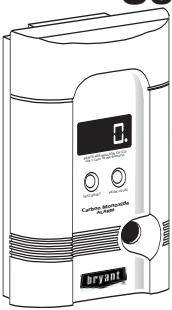
Carbon Monoxide Alarm

See page 23 for "What to do when the alarm sounds"

User's Guide



BRYANT CO Alarm with Digital Display and Peak Level Memory
Model: KN-COPP-3-RC
Assembly: COALMCCNRB01-A

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

US

For questions concerning your Carbon Monoxide Alarm, please call our Consumer Hotline at 1-800-880-6788.

Please have the following information ready when calling:
CO Model number (located on back of alarm):
CO Assembly number (located on back of alarm):
Date of Manufacture (located on the back of the 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. 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.

OM19-01
810-2682 REV. A
09/05

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 POWER OUTAGE, THIS UNIT WILL OPERATE FOR A PERIOD OF AT LEAST 20 HOURS ON A FULLY CHARGED BRYANT RECHARGABLE BATTERY PACK.

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.

INDIVIDUALS WITH MEDICAL PROBLEMS MAY CONSIDER USING WARNING DEVICES WHICH PROVIDE AUDIBLE AND VISUAL SIGNALS FOR CARBON MONOXIDE CONCENTRATIONS UNDER 30 PPM.

Quick Set Up Guide

We urge you to read this entire manual in the sequence it is presented.

Listed below are six easy steps for setting up your Bryant CO alarm. Please read this 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. The alarm should be located where it can wake you if it alarms at night. Refer to page 8 for installation location 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 11, “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 10). Refer to pages 10-12 for further information on installing your alarm.

Step 3

A Bryant 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 13).

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.

Quick Set Up Guide

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 13 for complete information.

Step 6

Make sure the red dot in the digital display is blinking. 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”.

While testing the alarm, have someone else check that the alarm can be heard easily from the sleeping areas. For complete testing information, refer to page 16.

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

Your Bryant CO alarm is now monitoring for the presence of carbon monoxide.

Introduction

This Bryant carbon monoxide (CO) alarm is an important part of your family's home safety plan. 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. Like smoke alarms, CO alarms monitor the air in your home and sound a loud alarm to warn you of trouble.

The way you respond to a CO alarm is quite different than 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 with your senses. You can see and smell the smoke, feel the heat, see, and possibly hear the fire burning. You can also readily see if your smoke alarm is alarming in a non-emergency situation, for example someone smoked up the kitchen with some burnt toast. Because your sense of sight, smell, hearing and touch give you information, you can almost instantly judge what action to take if you hear your smoke alarm.

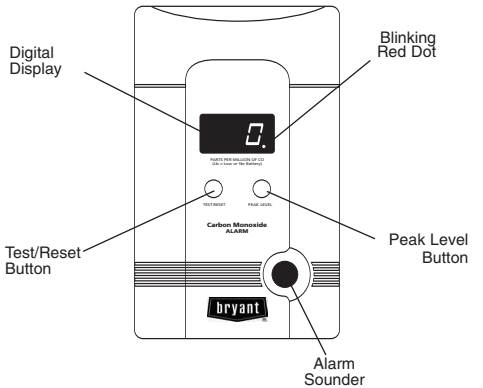
Carbon monoxide (CO) is invisible, odorless, tasteless, nonirritating, poisonous gas that is completely undetectable to your senses. It is created when any fuel is burned – gasoline, propane, natural gas, oil, wood, coal, and even tobacco. When oxygen is limited during combustion, more CO is produced. Serious problems can develop when combustion by-products are not properly vented outside the house. That's why it's so important to your safety that you have a carbon monoxide alarm.

Please take the time to completely read this guide to familiarize yourself with the facts about carbon monoxide, how your new unit works, and what to do if it alarms. Find a handy place to keep this manual so that it will be readily available when you have a question.

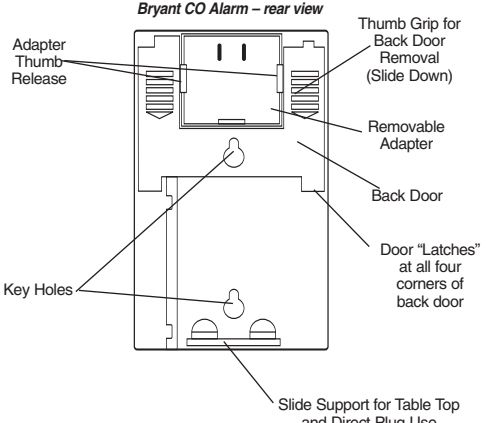
Thank you for making Bryant a part of your complete home safety program. With proper installation and use, your new Bryant CO alarm will provide you with years of dependable service.

