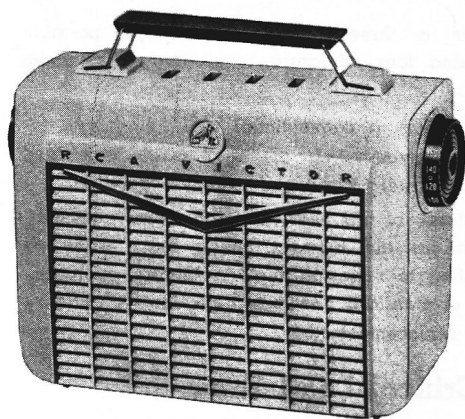




RCA VICTOR



Model P-130

AC-DC-Battery Portable Receiver

MODEL P-130

SERVICE DATA

— 1956 No. 7 —

ISSUED BY

GENERAL SERVICE DEPARTMENT
RCA VICTOR COMPANY, LTD.
MONTREAL, CANADA

ELECTRICAL AND MECHANICAL SPECIFICATIONS

TUNING RANGE540-1,600 kc
INTERMEDIATE FREQUENCY455 kc
LOUDSPEAKER

Size and Type4 in. P.M.
Voice Coil Impedance3.2 ohms at 400 cycles

POWER OUTPUT (Power line operation)

Undistorted0.135 watt
Maximum0.17 watt
Power output on battery operation is approx. 50% less.

TUBE COMPLEMENT

- (1) RCA 1R5Converter
- (2) RCA 1U4I.F. Amplifier
- (3) RCA 1U5Det.—AVC—1st A.F.
- (4) RCA 3V4Output

A selenium rectifier is used.

POWER SUPPLY RATING

Power Line Operation

115 volts, d. c. or 50 to 60 cycles a. c.18 watts
or

Battery Operation

Batteries Required: Current Consumption Approx. Life (Intermittent Service)

"A"—3 volts } 0.155 amp. 30 hrs.

RCA VS 036 (2 req'd) }
"B"—67.5 volts } 8.5 ma. 100 hrs.
RCA VS 216 }

TUNING DRIVE RATIO1:1 (direct drive)

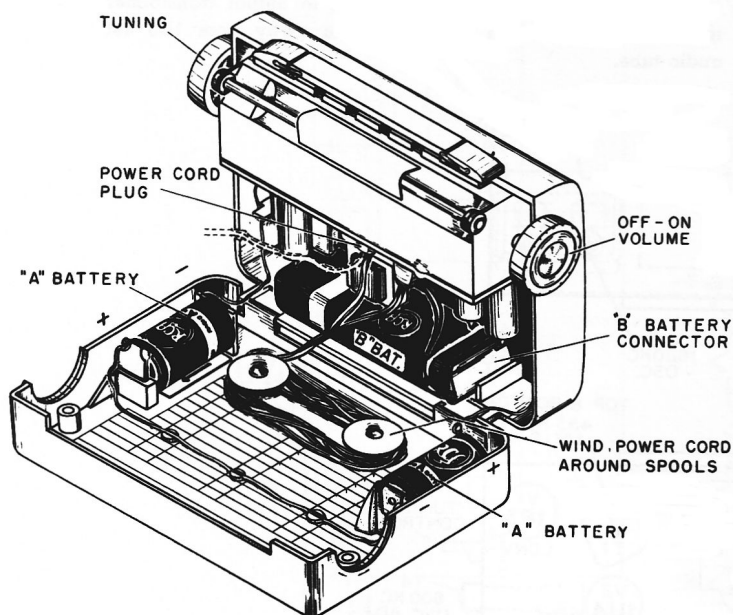
WEIGHT (Approx.)

Without battery4 lbs.

With battery5 lbs.

DIMENSIONS (Overall)

Height ...7 in. Width ...10¼ in. Depth ...3-3/16 in.



Back View

Battery Replacement

The instrument is provided with two 1½ Volt "A" batteries connected in series. Each battery is electrically connected and held in place by clips. The one battery is mounted in one end of the back cover and the other battery is mounted in the other end of the back cover. To remove batteries, simply lift out of clips.

The "B" battery connector is a pair of snap-action fasteners. To disconnect, pry the fastener away from the battery.

Power Line Operation

A power cord is stored inside the cabinet. To open the cabinet, pull backwards on the top of the cabinet back. It is secured by means of two spring clips and catches on the inside of the cabinet. Remove the plug of the power cord from its socket on the chassis and insert the plug into a convenient electrical power outlet. A notch in the right side of the cabinet allows the back to be closed with the cord passing through.

Notes: If reception is not obtained on DC, reverse plug in power outlet. On AC operation, reversal of the plug may reduce hum.

If instrument is operated without batteries in place, the "B" battery connector should be prevented from contacting the chassis.

