



# RCA VICTOR



## RECORD CHANGER SERVICE DATA

—File: 1967 No. 6-S1—

**RP-225 Series**  
**RP-226 Series**  
**RP-227 Series**  
**RP-228 Series**



RP-228-12SC

### RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY

#### PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201

### SPECIFICATIONS

#### STYLUS FORCE

Solid Mount ..... 5 to 7 grams      "Feather Action" ..... 4 to 6 grams

### RECORD CHANGER TO MODEL CROSS REFERENCE

Changer	Cartridge (Less Stylus) Stock No.	MG (0.7 Mil) Stylus	78 Stylus	Styli Stock No.	Used in—
RP-225-12ABD	117331	Diamond	Sapphire	118198	VJP 65
RP-226-12	122124	Diamond	Universal	118200	VJP 41, 94K, 96K
RP-226-12BD	122123	Diamond	Sapphire	118198	VJP 55, 98K
RP-226-19	122124	Diamond	Universal	118200	VJP 35, 37
RP-226-29H	118056	Sapphire	Universal	118199	VJE 10, 12, 14
RP-226-49	118056	Sapphire	Universal	118199	VJP 33
RP-227-12	115703	Diamond	Sapphire	115911	VJT 23, 24, 25, 29, 30, 31, 33, 35, 37
RP-227-12D	115703	Diamond	Sapphire	115911	VJT 38, 40, 41, 43, 45, 46, 47, 84K, 85K, 89K, 90K, 91K, 38x, 40x, MJL 31
RP-227-29	115346	Sapphire	Sapphire	115329	VJT 16, 18
RP-228-12BS	115703	Diamond	Sapphire	115911	VJP 77
RP-228-12BSC	120695	Diamond	Sapphire	122057	VJP 75
RP-228-12C	120695	Diamond	Sapphire	122057	VJT 54, 55, 93, 94K, 96K, 97K
RP-228-12SC	120695	Diamond	Sapphire	122057	VJT 61, 62, 66, 67, 74, 76, 77, 98K, MJL 32

FOR RECORD CHANGER SERVICING, CYCLE OF OPERATION,  
ADJUSTMENTS AND ILLUSTRATION IDENTIFICATION, REFER  
TO RECORD CHANGER SERVICE DATA 1967 NO. 6 EXCEPT  
AS NOTED HEREIN.

#### SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject

## GENERAL DESCRIPTION

The information in this supplement augments the changer series information on record changers employed in current stereophonic instruments. The replacement parts list for the record changers includes the RP-225 & RP-226 Series previously published in Record Changer Service Data 1967 No. 6, but has been updated to cover late changes.

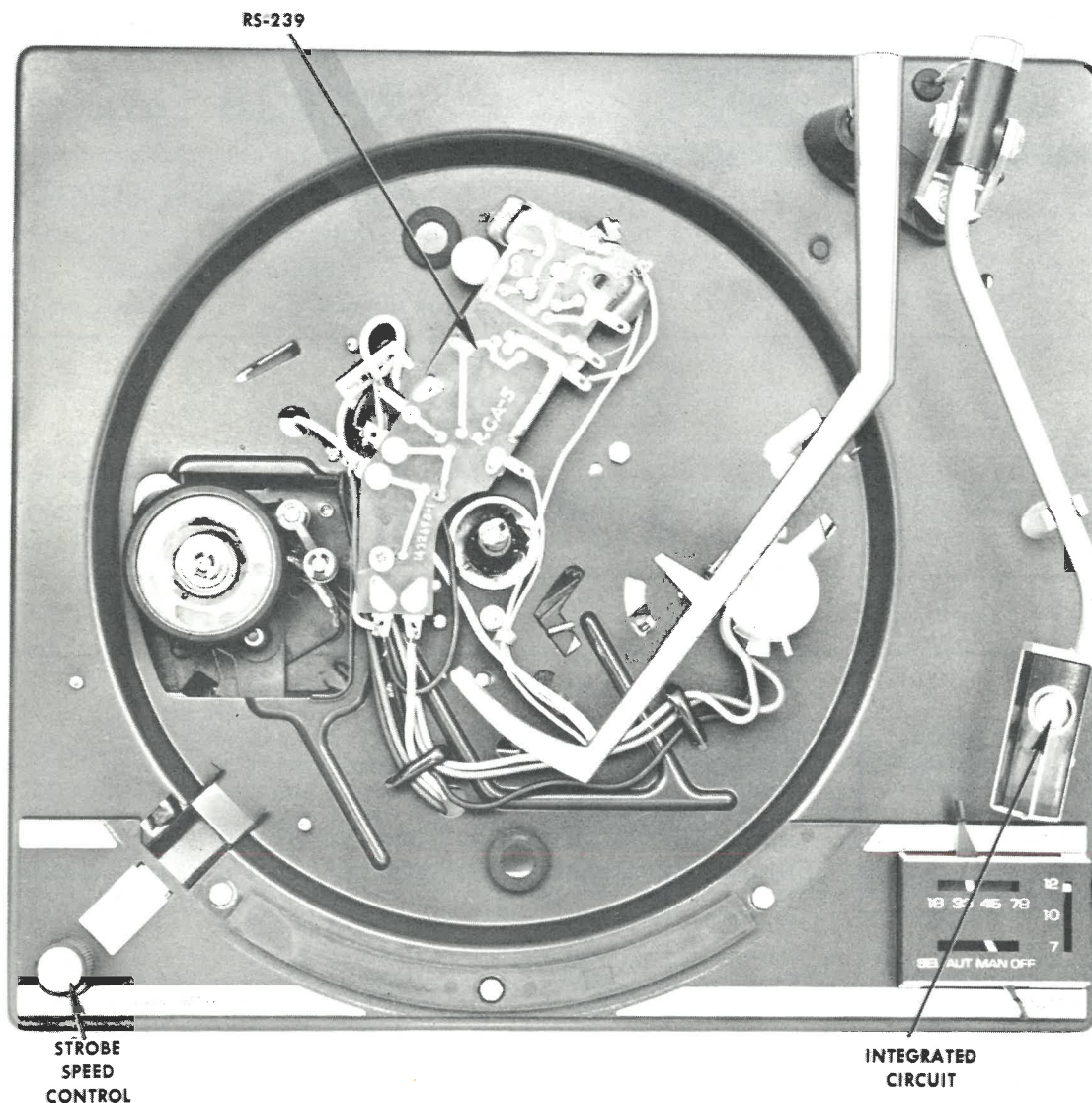
The exploded views included in this Service Data indicate parts added to the basic mechanism and motorboard which are distinguishing features of particular record changers.

The RP-228-12-C is the record changer incorporating the use of an integrated circuit and matching network. The IC component is an integral part of the pickup and the matching network (including the power supply for the strobe feature on some models) is on a

solid-copper circuit board mounted to the motorboard—underneath the turntable.

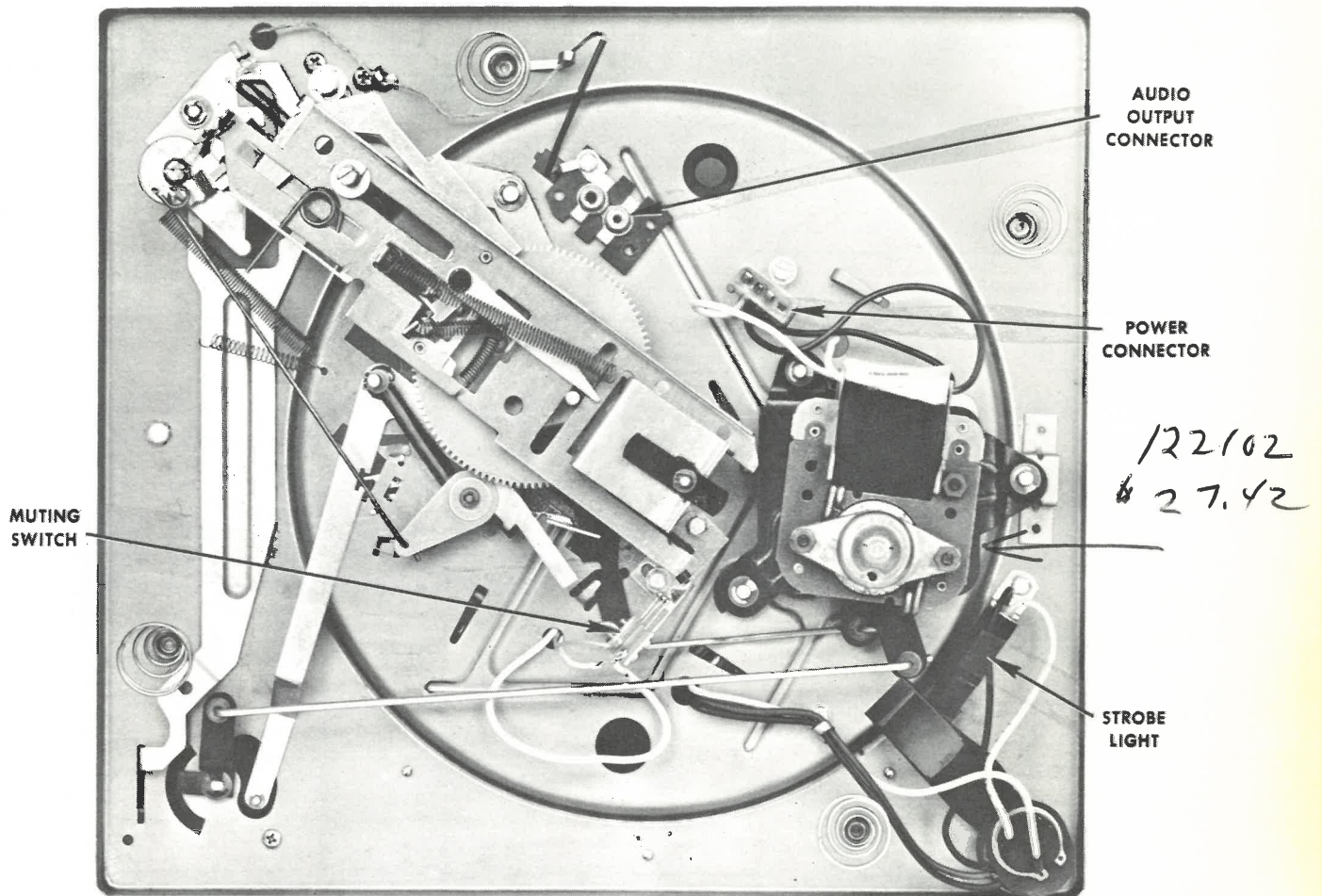
Cleaning and lubrication procedures for all changer series is included along with recommended lubricants in this Service Data.

In the record changer designation, the last number in the second set of numbers refers to the size of the turntable. For example, a "9" (RP-226-19) indicates a 9 inch turntable and a "2" (RP-226-12) indicates a 12 inch turntable. Where a letter appears after the turntable size, "A" indicates separate amplifier controls (portable instruments only), "B" indicates magnetic tone arm rest (portable instruments only), "C" indicates integrated circuit, "D" indicates deluxe trim. "H" indicates integrated amplifier controls ("Victrola" phonograph consoles only), and "S" indicates "Studio Strobe".

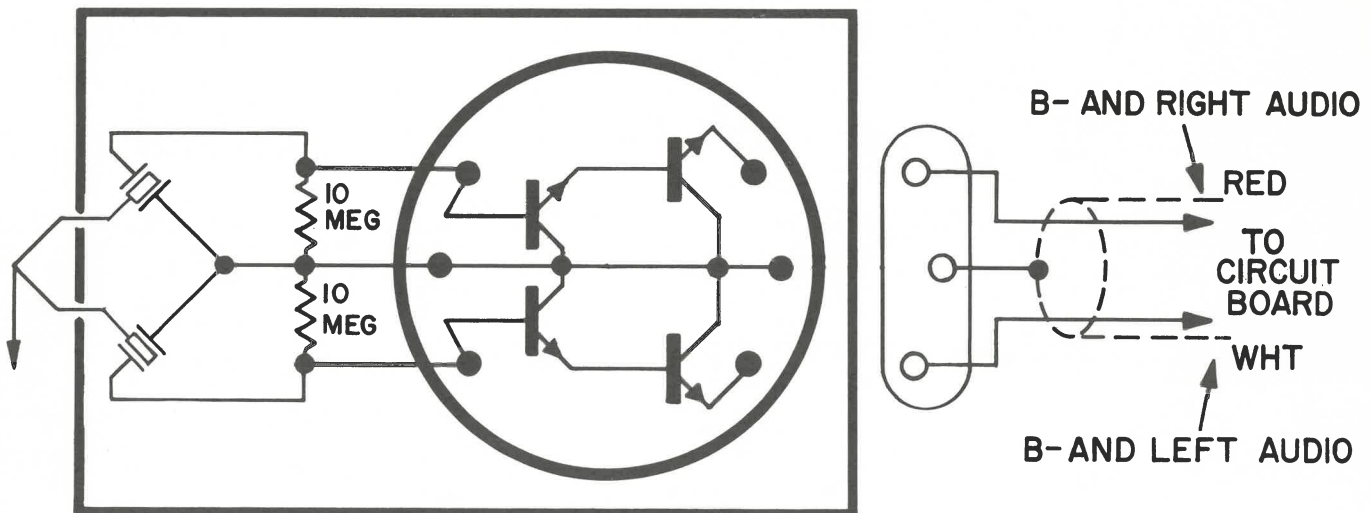


*Top View—Turntable Removed*

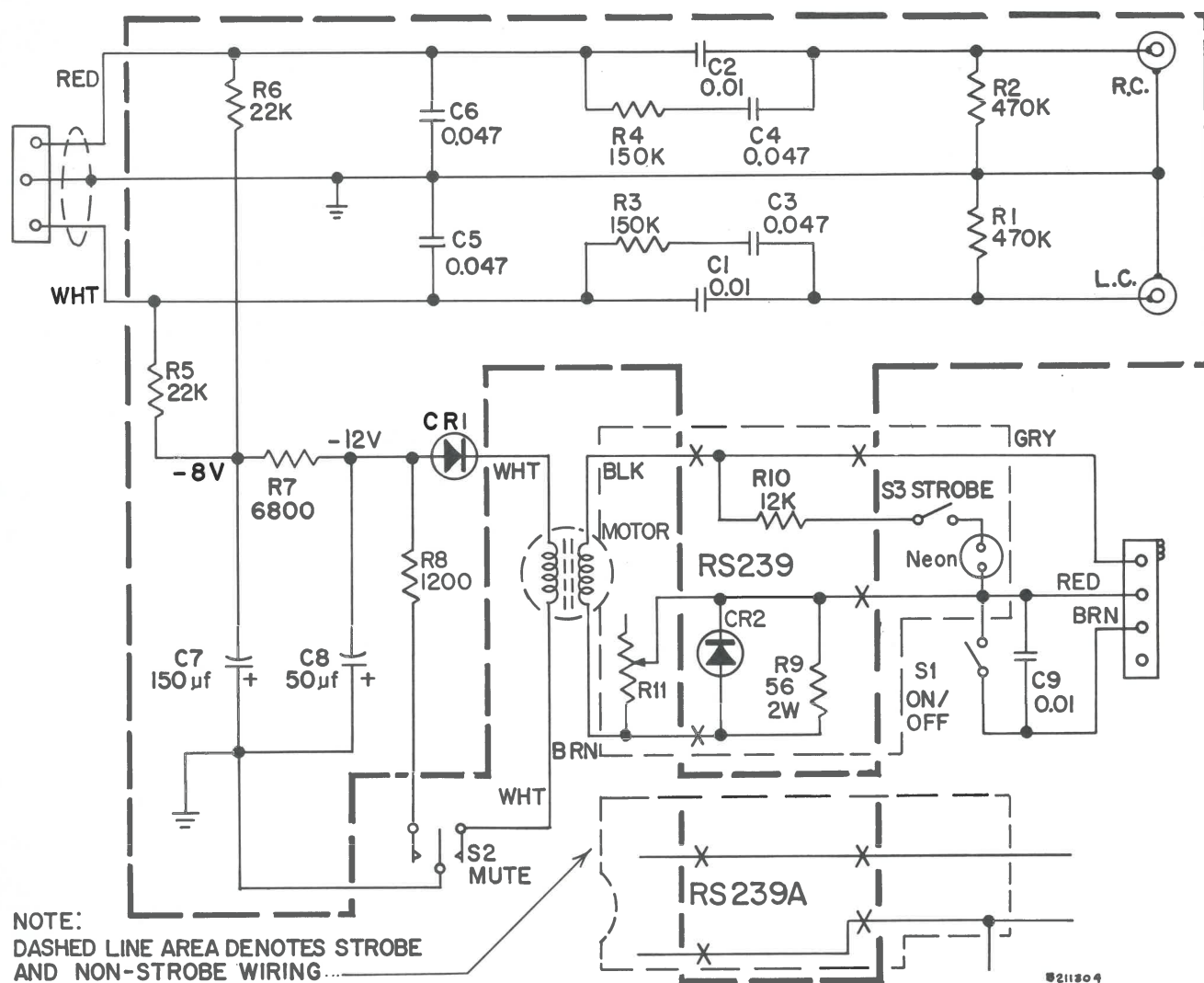




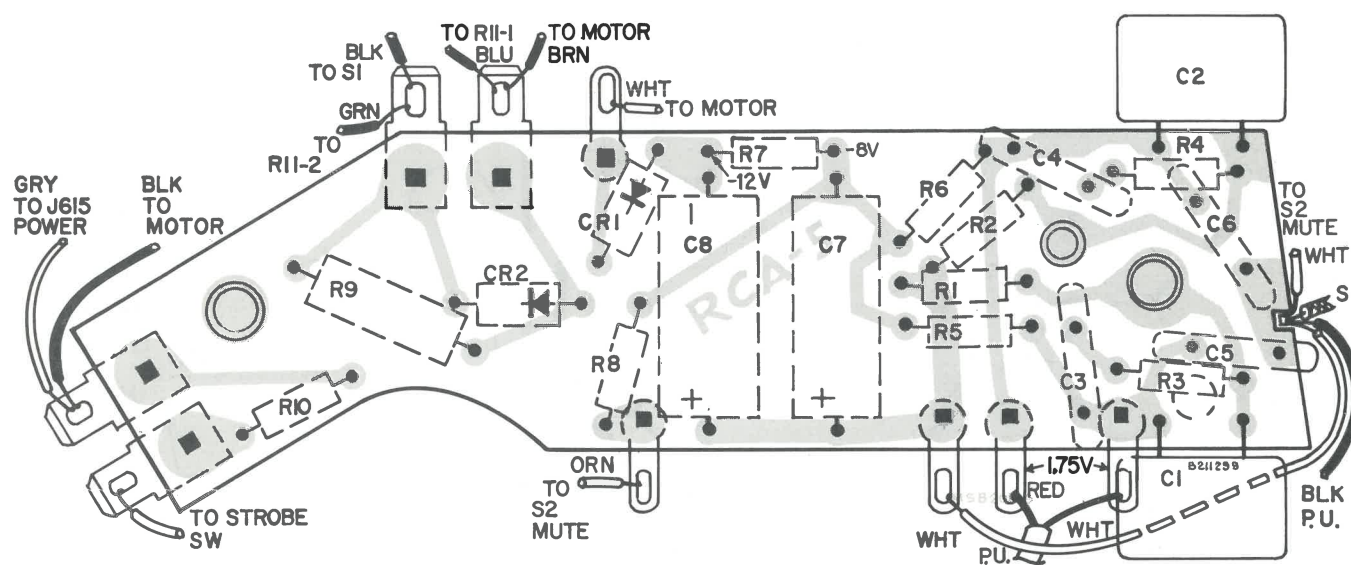
Bottom View RP-228-12SC Mechanism



Integrated Circuit and Pickup Diagram



### RS-239 Schematic Diagram



### RS-239 Circuit Board Layout—Wiring View



## CLEANING AND LUBRICATION

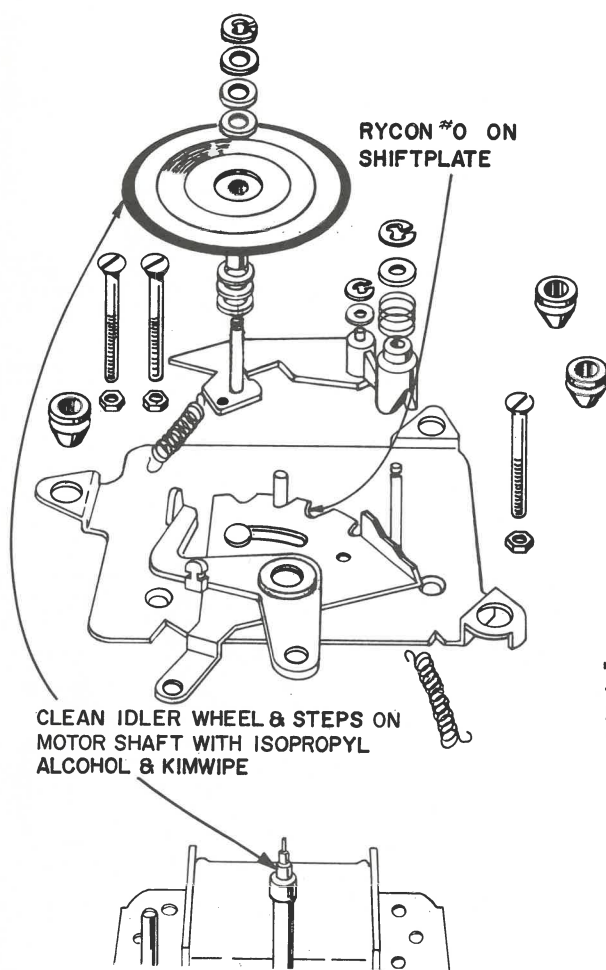
The mechanism is properly lubricated at the point of manufacture; cleaning and additional lubrication should not be necessary for a long period of time.

It is important that the drive motor spindle, rubber idler wheel, the inside rim of the turntable, the clutch lever assembly and the area around the off/on latch on the control lever be kept clean and free of oil and grease. In areas where it is necessary to remove lint and/or grease and oil, the use of isopropyl alcohol and low lint content paper toweling are the recommended cleaning agents. CAUTION: (a) Do not permit any cleaning agent which reacts with plastic to come into

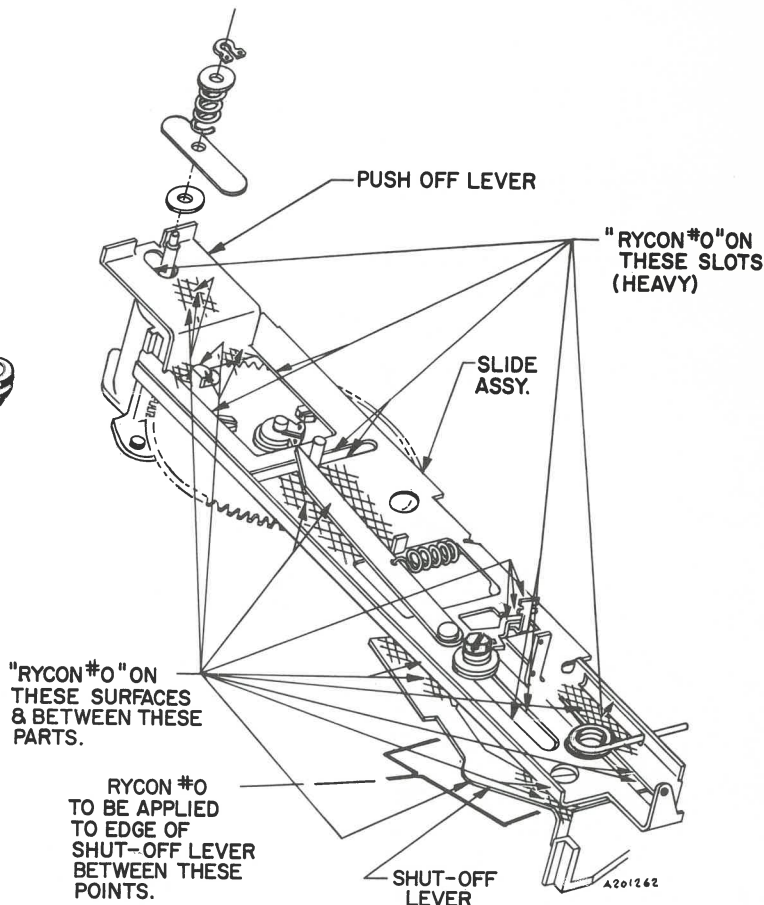
contact with plastic parts. (b) Petroleum base lubricants will attack the stabilizer arm housing and should not be used.

The following illustrations indicate the parts and areas that require cleaning and lubrication for proper operation. Indiscriminate use of lubricants could give the same results as misadjustment; i.e., the use of heavy lubricant where a light coating of oil is recommended might affect movement and proper tension.

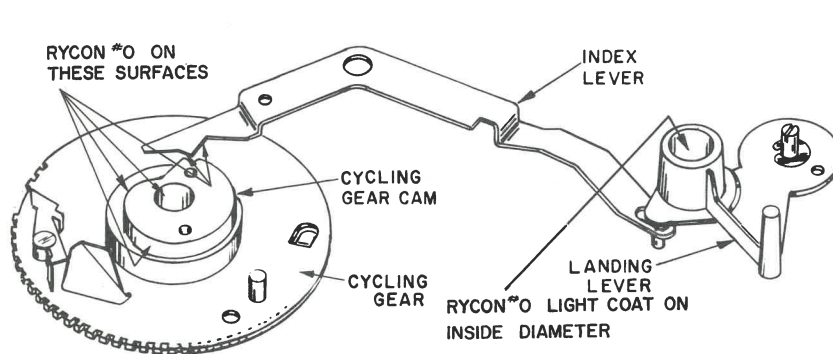
For best results, maintenance should be performed by cleaning first, then lubricating, then adjusting as necessary.



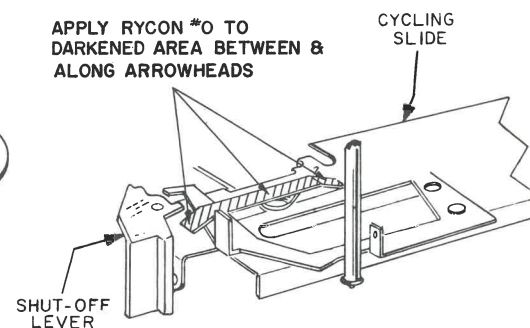
Motor Assembly



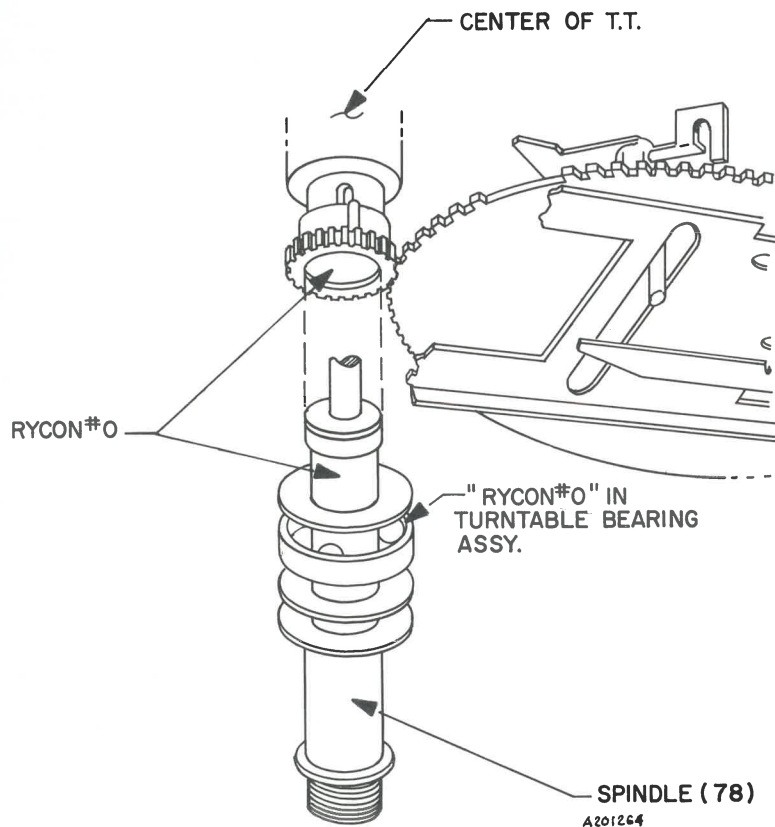
Cycling Slide Assembly



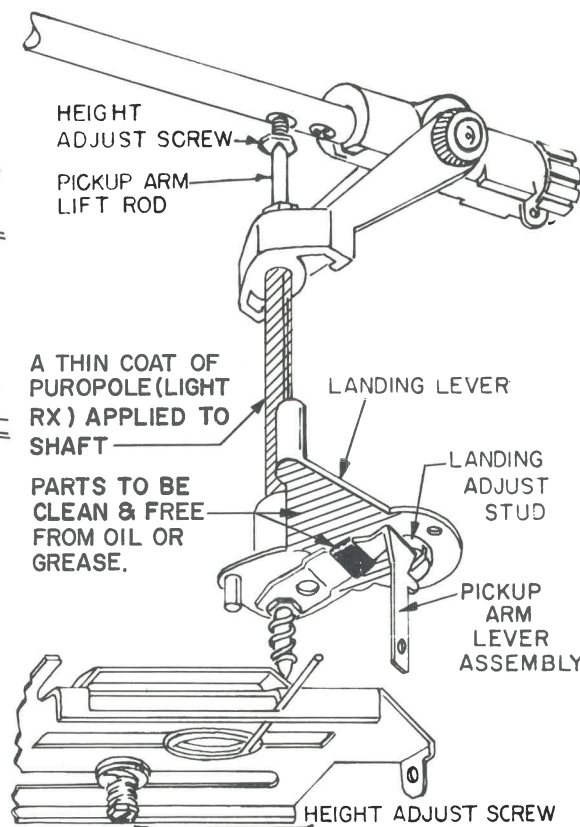
*Cycling Gear, Index Lever and Landing Lever*



*Cycling Slide and Shut-off Lever*



*Spindle and Gear*



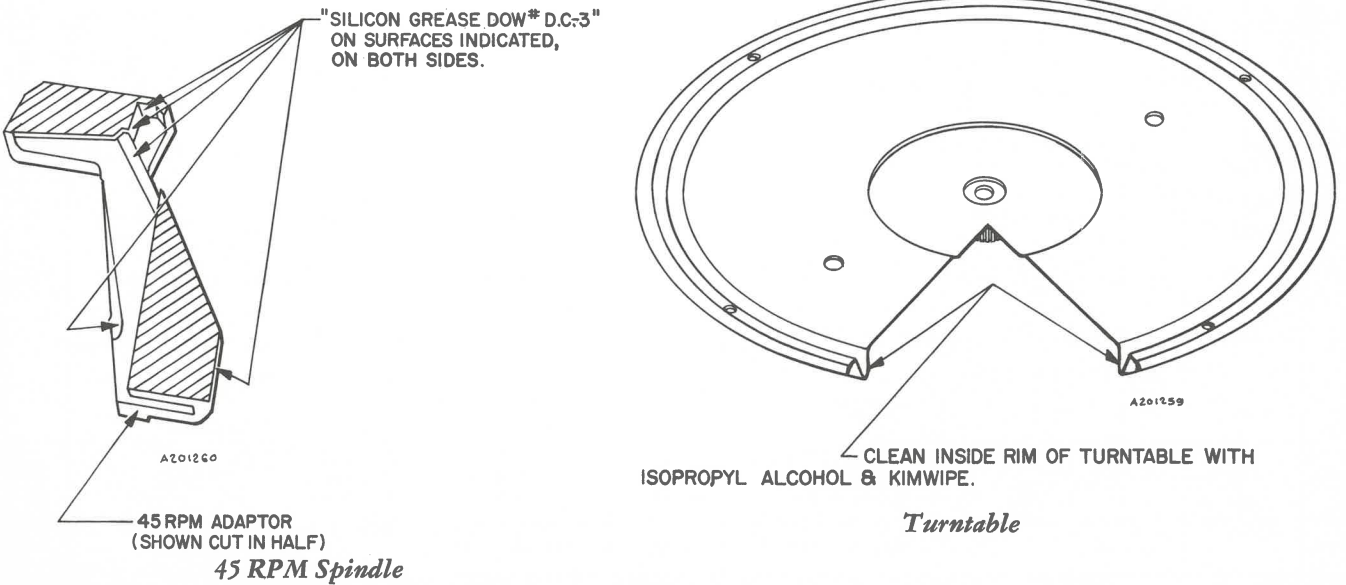
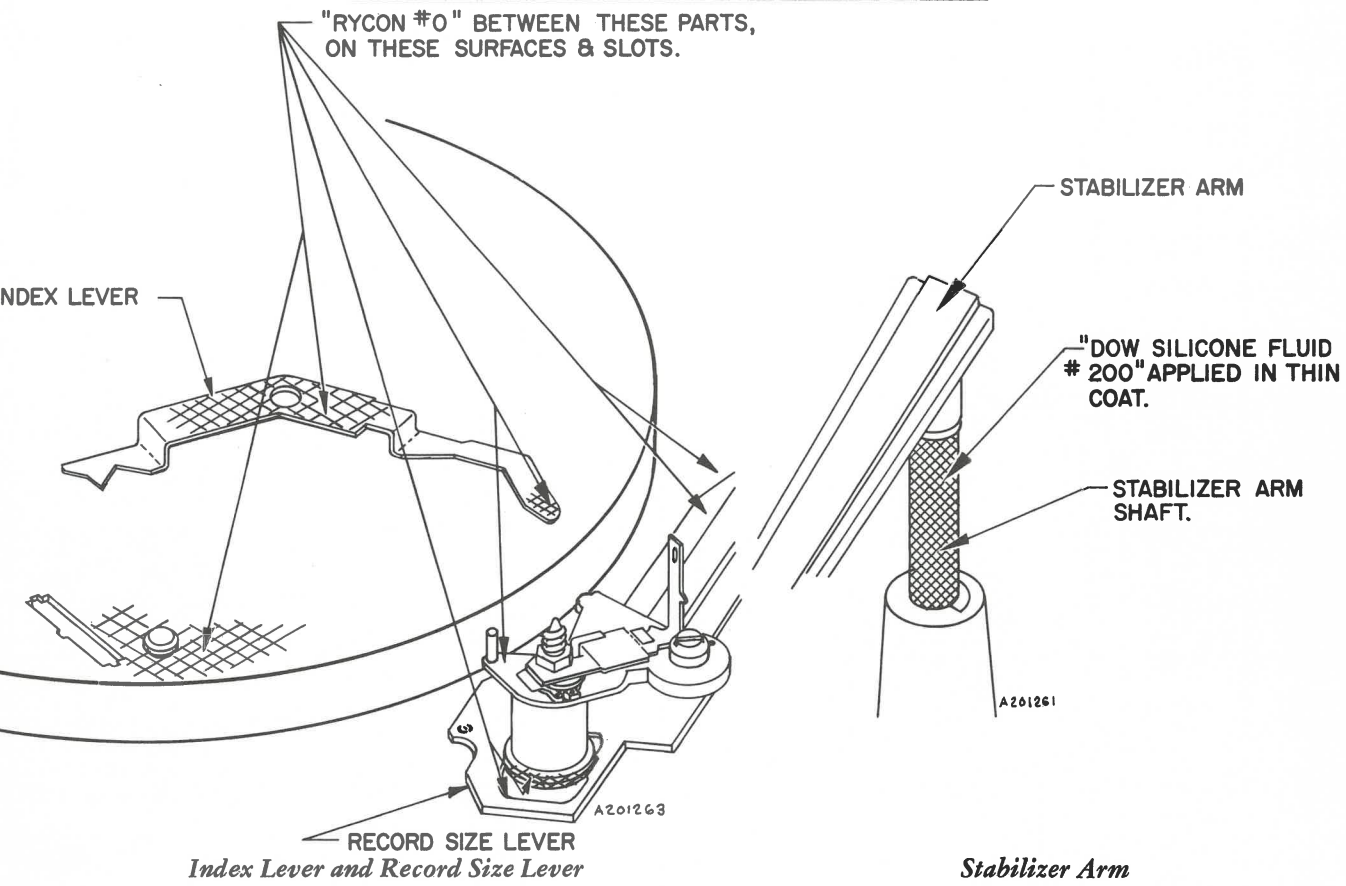
*Pickup Arm and Landing Lever*

INTEGRATED CIRCUIT PICKUP CARTRIDGE REMOVAL

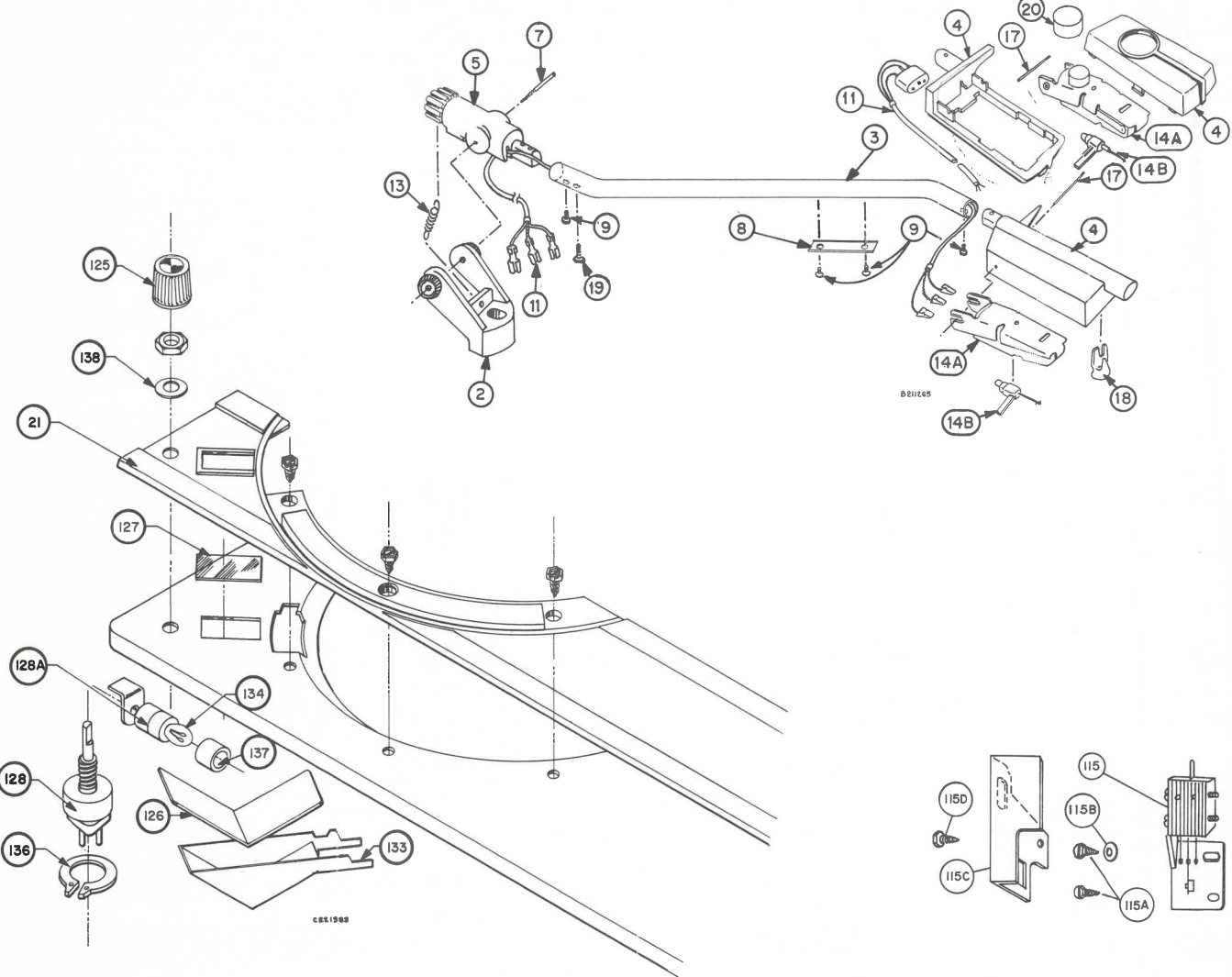
The removal of the cartridge must be made from the top rather than from the bottom.

Lift the arm to a vertical position and remove the screw holding the top (cover) to the bottom portion of the pickup arm head. Remove the top by squeezing in at the sides and lifting it away from the bottom. Turn the stylus holder tab to a vertical position (midway be-

tween "Microgroove" and "78"). Push the cartridge upward, taking care that the pressure springs on the cartridge clear the damping pads mounted in the bottom portion of the pickup arm head and that the pickup mounting shaft clears the shaft cradle. After removing the mounting shaft, tilt the cartridge and disconnect the cable connector. To install a cartridge, reverse the above procedure.



PARTS IDENTIFICATION



REPLACEMENT PARTS

ILLUS. NO.	STOCK NO.	DESCRIPTION	ILLUS. NO.	STOCK NO.	DESCRIPTION
		<b>RECORD CHANGER</b> <b>RP-225, 226, 227, 228 Series</b> <b>PICKUP &amp; ARM ASSEMBLY</b> NOTE: Stock numbers for RP-225-39A same as RP-225-39 except motor assembly.	5	118183	Base—pickup arm for RP-226-12BD
			5	122050	Base—pickup arm for RP-228-12C, -12SC, -12BSC, -12BS, RP-225-12ABD
			7	115342	Shaft—pickup arm pivot
			8	118188	Plate—hold-down, magnetic pickup arm for RP-226-12BD, RP-228-12BS, -12BSC, RP-225-12ABD
			9	118190	Screw—for Ill. 3, 4, 5, for RP-226-12BD, RP-228-12BS, RP-225-12ABD
			11	118173	Cable—pickup arm for RP-225-49A, RP-227-12, -12D, -29
			11	118174	Cable—pickup arm for RP-225-12ABD
			11	120267	Cable—pickup arm for RP-228-12BS
			11	122043	Cable—pickup arm for RP-225-39
			11	123166	Cable—pickup arm for RP-226-49
			11	122045	Cable—pickup arm for RP-226-19, -12, -29H, -12BD, -49M
			11	122046	Cable—pickup arm for RP-228-12C, -12SC, -12BSC
			13	115339	Spring—pickup arm counterbalance for RP-225-49A, RP-226-49, -49M, -19, -12, -29H, RP-227-12, -12D, -29
			13	118194	Spring—pickup arm counterbalance for RP-225-39
			13	118196	Spring—pickup arm counterbalance for RP-226-12BD, RP-228-12C, -12SC, -12BSC, -12BS, RP-225-12ABD
			14A	115346	Pickup—less stylus for RP-227-29
			14A	115703	Pickup—less stylus for RP-227-12, -12D, RP-228-12BS
			14A	117331	Pickup—less stylus for RP-225-12ABD
			14A	118054	Pickup—less stylus for RP-225-39



## REPLACEMENT PARTS (Continued)

ILLUS. NO.	STOCK NO.	DESCRIPTION	ILLUS. NO.	STOCK NO.	DESCRIPTION
14A	118056	Pickup—less stylus for RP-225-49A, RP-226-49, -49M, -29H	3	118118	Motorboard—with welded & staked parts, RP-226-19, -49M, -12, -12BD
14A	120695	Pickup—less stylus for RP-228-12C, -12SC, -12BSC	3	118119	Motorboard—with welded & staked parts, RP-226-49
14A	122123	Pickup—less stylus for RP-226-12BD	3	122069	Motorboard—with welded & staked parts, RP-228-12C, RP-225-12ABD
14A	122124	Pickup—less stylus for RP-226-19, -12	3	122070	Motorboard—with welded & staked parts, RP-227-29, -12, -12D
14B	115060	Stylus—0.7 mil sapphire for RP-225-39	3	122071	Motorboard—with welded & staked parts, RP-228-12SC, -12BSC, -12BS
14B	115329	Stylus—0.7 mil/3 mil sapphire for RP-227-29	3	122072	Motorboard—with welded & staked parts, RP-226-29H
14B	115911	Stylus—0.7 mil diamond/3 mil sapphire for RP-227-12, -12D, RP-228-12BS	6	110908	Turntable—including pinion & bushing, RP-228-12C, -12SC, -12BSC, -12BS, RP-225-12ABD
14B	118198	Stylus—0.7 mil diamond/3 mil sapphire for RP-226-12BD, RP-225-12ABD	6	115331	Turntable—including pinion & bushing, RP-225-39, -49A, RP-226-49, -19, -29H, -49M, RP-227-29
14B	118199	Stylus—0.7 mil sapphire for RP-225-49A, RP-226-49, -49M, -29H	6	115697	Turntable—including pinion & bushing, RP-226-12BD, -12
14B	118200	Stylus—0.7 mil diamond/3 mil sapphire for RP-228-12C, -12SC, -12BSC	6	122059	Turntable—including pinion & bushing, RP-227-12, -12D
14B	122057	Stylus—0.7 mil diamond/3 mil sapphire for RP-228-12C, -12SC, -12BSC	7		Shaft—hollow (part of lever & shaft assembly, Ill. 42)
15	118179	Clip—pickup arm hold-down for RP-225-39, -49A, RP-226-49, -49M, -19, -12, -29H, RP-227-12, -12D, -29	8	118120	Spindle—assembly 1/4" diameter
17	118191	Shaft—pickup mounting for RP-226-12BD, RP-227-12, -12D, -29, RP-228-12BS, RP-225-12ABD	9	118121	Slide—cycling slide complete
17	122048	Shaft—pickup mounting for RP-228-12C, -12SC, -12BSC	9A	110911	Spring—actuating pickup arm assembly
18	115327	Retainer—pickup retainer with pad for RP-226-12BD, RP-227-12, -12D, -29, RP-228-12BS, RP-225-12ABD	9B	120275	Spring—shut-off latch
19	115340	Screw—pickup arm height adjustment for RP-225-39, -49A, RP-226-49, -49M, -19, -12, -29H, RP-227-12, -12D, -29	9C	110296	Spring—shut-off latch actuator
19	122047	Screw—pickup arm height adjustment for RP-226-12BD, RP-228-12C, -12SC, -12BSC, -12BS, RP-225-12ABD	9D	110912	Spring—for "helper" lever
		Screw—#2-56 x 0.19 for Ill. 8, RP-225-12ABD	10	120888	Gear—cycling, complete with staked parts
		Screw—#2-56 x 0.25 for Ill. 4, RP-228-12BFC, -12C, -12SC	10A	111173	Spring—trip pawl, for Ill. 10
20	122049	Cap—integrated circuit for RP-228-12C, -12SC, -12BSC	13	118124	Arm—stabilizer, RP-225-39, -49A, RP-226-49, -19, -49M, -12
		Resistor—10 megohm $\pm 10\%$ 1/4 w (part of pickup assembly 120695) for RP-228-12C, -12SC, -12BSC	13	120280	Arm—stabilizer, RP-226-12BD
			13	122093	Arm—stabilizer, RP-226-29H, RP-227-29, -12, -12D
		<b>MOTOR ASSEMBLY (Stamped 190)</b>	13	122094	Arm—stabilizer, RP-228-12C, -12SC, -12BSC, -12BS, RP-225-12ABD
1	108602	Wheel—turntable drive idler	15	118125	Knob—speed, RP-225-39, -49A, RP-226-49, -19, -49M, -12, -12BD
2	108603	Arm—idler	15	122085	Knob—speed, RP-226-29H, RP-227-29, -12, -12D, RP-228-12C, -12SC, -12BSC, -12BS, RP-225-12ABD
3	108601	Link—toggle	16	118126	Knob—function, RP-225-39, -49A, RP-226-49, -19, -49M, -12, -12BD
4	102595	Spring—compression, for Ill. 3	16	122086	Knob—function, RP-226-29H, RP-227-29, -12, -12D, RP-228-12C, -12SC, -12BSC, -12BS, RP-225-12ABD
5	108606	Washer—cup for idler pulley support stud	17	118127	Knob—size, RP-225-39, -49A, RP-226-49, -19, -49M, -12, -12BD
6	122953	Spring—detent	17	122079	Knob—size, RP-226-29H, RP-227-29, -12, -12D, RP-228-12C, -12SC, -12BSC, -12BS, RP-225-12ABD
7	108606	Grommet—motor mounting	18	118128	Escutcheon—knob housing, upper, RP-225-39, -49A, RP-226-49, -19, -49M, -12, -12BD
8	78374	Spring—idler wheel tension	18	122073	Escutcheon—knob housing, upper, RP-226-29H, RP-227-29, -12, -12D, RP-228-12C, -12SC, -12BSC, -12BS, RP-225-12ABD
9	111058	Motor—complete, RP-227-29, -12, -12D	19	118129	Escutcheon—knob housing, lower, RP-225-39, -49A
9	118122	Motor—complete, RP-225-39A, -49A, RP-226-19, -29H, -12	19	118130	Escutcheon—knob housing, lower, RP-226-49, -19, -49M, -12, -12BD
9	120268	Motor—complete, RP-228-12BS	19	122064	Escutcheon—knob housing, lower, RP-227-29, -12, -12D, RP-228-12C, RP-225-12ABD
9	115925	Motor—complete, RP-228-12SC, -12BSC	19	122065	Escutcheon—knob housing, lower, RP-226-29H
9	122102	Motor—complete, RP-226-49M	20	118133	Support—turntable
9	122193	Motor—complete, RP-226-49	21	122068	Escutcheon—strobe, RP-228-12SC, -12BSC, -12BS
9	122194	Motor—complete, RP-226-12BD	22	118134	Lever—shut-off
9	122195	Motor—complete, RP-226-12BD, RP-225-12ABD	23	118135	Rest—pickup arm, RP-225-39, -49A, RP-226-49, -19, -49M, -12
9	122196	Motor—complete, RP-228-12C	23	122076	Rest—pickup arm, RP-226-29H, RP-227-29, -12, -12D
10	20165A	Washer—"C" retaining ring	23	122077	Rest—pickup arm, RP-228-12C, -12SC
11	108604	Washer—fiber	23	122095	Rest—pickup arm, RP-228-12BSC, -12BS, RP-225-12ABD
12	78647	Washer—shim	23	122096	Rest—pickup arm, RP-226-12BD
		<b>MOTOR ASSEMBLY (Stamped 107)</b>	26	118137	Mat—turntable, RP-225-39, -49A, RP-226-49, -19, -49M
1	103445	Washer—"C" retaining	26	118138	Mat—turntable, RP-226-12
2	108607	Washer—flat metal	26	120309	Mat—turntable, RP-226-12BD
3	108608	Washer—fiber	26	122061	Mat—turntable, RP-226-29H, RP-227-29
4	110040	Wheel—turntable drive idler	26	122062	Mat—turntable, RP-228-12C, -12SC, -12BSC, -12BS, RP-225-12ABD
5	108610	Spring—for idler link	26	122063	Mat—turntable, RP-227-12, -12D
6	108611	Link—idler (includes screw #6A & insert #6B)	27	110929	Insert—turntable mat, RP-226-12BD
6A		Screw—set (part of #6)	27	122088	Insert—turntable mat, RP-228, -12BS, RP-225-12ABD
6B		Insert—for idler link set screw (part of #6)	27	122089	Insert—turntable mat, RP-227-12D
7		Plate—idler plate assembly	27	122958	Insert—turntable mat, RP-228-12C, -12SC, -12BSC
8	108613	Spring—idler plate	29	118141	Washer—bearing
9	108614	Spring—detent	30	78660	Bearing—turntable thrust
10	122953	Grommet—motor mounting	31	110933	Lever—control
11	111058	Motor—complete, RP-227-29, -12, -12D	32	118142	Stud—control lever
11	118122	Motor—complete, RP-225-39A, -49A, RP-226-19, -29H, -12			
11	120268	Motor—complete, RP-228-12BS			
11	122194	Motor—complete, RP-226-49			
11	122195	Motor—complete, RP-226-12BD, RP-225-12ABD			
11	122196	Motor—complete, RP-228-12C			
		<b>AUTOMATIC RECORD CHANGER</b>			
		<b>RP-225-39, -49A, -12ABD</b>			
		<b>RP-226-49, -19, -29H, -49M, -12, -12BD</b>			
		<b>RP-227-29, -12, -12D</b>			
		<b>RP-228-12C, -12SC, -12BSC, -12BS</b>			
3	118116	Motorboard—with welded & staked parts, RP-225-39, -49A			

## REPLACEMENT PARTS (Continued)

ILLUS. NO.	STOCK NO.	DESCRIPTION	ILLUS. NO.	STOCK NO.	DESCRIPTION
33	111495	Lever—automatic neutral link detent lever	115	122074	Switch—muting (with mounting bracket), RP-228-12BS
34	118143	Lever—push-off	115	122075	Switch—muting (with mounting bracket), RP-228-12C, -12SC, -12BSC
35	118144	Lever—landing	115	111564	Switch—muting (with mounting bracket), RP-225-12ABD
35A	111647	Stud—for landing lever	115A		Screw—#8 x 0.25
36	118145	Rod—pickup arm lift rod	115B		Washer—0.170 i.d. x 0.343 o.d.
37	118146	Lever—record size	115C		Shield—for Ill. 115
38	118147	Lever—speed control	115D		Screw—#6 x 0.25, for Ill. 115
39	108457	Switch—on/off	122		Terminal—for Ill. 82
40	122092	Cover—switch	125	122078	Knob—speed control adjustment, RP-228-12SC, -12BSC, -12BS
41	110945	Link—trip	126	115932	Mirror—strobe, RP-228-12SC, -12BSC, -12BS
42	118148	Lever—pickup arm pivot assembly (includes lever, shaft, nut & cushion)	127	115931	Window—strobe, RP-228-12SC, -12BSC, -12BS
43	111176	Link—motor speed change	128	115928	Resistor—variable speed adjustment, RP-228-12SC, -12BSC, -12BS
44	110949	Lever—trip	128A	115927	Socket—strobe lamp, RP-228-12BS
45	110950	Lever—clutch	130	117145	Diode—silicon, speed adjustment, RP-228-12BS
46	110951	Spring—push-off lever tension for Ill. 20	131		Resistor—62 ohm $\pm 5\%$ 2 w., wirewound, strobe assembly, RP-228-12BS
47		Board—terminal	132	502312	Resistor—12,000 ohm $\pm 10\%$ 1/2 w., RP-228-12BS
48	110931	Washer—oil resistant rubber	133	118193	Shield—strobe mirror, RP-228-12SC, -12BSC, -12BS
49	110176	Spring—motorboard mounting	134	115929	Lamp—NE 51, neon strobe, RP-228-12SC, -12BSC, -12BS
50		Screw—#10 x 0.44, pickup arm rest	135	118205	Washer—strobe control, RP-228-12SC, -12BSC, -12BS
51	118150	Washer—"C" retaining stabilizer arm	136	118180	Clip—strobe control, RP-228-12SC, -12BSC, -12BS
51A	118149	Washer—for stabilizer arm	137	118192	Shield—strobe lamp, RP-228-12SC, -12BSC, -12BS
51B	118168	Washer—"C" retaining, for Ill. 13	138	118204	Washer—resistor mounting, RP-228-12SC, -12BSC, -12BS
52	33726	Washer—"C" retaining, for Ill. 38	143	120275	Spring—record size lever
53	118152	Washer—spring type, for index lever	144		Screw—#6 x 0.25, for Ill. 145
54	74431	Retainer—for Ill. 32	145	120276	Connector—female, audio output, RP-228-12BS
55	77269	Washer—"C" retaining, for Ill. 16, 36, 44	145	122197	Connector—female, audio output, RP-228-12C, -12SC, -12BSC
56	109440	Connector—4 contact, phono power, RP-227-29, -12, -12D, RP-228-12C, -12SC, -12BSC, -12BS	73960		Capacitor—0.01 $\mu$ f $\pm 100-0\%$ , 500 v, ceramic, RP-226-19, -29H, -12, -12BD, RP-228-12C, -12SC, -12BSC, -12BS
56A		Screw—#6 x 0.62, RP-227-29, -12, -12D	121185		Contact—for Ill. 56, RP-227-29, -12, -12D, RP-228-12C, -12SC, -12BSC, -12BS
57	110952	Screw—adjusting for cycling slide	122060		Disc—timing, for turntable (11-9/16" o.d.), RP-228-12SC, -12BSC, -12BS
58	111482	Eyelet—for Ill. 57	118296		Knob—volume, RP-226-49, -19, -49M, -12, -12BD
59	78654	Clip—retaining ring for turntable	122080		Knob—volume, RP-226-29H
60	118155	Clip—push-off lever retainer	118298		Knob—balance, RP-226-19, -12, -12BD
61	118156	Clip—retaining, for Ill. 10 & 32	122081		Knob—balance, RP-226-29H
62	110955	Clip—retaining, for Ill. 35	118297		Knob—tone, RP-226-49, -49M
63	111717	Eyelet—for Ill. 20	118299		Knob—treble, RP-226-19, -12, -12BD
64		Nut—0.50-32, for Ill. 8	122082		Knob—treble, RP-226-29H
65		Nut—0.25-32, for Ill. 42	118300		Knob—bass, RP-226-19, -12, -12BD
66	110957	Spring—height adjustment	122083		Knob—bass, RP-226-29H
67	110958	Spring—pickup arm lift rod	122084		Knob—AC/DC/bat, RP-226-49M
68	110959	Spring—push-off lever	115910		Magnet—pickup arm rest, RP-226-12BD, RP-228-12BSC, -12BS, RP-225-12ABD
69	110956	Spring—trip clutch, for Ill. 44	110953		Spring—flat, pickup arm torque
70	118158	Washer—for Ill. 35			<b>RS-239</b>
71	118159	Spring—pickup arm latch	122100		Circuit—board assembly, complete, RP-228-12C, -12SC, -12BSC
72	115232	Spring—reject, for Ill. 9 & 34	C1-2	120400	Capacitor—0.01 $\mu$ f $\pm 10\%$ , 100 v, mylar, RP-228-12C, -12SC, -12BSC
73	110962A	Spring—cycling slide & landing lever	C3-6	111837	Capacitor—0.047 $\mu$ f $\pm 20\%$ , 100 v, ceramic, RP-228-12C, -12SC, -12BSC
74	118151	Washer—"C" retaining, for Ill. 94	C7	115054	Capacitor—150 $\mu$ f, 10 v, electrolytic, RP-228-12C, -12SC, -12BSC
75	118161	Spring—record size, for Ill. 37	C8	121649	Capacitor—50 $\mu$ f, 15v, electrolytic, RP-228-12C, -12SC, -12BSC
76	122058	Washer—0.300 o.d., for Ill. 20 & 44	CR1-2	117145	Diode—silicon rectifier, RP-228-12SC, -12BSC, -12C
77		Screw—#8 x 0.19, for Ill. 20	R1-2	502447	Resistor—470,000 ohm $\pm 10\%$ , 1/2 w, RP-228-12C, -12SC, -12BSC
78		Screw—#6 x 0.25, for Ill. 47	R3-4	502415	Resistor—150,000 ohm $\pm 10\%$ , 1/2 w, RP-228-12C, -12SC, -12BSC
79		Spring—stabilizer arm	R5-6	502322	Resistor—22,000 ohm $\pm 10\%$ , 1/2 w, RP-228-12C, -12SC, -12BSC
80	118160	Screw—#6 x 0.31, for Ill. 18	R7	502282	Resistor—8200 ohm $\pm 10\%$ , 1/2 w, RP-228-12C, -12SC, -12BSC
81		Screw—#8 x 0.25, for Ill. 83	R8	502212	Resistor—1200 ohm $\pm 10\%$ , 1/2 w, RP-228-12C, -12SC, -12BSC
82	118164	Housing—stabilizer arm, RP-225-39, -49A, RP-226-49, -19, -49M, -12, -12BD	R9		Resistor—56 ohm $\pm 5\%$ 2w, wirewound, RP-228-12SC, -12BSC
83	122066	Housing—stabilizer arm, RP-226-29H, RP-227-29, -12, -12D	R10	502312	Resistor—12,000 ohm $\pm 10\%$ , 1/2 w, RP-228-12SC, -12BSC
83	122067	Housing—stabilizer arm, RP-228-12C, -12SC, -12BSC, -12BS, RP-225-12ABD			<b>LUBRICANTS</b>
88	121922	Adaptor—45 RPM	10R115		Dow Silicon Fluid #200
89	118162	Grommet—motor mounting	10R116		Dow Silicon Grease DC-3
90	118163	Grommet—motorboard	10R117		Rycon #0
92	118152	Washer—spring, for Ill. 38, RP-228-12SC, -12BSC, -12BS	10R118		Purolite RX
93		Washer—0.172 i.d. x 0.50 o.d., for Ill. 57			
94	118153	Lever—index			
99	75749	Washer—motor mounting			
100	251736	Washer—"C" retaining, Ill. 36			
101		Lug—for Ill. 49			
102	118154	Cam—cycling gear			
104	118178	Clamp—magnet, RP-226-12BD, RP-228-12BSC, -12BS			
105	118167	Washer—"C" retaining, for Ill. 57			
106	115151	Spring—torque, for Ill. 9 & 42, RP-226-12BD, RP-227-29, -12, -12D, RP-228-12C, -12SC, -12BSC, -12BS			
106	123167	Spring—torque, for Ill. 9 and 42, RP-225-39, -39A, -49A, RP-226-49, -19, -29H, -49, -12			
107		Screw—#6 x 0.25, for Ill. 102			
110	118169	Cushion—pickup arm lift, for Ill. 36, RP-226-12BD, RP-228-12BSC, -12BS, RP-225-12ABD			
112	118182	Grommet—pickup arm, RP-225-39, -49A, RP-226-49, -19, -49M, -12, -12BD			
112	122191	Grommet—pickup arm, RP-228-12C, -12SC, -12BSC, -12BS, RP-225-12ABD			
112	122192	Grommet—pickup arm, RP-226-29H, RP-227-29, -12, -12D			
113	118181	Washer—rubber, stabilizer arm pad, RP-225-39, -49A, RP-226-49, -19, -49M, -12, -12BD			
113	122189	Washer—rubber, stabilizer arm pad, RP-228-12C, -12SC, -12BSC, -12BS			
113	122190	Washer—rubber, stabilizer arm pad, RP-226-29H, RP-227-29, -12, -12D			



# RCA VICTOR



## RADIO & "VICTROLA"® PHONOGRAPH

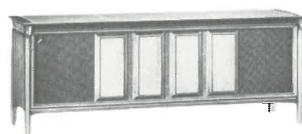
### SERVICE DATA

—File: 1967 No. 42—



*The "Blackbeath"*  
Model VJT 38WX—  
Walnut

*The "Attleboro"*  
Model VJT 40LX—Maple



*The "Oland"*  
Model VJT 74W—Walnut

**Model VJT 38-X**

**Model VJT 40-X**

**Model VJT 74**

**Tuner Chassis RC-1223C**

**Amplifier Chassis RS-215J**

**Power Chassis RK-314E**

**Record Changers RP-227-12D**

**& RP-228-12SC**

**Tape Deck TCT-8A & TRT 6**

#### RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY

PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201

#### DESCRIPTION

The models VJT 38-X and VJT 40-X are the same as models VJT 38 and VJT 40 respectively but with the addition of a Stereo "8" tape cartridge player.

The model VJT 74 is similar to model VJT 54 except for cabinet

styling and for the addition of a reel to reel tape recorder.

The addition of the tape decks to these instruments requires that an additional receptacle be incorporated in the RK-314 power chassis to supply power to the tape decks.

Model	Record Changer	Tape Deck	Speakers		
			"A"	"B"	"C"
VJT 38-X	RP-227-12D	TCT-8A	2-12"x8", 2-horns, 2-3 1/2"		
VJT 40-X	RP-227-12D	TCT-8A	2-12"x8", 2-horns, 2-3 1/2"		
VJT 74	RP-228-12SC	TRT 6	2-15"x9", 2-horns, 2-3 1/2"		

FOR SERVICING AND PARTS INFORMATION ON THE RC-1223C, RS-215J AND RK-314E CHASSIS: REFER TO SERVICE DATA—1967 NO. 41—EXCEPT AS NOTED HEREIN.

FOR SERVICING AND PARTS INFORMATION ON THE RP-227-12D, RP-228-12SC RECORD CHANGER MECHANISM AND RS-239 AMPLIFIER: REFER TO SERVICE DATA—1967 NO. 6 AND 6-S1.

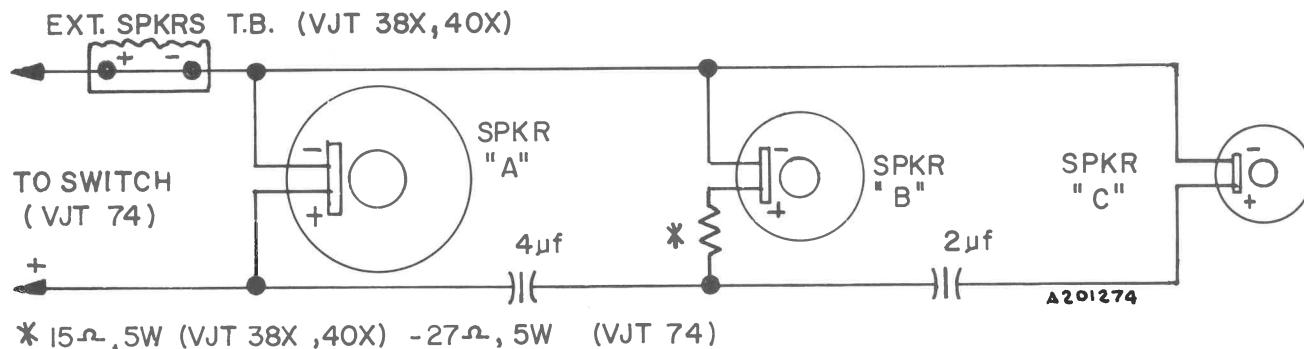
FOR SERVICING AND PARTS INFORMATION ON THE TCT 8A CARTRIDGE TAPE PLAYER MECHANISM: REFER TO SERVICE DATA—1967 NO. 45

FOR SERVICING AND PARTS INFORMATION ON THE TRT 6 REEL TAPE RECORDER MECHANISM: REFER TO SERVICE DATA—1967 NO. 46.

#### SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject





Speaker Wiring Diagram

## REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION
Change C218 C229 C237	150301	Refer to—1967 No. 41—except as listed <b>RADIO CHASSIS</b> RC-1223C/RS-215J Capacitor—0.1 μf, ±20%, 50 v, ceramic Capacitor—330 μf, ±10%, 500 v, ceramic Capacitor—0.1 μf, ±20%, 50 v, ceramic
To Read C218 C229 C237	115652 105301 115652	Capacitor—0.1 μf, ±20%, 50 v, ceramic Capacitor—330 μf, ±10%, 500 v, ceramic Capacitor—0.1 μf, ±20%, 50 v, ceramic
Add J513	52131	<b>POWER CHASSIS</b> RK-314E Connector—2 contact, female, tape power
		<b>MISCELLANEOUS</b>
	124009	Back—cabinet, VJT 38WX
	124010	Back—cabinet, VJT 40LX
	120452	Back—cabinet, VJT 74W
	117438	Board—external speaker terminal, VJT 38WX, 40LX
	111743	Board—external speaker terminal, VJT 74W
	116071	Bracket—plastic, compartment lamp mounting
	118858	Cable—polarized, changer audio, intermediate cable, VJT 74W
	120449	Cable—audio, tape player (96" lg.) VJT 38WX, 40LX
	111831	Capacitor—4 μf, 25 v, electrolytic (speaker crossover)
	115189	Capacitor—2 μf, 25 v, electrolytic (speaker crossover)
	115837	Clip—spring clip for mounting panel 122371 & 121636 to tuner chassis
	121437	Cloth—grille, VJT 38WX
	122375	Cloth—grille, VJT 40LX
	X8385	Cloth—behind louvered trim, VJT 40LX
	123772	Cloth—grille, VJT 74W
P611	74882	Connector—3 pin, male, changer audio intermediate cable
P11✓	110145	Connector—3 contact, male, changer power intermediate cable
P15✓	109442	Connector—4 contact, female, changer power intermediate cable
P16	103165	Connector—3 pin, male, lamp socket leads
	111963	Connector—headphone jack, VJT 74W
	121185	Contact—for connector 109442 & 110145
	122370	Escutcheon—tuner & amplifier controls (11½" x 2½") VJT 38WX, 40LX
	121641	Escutcheon—tuner & amplifier controls (11½" x 2½") VJT 74W
	123970	Escutcheon—volume & channel selector controls on tape player, VJT 38WX, 40LX
	121629	Escutcheon—speaker selector switch, VJT 74W
	115353	Grommet—⅝" o.d., for mounting tuner & tape deck
	121593	Hinge—support for changer/tuner compartment lid, VJT 38WX
	115264	Hinge—support for changer/tuner compartment lid, VJT 40LX
	115686	Hinge—support for changer/tuner compartment lid, VJT 74W
	115687	Hinge—support for tape deck compartment lid, VJT 74W
	122373	Hinge—decorative, VJT 40LX
	121435	Holder—45 RPM adaptor

SYMBOL NO.	STOCK NO.	DESCRIPTION
	119185	Indicator—plastic 2⅝" o.d., tuner function dial, VJT 38WX, 40LX
	117485	Indicator—plastic, 2⅝" o.d., tuner function dial, VJT 74W
	121638	Knob—tuning
	121080	Knob—function
	122364	Knob—AFC/balance, VJT 38WX, 40LX
	121639	Knob—AFC/balance, VJT 74W
	122365	Knob—loudness, treble, bass, VJT 38WX, 40LX
	121640	Knob—loudness, treble, bass, VJT 74W
	123968	Knob—tape player volume, VJT 38WX, 40LX
	121637	Knob—speaker selector switch, VJT 74W
	111481	Lamp—# 159, changer compartment
	103211	Lamp—# 1847, pilot
	111824	Lens—pilot lamp
	120866	Nut—tee-nut for changer mounting
	122371	Panel—amplifier & tuner control (12¼" x 7¼") VJT 38WX, 40LX
	121636	Panel—amplifier & tuner control (12¼" x 7¼") VJT 74W
	123969	Panel—metal, control panel for tape player (8⅝" x 4⅝") VJT 38WX, 40LX
	123971	Plate—RCA Victor & solid state markings, VJT 38WX, 40LX
	122220	Pull—decorative (4 required) VJT 38WX
	122374	Pull—decorative, VJT 40LX
	117480	Resistor—15 ohm, ±10%, 5 w, wire wound (used with speaker 122206) VJT 38WX, 40LX
	121635	Resistor—27 ohm, ±10%, 5 w, wire wound (used with speaker 122206) VJT 74W
	502182	Resistor—820 ohm, ±10%, ½ w, (used on speaker selector switch assembly) VJT 74W
	111964	Resistor—8.2 ohm, ±10%, 15 w, wire wound (used on speaker selector switch assembly) VJT 74W
	111648	Retainer—speakers
	112639	Screw—changer mounting (includes grommet)
	118566	Socket—pilot lamp
	122372	Socket—changer compartment lamp, VJT 38WX, 40LX
	113235	Socket—compartment lamp, VJT 74W
	111987	Speaker—3½" PM, 20 ohm v.c.
	122206	Speaker—horn, 12 ohm v.c.
	120748	Speaker—12" x 8" PM, 8.5 ohm v.c. VJT 38WX, 40LX
	111988	Speaker—15" x 9" PM, 8.5 ohm v.c. VJT 74W
	111962	Switch—speaker selector, VJT 74W
	110501	Terminal—audio pickup cable
	114272	Terminal—external speaker board
	121592	Trim—louvered (17½" x 14") VJT 40LX
	122379	Trim—cabinet door (16¼" x 3") VJT 38WX
		<b>ACCESSORIES</b>
	123843	Microphone—recording, VJT 74
	121922	Spindle—"45" adaptor
		— Order from RCA Sales Corporation —
	1407165-2	Book—customer instruction, VJT 38WX, 40LX
	1407456-1	Book—customer instruction, VJT 74W

Specifications Subject to Change Without Notice

APPLY TO YOUR RCA DISTRIBUTOR FOR REPLACEMENT PARTS AND ACCESSORIES





# RCA VICTOR



## RECORD CHANGER SERVICE DATA

—File: 1967 No. 6—

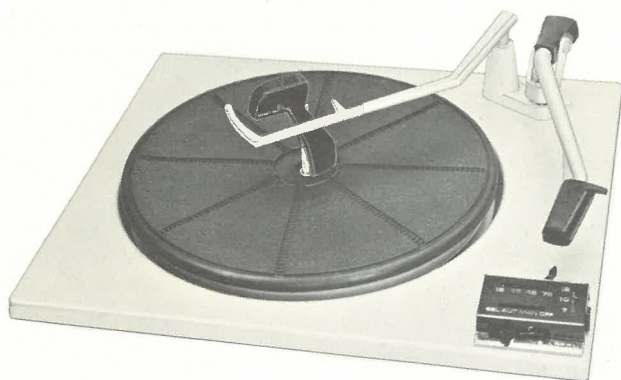
### RP-225 Series RP-226 Series

#### RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY

#### PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201



RP-225-39A

### SPECIFICATIONS

**TURNTABLE SPEEDS** ..... 16 $\frac{2}{3}$ , 33 $\frac{1}{3}$ , 45, and 78 rpm  
**RECORD SIZES** ..... 7", 10", and 12"  
**RECORD CAPACITY** ..... up to six same size records  
**POWER REQUIREMENTS** ..... 120 volts, 60 cycle, 15 watts

#### STYLUS FORCE

Solid mount crystal pickup ..... 7 to 9 grams  
Solid mount ceramic pickup ..... 5 to 7 grams

CHANGER	TYPE	CARTRIDGE	STOCK NO.	0.7 Mil STYLUS	STOCK NO.	USED IN—
RP-225-39	Mono	Crystal	118054	Sapp.	115060	VJP 27
RP-225-39A	Mono	Crystal	118054	Sapp.	115060	VJP 21, 25, 92K
RP-225-49A	Stereo	Ceramic	118056	Sapp.	118199	VJP 31
RP-226-49M	Stereo	Ceramic	118056	Sapp.	118199	VJP 34

### GENERAL DESCRIPTION

The RP-225 and RP-226 Series automatic record changers are four-speed mechanisms designed to play 7, 10, or 12 inch records. Manual operation is also provided.

