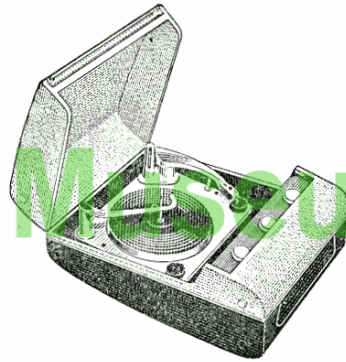


SERVICE DATA



TECHNICAL LIBRARY
KOLSTER-BRANDES LTD
FOOTSCRAY KENT

SPECIFICATION

The PRP20 is a three valve, stereophonic record player suitable for A.C. Mains operation. A B.S.R. four-speed record changer, type UA8, is fitted.

VOLTAGE RATING: 200—250 volts, 50 C/s A.C. only.

POWER CONSUMPTION: Amplifier—40 Watts.
Motor—15 Watts.

CONTROLS: Off/On and Tone.
Volume.
Balance.

VALVE COMPLEMENT: 1 Brimar 12AX7 Audio Amplifier.
2 Brimar EL84 Output Pentodes.

RECTIFIER: Westinghouse E.C.1 Bridge selenium rectifier.

DIMENSIONS:	WIDTH	HEIGHT	DEPTH
	16 ins. (40.6 cms)	9.75 ins. (23.4 cms)	20.5 ins. (52.1 cms)

WEIGHT: 24 lbs. 8 ozs. (11.1 Kg).

GENERAL INFORMATION

The PRP20 is a stereophonic record player, with two loudspeakers, one being permanently mounted in the cabinet whilst the other is in a small plastic housing which is carried inside the cabinet, but which should be removed and placed some six to ten feet away for Stereo effect. Either of the speakers may be plugged into either amplifier so that the extension speaker may be used either on the left or the right of the record player. It is important to note that under no circumstances should a record be played without at least one loudspeaker plugged in, and that it is preferable always to use both loudspeakers.

SETTING UP PROCEDURE

1. Unscrew the three screws holding the amplifier cover plate. These are situated close to the three control knobs on the vertical part of the cover.
2. Slide the cover off to the rear.
3. Set the mains voltage adjustment to the correct position. The plug for adjustment is to the left of the Off/On Tone Control. For main voltages between 200 and 220 it should be set to the 210 volts position, and for voltages between 230 and 250 to the 240 volt position.
4. Ensure that the valves are pushed firmly into their sockets.
5. Replace the cover plate and screws.
6. Plug in the two loudspeakers to the appropriate sockets at the back of the motorboard. If the extension loudspeaker is required to be used on the right of the record player, plug it into the right hand sockets viewed from the front of the player. The lead from the internal loudspeaker should then be plugged into the left hand sockets. If the extension loudspeaker is to be used on the left of the player, then it should be plugged into the left hand sockets and the internal loudspeaker to the right hand sockets. To ensure correct phasing of the two loudspeakers, the red plugs should always be plugged into the red sockets. Under no circumstances should the player ever be used without at least one loudspeaker connected.

NOTE: It is preferable always to use both loudspeakers.

7. Screw down the two transit screws on the record changer.

The logo for KB Museum.org.uk is positioned at the top center of the page. It features a green stylized 'K' and 'B' with a green arrow pointing upwards from the 'K'. Below the letters, the text 'Museum.org.uk' is written in a green, sans-serif font.

CIRCUIT DESCRIPTION

The circuit consists of two identical amplifiers fed from a common H.T. supply. Each amplifier consists of half 12AX7 R.C. coupled to an EL84 output pentode. Negative feedback is applied from the secondary of each output transformer into the bottom of each volume control. The feedback is thus increased in value as the volume is reduced. The feedback is reduced at low frequencies by means of C2, thus giving bass boost to the amplifier which likewise will increase as the volume is reduced. A Balance Control which simultaneously increases the gain of one amplifier and reduces that of the other, is provided on the input. Treble cut type tone controls are provided in the grid circuits of the two output valves.

