

SECTION 14

AMPLIFIERS PFL/4, 4A AND 4B

General Description

The PFL/4 is a pre-fade listening amplifier installed in TD/7A disk reproducing desks at certain stations. It comprises two separate amplifiers with their inputs connected to the output of two gramophones fitted on the desk. Provision is made for connecting headphones via key switching across the output of either amplifier. The PFL/4A and 4B are similar in construction but the 4A has a wooden baseboard and the 4B an input transformer on the secondary side of which is a loading resistance of 100,000 ohms.

Circuit Description (Figs. 33, 34)

The amplifier consists of two independent single-stage amplifiers which, with the exception previously mentioned, have neither input nor output transformers. Grid bias is automatic and jacks are provided for measuring the individual anode currents. No volume control is provided. Rectified h.t. and a.c. l.t. supplies are taken from a mains unit MU/1, common to the six amplifier units incorporated in the standard triple desk (six turntables) provided for gramophone reproduction.

Valve Data

<i>Valve</i>	<i>Anode Current mA</i>	<i>Fil. Volts</i>	<i>Fil. Amps.</i>	<i>Automatic Grid Bias Volts Neg.</i>
Each stage, AC/2HL	2	4	1	1

Total Feed, 4 mA.

H.T. Supply, 300 V rectified a.c.

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

General Data*Impedances*

Input	Z = infinity (PFL/4 and 4A). Z = 10,000 Ω (PFL/4B).
Output	Z = 15,000 Ω .
Normal load	Z = 18,000 Ω . (1 pair Ericsson headphones at 1,000 c/s.)

