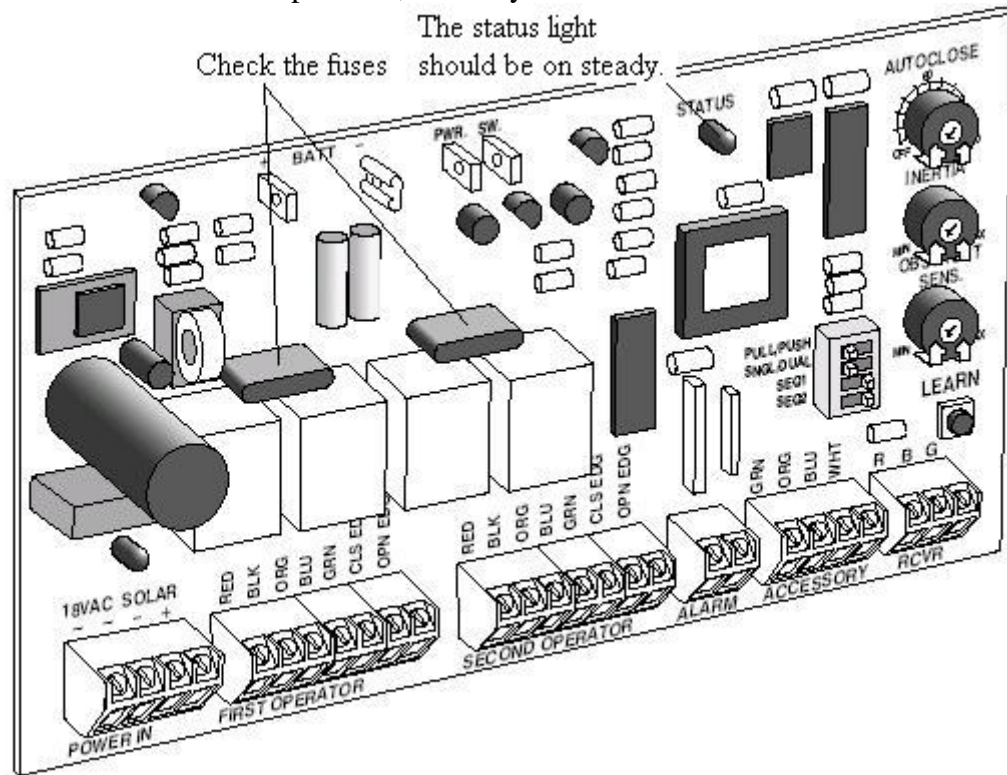


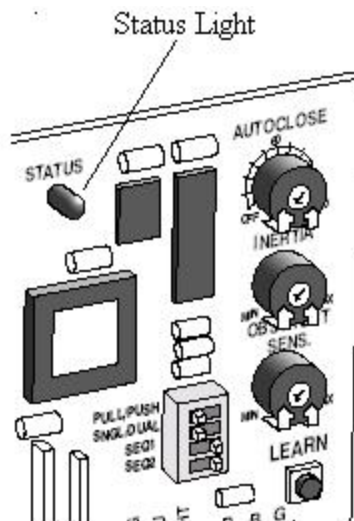
Battery & Charging Circuit Test

Whenever you suspect low voltage problems with your gate opener, there are several steps you can take with your troubleshooting. Start with the most obvious

