

Solinst® Water Level Meter Complete Electronics Replacement

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Model 102M

Tools and Materials Needed

1. Mk2 102M Complete Electronics Package (#107485) Includes:
 - 102M Faceplate Electronics Repair Kit (Circuit Board with Wiring, Sensitivity Switch and Knob, Light and Red Lens, Test Button, and Battery Connector)
 - Sonalert
 - 9V Alkaline Battery
2. Phillips or Robertson #2 Screwdriver
3. Small 1/10" (3 mm) Flat Screwdriver
4. 3/8" (10 mm) Wrench
5. Wire Cutters, if required
6. Pliers

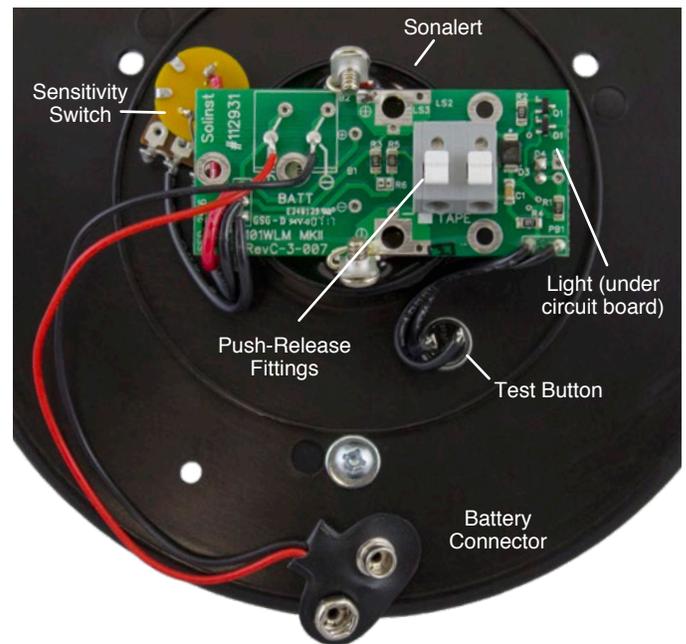


Instructions

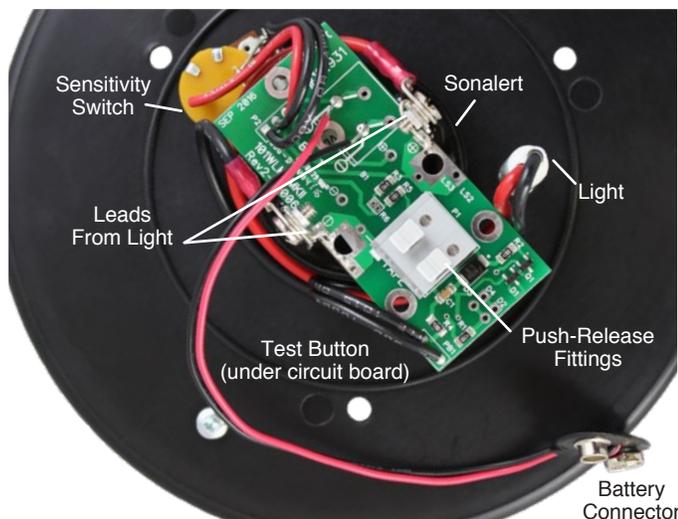
For Mk2 Water Level Meters (Push-Release Tape Connection)

Note: Instructions for Mk1 Water Level Meters (Molex tape connection, soldered connections to battery tray) are on Page 2.

1. Remove the faceplate by unfastening the three screws on the front.
2. Disconnect the battery.
3. Press down on the white terminals of the push-release fittings on the circuit board and pull out to remove the cable leads.
4. From the front of the faceplate, use a small flat screwdriver to undo the screw holding the sensitivity switch knob. Remove the knob.
5. Use the wrench or pliers to undo the nut holding the sensitivity switch to the faceplate. Push the switch through the faceplate.
6. Use the wrench or pliers to undo the nut holding the test button to the faceplate. Push the button through the faceplate.



Back of Mk2 Water Level Meter Faceplate with New Style Light



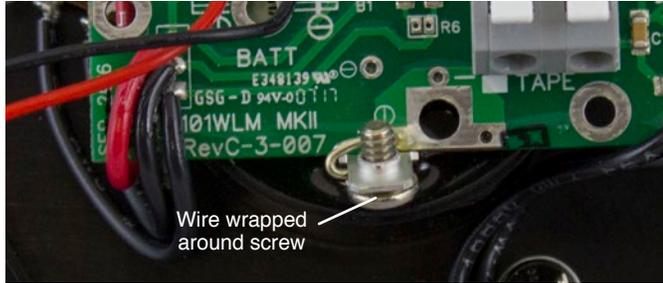
Back of Mk2 Water Level Meter Faceplate with Older Style Light

7. If you have an older style light (leads connected to Sonalert terminals – see photo above), cut the red and black wires connected to the light, and push the light out through the front of the faceplate.

