

**SERVICE MANUAL FOR
KB RECORD PLAYER KP040
&
GENERAL PURPOSE AMPLIFIER KA041**

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ITT

SERVICE MANUAL FOR RECORD PLAYER KP040 AND GENERAL PURPOSE AMPLIFIER KA041

Dimensions	KP040	KA041
Height:	198mm (7 $\frac{3}{4}$ ")	170mm (6 $\frac{5}{8}$ ")
Width:	404mm (15 $\frac{7}{8}$ ")	386mm (15 $\frac{1}{4}$ ")
Depth:	444mm (17 $\frac{1}{2}$ ")	121mm (4 $\frac{3}{4}$ ")
Weight:	6.8 kg (15 lb)	2.2 kg (5 lb)
Power Consumption:	14 watts (28 VA)	Less than 14 watts
Power Supply:	240 volts. 50 Hz	
Power Output:	3.5 watts at 10% distortion	
Frequency Response:	–3dB at 60 Hz and 20 kHz	
Semiconductor Complement:		
Transistors:	BC 154 – Preamplifier BC 107 – Driver AC 128 } – Complementary symmetry push-pull AC 176 } output	
Bridge Rectifier:	LT 120	
Controls:	Volume – On/Off Bass Treble	

CIRCUIT DESCRIPTION

The signal from the cartridge passes first to the bass control which functions by resistively loading the capacitive source. The treble control cuts high frequencies when the slider is towards the end of the control connected to R4. The signal is then applied to the volume control R5 and then onto the input of TX1 which is high impedance. The amplified signal then passes to TX2 which drives the output stage. This stage consists of two transistors TX3 and TX4 operating in complementary symmetry. They function in the common emitter mode because R15 is connected to the live terminal of the load.

D.c. and a.c. feedback is applied via R11 from the output to the emitter of TX1. A large amount of d.c. feedback is applied to eliminate the need for any adjustment for correct working conditions.

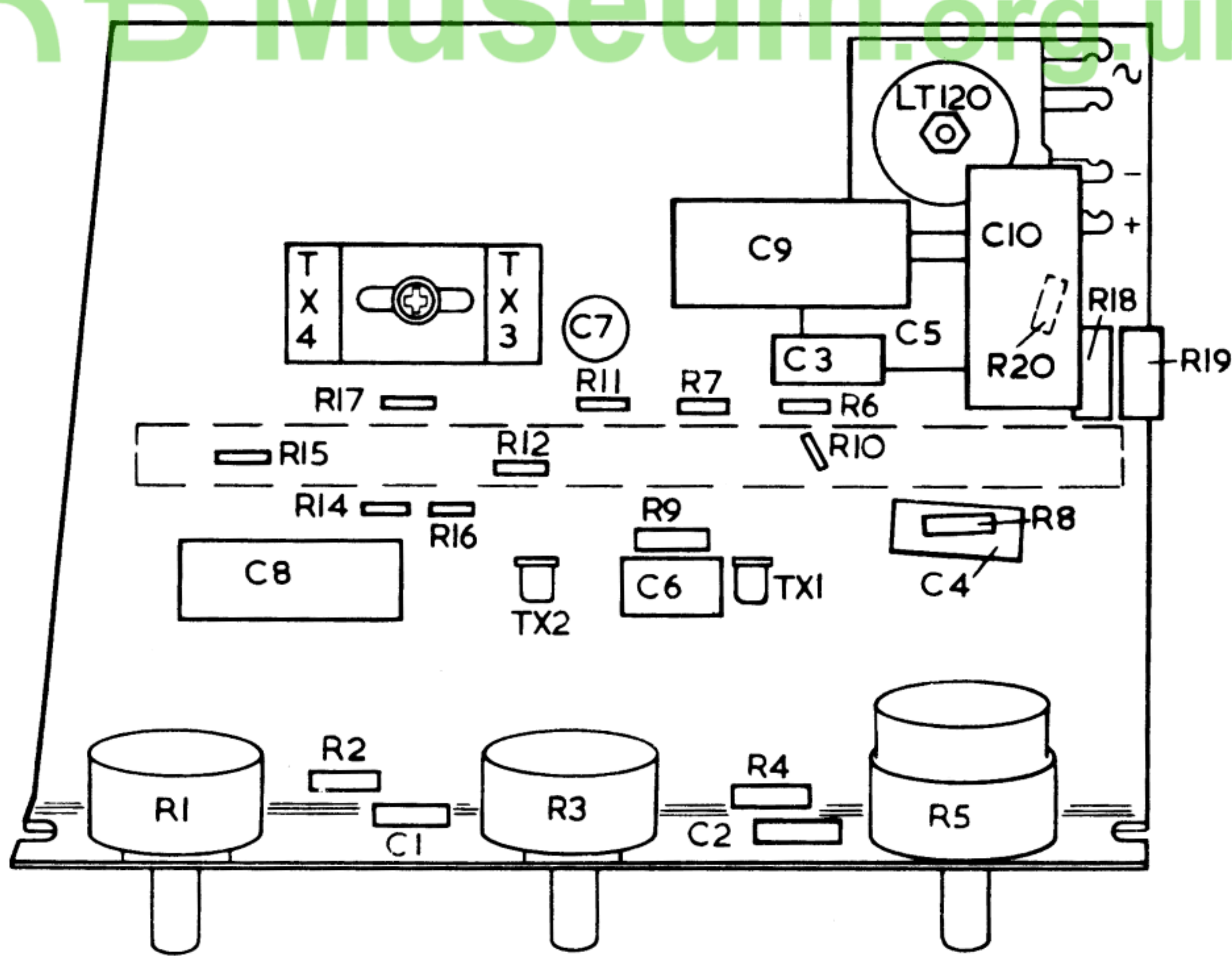
The a.c. feedback is controlled by the networks R10, C5 and R11, R12, C6. R12 and C6 also provide some low frequency compensation.

