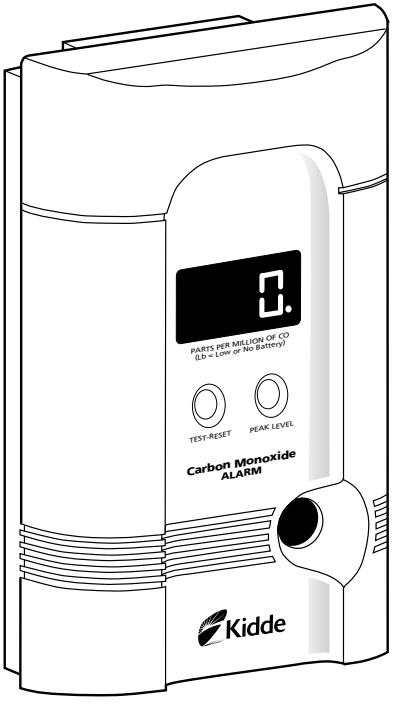
Carbon Monoxide Alarm

User's Guide

See page 13 for "What to do when the alarm sounds"



Kidde CO Alarm with Digital Display and Peak Level Memory

Model: KN-COPP-3, Assembly 900-0099

IAS 6-96 2ND EDITION CO ALARM
ALSO COMPLIES WITH CSA 6.19-01

For your convenience, write down the following information. If you call our customer hotline, these are the first questions you will be asked:
CO Alarm Model Number (located on back of alarm):
Date of Manufacture (located on the back of the alarm):
Date of Purchase:
Where Purchased:
CO Alarm Assembly Number (located on the back of the alarm)

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. If you have any questions about the operation or installation of your alarm, please call our toll free Consumer Hotline at 1-800-880-6788.

Part # 810-2508 Rev.A
09/04
2507-7205-00

Table of Contents

IMPORTANT

THIS CARBON MONOXIDE ALARM IS DESIGNED TO DETECT CARBON MONOXIDE FROM ANY SOURCE OF IMPROPER OR MALFUNCTIONING APPLIANCES. IT IS NOT DESIGNED TO DETECT SMOKE, FIRE, OR ANY OTHER GAS.

WARNING: THIS CARBON MONOXIDE ALARM IS NOT A SUBSTITUTE FOR INSTALLING AND MAINTAINING AN APPROPRIATE NUMBER OF SMOKE ALARMS IN YOUR HOME.

THIS CARBON MONOXIDE WILL NOT SENSE SMOKE, FIRE, OR ANY POISONOUS GAS OTHER THAN CARBON MONOXIDE. 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. NOT SUITABLE FOR INSTALLATION IN HAZARDOUS LOCATIONS AS DEFINED IN THE NATIONAL ELECTRIC CODE.

DURING A POWER OUTAGE, UNIT WILL OPERATE FOR A PERIOD OF AT LEAST TWENTY HOURS ON A FULLY CHARGED KIDDE RECHARGEABLE BATTERY PACK.

WARNING: THIS PRODUCT IS INTENDED FOR USE IN ORDINARY INDOOR RESIDENTIAL AREAS. IT IS NOT DESIGNED TO MEASURE COMPLIANCE WITH COMMERCIAL AND INDUSTRIAL STANDARDS.

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.

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1394 South Third Street, Mebane, NC 27302
Consumer Hotline: 1-800-880-6788 www.kiddeUS.com

About this User's Guide

Notice we call this booklet a "User's Guide" and not an "Owner's Manual." This is because our intention is you *use* this guide just as you will be using your Kidde CO alarm. Keep the guide in a handy location and refer to it when you have questions about your CO alarm, its functions and features, or if you have questions about carbon monoxide. It will take about an hour of your time, but it's well worth it. Please read it in the sequence presented. Reading this guide is the only way to learn how to use your unit wisely and to know how to react in the event of an alarm.

Part One
Your Kidde Carbon Monoxide Alarm, covers the unique features of your Kidde carbon monoxide alarm, how and where to install it, as well as information on testing and maintaining your unit.

Part Two
Carbon Monoxide - The Silent Killer, contains valuable information about carbon monoxide (CO). From discovering the most common sources of CO in your home to recognizing the symptoms of CO poisoning, this section provides tips and information that could help protect your family from carbon monoxide poisoning.

Part Three
What You Should Know Before the Alarm Sounds, provides a common sense approach to understanding the difference between low level CO readings, high levels and emergency situations. This section also describes the effects of exposure to CO levels over time and when your Kidde CO unit will alarm.

Part Four
What to do When the Alarm Sounds, gives you step-by step information on how to respond to the different alarm situations. Also covered is whom to call for help if you think you have CO in your home.

Part Five
Technical Information, covers the technical specifications of your Kidde CO alarm.

Part Six
Frequently Asked Questions, contains the most commonly asked questions about our alarms. Part six was written by Kidde customer service representatives who handle thousands of calls per month, year-round. This section provides you with answers and tips that will most likely answer any questions you might have after reading this user's guide.

Introduction

This Kidde carbon monoxide (CO) alarm is an important part of your family's home safety plan. Because CO alarms for the home haven't been available until recently, most people haven't had much experience using them. As a new owner of a CO alarm, there are some basic facts you should know for your protection *and* convenience.

Many people think that CO alarms operate like smoke alarms. And in some basic ways, this is true. Like smoke alarms, CO alarms monitor the air in your home and sound a loud alarm to warn you of trouble.

But, the similarities end here. The way you respond to a CO alarm is quite different than that of a smoke alarm. That's because a house fire and a carbon monoxide problem are two distinctly different situations. If your smoke alarm were to alarm, you would quickly be able to judge the level of danger you were in (if any) with your five senses: you could see and smell the smoke, you could feel the heat, you could see and even hear the fire burning. You could also readily see if your smoke alarm were alarming in a non-emergency situation, say if someone smoked up the kitchen with some seriously burnt toast. Because your sense of sight, smell, hearing and touch give you so much information, you could almost instantly judge what action to take if you heard your smoke alarm.

But now, what about a CO alarm? Carbon monoxide (CO) is invisible, odorless, tasteless and non-irritating–completely undetectable to your five senses. That's why it's so important to your safety that you have a carbon monoxide alarm. But, how do you know what to do if your unit alarms?

You have to *learn* what to do, because your five senses won't tell you. That's why this user's guide is so important. Please take the time to read this guide from cover to cover, to familiarize yourself with the facts about carbon monoxide, how your new unit works, and what to do if it alarms. Then, find a handy place to keep the guide so it will be readily available in the future when you have a question. You might want to write down Kidde toll-free customer service number and keep it with your other important phone numbers for the same reason.

Thank you for making Kidde a part of your complete home safety program. With proper installation and use, your new Kidde CO alarm should provide you with years of dependable service.

Quick Set Up Guide

We urge you to read this entire manual in the sequence it is presented. But, if you only read one part of this guide initially, read this page!

Listed below are seven easy steps for setting up your Kidde CO alarm. Please read the entire guide for complete information.

Setting up your alarm for first time operation:

Step 1
Determine the best location for your CO alarm(s). Usually this is in or near bedrooms. Refer to page 5 for complete information.

Step 2
Your CO alarm is equipped to be mounted as a corded unit, a direct plug unit or a table top unit. In the "as shipped" configuration, the unit can be plugged directly into a wall socket. (If your outlets are mounted horizontally, please refer to page 6, "to rotate adapter"). If the transformer/adapter is taken out of the unit, the alarm can be mounted on the wall at eye level, while the transformer is plugged into a wall socket. The unit can also be set on a table if the support at the bottom of the unit is pulled out (see "rear view" illustration on page 3). Refer to page 6 for further information on installing your alarm.

