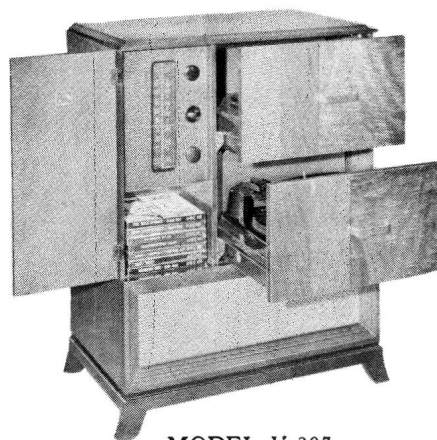




MODEL V-307



RCA VICTOR



RADIO & DUAL PHONOGRAPH COMBINATION

MODEL V-307 SERVICE DATA

—1950 No. 10—

GENERAL SERVICE DIVISION
RCA VICTOR COMPANY LIMITED
MONTREAL, QUE.

Electrical and Mechanical Specifications

Tuning Ranges:

Standard Broadcast 540-1600 KC.
Short Wave 5.8-18.2 MC.
Intermediate Frequency 455 KC.

Tube Complement

(1) RCA 6BE6 Converter
(2) RCA 6BA6 I.F.
(3) RCA 6AV6 Phase Inverter & A.V.C.
(4) RCA 6AV6 Audio
(5) RCA 6V6GT Output
(6) RCA 6V6GT Output
(7) RCA 6X5GT/G Rectifier

Dial Lamps (3) Mazda 51

Tuning Drive Ratio 10 to 1 ($5\frac{1}{2}$ turns of knob)

Power Output

Undistorted 5.5 watts

Maximum 8.5 watts

Loudspeaker

Type 12" P.M.

Voice coil impedance 2.2 ohms at 400 cys.

Power Supply Ratings

Rating A—105—125 volts, 60 cycles, .55 amps, 64 watts

Rating B—105—125 volts, 25 cycles, .55 amps, 64 watts

Cabinet Dimensions

Height $32\frac{3}{4}$ "

Width $25\frac{1}{2}$ "

Depth $15\frac{1}{2}$ "

PHONOGRAPH (RP-200)

Record capacity Ten twelve inch or twelve ten inch

Turntable speed $33\frac{1}{3}$ or 78 R.P.M.

Pickup 1.4 volts at 4000 cycles across 500,000 ohm load

PHONOGRAPH (RP168A-1)

Record capacity Ten 7 in.

Turntable speed 45 R.P.M.

Pickup6 volts at 1000 cycles across 1 Megohm load

Refer to the RP168 and RP200 Service Notes for information on the 45 and $33\frac{1}{3}$ -78 R.P.M. record changers respectively.

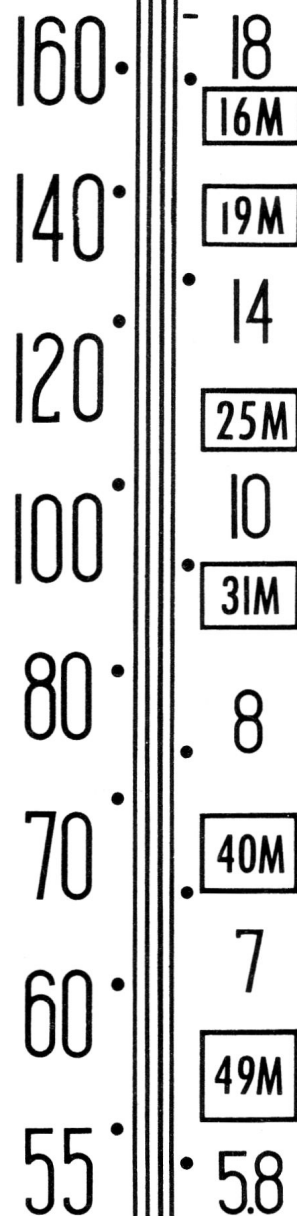


Fig. 1.—The Dial Scale Drawing shown is a full size reproduction. It can be used as a reference in alignment procedure.

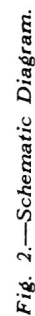


Fig. 2.—Schematic Diagram.

