



Marine Battery Carbon Monoxide Alarm

USER'S MANUAL

SA-340-MARINE Non-Replaceable Lithium Battery

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SA34006152019-1

ATTENTION: This user's manual contains important Carbon Monoxide (CO) alarm installation, operation, troubleshooting and warranty information. Read, follow, and keep this manual for future reference.

NOTE: If you install or purchase this alarm for another person, give this manual to that person.

IMPORTANT: It is recommended that this alarm is replaced after five years of retail sale. Record the installation / retail sale date in the Owner's Replacement Record section of this manual and also record a replacement date. This unit has an End of Life (EOL) signal that will sound after 5 years of use.

WHY EVERY BOAT NEEDS A SA-340-MARINE CO ALARM

Everyone is at risk for carbon monoxide poisoning! Particularly sensitive are children, pregnant women, the elderly and people with lung or heart disease or anemia! Carbon monoxide (CO) is an odorless, colorless gas that prevents the blood from carrying oxygen to vital organs. CO is 200 times more likely to replace oxygen in the blood. The Consumer Product Safety Commission (CPSC) recommends using at least one CO alarm located outside of sleeping areas. For the best security, locate a CO alarm in each sleeping area. Safe-T-Alert CO alarms are available for secondary installations.

ABOUT THIS ALARM

Because CO is a colorless, odorless, tasteless and highly poisonous gas; it can endanger lives even at low levels of concentration. The CO Alarm will alert you to potentially dangerous situations. **The following symptoms may be related to CO POISONING. Discuss these symptoms with ALL household members and boat guests:**

- **Mild Exposure:** Headaches, running nose, sore or watery eyes, often described as "flu-like" symptoms.
- **Medium Exposure:** Dizziness, drowsiness, vomiting.
- **Extreme Exposure:** Unconsciousness, brain damage and death.

NOTE: Reported cases of CO gas poisoning indicate that while victims are aware they are not well, they are disoriented. They are unable to save themselves by exiting the boat or calling for assistance. **Small children and pets may be affected first.**

Your SAFE-T-ALERT Series alarm helps protect your family members and guests from CO produced while using your Boat. CO gas is produced when any type of fuel is incompletely burned. Potential sources of CO in and around your Boat can include gas or diesel engine exhaust, portable space heaters, galley gas stoves and ovens, furnaces, defective engine exhaust systems, charcoal, portable grills, other nearby Boats, portable generators, generator exhaust, and other gas powered appliances. All produce CO.

The following are also sources of CO that may affect your Boat:

- Extended operation of unvented fuel burning appliances can build up high CO levels.
- An idling boat or other vehicle in an open area or closed garage.
- Temperature inversions can trap exhaust near the ground and water.

- CO build up can be caused by reverse/negative venting of fuel burning appliances including; 1) Clogged, loose or faulty stacks or chimneys of (clothes dryers, furnaces and water heaters, etc.), 2) wind direction and/or velocity, 3) simultaneous operation of multiple fuel burning appliances, and/or exhaust fans.
- Portable Generators on your boat or neighboring boats.

WARNING:

LIMITATIONS OF CO ALARMS

THIS ALARM WILL NOT WORK WITHOUT POWER.

DO NOT REMOVE THE 3 VOLT LITHIUM BATTERY

THIS ALARM WILL ONLY INDICATE THE PRESENCE OF GAS AT THE SENSOR. CO may be present in other areas. MTI recommends installing CO alarms in all sleeping areas. **Do not block or cover** the alarm with any object that can prevent carbon monoxide from reaching the sensor.

THIS ALARM IS INTENDED FOR USE IN Boats. It does not monitor external deck areas where CO may be present. It is not designed to measure compliance with commercial and industrial standards.

THIS ALARM MAY NOT BE HEARD. The alarm's loudness is designed to meet or exceed regulatory standards; however, the alarm may not be heard if alarms are located in remote locations or behind closed doors. Persons who are hard-of-hearing, have consumed alcoholic beverages, taken prescription, non-prescription or illegal drugs, may not hear the alarm.

