



RCA VICTOR



BATTERY PERSONAL RECEIVER MODEL BP6D SERVICE DATA

—1950 No. 9—

GENERAL SERVICE DIVISION
RCA VICTOR COMPANY LIMITED
MONTREAL, QUE.

MODEL BP6D

Electrical and Mechanical Specifications

Tuning Range540-1,600 kc
Intermediate Frequency455 kc

Power Supply Rating

Power Line Operation

115 volts, d. c. or 50 to 60 cycles a. c.15 watts
or

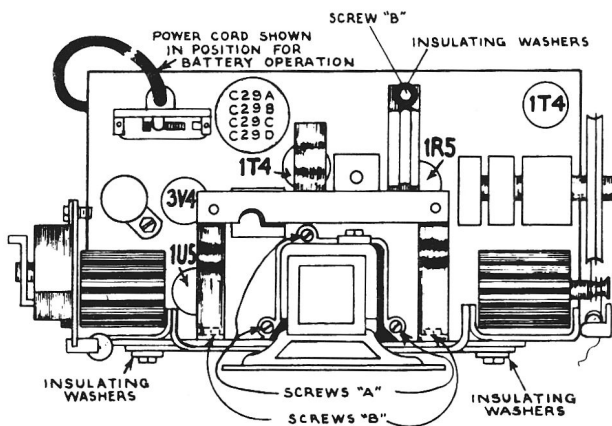
Battery Operatedusing RCA VS 019 Battery
(Average battery life—125 hrs. intermittent service)

Battery current“A” 50 ma., “B” 13 ma.

Tube Complement

- (1) RCA 1T4R.F. Amplifier
- (2) RCA 1R5Converter
- (3) RCA 1T4I.F. Amplifier
- (4) RCA 1U52nd Det.—AVC—1st A.F.
- (5) RCA 3V4Output

A selenium rectifier is used.



Chassis Assembly

To Remove Back Cover:

Push the wire latch on the bottom of the case to the right. Open the back about 3" and remove by easily lifting and sliding the top edge of the cover out of the case.

To Replace Back Cover:

Insert the top edge of the back cover into the case. Hold the top edge in position with one hand and press the bottom edge in place with the other hand until it is latched.

Weight (Approx.)

Without battery7 lbs. With battery10½ lbs.

Power Output

Undistorted150 watt
Maximum325 watt

Loudspeaker4 in. P.M.

Voice coil impedance3.2 ohms at 400 cycles

Cabinet Dimensions

Height10 in. Width13 in. Depth5½ 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.

To Remove Chassis:

1. Loosen battery clamps, pull out battery and disconnect battery plug.
2. Unsolder the two loop antenna leads.
3. Remove the two large screws (under handle) in the top of the case (do not loosen small screws).
4. Lay receiver on table with face down.
5. Remove the two screws holding chassis to case sides.
6. The chassis may now be lifted from the case.

To Remove Speaker:

1. Remove chassis from case as described above.
2. Unsolder output transformer leads from speaker.
3. Un-hook dial cord tension spring.
4. Remove the two screws “B” holding dial bracket to chassis support bracket.
5. Remove the four screws holding dial bracket to chassis base.
6. Tilt dial bracket forward and remove three screws “A” holding speaker bracket to chassis base.

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.

