Part 3, Attachment 3. <u>Capacitor Assembly</u>

Wall of Sound.ca Tubelab DIY EL84 Amp

Tools Required:

-Same as previous attachment.

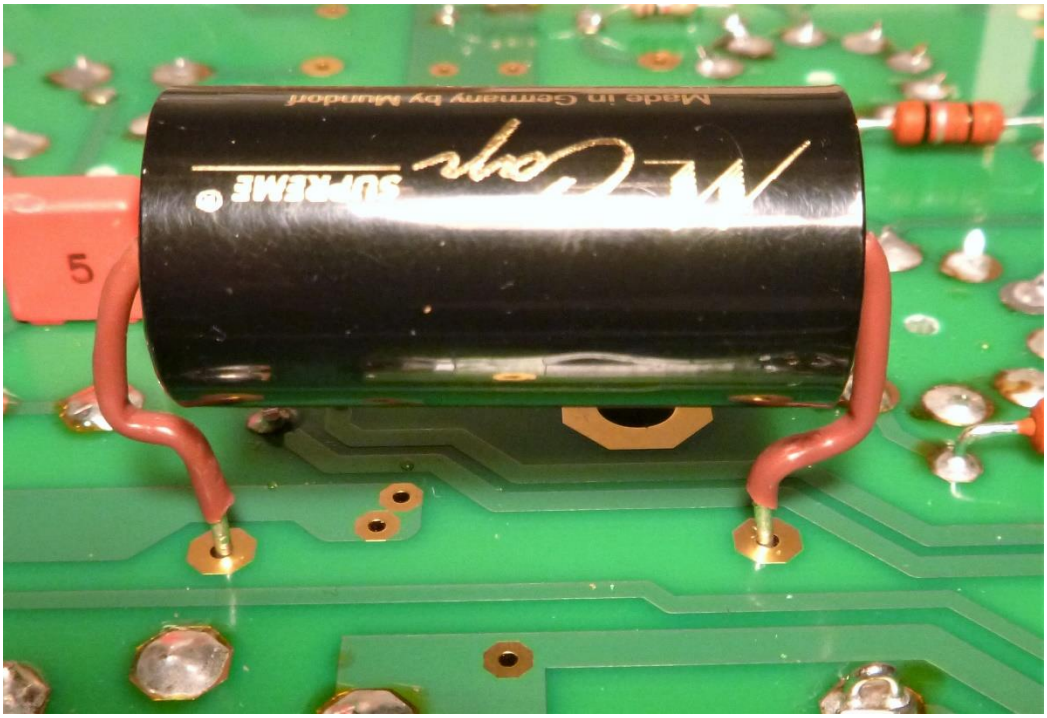
-Wire strippers

-Sharpie marker

All capacitors are assembled to the **<u>UNDER SIDE</u>** of the board.

If you have some long 8-32 screws temporarily assemble them to the board spacers. This will protect the coupling capacitors from damage.

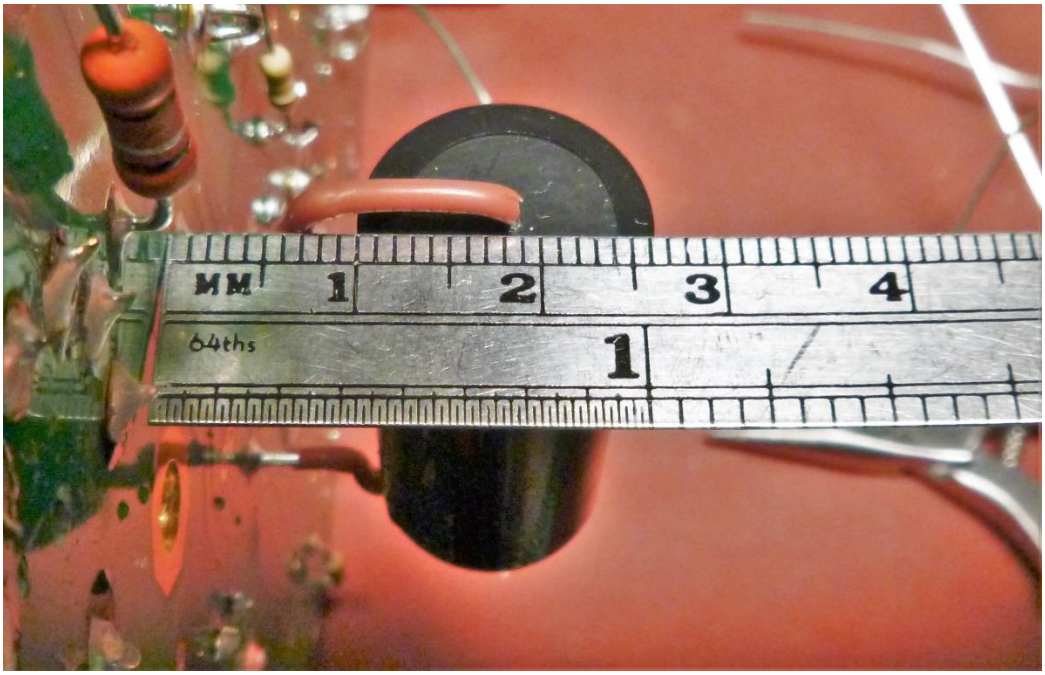
Note: The board was designed for some generic coupling caps. Both the Mundorfs shown below and the CDE caps in the parts list are a bit long.



