RCA VICTOR
MODEL BP6C

"HIS MASTER'S VOICE"

Portable 6 Tube Single Band AC-DC Superheterodyne

TECHNICAL INFORMATION AND SERVICE DATA

1948 No. 20

GENERAL SERVICE DIVISION • RCA VICTOR COMPANY LTD.

Electrical and Mechanical Specifications

Frequency Range ..... 540-1,600 kc

Intermediate Frequency ..... 455 kc

Power Supply Rating

110 to 125 volts, AC 25 to 60 cycles, or DC.....18 watts

Batteries required

One Eveready Pack. No. 753

Tube Complement

(1) RCA—1T4 .....R.F.
(2) RCA—1R5 .....Converter
(3) RCA—1U4 .....I.F.-Amplifier
(4) RCA—1U5 .....2nd Det. AVC. & A.F.-Amplifier
(5) RCA—3V4 .....Power Output
(6) RCA—117Z3 .....Rectifier

Current Consumption

Battery Operation....."A" 50 ma., "B" 13 ma.
Total Rect. Current (117 volt, 60 cycle).....61 ma.

Power Output

Undistorted ..... .150 watt
Maximum ..... .275 watt

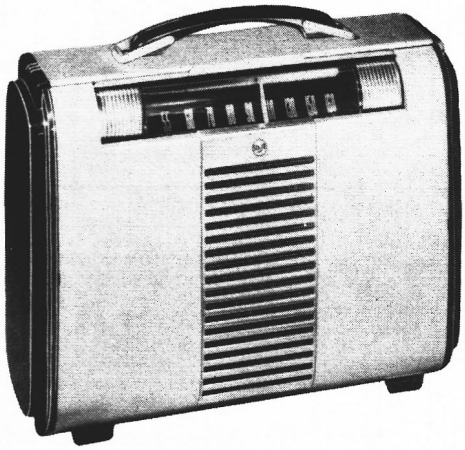
Loudspeaker.....4 in. P.M. 3.4 ohms at 400 cycles

Cabinet Dimensions

Height...13¼ in. Width...9½ in. Depth...5½ in.

CAUTION.—

1. **Do not remove any tubes from the chassis with the set operating and the plug connected to the power line. Damage to tubes may result.**
2. **When cleaning the aluminum portion of the case use soap and water or cleaning fluid. Do not use abrasive cleansers.**



(PHOTOGRAPH OF MODEL BP6)

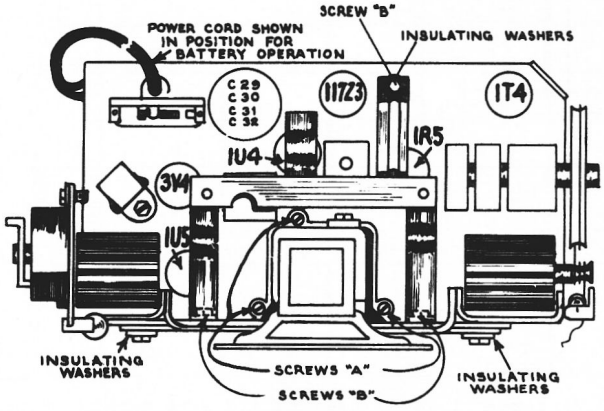
AC-DC Operation.—

This receiver will operate on 105 to 125 volts, AC 25 to 60 cycles, or DC.

A power cord is stored in the fiber tube which is clamped above the chassis inside the cabinet. To open the cabinet, push the wire latch on the bottom of the case to the right, and raise the back cover upward on its hinges. Then pull the power cord plug out of the socket on the top of the chassis as shown, and take out and unroll the power cord. A slot in the bottom of the cabinet allows the closing of the cabinet with the power cord passing through. Close the cabinet with the cord extending through the slot and insert the plug into a convenient electrical outlet.

When returning to battery operation, be sure to replace the power plug in its socket inside the case with the cord stored in the fiber tube.

NOTE. If reception is not obtained on DC, reverse plug in outlet receptacle. This may also reduce hum on AC operation.



