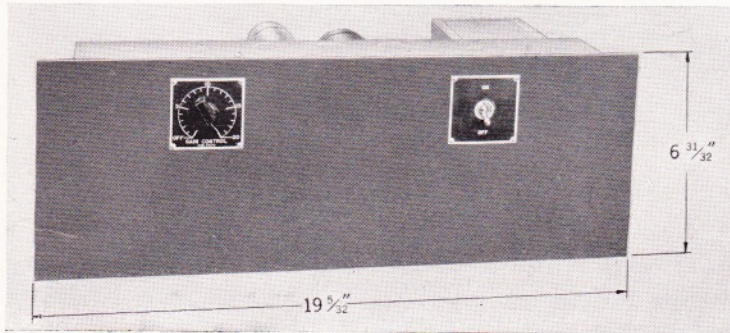


MONITOR

AMPLIFIER
124E
<i>Western Electric</i>

AMPLIFIER



for

SPEECH INPUT

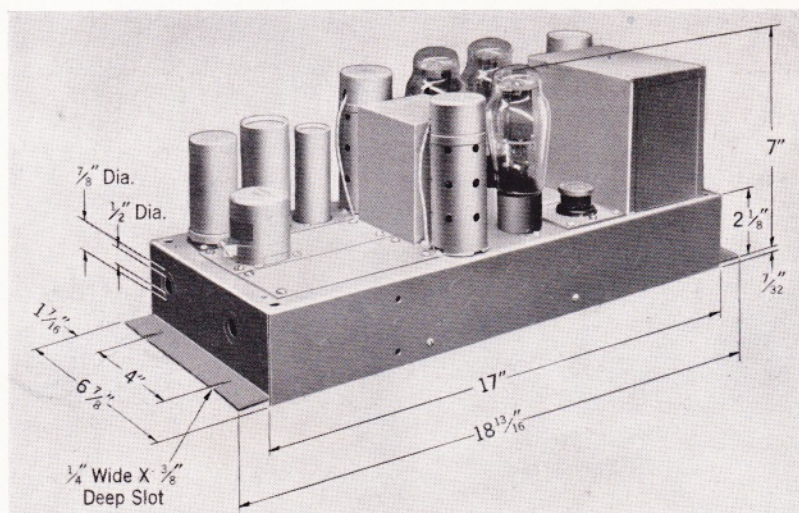
SYSTEMS

THE 124E AMPLIFIER is intended primarily for use as a high quality monitoring and audition loud speaker amplifier when a gain control on the amplifier is required. When such a gain control is not necessary the 124A is recommended. The frequency characteristics of the amplifier, signal to noise ratio and power handling capability, conform fully to the requirements of radio broadcast frequency modulation systems. The frequency response is uniform over a range of from 30 to 15,000 cycles and at full power output of twenty watts, the dynamic range between signal and noise is about 80 db.

Designed for specially quiet operation, the 124E may be placed in a loud speaker cabinet without radiating interfering sounds either from the chassis or from the walls of the cabinet.

The 124E Amplifier was designed to radiate the minimum field from the power coil and retard coil, thus facilitating its use in high gain assemblies.

Western Electric



In addition to its primary use as a loud speaker amplifier, the 124E finds successful application as a high level booster and general purpose amplifier.

Other noteworthy features are:

Tapped output coil for operating into load impedances from 1 to 1000 ohms — because of the variety of terminations provided any of the current loud speaker combinations may be matched in impedance without loss of power or introduction of harmonic.

Choice of the use of Western Electric or commercially available vacuum tubes.

20-watt output available, simply by changing connections and using *Western Electric vacuum tubes*. No additional apparatus required.

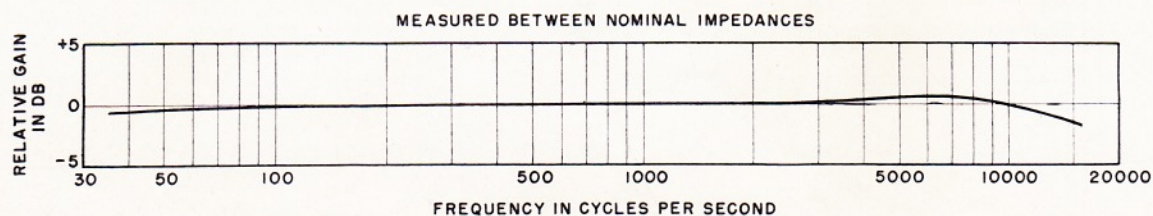
Input coil especially shielded and rotatable to a position of minimum noise pick-up.