The pickup arm is coupled to the mechanism through a friction clutch arrangement which permits handling of the pickup arm in or out of cycle without damage to the mechanism. A full 90 degree lift of the pickup arm is possible for ease of stylus and cartridge replacement.

Record separation is accomplished by means of a push-off finger and shelf on the spindle. The stabilizer arm must be employed to keep the record stack level for proper separation when playing either 1/4 inch or 1 1/2 inch center hole records.

The tripping method employed is of the acceleration type in which tripping is initiated by rapid inward movement of the pickup arm at the end of each record. An enlarged trip pawl and clutch lever assembly is mounted independently of the cycling gear to insure positive automatic tripping action.

The mechanism will shut off and the drive system return to neutral automatically after playing the last record.

The basic mechanism is similar to the RP-221 through RP-224 Series. Most of the changes are in re-styling. These two series pickup arms employ solid mount cartridge design.

In the record player designation, the last number in the second set of numbers refers to the size of the turntable. For example, a "9" (RP-225-39) indicates a 9 inch turntable. Where a letter appears after the turntable size, "A" indicates separate amplifier controls, and the letter "M" denotes a DC motor. The RP-225-39A employs a motor with a secondary winding. This design allows the use of the winding as an isolated power source for the associated amplifier.

#### SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject

## RECORD CHANGER REMOVAL

To remove the record changer, place the function selector lever in the OFF position. The edge of the rubber turntable mat may be folded back slightly revealing two access holes 180 degrees apart at the outer rim of the turntable. Rotate the turntable to align one of these holes with the mounting bolts located at 11 o'clock and 6 o'clock (when facing the changer). Back out the bolts sufficiently to disengage them from the T-nuts mounted in the shelf. Tilt the motorboard up and disconnect the 3 audio leads (connectors) and the phono power con-

ductor at the bottom of the changer and lift the changer from the well. When reinstalling the changer, do not tighten the two bolts beyond the point where the suspension springs begin to compress or acoustic feedback may be encountered. If the instrument is to be transported, tighten the bolts more securely; again adjusting them for loose fit when the instrument is installed in a new location. All the record changers of these series have the same mounting and removal.

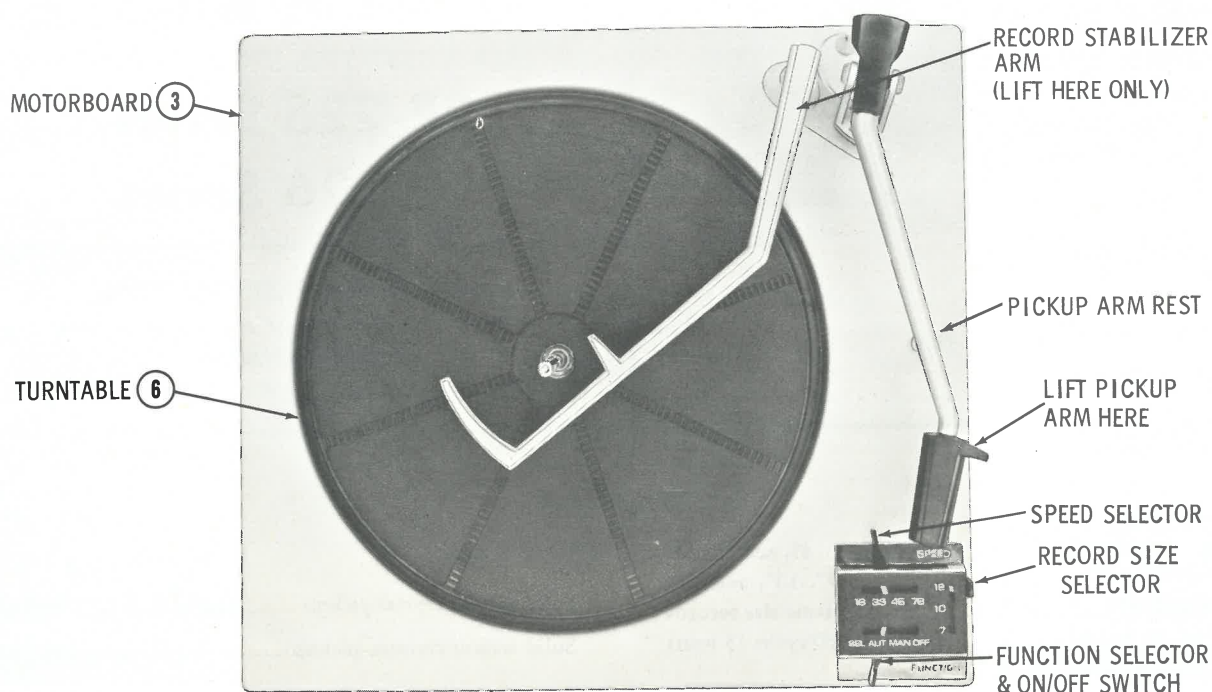


Figure 1—Top View of Record Changer

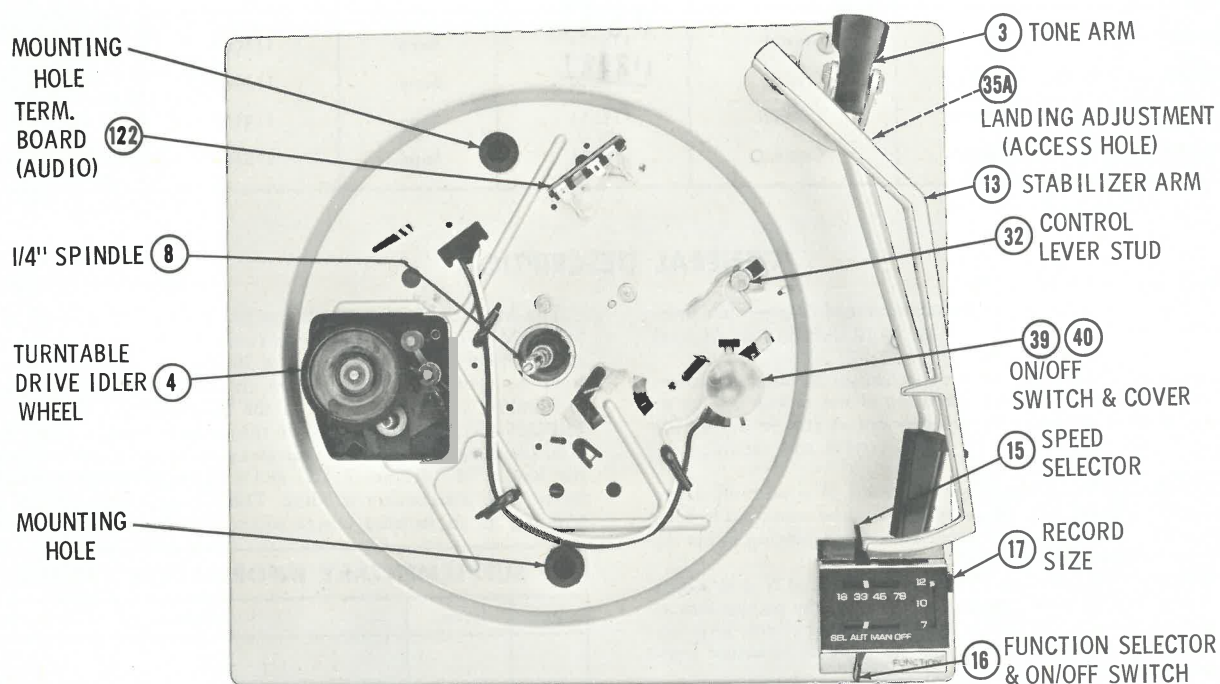


Figure 2—Top View of Record Changer with Turntable Removed



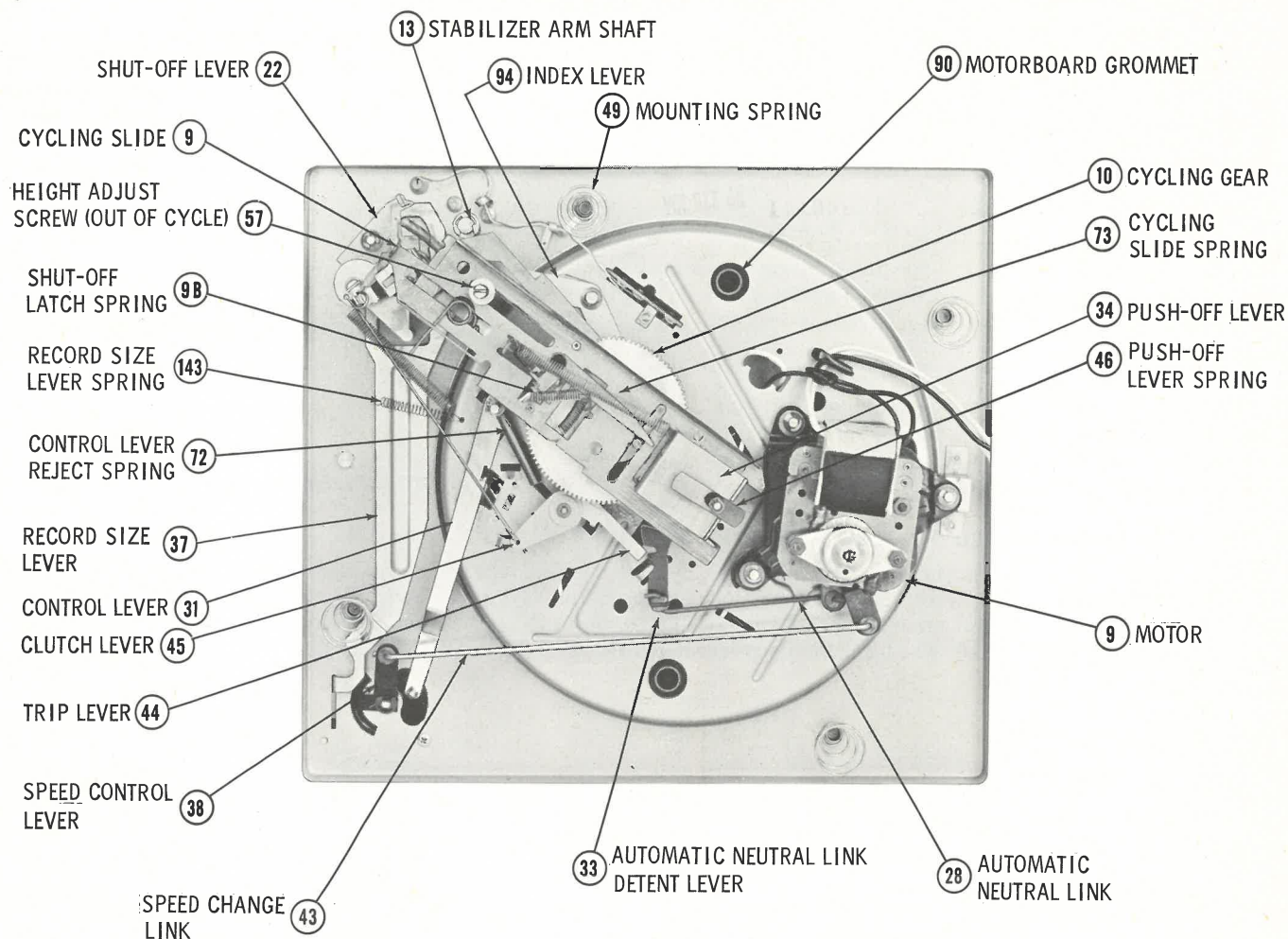


Figure 3—Bottom View of Record Changer Mechanism

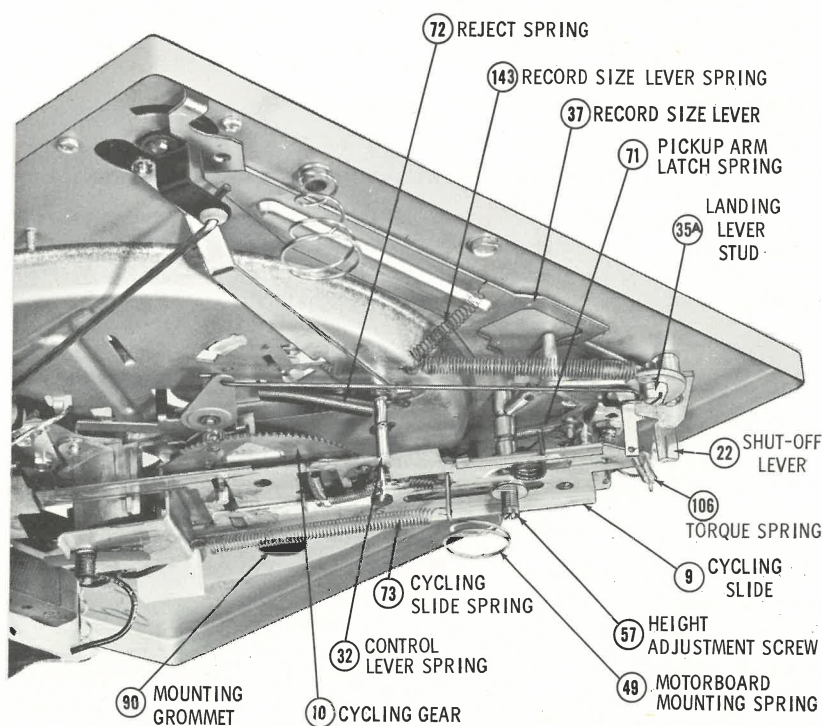


Figure 4—Partial Bottom View



## CYCLE OF OPERATION

NOTE: Numbered references in parentheses throughout the text refer to parts identification in specific parts list (pickup and arm assembly, motor assembly and automatic record changer). Even though the same number may appear more than once, the reader should first associate the number to the particular parts list to obtain the description. i.e. Illustration 9 may refer to a spring, motor, or cycling slide according to the subject matter.

In the cycle of operation it is assumed the mechanism has stopped automatically with the pickup arm on the rest.

### PRELIMINARY PROCEDURE

Lift the stabilizer arm and place a stack of  $\frac{1}{4}$ " center-hole records (either 7", 10" or 12") on the spindle. Place record size selector in appropriate position. Place the record stabilizer arm so that it rests on the records.

OR

If playing records with  $1\frac{1}{2}$ " centerhole, first place the 45 rpm Adapter over the center spindle. Place record size selector in 7" position. Place the record stabilizer arm so that it rests on the records.

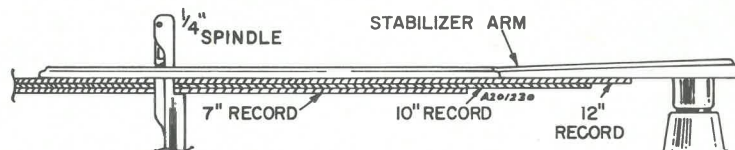


Figure 5—Preliminary Procedure

### FUNCTION KNOB TURNED TO "SEL" (SELECT) POSITION

The FUNCTION knob is moved to the SEL position then released. The knob arm will automatically reset to the AUT position. This action causes control lever (31) to move closing off-on switch (39) and the motor starts. The opposite end of the control lever actuates the automatic neutral link detent lever (33) and through the automatic neutral link engages the drive wheel to the motor shaft. The turntable starts its rotation.

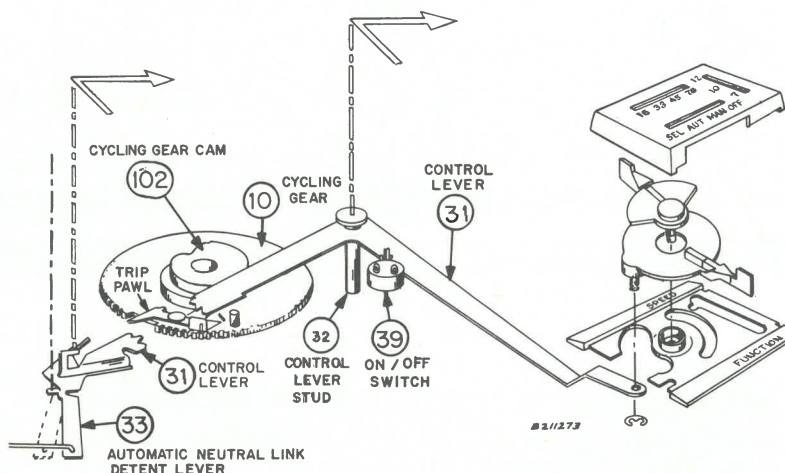


Figure 6—Automatic Position

Continued movement of the control lever (31) (now a lateral motion due to the control lever stud (32) following the right angle slot in the motorboard) causes the flanged end of the control lever to strike the tab end of the trip pawl (part of cycling gear). This causes the trip pawl to advance into the path of the projection on the turntable hub. Cycling gear (10) starts rotating when the projection on the turntable hub strikes the trip pawl.

### SERVICE HINTS

Failure to turn on may be caused by bent tab on control lever (31) not engaging switch (39). Binding of knobs or sticking in "SEL" position can be corrected by light lubrication of the knob shafts.

### CYCLING STARTS

As the cycling gear rotates, the cycling slide (9) starts its outward motion—this is accomplished by the pin extending downward from the cycling gear traveling in the elongated slot in the cycling slide. During the change cycle, the cycling gear will complete one revolution and the cycling slide will perform one complete excursion (outward and inward) of travel.

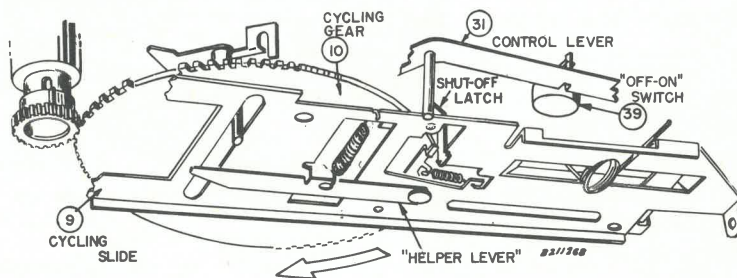


Figure 7—Cycling Starts

## CYCLE OF OPERATION

### SERVICE HINTS

If cycling fails to start, check condition of trip pawl (10A). If mechanism stalls or slows down in cycle, check for (1) bent or binding cycling gear (10), (2) slippage between motor shaft, idle wheel and turntable.

The pickup arm lift rod (36) must be free to travel vertically and the ends smooth and rounded for proper lift of the pickup arm.

### PICKUP ARM RISES

The outward movement of cycling slide (9) causes the pickup arm lift rod (36) to arrive at the flat portion of the lance on the cycling slide, completing the vertical rise of the pickup arm. Continued outward movement of the cycling slide causes the vertical tab on the shut-off latch actuator (part of cycling slide—fig. 16) to contact the tab on the shut-off lever (22) causing it to rotate thus unlocking the landing lever.

Further rotation of the cycling gear (10) and further outward movement of the cycling slide (9) results in the contact of actuator spring (9A) with the pickup arm lever (42), pushing the lever back against the landing adjustment stud (35A) to establish the positive reference point for the pickup arm travel. The pickup arm has a slight outward movement to this reference point before starting its inward travel.

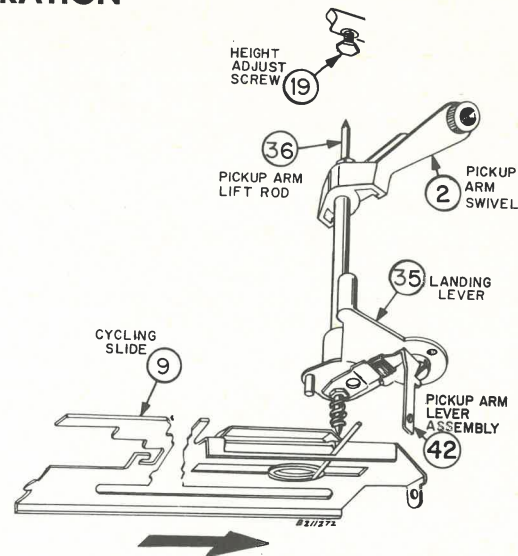


Figure 8—Pickup Arm Rises

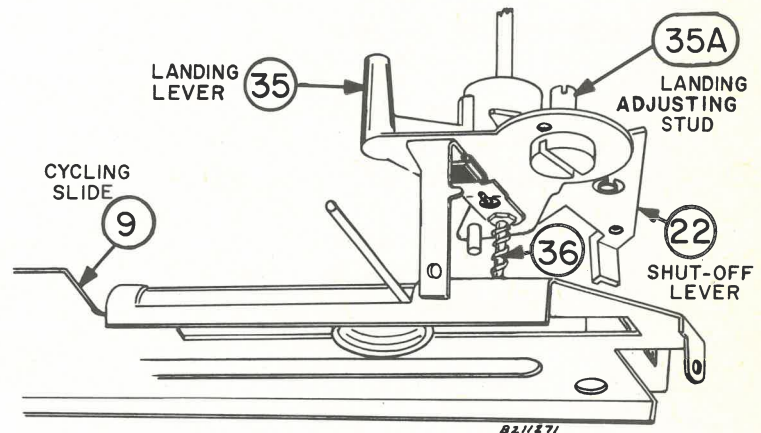


Figure 9—Pickup Arm Rises

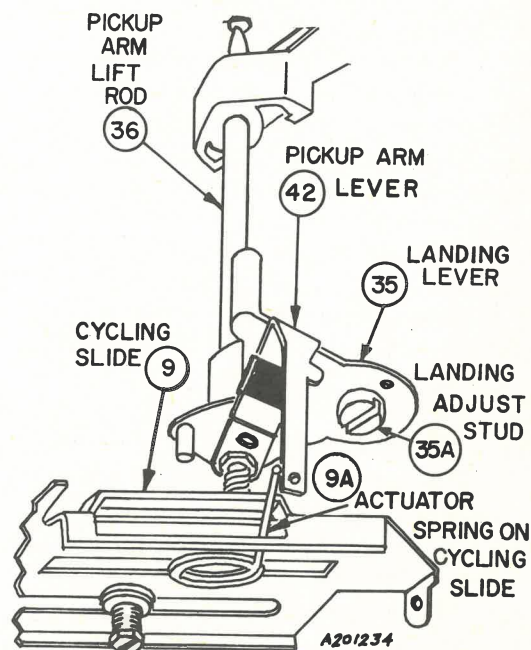


Figure 10—Pickup Arm Moves In

### RECORD DROPS

As the actuator spring makes contact with the pickup arm lever, a lance on the cycling gear starts to move the push-off lever (34—fig. 3) in the opposite direction from the movement of the cycling slide (toward the turntable support) thus actuating the push-off finger in the spindle assembly causing the record to drop. At this time, the cycling gear has completed one half of its rotation and the cycling slide has reached its extreme outward travel.

### PICKUP ARM MOVES IN

The cycling slide (9) starts its inward travel as the cycling gear continues its rotation. The actuator spring applies constant pressure to the pickup arm lever as the landing adjustment stud (35A) moves the pickup arm lever forward due to the contraction of the landing lever spring. The receding cycling slide merely directs the movement of the pickup arm lever. Push-off lever (34) returns to normal position. The unlatched condition of the shut-off lever (22) permits the landing



## CYCLE OF OPERATION

### PICKUP ARM MOVES IN (Cont.)

lever (35) to rotate inward until the stud on the lever is stopped by the selected step on the record size lever (37).

### SERVICE HINTS

If erratic landing is encountered check for proper placement of actuator spring in cycling slide. Make sure the metal surface of the landing lever (35) is clean and dry. Improper HEIGHT adjustment can cause erratic LANDING.

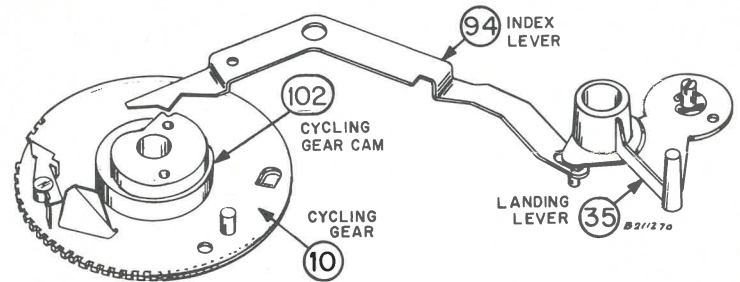


Figure 11—Pickup Arm Re-latches

### PICKUP ARM TOUCHES RECORD

The stud extending upward from the cycling gear (10) resets the trip lever (44). The landing lever (35) moves away due to the action of the index lever (94). The "helper" (fig. 17) on the cycling slide assists in the completion of the last portion of the cycle of operation. At this time the cycling gear has rotated one complete revolution, the cycling slide has completed its inward travel, and the pin on the cycling gear rests in the center of the elongated slot in the cycling slide.

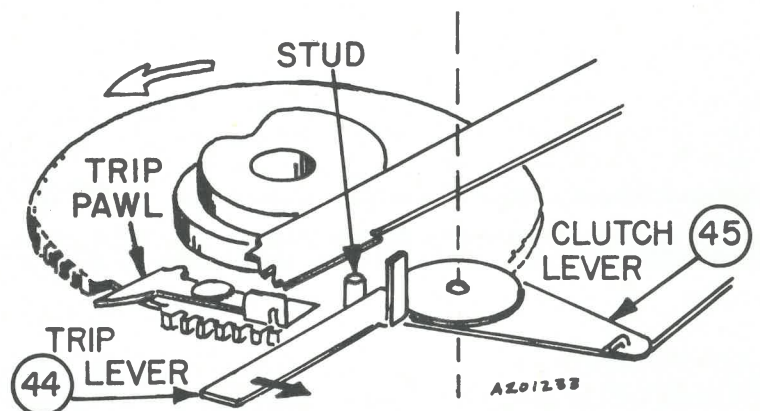


Figure 12—Clutch Lever Reset

### RECORD PLAYS

The pickup arm, having descended, the stylus enters the record starting grooves. The pickup arm is now directed solely by the grooves on the record; the only mechanical engagement is that of the trip link (41) connecting the pickup arm lever (42) to the clutch lever (45).

As the record plays, the pickup arm moves inward at a slow rate and finally comes to the fast advance spiral lead-in grooves at the end of the record. The trip link (operated by the inward travel of the pickup arm lever) causes the clutch lever to move the trip lever (44) into contact with the trip pawl lever on the cycling gear. Although the trip lever (44) may contact the trip pawl lever during the slow advance, the trip pawl lever is not moved in sufficiently to make a solid contact with the projection on the turntable hub and is pushed away. However when the trip pawl is moved in a sufficient distance by the fast advance it will contact the turntable hub projection solidly and cause the cycle of operation to repeat.

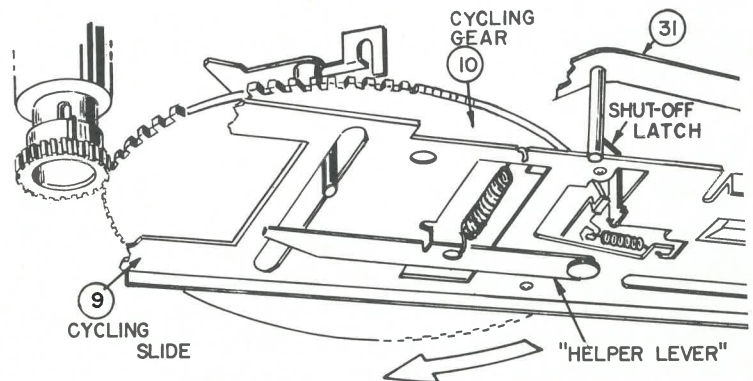


Figure 13—"Helper" Lever Action



## LAST RECORD PROCEDURE

As the last record falls, the stabilizer arm (13) drops also, with the shaft end resting on the extended portion of the shut-off actuator. This does not affect the playing of the last record; however, at the completion of the change cycle which caused the last record to drop, the stabilizer arm shaft drops further and forms an obstruction to the free movement of the cycling slide.

### SERVICE HINTS

*Continuous trip may be caused by failure of the trip lever (44) to re-set. Check for oil or loose assembly. If stylus skips grooves or fails to become free at the time of "touchdown" check action of index lever (94) and check for proper clearance between landing lever (35) and pickup arm lever (42).*

### SHUT-OFF CYCLE STARTS

At the completion of the last record the cycle of operation starts to repeat. Since the stabilizer arm shaft is in the downward position, the shut-off actuator is cammed inward as the cycling slide (9) moves outward, consequently the shut-off latch actuator (Fig. 15) misses the tab on the shut-off lever (22) allowing the pickup arm lever (42) and landing lever (35) to remain latched.

### PICKUP ARM DESCENDS TO REST POSITION

As the cycling slide starts its inward travel, the latched condition of the pickup arm lever (42) to the landing lever (35) prevents the pickup arm from following the receding actuator spring on the cycling slide. The pickup arm then descends to the rest position.

### LAST RECORD CYCLING COMPLETED

Further inward travel of the cycling slide (9) causes the shut-off latch to contact the control lever stud (32) and thereby return the control lever to the OFF position. The control lever also actuates the off-on switch, which shuts off the motor, and actuates the automatic neutral link detent lever (33), which causes the drive system to come to an automatic neutral condition.

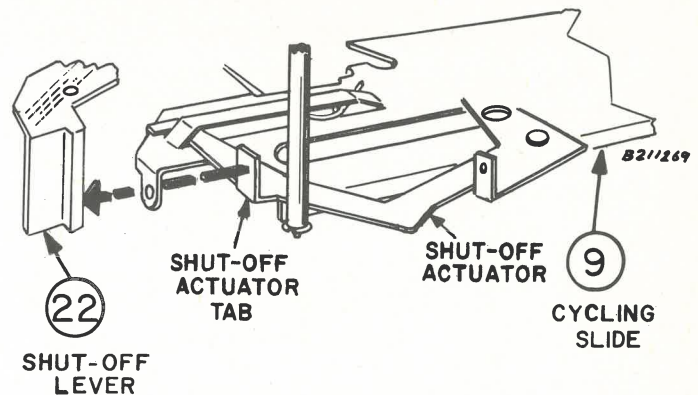


Figure 14—Stabilizer Arm Drops

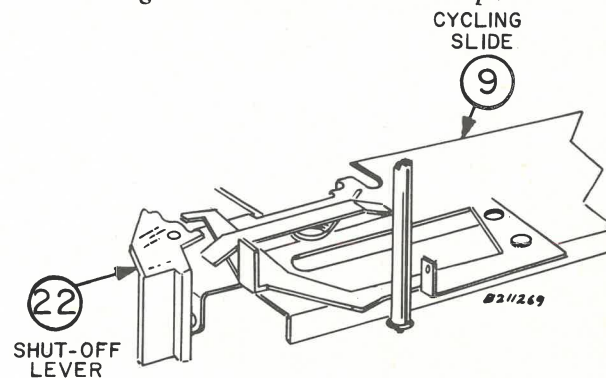


Figure 15—Stabilizer Arm Drops Further

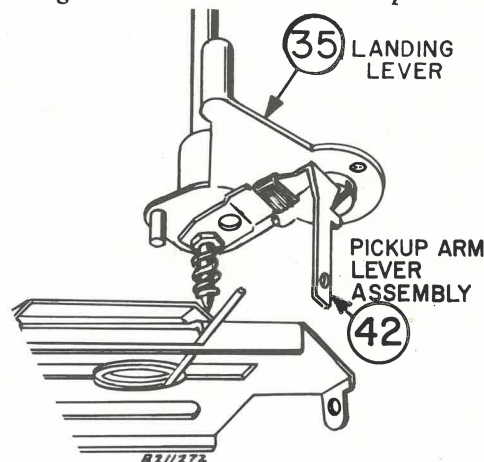


Figure 16—Pickup Arms Descend to Rest Positions

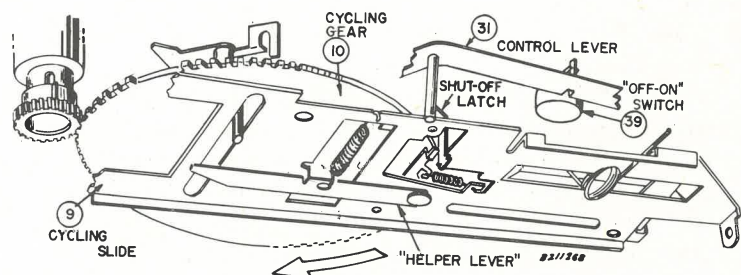


Figure 17—Shut-off Occurs

## MANUAL OPERATION

### FUNCTION KNOB TURNED TO "MAN" POSITION

As the function knob is turned to the manual position the control lever (31) closes the "off-on" switch (39) causing the motor to start, and through the automatic neutral link detent lever (33) causes the drive system to engage the turntable (6).

### CONDITIONS EXISTING IN "MAN" POSITION

The control lever linkage is in such a position as to prevent the inward movement of the clutch lever (45). This prevents automatic trip at the end of the record.

The cycling gear (10) and the cycling slide (9) remain stationary. The pickup arm lever (42) and the landing lever (35) remain disengaged.

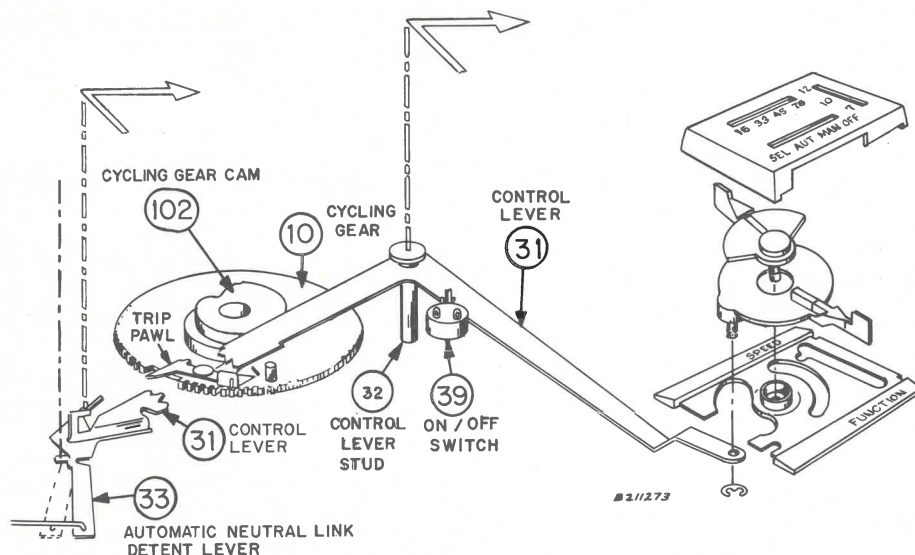


Figure 18—Manual Operation

### PLAYING RECORDS MANUALLY

The pickup arm may be manually raised and placed upon the starting grooves of any size record (or placed at any point in the recorded portion of any size record). At the end of the record no automatic trip occurs. *The pickup arm must be manually lifted and placed on the rest.* Additional record selections are manually replaced on turntable and pickup arm placed on starting grooves for each record selection.

### SERVICE HINTS

*If mechanism trips in manual, check for bent ear on clutch lever (45). Also check trip pawl lever (10A) for freedom of motion. If pickup arm fails to become free for manual handling, check for proper clearance between landing lever (35) and pickup arm lever (42). See Height Adjustment Figure 22.*

### RECORD SIZE SELECTOR

Manual record size selection of the RP-225 and RP-226 series changers provides for a simplified mechanism. The record size selector is located on the control panel. The size selector consists of a single lever with three indexing points for 7-10-12 inch diameter records. The pickup arm positioning is accomplished by an extension pin on the landing lever that stops the inward travel of the pickup arm when it is positioned directly above the record lead-in grooves.

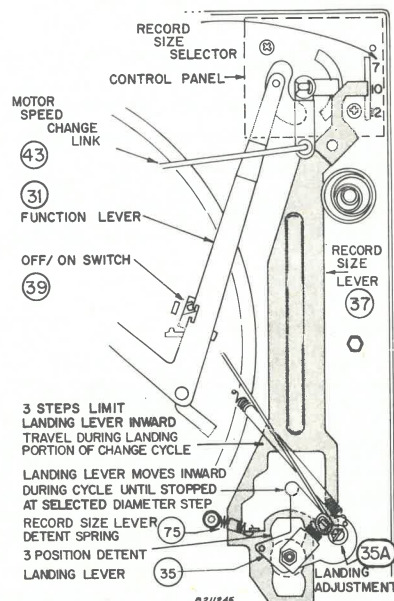


Figure 19—Record Size Selector



## SERVICE HINTS

NOTE: Should the RP-225 or -226 series record changers require service, the "Cycle of Operation" (pages 4 through 8) should be understood before attempting such service. The following "Effect-cause" Table with figure references may be used in servicing the record changer mechanism.

### ERRATIC LANDING

	Figure
(Pickup lands off record, or on recorded portion of record)	
Landing adjustment incorrect .....	22
Landing adjustment stud (35A) loose .....	22
Pickup arm wiring interferes with cycling .....	16
Actuator spring (9A) improperly positioned .....	10
Height adjustment (57) incorrect .....	22

### IMPROPER LANDING

(Pickup lands for wrong diameter record)	
Landing lever (35) binding on shaft .....	10
Pickup arm wiring interferes with free movement of pickup arm .....	10
Retainer ring (61) on cycling gear (10) not seated properly .....	11

### PREMATURE TRIP—FAILURE TO TRIP—CONTINUOUS TRIP

Ear on clutch lever (45) bent .....	12
Trip clutch spring (69) missing or trip lever bent .....	26
Clutch lever (45) bent or inside surface not smooth .....	12
Grease between clutch lever (45) and trip lever (44) .....	12
Function knob sticking in "Select" position .....	6
Clutch lever mounting stud (in motorboard) bent .....	26

### FAILURE TO TRACK RECORDS

(Pickup skips grooves)	
Incorrect stylus being used .....	20
Pickup wiring interferes with free movement of pickup arm .....	20
Spiral wrap of trip link (41) binding on pickup arm lever (42) .....	26

### TRIPS IN MANUAL

Ear on trip lever (44) bent .....	12
End of trip pawl bent .....	12

### FAILURE TO DROP RECORDS

Stabilizer arm and shaft (13) bent or binding .....	3, 14 & 18
Push off lever (34) binding or improperly assembled .....	3
Lever in spindle assembly (8) binding or bent .....	25
Tab on cycling gear (10) bent or not engaging push off lever (34) .....	26

### STALLS OR SLOW DOWNS IN CYCLE

	Figure
Cycling gear (10) bent or binding .....	18
Turntable bearing binding .....	13
Motor idler greasy, or slipping on turntable rim .....	23 or 24, 25
Motor or motor linkage jammed .....	23 or 24, 26 & 27

### PICKUP ARM STRIKES BOTTOM OF RECORD STACK

Improper height adjustment (12) .....	22
---------------------------------------	----

### STYLUS DRAGGING TOP OF RECORD STACK

(On Turntable)	
Improper height adjustment (12) .....	22
Stylus improperly installed in pickup .....	28

### FAILURE TO SHUT OFF AFTER LAST RECORD OR IMPROPER SHUT OFF

Stabilizer arm shaft (13) not lubricated, or binding .....	25
Shut off lever (22) bent or not assembled properly .....	26
Switch actuator ear on control lever (31) bent .....	19
Height adjustment (57) incorrect—set too low .....	22

### FAILURE TO TURN ON—NO POWER

Cable connections, wiring, soldered connections open circuited	
Actuator on switch (39) not engaging tab on control lever .....	19

### LOW SPEED—RUMBLE—WOW

Grease or oil on turntable drive surface or on motor idler .....	25, 26, 23 or 24
Motor bearings binding .....	23 or 24
Rubber motor mounting grommets improperly assembled, missing, worn .....	23 or 24
Turntable support (20) mounting screws loose or missing .....	26
Neoprene washers or turntable bearing washers not lubricated, missing .....	25
Turntable (6) bent .....	25
Obstruction touching underside of turntable .....	25
Bump or cut on motor idler .....	23 or 24
45 rpm adapter (88) not tight .....	25
Motor shaft bent .....	23 or 24

## STYLUS REPLACEMENT

### STYLUS REPLACEMENT (Solid Mounted Cartridge)

The styli in the solid mounted cartridge are mounted in a plastic holder and are readily removed and replaced.

To remove the stylus assembly in the RP-225-39, -39A series hold the thumb over the cavity containing the element—behind the stylus assembly. Insert fingernail, or knife, under the bent end portion of the stylus holder and pull straight out. To replace the stylus assembly, insert the split end of the stylus holder in the slot in the cartridge body and press firmly into place.

To remove the stylus assembly in the RP-225-49A and RP-226-49M series, grasp the ends of the "wings" on the holder and lift up and out from under the spring attached to the cartridge body. To replace the stylus assembly, insert a pin or similar object across the body of the cartridge under the end of the retaining spring to lift it slightly. Slide the stylus assembly under the spring and down into place, making certain that the stylus is in the playing position before withdrawing the pin.

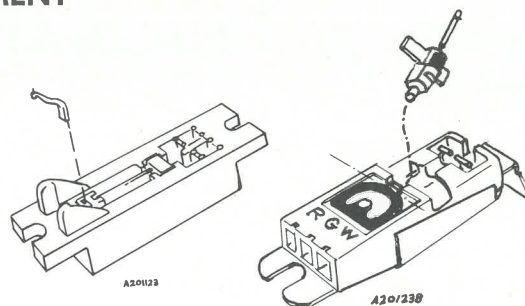


Figure 20—Stylus Replacement

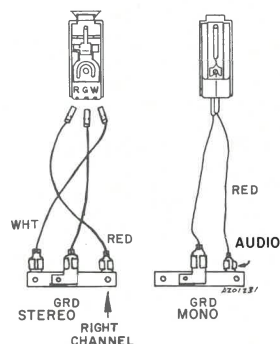


Figure 21—Wiring Diagram

## ADJUSTMENTS

### LANDING ADJUSTMENT

The landing position of the stylus is adjusted by means of an eccentric landing adjustment stud. When adjusted for correct landing on one size record (7 inch preferably), the landing position for each of the other two sizes is automatically established.

The landing adjustment stud (35A) is accessible from the underside of the record changer, or through an access hole provided in the motorboard. Place record size selector in 7" position. Disconnect the power cord from the instrument and place a 7 inch record on the centerpost with the stabilizer in place. Turn the function knob to "SEL" and rotate the turntable by hand until the record drops and the stylus is poised above the starting grooves of the record. Then turn the landing adjustment stud so the stylus will land on the record midway between the outer edge and the recorded portion.

Connect the power, place the stabilizer arm to the right, and cause the mechanism to go through cycle several times while observing the landing position.

Slight "Touch up" of this adjustment may be necessary so that the pickup will land correctly for all three record sizes.

### HEIGHT ADJUSTMENT

Two height adjustment screws are provided on the RP-225 and RP-226 series mechanisms. Height adjustment screw (57) on the cycling slide is adjusted with the mechanism OUT OF CYCLE for a gap of from .065" to .075", (about the thickness of a penny) between the landing lever (35) and the pickup arm lever (42).

Height adjustment screw (19) in the pickup arm is ad-

justed with the mechanism IN CYCLE with the pickup arm at its full height. Adjust the height adjustment screw (19) so that the stylus is  $1\frac{3}{16}$  inches above the turntable mat.

These adjustments will prevent the stylus from touching the motorboard out of cycle; and further enable the stylus to land properly on a full stack of records.

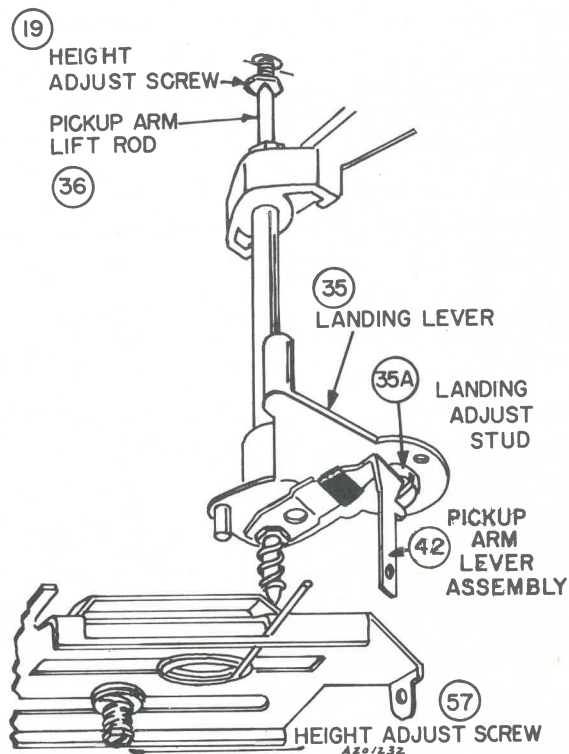


Figure 22—Adjustments



REPLACEMENT PARTS

ILLUS. NO.	STOCK NO.	DESCRIPTION
<b>MOTOR ASSEMBLY (Stamped 107)</b>		
1	103445	Washer—"C" retaining
2	108607	Washer—flat metal
3	108608	Washer—fiber
4	110040	Wheel—turntable drive idler
5	108610	Spring—for idler link
6	108611	Link—idler (includes screw # 6A & insert # 6B)
6A		Screw—set (part of # 6)
6B		Insert—for idler link set screw (part of # 6)
7		Plate—idler plate assembly
8	108613	Spring—idler plate
9	108614	Spring—detent
10	75761	Grommet—motor mounting
11	118122	Motor—complete, RP 225-39A, -49A, dual winding
11	120268	Motor—complete, RP 225-39, single winding

ILLUS. NO.	STOCK NO.	DESCRIPTION
<b>MOTOR ASSEMBLY (Stamped 190)</b>		
1	108602	Wheel—turntable drive idler
2	108603	Arm—idler
3	108601	Link—toggle
4		Spring—compression, for Ill. 3
5	102595	Washer—cup for idler pulley support stud
6	108606	Spring—detent
7	75761	Grommet—motor mounting
8	78374	Spring—idler wheel tension
9	118122	Motor—complete, RP 225-39A, -49A, dual winding
9	120268	Motor—complete, RP 225-39, single winding
9	122193	Motor—complete, RP 226-49M
10	20165A	Washer—"C" retaining ring
11	108604	Washer—fiber
12	78647	Washer—shim

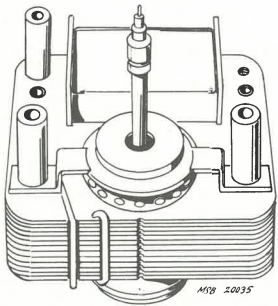
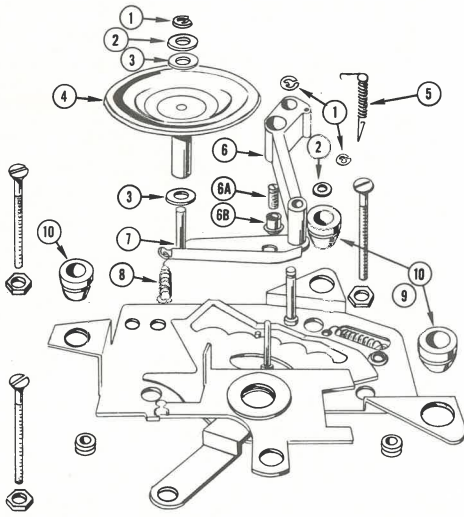


Figure 23—Motor Assembly Stamped 107

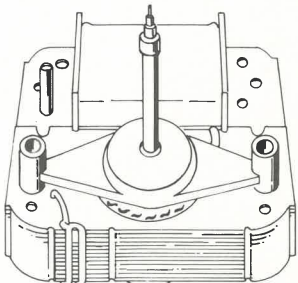
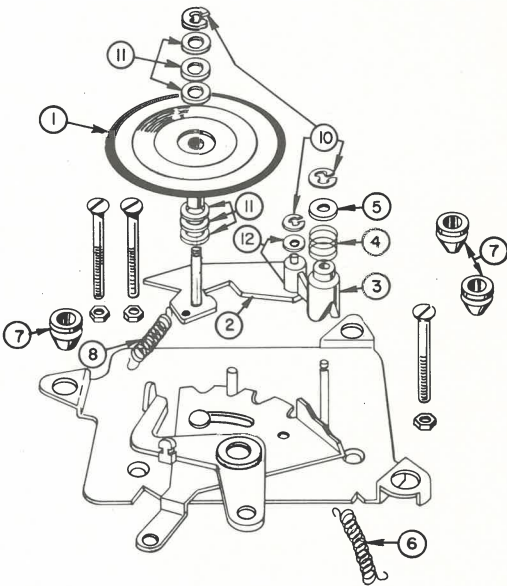


Figure 24—Motor Assembly Stamped 190

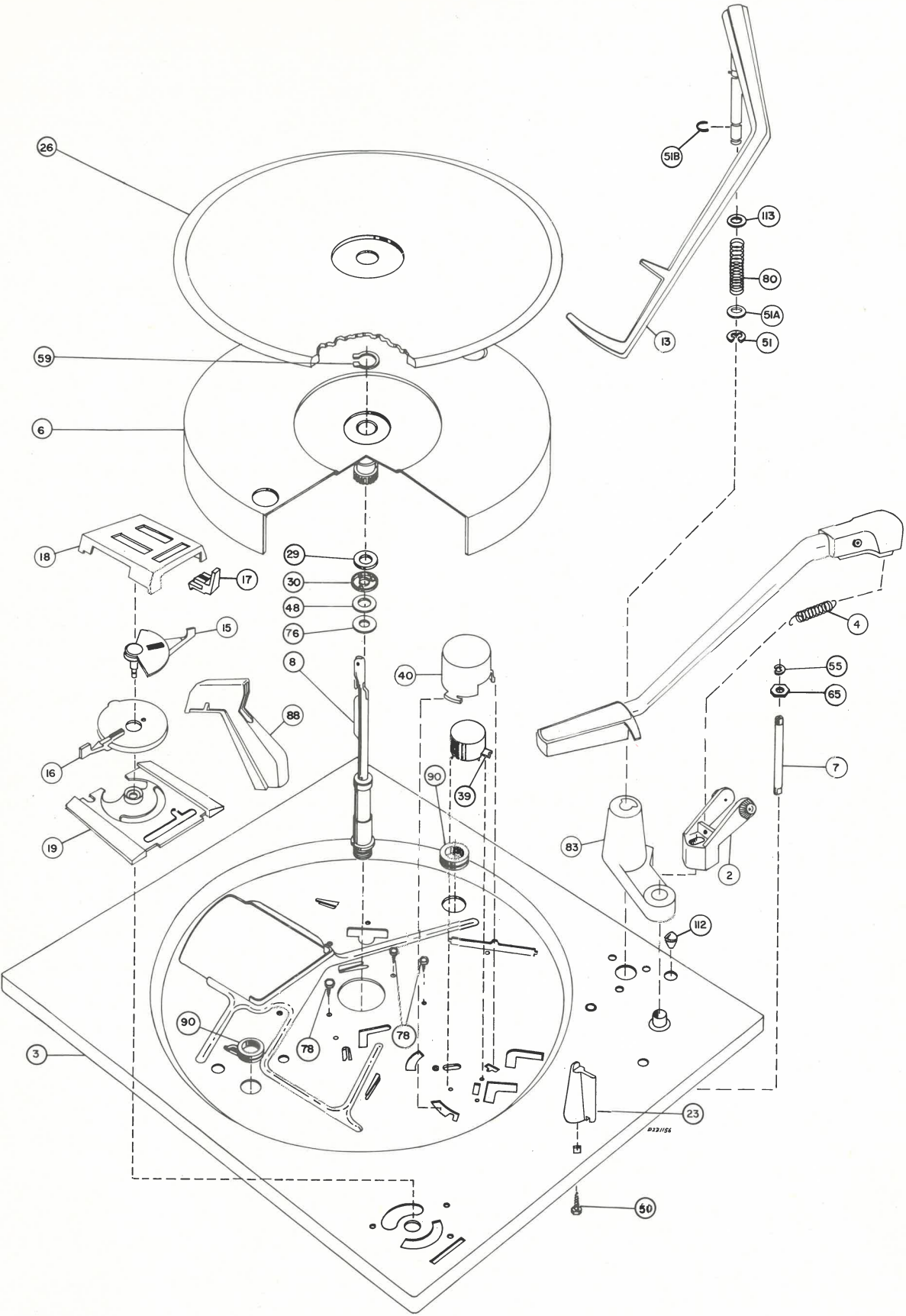


Figure 25—Exploded View of Top of Record Changer



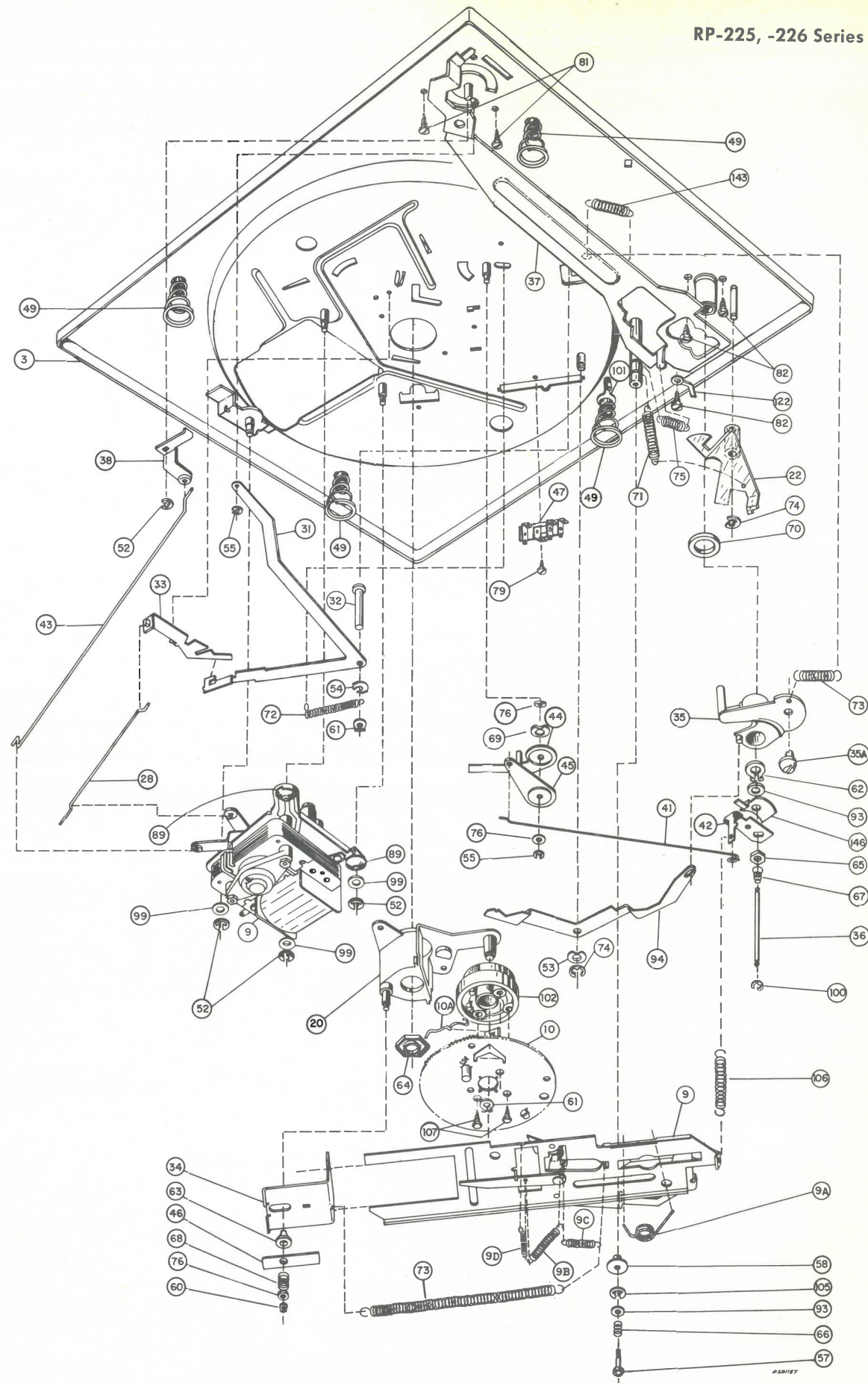


Figure 26—Exploded View of Bottom of Record Changer

REPLACEMENT PARTS

ILLUS. NO.	STOCK NO.	DESCRIPTION	ILLUS. NO.	STOCK NO.	DESCRIPTION
<b>PICKUP &amp; ARM ASSEMBLY RP 225-226</b>					
2	118172	Bracket—pickup arm swivel for RP 225-49A, RP 226-49M	7	115342	Shaft—pickup arm pivot
3	118170	Arm—pickup for RP 225-49A, RP 226-49M	11	118173	Cable—pickup arm for RP 225-49A
3	118246	Arm—pickup for RP 225-39, -39A	11	122043	Cable—pickup arm for RP 225-39, -39A
4	115339	Spring—pickup arm counterbalance for RP 225-49A, RP 226-49M	11	122044	Cable—pickup arm for RP 226-49M
4	118194	Spring—pickup arm counterbalance for RP 225-39, -39A	14A	118054	Pickup—less stylus for RP 225-39, -39A
			14A	118056	Pickup—less stylus for RP 225-49A, RP 226-49M
			14B	115060	Stylus—0.7 mil sapphire for RP 225-39, -39A
			14B	118199	Stylus—0.7 mil sapphire for RP 225-49A, RP 226-49M
			15	118179	Clip—pickup arm hold-down
			19	115340	Screw—pickup arm height adjustment

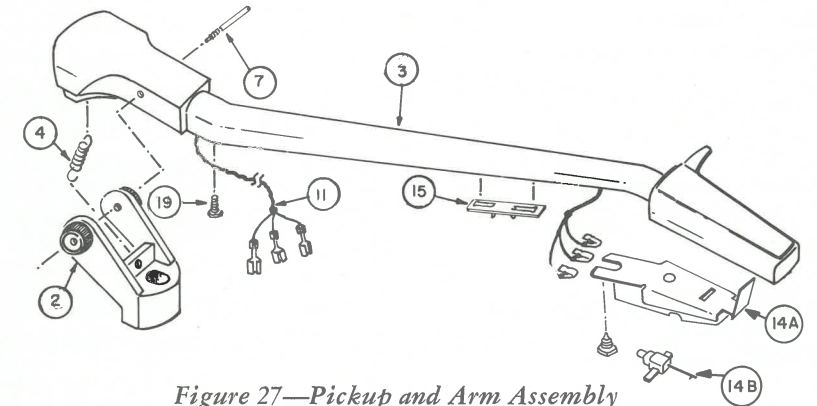


Figure 27—Pickup and Arm Assembly

REPLACEMENT PARTS

ILLUS. NO.	STOCK NO.	DESCRIPTION	ILLUS. NO.	STOCK NO.	DESCRIPTION
<b>AUTOMATIC RECORD CHANGER RP 225-39, -39A, -49A RP 226-49M</b>					
3	118116	Motorboard—with welded & staked parts, RP 225-39, -39A, -49A	49	110176	Spring—motorboard mounting
3	118118	Motorboard—with welded & staked parts, RP 226-49M	50		Screw—# 10 x 0.44, pickup arm rest
6	115331	Turntable—including pinion & bushing	51	118150	Washer—"C" retaining, stabilizer arm
7		Shaft—hollow (part of lever & shaft assembly, Ill. 42)	51A	118149	Washer—for stabilizer arm
8	118120	Spindle—assembly 1/4" diameter	51B	118168	Ring—"C" retaining, for Ill. 13
9	118121	Slide—cycling slide complete	52	33726	Washer—"C" retaining, for Ill. 38 and motor mounting
9A	110911	Spring—actuating pickup arm	53	118152	Washer—spring type, for index lever
9B	120275	Spring—shut-off latch	54	74431	Retainer—for Ill. 32
9C	110296	Spring—shut-off latch actuator	55	77269	Washer—"C" retaining, for Ill. 16, 36, 44
9D	110912	Spring—for "helper" lever	57	110952	Screw—adjusting for cycling slide
10	120888	Gear—cycling, complete with staked parts	58	111482	Eyelet—for Ill. 57
10A	111173	Spring—trip pawl, for Ill. 10	59	78654	Clip—retaining ring for turntable
13	118124	Arm—stabilizer	60	118155	Clip—push-off lever retainer
15	118125	Knob—speed	61	118156	Clip—retaining, for Ill. 10 & 32
16	118126	Knob—function	62	110955	Clip—retaining, for Ill. 35
17	118127	Knob—size	63	111717	Eyelet—for Ill. 20
18	118128	Escutcheon—knob housing, upper	64		Nut—0.50-32, for Ill. 8
19	118129	Escutcheon—knob housing, lower, RP 225-39, -39A, -49A	65		Nut—0.25-32, for Ill. 42
19	118130	Escutcheon—knob housing, lower, RP 226-49M	66	110957	Spring—height adjustment
20	118133	Support—turntable	67	110958	Spring—pickup arm lift rod
22	118134	Lever—shut-off	68	110959	Spring—push-off lever
23	118135	Rest—pickup arm	69	110956	Spring—trip clutch, for Ill. 44
26	118137	Mat—turntable	70	118158	Washer—for Ill. 35
28		Link—automatic neutral	71	118159	Spring—pickup arm latch
29	118141	Washer—bearing	72	115232	Spring—reject, for Ill. 32
30	78660	Bearing—turntable thrust	73	110962A	Spring—cycling slide & landing lever
31	110933	Lever—control	74	118151	Washer—"C" retaining, for Ill. 94 & 22
32	118142	Stud—control lever	75	118161	Spring—record size, for Ill. 37
33	111495	Lever—automatic neutral link detent	76	122058	Washer—0.300 o.d., for Ill. 20 & 44
34	118143	Lever—push-off	78		Screw—# 8 x 0.19, for Ill. 20
35	118144	Lever—landing	79		Screw—# 6 x 0.25, for Ill. 47
35A	111647	Stud—landing adjusting	80	118160	Spring—stabilizer arm
36	118145	Rod—pickup arm lift	81		Screw—# 6 x 0.31, for Ill. 18
37	118146	Lever—record size	82		Screw—# 8 x 0.25, for Ill. 83
38	118147	Lever—speed control	83	118164	Housing—stabilizer arm
39	108457	Switch—on/off	88	121922	Adapter—45 RPM
40	122092	Cover—switch, all models except RP 226-49M	89	118162	Grommet—motor mounting
41	110945	Link—trip	90	118163	Grommet—motorboard
42	118148	Lever—pickup arm pivot assembly (includes lever, shaft, nut & cushion)	93		Washer—0.172 i.d. x 0.50 o.d., for Ill. 57
43	111176	Link—motor speed change	94	118153	Lever—index
44	110949	Lever—trip	99	75749	Washer—motor mounting
45	110950	Lever—clutch	100	251736	Washer—"C" retaining, Ill. 36
46	110951	Spring—push-off lever tension for Ill. 20	101		Lug—for Ill. 49
47		Board—terminal	102	118154	Cam—cycling gear
48	110931	Washer—oil resistant rubber	105	118167	Washer—"C" retaining, for Ill. 57
			106	115151	Spring—torque, between Ill. 9 & 42
			107		Screw—# 6 x 0.25, for Ill. 102
			112	118182	Grommet—pickup arm cable
			113	118181	Washer—rubber, stabilizer arm pad
			122		Terminal—for Ill. 82
			143	120275	Spring—record size lever
			144		Screw—# 6 x 0.25, for Ill. 145
				118296	Knob—volume, RP 226-49M
				118297	Knob—tone, RP 226-49M
				122084	Knob—AC/DC/bat, RP 226-49M
			146	110953	Spring—flat, pickup arm torque

Specifications subject to change without notice.

APPLY TO YOUR RCA DISTRIBUTOR FOR REPLACEMENT PARTS AND ACCESSORIES





# RCA VICTOR



## RECORD CHANGER SERVICE DATA

—File: 1967 No. 6-S2—

### RP-228 Series

#### RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY

PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201

#### INTEGRATED CIRCUIT PICKUP REMOVAL AND REPLACEMENT

The method of mounting the new integrated circuit (chip) pickup cartridge in the new pickup-arm head differs from that used in any previous record player.

The head of the arm is now constructed of two pieces—a base (4A), and a cap (4B)—which are held together by small lugs at the front and sides of the cap and by a screw (4C) at the rear.

##### To remove the cartridge—

1. Raise the pickup-arm to a vertical position and remove the screw (4C) holding the cap (4B) to the base (4A).
2. Unplug the cartridge connector.
3. Squeeze the sides of the cap (4B), as near the free edge as possible, at the point where the side lugs are located (see illustration #2). *Failure to do this before lifting (step 4) can break these lugs. DO NOT PRY ON LUGS.*

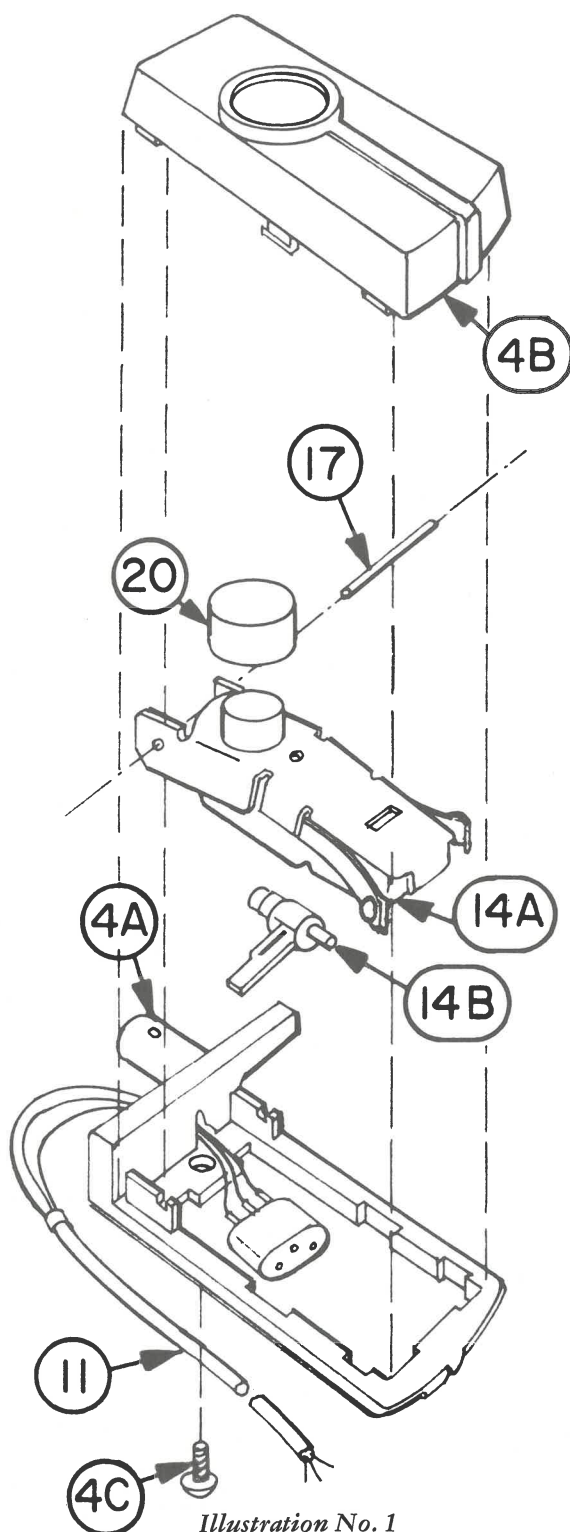
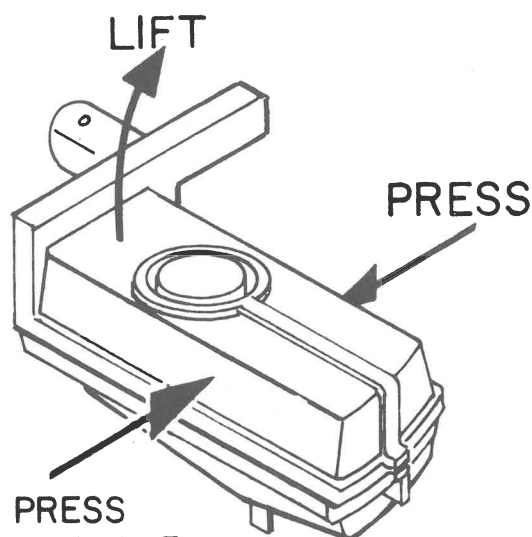


Illustration No. 1



PRESS  
TO REMOVE  
OR INSTALL

Illustration No. 2  
(continued on page 2)

FOR RECORD CHANGER SERVICING, CYCLE OF OPERATION, ADJUSTMENTS AND ILLUSTRATION IDENTIFICATION, REFER TO RECORD CHANGER SERVICE DATA 1967 NO. 6 AND 6-S1 EXCEPT AS NOTED HEREIN.

