



# TWO BANK LOW VOLTAGE BATTERY MONITOR

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West Marine Model # 542134

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## SUMMARY

This monitor protects two 12 volt battery banks from damage due to deep discharging. Leaving an anchor or engine room light burning, or any 12 volt load, especially when you are asleep, can discharge your battery bank(s) to the point where you are unable to start an engine. Now you can be alerted before it is too late.

It can be mounted anywhere with convenient access to both battery leads before they pass through the selector switch. Access should be provided for the alarm cancel button.

### FEATURES:

- ZERO FALSE ALARMS**—A built-in time delay of approximately 30 seconds allows anchor windlass operation, toilet flushing, or engine starting without annoying alarms going off. You do not have to disconnect the monitor to stop the alarm, so you will not forget to turn it back on.
- HIGHER RESERVE**—With the elimination of false alarms, the low alarm can be set 1/2 a volt higher than conventional alarms. When the alarm triggers, you will still have ample power in reserve to start an engine.
- DUAL (or single) BATTERY BANK MONITORING**— Alarm sounds when either bank's voltage falls below the (adjustable) limits for 30 seconds or more. LED indicators show which battery is low.
- ALARM CANCEL BUTTON**—Silences the audible alarm, but the LED indicators continue to display the battery conditions. The audio is re-alarmed automatically when alarm conditions are corrected.
- ADJUSTABLE**— voltage

setting, preset to normal limits.

- VERY LOW POWER DRAIN**— means there is no need to disconnect the monitor when not in use. Alarm power is drawn from the highest bank.
- EASY INSTALLATION**— requires only one lead to each battery and a ground lead.

## 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, or under a bunk is satisfactory. Secure the monitor with cable ties tape or velcro strip. If appropriate, remove cover and mount with screws through box. Enterprising installers can mount the box behind a panel with the LED indicators showing through cut-outs in the panel. Use the front of the box as a template to cut eight holes in the panel. Panel thickness must be 1/8" or less. Transfer the LED lenses and mount the box behind the panel.

### WIRING:

The wiring connections are as follows:  
Green Ground  
Brown/Orange Battery 1+  
Red Battery 2 +

Connection should be made before the bank selector switch so all banks are always being monitored. Very little current flows so a light gauge flexible wire is adequate. If you have one bank, then connect it to both terminals. Mark the LED indicators with the bank identification connected to the connections made.

## OPERATION

The 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. If the voltage rises again the alarm will stop or you can cancel the audio alarm by pressing the yellow button. The alarm cancel function will be reset as soon as the voltage rises enough for the LED to go out, so you don't have to remember to turn it back on. With only one bank, either or both LEDs may light

### TESTING:

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.

### ADJUSTMENT:

There is an adjustment potentiometer inside with a small screwdriver slot which sets the trigger voltage for both banks. Rotating clockwise raises the setting. The range is approximately 10.5 to 12.5V.

**WARRANTY:** 1 year. Made in USA.

## SPECIFICATIONS

### VOLTAGE:

Operating: 8 to 18 volts  
Maximum: 0 to +/- 25V  
Alarm setting range:  
10.5 to 12.5V.  
Preset to 12.2V.

### POWER CONSUMPTION:

No alarms: Less than 0.001 amp.  
LED(s) on: Maximum 0.005 amp.  
LED(s) & alarm: Approx. 0.010 amp.  
SIZE: 4" x 2" x 1" plus terminals