Features

Bryant CO Alarm – front view



Bryant CO Alarm – rear view



Features

Digital Display

The continuous digital display shows you the level of carbon monoxide (if any) the unit is sensing. The unit updates the digital display every 15 seconds .

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. The blinking dot after the number shows the unit is operating.

Test/Reset Button

The Test/Reset button has three functions:

1. Press this button to test the unit weekly (see page 16 for further details).

2. Press this button to silence the alarm. This will reset the unit and it will then start monitoring for CO. If the CO concentration is above 70 ppm the alarm will again sound within 6 minutes.

3. Press the Test/Reset button to reset peak level memory. (See page 19).

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 Bryant feature allows you (or a heating contractor or a fireman) to see exactly how serious the CO problem you have so you can react accordingly.

Sensor

The sensor is a highly sensitive, electrochemical sensor that is CO-specific to help avoid false alarms.

Sounder Alarm

This is the loud 85 decibel pulsing alarm that will sound to alert you to a potential problem. An alarm condition is 4 quick "chirps" – followed by 5 seconds of silence – followed by 4 quick "chirps". This pattern repeats until the alarm is silenced or a high level of CO is no longer present.

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 or thumb while testing the alarm.

Keyholes

When the alarm is mounted to the wall, the keyholes slide onto the screws mounted in the wall.

Features

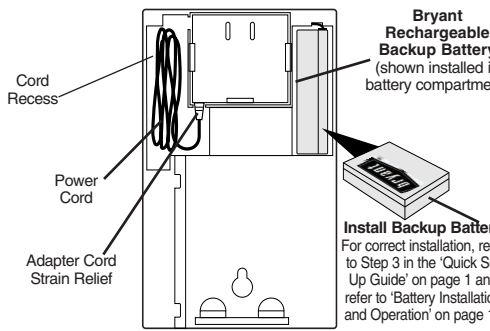
Pull-Out Transformer/Adapter

This unique Bryant feature enables the alarm to be used as a direct plug unit, a wall mounted unit or a table top unit.

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.

Rear view with back door removed



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

Features

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.

This Carbon Monoxide alarm is not a substitute for installing and maintaining an operational smoke alarm.

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 Bryant 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 25 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 8 "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.

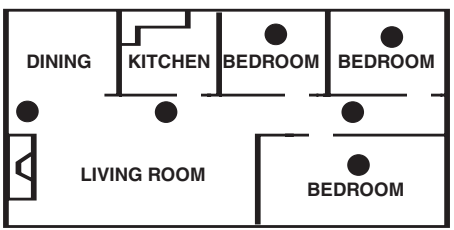
Installation

Where to Install Your CO Alarm

Your Bryant CO alarm should be mounted in or near bedrooms and living areas. It is recommended that you install a Bryant 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 Bryant 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.

Installation

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 :

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 Bryant 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.

Installation

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 Bryant 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.

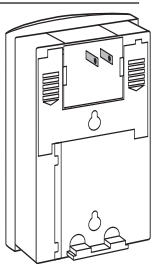
Direct Plug Alarm

First, refer to "Where to Install Your CO Alarm" on page 8 for general guidelines as to where to locate your CO alarm.

In its "as shipped" configuration, your Bryant CO alarm is ready to be plugged directly into a wall socket.

To install:

1. Choose a standard 120V unswitched outlet to plug the alarm into.
2. Pull slide support out approximately 1/4" until slide snaps in place (this will help support unit in wall outlet).
3. Plug the alarm into the outlet.



Back of unit when used as direct plug

Installation

If the 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˚.

To rotate the adapter:

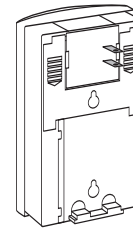
1. With back of the unit facing towards you and the adapter located at the top, place your thumbs on thumb grips.

2. Pull with your thumbs in the direction of the arrows on the thumb grips and slide the back door toward you until it stops.

3. Place your index finger into the small opening along the bottom of the adapter. Catch the edge of the door with your finger or finger nail and lift the door out.

