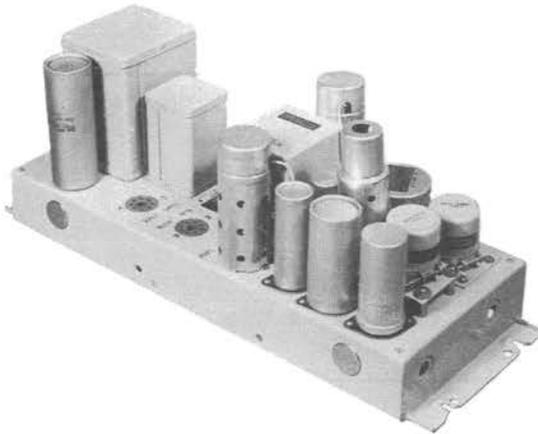


124F AMPLIFIER



GENERAL

The 124F amplifier is a push-pull, two-stage amplifier with self-contained power supply unit and plate supply filter. It is intended for use as a combination monitoring and talk-back amplifier in speech input equipment and through the use of two separate input channels it fulfills either high or low gain requirements.

ELECTRICAL CHARACTERISTICS

Gain

Line Input - High gain: 60 db.
Bridging: 47 db.

Low Level - - 104 db.
Input

Source Impedance-Matching: 0 to 1000 ohms.
Bridging: 0 to 25,000 ohms. Low level input: 15 to 250 ohms (nominal 30 and 120 ohms).

Internal Input - High gain input: 1000 ohms.
Impedance Bridging: 4000 ohms.
Low level input: high.

Internal Output - 3/4 of nominal load impedance.
Impedance

Load Impedance - 1.75, 7.5, 16, 30, 150 or 600 ohms. Also 70-volt loudspeaker distribution line. See output connection table on schematic.

Output Level - - +41 dbm (12 watts) with less than 5% total harmonic distortion from 50 to 5000 cycles, and +43 dbm (20 watts) with 5% total harmonic distortion at 400 cycles with 600-ohm load.

Output Noise - - -8 dbm (unweighted).

Frequency - - - Line input: +1 db, 50 to
Response 10,000 cycles, -3 db at 15,000
cycles. Microphone input:
+1 db, 50 to 15,000 cycles.

Gain Control

Line Input - 38 db in 2 db steps.

Low Level - - 35 db continuously variable.
Input

Power Supply - - 105 to 125 volts, 50 to 60
cycles, 1.1 amperes, 105 watts when used
with 12-watt output connection. 105 to 125
volts, 50 to 60 cycles, 1.25 amperes, 125
watts when used with 20-watt output connection.

EQUIPMENT CHARACTERISTICS

Dimensions - - - 19" wide, 7" high, 7-3/8"
deep including controls.

Weight - - - - - Approximately 20 pounds.

Finish - - - - - Chassis: Aluminum lacquer.
Front and edge of mat: black enamel or
dark aluminum gray.

Mounting - - - - - Relay rack, shelf or apparatus cabinet.

ELECTRON TUBES

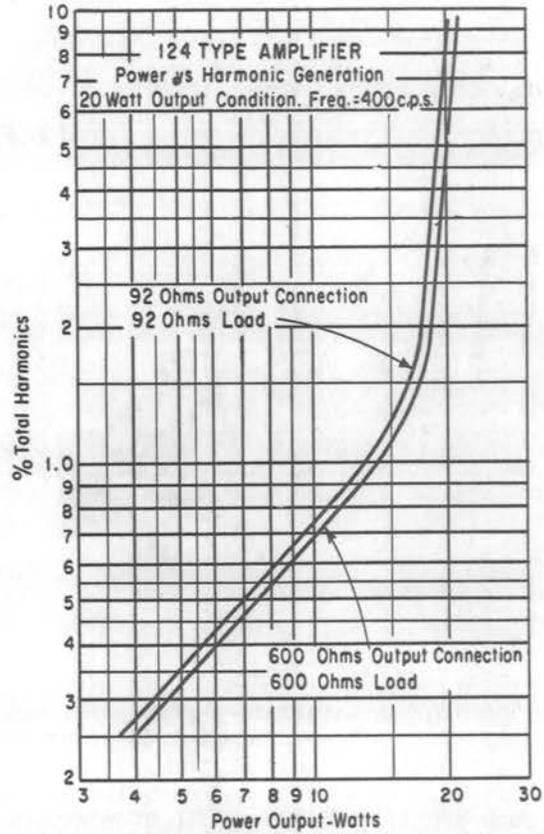
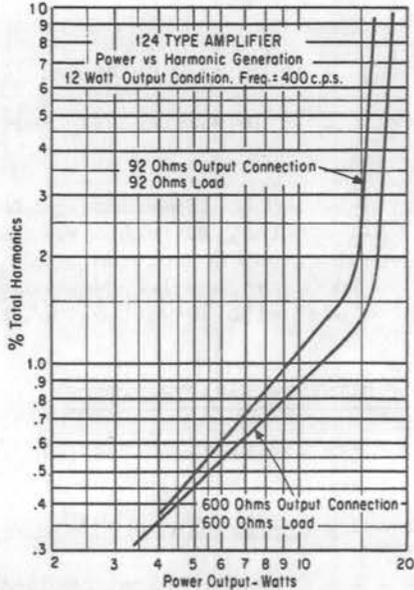
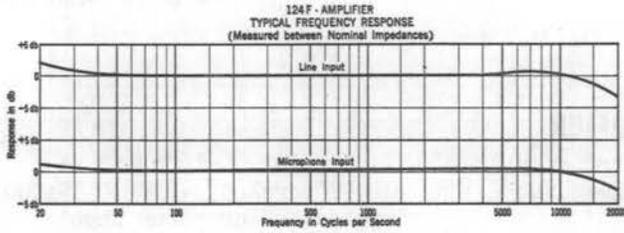
(These tubes are not supplied with the amplifier and must be ordered separately.)