THIS ALARM IS DESIGNED TO DETECT CARBON MONOXIDE. THE ALARM IS NOT DESIGNED TO DETECT SMOKE, OR FIRE.

THIS ALARM MAY NOT ALARM AT LOW CO LEVELS - It is not designed to measure compliance with the Occupational Safety Health Administration (OSHA) commercial or industrial standards. Individuals with medical problems may consider using warning devices, which provide audible and visual signals for CO concentrations under 30 ppm.

THIS ALARM IS NOT A REPLACEMENT FOR INSURANCE. Always be sure your RV is fully insured.

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

DO NOT Install within 5 feet (1.5M) of any cooking appliance.

WARNING: TO REDUCE THE RISK OF CARBON MONOXIDE POISONING, TEST ALARM OPERATION WHEN NOT IN USE FOR 10 DAYS OR MORE; AND BEFORE EACH TRIP.

HOW TO PROTECT YOUR FAMILY

CAUTION - The SAFE-T-ALERT™ SA-340-MARINE CO Alarm is designed to protect individuals from the acute effects of carbon monoxide exposure in boats. It will not fully safeguard individuals with specific medical conditions. If in doubt, consult a medical practitioner.

To protect your family, you should:

- **INSTALL THE ALARM PROPERLY.** Carefully read and follow ALL the instructions in this manual. Test your unit every week. Alarms that do not work will not alert you to hazardous levels of CO. See the section, **Test Procedure**, in this manual for further information.
- **MAKE REGULAR VISUAL INSPECTIONS.** Check all fuel burning equipment including gas water-heaters, galley gas stoves, space heaters, gas dryers and all pilot lights. Check the color of the pilot flame. The color should be blue.
- **MAKE REGULAR VISUAL INSPECTIONS OF THE ENGINE AND GENERATOR EXHAUST SYSTEMS.** Cracked exhaust systems can allow CO to enter the living area of your boat.
- **PROFESSIONALLY MAINTAIN YOUR ENGINE AND GENERATOR.** Although gas engines and generators produce CO, a poorly tuned engine and generator will produce greater amounts CO.
- **KEEP THE COCKPIT AND PASSENGER AREA WELL VENTILATED.** When idling, traveling at slow speeds or when the canvas is up at any speed, under certain conditions high CO levels can collect in the open air and can enter enclosed areas (station wagon effect).

WHERE TO INSTALL

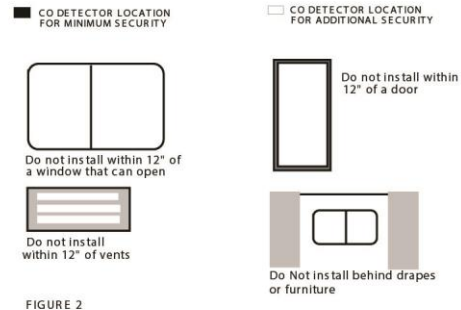
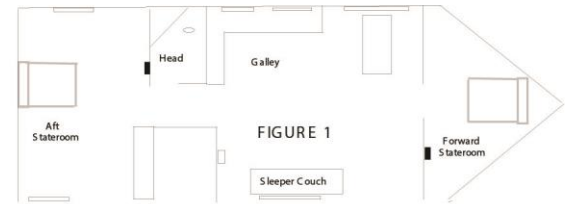
- MTI Recommends installing a CO gas alarm in each sleeping area.
- The NFPA and Consumer Product Safety Commission recommends installing a CO alarm outside the sleeping area. The FX-4 CO alarm complies with that recommendation. ‡
- **INSTALL ALARM** at least 4” (101.6 mm) off the floor.

