

SERVICE NOTES

for

RCA Victor Models R-4 and R-6

ELECTRICAL SPECIFICATIONS

Voltage Rating.....	105-125 Volts
Frequency Rating.....	50-60 cycles and 25-60 cycles
Power Consumption.....	95 Watts
Type of Circuit.....	Super-Heterodyne
Type and number of Radiotrons.....	2 RCA-235, 2 UY-227, 1 UY-224, 1 RCA-247 and 1 UX-280
Number of R.F. Stages.....	One
Number of I.F. Stages.....	One using one tuned input transformer and one untuned output transformer
Type of Second Detector.....	Power self biasing
Type of Tone Control.....	Variable resistance
in series with condenser that tunes secondary of interstage transformer at "low" position	
Number of Audio Stages.....	One—Single Pentode
Type of Rectifier.....	Full wave, UX-280
Undistorted output.....	2.25 Watts

PHYSICAL SPECIFICATIONS—R-4

Height.....	17 inches
Depth.....	10 inches
Width.....	14 inches
Weight alone.....	30½ lbs.
Weight Packed for Shipment.....	36 lbs.

PHYSICAL SPECIFICATIONS—R-6

Height.....	38½ inches
Depth.....	11½ inches
Width.....	23 inches
Weight alone.....	56 lbs.
Weight Packed for Shipment.....	77 lbs.

The RCA Victor Models R-4 and R-6 are seven tube Super-Heterodyne radio receivers incorporating such features as Super Control Screen Grid Radiotrons in the R.F. and I.F. stages, single Pentode output stage and the inherent sensitivity, selectivity and tone quality of the RCA Victor Super-Heterodyne. Model R-4 is a table model and R-6 is a small console. Except for the cabinet, speakers and output circuit, both models are identical.

Service work in conjunction with this receiver will be very similar to that of other table type receivers. However, there are several new features of this model which require some consideration.

The second I.F. transformer in this receiver is of the untuned variety, making the set slightly less sensitive and selective than the R-7. This decreased selectivity permits the omission of the 600 K.C. adjustable capacitor used on the R-7, R-10 and other Super-Heterodyne receivers. When aligning adjustments are necessary, it is therefore only necessary to tune one I.F. transformer and the three tuning capacitors. The I.F. transformer is adjusted at 175 K.C. and the tuning capacitors at 1400 K.C. In the case of the latter, the dial should be set at 1400 as well as the oscillator and the three screws adjusted for maximum output. This will permit the dial to read very accurately.

The schematic diagram, the wiring diagram, the voltage readings and the replacement parts are given in the following pages.

RADIOTRON SOCKET VOLTAGES

120 Volt A. C. Line

VOLUME CONTROL AT MINIMUM

VOLUME CONTROL AT MAXIMUM

Radiotron No.	Cathode to Heater Volts, D. C.	Cathode or Filament to Control Grid Volts, D. C.	Cathode or Filament to Screen Grid Volts, D. C.	Cathode or Filament to Plate Volts, D. C.	Plate Current M. A.	Screen Current M. A.	Heater or Filament Volts, A. C.	Radiotron No.	Cathode to Heater Volts, D. C.	Cathode or Filament to Control Grid Volts, D. C.	Cathode or Filament to Screen Grid Volts, D. C.	Cathode or Filament to Plate Volts, D. C.	Plate Current M. A.	Screen Current M. A.	Heater or Filament Volts, A. C.
1. R. F.	50	50	60	235	0	0	2.66	1. R. F.	3.0	3.0	65	260	3.0	0.5	2.66
2. Osc.	50	0	—	55	4.5	—	2.66	2. Osc.	3.0	0	—	60	5.0	—	2.66
3. 1st Det.	10	9	100	260	1.0	0.25	2.66	3. 1st Det.	6.0	5.5	60	260	0.75	0.25	2.66
4. I. F.	50	50	60	235	0	0	2.66	4. I. F.	3.0	3.0	65	260	3.0	0.5	2.66
5. 2d Det.	25	10	—	250	1.0	—	2.66	5. 2d Det.	25	10.0	—	250	1.0	—	2.66
6. Pwr.	—	10	290	280	35	—	2.66	6. Pwr.	—	10.0	290	280	35	—	2.66

