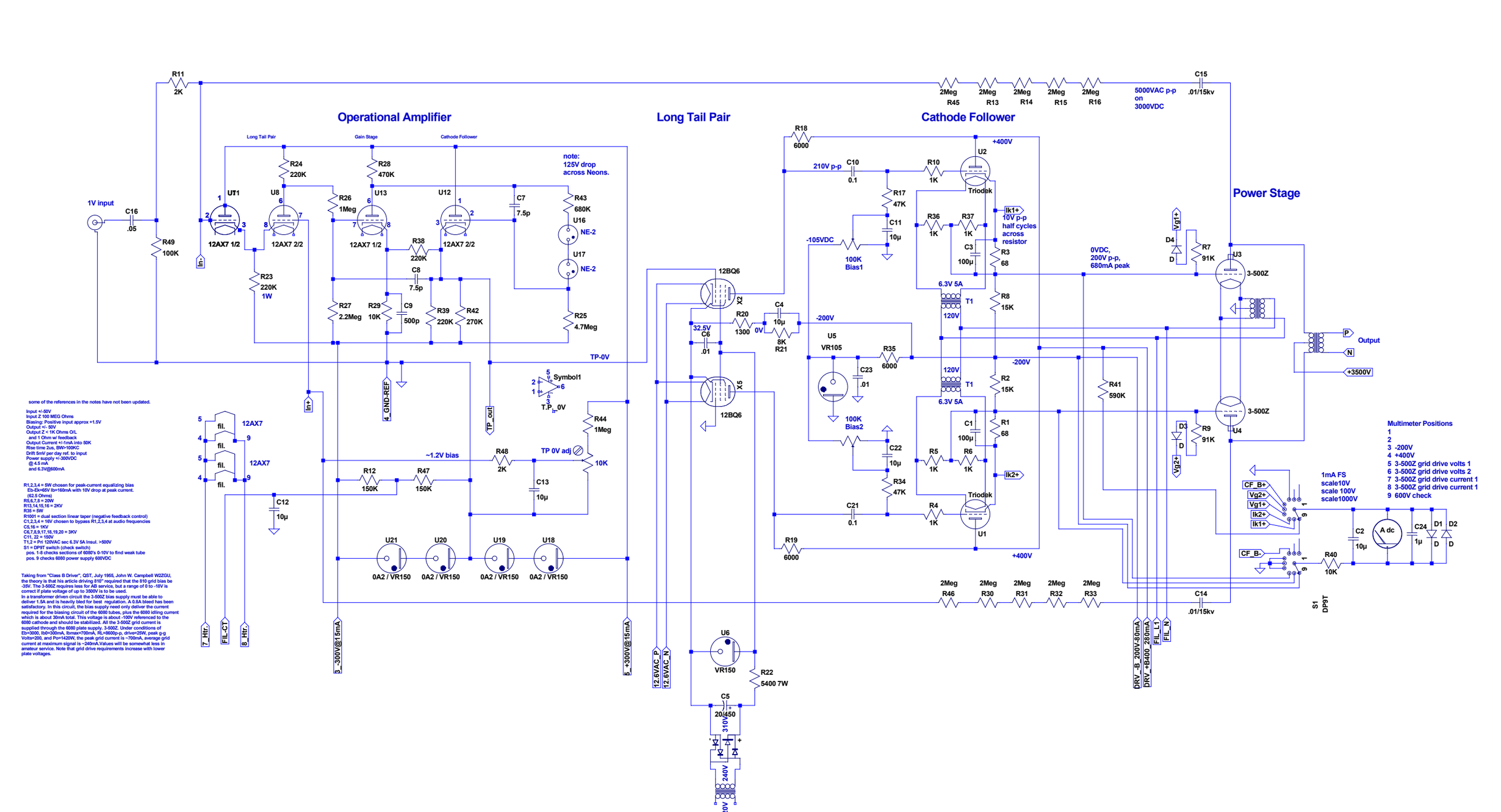

some of the references in the notes have not been updated.

Input +/-50V
Input Z 100 MEG Ohms
Biasing: Positive input approx +1.5V
Output +/- 50V
Output Z < 1K Ohms O/L
and 1 Ohm w/ feedback
Output Current +/-1mA into 50K
Rise time 2us, BW>100KC
Drift 5mV per day ref. to input
Power supply +/-300VDC
@ 4.5 mA
and 6.3V@600mA

R1,2,3,4 = 5W chosen for peak-current equalizing bias
Eb-Ek=65V Ib=160mA with 10V drop at peak current.
(62.5 Ohms)
R5,6,7,8 = 20W
R13,14,15,16 = 2KV
R35 = 5W
R1001 = dual section linear taper (negative feedback control)
C1,2,3,4 = 16V chosen to bypass R1,2,3,4 at audio frequencies
C5,16 = 1KV
C6,7,8,9,17,18,19,20 = 3KV
C11, 22 = 150V
T1,2 = Pri 120VAC sec 6.3V 5A Insul. >500V
S1 = DP9T switch (check switch)
pos. 1-8 checks sections of 6080's 0-10V to find weak tube
pos. 9 checks 6080 power supply 600VDC

Taking from "Class B Driver", QST, July 1955, John W. Campbell W2ZGU, the theory is that his article driving 810" required that the 810 grid bias be -30V. The 3-500Z requires less for AB service, but a range of 0 to -15V is correct if plate voltage of up to 3500V is to be used.
In a transformer driven circuit the 3-500Z bias supply must be able to deliver 1.5A and is heavily bled for best regulation. A 0.8A bleed has been satisfactory. In this circuit, the bias supply need only deliver the current required for the biasing circuit of the 6080 tubes, plus the 6080 idling current which is about 30mA total. This voltage is about -100V referenced to the 6080 cathode and should be stabilized. All the 3-500Z grid current is supplied through the 6080 plate supply. 3-500Z. Under conditions of Eb=3000, Ib0=300mA, Ibmax=700mA, RL=8600p-p, drive=25W, peak g-g Volts=200, and Pin=1420W, the peak grid current is ~700mA, average grid current at maximum signal is ~240mA.Values will be somewhat less in amateur service. Note that grid drive requirements increase with lower plate voltages.

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