This will necessitate raising the caps clear of the board with the leads bent down and underneath as shown above.

Though not really necessary, I prefer to cover the leads with some stripped-off Teflon or FEP wire insulation.

Bend the leads of the coupling caps as shown above.



When assembled and soldered to the board the tops of the caps should not protrude more than 28mm (1 1/8") from the board.

Inset one of the prepped coupling caps into position **C103** as shown above. Solder to the board then turn it over and solder the other side as well. This is especially important as soldering on both sides protects the board traces from damage. Trim the leads.

In this order:

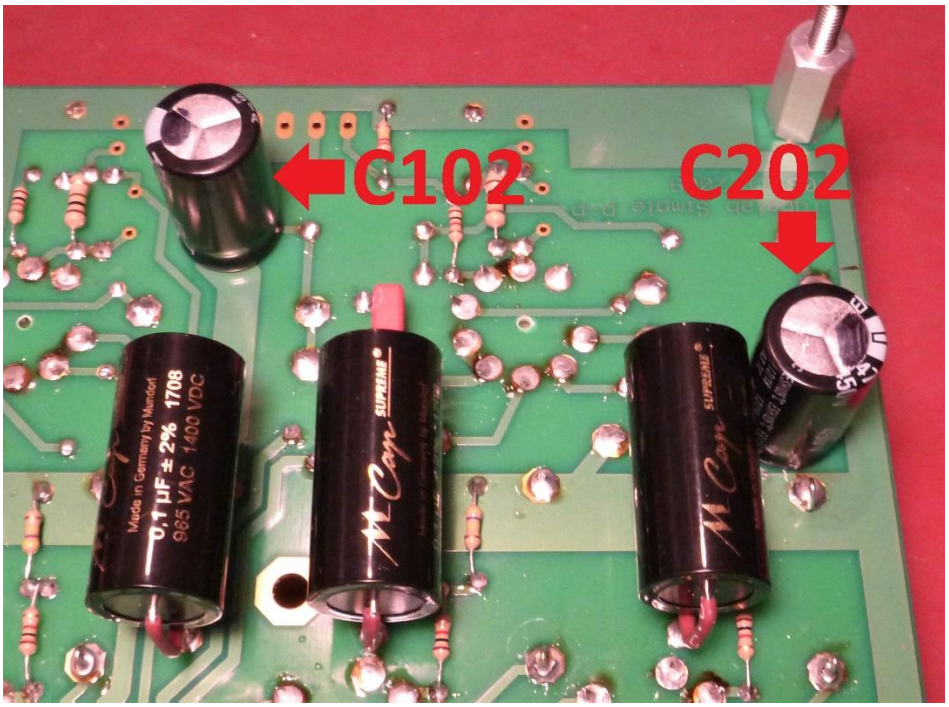
Assemble **C205**, solder and trim.

Assemble **C203**, solder and trim.

Assemble **C105**, solder and trim.

Electrolytic capacitors are **polarity critical**. Please follow the tips below to orient them correctly.

Hold capacitors **C102** and **C202**, both 47uF 450V with thin wire leads, as shown above. Using a Sharpie marker make a black spot on the tops adjacent to the NEGATIVE stripes.

