


## PROCEDURES TO TAKE DURING AN ALARM

 **WARNING--ACTIVATION OF THIS ALARM INDICATES THE PRESENCE OF DANGEROUS LEVELS OF GASOLINE VAPORS OR HEAT THAT COULD CAUSE AN EXPLOSION OR FIRE. IT ALSO INDICATES THE PRESENCE OF RISING WATER IN YOUR BOAT.**

**TAKE THESE STEPS IF AN ALARM SOUNDS:**

### If the Fume Alarm Sounds:

Turn off all electrical equipment, generators; extinguish all open flames (oven, cook top, smoking materials, etc.). Turn off the engine(s) if safe navigation conditions exist. Open the engine compartment, ports, hatches and doors and ventilate the area. If you are ashore, evacuate the boat. Do not return until the area is ventilated and the detector has returned to normal standby condition. Proceed with caution and locate and repair the cause of the leak. Seek a qualified technician if necessary. Do not start or use the boat until all the necessary repairs are made.

### If the Heat Alarm Sounds:

Check the engine(s) temperature. If there is smoke coming from the engine room/compartment and there is no automatic fire suppression system in the engine room/compartment; put on your life jackets, radio the Coast Guard and leave the boat if necessary. Get as far away from the boat as possible. **DO NOT OPEN THE ENGINE ROOM DOOR OR HATCH.**

### If the Water Alarm Sounds:

Put on your life jackets. Check the bilge pump water outlet to determine that the pump is running. If it is not running, manually start bilge pump. Open the hatch or compartment and try to determine the cause of the water leak. If more water is entering the boat then the pump can handle, radio the Coast Guard for assistance.

## TROUBLE SHOOTING GUIDE

YELLOW LED Won't Turn ON/OFF when pressed	Wire connections, missing or blown fuse, reversed wires, or defective unit
Locked in WAIT (more than 4-5 minutes)	Replace Sensor Block SA-186-SB
No Beep and WARNING (RED) Lights Blink When TEST/MUTE is Pressed	Return for repair or replacement
Alternate Blink on RED GREEN Lights	No communication with sensor block, check for RED LED light ON at Sensor block, if on return for repair or replacement.

## SPECIFICATIONS

Power Supply: 12 VDC Operational Voltage: 8 to 15 VDC Power Draw: 100mA amps @ 12VDC

Operating Temp: -22° F - 160° F Alarm Threshold: < 20% LEL of Gasoline Fumes / Vapor

Other Gases Detected: Alcohol, Acetone, Hydrogen and most other Hydrocarbon gases

## LIMITED PRODUCTS WARRANTY

MTI INDUSTRIES, INC. Warrants to the original purchaser that this detector will be free from defects of material or workmanship for a period of Two (2) years. If proven to have been defective in original materials or workmanship and returned, delivery costs prepaid, MTI INDUSTRIES, INC. will repair or replace this product free of charge.

### LIMITS OF WARRANTY

Repair or 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 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.

### WARRANTY RETURN POLICY

**Warning-** opening this product for any reason voids the warranty. There are no user serviceable parts in the cases. No product will be accepted for repair or replacement without an authorization number (RA). RA numbers may only be issued by MTI or authorized distributors. Include an explanation of the problem, the original dated sales receipt, and your return address. Send, shipping prepaid, to MTI Industries, Inc. 206C Tequesta, FL 32541 E-mail [sales@mtiindustries.com](mailto:sales@mtiindustries.com) [www.mtiindustries.com](http://www.mtiindustries.com)

MARINE TECHNOLOGIES, INC.

SAFE-T-ALERT™ MGD-10XL

MARINE GASOLINE FUME, FIRE & BILGE WATER DETECTOR

## USER'S MANUAL

### IMPORTANT

**PLEASE READ CAREFULLY AND SAVE**

**This manual contains important information. Purchasers who install this detector for use by others must leave this manual with the user.**

ALL RIGHTS RESERVED

REV: MGD10XL 02142019-1

### **WARNING: LIMITATIONS OF FUME DETECTORS**

**Detector will not work without power.** Examples causing no detector power are an open circuit breaker, blown or missing fuse, broken wire or improper wire crimp connection.

**CAUTION - This detector will only indicate the presence of gasoline fumes at the sensor.** The sensor cannot monitor a compartment that is separated by a bulkhead. Gasoline fumes may be present in other areas. MTI recommends that sensors be installed in compartments where gasoline fumes may accumulate.

