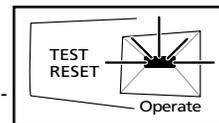


Figure 9

Battery Installation/Replacement

Installation/Replacement

Since batteries are not installed in the unit at the factory, you will need to install them.

Three AA batteries have been included with your purchase. When replacing the batteries, we recommend use of the following for a minimum of one year normal operation:

- Duracell MN1500
- Energizer E91
- Rayovac 815

These batteries can be purchased at your local retailer.

Note: Constant exposure to high or low humidity may reduce battery efficiency.

Battery Installation/Replacement (cont.)

Battery Replacement/Installation Instructions

To install or replace the batteries in your Kidde unit please perform the following steps:

1. Gently flip open the lower half of the front cover to expose the battery compartment.
2. Remove the old batteries and properly dispose of them as recommended by the battery manufacturer (see figure 10).

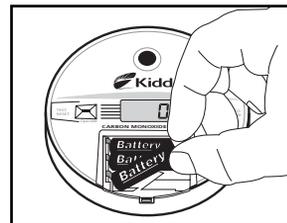
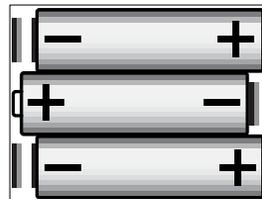


Figure 10

3. **Reinstall the new batteries, being careful to seat the red battery warning flags in the recess of the battery well.** Also, note the polarity illustration in the bottom of the battery compartment. If applicable, the unit will chirp and display **888** for approximately one minute and return to normal operation.
4. Gently close the bottom cover. **The bottom cover of your CO alarm will NOT close if all three AA batteries are not properly installed.**



Part Four – What to do When the Alarm Sounds



WARNING: Actuation of your CO Alarm indicates the presence of Carbon Monoxide (CO) which can KILL YOU.

- 1) Operate test/reset button;
- 2) Call your emergency services (fire dept. or 911);

PHONE NUMBER

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

PHONE NUMBER

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 CO safety and this equipment. Make sure that motor vehicles are not, and have not been, operating in an attached garage or adjacent to the residence.

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

What To Do If The Alarm Sounds (cont.)

Symptoms of CO Poisoning

The following common symptoms are related to carbon monoxide poisoning and should be discussed with ALL members of the household. Learn the difference between mild, medium and extreme levels.

Caution: This CO alarm will only indicate the presence of CO at the sensor. CO may be present in other areas.

Mild Exposure: Slight headache, nausea, vomiting, fatigue (often described as "Flu-like" symptoms).

Medium Exposure: Severe throbbing headache, drowsiness, confusion, fast heart rate.

Extreme Exposure: Unconsciousness, convulsions, cardiorespiratory failure, death.

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. Young children and household pets are typically the first affected.

If you experience even mild symptoms of CO poisoning, consult your doctor immediately!

What To Do If The Alarm Sounds (cont.)

Because carbon monoxide is a cumulative poison, long-term exposures to low levels may cause symptoms, as well as short-term exposures to high levels. This Kidde unit has a time-weighted alarm - the higher the level of carbon monoxide present, the sooner the alarm will be triggered.

This CO alarm can only warn you of the presence of CO. It does not prevent CO from occurring, nor can it solve an existing CO problem. If your unit has alarmed and you've provided ventilation by leaving your windows and doors open, the CO buildup may have dissipated by the time help responds. Although your problem may appear to be temporarily solved, it's crucial that the source of the CO is determined and that the appropriate repairs are made.

This CO alarm meets the UL 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

WARNING

This product is intended for use in ordinary indoor residential areas. It is not designed to measure compliance with commercial and industrial standards.

This device is designed to protect individuals from acute effects of carbon monoxide exposure. It may not fully safeguard individuals with specific medical conditions. If in doubt, consult a medical practitioner. Individuals with medical problems may consider using warning devices, which provide audible and visual signals for carbon monoxide concentrations under 30 ppm.

Caring for your Kidde Battery Powered CO Alarm

To keep your CO alarm in good working order, please follow these simple steps:

- Verify unit alarm, lights and battery operation by pushing the test button once a week.
- Vacuum the CO alarm cover with a soft brush attachment once a month to remove accumulated dust.
- Instruct children never to play with the CO alarm. Warn children of the dangers of carbon monoxide poisoning.
- Never use detergents or other solvents to clean the CO alarm.
- Avoid spraying air fresheners, hair spray, paint or other aerosols near the CO alarm.
- **Do not paint the CO alarm.** Paint will seal the vents and interfere with the sensor ability to detect CO.
- Do not place near a diaper pail.

Caring for your Kidde Battery Powered CO Alarm (cont.)

Move the CO alarm and place in another location prior to performing any of the following:

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

Storing the unit in a plastic bag during the above projects will protect the sensor from permanent damage.

WARNING: As soon as possible, place the CO alarm back in its proper location to assure continuous protection from Carbon Monoxide poisoning.

Accommodation spaces should be well ventilated when household cleaning supplies or similar contaminants are used.

The following substances can affect the sensor and may cause false readings:

Methane, propane, iso-butane, iso-propanol, ethylene, benzene, toluene, ethyl acetate, hydrogen sulfide, sulfur dioxides, alcohol based products, paints, thinners, solvents, adhesives, hair sprays, after shaves, perfumes, and some cleaning agents.

