



**Carbon Monoxide Alarm
Model 12Marine
OWNER'S MANUAL
PLEASE READ AND SAVE!**



For Houseboats and Watercraft
Power 12Vdc, Current draw: 50mA max.

Dear New COSTAR® 12Marine Owner,

Congratulations as you have taken steps to help insure the health and life safety of you and your family. We are proud to offer you our unique, patented CO Sensor technology that detects CO in a manner similar to the human body's response. The COSTAR® 12Marine is an ideal and low-cost way of warning you of both the acute and chronic effects of CO poisoning.

Please read this owner's manual carefully so you will have a better understanding of the effects of CO poisoning and the COSTAR® 12Marine Alarm, as we work together pursuing a safer, healthier marine environment for us all.

To your good health and safety,

Mark Goldstein, Ph.D.
President
Quantum Group Inc.

1.0 WHAT YOU SHOULD KNOW ABOUT CO

Carbon monoxide (CO) is an insidious poison. It is a colorless, odorless and tasteless gas. It is a cumulative poison. Even low levels of CO have been shown to cause brain and other vital organ damage in unborn infants with no effect on the mother.

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

- MILD EXPOSURE

Slight headache, nausea, vomiting, fatigue (often described as "flu-like" symptoms)

- MEDIUM EXPOSURE

Severe throbbing headache, drowsiness, confusion, fast heart rate

- EXTREME EXPOSURE

Unconsciousness, convulsions, cardiorespiratory failure, death

Many cases of reported CARBON MONOXIDE POISONING indicate that while victims are aware they are not well, they become so disoriented they are unable to save themselves by either exiting the houseboat or watercraft or calling for assistance. Also, young children and pets may be the first affected. Your CO alarm is designed to detect the toxic CO fumes that result from incomplete combustion, such as those emitted from appliances and furnaces. A CO Alarm is NOT A SUBSTITUTE for other combustible gas, fire or smoke alarms. This carbon monoxide alarm is designed to detect carbon monoxide gas from ANY source of combustion.

WARNING: Common sources of CO on vessels are engines, auxiliary generators, and propane heating or cooking appliances.

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

WARNING: This device may not alarm at low carbon monoxide levels. The Occupational Safety and Health Association (OSHA) has established that continuous exposure to levels of 50 PPM should not be exceeded in an eight-hour period. This alarm has not been investigated for carbon monoxide detection below 70 PPM. Individuals with medical problems may consider using detection devices that provide audible and visual signals for CO concentrations under 30 PPM.

2.0 WHAT YOU SHOULD DO IF THE ALARM SOUNDS

⚠ WARNING:

Activation of this device indicates the presence of carbon monoxide (CO), which can kill you. If alarm sounds:

- 2.1 Operate reset/silence button;
- 2.2 Call your emergency services (_____ - _____) [fire department or 911];
- 2.3 Immediately move to fresh air – outdoors or by an open door/window. Then, do a head count to check that all persons are accounted for. Do not reenter the premises nor move away from the open door/window until the emergency services responders have arrived, the premises have been aired out, and your alarm remains in its normal condition.
- 2.4 After following steps 2.1-2.3, if your alarm reactivates within a 24-hour period, repeat steps 2.1-2.3 and call a qualified technician (_____ - _____) to investigate for sources of CO from fuel burning equipment and appliances, and inspect for proper operation of this equipment. If problems are identified during this inspection, have the equipment serviced immediately. Note any combustion equipment not inspected by the technician and consult the manufacturers' instructions or contact the manufacturers directly for more information about CO safety and this equipment.

2.5 IMPORTANT CONSIDERATIONS

The 12Marine alarm has been designed and is warranted to operate for five (5) years.

NOTE: Manufacturer strongly recommends replacement of alarm five

years after date of purchase

2.6 Never disconnect the unit to silence an alarm. The alarm will automatically sense when the level of CO in the air falls below the danger level. When the alarm sounds quickly move outside to fresh air, either up on the deck or dock and remain there till the alarm is silenced. The sound produced by the alarm is loud because it is designed to awaken a person in an emergency. Prolonged exposure to the alarm at a close distance may be harmful to your hearing.

3.0 DEVELOPING YOUR OWN CO SAFETY PLAN

This CO alarm can quickly alert you to the presence of CO - it cannot prevent toxic CO emissions. Please note that there are hazards against which CO detection may not be effective, such as propane gas leaks or explosions. The ultimate responsibility for protection against toxic CO gas rests solely on you. Installing CO alarms is just the first step in protecting your family from toxic CO poisoning. We also suggest that you create an effective, comprehensive safety program as outlined below.

