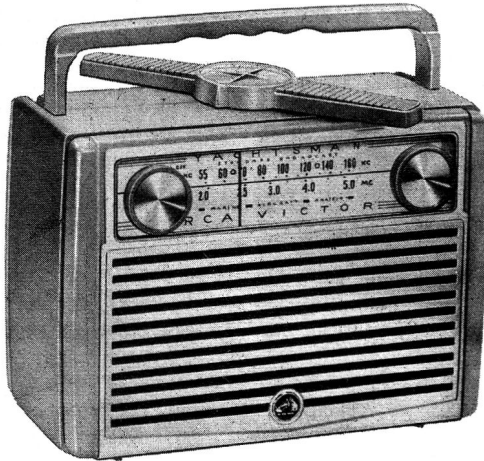




RCA VICTOR



The "New Yachtsman"
Model 7-BX-9H Surf Green

AC-DC-Battery Portable Receiver

MODEL 7-BX-9H

SERVICE DATA

— 1956 No. 31 —

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

SPECIFICATIONS

TUNING RANGE:

"A" Band 540-1,600 kc
"B" Band 2-5 mc

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 RCA VS 057W Battery
(Average battery life — 100 hrs. intermittent service)
Battery current "A" 52 ma., "B" 14 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.

To Remove Hinges

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

WEIGHT (Approx.)

Without battery 5 lb. With battery 8 lb.

POWER OUTPUT:

Undistorted 150 milliwatts
Maximum 240 milliwatts

LOUDSPEAKER 4 in. P.M.

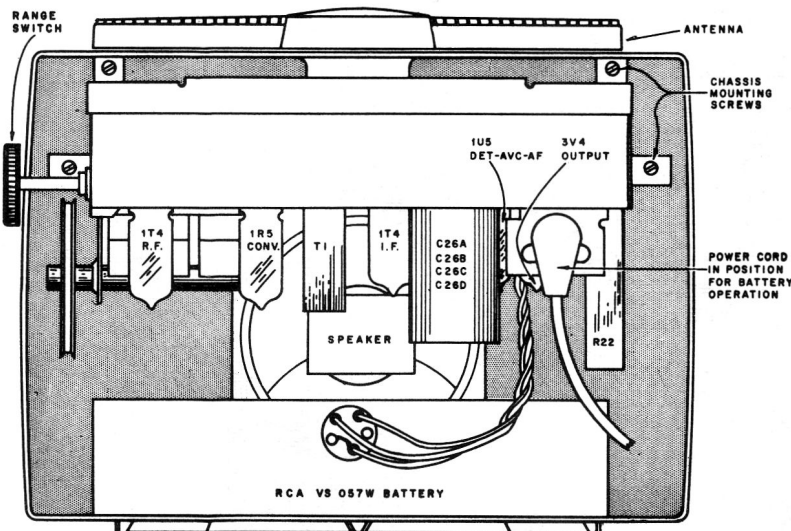
Voice Coil impedance 3.2 ohms at 400 cycles

CABINET DIMENSIONS:

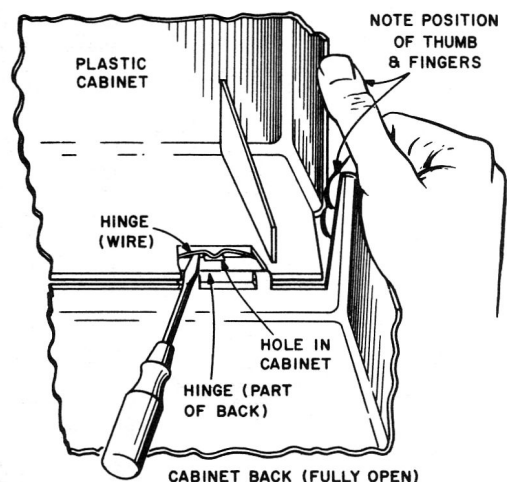
Height... 8 3/4 in. Width... 11 3/4 in. Depth... 5 1/4 in.