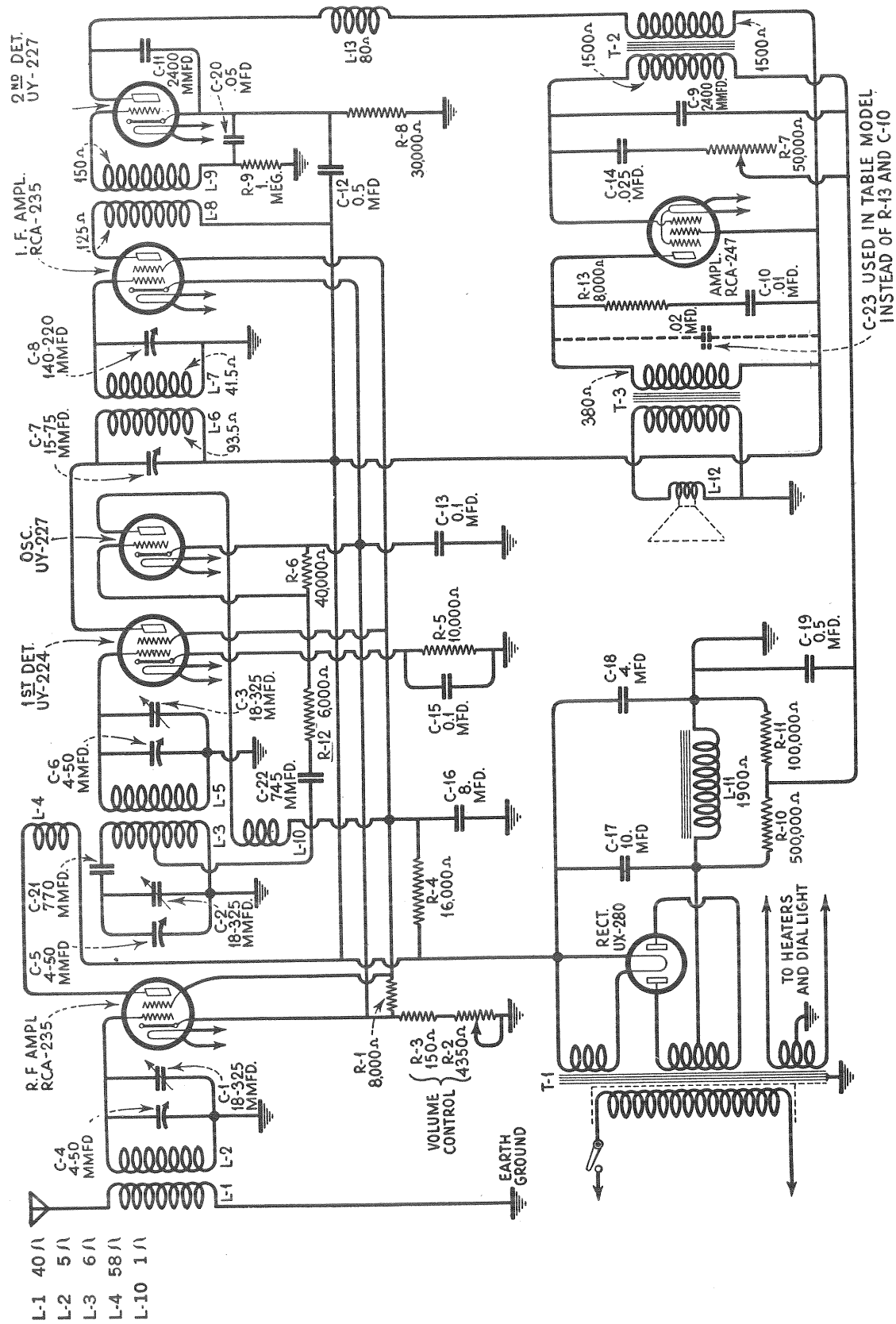


Figure 1—Schematic Wiring Diagram

REPLACEMENT PARTS

Stock No.	DESCRIPTION	List Price	Stock No.	DESCRIPTION	List Price
PARTS COMMON TO R-4 AND R-6			RECEIVER PARTS SPECIAL FOR R-4		
2563	Resistor—6000 ohms—Carbon type—1 watt— Package of 5.....	\$3.00	8839	Capacitor—Comprising one 0.05 mfd., two 0.5 mfd., one 10.0 mfd., one 8.0 mfd., one 0.02 mfd., one 4.0 mfd., and two 0.1 mfd. capacitors in metal con- tainer.....	\$8.95
2746	Socket—Dial lamp socket.....	.50	8840	Transformer—Audio transformer assembly—Com- prising interstage and output transformer.....	4.50
2747	Cap—Grid contactor cap—Package of 5.....	.50	RECEIVER PARTS SPECIAL FOR R-6		
2749	Capacitor—2400 mmfd.....	1.50	6183	Resistor—8,000 ohms—Carbon type— $\frac{1}{2}$ watt— Package of 5.....	2.00
2875	Knob—Tuning control, volume control or tone con- trol knob—Package of 5.....	1.50	7343	Transformer—Audio transformer assembly—Com- prising interstage and output transformer.....	3.85
2881	Bracket—Dial lamp bracket—Package of 5.....	.50	8846	Capacitor—Comprising one 0.05 mfd., two 0.5 mfd., one 10.0 mfd., one 8.0 mfd., one 0.01 mfd., one 4.0 mfd. and two 0.1 mfd. capacitors in metal con- tainer.....	8.95
2882	Socket—Five contact Radiotron socket—Complete with insulator—6 used.....	.50	R-4 LOUDSPEAKER PARTS		
2963	Resistor—8000 ohms—Carbon type—1 watt— Package of 5.....	2.50	2975	Rivet—Cone retaining ring mounting rivet—Pack- age of 100.....	.50
2968	Socket—Four contact Radiotron socket—Complete with insulator—1 used.....	.50	3005	Screw assembly—Speaker mounting screw assembly —Comprising 4 screws, 4 eyelets, 4 washers and 4 nuts—Package of 1 set.....	.50
2991	Transformer—1st intermediate transformer.....	3.00	6182	Board—Terminal board complete with 3 terminals Package of 5.....	.50
2994	Coil—R.F. choke coil.....	.60	7442	Cone—Speaker paper cone—Package of 5.....	7.50
2995	Volume control—Volume control complete with mounting nut—Package of 5.....	6.00	8702	Ring—Cone retaining ring.....	.80
2997	Coil—R.F. coil.....	1.90	8845	Coil assembly—Speaker field coil assembly—Com- prising field coil, cone bracket and magnet.....	4.50
2999	Shaft—Tuning condenser drive shaft complete.....	.50	R-6 LOUDSPEAKER PARTS		
3000	Scale—Dial drum and scale with set screws.....	.60	3237	Screw assembly—Speaker mounting screw assembly —Comprising 4 screws, 4 washers, 4 eyelets and 4 nuts—Package of 1 set.....	.50
3003	Cushion—Receiver chassis sponge rubber cushion— Package of 4.....	.50	6184	Board—Terminal board complete with 3 terminals and mounting rivets—Package of 5.....	.50
