

# Service Notes

## for

# RCA Victor Radiola Superette R-7A

The RCA Victor Superette R-7A is an eight tube screen grid Super-Heterodyne similar to the R-7 with the exception that the new Pentode Radiotrons, RCA-247 are used in the push-pull output stage instead of Radiotrons UX-245. Use of these tubes, with their associated circuits, results in greater sensitivity, greater power and better tone quality.

Referring to Figure 1, the schematic circuit diagram, the audio circuit functions in the following manner:

The output of the detector is coupled to the grids of the Radiotrons RCA-247 through an audio transformer. Shunted across the secondary of this transformer are two 0.0004 mfd. condensers, connected in series with the center connection grounded. The purpose of

these two condensers is to prevent any audio oscillation and to provide a high frequency cut-off for the stage. Also across the secondary of the input transformer is shunted the resistor and capacitor that constitutes the tone control. This is a 200,000 ohm variable resistor and a 0.008 mfd. condenser connected in series. The tone control functions to reduce the high frequency output as the resistance is decreased. At the extreme low position, the condenser and secondary of the A. F. transformer resonates at a low frequency and thereby accentuates the bass response. A 0.005 mfd. condenser connected in series with a 10,000 ohm resistor is placed across the primary of the output transformer. This functions to reduce the third harmonic distor-

tion, an inherent characteristic of the Pentode tube. The bias voltage for Radiotrons RCA-247 is obtained by using a portion of the drop across the reproducer field. One 160,000 ohm and one 40,000 ohm resistor act as voltage dividers.

### SERVICE DATA

Figure 1 shows the schematic diagram and Figure 2 the wiring diagram. The voltage readings are shown on the reverse side and the replacement parts below.

Reference to the RCA Victor Radiola Superett Service Notes should be used for servic data applying to the R. F., oscillator and I. F. stages as well as general service data on this type of receiver.

## REPLACEMENT PARTS

Part No.	DESCRIPTION	List Price	Part No.	DESCRIPTION	List Price
2563	Resistor—6,000 ohms—Carbon type—Package of 5	\$3.00	3062	Board—Loudspeaker terminal board—Package of 3	\$0.50
2734	Capacitor—745 mmfd.—Package of 5	2.20	3076	Resistor—1 megohm—Carbon type—Package of 5	2.50
2745	Screw—Adjusting condenser screw—Package of 10	.50	3077	Resistor—30,000 ohm—Carbon type—Package of 5	2.50
2746	Socket—Dial lamp socket	.50	3078	Resistor—10,000 ohm—Carbon type—Package of 5	2.50
2747	Cap—Grid connector cap—Package of 5	.50	3079	Resistor—40,000 ohm—Carbon type—Package of 5	2.50
2749	Capacitor—2400 mmfd.	1.50	3080	Resistor—160,000 ohm—Carbon type—Package of 5	2.50
2875	Knob—Tuning, volume control or tone control knob—Package of 5	1.50	3081	Resistor—16,000 ohm—Carbon type	.60
2881	Bracket—Dial lamp bracket—Package of 5	.50	3082	Board—Resistor board—Less resistors, coil and capacitor	1.00
2882	Socket—UY Radiotron socket—7 used	.50	3083	Tone control and switch—Tone control and operating switch—Complete less knob	1.60
2957	Capacitor—10 mfd. electrolytic capacitor	3.00	3084	Capacitor—0.008 mfd.—For tone control	.70
2963	Resistor—8,000 ohm carbon type—Package of 5	2.50	3085	Capacitor—400 mmfd.	.60
2968	Socket—UX Radiotron socket—1 used	.50	7054	Cord—Power cord	1.00
2973	Board—Magnetic pickup terminal board	.50	7062	Capacitor—Adjustable oscillator trimming capacitor	1.00
2991	Transformer—First intermediate transformer	3.00	7241	Capacitor—3 gang tuning capacitor	8.00
2992	Transformer—Second intermediate transformer	3.00	7242	Board—Baffle board and grille cloth	1.00
2994	Coil—Second detector plate coil complete with mounting rivet	.60	7255	Transformer—Interstage audio transformer	4.50
2995	Volume control—Complete less knob—Package of 5	6.00	7256	Capacitor pack—By-pass capacitor pack	3.50
2997	Coil—R. F. coil—Complete with mounting washers and nuts	1.90	8559	Ring—Cone retaining ring	.80
2998	Coil—Detector and oscillator coil—Complete with mounting washers and nuts	2.40	8570	Shield—Intermediate transformer shield	.60
2999	Drive shaft—Dial drive shaft with mounting screws and washers	.50	8601	Cone—Cone with voice coil—Package of 5	15.00
3000	Scale—Dial scale and drum with set screws	.60	8653	Coil—Speaker field coil, core and cone support	5.00
3003	Cushion—Sponge rubber chassis support cushions—One set of 4	.50	8654	Transformer—Power transformer—220 volt, 50-60 cycle	11.00
3005	Screw assembly—Speaker mounting screw assembly—Comprising one set of 4 screws, 4 eyelets, 4 nuts and 4 washers	.50	8679	Transformer—Power transformer—105-125 volt, 50-60 cycle	9.00
3020	Escutcheon—Station selector escutcheon complete with 4 mounting screws	.60	8680	Transformer—Power transformer—105-125 volt, 25-40 cycle	12.00
3056	Shield—Radiotron shield—3 used—Package of 2	.50	9323	Speaker—Loudspeaker complete	8.70
3060	Resistor—40,000 ohm—Carbon type—Package of 5	2.50	9351	Receiver—Receiver assembly—105-125 volt, 50-60 cycle	40.00
			9353	Cabinet—Complete with grille cloth and baffle board	15.00