The motor of the record playing unit in the KP040 has an 18.6 volt secondary which is used to supply the indicator lamp, and drive the H.T. rail via the bridge rectifier and the R20, C9, C10 smoothing network. The KA041 has a transformer to supply the indicator lamp and H.T. rail.

CHASSIS REMOVAL INSTRUCTIONS

Remove the two screws from the top of the control panel. Lift the control panel, with the attached chassis, out of the cabinet. Lay the chassis on top of the cabinet over the space from which it has been removed.

To refit the control panel and chassis reverse the procedure, being careful to fit the chassis compartment back panel correctly into its top and bottom locating slots.

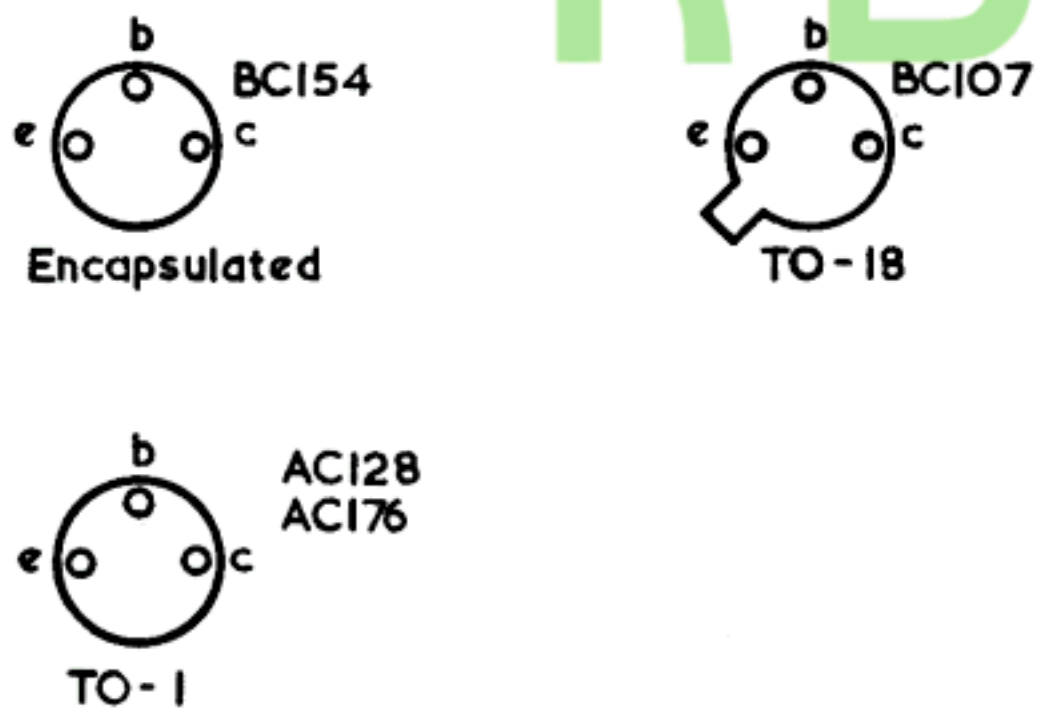


CHASSIS LAYOUT PCII

UNLESS OTHERWISE STATED
 ALL RESISTORS 5% 1/4W
 ALL CAPACITORS 10%
 EXCEPT ELECTROLYTICS
 AND WHERE STATED.



