RCA VICTOR

BATTERY OPERATED PERSONNAL RECEIVER

2B400 SERIES

SERVICE DATA

— 1953 No. 6 —

HOME INSTRUMENT SERVICE DIVISION ·
RCA VICTOR COMPANY LTD.
MONTREAL, QUE.

2 B 400 SERIES

2 B 400 Grey — *2 B 401* Black

2 B 403 Green — *2 B 404* Tan — *2 B 405* Red

ELECTRICAL AND MECHANICAL SPECIFICATIONS

Tuning Range ..... 540-1600 kc

Intermediate Frequency ..... 455 kc

Tube Complement:

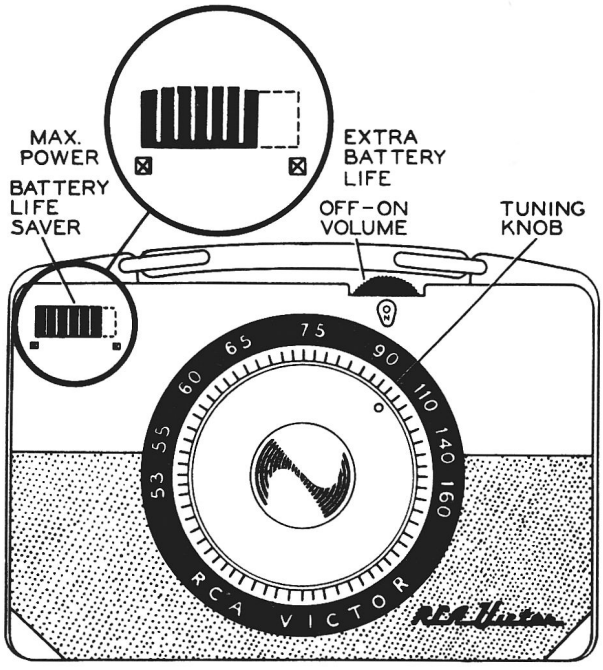
1. RCA 1R5 ..... Converter
2. RCA 1U4 ..... I.F. Amplifier
3. RCA 1U5 ..... Det. A.F.Amp. A.V.C.
4. RCA 3V4 ..... Output

Loudspeaker

Size and type ..... 2" x 3" P.M.

Voice coil impedance ..... 11¾ ohms at 1000 cycles

Weight (with batteries) ..... approx. 3¾ lbs.



Controls

Batteries Required:

Type of Battery	Current Drain Normal Pos.	Current Drain Saver Pos.
"A"—1.5 volt (two) No. 964	0.25 amp.	0.20 amp.
"B"—67.5 volts No. 477	8.45 ma.	5.45 ma.

Battery life is approximately 100 hrs. intermittent service with battery-saver switch in "Normal" position. With switch in "Saver" position, battery life is increased approximately 30%.

Power Output:

Undistorted ..... .075 watt

Maximum ..... 0.10 watt

Dimensions (over-all) ..... approx. 8⅞" x 5⅞" x 2 1/16"

Case Back

To remove—insert small coin in the slot at top rear of case and pry open.

To replace—insert bottom edge into case and snap top edge in place.

Off-On Indicator

A window in the case (just below edge of volume control knob) indicates whether set is turned ON or OFF. "ON" appears in window when set is turned ON and disappears when set is turned OFF.

Battery-Life Saver Switch

Maximum power is obtained when the slider button is pushed toward left (outer edge of case). Extra battery life with slight effect on performance is obtained with the slider button pushed to the right (toward center of case).

Battery Life

The life of the "A" and "B" batteries is approximately equal. For best performance all batteries should be replaced at the same time.

Output Meter.—Connect meter to voice coil terminals. Turn volume control to maximum position.

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 a-v-c action.

Note:—The ant. coil is supplied pre-adjusted and cemented to rod. This makes further adjustment unnecessary. However when replacing ant. assembly make certain that the coil end of the rod is fully entered in its rubber mounting grommet but does not extend through the grommet more than is required to permit the opposite end to fit inside the case.

Replacement of Component Parts

I. To Remove Back Cover

a. Depress top of case midway between the handle supports, until the top end of the back separates from the main case.

b. Pull the back cover back and up, thereby unhooking the retaining lugs in the bottom of the main case.

II. To Replace Batteries

a. Remove back cover.

b. Remove both "A" and "B" batteries. The "B" battery snap fasteners can best be removed by inserting a screwdriver under the snap fastener strip and prying upward.

c. The "A" batteries can easily be removed by pulling up on the spring wire clips.