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



Removal of Cabinet Back

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 cover.			
2	Pin #6 of 1T4 I.F. Amplifier thru .005 mf.	455 kc	Quiet point near 1600 kc "A" Band	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 connect loop. Place loop in the same position in relation to chassis as when the receiver is fully assembled.			
5	Short wire placed near antenna for radiated signal	1620 kc	gang fully open "A" Band	Osc. trimmer C33
6		1400 kc	1400 kc signal "A" Band	Ant. and R.F. trimmers C30 and C32
7		600 kc	600 kc signal "A" Band	T5 R.F. core and T6 Osc. core alternately while rocking gang
8		Repeat Steps 5, 6 and 7		
9		5200 kc	gang fully open "B" Band	Osc. trimmer C34
10		4800 kc	4800 kc signal "B" Band	Ant. and R.F. trimmers C29 and C31
11		2000 kc	2000 kc signal "B" Band	T4 R.F. core and T7 Osc. core alternately while rocking gang
12	Repeat Steps 9, 10 and 11			
13	Reassemble chassis and antenna in cabinet. Check adjustment of C29 ("B" Ant.) at 4800 kc and C30 ("A" Ant.) at 1400 kc.			

Alignment Procedure

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.

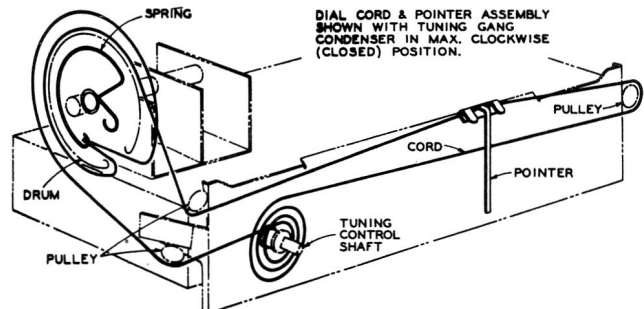
Battery operation of the receiver is preferable during alignment; on AC operation an isolation transformer (117v./117v.) may be necessary if the test oscillator is also AC operated.

Critical Lead Dress

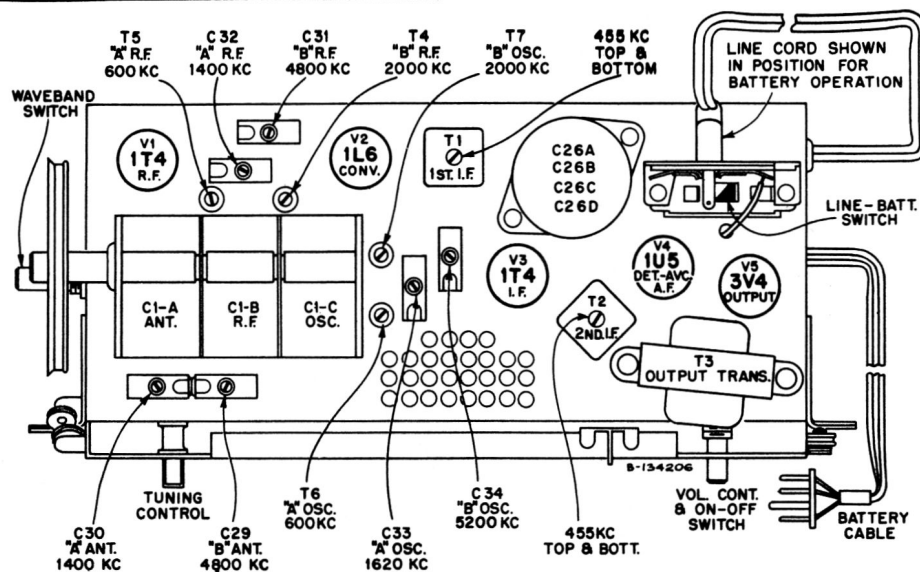
1. Dress all filament leads next to chassis.
2. Use short pigtail leads on components to V1, Pin 6.
3. Dress gang leads direct to avoid excess lead length.
4. Dress capacitor C17 across V3 socket to act as shield for C21.
5. Dress capacitors C3, C4 and C6 down to base between V1 socket and V2 socket, use short leads.
6. Use short pigtail lead on C16 to V3-2 and dress away from Pin 6.
7. Dress capacitor C24 down to base.
8. Twist loop antenna leads and dress into slots provided in cabinet—allow sufficient slack to permit rotation of antenna.
9. The "A" band series ant. coil (L3) and "B" band shunt ant. coil (L2) should be dressed away from chassis.