WHERE NOT TO INSTALL

- **DO NOT INSTALL** behind furniture, drapes, curtains, in closets or areas that will block air flow to the alarm. ‡
- **DO NOT INSTALL** within 12” (304.8 mm) of opening windows, hatches, exterior doors, heating or return vents, or other drafty areas. ‡
- **DO NOT INSTALL** on an outside wall. ‡
- **NOTE:** Older Boats may have little or no insulation and therefore are draftier. Carefully consider mounting locations. The following diagrams provide additional alarm installation information

The SA-340-MARINE is designed for use/installation in boats

The following diagrams provide additional alarm installation information:



INSTALLATION INSTRUCTIONS



WARNING
FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN A MALFUNCTION OR FAILURE OF THE ALARM AND MAY VOID THE WARRANTY.

Power Supply: Sealed In 3V Long life Lithium battery

Follow these instructions carefully. Failure to follow these instructions can damage the unit and void the warranty. Select a wall location at least 4” off the floor.

SA-340-MARINE: Having established the mounting location ensure that there is no electrical wiring or pipe work in the area adjacent to the mounting surface. Install the back plate at least 4” from the floor. Slide the Detector enclosure onto the mounting plate.

BE SURE PULL TAB IS VISIBLE after installation and not twisted. Pull on tab to remove, starts the detectors/operation.

Note you may remove the pull tab prior to installation, but alarm may sound if test button is accidentally pushed.

TEST PROCEDURE



WARNING

TO REDUCE THE RISK OF CARBON MONOXIDE POISONING, TEST THIS ALARM'S OPERATION AFTER THE BOAT HAS BEEN IN STORAGE, BEFORE EACH TRIP AND AT LEAST ONCE PER WEEK DURING USE.



WARNING

WARNING: THE TEST BUTTON ONLY TESTS THE ALARM CIRCUIT NOT THE SENSORS. TO TEST THE CO SENSOR USE A CAN OF SAFE-T-ALERT CO TEST GAS TO TEST THE 400 PPM CALABRATION POINT. DO NOT TRY TO GENERATE CO TO TEST THE ALARM. The TEST/RESET button tests all ELECTRICAL functions of the alarm. It does not check the sensor operation.

The alarm may be tested at any time -The TEST/Mute switch is located on the front of the alarm Press and hold the test button for 1 second. The alarm is working properly if the GREEN indicator light changes color to RED and the horn beeps 4 times, is silent for 5 seconds then repeats.

IMPORTANT - If this alarm does not test properly return it immediately for repair or replacement.

OPERATION

To operate this CO alarm, pull on tab to remove; this starts the detectors/operation. If the ON indicator light does not light, see the section, **Trouble-Shooting Guide**, in this manual for further information. **Do not attempt to fix it yourself.**

VISUAL AND AUDIBLE ALARM SIGNALS

This SAFE-T-ALERT™ CO Alarm is designed to be easy-to-operate. The alarm has two indicator lights that display a specific color for each monitored condition. There also is a matching sound pattern for alarm conditions.

CO ALARM

The Red CO LED will flash and the alarm will sound 4 "BEEPS" then silent for 5 Seconds. **After the initial 4 minutes of the alarm signal, the 5 second "off" period will change to approximately 60 seconds.** These signals indicate that the CO level is over 35 ppm. **IMMEDIATE ACTION IS REQUIRED.** See **Procedures To Take During An Alarm.** This cycle will continue until the TEST/Mute button on the front of alarm is pressed. Ventilate the Boat. The RED light will stay ON until the CO has cleared, or the alarm will reactivate in approximately 6 minutes if the CO is still present. **DO NOT RE-ENTER THE BOAT.** This alarm will return to normal operation after the boat is properly ventilated.

MALFUNCTION/SERVICE SIGNAL If any malfunction is detected, the Operational/CO LED will alternate Red/Green and the alarm will sound once every 15 seconds. Press the Test/Mute button. If the Test/Mute button does not clear the signals, check the battery voltage. **If the battery voltage is not low and the unit will not return to normal operation, immediately remove the alarm and return for service or warranty replacement.** See the warranty section in this manual.

