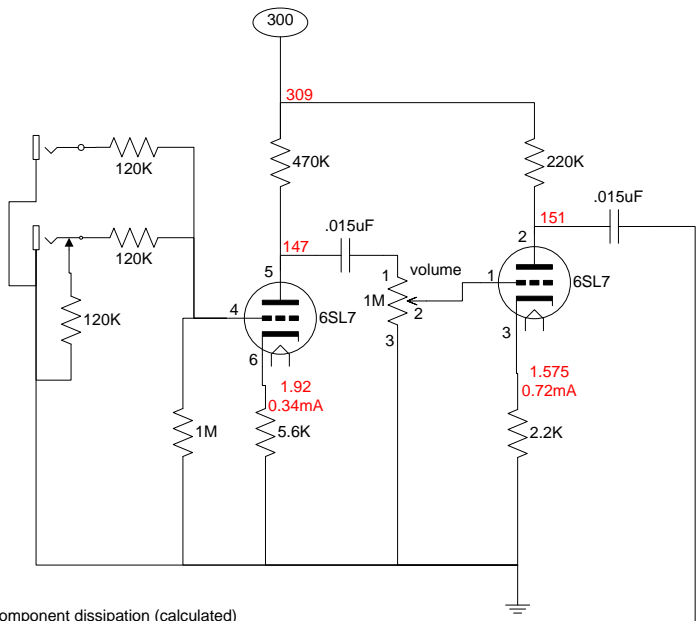


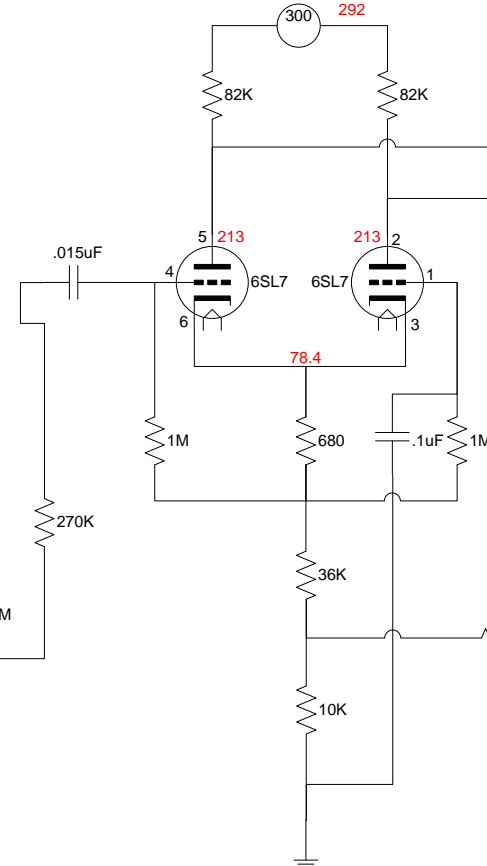
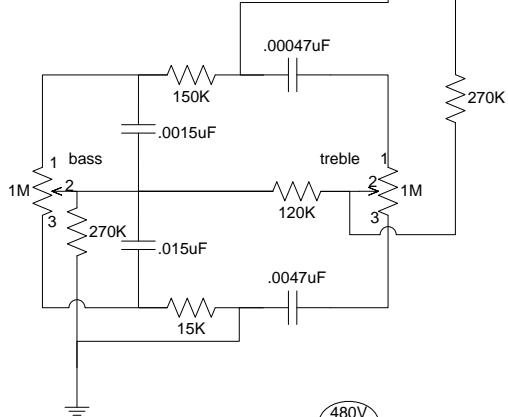
Bass Amp



Component dissipation (calculated)

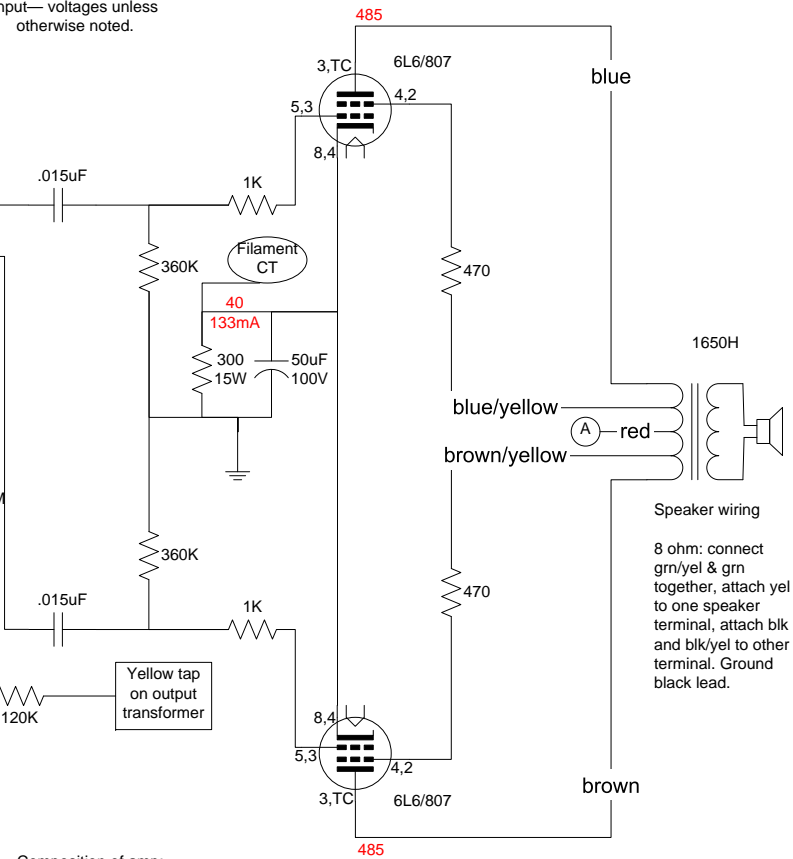
Power supply
 100K resistors: 0.625W
 120K resistor: 0.37W
 82K resistors: 0.09W

