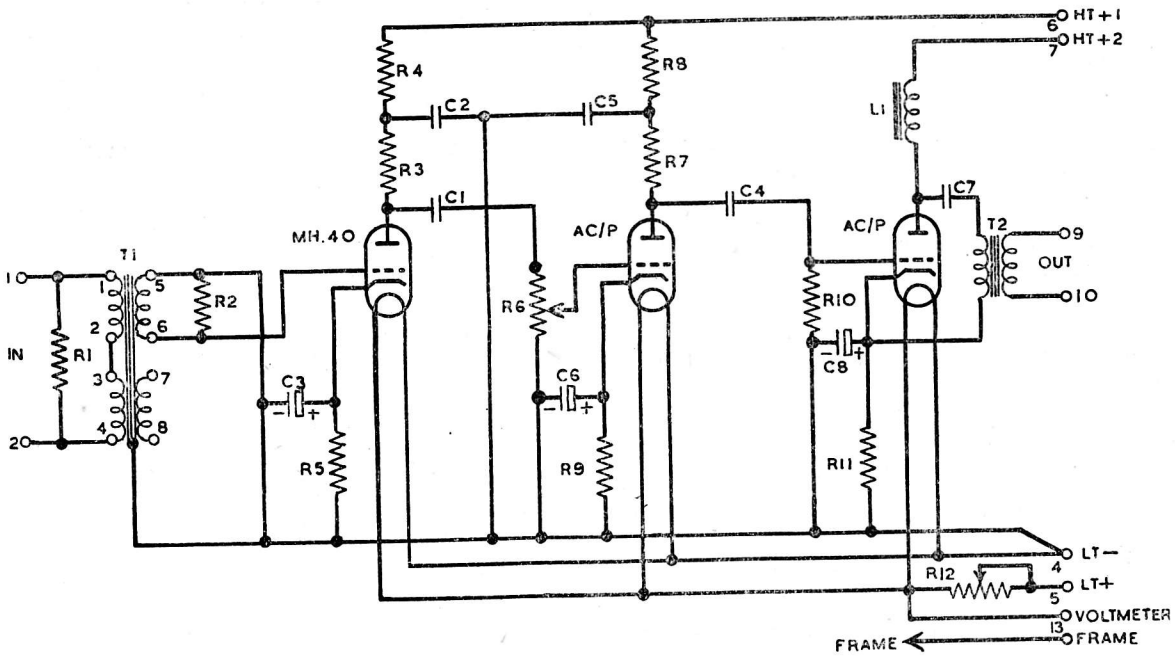
AMPLIFIER A/9



Components Table

Component	*Value or Type*	*Component*	*Value or Type*	*Component*	*Value or Type*
C1	0.5μF	C8	50μF	R6	100,000 Ω
C2	2 μF	L1	C9	R7	15,000 Ω
C3	50 μF	R1*	500 Ω	R8	10,000 Ω
C4	0.5μF	R2*	150,000 Ω	R9	1,000 Ω
C5	2 μF	R3	100,000 Ω	R10	250,000 Ω
C6	50 μF	R4	20,000 Ω	R11	1,000 Ω
C7	6 μF	R5	2,000 Ω	R12	0.85 Ω

* For Type IT256. In the case of Type CA4201–23, R1=400 Ω R2=250,000 Ω.

Transformers

T1. Turns Ratio 1/14.5 Type IT256 or CA4201–23.

T2. Turns Ratio 4.47/1 No. 105.

AMPLIFIER A/9
Technical Instructions
Item 3(A/9)
Issue 2. December, 1944

Circuit

The A/9 is a three-stage amplifier with a screened input transformer using resistance-capacity coupling between the stages and having its single output stage choke-capacity coupled to the output transformer. The volume control operates in the input to the second stage and the grid bias is automatic.

Microphone correction has recently been removed from this amplifier. Upper-frequency correction has been removed by modifying the input circuit as indicated under amplifier A/4A. Bass correction has been removed by modifying the coupling between the first and second stages. Previously, this consisted of two small condensers and a 90H. choke. These have all been removed and replaced by a 0.5μF coupling condenser.

Impedances

Input impedance	(approx) 300 ohms
Output impedance (Nos. 1 & 2)	(approx) 280 ohms
Normal load impedance	(approx) 600 ohms

Volume Control

Type	*Total Resistance*	*No. of Studs*	*Loss per Stud*	*Loss on Lowest Stud*
P11	100,000 Ω	10	2	Infinite

Supply Data

Stage	*Valve*	*Automatic Grid Bias* Volts negative	*Anode Current* mA (approx)	*Filaments* Volts	Amps
1	MH40	1.6	0.8	4	1
2	AC/P	4.7	4.7	4	1
3	AC/P	11.5	11.5	4	1
	Total		17.0		3

High Tension Supply

H.T.+1 (Stages 1 [redacted])	200 volts rectified A.C.
H.T.+2 (Output Stage)	200 volts rectified A.C.
Low Tension Supply	4–6 volts (adjusted to 4 volts by a series resistance)

600 Ohm Test Gain

Testing Conditions

Volume control set for maximum output.

Loss Pads key at **60 db.**

T.M.S. sending level .. .. —40 db.

Gain at 1,000 c/s .. .. **66±2 db.**

Frequency Response 50—9,000 c/s .. .. .. **±1 db.** relative to 1,000 c/s

Working Voltage Gain

Testing Conditions

Volume control set for maximum output.

Output loaded with 600 ohms and at approximately zero level.

Gain at 1,000 c/s .. .. **69.5±2 db.**