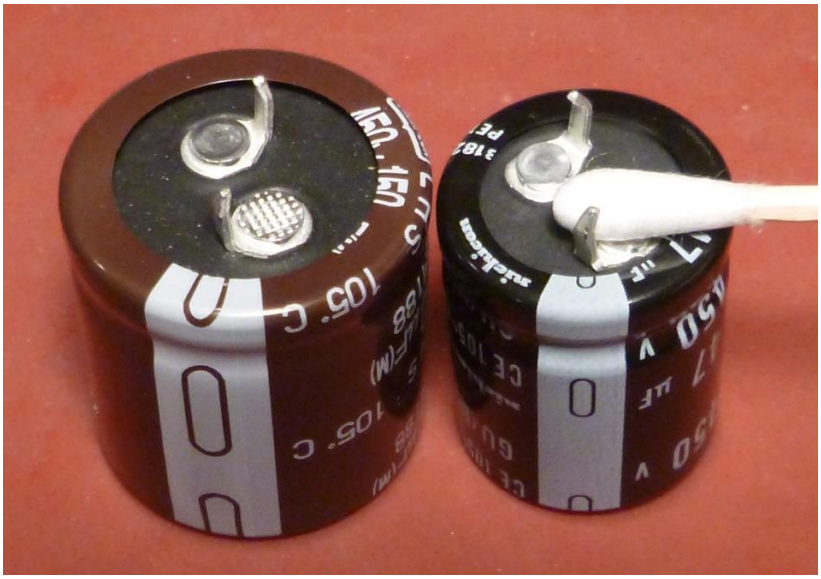


Assemble the caps to the board with the black spots oriented as shown above.

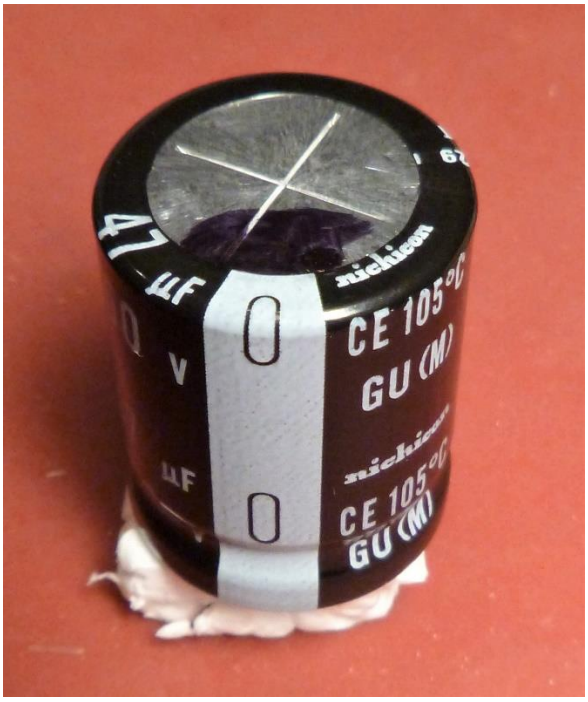
Flip the board over, pull the leads lightly as you bend them over to snug the caps to the board.

Solder the leads and trim the excess.

Locate capacitors **C1**, 47uF 450volts and **C2** 150uF 450volts in the parts kit.