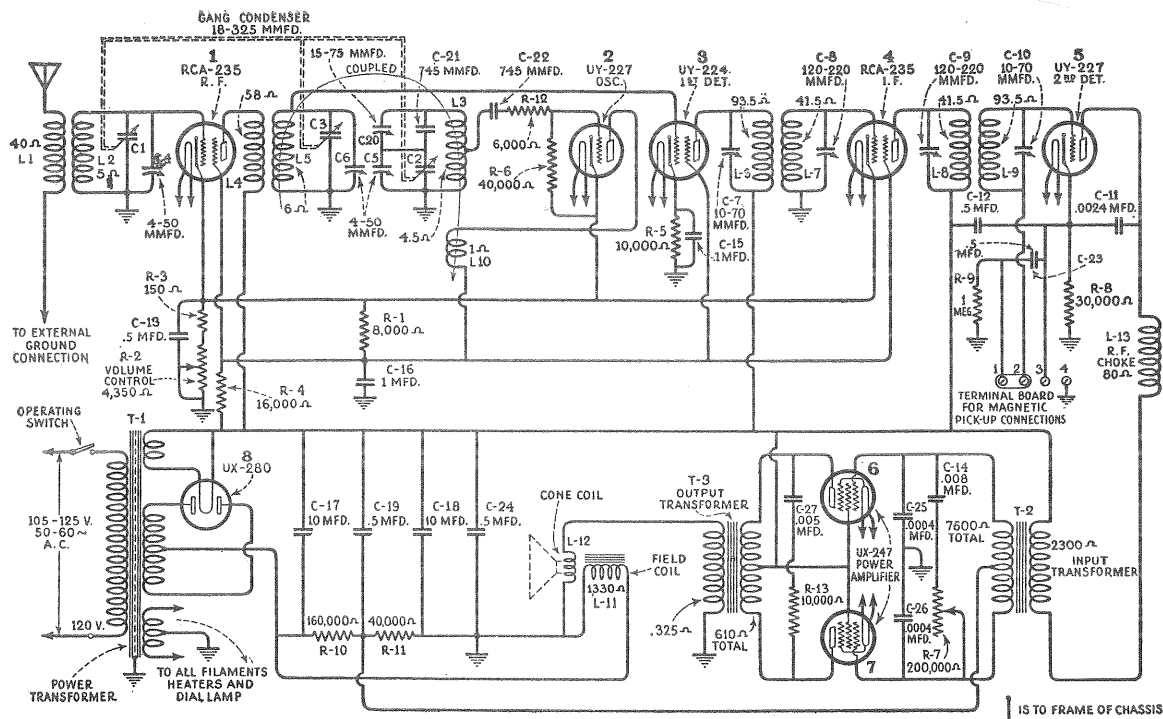


Figure 1—Schematic Diagram  
RADIOTRON SOCKET VOLTAGES—110 VOLT A. C. LINE

Radiotron No.	Cathode to Heater Volts D. C.	Cathode or Filament to Control Grid Volts D. C.	Cathode to Screen Grid Volts D. C.	Cathode or Filament to Plate Volts D. C.	Plate 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 to Screen Grid Volts D. C.	Cathode or Filament to Plate Volts D. C.	Plate Current M. A.	Heater or Filament Volts A. C.
