

SERVICE NOTES

for

RCA Victor R-21

ELECTRICAL SPECIFICATIONS

<p>Voltage Rating.....105-125 Volts</p> <p>Frequency Rating.....50-60 Cycles and 25-40 Cycles</p> <p>Power Consumption...25-40 Cycles 140 Watts, 50-60 Cycles 135 Watts</p> <p>Type of Circuit.....Super-Heterodyne using Super-Control Radiotrons and Push-pull Pentode output stage</p> <p>Type and Number of Radiotrons... 2 RCA-235, 3 UY-227, 1 UY-224, 1 UX-280, 2 RCA-247, —Total, 9</p> <p>Number of Radio Frequency Stages.....1</p> <p>Type of First Detector..Tuned Input Grid Bias</p> <p>Number of Intermediate Stages.....1</p> <p>Type of second detector.... ..Power Grid Bias</p>	<p>Type of Automatic Volume Control.... UY-227 Controlled by signal voltage in turn controlling bias on R. F. and I. F. tubes</p> <p>Type of Manual Volume Control Potentiometer used to regulate input to second detector</p> <p>Type of Tone Control. . . Variable resistance in series with capacitor connected across grids of output stage. Capacitor tunes transformer at "low" position</p> <p>Number of Audio Stages.....1</p> <p>Type of Rectifier.... ..Full wave</p> <p>Type of Loudspeaker.....8" Electro-Dynamic</p> <p>Undistorted Output.....4.0 Watts</p>
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PHYSICAL SPECIFICATIONS

Height.....41½ inches	Weight Alone.....72 lbs.
Depth.....13¾ inches	Weight Packed for Shipment.116 lbs.
Width.....25½ inches	

RCA Victor Model R-21 is a nine tube screen grid Super-Heterodyne radio receiver. Features such as Super-control Radiotrons, automatic volume control, push-pull Pentode output, large baffle area cabinet and the inherent sensitivity, selectivity and tone quality of the RCA Victor Super-Heterodyne are incorporated in this receiver.

The chassis and loudspeaker used in Model R-21 is identical with that used in the R-11 except for the dial and scale. A reference to the R-11 Service Notes will therefore give any information necessary in reference to circuit diagram, voltage reading and other service information. One change should be noted in later production of R-11s and all R-21s and that is the change in value of Resistor R-9 from 5 Megohms to 2 Megohms. The Replacement Parts are listed below.

REPLACEMENT PARTS

Stock No.	DESCRIPTION	List Price	Stock No.	DESCRIPTION	List Price
RECEIVER ASSEMBLY					
2563	Resistor—6,000 ohms—Carbon type—1 Watt—Package of 5.....	\$3.00	3046	Resistor—190,000 ohms—Carbon type—½ Watt—Package of 5.....	\$2.50
2730	Resistor—18,000 ohms—Carbon type—1 Watt—Package of 5.....	2.00	3047	Resistor—1,500 ohms—Carbon type—½ Watt—Package of 5.....	2.50
2734	Capacitor—745 mmfd.—Package of 5..	2.20	3048	Resistor—500,000 Ohms—Carbon type—½ Watt—Package of 5.....	2.50
2746	Socket—Dial lamp socket.....	.50	3049	Resistor—150 Ohms—Carbon type—½ Watt—Package of 5.....	2.50
2747	Cap—Grid contactor cap—Package of 5..	.50	3050	Resistor—14,000 Ohms—Carbon type—3 Watt.....	.60
2749	Capacitor—2400 mmfd.....	1.50	3053	Capacitor—9 mmfd.—Package of 2....	.50
2882	Socket—5 contact Radiotron socket—Complete with insulator—8 used.....	.50	3055	Cushion—Receiver chassis sponge rubber cushion—Package of 4.....	.50
2968	Socket—4 contact Radiotron socket—Complete with insulator—1 used.....	.50			

REPLACEMENT PARTS (Continued)