## RP-228 Series

4. While squeezing the sides of the cap, lift the rear of the cap with a hinge motion until it clears the rear of the base (4A) and then slide the cap slightly to the rear to disengage the front lugs (see illustration #3). The cap can now be lifted clear.

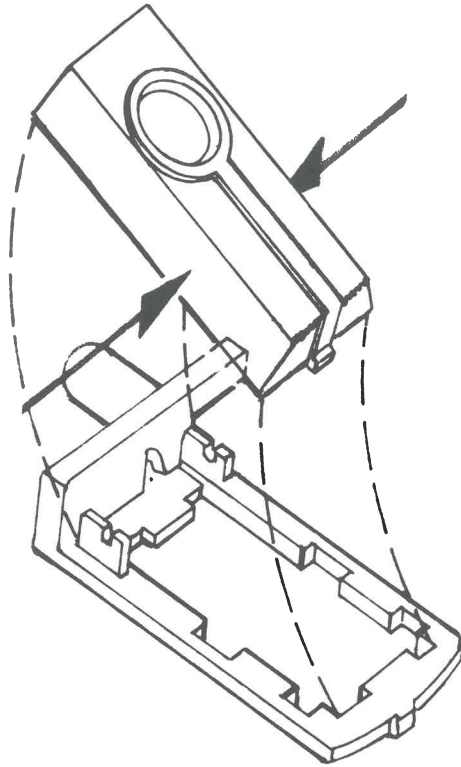


Illustration No. 3

5. Turn the stylus selector tab to a vertical position.
6. Lower the pickup-arm and lift the rear of the cartridge (14A) which will in turn lift the hinge pin (17) out of its slots in the base. The cartridge can now be lifted clear of the base.

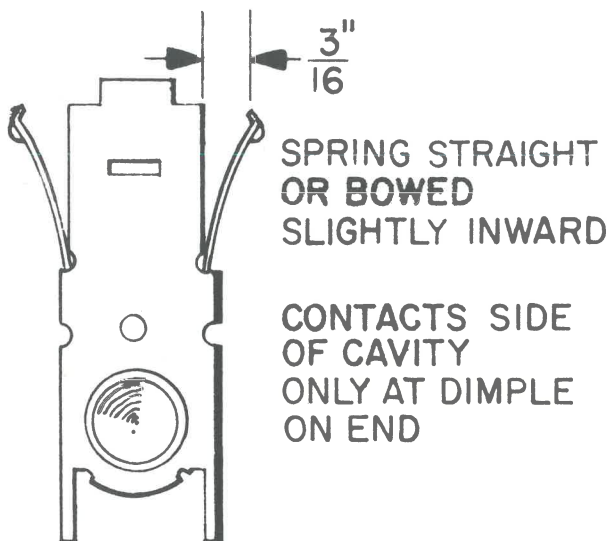


Illustration No. 4

### To install a cartridge—

1. Check the springs on the sides of the cartridge to determine that they are straight and at the correct angle (the end of the spring should be approximately 3/16" away from the body (see illustration #4). Should the springs not be positioned properly it could cause cartridge chatter, rumble or loss of bass response.  
Note: Springs that have been bent too far out are difficult, if not impossible, to return to their correct position.
2. Turn the stylus selector tab to a vertical position.
3. Place the hinge pin (17) in position in the cartridge (14A).
4. Hold the cartridge side springs close to the cartridge body and insert the front of the cartridge into the front of the base (4A) making certain that the springs are inside of the cavity in the base (see illustration #5).

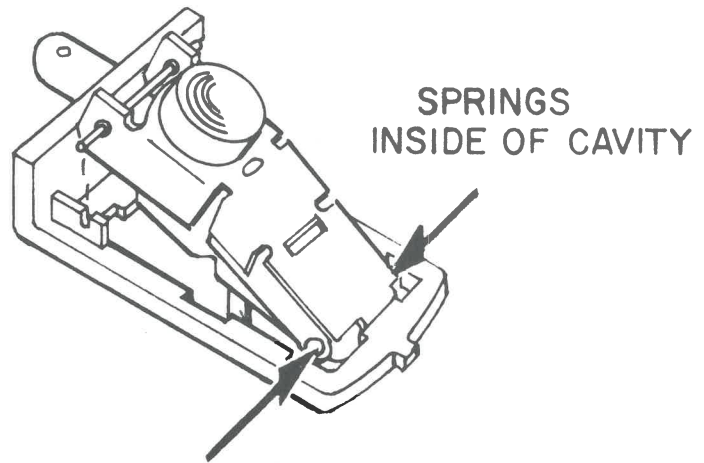


Illustration No. 5

5. Lower the rear of the cartridge thus setting the hinge pin (17) into place in its slots in the base. (The springs on the side of the cartridge should now be contacting the sides of the cavity only at the dimples at the free end of the spring.)
6. Place the front of the cap (4B) in position at the front of the base (4A) and lower the rear of the cap with a hinge action.
7. Squeeze the sides of the cap (as in step 3 for removal) and press it down firmly into place.
8. Hold the cap and the base firmly together at the rear so that the cap fits snugly against the base, and replace the cap retaining screw (4C).
9. Plug the cartridge connector onto the pins on the cartridge and dress the wires into the cavity at the rear of the cartridge, exercising care not to break the leads.

The cartridge should now ride freely up and down and be centered in the opening in the base.

### SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject





# RCA VICTOR



## RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY

### PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201

## RECORD CHANGER SERVICE DATA

—File: 1967 No. 6-S3—

### RP-226-12A, 227-19

#### RP-226-12A

Record Changer RP-226-12A is the same as the RP-226-12 except as listed below.

ILLUS. NO.	STOCK NO.	DESCRIPTION
3	118116	Motor board—with welded and staked parts
11	118173	Pickup & Arm Assembly Cable—pickup arm

#### RP-227-19

Record Changer RP-227-19 is the same as the RP-227-29 except as listed below.

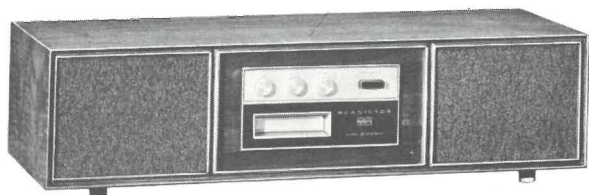
ILLUS. NO.	STOCK NO.	DESCRIPTION
14A	115703	Pickup & Arm Assembly
14B	115911	Pickup—less styli Styli—0.7 mil diamond and 3 mil synthetic sapphire

For additional parts and servicing information, refer to service data 1967 No. 6 and supplement.





# RCA VICTOR



Model YJD 22W

—Walnut—

Model MJC 28W

—Walnut—



## TAPE PLAYER SERVICE DATA

— File: 1967 No. 45 —

### Model YJD 22 Model MJC 28

**RCA SALES CORPORATION**

A RADIO CORPORATION OF AMERICA SUBSIDIARY

**PRODUCT PERFORMANCE**

600 NORTH SHERMAN DRIVE

INDIANAPOLIS, INDIANA 46201

### SPECIFICATIONS

#### TRANSISTOR COMPLEMENT (YJD 22, MJC 28)

(Q1)	822	Left Chan. 1st Pre-amp.
(Q2)	54E	Left Chan. 2nd Pre-amp.
(Q3)	54C	Left Chan. 1st Audio
(Q4)	822	Right Chan. 1st Pre-amp.
(Q5)	54E	Right Chan. 2nd Pre-amp.
(Q6)	54C	Right Chan. 1st Audio

#### ADDITIONAL TRANSISTOR (YJD 22 only)

(Q7)	54C	Left Chan. 2nd Audio
(Q8)	54C	Left Chan. Audio Driver
(Q9)	2N176	Left Chan. Output
(Q10)	54C	Right Chan. 2nd Audio
(Q11)	54C	Right Chan. Audio Driver
(Q12)	2N176	Right Chan. Output

**FREQUENCY RESPONSE** ..... 50 cps - 10 kc

#### PLAY TIME

per channel	20 minutes
per cartridge	80 minutes

#### LOUDSPEAKERS

YJD 22 only ..... Two 7" oval PM, 35 ohm

#### OUTPUT

YJD 22	Self-contained speakers and six foot external amplifier cable.
MJC 28	Six foot external amplifier cable only.

**POWER OUTPUT** ..... E.I.A. RS-234  
(YJD 22) ..... 3 watts nominal/6 watts maximum

#### POWER REQUIREMENTS

YJD 22	120 v, 60 cps, 65 watts
MJC 28	120 v, 60 cps, 25 watts

### DESCRIPTION

Models YJD 22 and MJC 28 are AC line powered tape players designed for RCA Mark 8 prerecorded 8 track stereo cartridges.

YJD 22 is an integrated instrument complete with all controls and 2 loudspeakers to provide high-fidelity, in-the-cabinet stereophonic reproduction. MJC 28 is a player module, designed as a low-level pre-amplifier and audio driver to be used with an external stereo instrument, or amplifier-loud-speaker system.

Both instruments contain TCT8A tape transport mechanism featuring a synchronous drive motor, a track indexing solenoid, an automatic, and a manual track selector switch. Instruments are turned on automatically when cartridge is inserted into tape compartment.

YJD 22 solid state circuitry consists of 12 transistors and 2 diodes arranged on three circuit boards: pre-amplifier board, low-level audio driver board, and audio output board. MJC 28

contains 6 transistors and 2 diodes arranged on 2 circuit boards: pre-amplifier, and audio driver board.

YJD 22 customer controls consist of volume, tone, balance, and a manual track select push button. MJC 28 controls consist of a volume control, and a manual track select push button only; external stereo instrument controls are used for normal play operation.

#### SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject



## OPERATING INSTRUCTIONS

### TO PLAY A STEREO CARTRIDGE (YJD 22)

1. Insert cartridge, label side up, into cartridge compartment; when it is firmly seated, instrument will automatically turn on.
2. Adjust VOLUME and TONE controls for normal listening level.
3. Adjust BALANCE control for normal stereo separation.
4. Instrument will automatically change channels at end of each track, and will continue to play channels sequentially until it is shut off.
5. To skip a channel, depress CHANNEL SELECTOR bar.
6. To turn instrument OFF, remove cartridge completely, or retract from seated position approximately 1 inch.

### TO PLAY A STEREO CARTRIDGE (MJC 28)

1. Connect accessory cable to TAPE preferably, (or AUX) jacks on external stereo instrument.
2. Set function switch on external instrument to TAPE (or AUX., if applicable).
3. Adjust LOUDNESS, BASS, TREBLE and BALANCE controls on external instrument to normal settings.
4. Subsequent procedure is similar to above, *except* volume, tone, and balance are controlled at external instrument. Volume control on player set to normal, undistorted output position.

If either instrument is used with an AC-DC (transformerless) external stereo instrument, an isolation transformer should be used to avoid AC line potentials and/or residual hum.

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## DISSASSEMBLY INSTRUCTIONS

### CHASSIS REMOVAL

1. Remove 4 exposed screws in cabinet bottom.
2. Remove back cover.
3. Remove front panel retaining screws (two midway up chassis front).

4. Remove knobs.
  5. Remove 3 wood screws across front of chassis.
  6. Disconnect speaker leads (if applicable).
  7. Remove power transformer retaining screws (if applicable).
- To reassemble reverse steps outlined above. Loudspeaker tracer leads connect to right terminal of respective speakers.

---

## MECHANISM REMOVAL

To service pre-amplifier board, head shifting mechanism, and solenoid, perform following steps:

1. Remove 3 pre-amplifier-to audio driver leads.
2. Remove 4 self-tapping screws securing mechanism to chassis base (2 in rear lip, 2 in front panel to left and right of cartridge compartment door).
3. Raise rear of mechanism and lift upward to clear chassis base.
4. Cover exposed chassis area with an insulating sheet (plastic

or cardboard) to prevent accidental short circuit of board, power, or AC line components. Pre-Amplifier and audio driver board are now accessible for service. If instrument is to be placed in operation, use clip leads to restore connections to driver board (removed in Step 1).

5. To service power output board, remove screws securing board and heat sink to chassis base.
6. To reassemble, reverse steps outlined above; restore original wiring at driver board.

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## CLEANING

Playback head surface and capstan shaft must be cleaned periodically to remove oxide deposited from tape. Head may be cleaned by inserting an alcohol moistened swab through tape cartridge door. Capstan may also be cleaned in a similar

manner by depressing micro switch actuator and wiping rotating capstan surface.

Do not use a solvent such as lighter fuel or lacquer thinner; they may cause damage to plastic parts or to instrument finish.

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## LUBRICATION

All mechanical parts are factory lubricated and should require no additional attention unless the following parts are binding or are replaced:

1. Track Shift Cam (63)  
Small amount of PLASTILUBE #00\* grease on cam face and ratchet teeth after reassembly.
2. Cam Actuating Pawls (60, 62)  
Small amount of PLASTILUBE #00\* on sliding surfaces and at Pivot Pin (37).
3. Track Shift Pin (68).  
Small amount of PLASTILUBE #00\* grease on pin where it passes through bushing (69).

4. Radius Arm (94, 105, 107)  
Very small amount of PLASTILUBE #00\* grease on ends of each of the three arms ONLY if a tendency to bind is noticed.
5. Capstan Thrust Bearing (29).  
Small amount of DC-4 SILICONE GREASE\*\* on end of plastic capstan bearing (17) before capstan (16), and capstan housing (27) are re-assembled.

\*PLASTILUBE #00 is a product of THE WARREN REFINING AND CHEMICAL COMPANY—Cleveland, Ohio

\*\*DC-4 SILICONE GREASE is a product of THE DOW CHEMICAL COMPANY—Midland, Maryland.

**DO NOT LUBRICATE SOLENOID PLUNGER.**

SERVICE ADJUSTMENTS & PROCEDURES

Models YJD 22 & MJC 28

HEAD HEIGHT

Head height adjustment aligns head correctly in relation to recorded track positions on tape. To check, and set, if required, perform following steps:

1. Load instrument with RCA test tape #321.
2. Connect oscilloscope to left channel output (test point #1).
3. Select track 2.
4. Adjust height screw (50) for a null at test point #1 (Out-of-phase 1Kc tones are in guard bands between tracks 1-2 and 3-4—track 2 is blank—null now indicates precise height adjustment).

AZIMUTH

1. Connect oscilloscope to test point #2.
2. Rock azimuth screw (18) with a 1/16" hex wrench for maximum output of 6Kc test tone on tape. Perform this adjustment very carefully for a clearly defined, sharp maximum set point; a slight misadjustment can result in out-of-phase track signal pickup.
3. Repeat HEIGHT and AZIMUTH adjustments until a precise null height setting occurs coincident with a precise maximum azimuth setting.
4. Secure settings by applying quick drying (airplane) cement to screw heads.

SOLENOID PULL-IN

Track indexing solenoid (40) has a pull-in stud (42) to insure positive action under normal AC line voltage variations. To check, perform following steps:

1. Reduce AC line voltage to 105 volts.

2. Cycle track selector mechanism by depressing TRACK SELECTOR switch while moving stud (42) until solenoid fails to pull in.
3. Continue cycling mechanism; move plunger in opposite direction until solenoid pulls in. Continue stud (42) motion in same direction for an additional half turn.
4. Check by manually cycling mechanism as in Steps 2 & 3; if solenoid fails to operate positively, touch up stud (42) as required.

MOTOR POSITION

1. Align motor to insure drive belt will run true by loosening screw (7) and moving motor vertically as required.

HUM CANCELLATION

1. Rotate motor in mounting bracket (8) for minimum, or null, hum with VOLUME control full on.
2. Hold motor in fixed position, and move shield (9) for minimum, or null, hum with VOLUME control full on. Be sure to use loudspeaker system capable of reproducing a 60 cycle signal or an oscilloscope for hum balance adjustments.

HEAD RESIDUAL MAGNETISM

If head becomes magnetized poor high frequency response and excessive hiss will result, even with correct azimuth setting.

To correct, follow demagnetizer instructions carefully. In most cases, demagnetizer may be inserted to head surface through tape compartment opening.

SERVICE NOTES

Service procedures common to high-grade solid state devices apply to both instruments. In general, a successful approach includes the following steps:

1. Operate instrument with a test, or well-recorded tape, to indicate precise performance.
2. Determine if malfunction is electrical or mechanical.

3. Determine if malfunction is restricted to one channel, or common to both.
4. Take transistor electrode voltages.
5. Apply test tone and signal trace each stage.
6. Isolate defective stage(s) and component(s).
7. Replace defective component(s).
8. Performance check instrument in all operating modes.

SERVICE HINTS

UNIT WILL NOT TURN ON

- Deformed micro switch actuator (25)
- Defective micro switch (S1)

CARTRIDGE WILL NOT SEAT

- Defective detent spring (36)

NO AUTOMATIC TRACK CHANGE

- Incorrect solenoid adjustment (42)
- Defective auto-change switch (100)

NO MANUAL TRACK CHANGE

- Defective manual track switch (S2)

Incorrect solenoid adjustment (42)

ERRATIC SPEED (WOW)

- Defective cartridge
- Oxide or oil contaminated capstan (16)
- Defective drive belt (10)

DEAD MOTOR (5)

- Motor shaft binding
- Defective phase shift component (R112, C108 or R228, C214)

POOR FREQUENCY RESPONSE

- Oxide coated head surface
- Azimuth (18) incorrect
- Magnetized head

EXCESSIVE HUM (60 cps)

- Motor (5) incorrectly oriented
- Shield (9) incorrectly located

CROSS TALK

- Head height adjustment (50) incorrect
- Height indexing mechanism binding

REPLACEMENT PARTS

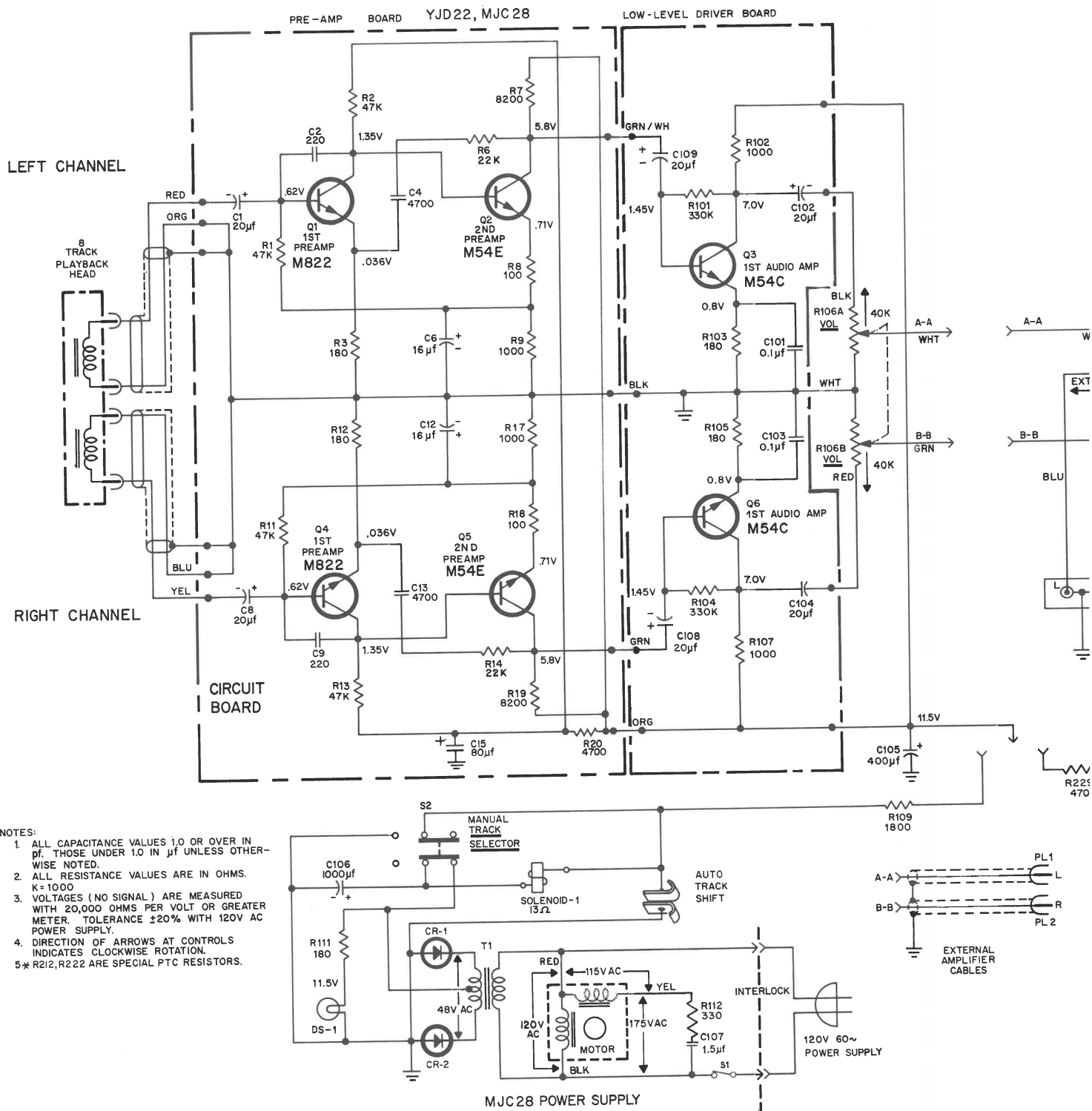
ILL. NO.	STOCK NO.	DESCRIPTION
		<b>RTD 136</b>
		<b>8 TRACK TAPE TRANSPORT ASSEMBLY</b>
1		Screw—#6-32 x 1/4
2		Board—terminal
3		Board—terminal
4		Rivet
5	124167	Motor—includes fan & pulley
6		Screw—#6-32 x 1/4
7		Screw—#8-32 x 3/4
8	120618	Bracket—motor mounting
9		Shield—magnetic
10	120619	Belt—drive
11		Screw—#6-32 x 1/4
12		Clip
13		Screw—#6-32 x 1/4
14		Nut—#8-32 x 5/16
15	120620	Flywheel
16	124159	Capstan
17	124155	Bearing—for capstan
18		Screw—#4-40 x 3/4
19	120648	Spring—azimuth adjustment
20		Screw—#4-40 x 5/8
21		Screw—#4-40 x 1/4

ILL. NO.	NO. STOCK	DESCRIPTION
22		Retainer—for Ill. 25
23		Screw—#4-40 x 5/8
24	120477	Switch—micro, on/off (S1)
25	120624	Arm—micro switch actuating
26		Insulator—micro switch
27	124165	Housing—capstan
28	120626	Washer—thrust
29	120627	Bearing—thrust
30	120626	Washer—thrust
31	120628	Washer—"C", for capstan
32	120629	Nut—thrust
33		Motorboard—tape deck assembly
35		Screw—#8-32 x 9/32
36		Screw—#8-32 x 9/32
37	120633	Pin—pivot pin for Ill. 60 & 62
38	120634	Plunger—solenoid
39	124174	Spring—compression
40	124175	Solenoid
41	120636	Washer—for solenoid plunger
42	120637	Screw—plunger adjustment
43	120638	Nut
44	124158	Bracket
45		Screw—#6-32 x 5/32

(Continued Page 8)

Models YJD 22 & MJC 28

Models YJD 22



- NOTES:
1. ALL CAPACITANCE VALUES 1.0 OR OVER IN  $\mu$ F. THOSE UNDER 1.0 IN  $\mu$ F UNLESS OTHERWISE NOTED.
  2. ALL RESISTANCE VALUES ARE IN OHMS. K=1000
  3. VOLTAGES (NO SIGNAL) ARE MEASURED WITH 20,000 OHMS PER VOLT OR GREATER METER. TOLERANCE  $\pm 20\%$  WITH 120V AC POWER SUPPLY.
  4. DIRECTION OF ARROWS AT CONTROLS INDICATES CLOCKWISE ROTATION.
  5. \* R212, R222 ARE SPECIAL PTC RESISTORS.

	Q1, Q4	Q2, Q5	Q3, Q6	Q7, Q10	Q8, Q11	Q9, Q12
C	1.35	5.8	7.0	9.6	15.0	1
B	0.62	1.35	1.45	1.75	1.33	16
E	0.03	0.71	0.80	1.10	0.75	16

YJD 22  
— TRANSISTOR ELECTRODE VOLTAGES —  
ALL VOLTAGES REFERRED TO B— BUSS



Pressing TRACK until solenoid

Turner in opposite stud (42) motion.  
In Steps 2 & 3; up stud (42)

True by loosening as required.

Minimum, or shield (9) for control full on. of reproducing in balance ad-

Frequency response correct azimuth

Check carefully. In head surface

One channel, or

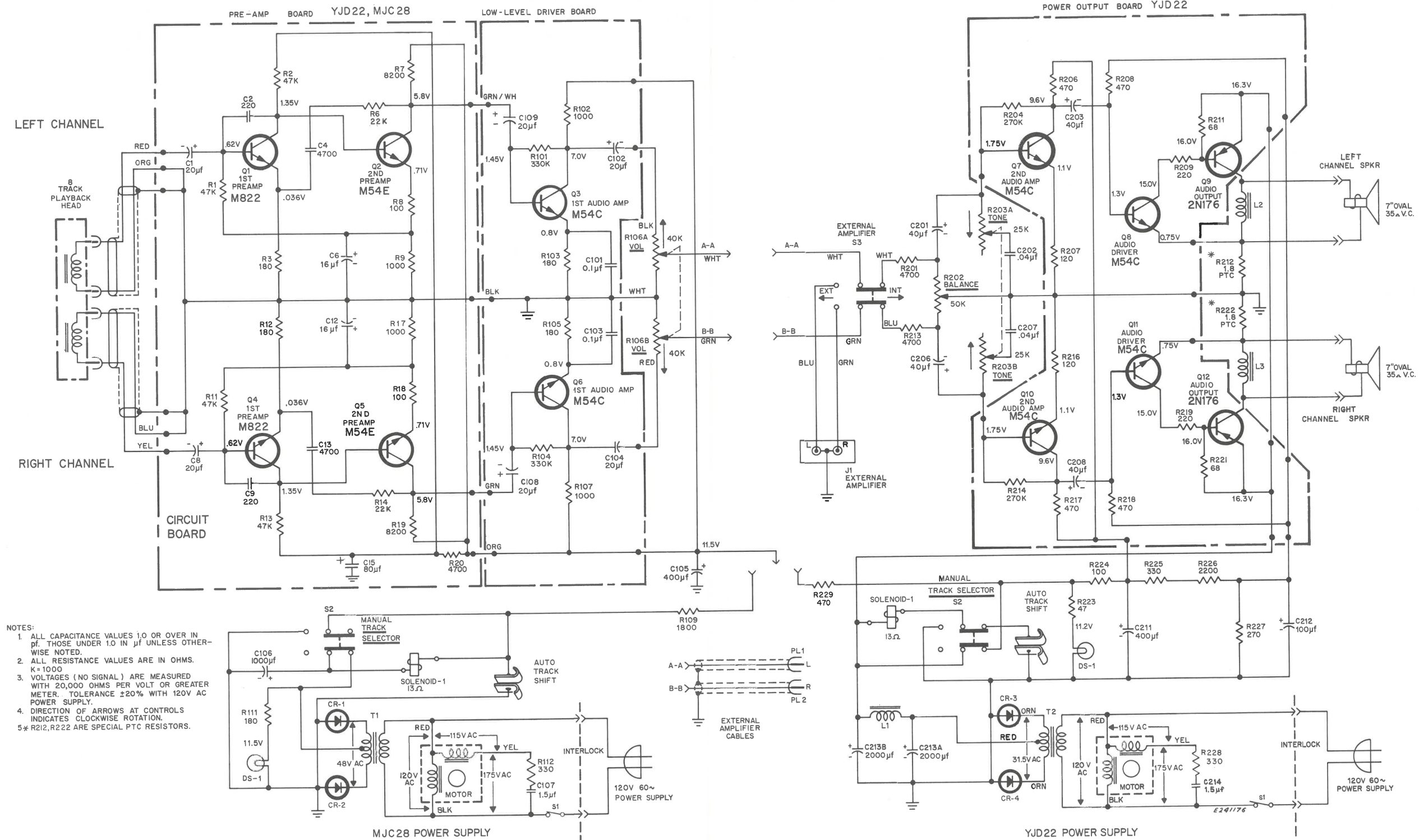
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Schematic Diagram, YJD 22 & MJC 28

	Q1, Q4	Q2, Q5	Q3, Q6	Q7, Q10	Q8, Q11	Q9, Q12
C	1.35	5.8	7.0	9.6	15.0	1.8
B	0.62	1.35	1.45	1.75	1.33	16.0
E	0.03	0.71	0.80	1.10	0.75	16.3

YJD 22

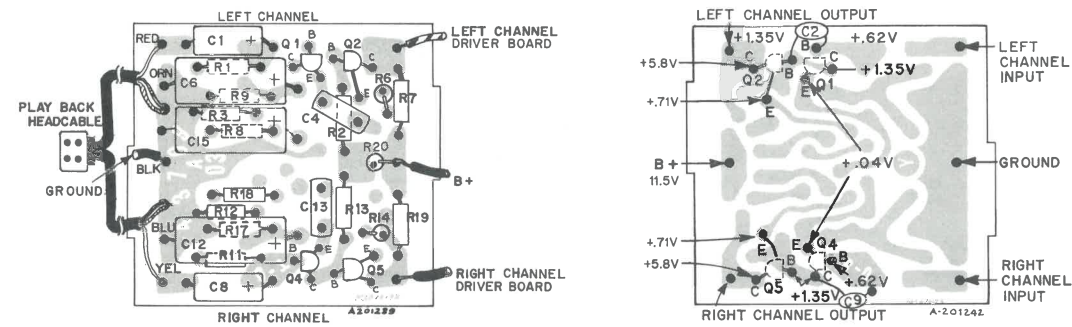
— TRANSISTOR ELECTRODE VOLTAGES —  
ALL VOLTAGES REFERRED TO B— BUSS

	Q1, Q4	Q2, Q5	Q3, Q6
C	1.30	5.0	6.0
B	0.62	1.30	1.35
E	0.03	0.70	0.70

MJC 28

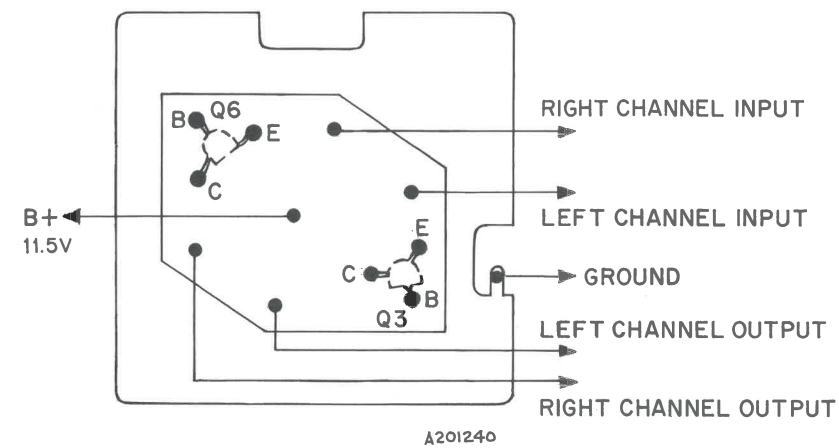


**Note variation in front-to-back  
copper pattern**

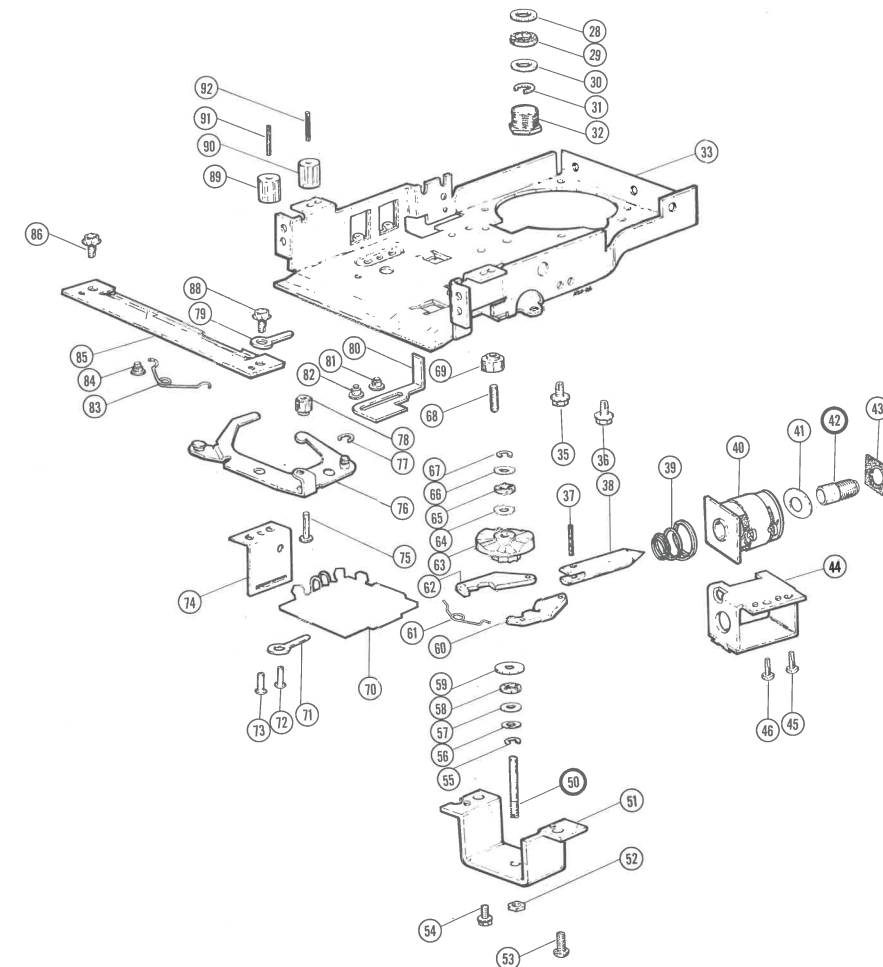
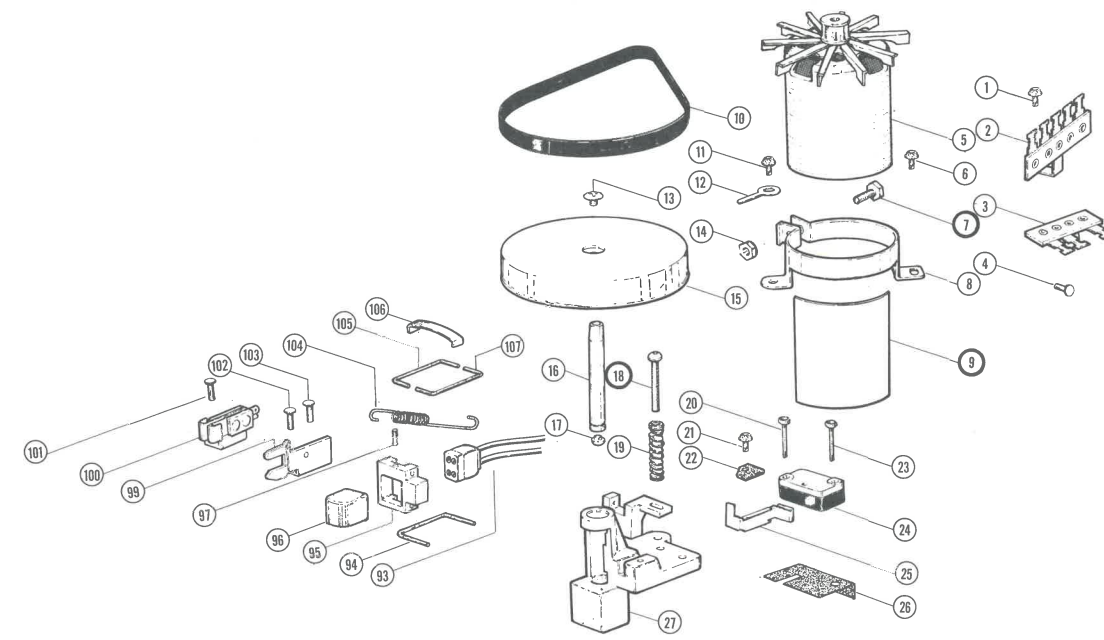
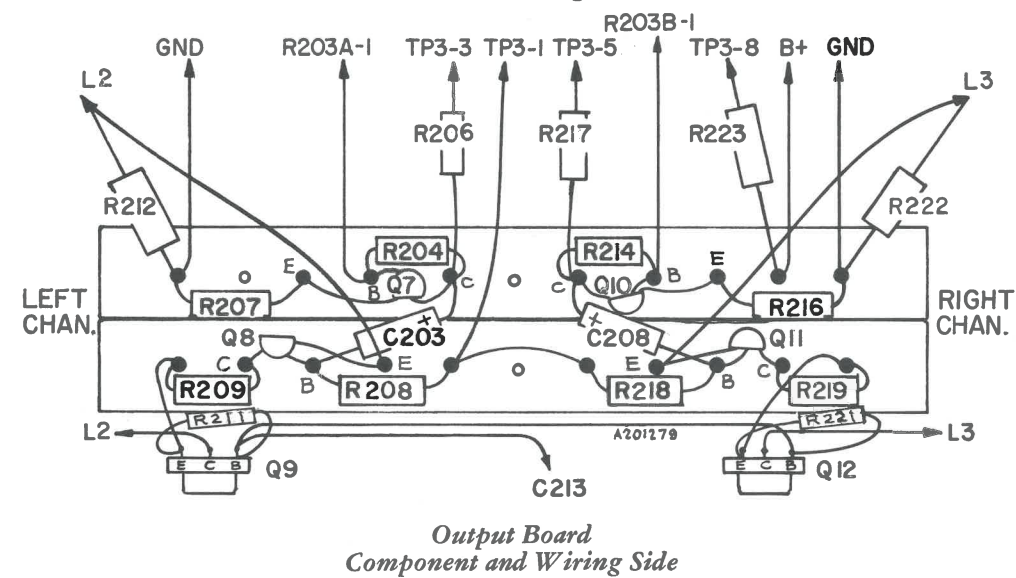


**Preamplifier Board  
Component Side**

### Preamplifier Board Wiring Side

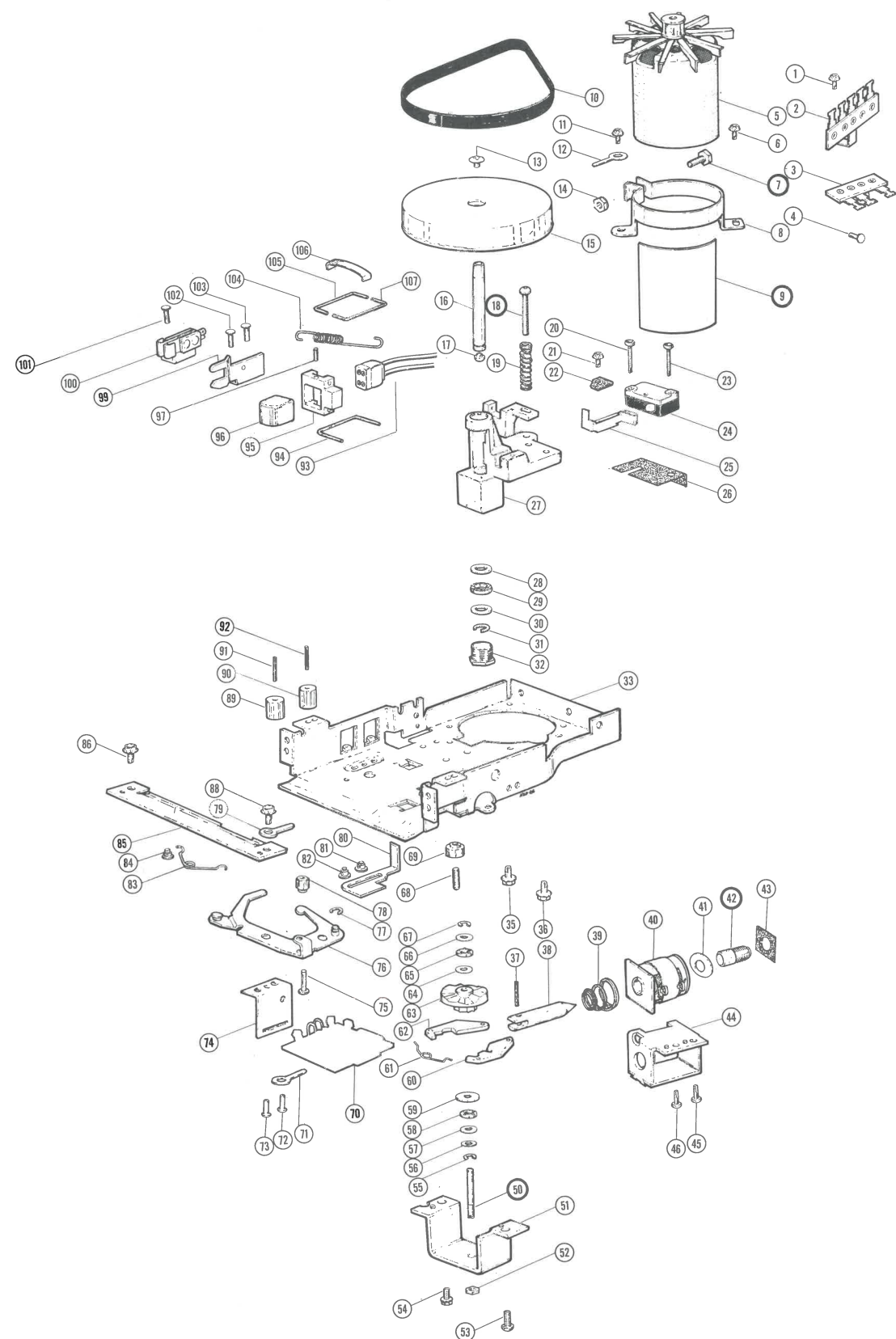


**Driver Board**  
**Interunit Wiring Side**



*Exploded Views YJD 22, MJC 28  
(TCT 8A) Mechanism*

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<b>SYMBOL NO.</b>	
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C1	
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C12	
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C101	
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C103	
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C107	
C108	
C109	
C201	
C202	
C203	
C206	
C207	
C208	
C211	
C212	
C213A/B	
C214	
CR1	
CR2	
CR3	
CR4	
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J1	
L1	
L2	
L3	
Q1	
Q2	
Q3	



Exploded Views YJD 22, MJC 28  
(TCT 8A) Mechanism

REPLACEMENT PARTS (Continued)

ILL. NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
46		Screw—#6-32 x 5/32	Q4	120481	1st pre-amp., 822
50	120640	Shaft—camshaft & height adjustment	Q5	120482	2nd pre-amp., 54E
51	120641	Bracket—camshaft	Q6	120483	1st audio amp., 54C
52		Nut—#8-32 x 1/4	Q7	120483	2nd audio amp., 54C, YJD 22W
53		Screw—#8-32 x 3/8	Q8	120483	audio driver, 54C, YJD 22W
54		Screw—#6-20 x 1/4	Q9	120483	2nd audio output, 2N176, YJD 22W
55	120642	Washer—"C", camshaft	Q10	120483	2nd audio amp., 54C, YJD 22W
56	120643	Washer—spring, camshaft assembly	Q11	120483	audio driver, 54C, YJD 22W
57	120644	Washer—thrust, camshaft assembly	Q12	120483	audio output, 2N176, YJD 22W
58	120645	Rear—thrust, camshaft assembly			RESISTORS: ±10%, 1/2 watt, composition unless noted otherwise.
59		Washer—thrust, camshaft assembly	R1	108871	47,000 ohm 1/4 w.
60	120649	Pawl—cam actuating	R2	502347	47,000 ohm
61	120690	Spring—for Ill. 60 & 62	R3	108862	180 ohm ±5%, 1/4 w.
62	120650	Pawl—cam actuating	R6	502322	22,000 ohm
63	120651	Cam—track shift	R7	219465	8200 ohm 1/4 w.
64	120644	Washer—thrust, camshaft assembly	R8	108861	100 ohm 1/4 w.
65	120645	Bearing—thrust, camshaft assembly	R9	108865	1000 ohm 1/4 w.
66	120644	Washer—thrust, camshaft assembly	R11	108871	47,000 ohm 1/4 w.
67	120642	Washer—"C", camshaft	R12	108862	180 ohm ±5%, 1/4 w.
68	120653	Pin—track shift	R13	502347	47,000 ohm
69	120654	Bushing—track shift pin	R14	502322	22,000 ohm
71		Clip	R17	108865	1000 ohm 1/4 w.
72		Rivet	R18	108861	100 ohm 1/4 w.
73		Rivet	R19	219465	8200 ohm 1/4 w.
74	124157	Bracket	R20	502247	4700 ohm
75		Rivet	R101	259309	330,000 ohm 1/4 w.
76	124166	Lever	R102	108865	1000 ohm 1/4 w.
77	124177	Washer—"C" type	R103	502118	180 ohm
78		Roller—part of Ill. 76	R104	259309	330,000 ohm 1/4 w.
79		Clip	R105	502118	180 ohm
80	124156	Bracket	R106A/B	120466	control, volume
81	124172	Rivet	R107	108865	1000 ohm 1/4 w.
82	124172	Rivet	R111	522118	180 ohm 2 w., MJC 28W
83	124173	Spring	R112	120470	330 ohm 7 w., wire wound, MJC 28W
84	124172	Rivet	R201	502247	4700 ohm YJD 22W
85	120657	Bracket—cartridge	R202	124170	control, balance, YJD 22W
86		Screw—#8-18 x 1/4	R203A/B	120467	control, tone, YJD 22W
88		Screw—#8-18 x 1/4	R204	502427	270,000 ohm YJD 22W
89	124171	Roller—cartridge	R206	502147	470 ohm YJD 22W
90	124171	Pin—for Ill. 89 & 90	R207	502112	120 ohm YJD 22W
91	124169	Pin—for Ill. 89 & 90	R208	502147	470 ohm YJD 22W
92	120485	Cable—playback head	R209	502122	220 ohm YJD 22W
93	120667	Arm—radius, for Ill. 95	R211	502068	68 ohm YJD 22W
94	120662	Mount—playback head	R212	120469	1.8 ohm 5 w., wire wound, YJD 22W
95	124164	Head—playback	R213	502247	4700 ohm YJD 22W
96		Screw—#4-40 x 3/16	R214	502427	270,000 ohm YJD 22W
97		Bracket—tape guide	R216	502112	120 ohm YJD 22W
98	120665	Contact—automatic track shift	R217	502147	470 ohm YJD 22W
99	120478	Rivet	R218	502147	470 ohm YJD 22W
100		Rivet	R219	502122	220 ohm YJD 22W
101		Rivet	R221	502068	68 ohm YJD 22W
102		Rivet	R222	120469	1.8 ohm 5 w., wire wound, YJD 22W
103		Rivet	R223	522047	47 ohm 2 w., YJD 22W
104	120666	Spring—head tension	R224	502110	100 ohm YJD 22W
105	120661	Arm—radius, for Ill. 95	R225	502133	330 ohm YJD 22W
106	120668	Clip—for Ill. 105 & 107	R226	502222	2200 ohm YJD 22W
107	120661	Arm—radius, for Ill. 95	R227	502127	270 ohm YJD 22W
			R228	120470	330 ohm 7 w., wire wound, YJD 22W
			R229	502147	470 ohm YJD 22W
			S2	120479	Switch—channel selector
			S3		Switch—external amplifier, YJD 22W
			T1	120474	Transformer—power, MJC 28W
			T2	120475	Transformer—power, YJD 22W
					MISCELLANEOUS
				120447	Back—cabinet, YJD 22W
				120448	Back—cabinet, MJC 28W
				120685	Board—terminal, 1st audio amp. (less components)
				120495	Button—channel selector
				X6191	Cabinet—includes grille cloth, YJD 22W
				X6192	Cabinet—MJC 28W
				120449	Cable—audio output, MJC 28W
				120861	Cable—AC power (nonpolarized)
				X8316	Cloth—grille (36" x 36") YJD 22W
				124162	Connector—male, AC interlock
				124161	Cover—hinged, cartridge compartment
				123970	Escutcheon—volume & channel selector controls, MJC 28W
				124163	Escutcheon—volume, balance & tone controls, YJD 22W
				124151	Foot—cabinet
				115794	Insulator—mica, for Q9 & Q12, YJD 22W
				123968	Knob—volume, MJC 28W
				123968	Knob—volume & tone, YJD 22W
				124152	Knob—balance, YJD 22W
				111824	Lens—pilot lamp
				123969	Panel—control panel (less cover 124161, escutcheon 123970 or 124163 & plate 123971 or 124168)
				120495	Pin—hinge pin for cover 124161
				123971	Plate—with RCA Victor & solid state markings (8 9/16" x 2 3/16") MJC 28W
				124168	Plate—with RCA Victor & Mark 8 stereo markings (8 9/16" x 2 3/16") YJD 22W
				120497	Socket—transistor, for Q9 & Q12, YJD 22W
				124176	Socket—pilot lamp
				120499	Spring—compression, for cover 124161
				120450	Speaker—5" x 7" PM, 35 ohm YJD 22W
				120686	Strip—2 terminal strips & mounting bracket assembly (less components) YJD 22W
					—order from RCA Sales Corporation—
				1407602-1	Book—customer instruction





# RCA VICTOR



## *The "Chieftain"*

Model VJP 21N—Ivory  
Model VJP 21R—Red  
Model VJP 21Y—White



## *The "Upbeat"*

Model VJP 25E—Black  
Model VJP 25G—Olive

# "VICTROLA"® SERVICE DATA

—File: 1967 No. 2—

## VJP 21 Series

### Amplifier Chassis RS-225D

## VJP 25 Series

### Amplifier Chassis RS-225C

### Record Changer RP-225-39

## RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY

### PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201

## SPECIFICATIONS

### TRANSISTOR COMPLEMENT

(Q401) Type SE6002	Driver
(Q402) Type 2N3643	Output
(Q403) Type 2N3638A	
(CR401) Stock No. 117144	Stabilizer
(CR402) Stock No. 117145	Rectifier

### POWER SUPPLY RATING

120 volts, 60 cycle ..... 20 watts

### DIMENSIONS (Approx.)

Height.....7" Width.....18" Depth.....14½"

LOUDSPEAKER ..... 5" x 3" PM, 35 ohm, v.c.

### POWER OUTPUT

Maximum ..... 1.7 watts  
Undistorted ..... 1.0 watts

### RECORD CHANGER

Turntable Speeds ..... 16⅔, 33⅓, 45 and 78 r.p.m.  
Record Sizes ..... 7", 10", or 12"  
Record Capacity ..... Up to six of same size and speed  
Pickup (Stock No. 118187) ..... Crystal  
Stylus (Stock No. 115060) ..... 0.7 mil. sapphire

WEIGHT (Approx.) ..... 13 lbs.

## DESCRIPTION

The VJP 21 and VJP 25 are four-speed portable transistorized monophonic record players designed to automatically play a stack of up to six records. The records in the stack must all be of the same size and require the same turntable speed.

These instruments are housed in a horizontally styled three-piece molded wood-fibre and polystyrene case. The molded polystyrene motorboard, to which the changer, amplifier, earphone jack (VJP 25 only), speaker and carrying handle are mounted, forms the center section of the case. The molded wood-fibre bottom section of the case is secured to the center section by eight screws and when removed exposes the changer mechanism, chassis and speaker for ease in servicing. The molded wood-fibre top section is hinged to the center section with split "slip-off" hinges and is secured in the closed position with a latch.

The circuitry of the RS-225C and RS-225D transistorized solid copper circuit amplifiers is the same excepting that the RS-225C amplifier embodies an earphone jack for personal listening. Power for the amplifier is obtained from a secondary winding on the phono motor thus providing power line isolation without the use of a separate transformer.

### SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject

FOR RECORD CHANGER SERVICING AND PARTS  
INFORMATION REFER TO RP-225, 226, 227, 228  
SERIES SERVICE DATA-1967 NO. 6.

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Printed in U.S.A.

1967 No. 2



## OPERATION

### To Play Records Automatically

1. Set **SPEED** control lever, located at top of record changer control center, to correct speed position (16, 33, 45, 78).
2. Set **SIZE** control lever, at side of record changer control center, to correct size of record (7, 10, 12).
3. Lift **STABILIZER ARM**, by point of pivot (shaft end), and swing it to the right.
4. If large center hole (45 r.p.m.) records are to be played, place adapter on spindle.
5. Place stack of records on spindle
6. Swing **STABILIZER ARM** to left and lower on top of records (Records should lay horizontal to turntable).
7. Move **FUNCTION** control lever, at bottom of record changer control center, against spring action to **SElect** position and release. (Control arm will move back to **AUTomatic** position.)
8. Set **VOLUME** and **TONE** controls as desired.

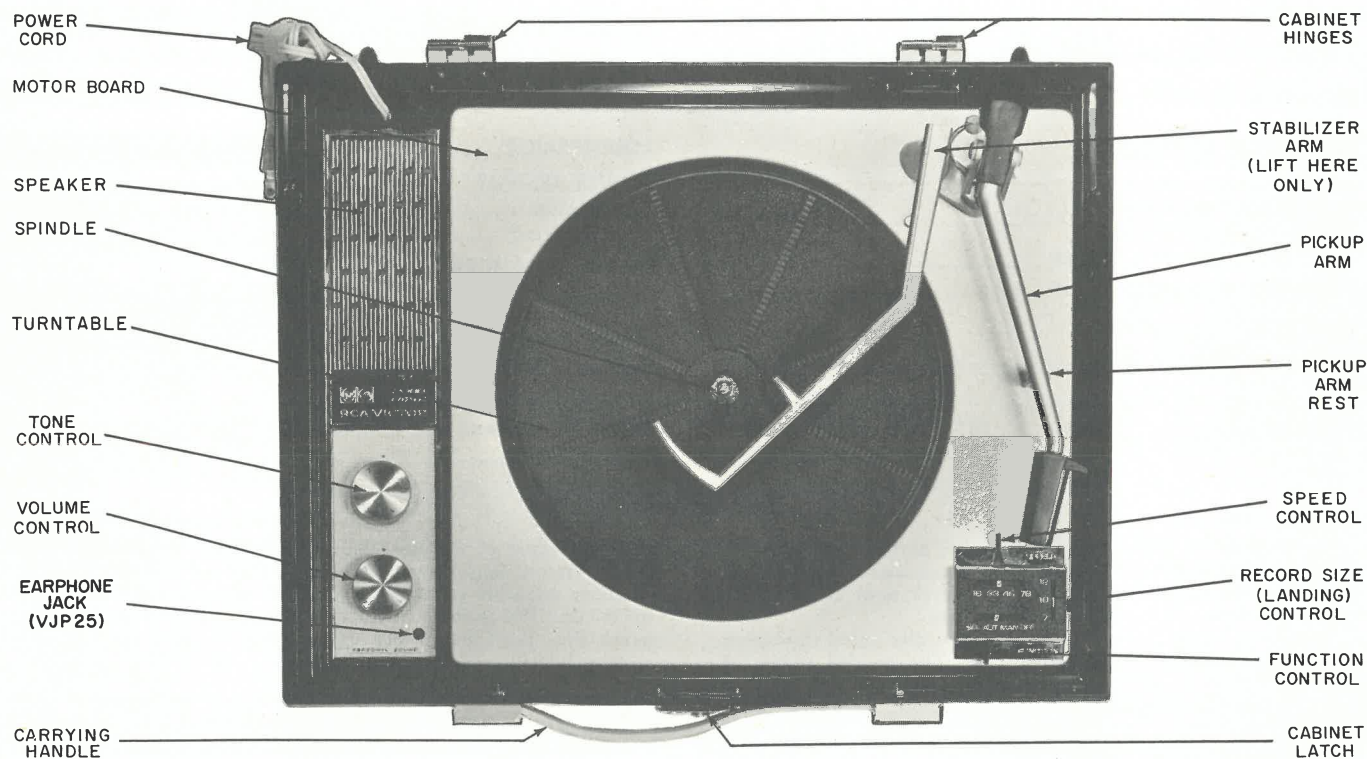
A record will then drop onto the turntable and pickup arm will move in and land on record. At the end of each record, the automatic cycling will drop and play the record without the need for touching the controls.

To reject a record and play the next, move the **FUNCTION** lever to the **SElect** position and release. Record that is playing will stop and the next record will drop and play.

At the end of the last record, the pickup arm will set on its rest and the **FUNCTION** lever will automatically return to the **OFF** position and shut the instrument **OFF**.

### To Play Records Manually

1. Follow steps 1, 2, 3, and 4 under "To play records automatically."
2. Place record on spindle and lower it onto turntable.
3. Move **FUNCTION** control lever to **MANual** position.
4. Lift pickup arm and lower it in position onto record.
5. Set **VOLUME** and **TONE** controls as desired.
6. At the end of the record, lift pickup arm from record and place it on its rest.
7. When finished playing, return **FUNCTION** control lever to **OFF** position. Instrument will not shut off automatically when in the **MANual** function.



*Instrument Control*



# RCA VICTOR



*The "Bandsman"*  
Model VJP 92AK—Blue

## "VICTROLA"® SERVICE DATA

—File: 1967 No. **2-S1**—

### VJP 92-K Series

Amplifier Chassis RS-225D

Record Changer RP-225-39

#### RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY

#### PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201

#### DESCRIPTION

The VJP 92-K is a four-speed portable monophonic record player; it is the same as the VJP 21 except for the cabinetry. The amplifier circuitry in this instrument is transistorized and is contained on a "Solid Copper Circuit" chassis which is mounted to the cabinet center section along with the loudspeaker and record changer.

#### REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION
		<b>INSTRUMENT MISCELLANEOUS</b>
	121062	Case—top section
	121075	Case—center section (includes riveted parts)
	121069	Case—bottom section

APPLY TO YOUR RCA DISTRIBUTOR  
FOR REPLACEMENT PARTS AND ACCESSORIES

FOR INSTRUMENT SPECIFICATIONS, SERVICING AND PARTS INFORMATION: REFER TO MODEL VJP 21 IN SERVICE DATA—1967 No. 2—EXCEPT AS LISTED HEREIN.

FOR RECORD CHANGER SERVICING AND PARTS INFORMATION: REFER TO SERVICE DATA—1967 No. 6—.

SUPPLEMENTARY INFORMATION LISTINGS		
Vol.	Issue	Subject

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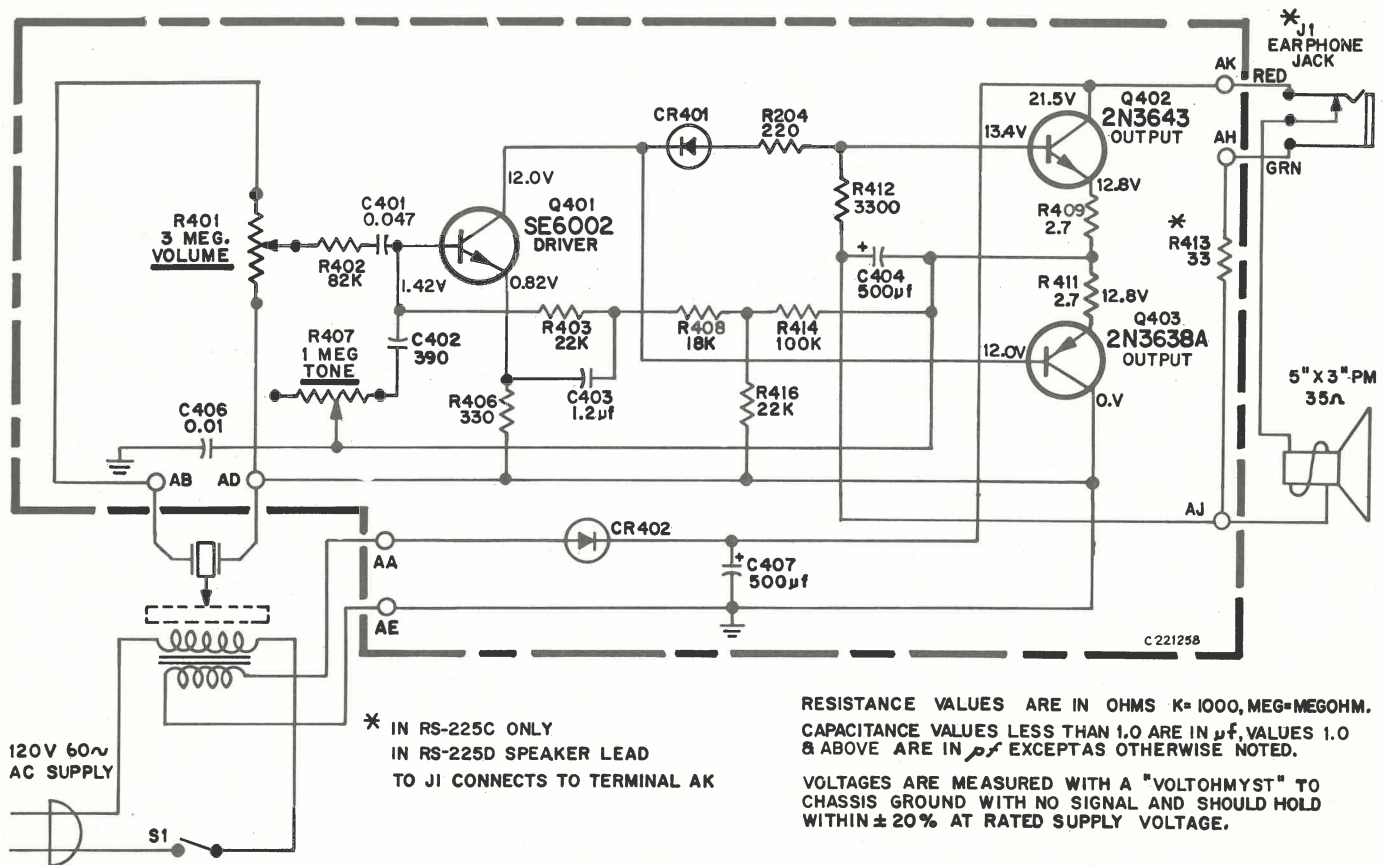
First Edition—First Printing

Printed in U.S.A.

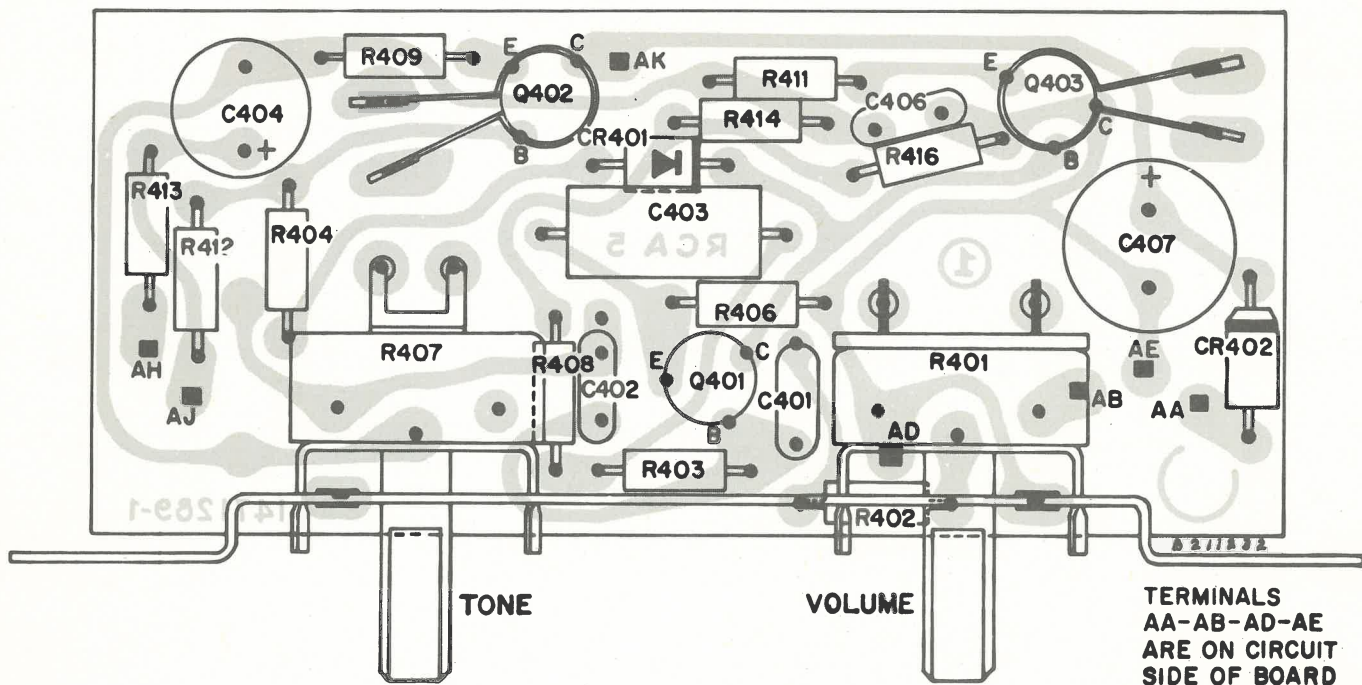
1967 No. **2-S1**







Schematic Diagram



Chassis Layout

## REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION
		<b>AMPLIFIER CHASSIS RS-225C, D</b>
	119197	Circuit—board, complete
		<b>CAPACITORS:</b>
C401		ceramic—0.047 $\mu$ f, $\pm$ 20%, 100 v
C402		ceramic—390 $\mu$ f, $\pm$ 20%, 500 v
C403	115180	electrolytic—1.2 $\mu$ f, $\pm$ 20%, 15 v
C404	111789	electrolytic—500 $\mu$ f, +100—10%, 15 v
C406		ceramic—0.01 $\mu$ f, $\pm$ 20%, 100 v
C407	111790	electrolytic—500 $\mu$ f, +100—0%, 25 v
CR401	117144	Diode—stabilizer
CR402	117145	Diode—rectifier, silicon
Q401	115225	Transistor—audio amp—SE 6002 or SE 4002
Q402	119982	Transistor—audio amp—2N3643
Q403	119983	Transistor—audio amp—2N3638A
		<b>RESISTORS: fixed, composition, <math>\pm</math>10%, ½ watt, unless otherwise specified</b>
R401	119278	control—"Volume"
R402	502382	82,000 ohm
R403	502322	22,000 ohm
R404	502118	180 ohm, $\pm$ 5%
R406	502133	330 ohm
R407	119279	control—"Tone"
R408	502318	18,000 ohm
R409		2.7 ohm
R411		2.7 ohm
R412	502233	3300 ohm
R413	502033	33 ohm, RS 225C
R414	502410	100,000 ohm
R416	502322	22,000 ohm
	117146	Bracket—mounting
	115799	Shield—heat sink
		<b>INSTRUMENT MISCELLANEOUS</b>
	117157	Cable—power cord
		<b>CASES:</b>
	121061	top section, VJP 21N
	121066	top section, VJP 21R

SYMBOL NO.	STOCK NO.	DESCRIPTION
	121060	top section, VJP 21Y
	121063	top section, VJP 25E
	121064	top section, VJP 25G
	121074	center section; changer, amplifier and speaker mounting, includes riveted parts (VJP 21)
	121073	center section; changer, amplifier and speaker mounting, includes riveted parts (VJP 25)
	121068	bottom section, VJP 21N
	119217	bottom section, VJP 21R
	121067	bottom section, VJP 21Y
	121070	bottom section, VJP 25E
	121071	bottom section, VJP 25G
	101825	Connector—splicing, for AC power cord
	115608	Connector—earphone jack, VJP 25
	119313	Grommet—power cord
	119301	Handle—carrying strap
	119302	Hinge—R.H., mounted on center section
	119303	Hinge—L.H., mounted on center section
	121077	Hinge—mounted on top section
	120705	Holder—45 RPM adapter
	118296	Knob—"Volume"
	118297	Knob—"Tone"
	119224	Latch—for top section, mounted on center section
	121078	Latch—metal, mounted on top section (approx. 1½" lg.)
	119229	Nameplate—RCA Victor, VJP 21
	119230	Nameplate—RCA Victor, VJP 25
	117475	Nut—earphone jack, VJP 25
	119231	Plate—for mounting hinges 119302, 119303, 121077 (1½" x ½")
	118852	Retainer—speaker
	119307	Speaker—3" x 5" PM, 35 ohm
	110501	Terminal—amplifier input leads
		<b>ACCESSORIES</b>
	15C101	Earphone (VJP 25) Spindle—45 RPM adapter
		<b>—order from RCA Sales Corp.—</b>
	1407415-1	Book—customer instruction

APPLY TO YOUR RCA DISTRIBUTOR FOR REPLACEMENT PARTS AND ACCESSORIES



# RCA VICTOR



*The "Co-ed"*  
Model VJP 27E—Black  
Model VJP 27Y—White

## RADIO/"VICTROLA"® SERVICE DATA

—File: 1967 No. 3—

### VJP 27 Series Chassis RC-1222B Record Changer RP-225-39A

#### RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY

#### PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201

### SPECIFICATIONS

**FREQUENCIES** Tuning IF  
AM 540-1600 kc 455 kc

#### TRANSISTOR COMPLEMENT

(Q1) Type 35816	Converter
(Q2) Type 35824	1st IF Amp.
(Q3) Type 35817	2nd IF Amp.
(Q4) Type 35819	A.G.C. Amp.
(Q5) Type 35820-1	Audio Amp.
(Q6) Type 35820-2	Audio Driver
(Q7) Type 35820-3 (M)	Output
(Q8) Type 35820-3 (M)	

#### POWER OUTPUT

Maximum 430 milliwatts  
Undistorted 200 milliwatts

#### POWER SUPPLY

120 volts, 60 cycle 20 watts

**LOUDSPEAKER** 5" x 3" PM, 35 ohm v.c.

**TUNING** 1:1 (Direct Drive)

#### RECORD CHANGER

Turntable speeds 16 $\frac{2}{3}$ , 33 $\frac{1}{3}$ , 45 or 78 r.p.m.  
Record Sizes 7 inch, 10 inch, 12 inch  
Record Capacity Up to six of same size and speed  
Pickup Monophonic Crystal  
Complete Stock No. 118187  
Body, less stylus Stock No. 118054  
Stylus (0.7 mil synth. sapp.) Stock No. 115060

#### CABINET DIMENSIONS (Approx.)

Height 7" Width 18" Depth 14 $\frac{1}{2}$ "

**WEIGHT (Approx.)** 13 lbs.

### DESCRIPTION

The VJP 27 is a portable transistorized Radio/"Victrola" designed for the reception of AM broadcasts and the playing of records. The four-speed monophonic record changer will play a stack of up to six records automatically at speeds of 16 $\frac{2}{3}$ , 33 $\frac{1}{3}$ , 45 or 78 r.p.m. The records in the stack must all be of the same size and require the same turntable speed. Provision is also made for the playing of single records manually.

