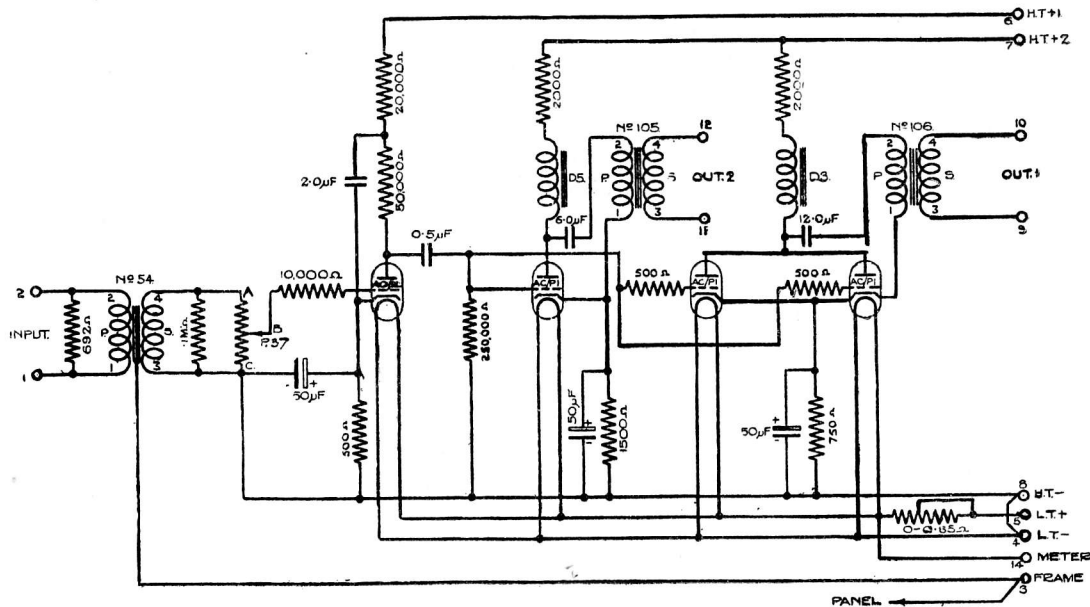


AMPLIFIER D/8



Drawing A.3384, Issue 4.

This amplifier is used at **Edinburgh** and **Plymouth**.

Circuit

It is a two-stage amplifier with screened input transformer and resistance-capacity coupling between the stages. It has two output stages designed to enable echo to be added to the programme when required and the output stages are choke-capacity coupled to the output transformers. The main output stage comprises two valves in parallel. Except that the grid bias is automatic, the amplifier is similar to amplifier D/5.

Impedances

Input impedance	(approx) 600 ohms
Output 1 impedance	(approx) 180 ohms
Output 2 impedance	(approx) 180 ohms
Normal load impedance		
Output 1 ('B' amplifier input)	(approx) 600 ohms
('C' and programme meter amplifier inputs)	(approx) 8,000—17,000 ohms
Output 2	(approx) 3,000 ohms

Transformers

			<i>Impedance</i>	<i>Turns</i>
		<i>Number</i>	<i>Ratio</i>	<i>Ratio</i>
Input	54	1/10.9	1/3.31
Output 1	106	10/1	3.16/1
Output 2	105	20/1	4.47/1

Volume Control

<i>Type</i>	<i>Total Resistance</i>	<i>No. of Studs</i>	<i>Loss per Stud</i>	<i>Loss on Lowest Stud</i>
P.37	100,000Ω	21	2 db.	Infinite

Supply Data

<i>Stage</i>	<i>Valve</i>	<i>Automatic Grid Bias</i>	<i>Anode Current</i>	<i>Filaments</i>	
		Volts negative	mA (approx)	Volts	Amps
1	ACHL	- 1.8	2.7	4	1
Output 1	2—ACP 1 (in parallel)	- 25.0	36.0	4	2
Output 2		- 28.0	18.5	4	1
		<i>Total</i>	57.2		4
High Tension Supply		(approx) 300	volts	
Low Tension Supply		(approx) 6	volts (adjusted to 4V by a series resistance)	

600 Ohm Test Gain

Testing Conditions

Volume control set for maximum output.

Loss Pads key set at -60 db.

T.M.S. sending level zero

Gain at 1,000 c/s. Output 1 34 ± 2 db.

Output 2 32 ± 2 db.

Gain at 50—5,000 c/s. (Output 1) .. ± 0.5 db. } Relative to gain at
 5,000—9,000 c/s. (,, 1) .. ± 1.0 db. } 1,000 c/s.

Working Voltage Gain

Testing Conditions

Amplifier volume control set for maximum output.

Gain at 1,000 c/s.

Output 1 (loaded with 600 ohms and at a level of 0 db.) 34 ± 2 db.

Output 1 (loaded with 8,000 ohms and at a level of + 10 db.) 36 ± 2 db.

Output 2 (loaded with 5,000 ohms and at a level of 0 db.) 34 ± 2 db.