



RCA Victor

MODEL BP-4 PERSONAL RADIO

Four-Tube, Single-Band, Battery-Operated, Superheterodyne Receiver

TECHNICAL INFORMATION AND SERVICE DATA

— 1946 No. 17 —

SERVICE DIVISION

RCA VICTOR COMPANY LIMITED

MONTREAL

Specifications

Frequency Range 550-1,600 kc

Intermediate Frequency 455 kc

TUBE COMPLEMENT

- (1) Type-1R5..... 1st Det.—Osc.
 (2) Type-1T4..... I-F Amplifier
 (3) Type-1S5..... 2nd Det., A-F, and A.V.C.
 (4) Type-3S4..... Power Output

Type Battery	Current Consumption	Approximate Life (Intermittent Duty)
"A"—1.5 volt Eveready No. 950	0.25 amperes	3-5 hours
"B"—67.5 volts Eveready No. 467	8.5 milliamperes	25-40 hours

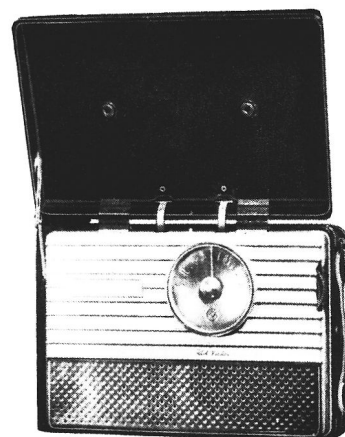
Power Output..... Undistorted 0.05 watts Maximum 0.12 watts
Loudspeaker

Type Permanent-Magnet Dynamic Elliptical 2 x 3 in.

Voice Coil Impedance 11¼ ohms at 500 cycles

Cabinet Dimensions (inches)..... 3-3/16 x 6½ x 4-3/16

Weight..... 3¼ lbs. (net) Tuning Drive Ratio 1 to 1



Replacement Parts

STOCK NO.	DESCRIPTION	STOCK NO.	DESCRIPTION
RECEIVER ASSEMBLIES		MISCELLANEOUS ASSEMBLIES	
70444	Board-Speaker terminal board(5 contact).....	70456	Bottom-Case bottom - black.....
70445	Board-Terminal board (1 contact).....	70988	Bottom-Case bottom - brown.....
33111	Capacitor-Ceramic 33 MMF. (C16).....	70457	Catch-Spring catch assembly.....
60954	Capacitor-Ceramic 56 MMF. (C4).....	70455	Center-case center-black.....
71514	Capacitor-Ceramic 82 MMF. (C13).....	70987	Center-Case center-brown.....
70454	Capacitor-Tubular .002 Mfd.(C14, C19).....	70452	Connector-loop connector.....
70627	Capacitor-Tubular .005 Mfd.(C20).....	36645	Fastener-Push fastener to hold loop (Pkg.3).....
70453	Capacitor-Tubular .02 Mfd.(C10, C15).....	70429	Grommet-For tube support & var.cond. (Pkg.5).....
71013	Capacitor-Tubular .05 Mfd.(C7).....	70459	Handle-Carrying handle - black.....
36718	Capacitor-Electrolytic 10 Mfd. (C17).....	70989	Handle-Carrying handle - brown.....
70443	Coil-Oscillator Coil (L2,L4).....	70434	Hinge-Lid hinge-black.....
70438	Condenser-Variable tuning (C1, C2,C5,C6).....	70984	Hinge-Lid hinge-brown.....
70447	Loop-antenna loop complete (L1) less lid (black).....	70441	Holder-Battery holder.....
70985	Loop-Antenna loop complete (L1) less lid (brown).....	70424	Knob-Tuning knob.....
14076	Resistor,820 ohms 1/4 watt (R9).....	70432	Knob-Volume Control.....
36714	Resistor,15,000 ohms-1/4 watt(R2).....	70708	Lead-Battery lead complete.....
14138	Resistor,68,000 ohms-1/4 watt(R5).....	70450	Lid-Case lid & support,less loop (Black).....
3252	Resistor,100,000 ohms-1/4 watt(R1).....	70986	Lid-Case lid & supportless loop(brown).....
30652	Resistor,1 Megohm - 1/4 watt(R7).....	70461	Link-Handle link - Black.....
12928	Resistor,3.3 Megohm - 1/4 Watt(R3, R10).....	70990	Link-Handle link - Brown.....
30931	Resistor,4.7 Megohm -1/4 Watt(R8).....	70449	Nameplate - "RCA".....
30992	Resistor,10 Megohm - 1/4 Watt(R4).....	70427	Nut-Retaining nut for lid support stud (Pkg.10).....
70436	Socket-Tube Socket.....	70420	Panel-Chrome panel.....
70430	Switch-Power Switch (S1).....	70422	Plate-Backing plate for mtg.hinge on lid (black).....
70442	Transformer-1st I.F.(L5,L6,C8,C9).....	70983	Plate-backing plate for mtg.hinge on lid (brown).....
70437	Transformer-2nd I.F.(L7,L8,C11, C12).....	70421	Screw-case cover mtg.screw1 set blk)
70439	Volume Control (R6) 2 Megohms.....	71150	Screw-case cover mtg.screw1 set brwn)
SPEAKER ASSEMBLIES		70446	Screw-#6-32x1/4" to mount battery holder(Pkg.10).....
70428	Speaker.....	70423	Spacer-Rubber shock spacer (Pkg.5).....
70440	Transformer-Output (T1).....	70425	Spring-Tuning knob spring clip.....
		70426	Stud-Lid support stud (Pkg.5).....
		70451	Support-Lid support.....
		70435	Support-Tube support less sockets & transformer.....
		70460	Screw-4-40 x 1/8" for case center strip (Pkg.5).....
		70433	Washer-Spring washer for V.C.knob (Pkg.10).....