Troubleshooting Guide

Symptom	Problem	Action
1 chirp every 30 seconds with a red LED flash, digital units display 	Batteries are low and need replacing.	See pages 16-17. Battery Installation/Replacement.
1 chirp every 30 seconds with a red LED flash, digital units display 	Sensor or unit malfunction.	Replace unit, if necessary

The problems listed above are under normal operation conditions. Other error (Err) conditions could exist if, for instance, ambient conditions are outside normal operating range (see page 26), battery condition is less than optimal, etc. If you still have any additional questions regarding Err conditions, please call our Consumer Hotline at 1-800-654-9677.

Frequently Asked Questions

Q. *How many CO alarms do I need?*

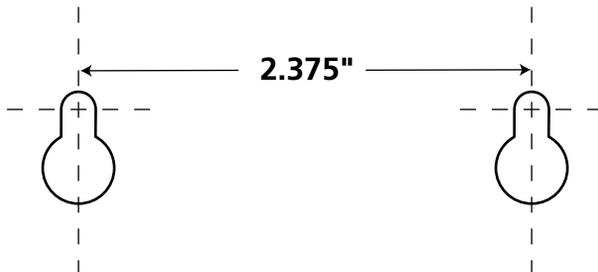
A. There is no formula for determining how many CO alarms you will need. It all depends on the layout of your home, how many bedrooms you have, where the heat sources are, and where the fuel-burning appliances are located. The Consumer Product Safety Commission (CPSC) recommends installing at least one carbon monoxide alarm with an audible warning signal near the sleeping area. The International Association of Fire Chiefs (IAFC) also recommends UL listed carbon monoxide alarms – on every level of the home and in areas near appliances that are potential sources of CO.

Q. *Do I have to press the test button to get a CO reading?*

A. No. Your Kidde CO alarm continuously monitors the air for carbon monoxide. The CO alarm will alert you to the presence of CO automatically. To test the internal components and circuitry of your CO alarm, press the test/reset button.

Wall Mounting Template

If you are going to mount your Kidde CO Alarm to the wall, you may use this template for exact placement of the two wall mount screws provided. For more information about mounting to the wall, please refer to page 8.



Product Specifications

POWER: Three AA batteries (supplied)

SENSOR: Electrochemical carbon monoxide sensor

ACCURACY: Each Kidde CO Alarm is calibrated to a CO concentration of 150 ppm (+/-25 ppm) in air, at 80°F (+/-10°F) and 40% (+/-3%) relative humidity. Depending on the ambient condition (temperature, humidity) and the condition of the sensor, the alarm readings may vary. The digital reading tolerances are: Ambient: 80°F(+/-10°F), atmospheric pressure +/-10%, 40%+/-3% relative humidity.

READING	TOLERANCE (OF DISPLAY READING)
0-999ppm	+20% +15ppm

TEMPERATURE: Operating range 40°F (4.4°C) to 100°F (37.8°C)

MOUNTING: Accessories supplied for wall mounting and table top applications

ALARM: 85+ dB at 10' @ 3.4 ± 0.5 KHz pulsing alarm

SIZE & WEIGHT: 5.5" diameter x 1.4" depth/0.66 lbs. with batteries

WARRANTY: Five-year limited warranty from date of purchase against defects in material and workmanship on the CO Alarm unit.

Limited Warranty

WARRANTY COVERAGE: THE MANUFACTURER WARRANTS TO THE ORIGINAL CONSUMER PURCHASER, THAT THIS ALARM WILL BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF FIVE (5) YEARS FROM DATE OF PURCHASE. THE MANUFACTURER'S LIABILITY HEREUNDER IS LIMITED TO REPLACEMENT OF THE PRODUCT, REPAIR OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT WITH REPAIRED PRODUCT AT THE DISCRETION OF THE MANUFACTURER. THIS WARRANTY IS VOID IF THE PRODUCT HAS BEEN DAMAGED BY ACCIDENT, UNREASONABLE USE, NEGLIGENCE, TAMPERING OR OTHER CAUSES NOT ARISING FROM DEFECTS IN MATERIAL OR WORKMANSHIP. THIS WARRANTY EXTENDS TO THE ORIGINAL CONSUMER PURCHASER OF THE PRODUCT ONLY.

Warranty Disclaimers: Any implied warranties arising out of this sale, including but not limited to the implied warranties of description, merchantability and fitness for a particular purpose, are limited in duration to the above warranty period. In no event shall the Manufacturer be liable for loss of use of this product or for any indirect, special, incidental or consequential damages, or costs, or expenses incurred by the consumer or any other user of this product, whether due to a breach of contract, negligence, strict liability in tort or otherwise. The Manufacturer shall have no liability for any personal injury, property damage or any special, incidental, contingent or consequential damage of any kind resulting from gas leakage, fire or explosion.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Some states do not allow the exclusion or limitation of consequential or incidental damages, so the above limitations or exclusions may not apply to you.

Legal Remedies: This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

Warranty Performance: During the above warranty period, your product will be replaced with a comparable product if the defective product is returned, postage prepaid, to KIDDE, Customer Service Department, 1394 South Third Street, Mebane, NC 27302, together with proof of purchase date. Please include a note describing the problem when you return the unit. The replacement product will be in warranty for the remainder of the original warranty period or for six months, whichever is longer. Other than the cost of postage, no charge will be made for replacement of the defective product.