3048	Resistor—500,000 ohms—Carbon type— $\frac{1}{2}$ watt— Package of 5.....	2.50	7345	Coil—Speaker field coil assembly—Comprising coil, cone housing and magnet.....	5.00
3056	Shield—Radiotron shield—3 used—Package of 2.....	.50	8559	Ring—Cone retaining ring.....	.80
3060	Resistor—40,000 ohms—Carbon type—1 watt— Package of 5.....	2.50	8601	Cone—Speaker paper cone—Package of 5.....	15.00
3076	Resistor—1 megohm—Carbon type— $\frac{1}{2}$ watt— Package of 5.....	2.50	R-4 CABINET PARTS		
3077	Resistor—30,000 ohms—Carbon type— $\frac{1}{2}$ watt— Package of 5.....	2.50	X-33	Baffle board and grille cloth.....	.85
3078	Resistor—10,000 ohms—Carbon type— $\frac{1}{2}$ watt— Package of 5.....	2.50	6113	Foot—Felt foot—Package of 15.....	.50
3081	Resistor—16,000 ohms—Carbon type—3 watt.....	.60	7437	Escutcheon—Tuning dial escutcheon—Complete with mounting screws.....	.90
3082	Board—Resistor board complete—Less resistors, ca- pacitors and coil.....	1.00	9403	Cabinet—Cabinet complete less equipment.....	13.00
3234	Tone control—Tone control complete with mount- ing nut.....	1.90	R-6 CABINET PARTS		
3252	Resistor—100,000 ohms—Carbon type— $\frac{1}{2}$ watt— Package of 5.....	2.75	X-34	Post—Front post—R.H.....	2.85
6179	Terminal—Single ground terminal—Complete with mounting rivet—Package of 5.....	.50	X-35	Post—Back post—R.H.....	2.55
6180	Capacitor—0.025 mfd.—Package of 5.....	.75	X-36	Post—Front post—L.H.....	2.85
6181	Capacitor—770 mmfd.—Package of 5.....	1.30	X-37	Post—Back post—L.H.....	2.55
6193	Rubber strip—Rubber clamping strip located inside of chassis shield—Package of 4.....	.50	X-38	Control panel.....	4.60
7054	Cord—Power cord.....	1.00	X-39	Moulding—Control panel top moulding.....	1.60
7241	Capacitor—3 gang tuning capacitor.....	8.00	X-40	Top.....	4.85
7299	Capacitor—745 mfd.....	.70	X-41	Stretcher.....	3.55
7436	Coil—1st detector and oscillator coil.....	3.20	X-42	Foot.....	1.10
8837	Support—Receiver chassis metal mounting support —Package of 4.....	.70	X-43	Baffle board with grille cloth.....	.90
8841	Transformer—2d intermediate transformer.....	2.50	7437	Escutcheon—Tuning dial escutcheon—Complete with mounting screws.....	.90
8842	Transformer—Power transformer—105-125 volts, 50-60 cycles.....	6.25	9404	Cabinet—Cabinet complete less equipment.....	42.35
8843	Transformer—Power transformer—105-125 volts, 25-40 cycles.....	9.55			
8844	Transformer—Power transformer—220 volts, 60 cycles.....	6.45			