Step 3
A Kidde rechargeable battery pack is provided for backup in the event of a power outage. To install the battery pack, open the back door and align the connector with the slot in the battery. Insure the orientation of the two alignment ribs align with the slots in the battery case. Press the connector in until it is fully seated. Depending on the charge state of the battery pack (the battery packs can have different amounts of energy stored in them due to storage time), you may hear the alarm sound briefly to indicate the alarm is receiving power. Place battery pack into battery compartment and replace back door (refer to page 3). **Note:** Battery backup will be limited until the battery has fully charged. It may take up to 24 hours for the battery back up to fully charge.

Step 4
Plug the alarm into a standard, unswitched 120 volt AC electric outlet in one of the configurations listed in step 2. Refer to page 6 for more details.

Step 5
If the battery pack has a full charge when first powered up, you will see three eights in the digital display indicating the alarm is warming up. After approximately 20 seconds, the first reading will be displayed. The number on the display should be "0". If the battery pack is partially charged,"Lb"(Low battery) will flash every second alternating with a "0" until the battery is charged. If this occurs, see page 7 for complete information.

Step 6
Make sure the red dot in the digital display is blinking. Then test the unit's operation by pressing and releasing the Test/ Reset button. Within 15 seconds you will hear 4 quick "chirps" -followed by 5 seconds of silence- followed by 4 quick "chirps". For complete testing information, refer to page 8.

Step 7
While testing the alarm, have someone else check that the alarm can be heard easily from the sleeping areas. The alarm should be located where it can wake you if it alarms at night. See page 5 for complete information on the best locations for your alarm.

Caution: Continuous exposure to the loud 85 decibel alarm at close range over an extended period of time may cause hearing loss.

That's it. Your Kidde CO alarm is now monitoring for the presence of carbon monoxide.

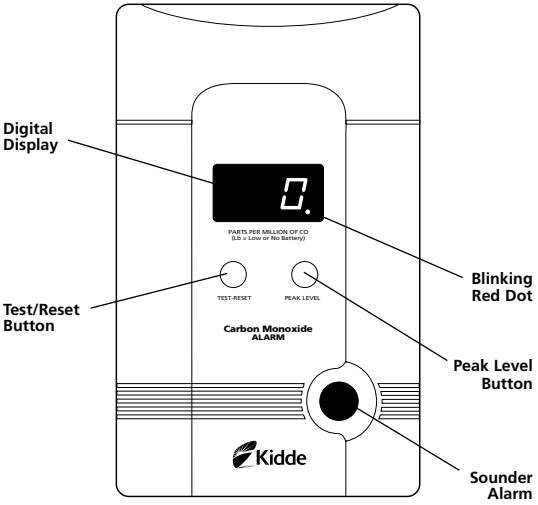
Part One – Your Kidde Carbon Monoxide Alarm

About Your CO Alarm

The number one feature that sets this Kidde model apart from other alarms is its unique digital display that gives you a continuous readout of CO levels from 30-999 parts per million. The digital display serves as an early warning of CO presence. Additionally, the digital display gives you added time to find the source of the CO and correct the problem, limiting the risk of unrecognized long term exposure. Of course, the loud 85 decibel alarm warns of higher levels.

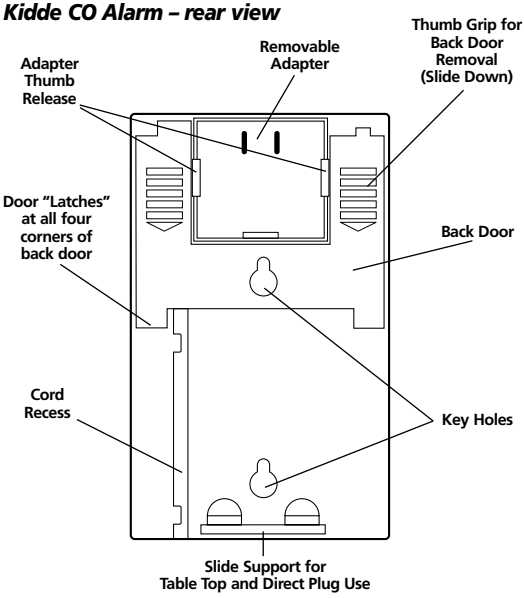
Kidde is the only CO alarm that gives you the choice of a direct-plug, a 6' power cord or table top unit all in one. Depending on how or where you wish to mount your alarm, you can get exactly what you need for a perfect application.

Kidde CO Alarm – front view

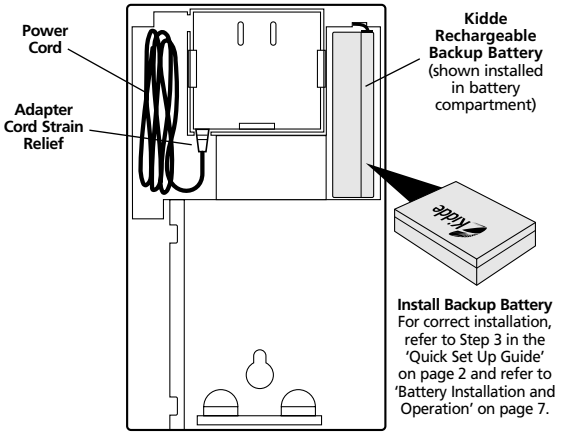


Note: Your Kidde CO alarm is NOT battery operated.
The rechargeable battery pack is to supply a short-term backup during a power outage. In the event of a power outage, the rechargeable battery pack will continue operating the alarm for at least 20 hours.

Kidde CO Alarm – rear view



Rear view with back door removed



Part One – Your Kidde Carbon Monoxide Alarm

The Unique Features of this Kidde CO Alarm

Digital Display

The continuous digital display shows you the level of carbon monoxide (if any) the unit is sensing. The unit updates this reading every 15 seconds so you can watch levels rise or fall.

Note: If the unit does not sense any CO, the reading is zero (0). In most homes, the unit reads "0" all the time. A reading of "0" is expected under normal conditions, and is good. The blinking dot after the number shows you the unit is operating.

Test/Reset Button

This button has three functions. First, this is the button you press when you test the unit monthly (see page 8 for further details). Secondly, you press this button if the unit alarms and you want to silence the alarm. This will reset the unit and it will then again start monitoring for CO, if CO concentration is above 70 ppm the alarm will again sound within 6 minutes. It's also used when resetting the peak level memory. (See page 9).

Peak Level Button

By pressing this button, you can see the peak CO level recorded by the alarm since it was last cleared or unplugged. This Kidde feature allows you (or heating contractor or fireman) to see exactly how big a CO problem you have so you can react accordingly. (More on the peak level memory feature on page 9).

Sensor

The sensor is a highly sensitive, electrochemical sensor that is CO-specific to help avoid false alarms. Turn to page 9 for more information on how to care for and protect the alarm.

Sounder Alarm

This is the loud 85 decibel pulsing alarm that will sound to alert you to a potential problem. Alarm condition is 4 quick "chirps" – followed by 5 seconds of silence – followed by 4 quick "chirps". Repeat.

Caution: Continuous exposure to this sound level at close range over an extended period of time may cause hearing loss. We recommend you cover the sounder with your finger while testing. More on testing on page 8.