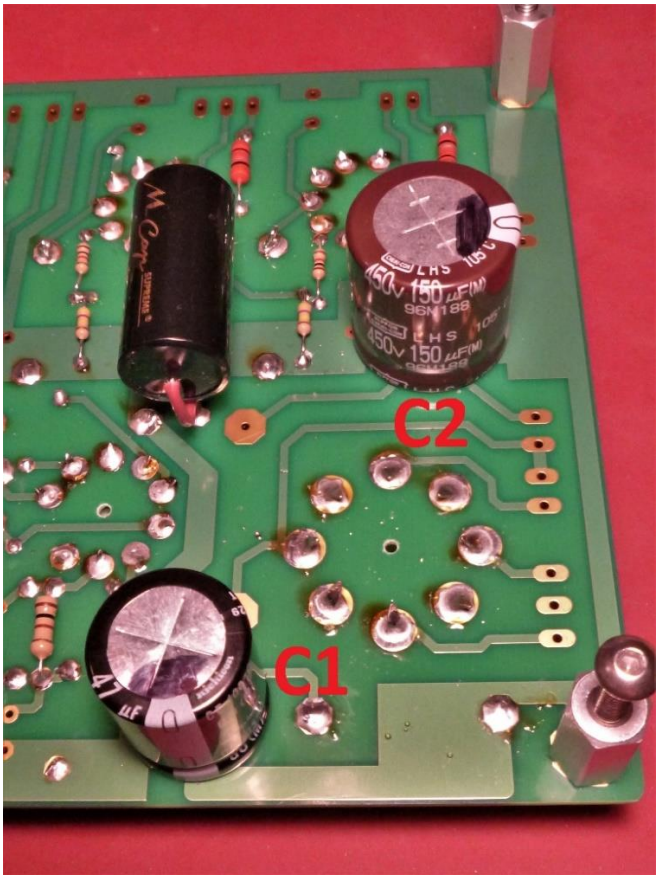


Wipe the pins on both with a solvent-dampened swab.

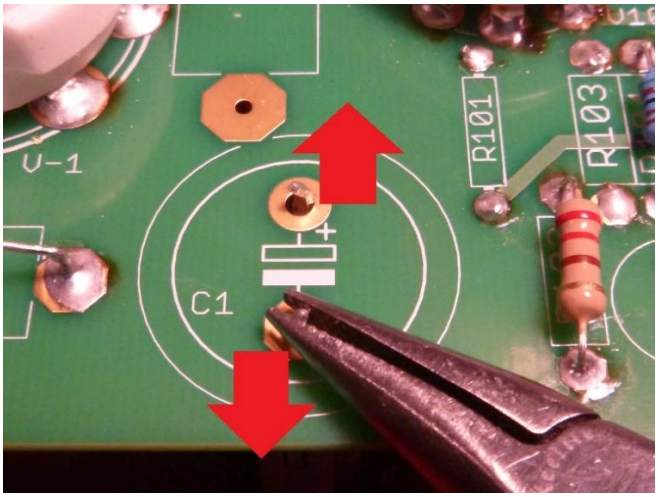


Position capacitor **C1**, 47uF 450volts, as shown above. Using a Sharpie marker make a black spot on the top adjacent to the NEGATIVE stripe.

Position capacitor **C2**, 150uF 450volts as shown above. Using a Sharpie marker make a black spot on the top adjacent to the NEGATIVE stripe.

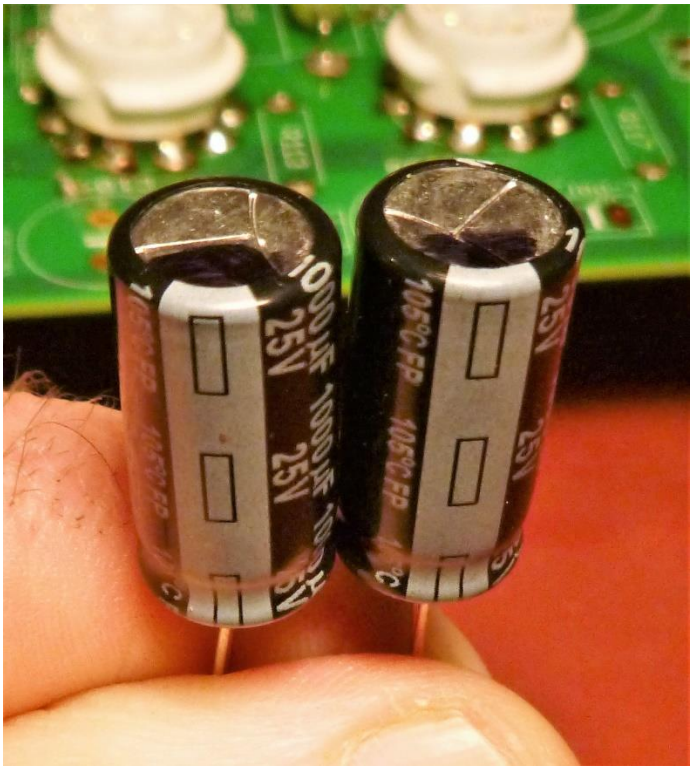


Assemble C1 and C2 to their respective places on the board with the black spots oriented as shown above.

