



RCA VICTOR



AC-DC BATTERY PORTABLE RECEIVER

Model BP61

SERVICE DATA

— 1952 No. 10 —

HEAD OFFICE SERVICE DEPARTMENT
RCA VICTOR COMPANY, LTD
MONTREAL, QUE.

Specifications

Tuning Range 540-1,600 kc
Intermediate Frequency 455 kc
Power Supply Rating
Power Line Operation
115 volts, d. c. or 50 to 60 cycles a. c. 15 watts

or
Battery Operated using Eveready No. 756 Battery
(Average battery life — 100 hrs. intermittent service)
Battery current "A" 50 ma., "B" 13 ma.

Tube Complement

(1) RCA 1T4	 R.F. Amplifier
(2) RCA 1R5	 Converter
(3) RCA 1T4	 I.F.-Amplifier
(4) RCA 1U5	 Det. — AVC — 1st A.F.
(5) RCA 3V4	 Output

A selenium rectifier is used.

Weight (Approx.)

Without battery ... 4 lb. 10 oz. With battery ... 7 lb. 12 oz.

Power Output

Undistorted 170 watt
Maximum 320 watt

Loudspeaker 4 in. P.M.

Voice Coil impedance 3.2 ohms at 400 cycles

Cabinet Dimensions

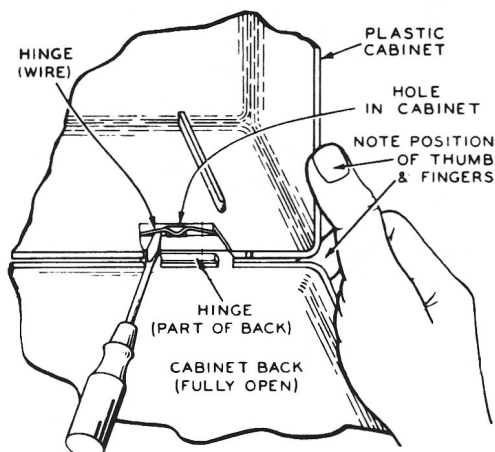
Height 8 in. Width 12½ in. Depth 5½ in.

To Remove Chassis:

1. 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.

To Remove Hinges

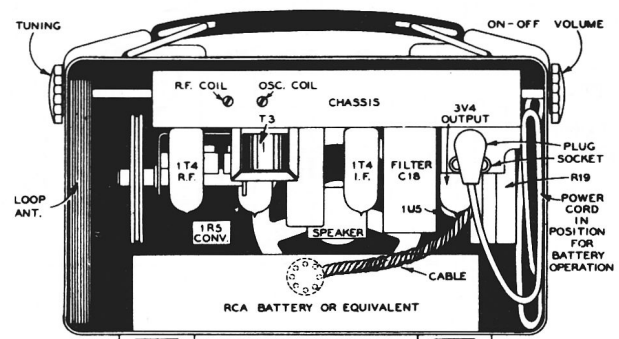
Remove back from cabinet as described at right. Spread the hinge apart to remove it from the cabinet back.



Removal of Cabinet Back

To Remove Cabinet Back

With the back fully open, grip the cabinet as illustrated. Insert a screwdriver under one hinge and pry the center of the hinge out of the opening in the cabinet while maintaining pressure on the back with the fingers and on the cabinet with the thumb. Repeat this procedure with the other hinge. Pull the back straight to the rear using both hands.



Rear View With Back Removed

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.

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.

Dial Pointer Position—With the tuning condenser fully meshed the center of the dial pointer should be in line with the score mark on the chassis.

Step	Connect High Side of Sig. Gen. to —	Sig. Gen. Output	Dial Pointer Setting	Adjust for Max. Output
1	Disconnect loop—remove chassis—remove bottom plate.			
2	Pin #6 of 1T4 I.F. Amplifier thru .005 mf.	455 kc	Quiet point near 1600 kc	2nd I.F. Trans. T2 Top & Bottom
3	Pin #6 of 1R5 Converter thru .005 mf.			1st I.F. Trans. T1 Top & Bottom
4	Replace bottom cover and install chassis in cabinet. Re-connect loop.			
5	Short wire placed near loop for radiated signal	1620 kc	min. cap.	1600 kc osc. trimmer C1-3T
6		1400 kc	1400 kc Signal	1400 kc r.f. & ant. trimmers*
7		Connect a 22,000 ohm resistor in parallel with r.f. tuning cond. C1-2		
8		600 kc	600 kc Signal	L4 osc. core* while rocking gang
9		Remove the 22,000 ohm resistor from r.f. tuning cond. C1-2.		
10		600 kc	600 kc Signal	L3 r.f. core
11	Repeat Steps 5, 6, 7, 8, 9 and 10.			