Keyholes

When the alarm is mounted to the wall, these keyholes slide onto the screws in the wall. (See "How to install your alarm on page 6).

Pull-Out Transformer/Adapter

This unique Kidde feature enables the alarm to be used as a direct plug unit, a wall mounted unit or a table top unit. More on how this unique feature is used for different application, page 6.

Note: This CO alarm is not battery operated.

Warning : Do not use any other type of rechargeable battery in your alarm or attempt to recharge the battery pack yourself. Improper charging may even cause the battery pack to overheat or leak, thus posing possible injury to the user.

What Carbon Monoxide Alarms Can and Cannot Do

CO alarms are designed to sense unacceptable levels of CO from malfunctioning furnaces, appliances, gas engines or other sources.

CO alarms provide early warning of the presence of carbon monoxide, usually before a healthy adult would experience symptoms.

This early warning is possible, however, only if your Kidde CO alarm is located, installed and maintained as described in this user's guide.

This CO alarm is designed to act as a monitor, it is not designed for use as a short-term testing device to perform a quick check for the presence of CO.

CO alarms have limitations. Like any other electronic device, CO alarms are not fool-proof.

CO alarms have a limited operational life. You must test your CO alarm weekly, because it could fail to operate at any time. If your CO alarm fails to test properly, or if its self-diagnostic test reveals a malfunction, immediately have the unit replaced. See back page for warranty information. This CO alarm also has an "operational end of life" feature which will indicate when to replace the alarm. See page 14 for details of this feature.

CO alarms can only sense CO that reaches the unit's sensor. Carbon monoxide may be present in other areas without reaching the alarm. The rate at which CO reaches the unit may be affected by doors or other obstructions. In addition, fresh air from a vent or open window or any other source may prevent CO from reaching the sensor. Please observe cautions on page 5 "Where to install your alarm."

CO could be present on one level of the home and not reach a CO alarm installed on a different level. For example, CO in the basement may not reach an alarm on the second level, near the bedrooms. For this reason, we recommend you provide complete coverage by placing a CO alarm on every level of the home.

CO alarms are not smoke alarms. CO alarms do not sense smoke or fire. For early warning of fire you must install smoke alarms, even though carbon monoxide can be generated by a fire.

CO alarms should not be used to detect the presence of natural gas (methane), propane, butane, or other combustible fuels.

CO alarms are not a substitute for property, disability, life or other insurance of any kind. Appropriate insurance coverage is your responsibility. Consult your insurance agent.

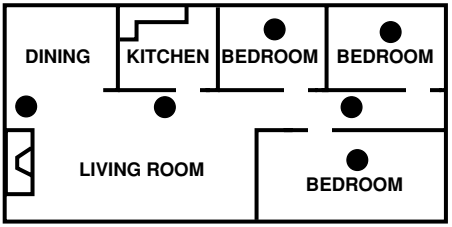
Part One – Your Kidde Carbon Monoxide Alarm

Where to Install Your CO Alarm

Your Kidde CO alarm should be mounted in or near bedrooms and living areas. It is recommended that you install a Kidde CO alarm on each level of a multi-level home. You may use the number and location of smoke alarms installed in your home according to current building code requirements as a guide to the location of your Kidde CO alarm(s).

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



Two labels have been provided with important information on what to do in case of an alarm. Add the phone number of your emergency service provider in the space provided. Place one label next to the alarm after it is mounted, and one label near a fresh air source such as a door or window.

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

IMPORTANT: Improper location can affect the sensitive electronic components in this alarm. Please see the next section describing where NOT to install this alarm.

Where Not to Install Your CO Alarm

To avoid causing damage to the unit, to provide optimum protection, and to prevent unnecessary alarms, follow the directions below where NOT to install this alarm:

It is recommended that you do not install this CO alarm in garages, kitchens or furnace rooms. Installation in these areas could lead to nuisance alarms, may expose the sensor to substances that could damage or contaminate it, or the alarm may not be heard by persons in other areas of the home, especially if they are sleeping.

In the garage, vehicle exhaust can contain some carbon monoxide. These levels are higher when the engine is first started. Within hours of starting a vehicle and backing it out of the garage, the levels present over time can activate the alarm and become a nuisance.

In the kitchen and furnace room, some gas appliances can emit a short burst of carbon monoxide upon start-up. This is normal. If your CO alarm is mounted too close to these appliances, it may alarm often and become a nuisance.

If you must install a Kidde CO alarm near a cooking or heating appliance, **install AT LEAST 5 feet away from appliance.**

Do not install in excessively dusty, dirty or greasy areas such as kitchens, garages and furnace rooms. Dust, grease or household chemicals can contaminate or coat the alarm's sensor, causing the alarm not to operate properly.

Do not obstruct the vents located at the top and bottom of the alarm. Place the alarm where drapes, furniture or other objects do not block the flow of air to the vents.

Do not install in dead air space, such as peaks of vaulted ceilings or gabled roofs, where carbon monoxide may not reach the sensor in time to provide early warning.

Do not install in turbulent air from ceiling fans. Do not install near doors and windows that open to the outside, near fresh air vents, or anywhere that is drafty. Rapid air circulation from fans or fresh air from outside may cause the sensor to display an inaccurate reading in the presence of CO.

Do not install this alarm in a switch- or dimmer-controlled outlet.

Do not install in areas where the temperature is colder than 40˚F (4.4˚C) or hotter than 100˚F (37.8˚C). These areas include unconditioned crawl spaces, attics, porches and garages. Extreme temperatures will affect the sensitivity of the alarm.

Do not install CO alarm near deep cell large batteries. Large batteries have emissions that can cause the alarm to perform at less than optimum performance.

Avoid the following:

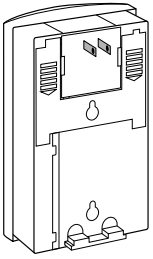
- Excessive spillage or reverse venting of fuel burning appliances caused by outdoor ambient conditions, such as: 1) Wind direction and/or velocity, including high gusts of wind. Heavy air in the vent pipes (cold/humid air with extended periods between cycles). 2) Negative pressure differential resulting from the use of exhaust fans. 3) Simultaneous operation of several fuel burning appliances competing for limited internal air. 4) Vent pipe connections vibrating loose from clothes dryers, furnaces or water heaters. 5) 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.

How to Install Your Alarm

Your Kidde CO alarm with its removable adapter allows you to install the alarm as a wall mounted unit, a direct plug unit, or as a table top unit.

Direct Plug Alarm

First, refer to "Where to Install Your CO Alarm" on page 5 for general guidelines as to where to locate your CO alarm.
In its "as shipped" configuration, your Kidde CO alarm is ready to be plugged directly into a wall socket.



Back of unit when used as direct plug

To install:

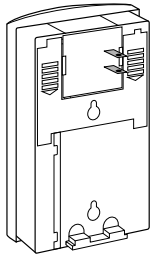
1. Choose a standard 120V outlet to plug alarm into.
2. Pull slide support out approximately .25" until slide snaps in place (this will help support unit in wall outlet).
3. Simply plug in.

If outlet is mounted horizontally (sideways):

If you are going to use your alarm as a direct plug and you are going to plug in to an outlet that is mounted horizontally (sideways), you will need to rotate the adapter 90˚. This simple process is outlined as follows:

To rotate adapter:

1. With back of unit facing you (with adapter at top), place your thumbs on thumb grips.
2. With your thumbs, push down in the direction of the arrows on the thumb grips and slide back door off.
3. Next, place your thumbs on the adapter thumb releases.
4. Spread adapter thumb releases out and carefully turn alarm over. This will allow adapter to slide out.
5. Rotate the adapter 90˚ to the right (clockwise), and snap firmly back into place.



