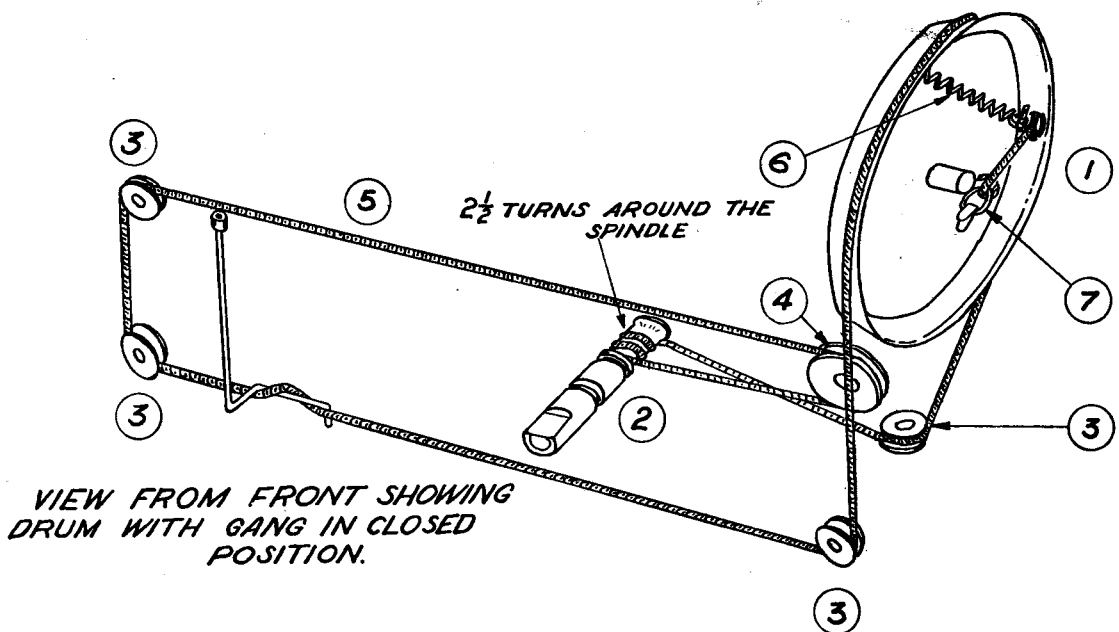


## MISCELLANEOUS COMPONENTS

No. on Dial Cord Layout Drawing	Description	Code No.	No. on Dial Cord Layout Drawing	Description	Code No.
—	Assembly, cabinet grille and overlay	CR.520.832	5	Cord, dial drive	50" of cord required
—	Assembly, cursor	CR.480.657	1	Drum, dial	CS.360.005
—	Assembly, lampholder	C/F 733.8.1	—	Gear, driving W/C and T/C gearwheels, 2x	CS.354.202
—	Assembly, W/C clicker	CR.450.045	—	Gearwheel, W/C and T/C spindles, 2x	CS.354.201
—	Assembly, W/C switch	CZ.200.238	—	Knob, inner	CS.432.658
—	Badge, Philips	CS.436.425	—	Knob, outer	CR.523.711
—	Bank, W/C switch	CZ.200.213	3	Pulley, dial drive, 4x	CS.359.612
—	Cabinet and grille, burgundy	CR.570.569	4	Pulley, dial drive, 1x	CS.359.602
—	Cabinet and grille, ivory	CR.570.568	—	Scale, dial	CS.412.392
—	Cabinet and grille, walnut	CR.570.570	—	Sleeve, gear driving (dog), 2x	CS.381.870
—	Clip, gear wheels and knobs, 4x	CS.281.832	2	Spindle, tuning	CS.351.243
—	Clip, spring (I.F.T. mtg.), 2x	A3.652.58	6	Spring, dial cord	CS.210.020