<u>OPERATION</u>	<u>AUDIBLE SIGNAL</u>	<u>VISUAL SIGNAL</u>
NORMAL	NONE	GREEN LED FLASHES EVERY MINUTE
CO ALARM	4 "BEEPS"	FLASHING RED
AFTER 4 MINUTES	5 SECONDS OFF – CYCLE REPEATS 60 SECONDS OFF – CYCLE REPEATS	
ALARM MALFUNCTION	BEEP EVERY 30 SECONDS	ALTERNATING RED/GREEN
END OF LIFE	BEEPS EVERY 25-30 SECONDS	RED RED GREEN GREEN FLASHING

TROUBLE-SHOOTING GUIDE

Use this chart to trouble-shoot problems with this SA-340-MARINE Alarm.

<u>PROBLEM</u>	<u>CAUSE/SOLUTION</u>
Green Operational LED Off	1. Dead or Missing Battery 2. Contact Customer Service
No Sound When Testing	Contact Customer Service
No Red LED When Testing	Contact Customer Service
Locked In Alarm	Contact Customer Service
MALFUNCTION ALARM LED Red/Green & Beeps Every 15 Seconds	1. Check Battery Voltage Battery Voltage is Good and it Will Not Reset To Normal operation 2. Contact Customer Service
END OF LIFE ALARM	Push reset button to reset for 3 days – Replace within 30 days.
Customer Service 800-383-0269	www.safetalert.com

HOW TO TAKE CARE OF YOUR ALARM


This CO Alarm is designed to be as maintenance free as possible. To keep your alarm in good working order, you must:

- **TEST THE ALARM WEEKLY.** See the section, **Test Procedure, in this manual for further information.**
- **VACUUM THE DUST OFF THE ALARM COVER.** At least once a month (more frequently in dusty locations), use the soft brush attachment of your vacuum to clean the alarm cover.
- **CLEAN THE ALARM COVER WHEN DIRTY.** Wash the alarm cover by hand. Use a cloth dampened in clean water. Dry with a soft cloth.
- **DO NOT SPRAY CLEANING AGENTS OR WAXES DIRECTLY ONTO THE FRONT PANEL.** This action may damage the sensor, cause an alarm or cause an alarm malfunction.
- **OBSERVE THE COLOR OF THE INDICATOR LIGHT.** At frequent intervals and during your weekly test, check the indicator light on the on the front panel of the alarm.
- See the section, **Operation**, in this manual for further information.


PROCEDURES TO TAKE DURING AN CO ALARM

Follow the alarm procedures for your country. The emergency number depends on your travel location.

PROCEDURES TO TAKE DURING A CO ALARM IN THE USA

 **WARNING:** Actuation of this device indicates the presence of carbon monoxide (CO) gas, which can KILL YOU. If signal sounds (4 beeps and flashing or solid red light): **1)** Operate the Test/Mute button; **2)** Call your emergency local service (Phone Number _____) (fire department or 911); **3)** Immediately move to fresh air - outdoors or by an open door/window. Check that all persons are accounted for. Do not reenter the premises or move away from the open door / window until the emergency responders have arrived, the premises have been aired out and your alarm remains in its normal operation. **4)** After following steps 1-3, if your alarm reactivates within a 24-hour period, repeat steps 1-3 and call a qualified appliance technician. (Phone Number _____) 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 manufacturer directly, for more information about CO safety and this equipment. Make sure that the motor vehicles are not, and have not been, operating in an attached garage or adjacent to the residence.

PROCEDURES TO TAKE DURING A CO ALARM IN CANADA

 **WARNING:** Actuation of this device indicates the presence of carbon monoxide (CO) gases which can KILL YOU. If signal sounds (4 beeps and flashing or solid red light): **1)** Operate the Test/Mute. Immediately move to fresh air - outdoors or by an open door/window. Check that all persons are accounted for. Do not reenter the premises or move away from the open door/window until the emergency responders have arrived, the premises have been aired out, and your alarm remains in its normal condition; **2)** call your emergency local service (telephone number _____) (Fire department or 911).