Insulating Washers:

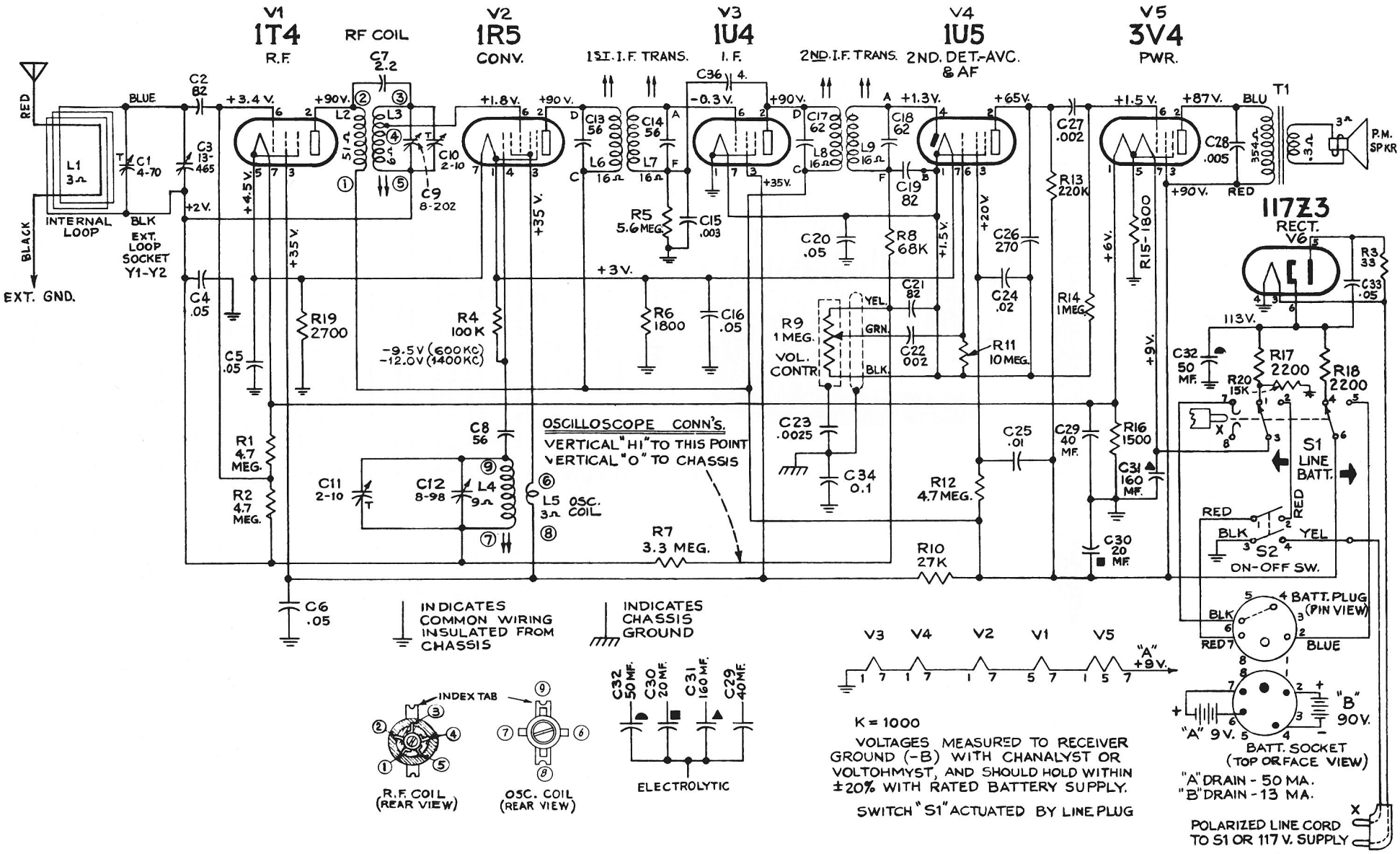
The mounting bracket and dial frame are insulated from the chassis with insulating washers. This serves to insulate the case from the chassis. In servicing make certain that these washers are in place and properly positioned.

To Remove Chassis from Cabinet:

1. Disconnect battery plug and remove battery.
2. Disconnect antenna in cabinet.
3. Remove the two screws in the top of the cabinet (beneath handle).
4. Remove the two battery clips.
5. Remove the chassis from the cabinet

To Remove Speaker:

1. Remove tubes 3V4 and 1U5.
2. Remove the three screws "B" holding power cord bracket assembly and remove bracket.
3. Remove the three screws "A" holding speaker bracket assembly.
4. Disconnect voice coil leads.
5. The speaker and speaker bracket may now be removed.



SCHEMATIC DIAGRAM

Alignment Procedure

Cathode Ray Alignment is the preferable method. Connections for the oscilloscope are shown on the schematic diagram.

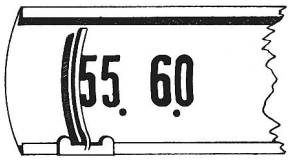
Output Meter Alignment.—If this method is used, connect the meter across the voice coil and turn the receiver volume control to maximum.

Test Oscillator.—For all alignment operations, connect the low side of the test oscillator to the receiver chassis and keep the oscillator output as low as possible to avoid AVC action.

