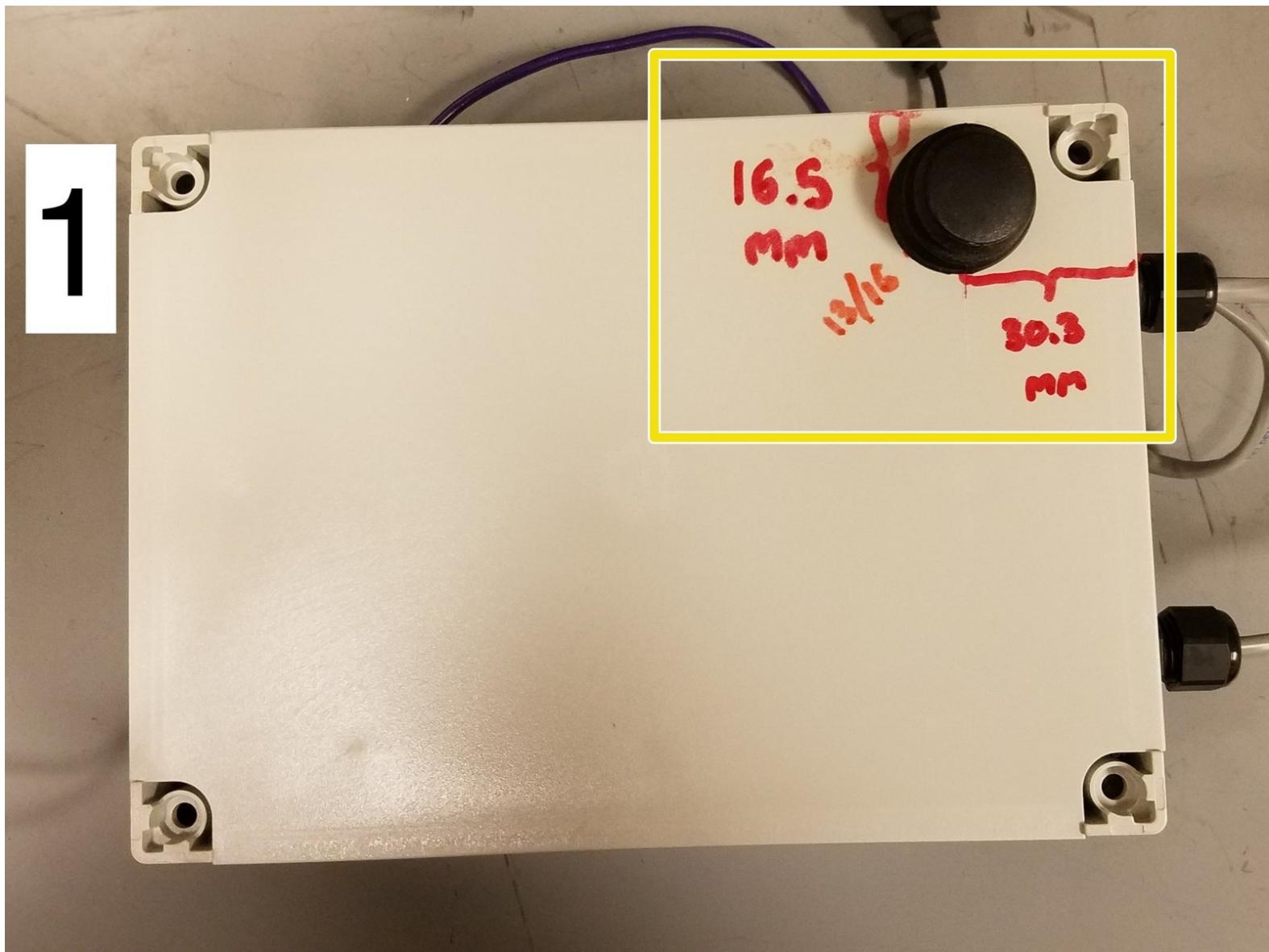




Autosampler Battery Enclosure Assembly (For Old & New Versions)

Learn how to build the battery enclosure for the autosampler.

