

## SECTION 7

## AMPLIFIER ECA/2

The ECA/2 is an echo-room amplifier used in conjunction with the dramatic control unit DC/7.

**Circuit Description (Fig. 23)**

The ECA/2 is a two-stage amplifier with two input stages, one associated with each of the two groups of d.c. input channels in the output of the echo group mixer. A stabilising resistor is included in series with the grid in each of the input stages and grid bias for both valves is obtained from a resistor in the common h.t. return lead. Resistance-capacitance coupling is used between the stages, the anodes of the two input stages being connected in parallel, via individual 25,000-ohm decoupling resistors and a common coupling capacitor, to a fixed potentiometer in the input to the second stage, which is choke-capacitance coupled to the output transformer.

**Valve Data**

Valve	Anode Current mA	Fil. Volts	Fil. Amps.
Stage 1 (each stage) AC/HL	2.5	4	1
Stage 2 AC/P	13.0	4	1
Total Feed, 18 mA.			

H.T. Supply, 300 V.

L.T. Supply, 6 V (adjusted to 4 V by series resistor).

**General Data***Impedances*

Input (either stage)	Z = 15,000 $\Omega$ .
Output	Z = 600 „
Normal Load	Z = 2,400 „

**Test Data***600-ohm Test Gain*

Test Conditions :

Tone Source Sending Level, - 20 dB.

Gain at 1,000 c/s,  $G = 27 \pm 2$  dB.

Gain at 50-5,000 c/s,  $G = \pm 0.5$  dB relative to gain at 1,000 c/s.

Gain at 5,000-8,000 c/s,  $G = \pm 1.0$  dB relative to gain at 1,000 c/s.

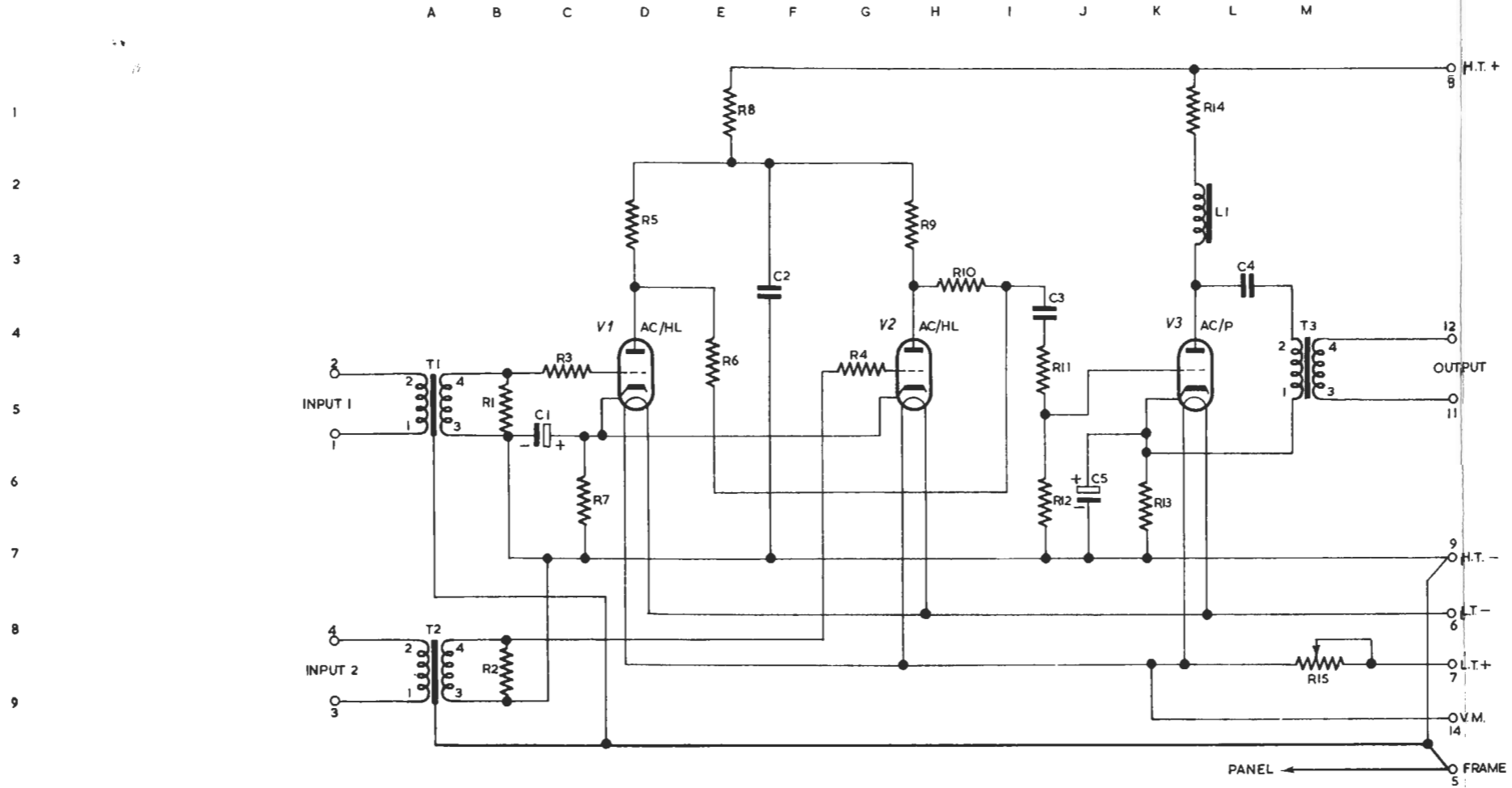
*Maximum Working Voltage Gain*

Test Conditions :

Output loaded with 2,400  $\Omega$  and output level at - 5 dB.

Gain at 1,000 c/s,  $G = 25 \pm 2$  dB.

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COMP	LOC.	VALUE	TYPE	COMP	LOC.	VALUE	TYPE
C1	C5	50		R8	F1	10K	
C2	F3	2		R9	H3	50K	
C3	J3	0.5		R10	H4	25K	
C4	L3	4		R11	J5	150K	
C5	J6	50		R12	J6	50K	
				R13	K6	1K	
				R14	L1	5K	
L1	L2		C9	R15	M8	0.17	
R1,2	B 5,9	10K		T1	A5		No 200B
R3,4	C4 G4	5K		T2	A9		No 200B
R5	D3	50K		T3	M4		No 118 A
R6	E4	25K					
R7	C6	300					

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