3.1 Install CO alarms properly following the instructions in this manual.

3.2 Develop a family escape plan and practice it with your entire family, especially small children.

- Draw a floor plan of your houseboat or watercraft showing exits to the deck and open air

- Make sure that all occupants know what the CO alarm signal means and how they must be prepared to leave the houseboat or watercraft by themselves if necessary.

- Decide on a meeting place on the deck or dock of your houseboat or watercraft and make sure all occupants understand where they should go and wait if there is a dangerous CO condition.

- Conduct CO safety drills at least every 6 months to make sure that everyone, even small children, know what to do in order to escape safely.

- Know where to go to obtain emergency assistance from outside your houseboat or watercraft.

4.0 IMPORTANT: WHAT YOUR CO ALARM CAN AND CANNOT DO

4.1 This unit is designed to detect carbon monoxide (CO) entering its sensing chamber. It does not sense combustible gas (such as natural gas, propane or butane), heat, smoke or flames.

4.2 NOTE: This CO alarm is designed for use within a single houseboat or watercraft.

4.3 When properly located, installed, and maintained, this CO alarm is designed to provide early warning of developing poisonous CO conditions at a reasonable cost. This alarm monitors the air, and when it senses CO, it activates its built-in alarm. It can provide precious time for you and your family to escape from your houseboat or watercraft before CO can seriously injure or kill you. However, such an early warning is possible only if the alarm is located, installed, and maintained as specified in the Owner's Manual.

5.0 INSTALLING YOUR CARBON MONOXIDE ALARM

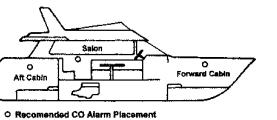


Figure 1: Recommended CO Alarm Placement

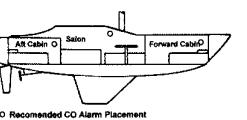


Figure 1: Recommended CO Alarm Placement

5.2 Put a CO alarm in a central location inside the cabin, near sleeping areas. A closed door can block particulate smoke, but CO gas is likely to get through. If your houseboat or watercraft has an interior room divider or door it is recommended to place a CO alarm on both sides of the divider or door. If the alarm is located outside of a bedroom, it may not wake up a sound sleeper, especially if the bedroom door or divider is closed or only partly open.

5.3 LOCATIONS TO AVOID

- Within 5 feet (1.5m) of any cooking appliance or furnace

- Near an open window or door, because the fresh air entering the opening may delay CO from reaching the alarm

- In damp or very humid areas or next to bathrooms with showers. Install detectors at least 5 feet (1.5 meters) away from bathrooms

- Temperature limits for proper operation are 32°F to 120°F (0°C to 49°C)

- Areas where household cleaning supplies or similar contaminants are stored or frequently used

5.7 CONDITIONS WHICH CAN RESULT IN TEMPORARY CO SITUATIONS:

-Excessive spillage or reverse venting of fuel burning appliances caused by outdoor ambient conditions, such as:

i) Wind direction and/or velocity, including high gusts of wind. Heavy air in the vent pipes (cold/humid air with extended periods between cycles)

ii) Negative pressure differential resulting from the use of exhaust fans

iii) Simultaneous operation of several fuel burning appliances competing for limited internal air

iv) Vent pipe connections vibrating loose from clothes dryers, furnaces, or water heaters

v) Obstructions in or unconventional vent pipe designs which can amplify the above situations

-Extended operation of unvented fuel burning devices (range, oven, fireplace, etc.)

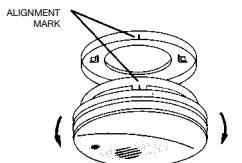
-Temperature inversions that can trap exhaust gasses near the ground

6.0 INSTALLATION INSTRUCTIONS: CAUTION!! READ CAREFULLY

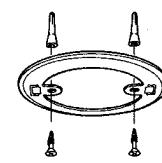
CAUTION: THIS UNIT IS SEALED. THE COVER IS NOT REMOVABLE!

6.1 Select proper location

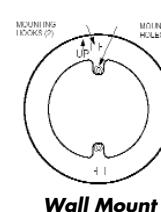
6.2 A mounting plate is provided on the back of the alarm. Remove the mounting plate from the back of the alarm by holding the mounting plate and twisting the alarm in the direction indicated by the "OFF" arrow on the alarm cover.



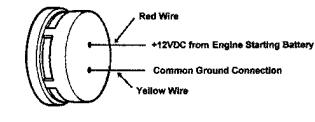
Installation / Removal



Ceiling Mount



Wall Mount



Wiring Installation

Figure 2: Installation Instructions

6.3 To insure aesthetic alignment of the alarm, the UP ARROW on the mounting plate must be:

- A.) Parallel with the hallway walls when ceiling mounting
- B.) Pointed upward when wall mounting

6.4 As described in Figures 2, attach the mounting plate on the wall or ceiling. Use the screws and anchors provided to secure the mounting plate.

