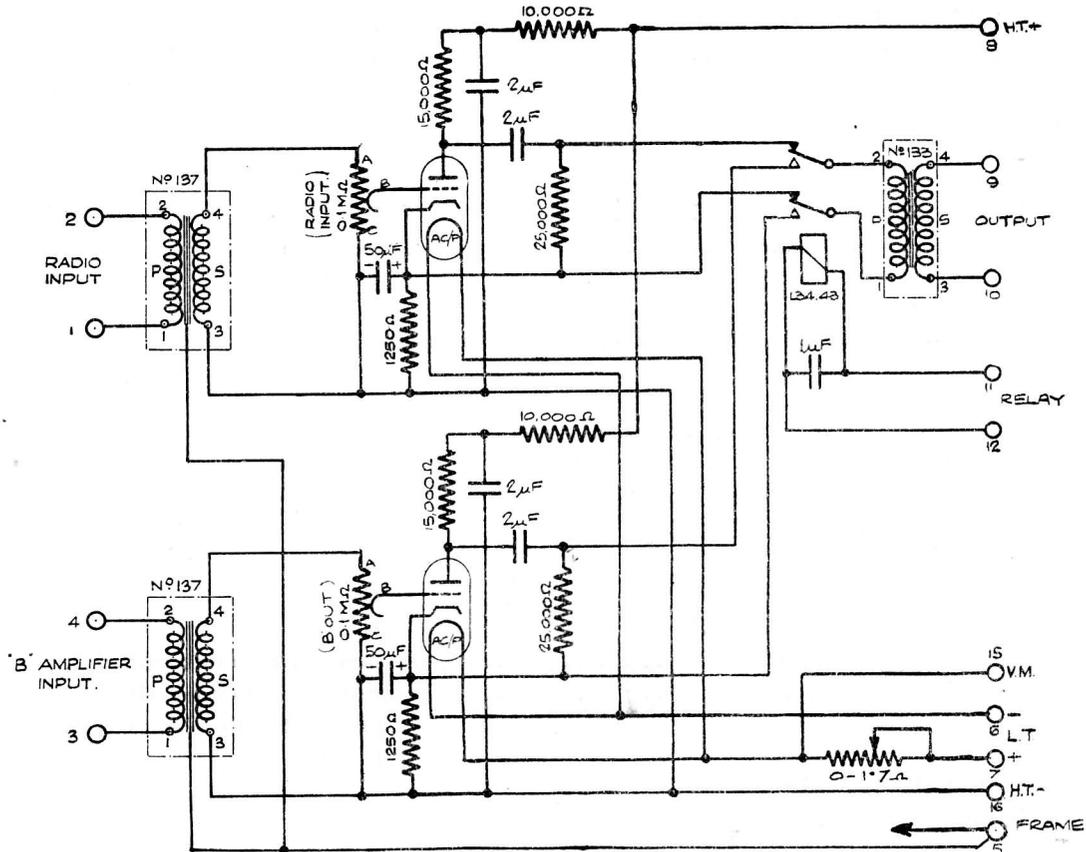


AMPLIFIER CCT/2



Drawing A.4320, Issue 1.

This is a comprehensive checking amplifier for providing loudspeaker monitoring either of the 'B' amplifier output or of the check receiver output. It is used at Daventry.

Circuit

It consists of two single-stage amplifiers with separate input circuits and a common output transformer connected on its primary side via the change-over contacts of a relay across the output of either amplifier. The break contacts are connected across the output of the stage connected to the radio receiver (CPL amplifier) output, and the make contacts across the output of the stage connected to the 'B' amplifier output. Both stages have input transformers and are resistance-capacity coupled to the output transformer. The two input potentiometers should be adjusted so that when the output connection is changed from the check receiver output to the 'B' amplifier output there is no appreciable change of volume in the loudspeaker. The grid bias is automatic.

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Technical Instructions
Item 3(CCT/2). May, 1938

Impedances

' Radio ' input impedance	(approx)	25,500 ohms
' B ' amplifier input impedance	..	..	..	..	(approx)	25,500 ohms
Output impedance	..	..	..	..	(approx)	270 ohms

Transformers

					<i>Number</i>	<i>Impedance</i>	<i>Turns</i>
						<i>Ratio</i>	<i>Ratio</i>
Input (both stages)	..	..	..		137	1/4	1/2
Output	..	..	..		133	12.1/1	3.47/1

Volume Control

Two continuously variable potentiometers of resistance 100,000 ohms (approx).

Supply Data

<i>Stage</i>	<i>Valve</i>	<i>Automatic</i>		<i>Anode Current</i>	<i>Filaments</i>	
		<i>Grid Bias</i>	<i>Volts negative</i>		<i>mA (approx)</i>	<i>Volts</i>	Amps
Input	ACP		7.6	6.1	4	1
' B ' Amp.	ACP		7.6	6.1	4	1
			<i>Total</i>	12.2		2
High Tension Supply	..	..	..	(approx)	250 volts rectified A.C.	
Low Tension Supply	..	..	..	(approx)	6 volts rectified A.C. (adjusted to 4V by a series resistance)	

Working Voltage Gain

Testing Conditions

Volume control set for maximum output
Output loaded with 3,000 ohms and at approximately zero level.

Gain at 1,000 c/s.

' Radio ' output (relay unoperated)	..	..	10 ± 1 db.
' B ' amplifier output (relay operated)	..	..	10 ± 1 db.