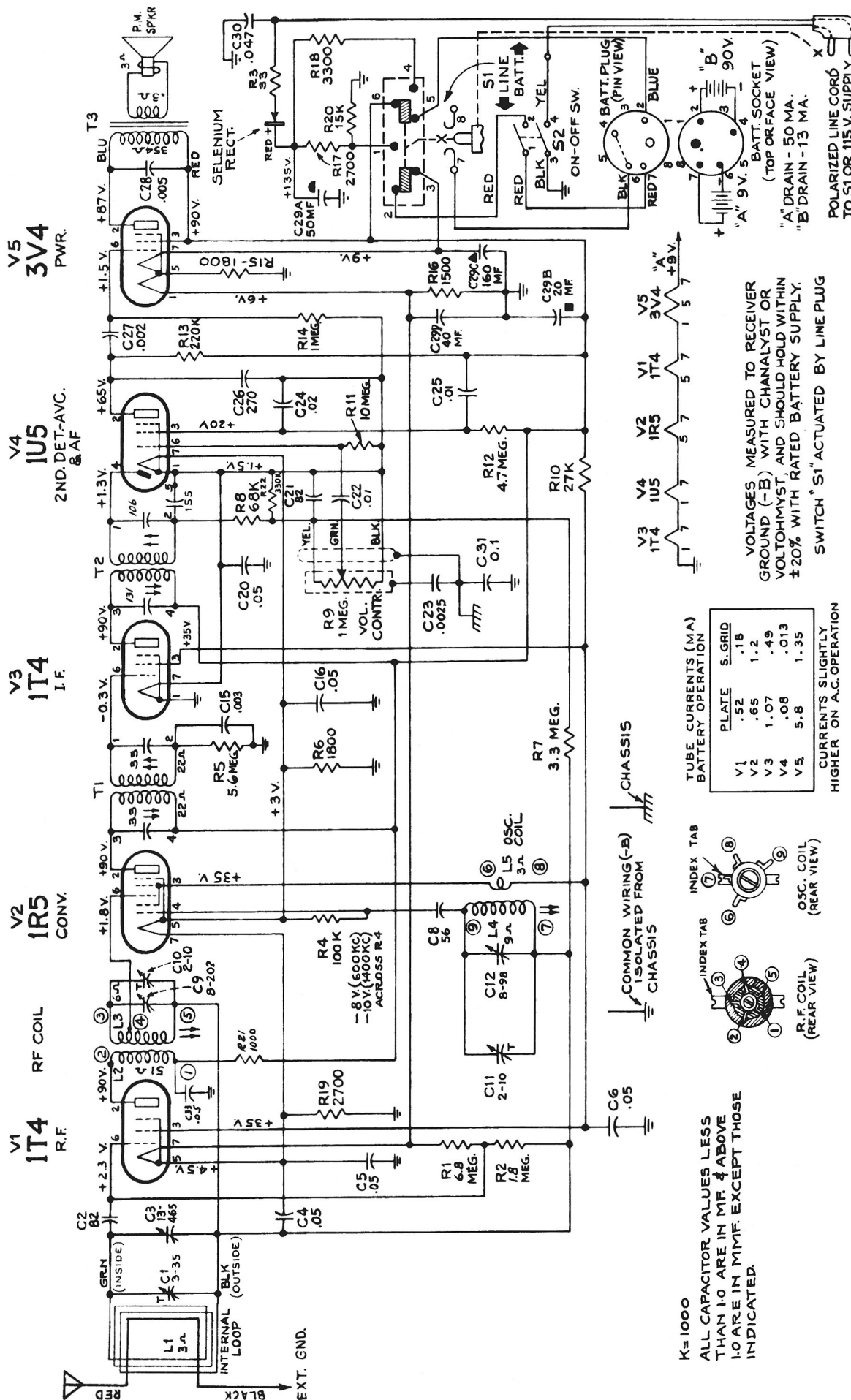
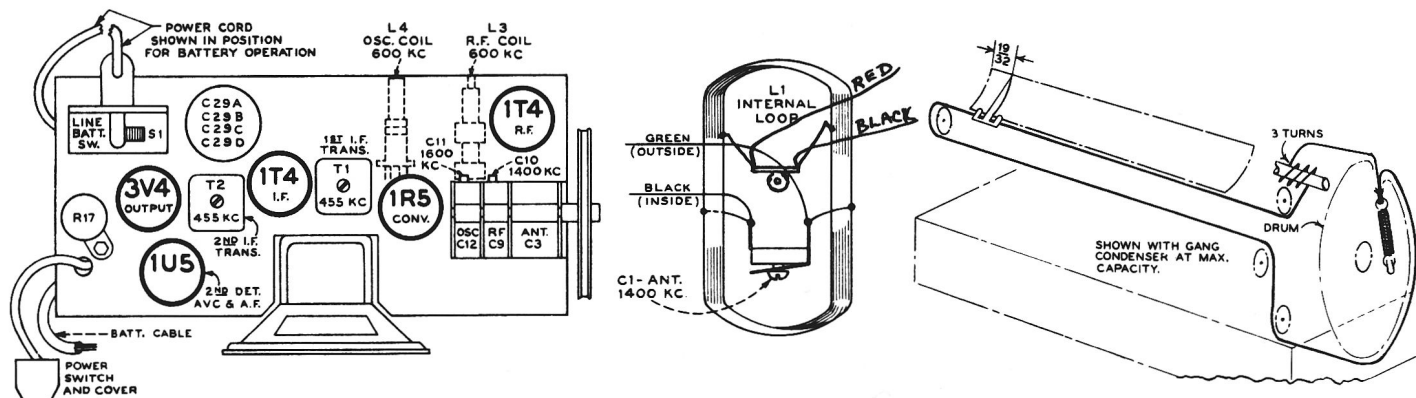