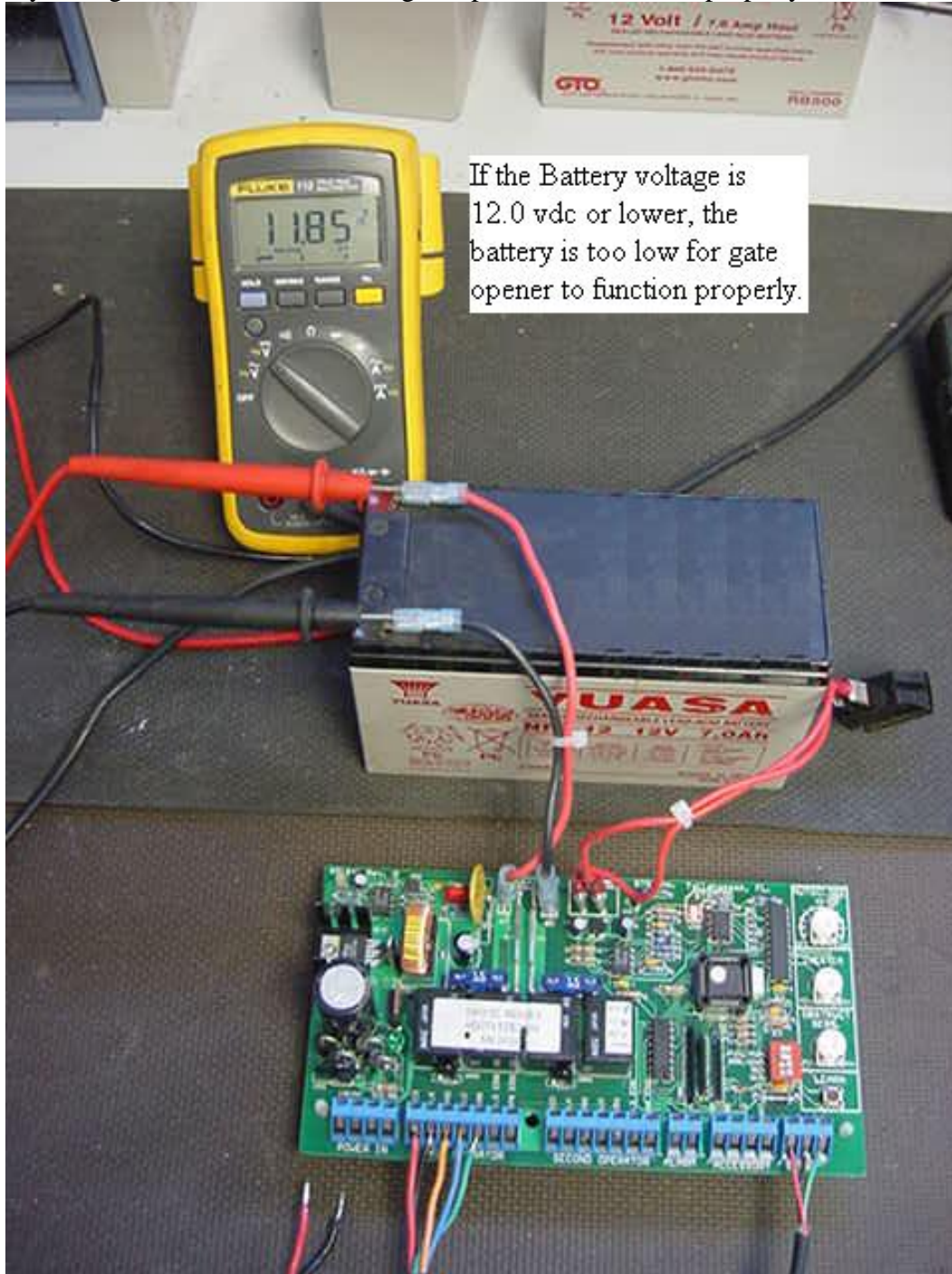
- 1) Check the fuses. Even though a failed fuse will not cause the red status light to blink, if the opener is not working at all, it is possible that something caused it to blow. It won't take much time and if that is the problem, it is easy to fix.



- 2) Notice the condition of the red status light. A blinking red status light is an indication of low voltage on the battery.