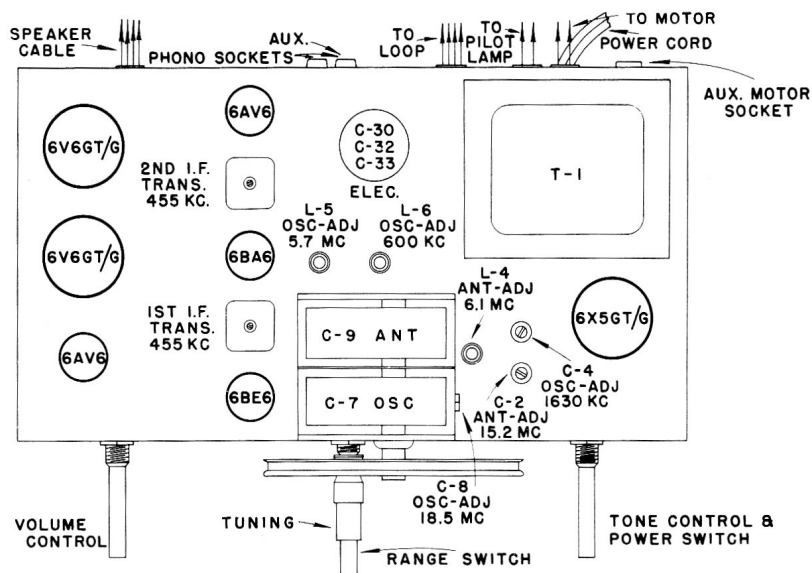


FIG. 3—CHASSIS LAYOUT AND ALIGNMENT ADJUSTMENT

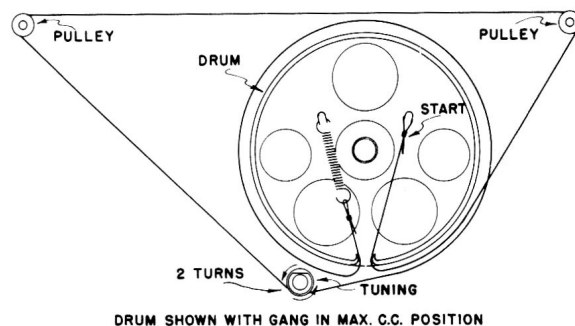


FIG. 4—DIAL CORD STRINGING

Critical Lead Dress

Dress the blue and the green leads, from the terminal board to the tone control, away from each other.

Alignment Procedure

Before aligning the receiver, set the gang condenser for maximum capacity and then set the dial cursor on the calibration point at the extreme left hand end of the dial.

When only a portion of the circuit is to be aligned select the required portion and perform all the remaining

steps.

In order to obtain best results, it is advisable to align the 455 KC I.F.'s with the help of a cathode ray oscilloscope. The scope should be connected across the volume control. If this equipment is not available, use the method outlined below in the alignment chart.

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	V-2, 6BA6 Pin #1	GND	.1MFD.	455 KC	S.B.	"HI" End	2nd I.F. Trans.	L-9, L-10	Max. Out.
	2	V-1, 6BE6 Pin #7	Same	Same	Same	Same	Same	1st I.F. Trans.	L-7, L-8	Same
	3	Repeat Steps 1 and 2								
S.W. Alignment	4	"Ant" Terminal	GND	300 OHMS	5.7 MC	S.W.	"LO" End	S.W.-Osc.	L-5	Same
	5	Same	Same	Same	6.1 MC	Same	6.1 MC	S.W.-Ant.	L-4	Same
	6	Same	Same	Same	18.5 MC	Same	"HI" End	S.W.-Osc.	C-8	Same
	7	Same	Same	Same	15.2 MC	Same	15.2 MC	S.W.-RF	C-2	Same
	8	Repeat steps 4 to 7								
S.B. Alignment	9	"Ant" Terminal	GND	220 MMF	600 KC	S.B.	600 KC	S.B.-Osc.	L-6 (Rock In)	Same
	10	Same	Same	Same	1630 KC	Same	"HI" End	S.B.-Osc.	C-4	Same
	11	Same	Same	Same	1500 KC	Same	1500 KC	S.B.-Ant.	C-1*	Same
	12	Repeat steps 9 to 11								

* It is advisable to Align C-1 when the loop antenna & receiver are both in the cabinet.

