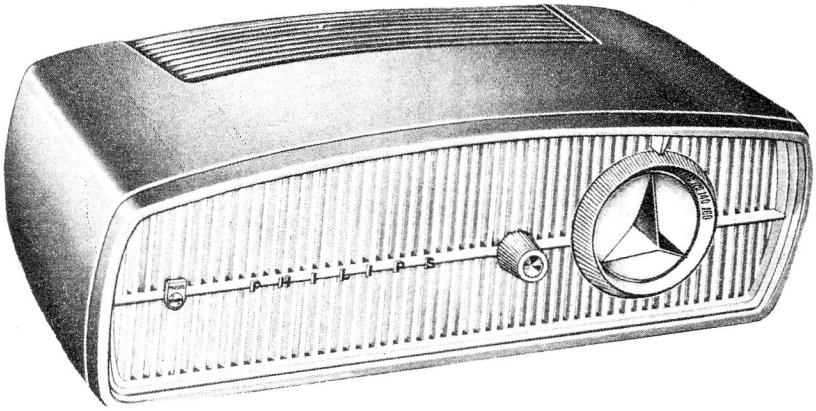
SERVICE DATA

MANTEL RADIO

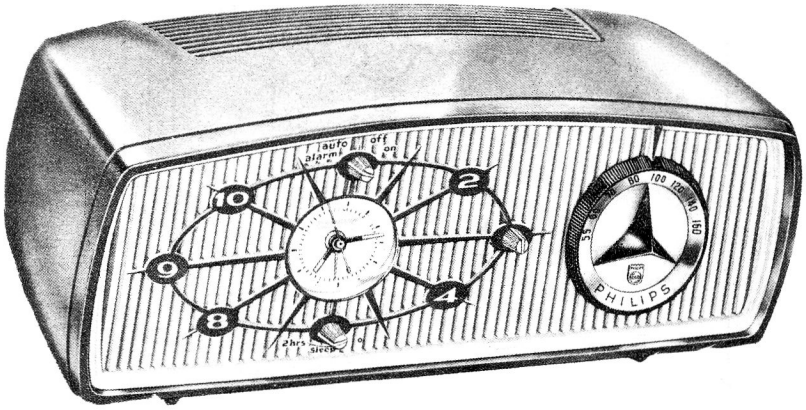
B1C12U
B1C13U

MODELS

RG1050U
RG1051U



B1C12U



B1C13U

PHILIPS

COMPILED AND PUBLISHED BY

ROGERS MAJESTIC

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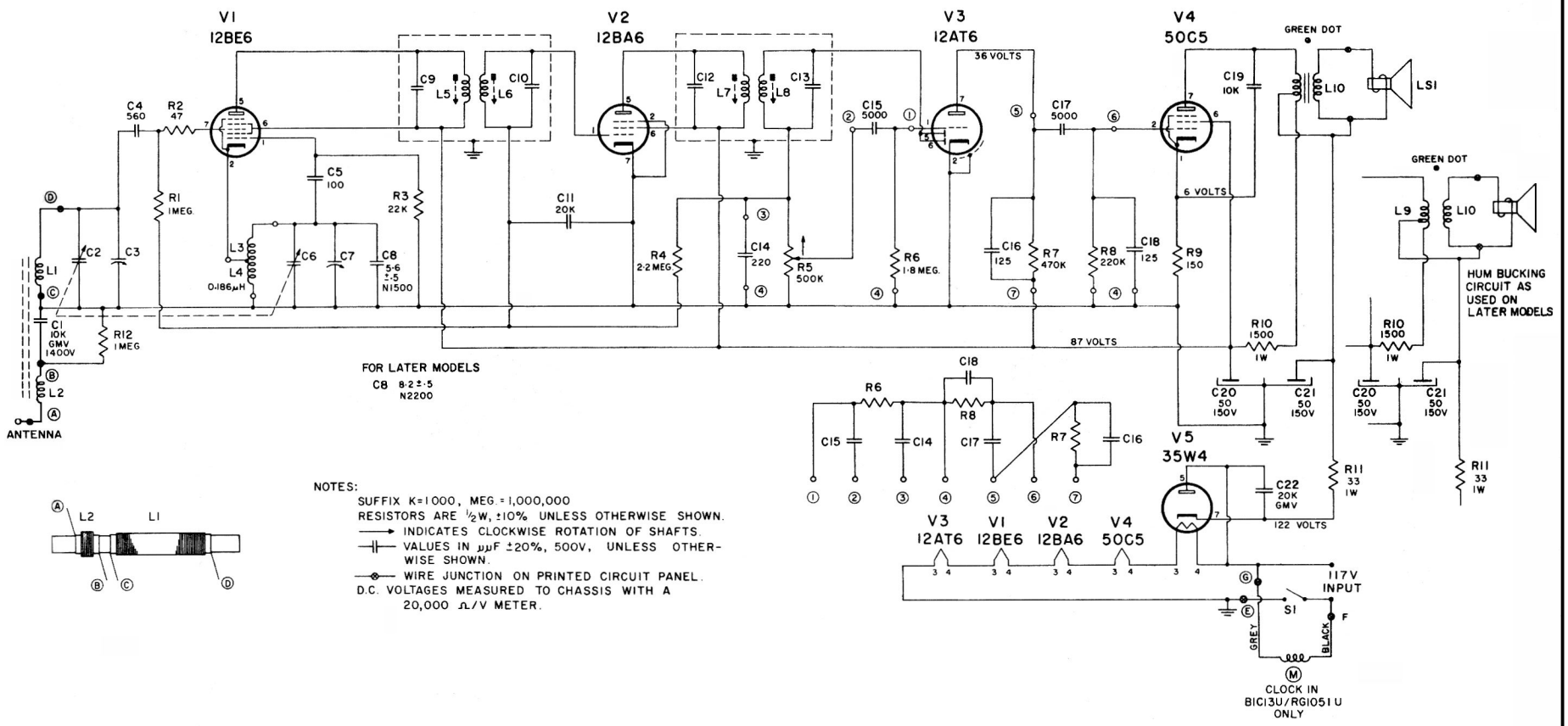


