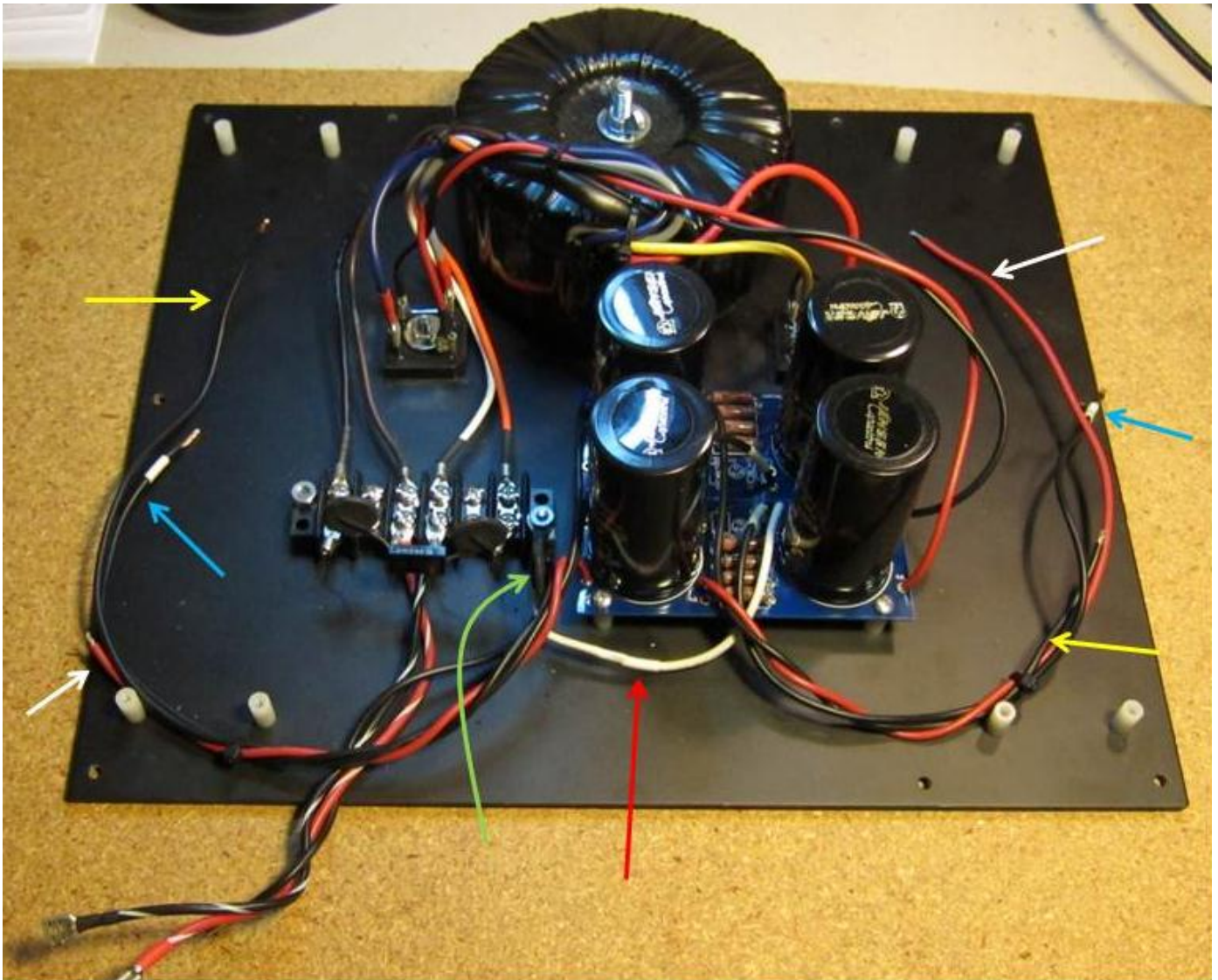


Finishing PS Wiring and Beginning Amp Board Wiring

The next step was to install the ground from the PS board to the case (through a CL-60 to prevent loops that can produce hum), from the case to power line (ground), and wiring that will run from the PS board to both amp boards.