*Walton*

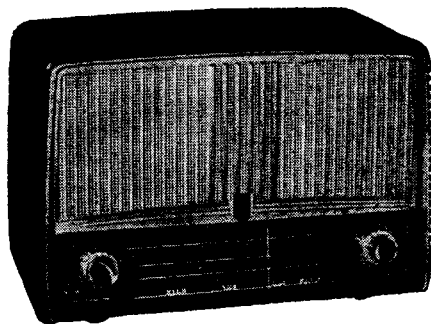
# PHILIPS RADIOPLAYER

## MODEL 161

### SPECIFICATIONS

(Subject to alteration without notice)

Power Supply	.....	200-250V, 40-50 c/s.
Tuning Ranges	.....	B/C band, 530-1620 kc/s. S/W band, 5.85-12.2 Mc/s.
Intermediate Frequency	.....	455 kc/s.
Cabinet	.....	Plastic table.



### VALVE EQUIPMENT AND VOLTAGE ANALYSIS

Valve Function	Valve No.	Valve Type	Plate Volts	Screen Volts	Osc. P. Volts
Frequency Converter	V1	6AN7	235	53	95
	V2	6BH5	235	53	—
I.F. Amplifier					
Audio Amplifier, A.V.C. and Demodulator	V3	6BD7	70	—	—
	V4	6M5	240	235	—
Power Amplifier					
Rectifier	V5	6V4	V5 Cathode — L17 C.T., 256V.		
Dial Lamp	V11		6.3V, 0.32A, tubular screw		
			Voltage across R13, -1.2V. Voltage across R18, 5.5V.		

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.

#### TO REMOVE CHASSIS FROM CABINET.

Remove the power plug from the wall outlet socket. Remove the cabinet back (6 screws) and unplug the aerial loop. Remove the two top speaker mounting screws. Remove the four chassis mounting screws from the counter bored holes in the base of the cabinet. The chassis may now be withdrawn from the cabinet.

Refitting of the chassis is a reversal of the above procedure.

If it is necessary to turn the cabinet face downwards during service work, some soft protective material should be used over the work area.

#### ALIGNMENT.

Alignment may be carried out without the necessity of removing the chassis from the cabinet. There is a variation in the position of the B/C oscillator padding adjustment within this model—refer to the trimmer location drawings shown as insets to the circuit diagram drawing.

Because of the noise pick-up of the aerial loop, it will be found advisable to either carry out alignment without the loop in position, or else to desensitise the receiver. If the loop is removed, its place should be taken by a 50,000 ohms carbon resistor connected between the red and yellow or blue leads. To desensitise the receiver, connect a 25,000 ohms 1 watt 10% carbon resistor and a 0.1 mF 200V. 20% paper capacitor in series across the secondary of the first I.F. transformer.

Before attempting alignment, set the dial cursor, with the tuning gang fully closed, to the right-hand edge of the 49M band block.

I.F. transformer adjustments are:—

2nd I.F.T.—

Secondary — nearer 6

Primary — nearer 6BH5

1st I.F.T.—

Secondary — nearer 6BH5

Primary — nearer 6AN7

For broadcast band alignment: when the loop is in position use a 50 pF capacitor as dummy; if the loop has been removed use the standard I.R.E. dummy. Because of the interdependence of oscillator coil coupling windings, it is essential that the broadcast adjustments be made before the short wave adjustments. Broadcast band alignment frequencies are: 1,420 kc/s (oscillator trimmer and loop trimmer), and 600 kc/s, 7ZL (oscillator padding). Short wave band alignment frequencies are: 6.1 Mc/s, small peaked mark above "9" in 49M block (oscillator padding), and 11.85 Mc/s, small peaked mark between "2" and "5" in 25M block (oscillator trimmer and aerial trimmer, the latter with rocking of the tuning gang).

The broadcast aerial loop trimmer should be adjusted only with the loop in its normal operating position.

If an oscillator coil has been replaced, it is advisable to make a preliminary peaking of the iron core at 600 kc/s or 6.1 Mc/s, as the case may be, before proceeding with normal alignment procedure.

**No attempt should be made to adjust the iron core of the S/W aerial coil.**

#### DIAL CALIBRATION ADJUSTMENT.

If dial calibrations are incorrect over the dial scale by an equal amount, the condition can be corrected by sliding the cursor on the dial cord. An access hole for this purpose is provided in the base of the cabinet.

