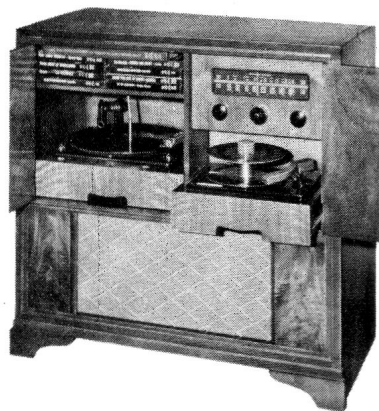




MODEL V-306



RCA VICTOR



RADIO &amp; DUAL PHONOGRAPH COMBINATION

MODEL V-306

SERVICE DATA

— 1950 No. 17 —

GENERAL SERVICE DIVISION  
RCA VICTOR COMPANY LIMITED  
MONTREAL, QUE.

## Electrical and Mechanical Specifications

## TUNING RANGES

Standard Broadcast .....540-1600 K.C.  
Short Wave .....5.8-18 MC.  
Intermediate Frequency .....455 K.C.

## TUBE COMPLEMENT

(1) RCA 6BE6 .....Converter  
(2) RCA 6BA6 .....I.F.  
(3) RCA 6AV6 .....Audio  
(4) RCA 6C4 .....Driver  
(5) RCA 6K6GT .....Output  
(6) RCA 6X5GT .....Rectifier  
Dial Lamps .....(2) Mazda 51  
Tuning Drive Ratio .....12 to 1 (6 turns of knob)

## POWER OUTPUT

Undistorted .....2.5 watts  
Maximum .....3.5 watts

## LOUDSPEAKER

Type .....10 inch P.M.  
Voice coil impedance .....3.4 ohms at 400 cycles

## POWER SUPPLY RATINGS

Rating A—105-125 volts, 60 cycles, .50 Amps., 58 watts  
Rating B—105-125 volts, 25 cycles, .50 Amps., 58 watts

## CABINET DIMENSIONS

Height .....31"  
Width .....26½"  
Depth .....16½"

## PHONOGRAPH (RP168A-1)

Record capacity .....Ten 7 in.  
Turntable speed .....45 R.P.M.  
Pickup .....6 volts at 1000 cycles across 1 Megohm load

## PHONOGRAPH (RP-200)

Record capacity .....Ten twelve inch or twelve ten inch  
Turntable speed .....33-1/3 or 78 R.P.M.  
Pickup .....1.4 volts at 4000 cycles across 500,000 ohm load