Note: The "A" and "B" batteries have approximately equal life and therefore it is advisable to replace all batteries at one time.

III. To Remove Chassis

a. Remove dial knob by grasping with finger tips at two sides and pulling.

b. Remove back cover.

c. Remove batteries.

d. Remove "A+" contacts by squeezing against case and sliding out of slots in case.

e. Remove the four screws "A."

f. Grasp the assembly by the speaker and pull the bottom end down and outward to clear the volume control knob.

IV. To Replace Chassis

a. Observe the position of the battery save button extension in relation to the "battery-save" switch. This extension must engage with the center of the battery save switch.

b. Replace in reverse order to that given for chassis removal.

V. To Remove Handle

a. Spread the square spring wire clips by pulling on one side of a clip.

b. Allow the clip to return to its original shape but resting on the outside of the case.

c. Pull the other side of the clip out of the case.

VI. To Replace Battery Save Switch Button

a. Remove chassis.

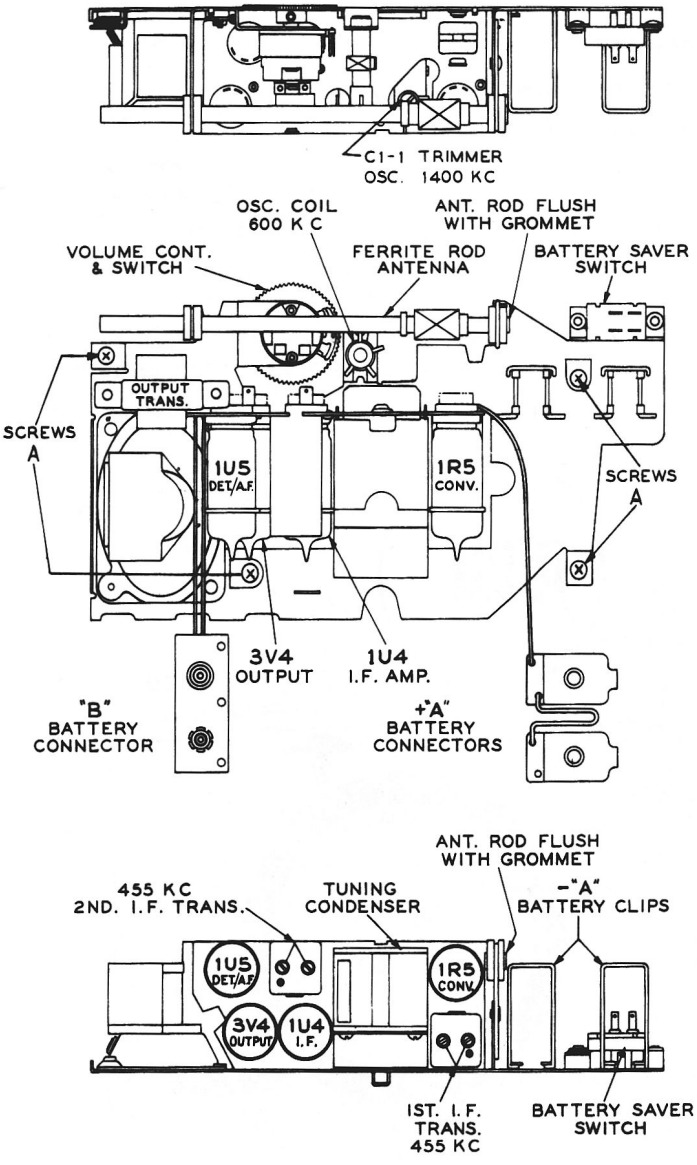
b. Spread the open end of the spring clip retainer no more than necessary to permit removal of clip.

c. Slide the clip clear of the slider button.

