



# THREE BANK HIGH/LOW VOLTAGE BATTERY MONITOR

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**West Marine Model # discontinued**

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## INSTALLATION

**LOCATION:-** Access to the monitor is only required occasionally to press the audio cancel button or check the LED indicators. Any location in a cabinet, under a desk, under a bunk, behind an opening electrical panel etc., is satisfactory. Secure the monitor with cable ties, velcro strip or screw through the box, being careful to avoid internal components. Disassemble by removing the four screws on the lid and pulling off.

**WIRING:-** The Green wire is connected to negative ground, and the other three wires to each of the battery bank positive terminals. Connection should be made before any bank selector switch so all banks are always being monitored. If you have less than three banks, then jumper unused wire(s) to a used one.

## OPERATION

The low voltage alarm has been factory set for 12.2 volts. Battery voltage may fall below this value quite often due to temporary heavy loads but the

time delay prevents false alarms. You will see the red LED indicator(s) flash during low voltage conditions. Only when a steady load causes the voltage to remain below 12.2 volts for 30 to 45 seconds will the audio alarm activate. The high voltage alarms (green LEDs) has been set for 14.2 volts, also with a time delay. Noise from alternators etc., may prevent the LED from remaining on without flickering, resetting the time delay so only when the alarm condition remains steady will the audio trigger.

The audio alarm will stop automatically when all LEDs are off or you can cancel the alarm by pressing the yellow button. The audio cancel function will remain active until all the LEDs go off. With inputs joined together, slight differences in sensitivity may affect which LED comes on first with voltages close to the trip point.

## TESTING

If you desire to test the monitor, remove any one of the battery wires and the red LED for that terminal should light immediately. The alarm should sound after 30 to 45 seconds. Repeat for the other terminals if

desired. A voltage higher than 14.2 is needed to test the high alarm. This can be simulated by putting a 4.5 volt battery in series with the lead being tested.

## ADJUSTMENT:-

There are two adjustment potentiometers inside labeled H and L which set the high and low trip point. Adjustment should only be attempted with an accurate digital volt meter and/or a regulated supply of known voltage.

The low voltage trip can be adjusted by allowing a battery bank to discharge to the voltage you want to set. Adjust the trip point so the corresponding red LED is just on the edge of switching. Clockwise rotation raises the trip voltage. Adjusting the high trip in the field is difficult as most charging sources, which will be necessary to maintain 14.2 volts, are pulsating and the voltage will not be constant.