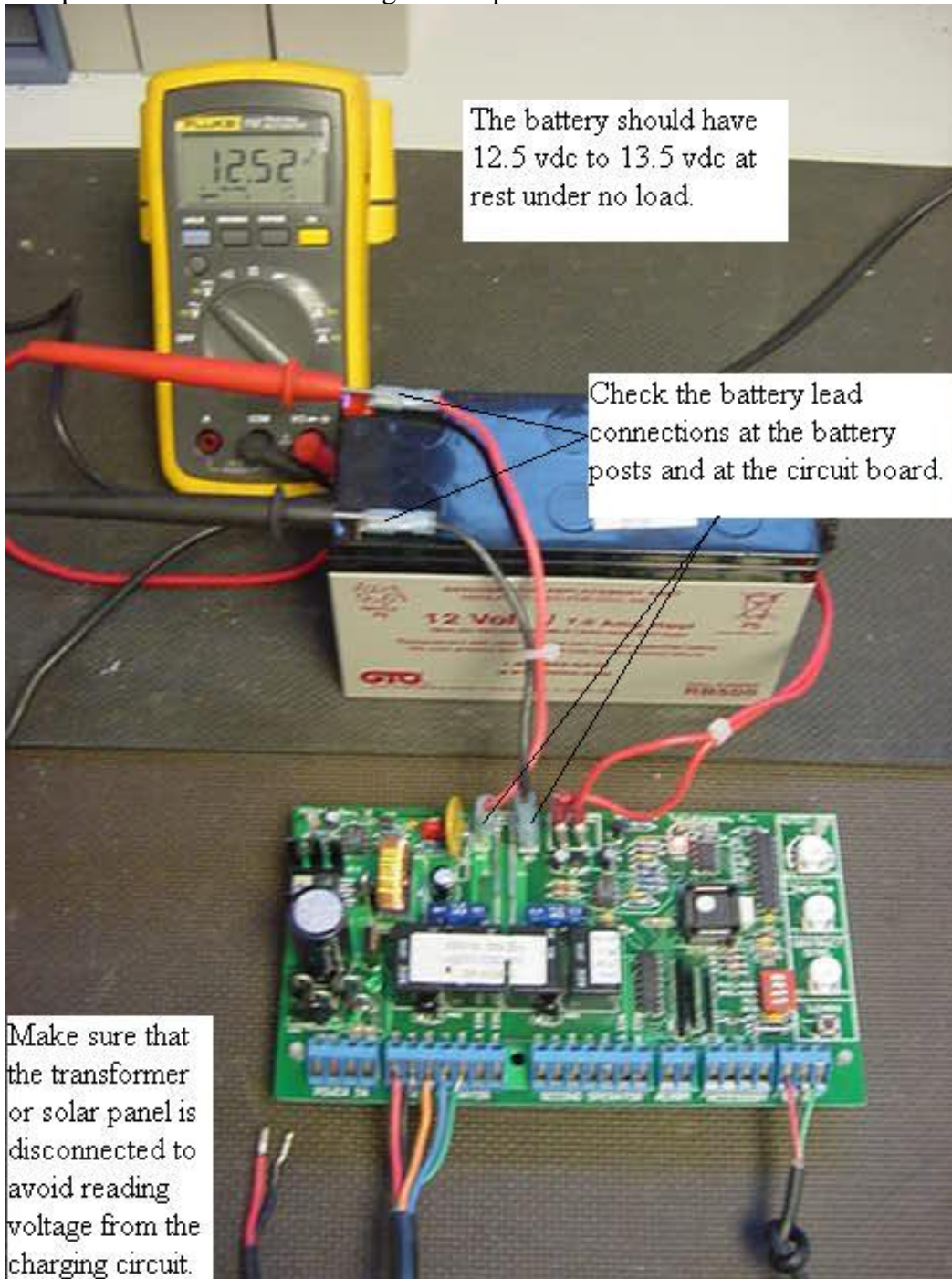


- 3) Check the voltage on the battery. The voltage should be between 12.5vdc to 13.5vdc. If the battery voltage is 12vdc or lower, the gate opener will not work properly.