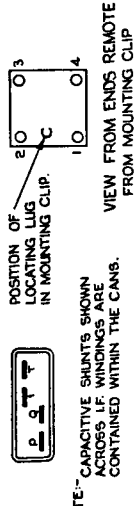
#### MAINS VOLTAGE ADJUSTMENT.

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

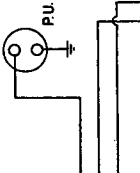
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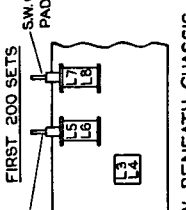
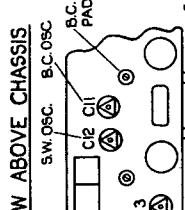
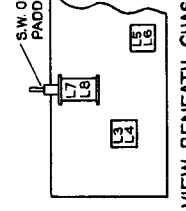
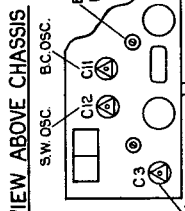
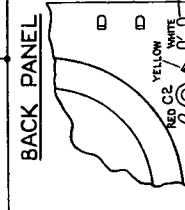
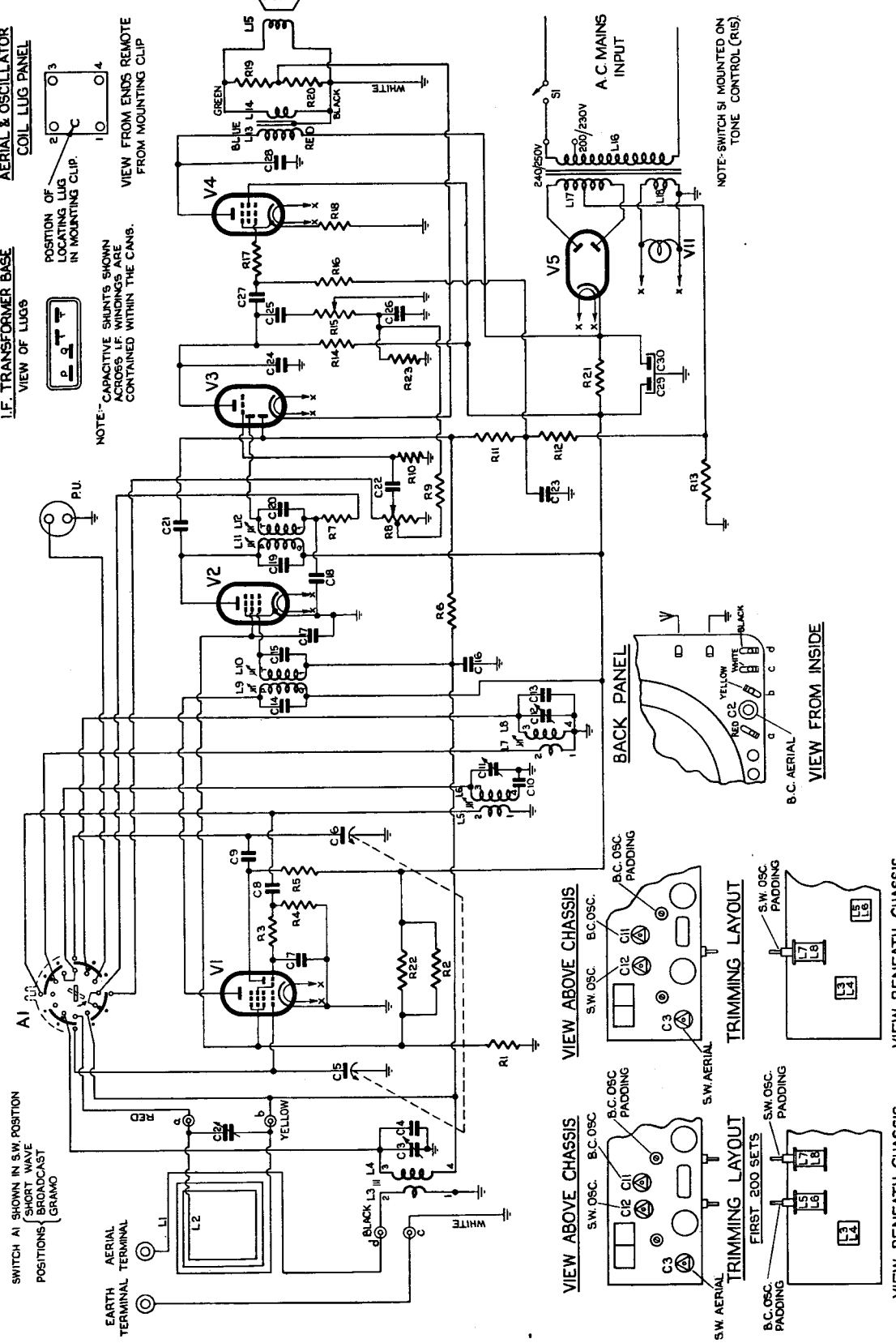
**I.F. TRANSFORMER BASE**  
VIEW OF LUGS



