

Power Supply

2016-05-28

The power supply is rack mounted. It uses a pair of commercial modules from TDK/Lambda. Each unit is rated 5 Amps, 15 volts.

Specifications

Output

Two independent 15 Volts, 5 Amps

Input

100-240 VAC 50-60 Hz, 1.5A

Modules

Two TDK/Lambda LS75-15

Fuse

5A 250VAC 5X20MM
with storage for spare fuse

Connectors

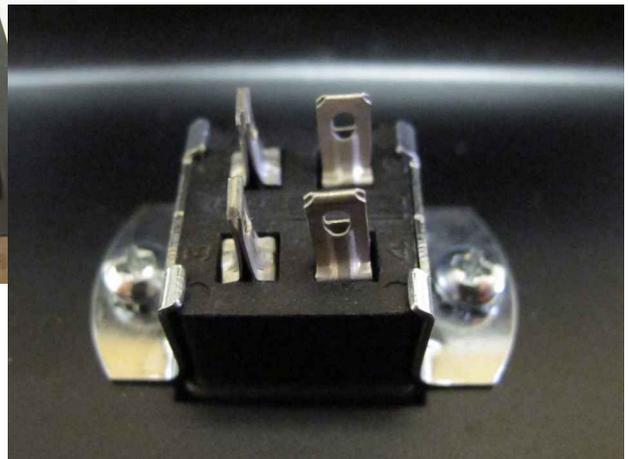
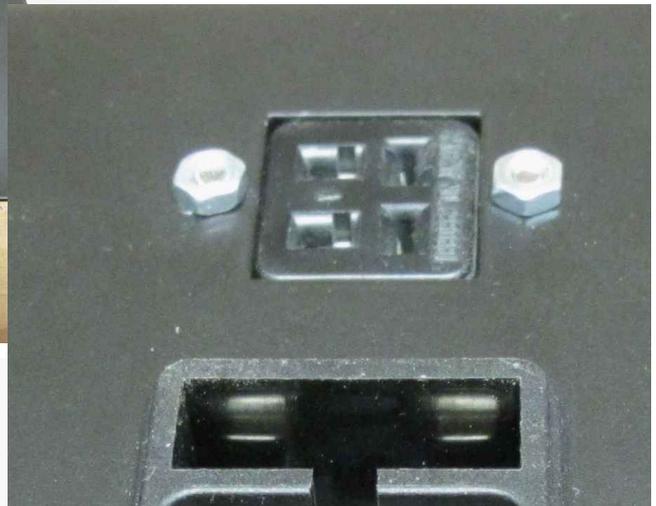
In: standard AC line
Out: 4-pin Jones

Installation

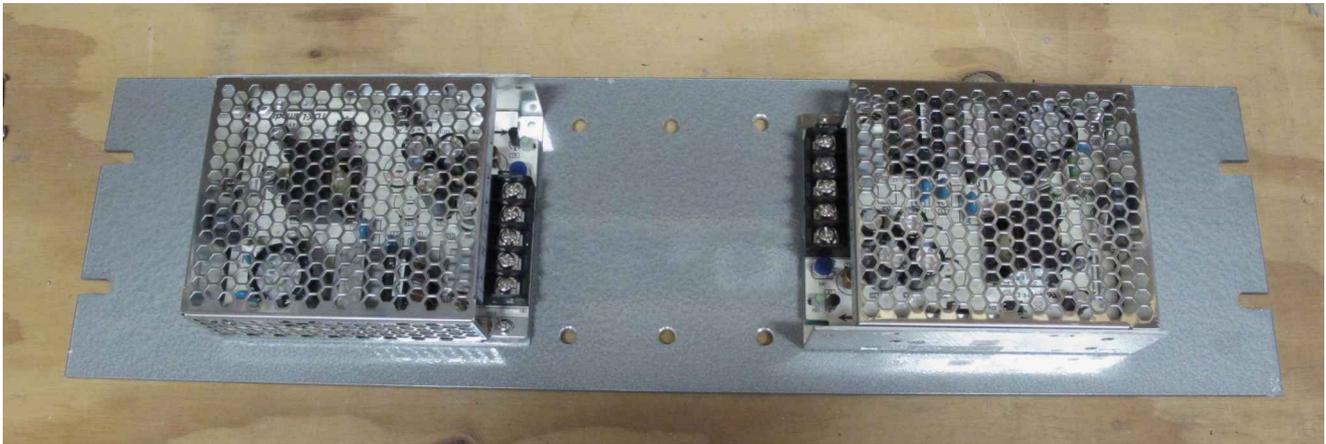
It is best to install it in a rack, allowing plenty of space around the back for cooling. If you must lay it flat, put the panel down, vents up for cooling.