This instrument is housed in a horizontally styled three-piece molded wood-fibre and polystyrene case. The radio chassis, record changer, loudspeaker, earphone jack and associated controls are mounted to the molded polystyrene motorboard which forms the center section of the case. The molded wood-fibre top and bottom sections fasten to the center section to complete the enclosure.

When the bottom section is removed, all parts of the instrument are exposed for servicing. When playing, the hinged top section may be completely removed by slipping it off its split hinges.

The radio chassis employs conventional superheterodyne circuitry on a "Solid Copper Circuit" board with a stacked class B output stage which eliminates the need for an output transformer or a center tapped voice coil in the loudspeaker. The use of a power transformer

provides the proper operating voltages for the chassis as well as power line isolation.

A jack is provided for the connection of an 8 ohm earphone for private listening. When the earphone is in use, the loudspeaker is disconnected.

**FOR RECORD CHANGER SERVICING AND PARTS INFORMATION: REFER TO SERVICE DATA 1967 No. 6.**

#### SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject



## CHANGER OPERATION

## TO PLAY RECORDS AUTOMATICALLY

1. Turn Radio ON.
2. Set SIZE and SPEED levers to correct positions according to records to be played.
3. Lift STABILIZER ARM by point of pivot, swing aside, and place records on spindle (Use 45 adapter if necessary).
4. Swing STABILIZER ARM back on top of records.
5. Move FUNCTION lever to SELECT and release. (Changer will shut off automatically after last record has been played.)

## TO PLAY RECORDS MANUALLY

1. Follow steps above and return FUNCTION lever to MANual position in step 5.
2. At end of record, lift pickup arm and place it on its rest. (Changer will not shut off.)
3. When finished playing, return FUNCTION lever to OFF. Changer will NOT shut off automatically after last record.)

## CHASSIS AND CHANGER ACCESSIBILITY

All components of the instrument are mounted to the molded center section of the case.

To gain access to the radio chassis and changer mechanism it is only necessary to remove the screws securing the bottom section of the case to the center section. When the bottom section is removed the radio chassis and changer mechanism are fully exposed.

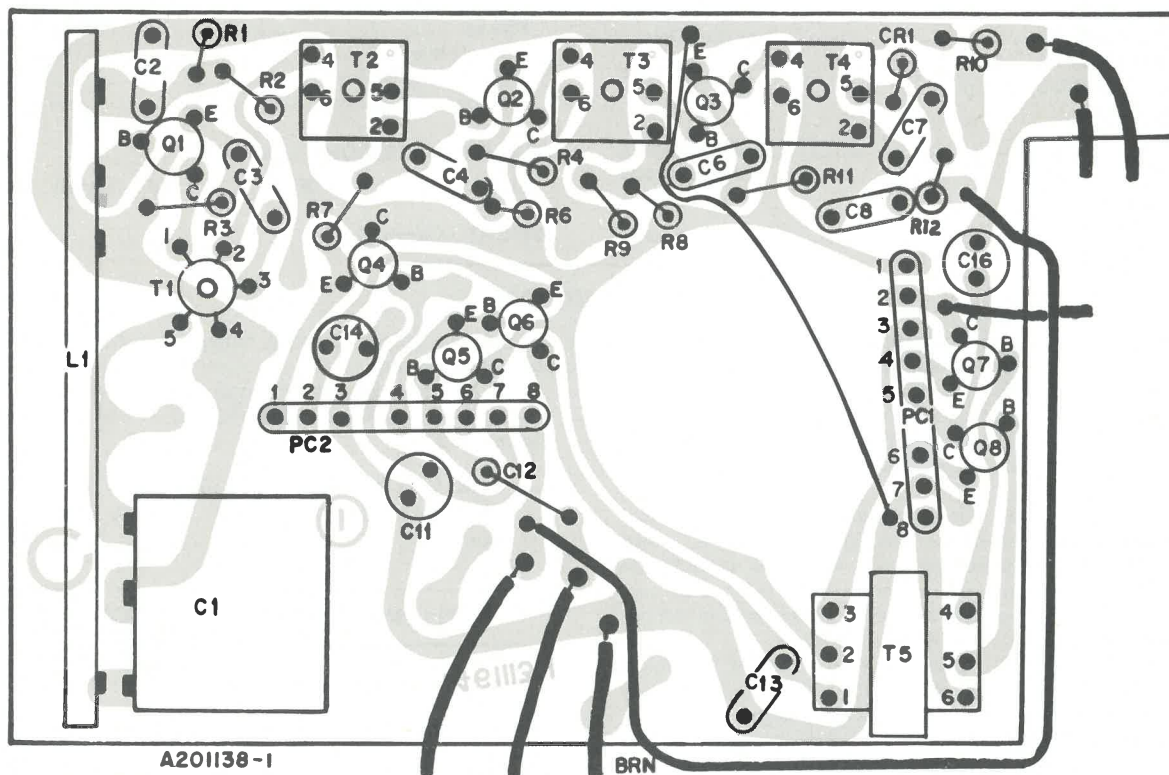
## ALIGNMENT PROCEDURE

For all alignment steps, connect the output meter across the speaker voice coil. Clip onto the extreme ends of the speaker terminals to avoid damage to the voice coil leads.

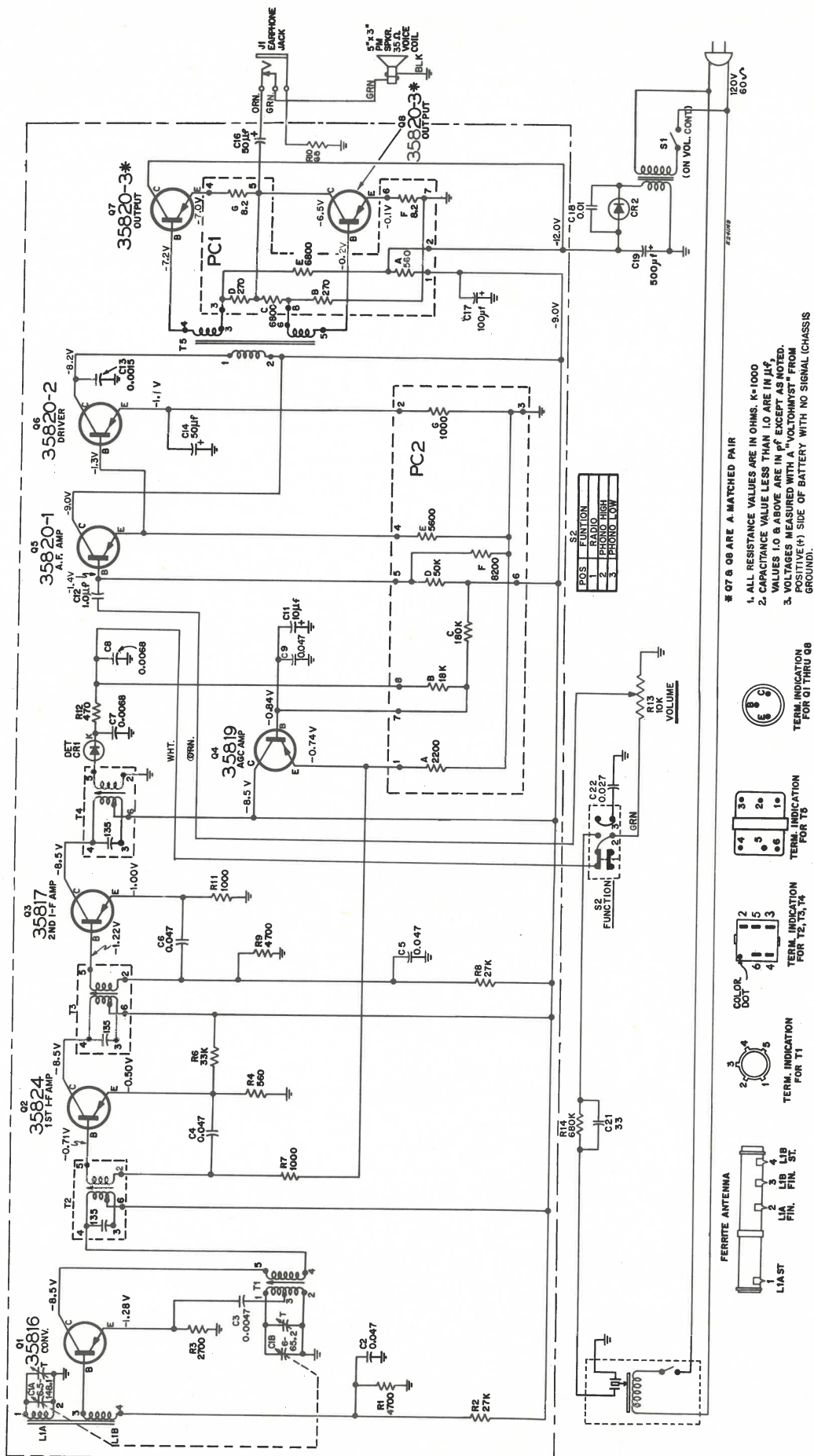
The strength of the injected signal should be kept as low as possible to avoid AVC action or clipping in the circuit. The volume control should be turned to maximum.

**USE PROPER ALIGNMENT TOOL FOR MAKING ADJUSTMENTS. CORES ARE EASILY BROKEN BY IMPROPER HANDLING, MAKING REPLACEMENT OF ENTIRE COIL OR TRANSFORMER NECESSARY.**

Step	Connect Signal Generator to—	Signal Gen. Output	Dial Pointer Setting	Adjust for Max. Output
1	Loop of wire placed near antenna for radiated signal	455 kc	Gang fully open	T4 (3rd IF)
2				T3 (2nd IF)
3				T2 (1st IF)
4	Repeat Steps 1, 2, and 3			
5	Loop of wire placed near antenna for radiated signal	1620 kc	Gang fully open	C1B-T Oscillator trimmer
6		1400 kc	1400 kc (rock gang if necessary)	C1A-T Antenna trimmer
7		600 kc	600 kc (rock gang)	T1 Oscillator coil
8	Repeat Steps 5, 6, and 7			
9	Check tuning range. If full range is not obtained, cement a small ferrite antenna tuning chip (stock no. 115357) into holder on antenna.			
10	Repeat Steps 5, 6, and 7			



Chassis Layout—Component Side



### Schematic Diagram

## REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
		<b>RADIO CHASSIS RC 1222B</b>			
	119384	Circuit—printed board, complete	R11		1000 ohm
		<b>CAPACITORS:</b>	R12		470 ohm
C1A/B	115371	variable tuning (including mounting screw)	R13	120258	control, "Volume" (includes S1)
C2		0.047 $\mu$ f, +80–20%, 10 v., ceramic	R14	502468	680,000 ohm, $\pm$ 10%, 1/2 w.
C3	111121	0.0047 $\mu$ f, $\pm$ 20%, 100 v., ceramic	S1		Switch—"On/Off" part of R13
C4		0.047 $\mu$ f, +80–20%, 10 v., ceramic	S2	113398	Switch—"Function"
C5		0.047 $\mu$ f, +80–20%, 10 v., ceramic			<b>Transformers:</b>
C6		0.047 $\mu$ f, +80–20%, 10 v., ceramic	T1	115364	oscillator coil
C7		0.0068 $\mu$ f, $\pm$ 20%, 500 v., ceramic	T2	115363	1st IF
C8		0.0068 $\mu$ f, $\pm$ 20%, 500 v., ceramic	T3	115362	2nd IF
C9		0.047 $\mu$ f, +80–20%, 10 v., ceramic	T4	115361	3rd IF
C11	115368	10 $\mu$ f, 10 v., electrolytic	T5	115360	driver
C12	111264	1 $\mu$ f, +250–10%, 10 v., electrolytic	T6	120261	power
C13		0.0015 $\mu$ f, $\pm$ 20%, 100 v., ceramic		115359	Antenna—ferrite rod
C14	115369	50 $\mu$ f, 6 v., electrolytic		115357	Rod—ferrite chip
C16	119373	50 $\mu$ f, 15 v., electrolytic			<b>INSTRUMENT MISCELLANEOUS</b>
C17	115370	100 $\mu$ f, +100–10%, 10 v., electrolytic		117157	Cable—power cord
C18	73960	0.01 $\mu$ f, +100–0%, 500 v., ceramic		121063	Case—top section, VJP 27E
C19	120264	500 $\mu$ f, 15 v., electrolytic		121065	Case—top section, VJP 27Y
C21	105348	33 $\mu$ f, $\pm$ 10%, 500 v., ceramic, NPO		121076	Case—center section (includes riveted parts)
C22		0.027 $\mu$ f, $\pm$ 20%, 100 v., ceramic		121070	Case—bottom section, VJP 27E
CR1	110610	Diode—detector		121072	Case—bottom section, VJP 27Y
CR2	115039	Diode—silicon rectifier		119313	Grommet—power cord
J1	115608	Connector—earphone jack		119301	Handle—carrying strap
PC1	119385	Circuit—printed component		119302	Hinge—R.H., mounted on center section
PC2	115366	Circuit—printed component		119303	Hinge—L.H., mounted on center section
		<b>TRANSISTORS:</b>		121077	Hinge—mounted on top section
Q1	119526	converter, 35816 or 2N1526		120705	Holder—45 RPM adapter
Q2		1st IF amp., 35824 or 2N1524		120259	Knob—Tuning
Q3		2nd IF amp., 35817 or 2N1524		120260	Knob—Volume
Q4		AGC amp., 35819 or 2N2614		119224	Latch—for top section, mounted on center section
Q5		audio amp., 35820-1 or 2N406		121078	Latch—metal, mounted on top section (approx. 1 1/16" lg.)
Q6		audio driver, 35820-2 or 2N408		120257	Nameplate—RCA Victor
Q7		output, 35820-3 or 2N408		117475	Nut—earphone jack
Q8		output, 35820-3 or 2N408 } matched pair		119231	Plate—for mounting hinges 119302, 119303, 121077 (1 1/16" x 1/16")
		<b>RESISTORS: <math>\pm</math>10%, 1/4 watt, composition, unless noted otherwise.</b>		118852	Retainer—speaker
R1		4700 ohm		119307	Speaker—5" x 3" PM, 35 ohm, v.c.
R2		27,000 ohm		110501	Terminal—amplifier input leads
R3		2700 ohm			<b>ACCESSORIES</b>
R4		560 ohm		150101	Earphone
R6		33,000 ohm			Spindle—45 RPM adapter
R7		1000 ohm, $\pm$ 20%			
R8		27,000 ohm			
R9		4700 ohm			
R10		68 ohm, $\pm$ 20%			
					<b>—order from RCA Sales Corp.—</b>
				1407417-1	Book—customer instruction

APPLY TO YOUR RCA DISTRIBUTOR FOR REPLACEMENT PARTS AND ACCESSORIES





# RCA VICTOR



*The "Refrain"*

Model VJP 31A—Blue  
Model VJP 31E—Black  
Model VJP 31Y—White

## "VICTROLA"® SERVICE DATA

— File: 1967 No. 4 —

### VJP 31 Series Amplifier Chassis RS-235A Record Changer RP-225-49A

#### RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY

#### PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201

### SPECIFICATIONS

#### TRANSISTOR COMPLEMENT

(Q401) RCA 121-1	Left Chan. Preamp.
(Q402) RCA 121-1	Right Chan. Preamp.
(Q403) RCA 120-1	Left Chan. Driver
(Q404) RCA 120-1	Right Chan. Driver
(Q405) RCA 120-4	Left Chan. Output
(Q406) RCA 120-4	Right Chan. Output
(Q407) RCA 112-3	Left Chan. Output
(Q408) RCA 112-3	Right Chan. Output
(CR401) Stk. #121484	} Temp. Comp. Bias
(CR402) Stk. #121484	
(CR405) Stk. #117145	Rectifier

#### POWER SUPPLY RATING

120 Volts, 60 cycle ..... 40 watts

#### POWER OUTPUT

Undistorted ..... 2 watts  
Maximum ..... 4 watts

#### LOUDSPEAKERS

Two 5" x 3" PM ..... 35 ohm v.c. imp.

#### RECORD CHANGER

Turntable Speeds ..... 16 $\frac{2}{3}$ , 33 $\frac{1}{3}$ , 45 and 78 rpm  
Record Sizes ..... 7", 10" and 12"  
Record Capacity ..... Up to six same size  
Pickup ..... Stereophonic Ceramic  
Complete ..... Stk. No. 116931  
Body Only ..... Stk. No. 118056  
Stylus ..... (0.7 mil. Syn. Sapp.) Stk. No. 118199

#### DIMENSIONS (Approx.)

Height ..... 8 $\frac{3}{4}$ " Width ..... 22 $\frac{1}{4}$ " Depth ..... 14 $\frac{1}{8}$ "

WEIGHT (Approx.) ..... 25 lbs.

### DESCRIPTION

The VJP 31 is a completely self-contained portable stereophonic "Victrola" designed for the playing of 16 $\frac{2}{3}$ , 33 $\frac{1}{3}$ , 45 and 78 r.p.m. records. The four-speed stereophonic record changer will play a stack of up to six records automatically when they are all of the same size and speed. Provision is also made for the playing of a single record manually.

This instrument is housed in a horizontally styled three-piece molded case with the record changer, dual-channel transistorized amplifier and left channel speaker mounted to the molded motorboard, which forms the center section of the case, and the right channel speaker mounted in the removable lid or top section. A bottom-tray section fastens to the center section to cover the components and complete the case.

When playing the instrument is laid flat and the lid is removed and set apart to the right to obtain stereophonic effect.

The RS-235A chassis that is used in this instrument is completely transistorized on a single "Solid Copper Circuit" board which is mounted vertically to the motorboard. Individual Volume controls in each channel, to allow for balancing, and a dual Tone control are provided for the regulation of the amplifier.

When servicing, it is only necessary to remove the bottom section of the case to have all parts of the instrument, except the right channel speaker, readily accessible and operative.

#### SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject

FOR RECORD CHANGER SERVICING AND PARTS INFORMATION: REFER TO SERVICE DATA—1967 No. 6—.

## CHANGER OPERATION

## TO PLAY RECORDS MANUALLY

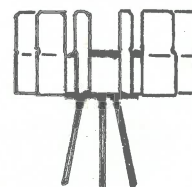
1. Set the SIZE (upper) and SPEED (side) levers to the correct positions corresponding to the size and speed of the records to be played. (Only records of same size and speed should be stacked on the spindle at one time.)
2. Lift the Stabilizer Arm by the point of pivot, swing it aside and place the stack of records (up to six) on the spindle. (Use the 45 adapter if large center hole records are to be played.)
3. Swing the Stabilizer Arm back into position and lower it on top of the records.
4. Move the FUNCTION (lower) lever to the SELECT position and release it. (The lever should return to the AUTO position.)
5. If it is desired to reject the record that is playing and play the next record: Move the FUNCTION lever to SELECT and release it.
6. To STOP the changer at any point, move the FUNCTION lever to the OFF position. This will turn the entire instrument OFF. (If the Stabilizer Arm is in its proper position, the changer will automatically move the FUNCTION lever to the OFF position after the last record has been played.)

## TO PLAY RECORDS AUTOMATICALLY

1. Follow steps 1 to 4 above, but in step 4 move the FUNCTION lever to the MANUAL position.
2. When record has finished playing, lift pickup arm and place it on its rest.
3. Move FUNCTION lever to the OFF position. (The MANUAL position of the FUNCTION lever disables the automatic feature of the changer.)

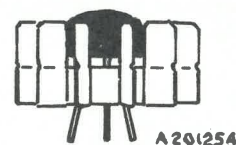
## CAUTION

The heat sink radiators used on this chassis must be placed properly on the output transistors to achieve the desired radiation of the heat and to prevent short circuiting of the transistor leads. The radiator must be installed with the free ends of the fins up and the lower ends flush with the bottom of the transistor. In this position the radiator is easily removed and replaced by grasping the free ends of the fins and squeezing them toward the center.



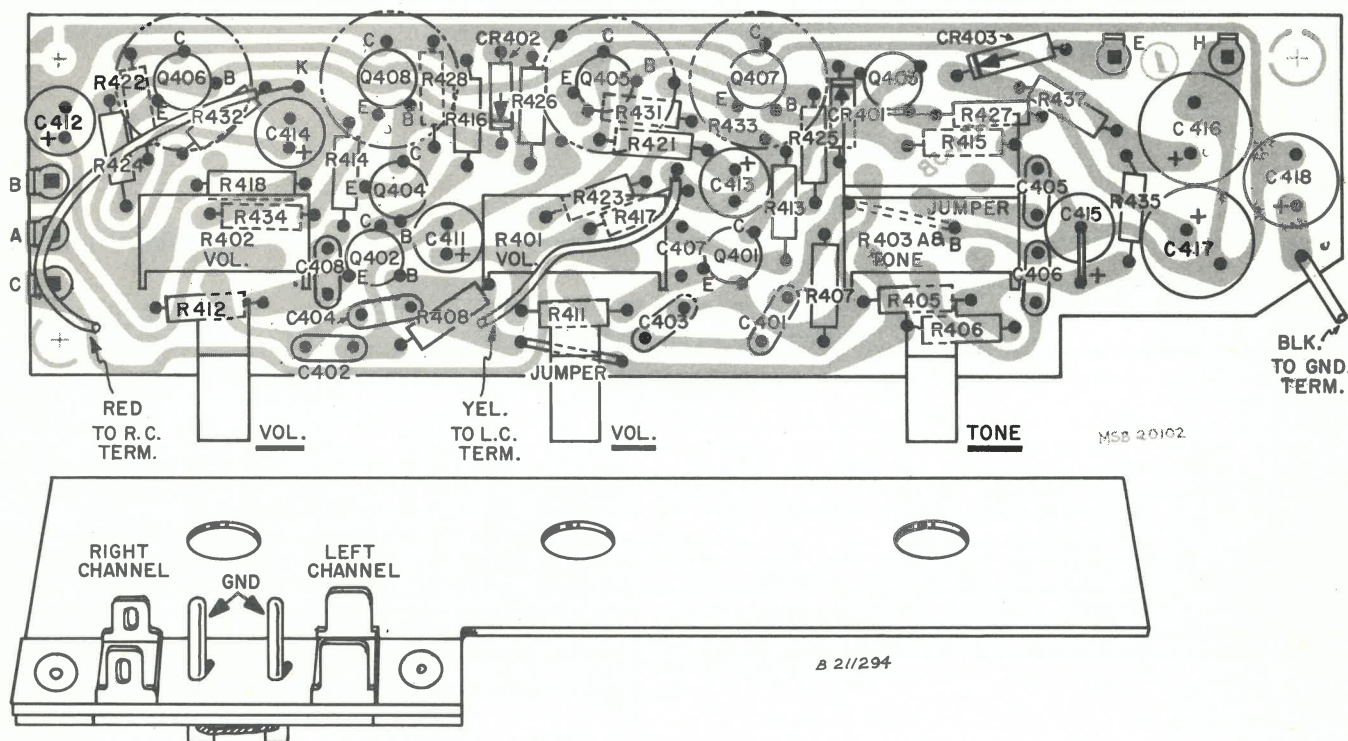
Correct Position

*bottom of radiator even with bottom of transistor*

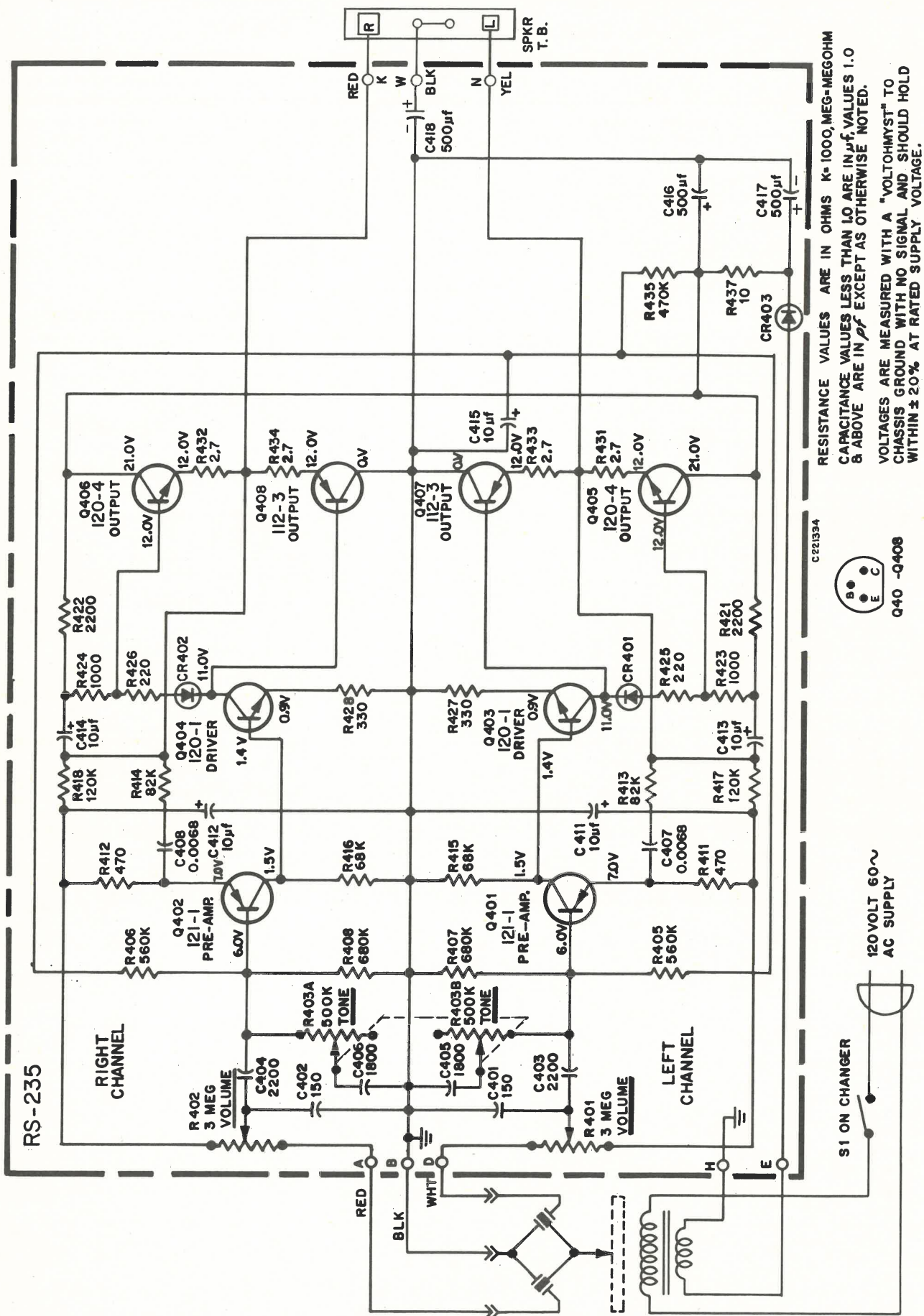


Wrong Position

*bottom of radiator below bottom of transistor*



Chassis Layout—Component Side



Schematic Diagram



## REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION
		<b>AMPLIFIER CHASSIS RS 235A</b>
	122000	Circuit—complete printed board
		<b>CAPACITORS:</b>
C401	103852	150 $\mu f$ $\pm 20\%$ , 500 v, ceramic
C402	103852	150 $\mu f$ $\pm 20\%$ , 500 v, ceramic
C403	111130	2200 $\mu f$ $\pm 20\%$ , 100 v, ceramic
C404	111130	2200 $\mu f$ $\pm 20\%$ , 100 v, ceramic
C405		1800 $\mu f$ $\pm 20\%$ , 100 v, ceramic
C406		1800 $\mu f$ $\pm 20\%$ , 100 v, ceramic
C407		6800 $\mu f$ $\pm 100-20\%$ , 100 v, ceramic
C408		6800 $\mu f$ $\pm 100-20\%$ , 100 v, ceramic
C411	116159	10 $\mu f$ , 10 v, electrolytic
C414	116159	10 $\mu f$ , 10 v, electrolytic
C415	110567	10 $\mu f$ , 15 v, electrolytic
C416	117524	500 $\mu f$ , 25 v, electrolytic
C417	117524	500 $\mu f$ , 25 v, electrolytic
C418	111789	500 $\mu f$ , 15 v, electrolytic
CR401	121484	Diode—output bias
CR402	121484	Diode—output bias
CR403	117145	Diode—silicon rectifier
		<b>TRANSISTORS:</b>
Q401	121467	pre amp., 121-1
Q402	121467	pre amp., 121-1
Q403	121660	driver, 120-1
Q404	121660	driver, 120-1
Q405	121663	output, 120-4
Q406	121663	output, 120-4
Q407	121659	output, 112-3
Q408	121659	output, 112-3
		<b>RESISTORS: <math>\pm 10\%</math>—<math>\frac{1}{2}</math> watt composition unless noted otherwise.</b>
R401	122001	control, "Volume", Left channel
R402	122001	control, "Volume", Right channel
R403A/B	122002	control, "Tone"
R405	502456	560,000 ohm
R406	502456	560,000 ohm
R407	502468	680,000 ohm
R408	502468	680,000 ohm
R411	502147	470 ohm
R412	502147	470 ohm
R413	502382	82,000 ohm
R414	502382	82,000 ohm
R415	502368	68,000 ohm
R416	502368	68,000 ohm
R417	502412	120,000 ohm
R418	502412	120,000 ohm

SYMBOL NO.	STOCK NO.	DESCRIPTION
R421	502222	2200 ohm
R422	502222	2200 ohm
R423	502210	1000 ohm
R424	502210	1000 ohm
R425	502122	220 ohm, $\pm 5\%$
R426	502122	220 ohm, $\pm 5\%$
R427	502133	330 ohm
R428	502133	330 ohm
R431		2.7 ohm
R434		2.7 ohm
R435	502447	470,000 ohm
R437	502010	10 ohm
		<b>INSTRUMENT MISCELLANEOUS</b>
	117157	Cable—power cord
		<b>CASES:</b>
	119222	bottom section, VJP 31A
	121070	bottom section, VJP 31E
	121072	bottom section, VJP 31Y
	121614	center section—includes riveted parts
	121612	top section (less grille), VJP 31A
	121613	top section (less grille), VJP 31E
	121611	top section (less grille), VJP 31Y
	121616	Grille—speaker, VJP 31A
	121617	Grille—speaker, VJP 31E
	121615	Grille—speaker, VJP 31Y
	119313	Grommet—power cord
	119301	Handle—carrying
	119302	Hinge—R.H., mounted on center section
	119303	Hinge—L.H., mounted on center section
	121077	Hinge—mounted on top section of case
	120705	Holder—45 RPM adaptor
	121618	Knob—"Volume"
	121619	Knob—"Tone"
	119224	Latch—mounted on center section
	121078	Latch—metal, mounted on top section
	121620	Nameplate—RCA
	119231	Plate—mounts behind all hinges ( $1\frac{1}{16}$ " x $\frac{9}{16}$ " )
	118852	Retainer—speaker
	119307	Speaker—5" x 3" PM, 35 ohm
	121621	Support—plastic, $6\frac{1}{2}$ " lg.—for top section
		<b>ACCESSORIES</b>
		Spindle—45 RPM adaptor
		<b>—order from RCA Sales Corp.—</b>
	1407416-1	Book—customer instruction

APPLY TO YOUR RCA DISTRIBUTOR FOR REPLACEMENT PARTS AND ACCESSORIES



# RCA VICTOR



*The "Wanderlust"*

Model VJP 34J—Alabaster/Blue

## "VICTROLA"®

### SERVICE DATA

—File: 1967 No. 5—

### VJP 34 Series

Amplifier Chassis RS-228A

Record Changer RP-226-49M

#### RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY

PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201

### SPECIFICATIONS

#### TRANSISTOR COMPLEMENT

(Q401) RCA 121-1	Left Chan. Preamp.
(Q402) RCA 121-1	Right Chan. Preamp.
(Q403) RCA 120-1	Left Chan. Driver
(Q404) RCA 120-1	Right Chan. Driver
(Q407) RCA 113-2	Left Chan. Output
(Q408) RCA 113-2	Right Chan. Output
(Q409) RCA 112-1	Left Chan. Output
(Q412) RCA 112-1	Right Chan. Output

#### POWER SUPPLY RATING (With Changer Operating)

120 volts, 60 cycle/12 volts DC (Int. or Ext.) ..... 30 watts

#### POWER OUTPUT

Undistorted ..... 1½ watts  
Maximum ..... 3 watts

#### LOUDSPEAKERS

Two 4" PM ..... 24 ohm v.c.

#### RECORD CHANGER

Turntable Speeds	16⅔, 33⅓, 45 and 78 RPM
Record Size	7 inch, 10 inch or 12 inch
Record Capacity	Up to six same size and speed
Pickup	Stereophonic Ceramic
Complete	Stock No. 116931
Body less stylus	Stock No. 118056
Stylus	Universal
0.7 mil syn. sapp.	Stock No. 118199

For Record Changer Servicing Information

Refer to RP-226 Series

Record Changer Service Data

—File: 1967 No. 6—

#### DIMENSIONS (Approx.)

Height ..... 8¾" Width ..... 22¼" Depth ..... 14⅛"

WEIGHT (Approx.) ..... 25 lbs.

### DESCRIPTION

Model VJP 34 is a four-speed portable stereophonic record player. The instrument uses transistor amplifier RS-228 which is attached to the motor board. This instrument has a unique feature which allows it to operate from either an AC line, from internal batteries, or from an external 12 volt DC source. A cable is available (optional—extra) which will allow the instrument to be connected through a cigarette lighter connector to utilize the 12 volt DC source commonly found in most automobiles.

The instrument controls consist of individual Volume controls in each channel, a dual Tone control, a switch to select the source voltage and the record changer selector controls.

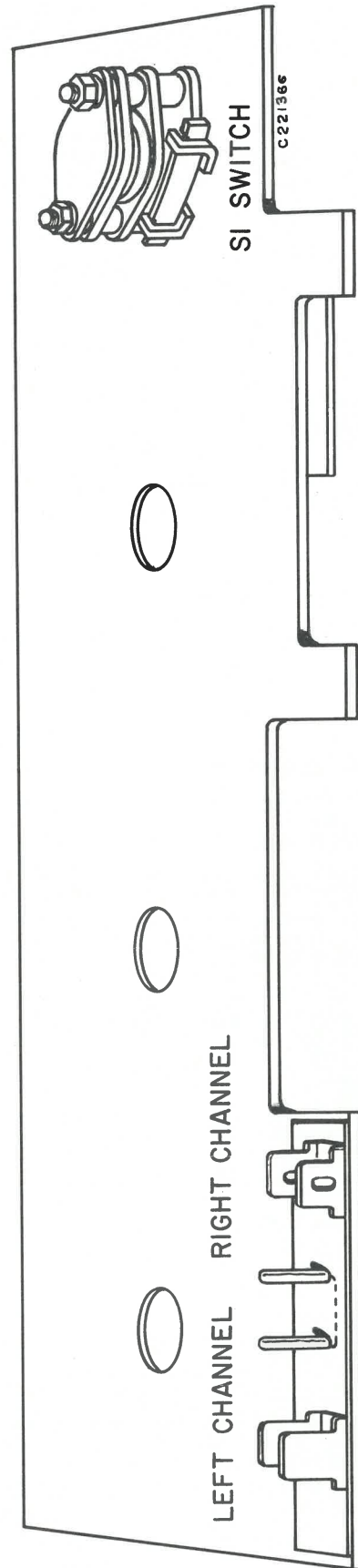
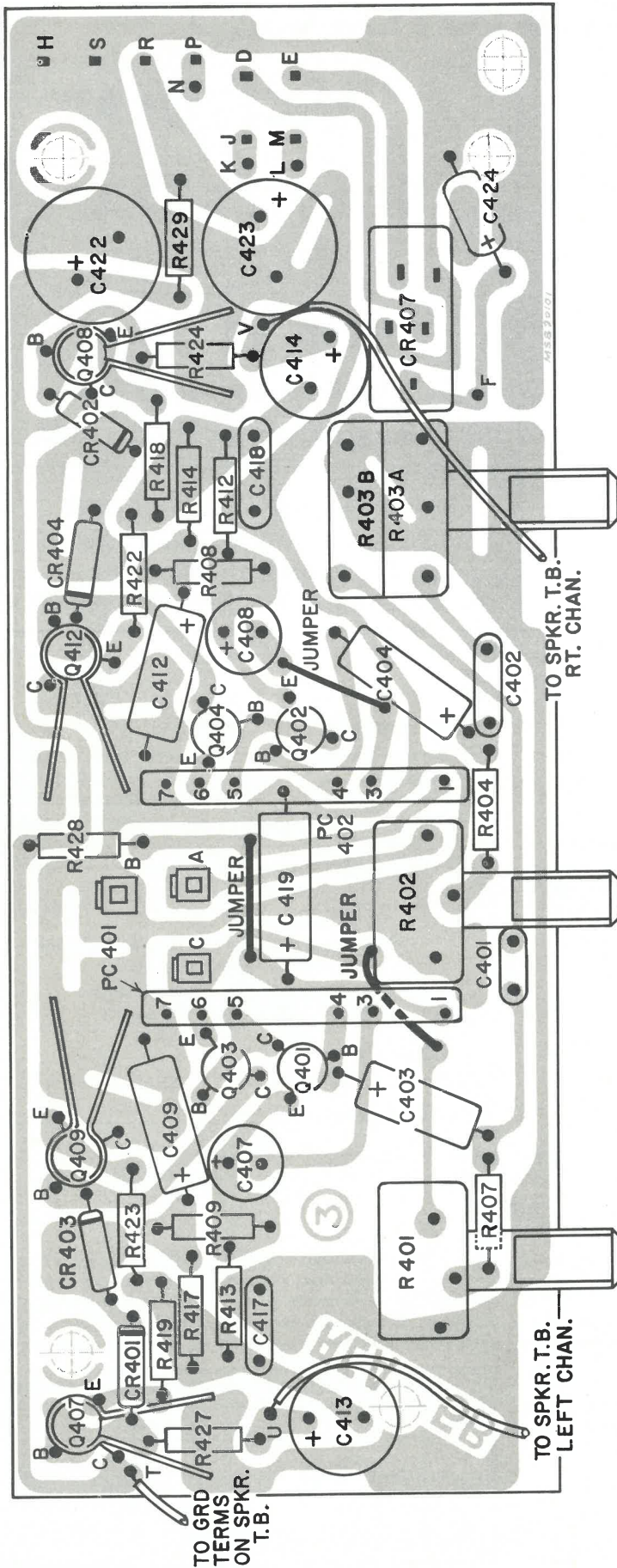
Both left and right speaker enclosures form the "lid" of VJP 34. When playing, the enclosures may be removed and placed one on each side of the case to obtain greater stereophonic effect.

The RP-226-49M record changer is designed to play a stack of up to

six records automatically at speeds of 16⅔, 33⅓, 45 or 78 r.p.m. The records in the stack must all be of the same size and require the same turntable speed. Provision is made for the playing of single records manually. The changer has an automatic shut-off provision to completely turn off the instrument after the last record of a stack is played.

#### SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject



Chassis Layout





NOTES: VOLTAGES MEASURED FROM GROUND WITH A "VOLTHOMYST" AND SHOULD HOLD WITHIN  $\pm 20\%$  AT RATED LINE VOLTAGE. MEASURED IN AC POSITION.  
ALL RESISTANCE VALUES ARE IN OHMS. K=1000  
ALL CAPACITANCE VALUES 1.0 AND ABOVE ARE pF, BELOW 1.0 ARE nF UNLESS OTHERWISE NOTED.

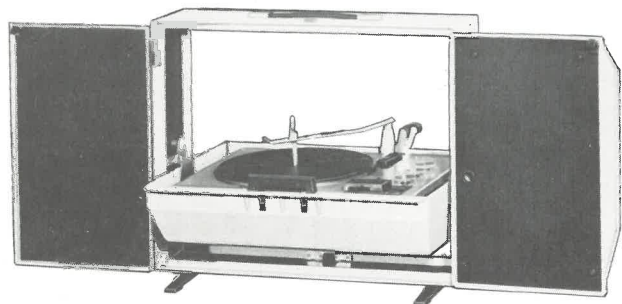
### Schematic Diagram

## REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION
		<b>AMPLIFIER ASSEMBLY RS 228A</b>
	122011	Circuit—Chassis board, complete
		<b>CAPACITORS:</b>
C401	111122	6800 $\mu f$ $\pm 20\%$ 100 v, ceramic
C402		6800 $\mu f$ $\pm 100-0\%$ 500 v, ceramic
C403	115597	10 $\mu f$ 10 v, electrolytic
C404	115597	10 $\mu f$ 10 v, electrolytic
C407	122012	30 $\mu f$ 10 v, electrolytic
C408	122012	30 $\mu f$ 10 v, electrolytic
C409	115597	10 $\mu f$ 10 v, electrolytic
C412	115597	10 $\mu f$ 10 v, electrolytic
C413	111789	500 $\mu f$ 15 v, electrolytic
C414	111789	500 $\mu f$ 15 v, electrolytic
C417	73960	0.01 $\mu f$ $\pm 100-0\%$ 500 v, ceramic
C418	73960	0.01 $\mu f$ $\pm 100-0\%$ 500 v, ceramic
C419	110567	10 $\mu f$ 15 v, electrolytic
C422	117524	500 $\mu f$ 25 v, electrolytic
C423	117524	500 $\mu f$ 25 v, electrolytic
C424	111370	2 $\mu f$ $\pm 25-10\%$ 50 v, electrolytic
CR401	122007	Diode—bias
CR402	122007	Diode—bias
CR403	122007	Diode—bias
CR404	122007	Diode—bias
CR407	122009	Diode—rectifier
PC401	122010	Circuit—printed component
PC402	122010	Circuit—printed component
		<b>TRANSISTORS:</b>
Q401	121467	pre amp
Q402	121467	pre amp
Q403	121660	driver
Q404	121660	driver
Q407	119982	output
Q408	119982	output
Q409	119983	output
Q412	119983	output
		<b>RESISTORS: <math>\pm 10\%</math> <math>\frac{1}{2}</math> w composition unless noted otherwise</b>
R401	122006	control—volume
R402	122006	control—volume
R403A/B	122005	control—tone
R404	502422	220,000 ohm
R407	502422	220,000 ohm
R408	502147	470 ohm
R409	502147	470 ohm
R412	502415	150,000 ohm
R413	502415	150,000 ohm
R414	502315	15,000 ohm

SYMBOL NO.	STOCK NO.	DESCRIPTION
R417	502315	15,000 ohm
R418		2.7 ohm
R419		2.7 ohm
R422		2.7 ohm
R423		2.7 ohm
R424	502156	560 ohm
R427	502156	560 ohm
R428	502333	33,000 ohm
R429	502022	22 ohm
S1	122008	Switch—AC—DC (ext.)—DC (int.)
	119521	Nut—for mounting switch 122008
	115799	Shield—heat sink
		<b>MISCELLANEOUS</b>
	122020	Baffle—R.H. speaker (includes grille cloth)
	122021	Baffle—L.H. speaker (includes grille cloth)
	119035	Cable—power cord
	122024	Case—changer
	119739	Connector—4 pin male, external power
	122025	Contact—for battery spring ( $1\frac{1}{2}$ " x $2\frac{1}{8}$ ")
	122016	Cover—battery tubes (5" long)
	122022	Enclosure—R.H. speaker lid (less baffle)
	122023	Enclosure—L.H. speaker lid (less baffle)
	118345	Handle—carrying
	118346	Hinge—L.H. & R.H. hinge on left & right speaker enclosures respectively
	122015	Hinge—R.H. & L.H. hinge on left & right speaker enclosures respectively
	120705	Holder—45 RPM adapter
	118344	Latch—speaker enclosures
	122027	Motorboard—changer
	120866	Nut—tee-nut for mounting changer
	115688	Plate—case vent (includes phono connector)
	122017	Plate—nickel finished, for external power connector
	111579	Retainer—speaker
	112639	Screw—changer mounting (includes grommet)
	122026	Screw—retaining battery cover
	122013	Speaker—4" P.M., 24 ohm v.c.
	122018	Spring—battery
	122014	Transformer—power
	122019	Tube—battery
		<b>ACCESSORIES</b>
	118165	Adapter—spindle, 45 RPM
	10T104	Cable—external DC (optional-extra)
		<b>—order from RCA Sales Corp.—</b>
	1407448-1	Book—customer instruction

APPLY TO YOUR RCA DISTRIBUTOR FOR REPLACEMENT PARTS AND ACCESSORIES



*The "Arabesque"*  
Model VJP 33B—Tan  
Model VJP 33J—Gray

## "VICTROLA"® PHONOGRAPH SERVICE DATA

—File: 1967 No. 33—

### VJP 33 Series Amplifier Chassis RS-235 Record Changer RP-226-49

#### RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY

#### PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201

### SPECIFICATIONS

#### TRANSISTOR COMPLEMENT

(Q401) RCA 121-1	Left Chan. Preamp.
(Q402) RCA 121-1	Right Chan. Preamp.
(Q403) RCA 120-1	Left Chan. Driver
(Q404) RCA 120-1	Right Chan. Driver
(Q405) RCA 113-2	Left Chan. Output
(Q406) RCA 113-2	Right Chan. Output
(Q407) RCA 112-1	Left Chan. Output
(Q408) RCA 112-1	Right Chan. Output
(CR401) Stk. #121484	} Temp. Comp. Bias
(CR402) Stk. #121484	
(CR405) Stk. #117145	Rectifier

#### POWER SUPPLY RATING

120 Volts, 60 cycle ..... 40 watts

#### POWER OUTPUT

Undistorted	2 watts
Maximum	4 watts

#### LOUDSPEAKERS

Two 4" PM ..... 35 ohm v.c. imp.

#### RECORD CHANGER

Turntable Speeds	16 $\frac{2}{3}$ , 33 $\frac{1}{3}$ , 45 and 78 rpm
Record Sizes	7", 10" and 12"
Record Capacity	Up to six same size and speed
Pickup Body (Stock No. 118056)	Stereophonic Ceramic
Stylus (Stock No. 118199)	0.7 mil. Syn. Sapp.

DIMENSIONS (approx.)	Height	Width	Depth
Open	17 $\frac{1}{4}$ "	37"	14 $\frac{1}{8}$ "
Closed	17 $\frac{1}{4}$ "	19"	10 $\frac{1}{2}$ "

### DESCRIPTION

The VJP 33 is a completely self-contained portable stereophonic "Victrola" phonograph designed for the playing of 16 $\frac{2}{3}$ , 33 $\frac{1}{3}$ , 45 and 78 r.p.m. records of 7", 10", or 12" diameter. The record changer will handle a stack of up to six records automatically when they are all of the same size and speed. Provision is also made for the playing of single records manually.

This instrument is housed in a vertically styled "Swingline" case wherein the record changer is mounted on a tray which forms the back of the instrument, when in closed position. In the open position this tray swings down and rests horizontally.

The two speaker enclosures are hinged, one on each side. They fold across the front to complete the closure of the instrument for transporting. These enclosures are mounted on "slip-off" hinges to permit their removal to be set apart for greater stereophonic effect.

The RS-235 chassis, used in this instrument, is completely transistorized and contained on a single RCA solid copper circuit board. Individual volume controls for each channel, to allow for balancing, and a dual tone control are provided for the regulation of the amplifier. The amplifier is mounted to the record changer motorboard thus becoming integral with the changer.

The STR 760 stand will accommodate this instrument.

#### SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject

FOR RECORD CHANGER SERVICING AND PARTS INFORMATION: REFER TO SERVICE DATA—1967 No. 6-51—.



## CHANGER OPERATION

### TO PLAY RECORDS AUTOMATICALLY

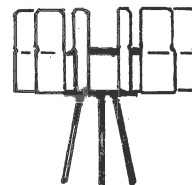
1. Set the SIZE (upper) and SPEED (side) levers to the correct positions corresponding to the size and speed of the records to be played. (Only records of same size and speed should be stacked on the spindle at one time.)
2. Lift the Stabilizer Arm by the point of pivot, swing it aside and place the stack of records (up to six) on the spindle. (Use the 45 adapter if large center hole records are to be played.)
3. Swing the Stabilizer Arm back into position and lower it on top of the records.
4. Move the FUNCTION (lower) lever to the SELECT position and release it. (The lever should return to the AUTO position.)
5. If it is desired to reject the record that is playing and play the next record: Move the FUNCTION lever to SELECT and release it.
6. To STOP the changer at any point, move the FUNCTION lever to the OFF position. This will turn the entire instrument OFF. (If the Stabilizer Arm is in its proper position, the changer will automatically move the FUNCTION lever to the OFF position after the last record has been played.)

### TO PLAY RECORDS MANUALLY

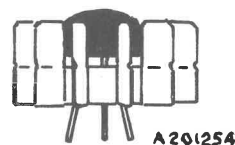
1. Follow steps 1 to 4 above, but in step 4 move the FUNCTION lever to the MANual position.
2. When record has finished playing, lift pickup arm and place it on its rest.
3. Move FUNCTION lever to the OFF position. (The MANual position of the FUNCTION lever disables the automatic feature of the changer.)

## CAUTION

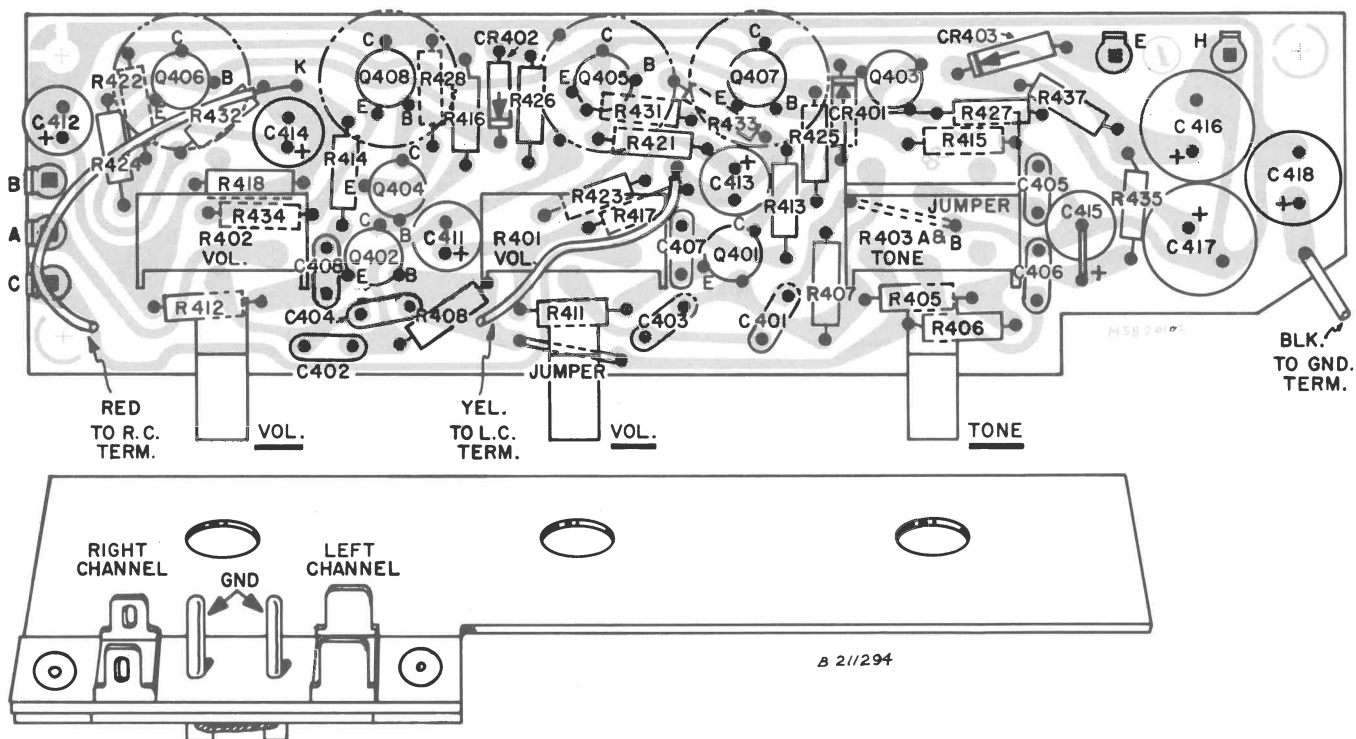
The heat sink radiators used on this chassis must be placed properly on the output transistors to achieve the desired radiation of the heat and to prevent short circuiting of the transistor leads. The radiator must be installed with the free ends of the fins up and the lower ends flush with the bottom of the transistor. In this position the radiator is easily removed and replaced by grasping the free ends of the fins and squeezing them toward the center.



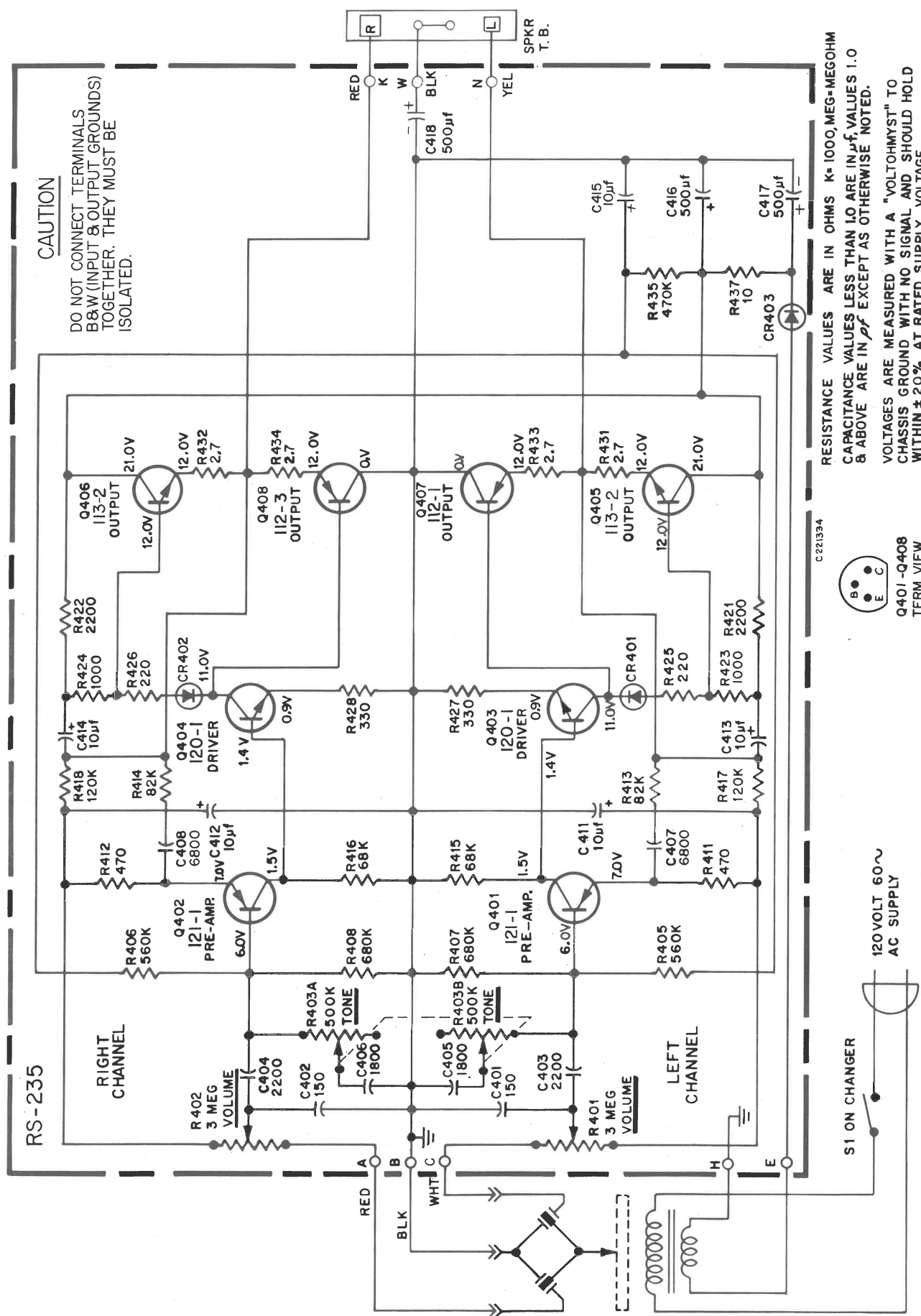
*Correct Position*  
bottom of radiator even with bottom of transistor



*Wrong Position*  
bottom of radiator below bottom of transistor



*Chassis Layout—Component Side*



## CAUTION

DO NOT CONNECT TERMINALS  
B&W (INPUT & OUTPUT GROUNDS)  
TOGETHER. THEY MUST BE  
ISOLATED.

RESISTANCE VALUES ARE IN OHMS K=1000, MEG=MEG OHM  
CAPACITANCE VALUES LESS THAN 1.0 ARE IN  $\mu$ F, VALUES 1.0  
8 ABOVE ARE IN  $\mu$ F EXCEPT AS OTHERWISE NOTED.

VOLTAGES ARE MEASURED WITH A "VOLTOHMYST" TO CHASSIS GROUND WITH NO SIGNAL AND SHOULD HOLD WITHIN  $\pm 20\%$  AT RATED SUPPLY VOLTAGE.

C221334

Q401 - Q408  
TERM VIEW

### Schematic Diagram

## REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
		<b>AMPLIFIER CHASSIS RS 235A</b>			<b>MISCELLANEOUS</b>
	122000	Circuit—complete circuit board	120874		Arm—plastic, pivot arm for mounting brake shoe assembly
		<b>CAPACITORS:</b>	119799		Bracket—changer pivot (part of brake assembly)
C401	103852	150 $\mu f$ $\pm 20\%$ , 500 v, ceramic	119796		Bushing—plastic $\frac{3}{4}$ " o.d., changer pivot bracket
C402	103852	150 $\mu f$ $\pm 20\%$ , 500 v, ceramic	121856		Button—pushbutton for changer release
C403	111130	2200 $\mu f$ $\pm 20\%$ , 100 v, ceramic	121605		Cabinet—center section, VJP 33B
C404	111130	2200 $\mu f$ $\pm 20\%$ , 100 v, ceramic	121606		Cabinet—center section, VJP 33J
C405		1800 $\mu f$ $\pm 20\%$ , 100 v, ceramic	105413		Cable—power cord
C406		1800 $\mu f$ $\pm 20\%$ , 100 v, ceramic	121974		Connector—2 pin male, AC power
C407		6800 $\mu f$ $\pm 100-20\%$ , 100 v, ceramic	120882		Cover—plastic $4\frac{1}{16}$ " lg., for latch 120881
C408		6800 $\mu f$ $\pm 100-20\%$ , 100 v, ceramic	119798		Cushion—rubber $\frac{7}{16}$ " o.d., for stop 119797
C411	116159	10 $\mu f$ , 10 v, electrolytic	121384		Enclosure—R.H. speaker (less grille) VJP 33J
C412	116159	10 $\mu f$ , 10 v., electrolytic	121385		Enclosure—L.H. speaker (less grille) VJP 33J
C413	116159	10 $\mu f$ , 10 v., electrolytic	121609		Enclosure—L.H. speaker (less grille) VJP 33B
C414	116159	10 $\mu f$ , 10 v, electrolytic	121608		Enclosure—R.H. speaker (less grille) VJP 33B
C415	110567	10 $\mu f$ , 15 v, electrolytic	120868		Foot—cabinet center section
C416	117524	500 $\mu f$ , 25 v, electrolytic	121428		Grille—plastic, R.H. speaker
C417	117524	500 $\mu f$ , 25 v, electrolytic	121429		Grille—plastic, L.H. speaker
C418	111789	500 $\mu f$ , 15 v, electrolytic	119313		Grommet—speaker leads
CR401	121484	Diode—output bias	121610		Handle—carrying
CR402	121484	Diode—output bias	119802		Hinge—bottom of R.H. speaker enclosure
CR403	117145	Diode—silicon rectifier	119789		Hinge—bottom of L.H. speaker enclosure
		<b>TRANSISTORS:</b>	119788		Hinge—top of R.H. speaker enclosure
Q401	121467	pre amp., 121-1	119790		Hinge—top of L.H. speaker enclosure
Q402	121467	pre amp., 121-1	121349		Hinge—mounted on cabinet, upper R.H. & lower L.H.
Q403	121660	driver, 120-1	121350		Hinge—mounted on cabinet, upper L.H. & lower R.H.
Q404	121660	driver, 120-1	121435		Holder—45 RPM adaptor
Q405	119982	output, 113-2	121358		Latch—nylon, mounted on speaker enclosures
Q406	119982	output, 113-2	119906		Latch—nylon $2\frac{1}{16}$ " lg., on bottom inside of cabinet
Q407	119983	output, 112-1	120881		Latch—nylon, riveted to changer tray
Q408	119983	output, 112-1	119801		Motorboard—changer
		<b>RESISTORS: <math>\pm 10\%</math>, <math>\frac{1}{2}</math> watt, composition, unless noted otherwise.</b>	119785		Nameplate—RCA Victor
R401	122001	control, "Volume", Left channel	120866		Nut—#8-32, tee-nut for changer mounting
R402	122001	control, "Volume", Right channel	118852		Retainer—speakers
R403A/B	122002	control, "Tone"	112639		Screw—changer mounting (includes grommet)
R405	502456	560,000 ohm	120869		Screw—thumbscrew, brake adjust
R406	502456	560,000 ohm	120865		Shoe—plastic brake shoe assembly including lining & metal bracket
R407	502468	680,000 ohm	116431		Speaker—4" PM, 35 ohm
R408	502468	680,000 ohm	121855		Spring—leaf type for changer release button ( $2\frac{1}{4}$ " lg.)
R411	502147	470 ohm	119787		Spring—leaf, used with latch 121358
R412	502147	470 ohm	119797		Stop—metal $2\frac{1}{4}$ " lg., changer tray
R413	502382	82,000 ohm	121607		Tray—changer, VJP 33B
R414	502382	82,000 ohm	Y7467		Tray—changer, VJP 33J
R415	502368	68,000 ohm	120873		Trim—black plastic strip ( $18\frac{3}{4}$ " lg.)
R416	502368	68,000 ohm	78652		Washer—"C", retaining screw 120869
R417	502412	120,000 ohm			<b>ACCESSORIES</b>
R418	502412	120,000 ohm	121922		Spindle—"45" adapter
R421	502222	2200 ohm			<b>—order from RCA Sales Corporation—</b>
R422	502222	2200 ohm			Book—customer instruction
R423	502210	1000 ohm			
R424	502210	1000 ohm			
R425	502122	220 ohm, $\pm 5\%$			
R426	502122	220 ohm, $\pm 5\%$			
R427	502133	330 ohm			
R428	502133	330 ohm			
R431		2.7 ohm			
R432		2.7 ohm			
R433		2.7 ohm			
R434		2.7 ohm			
R435	502447	470,000 ohm			
R437	502010	10 ohm			

Specifications Subject to Change Without Notice

APPLY TO YOUR RCA DISTRIBUTOR FOR REPLACEMENT PARTS AND ACCESSORIES





# RCA VICTOR

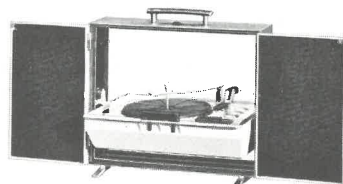


## The "Flourish"

Model VJP 35E—  
Charcoal/Alabaster  
Model VJP 35A—  
Blue/Gray

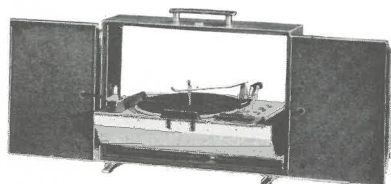
## The "Alma Mater"

Model VJP 37G—  
Green  
Model VJP 37W—  
Walnut Gr./White



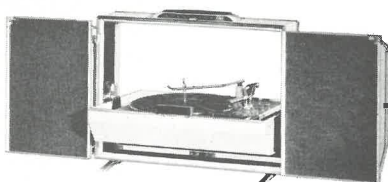
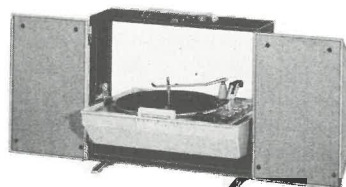
## The "Ranier"

Model VJP 41E—  
Black  
Model VJP 41W—  
Walnut Gr./White  
Model VJP 41J—  
Gray/White



## The "Spinet"

Model VJP 94BK—  
Bronze/Ivory  
Model VJP 94EK—  
Black/Gray



## The "Largo"

Model VJP 96JK—  
Alabaster

## "VICTROLA"® PHONOGRAPH

# SERVICE DATA

—File: 1967 No. 34—

## VJP 35 Series

## VJP 37 Series

Amplifier Chassis RS-236B

Record Changer RP-226-19

## VJP 41 Series

## VJP 94-K Series

## VJP 96-K Series

Amplifier Chassis RS-236B

Record Changer RP-226-12

## RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY  
PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201

## DESCRIPTION

All instruments in these series are portable, completely self-contained stereophonic record playing systems. Speaker enclosures are designed so that they can be spaced from each other to obtain the best stereophonic effect.

All models use the RS-236 chassis which is a completely transistorized dual channel amplifier using eight transistors. All components are mounted on a single RCA solid copper circuit board. Dual controls (Loudness, Bass, Treble) and a Balance control are provided for the regulation of the amplifier.

The speaker enclosures form the front cover of these series of instruments and are hinged, one on each side, to the case. When playing, they are unlatched and swung open, or may be lifted off and set apart for greater stereophonic effect. After the speaker enclosures

are opened, the changer can be lowered into the horizontal position by depressing the release bar located on the changer baseplate near the bottom of the case.

## SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject

## SPECIFICATIONS

## TRANSISTOR COMPLEMENT

(Q401) RCA 121-1	Left Chan. Preamp.
(Q402) RCA 121-1	Right Chan. Preamp.
(Q403) RCA 120-1	Left Chan. Driver
(Q404) RCA 120-1	Right Chan. Driver
(Q405) RCA 120-4	Left Chan. Output
(Q406) RCA 120-4	Right Chan. Output
(Q407) RCA 112-3	Left Chan. Output
(Q408) RCA 112-3	Right Chan. Output
(CR401) Stk. No. 121484	Temp. Comp. Diode
(CR402) Stk. No. 121484	
(CR403) Stk. No. 117145	Rectifier

## POWER SUPPLY RATING

120 Volts, 60 cycles/sec. .... 30 watts

## POWER OUTPUT

Undistorted ..... 3 watts  
Maximum ..... 6 watts

## LOUDSPEAKERS

VJP 35 ..... Two 4" PM 35 ohm v.c. imp.

VJP 37	Four 4" PM 17.5 ohm v.c. imp.
VJP 94-K	Two 4" PM 35 ohm v.c. imp.
VJP 41	Two 3½" PM 35 ohm v.c. imp.
VJP 96-K	

## RECORD CHANGER

Turntable Speeds ..... 16⅔, 33⅓, 45 and 78 rpm  
Record Sizes ..... 7 inch, 10 inch, 12 inch  
Record Capacity ..... Up to six same size and speed  
Pickup ..... Stereophonic Ceramic  
Cartridge (Less Stylus) ..... Stk. No. 122124  
Stylus (0.7 Dia.) ..... Stk. No. 118200

## For Record Changer Servicing Information

Refer to Record Changer Service Data

—File: 1967 No. 6 & 6-51—

DIMENSIONS (approx.)	Height	Width	Depth
VJP 35,37,94-K (closed)	17¼"	19"	10½"
(open)	17¼"	37"	14⅛"
VJP 41,96-K (closed)	17½"	21⅛"	10½"
(open)	17½"	49¾"	13¾"

## SWING-DOWN-TRAY BRAKE OPERATION AND ADJUSTMENT

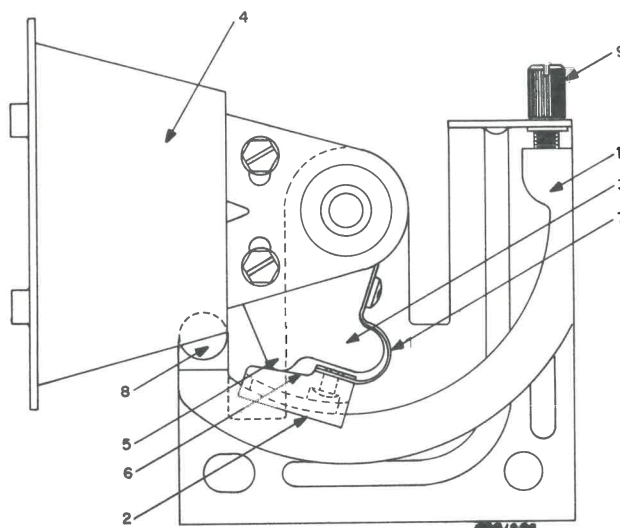
The record changer swing-down-tray incorporates a braking mechanism to retard the drop-down speed of the changer tray, upon opening, without offering resistance to its upward motion, when closing. This mechanism is located inside of the cabinet on the right hand side at the tray pivot.

