



**RIDE THE DUCKS INTERNATIONAL**  
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**Bulletin No. SB-00-01-13**  
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**Pages: 4**

# SERVICE BULLETIN

**Service Bulletin Name:** SB-00-01-13 Vapor Detection Operation and Maintenance Manual

**Applicable to:** All RTD Gas Powered Ducks

**Reason for Release:** United States Coast Guard Compliance Requirement - 46 CFR 182.480 (h) requires an "operation and maintenance" manual for the flammable vapor detection system to be on-board each vessel.

**Direction and Specifications:** Print off copies and stow onboard each Duck / In - Orange Captains Dry Box

**MARINE FUME DETECTOR WITH SPACE AGE ELECTRONICS**  
 • AUDIBLE VISUAL ALARM

**AV-200 Fume Detector**  
 Features: Audible/Visual Flush Mounted in dash.  
 Detects Gasoline, Butane, Propane, Heptane & Hydrogen.  
 Additional Audible/Visual Alarm & Detectors can be added for Multiple Stations.  
 Power 12VDC. Current drawn 222MA.  
 Failsafe circuit. Audible/Visual Alarm will sound if there is a malfunction in the electronic circuit.  
 Flush Mount requires 2" Hole.  
 25 feet of wire included.

U.S. Department of Transportation United States Coast Guard  
 "A cup of gasoline spilled in the bilges has the potential explosive power of 15 sticks of dynamite!"

**MARINE UL. LISTED**  
 BRISSON DEVELOPMENT, INC. IS PROUD TO ANNOUNCE THAT OUR FUME DETECTORS COMPLY TO SPECIFICATIONS OF THE UNITED STATES COAST GUARD AS PER 33CFR PART 183. 25th Anniversary 1970-1995

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**BRISSON GasGuard, Inc.**  
 22417 MARINE ST. EASTPOINT, MICHIGAN 48021  
 Phone: 417-266-7600 Fax: 417-266-7676  
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**Marine Products**  
 13805 New Market Road • Warren, Michigan 48090  
 (810) 778-3038  
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**EQUIPMENT**  
 Model AV-200 Fume Detector consists of an Audible/Visual Alarm and Detector. Twenty-five feet of connecting wire is provided for hookup. The Detector is equipped with a pilot lamp to indicate it is receiving power from the battery. The three conductor cable is connected to a terminal block. The Black wire is connected to Negative and the Red wire is connected to positive.

**INSTALLATION**  
 The Audible/Visual Alarm is designed for flush mounting and requires a two inch hole. A two inch hole saw reason, the sensor should be located as low as possible in the engine compartment (but not so low that the sensor could be submerged in bilge water). The sensor will operate in any position, but it is recommended that it be mounted with the screen portion down for greatest sensitivity.  
 The Detector if wired directly to the battery can be left on at all times. The power consumption: Continuous 163MA. Therefore no warmup time will be required for the sensor.

**NOTE**  
 If the Detector is connected to an external switch to be turned on and off separately from the battery, then a warm up time for the sensor will exist of approximately one minute.  
 The RED LAMP will stay on during this warm up period. When the RED LAMP goes out and the GREEN LAMP comes on that the warm up time has been completed and the engine is safe to start.

**TESTING**  
 The GREEN LAMP should remain on at all times if the sensor is not detecting dangerous fumes. If the RED LAMP comes on your sensor is detecting dangerous fumes and the engine should not be started until you have aired the compartment and the RED LAMP goes out and the GREEN LAMP comes back on. The Audible Alarm can be used as you wish and can be turned on and off with the switch on the face of your Alarm. When this switch is on, the Horn will sound when ever the RED LAMP indicates a dangerous condition.

**FAILSAFE DESIGN**  
 The Audible Alarm will sound and the RED LAMP will come on if dangerous fumes are detected, or if the Sensor becomes unplugged or if there is a malfunction in the electronic circuit.  
 Sensitivity and operation of the Sensor can be checked by placing a few drops of gasoline on a rag and placing it close to the Sensor, with the Audible switch turned on, the horn should sound and the RED LAMP should come on immediately to indicate a dangerous or explosive condition. When the rag is removed, clean air will reach the sensor. Within a few moments, the GREEN LAMP will indicate a safe condition.  
 The Sensor may eventually require replacement. It has been designed with a very high factor of safety and will last a long time. The sensor is a plug in type and can be replaced in the same manner as a radio tube.

**Specifications**  
 Voltage: 12V DC ± or ±10% current draw standby 163MA detecting 222MA  
 Gas Sensitivity: Density of gas (Gasoline, Propane, Butane) 10% of explosive mixture  
 Less than 2,000 ppm (10% of explosive mixture)  
 Detection time: Less than 15 seconds  
 Temperature Range: -25°C to +50°C  
 Level of sound: 80 db.