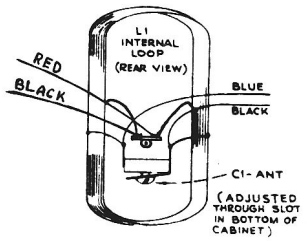
Battery operation of the receiver is preferable during alignment: on AC operation an isolation transformer (117v./117v.) may be necessary for the receiver if the test oscillator is also AC operated.

Calibration Scale.—The calibrated dial scale is attached to the chassis. It can be used directly as a reference for alignment.

With the gang at full mesh set the dial pointer so that the pointer is in line with the left hand vertical of the first figure 5 of the figures 55 on the dial scale as illustrated below.

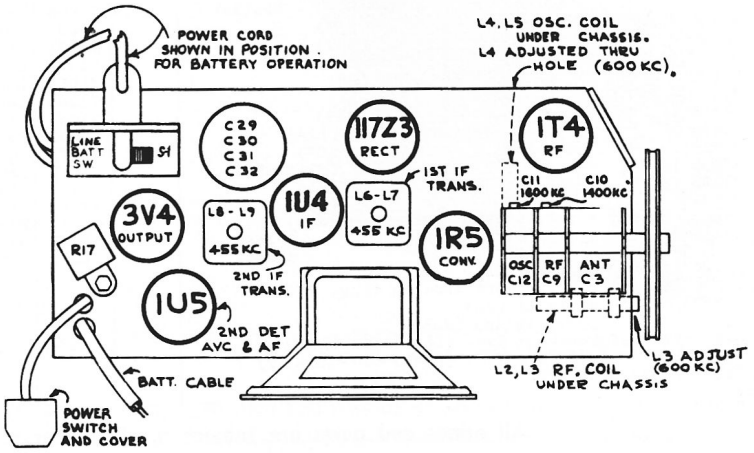


Dial Pointer Setting



Critical Lead Dress

1. Dress all filament leads next to chassis.
2. Keep the leads short on the end of the three components which connect to the grid terminal (#6) of the r.f. socket. (R-1, R-2, C-2).
3. Keep lead to center section of gang as short as possible.
4. Dress loop leads away from tuning drum and battery.
5. Dress lead to pin #4 of 1U5 tube away from other wiring.
6. Dress r.f. plate lead away from r.f. grid circuit.
7. Dress avc lead away from 2nd IF transformer and associated components.
8. Dress converter plate lead away from chassis and away from output leads.
9. Dress output leads up and away from other wiring.
10. Dress neutralizing capacitor C36, flat against chassis.
11. Dress 1st audio plate lead up and away from other wiring.
12. Dress R.F. tube plate lead slightly away from chassis base.
13. Dress 33 ohm resistor (R3) over bottom of rectifier socket and clear of other wiring.



Tube and Trimmer Locations

ALIGNMENT CHART

Order of Alignment		TEST OSCILLATOR: Connect "HI" Side To	TEST OSCILLATOR: Connect "LO" Side To	TEST OSCILLATOR: Dummy Antenna	TEST OSCILLATOR: Frequency Setting	TEST OSCILLATOR: Range Selector	Receiver Dial Setting	Circuit To Adjust	Adjustment Symbols	Notes
I.F. ALIGNMENT	1	1U4 I.F. GRID	GND	.01 MFD.	455 KC.		1600 KC.	2ND. I.F. TRANS.	L8 & L9 TOP *	MAX. OUTPUT
	2	1R5 CONV GRID	GND	.01 MFD.	455 KC.		1600 KC.	1ST. I.F. TRANS.	L6 & L7 TOP *	SAME
	3	SAME	SAME	SAME	SAME		SAME	2ND. I.F. TRANS.	L8	SAME
S.B. ALIGNMENT	4	BLUE LOOP LEAD	SAME	SAME	1600 KC		SAME	OSC.	C-11	SAME
	5	SAME	SAME	SAME	1400 KC.		1400 KC.	R.F.	C-10	SAME
	6	SAME	SAME	SAME	600 KC.		600 KC.	OSC. R.F.	L4 L3	SAME
	7	REPEAT STEPS 4, 5 AND 6								
	8	SEE NOTE	GND		1400 KC.		1400 KC.	LOOP ANT	C-1 CABINET CLOSED	SAME

NOTE: SHORT WIRE PLACED NEAR LOOP. (CHASSIS IN CABINET AND INTERNAL LOOP CONNECTED)

TOP * TWO PEAKS MAY BE FOUND, THE CORRECT PEAK IS THAT WITH THE CORE IN THE OUTER POSITION (COUNTER-CLOCKWISE)