The brake mechanism consists of a "J" shaped piece of ferrite (1), a "shoe" (2), a control arm (3), and a tray hanger (4). The "J" piece (1) is fastened to the case and acts as a track upon which the "shoe" (2) rides. The control arm (3), as its name implies, controls the action of the shoe and, with the changer tray, is fastened to the tray hanger (4). Downward motion of the changer tray causes a cam (5) on the control arm (3) to ride up an incline (6) on the brake shoe (2) forcing it against the track (1)

to slow the downward speed. When the changer tray is pushed up, the cam (5) rides down the incline (6) and the spring (7), connecting the control arm and brake shoe, causes the brake shoe to release its pressure on the track.

The short end of the "J" track (1) is anchored to the case by a pivot (8) and the long end is anchored by an adjustment screw (9). The brake pressure, and subsequent speed of descent is regulated by raising or lowering the "J" track by means of the adjusting screw (9). Should the tray descend too fast—turn the adjusting screw (9) clockwise to raise the "J" track and slow the descent of the changer tray.

An adjustable stop is provided on the left hand tray hanger to position the changer tray horizontally when in its player position.



Swing-Down-Tray Brake Assembly





C401.....5B	C412.....2A	C423.....3B	Q404.....3A	R404.....5C	R415.....3B	R426.....2A	R436.....1A	K.....4A
C402.....5B	C413.....5A		Q405.....6A	R405.....5C	R416.....3B	R427.....6A	R437.....1C	L.....4A
C403.....5C	C414.....2A	CR401.....6A	Q406.....1A	R406A/B.....6C	R417.....4A	R428.....1A	R438.....3A	M.....4A
C404.....5B	C415.....6B	CR402.....1A	Q407.....5A	R407.....1C	R418.....3A	R431.....6A		N.....1B
C405.....2B	C416.....2B	CR403.....4A	Q408.....2A	R408A/B.....3C	R421.....5A	R432.....1A	TERMINALS	P.....3A
C406.....3C	C417.....4A			R411.....4B	R422.....2A	R433.....4A	A.....1B	R.....3A
C407.....5B	C418.....3A	Q401.....5A	R401A/B.....4C	R412.....3B	R423.....5A	R434.....3A	D.....1B	T.....6B
C408.....2B	C421.....3A	Q402.....2A	R402.....4C	R413.....4B	R424.....3A	R435.....6A	F.....1B	Y.....3A
C411.....5A	C422.....4A	Q403.....5A	R403.....3C	R414.....3B	R425.....5A			

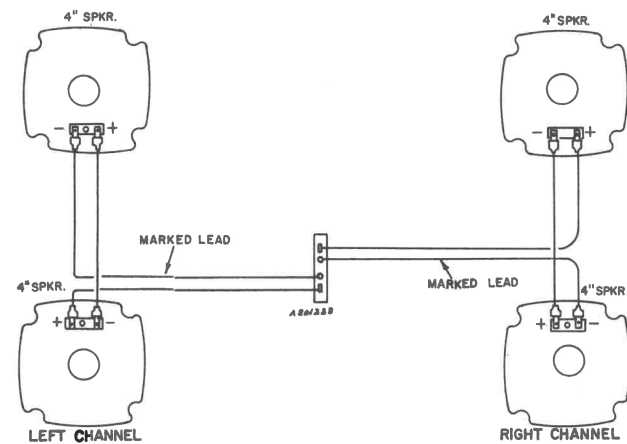


**TERMINAL VIEW**

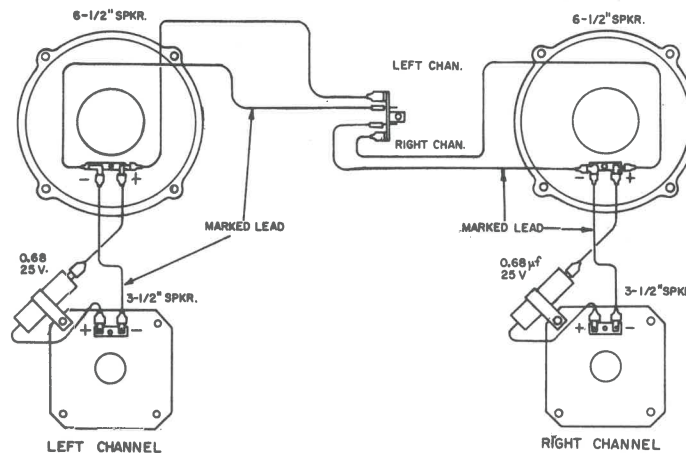
Q 401, 402 Q 403-408

1967 No. 34





Speaker Wiring Diagram—VJP 37



Speaker Wiring Diagram—VJP 41, 96-K

## REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION
<b>AMPLIFIER CHASSIS RS 236B</b>		
	121482	Circuit—board Assembly, complete
<b>CAPACITORS:</b>		
C401	107297	33 $\mu$ f, $\pm 20\%$ , 500 v., ceramic, N750
C402	107297	33 $\mu$ f, $\pm 20\%$ , 500 v., ceramic, N750
C403		1500 $\mu$ f, $\pm 20\%$ , 100 v., ceramic
C404		1500 $\mu$ f, $\pm 20\%$ , 100 v., ceramic
C405	111130	2200 $\mu$ f, $\pm 20\%$ , 100 v., ceramic
C406	111130	2200 $\mu$ f, $\pm 20\%$ , 100 v., ceramic
C407	102230	470 $\mu$ f, $\pm 20\%$ , 500 v., ceramic
C408	102230	470 $\mu$ f, $\pm 20\%$ , 500 v., ceramic
C411		0.01 $\mu$ f, $\pm 20\%$ , 100 v., ceramic
C412		0.01 $\mu$ f, $\pm 20\%$ , 100 v., ceramic
C413	106114	10 $\mu$ f, 10 v., electrolytic
C414	106114	10 $\mu$ f, 10 v., electrolytic
C415	119358	100 $\mu$ f, 15 v., electrolytic
C416	119358	100 $\mu$ f, 15 v., electrolytic
C417	115369	50 $\mu$ f, 6 v., electrolytic
C418	115369	50 $\mu$ f, 6 v., electrolytic
C421	117524	500 $\mu$ f, 25 v., electrolytic
C422	117524	500 $\mu$ f, 25 v., electrolytic
C423	110567	10 $\mu$ f, 15 v., electrolytic
CR401	121484	Diode—bias
CR402	121484	Diode—bias
CR403	117145	Diode—silicon rectifier
<b>TRANSISTORS:</b>		
Q401	121467	pre amplifier, 121-1
Q402	121467	pre-amplifier, 121-1
Q403	121660	driver, 120-1 or SE6002
Q404	121660	driver, 120-1 or SE6002
Q405	121663	output, 120-4 or 2N3569
Q406	121663	output, 120-4 or 2N3569

SYMBOL NO.	STOCK NO.	DESCRIPTION
Q407	121659	output, 112-3 or 2N4355
Q408	121659	output, 112-3 or 2N4355
<b>RESISTORS: <math>\pm 10\%</math>, <math>\frac{1}{2}</math> watt composition unless noted otherwise.</b>		
R401A/B	121473	control, "Bass"
R402	502415	150,000 ohm
R403	502415	150,000 ohm
R404	502422	220,000 ohm
R405	502422	220,000 ohm
R406A/B	121475	control, "Loudness"
R407	121470	control, "Balance"
R408A/B	121474	control, "Treble"
R411	502468	680,000 ohm
R412	502468	680,000 ohm
R413	502522	2.2 megohm
R414	502522	2.2 megohm
R415	502456	560,000 ohm
R416	502456	560,000 ohm
R417	502368	68,000 ohm
R418	502368	68,000 ohm
R421	502368	68,000 ohm
R422	502368	68,000 ohm
R423	502412	120,000 ohm
R424	502412	120,000 ohm
R425	502147	470 ohm
R426	502147	470 ohm
R427	502120	200 ohm $\pm 5\%$
R428	502120	200 ohm $\pm 5\%$
R431	502233	3300 ohm
R432	502233	3300 ohm
R433	502118	180 ohm
R434	502118	180 ohm
R435		2.7 ohm
R436		2.7 ohm
R437		10 ohm
R438	502010	470,000 ohm
	502447	Shield—heat sink, for Q405-408
	115799	

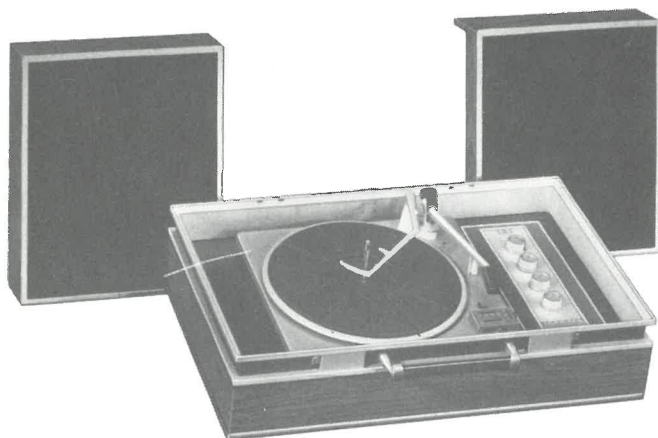
## REPLACEMENT PARTS (Cont.)

SYMBOL NO.	STOCK NO.	DESCRIPTION
<b>MISCELLANEOUS</b>		
	120874	Arm—plastic, pivot arm for mounting brake shoe assembly
	121422	Baffle—R.H. speaker (includes grille cloth) VJP 37G
	121423	Baffle—L.H. speaker (includes grille cloth) VJP 37G
	121425	Baffle—L.H. speaker (includes grille cloth) VJP 37W
	121424	Baffle—R.H. speaker (includes grille cloth) VJP 37W
	121409	Baffle—L.H. speakers (includes grille cloth) VJP 41E
	121408	Baffle—R.H. speakers (includes grille cloth) VJP 41E
	121413	Baffle—L.H. speakers (includes grille cloth) VJP 41J
	121412	Baffle—R.H. speakers (includes grille cloth) VJP 41J
	121411	Baffle—L.H. speakers (includes grille cloth) VJP 41W
	121410	Baffle—R.H. speakers (includes grille cloth) VJP 41W
	121427	Baffle—L.H. speaker (includes grille cloth) VJP 94BK
	121426	Baffle—R.H. speaker (includes grille cloth) VJP 94BK
	121415	Baffle—L.H. speakers (includes grille cloth) VJP 96JK
	121414	Baffle—R.H. speakers (includes grille cloth) VJP 96JK
	119799	Bracket—changer pivot (part of brake assembly) VJP 35A-E, VJP 37G-W, VJP 94BK
	119905	Bracket—changer pivot (part of brake assembly) VJP 41E-J-W, VJP 96JK
	119796	Bushing—plastic $\frac{3}{4}$ " o.d., changer pivot bracket
	121856	Button—pushbutton for changer release, VJP 35A-E, VJP 37G-W, VJP 94BK
	121857	Button—pushbutton for changer release, VJP 41E-J-W, VJP 96JK
	121361	Cabinet—center section, VJP 35A
	121362	Cabinet—center section, VJP 35E
	121363	Cabinet—center section, VJP 37G
	121364	Cabinet—center section, VJP 37W
	121366	Cabinet—center section, VJP 41J
	121367	Cabinet—center section, VJP 41W
	121368	Cabinet—center section, VJP 41W
	121369	Cabinet—center section, VJP 94BK
	121369	Cabinet—center section, VJP 96JK
	105413	Cable—power cord
	111972	Capacitor—0.68 $\mu$ f, 25v., electrolytic, spkr. crossover, VJP 41E-J-W, VJP 96JK
	105406	Connector—2 pin male, AC power on changer tray, VJP 41E-J-W, VJP 96J
	121974	Connector—2 pin male, AC power, VJP 35A-E, VJP 37G-W, VJP 94BK
	120882	Cover—plastic $4\frac{1}{8}$ " lg., for latch 120881
	119798	Cushion—rubber $\frac{1}{16}$ " o.d., for stop 119797
	121384	Enclosure—R.H. speaker (less grille) VJP 35A
	121385	Enclosure—L.H. speaker (less grille) VJP 35A
	121382	Enclosure—R.H. speaker (less grille) VJP 35E
	121383	Enclosure—L.H. speaker (less grille) VJP 35E
	121387	Enclosure—L.H. speaker (less baffle) VJP 37G
	121386	Enclosure—R.H. speaker (less baffle) VJP 37G
	121389	Enclosure—L.H. speaker (less baffle) VJP 37W
	121388	Enclosure—R.H. speaker (less baffle) VJP 37W
	121373	Enclosure—L.H. speakers (less baffle) VJP 41E
	121372	Enclosure—R.H. speakers (less baffle) VJP 41E
	121375	Enclosure—L.H. speakers (less baffle) VJP 41J-W
	121374	Enclosure—R.H. speakers (less baffle) VJP 41J-W
	121391	Enclosure—L.H. speaker (less baffle) VJP 94BK
	121390	Enclosure—R.H. speaker (less baffle) VJP 94BK
	121380	Enclosure—R.H. speakers (less baffle) VJP 96JK
	121381	Enclosure—L.H. speakers (less baffle) VJP 96JK
	119791	Foot—cabinet section
	121428	Grille—plastic, R.H. speaker, VJP 35A-E
	121429	Grille—plastic, L.H. speaker, VJP 35A-E
	119313	Grommet—speaker leads
	119792	Handle—carrying, VJP 35A-E

SYMBOL NO.	STOCK NO.	DESCRIPTION
	122763	Handle—carrying, VJP 37G-W
	118438	Handle—carrying, VJP 41E-J-W
	119794	Handle—carrying, VJP 94BK
	119793	Handle—carrying, VJP 96JK
	119802	Hinge—bottom of R.H. speaker enclosure, VJP 35A-E, VJP 37G-W, VJP 94BK
	119789	Hinge—bottom of L.H. speaker enclosure, VJP 35A-E, VJP 37G-W, VJP 94BK
	119788	Hinge—top of R.H. speaker enclosure, VJP 35A-E, VJP 37G-W, VJP 94BK
	119790	Hinge—top of L.H. speaker enclosure, VJP 35A-E, VJP 37G-W, VJP 94BK
	119899	Hinge—top of R.H. speaker enclosure, VJP 41E-J-W, VJP 96JK
	119901	Hinge—top of L.H. speaker enclosure, VJP 41E-J-W, VJP 96JK
	119898	Hinge—bottom of R.H. speaker enclosure, VJP 41E-J-W, VJP 96JK
	119900	Hinge—bottom of L.H. speaker enclosure, VJP 41E-J-W, VJP 96JK
	121349	Hinge—mounted on cabinet, upper R.H. & lower L.H., VJP 35A-E, VJP 37G-W, VJP 94BK
	121350	Hinge—mounted on cabinet, upper L.H. & lower R.H., VJP 35A-E, VJP 37G-W, VJP 94BK
	121351	Hinge—mounted on cabinet, upper R.H. & lower L.H., VJP 41E-J-W, VJP 96JK
	121352	Hinge—mounted on cabinet, upper L.H. & lower R.H., VJP 41E-J-W, VJP 96JK
	121435	Holder—45 RPM adaptor
	121358	Latch—nylon, mounted on speaker enclosures, VJP 35A-E, VJP 37G-W, VJP 94BK
	121359	Latch—nylon, mounted on speaker enclosures, VJP 41E-J-W, VJP 96JK
	119906	Latch—nylon $2\frac{1}{16}$ " lg., on bottom inside of cabinet
	120881	Latch—nylon, riveted to changer tray
	119801	Motorboard—changer, VJP 35A-E, VJP 37G-W, VJP 94BK
	119909	Motorboard—changer, VJP 41E-J-W, VJP 96JK
	119783	Nameplate—solid state stereo marking, VJP 35A-E
	121432	Nameplate—solid state four speaker stereo marking, VJP 37G-W
	121434	Nameplate—solid state four speaker stereo marking, VJP 41E-J-W
	121433	Nameplate—solid state stereo marking, VJP 94BK
	119784	Nameplate—solid state & four speaker stereo marking, VJP 96JK
	120866	Nut—#8-32, tee-nut for changer mounting
	118852	Retainer—speakers, VJP 35A-E, VJP 41E-J-W, VJP 96JK
	111648	Retainer—speakers, VJP 37G-W, VJP 94BK
	112639	Screw—changer mounting (includes grommet)
	120869	Screw—thumbscrew, brake adjust
	120865	Shoe—plastic brake shoe assembly including lining & metal bracket
	116431	Speaker—4" PM, 35 ohm, VJP 35A-E VJP 94BK
	120172	Speaker—4" PM, 17.5 ohm, VJP 37G-W
	111986	Speaker—3" PM, 35 ohm, VJP 41E-J-W, VJP 96JK
	111982	Speaker—6" PM, 35 ohm, VJP 41E-J-W, VJP 96JK
	121855	Spring—leaf type for changer release button ( $2\frac{1}{4}$ " lg.)
	119787	Spring—leaf, used with latch 121358, VJP 35A-E, VJP 37G-W, VJP 94BK
	121356	Spring—leaf type $1\frac{1}{2}$ " lg., used with latch 121359, VJP 41E-J-W, VJP 96JK
	119797	Stop—metal $2\frac{1}{4}$ " lg., changer tray
	121392	Tray—changer, VJP 35A
	121393	Tray—changer, VJP 35E
	121394	Tray—changer, VJP 37G
	121395	Tray—changer, VJP 37W
	121396	Tray—changer, VJP 41E
	121397	Tray—changer, VJP 41J-W
	Y7466	Tray—changer, VJP 94BK
	121399	Tray—changer, VJP 96JK
	119795	Trim—handle, with RCA Victor marking, VJP 94BK
	119907	Trim—handle, with RCA Victor marking, VJP 96JK
	120873	Trim—black plastic strip ( $18\frac{3}{4}$ " lg.) VJP 35A-E, VJP 37G-W, VJP 94BK
	120886	Trim—black plastic strip ( $20\frac{3}{4}$ " lg.) VJP 41E-J-W, VJP 96JK
	78652	Washer—"C", retaining screw 120869
<b>—order from RCA Sales Corporation—</b>		
	1407419-1	Book—customer instruction

Specifications Subject to Change Without Notice.

APPLY TO YOUR RCA DISTRIBUTOR FOR REPLACEMENT PARTS AND ACCESSORIES



*The "Madrigal"*  
Model VJP 44W—Walnut Gr.

## "VICTROLA"® PHONOGRAPH SERVICE DATA

—File: 1967 No. 34-S1—

**Model VJP 44**  
**Amplifier Chassis RS-236B**  
**Record Changer RP-226-12A**

### RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY

#### PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201

### REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION
		<b>MISCELLANEOUS</b>
	120905	Bracket—mounting aluminum trim on case
	120906	Bracket—R.H. speaker enclosure catch
	120907	Bracket—L.H. speaker enclosure catch
	123648	Bushing—plastic, for knob
	124181	Case—changer base section
	117157	Cable—power cord
	124178	Cloth—grille
	124035	Escutcheon—balance, treble, bass, loudness
	124179	Enclosure—L.H. speaker (includes grille cloth)
	124180	Enclosure—R.H. speaker (includes grille cloth)
	124038	Handle—carrying
	120908	Hinge—speaker enclosures
	121435	Holder—45 RPM adaptor
	124036	Knob—balance, treble, bass, loudness
	120103	Latch—L.H. speaker enclosure, mounts on case
	120104	Latch—R.H. speaker enclosure, mounts on case
	124037	Motorboard—changer
	120866	Nut—tee-nut, changer mounting
	120909	Plate—cover for latch 120103 & 120104
	115688	Plate—case vent (includes audio connector)
	111579	Retainer—speaker
	112639	Screw—changer mounting (includes grommet)
	115817	Speaker—7" x 5" PM, 35 ohm v.c.
		<b>ACCESSORIES</b>
	121922	Spindle—"45" adapter
		—order from RCA Sales Corporation—
	1407458-1	Book—customer instruction

Specifications Subject to Change Without Notice

**APPLY TO YOUR RCA DISTRIBUTOR FOR  
REPLACEMENT PARTS AND ACCESSORIES**

### SPECIFICATIONS

#### LOUDSPEAKERS

Two—7"x5" PM .....35 ohm v.c.

DIMENSIONS (approx.)	Height	Width	Depth
Closed	8½"	24"	14½"

**FOR SERVICING AND PARTS INFORMATION ON THE  
RS-236B AMPLIFIER, REFER TO SERVICE DATA—File:  
1967 No. 34—.**

**FOR SERVICING AND PARTS INFORMATION ON THE  
RP-226-12A RECORD CHANGER, REFER TO SERVICE  
DATA—File: 1967 No. 6 & 6-S1—.**

#### SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject







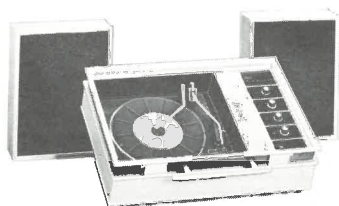
# RCA VICTOR



*The "Bachelor"*

Model VJP 55E—Black  
Model VJP 55W—  
Walnut Gr./Bronze

*The "Apartment"*  
Model VJP 65E—Black



*The "Bolero"*

Model VJP 98WK—  
Walnut Gr./Black

## "VICTROLA"® PHONOGRAPH

### SERVICE DATA

—File: 1967 No. 35—

#### VJP 55, 98-K Series

Record Changer RP-226-12BD

#### VJP 65 Series

Record Changer RP-225-12ABD

#### Amplifier Chassis RS-229A

#### RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY

#### PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201

### SPECIFICATIONS

#### TRANSISTOR COMPLEMENT

(Q401) Type 121-1	Left Chan. Preamp
(Q402) Type 121-1	Right Chan. Preamp
(Q403) Type 120-3	Left. Chan. Driver
(Q404) Type 120-3	Right Chan. Driver
(Q405) Type 122-1	Left Chan. Compensator
(Q406) Type 122-1	Right Chan. Compensator
(Q407) Type 120-1	Left Chan. Pwr. Driver
(Q408) Type 120-1	Right Chan. Pwr. Driver
(Q411) Type 112-2	Left Chan. Pwr. Driver
(Q412) Type 112-2	Right Chan. Pwr. Driver
(Q413) Type 123-2	Left Chan. Output
(Q414) Type 123-2	Right Chan. Output
(Q415) Type 123-2	Left Chan. Output
(Q416) Type 123-2	Right Chan. Output
(CR401) Stock No. 121468	Rectifier

#### MUSIC POWER OUTPUT (E.I.A. RS-234)

Maximum	20 watts
Undistorted	10 watts

#### LOUDSPEAKERS

VJP 55, 98-K	{ 2—9" x 6" PM 22 ohm v.c. 4—3½" PM "Tweeter," 35 ohm v.c.
VJP 65	{ 2—9" x 6" PM 8.5 ohm v.c. 4—3½" PM "Tweeter," 20 ohm v.c.

#### POWER SUPPLY RATING

120 volts, 60 cycle/sec.	35 watts
--------------------------	----------

#### RECORD CHANGER

Turntable Speeds	16⅔, 33⅓, 45 and 78 r.p.m.
Record Sizes	7", 10" and 12"
Record Capacity	Up to six same size and speed
Pick up Body (VJP 55, 98-K)	
(stock no. 122123)	Stereophonic Ceramic
Pick up Body (VJP 65)	
(stock no. 117331)	Stereophonic Ceramic
Styli (stock no. 118198)	0.7 mil. dia. and 3 mil. syn. sapp.

#### DIMENSIONS (approx.)

	Height	Width	Depth
VJP 55, 98-K (open)	17½"	49¾"	13¾"
(closed)	17½"	21⅛"	10½"
VJP 65	12"	24¾"	15½"

#### SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject

## DESCRIPTION

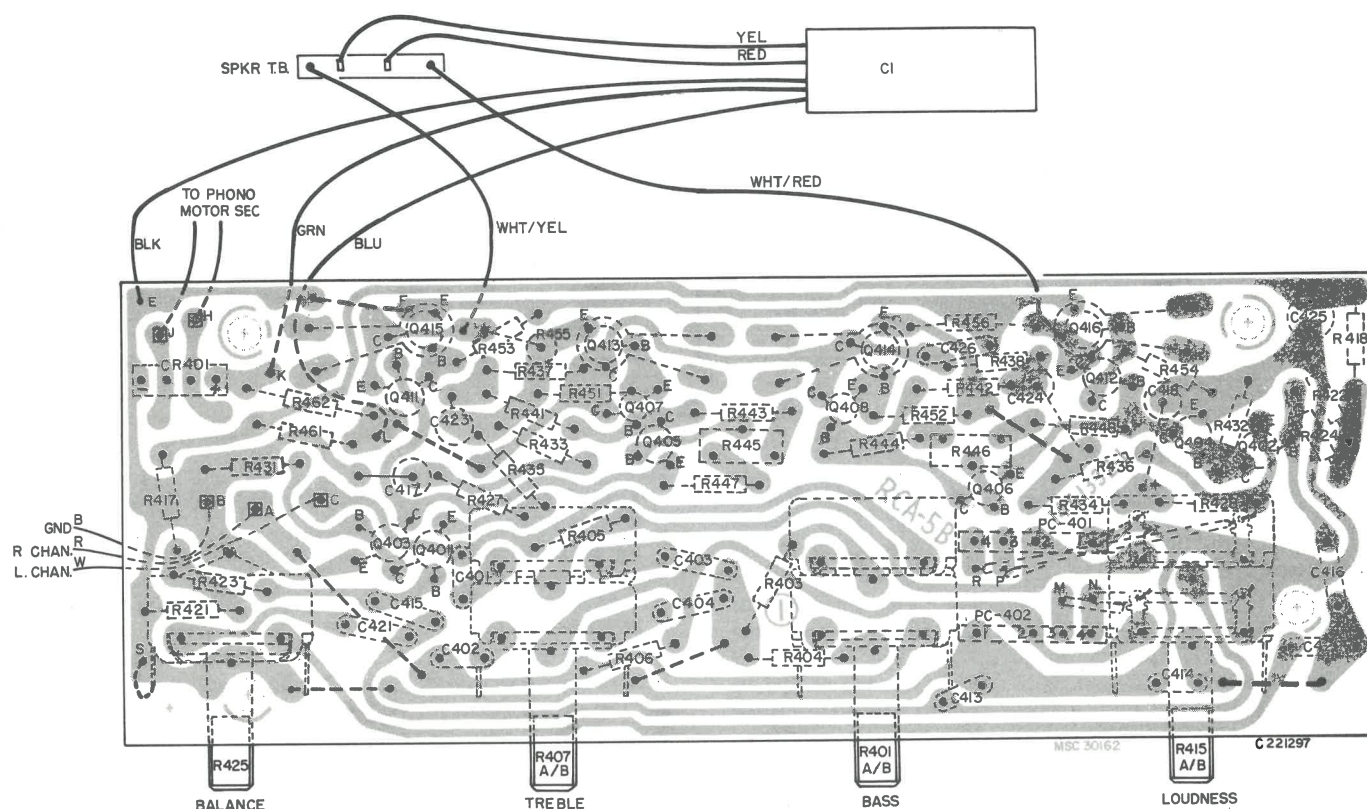
The VJP 55 and VJP 98-K are portable transistorized stereophonic record players designed to play 7 inch, 10 inch or 12 inch records at speeds of  $16\frac{2}{3}$ ,  $33\frac{1}{3}$ , 45 or 78 r.p.m. They are housed in a vertically styled "See Thru" case with a "Swing Down" changer tray and two detachable speaker units. When closed for carrying, the changer tray swings back and up and latches to form the rear of the case and the speaker units fold across the front to complete the closure of the case.

The VJP 65 is housed in a horizontally styled case in which the two speaker units form the lid. When playing the speaker units are lifted off and set apart on each side of the base unit.

The RS-229 amplifier is mounted to the motorboard in the VJP 55 and VJP 98-K forming an integral unit with the changer. Removal of the bottom cover of the changer tray exposes the amplifier and changer

mechanisms for servicing makes it unnecessary to remove the changer from the case. In the VJP 65 the amplifier is mounted separate from the changer but removal of the bottom of the case will also expose the amplifier and changer mechanisms. The RS-229 amplifier is a four stage direct coupled transistorized dual-channel amplifier. Four controls (Volume, Bass, Treble, Balance) are provided for its regulation. Power for the amplifier is obtained from a secondary winding on the changer motor thus providing powerline isolation without the use of a separate power transformer.

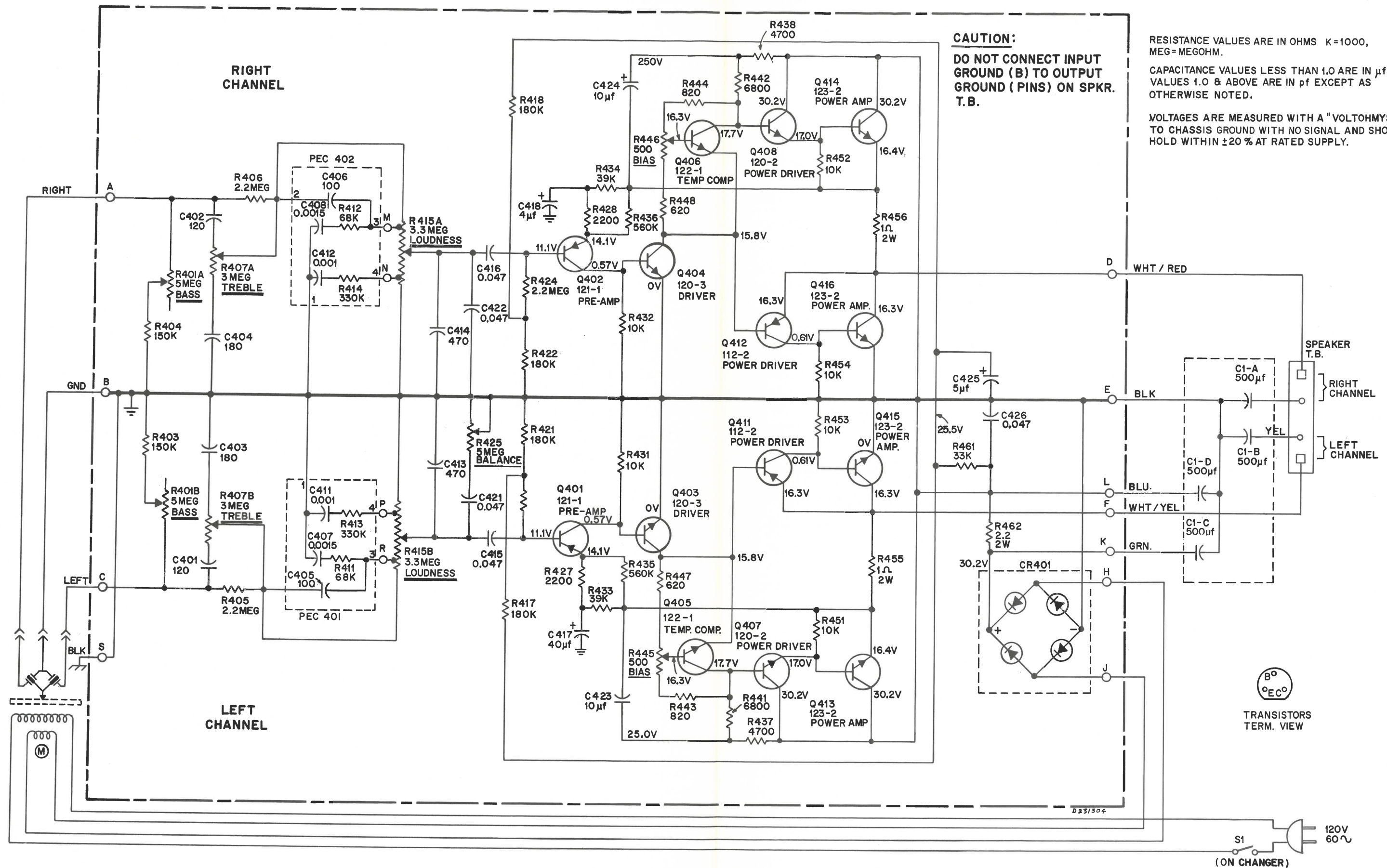
**FOR RECORD CHANGER SERVICING AND PARTS INFORMATION: REFER TO SERVICE DATA 1967 No. 6-S1.**



Chassis Layout

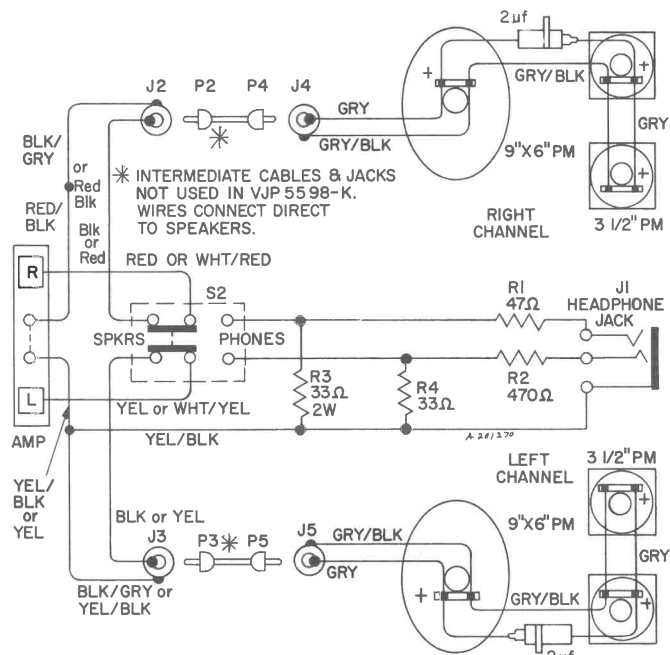
## VJP 65 CAUTION

When assembling control panel to instrument, be sure to use insulating washers on earphone jack to prevent chassis (input) and earphone (output) grounds being connected together.



Schematic Diagram





Speaker Wiring Diagram

REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION
<b>AMPLIFIER ASSEMBLY RS 229A</b>		
<b>CAPACITORS:</b>		
C1A/B/C/D	121479	500/500/500/500 $\mu$ f, 25/25/35/35 v., electrolytic
C401		120 $\mu$ f, $\pm 10\%$ , 500 v., ceramic
C402		120 $\mu$ f, $\pm 10\%$ , 500 v., ceramic
C403	105249	180 $\mu$ f, $\pm 1$ $\mu$ f, 500 v., ceramic, N750
C404	105249	180 $\mu$ f, $\pm 1$ $\mu$ f, 500 v., ceramic, N750
C405		part of PEC401
C406		part of PEC402
C407		part of PEC401
C408		part of PEC402
C411		part of PEC401
C412		part of PEC402
C413	102230	470 $\mu$ f, $\pm 10\%$ , 500 v., ceramic
C414	102230	470 $\mu$ f, $\pm 10\%$ , 500 v., ceramic
C415	116647	0.047 $\mu$ f, $\pm 20\%$ , 100 v., mylar
C416	116647	0.047 $\mu$ f, $\pm 20\%$ , 100 v., mylar
C417	121478	40 $\mu$ f, 35 v., electrolytic
C418	121478	40 $\mu$ f, 35 v., electrolytic
C421	111837	0.047 $\mu$ f, $\pm 20\%$ , 100 v., ceramic
C422	111837	0.047 $\mu$ f, $\pm 20\%$ , 100 v., ceramic
C423	110567	10 $\mu$ f, 15 v., electrolytic
C424	110567	10 $\mu$ f, 15 v., electrolytic
C425	121480	5 $\mu$ f, 35 v., electrolytic
C426	116647	0.047 $\mu$ f, $\pm 20\%$ , 100 v., mylar
CR401	121468	Diode—rectifier
PEC401	121483	Circuit—printed component
PEC402	121483	Circuit—printed component
<b>TRANSISTORS:</b>		
Q401	121467	pre amp., 121-1
Q402	121467	pre amp., 121-1
Q403	121662	driver, SE6002 or 120-3
Q404	121662	driver, SE6002 or 120-3
Q405	121664	temp. compensating, 2N3693 or 122-1
Q406	121664	temp. compensating, 2N3693 or 122-1
Q407	121661	power driver, SE6002 or 120-2
Q408	121661	power driver, SE6002 or 120-2
Q411	121658	power driver, 2N3645 or 112-2

SYMBOL NO.	STOCK NO.	DESCRIPTION
Q412	121658	power driver, 2N3645 or 112-2
Q413		power amp., RCA 40347 or 123-2
Q414		power amp., RCA 40347 or 123-2
Q415		power amp., RCA 40347 or 123-2
Q416		power amp., RCA 40347 or 123-2
<b>RESISTORS: <math>\pm 10\%</math>, 1/2 watt, composition, unless noted otherwise.</b>		
R401A/B	RS236	control, bass
R403	502415	150,000 ohm
R404	502415	150,000 ohm
R405	502522	2.2 megohm
R406	502522	2.2 megohm
R407A/B	121471	control, treble
R411		part of PEC401
R412		part of PEC402
R413		part of PEC401
R414		part of PEC402
R415A/B	121472	control, loudness
R417	502418	180,000 ohm
R418	502418	180,000 ohm
R421	502418	180,000 ohm
R422	502418	180,000 ohm
R423	502522	2.2 megohm
R424	502522	2.2 megohm
R425	RS236	control, balance
R427	502222	2200 ohm
R428	502222	2200 ohm
R431	502310	10,000 ohm
R432	502310	10,000 ohm
R433	502339	39,000 ohm
R434	502339	39,000 ohm
R435	502456	560,000 ohm
R436	502456	560,000 ohm
R437	502247	4700 ohm
R438	502247	4700 ohm
R441	502268	6800 ohm
R442	502268	6800 ohm
R443	502182	820 ohm, $\pm 5\%$
R444	502182	820 ohm, $\pm 5\%$
R445	121476	control, bias
R446	121476	control, bias
R447	502162	620 ohm, $\pm 5\%$

REPLACEMENT PARTS (Continued)

SYMBOL NO.	STOCK NO.	DESCRIPTION
R448	502162	620 ohm, $\pm 5\%$
R451	502310	10,000 ohm
R452	502310	10,000 ohm
R453	502310	10,000 ohm
R454	502310	10,000 ohm
R455		1 ohm, $\pm 10\%$ , 2 w., wire wound
R456		1 ohm, $\pm 10\%$ , 2 w., wire wound
R461	502333	33,000 ohm
R462		2.2 ohm, $\pm 10\%$ , 2 w., wire wound
	121481	Circuit—complete printed board
	115799	Shield—heat sink, for Q413-416
<b>MISCELLANEOUS</b>		
	120874	Arm—plastic, pivot arm for mounting brake shoe assembly, VJP 55, VJP 98-JK
<b>BAFFLES:</b>		
	121416	R.H. speakers (includes grille cloth) VJP 55E
	121417	L.H. speakers (includes grille cloth) VJP 55E
	121418	R.H. speakers (includes grille cloth) VJP 55W
	121419	L.H. speakers (includes grille cloth) VJP 55W
	121420	R.H. speakers (includes grille cloth) VJP 98WK
	121421	L.H. speaker (includes grille cloth) VJP 98WK
	120094	speaker (includes grille cloth) VJP 65E
	120092	relief (includes grille cloth) VJP 65E
	120093	relief (includes grille cloth) VJP 65E
	119905	Bracket—changer pivot (part of brake assembly) VJP 55, VJP 98-K
	119882	Bracket—mounting for headphone switch assembly, VJP 55, VJP 98-K
	119796	Bushing—plastic 3/8" o.d., changer pivot bracket, VJP 55, VJP 98-K
	123648	Bushing—plastic, 13/16" o.d., for knob 123652, VJP 65E
	121857	Button—pushbutton for changer release, VJP 55, VJP 98-K
	121371	Cabinet—center section, VJP 55W, VJP 98WK
	121370	Cabinet—center section, VJP 55E
	105413	Cable—power cord, VJP 55, VJP 98-K
	70392	Cable—power cord, VJP 65
	115189	Capacitor—2 $\mu$ f, 25 v., electrolytic
	123660	Case—changer section (less bottom panel) VJP 65E
	120111	Catch—mounted on R.H. speaker enclosure, VJP 65E
	120112	Catch—mounted on L.H. speaker enclosure, VJP 65E
J1	111963	Connector—headphone jack
J2 to J4	116769	Connector—speaker jacks, VJP 65E
J11	105406	Connector—2 pin male, AC power on changer tray, VJP 55, VJP 98-K
	120882	Cover—plastic, 4 1/16" lg. for latch 120881
	120109	Cover—metal, for latch 120104
	120110	Cover—metal, for latch 120103
	119798	Cushion—rubber 1/8" o.d., for stop 119797
	121376	Enclosure—R.H. speakers (less baffle) VJP 55E, VJP 98WK
	121377	Enclosure—L.H. speakers (less baffle) VJP 55E, VJP 98WK
	121378	Enclosure—R.H. speakers (less baffle) VJP 55W
	121379	Enclosure—L.H. speakers (less baffle) VJP 55W
	123661	Enclosure—R.H. speaker (less baffles) VJP 65E
	123662	Enclosure—L.H. speaker (less baffles) VJP 65E
	119883	Escutcheon—for headphone switch & jack assembly, VJP 55, VJP 98-K
	123651	Escutcheon—amplifier controls, VJP 65E
	119791	Foot—cabinet, VJP 55, VJP 98-K
	120115	Foot—plastic, 2 3/8" x 7/16", VJP 65E
	120106	Foot—plastic, 3/16" dia., VJP 65E
	119313	Grommet—speaker leads, VJP 55, VJP 98-K

SYMBOL NO.	STOCK NO.	DESCRIPTION
	121355	Handle—carrying, VJP 55, VJP 98-K
	120105	Handle—carrying, VJP 65E
<b>HINGES:</b>		
	119899	top R.H. speaker enclosure, VJP 55, VJP 98-K
	119901	top L.H. speaker enclosure, VJP 55, VJP 98-K
	119898	bottom R.H. speaker enclosure, VJP 55, VJP 98-K
	119900	bottom L.H. speaker enclosure, VJP 55, VJP 98-K
	121351	mounted on cabinet, upper R.H. & lower L.H., VJP 55, VJP 98-K
	121352	mounted on cabinet, upper L.H. & lower R.H., VJP 55, VJP 98-K
	120108	R. & L. speaker enclosures, VJP 65E
	121435	Holder—45 RPM adaptor
	123652	Knob—loudness, bass, treble, balance, VJP 65E
	121359	Latch—nylon, mounted on speaker enclosures, VJP 55, VJP 98-K
	119906	Latch—nylon, 2 1/16" lg., bottom inside of cabinet, VJP 55, VJP 98-K
	120881	Latch—nylon, riveted to changer tray, VJP 55, VJP 98-K
	120104	Latch—for R.H. speaker enclosure, VJP 65
	120103	Latch—for L.H. speaker enclosure, VJP 65
	119908	Motorboard—changer, VJP 55, VJP 98-K
	120095	Motorboard—changer, VJP 65
	119886	Nameplate—RCA Victor & solid state, VJP 55, VJP 98-K
	120866	Nut—#8-32, tee-nut, changer mounting
	Z6178	Panel—bottom panel for case 123660, VJP 65E
	123644	Panel—vinyl trimmed panel & vent plate assembly, VJP 65E
	111742	Pin—mounting escutcheon 119983
	119895	Plate—metal, 5 3/4" x 2 3/4", inside speaker enclosure, VJP 55, VJP 98-K
R1, R2	502147	Resistor—470 ohm, $\pm 10\%$ , 1/2 w. (headphones sw. assy.)
R3, R4		Resistor—33 ohm, $\pm 10\%$ , 2 w., wire wound (headphones sw. assy.)
	111648	Retainer—speakers
	112639	Screw—changer mounting (includes grommet)
	120869	Screw—thumbscrew, brake adjust, VJP 55, VJP 98-K
	120865	Shoe—plastic brake shoe assembly including lining & metal bracket, VJP 55, VJP 98-K
	120107	Spacer—plastic, for handle, VJP 65E
	121430	Speaker—9" x 6" PM, 22 ohm v.c.
	111986	Speaker—3 1/2" PM, 35 ohm v.c.
	121356	Spring—leaf type 1 7/8" lg., used with latch 121359
	121855	Spring—leaf type for changer release button (2 1/4" lg.) VJP 55, VJP 98-K
	119797	Stop—metal 2 1/4" lg., changer tray, VJP 55, VJP 98-K
		Switch—On/Off (part of record changer)
S1	46760	Switch—headphone
S2	110501	Terminal—audio leads, VJP 65
	121400	Tray—changer, VJP 55E, VJP 98WK
	121398	Tray—changer, VJP 55W
	120886	Trim—black plastic strip (20% lg.) VJP 55, VJP 98-K
	78652	Washer—"C", retaining screw 120689
	123967	Washer—insulation for headphone jack, VJP 65
<b>ACCESSORIES</b>		
	115202	Cable—speaker connection, VJP 65
	121922	Spindle—"45" rpm adaptor
	1407423-1	—order from RCA Sales Corporation— Book—customer instruction, VJP 55, VJP 98-K
	1407402-2	Book—customer instruction, VJP 65

Specifications Subject to Change Without Notice

APPLY TO YOUR RCA DISTRIBUTOR FOR REPLACEMENT PARTS AND ACCESSORIES



# RCA VICTOR



## "VICTROLA"® PHONOGRAPH

### SERVICE DATA

—File: 1967 No. 36—

### VJP 75 Series

Amplifier Chassis RS-230A

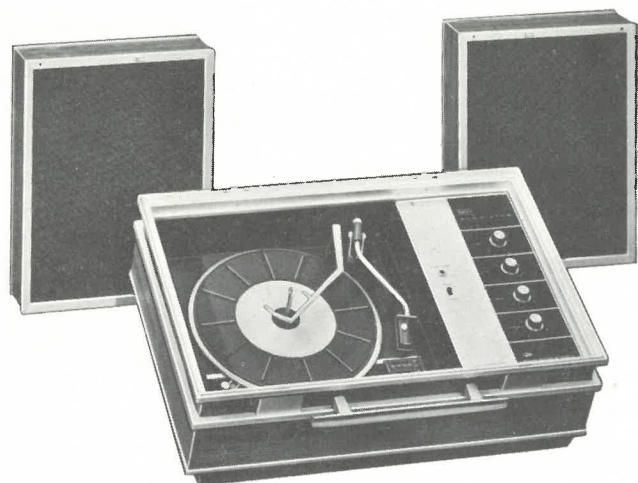
Record Changer RP-228-12BSC

#### RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY

#### PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201



*The "Impresario"*

Model VJP 75W—Walnut Gr./Black

### SPECIFICATIONS

#### TRANSISTOR COMPLEMENT

(Q1) RCA 124-1	Left Chan. Output
(Q2) RCA 124-1	Right Chan. Output
(Q3) RCA 124-1	Left Chan. Output
(Q4) RCA 124-1	Right Chan. Output
(Q401) RCA 122-2	Left Chan. Preamp.
(Q402) RCA 122-2	Right Chan. Preamp.
(Q403) RCA 121-1	Left Chan. Amp.
(Q404) RCA 121-1	Right Chan. Amp.
(Q405) RCA 120-3	Left Chan. Driver
(Q406) RCA 120-3	Right Chan. Driver
(Q407) RCA 122-1	Left Chan. Driver
(Q408) RCA 122-1	Right Chan. Driver
(Q411) RCA 112-2	Left Chan. Power Driver
(Q412) RCA 112-2	Right Chan. Power Driver
(Q413) RCA 120-2	Left Chan. Power Driver
(Q414) RCA 120-2	Right Chan. Power Driver

#### POWER SUPPLY RATING

120 volts, 60 cycle/sec. 80 watts

#### RECORD CHANGER

Turntable Speeds 16 $\frac{2}{3}$ , 33 $\frac{1}{3}$ , 45 and 78 r.p.m.  
Record Sizes 7", 10" and 12"  
Record Capacity Up to six, same size and speed  
Pickup Integrated Floating Stereophonic Ceramic  
Body only Stk. No. 120695  
Styli (0.7 mil. dia. & 3 mil. synth. sapp.) Stk. No. 122057

#### DIMENSIONS (approx.)

Height 13 $\frac{1}{2}$ " Width 24 $\frac{7}{8}$ " Depth 15 $\frac{3}{4}$ "

FOR RECORD CHANGER AND INTEGRATED AMPLIFIER  
SERVICING AND PARTS INFORMATION REFER TO:  
SERVICE DATA —File: 1967 Nos. 6 & 6-S1.

#### MUSIC POWER OUTPUT (E.I.A., RS-234)

Peak 100 watts  
Undistorted 50 watts

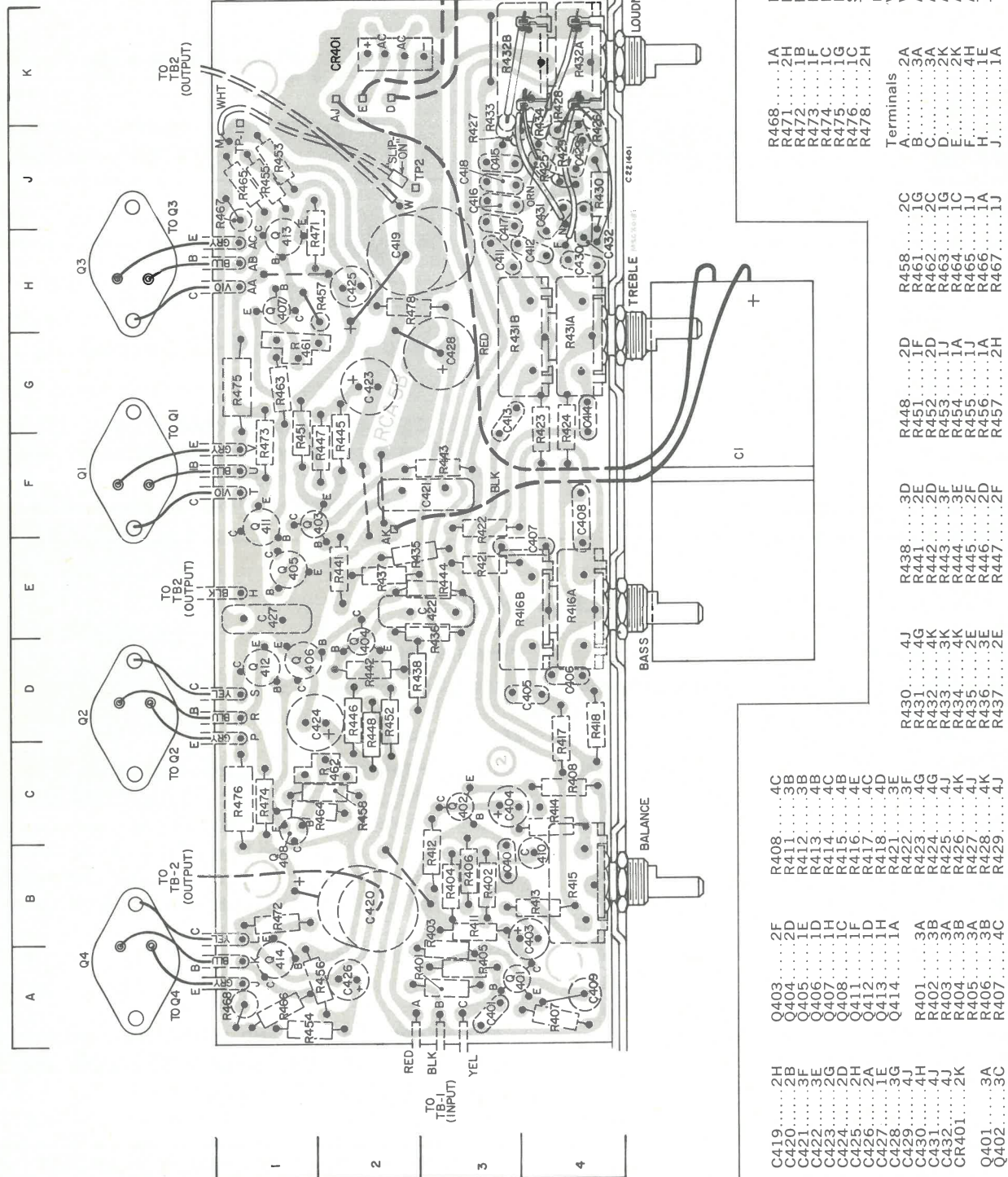
#### LOUDSPEAKERS

Two—6 $\frac{1}{2}$ " PM 6.5 ohm v.c. imp.  
Two—3 $\frac{1}{2}$ " "Middlers" 35 ohm v.c. imp.  
Two—3 $\frac{1}{2}$ " "Tweeters" 20 ohm v.c. imp.

#### SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject





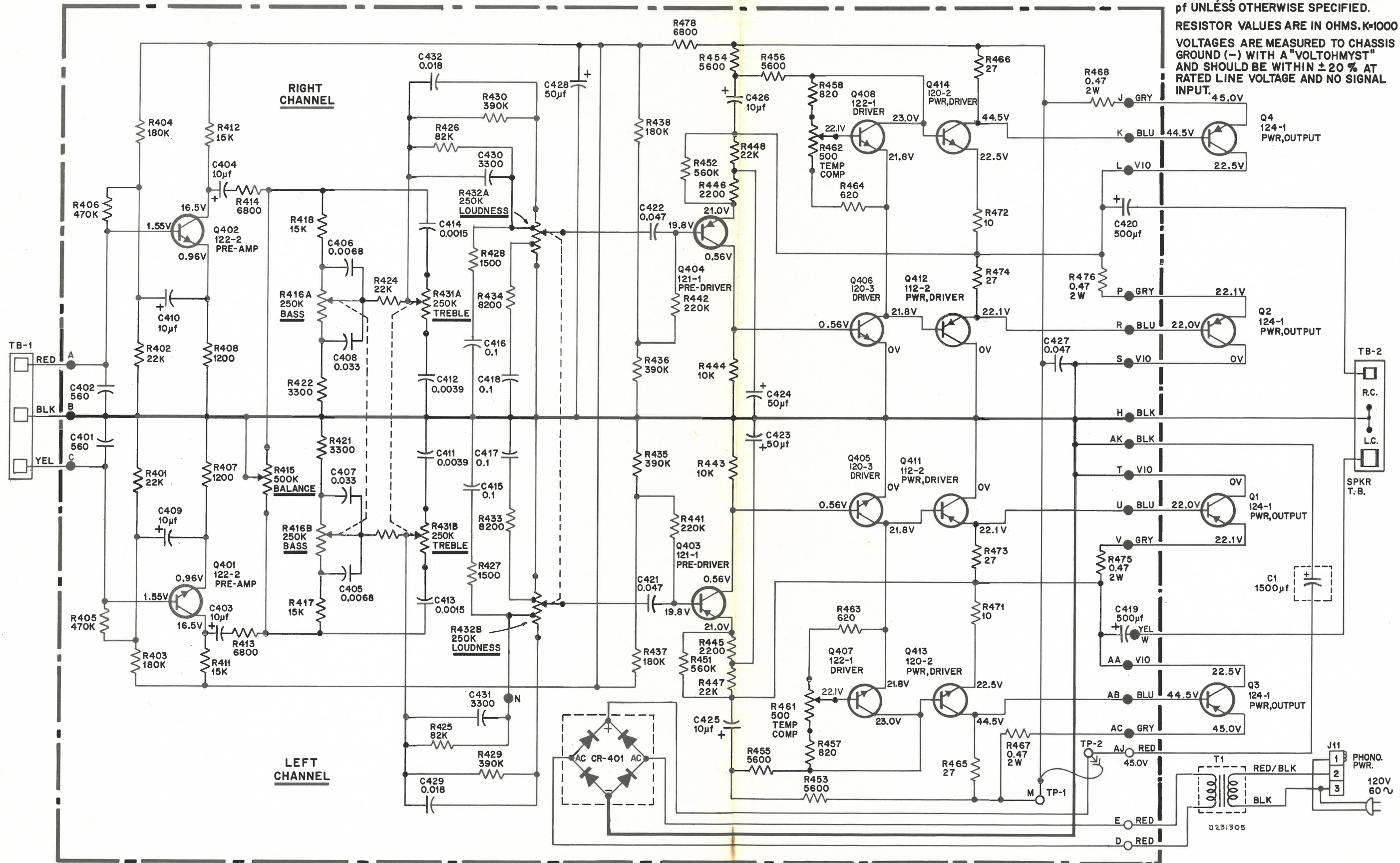
Circuit Board Layout (Wiring View)



CAPACITOR VALUES LESS THAN 1.0  
ARE IN  $\mu\text{f}$ , VALUES 1.0 AND ABOVE ARE IN  
pf UNLESS OTHERWISE SPECIFIED.

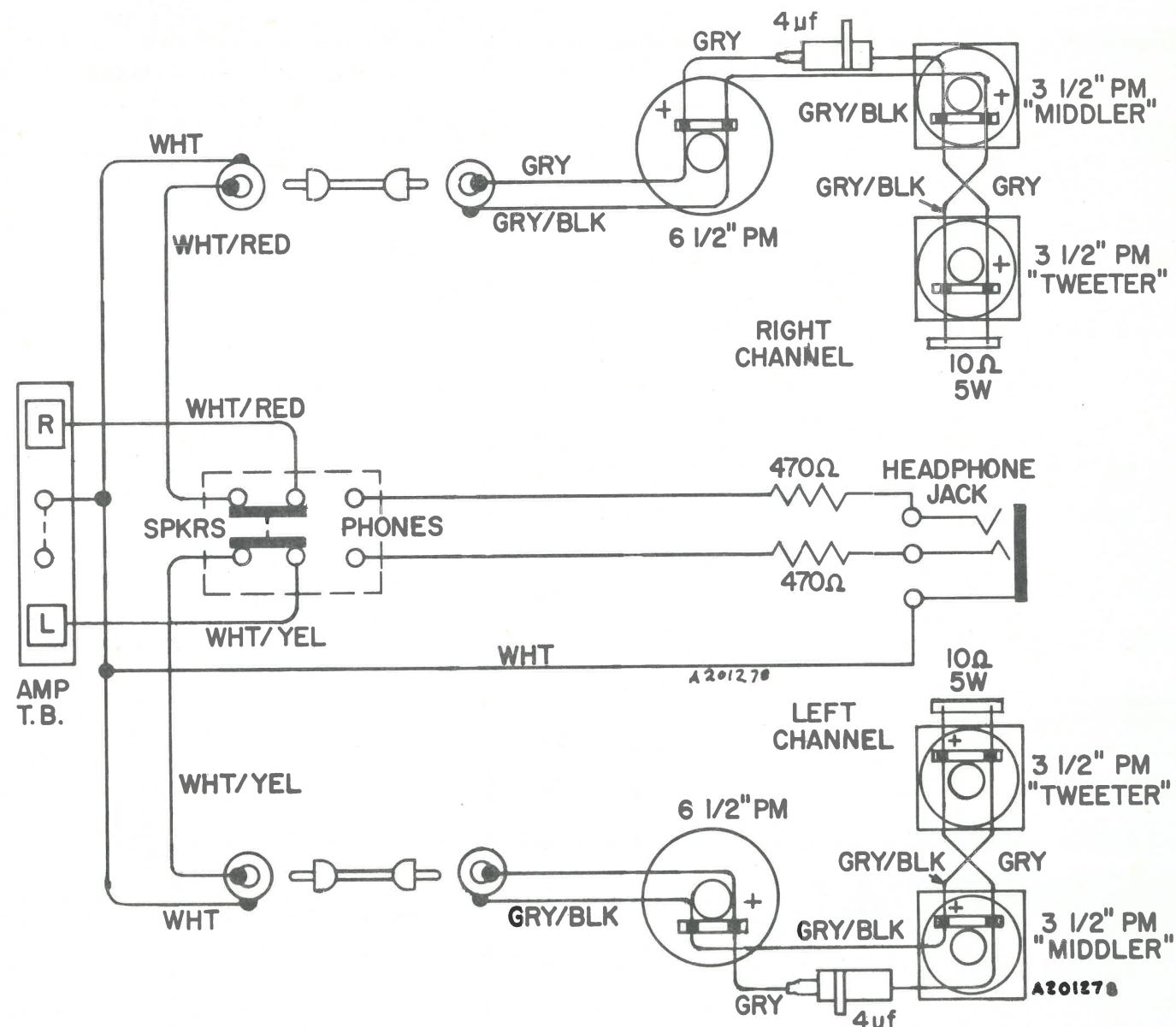
RESISTOR VALUES ARE IN OHMS. K=1000

VOLTAGES ARE MEASURED TO CHASSIS  
GROUND (-) WITH A "VOLTOHMYST"  
AND SHOULD BE WITHIN  $\pm 20\%$  AT  
RATED LINE VOLTAGE AND NO SIGNAL  
INPUT.



Schematic Diagram





Headphone Jack, Switch and Speaker Wiring

## REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION
<b>AMPLIFIER ASSEMBLY RS 230A</b>		
<b>CAPACITORS:</b>		
C1	121650	1500 $\mu$ f, 50 v., electrolytic
C401	105248	560 $\mu$ f, $\pm 10\%$ , 500 v., ceramic
C402	105248	560 $\mu$ f, $\pm 10\%$ , 500 v., ceramic
C403	118832	10 $\mu$ f, 25 v., electrolytic
C404	118832	10 $\mu$ f, 25 v., electrolytic
C405	111122	6800 $\mu$ f, $\pm 20\%$ , 100 v., ceramic
C406	111122	6800 $\mu$ f, $\pm 20\%$ , 100 v., ceramic
C407	121648	0.033 $\mu$ f, $\pm 20\%$ , 100 v., ceramic
C408	121648	0.033 $\mu$ f, $\pm 20\%$ , 100 v., ceramic
C409	115597	10 $\mu$ f, 10 v., electrolytic
C410	115597	10 $\mu$ f, 10 v., electrolytic
C411	121646	3900 $\mu$ f, $\pm 20\%$ , 100 v., ceramic

SYMBOL NO.	STOCK NO.	DESCRIPTION
C412	121646	3900 $\mu$ f, $\pm 20\%$ , 100 v., ceramic
C413		1500 $\mu$ f, $\pm 20\%$ , 100 v., ceramic
C414		1500 $\mu$ f, $\pm 02\%$ , 100 v., ceramic
C415	118352	0.1 $\mu$ f, $\pm 30\%$ , 10 v., ceramic
C416	118352	0.1 $\mu$ f, $\pm 30\%$ , 10 v., ceramic
C417	118352	0.1 $\mu$ f, $\pm 30\%$ , 10 v., ceramic
C418	118352	0.1 $\mu$ f, $\pm 30\%$ , 10 v., ceramic
C419	111835	500 $\mu$ f, 25 v., electrolytic
C420	111835	500 $\mu$ f, 25 v., electrolytic
C421	116647	0.047 $\mu$ f, $\pm 20\%$ , 100 v., mylar
C422	116647	0.047 $\mu$ f, $\pm 20\%$ , 100 v., mylar
C423	121651	50 $\mu$ f, 25 v., electrolytic
C424	121651	50 $\mu$ f, 25 v., electrolytic
C425	118832	10 $\mu$ f, 25 v., electrolytic
C426	118832	10 $\mu$ f, 25 v., electrolytic
C427	116647	0.047 $\mu$ f, $\pm 20\%$ , 100 v., mylar

## REPLACEMENT PARTS (Cont.)

SYMBOL NO.	STOCK NO.	DESCRIPTION
C428	121649	50 $\mu$ f, 50 v., electrolytic
C429	121647	1800 $\mu$ f, $\pm 20\%$ , 100 v., ceramic
C430	121645	3300 $\mu$ f, $\pm 20\%$ , 100 v., ceramic
C431	121645	3300 $\mu$ f, $\pm 20\%$ , 100 v., ceramic
C432	121647	1800 $\mu$ f, $\pm 20\%$ , 100 v., ceramic
CR401	123702	Diode—rectifier
J11	110529	Connector—3 contact female, changer power
	121656	Circuit—complete circuit board
<b>TRANSISTORS:</b>		
Q1		power output, 124-1 or 2N3615
Q2		power output, 124-1 or 2N3615
Q3		power output, 124-1 or 2N3615
Q4		power output, 124-1 or 2N3615
Q401	121655	pre-amp., 122-2 or 2N3565
Q402	121655	pre-amp., 122-2 or 2N3565
Q403	121467	pre-driver, 121-1
Q404	121467	pre-driver, 121-1
Q405	121662	driver, 120-3 or SE6002
Q406	121662	driver, 120-3 or SE6002
Q407	121664	driver, 122-1 or 2N3693
Q408	121664	driver, 122-1 or 2N3693
Q411	121661	power driver, 112-2 or SE6002
C412	121661	power driver, 112-2 or SE6002
C413	121661	power driver, 120-2 or SE6002
C414	121661	power driver, 120-2 or SE6002
<b>RESISTORS: <math>\pm 10\%</math>, <math>\frac{1}{2}</math> watt, composition, unless noted otherwise.</b>		
R401	502322	22,000 ohm
R402	502322	22,000 ohm
R403	502418	180,000 ohm
R404	502418	180,000 ohm
R405	502447	470,000 ohm
R406	502447	470,000 ohm
R407	502212	1200 ohm
R408	502212	1200 ohm
R411	502315	15,000 ohm
R412	502315	15,000 ohm
R413	502268	6800 ohm
R414	502268	6800 ohm
R415	121652	control, balance
R416A/B	121653	control, bass
R417	502315	15,000 ohm
R418	502315	15,000 ohm
R421	502233	3300 ohm
R422	502233	3300 ohm
R423	502322	22,000 ohm
R424	502322	22,000 ohm
R425	502382	82,000 ohm
R426	502382	82,000 ohm
R427	502215	1500 ohm
R428	502215	1500 ohm
R429	502439	390,000 ohm
R430	502439	390,000 ohm
R431A/B	121653	control, treble
R432A/B	121654	control, loudness
R433	502282	8200 ohm
R434	502282	8200 ohm
R435	502439	390,000 ohm
R436	502439	390,000 ohm
R437	502418	180,000 ohm
R438	502418	180,000 ohm
R441	502422	220,000 ohm
R442	502422	220,000 ohm
R443	502310	10,000 ohm
R444	502310	10,000 ohm
R445	502222	2200 ohm
R446	502222	2200 ohm
R447	502322	22,000 ohm
R448	502322	22,000 ohm
R451	502456	560,000 ohm
R452	502456	560,000 ohm
R453	502256	5600 ohm
R454	502256	5600 ohm
R455	502256	5600 ohm
R456	502256	5600 ohm
R457	502182	820 ohm, $\pm 5\%$
R458	502182	820 ohm, $\pm 5\%$
R461	116106	control, temp. compensating
R462	116106	control, temp. compensating

SYMBOL NO.	STOCK NO.	DESCRIPTION
R463	502162	620 ohm, $\pm 5\%$
R464	502162	620 ohm, $\pm 5\%$
R465	502027	27 ohm
R466	502027	27 ohm
R467	113152	0.47 ohm, 2 w., wire wound
R468	113152	0.47 ohm, 2 w., wire wound
R471	502010	10 ohm
R472	502010	10 ohm
R473	502027	27 ohm
R474	502027	27 ohm
R475	113152	0.47 ohm, 2 w.
R476	113152	0.47 ohm, 2 w.
R478	502268	6800 ohm
T1	121644	Transformer—power
	117157	Cable—power cord
	121185	Contact—for connector 110529
	115794	Insulator—mica, for Q1-4
	114918	Retainer—for controls
	115581	Socket—for power transistors
<b>MISCELLANEOUS</b>		
	123656	Baffle—R.H. speaker enclosure (includes cloth)
	123657	Baffle—L.H. speaker enclosure (includes cloth)
	123648	Bushing—plastic, $\frac{1}{16}$ " o.d., for knob 123653
	111831	Capacitor—4 $\mu$ f, 25 v., electrolytic speaker crossover
	123649	Case—changer section (less bottom panel)
	123658	Catch—mounted on R.H. speaker enclosure
	123659	Catch—mounted on L.H. speaker enclosure
	111963	Connector—headphone jack
	110145	Connector—3 contact male, changer power intermediate cable
	109442	Connector—4 contact female, changer power intermediate cable
	116769	Connector—speaker & tape jacks
	106844	Contact—for connector 110145 & 109442
	120109	Cover—metal—for latch 120104
	120110	Cover—metal—for latch 120103
	123654	Enclosure—R.H. speaker, less baffle
	124006	Enclosure—R.H. speaker, complete
	123655	Enclosure—L.H. speaker, less baffle
	124007	Enclosure—L.H. speaker, complete
	123650	Escutcheon—amplifier controls
	120115	Foot—plastic, $2\frac{3}{8}$ " x $\frac{1}{16}$ "
	120106	Foot—plastic, $\frac{9}{16}$ " dia.
	120105	Handle—carrying
	120108	Hinge—speaker enclosures
	121435	Holder—45 RPM adaptor
	123653	Knob—loudness, bass, treble, balance
	120103	Latch—L.H. speaker enclosure
	120104	Latch—R.H. speaker enclosure
	120095	Motorboard—changer
	120866	Nut—tee-nut for changer mounting
	Z6178	Panel—bottom panel—for case 123649
	123643	Panel—vinyl trimmed panel & vent plate assembly
	502147	Resistor—470 ohm, $\pm 10\%$ , $\frac{1}{2}$ w. (headphone switch assembly)
	112912	Resistor—10 ohm, $\pm 10\%$ , 5 w., wire wound, (speaker 111987)
	111648	Retainer—speakers
	112639	Screw—changer mounting (includes grommet)
	120107	Spacer—plastic, for handle
	123646	Speaker— $6\frac{1}{2}$ " PM, 6.5 ohm, v.c. imp
	111987	Speaker— $3\frac{1}{2}$ " PM, 20 ohm, v.c. imp
	115890	Speaker— $3\frac{1}{2}$ " PM, 35 ohm, v.c. imp
	46760	Switch—headphone
<b>ACCESSORIES</b>		
	115202	Cable—speaker connecting
	121922	Spindle—"45" Adaptor
	1407402-2	—order from RCA Sales Corporation—Book—customer instruction

Specifications Subject to Change Without Notice

APPLY TO YOUR RCA DISTRIBUTOR FOR REPLACEMENT PARTS AND ACCESSORIES



# RCA VICTOR



*The "Berkshire"*

Model VJP 77E—Black  
Model VJP 77W—Walnut

## RADIO & "VICTROLA"® PHONOGRAPH

### SERVICE DATA

—File: 1967 No. 37—

### VJP 77 Series

Tuner/Amplifier Chassis RC-1227C  
Record Changer RP-228-12BS

#### RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY  
PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201

### SPECIFICATIONS

#### TRANSISTOR COMPLEMENT

(Q1) RCA 40022	Left Chan. Output
(Q2) RCA 40022	Right Chan. Output
(Q3) RCA 40022	Left Chan. Output
(Q4) RCA 40022	Right Chan. Output
(Q101) RCA 118-1	FM RF Amp.
(Q102) RCA 118-2	FM Converter
(Q201) RCA 2N1526	AM Converter
(Q202) RCA 118-4	1st AM and FM IF Amp.
(Q203) RCA 118-3	2nd AM and FM IF Amp.
(Q204) RCA 118-3	3rd FM IF Amp.
(Q301) RCA 115-2	1st 19 kc Stereo Amp.
(Q302) RCA 115-2	2nd 19 kc Stereo Amp.
(Q303) RCA 115-1	38 kc Stereo Amp.
(Q304) RCA 115-6	Stereo Switch
(Q305) RCA 115-1	Left Chan. Diff. Amp.
(Q306) RCA 115-1	Right Chan. Diff. Amp.
(Q401) RCA 115-3	Left Chan. Preamp.
(Q402) RCA 115-3	Right Chan. Preamp.
(Q403) RCA 115-1	Left Chan. Predriver
(Q404) RCA 115-1	Right Chan. Predriver
(Q405) RCA 115-5	Left Chan. Driver
(Q406) RCA 115-5	Right Chan. Driver
(CR1) RCA Stk. #117145	Rectifiers
(CR2) RCA Stk. #117145	
(CR101) RCA 223-1	FM AFC Diode
(CR201) RCA 677-4	AVC Diode
(CR202) RCA 677-4	AM Detector
(CR203) RCA 1N542	FM Demodulator
(CR204) RCA 1N542	
(CR301) Stk. #112524	Stereo 19-38 kc Doubler
(CR302) Stk. #112524	
(CR303) Stk. #112524	Stereo Balanced Demodulator
(CR304) Stk. #112524	
(CR305) Stk. #112524	
(CR306) Stk. #112524	

#### FREQUENCIES

	Tuning	IF
AM	540-1620 kc/s	455 kc/s
FM	88-108 mc/s	10.7 mc/s

#### MUSIC POWER OUTPUT (E.I.A., RS-234)

Undistorted	20 watts
Maximum	40 watts

#### AUDIO FREQUENCY RESPONSE

50-15,000 cycles/sec

#### LOUDSPEAKERS

Two-9" x 6" PM "Midrange"	8.5 ohm v.c. imp.
Four-3½" PM "Tweeter"	3.5 ohm v.c. imp.