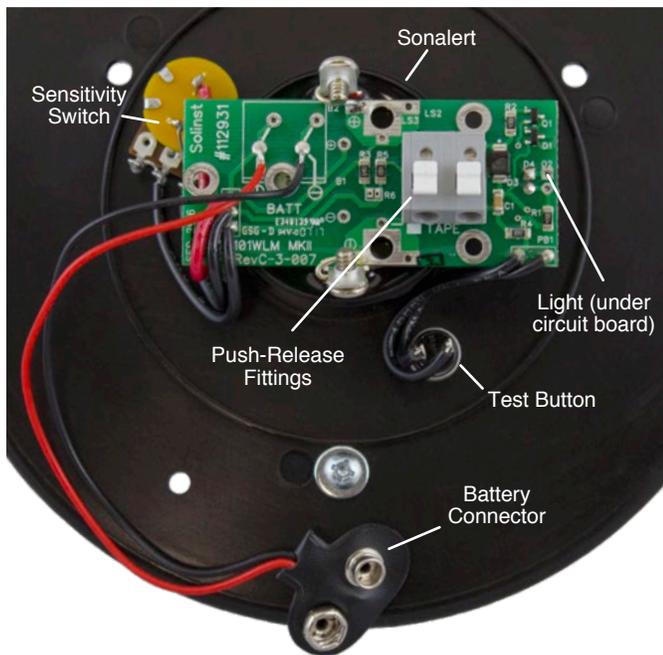
8. Undo the Sonalert retaining ring on the front of the faceplate and remove the old Sonalert and circuit board assembly.
9. Place the new Sonalert in the opening and secure using the retaining ring. Use the photo of the fully assembled faceplate above as a reference for its position.
10. If you had an older style light (or the lens needs replacing) insert the new red lens through the opening in the faceplate and secure using the white nut.
11. Place the circuit board assembly in position on top of the Sonalert, ensuring the sides marked +ve and -ve are lined up with the corresponding terminals on the Sonalert and the light seated in the lens.

Water Level Meter Complete Electronics Replacement

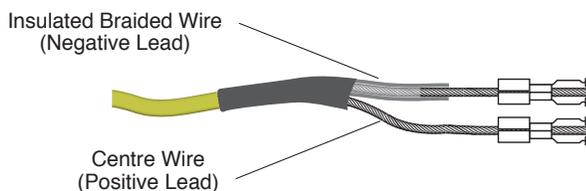
12. To connect the circuit board, loosen the two screws from the Sonalert. Wrap the two bare wires from the circuit board around the screws, between the screw head and Sonalert terminals. Start by bringing the wires underneath the screws (see photo below). Tighten the two screws.



13. Insert the test button through the opening in the faceplate, and secure it in place using the nut.
14. Insert the sensitivity switch through the faceplate with the three connection prongs positioned away from the centre of the faceplate, and angled down (see photo below). Fasten the sensitivity knob on the front of the switch using the brass screw.



15. Connect the cable to the new circuit board assembly by pressing down on the white terminals on the circuit board and inserting the leads. Release the terminals and the leads should be secured. The negative lead is inserted into the terminal with a white square below it on the circuit board. (The negative pin is connected to the black insulated braided wire and the positive lead has the pin connected to centre wire.)



16. Connect the new battery.
17. 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 all connections and the polarity of the battery.
18. Reattach the faceplate to the reel using the three screws.

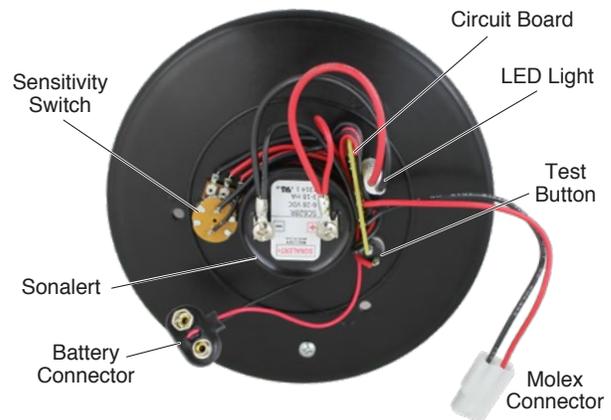
Instructions

For Mk1 Water Level Meters (Molex Tape Connection)

Note: Instructions for Mk2 Water Level Meters are on Page 1 (tape connection using push-release fittings on circuit board and quick-connect fittings to battery tray).

