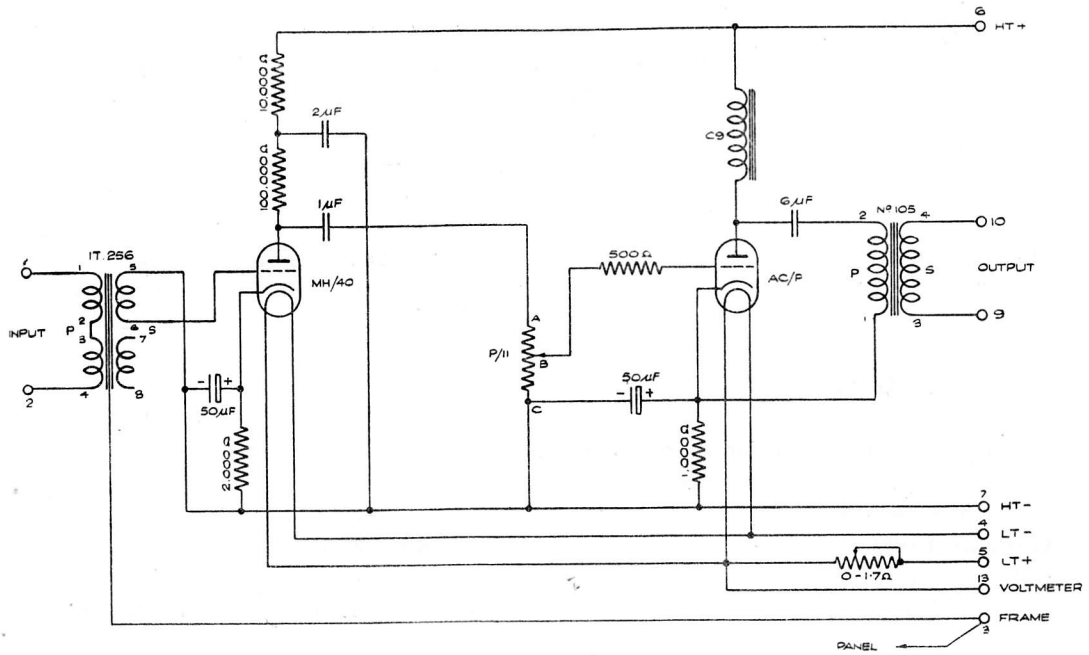
AMPLIFIER A/5A



*Drawing A.*4918, *Issue* 2.

This amplifier is used at **Manchester** for the remote echo room.

Circuit

It is a two-stage amplifier with a screened input transformer and only one output. Resistance-capacity coupling is used between the stages and the output stage is choke-capacity coupled to the output transformer. The volume control operates in the input to the second stage and the grid bias is automatic.

Impedances

Input impedance	Very high	
Output impedance	(approx)	300 ohms
Normal load impedance	(approx)	600 ohms

Transformers

	Number	*Impedance Ratio*	*Turns Ratio*
Input	1T.256	1/210	1/14.5
Output	105	20/1	4.47/1

Volume Control

Type	*Total Resistance*	*No. of Studs*	*Loss per Stud*	*Loss on Lowest Stud*
P.11	100,000Ω	10	2 db.	Infinite

Supply Data

Stage	*Valve*	*Automatic Grid Bias* Volts negative	*Anode Current* mA (approx)	*Filaments* Volts	Amps
1	MH.40	2.4	1.2	4	1
2	ACP	12	12.0	4	1
	Total		13.2		2

High Tension Supply .. .. 250 volts rectified A.C.
Low Tension Supply .. .. 6 volts (adjusted to 4V 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 .. .. −20 db.
Gain at 1,000 c/s .. .. **48 ±2 db.**
Gain at 50—5,000 c/s .. .. ±0.5 db } Relative to gain
5,000—9,000 c/s .. .. ±1.0 db } at 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 .. .. **54 ±2 db.**