

# Power Connector Board Assembly Instructions

1. Reminders and/or Warnings
  - a. Soldering irons, soldered joints, and traces are HOT and cool slowly. Don't touch them...
  - b. Cut wires and component leads can be sharp, and can puncture or scratch – be careful.
  - c. Rosin smoke from soldering can be toxic, avoid inhaling or contact with it.
  - d. Lead-based solder can be harmful especially to kids – avoid contact and use caution.
2. Prepare your assembly area.
  - a. Tools
    - i. Soldering Iron (A temperature-controlled soldering iron is highly recommended)
    - ii. Rosin core solder
    - iii. Wire Cutters (small, see photo)
    - iv. Needle-nose pliers (not shown)
    - v. Crimper
    - vi. Ruler
    - vii. Ohmmeter or Multimeter
    - viii. Vise, or alligator board holder
    - ix. Ruler
  - b. Eye protection is strongly recommended.
  - c. Get the board top and bottom diagrams out so you can see where the components go.
  - d. Get the schematic diagram out for reference.



Reference information can always be found online at [www.K9JEB.com](http://www.K9JEB.com) Refer to the pictures below of the board and finished kit. Note that these pictures may differ slightly from yours.



Top



Bottom

1. Overall the process is to mount the fuse holders first and then the PowerPole connectors second.
2. Fuse holder sockets go above the website address on the top of the board as shown above.
3. Mount the pair of fuse holder sockets on the top side of the board, with the open side to the left as shown. Push the connectors down to the surface of the board as flush as they will go.
4. Tack-solder them in on the top of the board similar to those as shown by the arrows. Make sure to heat it enough that the solder adheres to the connector, but don't burn the board. Make sure each of the connectors is straight, and oriented as desired.



(old board version)



[www.K9JEB.com](http://www.K9JEB.com)

*Remember folks - this is a do-it-yourself kit and K9JEB assumes no liability if something burns up or someone gets hurt... so please be careful!*

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5. Flip the board over. Make sure each connector is straight. Solder in each of the fuse holders, one leg at a time. Make sure to connect each leg to its pads with enough solder to make a good connection. Avoid using too much solder, as it will flow down to the top side of the board, and excess may clog the clip that holds the fuse blade.
6. Make sure there is still a gap between the fuse blade holders, and no solder short there.
7. For newer boards with Fuse Out indicator – mount the 10K resistor and solder in place, then mount LED with longer lead in “+” hole as indicated on board.
8. Solder in optional USB module(s) using the instructions from the Power Distribution Center



## PowerPole Connector Preparation and Mounting

Mounting the Anderson PowerPole connectors on the board requires some preparation

1. Cut 10 pieces 5/8" to 3/4" (16-19mm) from the bare copper wire (included), as shown.



2. Insert each wire segment into a PowerPole contact and crimp using the crimper, to hold it in place. Solder the tip of the wire with solder as shown.
3. Join a red and a black PowerPole shell together by sliding them as shown in the picture. The standard connection is the “Red-Right-Tongue-Top” configuration (also referred to as “RRTT”). This ensures that your Power Pole connectors will be compatible with other equipment.
4. Orient the contacts as shown in the picture and insert them into the Power Pole connector shells. The “curved” part of the contact will cover the spring clip inside the shell. Double-check your work against the pictures!!
5. Mount the connector flush to the top of board with the red connector on the + side, and solder the + (red) side in place.
6. Repeat process for each Power Pole connector.
7. Below is the finished assembly.



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## 1. TROUBLESHOOTING

There really isn't much that can go wrong with this simple board, but...

- If during first time testing a fuse blows for ANY REASON, immediately disconnect all of the power and equipment. Pull all of the fuses and check all connections with an ohm meter before connecting ANYTHING back to the board...
- Make sure that the Red connector and Black connector are on the correct sides as shown in the pictures, BEFORE soldering. It's quite difficult to un-solder a connector that was constructed backward or sideways.
- Remove the fuse while power is connected and there is a load connected, the red Fuse Out LED should light. If it doesn't, it may be reversed. Be careful when unsoldering LED's and use low heat only or they will melt readily.

Email [k9jeb@k9jeb.com](mailto:k9jeb@k9jeb.com) with any questions (and pictures) for troubleshooting.