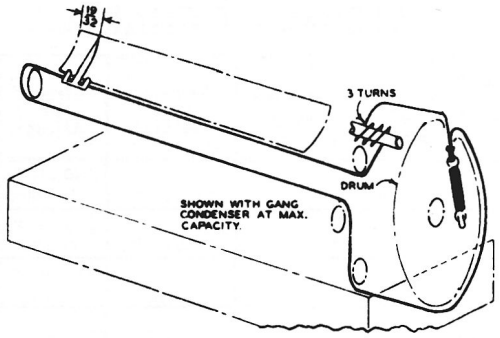
REPLACEMENT PARTS FOR MODEL BP6C

Insist on genuine factory tested parts, which are readily identified and may be purchased from authorized dealers.

STOCK NO.	DESCRIPTION
	CHASSIS ASSEMBLY
71069	Capacitor - trimmer (C1)
71502	" - 2.2 Mmf. (7)
S-4382	" - 4 Mmf. (C36)
71924	" - 56 Mmf. (C8)
71514	" - 82 Mmf. (C2-C21)
71540	" - 270 Mmf. (C26)
S-3644	" - .0025 Mfd. (C22-C23-C27)
S-4383	" - .003 Mfd. (C15)
S-3646	" - .005 Mfd. (C28)
70615	" - .05 Mfd. (C4-C5-C6-C16-C20-C33)
S-3650	" - .02 Mfd. (C24)
S-3648	" - .01 Mfd. (C25)
S-3655	" - .1 Mfd. (C34)
73112	Condenser - Variable (C3-C9-C10-C11-C12)
73113	Capacitor - Electrolytic (C29-C30-C31-C32)
S-4329	Coil R.F. Coil (L2-L3)
S-4328	Coil Osc. Coil (L4-L5)
73111	Indicator - Station Selector pointer
73237	Resistor - 33 ohms W.W. (fuse type)(R3)
30654	" - 1500 ohms ½ watt (R16)
12194	" - 1800 " ½ " (R6-R15)
30492	" - 2200 " ½ " (R18)
73238	" - 2200 " 6 watts (R17) - ballast
30730	" - 2700 " ½ " (R19)
36714	" - 15,000 " ½ " (R20)
30409	" - 27,000 " ½ " (R10)
14138	" - 68,000 " ½ " (R8)
3252	" - 100,000" ½ " (R4)
14583	" - 220,000" ½ " (R13)
30652	" - 1 Megohm ½ watt (R14)
31417	" - 3.3 " ½ " (R7)
30931	" - 4.7 " ½ " (R1-R2-R12)
31455	" - 5.6 " ½ " (R5)
30992	" - 10. " ½ " (R11)
73115	Socket - tube socket (rubber moulded)
73116	" - " " (" ") less shield
73122	Shaft - Drive shaft
70390	Spring - Drive cord tension (Pkg. 2)
S-3585	Switch assembly (S1)
71045	" power switch (S2)
S-4326	Transformer 1st I.F. (L6-L7-C13-C14)
S-4327	" 2nd I.F. (L8-L9-C17-C18-C19)
71057	Volume Control (R9)

STOCK NO.	DESCRIPTION
	SPEAKER ASSEMBLY 4" ROUND
S-4330	Cone - cone & Voice coil assembly
S-4325	Speaker
S-4355	Output transformer (T1)
	MISCELLANEOUS ASSEMBLIES
71074	Arm - shutter arm lever
71064	Bracket - to hold battery
71073	" - bearing bracket for shutter arm lever
71044	" - Power switch bracket less switch
73243	Back - case back complete with centre strip
71080	Clip - case side spring clip & screw (2 req'd)
S-4331	Cord - power cord
S-4313	Cord - drive cord
S-4385	Cable - battery cable & plug
S-3741	" - volume control
S-4041	Dial - dial scale
71068	Foot - case foot (front section)
73124	Front - case front complete (less shutter)
71061	Foot - case foot (rear section)
71063	Handle Assembly
71031	Holder - power cord holder
73121	Knob - volume & tuning
71079	Loop - antenna loop
71065	Link - Handle link assembly
73244	Latch - case latch
71041	Plug - battery cable plug
30900	Spring - retaining knob spring (Pkg. 5)
71072	Spring - case shutter compression spring
71071	Shutter
72979	Side - case side R.H. (less capacitor assy.)
72980	" - " " L.H.
71049	Window - Dial window
31608	Washer "C" washer for case shutter (Pkg. 10)
71078	" - dampening washer for shutter shaft (Pkg. 10)

All prices and parts are subject to change or withdrawal without notice.



Dial-Indicator and Drive Mechanism