#### POWER SUPPLY RATING

120 volts, 60 cycle/sec	60 watts
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#### TUNING

Vernier Slide Rule

Drive Ratio	13½:1 (6¾ turns of knob)
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#### RECORD CHANGER

Turntable Speeds	16⅔, 33⅓, 45 and 78 rpm
Record Sizes	7 inch, 10 inch and 12 inch
Record Capacity	up to six, same size and speed
Pickup Body (stk. no. 117331)	Stereophonic Ceramic
Stylus (stk. no. 118195)	0.7 mil dia. & 3 mil syn sapp.

#### CABINET DIMENSIONS (approx.)

Height	12"	Width	24⅞"	Depth	15¾"
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#### WEIGHT (approx.)

41 lbs.

#### SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject



## DESCRIPTION

The VJP 77 is a stereophonic high fidelity portable Radio and "Victrola" phonograph. It is a complete radio and record playing system designed for the reception of AM, FM, and FM Stereo broadcasts, and for the playing of stereophonic or monophonic records. It is housed in a horizontally styled case with two detachable speaker enclosures which latch across the top of the instrument to form a complete enclosure for transporting.

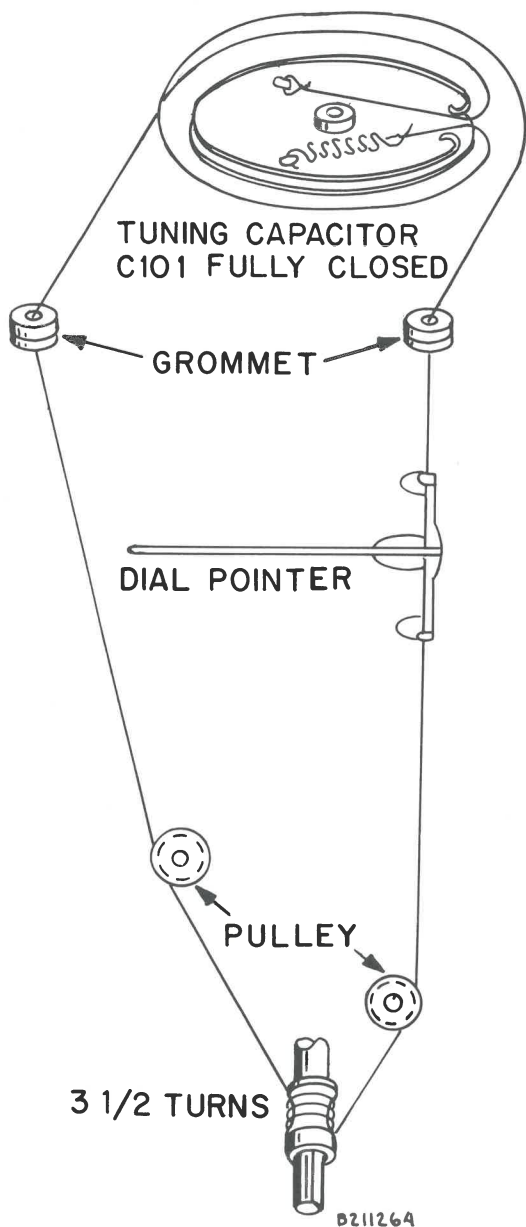
The RC-1227C tuner-amplifier is completely transistorized with most of its components and circuitry contained on one RCA solid copper circuit board. The controls, output transistors and power supply (except power transformer) are mounted on a separable section of the chassis assembly. The power transformer is separate and is mounted elsewhere in the case. The circuitry of the tuner is conventional superheterodyne with an RF stage in the FM circuit. Separate converter stages are used for AM and FM. All band switching is ac-

complished in the audio circuits—none in the RF or IF circuits.

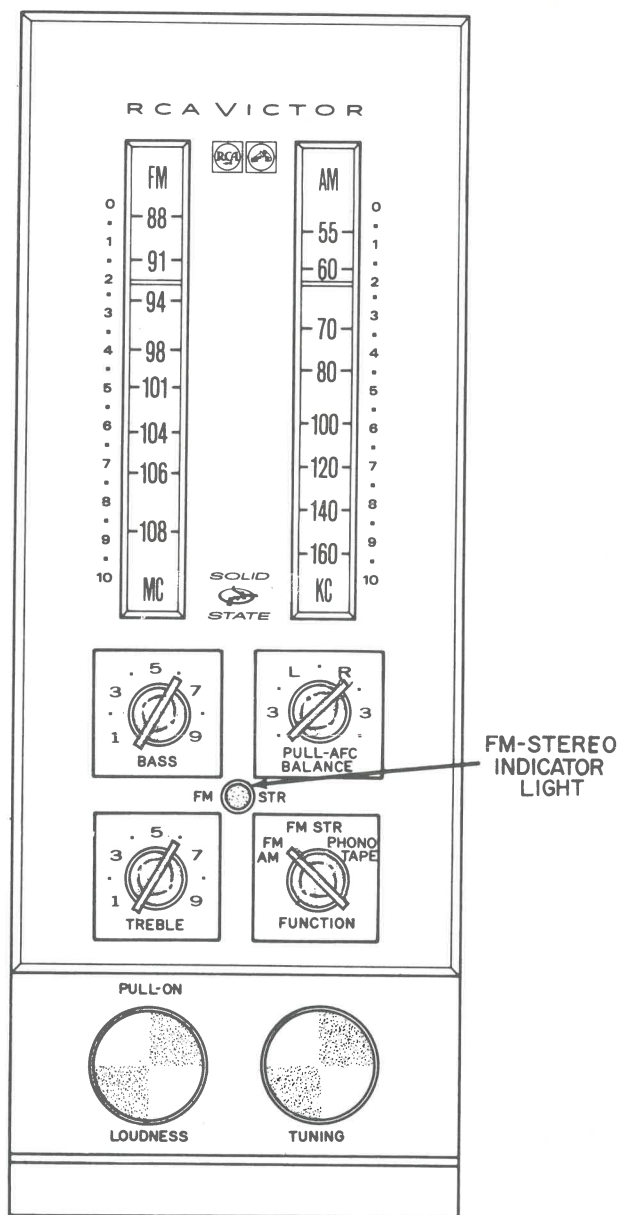
Five controls (Function, Balance/AFC, Bass, Treble, Loudness/On-Off) are provided to permit complete regulation of the instrument. When using the record player, the entire instrument may be placed under the control of the switch in the record changer by leaving the on/off switch on the tuner-amplifier in the Off position. This mode of operation permits the tuner-amplifier and the record changer to shut off automatically after the last record has been played.

Tape jacks are provided so that tape recordings can be made from any function of the radio or from records; they also permit a tape recorder to be played through this instrument. Binaural headphones may be connected to the "Personal Sound" jack for private listening.

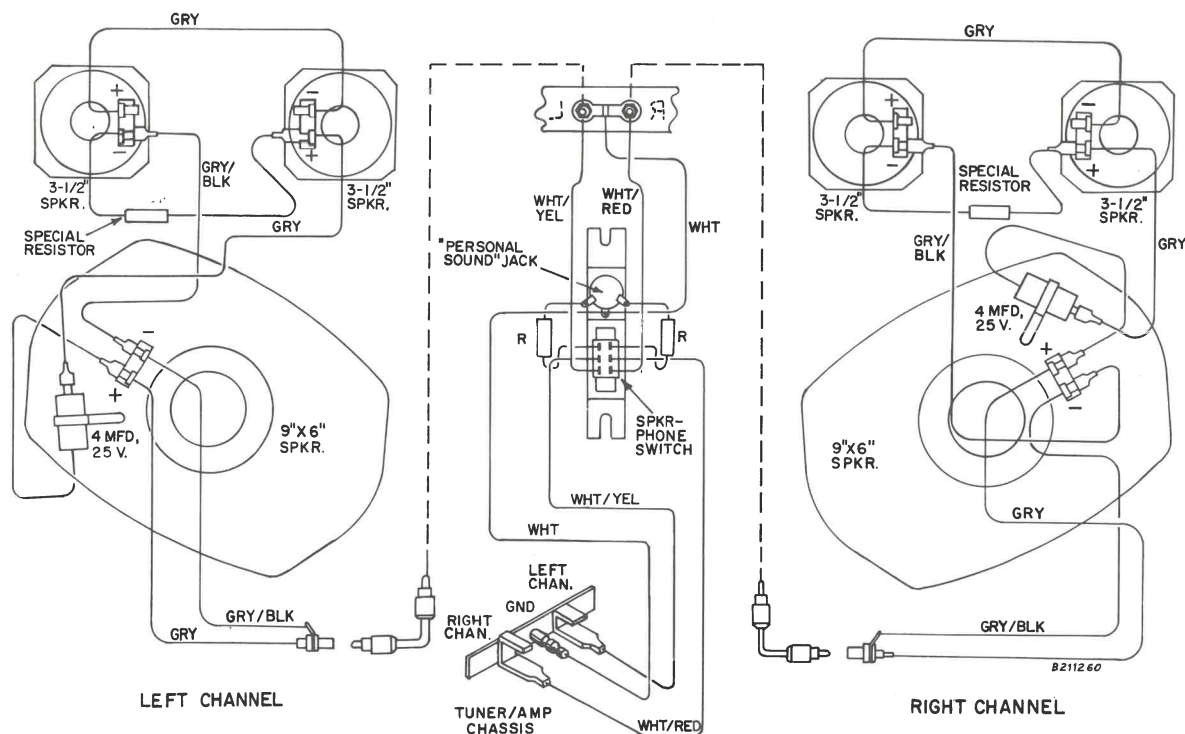
The record changer also provides for some speed adjustment by means of a control and strobe disc located at left front corner of the changer.



Dial Cord Arrangement



Control Panel



Speaker Wiring Diagram

## SPEAKER PHASING

The speaker systems must be properly connected in order to have "in-phase" sound outputs. Incorrect connections will be evidenced by "loss of bass" or distortion in the sound when playing a mono-phononic recording and listening from a point midway between the

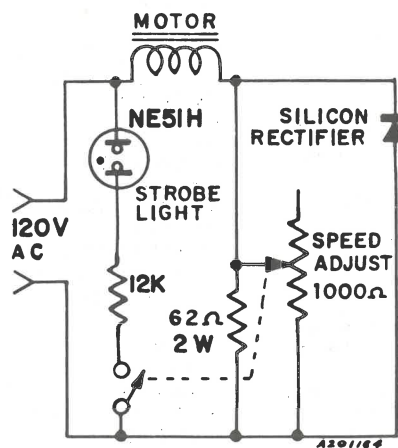
two speaker systems. Similarly the speakers in each system must be phased with each other.

A listening test for speaker phasing may be difficult to perform, therefore, to maintain correct phasing, the speaker connections as shown in the wiring diagram should be closely followed.

## STROBOSCOPE

### OPERATING INSTRUCTIONS

1. Set Speed Selector to desired speed.
2. Depress and hold down Speed Adjust Knob—strobe lamp will light.
3. Observe rows of dots through window—one row will be clear but possibly moving to right or left, while the other rows will be blurred.
4. Turn Speed Adjust Knob until row of clear dots is stationary. Speed is then exact.



Schematic Diagram

For Record Changer Servicing and Parts Information  
Refer to Service Data: File: 1966 No. 6-S1

## AM-FM ALIGNMENT PROCEDURE

## INSTRUMENTS REQUIRED

## Signal Sources

1. RF Signal Generator (RCA WR-50B or equivalent)
2. TV/FM Sweep Generator (RCA WR-69A or equivalent)
3. Marker Generator (RCA WR-99A or equivalent)

## Output Indicators

4. Vacuum-Tube Voltmeter (RCA WV-98C or equivalent)
5. Oscilloscope (RCA WO-91B or equivalent)

## Tools

6. Hex head alignment tool
7. Thin fibre shaft alignment tool

## GENERAL ALIGNMENT CONDITIONS

1. Connect low side of signal source and output indicator to chassis ground as close as possible to high side connection unless otherwise specified.
2. Signal input should be kept as low as possible to avoid AVC action. (Set output indicator to highest sensitivity.)
3. Markers should be accurate. (Crystal controlled or checked against a crystal calibrator.) The 10.7 mc marker used in each section of the alignment should be the same. (Generator dial should not be moved.)
4. Marker insertion and amplitude should not distort the oscilloscope trace.
5. Standard modulation is 400 cycle at 30% amplitude.

STEP	Signal Source	Output Indicator	Set Signal To—	Set Radio Dial To—	Adjust	Adjust for	STEP
1	Set Radio Function Switch on "AM"						1
2	RF Generator connected to a short piece of wire, or loop to radiate signal into AM antenna	V.T.V.M. Connected across Speaker Voice Coil (Either Channel)	455 kc (Modulated)	Quiet point on band near 1600 kc	T205 Top Core (3rd AM IF)	Maximum	2
3					T204 (2nd AM IF)		3
4					T202 Top & Bottom Core (1st AM IF)		4
5			1620 kc (Modulated)	Gang Fully open	C101E-T (Osc. Trim)		5
6			1400 kc (Modulated)	1400 kc	C101B-T (Ant. Trim)		6
7			600 kc (Modulated)	600 kc (rock gang)	T201 (AM Osc.)		7
8	Repeat Steps 2 through 4 and Steps 5 through 7 as necessary to obtain Maximum Sensitivity on Stations						8
9	RF Generator Connected to Q204 Base through a 0.01 $\mu$ f Capacitor	V.T.V.M. Connected Across R239	10.7 mc (Unmodulated)	Quiet Point on Band	T206 Bottom Core (Ratio Detector)	Maximum	9
10		V.T.V.M. (Set to Center Zero) Connected to Junction of R224 & C227			T206 Top Core (Ratio Detector)	Zero Voltage (Cross-over)	10
11	Repeat Steps 9 and 10 as necessary to obtain a Balanced "S" curve with $\pm 200$ kc Linearity						11
12	Connect a 0.047 $\mu$ f Capacitor across the primary winding of T102						12
13	RF Sweep Generator Connected to Q202 Base Through a 0.01 $\mu$ f Capacitor	Oscilloscope with signal tracing probe (RCA WG-302A) connected to Q204 Base (Adjust signal input to obtain a 50 MV P-P reading on Oscilloscope)	10.7 mc Sweep with markers at 10.6, 10.7 & 10.8 mc	Quiet Point on Band	Simultaneously T205 Bottom Core (3rd FM IF) and T203 Top & Bottom Core (2nd FM IF)	Maximum and best Symmetry	13
14	Remove 0.047 $\mu$ f capacitor across primary winding of T102						14
15	TV/FM Sweep Gen. across Antenna Terminals through a matching network if necessary	Oscilloscope with signal tracing probe (RCA WG-302A) connected to Q204 Base (Adjust signal input to obtain a 50 MV P-P reading on Oscilloscope)	98-108 mc 240 kc sweep	Tune in Signal (Approx. 103 mc)	T102 Top & Bottom Core (1st FM IF)	Maximum and best Symmetry	15
16	Repeat Steps 12 through 15 as necessary to obtain specified response						16
17	Marker Generator Connected Across FM Antenna Terminals through a matching network if necessary	V.T.V.M. with signal tracing probe (RCA WG-301A) connected to Q204 Base	108 mc	108 mc (Rock Gang if Necessary)	C118 (Osc. Trimmer)	Maximum	17
18					C101C-T (RF-Trimmer)		18
19					C101A-T (Ant. Trimmer)		19
20	Repeat Steps 17, 18 and 19 as necessary to obtain maximum sensitivity on stations						20



## MULTIPLEX ALIGNMENT PROCEDURE

### INSTRUMENTS REQUIRED

#### Signal Source

1. FM-Stereo Simulator (RCA WR-52A or equivalent)

#### Output Indicator

2. Oscilloscope (RCA WO-91A or equivalent)

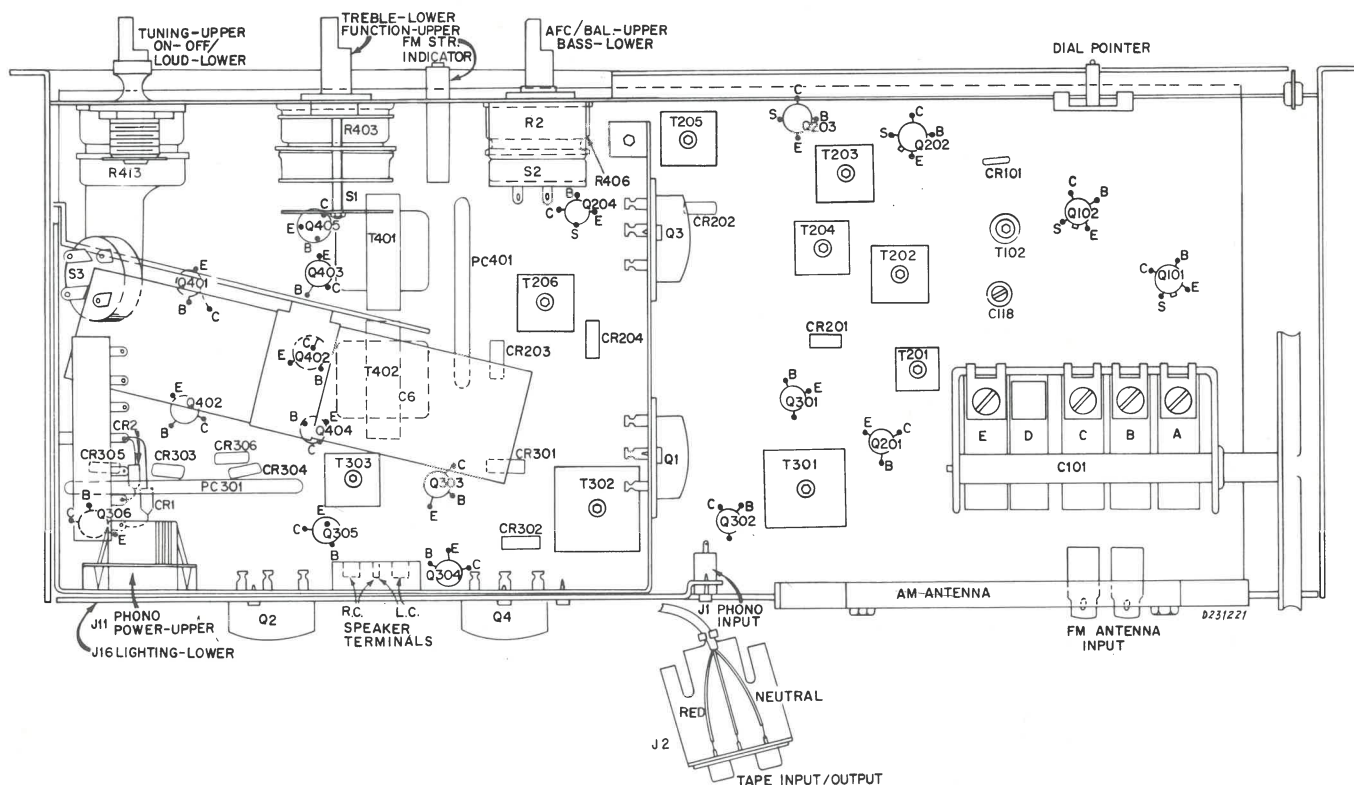
#### Tools

3. Hex head alignment tool

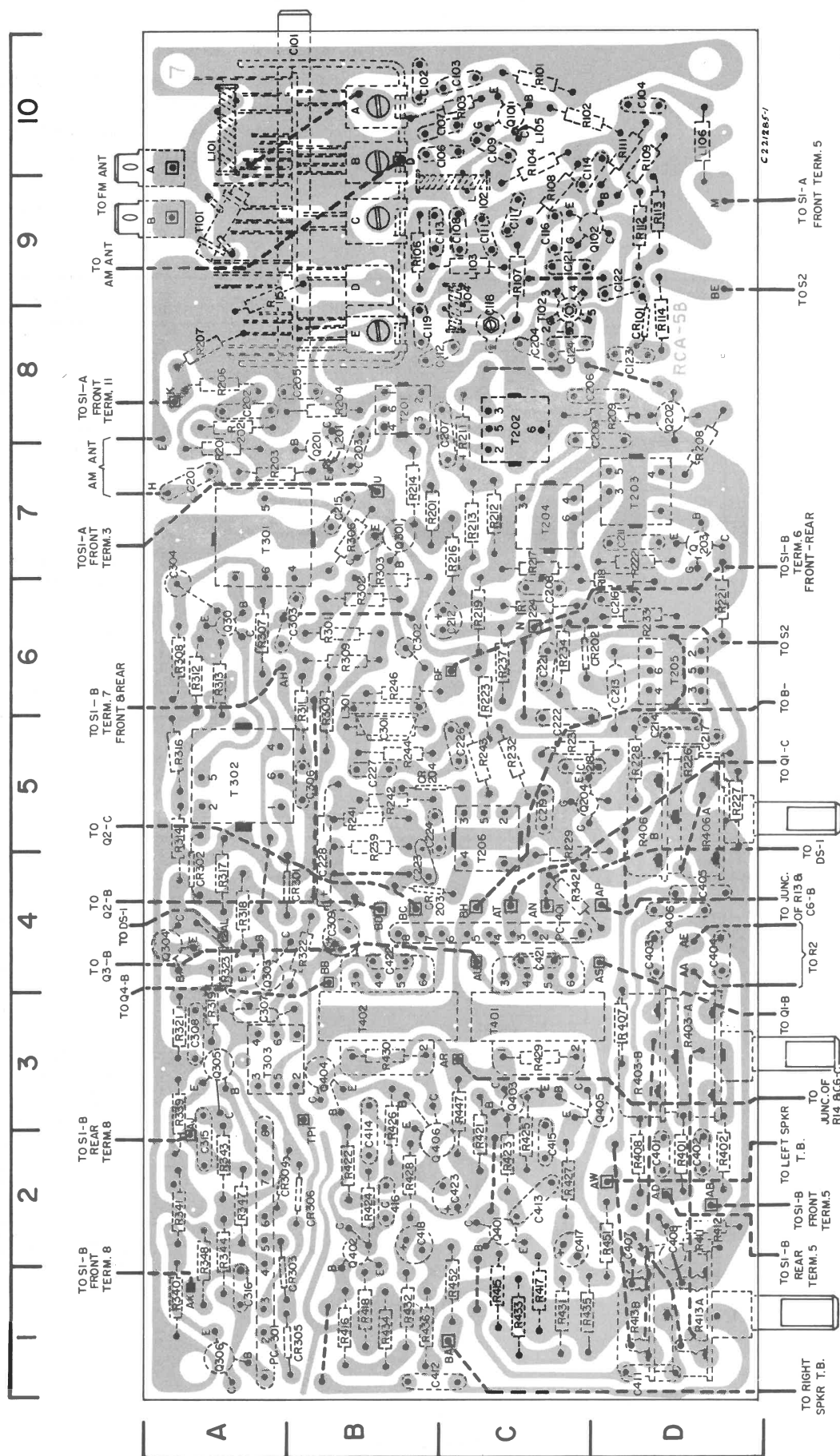
### GENERAL ALIGNMENT CONDITIONS

1. Connect low side of output indicator to chassis ground as close as possible to high side connection.
2. RF deviation should be set to approximately 75 kc.
3. Input signal should be held at a level that will not produce limiting.
4. FM-Stereo Simulator connected across FM antenna terminals. Tune radio to 100 mc. AFC on.

STEP	19 kc Subcarrier Level set to—	Audio Freq. Sel. set to—	Function Sel. Set to—	Output Indicator	Adjust	Adjust for	STEP
1	Set Radio Function Switch to FM-Stereo						1
2	Ground Stake "AL" (Stereo Indicator Light Should Remain Lit.)						2
3	10 %	19 kc (If 19 kc not available, set at 67 kc)	Stereo left	Oscilloscope Connected to TP #1 (Retain Signal Input to just below limiting)	T301 (19 kc Trans.)	Maximum	3
4					T302 (19 kc Trans.)		4
5					T303 (38 kc Trans.)		5
6		1000 cycle	Stereo right	Connected to Stake "AJ" (Left chan. output) (Increase signal input)	T301 (19 kc Trans.)	Retouch <i>slightly</i> for Minimum and correct phase	6
7			Stereo left	Connected to Stake "AK" (Right chan. output) (Increase signal input)			7
8	Repeat steps 6 and 7 to equalize minimums on both channels to obtain best separation						8
9	Remove Ground from stake "AL"						9



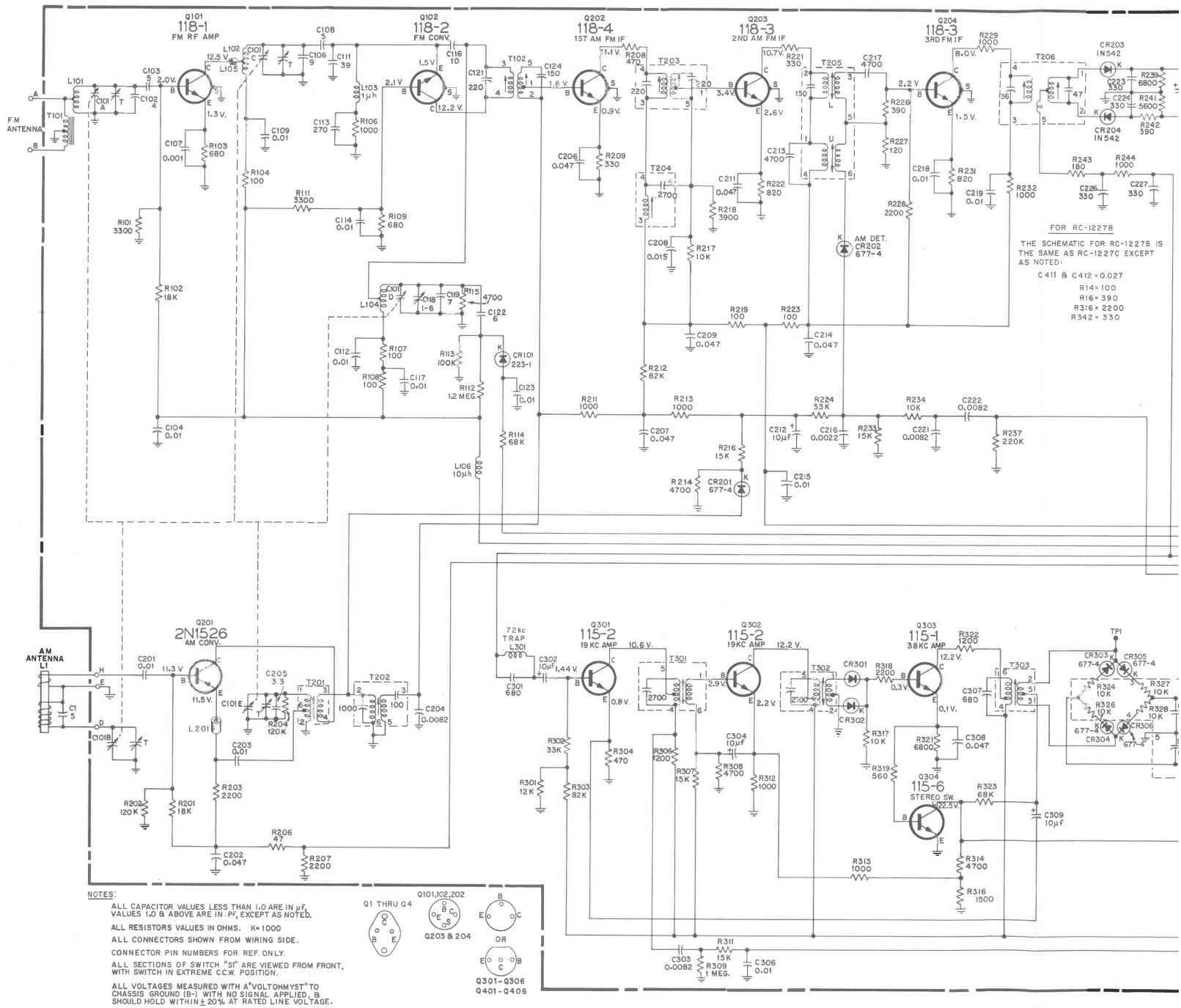
Chassis Layout



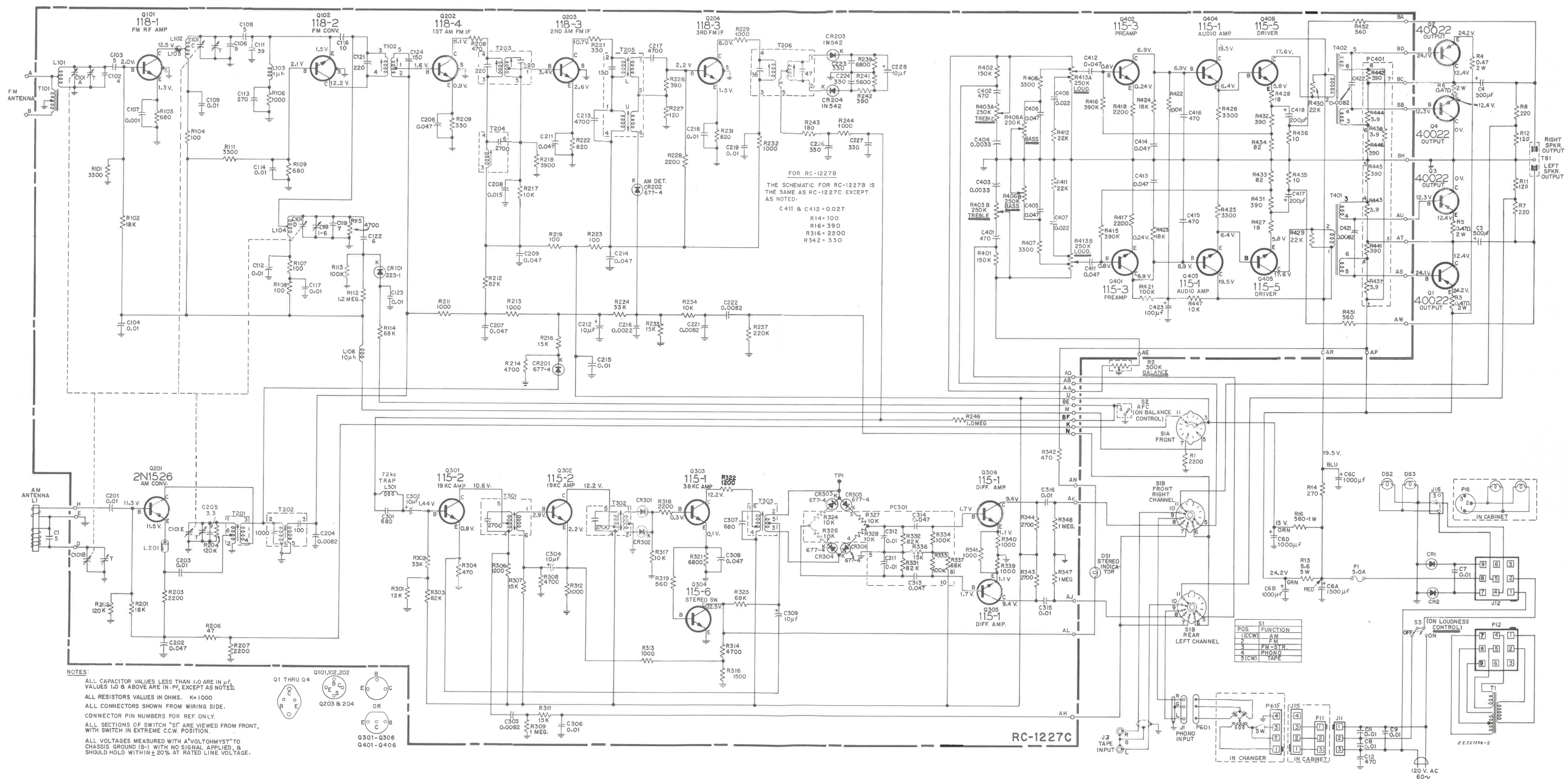
Chassis Board Layout—View From Component Side

C101.....9B	C209.....8D	C401.....2D	CR303.....1A	Q305.....3A	R208.....7D	R246.....6B	R401.....2D	R435.....1C	M.....9D
C102.....10B	C211.....7D	C402.....2D	CR304.....2A	Q306.....1A	R209.....8D	R301.....6B	R402.....2D	R436.....1B	N.....6C
C103.....10C	C212.....6C	C403.....4D	CR305.....1B	Q401.....2C	R211.....8C	R302.....6B	R403.....3D	R447.....2C	U.....7B
C104.....10D	C213.....6D	C404.....4D	CR306.....2B	Q402.....2B	R212.....7C	R303.....6B	R406.....5D	R451.....2D	
C106.....10B	C214.....5D	C405.....4D	L101.....10A	Q403.....3C	R213.....7C	R304.....6B	R407.....3D	R452.....1C	AA.....4D
C107.....10B	C215.....7B	C406.....4D	L102.....9C	Q404.....3B	R214.....7B	R306.....7B	R408.....2D	AB.....2D	AB.....2D
C108.....9C	C216.....6D	C407.....2D	L103.....9C	Q405.....3D	R216.....7C	R307.....6A	R411.....2D	AD.....2D	AD.....2D
C109.....10C	C217.....5D	C408.....2D	L104.....10C	Q406.....2B	R217.....7C	R308.....6A	R412.....2D	AE.....4D	AE.....4D
C111.....9C	C218.....5C	C411.....1D	L105.....10C	R101.....10C	R218.....6D	R309.....6B	R413.....1D	AH.....6B	AH.....6B
C112.....8C	C219.....5C	C412.....1B	L106.....10D	R102.....10C	R219.....6C	R311.....6B	R415.....1C	AJ.....2A	AJ.....2A
C113.....9B	C221.....6C	C413.....2C	L201.....7B	R103.....10C	R221.....6D	R312.....6A	R416.....1B	AK.....1A	AK.....1A
C114.....9C	C222.....5C	C414.....2B	L301.....6B	R104.....10C	R222.....7D	R313.....6A	R417.....1C	AL.....4A	AL.....4A
C116.....9C	C223.....4B	C415.....2C	L302.....6B	R106.....9B	R223.....6C	R314.....5A	R418.....1B	AN.....4C	AN.....4C
C117.....9C	C224.....5B	C416.....2B	L303.....6B	R107.....9C	R224.....6C	R316.....5A	R421.....2C	AP.....4D	AP.....4D
C118.....8C	C226.....5C	C417.....2C	PC301.....2A	R108.....9C	R226.....5D	R317.....4A	R422.....2B	AR.....3C	AR.....3C
C119.....8B	C227.....5B	C418.....2B	PC401.....4C	R109.....10D	R227.....5D	R318.....4A	R423.....2C	AS.....4D	AS.....4D
C121.....9C	C228.....5B	C421.....4C	Q101.....10C	R111.....10D	R228.....5D	R319.....3A	R424.....2C	AT.....4C	AT.....4C
C122.....9D	C229.....4B	C422.....4B	Q102.....9C	R112.....9D	R229.....4C	R321.....3A	R425.....2C	AU.....4C	AU.....4C
C123.....8D	C230.....5B	C423.....2C	Q103.....8D	R113.....9D	R231.....5C	R322.....4B	R426.....3B	AW.....2D	AW.....2D
C124.....8C	C231.....5B	C424.....2C	Q104.....7B	R114.....8D	R232.....5C	R323.....4A	R427.....2C	BA.....1C	BA.....1C
C201.....7A	C302.....6B	CR101.....8D	Q201.....7B	R115.....9A	R233.....6D	R339.....3A	R428.....2B	BB.....4B	BB.....4B
C202.....8A	C303.....6A	CR201.....7B	Q202.....8D	R201.....7B	R234.....6C	R340.....1A	R429.....3C	BC.....4B	BC.....4B
C203.....7B	C304.....5B	CR202.....6C	Q203.....7D	R202.....8A	R237.....6C	R341.....2A	R430.....3B	BD.....4B	BD.....4B
C204.....8C	C307.....3A	CR203.....4B	Q204.....5C	R203.....7A	R239.....5B	R342.....4C	R431.....1C	BE.....9D	BE.....9D
C205.....8B	C308.....3A	CR204.....5B	Q301.....7B	R204.....8B	R241.....5B	R343.....2A	R432.....1B	BF.....6C	BF.....6C
C206.....8C	C309.....4B	CR301.....4A	Q302.....6A	R206.....8A	R242.....5B	R344.....2A	R433.....1C	BH.....4C	BH.....4C
C207.....8C	C315.....2A	CR302.....4A	Q303.....4A	R207.....8A	R243.....5C	R347.....2A	R434.....1B	TP1.....3B	TP1.....3B
C208.....6C			Q304.....4A		R244.....5B	R348.....2A			

## Component Location Guide







Schematic Diagram—Chassis RC-1227C

## REPLACEMENT PARTS (Continued)

SYMBOL NO.	
R432	
R433	
R434	
R435	
R436	
R437	
R438	
R441	
R442	
R443	
R444	
R445	
R446	
R447	
R451	
R452	
S1	
S2	
S3	
T101	
T102	
T201	
T202	
T203	
T204	
T205	
T206	
T301	
T302	
T303	
T401	
T402	



## REPLACEMENT PARTS (Continued)

SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
R432	502139	390 ohm		Z6176	Case—changer section (less bottom panel), VJP 77W
R433	502082	82 ohm		120111	Catch—mounted on R.H. speaker enclosure
R434	502082	82 ohm		120112	Catch—mounted on L.H. speaker enclosure
R435	502010	10 ohm		115837	Clip—spring clip retaining panel 121642
R436	502010	10 ohm		74882	Connector—3 pin male, changer audio cable
R437		3.9 ohm (part of PC401)	J15	109442	Connector—4 contact female, changer intermediate cable
R438		3.9 ohm (part of PC401)	P11	110145	Connector—3 contact male, changer power intermediate cable
R441		390 ohm (part of PC401)	P12	110882	Connector—9 contact male, power transformer
R442		390 ohm (part of PC401)		111963	Connector—headphone jack
R443		3.9 ohm (part of PC401)		116769	Connector—tape and speaker jacks
R444		3.9 ohm (part of PC401)		121185	Contact—single—for connectors 110145, 109442, 110882
R445		390 ohm (part of PC401)		120109	Cover—metal—for latch 120104
R446		390 ohm (part of PC401)		120110	Cover—metal—for latch 120103
R447	502310	10,000 ohm		Z6172	Enclosure—R.H. speaker (less baffles), VJP 77E
R451	502156	560 ohm		Z6173	Enclosure—L.H. speaker (less baffles), VJP 77E
R452	502156	560 ohm		Z6179	Enclosure—R.H. speaker (less baffles), VJP 77W
S1	118899	Switch—function		Z6174	Enclosure—L.H. speaker (less baffles), VJP 77W
S2		Switch—AFC (part of R2)		121630	Escutcheon—bass control
S3		Switch—On/Off (part of R413)		121631	Escutcheon—treble control
		TRANSFORMERS		121632	Escutcheon—AFC/balance control
T101	115649	FM antenna		121633	Escutcheon—function control
T102	118900	1st FM IF 10.7 m.c.		121634	Escutcheon—loudness & AM/FM tuning controls
T201	118903	AM oscillator		123645	Escutcheon—headphone selector switch and jack assembly
T202	118904	1st AM IF 455 kc		101345	Eyelet— $\frac{1}{2}$ " O.D.—for mounting tuner chassis
T203	118901	2nd FM IF 10.7 m.c.		120115	Foot—plastic, $2\frac{3}{8}$ " x $\frac{1}{16}$ "
T204	118902	2nd AM IF 455 kc		120106	Foot—plastic, $\frac{9}{16}$ " dia.
T205	118905	3 AM & FM IF		115353	Grommet— $\frac{3}{8}$ " O.D.—for mounting tuner chassis
T206	118906	FM ratio detector		120105	Handle—carrying
T301	117512	19 kc multiplex		120108	Hinge—R & L speaker enclosures
T302	118907	19 kc doubler		121435	Holder—45 RPM adaptor
T303	118908	38 kc multiplex		121080	Knob—loudness and tuning
T401	118909	left channel driver		122466	Knob—bass, treble, AFC/balance, function
T402	118909	right channel driver		120104	Latch—for R.H. speaker enclosure
		MISCELLANEOUS		120103	Latch—for L.H. speaker enclosure
	110875	Bushing—dial cord drive		120095	Motorboard—changer
	118878	Bushing—tuning shaft		120866	Nut—tee-nut—for changer mounting
	115621	Cable—AC power cord		Z6177	Panel—bottom panel—for cases Z6175 & Z6176
	119913	Circuit—chassis sub assembly, complete		121642	Panel—tuner and amp. control including AM/FM dial ( $12\frac{7}{8}$ " x $4\frac{1}{8}$ " )
	115630	Clip—multiplex lamp retaining		502147	Resistor—470 ohm, $\pm 10\%$ , $\frac{1}{2}$ w (used on headphone and jack switch assembly)
	72953	Cord—dial drive cord (250' spool)			Resistor—10 ohm, $\pm 10\%$ , 2 w, wire wound for speaker 111987
	118885	Diffuser—vinyl—for AM/FM tuning dial ( $5\frac{1}{16}$ " x $3\frac{1}{2}$ " )		111648	Retainer—speakers
	118888	Grommet—strain relief—for power cord		112639	Screw—changer mounting (includes grommet)
	118889	Grommet—strain relief—for J3 cable assembly		120107	Spacer—plastic—for handle 120105
	115794	Insulator—mica—for power transistor		111987	Speaker— $3\frac{1}{2}$ " P.M., 20 ohm, v.c.
	118891	Pointer—tuning		120097	Speaker—9" x 6" P.M., 8.5 ohm, v.c.
	118892	Pulley—tuning capacitor		46760	Switch—speaker selector
	118898	Shaft—tuning drive		120098	Transformer—power
	118897	Socket—dial light			Washer—insulating—for headphone jack
	115581	Socket—transistor—for Q1,Q2,Q3,Q4			ACCESSORIES
	31418	Spring—dial cord tension		115202	Cable—speaker connecting
	120092	Baffle—R.H., relief (includes cloth), VJP 77E		121922	Spindle—"45" adaptor
	120093	Baffle—L.H., relief (includes cloth), VJP 77E			—order from RCA Sales Corporation—
	120101	Baffle—L.H., relief (includes cloth), VJP 77W			Book—customer instruction
	120102	Baffle—R.H., relief (includes cloth), VJP 77W			
	120094	Baffle—R & L speakers (includes cloth), VJP 77E			
	120100	Baffle—R & L speakers (includes cloth), VJP 77W			
	119769	Bracket— $4\frac{1}{8}$ " lg., for mounting tuner chassis			
	119962	Bracket—switch and jack mounting			
	118858	Cable—polarized, changer audio			
	111831	Capacitor—4 $\mu$ f, 25 v, electrolytic (speaker crossover)			
	Z6175	Case—changer section (less bottom panel), VJP 77E			

APPLY TO YOUR RCA DISTRIBUTOR FOR REPLACEMENT PARTS AND ACCESSORIES

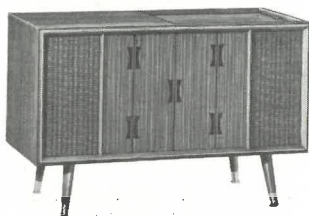




# RCA VICTOR



*The "Rushmore"*  
Model VJE 10W—Walnut Gr.



*The "Holsted"*  
Model VJE 12W—Walnut Gr.



*The "Brockton"*  
Model VJE 14L—Maple Gr.

## "VICTROLA"® PHONOGRAPH

### SERVICE DATA

—File: 1967 No. 38—

**VJE 10 Series**

**VJE 12 Series**

**VJE 14 Series**

**Amplifier Chassis RS-236B**

**Record Changer RP-226-29H**

#### RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY

#### PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201

### SPECIFICATIONS

#### TRANSISTOR COMPLEMENT

(Q401) RCA 121-1	Left Chan. Preamp.
(Q402) RCA 121-1	Right Chan. Preamp.
(Q403) RCA 120-1	Left Chan. Driver
(Q404) RCA 120-1	Right Chan. Driver
(Q405) RCA 120-4	Left Chan. Output
(Q406) RCA 120-4	Right Chan. Output
(Q407) RCA 112-3	Left Chan. Output
(Q408) RCA 112-3	Right Chan. Output
(CR401) Stk. No. 121484	Temp. Comp. Diode
(CR402) Stk. No. 121484	
(CR403) Stk. No. 117145	
	Rectifier

#### POWER SUPPLY RATING

120 volts, 60 cycle/sec. .... 30 watts

#### POWER OUTPUT

Undistorted ..... 3 watts  
Maximum ..... 6 watts

#### LOUDSPEAKERS

VJE 10 ..... Two 9"x6" PM 35 ohm v.c. imp.  
VJE 12, 14 ..... { Two 9"x6" PM 35 ohm v.c. imp.  
                                    Two 3½" PM 35 ohm v.c. imp.

#### RECORD CHANGER

Turntable Speeds ..... 16⅔, 33⅓, 45 and 78 rpm  
Record Sizes ..... 7 inch, 10 inch, 12 inch  
Record Capacity ..... Up to six same size and speed  
Pickup ..... Stereophonic Ceramic  
Cartridge (Less Stylus) ..... Stk. No. 118056  
Stylus (0.7 mil. synth. sapp.) ..... Stk. No. 118199

For Record Changer Servicing Information

Refer to Record Changer Service Data

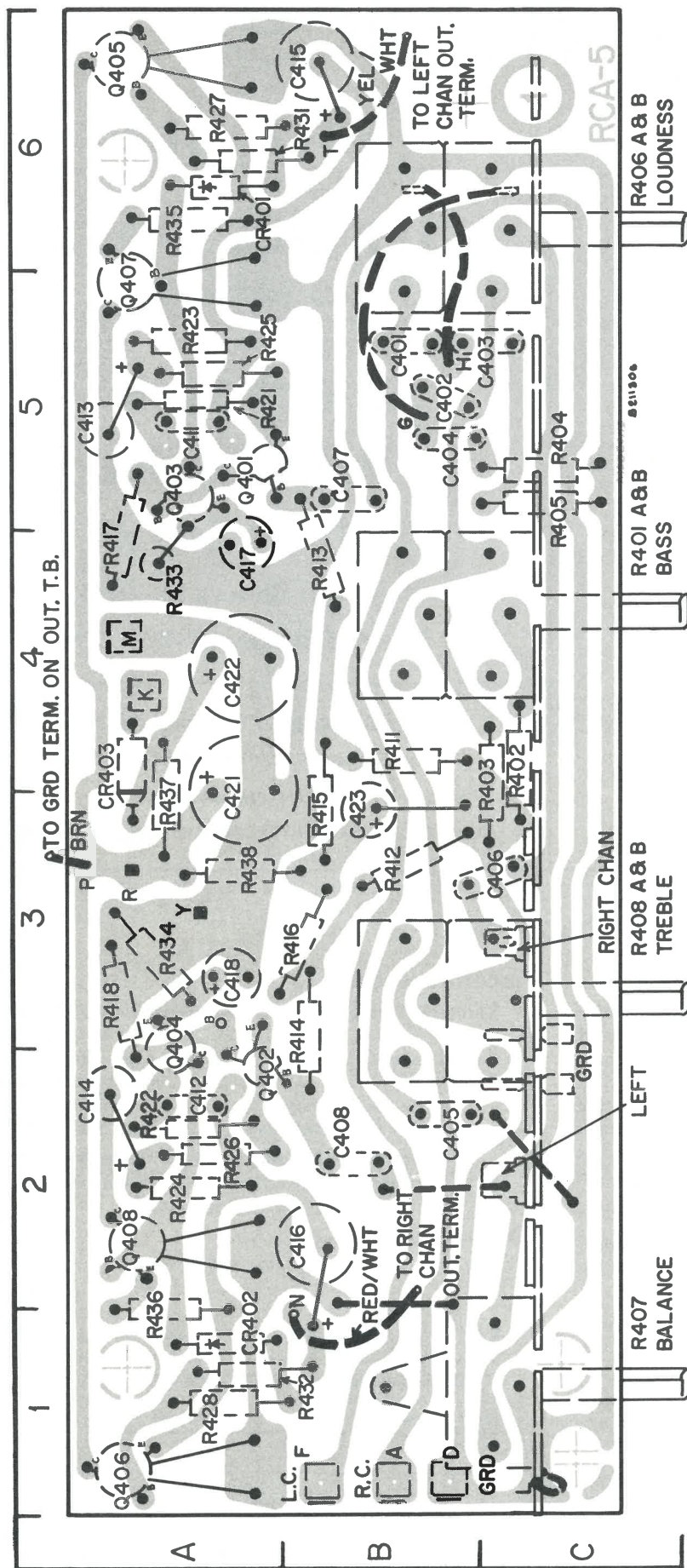
—File: 1967 No. 6 & 6-S1—

#### DIMENSIONS (approx.)

	Height	Width	Depth
VJE 10	24½"	40¾"	18¾"
VJE 12	26¾"	40"	16¾"
VJE 14	28"	40"	16¾"

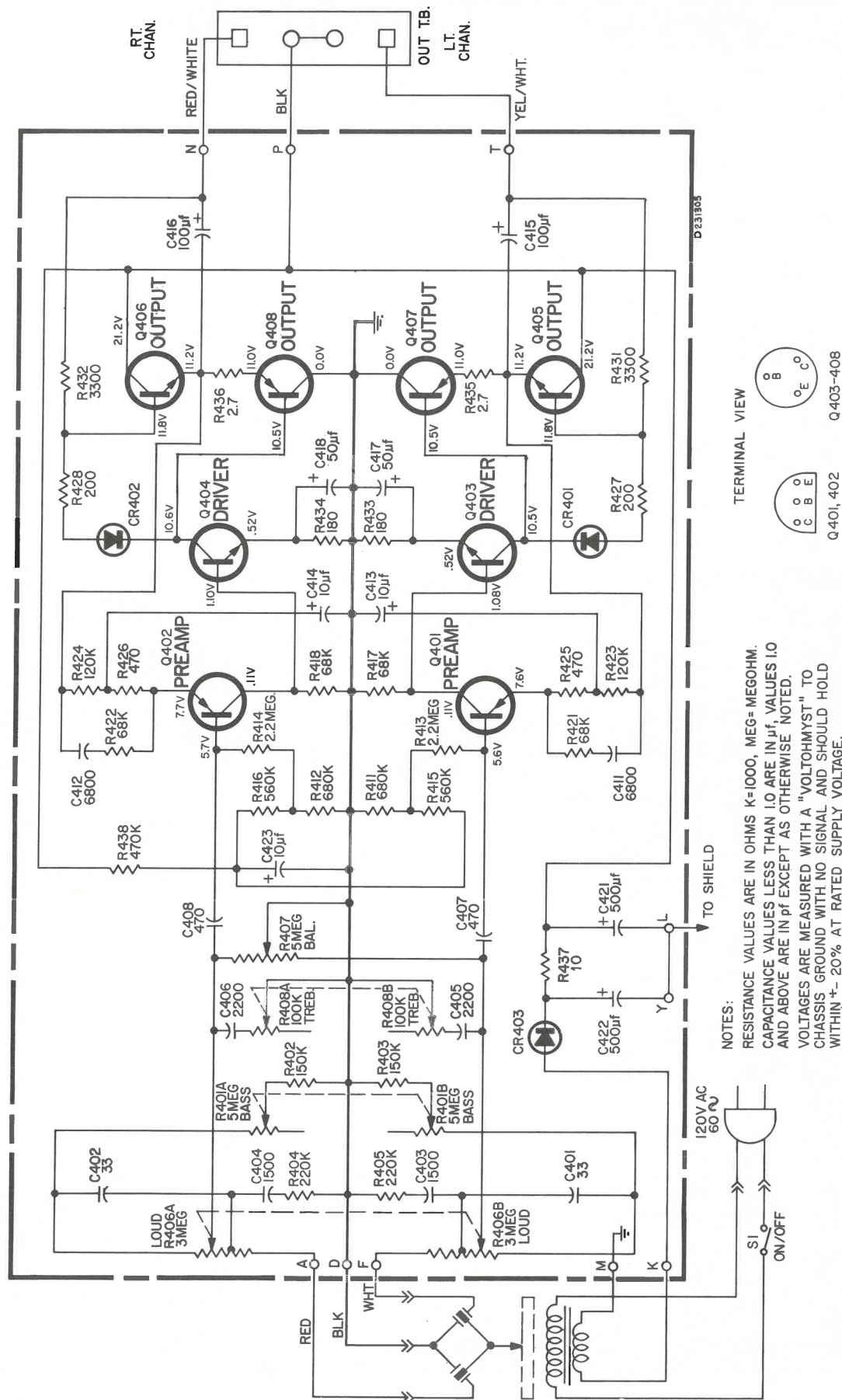
#### SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject



C401.....5B	C412.....2A	C423.....3B	Q404.....3A	R404.....5C	R415.....3B	R426.....2A	R436.....1A	K.....4A
C402.....5B	C413.....5A	C405.....6A	Q405.....6A	R405.....5C	R416.....3B	R427.....6A	R437.....3A	L.....1C
C403.....5C	C414.....2A	CR401.....1A	Q406.....1A	R406A/B..6C	R417.....4A	R428.....1A	R438.....3A	M.....4A
C404.....5B	C415.....6B	CR402.....1A	Q407.....5A	R407.....1C	R418.....3A	R431.....6A	TERMINALS	N.....1B
C405.....2B	C416.....2B	CR403.....4A	Q408.....2A	R408A/B..3C	R421.....5A	R432.....1A	A.....1B	P.....3A
C406.....3C	C417.....4A	Q401.....5A	R401A/B..4C	R411.....4B	R422.....2A	R433.....4A	R.....3A	R.....3A
C407.....5B	C418.....3A	Q402.....2A	R402.....4C	R412.....3B	R423.....5A	R434.....3A	D.....1B	T.....6B
C408.....2B	C421.....3A	Q403.....5A	R403.....3C	R413.....4B	R424.....2A	R435.....6A	F.....1B	Y.....3A
C411.....5A	C422.....4A			R414.....3B	R425.....5A			

Board Layout—View from Wiring Side



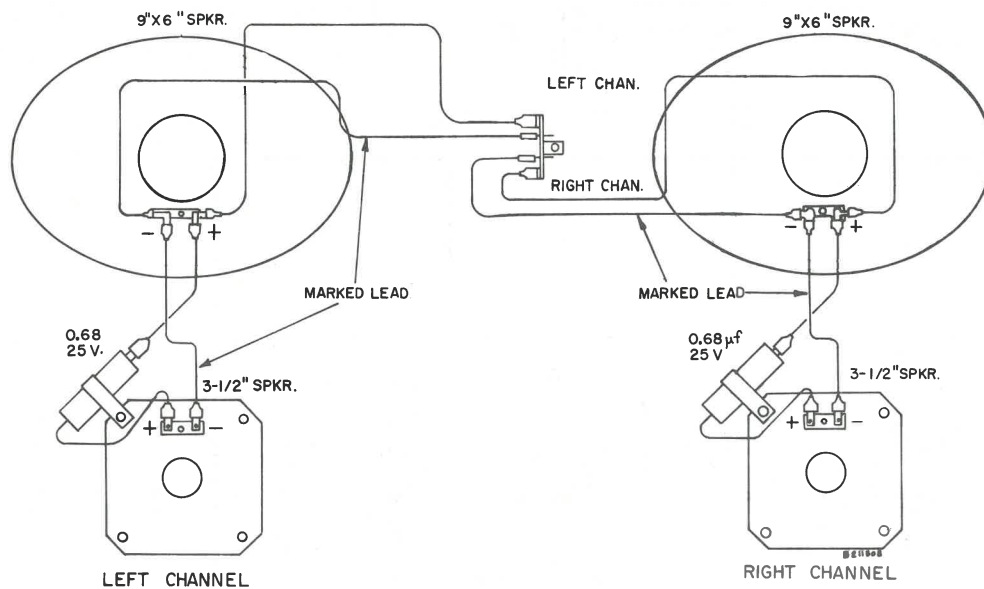
NOTES:

RESISTANCE VALUES ARE IN OHMS K=1000, MEG= MEGOHM.  
CAPACITANCE VALUES LESS THAN 1.0 ARE IN  $\mu$ F, VALUES 1.0  
AND ABOVE ARE IN pF EXCEPT AS OTHERWISE NOTED.  
VOLTAGES ARE MEASURED WITH A "VOLTOHMYST" TO  
CHASSIS GROUND WITH NO SIGNAL AND SHOULD HOLD  
WITHIN  $\pm 20\%$  AT RATED SUPPLY VOLTAGE.

RS-236B Schematic Diagram



## VJE 10, 12, 14 Series



### VJE 12, 14 Speaker Wiring Diagram

## REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
		<b>AMPLIFIER CHASSIS RS 236B</b>			
	121482	Circuit—board Assembly, complete	R422	502368	68,000 ohm
		<b>CAPACITORS:</b>	R423	502412	120,000 ohm
C401	107297	33 $\mu f$ , $\pm 20\%$ , 500 v., ceramic, N750	R424	502412	120,000 ohm
C402	107297	33 $\mu f$ , $\pm 20\%$ , 500 v., ceramic, N750	R425	502147	470 ohm
C403		1500 $\mu f$ , $\pm 20\%$ , 100 v., ceramic	R426	502147	470 ohm
C404		1500 $\mu f$ , $\pm 20\%$ , 100 v., ceramic	R427	502120	200 ohm $\pm 5\%$
C405	111130	2200 $\mu f$ , $\pm 20\%$ , 100 v., ceramic	R428	502120	200 ohm $\pm 5\%$
C406	111130	2200 $\mu f$ , $\pm 20\%$ , 100 v., ceramic	R431	502233	3300 ohm
C407	102230	470 $\mu f$ , $\pm 20\%$ , 500 v., ceramic	R432	502233	3300 ohm
C408	102230	470 $\mu f$ , $\pm 20\%$ , 500 v., ceramic	R433	502118	180 ohm
C411		0.01 $\mu f$ , $\pm 20\%$ , 100 v., ceramic	R434	502118	180 ohm
C412		0.01 $\mu f$ , $\pm 20\%$ , 100 v., ceramic	R435		2.7 ohm
C413	106114	10 $\mu f$ , 10 v., electrolytic	R436		2.7 ohm
C414	106114	10 $\mu f$ , 10 v., electrolytic	R437	502010	10 ohm
C415	119358	100 $\mu f$ , 15 v., electrolytic	R438	502447	470,000 ohm
C416	119358	100 $\mu f$ , 15 v., electrolytic		115799	Shield—heat sink, for Q405-408
C417	115369	50 $\mu f$ , 6 v., electrolytic			<b>MISCELLANEOUS</b>
C418	115369	50 $\mu f$ , 6 v., electrolytic		117491	Back—cabinet, VJE 12W, VJE 14L
C421	117524	500 $\mu f$ , 25 v., electrolytic		123647	Cable—power cord, VJE 10W
C422	117524	500 $\mu f$ , 25 v., electrolytic		115621	Cable—power cord, VJE 12W, VJE 14L
C423	110567	10 $\mu f$ , 15 v., electrolytic		111972	Capacitor—0.68 $\mu f$ , 25 v., electrolytic (speaker crossover) VJE 12W, VJE 14L
CR401	121484	Diode—bias		119223	Caster—set 4, VJE 10W
CR402	121484	Diode—bias		123663	Cloth—grille, VJE 10W
CR403	117145	Diode—silicon rectifier		X8336	Cloth—grille, VJE 12W
		<b>TRANSISTORS:</b>		122098	Cloth—grille, VJE 14L
Q401	121467	pre-amplifier, 121-1		103480	Flange—triangular, mounting legs, VJE 12W, VJE 14L
Q402	121467	pre-amplifier, 121-1		121435	Holder—45 RPM adaptor
Q403	121660	driver, 120-1 or SE6002		121442	Key—decorative key & backplate, VJE 14L
Q404	121660	driver, 120-1 or SE6002		119340	Leg—aluminum, VJE 10W
Q405	121663	output, 120-4 or 2N3569		X8057	Leg—walnut (set of 4) VJE 12W
Q406	121663	output, 120-4 or 2N3569		X8058	Leg—maple (set of 4) VJE 14L
Q407	121659	output, 112-3 or 2N4355		X8386	Lid—sliding, VJE 10W
Q408	121659	output, 112-3 or 2N4355		121401	Lid—sliding, VJE 12W
		<b>RESISTORS: <math>\pm 10\%</math>, <math>\frac{1}{2}</math> watt composition unless noted otherwise.</b>		121402	Lid—sliding, VJE 14L
R401A/B	121473	control, "Bass"		119225	Motorboard—changer, VJE 10W
R402	502415	150,000 ohm		120866	Nut—tee-nut, for mounting changer
R403	502415	150,000 ohm		119232	Pull—sliding lid, VJE 10W
R404	502422	220,000 ohm		119892	Pull—sliding lid, VJE 12W
R405	502422	220,000 ohm		118913	Pull—sliding lid, VJE 14L
R406A/B	121475	control, "Loudness"		111648	Retainer—speaker
R407	121470	control, "Balance"		112639	Screw—changer mounting (includes grommet)
R408A/B	121474	control, "Treble"		111981	Speaker—9" x 6" PM, 35 ohm
R411	502468	680,000 ohm		111986	Speaker—3½" PM, 35 ohm, VJE 12W, VJE 14L
R412	502468	680,000 ohm		101825	Terminal—power cord, VJE 12W, VJE 14L
R413	502522	2.2 megohm		119341	Trim—metal, 32½" lg., VJE 10W
R414	502522	2.2 megohm			
R415	502456	560,000 ohm			
R416	502456	560,000 ohm			
R417	502368	68,000 ohm			
R418	502368	68,000 ohm			
R421	502368	68,000 ohm			

Specifications Subject to Change Without Notice

SEE YOUR RCA DISTRIBUTOR FOR REPLACEMENT PARTS AND ACCESSORIES



# RCA VICTOR



## RADIO & "VICTROLA"<sup>®</sup> PHONOGRAPH SERVICE DATA

—File: 1967 No. 39—

VJT 16, 18, 23, 24,  
25, 29, 30, 31, 33, 35,  
37, 84-K, 85-K, 89-K,  
90-K, 91-K Series

Radio Chassis RC-1227C, E  
Record Changer RP-227-12, -12D, -29

### RCA SALES CORPORATION

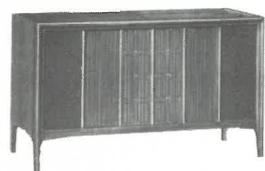
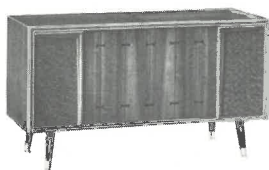
A RADIO CORPORATION OF AMERICA SUBSIDIARY  
PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201



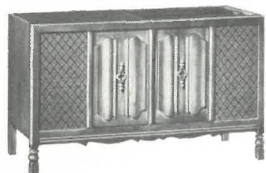
*The "Deerfield"*  
Model VJT 16W—  
Walnut Gr.

*The "Cayuga"*  
Model VJT 18M—  
Mahogany Gr.  
Model VJT 18W—  
Walnut Gr.



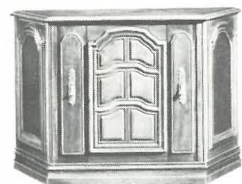
*The "Angerman"*  
Model VJT 23W—  
Walnut Gr.

*The "Adirondack"*  
Model VJT 24L—Maple Gr.



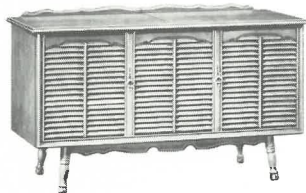
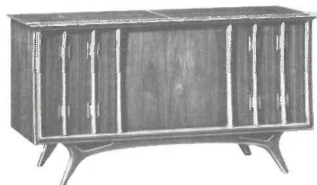
*The "Marengo"*  
Model VJT 25S—Maple Gr.

*The "Standish"*  
Model VJT 29L—Maple



*The "Algiers"*  
Model VJT 30S—Pecan

*The "Visby"*  
Model VJT 31W—Walnut



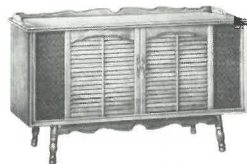
*The "Fitchburg"*  
Model VJT 33L—Maple

*The "Baracaldo"*  
Model VJT 35S—Pecan



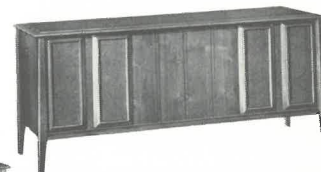
*The "Liege"*  
Model VJT 37F—  
Fruitwood  
Model VJT 37S—Pecan

*The "Skara"*  
Model VJT 84WK—  
Walnut



*The "Cooperstown"*  
Model 2VJT 85LK—Maple

*The "Hallsberg"*  
Model VJT 89WK—  
Walnut



*The "Clarksburg"*  
Model VJT 90LK—Maple

*The "Genova"*  
Model VJT 91FK—  
Fruitwood



## SPECIFICATIONS

## TRANSISTOR COMPLEMENT

(Q1) RCA 40022	Left Chan. Output
(Q2) RCA 40022	Right Chan. Output
(Q3) RCA 40022	Left Chan. Output
(Q4) RCA 40022	Right Chan. Output
(Q101) RCA 118-1	FM RF Amp.
(Q102) RCA 118-2	FM Converter
(Q201) RCA 2N1526	AM Converter
(Q202) RCA 118-4	1st AM and FM IF Amp.
(Q203) RCA 118-3	2nd AM and FM IF Amp.
(Q204) RCA 118-3	3rd FM IF Amp.
(Q301) RCA 115-2	1st 19 kc Stereo Amp.
(Q302) RCA 115-2	2nd 19 kc Stereo Amp.
(Q303) RCA 115-1	38 kc Stereo Amp.
(Q304) RCA 115-6	Stereo Switch
(Q305) RCA 115-1	Left Chan. Diff. Amp.
(Q306) RCA 115-1	Right Chan. Diff. Amp.
(Q401) RCA 115-3	Left Chan. Preamp.
(Q402) RCA 115-3	Right Chan. Preamp.
(Q403) RCA 115-1	Left Chan. Predriver
(Q404) RCA 115-1	Right Chan. Predriver
(Q405) RCA 115-5	Left Chan. Driver
(Q406) RCA 115-5	Right Chan. Driver
(CR1) RCA Stk. #117145	Rectifiers
(CR2) RCA Stk. #117145	
(CR101) RCA 223-1	FM AFC Diode
(CR201) RCA 677-4	AVC Diode
(CR202) RCA 677-4	AM Detector
(CR203) RCA 1N542	FM Demodulator
(CR204) RCA 1N542	
(CR301) Stk. #112524	Stereo 19-38 kc Doubler
(CR302) Stk. #112524	
(CR303) Stk. #112524	Stereo Balanced Demodulator
(CR304) Stk. #112524	
(CR305) Stk. #112524	
(CR306) Stk. #112524	

FREQUENCIES	Tuning	IF
AM	540-1620 kc/s	455 kc/s
FM	88-108 mc/s	10.7 mc/s

## MUSIC POWER OUTPUT (E.I.A., RS-234)

	Maximum	Undistorted
RC-1227C	40 watts	20 watts
RC-1227E	20 watts	10 watts

## AUDIO FREQUENCY RESPONSE

VJT 16, 18, 23, 24, 25	60-20,000 cycles/sec
VJT 29, 30, 31, 33, 35, 37, 84-K, 85-K, 89-K, 90-K, 91-K	50-20,000 cycles/sec

## POWER SUPPLY RATING

VJT 16, 18, 23, 24, 25	120 volts, 60 cycle, 50 watts
VJT 29, 30, 31, 33, 35, 37, 84-K, 85-K, 89-K, 90-K, 91-K	120 volts, 60 cycle, 60 watts

## TUNING

Drive Ratio	Vernier Slide Rule 14:1 (7 turns of knob)
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## RECORD CHANGER (RP-227-12, -12D)

Turntable Speeds	16 $\frac{2}{3}$ , 33 $\frac{1}{3}$ , 45 and 78 r.p.m.
Record Sizes	7 inch, 10 inch and 12 inch
Record Capacity	Up to six, same size and speed
Cartridge	
RP-227-12, 12D (Stk. No. 115703)	Stereophonic Ceramic
RP-227-29 (Stk. No. 115346)	Stereophonic Ceramic
Styli	
RP-227-12, -12D	
(Stk. No. 115911)	0.7 mil dia. & 3 mil syn. sapp.
RP-227-29	
(Stk. No. 115329)	0.7 mil syn. sapp. & 3 mil. syn. sapp.