Back of unit when used as direct plug for sideways outlet

6. Carefully replace back door by making sure "latches" on all four corners of door are lined up, then firmly press into place.
7. Now simply plug in to outlet.

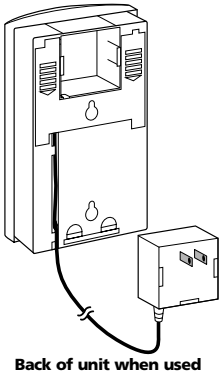
Wall Mounted Alarm

First, refer to "Where to Install Your CO Alarm" on page 5 for general guidelines as to where to locate your alarm.

Installation tips for power cord models:

The power cord option provides more flexibility in mounting locations and allows the alarm to be easily installed at eye level.

Note: If you mount the alarm high on a wall, make sure it is **at least 6" from the ceiling**. Any higher than this, it will be in "dead air space" and carbon monoxide may not reach the sensor.



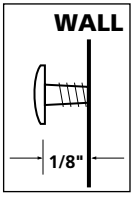
Back of unit when used as a wall mount

For a wall-mount, you will need to pull out the removable adapter and power cord. This simple process is outlined below.

To install:

1. Follow steps 1 thru 4 in the previous column under "To Rotate Adapter."
2. With adapter out, pull out power cord and unwrap it.
3. With cord extended, press last few inches into cord recess. Gently pull cord at bottom of cord recess until cord becomes taught and lays flat in cord recess.
4. Carefully replace back door, making sure "latches" on all four corners of door are lined up, then firmly press into place.

5. Using the wall mount diagram located near the back of this user's guide, install the two screws provided until heads are approximately 1/8" from wall (If mounting in plaster board or drywall, drill two 3/16 holes and use plastic anchors provided).



6. Hook the Kidde CO alarm unit over the screws onto keyholes in back of unit.

7. Plug cord into electrical outlet.

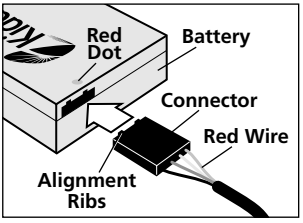
Table Top Alarm

You can also use your Kidde CO alarm as a table top unit. Simply follow steps 1 thru 4 on page 6 under "Wall Mounted Alarm", then instead of mounting to a wall, simply pull out slide support and stand on table, bedside stand, chest of drawers, etc. (refer to diagram on page 3).

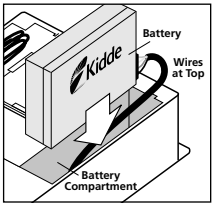
Battery Installation and Operation

Install the battery by first removing the battery door and the battery pack.

Align the connector with the slot in the battery. Insure the orientation of the two alignment ribs align with the slots in the battery case.
(Red dot on battery will align with red wire). Press the connector in until it is fully seated. See drawing at right.



Be sure to correctly insert battery into the battery compartment (with wires at top) as shown in drawing at right. After inserting battery, replace back door.



Upon initial power up or after the alarm has operated on battery backup and depending on the charge state of the battery, it could take up to 20 hours to FULLY charge the battery.

During the first 10-hour initial charge period or, until the battery has charged, "Lb" will be displayed along with the CO level (usually "0") and without an audible "chirp". When the initial charge is complete, the "Lb" will disappear. If however, after 10 hours the battery is not charging properly, "Lb" may continue to flash AND there will be an audible "chirp" once every 15 seconds indicating the battery is not charging. If this occurs, make sure the connection between the battery and the alarm is correctly oriented and fully seated. If not, disconnect the battery and reconnect insuring the alignment ribs match the slots in the battery. If it is properly connected and fully seated and "Lb" is still displayed along with an audible "chirp", contact customer service.

Battery Backup Operation

When the alarm is unplugged or loses AC power and the battery pack is fully charged, the alarm will automatically switch to battery backup operation and you will notice the following:

- For the first five minutes of operation on battery, the alarm will operate as if on AC power.
- However, after five minutes of operation, to conserve battery capacity, the display will flash the CO level (usually "0") once every 60 seconds.

Caution: If the unit detects CO and enters an alarm state while in battery back-up condition, the CO level will be displayed and the audible alarm pattern of four quick beeps will sound once every 60 seconds.

Battery Back-up Operation in Low Battery "Lb" Condition:
When the battery pack is not fully charged, the unit will begin displaying "Lb" and "chirp" once every 15 seconds. This will last approximately 7 hours to warn you the battery is losing capacity. Apply AC power to charge battery as soon as possible.

NOTE: While in the low battery "Lb" warning mode, the unit is sensing for and will alarm if CO is detected.

Battery Back-up Operation in Trouble Alarm Condition:
When the battery pack capacity has been discharged to a state where it can no longer provide enough power to detect CO and operate the alarm, it will enter a trouble alarm condition. The display will go blank and the alarm will give an audible trouble "chirp" once every 60 seconds. This will continue for approximately 7 hours after which time the alarm will no longer "chirp" to warn of a trouble condition.

WARNING: THE UNIT WILL NOT DETECT CO WHILE IN THE TROUBLE ALARM CONDITION, BLANK DISPLAY, AND ONE AUDIBLE TROUBLE "CHIRP" EVERY 60 SECONDS. APPLY AC POWER TO CHARGE THE BATTERY AS SOON AS POSSIBLE.

When AC power is restored, the alarm will automatically switch back to normal operating mode and begin charging the battery pack to full capacity. After continued operation on battery backup, "Lb" may flash while the battery is recharging and will continue until fully charged.

Part One – Your Kidde Carbon Monoxide Alarm

Constant exposures to high or low humidity may reduce battery life.

WARNING:
Replace the battery pack only with a Kidde rechargeable battery pack. Replacement battery packs can be purchased from Kidde customer service. See page 19 for additional precautions regarding the rechargeable battery pack.

Normal Operating Characteristics

When you first power up the alarm, the alarm will sound briefly to let you know the alarm is receiving power and that the alarm circuit is functioning.

You should see three "eights" on the digital display, indicating the alarm is in the start-up mode. The three eights will remain for approximately 20 seconds. You should see a blinking red dot to the lower right of the digital display. The blinking dot shows that the alarm is operating.

Within 20 seconds, your CO alarm will start monitoring for CO. The number indicates a measurement of carbon monoxide in parts per million (ppm). **Note:** The number will probably be zero (0). This is a normal condition for most households and shows that no measurable amount of CO has been detected.

The alarm has begun monitoring the air for carbon monoxide and will continue to do so as long as it receives power.

How to Test Your Alarm

Testing the Electronics

You should test the alarm once a week, following the directions listed below. If at any time you test the alarm and it does not perform as described below, have it replaced immediately. See "How to know if your alarm is malfunctioning" on this page for a description of the characteristics of a malfunctioning alarm and what you should do if a malfunction occurs.

Observe the alarm weekly to make sure the red dot is blinking, indicating normal operation.

If the dot is not blinking, unplug the alarm, then plug in again. This will clear the alarm for restart. If the dot does not resume blinking, your alarm may be malfunctioning.

To test the alarm, press and release the Test/Reset button. If the unit is operating properly, you should notice the following:

- The display shows three "eights", and then shows a number (usually around 200). You should then hear 4 quick "chirps" – followed by 5 seconds of silence – followed by 4 quick "chirps". The unit will then show the three eights for several seconds. It will then return to monitoring for carbon monoxide.