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.



Back of the alarm when used as direct plug unit for sideways outlet.

5. Lift the adapter completely out of the alarm and rotate the adapter 90˚ to the right (clockwise). Snap it firmly back into place.

6. Carefully replace the back door. Insure the "latches" on all four corners of the door are lined up, then press the door into place.

7. Push with your thumbs in the direction opposite of the arrows on the thumb grips and slide the back door toward the top until it stops.

8. Plug the alarm into an unswitched wall socket.

Wall Mounted Alarm

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, the alarm will be in "dead air space" and carbon monoxide may not reach the sensor.

Installation

For a wall-mounted unit, you will need to pull out the removable adapter and power cord.

To install:

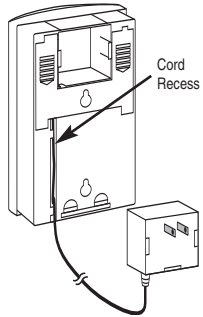
1. Follow steps 1 through 4 in the previous section under "To Rotate the Adapter."

2. With the adapter removed, pull the power cord out of the cord recess, remove the twist tie, and extend the power cord.

3. With the power cord extended, press the last few inches of the power cord back into the cord recess. Gently pull the cord at the bottom of the cord recess until the cord becomes taught and lays flat in cord recess.

4. Carefully replace the back door. Insure the "latches" on all four corners of the door are lined up, then press the door into place.

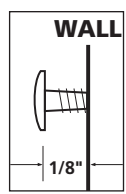
5. Push with your thumbs in the direction opposite of the arrows on the thumb grips and slide the back door toward the top until it stops.



Back of the alarm when used as a wall mount unit

6. Mark the location for the two mounting holes on the wall spaced vertically 2 5/8" apart.

7. If you are mounting the alarm in plaster board or drywall, drill a 3/16" hole into the wall and insert the plastic anchors provided. Install the two screws provided into the wall or wall anchors until the screw head is approximately 1/8" from the wall.



8. Hook the unit over the screw head and into the keyhole in back of the unit.

9. Plug the adapter into an unswitched wall socket.

Table Top Alarm

You can use your Bryant CO alarm as a table top unit. Follow steps 1 thru 4 above under "Wall Mounted Alarm". Instead of mounting the unit to a wall, pull the slide support all of the way out until it stops. You may stand the unit on a table, bedside stand, or chest of drawers. (refer to the diagram on page 10).

Battery Installation

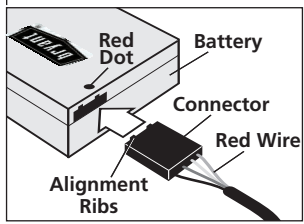
Note: This alarm is shipped from the factory with the battery disconnected from the alarm.

Battery Installation and Operation

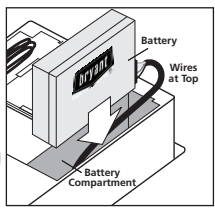
Install the battery by first removing the battery door and the battery pack.

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 24 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

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.

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

WARNING:

Replace the battery pack only with a Bryant rechargeable battery pack. Replacement battery packs can be purchased from Bryant customer service. See page 28 for additional precautions regarding the rechargeable battery pack.

Operation

Normal Operating Characteristics

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

You will 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 will 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.

Operation

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 page 17 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 it in again. This will clear the alarm for restart. If the dot does not resume blinking, your alarm may be malfunctioning.

Blinking Dot

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

- The display shows three eights 888, and then shows a number (usually around 200). You will then hear 4 quick beeps – followed by 5 seconds of silence – followed by 4 quick beeps. 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 no measurable amount of CO has been sensed by the alarm within the past 15 seconds.

Operation

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 20 seconds., 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 the "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, allowing time to resolve the problem calmly.

Operation

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 5).
- 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 it 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, iso-propanol, benzene, toluene, ethyl acetate, hydrogen, hydrogen sulfide, and sulfur dioxides.

Also most **aerosol spray, alcohol based products, paint, thinner, solvent, adhesives, hair spray, aftershaves, perfume, auto exhaust** (cold start) and some cleaning agents.

Operation

Peak Level Memory

The peak level feature is helpful in identifying 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 readings are heavy automobile traffic, a starting a 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.

