

JB/921

# PHILIPS

SERVICE DATA

and

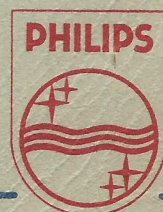
OPERATING INSTRUCTIONS

for

MIXER 6 CHANNEL

TYPE No. 1229

electro - **ola** acoustic division





## 6 CHANNEL MIXER

### SPECIFICATION

Output: 1 volt. low impedance.

Frequency  
Response: Pickup - within 2 dB from 30 cps to 15 K cps.  
Microphone - within 3 dB from 200 cps to 15 K cps.

Tone Controls: Treble Potentiometer type minus 12 dB at 15 K cps.  
Bass Potentiometer type plus 12 dB at 30 cps.  
Slide Switches provide 17 dB bass cut at 30 cps.  
on two microphone channels.

Signal to  
Noise Ratio: Pickup 70 db.  
Microphone 55 db.

Power  
Consumption: 9 watt (from booster power supply)  
312.v.DC at 4.4 mA; 6.3 v AC at 1.21A.

Input: Mic 50 ohms 1.9 mV sensitivity at grid (100,000 ohms)  
PU 500,000 ohms 280 mV sensitivity.

Valves: 4 x EF 86  
1 x 12AX7

Color: Grey Hammertone.

Dimensions: Length 14" x Depth 6" x Height  $6\frac{3}{4}$ ".

Weight: 10 lb.



## OPERATING INSTRUCTIONS FOR 6 CHANNEL MIXER

### GENERAL:

Before using Mixer, make sure that all Valves are seated firmly in their sockets. The Mixer leaves the factory ready for connection to a standard Philips Booster. The power for the Mixer being supplied by the Booster, the mixer does not require separate earthing.

### INPUT CONNECTIONS:

Before connecting any input source to the mixer ensure the voltage to the plugs does not exceed the following:

Pick up 2V  
Microphone .05 v

The input connectors are two-pin plugs metal sheathed type and are supplied with the amplifier. The pin numbers are stamped on the inside bakelite moulding of the plug:

No. 1 being Grid return  
No. 2 being Grid.

When connecting the microphone or pick up cable to the plug pins, the two inner wires must be connected to pins 1 and 2 whilst the braid shielding is soldered directly to outer spring on plug.

Where a single shielded conductor is encountered, the shielding should be connected to pin No. 1 and NOT to the spring as the mixer features single point earthing. If this is not done correctly excessive hum will develop.

### OUTPUT CONNECTION:

The output of 1 volt Low Impedance is taken direct to Booster via multi core cable and plug.

### VOLUME CONTROL:

Separate volume controls are provided for each input channel and this allows for individual adjustment and mixing. To increase volume turn clockwise.

### TONE CONTROLS:

Separate Bass and Treble Controls giving a wide attenuation range. Refer Frequency Response graph.

Slide switches which operate on microphone channels 1 and 2 provide a 17 dB Bass attenuation at 30 cps to improve intelligibility of speech reproduction.

### PRECAUTIONS:

It is strongly recommended not to carry out repairs on mixer unless technically capable. Besides additional damage which may result from trying to tamper with a mixer, it should always be borne in mind that if the covers are removed, terminals carrying dangerous high voltages are exposed, sometimes even after disconnecting from mains supply.

It is essential to allow sufficient space on all sides of mixer for ventilation.

NOTE - Plug numbers quoted for connection apply to plugs supplied with Mixer (Acme).



## 6 CHANNEL MIXER

### TEST SHEET

1. Inspect wiring for obvious faults. Plug in valves and connect mixer to a 3 Watt Booster.
2. Switch on and allow to warm up.
3. Set the tone controls to flat.
4. Feed a signal of 280m V at 1000 cps into the first P.U. channel. This should just produce 40 v across the 500 ohm output of the booster.
5. Reduce output to 13.8 v (plus 25 dB). Change generator frequency to 30 cps. Output should be 2.2 v. Change generator frequency to 15K cps. Output should be 6.5 V.
6. Change generator frequency to 1000 cps and adjust output to 4.5 v.
7. Change generator frequency to 15K cps and turn treble control fully clockwise. Output should now be 9.5 v. Turn treble control fully anti-clockwise. Output should now be .62v. Return treble control to flat position.
8. Change generator frequency to 30 cps. Turn basscontrol fully clockwise. Output should be 1.1v. Turn basscontrol fully anti-clockwise. Output should be 210mV.
9. Feed input into other P.U. channel. 280 mV at 1000 cps with the tone controls in the flat position, should give 40 v across the 500 ohm output of the booster.
10. Feed a signal of 4.3 mV at 1000 cps through the resistor network into microphone input "1" with the slide switch in the "music" position. Output should be 40v across the 500 ohm output from the booster.
11. Change generator frequency to 15K cps. Output should now be 15 v.
12. Change generator frequency to 30 cps. Output should be 2v. Operate appropriate slide switch to "speech" position. Output should be .4v.
13. Repeat items 10, 11, and 12 with microphone channel "2".
14. Feed a signal of 4.3 mV at 1000 cps into channel "3". Output should be 40 v.
15. Change generator frequency to 15K cps. Output should be 15 v.
16. Change generator frequency to 30 cps. Output should be 2v.
17. Repeat items 14, 15 and 16 with channel "4".
18. Remove inputs and turn down all volume controls. Output should be less than 53 mV.
19. Short circuit each of the microphone inputs in turn and turn up the appropriate volume control. Output in all cases should not exceed 200 mV.

