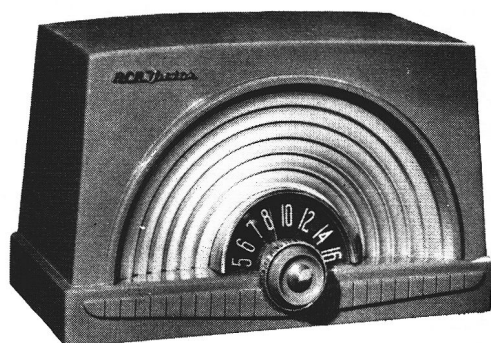




MODEL X-511 (BANDSELL)



RCA VICTOR



AC-DC RADIO RECEIVER

MODEL X-511

SERVICE DATA

—1954 No. 1—

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

## ELECTRICAL AND MECHANICAL SPECIFICATIONS

## FREQUENCY RANGES

Standard Broadcast ("A" Band) ----- 540-1,600 kc.

INTERMEDIATE FREQUENCY ----- 455 kc.

## TUBE COMPLEMENT

- (1) RCA-12BE6 ----- 1st Detector-Oscillator  
(2) RCA-12BA6 ----- IF Amplifier  
(3) RCA-12AV6 2nd Detector, A.V.C. and A-F Amplifier  
(4) RCA-50C5 ----- Output  
(5) RCA-35W4 ----- Rectifier

POWER SUPPLY POLARITY—For operation on d-c, the power plug must be inserted in the outlet for correct polarity.

## POWER SUPPLY RATINGS

105-125 volts ----- 30 watts

## POWER OUTPUT RATING

Undistorted ----- 1.0 watt

Maximum ----- 1.5 watts

## LOUDSPEAKER

Type ----- 4-inch Permanent-Magnet Dynamic

Voice Coil Impedance ----- 3.2 ohms at 400 cycles

If the set does not function, reverse the plug. On a-c, reversal of the plug may reduce hum.

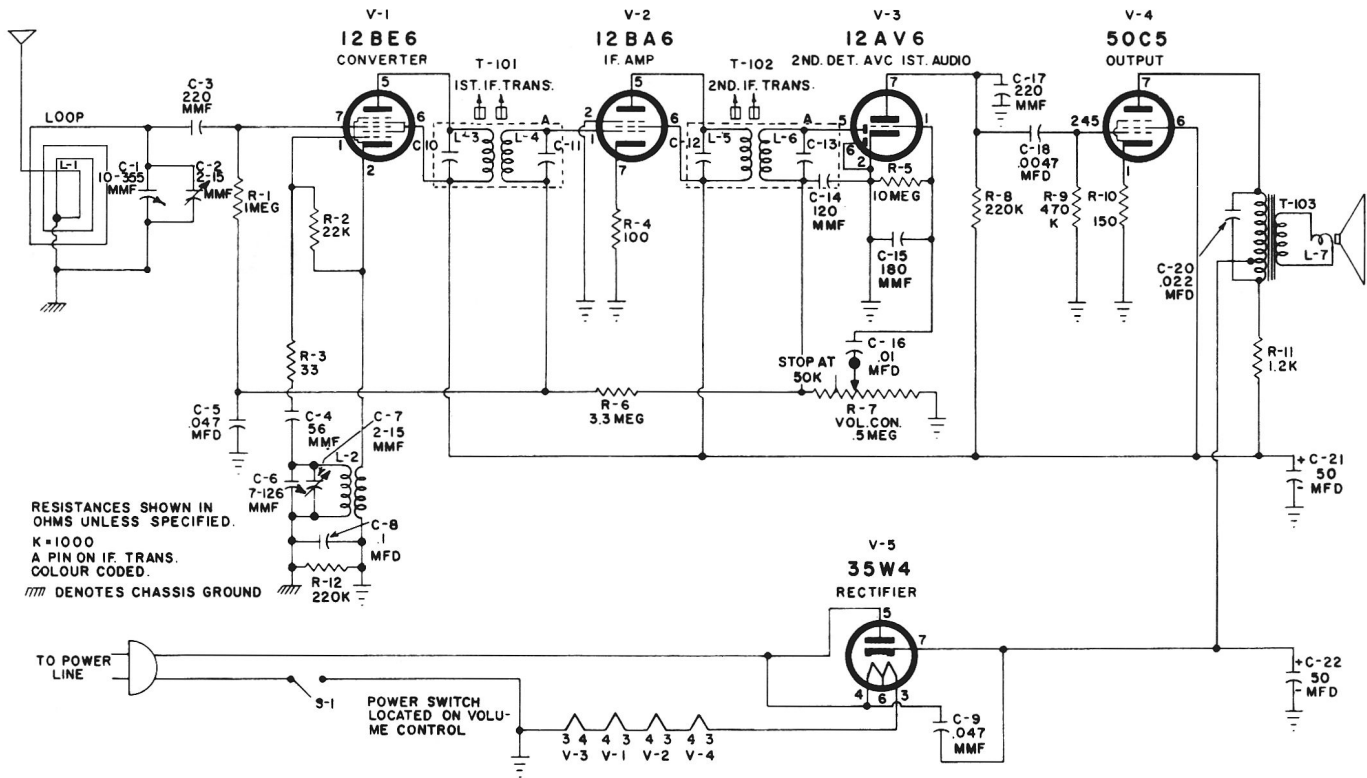
## REPLACEMENT PARTS LIST FOR MODEL X-511