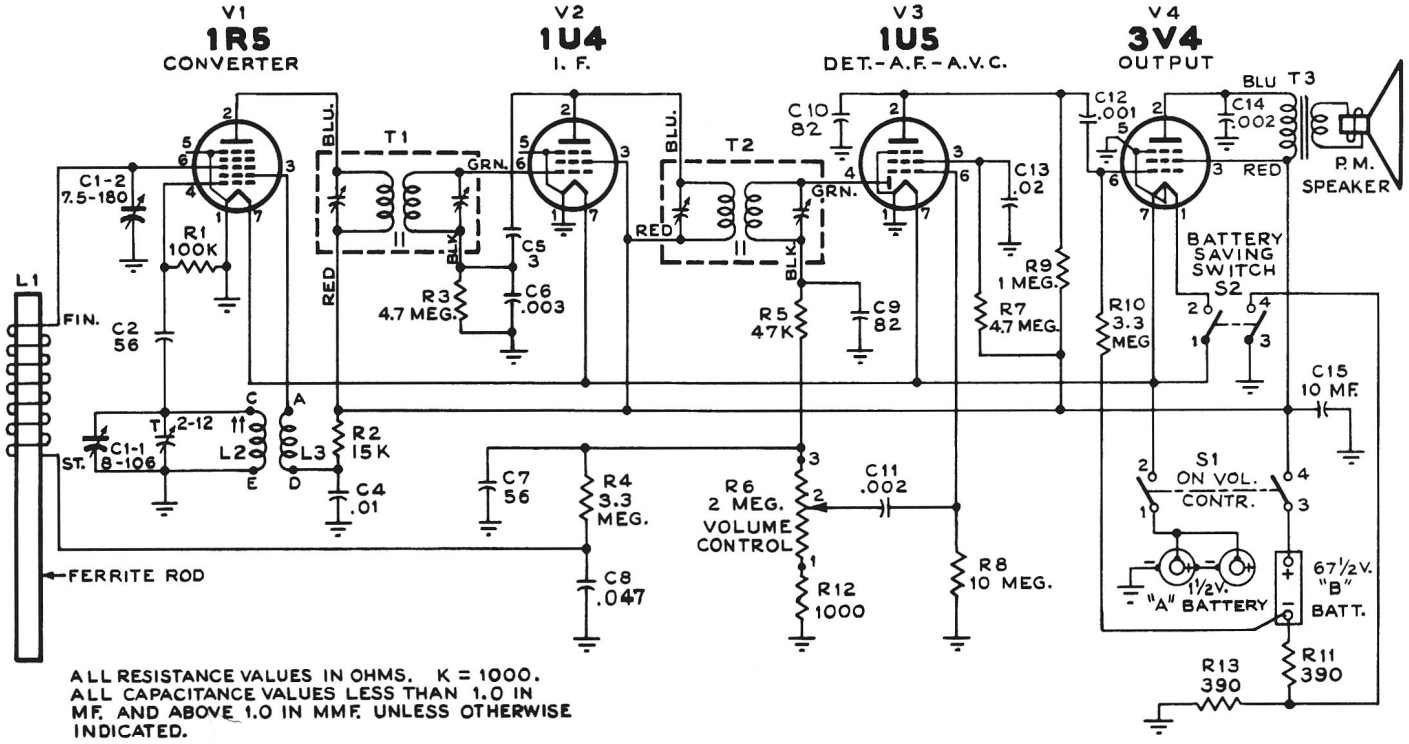
d. Turn slider button one-quarter turn and pull out of case.

e. Replace button in reverse order—do not use excessive force in replacing spring clip.