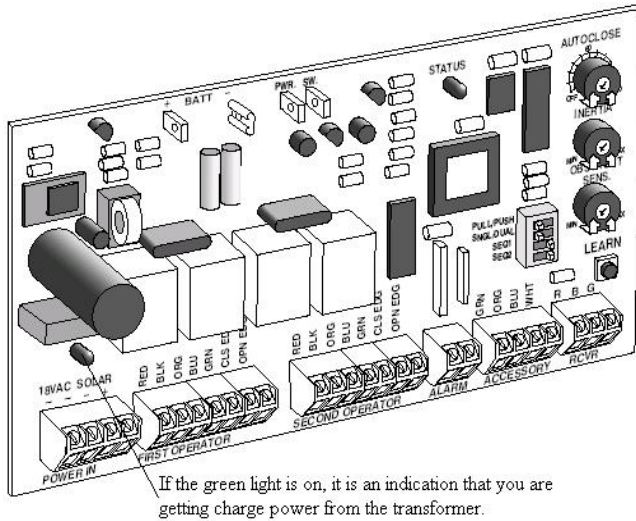


- 4) You can charge the battery with a trickle charger on a setting of 12 volts dc and 2 amps or less. Once the battery is charged, we can troubleshoot to find out what your problem is.

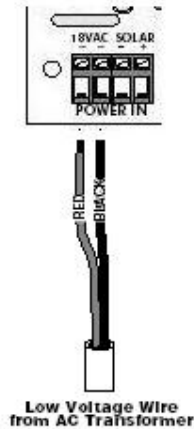
- 5) Check the connections of the battery leads. Make sure that there is no corrosion around the posts or the connections on the circuit board. Give the wires a pull test to ensure that they are making good connection. Especially check the black wire where it connects to the female connector on the circuit board. It is sometimes necessary to take a pair of needle nose pliers and crimp the female connector to tighten it up.



- 6) If the connections are good, check the condition of the green light in the lower left corner of the board. If the light is on, that is an indication that you are getting voltage from the transformer to keep your battery charged. If it is off, it is possible that the transformer is blown. With the transformer wires disconnected from the circuit board, the output of the transformer should be 18 to 22 volts AC.



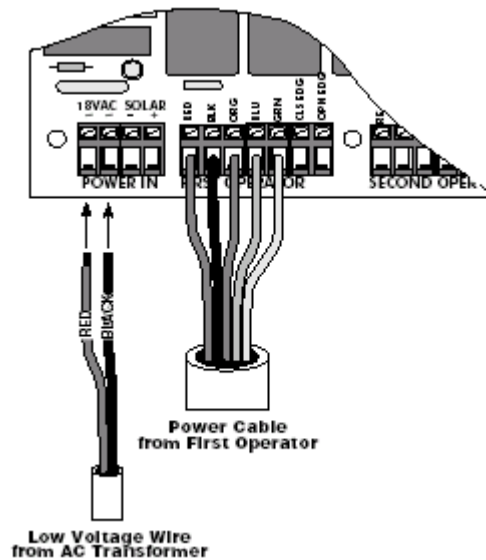
Disconnect the transformer wires and check the AC voltage directly across the wires.