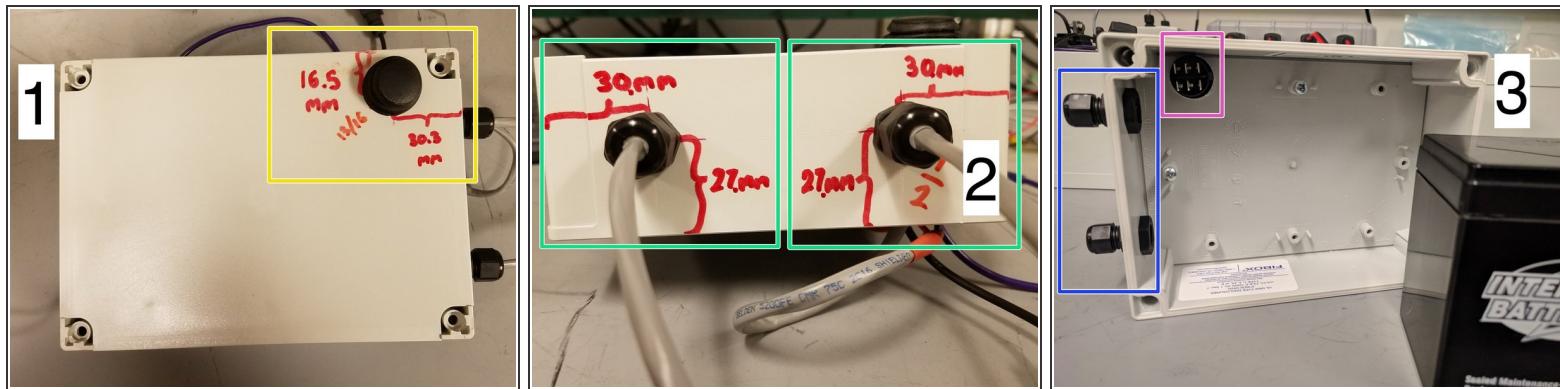
Written By: Brooke Mason



 **TOOLS:**

- [Phillips Screwdriver \(1\)](#)
- [Wire stripper/crimping tool \(1\)](#)
- [Wire clipper \(1\)](#)
- [Heat Shrink Gun \(1\)](#)
- [Power Drill \(1\)](#)
- [13/16" drill bit \(1\)](#)
- [1/2" drillbit \(1\)](#)
- [Vice \(1\)](#)
- [Soldering Iron \(1\)](#)
- [Flathead 3/32" or 2.5 mm Screwdriver \(1\)](#)
- [Digital Caliper \(1\)](#)
- [Sharpie \(1\)](#)

Step 1 — Drill the holes into the enclosure.



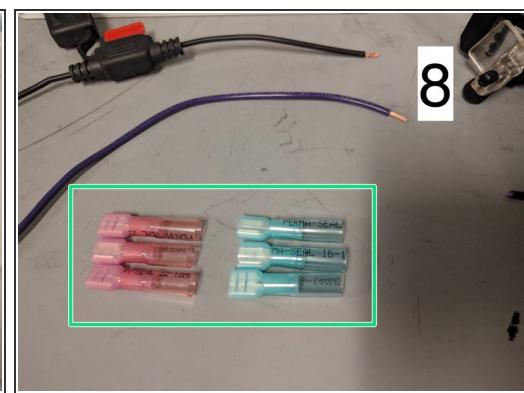
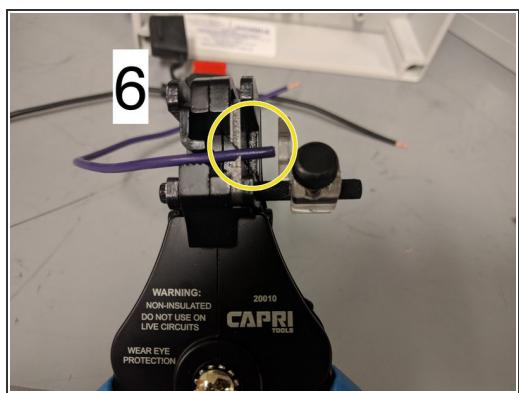
- 1. Drill a hole in the top right corner 16.5 mm from the top and 30.3 mm from the side using a 13/16 inch drill bit.
- 2. Drill two holes in the side 30 mm from the short sides and 27 mm from the long side using a 1/2 inch drill bit.
- 3. Screw in two waterproof cable gland connectors to the side holes.
- Put in a button in the rocker switch in the other hole.

