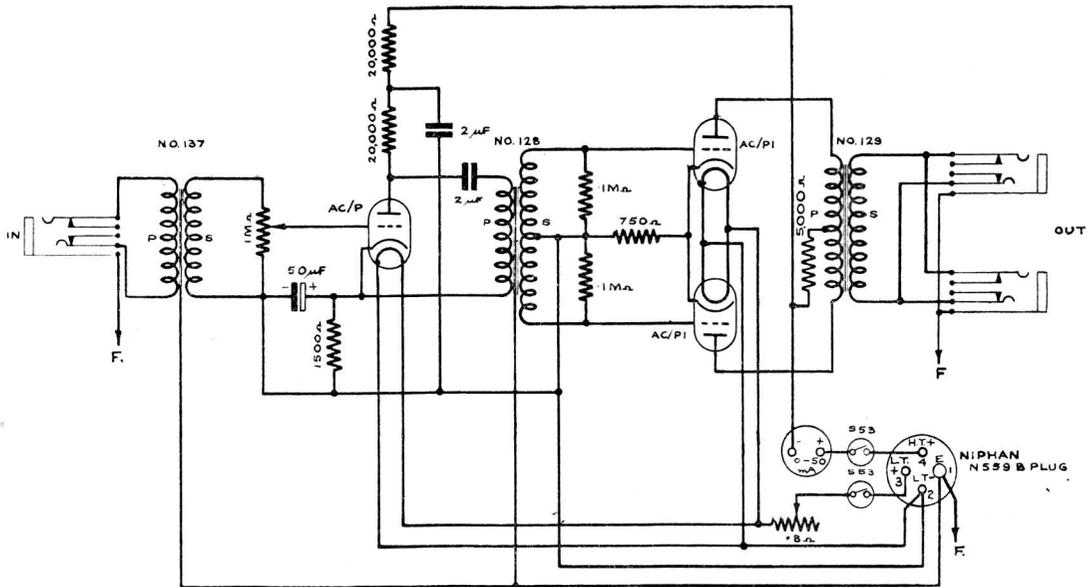


AMPLIFIER LSA/4



Drawing A.3793, Issue 2

This is a loudspeaker amplifier used in **Mobile Recording Units**, T.29 and T.30 (see Item 6.3).

Circuit

It comprises two stages of which the second employs two valves operating in push-pull. The volume control is connected in the grid circuit of the first stage across the secondary winding of the input transformer, and the valve is resistance-capacity coupled to the inter-stage transformer. The D.C. supplies are obtained from D.C. machines and are applied to the amplifier, via the Supply Unit SHL/1, which incorporates an H.T. Smoothing Circuit, by means of a cord fitted with Niphan connectors. Switches are fitted in both the H.T. and L.T. positive leads and a milliammeter connected in the H.T. lead provides a continuous reading of the total anode current. The usual precautions are taken to decouple the anode supply to the first stage. The grid bias for both stages is automatic. Both input and output are brought out to jacks which in the case of the output are duplicated.

Impedances

Input impedance	..	..	..	..	(approx) 25,000 ohms
Output impedance	..	..	..	..	(approx) 8 ohms
Normal load impedance (loudspeaker input)	..	..	..	..	(approx) 12 ohms

AMPLIFIER LSA/4
Technical Instructions
Item 3 (LSA/4). July, 1938

Transformers

					<i>Number</i>	<i>Impedance Ratio</i>	<i>Turns Ratio</i>
Input	..	..	..	..	137	1/4	1/2
Interstage	..	..	..	..	128	1/16	1/4
Output	..	..	..	..	129	600/1	24.5/1

Volume Control

Continuously variable potentiometer of resistance 100,000 ohms (approx).

Supply Data

<i>Stage</i>	<i>Valve</i>	<i>Automatic Grid Bias</i>		<i>Anode Current</i> mA (approx)	<i>Filaments</i>	
		Volts negative			Volts	Amps
1	ACP	9		6	4	1
2	2—ACP 1	24		16 (each valve)	4	1 (each valve)
		<i>Total</i>		38		3
High Tension Supply	..	..	..	(approx) 315V		
Low Tension Supply	..	..	..	(approx) 6V (adjusted to 4V by a series resistance)		

Working Voltage Gain

Testing Conditions

Volume control set for maximum output.

Output loaded with 12 ohms and at a level of approximately + 10 db.

Gain at 1,000 c/s. 12.5 ± 2 db.