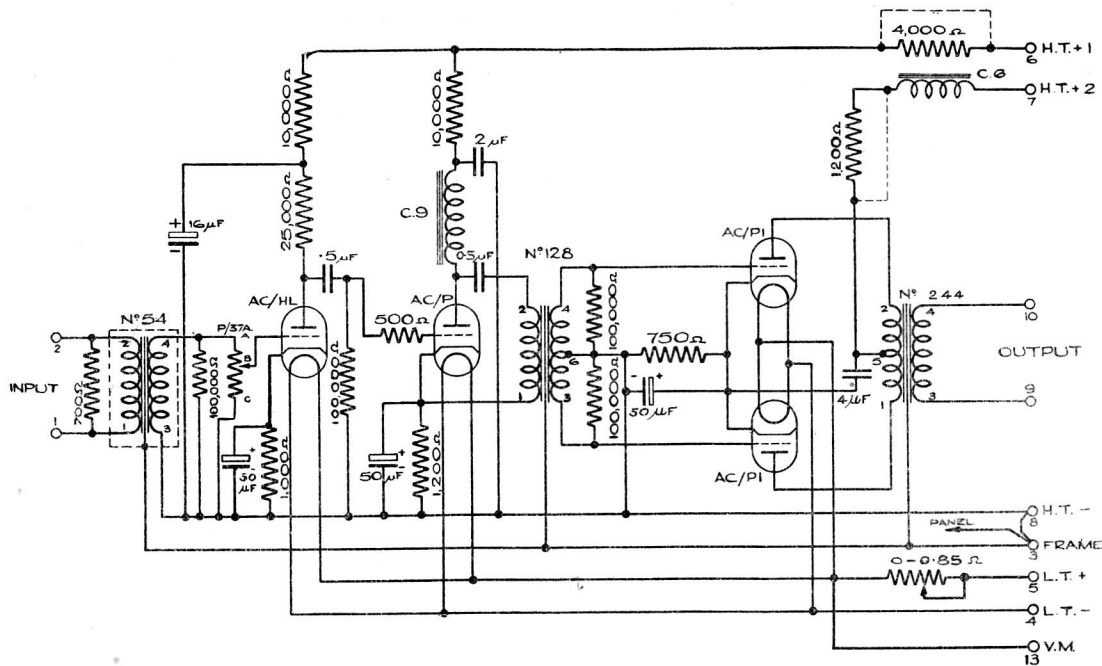


AMPLIFIER B/12



Drawing A.4476, Issue 4.

This amplifier is used at Brookmans Park, Moorside Edge, Westerglen, Washford, Droitwich, Lisnagarvey, Burghead and Penmon.

Circuit

It is a three-stage amplifier with screened input transformer and push-pull output. Resistance-capacity coupling is used between the first two stages. The output stage is driven by a choke-capacity coupled transformer and the same type of coupling is used to feed the output transformer. The volume control operates in the input to the first stage and the grid bias is automatic. The amplifier feeds the radio transmitter input line in which is connected the equaliser providing the "listeners' top lift." On this account the amplifier is normally operated to provide an output at a volume of + 14 db.

Impedances

Input impedance	(approx) 600 ohms
Output impedance	(approx) 600 ohms
Normal load impedance	(approx) 600 ohms

Transformers

	Number	Impedance Ratio	Turns Ratio
Input	54	1/10.9	1/3.31
Intervalve	128	1/16	1/4
Output	244	8.12/1	2.85/1

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Volume Control

Type	Total Resistance	No. of Studs	Loss per Stud	Loss on Lowest Stud
P.37A	100,000	21	2	Infinite

Supply Data

Stage	Valve	Automatic Grid Bias	Anode Current	Filament
		Volts negative	mA (approx)	Volts Amps
1	ACHL	3	3	4 1
2	ACP	10.5	8.8	4 1
3	2—ACP 1 (in push-pull)	30	40	4 2
	<i>Total</i>		51.8	4

High Tension Supply H.T. + 1 (stages 1 & 2) }
 " " " H.T. + 2 (output stage) } 250 volts rectified A.C.
 or 300 volt battery.
 (The 3,000Ω resistances in series with the supply leads to the output stages should be in circuit when the supply is at 300 volts but should be shorted out when it is at 250 volts)

Low Tension Supply 6 volts rectified A.C. or battery (adjusted to 4 volts by a series resistance).

600 Ohm Test Gain

Testing Conditions.

Volume Control set for maximum gain.

T.M.S. sending level to **Loss Pads** branch with key at **60 db.** - 20 db.

T.M.S. sending level to **Attenuator** branch zero

Gain at 1,000 c/s. **62 ± 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 gain.

Output loaded with 600 ohms and at a level of approximately + 15 db.

Gain at 1,000 c/s. **62 ± 2 db.**