Since only the loudspeaker in the main cabinet is capable of effective bass reproduction, the two amplifiers are coupled together at low frequencies by means of R20 and C2. R20 is only effective when the amplifier is fed from a gramophone pick-up. By this means a full bass response is maintained whichever amplifier the internal speaker is connected to and since little stereo information is conveyed by the low frequencies, a good stereophonic effect is still obtained.

REMOVAL OF CHASSIS AND RECORD CHANGER FROM CABINET

1. The chassis is in two parts: one is the mounting for the controls: the other for the amplifier.
2. Unscrew the four screws holding the motor board, which may then be lifted.
3. Unscrew the two cable clamps on the bottom of the cabinet.
4. Unscrew the two screws holding the control panel and remove same.
5. Unscrew the two screws holding the amplifier and remove same.
6. Unsolder the black lead from the amplifier to the loudspeaker. The amplifier and record changer may then be removed from the cabinet.

COIL AND TRANSFORMER DATA

FUNCTION

Approximate Resistance in Ohms.

LEFT HAND OUTPUT TRANSFORMER. L1 PRIMARY.	START—TAP	420
	TAP—FINISH	3.7
RIGHT HAND OUTPUT TRANSFORMER. L2 PRIMARY.	START—TAP	420
	TAP—FINISH	3.7
MAINS TRANSFORMER. L3 PRIMARY.	START—FINISH	32
	SECONDARY H.T.	90
	ALL OTHERS LESS THAN 1 OHM	

