

PHILIPS RADIOPLAYER

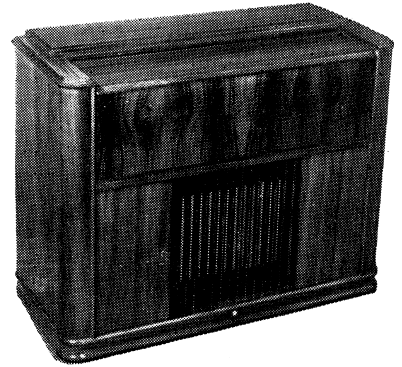
MODEL 157-A

NOTE: Model 157-A varies from Model 157 in speaker and output transformer only.
Refer to "Coils" section of parts lists for details.

SPECIFICATIONS

(Subject to alteration without notice)

Power Supply	.....	.....	.....	200-250V, 40-60c/s.
Tuning Ranges	.....	.....	.....	B/C band 530-1620 kc/s S/W band 5.9-18.4 Mc/s
Intermediate Frequency	.....	.....	.....	455 kc/s
Cabinet	.....	.....	.....	Radiogram
Gramo. Unit	.....	.....	.....	Type AG1000 (see separate service sheet).



VALVE EQUIPMENT AND VOLTAGE ANALYSIS

Valve Function	Valve No.	Valve Type	Plate Volts	Screen Volts	Osc. P. Volts
Frequency Converter	V1	6AN7	245	50	80
I.F. Amplifier, A.V.C. and Demodulator	V2	6N8	245	70	—
Audio Amplifier	V3	6N8	120	—	—
Power Amplifier	V4	6M5	220	245	—
Rectifier	V5	EZ82	Cathode — L17 C.T., 287V.		
Dial Lamps	V11, 12 & 13	6.3V 0.32A tubular screw			

Voltage across R23, -2.1V; across R23 and 24, -6.6V

NOTE: These voltages are measured with an "1,000 ohms per volt" meter and may vary $\pm 10\%$ from the figures quoted. They are measured from the socket points indicated to chassis or across the resistors listed. The receiver should be in a "no signal" condition.

ALIGNMENT.

The iron cores for the secondaries of the I.F. transformers are located in the top of the cans, those for the primaries are in the bottom of the cans. When trimming the I.F. circuits care should be taken not to screw the iron cores in too far, otherwise undesired coupling may give rise to a false peak. A preliminary positioning to the outer edge of the former of all iron cores should be made. Then, when trimming is being carried out, the cores should not be screwed in beyond the first peak. Metallic tools should not be used for I.F. transformer trimming.

Damped alignment of the I.F. channel is necessary. The procedure is:—

- Connect an 100 pF capacitor across the secondary of the 1st I.F.T.
- Trim in order, secondary of 2nd I.F.T., primary of 2nd I.F.T., primary of 1st I.F.T.
- Check (b).
- Remove the shunt from the secondary of the 1st I.F.T. and trim this circuit.
- Check (d).
- Do not alter adjustments without 100 pF shunt in position.

Broadcast band alignment frequencies are 1,420 kc/s, 3XY (oscillator and aerial trimmers), and 600 kc/s, 7ZL (slug padding); short wave alignment frequencies are 18.4 Mc/s (tuning gang fully open, oscillator trimmer) and 17.8 Mc/s (aerial trimmer—rock gang). Before commencing alignment set the dial cursor to the stop mark, which is the thin vertical mark at the extreme bottom on the right-hand end of the dial scale.

Do not attempt to adjust the iron cores of the aerial coils.

MAINS VOLTAGE ADJUSTMENT.

The power transformer is provided with two mains voltage tapplings—200/230 volts and 240/250 volts—for adjustment to the supply voltage at the point of installation. The receiver is adjusted at the factory to the 240/250 volts tapping.

If it is necessary to make a primary tapping change, care should be taken to see that the gramophone unit leads are also changed.

DIAL CALIBRATION.

If it is required to correct dial calibrations for an equal error on all stations, provision is made for moving the cursor assembly with respect to the dial cord. Loosen the clamping screw, make the necessary adjustment to the cursor position and securely retighten the clamping screw.

TO REMOVE CHASSIS FROM CABINET.

Remove the power plug from the mains outlet socket. Remove the four control knobs (a firm pull is all that is necessary) and the cabinet back. Remove the aerial and earth leads from the terminal assembly. Remove the pick-up, bezel lamp, speaker and gramophone unit plugs from their respective sockets. The chassis is held to the cabinet by four screws, two at the top of the dial back plate and two at the rear of the chassis. Removal of these screws permits the chassis to be withdrawn from the cabinet. Remove the dial back plate screws first, and during removal of the chassis screws hold the chassis to prevent it falling.