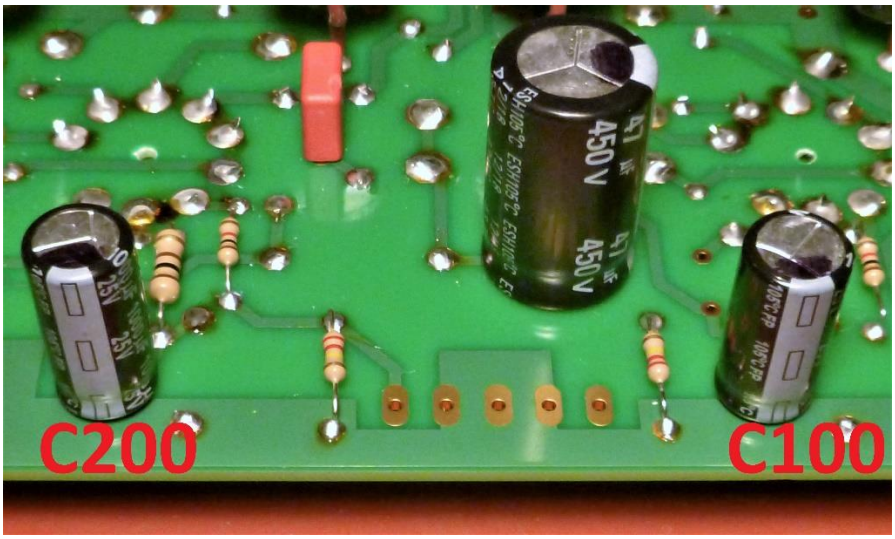


Flip the board over and bend the pins on both caps outwards to pull the caps snug to the board.

Solder both to the board.



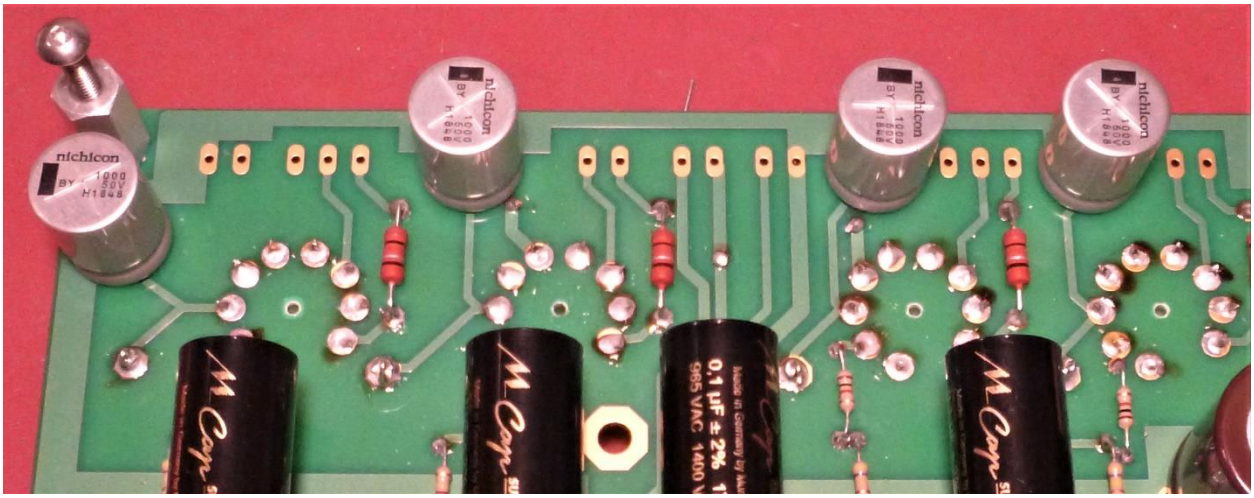
Hold capacitors **C100** and **C200**, both 1,000uF 25V, as shown above. Using a Sharpie marker make a black spot on the tops adjacent to the NEGATIVE stripes.



Assemble the caps to the board with the black spots oriented as shown above.

Flip the board over, pull the leads lightly as you bend them over to snug the caps to the board.

Solder the leads and trim the excess.



Capacitors C104, C106, 204 and 206, all 1,000uf 25V, have the negative connection already marked on top.