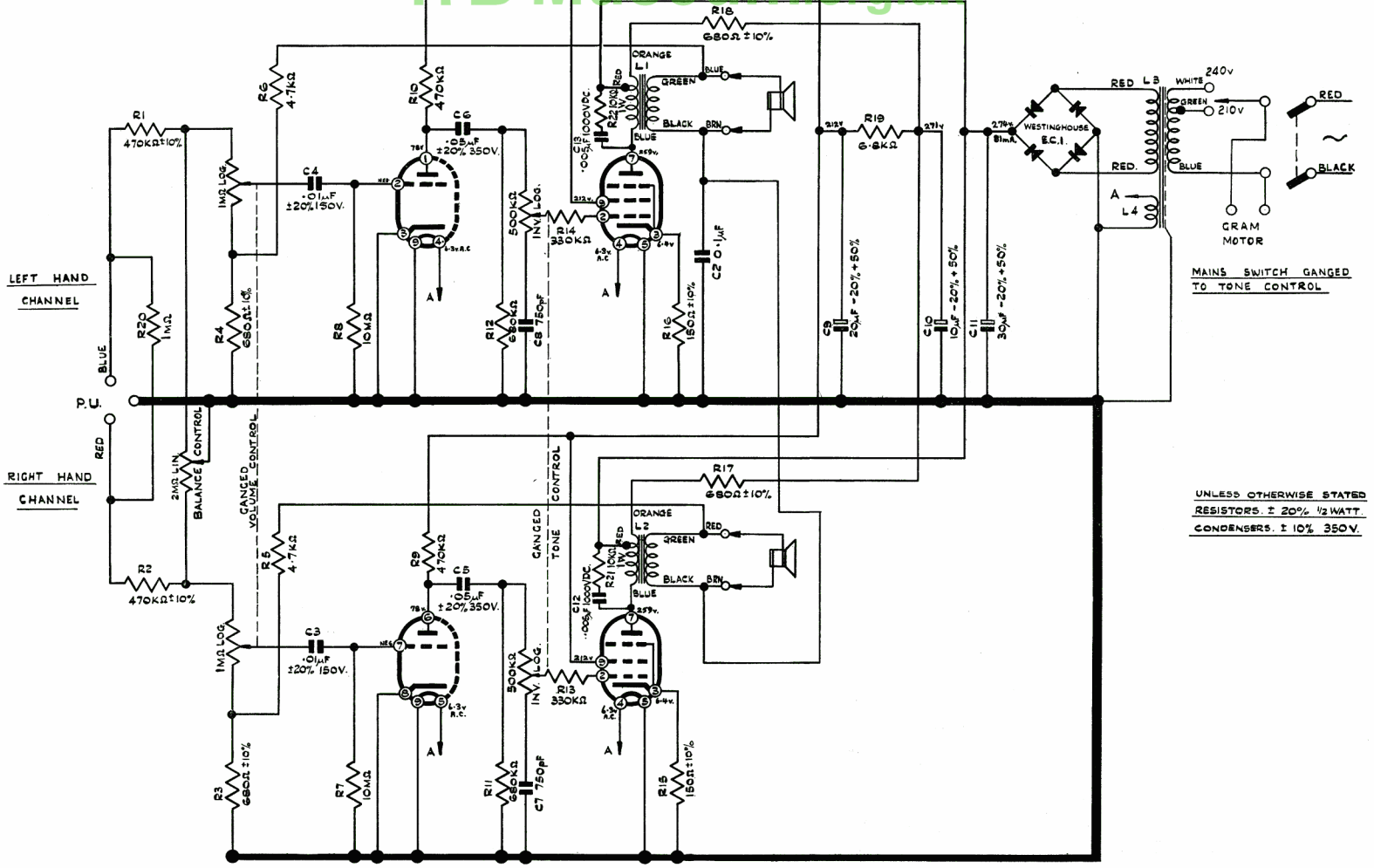
SPARES LIST

Component	Colour Code	Circuit Ref.	Part No.	Price Retail
Cabinet (Blue and Grey)			558/220	£ 10 10 0
Cabinet (Red and Grey)			558/220/1	10 10 0
Ext. Speaker Assy.			558/12	1 19 0 + P.Tax
CONDENSERS				
Elec. 30 + 20 + 10µF. 350 v.		C9, 10, 11	KEM 68	7 0
.01 µF. 150 v.		C3, 4	KPM 19	1 6
.05 µF. 350 v.		C5, 6	KT 53	1 6
.1 µF. ± 10% 350 v.		C2	KT 32	1 6
750pF. ± 10% 350 v.		C7, 8	KC 98	1 6
.005 µF. 1000 v.		C12, 13	KT 74	1 6
Knobs			558/260	1 9
Potentiometers				
2 MΩ Linear			P205H15F	3 9
1 MΩ + 1 MΩ Log			9/8	11 9
500 KΩ + 500 KΩ Inv. Log. with D.P.S.T. switch			9/7	14 9
Record Changer (Stereo) B.S.R.			552/215	10 17 6 + P.Tax
Control Panel Rivetted			558/11	2 6
Mains Tapping Plug			150/206	6
RESISTORS				
150 Ω ± 10% 1/4W		R15, 16	R151FE	1 0
680 Ω ± 10% 1/4W		R3, 4, 17, 18	R681FE	1 0
4.7 KΩ 1/4W		R5, 6	R472HE	1 0
6.8 KΩ 1/4W		R19	R682HE	1 0
10 KΩ 1/4W		R21, 22	R103HFT	1 0
330 KΩ 1/4W		R13, 14	R334HE	1 0
470 KΩ ± 10% 1/4W		R1, 2	R474FE	1 0
470 KΩ 1/4W		R9, 10	R474HE	1 0
680 KΩ 1/4W		R11, 12	R684HE	1 0
1 MΩ 1/4W		R20	R105HE	1 0
10 MΩ 1/4W		R7, 8	R106HE	1 0
Rectifier EC1			531/240	14 9
Speaker			230/251	1 1 9 + P.Tax
TRANSFORMERS				
Mains Transformer			558/85	2 5 0
Audio Output Transformer			558/95/1	8 6
Vent Cover (Brown)			558/219	4 6
Vent Panel Assy. (Brown)			558/130	4 6
Vent Cover (Grey)			558/219/1	4 6
Vent Panel Assy. (Grey)			558/130/1	4 6