Chassis Removal

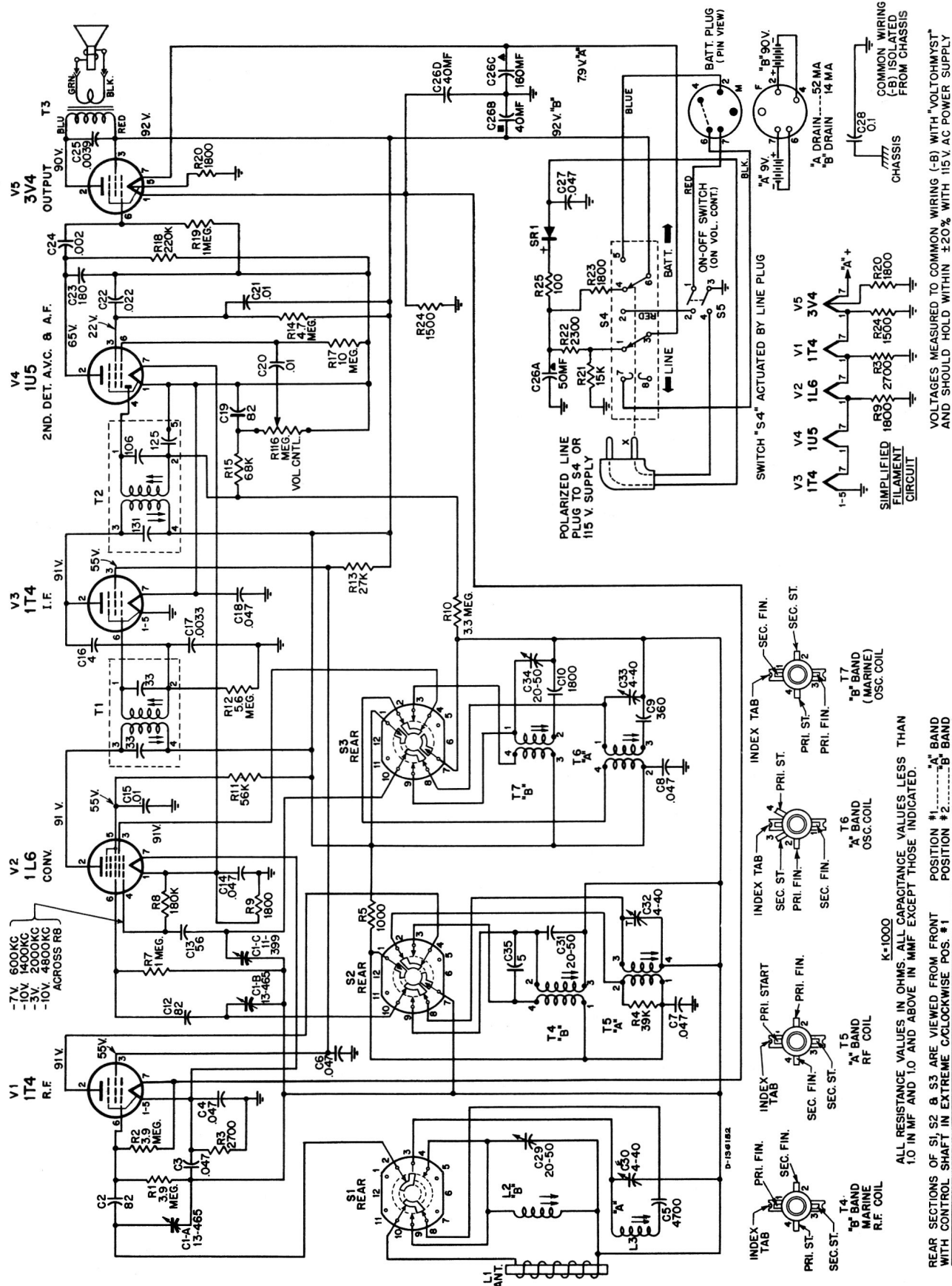
1. Remove control knobs (pull off).
2. Unsolder the two loop antenna leads.
3. Pull out battery and disconnect battery plug.
4. Remove the four chassis mounting screws, two at front sides and two at top rear.