* The position of the battery affects loop inductance. The battery should be in place during steps 5 to 11.

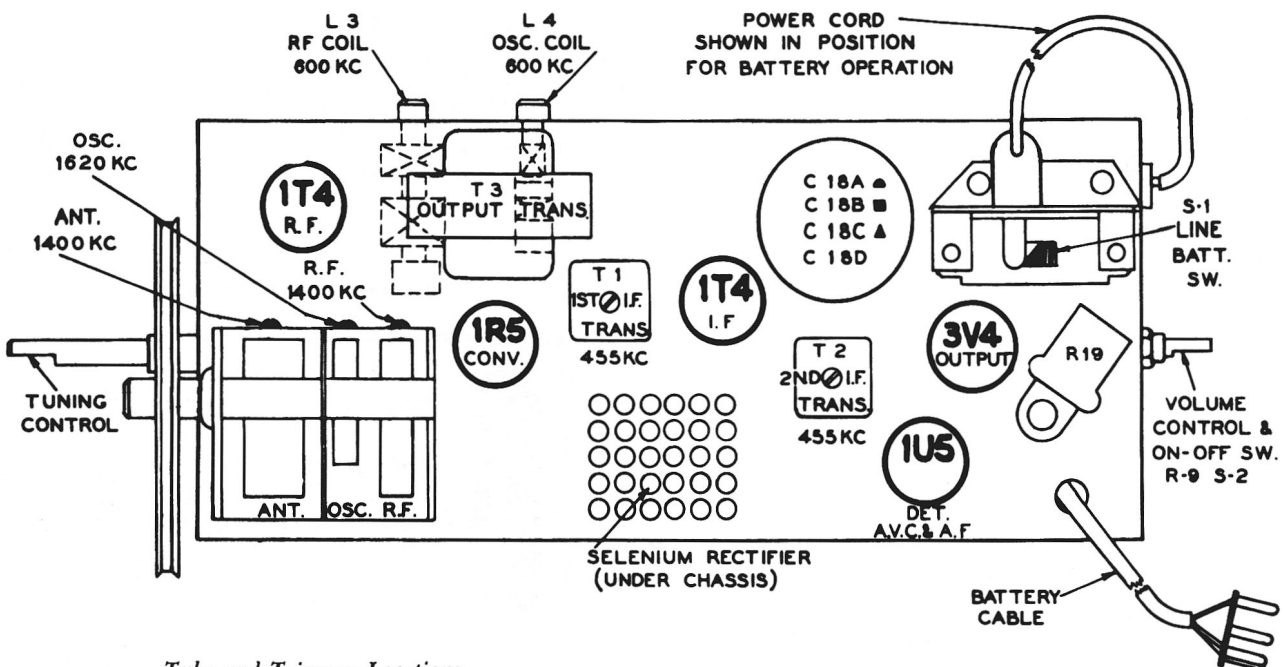
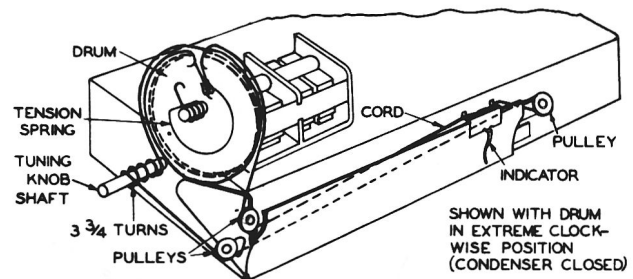
Critical Lead Dress

1. Dress all filament leads next to chassis.
2. Use short pigtail leads on components to V1, Pin 6.
3. Dress gang leads direct to avoid excess lead length.
4. Dress loop leads away from gang tuning drum.
5. Dress capacitors C3, C4, C6 for RF shielding.
6. Use short pigtail lead on C21 to V3-2 and dress away from Pin 6.
7. Dress capacitors C13 and C17 direct and down to base.