Assembly

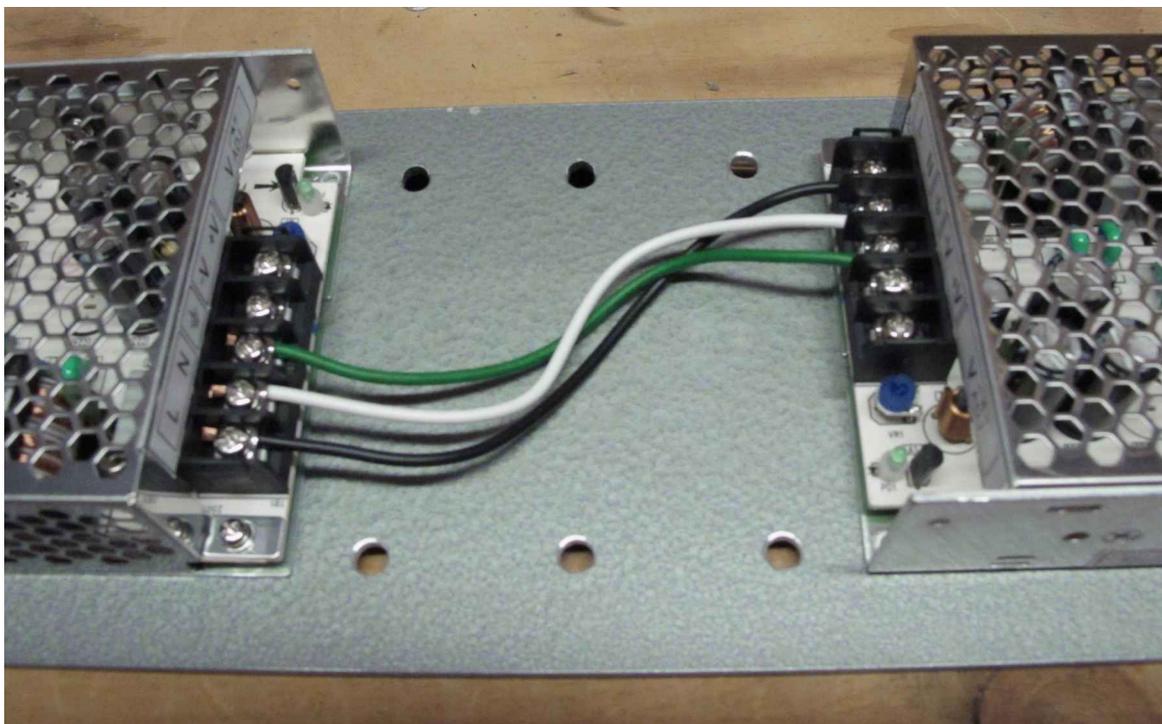
1. Mount the AC and DC connectors on the back cover.
The AC connector snaps in, from the outside.
The DC connector is attached from the inside with two short M3 screws. The hole is tapped. Put nuts on the outside for reinforcement.
Be sure to orient them as shown.