The chassis may be replaced by a reversal of the above procedure.

Published by Philips Electrical Industries Pty. Ltd.

Sydney - Melbourne - Brisbane - Adelaide - Perth

PARTS LISTS

CAPACITORS

No.	Description	Code No.
C1	10 pF mica	
C2, 9, 20, 31	100 pF mica	
C3, 25	0.05 mF 200V paper	
C4, 5, 13, 14	30 pF air trimmer	CZ.113.700
C6, 7	2 gang tuning	CZ.107.746
C8, 18, 33	0.01 mF 600V paper	
C10	50 nF mica 10%	
C11	475 pF mica 2%	CZ.066.119
C12	20 pF mica	
C15	0.008 mF mica 10%	
C16, 17, 22, 23	Part of I.F. transformers	
C19, 27	24 mF 350V electrolytic	
C21, 30	30 pF mica	
C24	0.002 mF 600V paper	
C26, 28	0.02 mF 400V paper	
C32	10 mF 40V electrolytic	
C34	0.02 mF 600V paper	
C35	0.001 mF 600V paper	

All tolerances are 20% unless otherwise stated.

RESISTORS

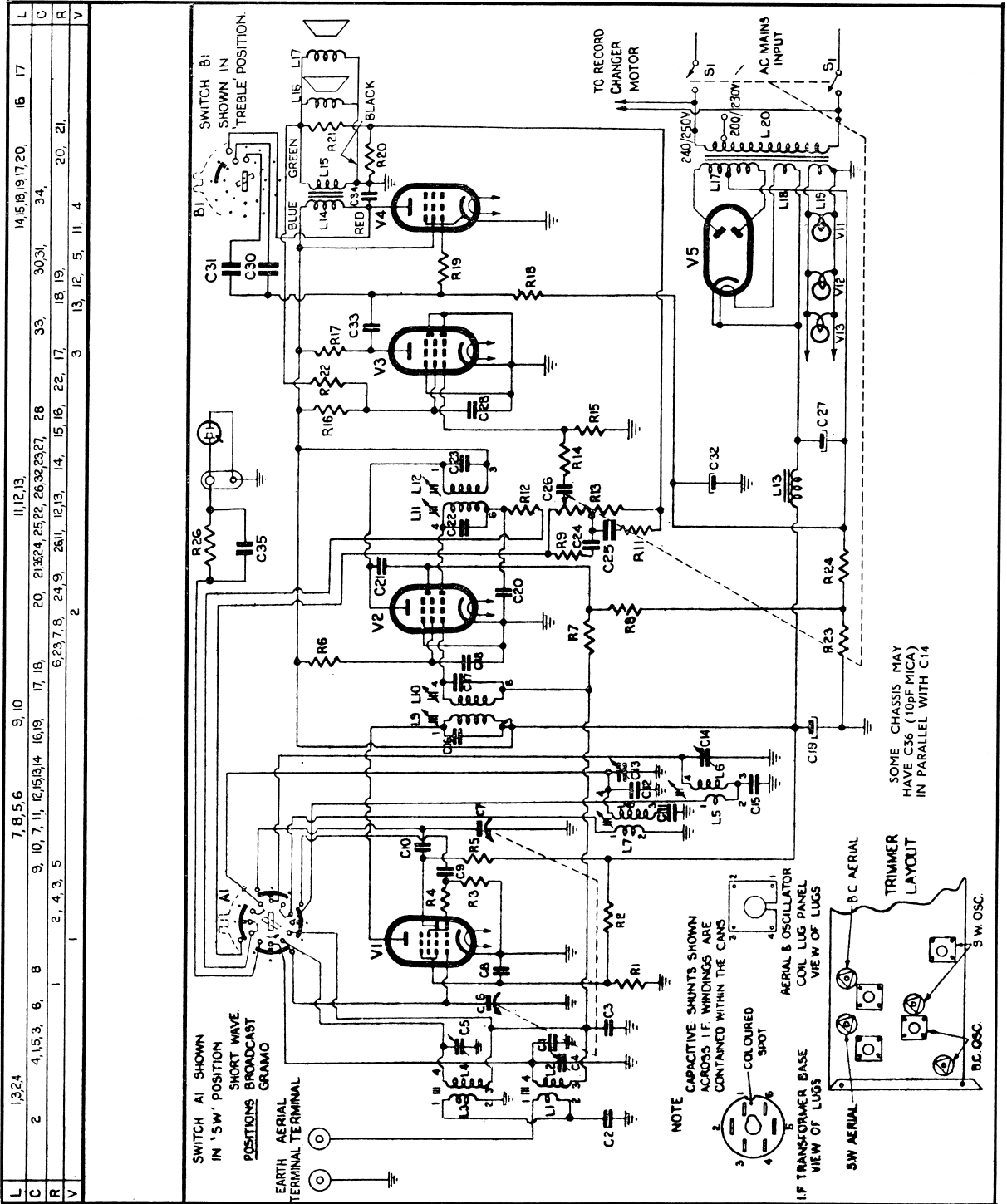
No.	Description	Code No.
R1, 5	33,000 ohms 1W carbon	
R2	82,000 ohms 1W carbon	
R3, 14, 19	47,000 ohms ½W carbon	
R4	100 ohms ½W carbon	
R6	150,000 ohms 1W carbon	
R7, 8	2.2 megohms ½W carbon	
R9, 18, 22	0.47 megohm ½W carbon	
R11	22,000 ohms ½W carbon	
R12	100,000 ohms ½W carbon	
R13	0.5 megohm tapped carbon potentiometer	CZ.029.137
R15	10 megohms 1W carbon	
R16	2.2 megohms 1W carbon	
R17	220,000 ohms 1W carbon	
R20	22 ohms ½W W/W 10%	
R21	390 ohms ½W carbon 10%	
R23	33 ohms ½W W/W 10%	
R24	75 ohms ½W W/W 10%	
R26	0.47 menohm ½W carbon	

