

PHILIPS MANTEL RADIOPLAYER MODEL 304I

A.C. OPERATED FOR BROADCAST RECEPTION

SPECIFICATIONS. (Subject to Alteration without Notice.)

Voltage Rating (Power Supply)	220 to 260 volts A.C. (Also special 110 volt Models)
Tuning Range	1610 to 540 Kc/s
Intermediate Frequency	472.5 Kc/s

VALVE EQUIPMENT.

Frequency Converter	EK2GT	Octode (V.1)
I.F. Amplifier, A.V.C. and Demodulator	EBF2	Duo-diode Triode (V.2)
Power Amplifier	EL3N	Power Penthode (V.3)
Rectifier	5Y3G	Full Wave (V.4)
Dial Lamp	6.3 volt 0.3 amp.	Panel Lamp (V.11)

VOLTAGE ADJUSTMENT

The receiver may be adapted for A.C. mains of 220, 240 or 260 volts by means of taps located on the power transformer. It is important that the receiver should be operated with the red lead of the power flex connected to the tap which most nearly corresponds to the mains voltage where the installation is made.

REMOVING THE CHASSIS

- (1) Disconnect power plug and remove back of cabinet.
- (2) Remove all knobs from front of cabinet.
- (3) Remove two screws from top of dial bracket.
- (4) With the above screws removed the chassis complete with speaker and dial mechanism may be withdrawn.

REPLACING THE CHASSIS

This may be accomplished by a reversal of the withdrawal procedure.

DIAL CALIBRATION

If, due to transit, or some other reason, the pointer does not indicate the correct position for tuning a given station, the position of the pointer in relation to the gang condenser can be adjusted by loosening the screw securing the pointer assembly to the dial drive cord and sliding the pointer to the required position. After adjustment tighten the clamping screw securely.

NOTE:

Should it be necessary at any time to replace the dial drive cord, it is important that the method of threading shown on the diagram over the page should be closely followed.

VOLTAGE ANALYSIS

Valve Type	Plate	Screen	Cath.	Osc. Plate	Bias
EK2GT	220	40	—	220	—1
EBF2	220	70	—	—	—
EL3N	205	220	—	—	—6
5Y3G	268v. A.C. per plate				—

Unfiltered B+ 280v.

NOTE:

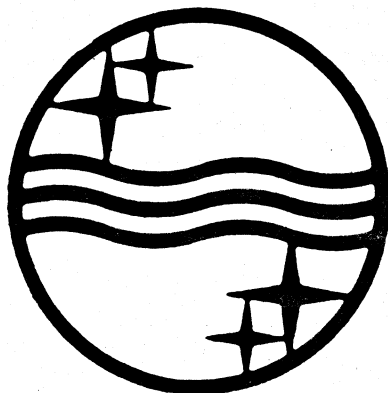
The abovementioned voltage values, with the exception of bias voltages, are measured between the socket points indicated and chassis, with the receiver in the no signal condition and with the volume control at zero. Bias voltages are to be measured at the source of the voltage, as incorrect readings will otherwise be obtained. Voltages are measured with a 1,000 ohm per volt voltmeter and may vary as much as 10 per cent. from the figures quoted.