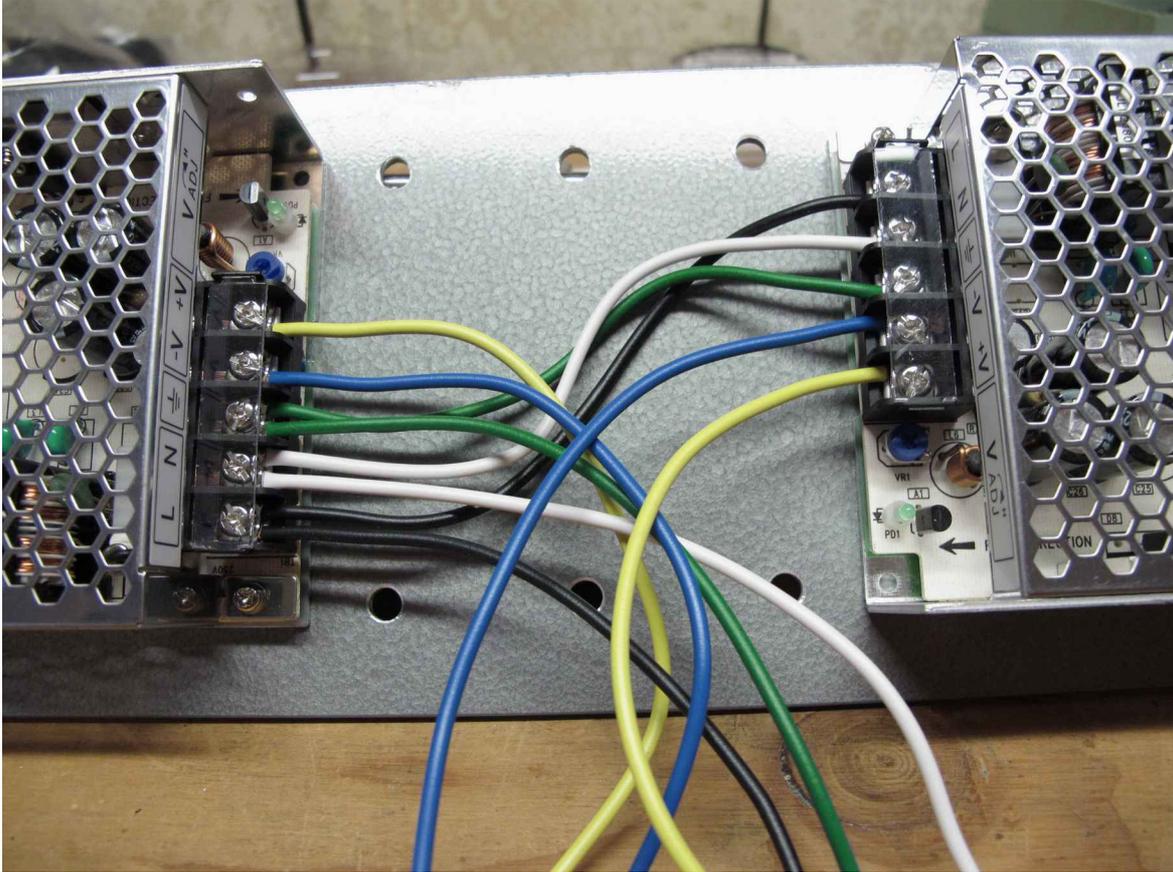
2. Mount the power supply modules to the panel with M3 8mm screws.
Note that the panel is not symmetric. To identify which side to mount on, measure the distance from the mount hole to the top edge. The one on the left is 2.0 inches. The one on the right is 1.9 inches.



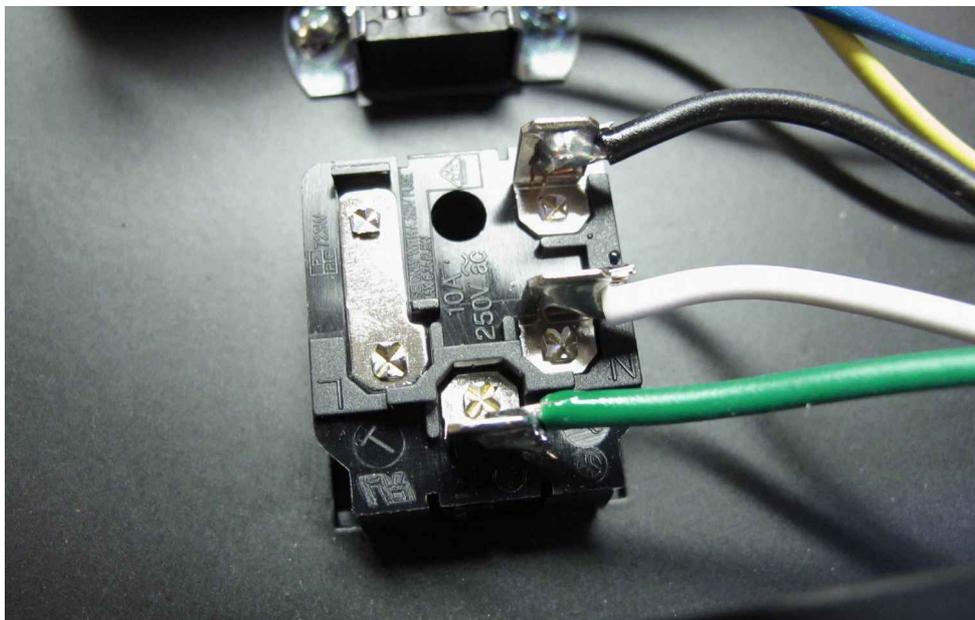
3. Cut and strip wires as follows:
 - 6.5" and 7.0" Black (AC hot)
 - 6.25" and 7.0" White (AC neutral)
 - 6.0" and 7.0" Green (AC ground)
 - two 7" Yellow (DC +)
 - two 7" Blue (DC -)
4. Connect the line terminals (L, N, ground) from one to the other as shown.
Tighten the screws only on the right. Leave them loose on the left.