TRANSISTOR BASE CONNECTIONS

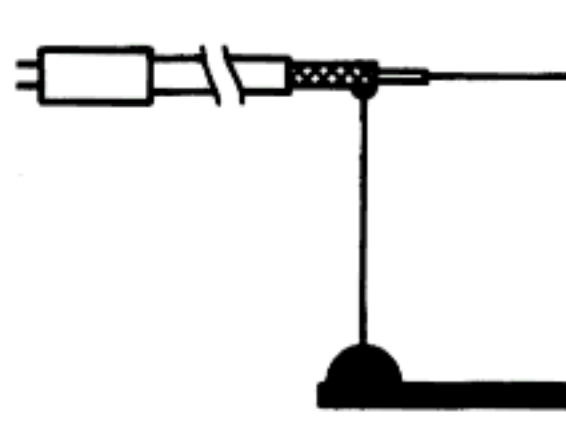


TX1
BC154

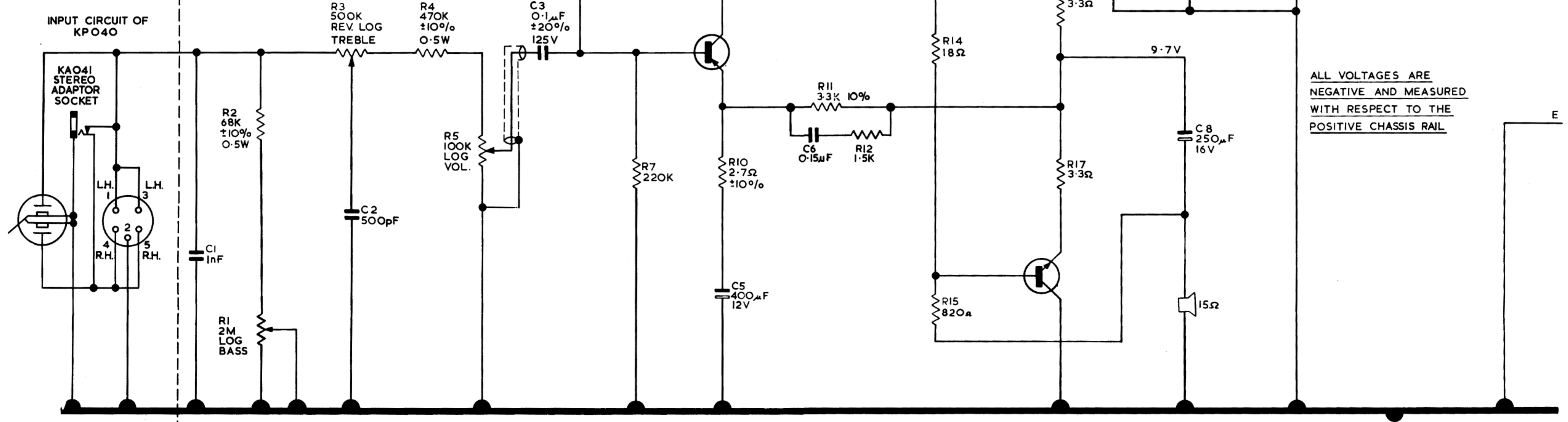
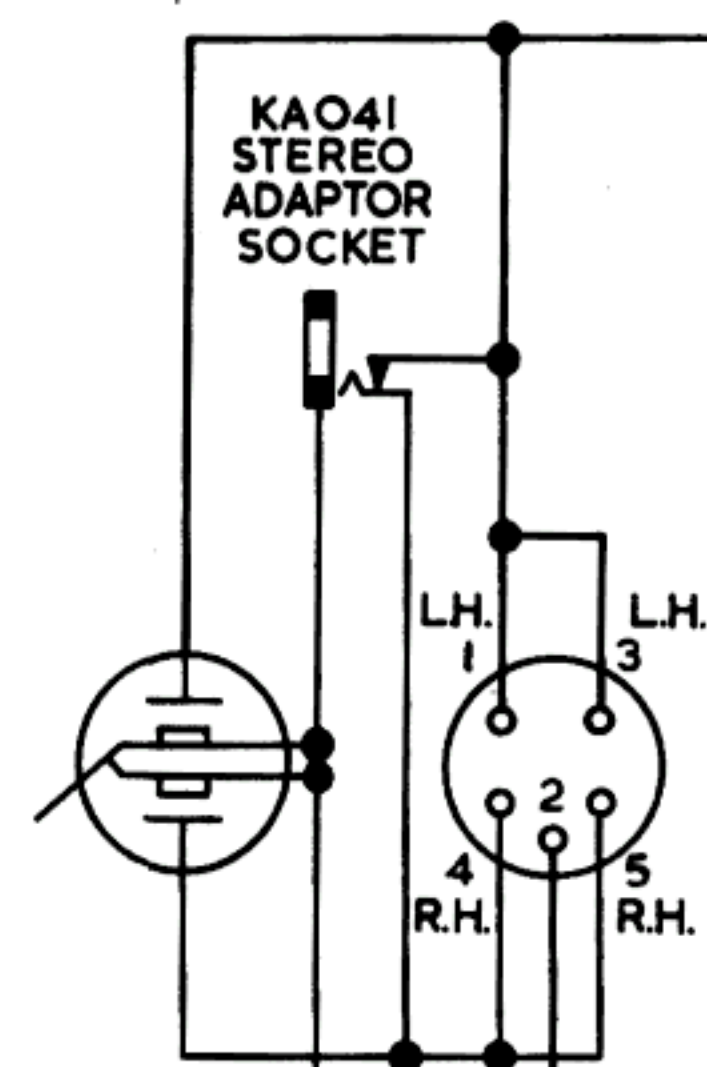
TX2
BC107

