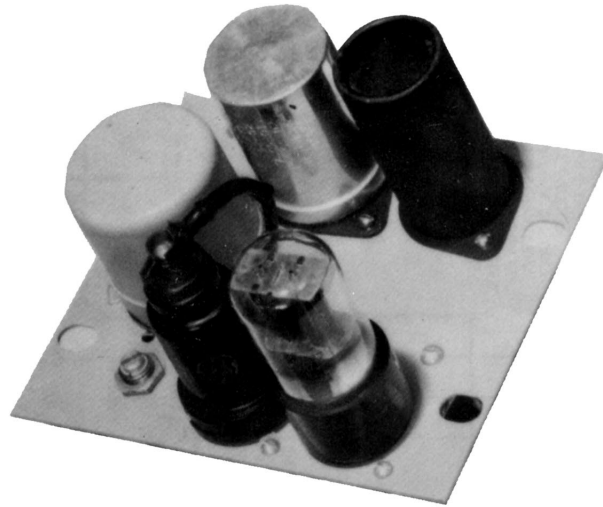


Western Electric Company

No. 141-A AMPLIFIER



Typical Characteristics

Frequency Response

± 1 db, 50 to 15,000 c.p.s.

Output Noise

-45 dbm.

Source Impedance

30, 250 or 600 nominal. The source impedance may be $\pm 40\%$ from these values with little effect upon the response characteristics.

Load Impedance

Any impedance 600 ohms or over.

Gain

70 db maximum, with 600 ohm load.

Gain Control

Adjustable in three steps of 10 db each.

Output Power

The output power varies with the gain setting and load impedance and is tabulated below for representative operating conditions. These output levels are obtained with not more than 1% total harmonic distortion over the frequency range of 50 to 7500 cycles when a 300 volt d-c supply is employed.

Gain Control Position	Circuit as Supplied	R_{15} Shorted
	600 ohm load	
40	+11	+14
50	+11	+14
60	+10	+13
70	+ 6	+11
	6000 ohm load	
40	+17	+17
50	+17	+17
60	+17	+16
70	+15	+13

Power Required

Filament 0.9 ampere at 6.3 volts a-c or d-c. 15 ma. maximum at 275 to 300 volts d-c. This may be obtained from the Western Electric 18 or 20 type Rectifier, or the supply for one 141A Amplifier may be obtained from a 142A or 143A Amplifier.