V1A
12AX7

V2
EL84

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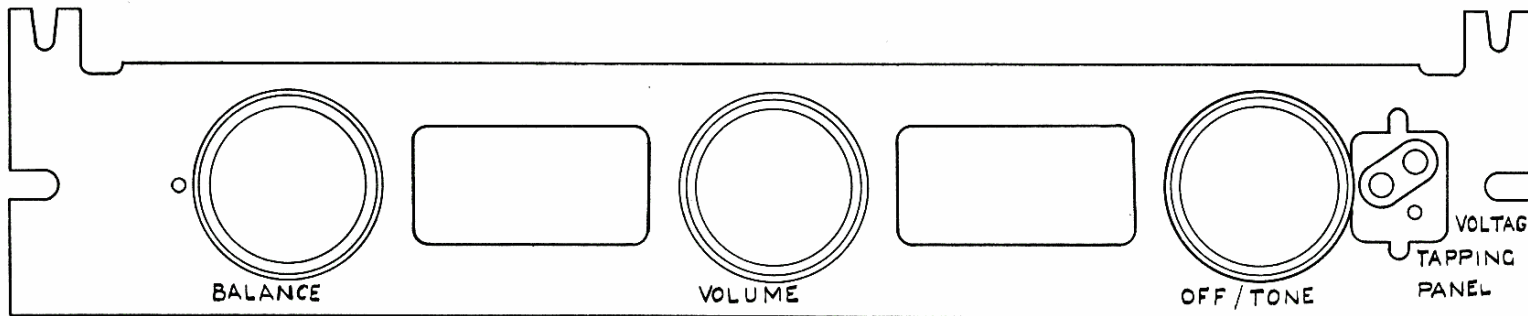
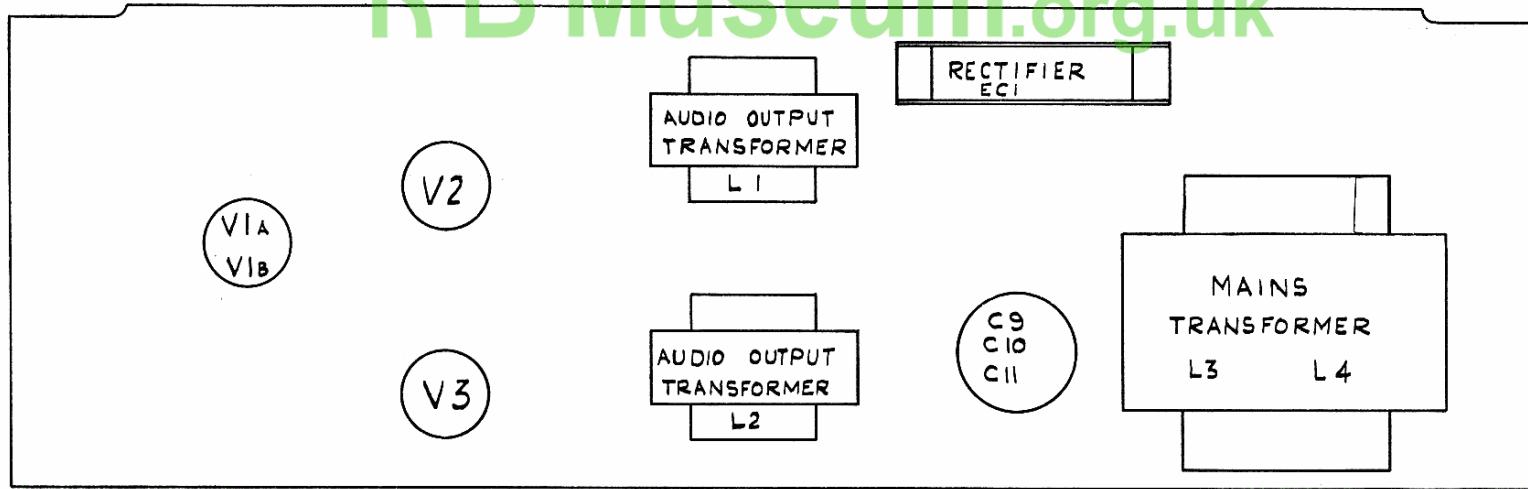
MAINS SWITCH GANGED TO TONE CONTROL

UNLESS OTHERWISE STATED
RESISTORS: ± 20% ½ WATT
CONDENSERS: ± 10% 350V.