Battery Operation

Place the power cord plug in the socket provided on the top of the chassis. Wind the power cord around the two small spools attached to the cabinet back.

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 which permits the bottom cover to remain in place. On AC operation, an isolation transformer (117v./117v.) may be necessary for the receiver if the test oscillator is also AC operated.

Step	Connect High Side of Sig. Gen. to —	Sig. Gen. Output	Dial Pointer Setting	Adjust for Max. Output
1	Remove chassis from case Remove chassis cover			
2	Connection lug of C1-A (front section of gang) in series with .01 mfd.	455 kc	Quiet point near 1600 kc	T2 2nd I. F. Trans.
3				T1 1st I. F. Trans.
4	Replace chassis cover and install chassis in case. Fasten antenna leads under tab on chassis apron.			
5	Short wire placed near antenna for radiated signal	1620 kc	gang fully open	C1-B (osc.)
6		1400 kc	1400 kc signal	C1-A (ant.)
7		600 kc	600 kc signal	T4 (osc.) rock gang
8	Repeat steps 5, 6 and 7.			

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.

Circuit Description

Model P-130 is a three-way "personal" type portable radio receiver using four miniature tubes and a selenium rectifier.

The receiver circuit is a conventional superheterodyne including pentagrid converter, i.f. amplifier stage, combined detector—a.v.c.—first audio stage and a power amplifier

One of the features of this receiver is the new switching circuit which changes the filament circuit from series on power line operation to series-parallel on battery operation. This permits use of standard flashlight cells for "A" battery resulting in lower replacement cost.

Critical Lead Dress

1. Blue Electrolytic lead to be dressed under ground end lead of .033 (C5) condenser to keep it from touching ballast resistor R8.

2. Yellow Electrolytic condenser lead to be dressed under the ground leads of C5 and C9 (.033 and .22 mf.).

3. Line cord lead to on-off switch to be dressed under C5 and C9 (.033 and .22 mf.) ground leads.

4. R14, 27 ohm resistor to be centered over 1U4 socket (V2) center pin.

5. Green and Black Electrolytic condenser leads to be dressed away from R8, 1200 ohm resistor.

6. Red Electrolytic lead to be dressed under W1 shielded lead to volume control.

7. Check wiring to see that no leads or parts are dressed so that they block the line plug insertion slots.

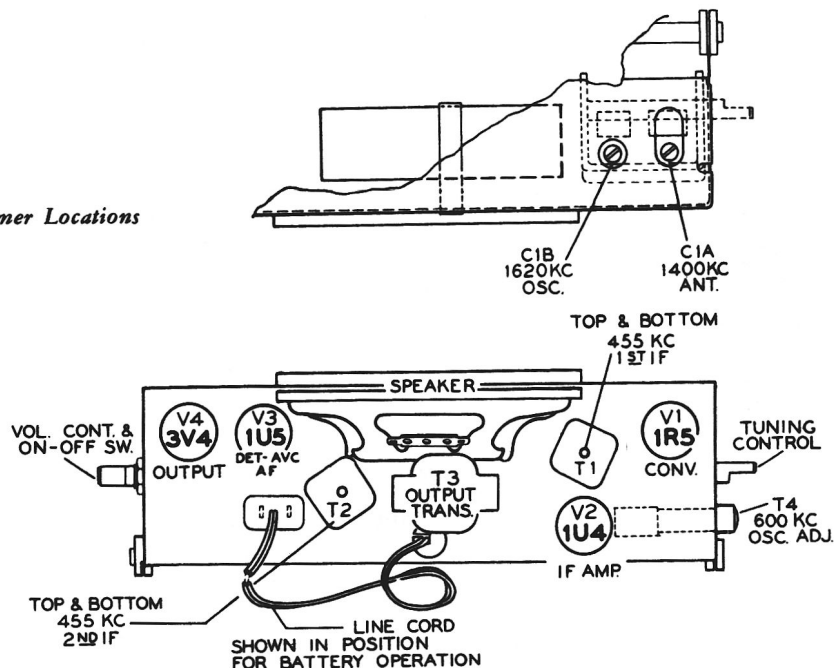
8. Second I.F. transformer plate lead to be reasonably direct and dressed for minimum coupling to first I.F. grid wire.