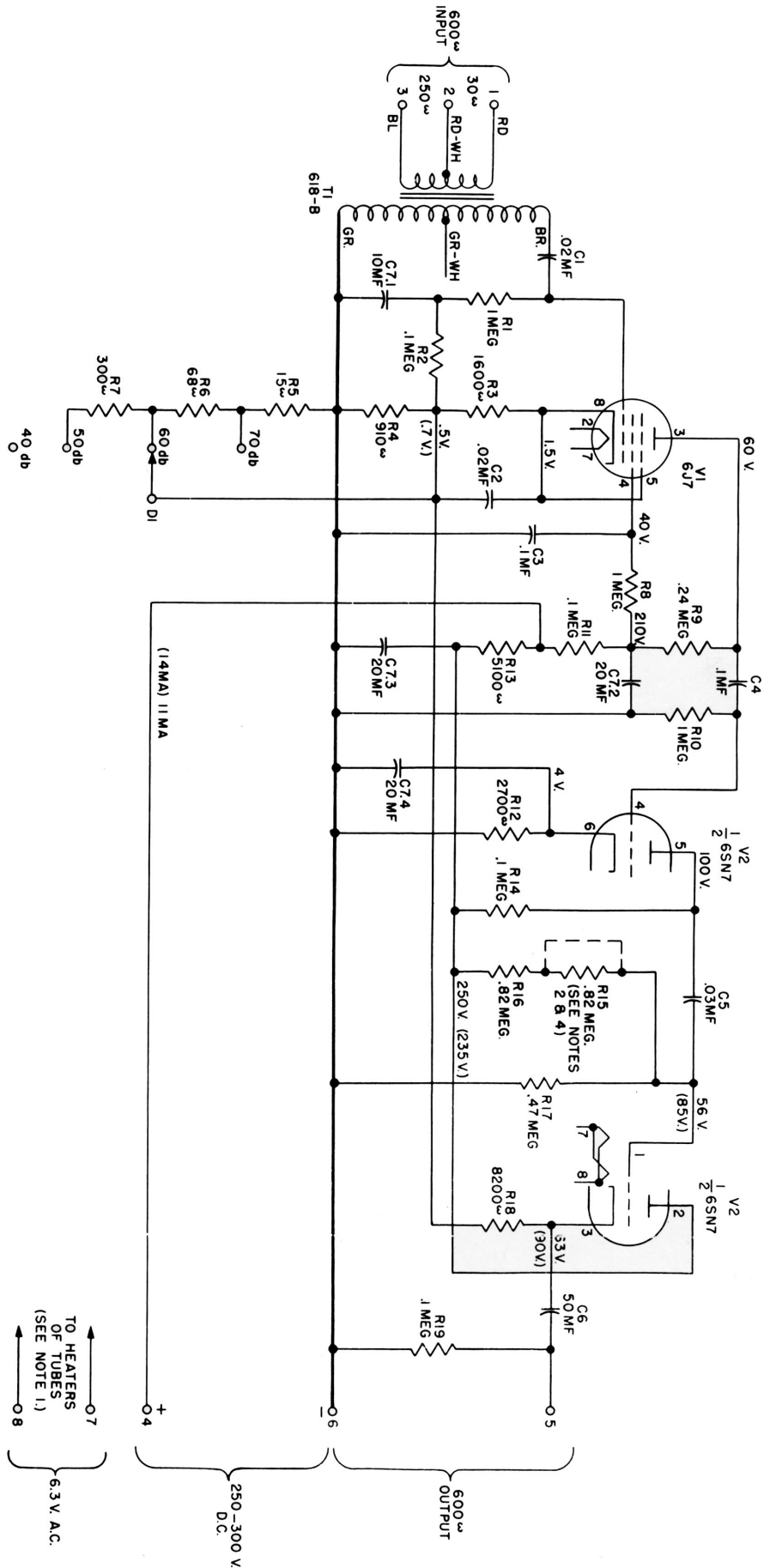
Mounting

Mounts on 142A and 143A Amplifiers. For relay rack mounting, a 203A Mounting Plate equipped with a 403A Panel may be used to mount up to three 141A Amplifiers.

Dimensions

The amplifier panel is $4\frac{7}{8}$ " x $5\frac{3}{8}$ ". The apparatus extends $2\frac{1}{2}$ " above the panel and approximately $1\frac{7}{8}$ " below the panel.

No. 141-A AMPLIFIER



NOTES:

- FOR MINIMUM NOISE LEVEL, THE HEATER SUPPLY SHOULD BE BIASED ± 15 TO ± 45 VOLTS D.C. WITH RESPECT TO GROUND.
- THE OUTPUT POWER VARIES WITH THE GAIN SETTING AND LOAD IMPEDANCE AND IS TABULATED BELOW FOR REPRESENTATIVE OPERATING CONDITIONS. THESE OUTPUT LEVELS ARE OBTAINED WITH NOT MORE THAN 1% TOTAL HARMONIC DISTORTION OVER THE FREQUENCY RANGE OF 50 TO 7500 CYCLES WHEN A 300 VOLT D.C. SUPPLY IS EMPLOYED.
- THE NUMBERS IN PARENTHESES ARE THE VOLTAGES AND CURRENT WITH R15 SHORTED.
- IN CASES WHEN THE "G" SUPPLY VOLTAGE IS OTHER THAN 300 V, THE VOLTAGES INDICATED ARE MULTIPLIED BY THE RATIO OF THAT VOLTAGE TO 300.
- THE VOLTAGES AND TOTAL CURRENT INDICATED REPRESENTS TYPICAL OPERATING CONDITIONS WITH AVERAGE TUBES, WITH A 300 V. D.C. "B" SUPPLY AND THE GAIN CONTROL AT 70db. THESE VOLTAGES SHOULD BE MEASURED WITH A VOLTMETER HAVING 11 MEGOHMS D.C. RESISTANCE. VOLTAGES ARE MEASURED FROM POINTS SHOWN TO TERMINAL 6 AND SHOULD BE WITHIN $\pm 20\%$.

GAIN CONTROL POSITION	CIRCUIT AS SUPPLIED	R15 SHORTED
40	+11	+14
50	+11	+14
60	+10	+13
70	+6	+11
6000 OHM LOAD		
40	+17	+17
50	+17	+17
60	+17	+16
70	+15	+13

Fig. 1—141A Amplifier Schematic