NOTES:

SUFFIX K=1000, MEG.=1,000,000

RESISTORS ARE ½W, ±10% UNLESS OTHERWISE SHOWN.

——→ INDICATES CLOCKWISE ROTATION OF SHAFTS.

—||— VALUES IN μμF ±20%, 500V, UNLESS OTHERWISE SHOWN.

—⊗— WIRE JUNCTION ON PRINTED CIRCUIT PANEL.

D.C. VOLTAGES MEASURED TO CHASSIS WITH A 20,000 Ω/V METER.

SERVICE MANUAL

MODELS B1C12U/RG1050U, B1C13U/RG1051U

DESCRIPTION

Models B1C12U and RG1050U are five tube AM superheterodyne (117V, AC-DC) radios.

Models B1C13U and RG1051U are clock-radios (117V, 60 c/s) consisting of a five tube AM superheterodyne radio combined with an electric alarm clock.

ALIGNMENT OF RECEIVER

GENERAL

1. A line isolating transformer (117V, 1:1 ratio transformer) must be used on AC lines with this receiver to prevent shock hazard and to protect the equipment.

2. When using a power meter as an output indicator set it to 4 ohms impedance and do not exceed 500 mw during alignment. If an a.c. voltmeter is used, connect it across the loudspeaker and do not exceed 1.4V during alignment.

3. The RF signal generator must be capable of supplying modulated RF frequencies from 450 Kc/s to 1640 Kc/s. The ground return lead must be connected to the tuning capacitor frame.

IF ALIGNMENT 455 Kc/s.

1. Turn the gang to the fully open position.

2. Connect the direct output of the generator via a .05 μF capacitor to the stator lug of the rear section of the gang. Set the generator to 455 Kc/s.

