PHILIPS

SERVICE DATA

MOD. EV 4438
10W AMPLIFIER

PHILIPS

ELECTRO-ACOUSTICS

S P E C I F I C A T I O N.

10 Watt Amplifier EV 4438.

Power Output:	10 Watt at less than 2% T.H.D.
Output Impedances:	1000 ohm. (100 volts) 500 ohms (70 volts) 250 ohm (50 volts)
Damping Factory:	3.8
Microphone Sensitivity:	2 mV into 100,000 ohms
Pick up Sensitivity:	120 mV into 500,000 ohms
Frequency Response:	Within 2 dB 40 c/s to 15 K c/s
Tone Control:	Clockwise - 13 dB at 100 c/s. Anticlockwise - 19 dB at 10 K c/s
Signal to noise Ratio:	Controls up 55 dB. Controls down 60 dB
Supply Voltage:	220-260 volts AC 50-60 c/s
Power Consumption:	50 VA
Fuse:	1 amp
Overall Dimensions:	11" x $8\frac{1}{4}$" x $6\frac{1}{2}$"
Weight:	14 lbs.

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Model EV 4438 - P.A. Amplifier - 10W.

1. GENERAL.

This amplifier is enclosed in a two-tone metal cabinet and is provided with independently controlled inputs for microphone and radio or pick-up. A tone control of the continuously adjustable type is fitted.

The microphone input can be changed from high to low input impedance (50 ohms) by means of a plug-in unit model EV4404, for which an octal socket is provided on the amplifier chassis.

The amplifier's standard output is at 100 V, but the output transformer is also tapped for 70 V and 50 V loudspeaker line standards.

2. INSTALLATION.

Adequate ventilation around the amplifier cabinet should be allowed, to prevent overheating in use. The amplifier is set for 240 V A.C. 50 c/s mains operation but where the voltage differs by more than 10% from this figure, the fly lead on the mains transformer should be resoldered to the nearest appropriate tap - i.e. 220V or 260V A.C.

3. FREQUENCY RESPONSE TESTS.

Before undertaking these tests, check that the correct mains voltage is being applied and that the voltages specified in the following table do not deviate by more than 5%. All filaments 6.3 V A.C.

	12AX7		6GW8 (V2A)		6GW8 (V3A)		6CA4
	Pin	Pin	Triode Pin	Pentode Pin	Triode Pin	Pentode Pin	Pin
Anode	1-100VDC	7-100VDC	9-145VDC	6-310 VDC	9-260 VDC	6-310VDC	1-280VAC 7-280VAC
Screen				3-290VDC		3-290VDC	
Cathode	3 & 8 .9 VDC		2-.1VDC	7-9.5VDC	2-25 VDC	7-9.5VDC	3-320VDC

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3.1 Equipment Required.

Audio Oscillator (GM 2316)
Electronic Voltmeter (GM 6005)
Cathode Ray Oscilloscope
1000 ohm 10 watt resistor
Multimeter A.V.O. Model 8
Loudspeaker with line transformer
Leads etc.

3.2 Procedure.

Inspect for obvious wiring faults.
Turn both volume controls anticlockwise and the tone control to the centre position, connect a 1000 ohm 1 watt resistor to the output terminals.

3.3 Set the audio oscillator output to 130 mV at 1000 c/s and connect to the pick-up input. Turn pick-up volume half way and adjust the tone control for maximum output turn up volume control. Output should reach 100 volts before overload occurs.

3.4 Reduce oscillator output to 2 mV and connect to the microphone channel and turn up the volume. Output should reach 100 volts without signs of overload.

3.5 Reduce the output to 50 volts. Switch oscillator to 100 c/s. Output should be 40-45 volts. Switch oscillator to 10K c/s. Output should be 45-50 volts.

3.6 Rotate tone control fully anticlockwise. Output should fall to 7-8 volts. Switch oscillator to 100 c/s; output should be 30-35 volts.

3.7 Rotate tone control fully clockwise. Output should be 9-10 volts. Switch to 10K c/s. Output should be 45-50 volts.

3.8 Switch oscillator to 1000 c/s and adjust tone control for maximum output. Disconnect oscillator, and short circuit microphone and pick-up inputs. Turn both volume controls fully anticlockwise. Output should be less than 100 mV. Turn both controls fully clockwise. Output should be less than 150 mV.