Familiarize yourself and household members with the alarm pattern described above. In the event of a CO incident, this pattern will continue to repeat as long as CO is present.

NOTE: Pressing the Test/Reset button tests the functions of the alarm's internal components, circuitry and micro-computer. **YOU DO NOT NEED TO PRESS THE TEST BUTTON TO TAKE A CO READING.** CO readings are automatically shown on the alarm's digital display. If the alarm shows zero (0), then 30 PPM of CO or less has been sensed by the alarm within the last 15 seconds.

How to Know If Your Alarm is Malfunctioning

Your alarm performs an internal self-diagnosis every 15 seconds to make sure that it is functioning properly. The alarm is designed to alert you in the unusual event of a malfunction.

If the alarm malfunctions.

In the rare event that your alarm malfunctions, it will alert you with one of these signal groups (depending upon the type of malfunction that occurs):

Malfunction Signal Group 1 - Component Failure
- An intermittent "chirping" alarm will sound every 30 secs., and
- An "Err" message will appear on the digital display

OR,

Malfunction Signal Group 2 - Microprocessor Failure
- The alarm will sound continuously, and
- The digital display will be blank, and
- The alarm cannot be shut off by pushing "Test/Reset" button

Unplug the alarm immediately and return for warranty exchange (see "Warranty" on back page).

What to do if you're not sure...

PLEASE familiarize yourself with the malfunction alert, and do not confuse these signals with an alarm. After reading the information above, if you are still unsure whether your alarm is operating properly, call the Kidde toll-free consumer hotline at 1-800-880-6788 to do a quick diagnostic check of the alarm over the phone. The customer service representative will be able to assist you and answer your questions.

Never ignore a CO alarm. A true alarm is an indication of potentially dangerous levels of carbon monoxide. CO alarms are designed to alert you to the presence of carbon monoxide before an emergency, before most people would experience symptoms of carbon monoxide poisoning, giving you time to resolve the problem calmly.

How to Care for Your Alarm

To keep your alarm in good working order, you must follow these simple steps:

WHAT YOU SHOULD DO:

- Test the alarm once a week by pressing the Test/Reset button (see page 8).
- Vacuum the alarm cover once a month to remove accumulated dust. Use the soft brush attachment of your vacuum cleaner, and unplug the alarm from the electrical outlet before vacuuming.
- Instruct children never to touch, unplug or otherwise interfere with the alarm. Warn children of the dangers of CO poisoning.

WHAT YOU SHOULD NOT DO:

- Never use detergents or solvents to clean the alarm. Chemicals can permanently damage or temporarily contaminate the sensor.
- Avoid spraying air fresheners, hair spray, paint or other aerosols near the alarm.
- Do not paint the alarm. Paint will seal the vents and interfere with proper sensor operation.
- Do not mount the alarm directly above or near a diaper pail, as high amounts of methane gas can cause temporary readings on the digital display.

Note: If you will be staining or stripping wood floors or furniture, painting, wall-papering, or using aerosols or adhesives for a do-it-yourself project or hobby, **before you begin: Remove the alarm to a remote location to prevent possible damage to or contamination of the sensor.** You may wish to unplug the alarm and store in a plastic bag during the project.

The following is a list of substances that at high levels can affect the sensor and cause temporary readings on the digital display that are not carbon monoxide readings:
Methane, propane, iso-butane, ethylene, ethanol, alcohol, isopropanol, benzene, toluene, ethyl acetate, hydrogen, hydrogen sulfide, sulfur dioxides.

Also most **aerosol sprays, alcohol based products, paints, thinners, solvents, adhesives, hair sprays, aftershaves, perfumes, auto exhaust** (cold start) and some cleaning agents.

The Peak Level Memory Button

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.

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 low level readings of CO.

Normally, the digital display will read "0" and under certain conditions you may notice levels of 30 or more for short periods of time, by using the Peak level memory feature on the Kidde CO alarm you can view concentrations of CO between 11 and 30 PPM. Use the low-level concentrations shown in memory as a tool in identifying the source of the CO. It may be helpful to purchase additional Kidde CO Alarms to place in different locations throughout your house to isolate the CO source. Monitor the CO concentrations shown in the peak level memory to see if readings occur in certain areas at certain times of the day, or near a particular appliance.

Once the source is located, correcting the problem may be as easy as opening a window, venting an appliance, backing a car out of the garage a safe distance from living quarters, closing the garage door, and letting the car warm up outside. It could be possible that a weather condition caused the low-level reading and the condition may or may not happen again.

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 12 for more details.

CO concentrations displayed below 30 PPM in "Peak Level" memory are for reference only and the accuracy of the concentration shown may not be as accurate as noted on page 14.

To Reset the Peak Level Memory…

Step 1. Press the peak level button.

Step 2. With the peak level button still pressed, press the test/reset button for two seconds and release.

The number on the display will turn to "0". The memory has now been cleared and the alarm will begin monitoring for CO within a few minutes.

Part Two – Carbon Monoxide-The Silent Killer

What is Carbon Monoxide?
Carbon monoxide (CO) is an odorless, colorless, poisonous gas created when any fuel is burned – gasoline, propane, natural gas, oil, wood, coal, and even tobacco. When combustion air is limited, more CO is produced. Serious problems can develop when combustion by-products are not properly vented outside the house.

You've probably heard about carbon monoxide poisoning in the news recently. It's a problem receiving more attention because groups like the American Lung Association and the Consumer Product Safety Commission have made it a priority to warn the public about the dangers of this deadly household poison.

What are the Effects of CO Exposure?
When you breathe carbon monoxide, it enters your bloodstream through your lungs and attaches to red blood cells. These red blood cells, called hemoglobin, carry oxygen throughout your body. Carbon monoxide molecules attach to the red blood cells 200 times faster than oxygen, preventing the flow of oxygen to your heart, brain and vital organs. As carbon monoxide accumulates in your bloodstream, your body becomes starved for oxygen. The amount of carbon monoxide in a person's body can be measured by a simple blood test, called a "carboxyhemoglobin level" test .

The early symptoms of carbon monoxide poisoning are often mistaken for the flu – headache, dizziness, weakness, nausea, vomiting, sleepiness, and confusion.

Could Your Family be at Risk from CO Poisoning?
Carbon monoxide is the number one cause of poisoning deaths in the United States. According to the Mayo Clinic, at least 10,000 Americans are affected by CO poisoning each year.

While anyone is susceptible, experts agree that unborn babies, small children, senior citizens and people with heart or respiratory problems are especially vulnerable to CO and are at the greatest risk for death or serious injury.

Where Does CO Come From?
Inside your home malfunctioning and improperly vented appliances used for heating and cooking are the most likely sources of carbon monoxide. Vehicles running in attached garages can also produce dangerous levels of carbon monoxide.

A by-product of combustion, carbon monoxide can be a potential problem from a number of common sources – automobiles, furnaces, water heaters, fireplaces, wood stoves, charcoal grills, gas ranges, space heaters and portable generators.

When these appliances are in good working condition with proper ventilation, lethal carbon monoxide gas is vented outdoors where it quickly disperses. But even the slightest malfunction or misuse of any of these sources can lead to a build-up of carbon monoxide in your home that can become deadly before you'd even know it's there.

And you don't have to have ancient appliances to have a problem. Today's more energy-efficient, airtight home designs can trap CO-polluted air inside where it can quickly build to lethal levels.