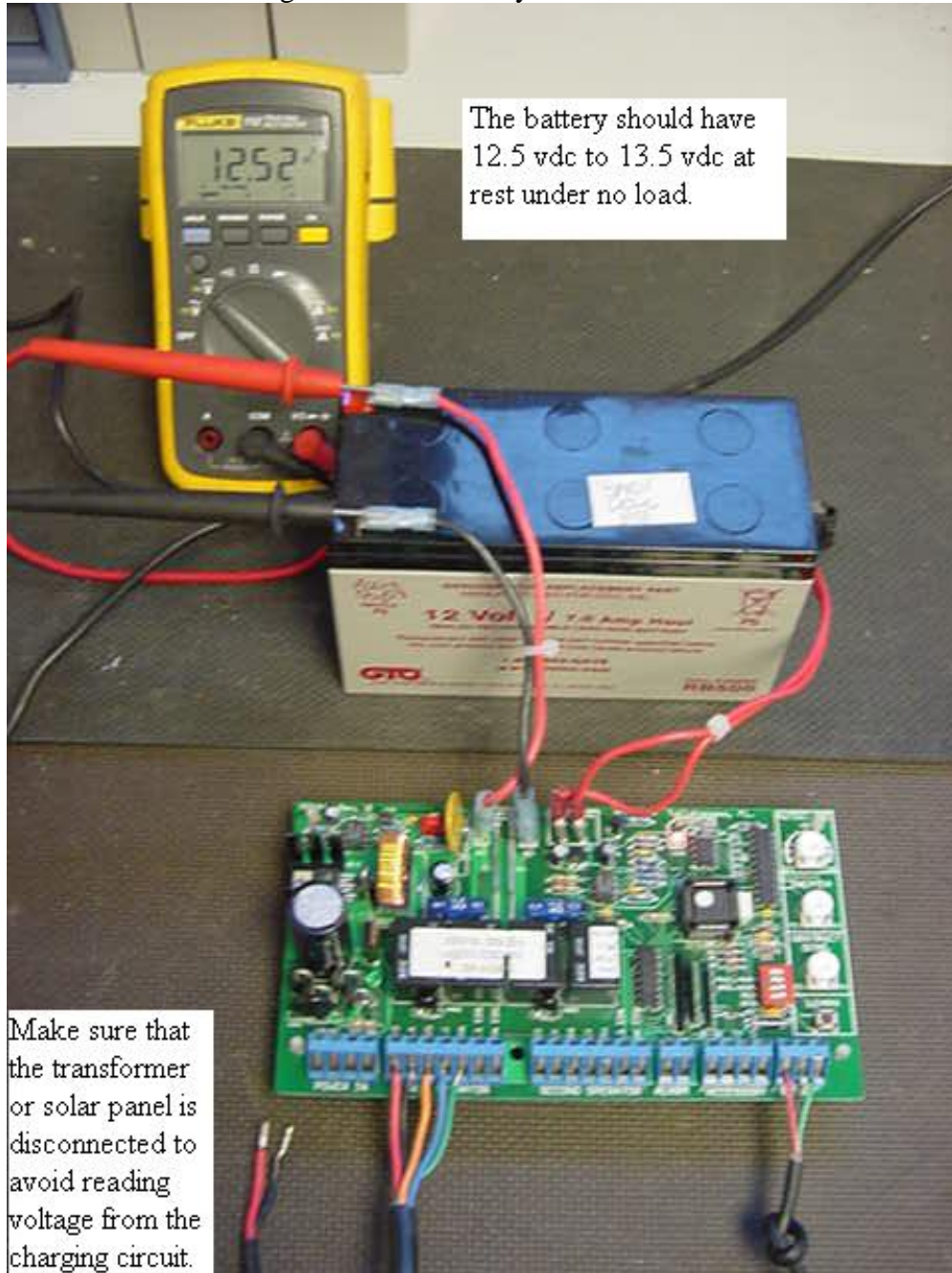
- 7) If the transformer is good, we need to load test the battery.

To load test the battery:

