

Tools and Materials Needed

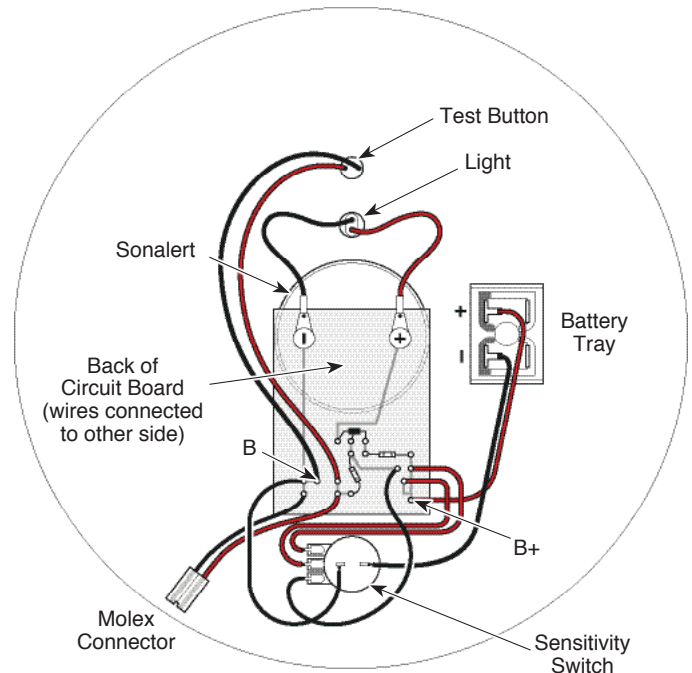
1. Required Repair Kit
2. Small Flat Screwdriver (3 mm (1/10"))
3. 10 mm (3/8") Wrench
4. Wire Cutters
5. Wire Strippers
6. Solder Wire with Flux
7. Soldering Iron

Note: These instructions explain how to replace each electronic component, either all at once or separately as required. Overleaf are instructions to replace each component separately.

Replacing all Electronics

Complete Electronics Kit (#103558) Includes:

- Sensitivity Switch and Knob
- Test Button
- Red LED Indicator Light with Terminals
- Battery Tray and 2 Phillips Screws
- Circuit Board Assembly with Sonalert
- 9V Alkaline battery



Circuit Board Showing Wire Connections

1. Remove the battery from the Meter. Undo the three screws holding the faceplate to the hub.
2. Remove the faceplate and disconnect the Molex connector connecting the circuit board to the tape.
3. From the front of the faceplate, unscrew the test button and push it out of the faceplate.
4. Push the light out of the faceplate.
5. Use the Phillips screwdriver to undo the two screws holding the battery tray to the faceplate. Cut the red and black wires from the back of the battery tray. Remove the battery tray.
6. Unscrew the Sonalert retaining ring from the front of the faceplate and remove the Sonalert and Circuit Board Assembly.
7. Use the small flat screwdriver to unscrew the small brass screw on the side of the sensitivity knob. Remove the sensitivity knob. Use the pliers to unscrew the nut holding the sensitivity switch and remove the switch from the faceplate.
8. Insert the new battery tray through the faceplate. Use the two screws to secure the tray to the faceplate.
9. Put the new Sonalert through the faceplate, and secure it using the retaining ring.
10. Install the new sensitivity switch, light, and test button in the faceplate.
11. Solder the wires from the new circuit board assembly to the correct connections on the test button, battery tray and sensitivity switch. Use steps 12 - 17, along with the diagram above, as a reference.
12. The red wire labeled B+ on the circuit board is connected to the positive terminal of the battery tray.

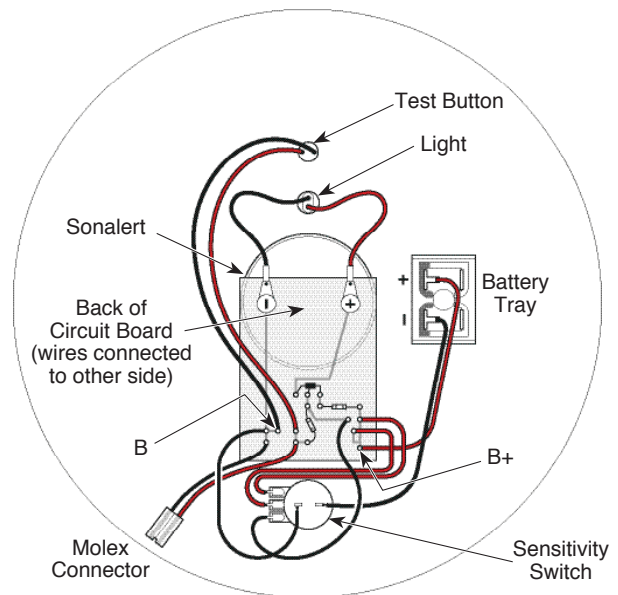
13. The other two red wires on the right side of the circuit board are connected to the first two connections on the sensitivity switch.
14. The black wire on the right side of the circuit board is connected to the third terminal on the sensitivity switch.
15. The black wire furthest left on the circuit board is attached to the terminal on the top of the sensitivity switch.