What Can You do to Protect Your Family?
To be safe, know the possible sources of CO in your home. Keep fuel-burning appliances and their chimneys and vents in good working condition. Learn the early symptoms of exposure, and if you suspect carbon monoxide poisoning, move outside to fresh air and get emergency help. A blood test can confirm that CO caused the problem.

Your first line of defense is an annual inspection and regular maintenance of your appliances. Contact a licensed contractor or call your local utility company for assistance.

But remember, problems can begin after an inspection is over, like a crack in a furnace heat exchanger, or a leak in a water heater vent, a bird's nest blocking a flue or other sources that are nearly impossible to detect: That's why you need the 24-hour protection provided by a CO alarm.

Part Two – Carbon Monoxide-The Silent Killer

Home Safety Tips

What You Can Do...

- Buy only appliances approved by a nationally recognized testing laboratory.
- Choose fuel-burning appliances that can be vented to the outdoors, whenever possible.
- Make sure appliances are installed according to manufacturer's instructions and local building codes. Most appliances should be installed by professionals and should be inspected by the proper authority after installation.
- Have the heating system, vents, chimney and flue inspected and cleaned by a qualified technician every year.
- Follow manufacturer's directions for safe operation of all fuel-burning appliances.
- Examine vents and chimneys regularly for improper connections, visible rust or stains.
- Open a window when a fireplace or wood-burning stove is in use, and provide adequate outdoor air for furnace and water heater.
- Notice problems that could indicate improper appliance operation:
  - Decreasing hot water supply
  - Furnace unable to heat house or runs constantly
  - Sooting, especially on appliances
  - Unfamiliar or burning odor
  - Yellow or orange flame
- Be aware of the symptoms of carbon monoxide poisoning:
  - headaches, dizziness, weakness, sleepiness, nausea, vomiting, confusion and disorientation.
- Recognize that CO poisoning may be the cause when family members suffer from flu-like symptoms that don't disappear but improve when they leave home for extended periods of time.

What You Should Not Do...

- Never burn charcoal inside a home, garage, cabin, RV or camper.
- Never install, service, or convert fuel-burning appliances from one type to another without proper knowledge, skills and tools.
- Never use a gas range, oven, or clothes dryer for heating.
- Never operate unvented gas-burning appliances, such as kerosene or natural gas space heaters, in a closed room.
- Never operate gasoline-powered engines (like vehicles, motorcycles, lawn mowers, yard equipment or power tools) in confined areas such as garages or basements, **even if** an outside door or window is open.
- Never ignore a safety device when it shuts off an appliance.
- Never ignore a CO alarm.

Be Aware of the Warning Signs of Carbon Monoxide:

Clues You Can See...

- Streaks of carbon or soot around the service door of your fuel-burning appliances.
- A yellow or orange flame may indicate a problem with natural gas appliances.
- Excessive rusting on flue pipes or appliance jackets.
- Loose or missing furnace panel.
- Moisture collecting on the windows and walls of furnace rooms.
- Loose or disconnected vent/chimney, fireplace or appliance.
- Small amounts of water leaking from the base of the chimney, vent or flue pipe.
- Rust on the portion of the vent pipe visible from outside your home.
- The absence of a draft in your chimney (indicating blockage).
- Fallen soot from the fireplace chimney.
- Loose, damaged or discolored bricks on your chimney.

Clues You Cannot See...

- Internal appliance damage or malfunctioning components
- Improper burner adjustment
- Hidden blockage or damage in chimneys

Part Three – Understanding the effect of CO exposure

Understand the Effects of Carbon Monoxide Exposure:

Concentration of CO in the Air *(ppm = parts per million)*	**Approximate Inhalation Time and Symptoms Developed**
50 ppm	The maximum allowable concentration for continuous exposure for healthy adults in any 8-hour period, according to OSHA*.
200 ppm	Slight headache, fatigue, dizziness, nausea after 2-3 hours.
400 ppm	Frontal headaches within 1-2 hours, life threatening after 3 hours.
800 ppm	Dizziness, nausea and convulsions within 45 minutes. Unconsciousness within 2 hours. Death within 2-3 hours.
1,600 ppm	Headache, dizziness and nausea within 20 minutes. Death within 1 hour.
3,200 ppm	Headache, dizziness and nausea within 5-10 minutes. Death within 25-30 minutes.
6,400 ppm	Headache, dizziness and nausea within 1-2 minutes. Death within 10-15 minutes.
12,800 ppm	Death within 1-3 minutes.

* Occupational Safety and Health Administration

Reminder: This chart relates to the exposure of healthy adults.

Part Four – What to do When the Alarm Sounds

Determine if anyone in the household is experiencing symptoms of CO poisoning. 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. Also young children and household pets may be the first affected. The following symptoms are related to CARBON MONOXIDE POISONING and should be discussed with ALL members of the household:

Become familiar with these common symptoms from CO poisoning.

Common Mild Exposure Symptoms:
Headaches, running nose, sore eyes, often described as "flu" like symptoms.

Common Medium Exposure Symptoms:
Dizziness, drowsiness, vomiting

Common Extreme Exposure Symptoms:
Unconsciousness, brain damage, death.

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

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

When the CO alarm senses a dangerous level of CO, the unit will emit a loud alarm pattern. The alarm pattern is 4 short "chirps" – followed by 5 seconds of silence – followed by 4 short "chirps". (Note: When the unit is disconnected from the 120V power supply and is on battery backup, the alarm pattern will continue for the first 5 minutes after detecting CO and then the cycle will repeat every one minute). Know how to respond to a CO emergency. Periodically review this user's guide and discuss with all members of your family.

If alarm signal sounds 4 quick "chirps", 5 seconds off:

1) **Immediately move to fresh air - outdoors. Check that all persons are accounted for. Do not re-enter the premises until emergency services responders have arrived, the premises have been aired out, and your alarm remains in its normal operating condition.**
2) **Call your emergency services**

PHONE NUMBER

(fire department or 911)

Part Five – Technical Information

Product Specifications

Power:	120V AC units: 60 Hz, Current 60 mA max.
Sensor:	Sensor calibrated at 150 ppm (±25 ppm).
Temperature:	Operating range: 40˚F (4.4˚C) to 100˚F (37.8˚C).
Humidity:	Operating range 5-95% non-condensing.
Mounting:	Accessories supplied for wall mount, direct plug and table top applications.
Alarm:	85+ dB at 10' @ 3.4 ± 0.5 KHz pulsing alarm.

How the Unit Determines When to Alarm

Your Kidde CO alarm uses advanced technology to monitor the environment in your home and warn you of unacceptable levels of carbon monoxide. An internal microcomputer works together with the carbon monoxide sensor inside the alarm to determine the levels of carbon monoxide in the air and to calculate the rate that CO would be absorbed into the human body. The microcomputer is calibrated to trigger the unit's alarm before most people would experience any symptoms of carbon monoxide poisoning. Because carbon monoxide is a cumulative poison, long-term exposures to low levels can cause symptoms, as well as short-term exposures to high levels. Your Kidde unit has a **time weighted alarm**, so the higher the level of carbon monoxide present, the sooner the alarm will be triggered.

This Kidde CO alarm meets the alarm response time requirements which are 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 device is designed to protect individuals from acute effects of carbon monoxide exposure. It will 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.

