

Tube Rectifier Mod

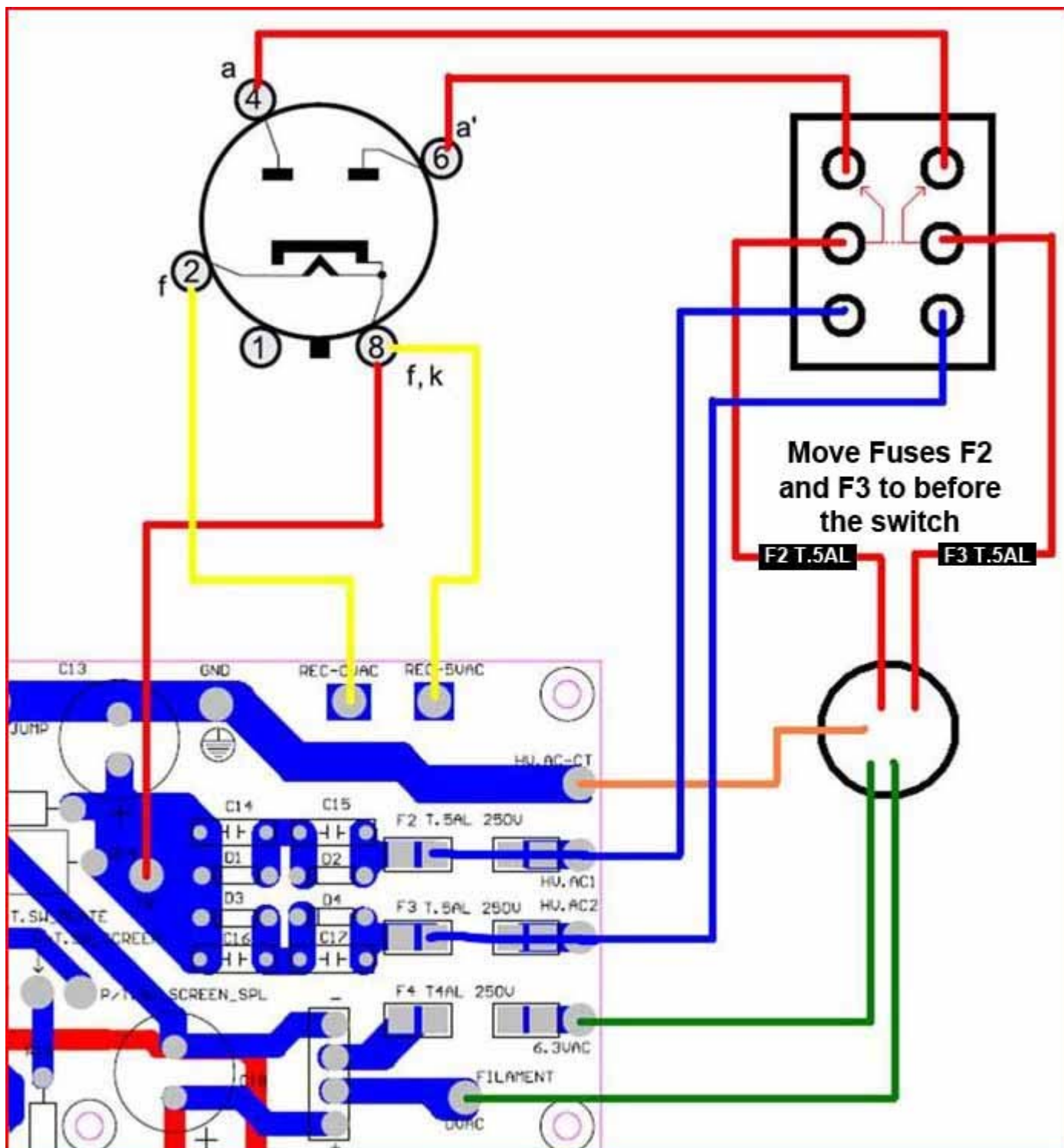
Pyotr Belov (the designer of the Epiphone Valve Junior and Blackheart Amps) emailed me with an explanation of a MOD for a tube rectifier. Here's what he said (when talking about the BH5H's PCB)

"There is a PAD named TR. It stands for tube rectifier.