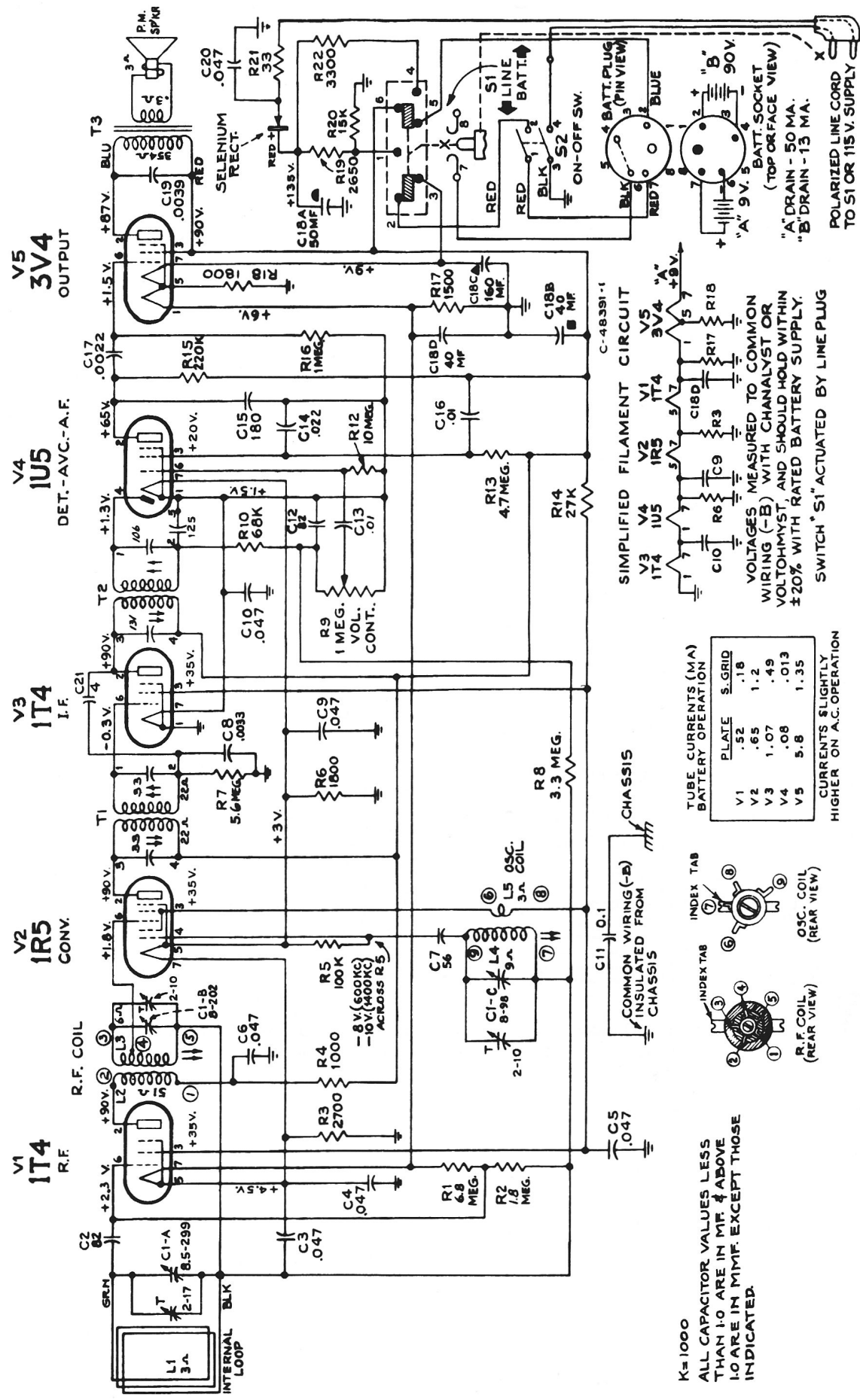
CAUTION.—

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.

Dial-Indicator and Drive Mechanism

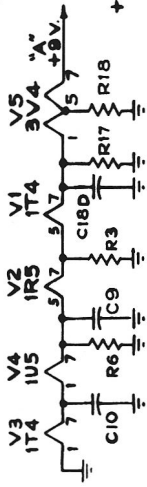


Tube and Trimmer Locations



K=1000
ALL CAPACITOR VALUES LESS
THAN 10 ARE IN MF. & ABOVE
10 ARE IN MMF. EXCEPT THOSE
INDICATED.

SIMPLIFIED FILAMENT CIRCUIT



VOLTAGES MEASURED TO COMMON
WIRING (-B) WITH CHANALYST OR
VOLTOHMIST, AND SHOULD HOLD WITHIN
±20% WITH RATED BATTERY SUPPLY.
SWITCH "S1" ACTUATED BY LINE PLUG

TUBE CURRENTS (MA)
BATTERY OPERATION

TUBE	PLATE	SCREEN
V1	.52	.18
V2	.65	1.2
V3	1.07	.49
V4	.08	.013
V5	5.8	1.35

CURRENTS SLIGHTLY
HIGHER ON A.C. OPERATION

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INDEX TAB



Schematic Diagram