Assemble the caps to the board with the black lines oriented as shown above.

Flip the board over, pull the leads lightly as you bend them over to snug the caps to the board.

Solder the leads and trim the excess.

Proceed to Part 3, Attachment 4 for terminal block assembly.

See next page for schematic.

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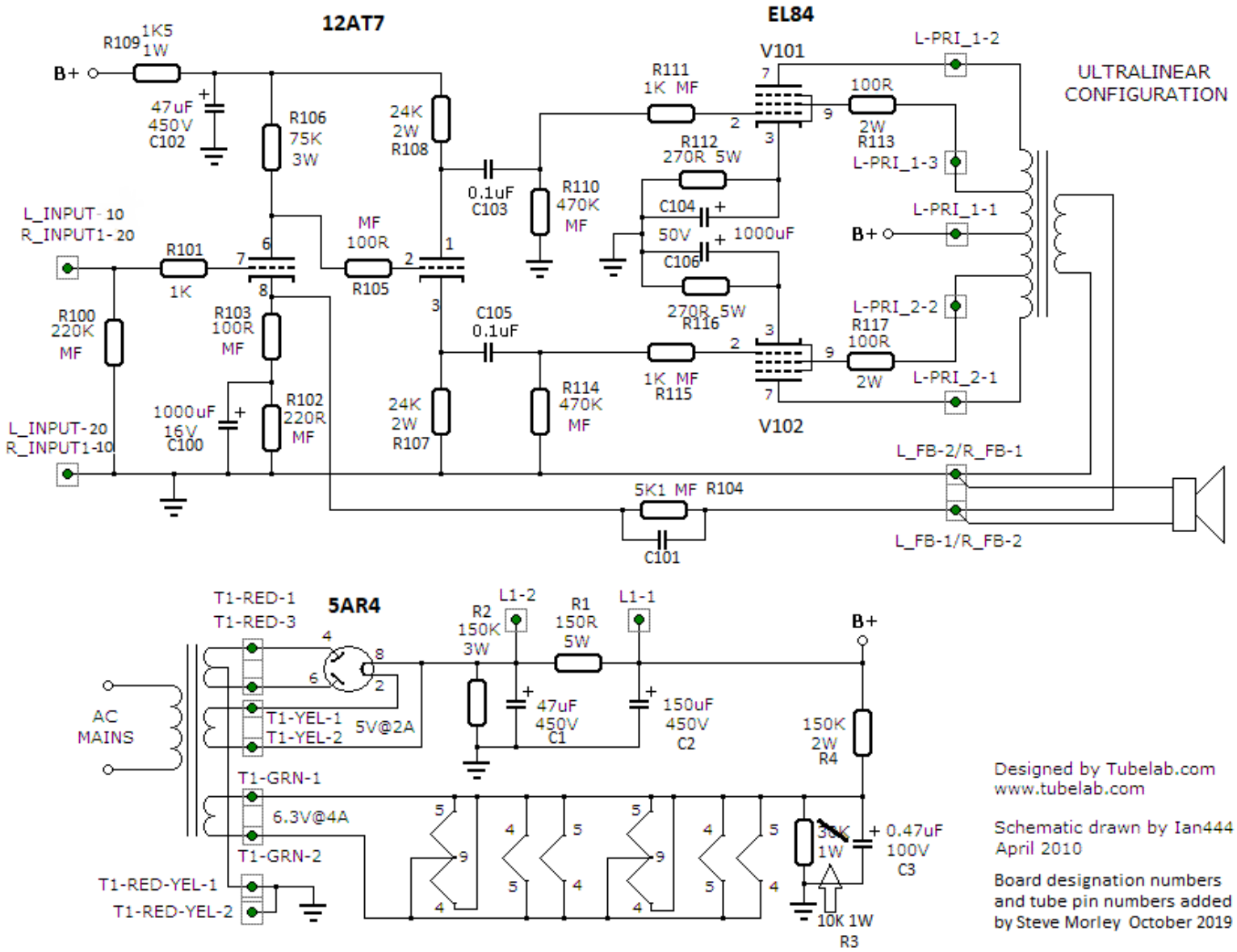

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www.tubelab.com

Schematic drawn by Ian444
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Board designation numbers and tube pin numbers added by Steve Morley October 2019