Step 2 — Prepare the battery wires.



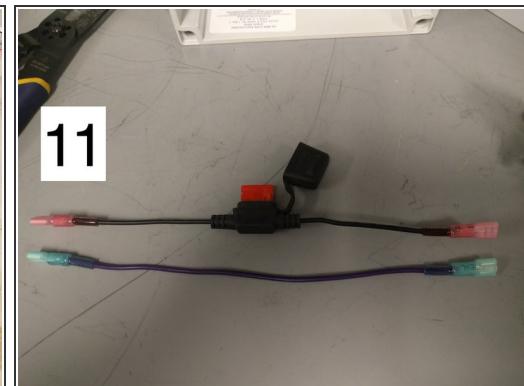
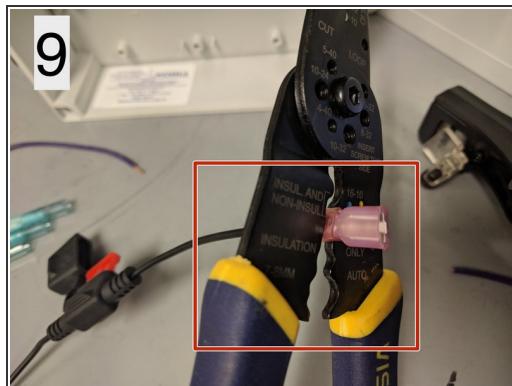
- 4. Cut the purple wire and the inline fuse holder wire 10 inches long.
- 5. Attach a 10A, 12VDC fuse.

Step 3 — Prepare the wires for the batteries.



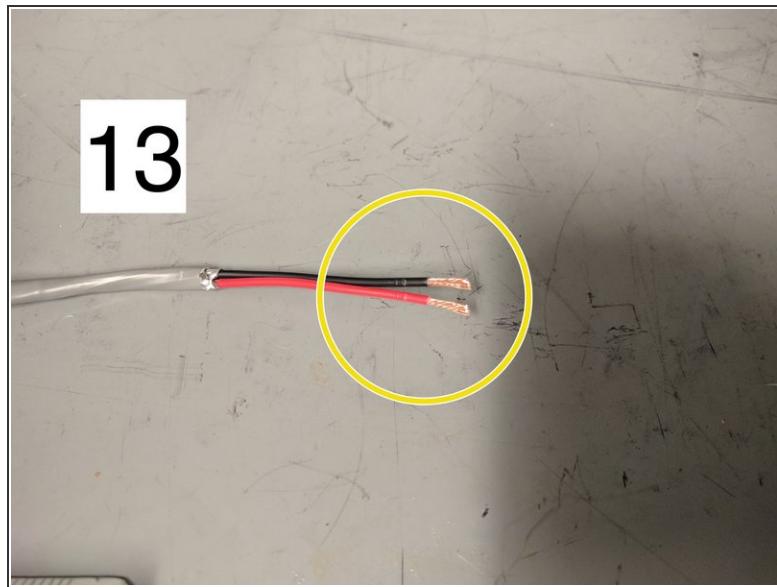
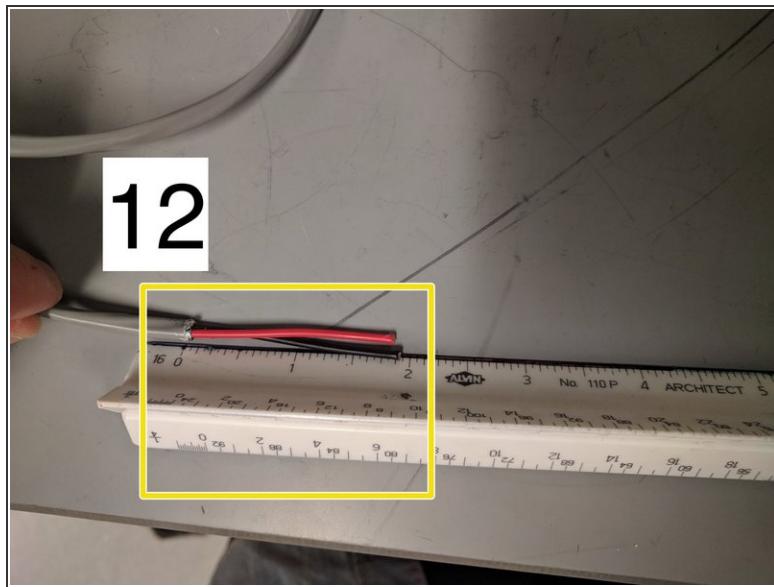
- 6. Strip both wires about 1/2 inch
- 7. using the 16 gauge slot of the wire stripper
- 8. Get 3 pink and 3 blue fully insulated heat-shrink quick-disconnect terminals.