## For Record Changer Servicing Information

Refer to Record Changer Service Data

—File: 1967 No. 6 &amp; 6-51—

## CABINET DIMENSIONS (approx.)

Model	Height	Width	Depth
VJT 16	24 $\frac{1}{2}$ "	40 $\frac{3}{4}$ "	18 $\frac{3}{4}$ "
VJT 18	26"	48"	17 $\frac{3}{4}$ "
VJT 23	26 $\frac{3}{4}$ "	46"	17 $\frac{5}{8}$ "
VJT 24	28 $\frac{1}{2}$ "	46"	16 $\frac{7}{8}$ "
VJT 25	26 $\frac{3}{4}$ "	46"	17 $\frac{1}{4}$ "
VJT 29	28 $\frac{3}{4}$ "	39 $\frac{1}{2}$ "	17 $\frac{3}{8}$ "
VJT 30	27 $\frac{1}{4}$ "	39 $\frac{1}{2}$ "	17 $\frac{3}{8}$ "
VJT 31	27"	52"	19 $\frac{3}{4}$ "
VJT 33	29"	50"	19"
VJT 35	27 $\frac{3}{4}$ "	50"	18 $\frac{5}{8}$ "
VJT 37	27 $\frac{1}{2}$ "	50 $\frac{1}{2}$ "	19"
VJT 84-K	26 $\frac{1}{2}$ "	52"	18 $\frac{1}{8}$ "
VJT 85-K	28 $\frac{5}{8}$ "	50"	19 $\frac{1}{8}$ "
VJT 89-K	26 $\frac{1}{2}$ "	62 $\frac{1}{2}$ "	19 $\frac{1}{4}$ "
VJT 90-K	28"	61 $\frac{1}{2}$ "	19 $\frac{1}{8}$ "
VJT 91-K	27"	62 $\frac{1}{2}$ "	19"

## MODEL TO CHASSIS CROSS REFERENCE

MODEL	TUNER/ AMPLIFIER	RECORD CHANGER	SPEAKERS
VJT 16, 18	RC-1227E	RP-227-29	2-9" x 6"
VJT 23, 24, 25	RC-1227E	RP-227-12	2-9" x 6", 4-3 $\frac{1}{2}$ " Tweeters
VJT 29, 30	RC-1227E	RP-227-12	2-12" x 8", 2-3 $\frac{1}{2}$ " Middlers, 2-3 $\frac{1}{2}$ " Tweeters
VJT 31, 33, 35, 37	RC-1227E	RP-227-12	2-12" x 8", 2-Horns, 2-3 $\frac{1}{2}$ " Tweeters
VJT 84-K, 85-K, 89-K, 90-K, 91-K	RC-1227E	RP-227-12D	2-15" x 9", 2-Horns, 2-3 $\frac{1}{2}$ " Tweeters



# AM-FM ALIGNMENT PROCEDURE

## INSTRUMENTS REQUIRED

### Signal Sources

1. RF Signal Generator (RCA WR-50B or equivalent)
2. TV/FM Sweep Generator (RCA WR-69A or equivalent)
3. Marker Generator (RCA WR-99A or equivalent)

### Output Indicators

4. Vacuum-Tube Voltmeter (RCA WV-98C or equivalent)
5. Oscilloscope (RCA WO-91B or equivalent)

### Tools

6. Hex head alignment tool
7. Thin fibre shaft alignment tool

## GENERAL ALIGNMENT CONDITIONS

1. Connect low side of signal source and output indicator to chassis ground as close as possible to high side connection unless otherwise specified.
2. Signal input should be kept as low as possible to avoid AVC action. (Set output indicator to highest sensitivity.)
3. Markers should be accurate. (Crystal controlled or checked against a crystal calibrator.) The 10.7 mc marker used in each section of the alignment should be the same. (Generator dial should not be moved.)
4. Marker insertion and amplitude should not distort the oscilloscope trace.
5. Standard modulation is 400 cycle at 30% amplitude.

STEP	Signal Source	Output Indicator	Set Signal To—	Set Radio Dial To—	Adjust	Adjust for	STEP
1	Set Radio Function Switch on "AM"						1
2	RF Generator connected to a short piece of wire, or loop to radiate signal into AM antenna	V.T.V.M. Connected across Speaker Voice Coil (Either Channel)	455 kc (Modulated)	Quiet point on band near 1600 kc	T205 Top Core (3rd AM IF)	Maximum	2
3					T204 (2nd AM IF)		3
4					T202 Top & Bottom Core (1st AM IF)		4
5			1620 kc (Modulated)	Gang Fully open	C101E-T (Osc. Trim)		5
6			1400 kc (Modulated)	1400 kc	C101B-T (Ant. Trim)		6
7			600 kc (Modulated)	600 kc (rock gang)	T201 (AM Osc.)		7
8	Repeat Steps 2 through 4 and Steps 5 through 7 as necessary to obtain Maximum Sensitivity on Stations						8
9	RF Generator Connected to Q204 Base through a 0.01 $\mu$ f Capacitor	V.T.V.M. Connected Across R239	10.7 mc (Unmodulated)	Quiet Point on Band	T206 Bottom Core (Ratio Detector)	Maximum	9
10		V.T.V.M. (Set to Center Zero) Connected to Junction of R224 & C227			T206 Top Core (Ratio Detector)	Zero Voltage (Cross-over)	10
11	Repeat Steps 9 and 10 as necessary to obtain a Balanced "S" curve with $\pm 200$ kc Linearity						11
12	Connect a 0.047 $\mu$ f capacitor across the primary winding of T102						12
13	RF Sweep Generator Connected to Q202 Base Through a 0.01 $\mu$ f Capacitor	Oscilloscope with signal tracing probe (RCA WG-302A) connected to Q204 Base (Adjust signal input to obtain a 50 MV P-P reading on Oscilloscope)	10.7 mc Sweep with markers at 10.6, 10.7 & 10.8 mc	Quiet Point on Band	Simultaneously T205 Bottom Core (3rd FM IF) and T203 Top & Bottom Core (2nd FM IF)	Maximum and best Symmetry	13
14	Remove 0.047 $\mu$ f capacitor across primary winding of T102						14
15	TV/FM Sweep Gen. across Antenna Terminals through a matching network if necessary	Oscilloscope with signal tracing probe (RCA WG-302A) connected to Q204 Base (Adjust signal input to obtain a 50 MV P-P reading on Oscilloscope)	98-108 mc 240 kc sweep	Tune in Signal (Approx. 103 mc)	T102 Top & Bottom Core (1st FM IF)	Maximum and best Symmetry	15
16	Repeat Steps 12 through 15 as necessary to obtain specified response						16
17	Marker Generator Connected Across FM Antenna Terminals through a matching network if necessary	V.T.V.M. with signal tracing probe (RCA WG-301A) connected to Q204 Base	108 mc	108 mc (Rock Gang if Necessary)	C118 (Osc. Trimmer)	Maximum	17
18					C101C-T (RF-Trimmer)		18
19					C101A-T (Ant. Trimmer)		19
20	Repeat Steps 17, 18 and 19 as necessary to obtain maximum sensitivity on stations						20

## MULTIPLEX ALIGNMENT PROCEDURE

### INSTRUMENTS REQUIRED

#### Signal Source

1. FM-Stereo Simulator (RCA WR-52A or equivalent)

#### Output Indicator

2. Oscilloscope (RCA WO-91A or equivalent)

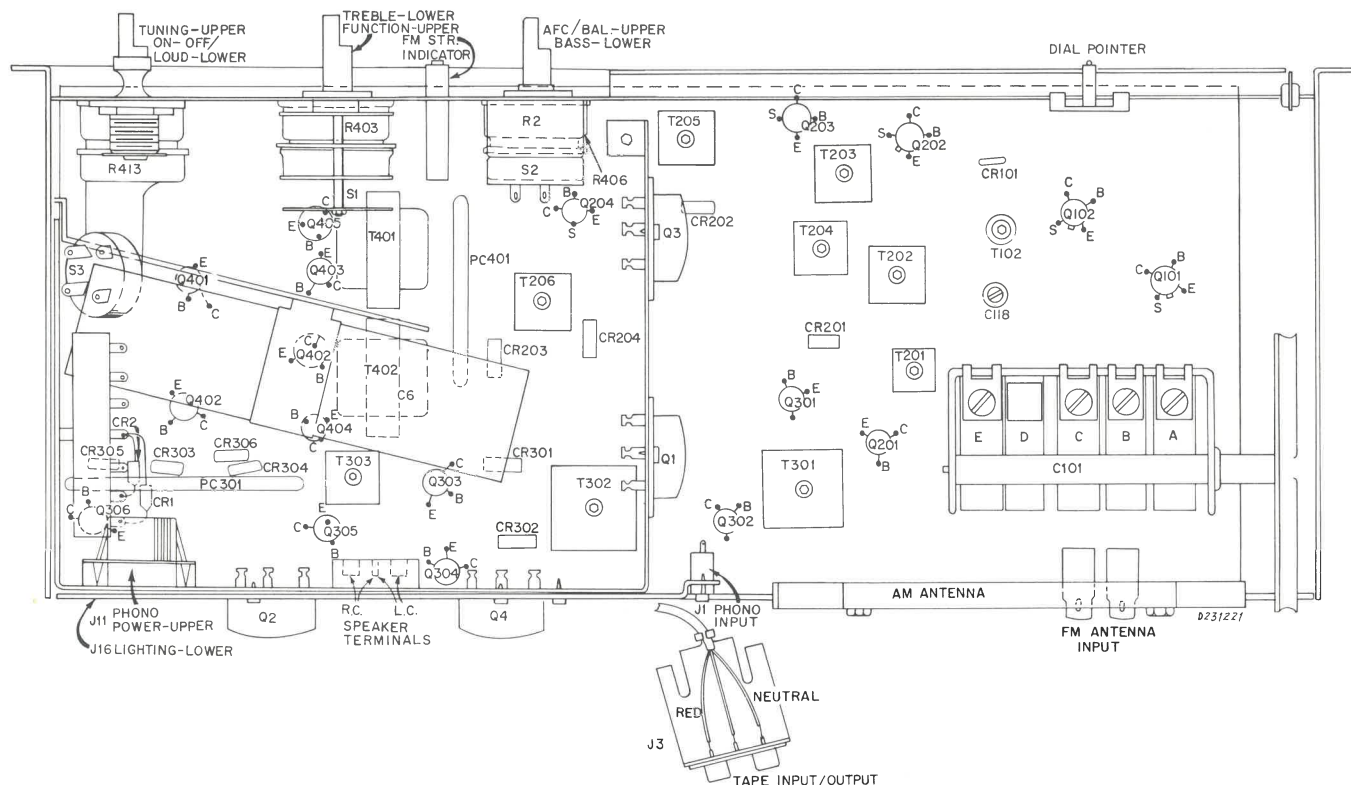
#### Tools

3. Hex head alignment tool

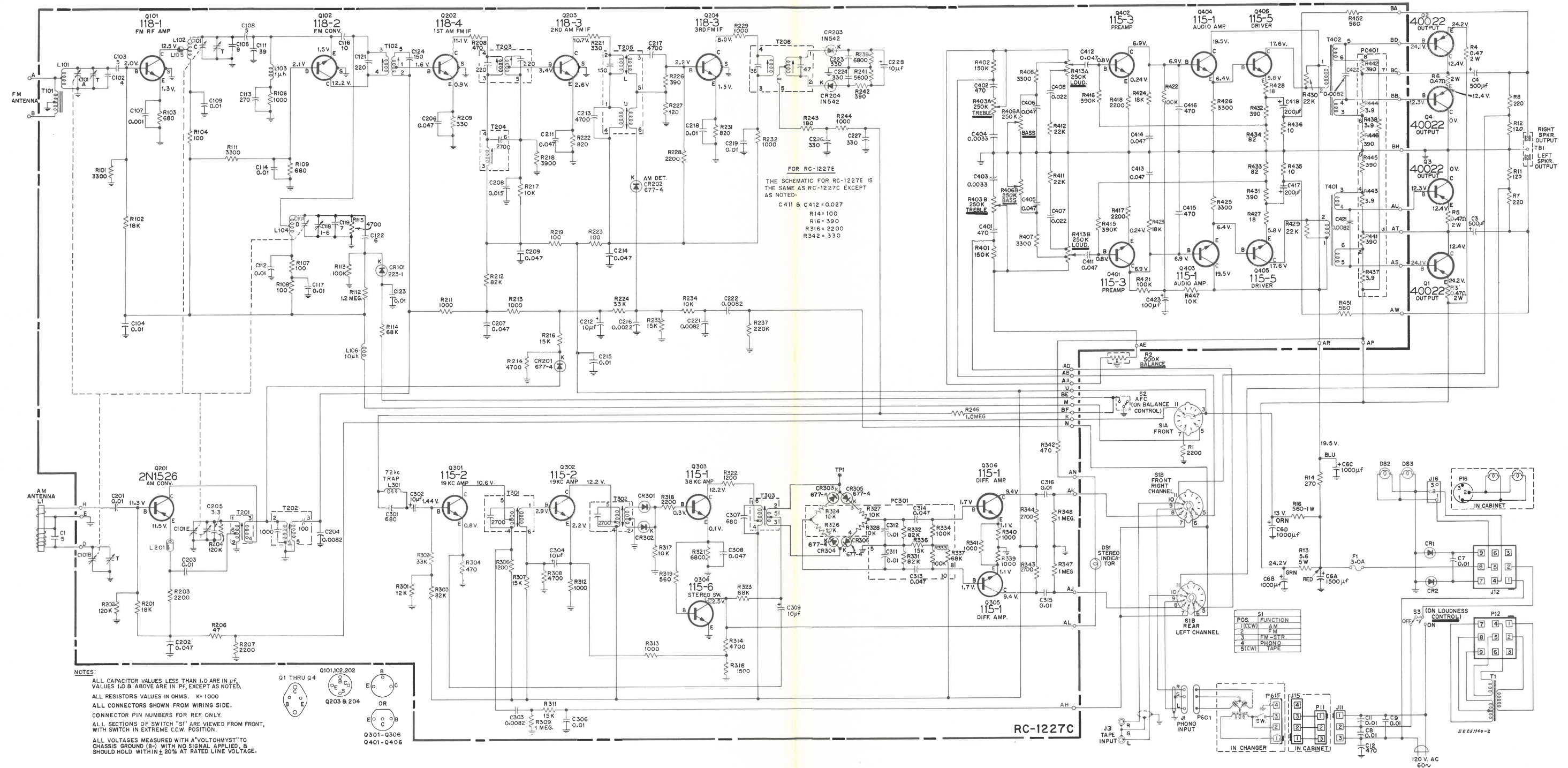
### GENERAL ALIGNMENT CONDITIONS

1. Connect low side of output indicator to chassis ground as close as possible to high side connection.
2. RF deviation should be set to approximately 75 kc.
3. Input signal should be held at a level that will not produce limiting.
4. FM-Stereo Simulator connected across FM antenna terminals. Tune radio to 100 mc. AFC on.

STEP	19 kc Subcarrier Level set to—	Audio Freq. Sel. set to—	Function Sel. Set to—	Output Indicator	Adjust	Adjust for	STEP
1	Set Radio Function Switch to FM-Stereo						1
2	Ground Stake "AL" (Stereo Indicator Light Should Remain Lit.)						2
3	10 %	19 kc (If 19 kc not available, set at 67 kc)	Stereo left	Oscilloscope Connected to TP #1 (Retain Signal Input to just below limiting)	T301 (19 kc Trans.)	Maximum	3
4					T302 (19 kc Trans.)		4
5					T303 (38 kc Trans.)		5
6		1000 cycle	Stereo right	Connected to Stake "AJ" (Left chan. output) (Increase signal input)	T301 (19 kc Trans.)	Retouch <i>slightly</i> for Minimum and correct phase	6
7			Stereo left	Connected to Stake "AK" (Right chan. output) (Increase signal input)			7
8	Repeat steps 6 and 7 to equalize minimums on both channels to obtain best separation						8
9	Remove Ground from stake "AL"						9

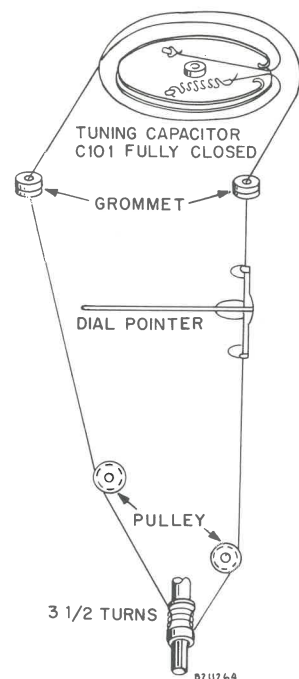


RC-1227 Chassis Layout

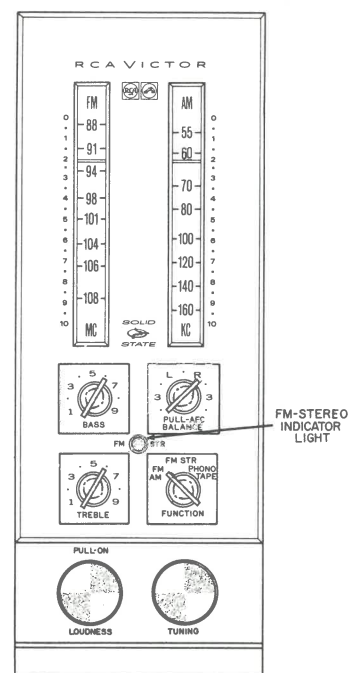


*Schematic Diagram—RC-1227*

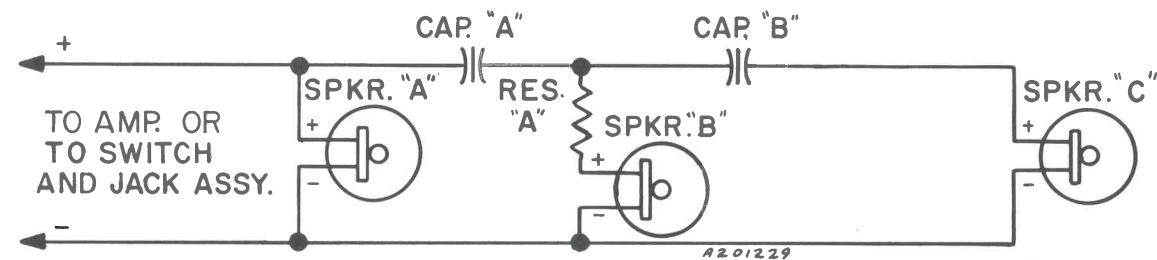




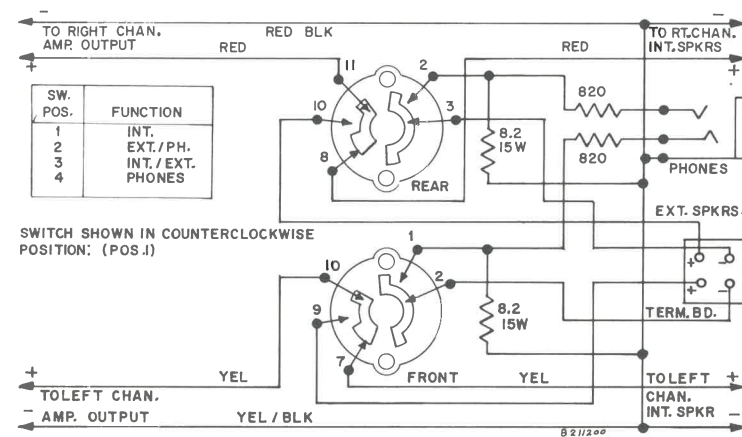
### Dial Cord Arrangement



### Control Panel



MODEL	SPEAKER "A"	CAPACITOR "A"	RESISTOR "A"	SPEAKER "B"	CAPACITOR "B"	SPEAKER "C"
VJT 16	9" x 6"					
VJT 18	9" x 6"	2 $\mu f$		3 1/2 "		
VJT 23, 24, 25	9" x 6"	4 $\mu f$		3 1/2 "		3 1/2 "
VJT 29, 30	12" x 8"	4 $\mu f$		3 1/2 "	2 $\mu f$	3 1/2 "
VJT 31, 33, 35, 37	12" x 8"	4 $\mu f$	15 $\Omega$ , 2 w.	Horn	2 $\mu f$	3 1/2 "
VJT 84-K, 85-K	15" x 9"	4 $\mu f$	27 $\Omega$ , 5 w.	Horn	2 $\mu f$	3 1/2 "
VJT 89-K, 90-K, 91-K	15" x 9"	4 $\mu f$	27 $\Omega$ , 2 w.	Horn	2 $\mu f$	3 1/2 "



### Speakers and VJT 89-K, 90-K, 91-K Selector Switch Diagrams

C101.....9B	C209.....8D	C401.....2D	CR303...1A	Q305.....3A	R208.....7D	R246.....6B	R401.....2D	R435.....1C
C102.....10B	C211.....7D	C402.....2D	CR304...2A	Q306.....1A	R209.....8D	R301.....6B	R402.....2D	R436.....1B
C103.....10C	C212.....6C	C403.....4D	CR305...1B	Q401.....2C	R211.....8C	R302.....6B	R403.....3D	R447.....2C
C104.....10D	C213.....6D	C404.....4D	CR306...2B	Q402.....2B	R212.....7C	R303.....6B	R406.....5D	R451.....2D
C106.....10B	C214.....5D	C405.....4D	L101.....10A	Q403.....3C	R213.....7C	R304.....6B	R407.....3D	R452.....1C
C107.....10B	C215.....7B	C406.....4D	L102.....9C	Q404.....3B	R214.....7B	R306.....7B	R408.....2D	AA.....4D
C108.....9C	C216.....6D	C407.....2D	L103.....9C	Q405.....3D	R216.....7C	R307.....6A	R411.....2D	AB.....2D
C109.....10C	C217.....5D	C408.....2D	L104.....8C	Q406.....2B	R217.....7C	R308.....6A	R412.....2D	AD.....2D
C111.....9C	C218.....5C	C411.....1D	L105.....10C	R101.....10C	R218.....6D	R309.....6B	R413.....1D	AE.....4D
C112.....8C	C219.....5C	C412.....1B	L106.....10D	R102.....10C	R219.....6C	R311.....6B	R415.....1C	AH.....6B
C113.....9B	C221.....6C	C413.....2C	L201.....7B	R103.....10C	R221.....6D	R312.....6A	R416.....1B	AJ.....2A
C114.....9C	C222.....5C	C414.....2B	C414.....2B	R104.....10C	R222.....7D	R313.....6A	R417.....1C	AK.....1A
C116.....9C	C223.....4B	C415.....2C	L301.....6B	R106.....9B	R223.....6C	R314.....5A	R418.....1B	AL.....4A
C117.....9C	C224.....5B	C416.....2B	PC301...2A	R107.....9C	R224.....6C	R316.....5A	R421.....2C	AN.....4C
C118.....8C	C226.....5C	C417.....2C	PC401...4C	R108.....9C	R227.....5D	R317.....4A	R422.....2B	AP.....4D
C119.....8B	C227.....5B	C418.....2B	C421.....4C	R109.....10D	R228.....5D	R318.....4A	R423.....2C	AR.....3C
C121.....9C	C228.....5B	C421.....4C	C422.....4B	R111.....10D	R229.....4C	R319.....3A	R424.....2B	AS.....4D
C122.....9D	C422.....4B	C423.....2C	Q101...10C	R112.....9D	R231.....5C	R321.....3A	R425.....2C	AT.....4C
C123.....8D	C301.....5B	C423.....2C	Q102...9C	R113.....9D	R232.....5C	R322.....4B	R426.....3B	AU.....4C
C124.....8C	C302.....6B	CR101...8D	Q201...7B	R114.....8D	R233.....6D	R323.....4A	R427.....2C	AW.....2D
C201.....7A	C303.....6B	CR201...7B	Q202...8D	R115.....9A	R234.....6C	R339.....3A	R428.....2B	BA.....1C
C202.....8A	C304.....6A	CR202...6C	Q203...7D	R201...7B	R237.....6C	R340.....1A	R429.....3C	BB.....4B
C203.....7B	C306.....5B	CR202...6C	Q204...5C	R202...8A	R239.....5B	R341.....2A	R430.....3B	BC.....4B
C204.....8C	C307...3A	CR203...4B	CR204...5B	R203...7A	R241.....5B	R342.....4C	R431...1C	BD.....9A
C205.....8B	C308.....3A	CR204...5B	Q301...7B	R204...8B	R242.....5B	R343.....2A	R432...1B	BE.....9D
C206.....8C	C309.....4B	CR301...4A	Q302...6A	R206...8A	R243.....5C	R344.....2A	R433...1C	BF.....6C
C207.....8C	C315.....2A	CR302...4A	Q303...4A	R207...8A	R244.....5B	R347...2A	R434...1B	BH.....8A
C208.....6C	C316...1A	CR302...4A	Q304...4A	R207...8A	R244.....5B	R348.....2A	R435...1C	TP1.....3B





SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
		<b>RADIO CHASSIS</b>			
		<b>RC 1227C, E</b>			
		<b>CAPACITORS:</b>			
C1		5 $\mu f$ , $\pm 1 \mu f$ , 500 v, ceramic	C413	111837	0.047 $\mu f$ , $\pm 20\%$ , 100 v, ceramic
C3	111835	500 $\mu f$ , 25 v, electrolytic	C414	111837	0.047 $\mu f$ , $\pm 20\%$ , 100 v, ceramic
C4	111835	500 $\mu f$ , 25 v, electrolytic	C415	102230	470 $\mu f$ , $\pm 20\%$ , 500 v, ceramic
C6A/B/ C/D	120080	1500/1000/1000/1000 $\mu f$ , 35/35/25/15 v, electrolytic	C416	102230	470 $\mu f$ , $\pm 20\%$ , 500 v, ceramic
C7	73960	0.01 $\mu f$ , $\pm 100-0\%$ , 500 v, ceramic	C417	118880	200 $\mu f$ , $\pm 250-10\%$ , 6 v, electrolytic
C8	73960	0.01 $\mu f$ , $\pm 100-0\%$ , 500 v, ceramic	C418	118880	200 $\mu f$ , $\pm 250-10\%$ , 6 v, electrolytic
C9	73960	0.01 $\mu f$ , $\pm 100-0\%$ , 500 v, ceramic	C421		8200 $\mu f$ , $\pm 20\%$ , 100 v, ceramic
C11	73960	0.01 $\mu f$ , $\pm 100-0\%$ , 500 v, ceramic	C422		8200 $\mu f$ , $\pm 20\%$ , 100 v, ceramic
C12	115259	470 $\mu f$ , $\pm 20\%$ , 1000 v, ceramic	C423	118831	100 $\mu f$ , 25 v, electrolytic
C101	118879	variable tuning			<b>RECTIFIERS</b>
C102		9 $\mu f$ , $\pm 0.5 \mu f$ , 500 v, ceramic	CR1	117145	rectifier, silicon
C103	104178	5 $\mu f$ , $\pm 0.5 \mu f$ , 500 v, ceramic	CR2	117145	rectifier, silicon
C104	115091	0.01 $\mu f$ , $\pm 20\%$ , 100 v, ceramic	CR101	115099	AFC
C106		9 $\mu f$ , $\pm 0.5 \mu f$ , 500 v, ceramic	CR201	112524	AGC
C107	115090	0.001 $\mu f$ , $\pm 100-0\%$ , 100 v, ceramic	CR202	112524	AM detector
C108	104178	5 $\mu f$ , $\pm 0.5 \mu f$ , 500 v, ceramic	CR203	115101	FM ratio detector
C109	115091	0.01 $\mu f$ , $\pm 20\%$ , 100 v, ceramic	CR204	115101	FM ratio detector
C111	115088	39 $\mu f$ , $\pm 5\%$ , 100 v, ceramic	CR301	112524	19kc doubler
C112	115091	0.01 $\mu f$ , $\pm 20\%$ , 100 v, ceramic	CR302	112524	19kc doubler
C113	115089	270 $\mu f$ , $\pm 10\%$ , 100 v, ceramic	CR303	112524	MPX sync. det.
C114	115091	0.01 $\mu f$ , $\pm 20\%$ , 100 v, ceramic	CR304	112524	MPX sync. det.
C116	115657	10 $\mu f$ , $\pm 5\%$ , 100 v, ceramic	CR305	112524	MPX sync. det.
C117		0.01 $\mu f$ , $\pm 100-20\%$ , 100 v, ceramic	CR306	112524	MPX sync. det.
C118	115092	1-6 $\mu f$ , trimmer	DS1	115635	Lamp—multiplex indicator
C119	104177	7 $\mu f$ , $\pm 0.5 \mu f$ , 500 v, ceramic	DS2	111481	Lamp—dial light
C121		220 $\mu f$ , $\pm 5\%$ , 500 v, mica	DS3	111481	Lamp—dial light
C122	121225	6 $\mu f$ , $\pm 0.5 \mu f$ , 500 v, ceramic	F1	120082	Fuse—3 amp
C123		0.01 $\mu f$ , $\pm 100-20\%$ , 100 v, ceramic	J1	111389	Connector—3 contact female, phono input
C124		150 $\mu f$ , $\pm 5\%$ , 500 v, mica	J3	116442	Connector—2 contact female, tape input
C201		0.01 $\mu f$ , $\pm 100-20\%$ , 100 v, ceramic	J11	110119	Connector—3 contact female, changer power
C202	117334	0.047 $\mu f$ , $\pm 100-20\%$ , 100 v, ceramic	J12	111402	Connector—9 contact female, power from transformer
C203		0.01 $\mu f$ , $\pm 20\%$ , 100 v, ceramic	L1	118877	Antenna—ferrite rod
C204		0.0082 $\mu f$ , $\pm 20\%$ , 100 v, ceramic			<b>COILS</b>
C205	110710	3.3 $\mu f$ , $\pm 0.25 \mu f$ , 500 v, ceramic, N3300	L101	115096	FM antenna
C206	114007	0.047 $\mu f$ , $\pm 100-20\%$ , 100 v, ceramic	L102	115097	FM RF
C207	117334	0.047 $\mu f$ , $\pm 100-20\%$ , 100 v, ceramic	L103	105513	1.0 $\mu f$ , FM RF choke
C208		0.015 $\mu f$ , $\pm 10\%$ , 100 v, mylar	L104	118883	10.7 mc
C209	111837	0.047 $\mu f$ , $\pm 20\%$ , 100 v, ceramic	L105	119971	ferrite bead
C211	114007	0.047 $\mu f$ , $\pm 100-20\%$ , 100 v, ceramic	L106	115639	10 $\mu h$ , FM RF choke
C212	116159	10 $\mu f$ , $\pm 250-10\%$ , 10 v, electrolytic	L201	116761	ferrite bead
C213		4700 $\mu f$ , $\pm 5\%$ , 25 v, plastic	L301	118884	72 kc trap
C214	114007	0.047 $\mu f$ , $\pm 100-20\%$ , 100 v, ceramic	PC301	118881	Circuit—printed component
C215		0.01 $\mu f$ , $\pm 100-20\%$ , 100 v, ceramic	PC401	118882	Circuit—printed component</



REPLACEMENT PARTS (Continued)

SYMBOL NO.	STOCK NO.	DESCRIPTION
R102	502318	18,000 ohm
R103	502168	680 ohm
R104	502110	100 ohm
R106	502212	1200 ohm
R107	502110	100 ohm
R108	502110	100 ohm
R109	502168	680 ohm
R111	502233	3300 ohm
R112	502512	1.2 megohm
R113	502410	100,000 ohm
R114	502368	68,000 ohm
R115	502247	4700 ohm
R201	502318	18,000 ohm
R202	502412	120,000 ohm
R203	502222	2200 ohm
R204	502412	120,000 ohm
R206	502047	47 ohm
R207	502222	2200 ohm
R208	502147	470 ohm
R209	502133	330 ohm
R211	502210	1000 ohm
R212	502382	82,000 ohm, ±5%
R213	502210	1000 ohm
R214	502247	4700 ohm, ±5%
R216	502315	15,000 ohm, ±5%
R217	502310	10,000 ohm
R218	502239	3900 ohm
R219	502110	100 ohm
R221	502133	330 ohm
R222	502182	820 ohm
R223	502110	100 ohm
R224	502333	33,000 ohm, ±5%
R226	502139	390 ohm
R227	502112	120 ohm
R228	502222	2200 ohm
R229	502210	1000 ohm
R231	502182	820 ohm
R232	502210	1000 ohm
R233	502315	15,000 ohm
R234	502310	10,000 ohm
R237	502422	220,000 ohm
R239	502268	6800 ohm, ±5%
R241	502256	5600 ohm, ±5%
R242	502139	390 ohm, ±5%
R243	502118	180 ohm
R244	502210	1000 ohm
R246	502510	1 megohm
R301	502312	12,000 ohm, ±5%
R302	502333	33,000 ohm
R303	502382	82,000 ohm, ±5%
R304	502147	470 ohm
R306	502212	1200 ohm
R307	502315	15,000 ohm
R308	502247	4700 ohm
R309	502510	1 megohm
R311	502315	15,000 ohm
R312	502210	1000 ohm
R313	502210	1000 ohm, ±5%
R314	502247	4700 ohm, ±5%
R316	502215	1500 ohm, ±5%, RC-1227C
R316	502222	2200 ohm, ±5%, RC-1227E
R317	502310	10,000 ohm
R318	502222	2200 ohm
R319	502156	560 ohm
R321	502268	6800 ohm
R322	502212	1200 ohm
R323	502368	68,000 ohm
R324		10,000 ohm (part of PC301)
R326		10,000 ohm (part of PC301)
R327		10,000 ohm (part of PC301)
R328		10,000 ohm (part of PC301)
R331		82,000 ohm (part of PC301)
R332		82,000 ohm (part of PC301)
R333		100,000 ohm (part of PC301)
R334		100,000 ohm (part of PC301)
R336		15,000 ohm (part of PC301)
R337		68,000 ohm (part of PC301)
R339	502210	1000 ohm
R340	502210	1000 ohm
R341	502210	1000 ohm
R342	502147	470 ohm, RC-1227C
R342	502133	330 ohm, RC-1227E
R343	502227	2700 ohm
R344	502227	2700 ohm
R347	502510	1 megohm
R348	502510	1 megohm
R401	502415	150,000 ohm
R402	502415	150,000 ohm

SYMBOL NO.	STOCK NO.	DESCRIPTION
R403A/B	118894	control—treble
R406A/B	118893	control—bass
R407	502233	3300 ohm
R408	502233	3300 ohm
R411	502322	22,000 ohm
R412	502322	22,000 ohm
R413A/B	118895	control—loudness (includes S3)
R415	502439	390,000 ohm
R416	502439	390,000 ohm
R417	502222	2200 ohm
R418	502222	2200 ohm
R421	502410	100,000 ohm
R422	502410	100,000 ohm
R423	502318	18,000 ohm
R424	502318	18,000 ohm
R425	502233	3300 ohm
R426	502233	3300 ohm
R427	502018	18 ohm
R428	502018	18 ohm
R429		22,000 ohm, ¼ w
R430		22,000 ohm, ¼ w
R431	502139	390 ohm
R432	502139	390 ohm
R433	502082	82 ohm
R434	502082	82 ohm
R435	502010	10 ohm
R436	502010	10 ohm
R437		3.9 ohm (part of PC401)
R438		3.9 ohm (part of PC401)
R441		390 ohm (part of PC401)
R442		390 ohm (part of PC401)
R443		3.9 ohm (part of PC401)
R444		3.9 ohm (part of PC401)
R445		390 ohm (part of PC401)
R446		390 ohm (part of PC401)
R447	502310	10,000 ohm
R451	502156	560 ohm
R452	502156	560 ohm
S1	118899	Switch—function
S2		Switch—AFC (part of R2)
S3		Switch—On/Off (part of R413)
		TRANSFORMERS
T101	115649	FM antenna
T102	118900	1st FM IF 10.7 m.c.
T201	118903	AM oscillator
T202	118904	1st AM IF 455 kc
T203	118901	2nd FM IF 10.7 m.c.
T204	118902	2nd AM IF 455 kc
T205	118905	3 AM & FM IF
T206	118906	FM ratio detector
T301	117512	19 kc multiplex
T302	118907	19 kc doubler
T303	118908	38 kc multiplex
T401	118909	left channel driver
T402	118909	right channel driver
	110875	Bushing—dial cord drive
	118878	Bushing—tuning shaft
	115621	Cable—AC power cord
	119913	Circuit-board assembly, complete, RC-1227C
	119912	Circuit-board assembly, complete, RC-1227E
	115630	Clip—multiplex lamp retaining
	72953	Cord—dial drive cord (250' spool)
	118885	Diffuser—vinyl, for AM/FM tuning dial (5¼" x 3½"), RC-1227C
	121199	Diffuser—vinyl, for AM/FM tuning dial (5¼" x 3½"), RC-1227E
	118888	Grommet—strain relief—for power cord
	118889	Grommet—strain relief—for J3 cable assembly
	115794	Insulator—mica—for power transistor
	118891	Pointer—tuning
	118892	Pulley—tuning capacitor
	118898	Shaft—tuning drive
	118897	Socket—dial light
	115581	Socket—transistor—for Q1,Q2,Q3,Q4
	31418	Spring—dial cord tension
		MISCELLANEOUS
	121079	Back—cabinet, VJT 18
	119890	Back—cabinet, VJT 23, 25
	118861	Back—cabinet, VJT 24
	123742	Back—cabinet, VJT 29, 30
	121628	Back—cabinet, VJT 31
	121626	Back—cabinet, VJT 33, 35, 84-K, 85-K
	121627	Back—cabinet VJT 37
	123741	Back—cabinet, VJT 89-K, 91-K

REPLACEMENT PARTS (Continued)

SYMBOL NO.	STOCK NO.	DESCRIPTION
	123740	Back—cabinet, VJT 90-K
	117438	Block—external speaker terminal, VJT 16, 18, 23, 24, 25, 29, 30, 31, 33, 35, 37, 84-K, 85-K
	111743	Block—external speaker terminal, VJT 89-K, 90-K, 91-K
	119226	Board—changer mounting (33" x 14½") VJT 16W
	116071	Bracket—mounting for tuner/changer lamp socket, VJT 89-K, 90-K, 91-K
	119769	Bracket—4½" lg., for mounting tuner chassis, VJT 16W
	118546	Bracket—4½" lg., for mounting tuner chassis to cabinet except VJT 16
	123703	Cable—power cord, VJT 16
	111831	Capacitor—4 µf, 25 v, electrolytic (used on speaker crossover) except VJT 16, 18
	115189	Capacitor—2 µf, 25 v, electrolytic (used on speaker crossover) except VJT 16
	119223	Caster—cabinet, VJT 16
	115837	Clip—spring clip for retaining panel 121642
		CLOTH:
	123663	grille, VJT 16W
	121082	grille, VJT 18M, W
	X5872	grille, VJT 23W
	121437	grille, VJT 24L
	121438	grille, VJT 25S
	X8378	grille, VJT 29L
	123768	grille, VJT 30S
	X8381	grille, VJT 31W
	X8385	grille, VJT 33L, 85LK
	X8202	grille, VJT 35S
	122331	grille, VJT 37F
	X5872	grille, VJT 84WK
	123769	grille, VJT 85LK
	122640	grille, VJT 89WK
	120896	grille, VJT 90LK
	122327	grille, VJT 91FK
		CONNECTORS:
P12	110882	9 contact, power transformer
P11	110145	3 contact male, changer power intermediate cable
J15	109442	4 contact female, changer intermediate cable
	74882	3 pin male, changer audio cable
	111963	headphone jack, VJT 89-K, 90-K, 91-K
	103165	3 pin male for pilot lamp socket, VJT 89WK, 90LK, 91FK
	121185	Contact—for connector 109442, 110145 & 110882
		ESCUTCHEONS—for VJT 29, 30, 31, 33, 35, 37, 84-K, 85-K, 89-K, 90-K, 91-K:
	121630	bass control
	121631	treble control
	121632	AFC/balance control
	121633	function control
	121634	loudness & tuning controls
	121629	speaker selector switch assembly, VJT 89-K, 90-K, 91-K
	101345	Eyelet—½" o.d., for mounting power transformer & tuner
	103480	Flange—triangular, for mounting legs, VJT 18, 24, 33, 85-K, 89-K
	121407	Grille—decorative wood (17¼" x 12½") VJT 23W
	121592	Grille—louvered, VJT 33L, 85LK
	115353	Grommet—¾" o.d., for mounting power transformer & tuner
	115686	Hinge—hinge support for tuner/changer compart. lid, VJT 29L, 30S
	115264	Hinge—hinge support for tuner/changer compart. lid, VJT 31W, 33L, 35S, 89WK, 90LK, 91FK
	121593	Hinge—hinge support for tuner/changer compart. lid, VJT 37F, 84WK, 85LK
	121435	Holder—45 RPM adaptor
	102751	Housing—for speaker 111987
	121080	Knob—loudness & tuning
	118323	Knob—bass, treble, AFC/balance, function
	122542	Knob—speaker selector, VJT 89-K, 90-K, 91-K
	103211	Lamp— # 1847, pilot, VJT 89-K, 90-K, 91-K
	111481	Lamp— # 159, changer compart., VJT 89WK, 90LK, 91FK

Specifications Subject to Change Without Notice

APPLY TO YOUR RCA DISTRIBUTOR FOR REPLACEMENT PARTS AND ACCESSORIES

SYMBOL NO.	STOCK NO.	DESCRIPTION
		LEGS:
	119340	aluminum, VJT 16W
	X8311	mahogany (set of 4) VJT 18M
	X8057	walnut (set of 4) VJT 18W
	X8237	maple (set of 4) VJT 24L
	121643	maple (set of 4) VJT 33L, 85LK, 90LK
	111824	Lens—pilot lamp, VJT 89WK, 90LK, 91FK
		LID:
	X8386	sliding (matched set) VJT 16W
	121083	sliding, VJT 18M
	121084	sliding, VJT 18W
	121406	sliding, VJT 23W
	121405	sliding, VJT 24L
	121404	sliding, VJT 25S
	120866	Nut—tee-nut for changer mounting
	123761	Ornament—metal, for legs, VJT 91FK
	121081	Panel—tuner control with AM/FM tuning dial (12½" x 4½") VJT 16, 18, 23, 24, 25
	121642	Panel—tuner & amplifier control with AM/FM dial (12½" x 4½") VJT 29, 30, 31, 33, 35, 37, 84-K, 85-K, 89-K, 90-K, 91-K
	123775	Plate—decorative backplate for pull 123759
	123774	Plate—decorative backplate for pull 123760
		PULLS:
	119232	sliding lid, VJT 16W
	119892	sliding lid, VJT 18M, W
	118913	sliding lid, VJT 23W, 24L, 25S
	121441	decorative, VJT 25S
	121439	decorative, VJT 24L
	123760	decorative, VJT 29L
	123759	decorative, VJT 30S
	121603	decorative, VJT 33L
	121598	decorative, VJT 35S
	123766	decorative, VJT 85LK
	121602	decorative, VJT 90LK
	114608	decorative, VJT 91FK
	121635	Resistor—27 ohm ±10%, 5 w, wirewound (used with speaker crossover) VJT 84-K, 85-K
	119889	Resistor—27 ohm ±10%, 2 w, wirewound (used with speaker crossover) VJT 89-K, 90-K, 91-K
	117480	Resistor—15 ohm ±10%, 5 w, wirewound (used with horn 122206)
	111964	Resistor—8.2 ohm ±10%, 15 w (used on speaker selector switch assembly) VJT 89-K, 90-K, 91-K
	502182	Resistor—820 ohm ±10%, ½ w (used on speaker selector switch assembly) VJT 89-K, 90-K, 91-K
	111648	Retainer—speakers
	112639	Screw—changer mounting (includes grommet)
	113235	Socket—changer/tuner compart. lamp, VJT 89-K, 90-K, 91-K
	118566	Socket—pilot lamp, VJT 89-K, 90-K, 91-K
		SPEAKER:
	111987	3½" PM 20 ohm at 1 KC, except VJT 16
	115890	3½" PM 35 ohm, VJT 29L, 30S
	115889	9" x 6" PM, 8.5 ohm, VJT 16, 18, 23, 24, 25
	122206	horn, 12 ohm, all Models except VJT 16, 18, 23, 24, 25, 29, 30
	111988	15" x 9" PM 8.5 ohm, VJT 84-K, 85-K, 89-K, 90-K, 91-K
	120748	12" x 8" PM 8.5 ohm, VJT 29, 30, 31, 33, 35, 37
	111962	Switch—speaker selector, VJT 89-K, 90-K, 91-K
	110501	Terminal—changer audio cable
	118864	Transformer—power, VJT 16, 18, 23, 24, 25
	118967	Transformer—power, VJT 29, 30, 31, 33, 35, 37, 84-K, 85-K, 89-K, 90-K, 91-K
	119341	Trim—metal (32¼" lg.) VJT 16W
	121595	Trim—grille (17½" lg.), VJT 31W
		—order from RCA Sales Corporation—
		1407166-2 Book—customer instruction



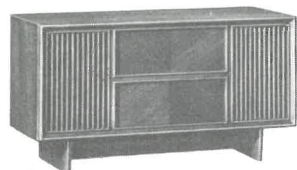
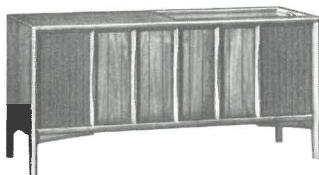


# RCA VICTOR



## *The "Bristol"*

Model VJT 19M—  
Mahogany Gr.  
Model VJT 19W—  
Walnut Gr.

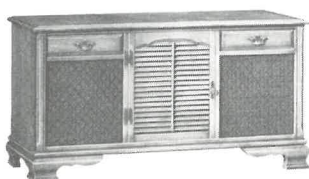


## *The "Alsond"*

Model VJT 32W—  
Walnut Gr.

## *The "Georgetown"*

Model VJT 34L—  
Maple Gr.



## *The "Helsingfors"*

Model VJT 42W—  
Walnut

## *The "Oneida"*

Model VJT 48L—  
Maple



## *The "Nice"*

Model VJT 49F—  
Fruitwood

## *The "Tangier"*

Model VJT 51S—  
Pecan



# RADIO & "VICTROLA"® PHONOGRAPH SERVICE DATA

— File: 1967 No. 39-S1 —

## VJT 19, 32, 34, 42, 48, 49, 51

Radio Chassis RC-1227C, E  
Record Changer RP-227-12D, -19

## RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY

## PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201

## MODEL TO CHASSIS CROSS REFERENCE

Model	Tuner/Amp	Record Changer	Speakers
VJT 19	RC-1227E	RP-227-19	2-6"x9", 4-3½"
VJT 32,34	RC-1227C	RP-227-12D	2-8"x12", 4-3½"
VJT 42,48, 49,51	RC-1227C	RP-227-12D	2-9"x15", 2-5"x7", 2-3½"

## DIMENSIONS, (approx.)

Model	Height	Width	Depth
VJT 19	25½"	55"	17¾"
VJT 32	26¼"	50"	17¾"
VJT 34	26¼"	51½"	18⅞"
VJT 42	26⅝"	63"	18½"
VJT 48	28¾"	60"	17⅝"
VJT 49	27⅞"	61½"	18½"
VJT 51	26⅞"	62¼"	18⅞"

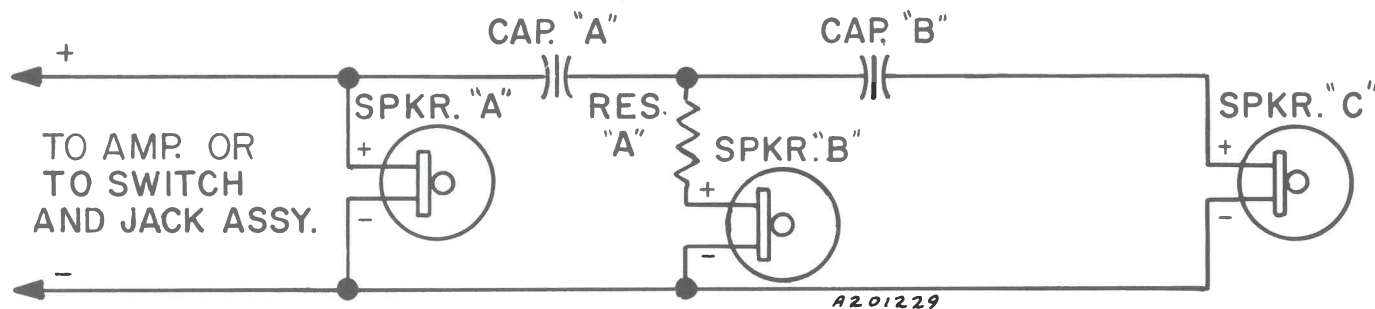
For Servicing and Parts Information on RC-1227C,E  
Tuner/Amplifiers Refer to: —File: 1967 No. 39—

For Record Changer Servicing Information Refer to  
Record Changer Service Data: —File: 1967 No. 6 &  
6-S1—

Correction: In Service Data 1967 No. 39 Model-to-Chassis  
Cross Reference table, page 2, tuner/amplifier for Models  
VJT 29 through VJT 91-K should read RC-1227C.

## SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject



SPEAKER WIRING CHART

Model	Speaker A	Capacitor A	Resistor A	Speaker B	Capacitor B	Speaker C
VJT 19	6"x9"	4 $\mu$ f	—	3½"	—	3½"
VJT 32,34	8"x12"	4 $\mu$ f	—	3½"	—	3½"
VJT 42,48, 49,51	9"x15"	20 $\mu$ f	—	5"x7"	2 $\mu$ f	3½"

Left and right channel speaker wiring is symmetrical; — indicates component not used.

## REPLACEMENTS PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
P3 P11 P15		<b>INSTRUMENT MISCELLANEOUS</b>			
		BACKS:			
	120745	cabinet, VJT 19M-W		121592	Grille—louvered, VJT 34L
	121628	cabinet, VJT 32W		124030	Hinge—decorative, VJT 34L
	122367	cabinet, VJT 34L		115687	Hinge—support for changer/tuner compartment lid, VJT 32W, 34L, 49F
	120704	cabinet, VJT 42W		115686	Hinge—support for tuner/changer compartment lid, VJT 42W, 48L
	119941	cabinet, VJT 48L		115264	Hinge—support for tuner/changer compartment lid, VJT 51S
	124033	cabinet, VJT 49F		121435	Holder—45 RPM adaptor
	123741	cabinet, VJT 51S		119943	Key—decorative door, VJT 34L
	117438	Board—external speaker terminal		121080	Knob—loudness & tuning
	118546	Bracket—4½" lg., mounting tuner chassis to cabinet		118323	Knob—bass, treble, function, AFC/balance
	111831	Capacitor—4 $\mu$ f, 25 v., electrolytic (used with speaker crossover) VJT 32W, 34L, 19M-W		121643	Leg—maple (set of 4) VJT 48L
	115189	Capacitor—2 $\mu$ f, 25 v., electrolytic (used on speaker crossover) VJT 42W, 48L, 49F, 51S		123973	Lid—sliding, VJT 19M
	115164	Capacitor—20 $\mu$ f, 25 v., electrolytic (used with speaker crossover) VJT 42W, 48L, 49F, 51S		123972	Lid—sliding, VJT 19W
	115837	Clip—spring clip for retaining panel 121081 & 121642		121081	Panel—tuner & amplifier control including AM/FM dial (12⅞"x4⅞") VJT 19M-W
		CLOTH:		121642	Panel—tuner & amplifier control including AM/FM dial (12⅞"x4⅞") VJT 32W, 34L, 42W, 48L, 49F, 51S
	X8381	grille, VJT 19M-W		120866	Nut—tee-nut, changer mounting
	X8385	grille, VJT 32W			PULLS:
	124029	grille, VJT 34L		119892	sliding lid, VJT 19M-W
	122328	grille, VJT 42W		124060	decorative drawers, VJT 34L
	124041	grille, VJT 48L		124045	decorative, VJT 42W
	124039	grille, VJT 49F		124042	decorative, VJT 48L
	X8202	grille, VJT 51S		124043	for simulated L.H. door on either half of cabinet, VJT 49F
	110882	Connector—9 contact, power transformer		124044	for simulated R.H. door on either half of cabinet, VJT 49F
	110145	Connector—3 contact, changer power cable		124046	decorative, VJT 51S
	109442	Connector—4 contact, changer power cable		111648	Retainer—speakers
	74882	Connector—3 pin male, changer pickup cable		121639	Screw—changer mounting (includes grommet)
	106844	Contact—for connector 109442, 110145 & 110882		111987	Speaker—3½"x12" PM, 20 ohm at 1 KC
	121630	Escutcheon—base control, VJT 32W, 34L, 42W, 48L, 49F, 51S		115673	Speaker—5"x7" PM, 35 ohm, VJT 42W, 48L, 49F, 51S
	121631	Escutcheon—treble control, VJT 32W, 34L, 42W, 48L, 49F, 51S		111988	Speaker—9"x15" PM, 8.5 ohm, VJT 42W, 48L, 49F, 51S
	121632	Escutcheon—AFC/balance control, VJT 32W, 34L, 42W, 48L, 49F, 51S		115889	Speaker—6"x9" PM, 8.5 ohm, VJT 19M-W
	121633	Escutcheon—function control, VJT 32W, 34L, 42W, 48L, 49F, 51S		120748	Speaker—8"x12" PM, 8.5 ohm, VJT 32W, 34L, 42W, 48L, 49F, 51S
	121634	Escutcheon—loudness & tuning controls, VJT 32W, 34L, 42W, 48L, 49F, 51S		110501	Terminal—changer pickup cable
	101345	Eyelet—½" o.d., for mounting power transformer & tuner	T1	118864	Transformer—power, VJT 19M-W
	103480	Flange—triangular, for mounting legs, VJT 48L	T1	118967	Transformer—power, VJT 32W, 34L, 42W, 48L, 49F, 51S
	115353	Grommet—⅝" o.d., for mounting power transformer & tuner			—order from RCA Sales Corporation—
				1407166-2	Book—customer instruction

Specifications Subject to Change Without Notice

APPLY TO YOUR RCA DISTRIBUTOR FOR REPLACEMENT PARTS AND ACCESSORIES



# RADIO & "VICTROLA"® PHONOGRAPH

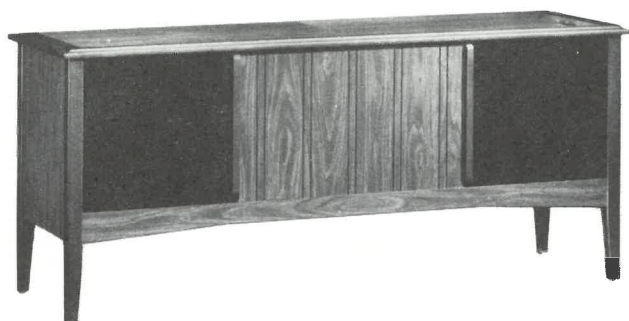
## SERVICE DATA

—File: 1967 No. 39-S2—

### Model VJT 20

Radio Chassis RC-1227E

Record Changer RP-227-19



*The "Bonanza"*

Model VJT 20W—Walnut Gr.

### RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY

#### PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201

### SPECIFICATIONS

#### LOUDSPEAKERS

Two 9" x 6" PM .....8.5 ohm v.c.

Four 3½" PM .....20 ohm v.c.

#### DIMENSIONS (approx.)

Height .....25½"

Width .....60"

Depth .....18¾"

### REPLACEMENT PARTS

ILLUS. NO.	STOCK NO.	DESCRIPTION
		<b>RECORD CHANGER RP 227-19</b>
		Same as RP 227-29 except for Pickup and Arm Assembly.
14A	115703	Pickup—less stylus
14B	115911	Stylus—0.7 mil. diamond/3 mil. sapphire
		Same as VJT 25S except as listed below:
		<b>MISCELLANEOUS</b>
	124183	Back—cabinet
	122328	Cloth—grille
	124184	Lid—sliding
	111987	Speaker—3½" PM 20 ohm at 1 KC

Specifications subject to change without notice.

**APPLY TO YOUR RCA DISTRIBUTOR FOR  
REPLACEMENT PARTS AND ACCESSORIES**

FOR SERVICING AND PARTS INFORMATION ON  
MODEL VJT 20, REFER TO: SERVICE DATA 1967  
No. 39, EXCEPT AS NOTED HEREIN.

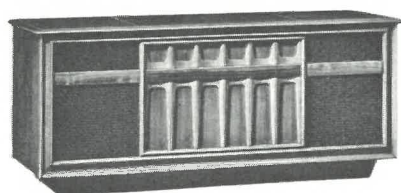
FOR SERVICING AND PARTS INFORMATION ON  
RP-227-19 RECORD CHANGER, REFER TO: SERVICE  
DATA 1967 No. 6 & 6-S1, EXCEPT AS NOTED  
HEREIN.

### SUPPLEMENTARY INFORMATION LISTINGS

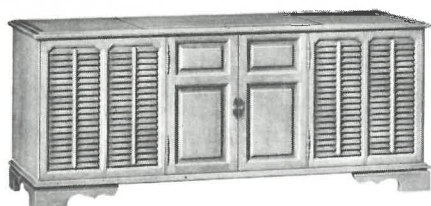
Vol.	Issue	Subject







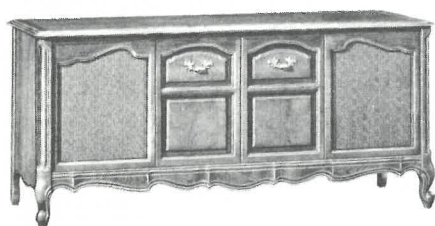
*The "Skagen"*  
Model VJT 61W—Walnut



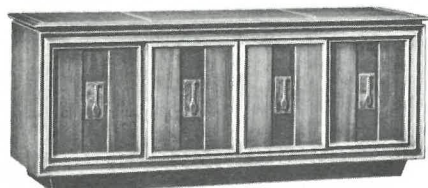
*The "Portsmouth"*  
Model VJT 62L—Maple  
Model VJT 62H—Pine



*The "Almanzora"*  
Model VJT 66S—Pecan



*The "Bretogne"*  
Model VJT 67F—Fruitwood



*The "Finlandia"*  
Model VJT 76W—Walnut

## RADIO & "VICTROLA"<sup>®</sup> PHONOGRAPH SERVICE DATA

—File: 1967 No. 40—

### VJT 61, 62, 66, 67, 76, 77, 98 Series

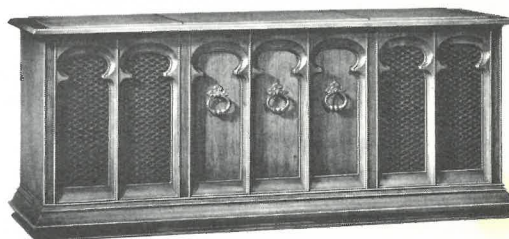
Tuner Chassis RC-1218AA, AD  
Amplifier Chassis RS-237A & RS-238A  
Record Changer RP-228-12SC

#### RCA SALES CORPORATION

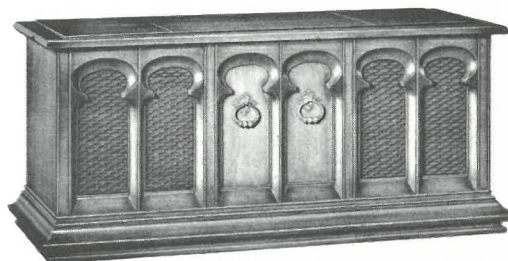
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PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201



*The "Tunis"*  
Model VJT 77S—Pecan



*The "Barrosa"*  
Model VJT 98S-K—Pecan

#### SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject

## SPECIFICATIONS

## TRANSISTOR COMPLEMENT

## RC-1218 Tuner Chassis

(Q101) Type 108-1	FM RF Amp.
(Q102) Type 108-2	FM Osc./Mixer
(Q201) RCA 2N1632	AM RF Amp.
(Q201) RCA 2N1526	AM Osc./Mixer
(Q203) Type 108-4	1st FM IF Amp.
(Q204) Type 108-4	1st AM/2nd FM IF Amp.
(Q205) Type 108-4	2nd AM/3rd FM IF Amp.
(Q206) Type 108-4	4th FM IF Amp.
(Q301) RCA 35678 (2N1524)	MPX Amp.
(Q302) RCA 35677 (2N1524)	MPX 10 kc Amp.
(Q303) RCA 35677 (2N1524)	MPX 38 kc Amp.
(CR204) Stock No. 112524	AM Detector
(Q305) RCA 2N408	MPX Left Chan. Diff. Amp.
(Q306) RCA 2N408	MPX Right Chan. Diff. Amp.
(Q401) RCA 2N2613	1st Left Chan. AF Amp.
(Q402) RCA 2N2613	1st Right Chan. AF Amp.
(Q403) RCA 2N2613	2nd Left Chan. AF Amp.
(Q404) RCA 2N2613	2nd Right Chan. AF Amp.
(Q405) RCA 2N2613	3rd Left Chan. AF Amp.
(Q406) RCA 2N2613	3rd Right Chan. AF Amp.
(Q407) RCA 2N408	4th Left Chan. AF Amp.
(Q408) RCA 2N408	4th Right Chan. AF Amp.
(CR101) Stock No. 115099	FM AFC Diode
(CR201) Stock No. 115101	} FM Demodulator
(CR202) Stock No. 115101	
(CR203) Stock No. 112524	Tuning Indicator Diode
(CR204) Stock No. 112524	AM Detector
(CR301) Stock No. 112524	} MPX 19 kc Doubler
(CR302) Stock No. 112524	
(CR303) Stock No. 112524	
(CR304) Stock No. 112524	} MPX Balanced Demodulator
(CR305) Stock No. 112524	
(CR306) Stock No. 112524	

## RS-238 Amplifier Chassis

(Q501) Stock No. 119983	Pre-driver
(Q502) Stock No. 119983	Pre-driver
(Q503) RCA 40347	Driver
(Q504) RCA 40347	Driver
(Q505) Stock No. 121244	L. Channel Output
(Q507) Stock No. 121244	L. Channel Output
(Q506) Stock No. 121244	R. Channel Output
(Q508) Stock No. 121244	R. Channel Output
(Q509) Stock No. 119983	Filter
(Q510) Stock No. 119712	Filter

## RS-237 Amplifier Chassis

(Q501) 2N3644	Driver
(Q502) 2N3644	Driver
(Q503) Stock No. 121243	Output
(Q504) Stock No. 121243	Output
(Q505) Stock No. 121243	Output
(Q506) Stock No. 121243	Output

## FREQUENCIES

	Tuning	IF
AM	540-1620 kHz	455 kHz
FM	88-108 mHz	10.7 mHz

## MUSIC POWER OUTPUT

(E.I.A. Std. RS-234)

Peak

VJT 6 & 9 Series	75 watts	150 watts
VJT 76, 77	250 watts	500 watts

## AUDIO FREQUENCY RESPONSE

VJT 6 & 9 Series	35 to 20,000 hertz
VJT 76, 77	10 to 20,000 hertz

## LOUDSPEAKERS

v.c. imp.

## VJT 6 Series

Two 3½" PM "Tweeter"	20 ohm
Four horns "Middler"	12 ohm
Two 15" x 9" "Woofer"	8.5 ohm

## VJT 98-K

Two 3½" "Tweeter"	20 ohm
Two horns "Middler"	12 ohm
Two 15" x 9" "Woofer"	8.5 ohm

## VJT 7 Series

Four 3½" "Tweeter"	20 ohm
Four horns "Middler"	12 ohm
Two 15" "Woofer"	8.5 ohm

## TUNING

Vernier Slide Rule

Drive Ratio	15:1 (7½ turns of knob)
-------------	-------------------------

## RECORD CHANGER

RP-228-12SC

Turntable Speeds	16⅔, 33⅓, 45 and 78 r.p.m.
Record Sizes	7 inch, 10 inch, and 12 inch
Record Capacity	Up to six of the same size
Pickup	Integrated Floating Stereophonic Ceramic
Body less styli	Stock No. 120695
Styli	Dual
0.7 mil dia., 3 mil syn. sapp	Stock No. 122057

## For Record Changer Servicing Information

Refer to RP-228 Series

Record Changer Service Data

—File: 1967 No. 6 and 6-51—

## POWER SUPPLY RATING

VJT 6 & 9 Series	RS-237A, 120 volts, 60Hz, 125 watts
VJT 76, 77 Series	RS-238A, 120 volts, 60Hz, 275 watts

## CABINET DIMENSIONS (approx.)

	Height	Width	Depth
VJT 61	26¼"	64¾"	20⅝"
VJT 62	26½"	65¼"	21"
VJT 66	26"	65"	20¾"
VJT 67	27¾"	63¾"	20½"
VJT 76	29"	73½"	22¼"
VJT 77	30½"	77"	20⅝"
VJT 98-K	30¾"	67½"	21⅝"

MODEL	TUNER	AMPLIFIER	RECORD CHANGER	SPEAKERS
VJT 61	RC-1218AA	RS-237A	RP-228-12SC	2-3½", 4-Horns, 2-15" x 9"
VJT 62	RC-1218AA	RS-237A	RP-228-12SC	2-3½", 4-Horns, 2-15" x 9"
VJT 66	RC-1218AA	RS-237A	RP-228-12SC	2-3½", 4-Horns, 2-15" x 9"
VJT 67	RC-1218AA	RS-237A	RP-228-12SC	2-3½", 4-Horns, 2-15" x 9"
VJT 76	RC-1218AB	RS-238A	RP-228-12SC	4-3½", 4-Horns, 2-15"
VJT 77	RC-1218AB	RS-238A	RP-228-12SC	4-3½", 4-Horns, 2-15"
VJT 98-K	RC-1218AA	RS-237A	RP-228-12SC	2-3½", 4-Horns, 2-15" x 9"



## DESCRIPTION

All models in the VJT 6, 7, & 9 Series are transistorized high-fidelity Radio/Victrola combination console instruments; they are complete radio and record playing systems designed to attain in-the-cabinet stereophonic reproduction. They consist of an AM/FM/FM-Stereo transistorized radio tuner, a stereophonic "Studiomatic" record changer, a dual channel transistorized high-power amplifier and two complete speaker systems all housed in a single wood cabinet to provide stereophonic reproduction without the need for external attachments.

The circuitry of the transistorized RC-1218 tuner chassis used in these instruments is contained on four "Solid Copper Circuit" boards.

The PB100 board embodies the FM tuner section and is mounted on the 6 gang AM/FM tuning capacitor and is completely covered with a shield. The FM tuner section contains a RF stage and a Mixer/Oscillator stage.

The PW300 board is the multiplex (FM-Stereo) section. Its circuitry is of the switching type in which the composite left and right channel information is alternately sampled at a 38 kHz rate. It also embodies an automatic "Stereo Off" switch.

The PB400 board is the audio preamplifier section which contains a four stage audio amplifier. The loudness, bass, treble and balance controls are mounted on this board. All switching in this tuner is held to a minimum with none being in the RF or IF sections. Some component value changes have been made in the preamplifier in the RG1218AD used in the VHT 7 Series. The changes provide an extension of the low frequency response.

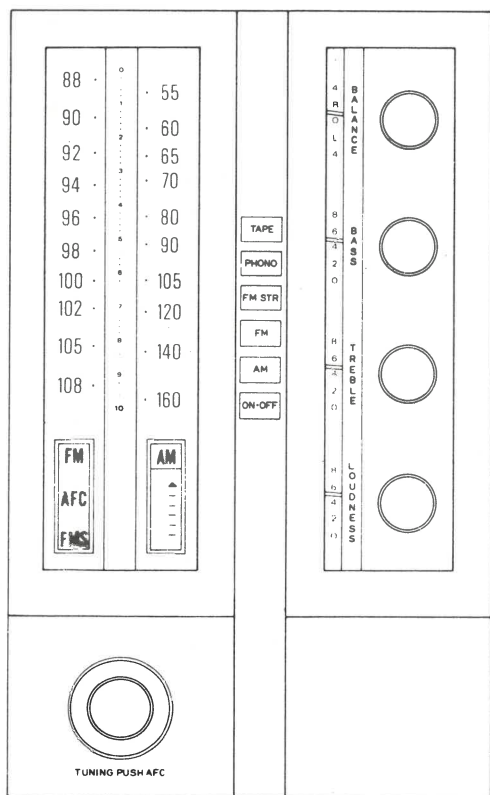
Five controls (Tuning/AFC, Loudness, Bass, Treble, Balance) and six push buttons (On-Off, AM, FM, FM Stereo, Phono, Tape) are provided for the regulation of the instrument. A novel AFC switch, incorporated with the tuning knob, automatically disables the AFC function when the tuning knob is rotated.