Frequency response:
 Main bass rolloff is in coupling between PI and power tubes. I have changed components to have same rolloff frequency as in Ampegs—30 Hz. Earlier version of this schematic had 40 Hz rolloff.



Red figures are measured values with no input— voltages unless otherwise noted.

Pin markings for 6L6/807:
 first number is for 6L6,
 second is for 807



Composition of amp:
 Ampeg B-15-NF preamp through tone stack. Two changes: first grid leak resistor dropped to 1M from 5.6M for noise reasons: 1) had to use carbon film instead of quieter metal for 5.6M, and 2) thermal noise, which is proportional to the square root of the resistance. Second change was to make tip-ring resistor on input jack equal to grid resistors to reduce potential for errors in building it—don't see any reason that it needs to be 100K instead of 120K.

Long-tail pair derived from design by Randall Aiken. Added transformer feedback proportionally similar to that on the November, feedback resistor adjusted to keep $R_i/(R_i+R_f)$ same as November (see Aiken for details). If you want to be exact, use 110K. I use 120K to keep down number of different values to order. Dropped presence control because I'm not interested in high boost, just feedback to clean up bass response.

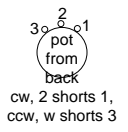
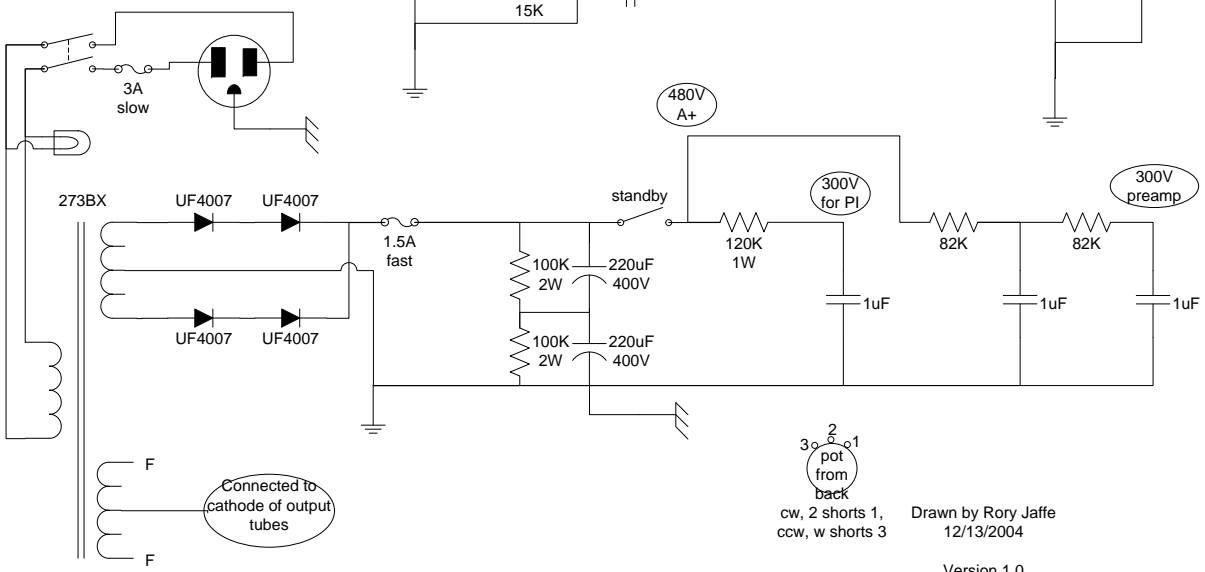
807 stage kind of generic.

Positive voltage to reduce filament hum obtained by attaching CT of filament windings to cathode bias resistor for output tubes. This is simplest method of doing this.

PS modeled for 125 mA 807 current, 1.72 mA PI current, 1 mA preamp current. Came out pretty close.

Changed to cathode bias to reduce complexity and parts count. Cathode bias resistor based upon net anode voltage (anode-cathode) of 450V, resting dissipation for 6L6. Wattage may have to go up, may be 220 mA peak current, about 10W. G2 resistor 0.23W at maximum current, so 1/2 watt ok.

Major bass cut is coupling PI to power stage: .015uF 360K gives 30Hz shoulder frequency, like Ampeg's (they use 0.02uF 270K).



Connected to cathode of output tubes
 cw, 2 shorts 1, ccw, w shorts 3

Version 1.0

Drawn by Rory Jaffe
 12/13/2004