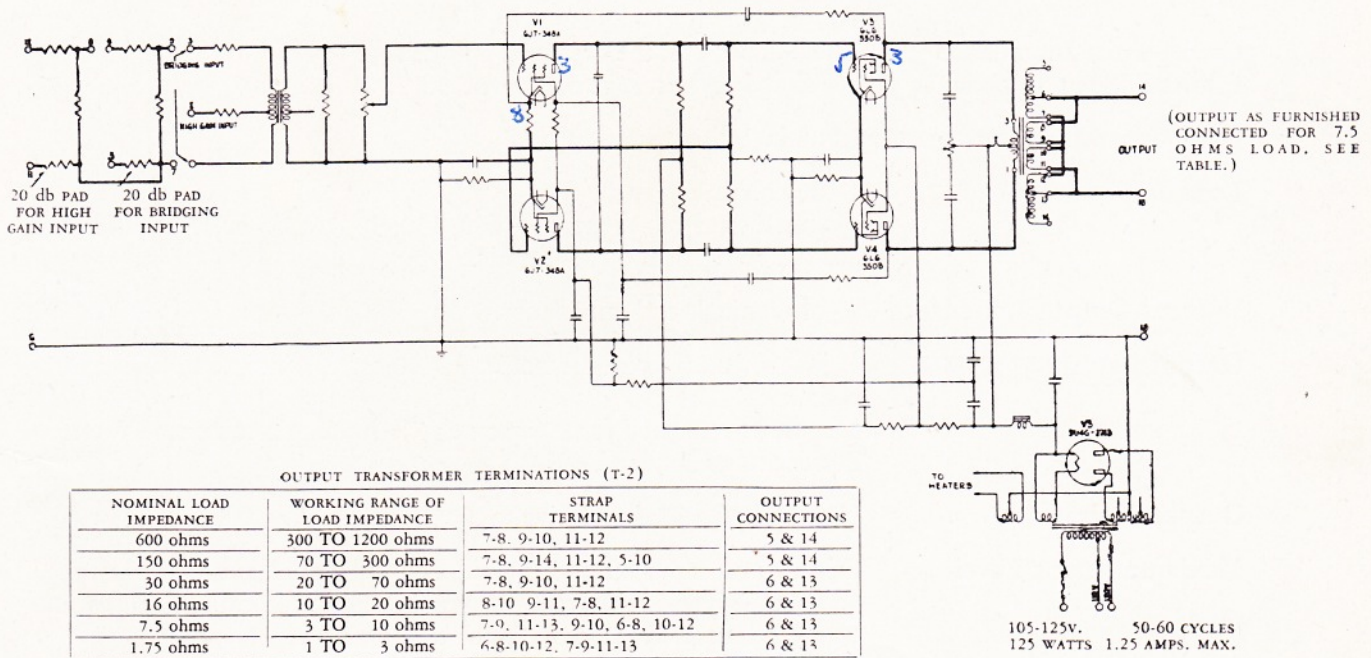
Provided with stabilized feedback as a particular aid in reducing hang-over or boominess in loud speakers.

Wired with *glass fibre* insulated wire, thus reducing the amount of inflammable material on the customer's premises.

Fused with a slo-blow type of fuse to absorb power surges due to momentary flash-over in tubes or condensers under trouble conditions.

Push-pull operation throughout.





OUTPUT TRANSFORMER TERMINATIONS (T-2)

NOMINAL LOAD IMPEDANCE	WORKING RANGE OF LOAD IMPEDANCE	STRAP TERMINALS	OUTPUT CONNECTIONS
600 ohms	300 TO 1200 ohms	7-8, 9-10, 11-12	5 & 14
150 ohms	70 TO 300 ohms	7-8, 9-14, 11-12, 5-10	5 & 14
30 ohms	20 TO 70 ohms	7-8, 9-10, 11-12	6 & 13
16 ohms	10 TO 20 ohms	8-10, 9-11, 7-8, 11-12	6 & 13
7.5 ohms	3 TO 10 ohms	7-9, 11-13, 9-10, 6-8, 10-12	6 & 13
1.75 ohms	1 TO 3 ohms	6-8-10-12, 7-9-11-13	6 & 13