Step 4 — Attach heat-shrinking terminals.



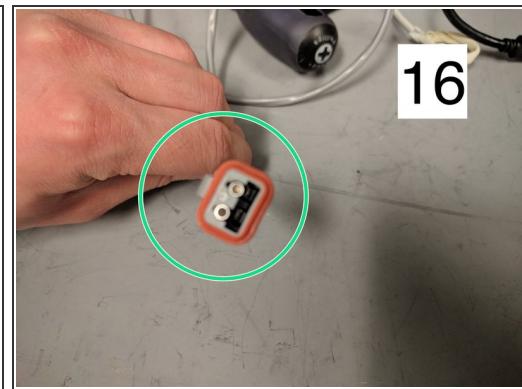
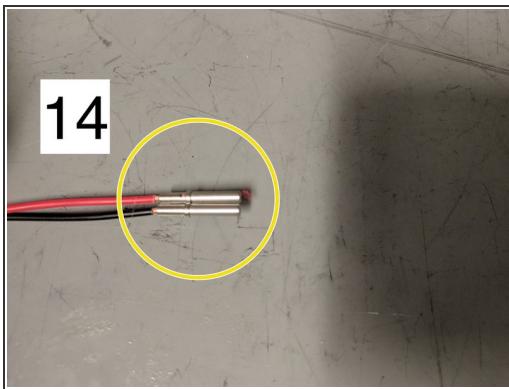
- 9. Crimp the fully insulated heat-shrink quick-disconnect terminal onto the end of the wire.
- 10. Use the heat shrink gun to heat shrink the ends of the crimps.
- 11. Repeat for both ends of both wires.

Step 5 — Prepare the battery connector wire.



- 12. Cut two feet of red and black 16G wire (grey insulated wire) and then strip 2 inches off of the grey insulation.
- 13. Strip 1/2 inch of both the black and red wires.

Step 6 — Prepare the battery connector wire.

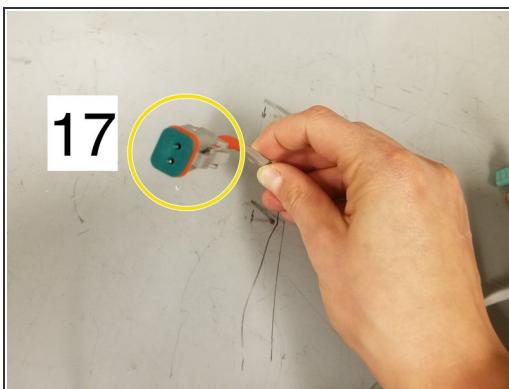


- 14. Place two metal contacts on both the red and black wires.

(i) You should see copper wire through the little pin hole. If not, strip more insulation.

- 15. Crimp the contacts into place.
- 16. Thread the contacts into the Amphenol connector.

Step 7 — Prepare the battery connector wire.



- 17. Attach the green wedge to the connector.
- 18. Cut 1.5 inches of 2:1 0.25" diameter heat shrink tubing.
- 19. Use the heat shrink gun to shrink the heat shrink tubing.

Step 8 — final battery connector.

20



- 20. This is what the final battery connector looks like.

Step 9 — Creating a 2-pin amphenol connector.

21



22



23



- 21. Cut 30 inches of red and black 16G wire (grey insulated wire). Strip 2 inches of the grey rubber coating from both ends.
- 22. Strip 0.5 inches from both the red and black wires from both ends.
- 23. Obtain a 2-pin amphenol connector.

Step 10 — Creating a 2-pin amphenol connector.