Maximum Working Voltage Gain

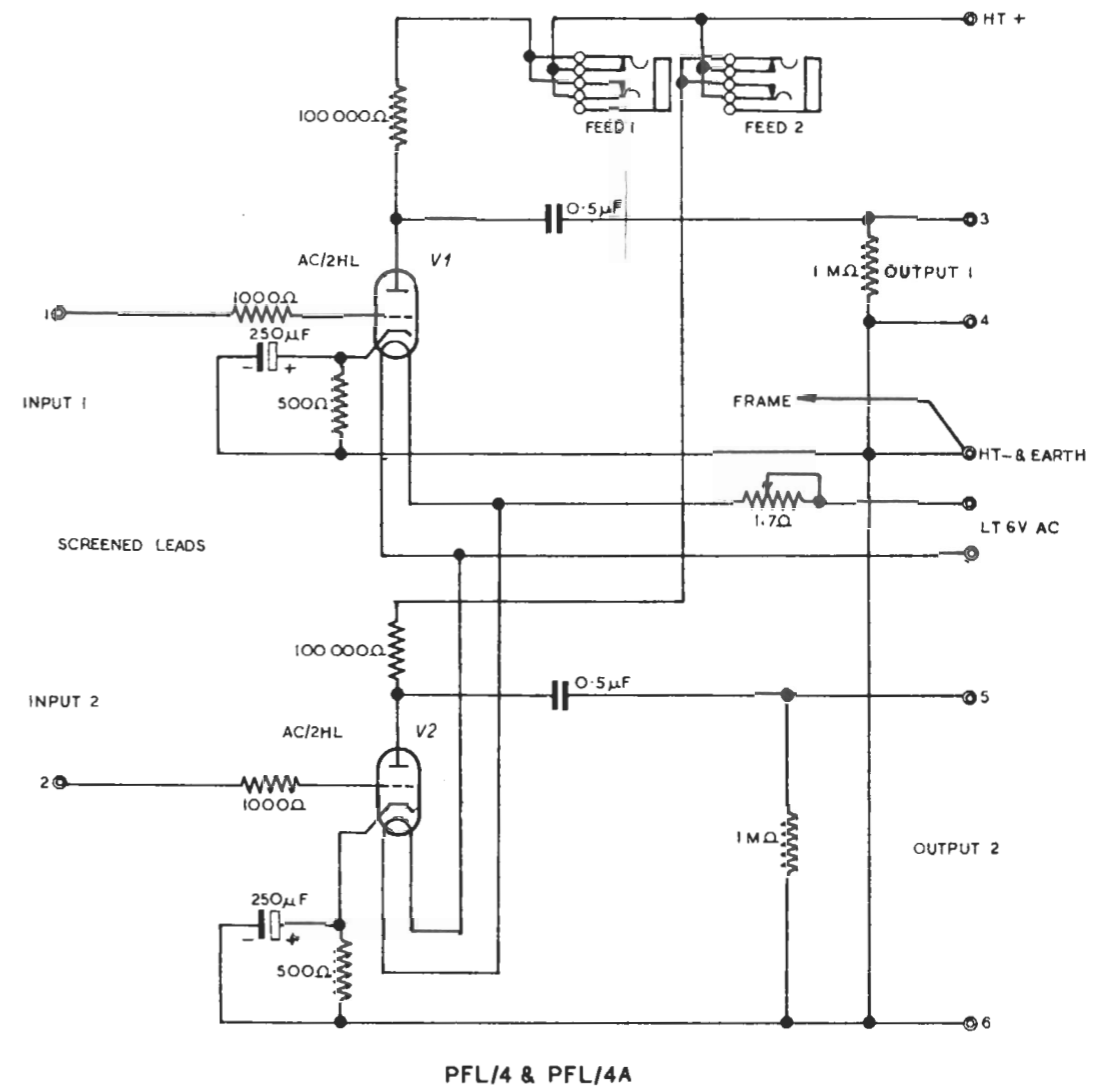
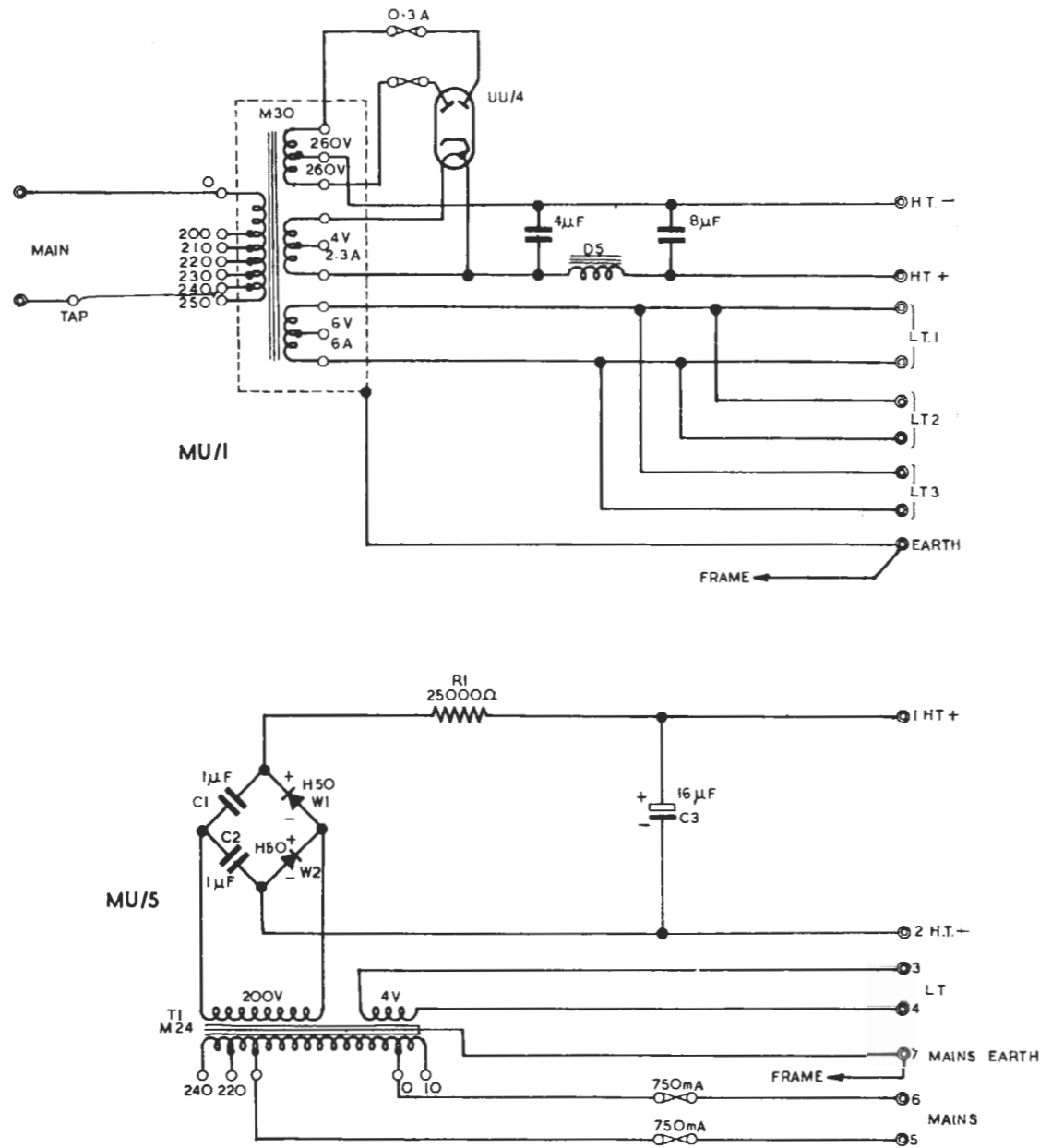
Test conditions :

Output loaded with 18,000 Ω and output level at zero. Frequency 1,000 c/s.

Gain of PFL/4 and 4A : 30 dB.

Gain of PFL/4B : 40 dB.