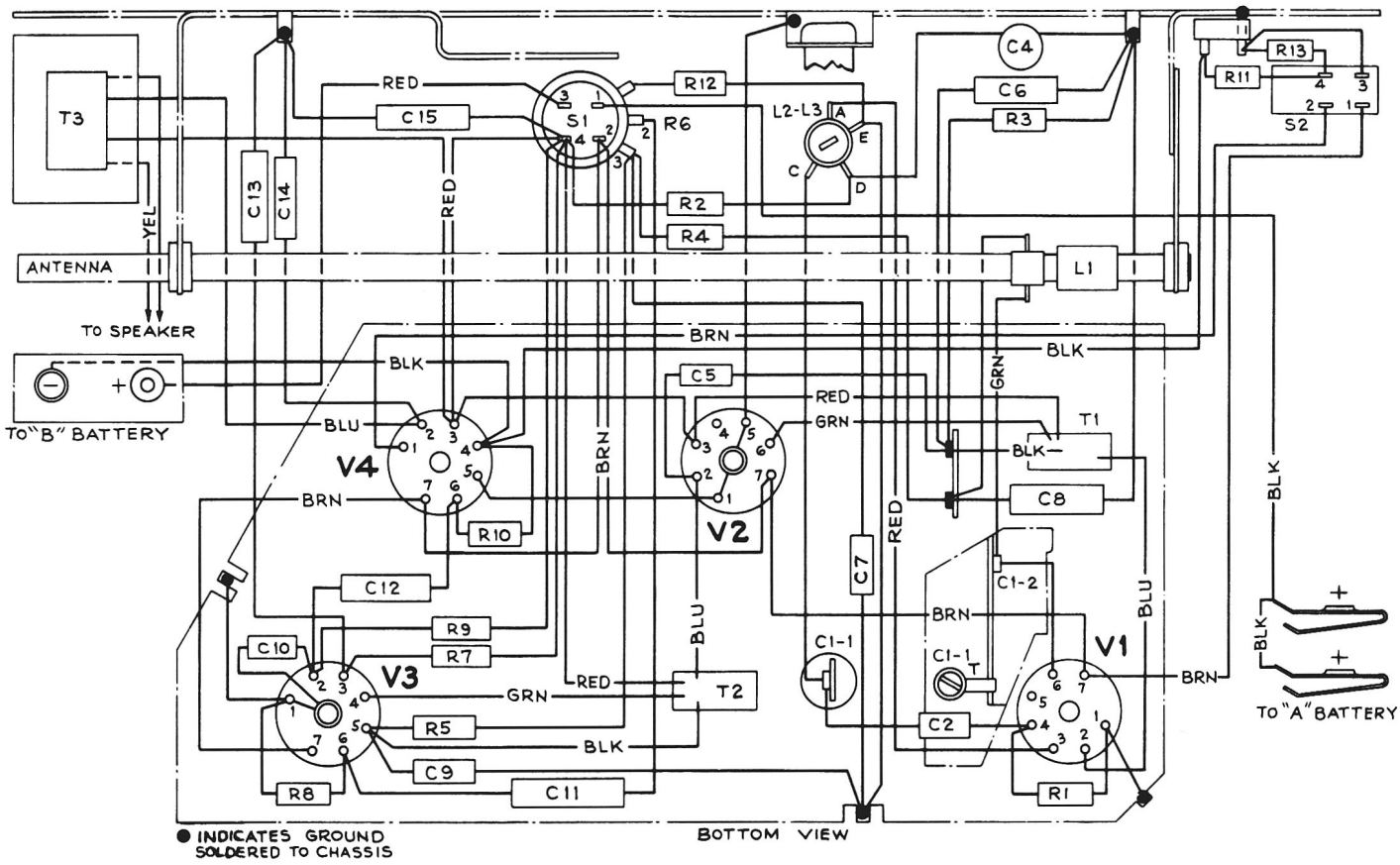
Steps	Connect high side of test osc. to—	Tune test-osc. to—	Turn radio dial to—	Adjust the following for max. output—
1	High side of ant. coil (terminal lug on coil which is connected to Pin #6 of 1R5 tube)	455 kc	Quiet point near 1600 kc	Trimmers of 2nd I-F trans
2				Trimmers of 1st I-F trans.
3		Repeat steps 1 and 2		
4 •	Short wire placed near ant. coil for radiated signal	1400 kc	14 Rock gang	C1-1T (osc.)
5		600 kc	60 Rock gang	L2 (osc.)
6		Repeat steps 4 and 5		



Tube and Trimmer Locations



Schematic Diagram



Connection Diagram

CRITICAL LEAD DRESS

1. Position Ferrite antenna rod as described above.
2. Dress all bus wires, pigtail leads and non-insulated components away from chassis base and away from each other.
3. Dress neutralizing capacitor C5 against front of chassis and with clearance under volume control knob. Utilize shielding effect of oscillator coil mounting bracket.
4. Dress all I-F transformer leads down to base.

