

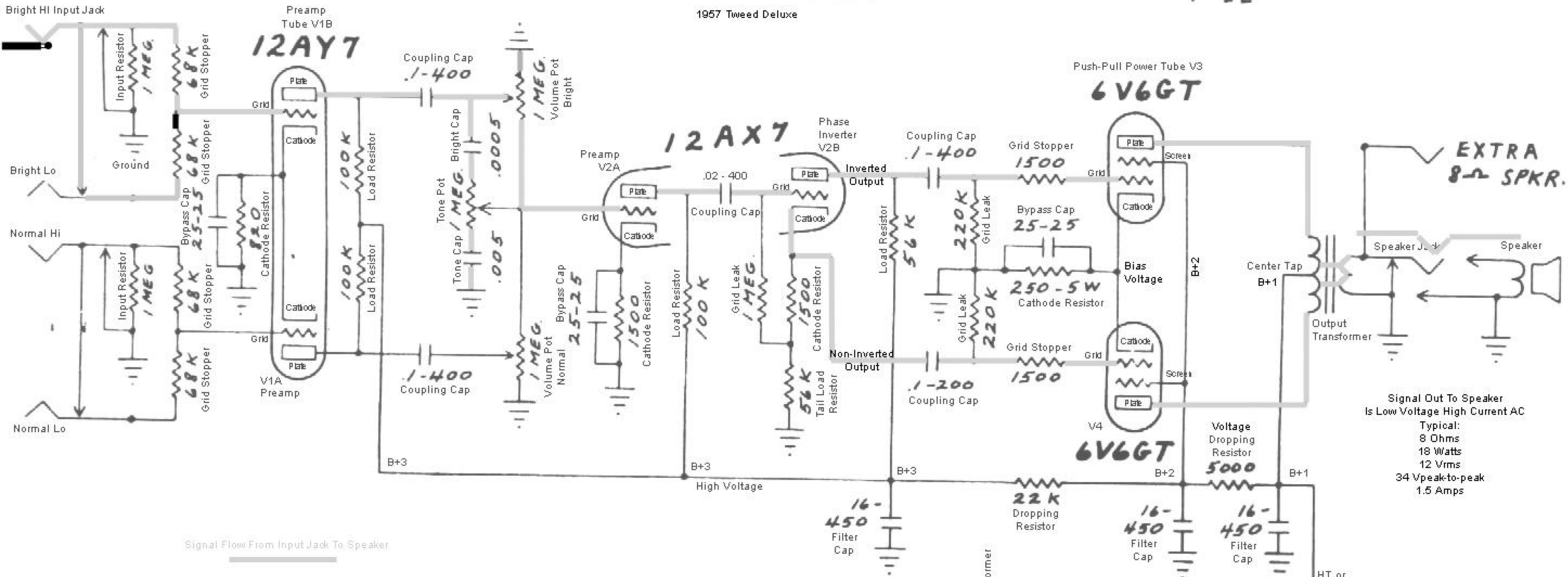
FENDER "DELUXE" SCHEMATIC

MODEL 5E3

F-EE

Signal In From Guitar Is
Very Low Voltage AC

Stratocaster Single Coil
Low E String Pluck = 0.05 Vrms or 50 milli volts rms



Signal Flow From Input Jack To Speaker

Signal Out To Speaker
Is Low Voltage High Current AC

Typical:
8 Ohms
18 Watts
12 Vrms
34 Vpeak-to-peak
1.5 Amps

- Notes: The Input Resistors act as tube V1's grid leak resistors.
- Grid Stopper Resistors filter out unwanted frequencies above human hearing.
- Grid Stopper Resistors also act as mixing resistors for each channel's two inputs.
- The Volume pots act as the V2A grid leak.
- The Input Resistor sets high input impedance to increase signal voltage at the grid by trading guitar coil current for voltage.
- Grid Leak Resistors provide the signal voltage return path.
- Grid Leak Resistors drain off unwanted grid current & voltage.
- Grid Leak Resistors also increase input impedance to enhance inter-stage signal voltage transfer.
- Load Resistors transform the amplification stage from current to voltage amplification.
- Coupling capacitors block the flow of high voltage DC but pass the AC signal voltage to the next amplifier stage.
- Cathode Resistors set the cathode bias voltage. Cathode Bypass Capacitors allow signal voltage to bypass the cathode resistor to boost gain.
- The Output Transformer steps down voltage and steps up current to drive the speaker voice coil which is a simple electromagnet.