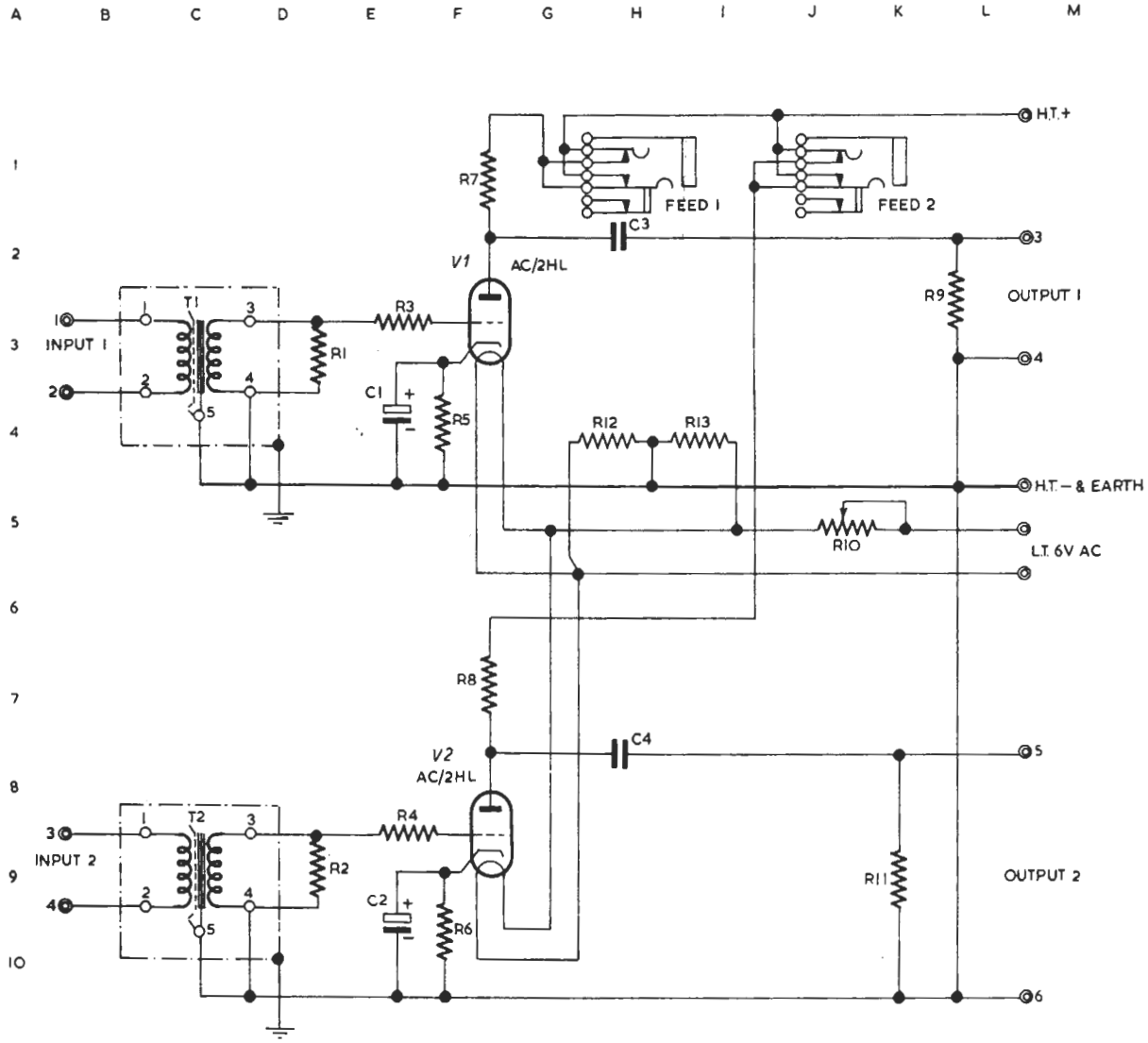
ISSUE	AMENDMENT
2	COMPONENT Nos. ADDED TO MU/5



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PRE-FADE AMPLIFIER PFL/4 & PFL/4A & MAINS UNITS

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COMP	LOC.	VALUE	TYPE
C1,2	E4,10	250 μF	TCC CE24B
C3,4	H2,8	0.5 "	MUIRHEAD 39AT
R1,2	D3,9	100 000 Ω	ERIE 8 ½ W
R3,4	E3,8	1 000 "	" 9 ¼ "
R5,6	F4,10	500 "	" 8 ½ "
R7,8	F1,7	100 000 "	" " "
R9	L2	1 MΩ	" 9 ¼ "
R10	J5	2 Ω	PAINTON 3B1
R11	K9	1 MΩ	ERIE 9 ¼ W
R12,13	H4	22 Ω	" 2 1 "
T1	C3	1:3.16	LG/7SA
T2	C9	1:3.16	LG/7SA

PRE-FADE LISTENING AMPLIFIER PFL/4B