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

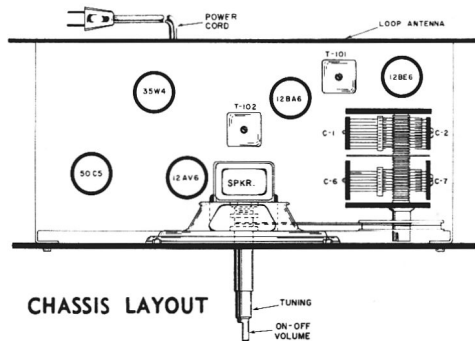
| Symbol No. | Stock No. | Description                       | Symbol No. | Stock No. | Description                                           |
|------------|-----------|-----------------------------------|------------|-----------|-------------------------------------------------------|
| C-1        | *S-20272  | Capacitor - Variable Tuning       | T-101      | S-5682    | Transformer - 1st I. F. Transf.                       |
| C-2        |           |                                   | T-102      | S-5683    | " - 2nd I. F. "                                       |
| C-3        |           | Capacitor - 220 mmf. 20% 350 V.   | T-103      | *S-20282  | " - Audio Output Transformer                          |
| C-4        | S-4523    | Capacitor - 56 mmf. 33 ohms.      |            |           | SPEAKER ASSEMBLY                                      |
| C-5        |           | Capacitor - .047 mfd. 20% 220 V.  |            |           |                                                       |
| C-6        |           | " - 7-126 mmf.                    |            |           |                                                       |
| C-7        |           | " - 2- 15 mmf.                    | S-20269    |           | Speaker - 4" P. M. Complete with Cone and Voice Coil. |
| C-8        |           | Capacitor - 0.1 mfd. 10% 400 V.   |            |           | MISCELLANEOUS ASSEMBLY                                |
| C-9        |           | " - .047 mfd. 20% 400 V.          |            |           |                                                       |
| C-10       |           | " - in 1st I. F.                  | *S-20273   |           | Bezel - Dial Bezel                                    |
| C-11       |           | " - in 1st I. F.                  |            |           |                                                       |
| C-12       |           | " - in 2nd I. F.                  | *S-20283   |           | Cabinet - Blue                                        |
| C-13       |           | " - in 2nd I. F.                  | *S-20284   |           | Cabinet - Red                                         |
| C-14       |           | " - 120 mmf. in 2nd I. F.         | *S-20285   |           | Cabinet - Yellow                                      |
| C-15       |           | " - 180 mmf. 20% 350 V.           | *S-20286   |           | Cabinet - Green                                       |
| C-16       |           | " - .01 mfd. 20% 200 V.           | *S-20287   |           | Cabinet - Ivory                                       |
| C-17       |           | " - 220 mmf. 20% 350 V.           |            |           |                                                       |
| C-18       |           | " - .0047 mfd. 20% 400 V.         | *S-20268   |           | Cord - Power Cord                                     |
| C-19       |           |                                   | S-4313     |           | Cord - Dial Cord                                      |
| C-20       |           | " - .002 mfd. 10% 600 V.          | *S-20274   |           | Cover - Back Cover & Loop                             |
| C-21       | *S-20204  | " - Electrolytic, 60 mfd.         |            |           |                                                       |
| C-22       |           | " - " 40 mfd.                     |            |           |                                                       |
| L-1 )      | *S-20288  | Coil - Oscillator Coil            | *S-20281   |           | Grille - Cabinet Grille                               |
| L-2 )      |           |                                   |            |           |                                                       |
| R-1        |           | Resistor - 1 megohm 20% 1/2 W.    | *S-20275   |           | Knob - Blue (Volume & Power)                          |
| R-2        |           | " - 22,000 ohms, 20% 1/2 W.       | *S-20276   |           | Knob - Red " "                                        |
| R-3        | S-4523    | Capacitor - 33 ohms, 56 mmf.      | *S-20277   |           | Knob - Yellow " "                                     |
| R-4        |           | Resistor - 100 ohms, 20% 1/2 W.   | *S-20278   |           | Knob - Green " "                                      |
| R-5        |           | " - 10 megohms 20% 1/2 W.         | *S-20279   |           | Knob - Ivory " "                                      |
| R-6        |           | " - 3.3 megohms 20% 1/2 W.        |            |           |                                                       |
| R-7        | *S-20270  | Resistor - Volume Control, 5 meg. | *S-20271   |           | Knob - Tuning Knob                                    |
| R-8        |           | " - 220,000 ohms, 20% 1/2 W.      | S-5661     |           | Monogram - "RCA VICTOR"                               |
| R-9        |           | " - 470,000 ohms, 20% 1/2 W.      |            |           |                                                       |
| R-10       |           | " - 150 ohms, 10% 1/2 W.          | *S-20280   |           | Pointer - Dial Pointer                                |
| R-11       |           | " - 1200 ohms, 10% 1 W.           |            |           |                                                       |
| R-12       |           | " - 220,000 ohms, 20% 1/2 W.      |            |           |                                                       |

