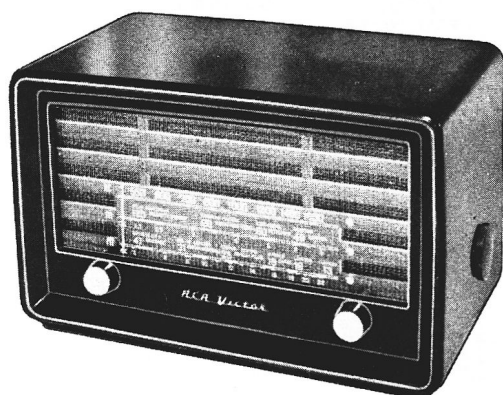




MODELS 533D AND 533F



RCA VICTOR



AC-DC RADIO RECEIVERS

Models 533D & 533F  
SERVICE DATA

— 1951 NO. 10 —

GENERAL SERVICE DIVISION  
RCA VICTOR COMPANY, LTD.  
MONTREAL, QUE.

## Electrical and Mechanical Specifications

## Frequency Ranges (533D only.)

Standard Broadcast ("A" band) .....540-1600 KC.  
 Medium Wave ("B" band) .....2.3-7. MC.  
 Short Wave ("C" band) .....7-22 MC.

## Frequency Ranges (533F only.)

Standard Broadcast ("A" band) .....535-1680 KC  
 Medium Wave ("B" band) .....2.05-6.5 MC  
 Short Wave ("C" band) .....7-22 MC  
 Intermediate Frequency .....455 KC.

## Tube Complement

- (1) RCA 12SA7 .....Converter  
 (2) RCA 12SK7 .....I.F. amplifier  
 (3) RCA 12SQ7 .....2nd Det., A.V.C. and audio  
 (4) RCA 50L6GT .....Output  
 (5) RCA 35Z5GT .....Rectifier

Dial Lamps (2) .....Mazda No. 1490, 3.4 volts .16 amps.

## Power Supply Ratings

105-125 volts D.C. or 25-60 cycles A.C. .3 amps. 30 watts.

## Power Output

Undistorted .....1.2 watt

Maximum .....2.0 watts

## Loudspeaker

Type .....6" P.M. dynamic

Voice coil impedance .....3.2 ohms at 400 cycles.

## Cabinet Dimension

Height .....7-15/16 ins.

Width .....14-9/16 ins.

Depth .....7 3/4 ins.