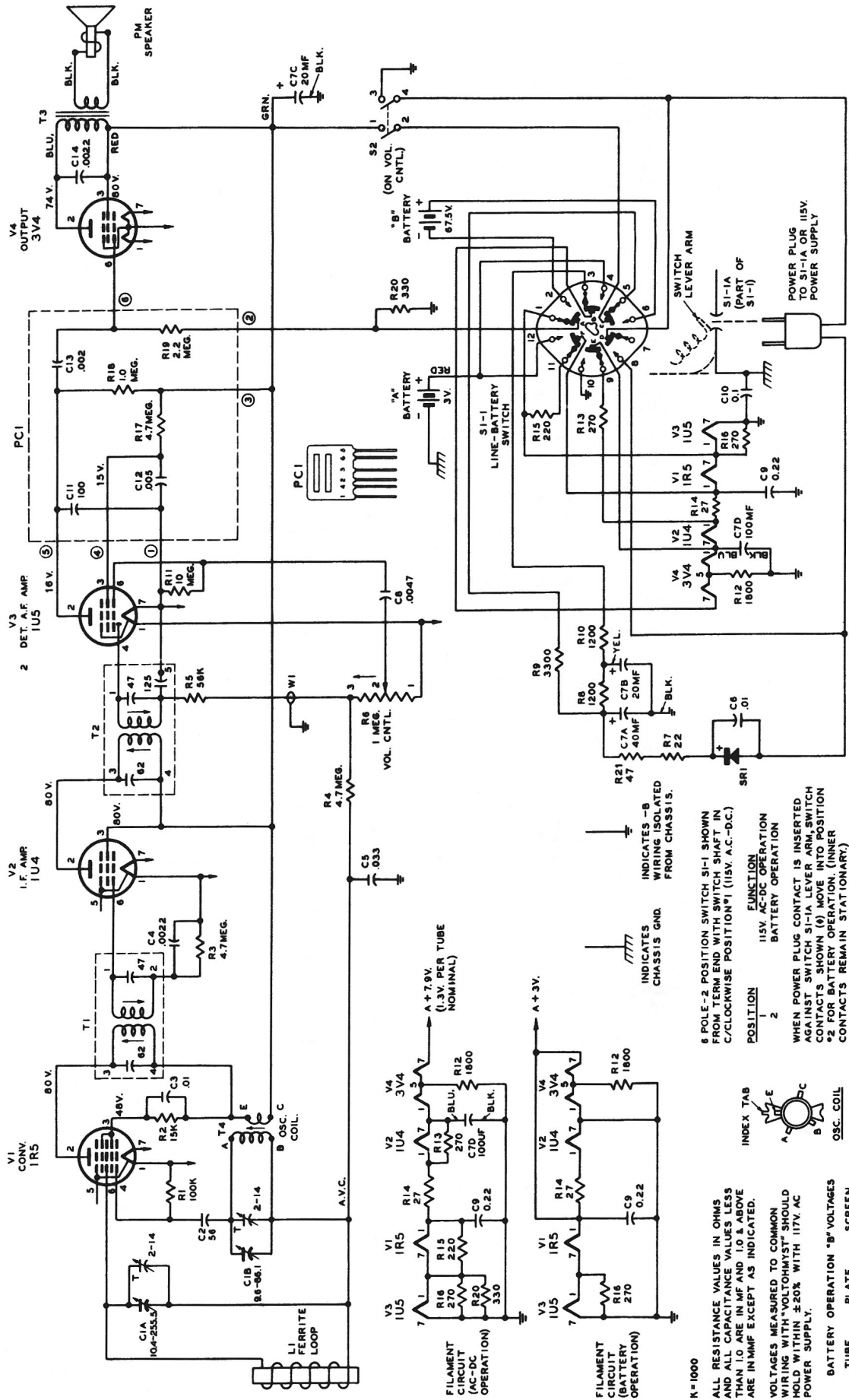
9. "B—" common wiring connections should not be altered.

10. Sleeving on long loop lead to be dressed under the two lances provided for this purpose on the chassis protective aluminum cover.

11. Blue plate lead from 3V4 plate to output transformer must be dressed down on the chassis away from 1U5 1st audio tube.