Replacement Parts

STOCK No.	DESCRIPTION
	CHASSIS ASSEMBLIES
*76847	Antenna—Ferrite rod antenna (L1)
*76846	Capacitor—Variable tuning capacitor (C1-1, C1-2)
	Capacitor—Ceramic, 3 mmf. (C5)
	Capacitor—Ceramic, 56 mmf. (C2, C7)
	Capacitor—Ceramic, 82 mmf. (C9, C10)
	Capacitor—Ceramic, 10,000 mmf. (C4)
73964	Capacitor—Electrolytic, 10 mfd., 70 volts (C15)
	Capacitor—Tubular, paper, .001 mfd., 200 volts (C12)
	Capacitor—Tubular, paper, .002 mfd., 200 volts (C11, C14)
	Capacitor—Tubular, paper, .003 mfd., 200 volts (C6)
	Capacitor—Tubular, paper, .02 mfd., 200 volts (C13)
	Capacitor—Tubular, paper, .047 mfd., 200 volts (C8)
* 75774	Coil—Oscillator coil complete with adjustable core (L2, L3)
75773	Control—Volume control and power switch (R6, S1)
* 76851	Knob--Volume control and power switch knob—less set screw
	Resistor—Fixed, composition:—
	390 ohms, ±10%, ½ watt (R11, R13)
	1000 ohms, ±20%, ½ watt (R12)
	15,000 ohms, ±10%, ½ watt (R2)
	47,000 ohms, ±20%, ½ watt (R5)
	100,000 ohms, ±20%, ½ watt (R1)
	1 megohm, ±20%, ½ watt (R9)
	3.3 megohm, ±20%, ½ watt (R4, R10)
	4.7 megohm, ±20%, ½ watt (R3, R7)
	10 megohm, ±20%, ½ watt (R8)
* 70527	Screw—#6-32 x 3/16" socket head set screw for volume control knob
*76848	Switch—Battery saver switch (S2)
* 76849	Transformer—First I.F. transformer (T1)
* 76850	Transformer—Second I.F. transformer (T2)
* 75777	Tansformer—Output transformer (T3)
	SPEAKER ASSEMBLY
76373	Speaker—2" x 3" P.M. speaker complete with cone and voice coil
	MISCELLANEOUS
* 76841	Back—Case back—GREY—for Model 2B400
* 77159	Back—Case back—BLACK—for Model 2B401
* 77161	Back—Case back—GREEN—for Model 2B403
* 77162	Back—Case back—TAN—for Model 2B404

STOCK No.	DESCRIPTION
*77163	Back—Case back—RED—for Model 2B405
*76859	Button—Battery saver switch slider button—GREY—for Model 2B400
*77164	Button—Battery saver switch slider button—BLACK—and spring clip for Model 2B401
*77166	Button—Battery saver switch slider button—GREEN—and spring clip for Model 2B403
*77167	Button—Battery saver switch slider button—TAN—and spring clip for Model 2B404
*77168	Button—Battery saver switch slider button—RED—and spring slip for Model 2B405
*76838	Case—Case assembly—GREY—less handle, links and back for Model 2B400
*77154	Case—Case assembly—BLACK—less handle, links and back for Model 2B401
* 77156	Case—Case assembly—GREEN—less handle, links and back for Model 2B403
* 77157	Case—Case assembly—TAN—less handle, links and back for Model 2B404
* 77158	Case—Case assembly—RED—less handle, links and back for Model 2B405
* 76860	Clip—Retaining spring clip for battery saver switch slider button
*76842	Dial—Polystyrene dial scale—GREY—for Model 2B400
*77169	Dial—Polystyrene dial scale—BLACK—for Model 2B401
*77171	Dial—Polystyrene dial scale—GREEN—for Model 2B403
*77172	Dial—Polystyrene dial scale—TAN—for Model 2B404
*77173	Dial—Polystyrene dial scale—RED—for Model 2B405
*76844	Emblem—"RCA Victor" emblem
*76843	Grille—Metal grille—perforated—GREY—for Model 2B400
*77179	Grille—Metal grille—perforated—GOLD—for Models 2B401
* 77180	Grille—Metal grille—perforated—GREEN—for Model 2B403
*77181	Grille—Metal grille—perforated—TAN—for Model 2B404
*77182	Grille—Metal grille—perforated—RED—for Model 2B405
* 76839	Handle—Carrying handle—BLACK—for Models 2B400 and 2B401
*77184	Handle—Carrying handle—GREEN—for Model 2B403
*77185	Handle—Carrying handle—BROWN—for Model 2B404
*77186	Handle—Carrying handle—RED—for Model 2B405
*76856	Knob—Tuning control knob—GREY—for Model 2B400
*77174	Knob—Tuning control knob—BLACK—for Model 2B401
*77176	Knob—Tuning control knob—GREEN—for Model 2B403
*77177	Knob—Tuning control knob—TAN—for Model 2B404
*77178	Knob—Tuning control knob—RED—for Model 2B405
*76840	Link—Carrying handle link (2 req'd)
*76858	Ring—Bearing ring for tuning knob
74734	Spring—Spring clip for tuning control knob

Only items listed under stock numbers are available as Replacement Parts.
All parts subject to change or withdrawal without notice.

* INDICATES NEW STOCK ITEMS.