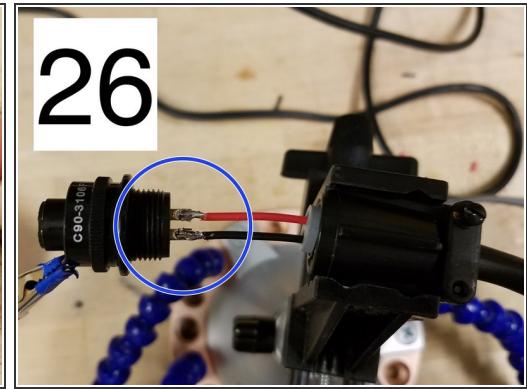
24



25



26



- 24. Disconnect the 2-pin amphenol connector into its individual parts.
- 25. Loosen the screws on the amphenol connector. Thread the stripped wire through the end of the amphenol connector and through the middle piece of the amphenol connector.
- *i* The black GND wire should be in the “A” port and the red PWR wire should be in the “B” port.
- 26. Solder the wires to the other end of the amphenol connector.

Step 11 — Creating a 2-pin amphenol connector.

27

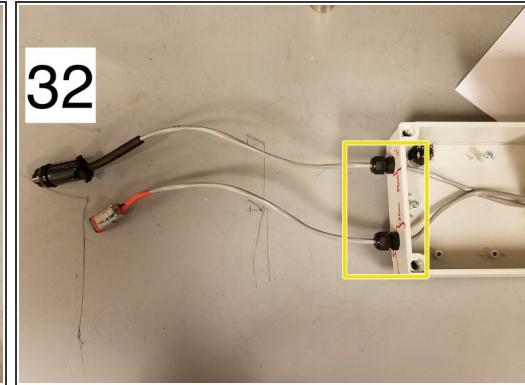


29



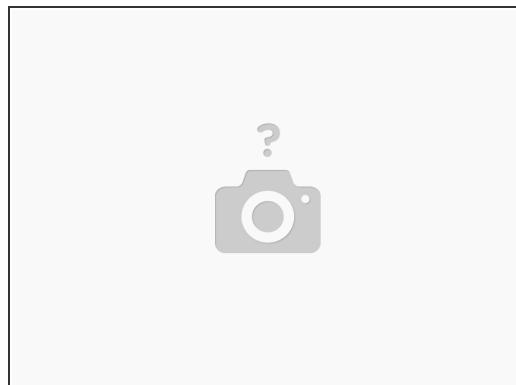
- 27. Obtain a Flux Remover Pen, 99 % Isopropyl Alcohol, and a Q-Tip.
- 28. Use the pen to remove the flux from the soldered pins.
- 29. Dip the q-tip in the alcohol. Use the q-tip to remove the flux remover.

Step 12 — Creating a 2-pin amphenol connector.



- 30. Screw the amphenol pieces back together. Then tighten the external screws.
- 31. This is what a final 2-pin amphenol connector looks like.
- 32. Thread the 2-pin amphenol autosampler wire through the top hole and the battery connector wire through the bottom hole of the enclosure box. Leave about a foot of each on the outside of the box. Tighten the glands.

Step 13 — Add quick-disconnect terminals to ends of 2-pin and battery wires.



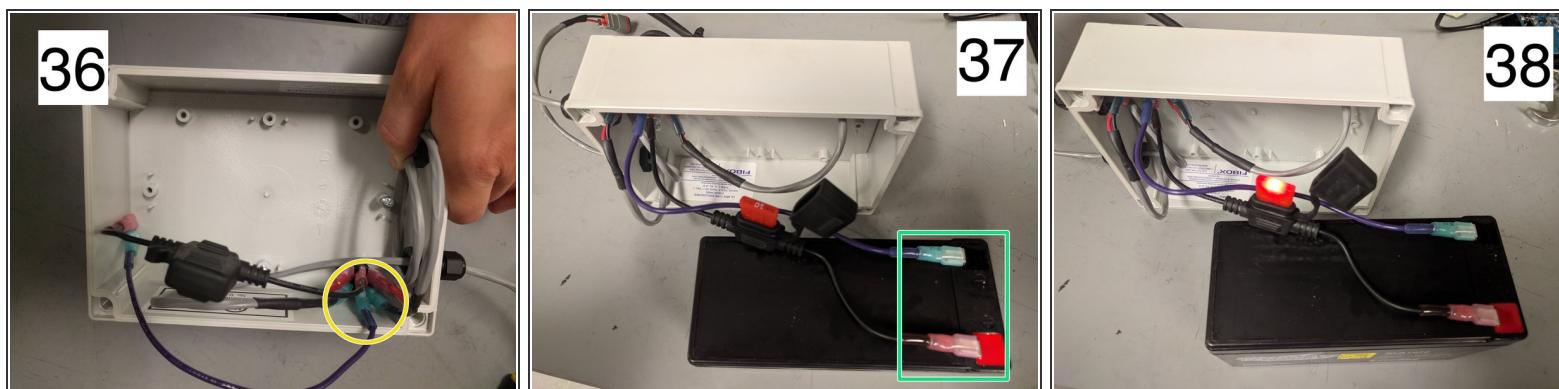
- Once 2 pin and battery wires constructed and threaded into box, strip opposite ends and add heat-shrinking quick disconnect terminals.

