SERVICE MANUAL

MODEL

RRP 20

ISSUED: OCTOBER, 1960.

KOLSTER-BRANDES LIMITED
FOOTSCRAY SIDCUP KENT

SERVICE DEPOTS

41, BENT STREET,
CHEETHAM, MANCHESTER
Telephone: BLAckfriars 1751 (3 lines)

FOOTSCRAY,
SIDCUP, KENT
FOOtscray 3333 (10 lines)

87, McALPINE STREET,
GLASGOW
CENtral 1779

Service Data

RRP 20

SPECIFICATION

The RRP 20 is a one-valve transportable record player suitable for A.C. mains operation. A B.S.R. four-speed record changer, type UA14 is fitted.

VOLTAGE RATING : 200–250 volts, 50 c/s.

POWER CONSUMPTION : Amplifier 20 watts.
Motor 10 watts.

CONTROLS : Off/On and Tone.
Volume.

VALVE COMPLEMENT :
Brimar ECL82 Audio Amplifier and Output.

RECTIFIER :
S.T.C. C3B. Full wave metal rectifier.

DIMENSIONS :
Width : 17¼ inches (44 cms.)
Height : 9¼ inches (23·5 cms.)
Depth : 13¾ inches (35 cms.)

WEIGHT : 18lbs (8·2 kilos.)

GENERAL INFORMATION

This record player is basically similar in design to Model ORP10 but has been improved by the use of new type components, and latest circuit techniques. It should be noted that certain components may only be replaced by special types as shown on the circuit diagram.

SETTING UP PROCEDURE

1. Remove the four screws holding the motor board in position and lift at rear edge to remove.
2. Check that the valve is firmly pressed into its socket.
3. Replace motor board and screws.

CIRCUIT DESCRIPTION

The ECL82 is a triode-pentode valve. The triode section is used in a voltage amplifying circuit and is resistance-capacity coupled to the pentode which is used in the power output circuit. Bias for the pentode is obtained from the by-passed resistor R8 (470 Ω) in its cathode circuit. Grid current bias is obtained from the triode by means of R3 (10 MΩ) and the blocking condenser C3 (·01 μF.) in its grid circuit.

Negative voltage feedback of middle and high frequencies is obtained from the secondary of the output transformer and is fed via R11 (4·7 KΩ) and C9 (0·1 μF.) into the bottom of the volume control so that the amount of negative feedback is increased as volume is reduced.

The feedback is also used to boost to bass response as bass frequencies are not fed back.

The mains transformer is of the completely isolated type and supplies the full-wave metal rectifier and reservoir capacitor C8 (30 μF.). A tapped output transformer is used giving hum bucking in conjunction with R6 (680 Ω) and C1 (10 μF.), a further stage of smoothing follows R5 (8·2 KΩ) and C2 (20 μF.).

Tone control is by means of an inverse log law potentiometer (500 KΩ) and condenser C7 (·003 μF.) in the grid circuit of the pentode.

The negative rail of the amplifier is connected to the loudspeaker chassis to reduce hum.

