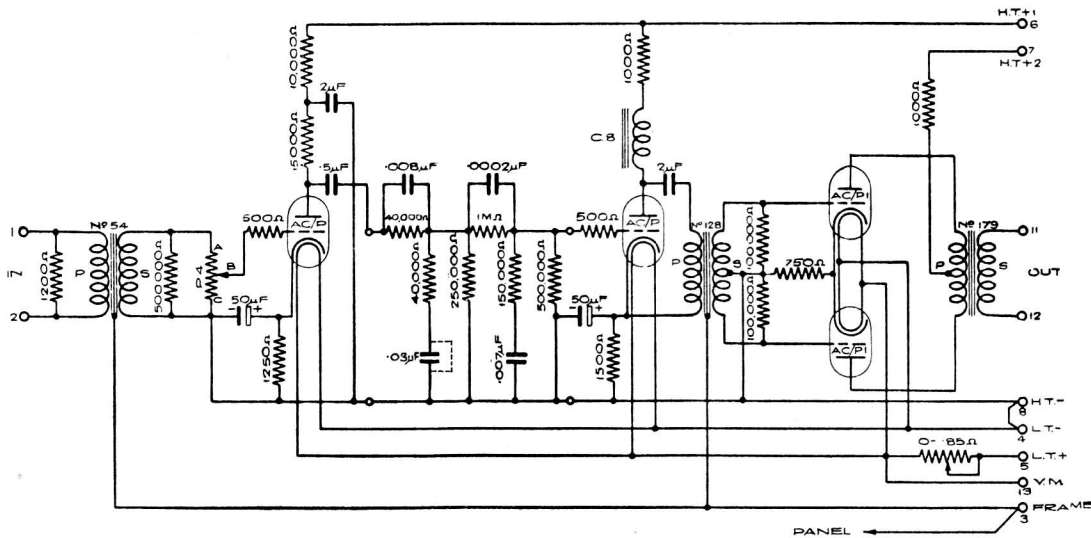


AMPLIFIER BRC/2



Drawing A.2780, Issue 6

This is the tape recording amplifier used at **Maida Vale** and incorporates correction to provide the recording frequency characteristic required.

Circuit

It is a three-stage amplifier with a push-pull output stage. The input is applied to the first stage via a screened input transformer and volume control. Resistance-capacity coupling is used between the first two stages and the second stage is choke-capacity coupled to the interstage transformer. The correction filter is included in the input to the second stage. The grid bias is automatic.

Impedances

Input impedance	..	..	..	..	..	(approx) 1,050 ohms
Output impedance	..	..	..	..	..	(approx) 60 ohms
Normal load impedance (cutter head at 1,000 c/s)	..	..	..	..	..	(approx) 600 ohms

Transformers

						<i>Impedance</i>	<i>Turns</i>
					<i>Number</i>	<i>Ratio</i>	<i>Ratio</i>
Input	..	..	..	..	54	1/11	1/3.31
Interstage	..	..	..	..	128	1/16	1/4
Output	..	..	..	..	179	100/1	10/1

AMPLIFIER BRC/2

Technical Instructions

Item 3 (BRC/2). July, 1938

Volume Control

Type	Total Resistance	No. of Studs	Loss per Stud	Loss on Lowest Stud
P 4	100,000Ω	21	Down to Stud 5	Infinite
			Studs 5-4	2db
			4-3	3db
			3-2	4db
			2-1	6db
				7db

Supply Data

Stage	Valve	Automatic	Anode Current	Filaments	
		Grid Bias		Volts	Amps
		Volts negative	mA (approx)		
1	ACP	6.9	5.8	4	1
2	ACP	14.2	9.5	4	1
3	Two ACP 1	30	20.0 (each valve)	4	1 (each valve)
		<i>Total</i>	55.3	4	

High Tension Supply
 H.T. + 1 (Stages 1 & 2) (approx) 210 volts
 H.T. + 2 (Output Stage) (approx) 270 volts
 Low Tension Supply (approx) 6 volts (adjusted to 4V by a series resistance)

Working Voltage Gain

Testing Conditions

Volume Control set for maximum output.

Output loaded with 600 ohms and at a level of approximately + 12 db.

Gain at 1,000 c/s.	30 ± 2 db.	
Gain at 50 c/s.	-9.7 ± 1 db.	} Relative to gain at 1,000 c/s.
100 c/s.	.. .. .	-9.5 ± 1 db.
200 c/s.	.. .. .	-8.0 ± 1 db.
500 c/s.	.. .. .	-4.0 ± 1 db.
2,000 c/s.	.. .. .	+5.0 ± 1 db.
3,000 c/s.	.. .. .	+7.5 ± 1 db.
4,000 c/s.	.. .. .	+9.7 ± 1 db.
5,000 c/s.	.. .. .	+11.3 ± 1 db.
6,000 c/s.	.. .. .	+12.4 ± 1 db.
7,000 c/s.	.. .. .	+13.5 ± 1 db.
8,000 c/s.	.. .. .	+14.6 ± 1 db.