VOLUME CONTROL AT MINIMUM							VOLUME CONTROL AT MAXIMUM						
1	38	35	50	200	.0	2.2	1	2.0	2.5	60	235	3.5	2.2
2	38	0	—	50	3.5	2.2	2	2.0	.0	—	50	4.5	2.2
3	7	6	80	235	0.5	2.2	3	4.0	4.0	55	230	0.5	2.2
4	38	35	50	200	.0	2.2	4	2.0	2.5	58	235	3.5	2.2
5	22	8	—	210	0.7	2.2	5	22	8	—	210	0.7	2.2
6	—	12	225	220	30	2.2	6	—	12	225	220	30	2.2
7	—	12	225	220	30	2.2	7	—	12	225	220	30	2.2

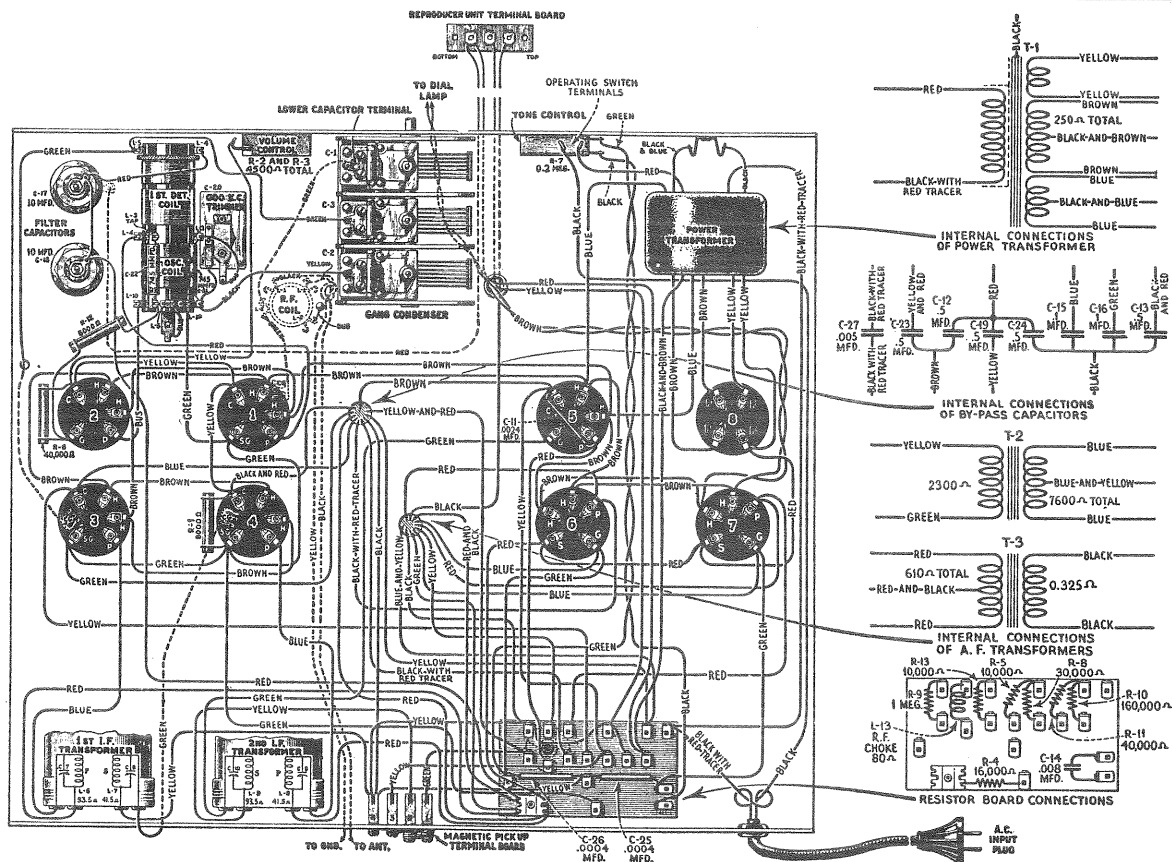


Figure 2—Wiring Diagram

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