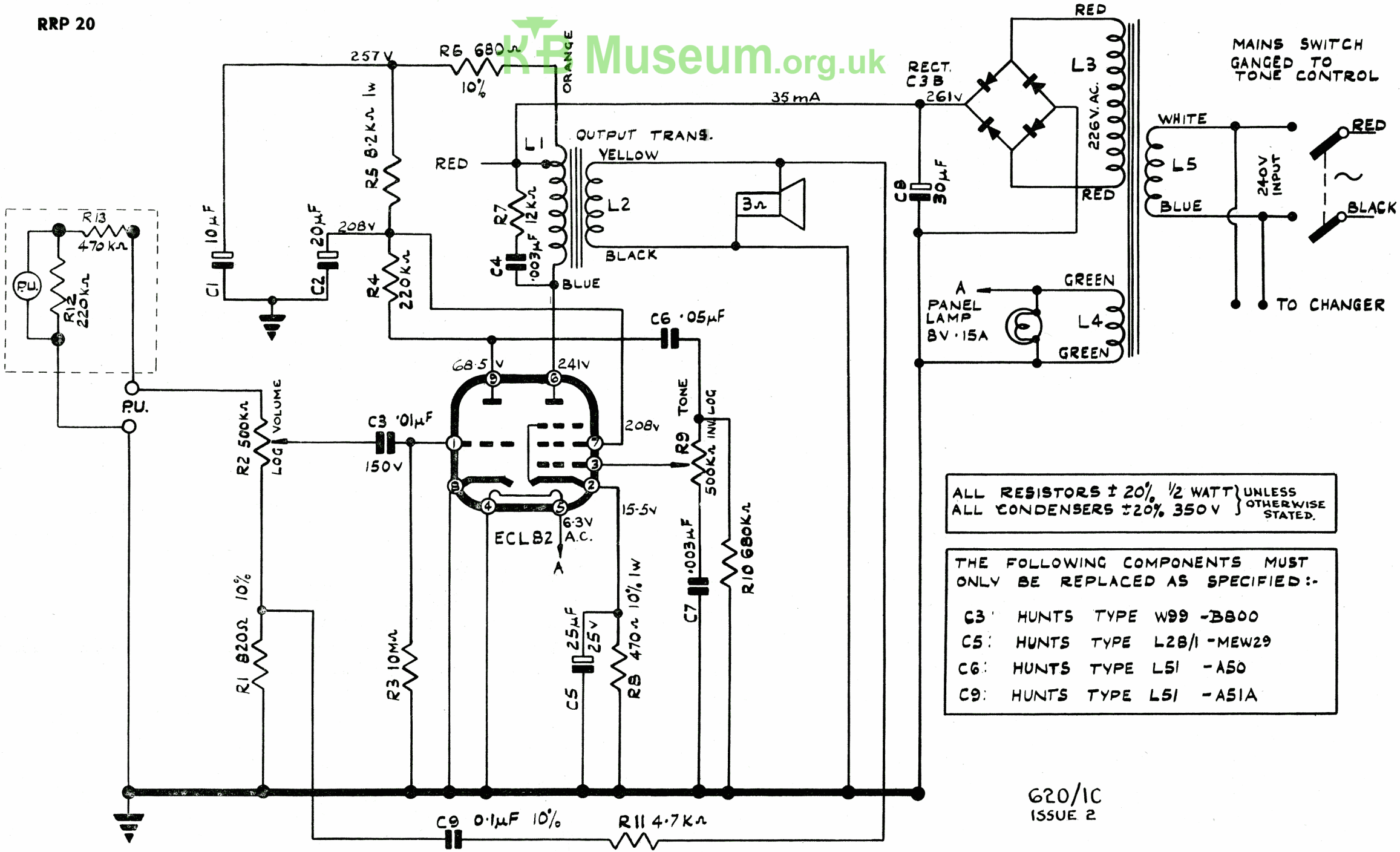
Two resistors R12 (220 KΩ) and R13 (470 KΩ) are mounted on a small tag strip on the changer and also screened.

REMOVAL OF CHASSIS FROM CABINET

1. Remove the control knobs (pull–off).
2. Remove motor board.
3. Unplug speaker leads from output transformer.
4. Remove two fixing screws at front and rear of chassis.
5. The pick-up lead can then be unsoldered from the volume control, and the mains supply to the record changer from the on/off switch.

COIL AND TRANSFORMER DATA

Circuit Ref. No.	Function	Approximate Resistance in ohms
L.3, 4, 5	**Mains Transformer**	
	Primary	185 Ω
	Secondary H T.	290 Ω
	Secondary L.T.	Less than 1 Ω
L.1, 2	**Output Transformer**	
	Primary Start to tap	700 Ω
	Tap to finish	20 Ω
	Secondary	0·5 Ω