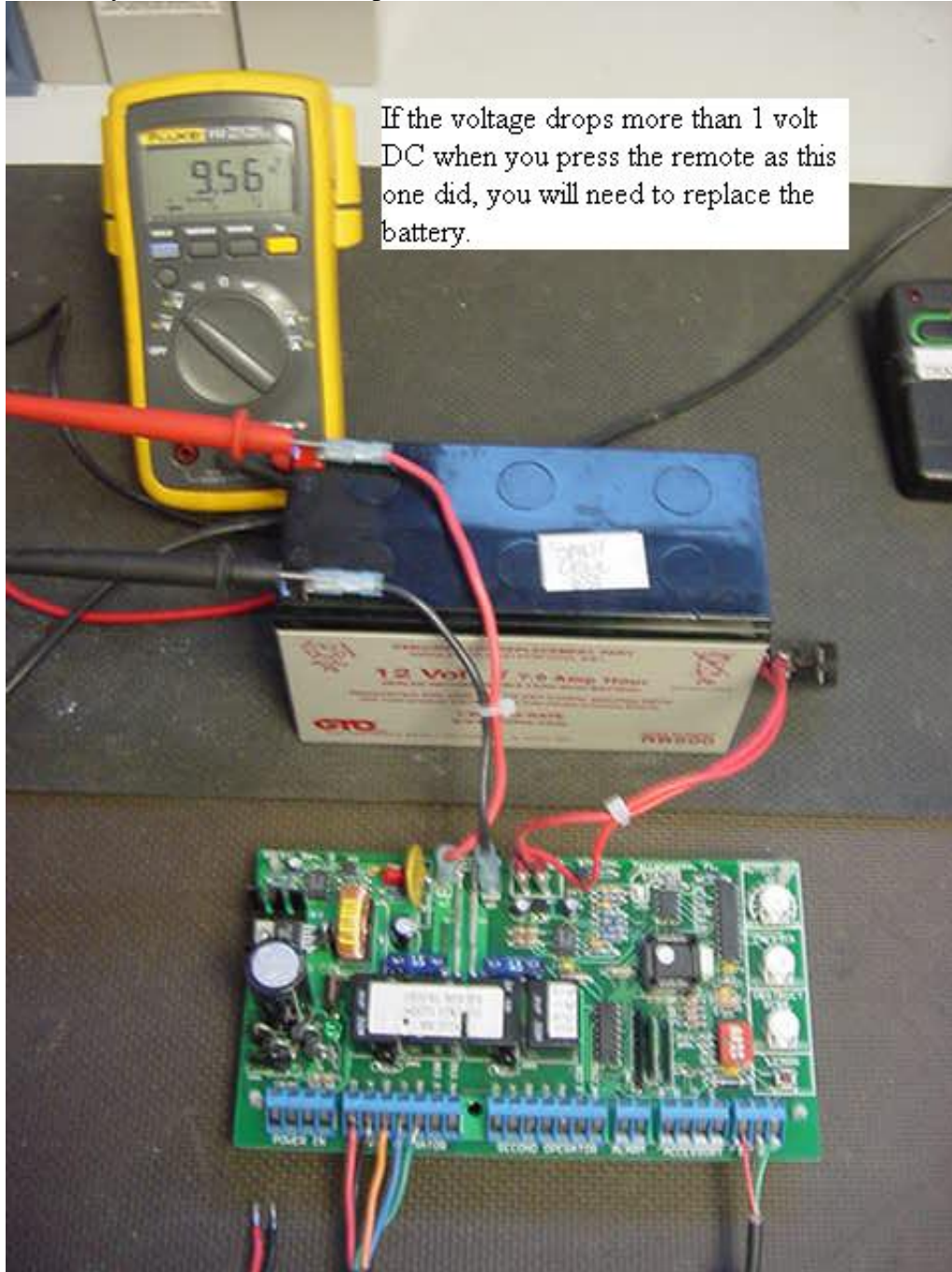
- A) Disconnect the transformer from the circuit board.