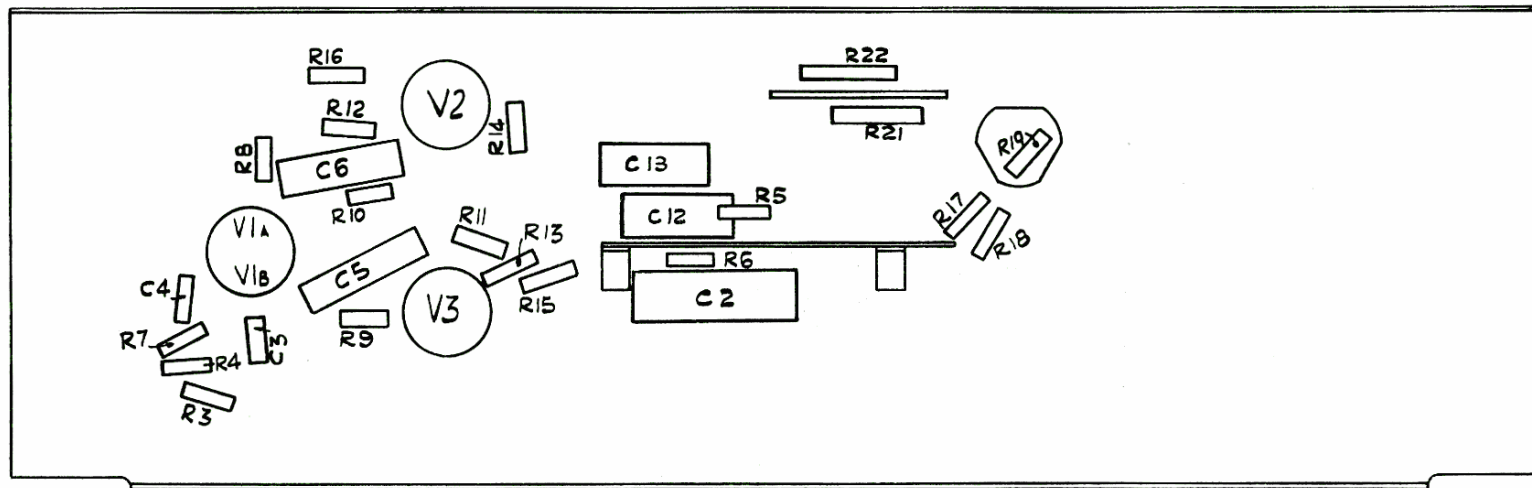
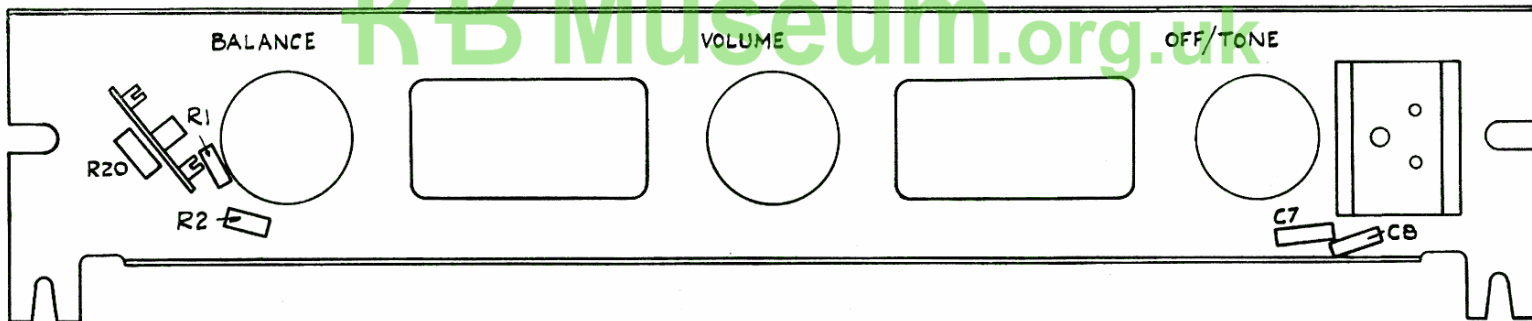
V1B
12AX7

V3
EL84

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SERVICE DEPOTS

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