If you do a Tube/Solid State rectifier mod by switching the HV AC taps between SS and pin 4 and pin 6 of the tube rectifier (using a DPDT switch) the wire from pin 8 of your 5Y3, 5V4 or 5AR4 can be cleanly connected to the High Voltage trace."

Like I said... these amps were designed with modifying in mind, so they even put in a pre labelled pad to connect the tube rectifier on the stock PCB! Great guy and a great amp!

Below is a Schematic for the Tube Rectifier mod (note, you should unsolder the yellow wires from the PCB at the 2 points labelled REC-0VAC and REC-5VAC and connect those wires directly to the rectifier tube socket.) Also note the new fuse position:



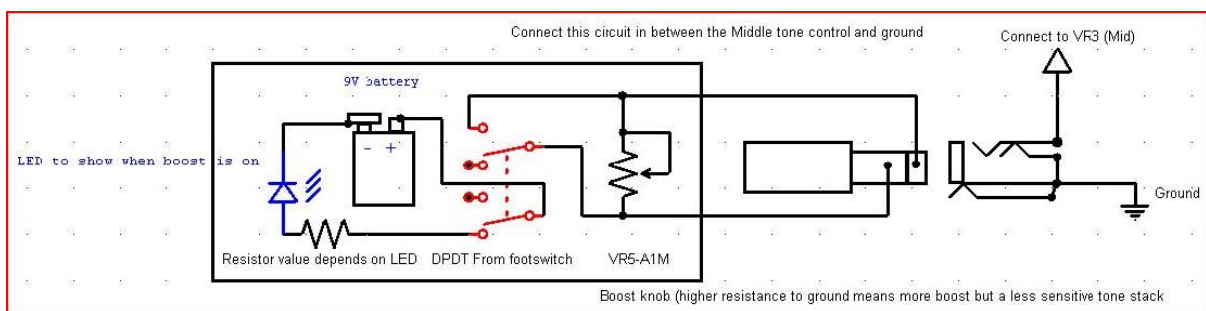
Tone Stack Capacitor Mod

I must say that I haven't demo'd the blackheart much with the stock caps, as I decided to replace some of the caps for ones that are used in high end Marshalls and Fenders. I replaced C2 for a 390pF 500v Silver Mica cap (I tried 470pF which wasn't full enough, it was too bright), and C3, C4 and C6 for Mallory 150 0.022uF 600v caps. To be honest the sound change is ever so subtle (cGil from the sewatt.com and epiphone forums helped me with the type/make of caps to use. Mallory 150's in C3,C4 and C6 for a marshall tone and Orange drop 715/716's in the same positions for a Fenderish tone. And also the Silver Mica in C2. Using all of the stock values of course, and using 400v to 650v in C3, C4 and C6 and 500v in C2).

Please see the last page in this guide for a schematic with these (and other) mods shown.

Boost Footswitch Mod

This one is purely Pyotr Belov's mod, as it used to be included in all of his 'Belov' amps.



It essentially reduces the resistance to ground through the tone stack. This in turn does two things.

- 1 The higher you turn the variable resistor on the foot switch, the higher the boost is
- 2 The higher the boost is, the less effect on your tone the three tone controls will have.