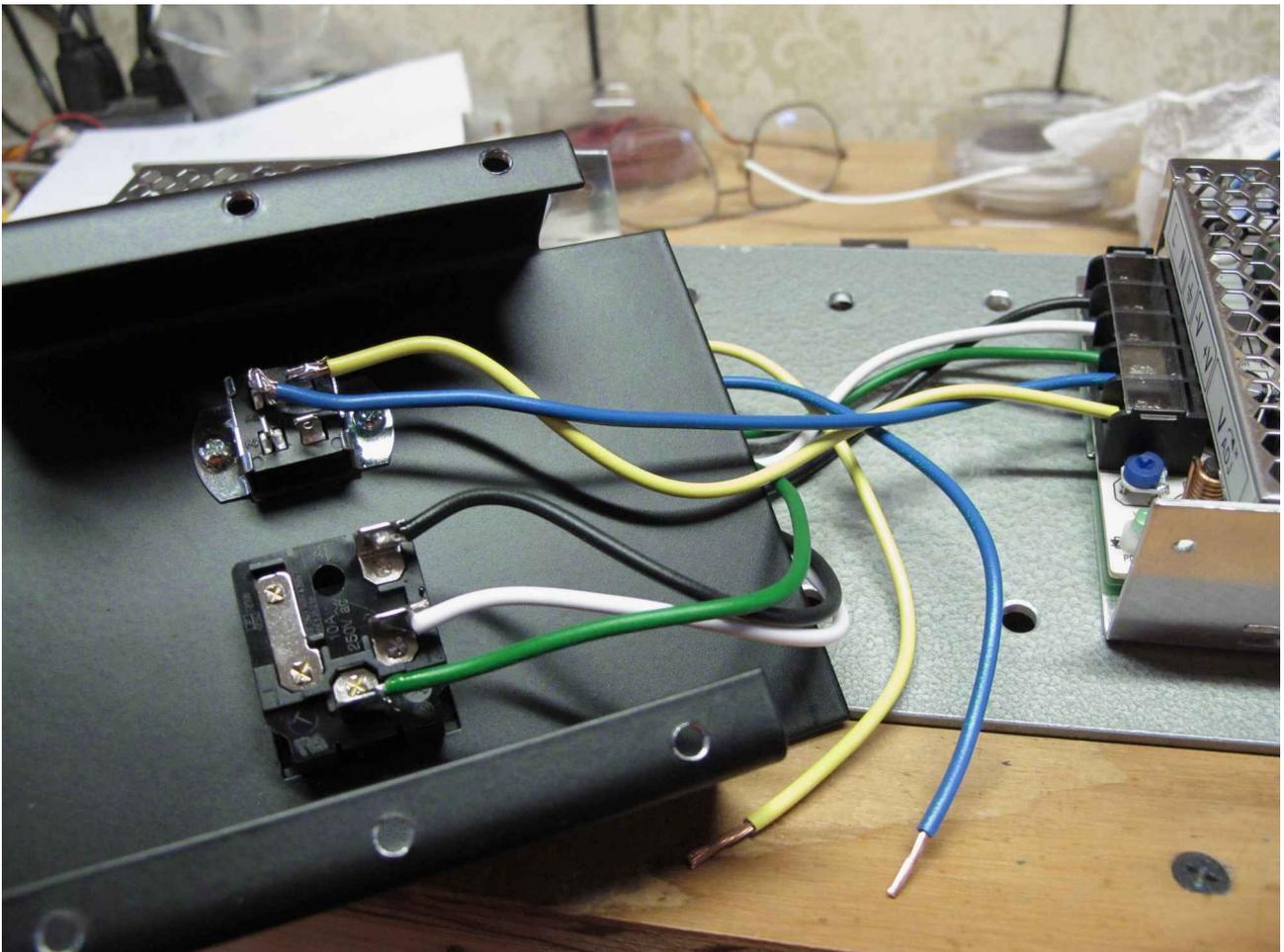
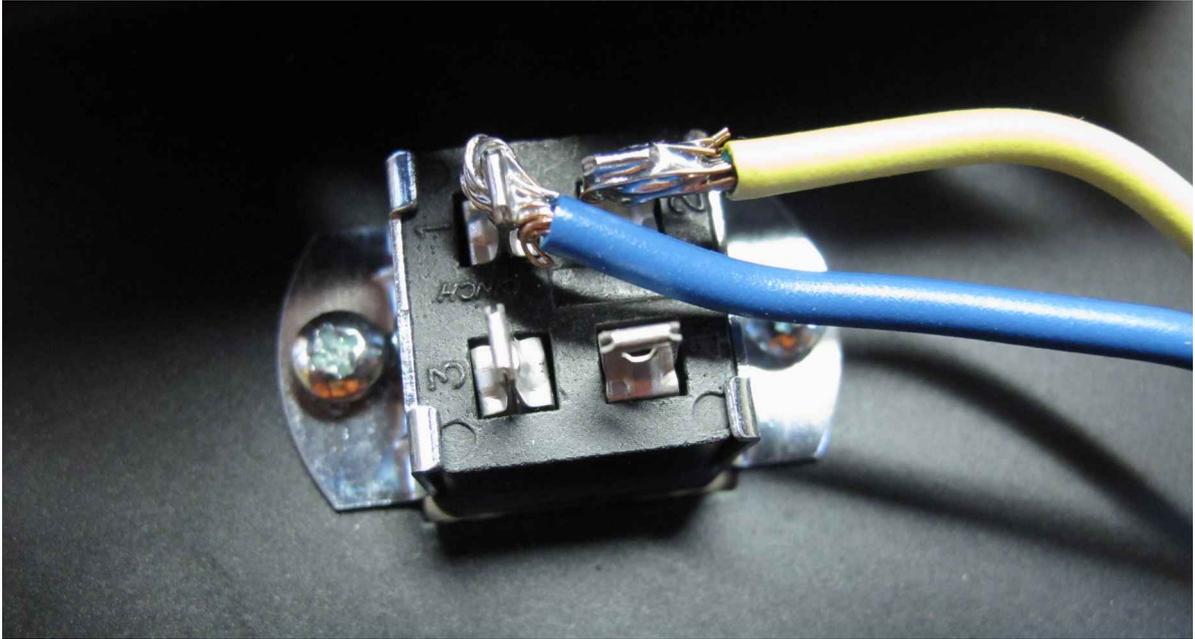
5. Attach the other wires as shown. For now, leave the other end hanging. Tighten the screws. Match the colors:
- L Black (left only)
 - N White (left only)
 - ground Green (left only)
 - V Blue (both)
 - +V Yellow (both)