(\*) INDICATES NEW STOCK ITEMS.

Only items listed under stock numbers are available as Replacement Parts.  
All parts subject to change or withdrawal without notice.



SCHEMATIC DIAGRAM



## LEAD DRESS

1. Dress all capacitors down against chassis.
2. C-15 must be located so that connection to Pin #1 of 12AV6 is short, as possible and condenser butts against rim of volume control.
3. Connect outside foil of all condensers as indicated in schematic diagram.
4. Dress Filament, B+ and B- leads down against chassis.
5. Dress R-4, 12BA6 cathode resistor, down against tube center post with leads to Pin 2 and Pin 7 as short as possible.

## Alignment Procedure

Before aligning the receiver, set the gang condenser for maximum capacity and then set the dial knob opposite 55 on 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.

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

## Alignment Chart

| TEST OSCILLATOR    |                      |                      |               |                   | RECEIVER       |                       |                   |                           |          |
|--------------------|----------------------|----------------------|---------------|-------------------|----------------|-----------------------|-------------------|---------------------------|----------|
| Order of Alignment | Connect "HI" Side To | Connect "LO" Side To | Dummy Antenna | Frequency Setting | Range Selector | Receiver Dial Setting | Circuit To Adjust | Adjust Adjustment Symbols | Notes    |
| I.F. ALIGNMENT     | 1                    | 12BA6 Pin #1         | Gnd.          | .1 Mfd            | 455 KC         | "HI" End              | 2nd I.F. Trans.   | Top & Bottom cores        | Max.Out. |
|                    | 2                    | 12BE6 Pin #7         | Same          | Same              | Same           | Same                  | 1st I.F. Trans.   | Top & Bottom cores        | Same     |
| S.B. ALIGNMENT     | 3                    | Radiate signal       |               |                   | 1600 KC        | 1600 KC               | Osc.              | C-7                       | Same     |
|                    | 4                    | Same                 |               |                   | 1500 KC        | 1500 KC               | Osc.              | C-2                       | Same     |
|                    | 5                    | Repeat Steps 3 & 4.  |               |                   |                |                       |                   |                           |          |