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

Replacement of Component Parts

- I. To remove back cover:
 - a. Depress locking spring clip through hole in top of case.
 - b. With spring clip depressed, pull cover carefully out and up off the locking lug in the bottom of the case.
 - II. To replace batteries:
 - a. Remove back cover.
 - b. Remove, either or both, the "A" and "B" battery as the case may warrant. The "B" battery snap fasteners can best be removed by inserting a screwdriver under the snap fastener strip and prying upward.
 - III. To remove the case center strip:
 - a. Remove one screw on the inside near the back cover.
 - b. Tilt case center strip and lift.
 - IV. To replace tubes:
 - a. Remove back cover.
 - b. Remove "B" battery.
 - c. Remove case center strip.
 - d. Remove and replace tubes as required.
 - V. To remove the escutcheon plate (top cover):
 - a. Remove the main dial knob, just pull.
 - b. Remove the four corner nuts (B), rear.
 - c. The plate may either be removed from the stay arm or folded into the lid.
 - VI. To remove speaker:
 - a. Remove escutcheon plate (see item V above).
 - b. Remove two Phillips screws (C) on chassis front of panel assembly holding speaker.
 - c. Unsolder voice coil leads.
 - d. Slide forward away from hinge side.
 - VII. To remove output transformer:
 - a. Remove speaker (see item VI).
 - b. Remove rivet (when replacing use small brass bolt).
 - c. Unsolder mounting lug and leads.
 - d. Pull out transformer.
 - VIII. To remove volume control:
 - a. Remove speaker (item VI).
 - b. Unsolder (disconnect) lead to positive terminal of "A" battery holder.
 - c. Lift up the "A" battery holder by removing the one screw in its base. This holder has a hinge action and must be lifted up and back to remove.
 - d. Remove front plate (panel) as follows:
 1. Unsolder two copper strips (E) (from end of tube shelf to front plate) located under tubes 1R5 3S4.
 2. Remove two screws (F) holding tube shelf to front plate. These screws are located between tubes 1R5 and 1T4, also 3S4 and 1S5. Rubber shock mounts may stick on studs, pry loose.
 3. Remove nut (G) beneath tube shelf below second I-F transformer.
 4. Remove screw (G) beneath the negative terminal of "A" battery holder, near cover hinge and also screw (G) adjacent to volume control below "A" battery holder near release catch.
 5. Unsolder three chassis leads to cover switch assembly or remove the switch assembly from the front cover plate.
 6. Lay chassis on board or jig.
 7. Remove front plate.
 8. Unsolder volume control leads.
 9. Remove volume control knob and spider.
 10. Remove volume control assembly by bending back four lugs.
- Caution: Do not close lid unless center screw of switch assembly is in place.
- e. Reassemble in reverse order.
- IX. To remove oscillator coil:
 - a. Same procedure and steps as covered in item VIII for removal of volume control plus the following.
 - b. Unsolder oscillator coil leads.
 - c. Remove coil by unsnapping spring mounting clips from angle bracket.
- X. To remove 1st I-F transformer:
 - a. Remove speaker.
 - b. Unsolder four leads from 1st I-F transformer.
 1. Blue to plate (screen used as plate) of 1R5 tube.
 2. Green to grid of 1T4 tube.
 3. Red to B+ terminal of 5 lug terminal board adjacent output transformer.
 4. Black to AVC terminal of same strip as above.
 - c. Remove connections as required from two lug terminal board adjacent to 1st I-F transformer to permit this terminal board to be moved to a position free of the 1st I-F transformer.
 - d. Unsolder and bend mounting lugs straight on the I-F transformer can. These lugs are immediately below the 2nd I-F transformer on tube shelf.
 - e. Slip 1st I-F transformer forward toward volume control and out.

Note: It is possible to fold the 1st I-F transformer out the front of the chassis if the front plate is removed. This will eliminate the unsoldering of leads from the two lug terminal board.
- XI. To remove 2nd I-F transformer:
 - a. Carefully remove the two 0.02 uf C10, C15 capacitors.
 - b. Carefully depress the two leads (B+ and A+) near the I-F transformer case mounting lugs and unsolder these lugs from the tube mounting shelf and bend out.
 - c. Unsolder the blue (plate of 1T4), green (grid of 1S5), red (B+ on terminal board), and black leads.
 - d. Remove 2nd I-F transformer.
- XII. To remove condenser tuning gang:
 - a. Loosen oscillator coil.
 - b. Unsolder leads to tuning gang.
 - c. Unsolder grounding straps.
 - d. Remove three screws holding gang assembly to chassis.
 - e. Remove gang from rear of chassis.
- XIII. To remove loop assembly:
 - a. Unsolder loop leads in chassis.
 - b. Remove screw holding fish paper insulating envelope to chassis switch.
 - c. Remove snap fasteners holding loop in cover.