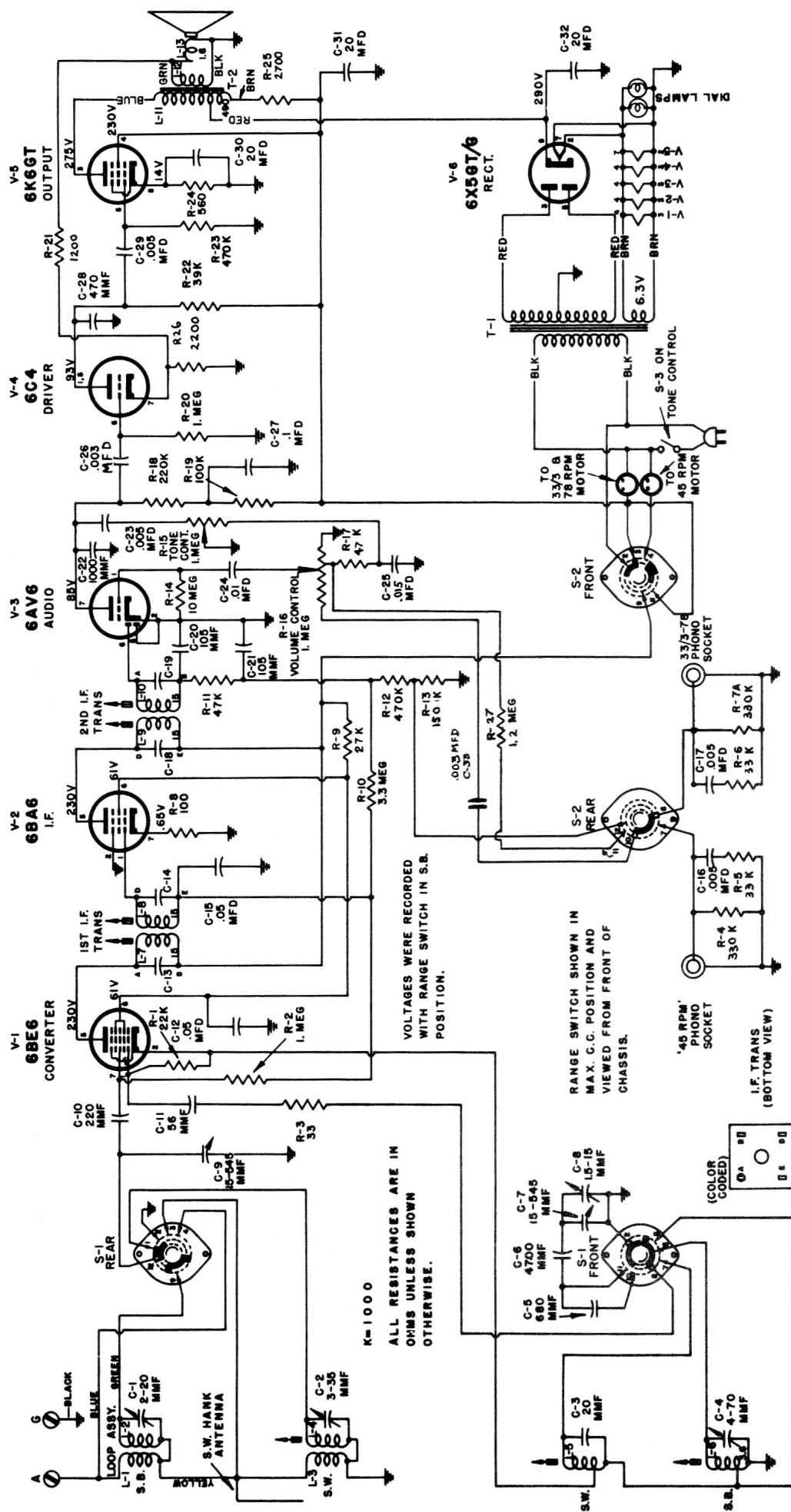
Refer to the RP168 and RP200 Service Notes for information on the 45 and 33½-78 R.P.M. record changers respectively.

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SW 6  $\frac{1}{49M}$  7  $\frac{1}{40M}$  8  $\frac{1}{31M}$  10  $\frac{1}{25M}$  14  $\frac{1}{19M}$  16  $\frac{1}{16M}$  18