Accuracy of the Digital Display

Each Kidde CO Alarm is calibrated at a CO concentration of 150 ppm in air, at 80˚ F (+/- 10˚ F). 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 displayed reading)
0-999 ppm	+/-20% +15 ppm

Replacement of Alarm

Eight years after initial power-up, this unit will "chirp" every 30 seconds to indicate that it is time to replace the alarm. A label has been provided that has "Replace by" printed on it. Write the replace by date on the label and affix it to the front of the alarm so that it is visible after mounting. The date written on the label should be after eight (8) years of cumulative power.

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

Part Six – Frequently Asked Questions

Q. How many alarms do I need in my house?
A. Refer to page 5 for recommended locations and where to place your alarm.

Q. Can you explain what "time-weighted alarm" means?
A. Because carbon monoxide is a cumulative poison, two factors determine how the body is affected by CO: the level of exposure and the length of exposure. For example, being continuously exposed to lower levels of carbon monoxide for many hours can be as dangerous as being exposed to higher levels of CO for a short period of time.

The microchip inside your Kidde CO alarm monitors the air for the presence of carbon monoxide and computes the levels and length of exposure, alarming when you should be concerned about CO exposure.

For more information about the alarm, see page 14.

Q. Do I have to press the test button to get a CO reading?
A. No. Your Kidde CO alarm monitors the air for carbon monoxide. An updated reading is shown on the digital display every 15 seconds. If there is no CO present, the digital display will show a zero. If the alarm shows zero "0", then 30 PPM of CO or less has been sensed by the alarm within the last 15 seconds. Refer to page 14 for more details. The alarm will alert you to the presence of CO automatically.

To test the internal components and circuitry of your alarm, press the Test/Reset button. For complete instructions on testing your alarm, see page 8.

Q. How do I get the alarm to show something besides "0." OR, How can I determine if the sensor is operating correctly?
A. Please refer to "Testing Sensor Response" on page 8 for complete instructions on how to test your alarm's electronics and sensor functions.

Q. You warranty the alarm for 7 years. How will I know when it doesn't work anymore and I need to buy a new one?
A. This CO alarm has an "operational end of life" feature which will indicate when to replace the alarm. See page 14 for details of this feature.

Q. What do the numbers mean on the digital display when I press the "Test/Reset" button?
A. The numbers you see when you press the Test/Reset button are NOT a CO reading. This is a simulated reading the alarm displays as it tests its electronics. The numbers displayed when the Test/Reset button is pushed should be between 100 to 400 (usually around 200).

Part Six – Frequently Asked Questions

Q. I tried to test the alarm (see below) and it still reads "0." Why?
- **by running the car in the garage**
- **by holding it to the tailpipe of the car**
- **by putting it next to the furnace vent**

A. DO NOT try to test your alarm by doing any of the above! Testing the alarm using any of the methods listed above usually does not yield satisfactory results and *could in fact be dangerous to your health.* To accurately test the alarm, please follow the guidelines given on page 8.

Never operate a vehicle in a closed garage, as high levels of CO can be built up in a short time. With an attached garage, dangerous CO levels develop inside the home as well as within the garage.

Attempting to test the sensor function by holding the alarm next to a tailpipe or furnace vent may not cause a reading on the display because today's vehicles emit very little CO once the engine reaches operating temperature. Likewise, many of today's high efficiency furnaces emit very low levels of CO.

Q. When I tried to test the unit I got a high number on the digital display, but the alarm didn't sound immediately. Why?
A. Please refer to "How the unit determines when to alarm" on page 14 for an explanation of the "time weighted alarm."

Q. Will the alarm last longer if I unplug it during the summer months and only use it during the winter?
A. No. Some components of the alarm can deteriorate over time if not used regularly. We recommend the alarm be plugged in continuously for maximum alarm life.

Q. I use the alarm in a vacation home that isn't always occupied and can have temperature extremes when no one is there (no heat or no air conditioning). Will that hurt the alarm? Should I leave it plugged in all the time?
A. We recommend that your alarm not be installed in areas where temperatures fall below 40˚F (4.4˚C) or rise above 100˚F (37.8˚C). Your alarm was designed to be constantly plugged in for maximum performance.

Q. I plugged in the alarm at my house (my parents', my neighbors', etc.) and it read "0." Does that mean everything is OK? (I'm thinking I can return the alarm since everything checks out OK.)
A. This CO alarm is not designed for use as a short-term testing device to perform a quick check for the presence of CO.

Remember, a carbon monoxide problem can occur at any time, even after a professional inspection has determined that everything is in proper working order. Examples of problems that can develop are a crack in a furnace heat exchanger, a leak in a water heater vent, or a bird's nest blocking a flue.

Other sources are nearly impossible to detect: even a change in the air pressure outside can turn a normally safe situation deadly. That's why you need the 24-hour protection provided by a CO alarm.

Part Six – Display Readings and What They Mean

Pages 18-19 contain vital information about the various readings you may see on your display. We suggest you keep this User's Guide handy for reference.

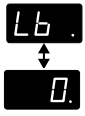
Your new Kidde carbon monoxide alarm is a sophisticated electronic device – yet very simple to understand. Basically, the unit will display a "0" if it senses 30 PPM of CO or less and if you have a good backup battery pack installed.
If it senses carbon monoxide, it will display a reading so you can see if you have a non-threatening or emergency situation.

However, if the backup battery pack is low or missing, or if the unit malfunctions, it will display other readings (and alarm differently) to alert you that something is wrong with the alarm.
Please familiarize yourself and other family members to the difference between a CO reading and a reading signifying a problem with the alarm itself.

AC AND DC START UP, ALARM AND ERROR OPERATION

Display Shows	Alarm Sound	Unit Status	Unit Condition	Recommended Action
 BRIEF "888" AND FLASHING DOT	ONE SHORT "CHIRP"	SELF TESTING ON START UP	NORMAL OPERATION AT START-UP OR RESET	NONE, UNIT WILL QUICKLY DISPLAY "0"
 STEADY DISPLAY OF NUMBER BETWEEN 30 AND 999	4 QUICK BEEPS, 5 SECONDS OFF, REPEATING	CARBON MONOXIDE DETECTED	UNIT IN ALARM CONDITION	REFER TO PAGE 13, WHAT TO DO IF ALARM SOUNDS
 STEADY "Err" AND FLASHING DOT	"CHIRP" EVERY 30 SECONDS	UNIT IS NOT OPERATIONAL, WILL NOT DETECT	UNIT MALFUNCTION	CONTACT KIDDE CUSTOMER SERVICE
 NO DISPLAY	CONSTANT ALARM			

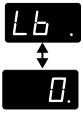
AC POWERED IN NORMAL STAND BY OPERATION

Display Shows	Alarm Sound	Unit Status	Unit Condition	Recommended Action
 "0" WITH FLASHING DOT	NONE	NORMAL OPERATION SENSING FOR CO	BATTERY IS FULLY CHARGED	NONE
(flashes alternately)  "0" ALTERNATING WITH "Lb" AND DOT	NONE	CHARGING BATTERY PACK. INITIAL POWER UP OR POWER WAS RESET	BATTERY DISCHARGED LESS THAN 10 HOURS ON AC, BATTERY IS IN CHARGE STATE	KEEP UNIT ON AC TO FULLY CHARGE BATTERY. " Lb" will disappear once battery is charged depending on initial charge
	1 BEEP EVERY 15 SECONDS	BATTERY DISCONNECTED OR NOT CHARGING	BATTERY DISCHARGED OR DISCONNECTED LONGER THAN 10 HOURS	CONNECT BATTERY PACK, CONFIRM CONNECTION IS ORIENTED AND SEATED PROPERLY, CONTACT CUSTOMER SERVICE

If at any time you test the alarm and it does not perform as described, have it replaced immediately.

