

# "HIS MASTER'S VOICE" SERVICE MANUAL

for

# FOUR-VALVE A.C. MAINS-OPERATED TWIN CHANNEL GRAMOPHONE AMPLIFIER CHASSIS

TYPE G2

THE GRAMOPHONE COMPANY LIMITED
(Incorporated in England)
2 PARRAMATTA ROAD, HOMEBUSH, N.S.W.

#### TECHNICAL SPECIFICATION

#### POWER SUPPLY

200 to 250 volts at 40 - 50 c.p.s.

### CONSUMPTION

48 watts

#### VALVE COMPLEMENT

2 x 6AU6 - A.F. Amp.

2 x 6M5 - Power

1 x CB3 - Metal Rectifier

#### **CONTROLS**

- 1: On-Off
- 2: Bass
- 3: Volume
- 4: Balance
- 5: Treble

#### OUTPUT IMPEDANCE

At 400 c.p.s. 15 ohms.

#### CIRCUIT DESCRIPTION

This chassis is a four-valve plus metal rectifier A.C. mains - operated gramophone amplifier, incorporating two separate amplifiers suitable for two-channel reproduction of stereophonic or monophonic records. The volume, tone and balance controls are mechanically coupled.

#### A.F. AMPLIFIERS

Outputs corresponding to "Left" and "Right" channels of the stereophonic cartridge are fed to treble controls RV1 and RV2, thence to balance controls RV3 and RV4 and volume controls RV5 and RV6, which drive V1, and V2 respectively. These valves are resistance-capacitance coupled to their respective output valves V3 and V4.

#### POWER OUTPUT STAGE

The power valves are transformer coupled to the loudspeakers via T1 and T2.

Negative voltage feedback from the secondaries of T1 and T2 is applied to the cathodes of V1 and V2.

The bass controls are part of the feedback loop.

TV7 and RV8 provide bass boost by decreasing the feedback at low frequencies.

#### POWER SUPPLY

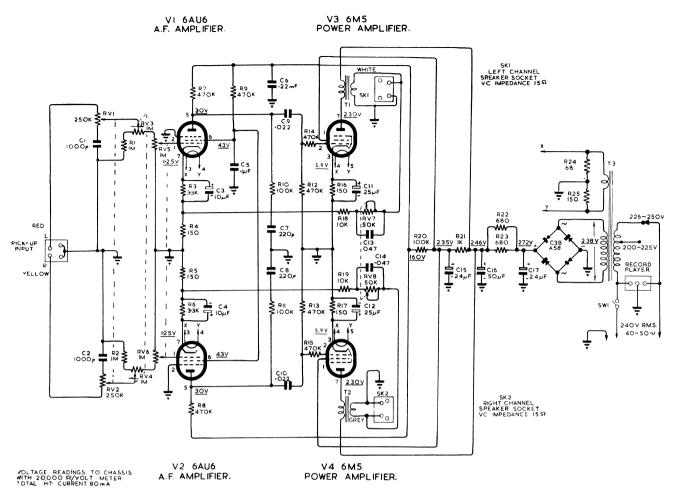
The bridge rectifier supplies H.T. to the anodes of the output valves V3 and V4 through a resistance-capacitance filter. Two additional filter sections supply H.T. to the screens of all valves and to the anodes of V1 and V2.

#### ADDITIONAL DATA

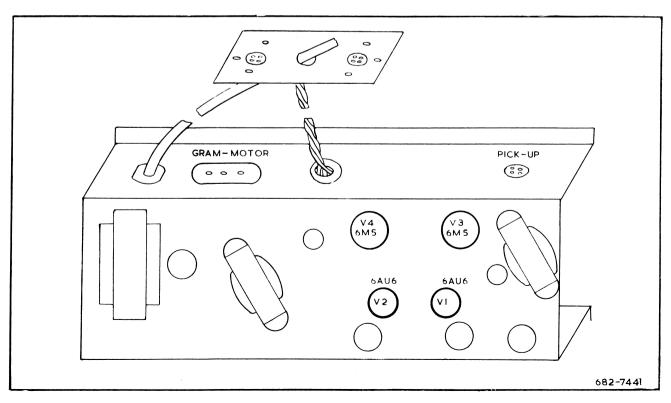
Any further service information may be obtained by addressing an inquiry to the "Service Division, E.M.I. (Aust.) Ltd., 575-577 Parramatta Road, Leichhardt." (Telephone LM1491).