SB 55 60 70 80 100 120 140 160

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.**

## 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.

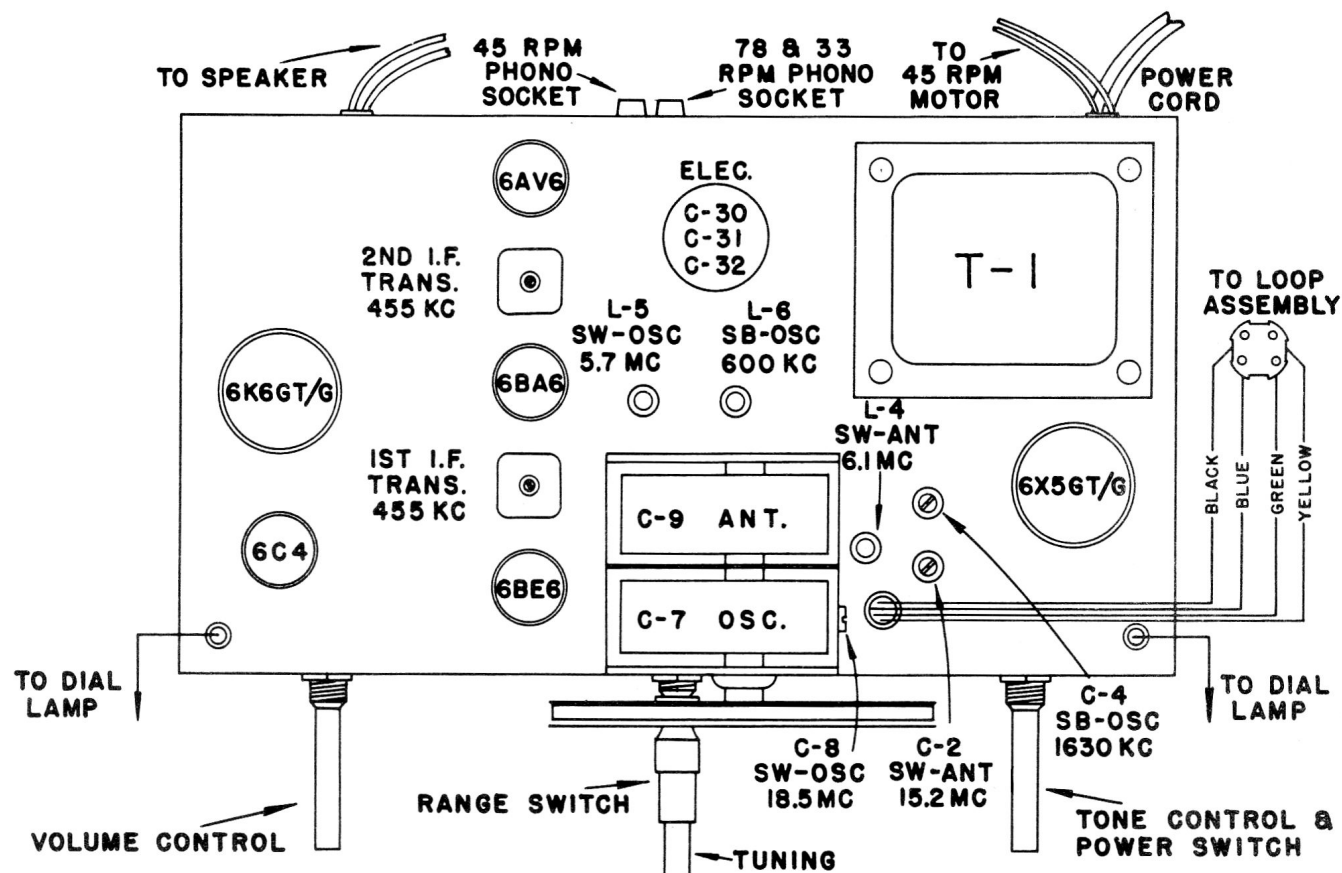


FIG. 3—CHASSIS LAYOUT AND ALIGNMENT ADJUSTMENT

## ALIGNMENT CHART

| ORDER OF ALIGNMENT |    | TEST OSCILLATOR      |                      |               |                   | RECEIVER       |              |                   |                     |           |
|--------------------|----|----------------------|----------------------|---------------|-------------------|----------------|--------------|-------------------|---------------------|-----------|
|                    |    | CONNECT "HI" SIDE TO | CONNECT "LO" SIDE TO | DUMMY ANTENNA | FREQUENCY SETTING | RANGE SELECTOR | DIAL SETTING | CIRCUIT TO ADJUST | ADJUSTMENT SYMBOLS  | NOTES     |
| I.F. ALIGNMENT     | 1  | Pin #1<br>6BA6       | Gnd.                 | .1 mfd        | 455 KC            | S. B.          | "HI" END     | 2nd I.F. Trans.   | Top & Bottom Slugs  | Max. Out. |
|                    | 2  | Pin #7<br>6BE6       | Same                 | Same          | Same              | Same           | Same         | 1st I.F. Trans.   | Top & Bottom Slugs  | Same      |
|                    | 3  | Repeat steps 1 & 2.  |                      |               |                   |                |              |                   |                     |           |
| S.W. ALIGNMENT     | 4  | Ter. "A" on loop     | Gnd.                 | 300 ohms      | 5.7 Mc            | S. W.          | "LO" End     | Osc.              | L-5                 | Same      |
|                    | 5  | Same                 | Same                 | Same          | 18.5 Mc           | Same           | "HI" End     | Osc.              | C-8                 | Same      |
|                    | 6  | Same                 | Same                 | Same          | 6.1 Mc            | Same           | 6.1 Mc       | Ant.              | L-4                 | Same      |
|                    | 7  | Same                 | Same                 | Same          | 15.2 Mc           | Same           | 15.2 Mc      | Ant.              | C-2                 | Same      |
|                    | 8  | Repeat steps 4 to 7. |                      |               |                   |                |              |                   |                     |           |
| S.B. ALIGNMENT     | 9  | Same                 | Same                 | 220 mmf       | 600 Kc            | S. B.          | 600 Kc       | Osc.              | L-6 Rock in to Loop | Same      |
|                    | 10 | Same                 | Same                 | Same          | 1630 Kc           | Same           | "HI" End     | Osc.              | C-4                 | Same      |
|                    | 11 | Same                 | Same                 | Same          | 1500 Kc           | Same           | 1500 Kc      | Loop Trimmer      | C-1*                | Same      |
|                    | 12 | Repeat steps 9 to 11 |                      |               |                   |                |              |                   |                     |           |

\* Align C-1 when receiver & loop assembly are in the cabinet.