In the photo below, a white wire was taken from one of the ground holes in the PS board through a CL-60 to a solder terminal that we placed on one of the bolts holding down the terminal strip. Again, we had made sure to scrape away paint to ensure that this solder terminal on the bolt would conduct well to the case.

In the photo, below, the red arrow points to the white ground coming from the PS board. The CL-60 (green arrow) is shown on edge, and the other side of the CL-60 goes to the solder terminal on the terminal strip bolt. Soldering of the white wire to the CL-60 lead was covered with heat shrinkable tubing.

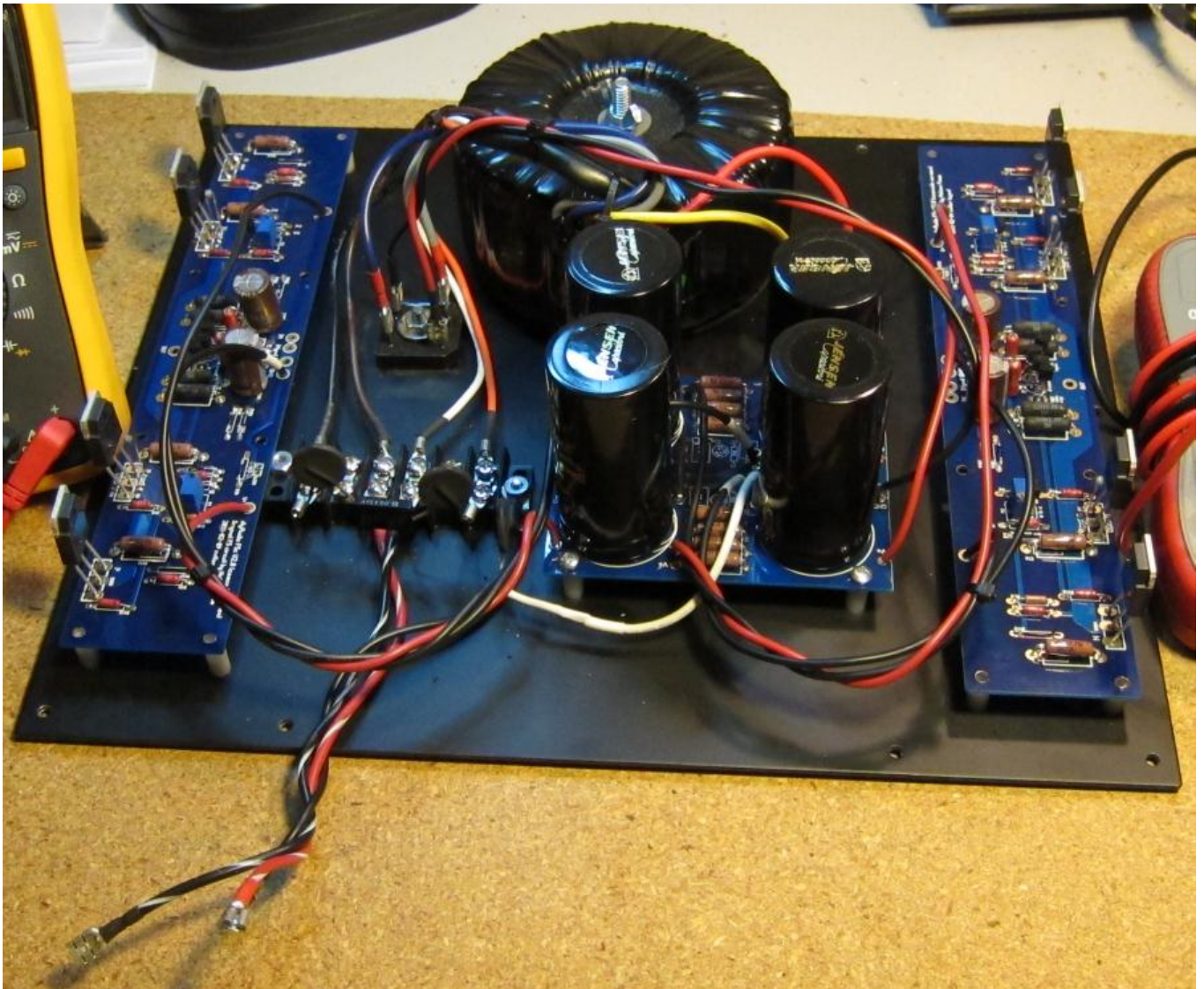


Staying on the photo, above, both rectifiers (one partially hidden on the right behind an electrolytic capacitor) are connected to voltage input sites on the PS board, and all four wires from rectifiers enter on the right end of the PS board, as shown earlier.

