



MODEL 523



RCA VICTOR



A-C—D-C RADIO RECEIVER

MODEL 523

SERVICE DATA

—1953 NO. 7—

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

Electrical and Mechanical Specifications

Frequency Ranges

Standard Broadcast ("A" Band)... 540-1,680 kc.

Short Wave ("C" Band)... 4.7-18 mc.

Intermediate Frequency 455 kc.

Tube Complement

- (1) RCA-12SA7 Converter
- (2) RCA-12SK7 IF Amplifier
- (3) RCA-12SQ7 Det., A.V.C.-A.F. Amp.
- (4) RCA-35L6GT Output
- (5) RCA-35Z5GT Rectifier

Power Supply Ratings (D-C or 25/60 cycles A-C)

..... 105-125 volts 30 watts

Power Output Rating

Undistorted 1.0 watt

Maximum 1.5 watts

Loudspeaker

Type 5-inch P.-M. Dynamic

Voice Coil Impedance 3.2 ohms at 400 cycles

Tuning Drive Ratio 18 to 1 (9 turns of knob)

Weight 6¾ lbs.

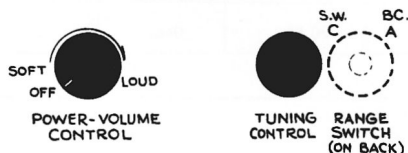
Cabinet Dimensions

Width 11¾" Height 6½" Depth 6¼"

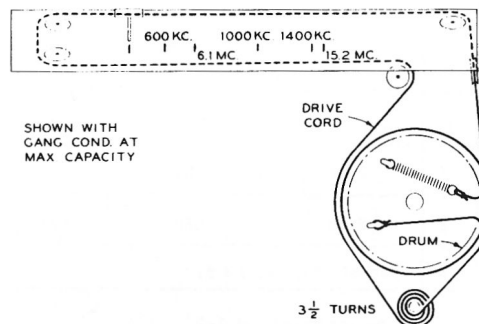
Precautionary Lead Dress

1. Dress output plate capacitor C24 and output transformer leads down next to chassis.
2. Dress green lead from terminal board to volume control down to chassis and away from adjacent parts.
3. Keep grid end of R2 as short as possible.
4. Keep body of C2 away from chassis.
5. Dress R7 and C19 down next to chassis.
6. Twist power leads underneath chassis.
7. Dress R9 against back apron of chassis.
8. Dress dial lamp leads between speaker and dial back plate bracket.
9. Dress C1 away from antenna coil winding.
10. Dress output transformer secondary leads away from dial drive cord.

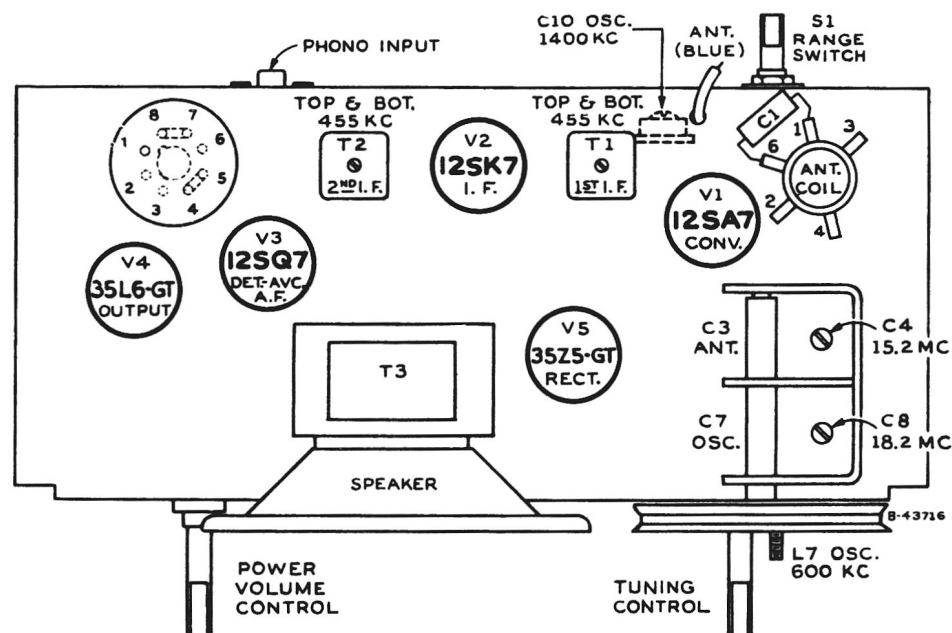
POWER SUPPLY POLARITY—For operation on d-c, the power plug must be inserted in the outlet for correct polarity. If the set does not function, reverse the plug. On a-c, reversal of the plug may reduce hum.



Location of Controls



Dial Indicator and Drive Mechanism



Tube and Trimmer Locations

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 low to avoid a-v-c action.

Note: If the test-oscillator is a-c operated, it may be necessary to use an isolation transformer (117v./117v.) for the receiver during alignment.

Calibration Scale—The glass tuning dial may be easily removed from the cabinet and mounted above

the pointer for reference during alignment. The extreme left hand mark of the Standard Broadcast scale must be in line with the left hand mark on the dial backing plate.