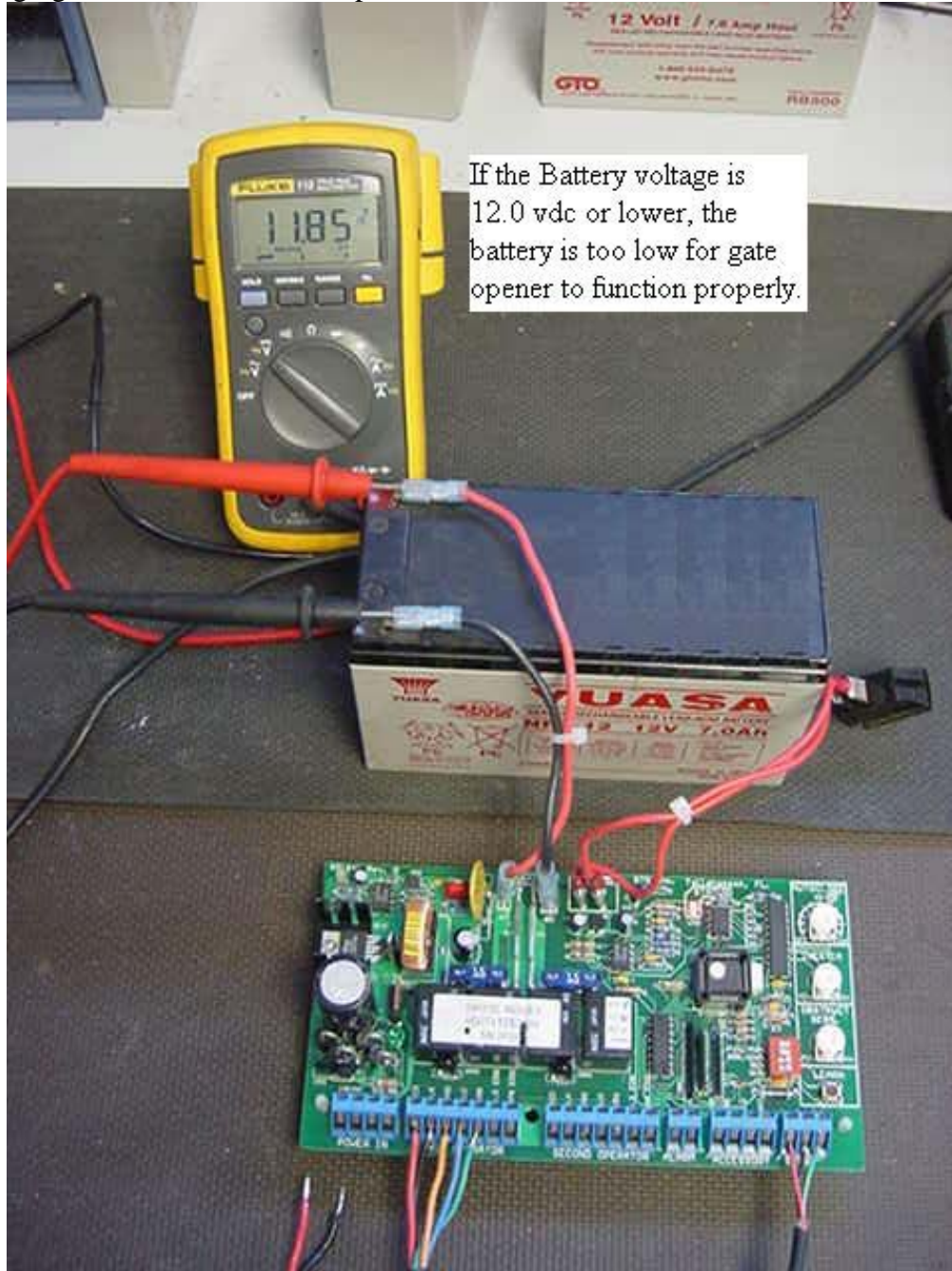
B) Check to see that the voltage across the battery is about 12.5 to 13 vdc.



- C) If the voltage is more than 12vdc, try to activate the opener with your transmitter or by shorting the Cycle/Close and Common terminals on the accessory terminal block while monitoring the battery voltage with your meter. The voltage should not drop more than 1 vdc. For instance, if the battery is charged to 13 vdc, the voltage should not drop more than 12 vdc. If the voltage does drop more than 1vdc, then you have a dead or weak cell in the battery and it needs to be replaced.



- D) If the voltage is not more than 12vdc, we need to put a full charge on the battery by charging at 12 volts dc and 2 amps dc or less for about 3 to 4 hours.



- E) If you cannot get the battery to charge with the trickle charger, then replace the battery.

- 8) If the transformer is good and the battery is good, check the charging circuit with the battery and transformer connected to the board. Do a draw on the battery by activating the unit. You should see the charging circuit charge the battery to 14 to 15 vdc. Once the voltage gets between 14 and 15 vdc, the charging circuit should switch off and the voltage across the battery should be 12.5 to 13 vdc.