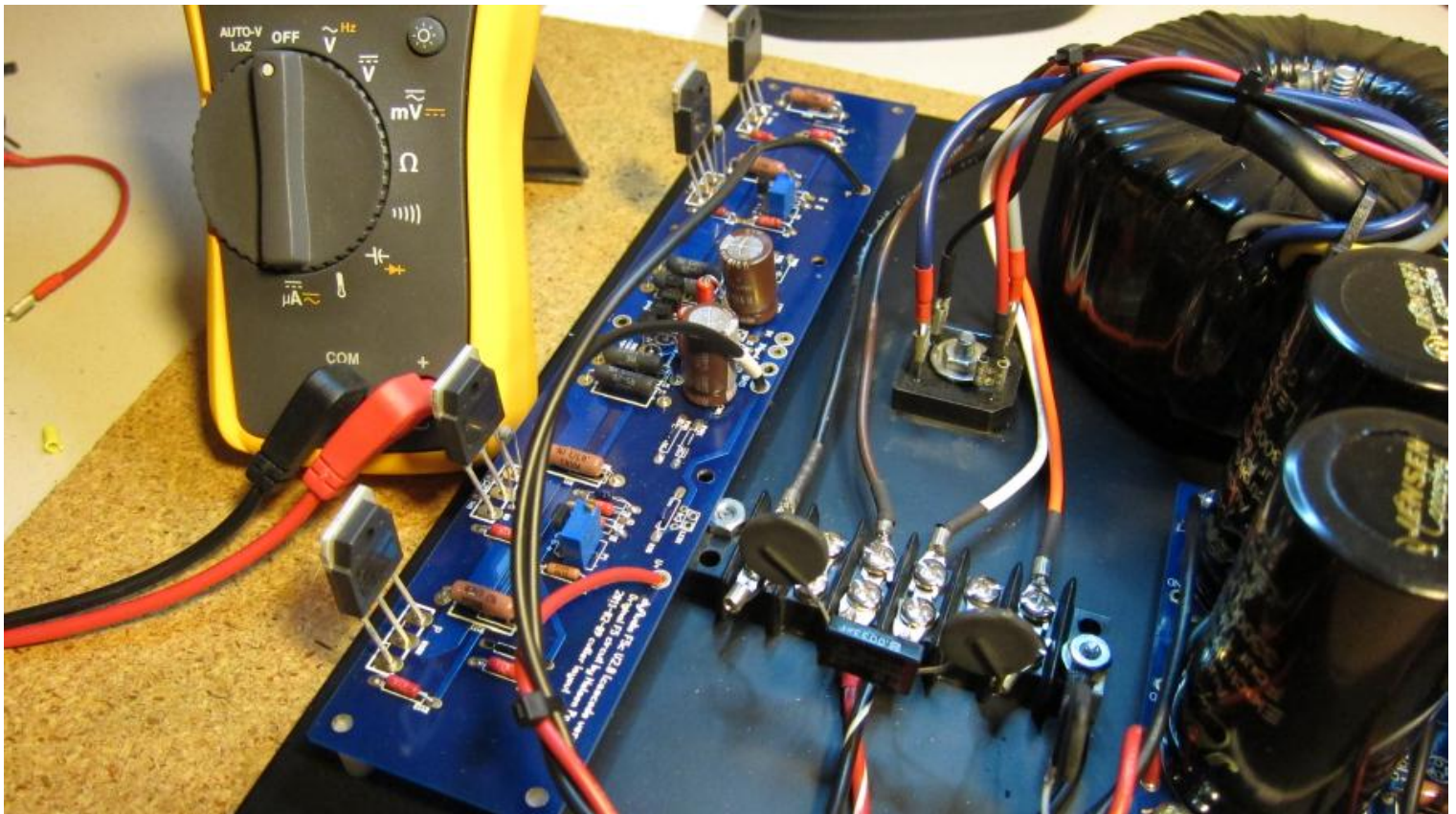
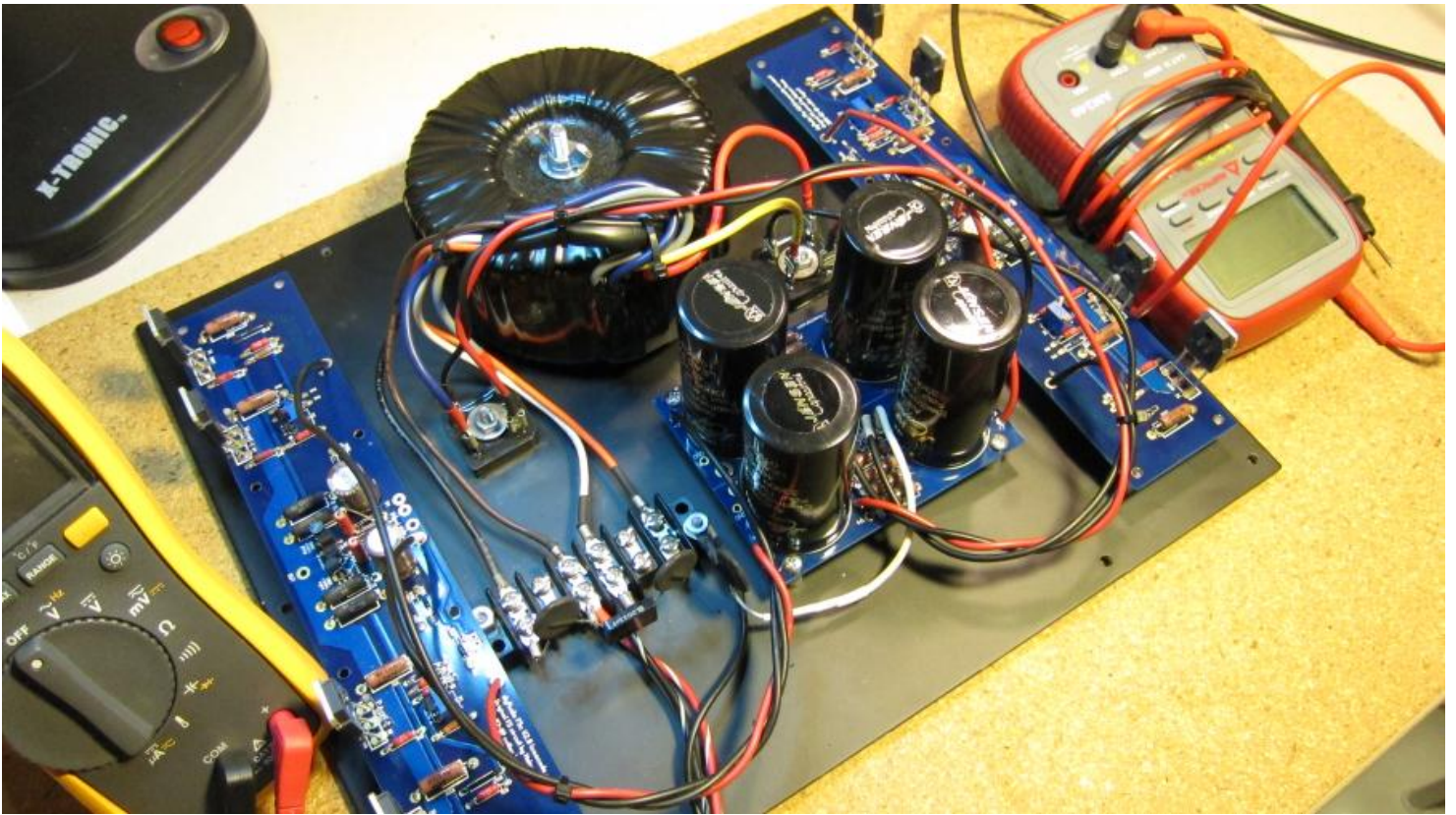
A solid black wire (no arrow) is now twisted with the striped red and striped black power-in wires and will be the ground from the power receptacle that will go directly to the case (also a solder lug on the terminal strip bolt, but NOT through a CL-60).