Step 14 — Connecting wires to the rocker switch.



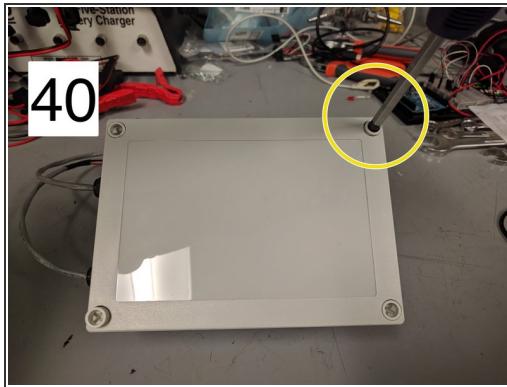
- 33. This is what the wires look like threaded through the glands in the box.
- 34. Connect the battery wire to the first two prongs of the rocker switch.
- 35. Connect the 2-pin amphenol autosampler wire to the last two prongs of the rocker switch.

Step 15 — Connecting the battery in the enclosure.



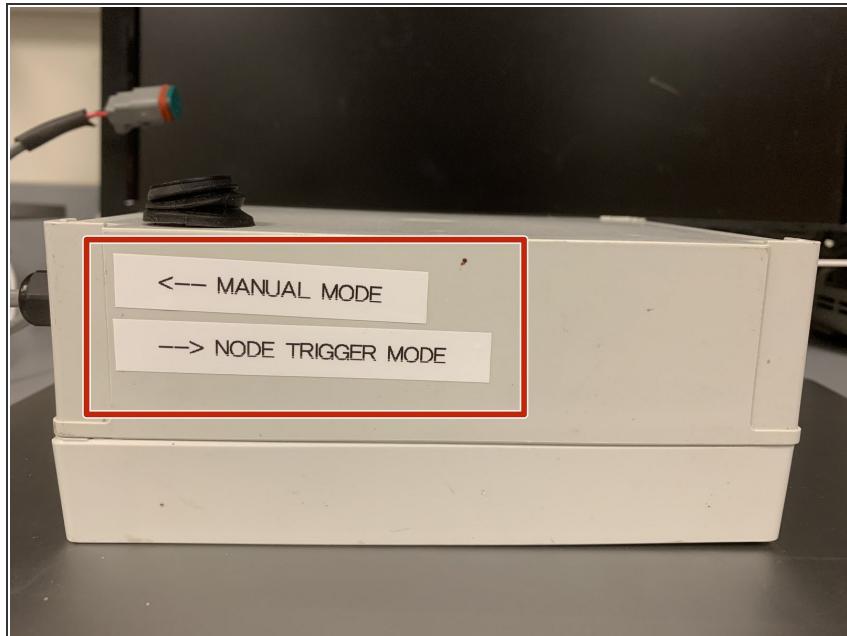
- 36. Connect the purple wire and fuse wire to the middle two prongs of the rocker switch.
- 37. Connect the other side of the purple wire and fuse wire to a 12 volt battery.
- ⚠ 38. A light goes on if the fuse is blown!

Step 16 — Completing the enclosure.



- 39. Place the 12V battery and all the wires into the enclosure.
- 40. Screw the lid onto the enclosure.
- 41. This is what the completed battery enclosure looks like.

Step 17 — Label the switch



- Label the switch with the label maker.
- <-- Manual Mode
- --> Node Trigger Mode