# REPLACEMENT PARTS FOR MODEL V-306

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

| STOCK NO.               | Description                                             | STOCK NO.                        | Description                                            |
|-------------------------|---------------------------------------------------------|----------------------------------|--------------------------------------------------------|
| <b>Chassis Assembly</b> |                                                         | <b>Chassis Assembly (Cont'd)</b> |                                                        |
| * S-5943                | Capacitor, 20 MMF. $\pm$ 5% 500V. (C-3)                 | ---                              | " , 150,000 ohms $\pm$ 10% " (R-13)                    |
| 73867                   | Capristor, 56 MMF. 33 ohms. (C-11) (R-33)               | ---                              | " , 220,000 ohms $\pm$ 20% " (R-18)                    |
| S-4614                  | " 2-105 MMF. 47000 ohms. (C-20) (C-21) (R-11)           | ---                              | " , 330,000 ohms $\pm$ 10% " (R-4) (R-7A)              |
| * S-5940                | Capacitor, 220 MMF. $\pm$ 20% 350V. (C-10)              | ---                              | " , 470,000 ohms $\pm$ 10% " (R-23)                    |
| * S-5933                | " , 470 MMF. $\pm$ 20% 350V. (C-28)                     | ---                              | " , 1 Megohm $\pm$ 20% $\frac{1}{2}$ watt (R-2) (R-20) |
| * S-5941                | " , 680 MMF. $\pm$ 5% 300V. (C-5)                       | ---                              | " , 1.2 Megohm $\pm$ 10% $\frac{1}{2}$ watt (R-27)     |
| S-5370                  | " , 1000 MMF. $\pm$ 20% 350V. (C-22)                    | ---                              | " , 3.3 Megohm $\pm$ 20% " (R-10)                      |
| * S-5942                | " , 4700 MMF. $\pm$ 5% 500V. (C-6)                      | ---                              | " , 10 Megohm $\pm$ 20% " (R-14)                       |
| ---                     | " , .003 MFD. $\pm$ 20% 200V. (C-33)                    | S-5358                           | Switch-Range Switch (S-1) (S-2)                        |
| ---                     | " , .003 MFD. $\pm$ 20% 400V. (C-26)                    | S-4487                           | Transformer-1st I.F. Trans. (L-7) (L-8)                |
| ---                     | " , .005 MFD. $\pm$ 10% 200V. (C-16) (C-17)             | S-5570                           | " 2nd " " (L-9) (L-10)                                 |
| ---                     | " , .005 MFD. $\pm$ 20% 400V. (C-23) (C-29)             | * S-5938                         | " -Power 60 cycle (T-1)                                |
| ---                     | " , .01 MFD. $\pm$ 20% 400V. (C-24)                     | * S-5939                         | " -Power 25 cycle (T-1)                                |
| ---                     | " , .015 MFD. $\pm$ 10% 200V. (C-25)                    | * S-5931                         | Transformer-Output Trans. (T-2)                        |
| ---                     | " , .05 MFD. $\pm$ 20% 200V. (C-15)                     | <b>Speaker Assembly</b>          |                                                        |
| ---                     | " , .05 MFD. $\pm$ 20% 400V. (C-12)                     | * S-5928                         | Speaker 10"                                            |
| ---                     | " , .1 MFD. $\pm$ 20% 400V. (C-27)                      | * S-5929                         | Cone-Cone & voice coil assembly                        |
| S-5630                  | Condenser, Gang Condenser & Drum. (C-7) (C-9)           | <b>Miscellaneous Assemblies</b>  |                                                        |
| S-5362                  | Capacitor-Electrolytic (C-30) (C-31) (C-32)             | * S-5937                         | Back-Cabinet back (Mahogany & Walnut)                  |
| S-5352                  | Coil-S.B. oscillator coil (L-6)                         | * S-5936                         | Back-Cabinet back (Blonde)                             |
| S-5351                  | Coil-S.W. antenna coil (L-3)                            | S-4313                           | Cord-Dial cord (Standard)                              |
| S-5353                  | Coil-S.W. oscillator coil (L-5)                         | * S-5935                         | Decalcomania                                           |
| S-5356                  | Control-Volume control 1. MEG. (R-16)                   | S-5263                           | Dial scale                                             |
| S-5357                  | Control-Tone control 1. MEG. (R-15)                     | * S-5934                         | Grille Cloth                                           |
| * S-5930                | Loop-loop assembly (L-1) (L-2)                          | S-5275                           | Knob (Mahogany) tuning                                 |
| ---                     | Resistor, 100 ohms $\pm$ 20% $\frac{1}{2}$ watt (R-8)   | S-4390                           | " (Walnut) tuning                                      |
| ---                     | " , 560 ohms $\pm$ 10% 1 watt (R-24)                    | S-5276                           | " (Blonde) tuning                                      |
| ---                     | " , 1200 ohms $\pm$ 10% 1 watt (R-21)                   | S-5277                           | " (Mahogany) range                                     |
| ---                     | " , 2200 ohms $\pm$ 10% 1 watt (R-26)                   | S-4387                           | " (Walnut) range                                       |
| ---                     | " , 2700 ohms $\pm$ 10% 1 watt (R-25)                   | S-5278                           | " (Blonde) range                                       |
| ---                     | " , 22000 ohms $\pm$ 20% $\frac{1}{2}$ watt (R-1)       | S-5279                           | " (Mahogany) Volume & Tone.                            |
| ---                     | " , 27000 ohms $\pm$ 10% 1 watt (R-9)                   | S-3870                           | " (Walnut) Volume & Tone.                              |
| ---                     | " , 33000 ohms $\pm$ 10% $\frac{1}{2}$ watt (R-5) (R-6) | S-5280                           | " (Blonde) Volume & Tone.                              |
| ---                     | " , 39000 ohms $\pm$ 10% 1 watt (R-22)                  | S-5272                           | Pointer-dial pointer                                   |
| ---                     | " , 47000 ohms $\pm$ 10% $\frac{1}{2}$ watt (R-11)      | * S-5344                         | Phono-Socket                                           |
| ---                     | " , 47000 ohms 20% " (R-17)                             | ---                              | Pulls-door pulls.                                      |
| ---                     | " , 100,000 ohms $\pm$ 20% $\frac{1}{2}$ watt (R-19)    | S-5363                           | Trimmer Assembly (C-1) (C-2) (C-4) (C-8)               |

\* INDICATES NEW STOCK ITEM.

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

All parts and prices subject to change or withdrawal without notice.