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 Bryant CO alarm you can view concentrations of CO between 11 and 30 PPM. Use the concentrations shown in memory as a tool in identifying the source of the CO. It may be helpful to purchase additional Bryant 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 running car out of the garage a safe distance from living quarters and closing the garage door. It could be possible that a weather condition caused the 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.

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 24.

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.

Carbon Monoxide

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 a garage or basement, **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.

Carbon Monoxide

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

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.

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!

What To Do When the Alarm Sounds

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 or by an open door or window. Check that all persons are accounted for. Do not re-enter the premises or move away from the open door or window 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)

Specifications

Power:
120 V AC units: 60 Hz, Current 60 mA max.

Sensor:
Sensor calibrated at 150 ppm (±25 ppm).

Temperature:
Operating range: 4.4˚C (40˚F) to 37.8˚C (100˚F).

Humidity:
Operating range: 5–95% non-condensing.

Mounting:
Accessories supplied for wall mount, direct plug and tabletop applications.

Alarm:
85+ dB at 3 m (10') @ 3.4 ± 0.5 KHz pulsing alarm.

CO Alarm Time:
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.

Digital Display Accuracy:
Each Bryant 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

Depending on the ambient condition (temperature, humidity) and the condition of the sensor, the alarm readings may vary.

Specifications

How the Unit Determines When to Alarm

Your Bryant 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 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 unit has a time weighted alarm, so the higher the level of carbon monoxide present, the sooner the alarm will be triggered.

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.

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! UNIT WILL NOT DETECT CO IN THIS CONDITION.

Display Readings

Your new Bryant 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 a zero.
	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 23, What to do if alarm sounds.
	Steady “Err” and flashing dot.	“Chirp” every 30 seconds.	Unit is not operational–will not detect CO.	Unit malfunction.	Contact customer service at 1-800-880-6788.
	No display.	Constant alarm.	Unit is not operational–will not detect CO.	Unit malfunction.	Contact customer service at 1-800-880-6788.

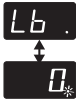
Display Readings

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 a flashing 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.
	"0" alternating with "Lb" and a flashing dot.	1 beep every 15 seconds.	Battery disconnected or not charging.	Battery discharged or disconnected longer than 10 hours.	Connect battery pack. "Lb" will disappear once battery is charged depending on initial charge.

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

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 on battery backup	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 battery backup.	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 battery backup.	Connect to AC power to fully recharge battery.

Display Readings

DC Powered in Battery Backup Operation

Display Shows	Alarm Sound	Unit Status	Unit Condition	Recommended Action
 "0" or CO concentration and "Lb" displayed once every 60 seconds, flashing dot every second.	1 "chirp" every 15 seconds	Battery conserve mode, sensing for CO.	Battery is partially discharged, after 5 minutes of operation on battery backup.	Confirm battery connection is fully seated & 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.	Confirm battery connection is fully seated & oriented properly. Connect to AC power to fully charge battery. Contact Kidde customer service if condition continues.
 None.	None.	Unit is not operational. *WILL NOT DETECT CO.*	Battery disconnected or missing.	Confirm battery connection is fully seated & oriented properly. Connect to AC power to fully charge battery. Contact Kidde customer service if condition continues.

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

Li-Ion Battery Handling Precautions

Handling

- Do not use the battery for a purpose other than for the alarm it is specified.
- 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.
- Do not discard the battery into fire or heat it under any circumstances. Otherwise, it may cause the battery to explode. Do not connect the battery to an electrical outlet.
- 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.

Li-Ion Battery Handling Precautions

- 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.
- Do not pierce the battery with sharp objects or subject to any other mechanical forces. Do not use an apparently damaged or deformed battery.
- Do not use or leave the battery near a heat source such as a fire or heater. Do not place the battery in microwave oven or on induction heaters.
- 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.
- 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.
- Do not immerse the battery in liquids such as fresh or salt water, beverages (fruit juices and coffee, etc.).
- 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.
- Li-Ion batteries may be disposed of in normal household waste. Contact local landfill for disposal or recycling practices in your area.

Battery Storage (When Detached From the Alarm)

- Store the battery in a location where children cannot reach it. Store the battery in a cool and dry storage area. Storing the battery in temperatures above 40°C 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.
- The proper operating/recharging temperature range is from 0 to 40°C. An operating/recharging condition outside this range can lead to battery damage, overheating or other problems.

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 *Bryant 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, Bryant 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.

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bryant

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