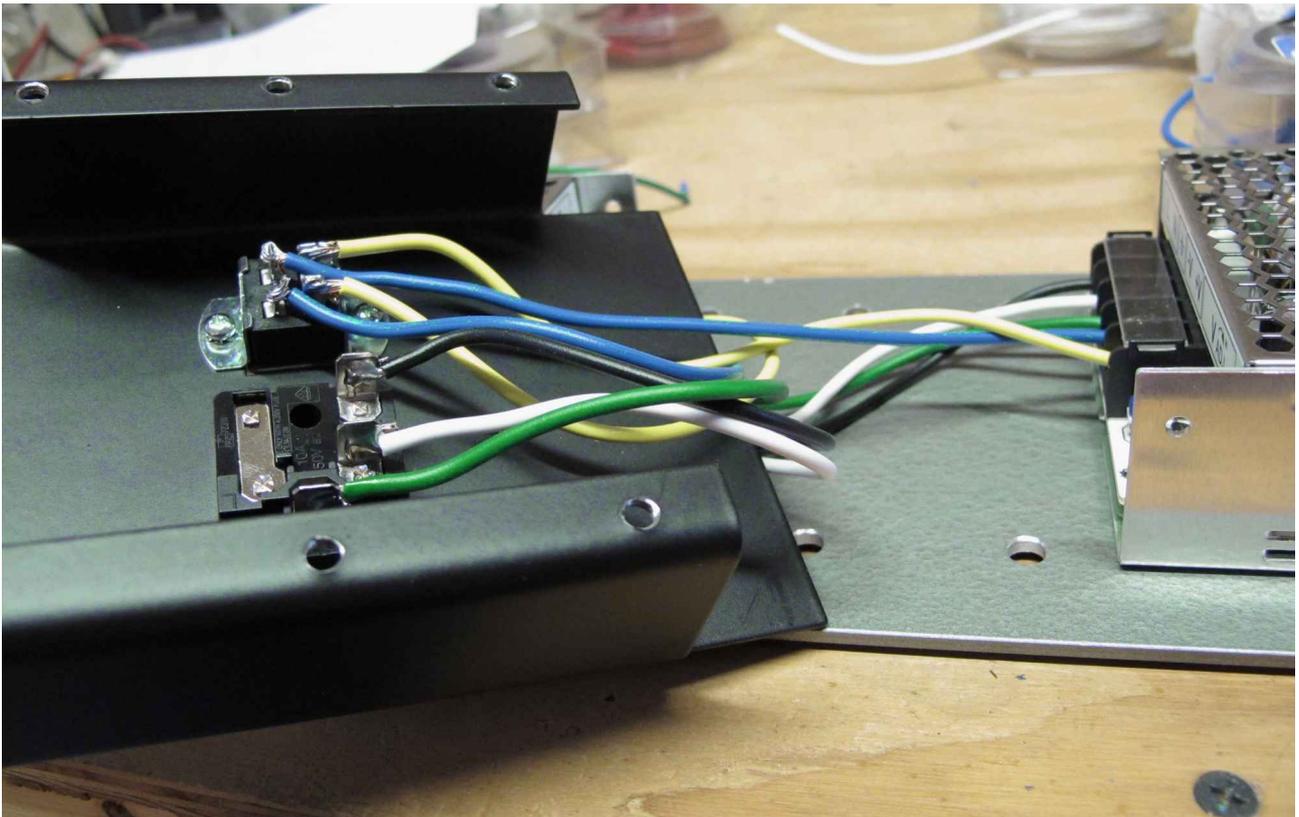
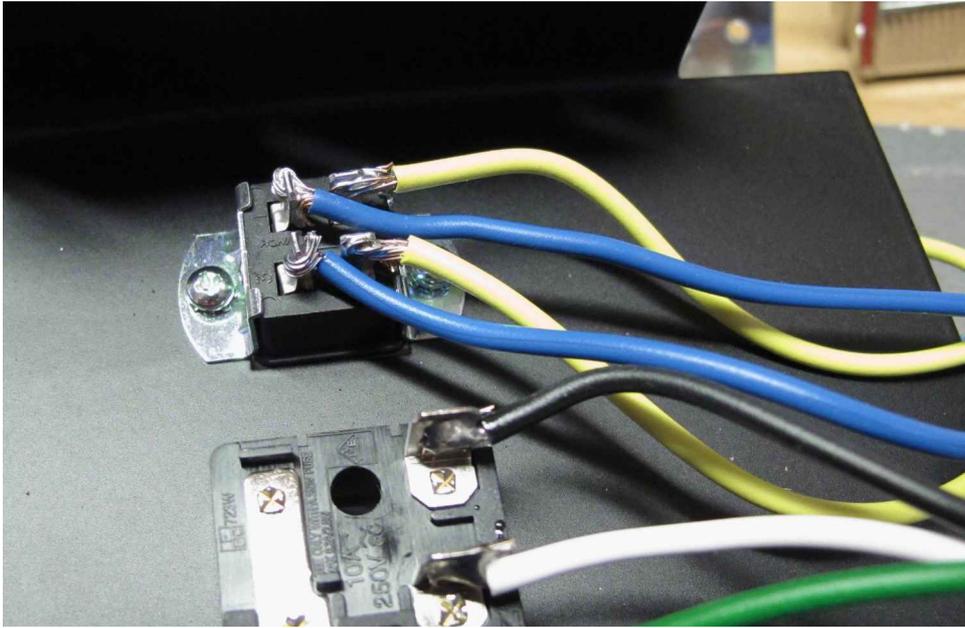
6. Add jumper from ground (green) to -V (blue) on right power supply.
7. Solder the black, white and green wires to the back panel power connector as shown.