Dial-Indicator and Drive Mechanism



Tube and Trimmer Locations



REPLACEMENT PARTS LIST

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

SYMBOL No.	STOCK No.	DESCRIPTION	SYMBOL No.	STOCK No.	DESCRIPTION
CHASSIS ASSEMBLY RC-1163			R18		Resistor—Fixed, composition, 220,000 ohms, $\pm 20\%$, $\frac{1}{2}$ w.
C1A, C1B, C1C	102360	Capacitor—Variable tuning capacitor.	R19		Same as R7.
C2	71514	Capacitor—Fixed ceramic, 82 mmf., $\pm 10\%$, 500 v.	R20		Resistor—Fixed, composition, 1800 ohms, $\pm 10\%$, $\frac{1}{2}$ w.
C3	77422	Capacitor—Fixed paper, 0.047 mf., $\pm 20\%$, 400 v.	R21		Resistor—Fixed, composition, 15,000 ohms, $\pm 10\%$, $\frac{1}{2}$ w.
C4	78921A	Capacitor—Fixed paper, 0.047 mf., $\pm 20\%$, 200 v.	R22		Resistor—Fixed, wirewound, 2300 ohms, $\pm 5\%$, 7 w.
C5	101721	Capacitor—Fixed paper, 4700 mmf., $\pm 10\%$, 200 v.	R23		Resistor—Fixed, composition, 1800 ohms, $\pm 10\%$, 1 w.
C6, C7, C8	77422	Same as C3	R24		Resistor—Fixed, composition, 1500 ohms, $\pm 10\%$, $\frac{1}{2}$ w.
C9	72572	Capacitor—Fixed mica, 360 mmf., $\pm 2\%$, 500 v.	R25	102429	Resistor—Fixed, wirewound, 100 ohms, $\pm 10\%$, 4 w.
C10	39658	Capacitor—Fixed mica, 1800 mmf., $\pm 5\%$, 500 v.	S1, S2, S3	102363	Switch—Function switch.
C12	71514	Same as C2	S4	38905	Switch—D.P.D.T. "battery/line" switch.
C13	71924	Capacitor—Fixed ceramic, 56 mmf., $\pm 10\%$, 500 v.	S5	101999	Part of R16.
C14	78921A	Same as C4	SR1	77958	Rectifier—Selenium rectifier.
C15	73960	Capacitor—Fixed ceramic, 0.01 mf., $\pm 100\%$ —0%, 500 v.	T1	73129	Transformer—1st I.F. transformer.
C16	102430	Capacitor—Fixed ceramic, 4 mmf., ± 1.0 mmf., 500 v.	T2	73130	Transformer—2nd I.F. transformer.
C17	102425	Capacitor—Fixed paper, 0.0033 mf., $\pm 10\%$, 400 v.	T3	102364	Transformer—Output transformer.
C18	78921A	Same as C4	T4	102369	Coil—R.F. coil, "B" band.
C19	71514	Same as C2	T5	102368	Coil—R.F. coil, "A" band.
C20, C21	101000	Capacitor—Fixed paper, 0.01 mf., $\pm 10\%$, 200 v.	T6	102366	Coil—Oscillator coil, "A" band.
C22	102080	Capacitor—Fixed paper, 0.022 mf., $\pm 10\%$, 200 v.	T7	102367	Coil—Oscillator coil, "B" band.
C23	71922	Capacitor—Fixed ceramic, 180 mmf., $\pm 10\%$, 500 v.		101921	Bracket—Dial plate mounting bracket (2 req'd)
C24	102079	Capacitor—Fixed paper, 0.0022 mf., $\pm 10\%$, 400 v.		101727	Connector—Terminal connector for speaker leads (2 req'd)
C25	102218	Capacitor—Fixed paper, 0.0039 mf., $\pm 10\%$, 400 v.		73275	Connector—5-contact male connector for battery cable.
C26A to C26D incl.	76659	Capacitor—Electrolytic, 50/40 mfd., 150 v., 160/40 mfd., 25 v.		79351	Cord—Power line attachment cord and plug.
C27	75071	Capacitor—Fixed paper, moulded, 0.047 mf., $\pm 20\%$, 400 v.		72953	Cord—Dial drive cord (250' spool).
C28	77423	Capacitor—Fixed paper, 0.1 mf., $\pm 20\%$, 400 v.		101926	Pointer—Station selector dial pointer.
C29	102359	Capacitor—Variable mica trimmer, 20-50 mmf., 500 v.		72602	Pulley—Aluminum pulley for dial plate assembly, 13/32" O.D. x 0.127 hole.