FIG. 2—SCHEMATIC DIAGRAM



Tube and Trimmer Locations

Critical Lead Dress

1. Dress all filament leads next to chassis.
2. Keep the leads short on the end of the three components, (R1, R2, C2) which connect to the grid terminal (#6) of the r.f. socket.
3. Dress tuning condenser leads direct and avoid excess lead length.
4. Dress loop leads away from tuning drum and battery.
5. Dress r.f. plate lead against chassis base.
6. Dress a.v.c. lead against chassis base.
7. Dress +B lead to output transformer against chassis base.
8. Dress 1st a.f. plate resistor (R13) up and away from other wiring.
9. Dress all leads away from the ballast resistor.
10. Dress ON-OFF switch leads clear of switch actuating lever and shutter.
11. Dress 1st a.f. grid resistor (R11) close to chassis.
12. Dress capacitor C4 in air between end apron and r.f. coil and away from selenium rectifier, with foil end to tuning condenser frame.

Alignment Procedure

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.

With the gang at full mesh set the dial pointer so that the pointer is $\frac{1}{4}$ " to the left of the 55 calibration on the dial scale.

Dial-Indicator and Drive Mechanism

Power Line Operation.—

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 lift the back cover up and off. 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. Replace the back cover 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.

To Replace Top Cover:

Assemble handle to cover and case front but do not tighten screws (small). Replace and tighten chassis mounting screws (large). Tighten the screws holding handle to top cover and case front.

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

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.

ALIGNMENT CHART

Order Of Alignment		TEST OSCILLATOR				RECEIVER				
		Connect "HI" Side to	Connect "LO" Side to	Dummy Antenna	Frequency Setting	Range Selector	Dial Setting	Circuit to Adjust	Adjustment Symbols	Notes
I.F. Alignment	1	C-M9 Gang	GND	39MMF	455KC		"HI" End	1st.&2nd. I.F. Trans.	T-1 & T-2 Top & Bottom	Max. Out.
	2	Radiate Signal			1600KC		1600KC	Osc.	C-11 Trimmer	Max. Out.
R.F. Alignment	3	Same			1400KC		1400KC	R.F. Ant.	C-1 & C-10 Trimmer	Max. Out.
	4	Same			600KC		600KC	R.F. Osc.	L-3 & L-4 Rock Gang	Max. Out.
	5	Repeat steps 2, 3 and 4.								

REPLACEMENT PARTS FOR MODEL BP6D

Insist on Genuine Factory Tested Parts, which are readily identified and may be purchased from Authorized Dealers.