8. Solder the blue and yellow wires from the RIGHT power supply to terminals 1 and 2 of the DC “Jones” connector as shown.



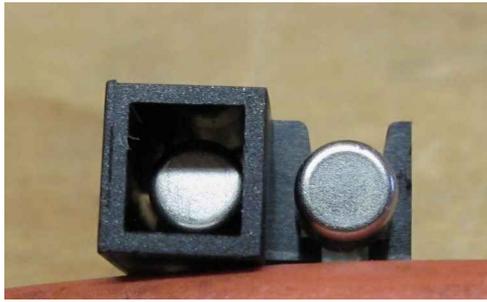
9. Solder the blue and yellow wires from the LEFT power supply to terminals 3 and 4 of the DC “Jones” connector as shown.



10. Fold the wired cover back and attach with 6 M3 12mm screws. Insert washers between the cover and panel as spacers.



11. Insert the fuse, and store the spare fuse.

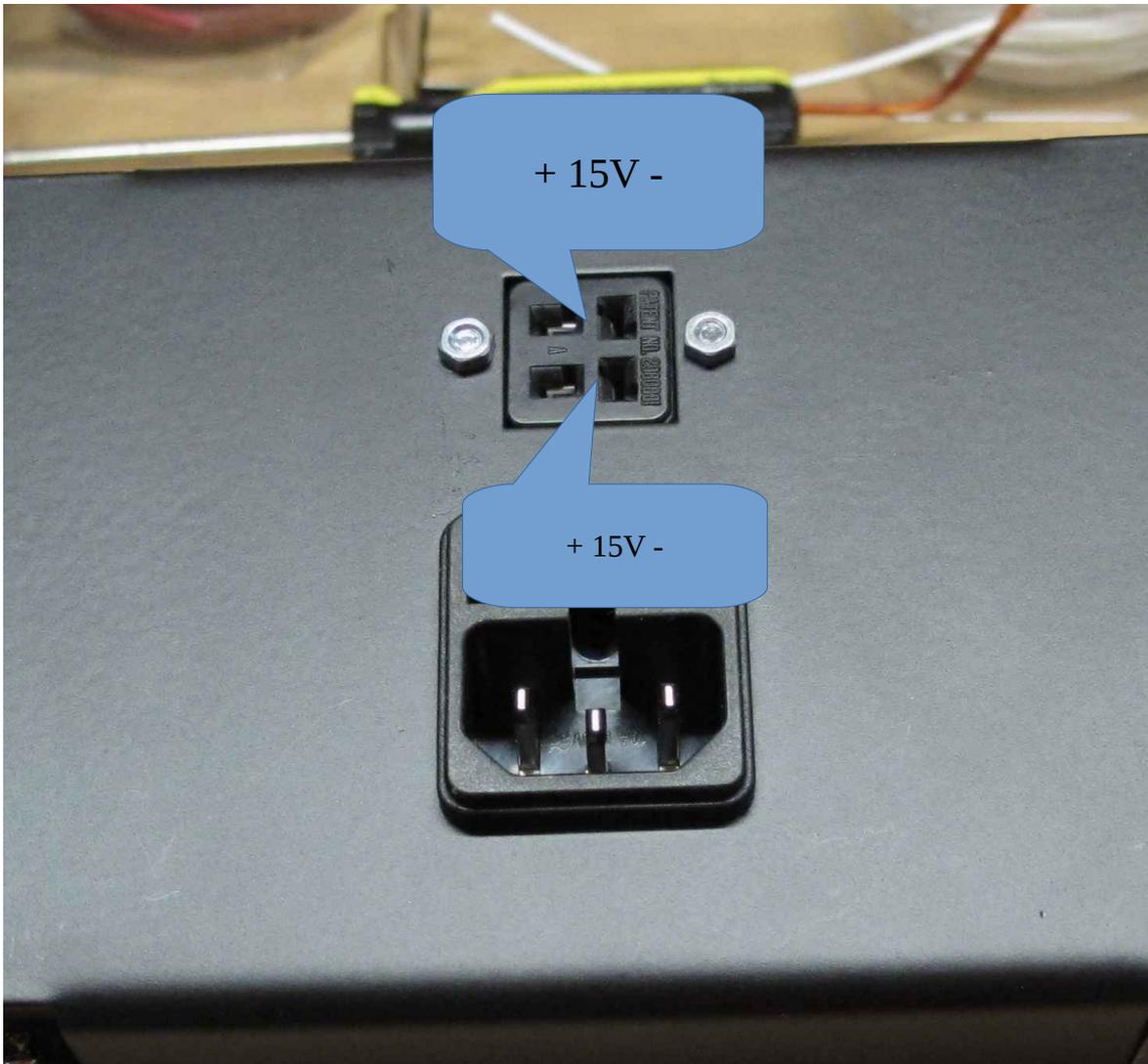


12. Testing

Plug it in. Measure with a voltmeter.