There are a selection of sites (holes) from which +VDC and -VDC outputs can be picked up from the PS board. We had already seen that there multiple holes for grounds in the PS board as well. Twisted cables of red, and two blacks (one with a white heat-shrinkable tubing marking an end) run out of the PS board to each side, and these will be positive, negative, and ground to each amplifier board. That is, white arrows point to +VDC to amp boards; yellow arrows point to -VDC to amp boards; blue arrows point to ground to amp boards.

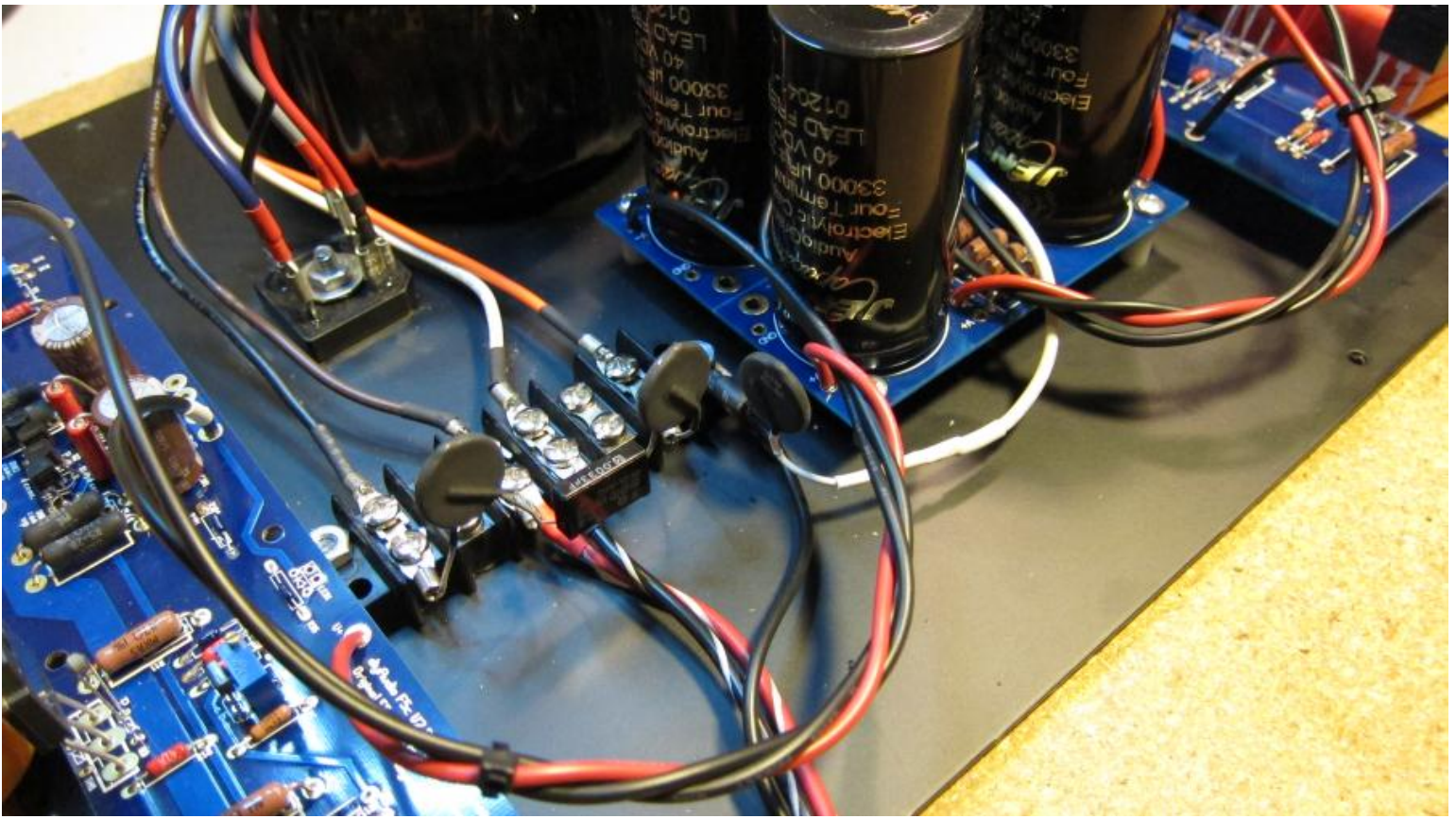
Importantly, we checked conductivity of the case, and the powder-coating, of course, completely insulated most everything. We scraped paint out of all the case holes to which the front, back and top panels and to which heat sinks will bolt in an attempt to assure that everything on the case was conductive (at least we thought we did). In the photo, below, we set the amp boards in place and held them there by butressing them with volt meters, and loosely inserted the positive, negative, and ground wires into the amp boards so you could get an idea as to how it will look.