SERVICE DATA

COMPONENTS NOT SHOWN ON CIRCUIT DIAGRAM

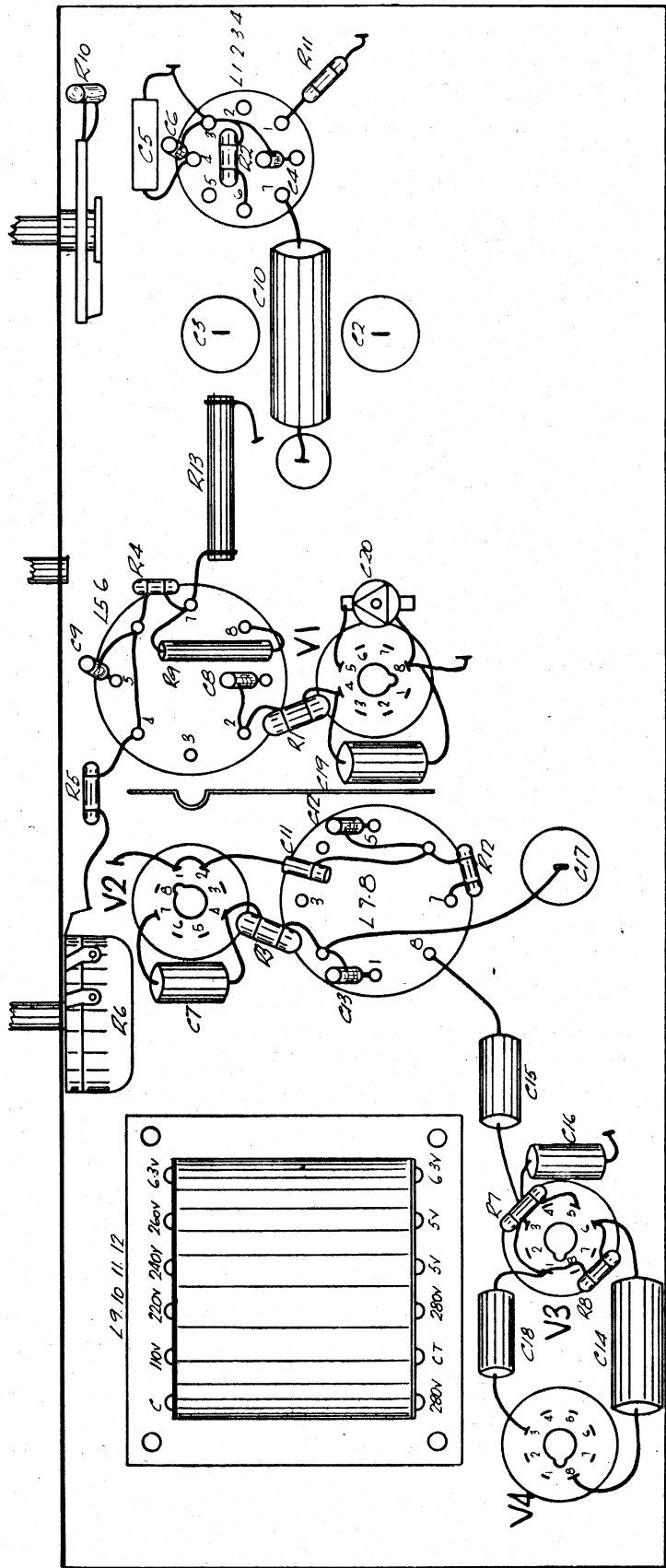
No. on Dial	Diagram	Description	Code No.	Price	No. on Dial	Diagram	Description	Code No.	Price
—		Back, cabinet	34/183	2/6	—		Knobs, control	32/281	5d.
—		Baffle with silk	34/439	2/6	—		Lamp, pilot	92/213	6d.
—		Bracket, speaker mounting	24/413	6d.	—		Plate, dial back	24/590	4/6
—		Cabinet, moulded, bakelite No. 30	32/540	20/—	3		Pointer, assembly, complete	93/265	9d.
—		Clamp, baffle	23/637	2d.	4		Pulley, dial drive, wood	34/134	6d.
—		Clamp, dial glass	23/459	1d.	—		Silk, baffle	35/239	2/—
—		Clip, grid, small	24/629	1d.	—		Socket, octal, Amphenol	34/521	6d.
5		Cord, dial drive	35/332	6d.	—		Socket, pilot lamp	34/901	5d.
—		Cord, power cable	26/211	1/9	6		Spindle, tuning control	24/991	9d.
1		Drum, dial drive, moulded	34/955	2/—	2		Spring, dial cord	25/219	3d.
—		Glass, dial, printed	35/422	4/6	—		Switch, tone control	93/352	2/9
—		Grommet, power cord	32/313	2d.					

(PRICES QUOTED SUBJECT TO CHANGE WITHOUT NOTICE)



COMPONENT LOCATION DIAGRAM

L	4 16 11 12	7 8	5 6	1 2 3 4
C	18	11 12	9	2 3 5
R	14	7 8	17 19	4 6 10 11
V	4	6 3 13	5 1 9	2 10 11 18



SERVICE DATA

COMPONENT PARTS

CONDENSERS (PRICES QUOTED ARE STRICTLY NETT AND ARE SUBJECT TO ALTERATION WITHOUT NOTICE)

No.	Value	Code No.	Price	No.	Value	Code No.	Price
C2/3.....	Tuning Condenser	53/322	9/11	C14	8 mfd Electrolytic	52/430	2/9
C4	30 mmfd Trimmer	52/536	3d.	C15 .....	.02 mfd	52/313	7d.
C5	340 mmfd \pm 5%	52/278	7d.	C16 .....	.006 mfd	52/326	8d.
C6	200 mmfd Trimmer	52/538	6d.	C17	16 mfd Electrolytic.....	52/432	3/9
C7 .....	.01 mfd	52/332	7d.	C18 .....	.002 mfd	52/333	7d.
C8/9.....	125 mmfd Trimmer	52/535	6d.	C19 .....	.01 mfd	52/332	7d.
C10 .....	.1 mfd	52/317	11d.	C20	Metal Trimmer	54/313	8d.
C11	100 mmfd	52/811	6d.				
C12/13.....	125 mmfd Trimmer	52/535	6d.				

