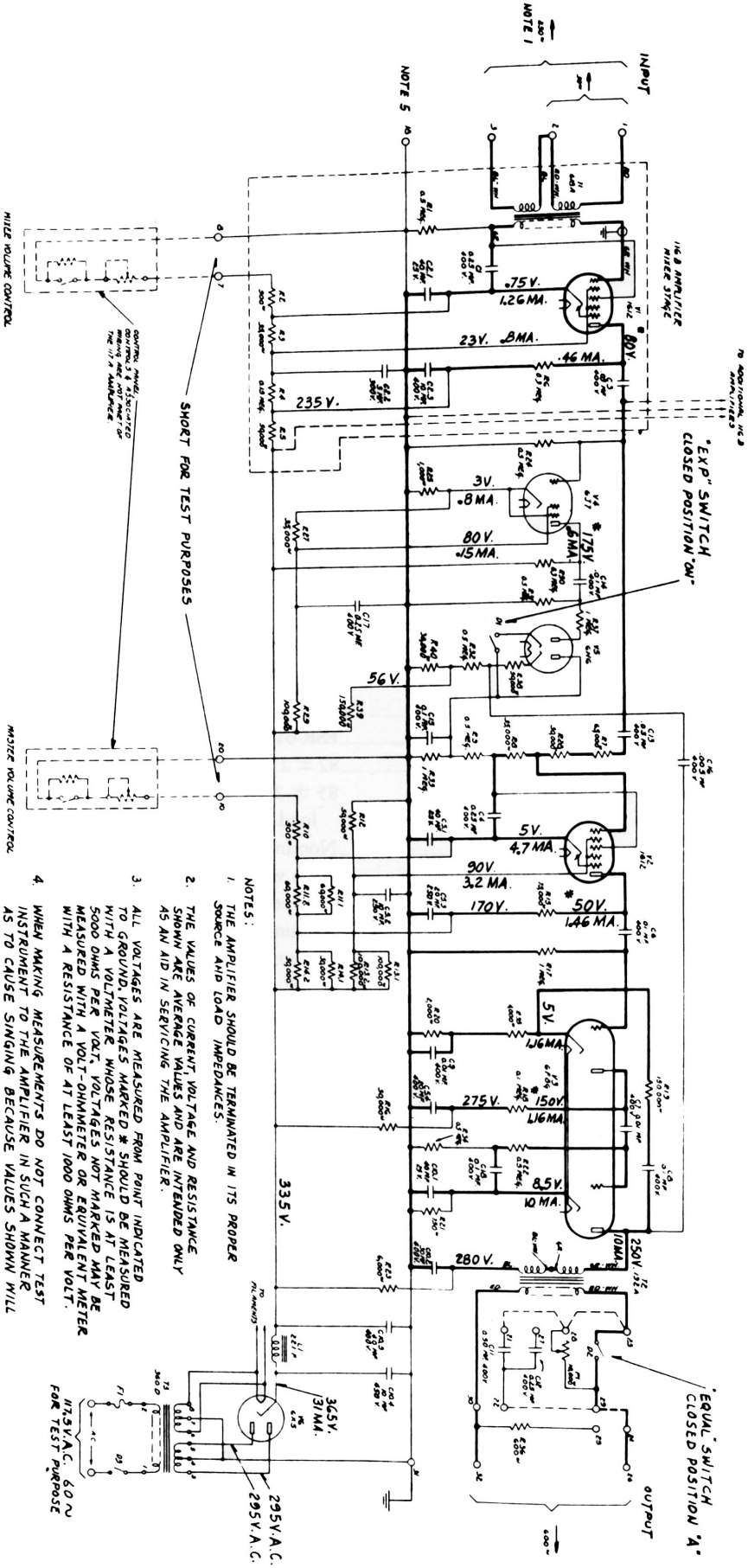
Western Electric Company

No. 116-B AMPLIFIER
No. 117-A AMPLIFIER

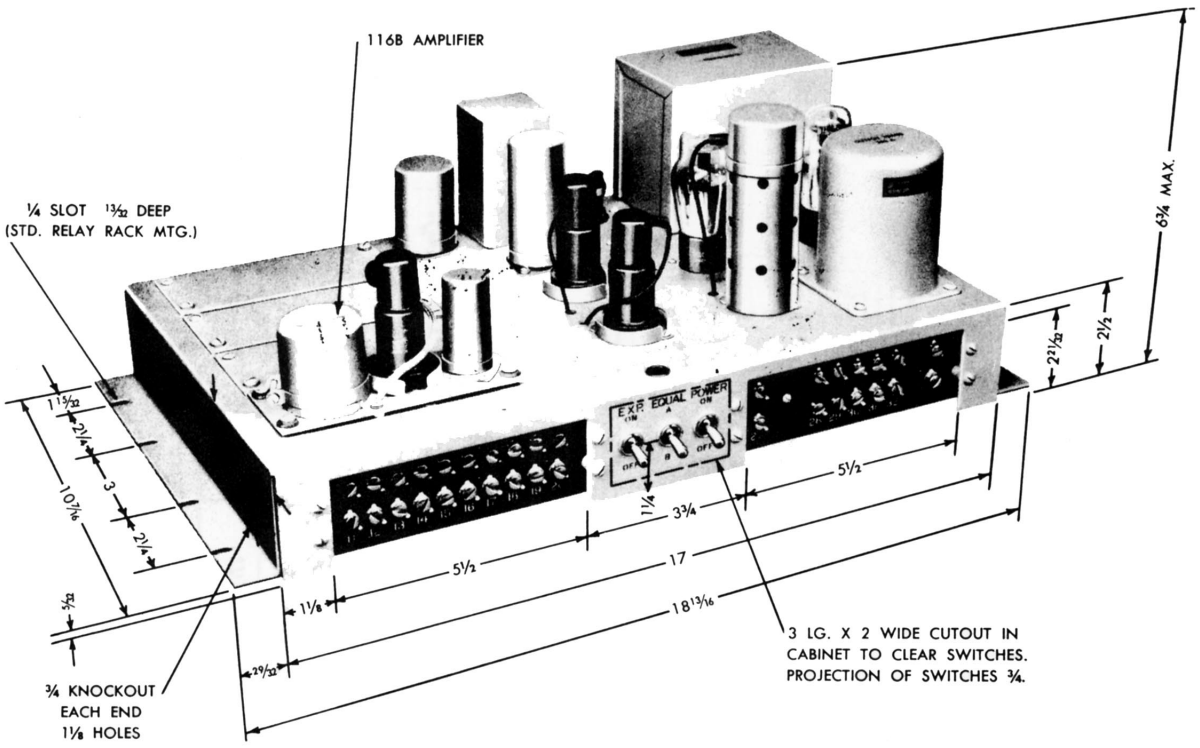


Service Schematic

NOTES:

1. THE AMPLIFIER SHOULD BE TERMINATED IN ITS PROPER SOURCE AND LOAD IMPEDANCES.
2. THE VALUES OF CURRENT, VOLTAGE AND RESISTANCE SHOWN ARE AVERAGE VALUES AND ARE INTENDED ONLY AS AN AID IN SERVICING THE AMPLIFIER.
3. ALL VOLTAGES ARE MEASURED FROM POINT INDICATED TO GROUND. VOLTAGES MARKED * SHOULD BE MEASURED WITH A VOLTMETER WHOSE RESISTANCE IS AT LEAST 5000 OHMS PER VOLT. VOLTAGES NOT MARKED MAY BE MEASURED WITH A VOLT-OHMMETER OR EQUIVALENT METER WITH A RESISTANCE OF AT LEAST 1000 OHMS PER VOLT.
4. WHEN MAKING MEASUREMENTS DO NOT CONNECT TEST INSTRUMENT TO THE AMPLIFIER IN SUCH A MANNER AS TO CAUSE SINGING BECAUSE VALUES SHOWN WILL NOT BE OBTAINED.
5. CONNECT GOOD BUILDING GROUND TO TERMINAL 18 OR 31.

No. 117-B AMPLIFIER



SUMMARY OF TYPICAL CHARACTERISTICS

Circuit Diagram	ESXX-614196
Wiring Diagram	ESR-614197
Gain at 1000 Cycles	82 ± 2 db for 30 ohm source and 600 ohm load 85 ± 2 db for 250 ohm source and 600 ohm load
Source Impedance	Nominal 30 or 250 ohm impedances
Internal Input Impedance	High with respect to nominal source impedances
Load Impedance	Nominal 600 ohm load
Internal Output Impedance	Approximately 170 ohms
Output Level (Max. Single Frequency)	+20* db volume limiting, +25 db without volume limiting with approximately 5 per cent total harmonic distortion
Output Noise Level (At Max. Gain)	—32 db unweighted; —42 db with program noise weighting
Frequency Characteristic	Useful frequency response 35-10,000 cycles. Flat within ± 1 db from 35 to 10,000 cycles. See ESA-746167
Power Required	105-125 volts, 50-60 cycles, 50 watts
Fuse	Circuit fused for 6/10 ampere
No. of Mixer Channels	From 1 to 4—116B Amplifiers may be used with each 117A Amplifier to furnish from 1 to 4 mixer input channels
Master Gain Control	Gain control either local or remote achieved by varying bias of variable mu tube
Mixer Gain Control	Gain control of 116B Mixer Amplifier achieved independently by varying bias of variable mu tube at either local or remote position
Expandor Characteristic	Expansion ratio 1½:1
Output Limiter Characteristic	Output limited to +20 db for input levels as high as —22 db