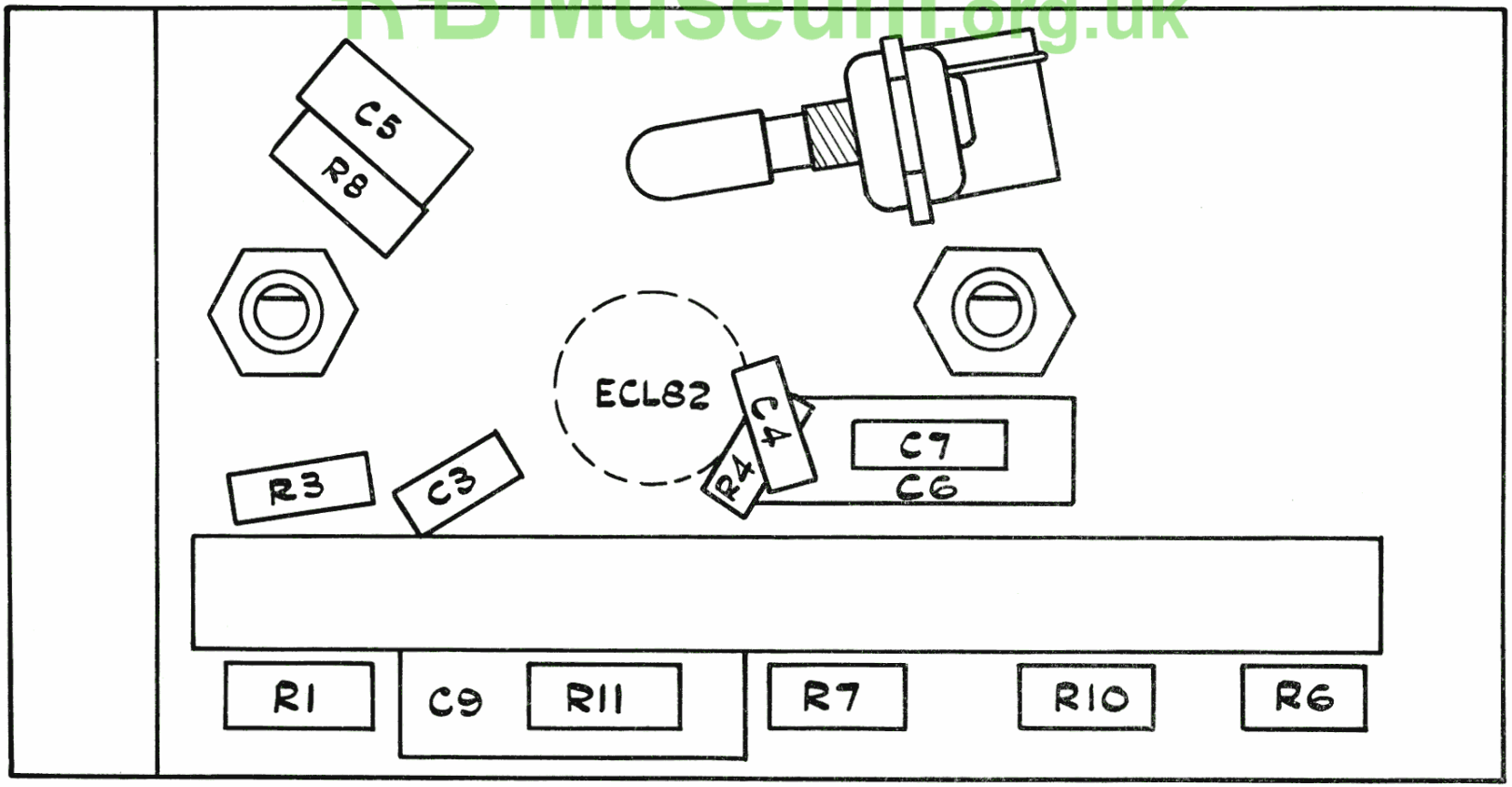
ALL RESISTORS ± 20% ½ WATT
ALL CONDENSERS ±20% 350V
} UNLESS OTHERWISE STATED.

THE FOLLOWING COMPONENTS MUST ONLY BE REPLACED AS SPECIFIED:-

C3:	HUNTS	TYPE	W99 -B800
C5:	HUNTS	TYPE	L28/1 -MEW29
C6:	HUNTS	TYPE	L51 -A50
C9:	HUNTS	TYPE	L51 -A51A

620/1C
ISSUE 2

CIRCUIT DIAGRAM



FRONT VIEW.