All tolerances are 20% unless otherwise stated.

COILS

No.	Ohms	Description	Code No.
L1	1.3-1.7	S/W aerial coil (white spot)	CZ.323.006
L2	<0.5		
L3	25.5-34.5	B/C aerial coil (2 blue spots)	CZ.323.007
L4	1.7-2.3		
L5	<0.5	S/W oscillator coil (yellow spot)	CZ.330.601
L6	<0.5		
L7	1.0-1.4	B/C oscillator coil (red spot)	CZ.330.600
L8	2.9-3.9		
L9	11.5-12.5	1st I.F. transformer	CZ.320.429
L10	11.5-12.5		
L11	11.5-12.5	2nd I.F. transformer	CZ.320.430
L12	11.5-12.5		
L17	365-495	Power transformer	CZ.344.080
L18	<0.5		
L19	<0.5		
L20	31-43		
L13		Filter choke	Type 14/16
L14	Speaker	157	Type CBG56
L15	Trans-former	6,000 ohms—157A	Type 15018 for 2.8P1 in parallel
L16	Speaker	157 8P1 with L1002 cone, 2 off	
		157A 8P1 with CAMAW cone, 2 off	

IMPORTANT! In ordering spare parts, quote CODE NUMBER of part and MODEL NUMBER of Receiver. In claiming free replacement under GUARANTEE, return defective part PROMPTLY and quote MODEL and SERIAL NUMBER of Receiver and DATE OF PURCHASE.



MISCELLANEOUS COMPONENTS

No. on Dial Cord Layout Drawing	Description	Code No.	No. on Dial Cord Layout Drawing	Description	Code No.
—	Assembly, cursor	CR.480.642	—	Knob, control, 4x	CR.523.693
—	Assembly, lampsocket (dial), 2x	CZ.367.900	—	Plug, 2-pin polarised (speaker and pick-up)	CZ.365.108
—	Assembly, lampsocket (bezel)	CZ.367.920	—	Plug, male (gramo. unit power)	CZ.365.115
5	Assembly, tuning spindle	CR.371.328	3	Pulley, dial drive, 4x	CS.359.602
—	Assembly, T/C switch	CZ.200.237	—	Rod, dial slide	CS.382.213
—	Assembly, T/C clicker	CR.450.039	—	Scale, dial	CS.412.371
—	Assembly, W/C switch	CZ.200.227	—	Socket, 2 pin polarised (speaker and pick-up)	CR.370.107
—	Assembly, W/C clicker	CR.450.040	—	Socket, female (gramo. unit power)	CZ.365.116
—	Badge, Philips	CR.531.408	—	Socket, bezel lamp	CZ.370.106
—	Bank, T/C switch	CZ.200.204	2	Spring, dial drum	CS.210.021
—	Bank, W/C switch	CZ.200.231	—	Switch, mains on/off	CZ.210.108
—	Bezel, amber	CS.430.024			
—	Clip, I.F.T. mounting, 6x	CS.235.833			
4	Cord, dial drive	63" of cord required			
1	Drum, dial	CS.360.007			

DIAL CORD LAYOUT

VIEW FROM REAR OF CHASSIS.