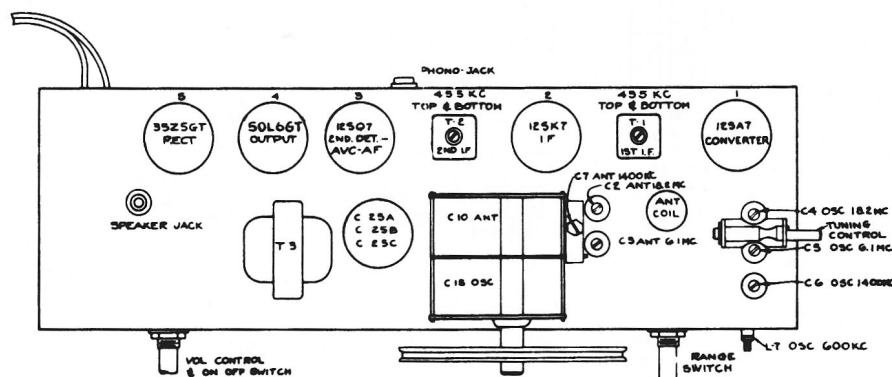


FIG. 1—CHASSIS LAYOUT AND ALIGNMENT ADJUSTMENTS

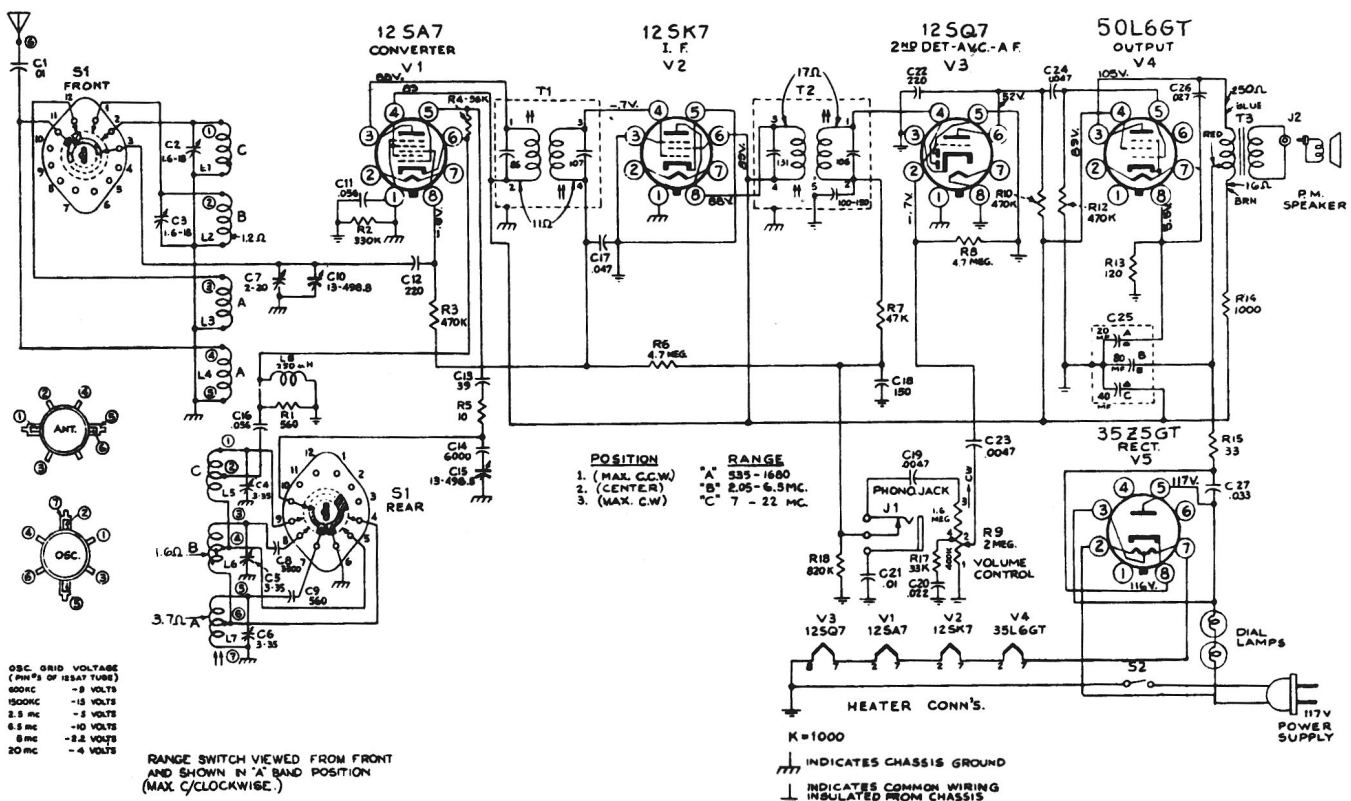
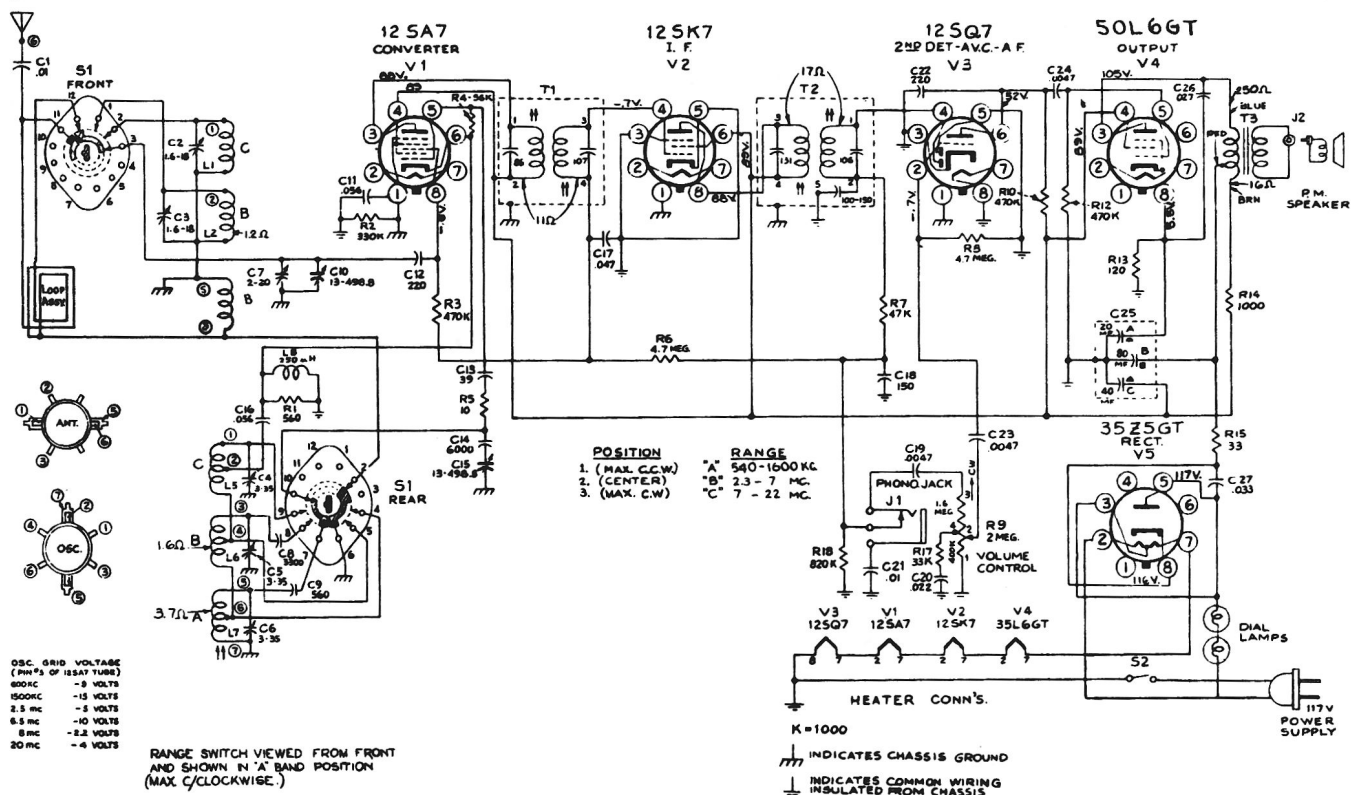
## Phonograph Attachment