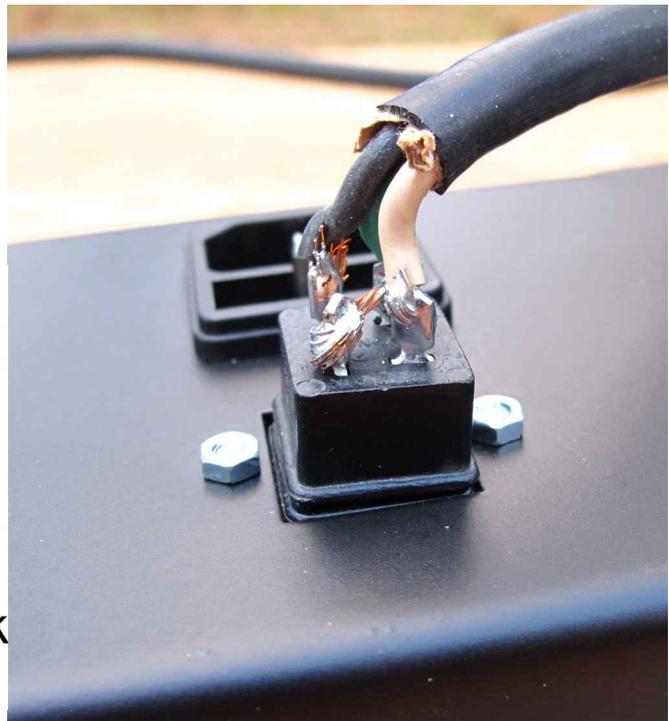
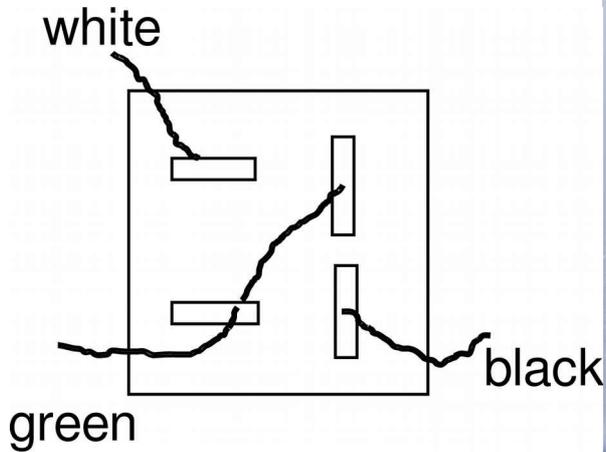
There are two separate 15 volt supplies.

Both have LED's (inside) They should be lit.

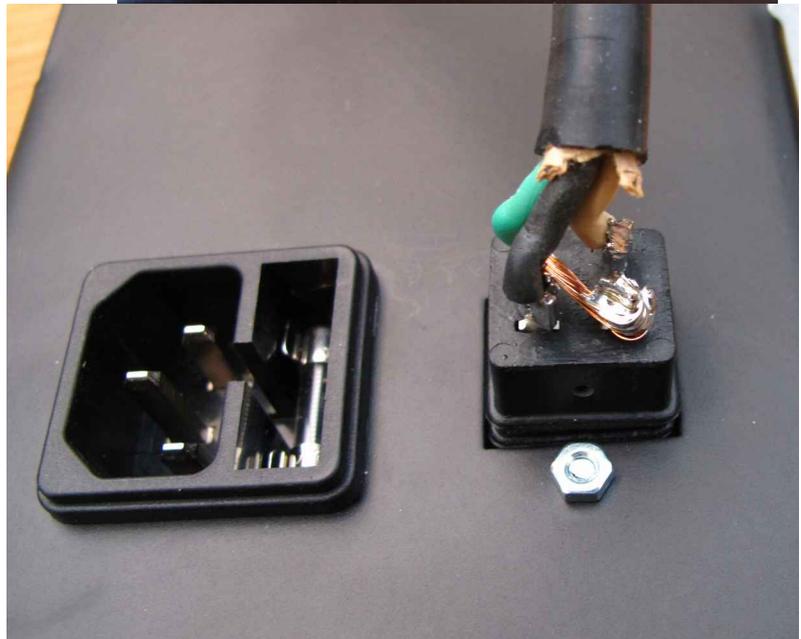


13. Build the connecting cable.
Power supply end

It is easiest if you plug it in to the power supply, and wire it there.



The white wire connects to one plus pin. The black wire connects to the other minus pin. The green wire connects to a plus and a minus diagonally.

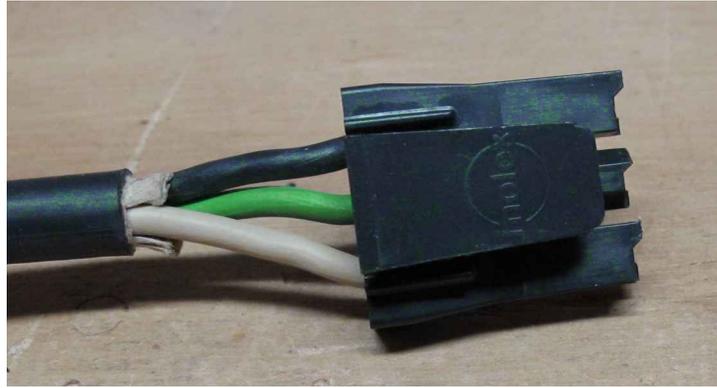


14. From the other end of the cable, slip the cover on and secure it with the pin.

Tighten the screws on the strain relief.



15. Console end:
Black – pin 1
Green – pin 2
White – pin 3



16. Now plug it into the power supply, plug the power supply into AC. Measure the voltage at the console end. It should be 15 volts between adjacent pins, 30 volts from white to black. White is positive.

The power supply and power cable are now ready to use.