C30	102358	Capacitor—Variable mica trimmer, 4-40 mmf., 500 v.		101919	Shaft—Tuning control shaft.
C31	102359	Same as C29.		101375	Socket—Tube socket, 7 pin miniature for V4 & V5.
C32, C33	102358	Same as C30		73117	Socket—Tube socket, 7 pin miniature for V1, V2, & V3.
C34	102359	Same as C29.		76332	Spring—Dial cord tension spring.
C35	75613	Capacitor—Fixed ceramic, 5 mmf., $\pm 1\%$, 500 v.	SPEAKER ASSEMBLY 971495-7		
L2	102432	Coil—Shunt coil, "B" band antenna.		77055	Speaker—4" P.M. speaker, complete with cone and voice coil (3.2 ohms).
L3	102431	Coil—Loading coil, "A" band antenna.	MISCELLANEOUS		
R1, R2	502539	Resistor—Fixed, composition, 3.9 megohms, $\pm 10\%$, $\frac{1}{2}$ w.	L1	102340	Antenna—Antenna assembly—green "Impac."
R3		Resistor—Fixed, composition, 2700 ohms, $\pm 10\%$, $\frac{1}{2}$ w.		100090	Catch—Case catch, spring steel.
R4		Resistor—Fixed, composition, 39,000 ohms, $\pm 10\%$, $\frac{1}{2}$ w.		Y2934	Case—Case front—green "Impac"—with grille, window and emblem.
R5		Resistor—Fixed, composition, 1000 ohms, $\pm 10\%$, $\frac{1}{2}$ w.		Y2935	Case—Case back—green "Impac"
R7		Resistor—Fixed, composition, 1 megohm, $\pm 20\%$, $\frac{1}{2}$ w.		101989	Emblem—Trademark emblem.
R8		Resistor—Fixed, composition, 180,000 ohms, $\pm 10\%$, $\frac{1}{2}$ w.		101930	Grille—Aluminum grille.
R9		Resistor—Fixed, composition, 1800 ohms, $\pm 10\%$, $\frac{1}{2}$ w.		102328	Handle—Carrying handle—green "Impac."
R10		Resistor—Fixed, composition, 3.3 megohms, $\pm 10\%$, $\frac{1}{2}$ w.		101925	Insert—Plastic insert for antenna case assembly.
R11		Resistor—Fixed, composition, 56,000 ohms, $\pm 10\%$, $\frac{1}{2}$ w.		102338	Knob—Function control knob with spring—green.
R12	31455	Resistor—Fixed, composition, 5.6 megohms, $\pm 10\%$, $\frac{1}{2}$ w.		102336	Knob—Tuning control knob with spring—green.
R13		Resistor—Fixed, composition, 27,000 ohms, $\pm 10\%$, $\frac{1}{2}$ w.		102334	Knob—Volume control knob with spring—green.
R14		Resistor—Fixed, composition, 4.7 megohms, $\pm 20\%$, $\frac{1}{2}$ w.		102675	Plate—L. H. hinge plate for carrying handle.
R15		Resistor—Fixed composition, 68,000 ohms, $\pm 10\%$, $\frac{1}{2}$ w.		102676	Plate—R. H. hinge plate for carrying handle.
R16		Control—Volume control and "on-off" switch (S5)		79744	Retainer—Formed wire retainer (hinge) for case front and case back.
R17		Resistor—Fixed, composition, 10 megohms, $\pm 20\%$, $\frac{1}{2}$ w.		101927	Spring—Retaining spring for volume and tuning control knobs.
				101069	Spring—Retaining spring for function control knob.
				101939	Washer—Spring washer for antenna assy. beryllium copper.
				101920	Washer—Phenolic stop washer ($\frac{3}{8}$ " I.D.) for antenna assembly.
				101918	Window—Dial window—clear vinylite.

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

All parts subject to change or withdrawal without notice.