DO NOT REPLACE BATTERY

End of Life Signal – The Sensor has a 5 Year Service Life

All SA-340-MARINE models include an End of Life (EOL) Signal indicating the sensor has reached the end of its 5 year service life and you must replace the alarm. The signal is the LED flashing RED RED GREEN GREEN with a beep every 25-30 seconds. The EOL

Signal may be reset by pushing TEST / RESET button on the alarm. This will reset the EOL Signal for a period of 72 hours (3 days) for a total of up to 30 days. After 30 days the signal cannot be reset and the alarm must be replaced. **DO NOT REMOVE THE ALARM UNTIL YOU HAVE A REPLACEMENT ALARM AVAILABLE TO INSTALL.**

END OF LIFE (EOL) DIRECTIONS

1. Unscrew the screws with a Phillips screwdriver. Placement marked by this image: 
2. Remove back panel.
3. Remove battery. Discard or recycle battery and circuit board. Replace with new alarm.

Important: Removing /damaging label or opening the alarm voids warranty. Only open at EOL.

SPECIFICATIONS

MODEL	SA-340-MARINE
POWER SUPPLY	Sealed In 3V Long life Lithium battery
RELATIVE HUMIDITY	15% (+/- 5%) to 95% (+/- 4%)
AUDIBLE OUTPUT	85 dB @ 10 feet
CO ALARM TRIGGER	<15 Minutes @ 400 ppm
CASE MATERIAL	ABS
CASE DIMENSIONS	4.75" x 2.75"
WARRANTY	1 Year Limited

Conforms To ANSI / UL STD 2034

OWNERS REPLACEMENT RECORD

Replace this SAFE-T-ALERT™ SA-340-MARINE CO alarm 5 years after date of installation. For new boats enter the month and year the boat was manufactured. If you are not sure, enter the month and year you purchased the boat or enter May and the model year of the boat (example May 2021), whichever is the earlier date.

Installation Date: _____
(Example: March 2021)

Replace by Date _____
(5 years after Installation date – example: March 2026)

If you don't know the installation date, replace the alarm no later than 5 years after the production date on the back of the alarm.

Two self-adhesive labels are included with this Alarm. Add the phone numbers of your emergency service provider and qualified technician in the space provided. Record your replace by date on this label. Place one label near the alarm and one label near a fresh air source where you plan to gather if the alarm sounds.

LIMITED PRODUCTS WARRANTY

MTI INDUSTRIES, INC. warrants to the original retail purchaser that its products will be free from defects of material or workmanship for a period of two (2) years from the date of retail purchase. If proven to have been

defective in original materials or workmanship and returned, delivery costs prepaid, MTI INDUSTRIES, INC. will replace this product free of charge.

LIMITS OF WARRANTY

Replacement is your exclusive remedy under this limited warranty or any other warranty (including any implied warranty of merchantability for a particular purpose). Any and all implied warranties or merchantability or fitness for a particular purpose shall be limited to the warranty period from the original date of retail purchase. MTI INDUSTRIES, INC., its dealers and distributors shall in no case be responsible or in any way liable for any incidental or consequential damages for any reason. Some states do not allow the limitation or exclusion of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. This warranty gives you specific rights, and you may also have other rights, which may vary, from state to state.

PRODUCT NOT WARRANTED

NOTE- There are no user serviceable parts inside the case. Opening any SAFE-T-ALERT™ product for any reason voids the warranty. This warranty does not cover damage or failure resulting from acts of God, abuse, misuse, neglect, or faulty installation.

WARRANTY RETURN PROCEDURES

It is MTI's experience that a CO Alarm is sounding for a reason. Call, ask your dealer to call, or e-mail our Customer Service Department (as listed below) to trouble shoot the situation.

Customer Service Phone No. - 800-383-0269

Fax No. 847-546-9007

E-mail Salesmtiindustries.com

Web Site: www.mtiindustries.com

If Customer Service determines that the unit is defective, a Return Authorization (RA) number will be issued. **No product will be accepted for service or replacement without first obtaining a RA number.**

If authorized, return this product to:

MTI Industries, Inc.

Warranty Dept. RA # (INSERT RA NUMBER HERE)

206 C Tequesta Drive

Destin, FL 32541

NOTE: Mark the RA number in the area shown on the outside of the box!

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