3.9 Connect loudspeaker and tap all valves. Check for internal shorts and microphony.

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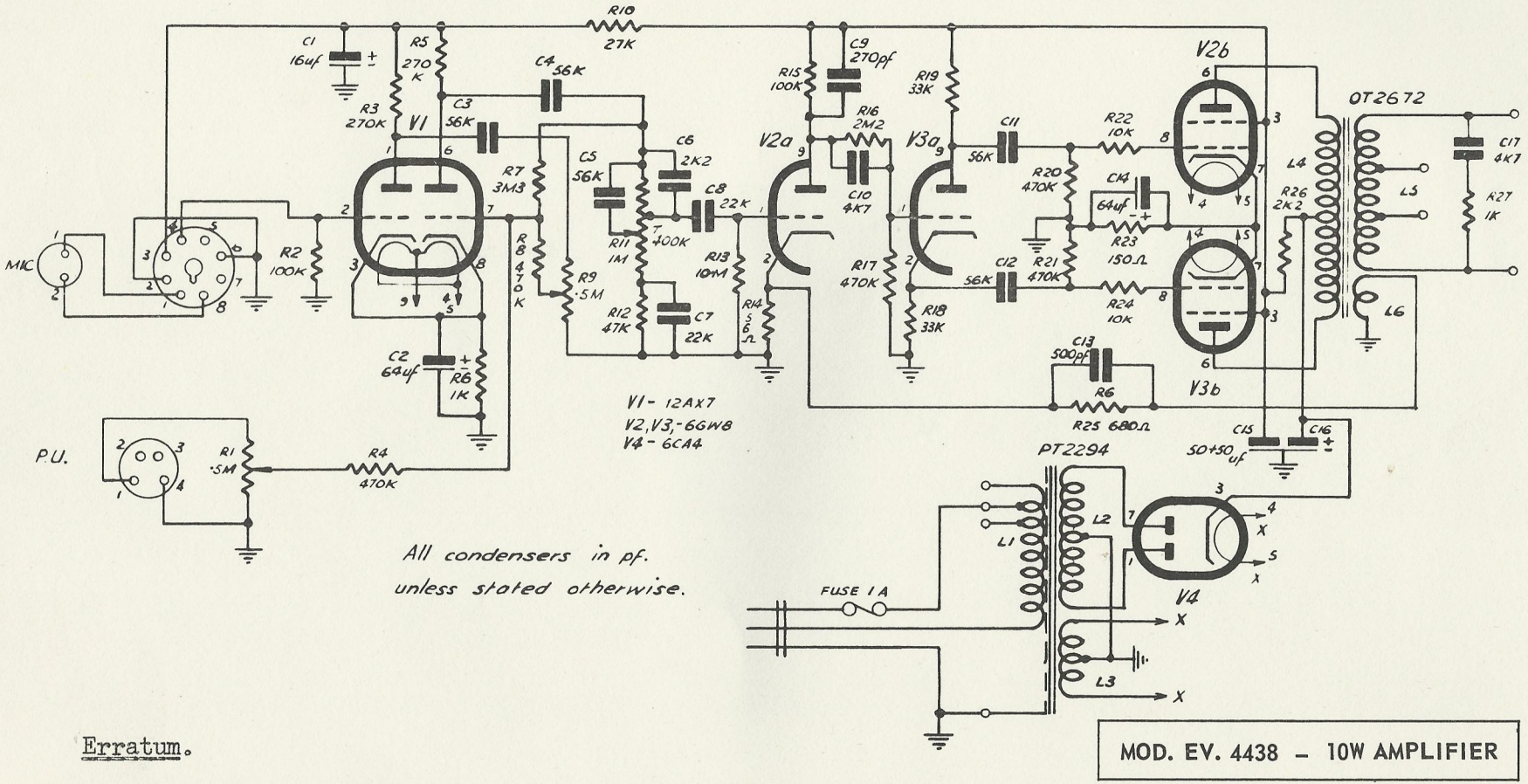

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Erratum.

Volume control is tapped at 100K not 400K, as shown on circuit drawing.

PHILIPS ELECTRO-ACOUSTICS

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PERTH	Cnr. Havelock & Murray Streets	Phone BA 3131
HOBART	73 Brisbane Street	Phone 3 3038
NEWCASTLE	194 Parry Street	Phone MA 5001
CANBERRA	Perth Buildings, Petrie Street, Civic Centre	Phone J 4498

FURTHER INFORMATION ON THIS EQUIPMENT CAN BE OBTAINED FROM ANY OF THE ABOVE PHILIPS BRANCHES