	W.E. Co.		Commercial
2 - - - - -	348A	or	6J7 or 6J7G
2 - - - - -	350B	or	6L6 or 6L6G
1 - - - - -	274B	or	5T4 or 5U4G
1 - - - - -			1612 or 6L7 or 6L7G

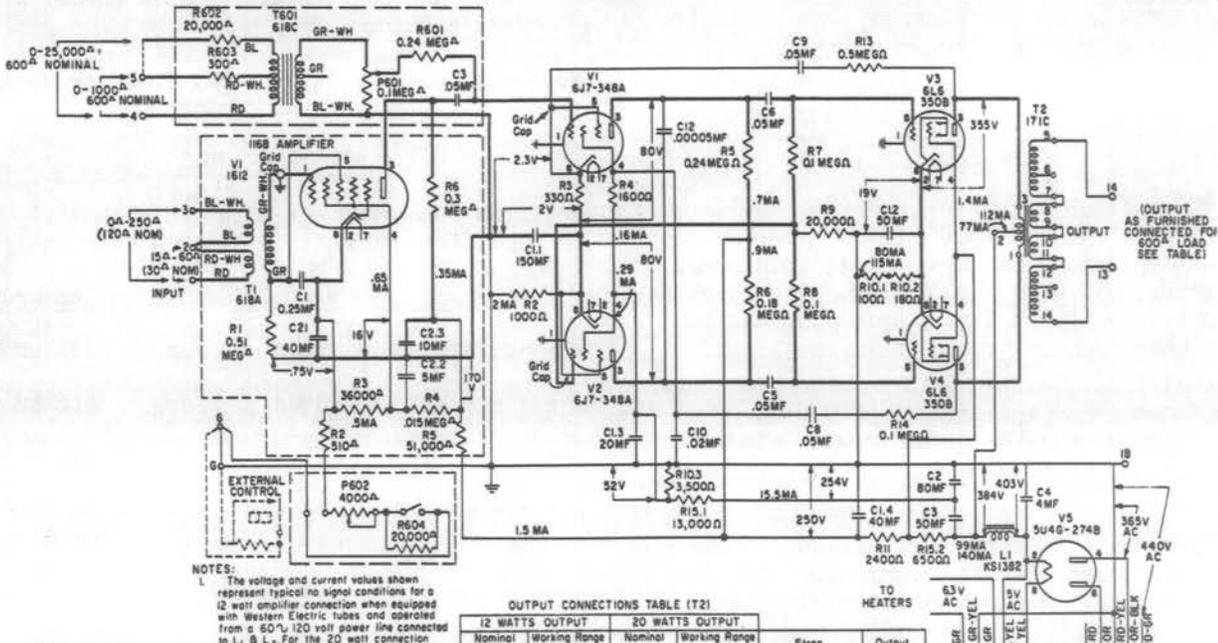
REFERENCES

ESX-675954 - - - - - Assembly and Stock List.
ESX-68049 - - - - - Wiring Diagram.
ESXX-680489 - - - - - Schematic.

SECTION 024-104-106



124F AMPLIFIER



NOTES:

- The voltage and current values shown represent typical no signal conditions for a 12 watt amplifier connection when equipped with Western Electric tubes and operated from a 60V, 120 volt power line connected to L1 & L2. For the 20 watt connection multiply the values shown by a factor of 1.10.
- When the amplifier is equipped with the Non-Western Electric type tubes indicated (including 5U4G rectifier) multiply the values shown by factors of 1.07 or 1.15 for the 12 & 20 watt conditions respectively (exception: the 6L6 screen current is approximately 1mA in either case).

OUTPUT CONNECTIONS TABLE (T2)

12 WATTS OUTPUT		20 WATTS OUTPUT		Strap Terminals	Output Connections
Nominal Load Impedance	Working Range of Load Impedance	Nominal Load Impedance	Working Range of Load Impedance		
600Ω	300Ω to 1200Ω	400Ω	200Ω to 800Ω	7-8-9-10-11-12	5 B 14
150Ω	70Ω to 300Ω	100Ω	50Ω to 200Ω	7-8-9-10-11-12	5 B 14
30Ω	20Ω to 70Ω	20Ω	10Ω to 50Ω	7-8-9-10-11-12	5 B 13
16Ω	10Ω to 20Ω	10Ω	5Ω to 15Ω	7-8-10-9-11-12	6 B 13
7.5Ω	5Ω to 10Ω	5Ω	2Ω to 7Ω	7-8-10-12-6-8-11-13	6 B 13
17.5Ω	1Ω to 3Ω	17.5Ω	0.5Ω to 2Ω	6-8-10-12-7-9-11-13	6 B 13

70V OUTPUT	12 & 20 WATTS OUTPUT
Strap Terminal	Output Connections
6-13	5 B 14