REPLACEMENT PARTS FOR MODEL V-307

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

STOCK NO.	Description	STOCK NO.	Description
Chassis Assembly		Chassis Assembly - (Cont'd.)	
S-4514	Capacitor-Trimmers, 2 section, 3-35 MMF. & 4 - 70 MMF. (C2, C4)	---	Resistor-33,000 ohms + - 10% 1/2 watt (R11)
31871	" -Ceramic, 20 MMF. + - 5% (C3)	---	" -68,000 ohms + - 10% 1/2 watt (R24)
S-4523	Capristor-56 MMF. and 33 ohms (C11, R3)	---	" -220,000 ohms + - 10% 1/2 watt (R7)
S-4614	" -2 - 105 MMF. & 1 - 47,000 ohms (C20, C21, R15)	---	" -220,000 ohms + - 20% 1/2 watt (R17, R21)
S-4221	Capacitor-Ceramic, 220 MMF. + - 20% (C10, C23)	---	" -270,000 ohms + - 10% 1/2 watt (R8)
14498	" -Mica, 680 MMF. + - 5% (C5)	---	" -470,000 ohms + - 10% 1/2 watt (R22, R12)
39668	" - " 4700 MMF. + - 5% (C6)	---	" -470,000 ohms + - 20% 1/2 watt (R18)
---	" -Paper .005 Mfd. + - 20%, 200V. (C17)	---	" -1.0 Megohm + - 20% 1/2 watt (R2)
---	" -Paper .001 Mfd. + - 10%, 200V. (C16, C34)	---	" -3.3 Megohm + - 20% 1/2 watt (R6)
---	" -Paper .005 Mfd. + - 10%, 1000V. (C29, C31)	---	" -10.0 Megohm + - 20% 1/2 watt (R16, R22)
---	" -Paper .01 Mfd. + - 20%, 200V. (C22, C27)	S-5358	Switch-Range Switch (S1, S2)
---	" -Paper .01 Mfd. + - 10%, 400V. (C24)	S-4487	Transformer-1st I.F. (L7, L8, C13, C14)
---	" -Paper .01 Mfd. + - 20%, 400V. (C26)	S-5570	" -2nd I.F. (L9, L10, C18, C19)
---	" -Paper .015 Mfd. + - 10%, 200V. (C25)	S-4379	" -Power (60 cycles) T-1
---	" -Paper .05 Mfd. + - 20%, 200V. (C15)	S-4381	" -Power (25 ") T-1
---	" -Paper .05 Mfd. + - 20%, 400V. (C12, C28)	Speaker Assembly	
S-5273	" -Electrolytic, 3 sections, 20 Mfd., 400 V. (C33)	S-5672	Cone & voice coil assembly
	20 Mfd., 350 V. (C32)	S-5813	Speaker
	20 Mfd., 25 V. (C30)	S-5775	Transformer-Output transformer (T2)
S-5360	Condenser & drum (C9, C7, C8)	Record Changer Mechanism	
S-5356	Control-Volume control (R10)	Refer to RP-168 and RP-200 series record changer Service Notes.	
S-5269	" -Tone control & power switch (R14, S3)	Miscellaneous Assemblies	
S-5351	Coil-S.W. ant. coil (L3, L4)	S-4313	Cord-Dial cord (Standard)
S-5352	" -S.B. osc. coil (L6)	S-5776	Decalcomania
S-5353	" -S.W. osc. coil (L5)	S-5263	Dial scale
---	Resistor-100 ohms, + - 20%, 1/2 watt (R4)	S-5777	Grille Cloth
---	" -390 ohms, + - 10%, 1/2 watt (R19)	S-4390	Knob-Walnut
---	" -3000 ohms, + - 5% 2 watt (R23)	S-5275	" -Mahogany
---	" -6800 ohms, + - 10% 1/2 watt (R20)	S-5276	" -Blonde
---	" -22000 ohms, + - 20% 1/2 watt (R1)	S-4387	" -Walnut
---	" -27000 ohms, + - 10% 2 watts (R5)	S-5277	" -Mahogany
---	" -47000 ohms, + - 10% 1/2 watt (R13)	S-5278	" -Blonde
		S-3870	" -Walnut
		S-5279	" -Mahogany
		S-5280	" -Blonde
		S-5354	Loop-Loop assembly (L1, L2)
		S-5272	Pointer-Station selector pointer

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

All parts subject to change or withdrawal without notice.