**ALTERNATE WIRING**  
 Marine UL Listed 636F

**DETECTS:**  
 GASOLINE  
 BUTANE  
 PROPANE  
 HYDROGEN  
 HEPTANE

**EXTERNAL SWITCH**

**BILGE DETECTOR**  
 MODEL G-100  
 GAS SENSOR TOS-813

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**MODEL AV-200 SYSTEM WIRING DIAGRAM FOR SINGLE STATION**  
 MARINE UL LISTED 636F

RED LIGHT GREEN LIGHT  
 BRIDGE-AUDIBLE AND VISUAL ALARM  
 HORN ON OFF TEST SWITCH  
 \*MODEL FM-200  
 MOUNTING DIAGRAM  
 MODEL 577 FD  
 1 AMP FUSE  
 12V DC.  
 BILGE DETECTOR MODEL G-100  
 PILOT LIGHT  
 MOUNT BY USING DOUBLE STICK TAPE OR KEY-HOLE SLOT  
 -B- Ground Wire  
 -W- Positive Wire  
 -G-Green Wire

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All work must be performed by qualified personnel, capable of understanding the function of the parts and their installation. Use only those components authorized, specified or provided by Ride The Ducks. All applicable OSHA safety standards and safe industry practices must be observed. Observe all safety information contained in the manufactures manuals. Make available this bulletin and all related technical information to personnel using the equipment.



# MARINE FUME DETECTOR WITH SPACE AGE ELECTRONICS

• AUDIBLE VISUAL ALARM



Marine  
UL listed



U.S. Department  
of Transportation  
United States  
Coast Guard



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25th Anniversary 1970-1995

DEALER

### AV-200 Fume Detector

Features: Audible/Visual Flush Mounted in dash.

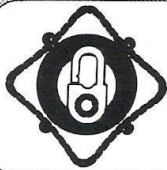
Detects Gasoline, Butane, Propane, Heptane & Hydrogen.

Additional Audible/Visual alarm & Detectors can be added for Multiple Stations.

Power 12VDC. Current drawn 222MA.

Failsafe circuit, Audible/Visual Alarm will sound if there is a malfunction in the electronic circuit.

Flush Mount requires 2" Hole.  
25 feet of wire included.



**BRISSON**  
GasGuard, Inc.

## Marine Products

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Phone (586) 778-3038 Fax (586) 778-3038  
Email bernieandernie@aol.com

### EQUIPMENT

Model AV-200 Fume Detector consists of an Audible/Visual Alarm and Detector. Twenty-five feet of connecting wire is provided for hookup. The Detector is equipped with a pilot lamp to indicate it is receiving power from the battery. The three conductor cable is connected to a terminal block. The Black wire is connected to Negative and the Red wire is connected to positive.

### INSTALLATION

The Audible/Visual Alarm is designed for flush mounting and requires a two inch hole. A two inch hole saw will work fine. Gasoline vapors are heavier than air and will collect at the bottom of a compartment. For this reason, the sensor should be located as low as possible in the engine compartment (but not so low that the sensor could be submerged in bilge water). The sensor will operate in any position, but it is recommended that it be mounted with the screen portion down for greatest sensitivity.

The Detector if wired directly to the battery can be left on at all times. The power consumption: Continuous 163MA. Therefore no warmup time will be required for the sensor.

### NOTE

If the Detector is connected to an external switch to be turned on and off separately from the battery, than a warm up time for the sensor will exist of approximately one minute.

The RED LAMP will stay on during this warm up period. When the RED LAMP goes out and the GREEN LAMP comes on then the warm up time has been completed and the engine is safe to start.

### TESTING

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Sensitivity and operation of the Sensor can be checked by placing a few drops of gasoline on a rag and placing it close to the Sensor, with the Audible switch turned on, the horn should sound and the RED LAMP should come on immediately to indicate a dangerous or explosive condition. When the rag is removed, clean air will reach the sensor. Within a few moments, the GREEN LAMP will indicate a safe condition.

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### Specifications

Voltage: 12V DC + or - 10% current draw standby 163MA detecting 222MA

Gas Sensitivity: Density of gas (Gasoline, Propane, Butane) when siren sounds.  
Less than 2,000 ppm (10% of explosive mixture)

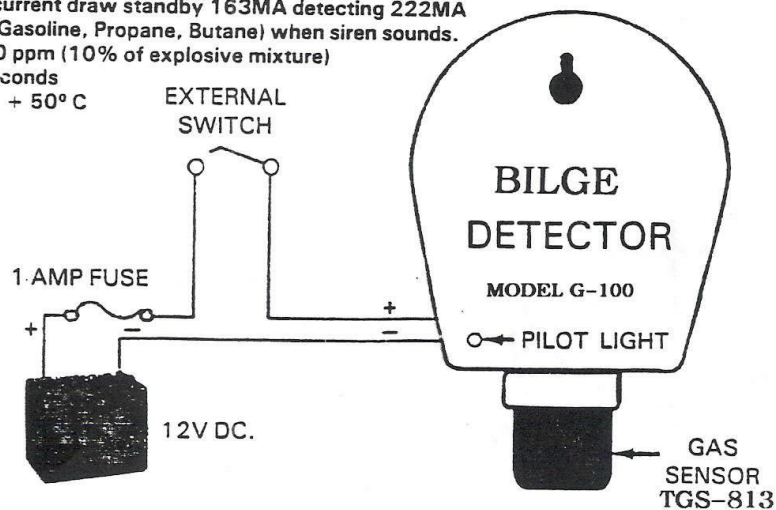
Detection time: Less than 15 seconds

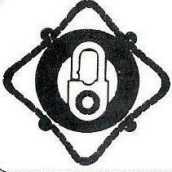
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ALTERNATE WIRING  
Marine UL Listed 636F

**DETECTS:**  
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HEPTANE





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## MODEL AV-200 SYSTEM WIRING DIAGRAM FOR SINGLE STATION MARINE UL LISTED 636F