Part Six – Display Readings and What They Mean

DC POWERED IN BATTERY BACKUP OPERATION

Display Shows	Alarm Sound	Unit Status	Unit Condition	Recommended Action
 "0"	NONE	OPERATION ON BATTERY BACKUP,SENSING FOR CO	BATTERY IS FULLY CHARGED, FIRST 5 MINUTES OF OPERATION ON BACKUP BATTERY	CONNECT TO AC POWER
 "0" OR CO CONCENTRATION DISPLAYED ONCE EVERY 60 SECONDS, FLASHING DOT	NONE	BATTERY CONSERVE MODE, SENSING FOR CO .	BATTERY IS FULLY CHARGED AND AFTER 5 MINUTES OF OPERATION ON BACKUP BATTERY	NORMAL BATTERY-ONLY OPERATION. TO RECHARGE BATTERY, CONNECT TO AC POWER.
 "0" OR CO CONCENTRATION ALTERNATING WITH "Lb"	NONE	BATTERY CONSERVE MODE, SENSING FOR CO .	BATTERY IS PARTIALLY DISCHARGED, FIRST 5 MINUTES OF OPERATION ON BACKUP BATTERY	CONNECT TO AC POWER TO FULLY RECHARGE BATTERY
 "0" OR CO CONCENTRATION & "Lb" DISPLAYED ONCE EVERY 60 SECONDS, FLASHING DOT EVERY SECOND	1 CHIRP EVERY 15 SECONDS		BATTERY IS PARTIALLY DISCHARGED AFTER 5 MINUTES OF OPERATION ON BACKUP BATTERY	CONFIRM BATTERY CONNECTION IS FULLY SEATED AND ORIENTED PROPERLY, CONNECT TO AC POWER TO FULLY CHARGE BATTERY. CONTACT KIDDE CUSTOMER SERVICE IF CONDITION CONTINUES
 FLASHING DOT ONCE EVERY 60 SECONDS	1 "CHIRP" EVERY 60 SECONDS	UNIT IN TROUBLE ALARM MODE. WILL CONTINUE FOR APPROXIMATELY 7 HOURS. **WILL NOT DETECT CO**	OPERATION ON BATTERY BACKUP AND BATTERY IS FULLY DISCHARGED.	
 NONE	NONE	UNIT IS NOT OPERATIONAL. WILL NOT DETECT CO	BATTERY DISCONNECTED OR MISSING	

If at any time you test the alarm and it does not perform as described, have it replaced immediately.

Part Seven – Li-ION Battery Handling Precautions

Handling:

1. Do not use the battery for a purpose other than for the alarm it is specified.

2. Do not recharge the battery using any charging circuit other than the one provided in the alarm. A recharging operation under non-conforming recharging conditions can cause electrolyte leakage, overheating, smoke emission, bulging/bursting and/or ignition.

3. Do not connect the positive and negative terminals of the battery with any conductor such as metal wires. Do not store the battery or transport it together with any metal objects.

4. Do not connect the battery to an electrical outlet.

5. Do not disassemble or modify the battery pack under any circumstances. Disassembling the battery can cause internal shorts, resulting in bulging/bursting due to excess gas generation, overheat, ignition, explosion or other problems.

6. Do not pierce the battery with sharp objects or subject to any other mechanical forces.

7. Do not discard the battery into fire or heat it under any circumstances. Otherwise, it may cause the battery to explode.

8. Do not use or leave the battery near a heat source such as a fire or heater.

9. Do not place the battery in microwave oven or on induction heaters.

10. Do not use or subject the battery to intense sunlight or hot temperatures. Otherwise, electrolyte leakage, overheating and/or smoke emission can occur. Also, its guaranteed performance will be lost and/or its service life will be shortened.

11. Do not subject the battery to static electricity. Otherwise, the built-in safety/protection circuits can be damaged by static voltages, possibly leading to leakage, overheating, smoke emission, bursting and/or ignition.

12. Do not immerse the battery in liquids such as fresh or salt water, beverages (fruit juices and coffee, etc.)

13. If the battery leaks, and the electrolyte gets into the eyes, the skin or other part of the body, rinse the body part with clean running water and immediately seek medical attention.

14. Do not use an apparently damaged or deformed battery.

15. Li-ion batteries may be disposed of in normal household waste. Contact the local Department of household hazardous waste in your state or local landfill for disposal or recycling practices in your area.

Storage for the battery when detached from the alarm:

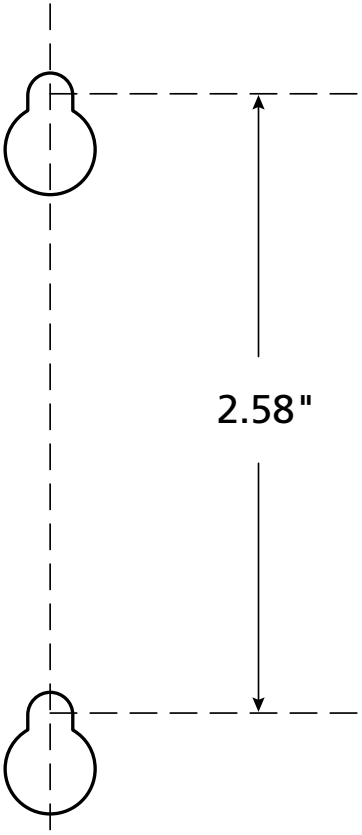
1. Store the battery in a location where children cannot reach it.

2. Store the battery in a cool and dry storage area. Storing the battery in temperatures above 40 ºC will lead to permanent battery damage. If a refrigerator is used for storage, the battery should be placed in a plastic bag for protection against condensation.

3. The proper operating/recharging temperature range is from 0 to 40 ºC.
An operating/recharging condition outside this range can lead to battery damage, overheating or other problems.

Wall Mount Diagram

If you are going to mount your Kidde CO alarm to the wall, you may use this guide for exact placement of the two wall mount screws provided. For more information about mounting to the wall, please refer to pages 6-7.



Limited Warranty

WARRANTY COVERAGE: THE MANUFACTURER WARRANTS TO THE ORIGINAL CONSUMER PURCHASER, THAT THIS PRODUCT WILL BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF SEVEN (7) YEARS FROM DATE OF PURCHASE AND THE BATTERY PACK WILL BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR 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, NEGLECT, 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, 1-800-880-6788, 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.

Important: Do not remove back cover. Back cover removal will void warranty.

Your *Kidde Carbon Monoxide Alarm* is not a substitute for property, disability, life or other insurance of any kind. Appropriate insurance coverage is your responsibility. Consult your insurance agent.

Also, Kidde makes no warranty, express or implied, written or oral, including that of merchantability or fitness for any particular purpose, with respect to the battery.

The above warranty may not be altered except in writing signed by both parties hereto.

Please send products and all other correspondence to:
Kidde
Attn.: Customer Service Department
1394 South Third Street, Mebane, NC 27302

The model number and assembly number can be found on the label on the back of the alarm.

For Warranty Service:
In many cases the quickest way to exchange your alarm is to return it to the original place of purchase. If you have questions, call the Kidde customer service department at 1-800-880-6788 for assistance.

Kidde

Questions or for more information, call our Consumer Hotline at **1-800-880-6788**
or contact us at our website at **www.kiddeUS.com**

Kidde, 1394 South Third Street, Mebane, NC 27302

Custom Assembled in China with U.S. and Foreign Components.