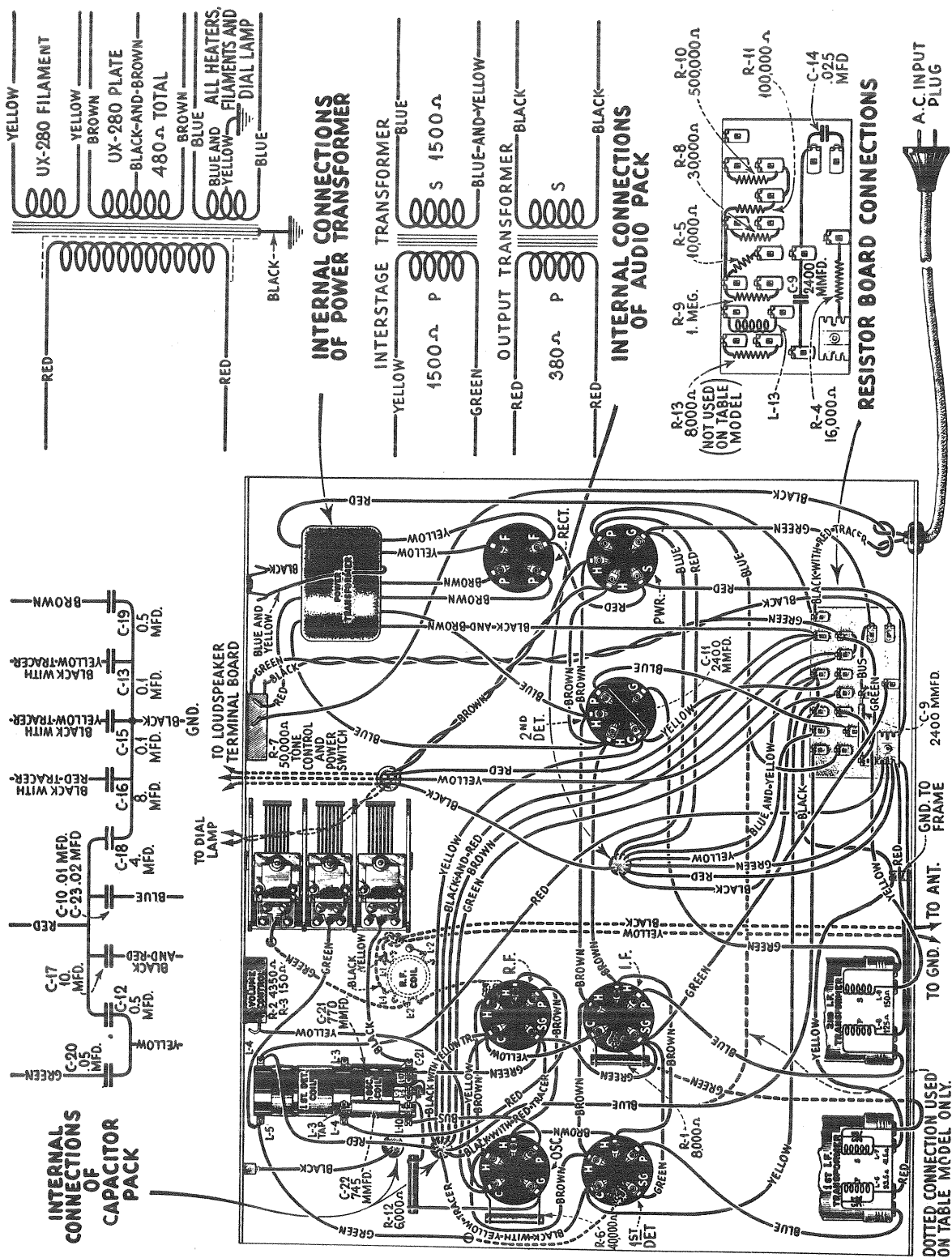


Figure 2—Wiring Diagram

SERVICE DIVISION
RCA Victor Company, Inc.
 Camden, N. J., U. S. A.