Schematic of 124E Amplifier

Input Arrangement No. 1

Gain 50 db Bridging Input —
Terminals 1 & 3

63 db High Gain Input —
Terminals 1 & 2

Measured between nominal impedances

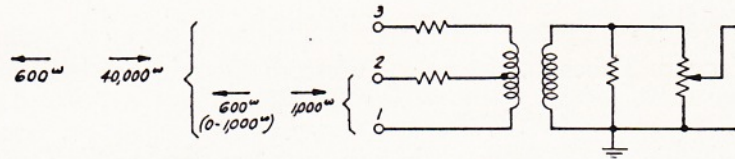
Gain Control 38 db in 2 db steps

Maximum Input Levels

+23 vu — Bridging Input

+5 vu — High Gain Input

Use General purpose where gain control is desired. Replaces 94D Amplifier.



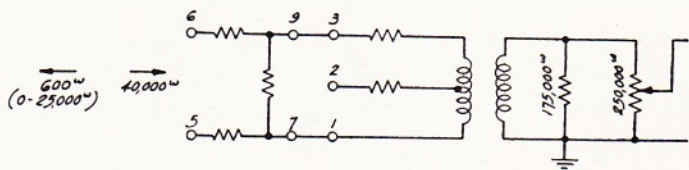
Input Arrangement No. 2

Gain 30 db Measured between nominal impedances

Gain Control 38 db in 2 db steps

Maximum Input Level +42

Use Same as for Input Arrangement No. 1 when higher input levels are available.



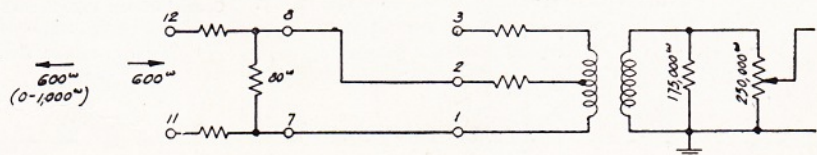
Input Arrangement No. 3

Gain 43 db Measured between nominal impedances

Gain Control 38 db in 2 db steps

Maximum Input Level +22

Use Same as for Input Arrangement No. 1 when higher input levels are available and where a 600 ohm internal input impedance is desired.



TYPICAL ELECTRICAL CHARACTERISTICS

Gain Source Impedance	} These depend on the input strapping used. See individual arrangement page 3.
Internal Input Impedance	
Gain Control	38 db in 2 db steps.
Load Impedance	1-1000 ohms. Nominal load impedances — 600, 150, 30, 16, 7.5 or 1.75 ohms. See strapping data on schematic.
Internal Output Impedance	$\frac{3}{4}$ of nominal load impedance.
Output Power	12 watts, (2.0% total harmonics at 400 cycles) into nominal load impedance. May be reconnected for 20 watts at 5% harmonic content if Western Electric tubes are used.
Output Noise	Unweighted, -37 db relative to .001 watt.
Maximum Input Level	Depends on input strapping used. See individual arrangements page 3. Levels given are as read on volume indicator calibrated for 600 ohm load, connected across input terminals.
Power Supply	105-125 volts, 50-60 cycles. Using 12 watt output 1.1 amperes, 105 watts. Fused with 1.25 amp. Buss Fustat on chassis. Power switch furnished. Using 20 watt output, 1.25 amperes, 125 watts.

MECHANICAL CHARACTERISTICS

Weight	20 pounds.
Vacuum Tubes	Western Electric or Commercially Available 2-348A or 2-6J7 or 5J7G 2-350B or 2-6L6 or 6L6G 1-274B or 1-5T4 or 5U4G
Finish	Chassis, Aluminum Lacquer. Mat, Black Japan — Code 124E-3 Aluminum Gray — Code 124E-15

Connections — all external connections are normally made to terminals under the chassis, and knock-outs are provided in the ends of the chassis to admit the wires. Additional knockouts are provided in the sides of the chassis where sockets may be installed if plug and socket connections are desired.

DISTRIBUTOR IN THE UNITED STATES

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