**Detector may not be heard.** The alarm loudness is designed to meet or exceed regulatory standards; however, the alarm may not be heard if detectors are installed in remote locations. The alarm may not be heard by persons who are hard of hearing.

### **WARNING: WHY EVERY BOAT NEEDS A FUME DETECTOR**

Gasoline vapors can develop in fuel pumps, fuel tanks, fuel lines, carburetors and fuel systems. The SAFE-T-ALERT™ MGD-10XL detector is for Marine Use. It is an early warning monitor, designed to notify the user when 20% or less of the lower explosive limit of gasoline fumes are present in the monitored area. In addition, this unit is an early warning detector that monitors for high heat, heat from fire, and bilge for high water.

**Power Supply: 12 vDC**

**Recommended Wire Gauge: 18 Ga.**

**Wire Color Code: Red (+) Black (-)**

**Fuse: In-Line 1 amp to the Red lead of the panel**

## WHERE TO INSTALL THE PANEL AND SENSOR

- Locate the control panel in the helm area where it can easily be seen and heard.
- Locate the sensor block on a forward bulkhead wall about starter height.

## WHERE NOT TO INSTALL THE PANEL AND SENSOR

- DO NOT mount the control panel under a cowling, or glass or plastic panel where it may not be seen or heard.
- DO NOT locate the sensor block above batteries. Hydrogen from the batteries may cause nuisance alarms.
- DO NOT locate the sensor block behind any obstruction that will prevent air flow to the sensor.
- DO NOT locate the sensor block on the aft bulkhead. Water in the sensor block could cause permanent damage to the sensor block.
- DO NOT locate the sensor within 12 inches (304.8 mm) of exhaust lines. High heat may cause false alarms.

## INSTALLATION INSTRUCTIONS

**CAUTION: Gasoline is heavier than air. Mount the Sensor Block below the engine starter height. Power Supply 12vDC Recommended Wire Gauge - 18 Ga.**

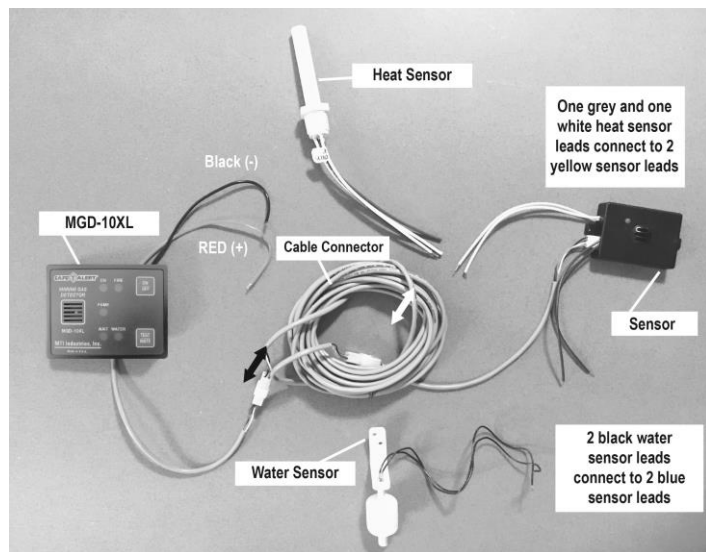
1. After referring to the “Where to Install the Panel and Sensor” and Where NOT TO Install the Panel and Sensor Block” select an area at the helm with at least 3” (76.2 mm) of clearance for the housing. Drill a 2 1/8” (53.975 mm) mounting hole and install the housing using the hardware supplied. **DO NOT CONNECT POWER UNTIL THE INSTALLATION IS COMPLETE.**
2. Connect one end of the 20-foot (6096 mm) cable assembly to the control panel and run the cable to the engine compartment location of the sensor block.
3. Mount the sensor block below starter height on the forward bulkhead wall with the cable down toward the bilge. **Do not mount the sensor block where it can get wet or submerged in water. Do not mount with the cable entering from the top as water can run into the sensor block and damage the sensor block.** Connect the 20-foot (6096 mm) cable.
4. Use a 1 amp in-line fuse and connect the RED power lead to the 12 vDC battery positive (+). Connect the BLACK lead to the battery ground (-).