A jack is provided on the rear of the chassis for connecting a phonograph attachment. (Note: the socket on top of chassis is for speaker.) The output cable of the attachment should be terminated in a Stock No. 31048

plug. It must be removed for radio reception.

**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.

533D  
533F



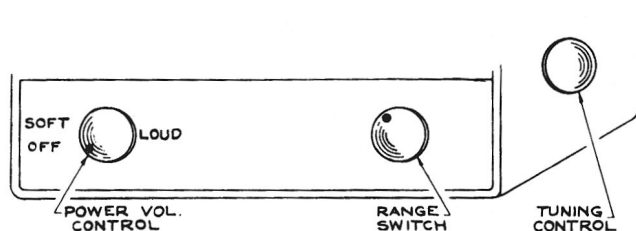
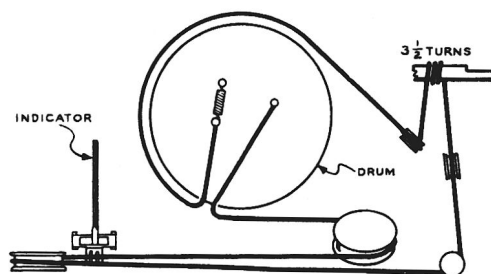


FIG. 4—LOCATION OF CONTROLS



SCHEMATIC DIAGRAM OF DRIVING CABLE WITH DRUM IN EXTREME COUNTER-CLOCKWISE POSITION (CONDENSER PLATES CLOSED). POINTER CONNECTED TO REAR CORD.

FIG. 5—DIAL CORD STRINGING

## Critical Lead Dress

1. Dress blue lead of output transformer close to chassis.
2. Dress C1 away from antenna coil winding.
3. Keep body of C12 away from chassis base.
4. Keep green wire from phono jack to terminal board

5. Dress R11 against back apron of chassis.
6. Keep C23 away from blue lead of output transformer.
7. Dress C19 close to chassis base.

## 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. The dial scale may be readily removed from the cabinet and used as a reference during alignment.

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  | I2SK7 Grid Pin #8      | GND                  | .01 MFD.      | 455 KC            | 'A' Band       | 'HI' End              | 2nd I.F. Trans.   | T-2                | Max. Out. |
|                    | 2  | I2SA7 Grid Pin #8      | Same                 | Same          | Same              | Same           | Same                  | 1st I.F. Trans.   | T-1 *              | Same      |
| 'A' Band Alignment | 3  | Ant. Lead              | Same                 | 200 MMF       | 1400 KC           | Same           | 1400 KC               | Osc.              | C-6                | Same      |
|                    | 4  | Same                   | Same                 | Same          | Same              | Same           | Same                  | Ant.              | C-7                | Same      |
|                    | 5  | Same                   | Same                 | Same          | 600 KC            | Same           | 600 KC                | Osc.              | L-7                | Same      |
|                    | 6  | Repeat Steps 3, 4 & 5. |                      |               |                   |                |                       |                   |                    |           |
| 'B' Band Alignment | 7  | Ant. Lead              | GND                  | 300 Ohms      | 6.1 MC            | 'B' Band       | 6.1 MC                | Osc.              | C-5 †              | Same      |
|                    | 8  | Same                   | GND                  | Same          | Same              | Same           | Same                  | Ant.              | C-3 ‡              | Same      |
|                    | 9  | Repeat Steps 7 & 8.    |                      |               |                   |                |                       |                   |                    |           |
| 'C' Band Alignment | 10 | Ant. Lead              | GND                  | 300 Ohms      | 18.2 MC           | 'C' Band       | 18.2 MC               | Osc.              | C-4 †              | Same      |
|                    | 11 | Same                   | Same                 | Same          | Same              | Same           | Same                  | Ant.              | C-2 ‡              | Same      |
|                    | 12 | Repeat Steps 10 & 11.  |                      |               |                   |                |                       |                   |                    |           |

\* Do not Re-Adjust T-2

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

‡ Rock Gang.