Another couple views, below

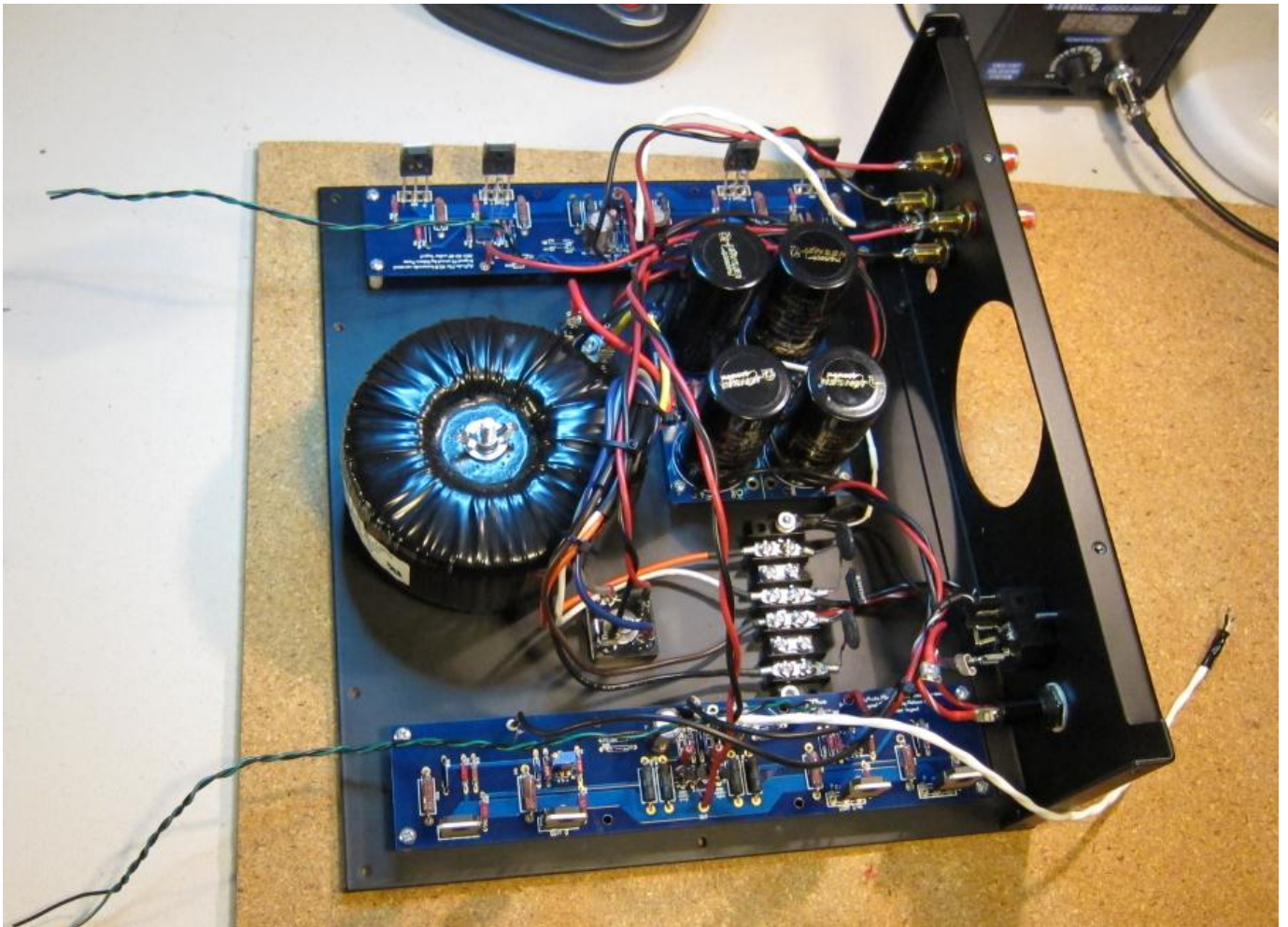


Finally, just a close-up of the ground system, below. Again, the white wire travels from ground on the PS board through the CL-60 to a terminal bolt that conducts to case, and the black case ground wire travels from the same terminal bolt (but NOT through a CL-60) back to the power connection on the back panel.



Wiring continues

Amp boards are now mounted. We have added wiring for audio in, speakers out, and LEDs.



