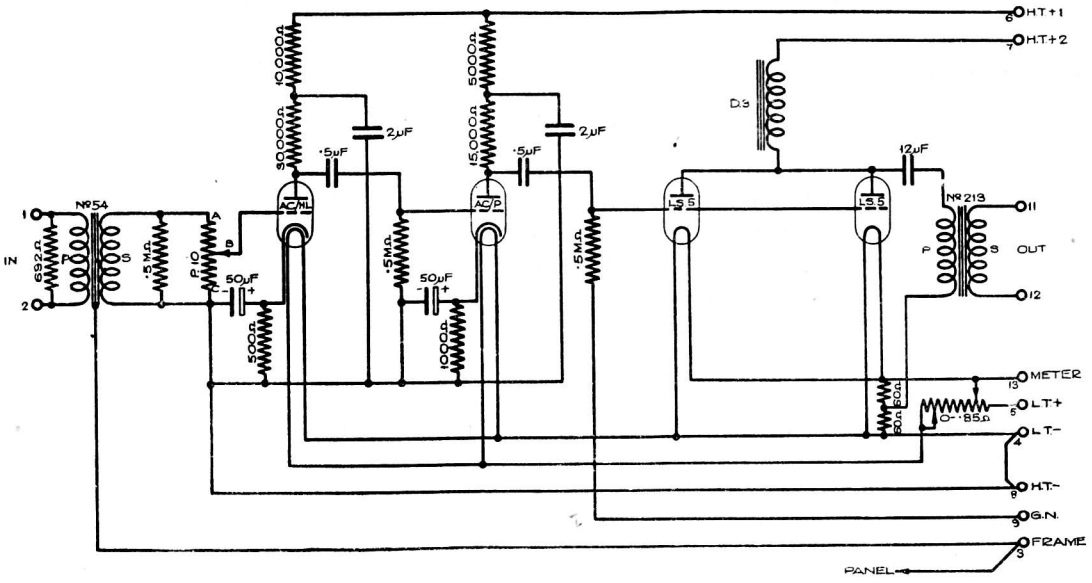
AMPLIFIER B/10



Drawing A.3410, Issue 1.

This amplifier is used at **London (Broadcasting House)** for the rehearsal control positions.

Circuit

It is a three-stage amplifier with screened input transformer and resistance-capacity coupling between the stages. The output stage is choke-capacity coupled to the output transformer. The volume control operates in the input to the first stage and the grid bias is automatic on the first two stages. It is normally operated to provide an output at a volume of + 10 db.

Impedances

Input impedance	(approx) 600 ohms
Output impedance	(approx) 25 ohms
Normal load impedance	100—3,000 ohms

Transformers

	Number	*Impedance Ratio*	*Turns Ratio*
Input	54	1/10.9	1/3.31
Output	213	154/1	12.4/1

Volume Control

Type	*Total Resistance*	*No. of Studs*	*Loss per Stud*	*Loss on Lowest Stud*
P.10	100,000Ω	10	4 db.	Infinite

Supply Data

Stage	*Valve*	*Grid Bias* Volts negative	*Anode Current* mA (approx)	*Filaments* Volts	Amps
1	ACHL	2 (automatic)	4	4	1
2	ACP	9 (automatic)	9	4	1
3	2-LS 5's (in parallel)	24 (battery)	36	5	1.6
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	Total		49		3.6

High Tension Supply
- H.T. + 1 (Stages 1 & 2) .. .. .. 300 volts
- H.T. + 2 (Output Stage) .. .. .. 300 volts

Low Tension Supply .. .. 6 volts (adjusted to 5V by a series resistance)

Grid Bias Supply (Output Stage) .. .. .. 24 volts

600 Ohm Test Gain

Testing Conditions
- Volume control for maximum output.
- **Loss Pads** key set at **60 db.**
- T.M.S. sending level .. .. zero

Gain at 1,000 c/s. .. .. **44 ± 2 db.**

Gain at 50—10,000 c/s (relative to gain at 1,000 c/s). ± 0.5 db.

Working Voltage Gain

Testing Conditions
- Volume control set for maximum output
- Output loaded with 1,000 ohms and at a level of approximately +10 db.

Gain at 1,000 c/s. .. .. **44 ± 2 db.**

Gain at 50—10,000 c/s, relative to gain at 1,000 c/s. ± 0.5 d.b.