## REPLACEMENT PARTS FOR MODELS 533D &amp; 533F

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-4450                  | " - trimmer dual 1.6-18 MMF. (C-2,C-3)                                      | S-6011                           | Switch - range switch (533D) (S-1)       |
| S-4451                  | " - " triple 3-35 MMF. (C-4,C-5,C-6)                                        | S-6012                           | Switch - range switch (533F) (S-1)       |
| S-4438                  | Capacitor - 150 MMF ceramic (C-18)                                          | S-4487                           | Transformer - 1st I.F. (T-1)             |
| S-4439                  | " - 220 MMF. mica (C-12, C-22)                                              | S-4488                           | " - 2nd I.F. (T-2)                       |
| S-4440                  | " - 560 MMF. " (C-9)                                                        | S-6013                           | Volume Control - 2 Megohm (R-9)(S-2)     |
| S-4441                  | " - 3,300 " " (C-8)                                                         | <b>Speaker Assembly</b>          |                                          |
| S-4442                  | " - 6,000 " " (C-14)                                                        | S-6014                           | Speaker                                  |
| ---                     | " - .0047 Mfd. " (C-19,C-23,C-24)                                           | S-6046                           | Cone - cone & voice coil assy            |
| ---                     | " - .01 " " (C-1, C-21)                                                     | S-6022                           | Output transformer (T-3)                 |
| ---                     | " - .022 " " (C-20)                                                         | S-4491                           | Plug - male plug for speaker cable (J-2) |
| ---                     | " - .027 " " (-26)                                                          | <b>Miscellaneous Assembly</b>    |                                          |
| ---                     | " - .035 " " (C-27)                                                         | S-5243                           | Back - back cover & loop assembly (533D) |
| ---                     | " - .047 " " (C-17)                                                         | S-5244                           | Back - back cover for cabinet (533F)     |
| ---                     | " - .056 " " (C-11, C-16)                                                   | S-6015                           | Baffle board & grille cloth              |
| S-4452                  | " - electrolytic 80-40-20 Mfd. (C-25A, C-25B, C-25C)                        | S-6016                           | Cabinet - plastic cabinet                |
| S-4453                  | Capristor - (39 MMF. -10 ohm)(C-13, R-5)                                    | S-4313                           | Cord - dial cord                         |
| S-5239                  | Coil - antenna coil (533F) (L-1,L-2,L-3,L-4)                                | S-4460                           | " - power cord                           |
| S-5241                  | " - " (533D) (L-1,L-2)                                                      | S-6017                           | Dial Scale (533D)                        |
| S-5240                  | " - oscillator coil (533F) (L-5,L-6,L-7)                                    | S-6018                           | Dial Scale (533F)                        |
| S-4457                  | " - peaking coil & resistor assy. (250 MH coil & 560 ohm resistor)(L-8,R-1) | ---                              | Dial Lamp (mazda 1490)                   |
| S-6010                  | Condenser - variable (C-10, C-15, C-7)                                      | S-5661                           | Emblem (RCA Victor)                      |
| S-6044                  | Indicator - station selector pointer                                        | S-4501                           | Fastener - push fastener for back cover  |
| ---                     | Resistor 33 ohms, 1 watt (R-15)                                             | S-4465                           | Jack - phono input jack                  |
| ---                     | " 120 " $\frac{1}{2}$ " (R-13)                                              | S-6019                           | Knob - volume and power switch           |
| ---                     | " 1,000 " 1 " (R-14)                                                        | S-6020                           | " - tuning                               |
| ---                     | " 33,000 " $\frac{1}{2}$ " (R-17)                                           | S-6021                           | " - Range switch                         |
| ---                     | " 47,000 " $\frac{1}{2}$ " (R-7)                                            |                                  |                                          |
| ---                     | " 56,000 " $\frac{1}{2}$ " (R-4)                                            |                                  |                                          |
| ---                     | " 330,000 " $\frac{1}{2}$ " (R-2)                                           |                                  |                                          |
| ---                     | Resistor 470,000 ohms, $\frac{1}{2}$ watt (R-3,R-10,R-12)                   |                                  |                                          |
| ---                     | " 820,000 " " (R-18)                                                        |                                  |                                          |
| ---                     | " 4.7 Megohms $\frac{1}{2}$ " (R-6, R-8)                                    |                                  |                                          |

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

All parts subject to change or withdrawal without notice.