Note: There will be a black wire connecting the battery to the top of the sensitivity switch. The new circuit board assembly comes with a separate replacement wire.

16. The other black wire connected to the top of the sensitivity switch is connected to the negative terminal on the battery tray.
17. The red wire closest to the center of the circuit board is connected to the positive terminal of the test button, and the black wire labeled B on the circuit board is connected to the negative terminal on the test button.
18. Place the new circuit board assembly over the connections to the Sonalert and attach the wires from the light to the Sonalert using the two screws through the circuit board.
19. Connect the Molex connector from the new circuit board to connector on the tape. Install the new battery.
20. With the Probe in a glass of tap water, turn the Water Level Meter to the 'ON' position. If the connections are correct the buzzer and light will activate. If the buzzer or light do not activate, check the polarity of the battery and Molex connector, and the soldered connections.
21. Reattach the faceplate to the reel using the three screws.

Replacing the Circuit Board (#102977)

1. Remove the battery. Unscrew the three screws and remove the faceplate. Unplug the Molex connector from the circuit board to the tape.
2. Watch for proper connection/polarity on the Sonalert and remove the two screws to disconnect the old circuit board from the Sonalert and the wires connected to the light.
3. Cut the wires from the circuit board at the connections to the test button, sensitivity switch, and battery tray. Note the order/polarity in which they are connected. Remove the old circuit board assembly.
4. Solder the wires from the new circuit board assembly to the correct connections on the test button, battery tray and sensitivity switch. Use steps 12 - 17 overleaf, along with the diagram on the right, as a reference.
5. Place the new circuit board assembly over the connections to the Sonalert and reattach the wires from the light to the Sonalert using the two screws through the circuit board.
6. Connect the Molex connector from the new circuit board assembly to the connector on the tape.
7. Replace faceplate and re-fasten the three screws. Replace the battery.



Circuit Board Showing Wire Connections

Replacing the Test Button (#109080)

1. Take out the battery, and remove the faceplate by unfastening the three screws.
2. Unplug the Molex connector from the circuit board to the tape.
3. Cut off the wires at the connections to the test button (note the polarity of the black and red wire) and strip the wires.
4. Unscrew the old test button and remove from the faceplate.
5. Screw in the new test button.
6. Attach the wires to the new test button by soldering.
7. Reconnect the Molex connector. Replace the faceplate by fastening the three screws. Replace the battery.

Replacing the On/Off Sensitivity Switch (#102976 or 110119)

1. Remove the battery.
2. Unscrew the small brass screw on the side of the sensitivity knob. Remove the sensitivity knob.
3. Unscrew and remove the faceplate. Unplug the Molex connector from the circuit board to the tape.

Note: To gain better access to the sensitivity switch, you may want to unscrew the two screws holding the circuit board to the Sonalert, in order to move the circuit board out of the way.

4. Cut and strip the wires at the connection to the sensitivity switch; note the order in which they are connected.
5. Unscrew the nut holding the sensitivity switch. Remove the switch from the faceplate.
6. Install the new sensitivity switch through the faceplate with the three connection prongs positioned opposite the battery drawer and slightly towards the centre of the reel. Tighten the nut.
7. Attach the wires to the correct positions by soldering. Use the diagram above as a reference.

8. Reconnect the Molex connector. Replace the faceplate, with three screws.
9. Fasten the sensitivity knob using the brass screw.
10. Replace the battery.

Replacing the Sonalert (#109075)

1. Remove the battery.
2. Unscrew the Sonalert retaining ring from the front of the faceplate. Push out the old Sonalert.
3. Unscrew and remove the faceplate. Unplug the Molex connector from the circuit board to the tape.
4. Unscrew the two screws holding the Sonalert to the circuit board (watch for proper connection/polarity). Remove the Sonalert from circuit board.
5. Insert the new Sonalert through the faceplate, and fasten the Sonalert retainer ring until finger tight. Screw the circuit board to the new Sonalert, making sure the wires from the light are connected.
6. Reconnect the Molex connector. Replace the faceplate using the three screws. Replace the battery.

Replacing the Light (#106660)

1. Remove the battery. Unscrew and remove the faceplate. Unplug the Molex connector from the circuit board to the tape.
2. Unscrew the two screws holding the wires from the light, through the circuit board and onto the Sonalert (watch for proper polarity).
3. Push the old light out and put the new light through the faceplate.
4. Reconnect the two wires, using screws through the circuit board and onto the Sonalert.
5. Reconnect the Molex connector. Replace faceplate using the three screws. Replace the battery.