During the course of production of this receiver, the Company reserves the right, without notice to make any modification or improvements in design which may be necessary to meet prevailing conditions.

Information concerning changes, which is likely to be of benefit to retailers and servicemen, will be notified as far as possible by issuing a Technical Data Sheet.



"RIGHT CHANNEL 682 - 7831



# PARTS LIST — CHASSIS TYPE G2

# RESISTORS

REF.	PART No.	DESCRIPTION	REF.	PART No.	DESCRIPTION
R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 R11 R12	740-0192 740-0192 740-0052 746-0261 746-0261 740-0052 742-0172 742-0172 742-0172 740-0142 740-0142 740-0622	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	R13 R14 R15 R16 R17 R18 R19 R20 R21 R22 R23 R24 R25	740-0622 740-0622 740-0622 746-0261 746-0261 740-0082 740-0142 742-0002 749-0191 749-0191 740-0603 746-0261	$\begin{array}{c} 470,000 \text{ ohms} \pm 20 \% \ \frac{1}{2} \text{ Watt.} \\ 470,000 \text{ ohms} \pm 20 \% \ \frac{1}{2} \text{ Watt.} \\ 470,000 \text{ ohms} \pm 20 \% \ \frac{1}{2} \text{ Watt.} \\ 150 \text{ ohms} \pm 10 \% \ \frac{1}{2} \text{ Watt.} \\ 150 \text{ ohms} \pm 10 \% \ \frac{1}{2} \text{ Watt.} \\ 10,000 \text{ ohms} \pm 10 \% \ \frac{1}{2} \text{ Watt.} \\ 10,000 \text{ ohms} \pm 10 \% \ \frac{1}{2} \text{ Watt.} \\ 100,000 \text{ ohms} \pm 10 \% \ \frac{1}{2} \text{ Watt.} \\ 1,000 \text{ ohms} \pm 10 \% \ \frac{1}{2} \text{ Watt.} \\ 680 \text{ ohms} \pm 10 \% \ 2 \text{ Watts} \\ 680 \text{ ohms} \pm 10 \% \ 2 \text{ Watts} \\ 68 \text{ ohms} \pm 10 \% \ \frac{1}{2} \text{ Watt.} \\ 150 \text{ ohms} \pm 10 \% \ \frac{1}{2} \text{ Watt.} \\ \end{array}$

## CONDENSERS

REF.	PART No.	DESCRIPTION	REF.	PART No.	DESCRIPTION
C1 C2 C3 C4 C5 C6 C7 C8	280-0251 280-0251 269-0451 269-0451 279-1741 279-1781 273-0691 273-0691	0.001 ± 10% 200V. 0.001 ± 10% 200V. 10 mF. 10 V.W. 10 mF. 10 V.W. 0.1 ± 20% 400V. 0.22 ± 20% 400V. 220 p. ± 10% 220 p. ± 10%	C9 C10 C11 C12 C13 C14 C15 \ C17 \ C16	280-1411 280-1411 269-0221 269-0221 279-1081 279-1081 269-0481 269-0471	0.022 ± 20% 400V. 0.022 ± 20% 400V. 25 mF. 25 V.W. 25 mF. 25 V.W. 0.047 ± 20% 200V. 0.047 ± 20% 200V. 24 mF. 350 V.W. 50 mF. 350 V.W.

### **MISCELLANEOUS**

REF.	PART No.	DESCRIPTION	REF.	PART No.	DESCRIPTION
RV1 - 2	677-0591	Treble control, 2-gang, 250,000 ohms	T1 } T2 {	905-0281	Transformer, Output
RV3 - 4	677-0561	Balance control, 2-gang,	T3 (	904-0241	Transformer, Power
		1 Meg.	V1 } V2 {	903-0441	Valve, 6AU6
RV5 - 6	677-0571	Volume control, 2-gang, 1 Meg.	V3 } V4 {	932-0291	Valve, 6M5
RV7 - 8	677-0581	Bass control, 2-gang, 50,000 ohms	św1	855-0163 932-1061	Switch, On-Off Rectifier, CB3