**AERIAL & OSCILLATOR**  
COIL LUG PANEL



SWITCH A1 SHOWN IN S.W. POSITION  
SHORT WAVE BROADCAST  
(GRAND)



PARTS LIST

CAPACITORS

No.	Description	Code No.
C2	50 pF compr. trimmer	
C3, 12	30 pF air trimmer	CZ.113.700
C4	95 pF mica 2½%	CZ.064.512
C5, 6	2 gang tuning	CZ.107.746
C7	10 pF mica	
C8, 9, 18, 24	100 pF mica	
C10	450 pF mica 2%	CZ.066.117
C11	60 pF air trimmer	49.005.58
C13	60 pF mica 2½%	CZ.064.514
C14, 15, 19, 20	Part of I.F. transformers	
C16	0.1 mF 200V paper	
C17, 26	0.02 mF 400V paper	
C21	30 pF mica	
C22, 25	0.01 mF 400V paper	
C23	0.05 mF 200V paper	
C27, 28	0.005 mF 600V paper	
C29	8+24 mF 350V dual electrolytic	CZ.099.913

Unless otherwise stated, all tolerances are 20%

RESISTORS

No.	Description	Code No.
R1, 2	47,000 ohms 1W carbon	
R3	270 ohms ½W carbon 10%	
R4, 7	47,000 ohms ½W carbon	
R5	33,000 ohms 1W carbon	
R6, 11	1 megohm ½W carbon	
R8	0.5 megohm tapped carbon potentiometer	CZ.029.145
R9	10,000 ohms ½W carbon 10%	
R10	10 megohms ½W carbon	
R12	0.56 megohm ½W carbon 10%	
R13	27 ohms ½W W/W 10%	
R14	0.22 megohm ½W carbon	
R15	2 megohms switch potentiometer	CZ.032.600
R16	0.47 megohm ½W carbon 10%	
R17	4,700 ohms ½W carbon	
R18	180 ohms ½W W/W 10%	
R19	1,000 ohms ½W carbon	
R20	15 ohms ½W W/W 10%	
R21	2,200 ohms 1W carbon 10%	

Unless otherwise stated, all tolerances are 20%

COILS

No.	Ohms	Description	Code No.
L1	<1	B/C loop	CR.572.106
L2	1.0-1.4		
L3	1.3-1.7	S/W aerial coil	CZ.323.022
L4	<1		
L5	0.9-1.1	B/C oscillator coil	CZ.330.612
L6	3.1-3.9		
L7	<1	S/W oscillator coil	CZ.330.611
L8	<1		
L9	11.5-15.5	1st I.F. transformer	A3.124.25
L10	11.5-15.5		
L11	11.5-15.5	2nd I.F. Transformer	A3.124.25
L12	11.5-15.5		
L13		Output transformer	Type HCG76
L14		Speaker	Type 5-7H, F86
L15		Power transformer	CZ.344.085
L16	28-38		
L17	305-415		
L18	<1		

**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.**