3. Adjust L8, L7, L6 and L5 in that order for maximum output.

RF ALIGNMENT

1. Set the RF generator to 1640 Kc/s and connect the dummy output via a 200 μμF capacitor to the antenna terminal.

2. Adjust C7 for maximum output.

3. Set to 1500 Kc/s and tune in the signal on the receiver.

4. Adjust C3 for maximum output.

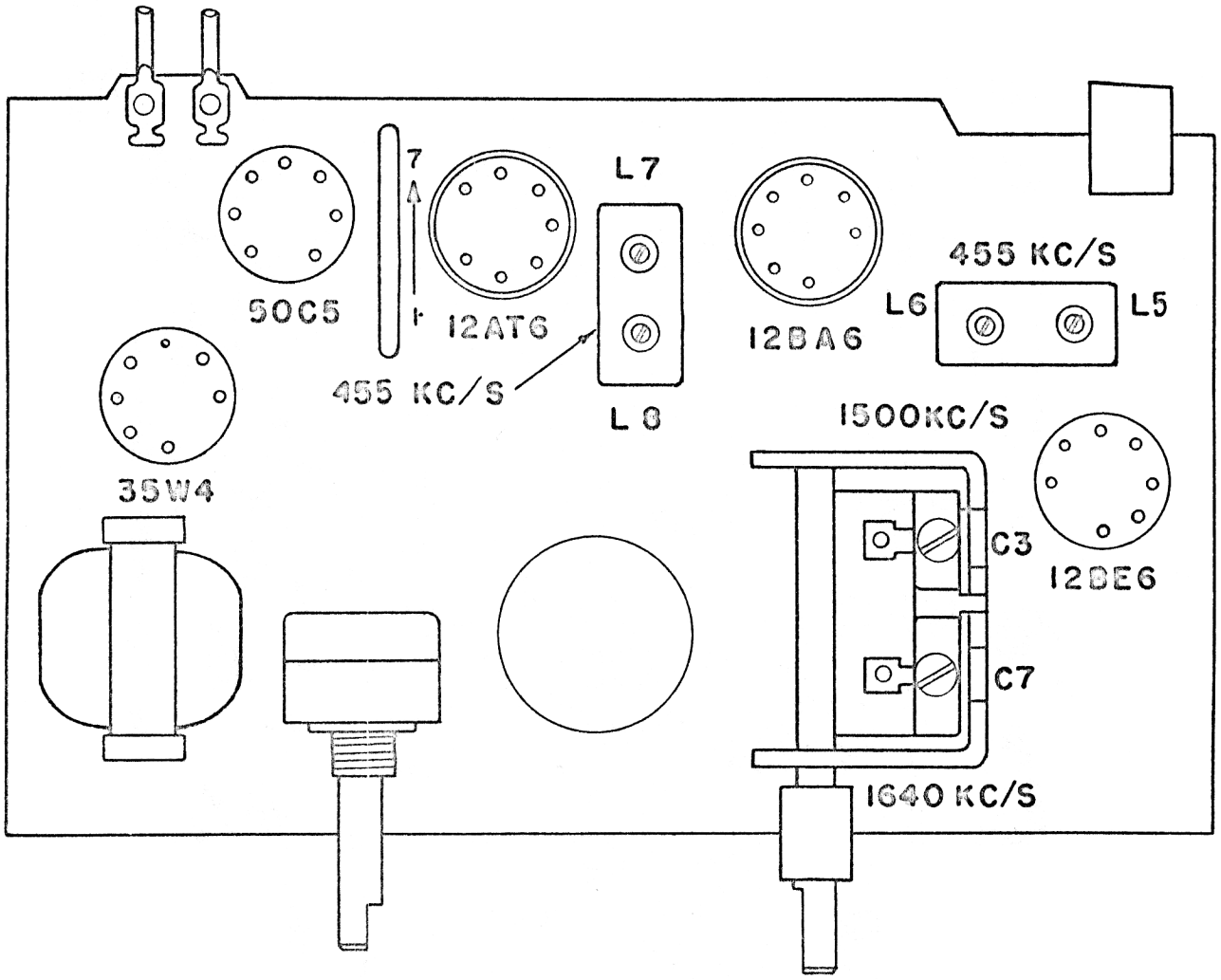
5. Check that the receiver tunes through 540 Kc/s and 1600 Kc/s.

ROGERS TUBES

V 1	12BE6	Pentagrid Converter
V 2	12BA6	IF Amplifier
V 3	12AT6	Detector, A.G.C. and 1st AF Amplifier
V 4	50C5	Audio Output Amplifier
V 5	35W4	Rectifier

SPECIAL PARTS

R 5	B1C12U/RG1050U Volume OFF-ON, 500 K	505-180
	B1C13U/RG1050U Volume, 500K	505-184
R 6, 7, 8)		
C14, 15, 16)	Couplate	51952200
C17, 18)		
C 2, 3, 6, 7	Tuning Capacitor	510-077
C 8	5.6 μμF ±.5 N1500	514-933
C 20, 21	50 + 50 μF 150V	516-608
L 1, 2	Antenna and Support Assy.	06039300
L 3, 4	Oscillator Coil	070-355
L 5, 6)		
L 7, 8)	Transformer IF	06039100
L 9, 10	Output Transformer	05040500
LS1	B1C12U/RG1050U Speaker 3" x 5	04125900
	B1C13U/RG1051U Speaker 3"	041-257
	B1C13U/RG1051U Clock Assy.	13031400
* See Footnote	- Line Cord	10010200
	Knob Tuning B1C12U/RG1050U	57255900
	B1C13U	57255901
	RG1051U	57255902
	Knob Control B1C12U/RG1050U	572-526
	B1C13U/RG1051U	572-581
	B1C12U/RG1050U Cabinet Back Yellow	031-250
	B1C12U Cabinet Face White	031-257
	RG1050U Cabinet Face White	031-259
	B1C13U/RG1051U Cabinet Back Turquoise	03129101
	Cabinet Face White-Brown	03129202
	Crystal Clock	33296500
* Insert	Field Assy. Clock	13032100
	Armature Assy. Clock	13032200



TUBE LOCATION AND ALIGNMENT

LS
C22
V5
L10
L9
R11
C19
V4
F
E
R5
R9
R10
V3
C20
C21
L2
B
C1
R4
V2
C
C6
C2
C4
R1
R2
L6
C11
L1
R3
C8
D
C5
L5
V1
L3
L4
ANT.
A