Stock No.	DESCRIPTION	List Price	Stock No.	DESCRIPTION	List Price
	RECEIVER ASSEMBLY (Continued)				
3056	Shield—Radiotron shield—6 used— Package of 2.....	\$0.50	7272	Transformer — Power transformer — 105-125 volts, 50-60 cycles.....	\$12.00
3076	Resistor—1 Megohm—Carbon type— ½ Watt—Package of 5.....	2.50	7273	Capacitor—Comprising one 4.0 mfd., one 6.0 mfd., four 0.5 mfd., two 1.0 mfd., five 0.1 mfd. and one 0.05 mfd. capacitors in metal container—105- 125 volts, 25-40 cycles.....	10.00
3077	Resistor—30,000 Ohms—Carbon type —½ Watt—Package of 5.....	2.50	7274	Transformer—Power transformer—105 -125 volts, 25-40 cycles.....	15.00
3078	Resistor—10,000 Ohms—Carbon type —½ Watt—Package of 5.....	2.50	7275	Transformer—Power transformer—220 volts, 60 cycles.....	10.00
3079	Resistor—40,000 Ohms—Carbon type —½ Watt—Package of 5.....	2.50	7438	Capacitor—Variable tuning capacitor...	5.20
3085	Capacitor—400 mmfd.....	.60	7439	Drum—Dial drum with screws and 3 scale mounting nuts.....	.50
3089	Board — Magnetic pickup terminal board — Complete with mounting rivets.....	.50	7440	Scale—Dial and dial scale.....	.75
3090	Board—A.V.C. and 2nd detector R.F. choke board—Less choke coils.....	.50	8871	Support — Receiver chassis metal mounting support—Package of 4.....	.75
3091	Board—Resistor board complete less resistors and capacitors.....	1.00		LOUDSPEAKER ASSEMBLY	
3092	Volume Control—Volume control com- plete with mounting nut.....	1.50	3237	Screw assembly—Speaker mounting screw assembly — Comprising 4 screws, 8 washers, 8 nuts and 4 eye- lets—Package of 1 set.....	.50
3093	Tone Control—Tone control complete with mounting nut.....	1.90	7257	Coil assembly — Speaker field coil assembly — Comprising field coil, cone bracket and magnet.....	6.00
3095	Coil—R.F. coil.....	1.90	7258	Transformer—Output transformer.....	1.70
3096	Coil—1st detector and oscillator coil...	3.55	8559	Ring—Cone retaining ring.....	.80
3098	Capacitor—0.008 mfd.....	.50	8601	Cone—Speaker paper cone—Package of 5.....	15.00
3099	Capacitor—0.005 mfd.....	.75		CABINET ASSEMBLY	
3137	Knob—Tuning control, volume control and tone control knob—Package of 5.	3.25	X-54	Post—Front post—R.H.....	4.45
6179	Terminal—Single ground terminal with set screw—Complete with mounting rivet—Package of 5.....	.50	X-55	Post—Back post—R.H.....	3.70
6186	Resistor—500,000 Ohms—Carbon type —¼ Watt—Package of 5.....	2.00	X-56	Post—Front post—L.H.....	4.45
6188	Resistor—2 Megohm—Carbon type— ½ Watt—Package of 5.....	2.00	X-57	Post—Back post—L.H.....	3.70
6189	Bracket—Dial lamp bracket and indica- tor—Package of 2.....	.65	X-58	Post—Center post—R.H.....	2.15
6190	Shaft—Tuning condenser drive shaft complete with 3 washers—Package of 5.....	.85	X-59	Post—Center post—L.H.....	2.15
6191	Cord—Tuning condenser drive cord— Package of 5.....	.55	X-60	Panel—Control panel.....	3.85
6192	Spring—Tuning condenser drive cord tension spring—Package of 10.....	.50	X-61	Doors—R.H. and L.H. door—Package of 1 pair.....	7.20
7054	Cord—Power cord.....	1.00	X-62	Ornaments — Door ornaments — Com- prising one Top L.H., one Top R.H. and 4 vertical mouldings—Package of 1 set.....	1.90
7062	Capacitor—Adjustable capacitor—15- 70 mmfd.....	1.00	X-63	Top.....	6.20
7266	Transformer—2nd intermediate trans- former.....	3.00	X-64	Foot.....	1.05
7267	Transformer—1st intermediate trans- former.....	3.00	X-65	Stretcher.....	5.50
7268	Coil—Choke coil.....	.60	X-66	Moulding—Front top moulding.....	1.25
7269	Capacitor—Comprising one 2.0 mfd., one 4.0 mfd., four 0.5 mfd., two 1.0 mfd., five 0.1 mfd., and one 0.05 mfd. capacitors in metal container.....	7.25	X-67	Baffle board and grille cloth.....	.95
7270	Reactor—Filter reactor.....	4.00	6210	Hinges—Door hinges—Comprising 4 hinges and 16 mounting screws— Package of 1 set.....	.90
7271	Transformer—Interstage transformer...	4.25	6211	Pull—Door pull with mounting screw— Package of 4.....	1.20
			7441	Escutcheon—Tuning dial escutcheon complete with mounting screws.....	1.05
			9407	Cabinet—Cabinet complete less equip- ment.....	64.50