NOTE: During last two tests it is important to keep the mixer away from any stray fields of power transformers.

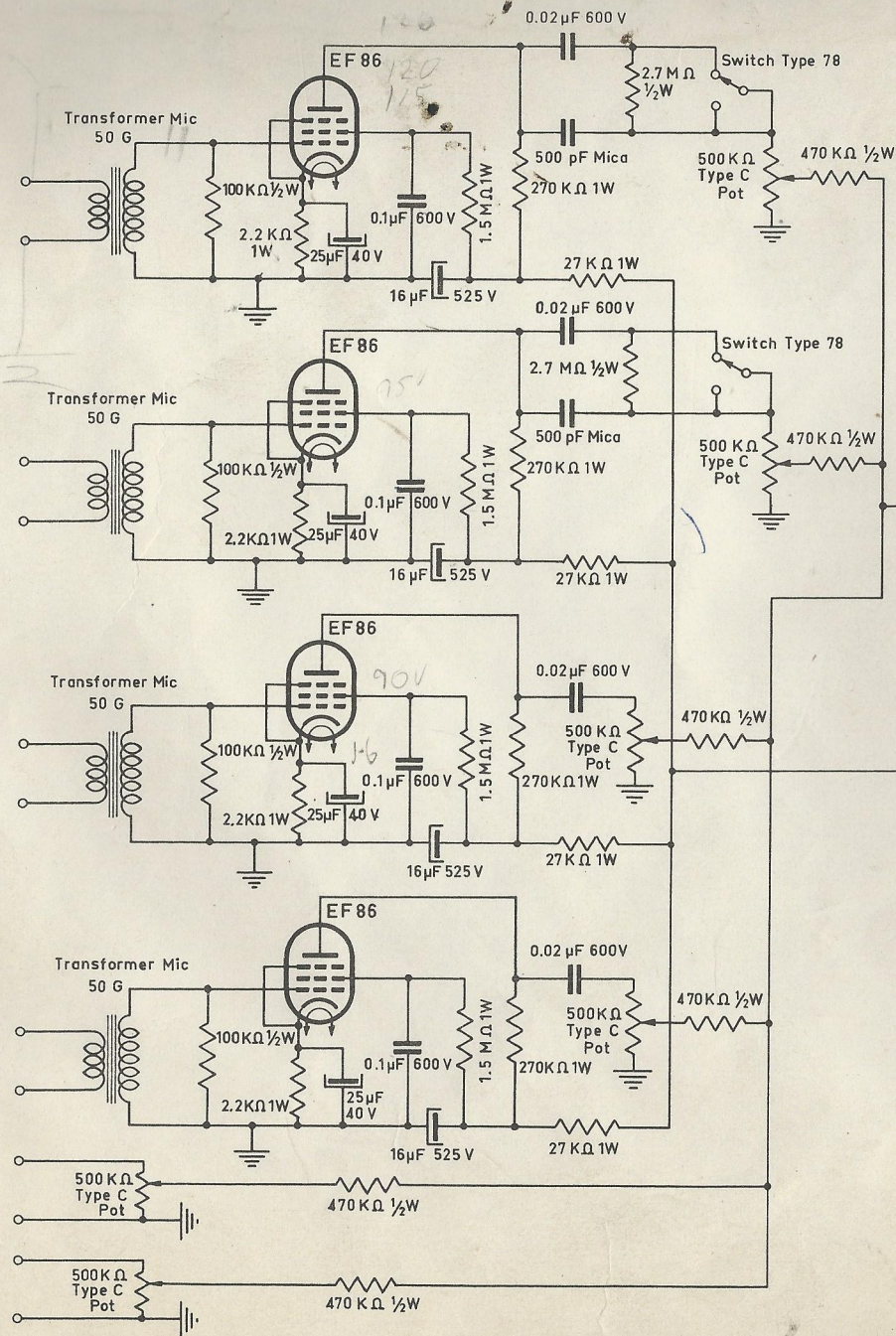


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### VOLTAGE ANALYSIS

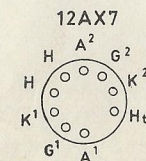
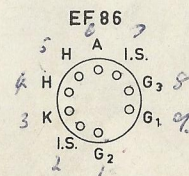
VALVE	ANODE	SCREEN	CATHODE	HEATER
V1-4 EF86	100 v DC	80 v DC	2 v DC	6.1 v AC
V 5 12 AX 7	145 v DC	-	1.5 v DC	6.1 v AC





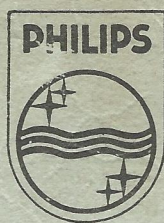
AN. 100V.  
SC. 80V.  
CAT. 2V.

AN. 145V.  
CAT. 1.5V.



Bases viewed from underside





THIS EQUIPMENT HAS BEEN DESIGNED AND

MANUFACTURED IN AUSTRALIA

By the

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**of**

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