STOCK NO.	DESCRIPTION	STOCK NO.	DESCRIPTION
CHASSIS ASSEMBLY		SPEAKER ASSEMBLY	
S-5591	Capacitor-Trimmer 3-35 Mmf.(C-1)	S-5575	Cone-Cone & Voice coil assy.
71924	Capacitor-Ceramic 56 MMF. (C-8)	S-3583	Output transformer
71514	Capacitor-Ceramic 82 MMF. (C-2,C-21)	S-5916	Speaker complete
*73922	Capacitor-Ceramic 270 MMF.(C-26)		
	Capacitor-Paper .002 Mfd.200 volts(C-27)		
	Capacitor-Paper .0025 Mfd.400 volts(C-23)		
	Capacitor-Paper .003 Mfd.200 volts(C-15)		
	Capacitor-Paper .005 Mfd.400 volts(C-28)		
	Capacitor-Paper .01 Mfd.200 volts(C22, C-25)		
-	Capacitor-Paper .02 Mfd.200 volts(C-24)		
	Capacitor-Paper .047 Mfd.400 volts(C30)		
	Capacitor-Paper .05 Mfd.200 volts(C-5, C-16,C-20)		
	Capacitor-Paper .05 Mfd.400 v.(C-4,C-6, C-33)		
	Capacitor-Paper .1 Mfd.400 v.(C-31)		
73113	Capacitor-Electrolytic 50 Mfd.150 volts (C-29A)		
	Capacitor-Electrolytic 20 Mfd.150 volts (C-29B)		
	Capacitor-Electrolytic 160 Mfd.25 volts (C-29C)		
	Capacitor-Electrolytic 40 Mfd. 25 volts (C29D)		
*S-5696	Capacitor-Variable capacitor complete with drum (C-3,C-9,C-10,C-11,C-12)		
S-5588	Coil-Oscillator coil (L-4,L-5)		
S-5589	Coil-R.F. Coil (L-2,L-3)		
71041	Connector-Male connector for battery cable		
71057	Control-Volume control (R-9)		
	Resistor- 33 ohms 150 M.A. (R-3)		
	Resistor-1,000 ohms 1/2 watt (R-21)		
	Resistor-1,500 ohms 1/2 watt (R-16)		
	Resistor-1,800 ohms 1/2 watt (R-6,R-15)		
	Resistor-2,700 ohms 1/2 watt (R-19)		
*74993	Resistor-2,700 ohms 10 watts (R-17)		
	Resistor-3,300 ohms 1 watt (R-18)		
	Resistor-15,000 ohms 1/2 watt (R-20)		
	Resistor-27,000 ohms 1/2 watt(R-10)		
	Resistor-68,000 ohms 1/2 watt(R-8)		
	Resistor-100,000 ohms 1/2 watt(R-4)		
	Resistor-220,000 ohms 1/2 watt(R-13)		
	Resistor-330,000 ohms 1/2 watt(R-22)		
	Resistor-1 Megohm 1/2 watt (R14)		
	Resistor-1.8 Megohm 1/2 watt (R-2)		
	Resistor-3.3 Megohm 1/2 watt (R-7)		
	Resistor-4.7 Megohm 1/2 watt (R-12)		
	Resistor-5.6 Megohm 1/2 watt (R-5)		
	Resistor-6.8 Megohm 1/2 watt (R-1)		
	Resistor-10 Megohm 1/2 watt (R-11)		
74322	Rectifier-Selenium rectifier		
*73122	Shaft-Tuning knob shaft		
71039	Switch-"Line Battery" change switch S1		
71045	Switch-Power switch S-2		
73129	Transformer-1st I.F.transformer T1		
S-5587	Transformer-2nd I.F.transformer T2		
		MISCELLANEOUS ASSEMBLIES	
		71074	Arm-shutter arm lever
		S-5584	Back-case back complete with latch
		*71044	Bracket-Power switch bracket less switch
		71073	Bracket-Bearing bracket for shutter arm lever
		*74995	Bracket-Drive cord pulley bracket complete with two pulleys
		71070	Bracket-Mounting bracket for S-5591 trimmer capacitor
		*75001	Clip-Clip to hold battery (2 req'd.)
		*75005	Clip-"C" clip (threaded) for battery hold clip (2 req'd.)
		*75009	Clip-Clip to hold chassis to case (2 req'd.)
		*75010	Clip-"C" clip and screw for fastening case front (4 req'd.)
		*71080	Clip-Case side spring clip and screw (2 req'd.)
		*75013	Clip-Spring clip with tab for fastening case front to case sides (4 req'd.)
		S-5592	Dial-Dial scale and window assy.
		S-5731	Emblem-"RCA Victor" Emblem
		S-5581	Front-Case front complete with insulating strip & support feet-less shutter
		*74838	Grommet-Power cord strain relief grommets (1 set)
		*72283	Grommet-Rubber grommets to mount tuning capacitor
		S-5585	Handle-Carrying handle assembly
		*71031	Holder-Power cord holder
		S-5586	Indicator-Station selector indicator
		*74994	Knob-Tuning or volume control knob
		*18469	Plate-Bakelite mounting plate for electrolytic capacitor
		*75000	Plate-Case top plate-less handle
		*75017	Plate-Mounting plate for carrying handle (2 req'd.)
		*72602	Pulley-Drive cord pulley
		*75015	Pin-Pivot pin for case shutter
		*71071	Shutter-Case shutter
		*S-5582	Side-Case side assembly R.H.
		*S-5583	Side-case side assembly L.H.
		*71072	Spring-case shutter compression spring
		*75008	Support-Moulded support foot for case (2 req'd.)
		*74353	Washer-Spring washer for shutter shafts
			* Indicates New Stock Item.

Only items listed under stock numbers are available as Replacement Parts.

All parts subject to change or withdrawal without notice.