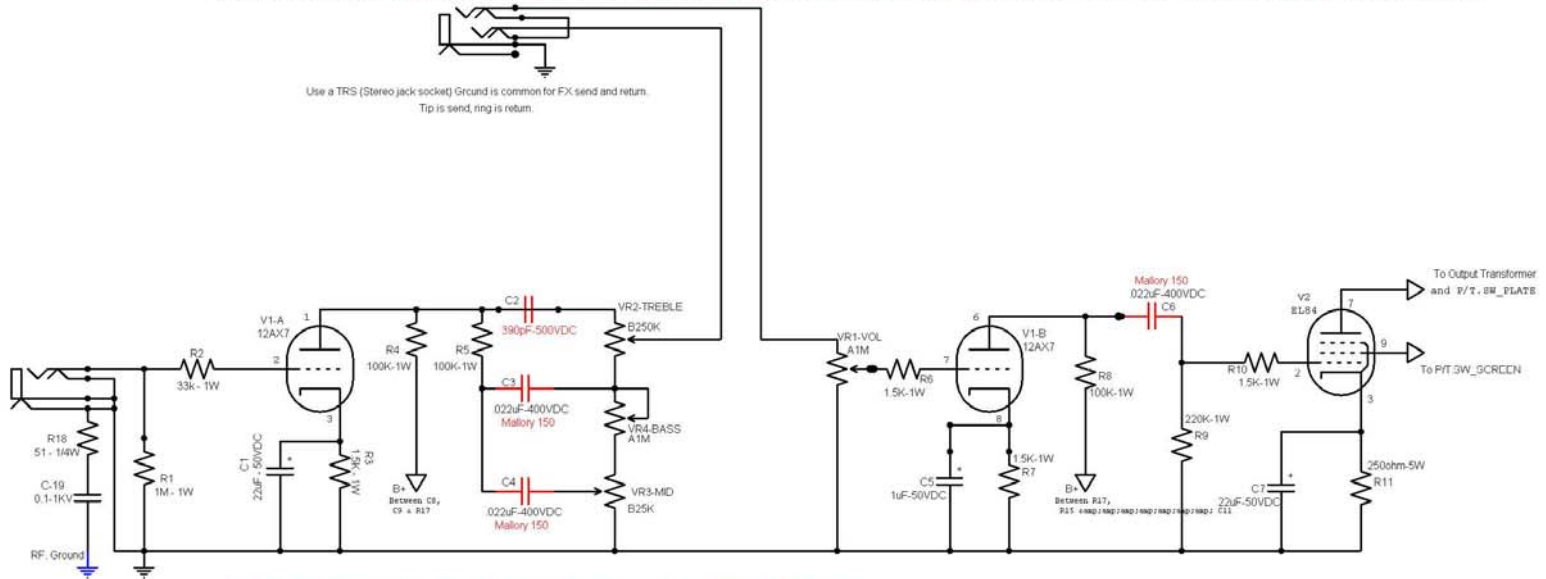
For a complete schematic of the BH5H (excluding power supply components) with this mod included, please see <http://www.rowbinet.co.uk/Blackheart/blackheart.htm>

Power Amp Input Mod

Just put in an FX loop, and use the FX return for the input. Look on the next page for this and other mods on a schematic.

BH5H FX Loop Mod

I've found the FX loop in this position to not work with some effects, which I would think is caused by an impedance mis-match. the problem shows as the sound that either the input of the FX box in the loop is clipping, or that the output of the FX box is too high and is clipping V1B. but this doesn't happen with many FX, and I've found the tone you get with delay and verb before the input of the amp sounds really good. so I don't use the loop now. You have been warned.



V1 - I use a Watford Valves Harma 27F 7025 Diamond Drive tested 250-270 Cryogenic Treated valve

V2 - I use a Watford Valves Harma 6B4L valve

C2 - I tried 470pf first, but it was too bright

Output Transformer - Get a Hammond 12588E, they sound much better.

I used my 3w/5w switch as a standby and relocated with a new switch, the 3w/5w switch to the back panel.

For standby, just interrupt the power to the 2 HV taps HVAC1 and HVAC2 (where the red wires from the power transformer connect to fuses on the board). you must isolate both with a DTSF or DTSF switch.