### Installing the Bilge Water Sensor

1. Mount the water sensor about 4” (101.6 mm) above the automatic bilge pump switch. Connect two black leads to the two blue leads on the sensor. Do not mount the sensor where it will get wet or submerged in water during normal operation. Do not mount with the cable up as water can run into the sensor assembly and damage the sensor assembly. Connect the 20-foot (6096 mm) cable.

### Installing the Fire/Heat Sensor

1. Connect the white lead to one of the yellow sensor wires. Connect the grey lead to the other yellow sensor wire.
2. Cap off other two wires or they can be used to install a second heat sensor (max of 8 heat sensors). Install the sensor above the engine(s) and as high as possible in the compartment
3. When installation is complete, run a system check of all sensors and the control panel. Be sure to turn the unit off when leaving the boat, as constant monitoring will run down the 12V battery.



## OPERATION

The MGD-10XL units have supervisory circuits to warn of various sensor block malfunctions and a disconnected or broken cable connector.

1. Press the ON pad on the control panel. The WAIT (YELLOW) light will turn on. In about two minutes the WAIT (YELLOW) light will turn off and the ON (GREEN) light will turn on. The detector is now operational and monitoring for gasoline fumes/vapors. During the two-minute warm-up time you may press the TEST/MUTE pad to check the alarm sounder and the WARNING (RED) light, as described in the TESTING section below.
2. When the sensor detects gasoline vapor, heat, or bilge water above the alarm threshold, the sounder will beep and the WARNING (RED) light will blink. The alarm will continue until the air in the monitored area has cleared.
3. Press the TEST/MUTE pad will mute the alarm sounder for 5 minutes. The WARNING (RED) light will continue to blink. After about 5 minutes, if the air in the monitored area has not cleared, the alarm sounder will resume beeping.

**NEVER ENTER THE ENGINE COMPARTMENT WITH AN OPEN FLAME OR LIT SMOKING MATERIALS. OPEN FLAMES AND SMOKING MATERIALS CAN CAUSE AN EXPLOSION AND OR FIRE.**

## TESTING



**WARNING**

**TEST THIS ALARM'S OPERATION AFTER THE BOAT HAS BEEN IN STORAGE, BEFORE EACH TRIP, AND AT LEAST ONCE PER WEEK DURING USE.**

1. With the unit on, press and hold the TEST/MUTE pad. Verify that the WARNING (RED) light blinks and the alarm sounder beeps. Release the TEST/MUTE pad. A brief press of the TEST/MUTE pad will run the test for 3 seconds. If the WARNING (RED) light does not blink and/or the alarm sounder does not beep, the unit is defective and must be replaced. This test step verifies a good connection between the control panel and the sensor block.
2. When the ON (GREEN) operation light is lit, the sensor block can be tested with hydrocarbon vapor.



**WARNING**

**USE ONLY A BUTANE LIGHTER TO PERFORM THIS TEST. NEVER USE GASOLINE SOAKED MATERIAL.**

1. **SENSOR BLOCK TEST:** Direct the butane lighter towards the sensor block and depress the lever to release butane (only) into the sensor block. The alarm should sound and the WARNING (RED) light on the control panel should blink. It will take 8 to 10 seconds for the unit to respond. **DO NOT** hold the lever on the butane lighter for more than 15 seconds.
2. **SUPERVISORY CIRCUIT TEST:** Disconnect one end of the 20-foot (6096 mm) connector cable. The alarm should beep every 30 seconds and the WARNING (RED) and ON (GREEN) lights on the control panel will blink alternately to indicate a malfunction.
3. **BILGE WATER SENSOR:** Hold a wire with both ends stripped across both contacts on the sensor. The alarm should sound and the RED alarm light on the control panel should be lit.
4. **HEAT SENSOR:** Hold 1800-watt hair dryer 6 inches from the sensor. Should alarm in less than 1 minute. If it does not go into alarm replace the heat sensor.

**IF THE UNIT DID NOT TEST PROPERLY REFER TO THE TROUBLE SHOOTING GUIDE**

## MAINTENANCE

1. Keep the sensor block free of dust and debris.
2. Remove or cover the sensor block whenever the bilge compartment or engine compartment equipment is being cleaned, painted, power washed etc. Direct contact with chemicals, WD-40, water, oil, etc. can cause permanent damage to the sensor.