Tools and Materials Needed

- Mk2 102M Complete Electronics Package (#107485)
Includes:
 - 102M Faceplate Electronics Repair Kit (Circuit Board with Wiring, Sensitivity Switch and Knob, Light and Red Lens, Test Button, and Battery Connector)
 - Sonalert
 - 9V Alkaline Battery
- Phillips or Robertson #2 Screwdriver
- Small 1/10" (3 mm) Flat Screwdriver
- 3/8" (10 mm) Wrench
- Wire Cutters
- Pliers



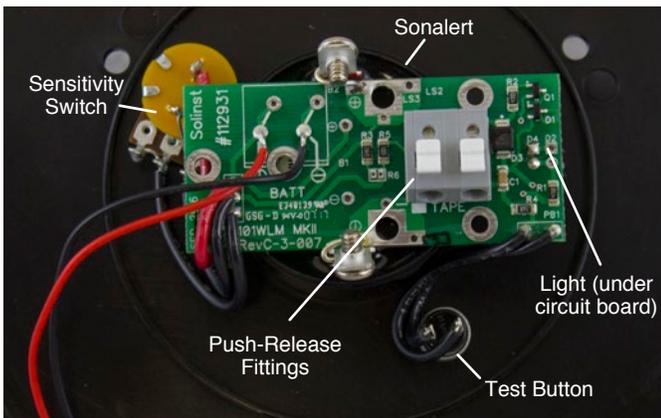
Back of Mk1 Water Level Meter Faceplate

- Remove the faceplate by unfastening the three screws on the front.
- Disconnect the battery.
- Disconnect the Molex connector that connects the circuit board to the cable.
- There may be a rubber band holding the internal wiring snug against the Sonalert, remove the band to access the wiring.
- From the front of the faceplate, use a small flat screwdriver to undo the screw holding the sensitivity switch knob. Remove the knob.
- Use the wrench or pliers to undo the nut holding the sensitivity switch to the faceplate. Push the switch through the faceplate.

7. Use the wrench or pliers to undo the nut holding the test button to the faceplate. Push the button through the faceplate.
8. Cut the red and black wires connected to the light, and push the light out through the front of the faceplate.
9. Undo the Sonalert retaining ring on the front of the faceplate and remove the old Sonalert and circuit board assembly.
10. Place the new Sonalert in the opening and secure using the retaining ring. Use the photo of the fully assembled faceplate below as a reference for its position.
11. Insert the new red lens through the opening for the light in the faceplate and secure using the white nut.
12. Place the circuit board assembly in position on top of the Sonalert, ensuring the sides marked +ve and -ve are lined up with the corresponding terminals on the Sonalert and the light seated in the lens.
13. To connect the circuit board, loosen the two screws from the Sonalert. Wrap the two bare wires from the circuit board around the screws, between the screw head and Sonalert terminals. Start by bringing the wires underneath the screws (see photo below). Tighten the two screws.

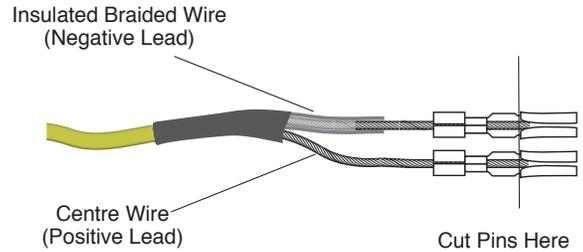


14. Insert the test button through the opening in the faceplate, and secure it in place using the nut.
15. Insert the sensitivity switch through the faceplate with the three connection prongs positioned away from the centre of the faceplate, and angled down (see photo below at left). Fasten the sensitivity knob on the front of the switch using the brass screw.

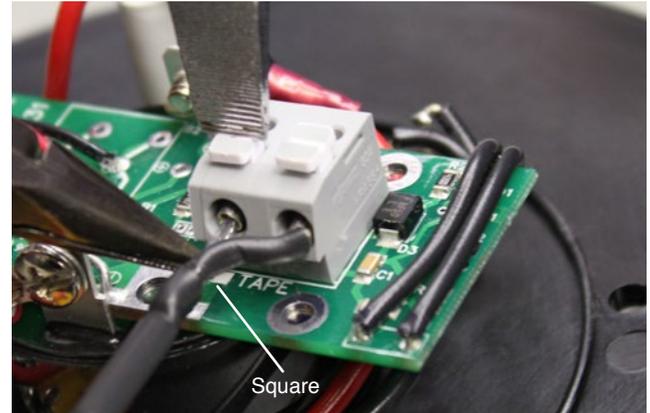


Back of Fully Assembled Water Level Meter Faceplate

16. Remove the Molex connector from the cable leads by pushing out the two pins. Cut each pin in half (see illustration below for correct location). Use pliers to flatten the remainder of the pins against the cable lead, so it fits easily into the terminals on the circuit board.



17. Connect the cable to the new circuit board assembly by pressing down on the white terminals on the circuit board and inserting the leads. Release the terminals and the leads should be secured. The negative lead is inserted into the terminal with a white square below it on the circuit board. (The negative pin is connected to the black insulated braided wire and the positive lead has the pin connected to centre wire.)



18. Connect the new battery.
19. 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 all connections and the polarity of the battery.
20. Reattach the faceplate to the reel using the three screws.

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