Dial Backing Plate—In the event that only the chassis is returned for service, the marks on the dial backing plate may be used during alignment; refer to the Dial Indicator and Drive Mechanism drawing for corresponding frequencies.

Dial Pointer—With the gang condenser in full mesh the dial pointer should be set to the left hand reference mark on the dial backing plate.

ALIGNMENT CHART

Order of Alignment		TEST OSCILLATOR				RECEIVER				
		Connect "HI" Side To	Connect "LO" Side To	Dummy Antenna	Frequency Setting	Range Selector	Receiver Dial Setting	Circuit to Adjust	Adjustment Symbols	Notes
I.F. Alignment	1	12SK7 Grid Pin #8	GND	.01 MFD.	455 KC	'A' Band	'HI' End	2nd I.F. Trans.	T-2	Max. Out.
	2	12SA7 Grid Pin #8	Same	Same	Same	Same	Same	1st I.F. Trans.	T-1*	Same
C Band Alignment	3	Ant. Lead	Same	300 Ohms	18.2 MC.	Same	18.2 MC.	Osc.	† C-8	Same
	4	Same	Same	Same	15.2 MC.	Same	15.2 MC.	Ant.	‡ C-4	Same
	5	Repeat Steps 3, 4.								
A Band Alignment	6	Ant. Lead	GND	200 MMF	600 KC	'A' Band	600 KC	Osc.	L-7	Same
	7	Same	GND	Same	1400 KC	Same	1400 KC	Osc.	C-10	Same
	8	Same	GND	Same	600 KC	Same	600 KC	Osc.	L-7	Same
	9	Repeat Steps 6, 7 & 8.								

* Do not Re-Adjust T-2

† Use minimum capacity peak if two peaks can be obtained.

‡ Rock Gang.

REPLACEMENT PARTS FOR MODEL 523

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

STOCK No.	DESCRIPTION	STOCK No.	DESCRIPTION
	CHASSIS ASSEMBLIES		Resistor—Fixed, composition: 33 ohms, $\pm 10\%$, 1 watt (R10) 120 ohms, $\pm 10\%$, $\frac{1}{2}$ watt (R12) 1200 ohms, $\pm 10\%$, 1 watt (R13) 33,000 ohms, $\pm 10\%$, $\frac{1}{2}$ watt (R3) 47,000 ohms, $\pm 20\%$, $\frac{1}{2}$ watt (R5) 330,000 ohms, $\pm 20\%$, $\frac{1}{2}$ watt (R1) 470,000 ohms, $\pm 20\%$, $\frac{1}{2}$ watt (R8, R11) 2.2 megohm, $\pm 20\%$, $\frac{1}{2}$ watt (R2) 3.3 megohm, $\pm 20\%$, $\frac{1}{2}$ watt (R4) 4.7 megohm, $\pm 20\%$, $\frac{1}{2}$ watt (R7)
*73252	Capacitor—Variable tuning capacitor (C3, C4, C7, C8) Capacitor—Mica trimmer, 1.6-18 mmf. (C10) Capacitor—Ceramic, 56 mmf. (C6) Capacitor—Mica, 220 mmf. (C2, C22) Capacitor—Mica, 430 mmf. (C9) Capacitor—Tubular, moulded paper, .0047 mfd., 600 volts (C1, C19, C21) Capacitor—Tubular, moulded paper, .027 mfd., 400 volts (C24) Capacitor—Tubular, moulded paper, .033 mfd., 400 volts (C13, C25) Capacitor—Tubular, moulded paper, .047 mfd., 400 volts (C11, C14, C20) Capacitor—Tubular, moulded paper, 0.1 mfd., 400 volts (C5)	*70358	Switch—Range switch (S1)
		*73253	Transformer—Output transformer (T3)
		*73036	Transformer—First I.F. transformer (T-1)
		*73254	Transformer—Second I.F. transformer (T2)
			SPEAKER ASSEMBLIES
		*73269	Speaker—5" P.M. speaker complete with cone and voice coil
			MISCELLANEOUS
*75969	Capacitor—Electrolytic comprising 1 section of 20 mfd., 20 volts, 1 section of 30 mfd., 150 volts and 1 section of 50 mfd., 150 volts (C23A, C23B, C23C)	*S-20295	Cabinet—Brown plastic cabinet
*73255	Coil—Oscillator coil (L6, L7)	*75660	Dial—Glass tuning dial
*73256	Coil—Antenna coil (L1, L2, L3, L4, L5)	77033	Emblem—"RCA Victor" emblem
*73268	Coil—Peaking coil (L8, R14)	37831	Fastener—Push fastener for cabinet back (1 set)
*73257	Control—Volume control and power switch (R6, S2)	*75661	Knob—Volume control or tuning knob
S-4313	Cord—Drive cord	S-5365	Knob—Range switch knob
*73259	Indicator—Station selector indicator	14270	Spring—Retaining spring for knob #75661
	Lamp—Dial lamp—Mazda 47	35126	Spring—Retaining spring for knob #S-5365
	Resistor—Wire wound, 68 ohms, 2 watts (R9)		

APPLY TO YOUR RCA DISTRIBUTOR FOR PRICES OF REPLACEMENT PARTS.

*INDICATES NEW STOCK ITEMS.