TX3
AC128

INPUT CIRCUIT OF
KAO41



INPUT CIRCUIT OF
KPO40



ALL VOLTAGES ARE
 NEGATIVE AND MEASURED
 WITH RESPECT TO THE
 POSITIVE CHASSIS RAIL

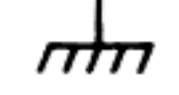
ALTERNATIVE KP 040/KA 041 CIRCUIT DIAGRAM

TX4
AC176

TRANSFORMER
ON KAO41

FIELD WINDING
OF MOTOR ON KPO40

SWITCH
GANGED
WITH
R5



SPARE PARTS LIST

DESCRIPTION	KP040 PART NUMBER	KA041 PART NUMBER
Cabinet	1589/220/21426	1590/220/21424
Cabinet back	34/308/27109	34/309/27097
Handle	28/277/14018	—
Lid Catch (2 off)	28/276/21384	—
Hinge	28/242/21195	—
Foot (6 off)	28/241/0/21364	—
Foot (2 off)	—	28/335/21342
Foot (1 off)	—	28/358/21423
Fascia Control Panel Assy.	1589/10/13245	1590/10/13231
D.I.N. Socket 5 way	13/437/25090	—
D.I.N. Socket Clip	4/277/20406	—
Miniature Jack Socket	13/435/1/25364	—
Jack Socket Clip	4/290/20484	—
Mains Transformer	—	39/S1/71/04012
Plug and Lead Assembly	—	5/212/25120
Record Playing Unit BSR C110	37/68/19064	—
P.U. Cartridge BSR SX5M	SX5M/19069	—
BSR Sapphire Stylus ST8	ST8/S/19028	—

COMMON ITEMS

Indicator Lens	35/547/12201
Indicator Lens Clip	4/216/20329
Loudspeaker (8" x 5" 15Ω)	11/193/03010
Loudspeaker Grille	28/352/13241
Knob Assembly, 3 off	1589/60/01214
Bulb	13/510/V/12094
Bulb Holder	13/137/23043

PC11 CHASSIS PARTS LIST FOR MODELS OF KP040/KA041 WITH 1000 μF SMOOTHING CAPACITOR

DESCRIPTION	CIRCUIT REF.	PART NUMBER
Rectifier LT120		14/30/12036
Electrolytic Capacitors		
50 μF 25V	C4, C10	KEM265/S/08875
250 μF 16V	C5, C8	KEM266/G/S/08271
1000 μF 30V	C9	KEM236/S/08226
Electrolytic Capacitor Clip		4/80/20991
Output Transistors		
AC128/AC176 Matched Pair	TX3, TX4	7/64/P/12391
Transistor Heat Sink Clip for Above		4/250/20008
Alt. AC131/AC186 Matched Pair	TX3, TX4	7/112/12409
Transistor Heat Sink Clip for Above		4/328/20542
Potentiometers		
2M log. Bass	R1	9/367/8/02222
500K. Rev. log. Treble	R3	9/367/7/02091
100K. log with Switch, Volume	R5	9/371/3/02200
Models of the PC11 chassis using two 400 μF capacitors for H.T. smoothing have the following electrolytic capacitor parts list:—		
50 μF 25V	C4	KEM265/S/08875
250 μF 16V	C8	KEM266/G/S/08271
400 μF 12V	C5	KEM253/S/G/08350
400 μF 25V	C9, C10	KEM283/08447