6.5 Follow the applicable codes and regulations for wiring. Disconnect power before installation or service. Connect red wire to 12 Volt DC power source. Connect Yellow wire to Ground.

6.6 Align marks on the edge of the trim plate with those on the alarm. Twist the alarm in the direction indicated by the "ON" arrow on the alarm cover (see step C) until it locks in place.

6.7 To make your carbon monoxide alarm tamper resistant, a locking pin has been provided in the bag with the screws and anchors. Using this pin will deter children and others from removing the alarm from the mounting plate. To use the pin, insert it into the hole in the side of the alarm after the alarm has been installed on the mounting plate (see fig. 3).

Using long nose pliers pull the pin out of the hole; it is now possible to remove the alarm from the mounting plate. Test alarm immediately following installation and weekly thereafter for proper operation by pushing the test button until a short beep is heard (approximately three seconds). Release the button. The alarm will then test itself for proper operation and the RED L.E.D. will flash 5 times. At completion of the self-test, the alarm will sound 2 patterns. The alarm then resumes normal operation.

6.8 This box contains two self-adhesive labels. You should write the telephone numbers of the emergency service provider and a qualified technician in the space provided in the labels. Place one label next to the alarm and the other label near a source of fresh air where you plan to gather after the alarm indicates the presence of carbon monoxide.

7.0 ALARM SIGNALS

7.1 NORMAL OPERATION

RED L.E.D. flashes once every 30 seconds, indicating that the alarm is powered and active.

7.2 ALARM CONDITION

RED LED turns "on" for 2 seconds and "off" for 4 seconds with 4 short beeps for 1 second and 5 seconds of silence. Pushing and holding the test/reset button for 3 seconds will silence the alarm for about 4 minutes. After 4 minutes, the alarm will once again sound until the unsafe CO concentration is reduced.

7.3 TROUBLE CONDITION

The detector self-tests every 10 minutes. The detector will beep and the Indicator/Test button will flash twice every 30 seconds if a fault is detected. This is an indication of a malfunction and that the detector requires immediate servicing.

8.0 MAINTENANCE

CLEANING YOUR ALARM:

8.1 To clean your alarm remove it from the mounting bracket as outlined in Section 6.2 and 6.7.

8.2 You can clean the interior of your alarm by using your vacuum cleaner hose and vacuuming through the openings around the perimeter of the alarm.

8.3 The outside can be wiped with a clean towel. Test your alarms weekly and replace them when they no longer function. As with any electronic product, it has a limited life. Alarms that do not work cannot warn you.

8.4 After cleaning, reinstall your alarm and test your alarm by using the TEST button.

! WARNING: Do not use any household cleaning agents, paints, varnishes or any other chemical on your 12Marine alarm.

NOTE: REGULAR TESTING IS RECOMMENDED.

9.0 PERIODIC ALARM TESTING

Test the alarm weekly for proper operation by pushing the test button until a short beep is heard (approximately three seconds). Release the button.

The alarm will then test itself for proper operation and the RED L.E.D. light will flash 4-6 times. At completion of the self-test, the alarm will sound 2 patterns. The alarm then resumes normal operation.

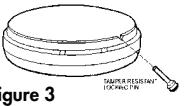


Figure 3

10.0 SERVICE AND WARRANTY

If after reviewing this manual you feel that your CO Alarm is defective in any way, do not tamper with the unit. Before returning your device, call Quantum Group's customer service line at 1-800-432-5599 to receive a return merchandise authorization (RMA) number. Once an RMA number has been issued, return product along with proof of purchase that includes a date. Please enclose a note describing the problem and send it to:



QUANTUM GROUP INC.

7737 Kenamar Court
San Diego, CA 92121-2425
Or call us toll free 1-800-432-5599
E-mail address: CustomerService@QGinc.com

LIMITED WARRANTY COSTAR® Model 12Marine

Quantum Group Inc. offers you this limited warranty on your new carbon monoxide alarm, including all of its component parts. This limited warranty extends solely to the original end-user purchaser of this product, provided your purchase was made from an authorized vendor. Transfer or resale of this product will automatically terminate warranty coverage.

Quantum Group Inc. warrants the enclosed carbon monoxide alarm to be free from defects in materials and workmanship under authorized use and service, as specified in the owner's manual, for a period of five (5) years from the date of purchase. During the initial one (1) year period commencing with the date of purchase, any repair or replacement shall be made without charge with proof of purchase. During the latter four (4) years of the warranty period, any repair or replacement shall be made at a charge to the purchaser not to exceed the manufacturer's cost of repair or replacement. All replaced items become the property of Quantum Group Inc.

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