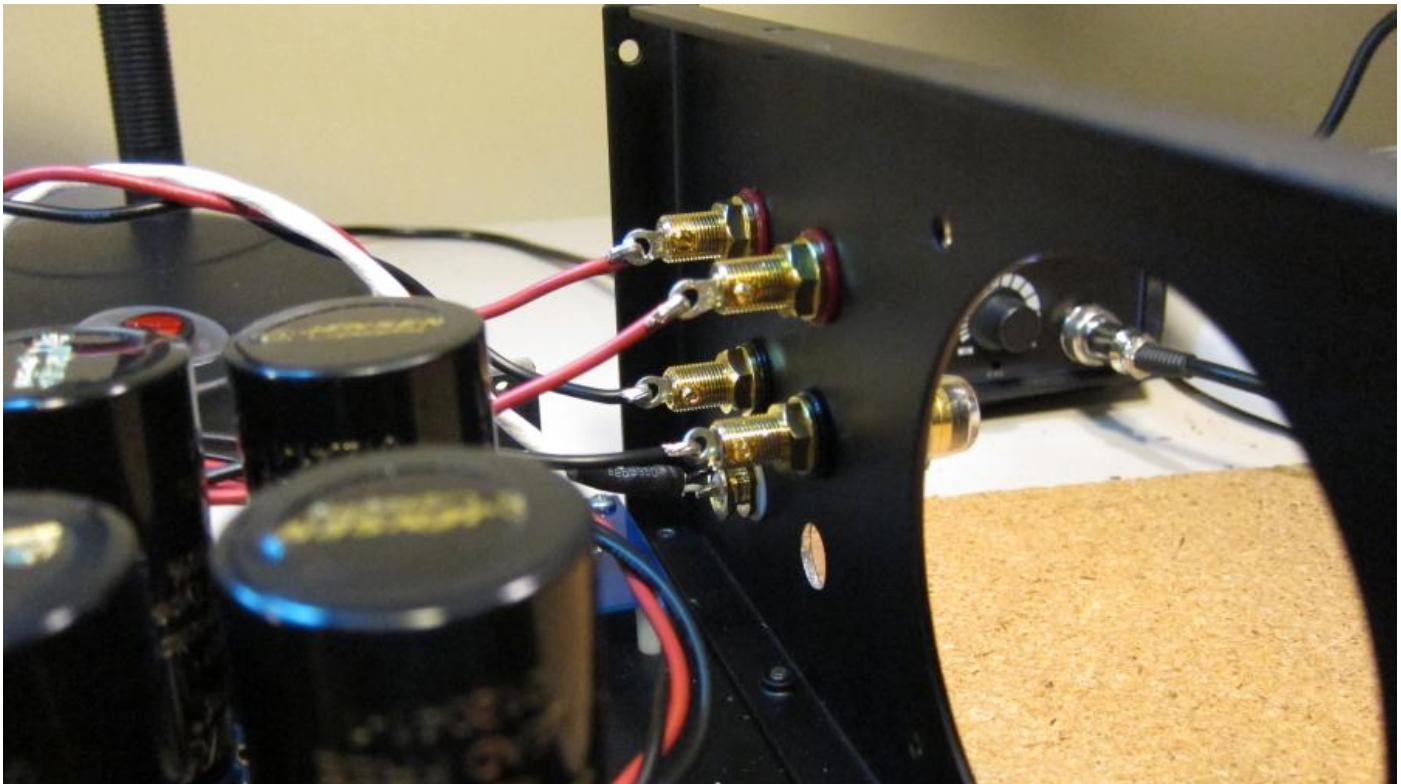
The back panel has been attached to the bottom panel. The green and black wires from each amp board will go to the LEDs in the front panel.

The white cable from the lower amp board that ends behind the amp is a shielded twisted pair be soldered to one of the RCA jacks for audio in – you can see the hole in the back panel where the RCA jack will go below the speaker terminals top right. We don't use the shield. Rather we cut it off flush with insulation and just used the twisted pair after placing some heat-shrinkable tubing on each end of the main cable. If we have a loop problem with hum, one of the options would be to connect one end of the shielding to ground, but we didn't need to do this with the F5.

Signal out (speaker) from the amp boards (red wires) and speaker ground from the amp boards (black wires) travel to the back panel. The speaker ground wires would not need to originate from the amp boards, but could come of the ground holes in the PS board. Taking the speaker grounds from the amp boards allowed for easier wiring.

Below is a close-up of the speaker terminals. Without realizing it, we had ordered speaker terminals that didn't have solder connections, but had two screws to clamp down on the wire. We didn't like this at all, so we took a round solder terminal and crimped the end and screwed it down tightly in each speaker terminal and then soldered to that. In reality, we soldered to the terminal, then crimped it, and then screwed it in tightly. Regardless, it seemed quite solid.

You can also see the white cable (shielded twisted pair) carrying signal in from one RCA jack to an amp board. An empty hole, again, is where the second RCA jack will go.



Continued in part 9.