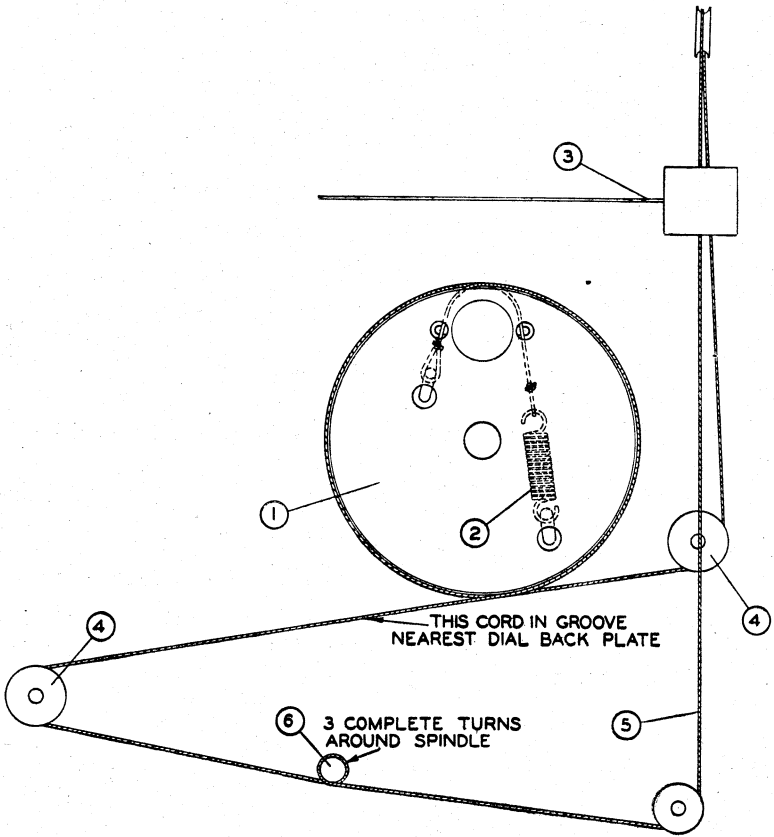
RESISTORS

No.	Value	Code No.	Price	No.	Value	Code No.	Price
R1	150,000 ohm	62/314	5d.	R7	50,000 ohm	62/212	4d.
R2	25,000 ohm	62/218	4d.	R8	1 megohm	62/214	4d.
R3	100,000 ohm	62/313	5d.	R9	120 ohm	64/251	6d.
R4	1 megohm	62/214	4d.	R10	10,000 ohm	62/323	5d.
R5	2 megohm	62/222	4d.	R11	10,000 ohm	62/213	4d.
R6 .....	.5 megohm			R12	50,000 ohm	62/212	4d.
	Potentiometer	63/435	3/3	R13	25 ohm	62/441	6d.

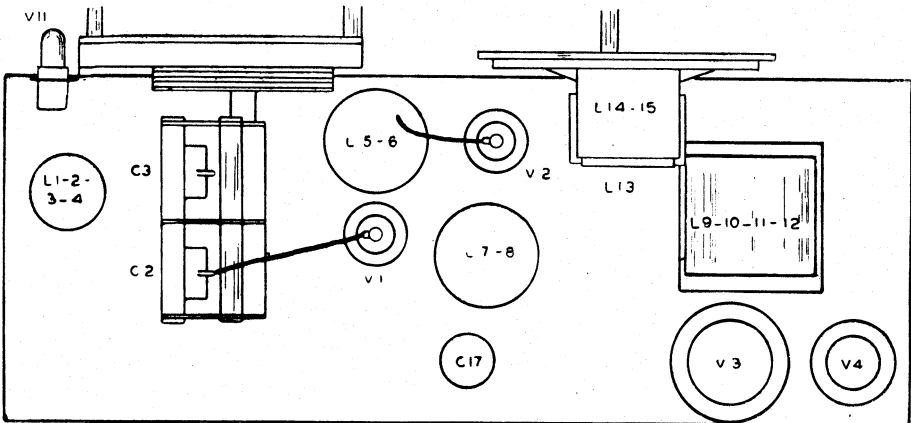
COILS

No.	Description	Code No.	Price	No.	Description	Code No.	Price
L1/4	Aerial and Oscillator Coil	42/742	5/6	L9/12	Power Transformer	44/255	11/3
L5/6	First I.F.	42/319	7/3	L13/16	Speaker and Transformer	45/371	18/-
L7/8	Second I.F.	42/430	7/3	L14/15	7,000 ohm Speaker Transformer	44/342	7/-

DIAL PARTS DIAGRAM



CHASSIS LAYOUT DIAGRAM



L	I.	2.	3.	4.	5.	6.	9.	7.	8.	10.	11.	12.	13.	14.	15.	16.	17.
C		2.	3.	20.	8.	7.	9.	10.	11.	18.	13.						
R	II.	1.	19.	4.	5.	6.	12.	7.	8.	9.	13.						
V		I.	2.	3.	3.	3.	2.	11.	3.	4.	11.	3.	4.				