Tube and Trimmer Locations





Schematic Circuit Diagram

REPLACEMENT PARTS LIST

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

SYMBOL	STOCK NO.	DESCRIPTION	SYMBOL	STOCK NO.	DESCRIPTION
C1A, C1B	S-20547	Capacitor - Variable tuning capacitor 31 mmf, to 8.6 mmf	S1	S-20533	Switch - "Line-Battery" switch
C2		Capacitor - Fixed, ceramic 56 mmf, ±20%, 500 v.	S2	*S-21249	Switch - (Pt. of R6) "On-Off" switch
C3	73960	Capacitor - Fixed, ceramic 0.01 mf, ±100-0%, 500 v.	SR1	S-20529	Rectifier - Selenium rectifier - 65 MA.
C4	77942	Capacitor - Fixed, paper 0.0022 mf, ±20%, 200 v.	T1	S-20540	Transformer - 1st I. F. transformer
C5	73552	Capacitor - Fixed, paper 0.933 mf, ±20%, 400 v.	T2	S-20541	Transformer - 2nd I. F. transformer
C6	79918	Capacitor - Fixed, ceramic, 0.01 mf, ±100-0%, 600 v.	T3	S-20532	Transformer - Output transformer
C7A to	S-20545	Capacitor - Electrolytic 40/20/20/100 mf, -10% +100%	T4	S-20542	Coil - Oscillator coil
C8		Capacitor - Fixed, paper - 0.0047 mf, ±20%, 200 v.		79774	Cable - "B" battery lead assembly with snap fastener
C9	79740	Capacitor - Fixed, paper 0.22 mf, ±20%, 200 v.		73935	Clip - I. F. transformer mtg, clip (2 req'd)
C10	77423	Capacitor - Fixed, paper 0.1 mf, ±20%, 400 v.		S-20531	Cord - AC power cord and plug
C11, C12 }		Capacitor - Part of PC1		101376	Shield - Protective shield (fiber) for antenna rod
C13 }		Capacitor - Fixed, paper 0.002 mf, ±20%, 400 v.		75780	Socket - Tube socket, 7 pin miniature for V1
C14 }		Antenna - Ferrite antenna assy. with protective shield		73116	Socket - Tube socket, 7 pin miniature for V2, V3
L1	S-20543	Circuit - Printed circuit consisting of C11, C12, C13, R16, R17 and R19		71494	Socket - Tube socket, 7 pin miniature for V4
PC1	S-20544	Resistor - Fixed, composition, 100,000 ohms ±20%, 1/2 w.			SPEAKER ASSEMBLY
R1		Resistor - Fixed, composition, 15,000 ohms ±20%, 1/2 w.		S-20546	Speaker - 4" P.M. speaker complete with cone voice (3.2 ohms)
R2		Resistor - Fixed, composition 4.7 meg. ±20%, 1/2 w.			MISCELLANEOUS ASSEMBLY
R3, R4		Resistor - Fixed, composition 56,000 ohms ±20%, 1/2 w.		*S-21242	Case - Case back - flame "Impac"
R5		Control - Volume control (Includes S2)		*S-21243	Case - Case back - gray "Impac"
R6	*S-21249	Resistor - Fixed, composition 22 ohms ±10%, 1/2 w.		*S-21244	Case - Case back - green "Impac"
R7		Resistor - Fixed, wire-wound 1200 ohms ±20%, 4 w.		*S-21245	Case - Case front - flame "Impac"
R8	100146	Resistor - Fixed, composition 3300 ohms ±10%, 1/2 w.		*S-21246	Case - Case front - green "Impac"
R9		Resistor - Fixed, wire-wound 1200 ohms ±20%, 4 w.		*S-21247	Case - Case front - gray "Impac"
R10	100146	Resistor - Fixed, composition 10 meg., ±20%, 1/2 w.		*S-20528	Catch - Case front and back catch (2 req'd)
R11		Resistor - Fixed, composition 1800 ohms ±10%, 1/2 w.		*S-20534	Clip - Battery retaining clip ("A") (2 req'd)
R12		Resistor - Fixed, composition 270 ohms ±10%, 1/2 w.		*S-20530	Contact - Battery contact spring ("A") (2 req'd)
R13		Resistor - Fixed, composition 27 ohms ±10%, 1/2 w.		*S-21038	Handle - Carrying Handle - flame "Impac"
R14		Resistor - Fixed, composition 220 ohms ±10%, 1/2 w.		*S-21030	Handle - Carrying handle - dark green "Impac"
R15		Resistor - Fixed, composition 270 ohms ±10%, 1/2 w.		*S-21034	Handle - Carrying handle - dark gray "Impac"
R16		Resistor - Part of PC1		*S-21040	Knob - Tuning control knob (with spring) flame
R17, R18 }		Resistor - Fixed, composition 330 ohms ±10%, 1/2 w.		*S-21032	Knob - Tuning control knob (with spring) green
R19 }		Resistor - Fixed, composition 46 ohms ±10%, 1 w.		*S-21036	Knob - Tuning control knob (with spring) gray
R20 }				*S-21039	Knob - Volume control knob (with spring) flame
R21				*S-21031	Knob - Volume control knob (with spring) green
				*S-21035	Knob - Volume control knob (with spring) gray
				*S-20527	Link - Case carry handle link (2 req'd)
				*S-21248	Retainer - Formed wire hinge retainer for case - front and case - back
				101680	Spacer - Fiber spacer for tuning shaft
				330720-84	Instruction Book

* Indicates New Stock Items.

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

All parts subject to change or withdrawal without notice.

To Remove Cabinet Back

With the back fully open, grip the cabinet with thumb pressing forward against case front and fingers pressing backward against case back. 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.

To Remove Hinges

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