The transistorized RS-237A and RS-238A amplifier chassis contain the driver and power amplifier sections, and the power supply for the entire instrument. Conventional wiring is used in this chassis design.

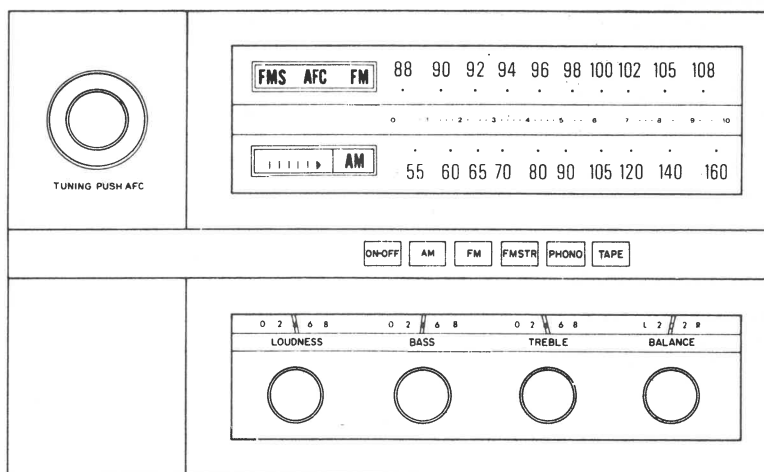
When playing records, the entire instrument may be placed under control of the "On/Off" switch on the record player by leaving the "On/Off" push button on the tuner in the "Off" position. This feature permits automatic shut off of the entire instrument after the last record has been played.

A "Speakers/Headphone" switch provides for various output modes. It will select "Internal Speakers", "External Speakers", "Internal and External Speakers", or "Headphones". A terminal board on the rear of the instrument permits attachment of accessory external speakers (RCA XFK21, 22, 23, MGS10 or MGS40 or equivalent) should they be desired. A jack adjacent to the switch provides for connection of a pair of 16 ohm stereo headphones (RCA XHK11 or equivalent).

A jack for the connection of a stereo tape recorder is also available on the rear of the instrument. This jack provides an output for recording when the radio or phono functions are used, or as an input for playing the tape recorder through the instrument's audio system when the TAPE push button is depressed.



RC-1218 Vertical Control Panel



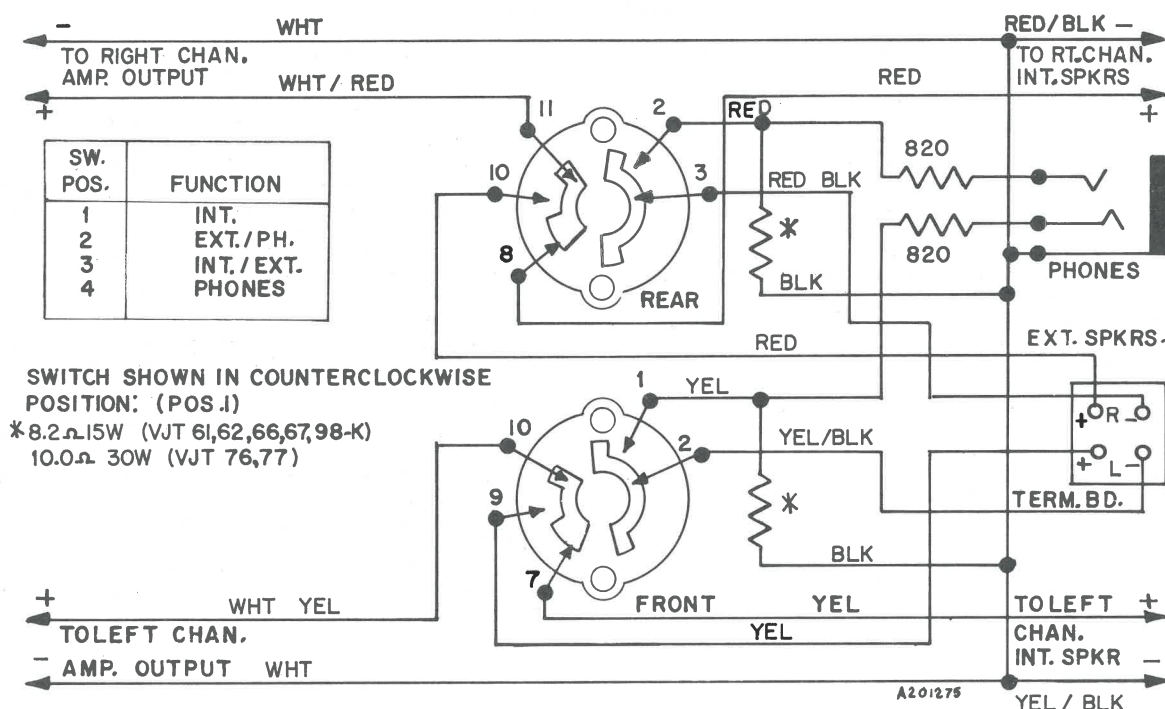
RC-1218 Horizontal Control Panel

## SPEAKER PHASING

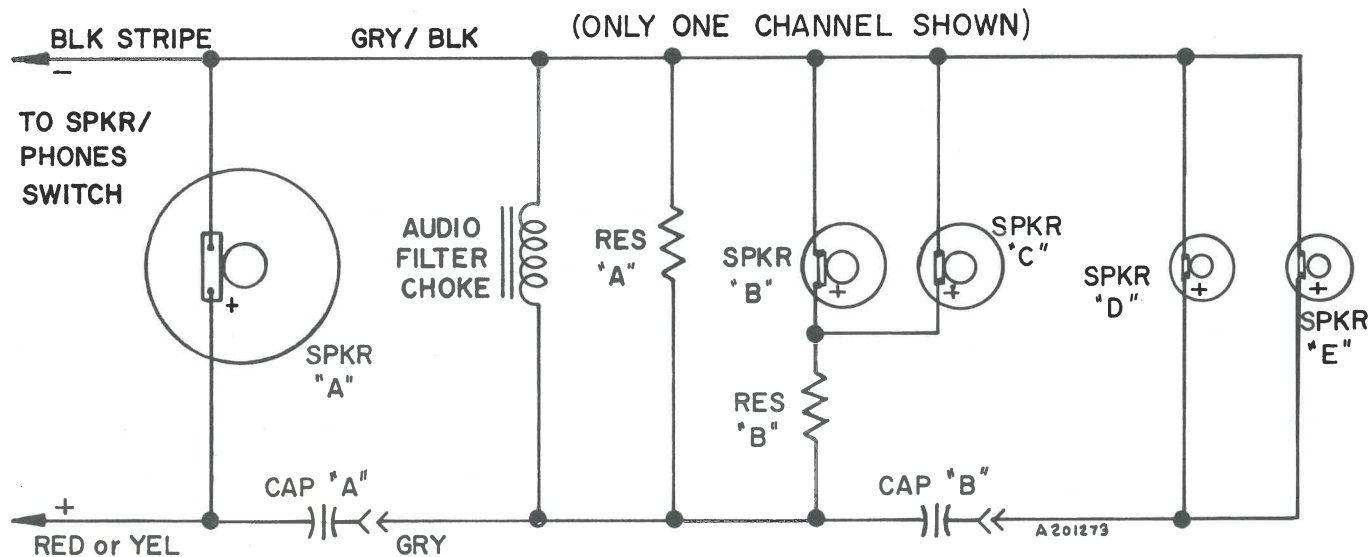
The two speaker systems must be properly connected in order to have "in-phase" sound outputs. Incorrect connections may be evidenced by "loss of bass" or distortion in the sound when listening from a point midway between the two speaker systems. Similarly the speakers in each system must be phased with each other.

To maintain the correct phasing, the speaker connections as shown in the speaker wiring diagram should be closely followed.

**CAUTION:** VHT 7 Series—Possible damage to "Woofers" can occur if instrument is operated with sealed backs loose or removed.

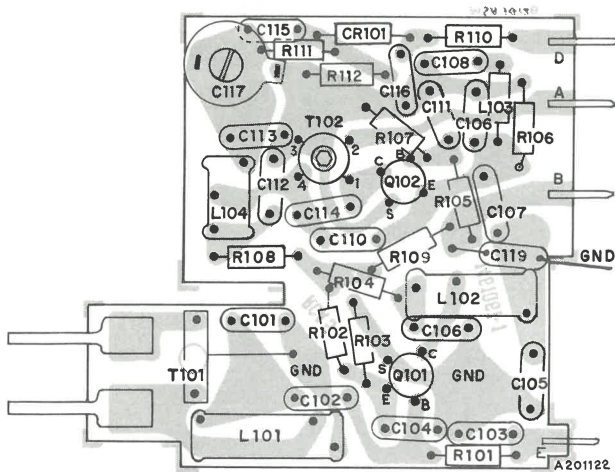


Switch &amp; Headphones Switch Diagram

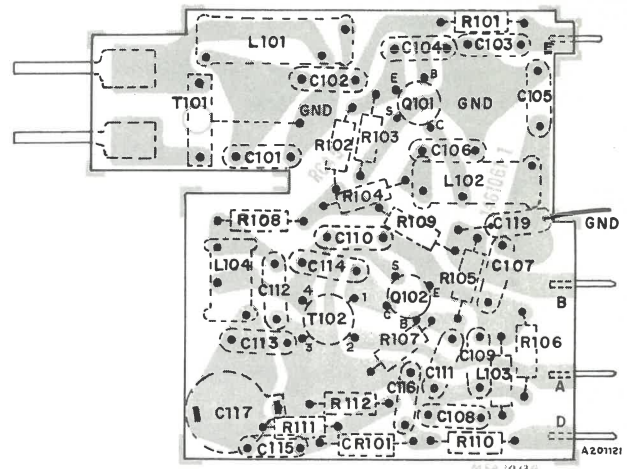


Speaker Wiring Diagram

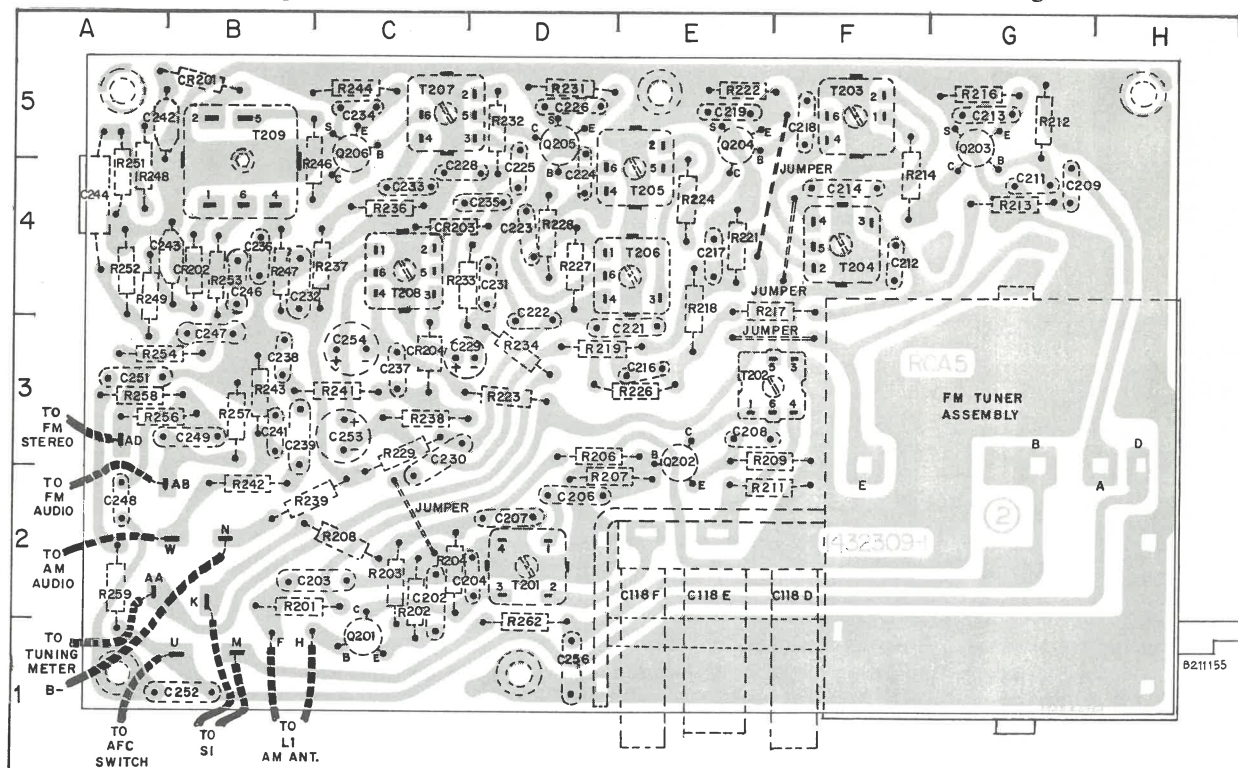
MODEL	SPKR "A"	CAP "A"	AUDIO FILTER	RES "A"	SPKR "B"	RES "B"	SPKR "C"	CAP "B"	SPKR "D"	SPKR "E"
VJT 61	15" x 9"	4 $\mu$ f	—	—	Horn	27 $\Omega$ , 5 w.	Horn	2 $\mu$ f	3 1/2"	—
VJT 62	15" x 9"	4 $\mu$ f	—	—	Horn	27 $\Omega$ , 5 w.	Horn	2 $\mu$ f	3 1/2"	—
VJT 66	15" x 9"	4 $\mu$ f	—	—	Horn	27 $\Omega$ , 5 w.	Horn	2 $\mu$ f	3 1/2"	—
VJT 67	15" x 9"	4 $\mu$ f	—	—	Horn	27 $\Omega$ , 5 w.	Horn	2 $\mu$ f	3 1/2"	—
VJT 76	15"	32 $\mu$ f	Yes	6.2 $\Omega$ , 15 w.	Horn	3.9 $\Omega$ , 5 w.	Horn	4 $\mu$ f	3 1/2"	3 1/2"
VJT 77	15"	32 $\mu$ f	Yes	6.2 $\Omega$ , 15 w.	Horn	3.9 $\Omega$ , 5 w.	Horn	4 $\mu$ f	3 1/2"	3 1/2"
VJT 98-K	15" x 9"	4 $\mu$ f	—	—	Horn	27 $\Omega$ , 5 w.	Horn	2 $\mu$ f	3 1/2"	—



PB 100—Component View



PB 100—Wiring View



PB 200 Circuit Board—Wiring View

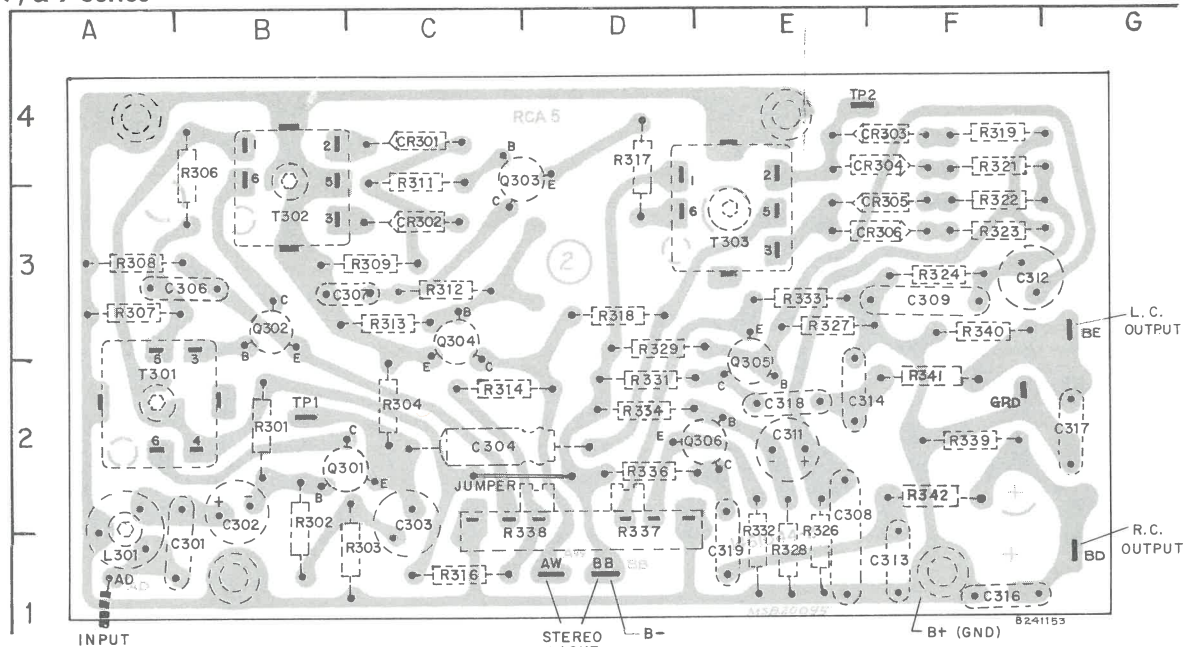
## COMPONENT LOCATION

C202.....2C	C223.....4D	C242.....5B	CR204.....3C	R208.....2A	R229.....3C	R251.....5A	T207.....5C
C203.....2C	C224.....5D	C243.....4B		R209.....3F	R231.....5D	R252.....4A	T208.....4C
C204.....2D	C225.....5D	C244.....5A		R211.....3F	R232.....5D	R253.....4B	T209.....5B
C206.....3D	C226.....5D	C246.....4B	Q201.....2A	R212.....5G	R233.....4D	R254.....3B	
C207.....2D	C228.....5C	C247.....4B	Q202.....3E	R213.....5G	R234.....4D	R256.....3B	
C208.....3E	C229.....3D	C248.....3A	Q203.....5G	R214.....5G	R236.....4C	R257.....3B	
C209.....5H	C230.....3C	C249.....3B	Q204.....5D	R216.....5G	R237.....4C	R258.....3A	
C211.....5G	C231.....4D	C251.....3A	Q205.....5D	R217.....4F	R238.....3C	R259.....2A	
C212.....4F	C232.....4B	C252.....1B	Q206.....5C	R218.....4E	R239.....3C	R262.....2D	
C213.....5G	C233.....5C	C253.....3C		R219.....4D	R241.....3C		
C214.....5F	C234.....5C	C254.....4C	R201.....2A	R221.....4E	R242.....3B		
C216.....3E	C235.....5D	C256.....1D	R202.....2A	R222.....5E	R243.....3B	T201.....2D	
C217.....4E	C236.....4B		R203.....2C	R223.....3D	R244.....5C	T202.....3F	
C218.....5F	C237.....3C		R204.....2D	R224.....5E	R246.....5C	T203.....5F	
C219.....5E	C238.....3B	CR201.....5B	R206.....3D	R226.....3E	R247.....4B	T204.....4F	
C221.....4E	C239.....3B	CR202.....4A	R207.....3D	R227.....4D	R248.....5A	T205.....5E	
C222.....4D	C241.....3B	CR203.....4C		R228.....4D	R249.....4A	T206.....4E	

## TERMINALS

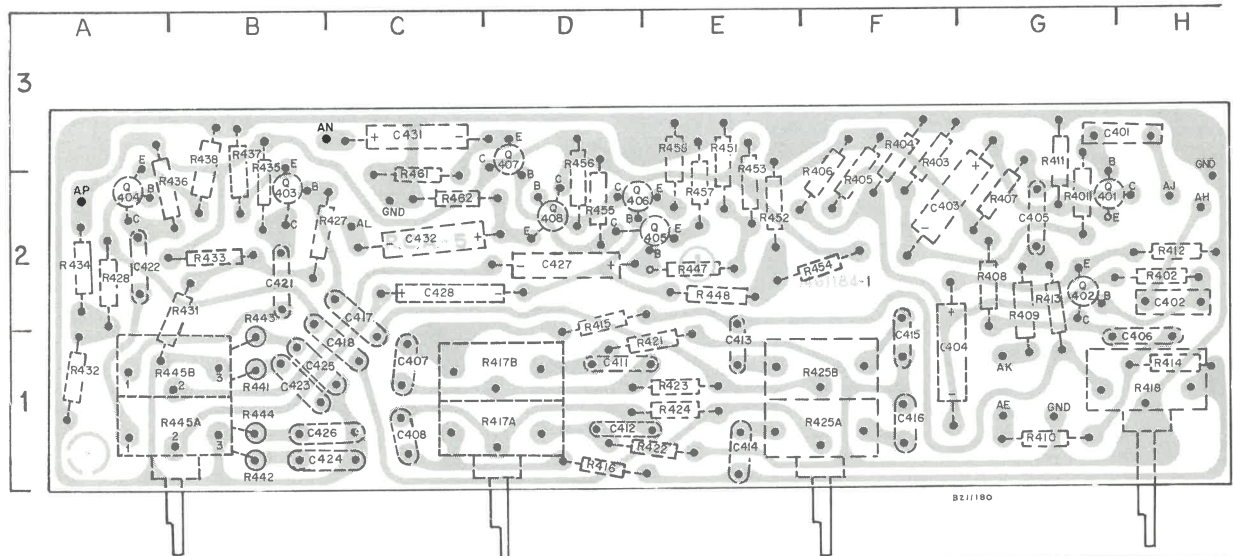
F.....2B
H.....2C
K.....2B
M.....1B
N.....2B
U.....1B
W.....2B
AA.....2B
AB.....3B
AD.....3A





C301.....1A	C316.....1F	L301.....1A	R303.....1B	R318.....3D	R333.....3E	T303.....3E
C302.....1B	C317.....2G	Q301.....2B	R304.....2C	R319.....4F	R334.....2D	TERMINALS
C303.....1C	C318.....2E	Q302.....2B	R306.....3B	R321.....3F	R336.....2D	AD.....1A
C304.....2C	C319.....1E	Q303.....3B	R307.....3A	R322.....3F	R337.....1D	AW.....1D
C306.....3A		Q304.....2C	R308.....3A	R323.....3F	R338.....1C	BB.....1D
C307.....3B	CR301.....4C	Q305.....2E	R309.....3C	R324.....3F	R339.....2F	BD.....1G
C308.....1E	CR302.....3C	Q306.....2D	R311.....3B	R326.....1E	R340.....2F	BE.....2G
C309.....3F	CR303.....4F		R312.....3B	R327.....3E	R341.....2F	TP1.....2B
C311.....2E	CR304.....3F	R301.....2B	R313.....3C	R328.....1E	R342.....2F	TP2.....4E
C312.....3F	CR305.....3F	R302.....1B	R314.....2C	R329.....2D		GRD.....2F
C313.....1F	CR306.....3F		R316.....1C	R331.....2D	T301.....2A	
C314.....2F			R317.....3D	R332.....1E	T302.....3B	

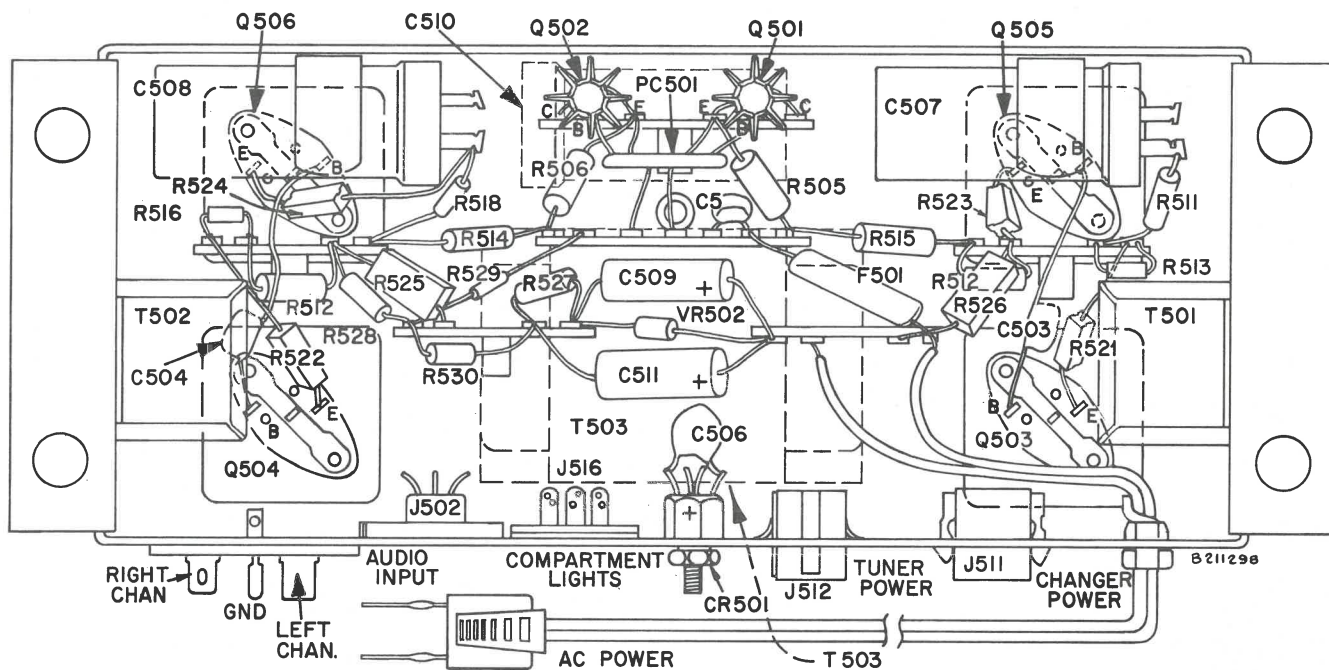
PB 300 Circuit Board—Wiring View



C401.....3G	C417.....2C	Q403.....3B	R407.....3G	R422.....1D	R438.....3B	R457.....3E
C402.....2H	C418.....2C	Q404.....3A	R408.....2G	R423.....2E	R441.....2B	R458.....3E
C403.....3F	C421.....2B	Q405.....3E	R409.....2G	R424.....2E	R442.....1B	R461.....3C
C404.....2F	C422.....2A	Q406.....3D	R410.....1G	R425A.....2F	R443.....2B	R462.....3C
C405.....3G	C423.....2B	Q407.....3D	R411.....3G	R425B.....2F	R444.....1B	
C406.....2H	C424.....1B	Q408.....3D	R412.....3H	R427.....3B	R445A/B.....2A	TERMINALS
C407.....2C	C425.....2B		R413.....2G	R428.....2A	R447.....2E	AE.....2G
C408.....1C	C426.....1B	R401.....3G	R414.....2H	R431.....2B	R448.....2E	AH.....3H
C411.....2D	C427.....3D	R402.....2H	R415.....2D	R432.....2A	R451.....3E	AJ.....3H
C412.....1D	C428.....2C	R403.....3F	R416.....1D	R433.....3B	R452.....3E	AK.....2G
C413.....2E	C431.....3C	R404.....3F	R417A.....1D	R434.....2A	R453.....3E	AL.....3C
C414.....1E		R405.....3F	R417B.....2D	R435.....3B	R454.....2F	
C415.....2F	Q401.....3G	R406.....3F	R418.....2H	R436.....3A	R455.....3D	
C416.....1F	Q402.....μG		R421.....2E	R437.....3B	R456.....3D	

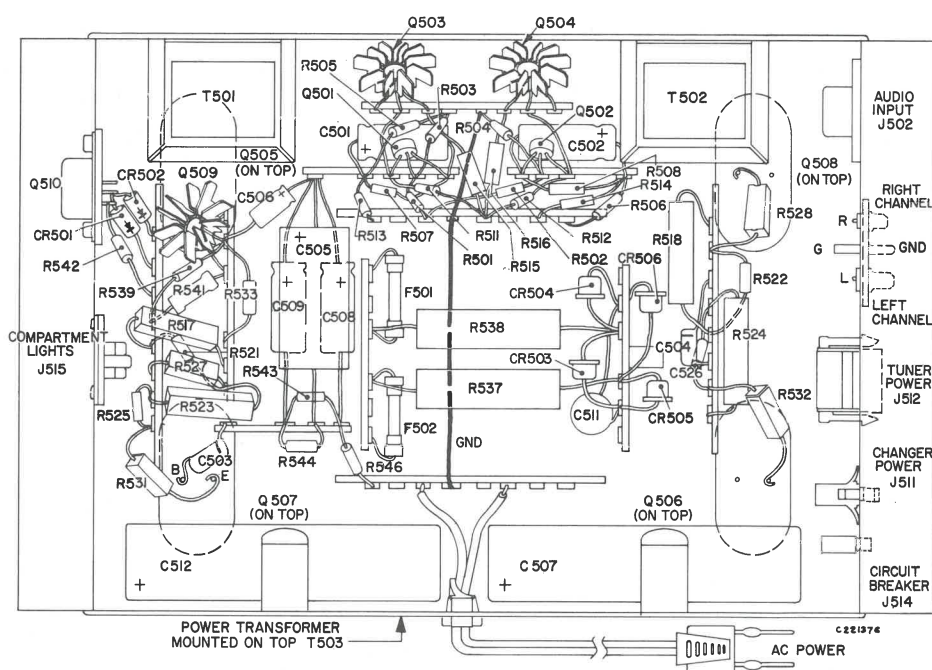
PB 400 Circuit Board—Wiring View

## RS-237A CHASSIS LAYOUT

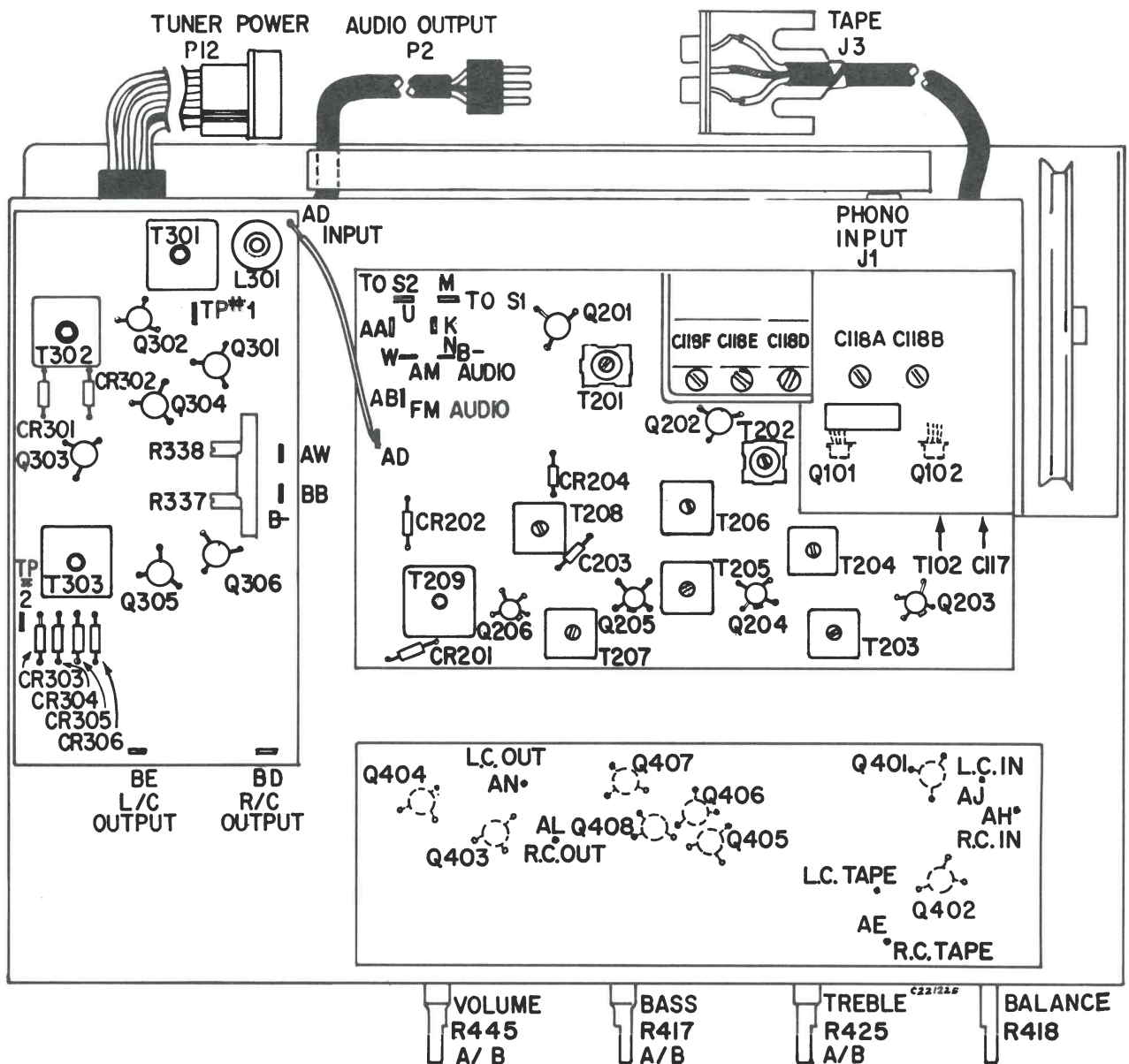


RS-237A Power Amplifier Layout

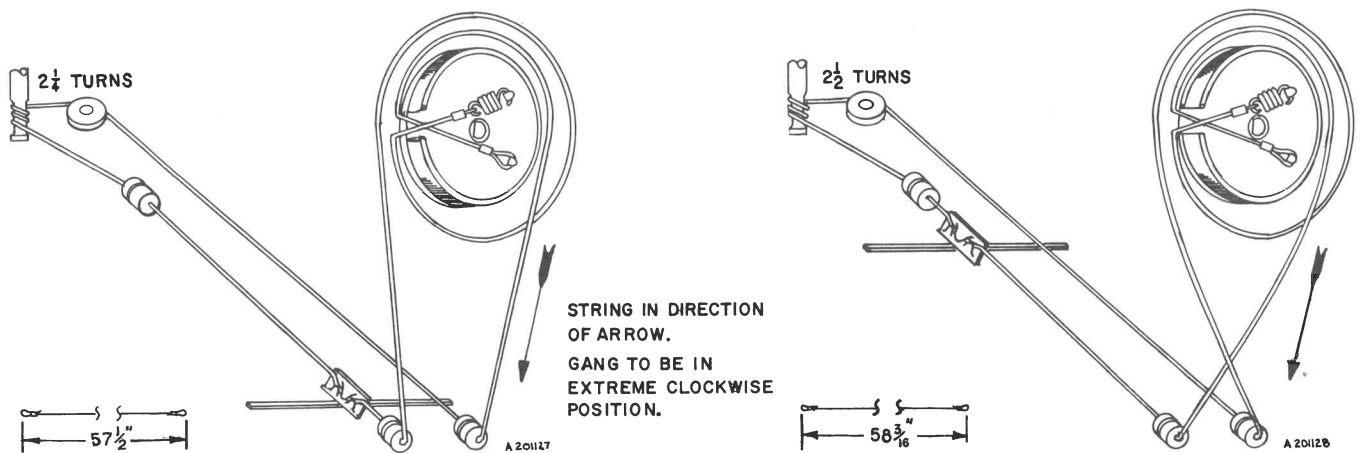
## RS-238A CHASSIS LAYOUT



RS-238A Power Amplifier Layout



RC-1218 Chassis Layout



Dial Cord Arrangement—Vertical

Dial Cord Arrangement—Horizontal



AM-FM ALIGNMENT PROCEDURE

INSTRUMENTS REQUIRED

Signal Sources

- 1. RF Signal Generator (RCA WR-50B or equivalent)
- 2. TV/FM Sweep Generator (RCA WR-69A or equivalent)
- 3. Marker Generator (RCA WR-99A or equivalent)

Output Indicators

- 4. Vacuum-Tube Voltmeter (RCA WV-98C or equivalent)
- 5. Oscilloscope (RCA WO-91B or equivalent)

Tools

- 6. Hex head alignment tool
- 7. Thin fibre shaft alignment tool

GENERAL ALIGNMENT CONDITIONS

- 1. Connect low side of signal source and output indicator to chassis ground as close as possible to high side connection unless otherwise specified.
- 2. Signal input should be kept as low as possible to avoid AVC action. (Set output indicator to highest sensitivity.)
- 3. Markers should be accurate. (Crystal controlled or checked against a crystal calibrator.) The 10.7 mc marker used in each section of the alignment should be the same. (Generator dial should not be moved.)
- 4. Marker insertion and amplitude should not distort the oscilloscope trace.
- 5. Standard modulation is 400 cycle at 30% amplitude.

STEP	Signal Source— Connected to—	Set Signal to—	Set Radio Dial to—	Output Indicator— Connected to—	Adjust	Adjust for—	STEP			
1	Set Radio Function For "AM"						1			
2	RF Generator— Q202 Base through a 0.01μf capacitor	455 kc (modulated)	Quiet point on band near 1600 kc.	Tuning Meter may be used as the output indicator	T208 (3rd AM IF)	Maximum	2			
3					T206 Top & Bottom (2nd AM IF)		3			
4					T204 Top & Bottom (1st AM IF)		4			
5					C118E-T (Oscillator Trim)		5			
6	A standard radiating loop or short piece of wire placed near AM antenna	1400 kc (modulated)	1400 kc		C118D-T (Antenna Trim)		6			
7		600 kc (modulated)	600 kc (rock gang)		C118F-T (RF Trimmer)		7			
8		550 kc (modulated)	550 kc (rock gang)		T201 (RF Trans.)		8			
9					T202 (Oscillator Coil)		9			
10		Repeat steps 2 through 4 and steps 5 through 9 as necessary to obtain maximum sensitivity on stations						10		
11	Set Radio Function For "FM"						11			
12	RF Generator— Q206 Base through a 0.01μf capacitor	10.7 mc (unmodulated)	Quiet point on band	V.T.V.M.— Across R251	T209 Bottom core (Ratio Detector)	Maximum	12			
13				(Set to center zero) Stake "AD"	T209 Top core (Ratio Detector)	Zero Voltage (cross-over)	13			
14	Repeat steps 12 and 13 as necessary to obtain a balanced "S" curve with ±200 kc linearity						14			
15	TV / FM Sweep Gen.— Q205 Base through a 0.01μf capacitor	240 kc Sweep centered at 10.7 mc with markers at 10.6, 10.7 & 10.8 mc	Quiet point on band	Oscilloscope— with signal Tracing Probe (RCA WG-302A) Q206 Base (adjust signal input to obtain a 30 mv P-P reading on oscilloscope)	*Detune T205 Bottom	Maximum symmetrical response centered at 10.7 mc with 10.6 and 10.8 mc at equal heights within 10% and approx. 40% down slope (limits between 30% -60%)	15			
16	Q204 Base through a 0.01μf capacitor				T207 Top & Bottom (4th FM IF)		16			
17					*Detune T203 Bottom		17			
18					T205 Top & Bottom (3rd FM IF)		18			
19					*Detune T102 Top		19			
20	Q203 Base through a 0.01 μf capacitor				T203 Top & Bottom (2nd FM IF)		20			
21	One FM antenna terminal				T102 Top & Bottom (1st FM IF-in tuner)		21			
22	Repeat steps 15 thru 21 as necessary to obtain specified response						22			
23	Marker Generator— across FM antenna terminals through a matching network if necessary	108 mc	108 mc	Tuning Meter may be used as the output indicator.	C117 (Oscillator Trimmer)	Maximum	23			
24					C118B-T (RF-Trimmer)		24			
25					C118A-T (Antenna Trimmer)		25			
26	Repeat steps 22, 23 and 24 as necessary to obtain maximum sensitivity on stations						26			

\* When detuning T205, T203 and T102, the specified core should be adjusted until no action appears in the trace with further adjustment of the core (2 or more turns). Opposite core will have little or no effect after specified core is fully de-tuned.

MULTIPLEX ALIGNMENT PROCEDURE

INSTRUMENTS REQUIRED

Signal Source

- 1. FM-Stereo Simulator (RCA WR-52A or equivalent)

Output Indicator

- 2. Oscilloscope (RCA WO-91B or equivalent)

Tools

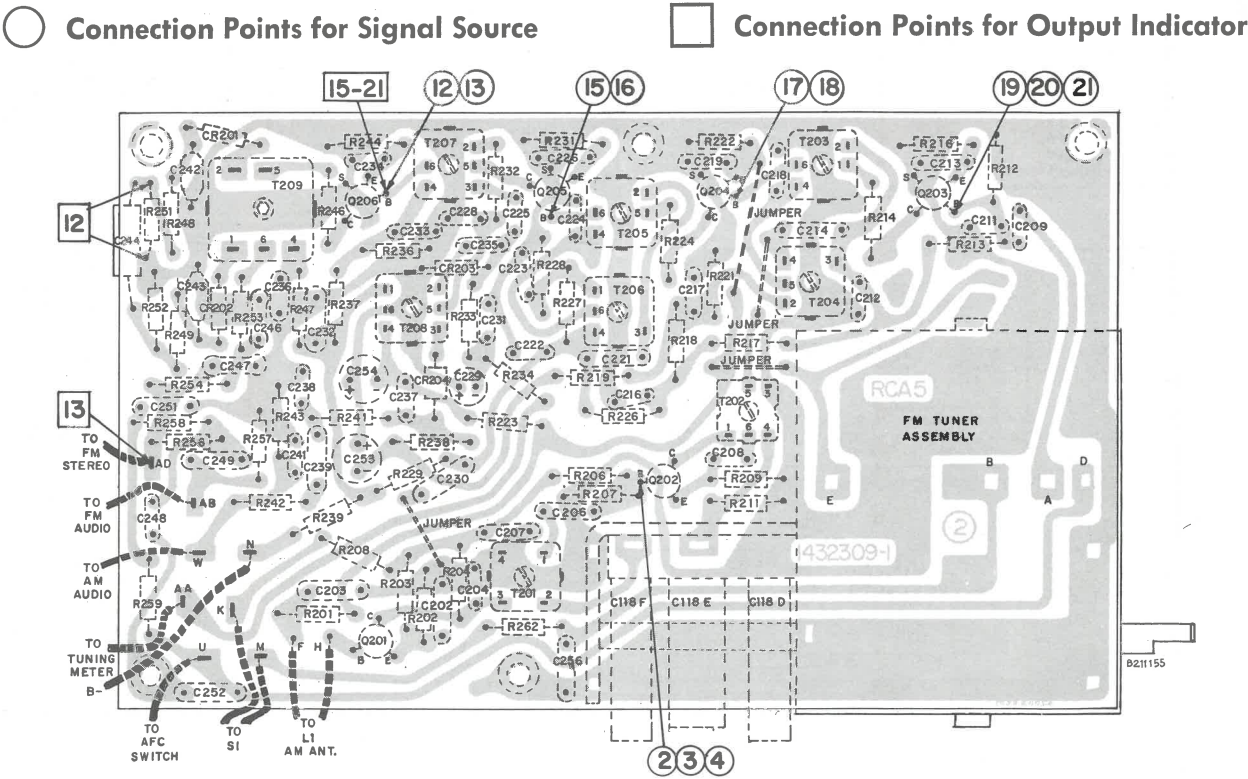
- 3. Hex head alignment tool

GENERAL ALIGNMENT CONDITIONS

- 1. Connect low side of output indicator to chassis ground as close as possible to high side connection.
- 2. RF deviation should be set to approximately 75 kc.
- 3. Input signal should be held at a level that will not produce limiting.
- 4. FM-Stereo Simulator connected across FM antenna terminals. Tune radio to 100 mc. AFC on.

STEP	19 kc Subcarrier Level Set to—	Audio Freq. Sel. Set to—	Function Sel. Set to—	Output Indicator— Connect to—	Adjust	Adjust for—	STEP
1	Set Radio Function For "FM-STEREO"						1
2	10%	72 kc (Note 1)	Audio & Mono FM	Oscilloscope— TP #1	L301 (72 kc Trap)	Minimum	2
3		Ground Stake "AW" (Stereo Indicator light should remain lit.)					3
4		19 kc (Note 2)	Stereo Left	Oscilloscope— TP #2 (retain signal input to just below limiting)	T301 (19 kc Trans.)	Maximum	4
5					T302 (19 kc Trans.)		5
6					T303 (38 kc Trans.)		6
7		1000 cycle	Stereo Right	Stake "BE" (Left Chan. output) (Increase signal input)	T301 (19 kc Trans.)	Retouch slightly for maximum and correct phase	7
8					R337 (Stereo Separation)	Minimum	8
9					Remove ground from Stake "AW". Turn R338 fully counterclockwise		9
10	6%				R338 (Stereo Threshold)	Clockwise until stereo indicator light just comes on. (Note 3)	10

- NOTES: 1. If 72 kc is not available, tune L301 to 67 kc and then adjust core 1 1/2 turns toward bottom of coil.  
2. If 19 kc is not available, set at 67 kc.  
3. If stereo indicator light will not extinguish with R338 fully counterclockwise, remove signal for an instant.

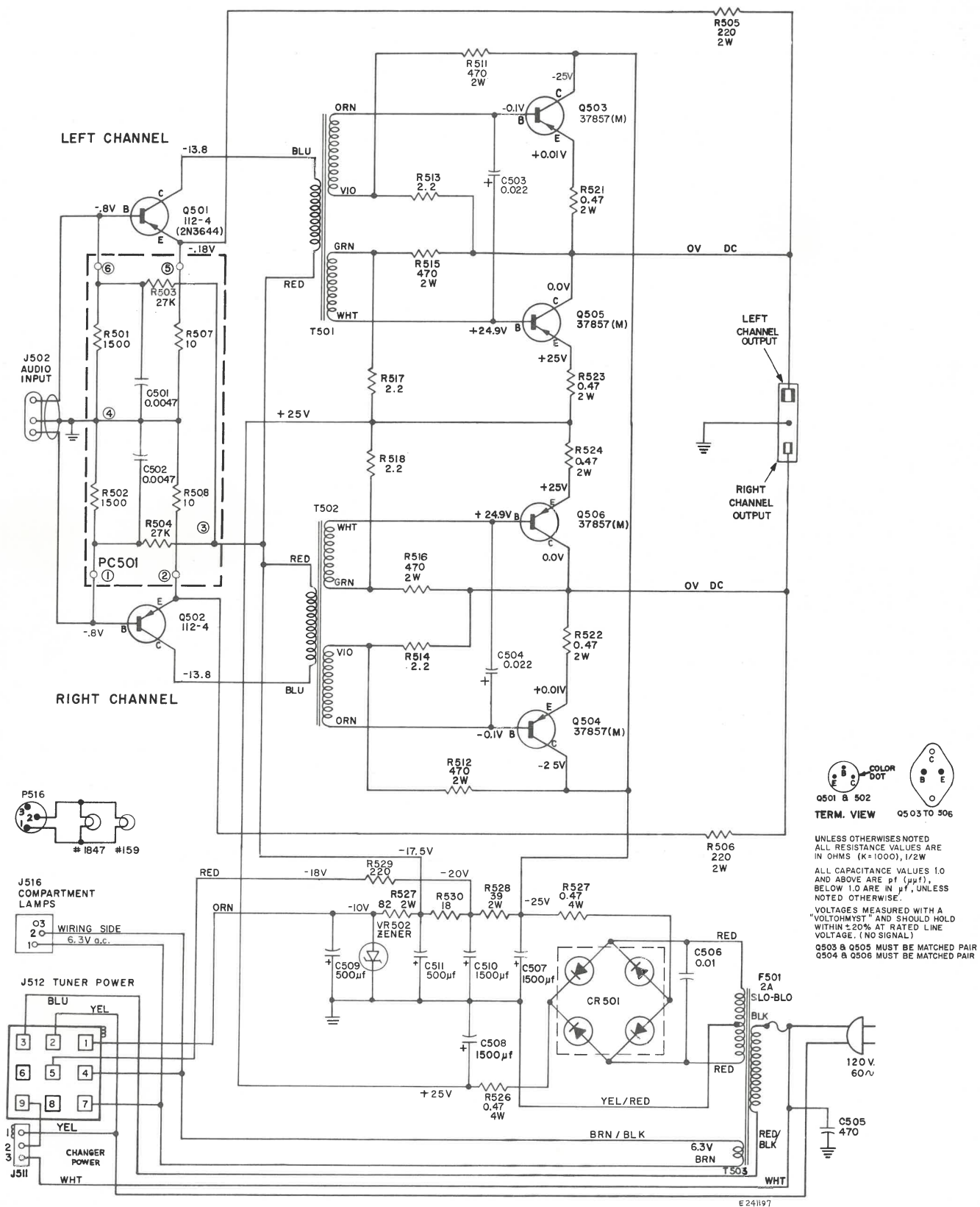






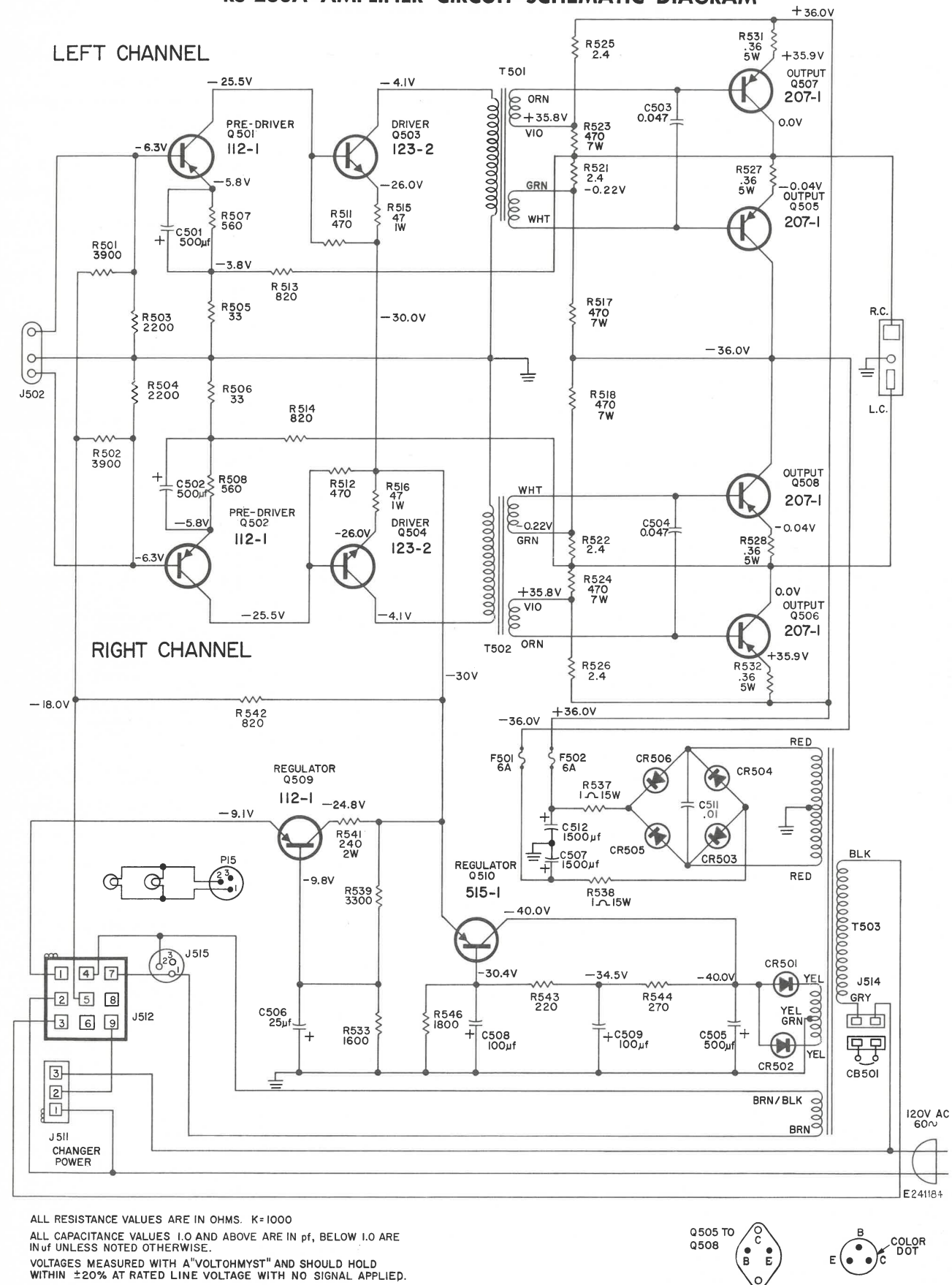


### RS-237A AMPLIFIER CIRCUIT SCHEMATIC DIAGRAM



### RC-237A Amplifier Circuit Schematic Diagram

### RS-238A AMPLIFIER CIRCUIT SCHEMATIC DIAGRAM

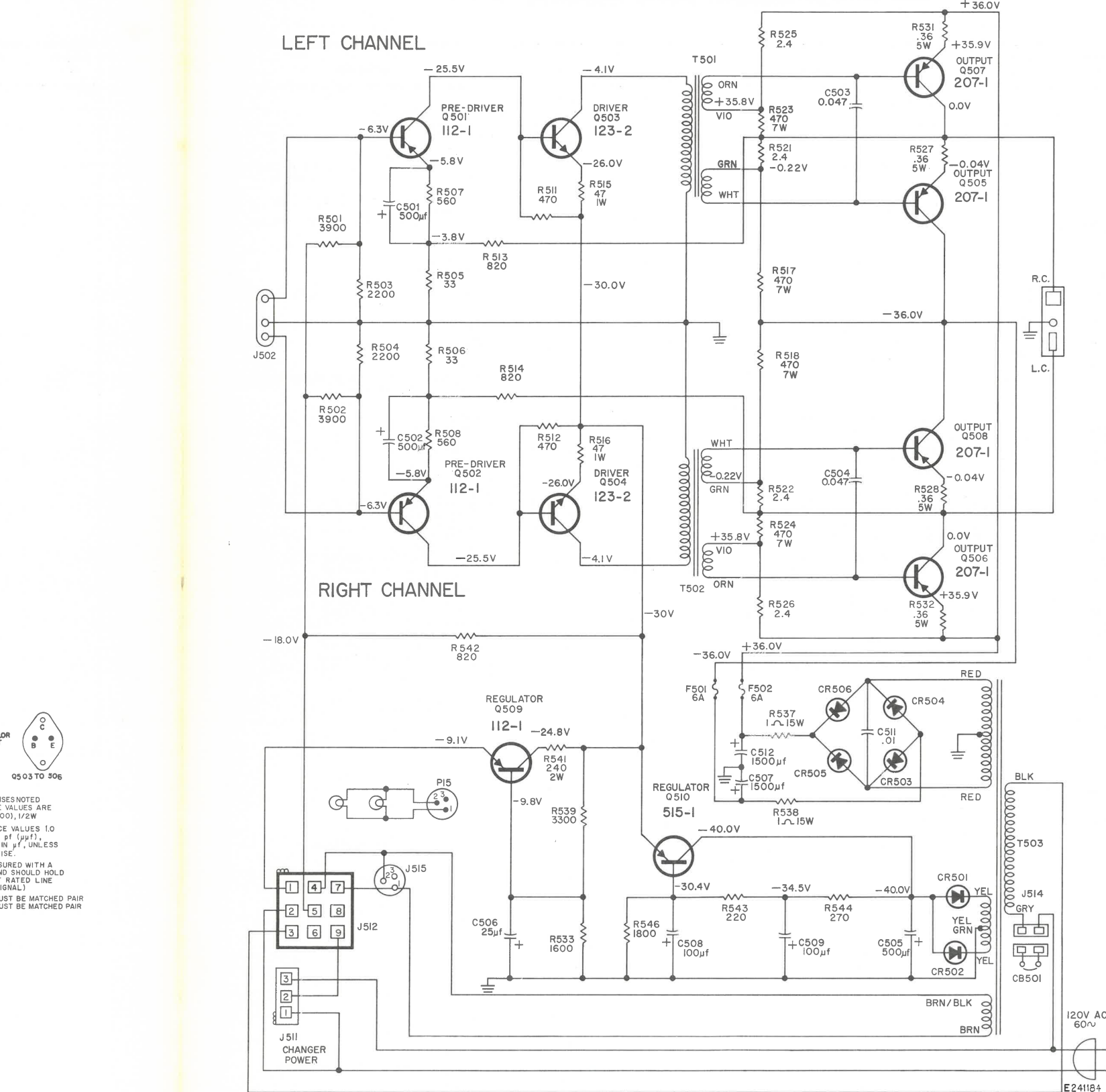


### RC-238A Amplifier Circuit Schematic Diagram

SYMBOL NO.	
C1	
C2	
C3	
C4	
C5	
C101	
C102	
C103	
C104	
C105	
C106	
C107	
C108	
C109	
C110	
C111	
C112	
C113	
C114	
C115	
C116	
C117	
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C251	
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C253	
C254	
C256	
C301	
C302	
C303	
C304	
C306	
C307	
C308	
C309	
C311	
C312	
C313	
C314	
C316	
C317	
C318	
C319	
C401	
C402	
C403	
C404	
C405	
C405	



RS-238A AMPLIFIER CIRCUIT SCHEMATIC DIAGRAM



Q503 TO 506  
RESISTOR  
E VALUES ARE  
(100), 1/2W  
CE VALUES 1.0  
pt (μf),  
IN μf, UNLESS  
NOTED  
SURED WITH A  
NO SHOULD HOLD  
T RATED LINE  
SIGNAL  
JUST BE MATCHED PAIR  
JUST BE MATCHED PAIR

ALL RESISTANCE VALUES ARE IN OHMS. K=1000  
ALL CAPACITANCE VALUES 1.0 AND ABOVE ARE IN pf, BELOW 1.0 ARE  
IN μf UNLESS NOTED OTHERWISE.  
VOLTAGES MEASURED WITH A "VOLTOHYST" AND SHOULD HOLD  
WITHIN ±20% AT RATED LINE VOLTAGE WITH NO SIGNAL APPLIED.

RC-238A Amplifier Circuit Schematic Diagram

REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
TUNER CHASSIS RC 1218AA & AD			C406	111837	0.047 μf, ±20%, 100 v., ceramic, RC-1218AN
CAPACITORS:			C406		0.22 μf, ±20%, 100 v., mylar, RC-1218AD
C1		0.047 μf, ±20%, 100 v., ceramic	C407	111122	0.0068 μf, ±20%, 100 v., ceramic
C2		0.047 μf, ±20%, 100 v., ceramic	C408	111122	0.0068 μf, ±20%, 100 v., ceramic
C3	73960	0.01 μf, +100-0%, 500 v., ceramic	C411	121648	0.033 μf, ±20%, 100 v., ceramic
C4	73960	0.01 μf, +100-0%, 500 v., ceramic	C412	121648	0.033 μf, ±20%, 100 v., ceramic
C5	115195	1000 μf, +100-10%, 25 v., electrolytic	C413		1500 μf, ±20%, 100 v., ceramic
C101	115087	12 pf, ±5%, 500 v., ceramic, NPO, special	C414		1500 μf, ±20%, 100 v., ceramic
C102	115084	5 pf, ±10%, 500 v., ceramic, NPO, special	C415	121646	0.0039 μf, ±20%, 100 v., ceramic
C103	115091	0.01 μf, ±20%, 500 v., ceramic, special	C416	121646	0.0039 μf, ±20%, 100 v., ceramic
C104	115090	1000 pf, +100-0%, 500 v., ceramic, special	C417	111837	0.047 μf, ±20%, 100 v., ceramic, RC-1218AA
C105	115087	12 pf, ±5%, 500 v., ceramic, NPO, special	C417	115652	0.1 μf, ±20%, 100 v., mylar, RC-1218AD
C106	115091	0.01 μf, ±20%, 500 v., ceramic, special	C418	111837	0.047 μf, ±20%, 100 v., ceramic, RC-1218AA
C107	115084	5 pf, ±10%, 500 v., ceramic, NPO, special	C418		0.047 μf, ±20%, 100 v., ceramic, RC-1218AA
C108	115089	270 pf, ±10%, 500 v., ceramic, special	C421	115652	0.1 μf, ±20%, 100 v., mylar, RC-1218AD
C109	115088	39 pf, ±5%, 500 v., ceramic, N750, special	C421		0.027 μf, ±20%, 100 v., ceramic, RC-1218AA
C110	115086	10 pf, ±5%, 500 v., ceramic, NPO, special	C422	115652	0.1 μf, ±20%, 100 v., mylar, RC-1218AD
C111	115091	0.01 μf, ±20%, 500 v., ceramic, special	C422		0.027 μf, ±20%, 100 v., ceramic, RC-1218AA
C112	115091	0.01 μf, ±20%, 500 v., ceramic, special	C423	111837	0.047 μf, ±20%, 100 v., ceramic, RC-1218AA
C113	115086	10 pf, ±5%, 500 v., ceramic, NPO, special	C423		0.22 μf, ±20%, 10 v., ceramic, RC-1218AD
C114		330 pf, ±5%, 100 v., mica	C424	111837	0.047 μf, ±20%, 100 v., ceramic, RC-1218AA
C115	115085	2 pf, ±10%, 500 v., ceramic, NPO, special	C424		0.22 μf, ±20%, 10 v., ceramic, RC-1218AD
C116	115091	0.01 μf, ±20%, 500 v., ceramic, special	C425	111837	0.047 μf, ±20%, 100 v., ceramic, RC-1218AA
C117	115092	1 to 6 pf, trimmer	C425		0.22 μf, ±20%, 10 v., ceramic, RC-1218AD
C118	115093	variable, tuning	C426	111837	0.047 μf, ±20%, 100 v., ceramic, RC-1218AA
C119	115194	0.01 μf, ±20%, 500 v., ceramic, special	C426		0.22 μf, ±20%, 10 v., ceramic, RC-1218AD
C202	114007	0.047 μf, +100-20%, 100 v., ceramic	C427	115597	10 μf, +250-10%, 10 v., electrolytic
C203	114007	0.047 μf, +100-20%, 100 v., ceramic	C428	115597	10 μf, +250-10%, 10 v., electrolytic
C204	111130	2200 pf, ±20%, 100 v., ceramic	C431	110567	10 μf, +250-10%, 15 v., electrolytic
C206	73960	0.01 μf, +100-0%, 500 v., ceramic	C432	110567	10 μf, +250-10%, 15 v., electrolytic
C207		0.1 μf, ±20%, 100 v., mylar	DIODES:		
C208		0.01 μf, ±20%, 100 v., ceramic	CR101	115099	FM AFC
C209		47 pf, ±5%, 100 v., mica	CR201	115101	FM ratio detector
C211	104135	680 pf, ±10%, 500 v., ceramic	CR202	115101	FM ratio detector
C212	111120	0.05 μf, ±20%, 25 v., ceramic	CR203	112524	tuning indicator
C213		0.01 μf, +100-20%, 100 v., ceramic	CR204	112524	AM detector
C214		1000 pf, ±5%, 500 v., mica	CR301	112524	19kc doubler
C216	111120	0.05 μf, ±20%, 25 v., ceramic	CR302	112524	19kc doubler
C217	111120	0.05 μf, ±20%, 25 v., ceramic	CR303	112524	synchronous detector
C218	105310	390 pf, ±10%, 500 v., ceramic	CR304	112524	synchronous detector
C219	114007	0.047 μf, +100-20%, 500 v., ceramic	CR305	112524	synchronous detector
C221		1000 pf, ±5%, 500 v., mica	CR306	112524	synchronous detector
C222	111120	0.05 μf, ±20%, 25 v., ceramic	LAMPS:		
C223	114007	0.047 μf, +100-0%, 200 v., ceramic	DS1	103211	control, lighting, #1847
C224	105310	390 pf, ±10%, 500 v., ceramic	DS2	103211	control, lighting, #1847
C225	105247	4 pf, ±0.5 pf, 500 v., ceramic	DS3	103211	control, lighting, #1847
C226	114007	0.047 μf, +100-20%, 100 v., ceramic	DS4	103211	control, lighting, #1847
C228	105310	390 pf, ±10%, 500 v., ceramic	DS5	123016	AFC
C229	117606	100 μf, 6 v., electrolytic	DS6	123015	FM stereo
C230	114007	0.047 μf, +100-20%, 100 v., ceramic	DS7	123014	AM
C231	111120	0.05 μf, ±20%, 25 v., ceramic	DS8	123014	FM
C232	112969	0.1 μf, ±20%, 50 v., ceramic	J1	111389	Connector—3 pin female, phono input
C233		0.01 μf, ±20%, 100 v., ceramic	J3	116422	Connector—Dual pin plug, tape input/output
C234		0.01 μf, +100-20%, 100 v., ceramic	COILS:		
C235		12 pf, ±0.5 pf, 500 v., ceramic	L1	115071	AM antenna, ferrite rod
C236		0.01 μf, +100-20%, 100 v., ceramic	L101	115096	FM antenna
C237	111130	0.0022 μf, ±20%, 100 v., ceramic	L102	115097	FM RF
C238	111130	0.0022 μf, ±20%, 100 v., ceramic	L103	105513	RF choke, 1.0 μh
C239		0.027 μf, ±20%, 100 v., ceramic	L104	115098	FM oscillator
C241	111130	0.0022 μf, ±20%, 100 v., ceramic	L301	115112	FM stereo
C242	115664	330 pf, ±5%, 125 v., plastic	M1	117175	Meter—tuning indicator
C243	115664	330 pf, ±5%, 125 v., plastic	P2	74882	Connector—3 pin male, audio
C244	111370	2 μf, +250-10%, 50 v., electrolytic	P12	110882	Connector—9 contact male, power cable
C246	76552	330 pf, ±10%, 500 v., ceramic	PB100	115135	Circuit—FM tuner board complete
C247	76552	330 pf, ±10%, 500 v., ceramic	PB200	115111	Circuit—IF board complete
C248		1500 pf, ±20%, 100 v., ceramic	PB300	118601	Circuit—multiplex board complete
C249		0.1 μf, ±20%, 100 v., mylar	PB400	118600	Circuit—audio board complete
C251	114007	0.047 μf, +100-20%, 100 v., ceramic	TRANSISTORS:		
C252	114007	0.047 μf, +100-20%, 100 v., ceramic	Q101	115227	FM RF amplifier, 108-1
C253	115100	10 μf, +100-10%, 10 v., electrolytic	Q102	115228	FM converter, 108-2
C254	115100	10 μf, +100-10%, 10 v., electrolytic	Q201		AM RF amplifier, RCA 2N1632
C256	73960	0.01 μf, +100-0%, 500 v., ceramic	Q202		AM converter, RCA 2N1526
C301	115665	560 pf, ±10%, 125 v., plastic	Q203		1st FM IF amp., 108-4
C302	119375	20 μf, 10 v., electrolytic	Q204	115229	2nd FM & 1st AM IF amp., 108-4
C303	117606	100 μf, 6 v., electrolytic	Q205	115229	3rd FM & 2nd AM IF amp., 108-4
C304	106114	10 μf, +250-10%, 10 v., electrolytic	Q206	115229	FM limiter, 108-4
C306		1 μf, +100-0%, 3 v., ceramic	Q301		19 KC amp., 35678 or 2N1524
C307		0.01 μf, +80-20%, 10 v., ceramic	Q302		19 KC amp., 35677 or 2N1524
C308	119352	0.018 μf, ±10%, 200 v., paper	Q303		38 KC amp., 35677 or 2N1524
C309	119352	0.018 μf, ±10%, 200 v., paper			
C311	119375	20 μf, 10 v., electrolytic			
C312	119375	20 μf, 10 v., electrolytic			
C313		1800 pf, ±20%, 500 v., ceramic			
C314		1800 pf, ±20%, 500 v., ceramic			
C316		180 pf, ±20%, 500 v., ceramic			
C317		180 pf, ±20%, 500 v., ceramic			
C318	111837	0.047 μf, ±20%, 100 v., ceramic			
C319	111837	0.047 μf, ±20%, 100 v., ceramic			
C402	115652	0.1 μf, ±20%, 100 v., mylar			
C403	115652	0.1 μf, ±20%, 100 v., mylar			
C404	115597	10 μf, +250-10%, 10 v., electrolytic			
C405	111837	0.047 μf, ±20%, 100 v., ceramic, RC-1218AN			
C405		0.22 μf, ±20%, 100 v., mylar, RC-1218AD			



REPLACEMENT PARTS (continued)

SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
Q304		stereo switch, 2N408	R326	502382	82,000 ohm, ±5%
Q305		L. channel audio amp., 2N408	R327	502256	5600 ohm, ±5%
Q306		R. channel audio amp., 2N408	R328	502256	5600 ohm, ±5%
Q401		L. channel, 1st audio amp., RCA 2N2613	R329	502347	47,000 ohm, ±5%
Q402		R. channel, 1st audio amp., RCA 2N2613	R331	502347	47,000 ohm, ±5%
Q403		L. channel, 2nd audio amp., RCA 2N2613	R332	502215	1500 ohm, ±5%
Q404		R. channel, 2nd audio amp., RCA 2N2613	R333	502215	1500 ohm, ±5%
Q405		L. channel, 3rd audio amp., RCA 2N2613	R334	502247	4700 ohm
Q406		R. channel, 3rd audio amp., RCA 2N2613	R336	502247	4700 ohm
Q407		L. channel, 4th audio amp., RCA 2N408	R337	115248	control, stereo separation
Q408		R. channel, 4th audio amp., RCA 2N408	R338	115248	control, stereo threshold
		RESISTORS: ±10%, ½ watt, composition, unless noted otherwise.	R339	502347	47,000 ohm
R1	502018	18 ohm	R340	502347	47,000 ohm
R2	502447	470,000 ohm	R341	502368	68,000 ohm
R3	502447	470,000 ohm	R342	502368	68,000 ohm
R4	502012	12 ohm	R401	502347	47,000 ohm
R101		8200 ohm, ¼ w.	R402	502347	47,000 ohm
R102		15,000 ohm, ¼ w.	R403	502215	1500 ohm
R103		820 ohm, ¼ w.	R404	502215	1500 ohm
R104	108861	100 ohm, ¼ w.	R405	502315	15,000 ohm
R105		10,000 ohm, ¼ w.	R406	502315	15,000 ohm
R106	108865	1000 ohm, ¼ w.	R407	502339	39,000 ohm
R107		2700 ohm, ¼ w.	R408	502339	39,000 ohm
R108	108861	100 ohm, ¼ w.	R409	502322	22,000 ohm
R109	108861	100 ohm, ¼ w.	R410	502322	22,000 ohm
R110		68,000 ohm, ¼ w.	R411	502256	5600 ohm
R111		1 megohm, ¼ w.	R412	502256	5600 ohm
R112	223769	100,000 ohm, ¼ w.	R413	502268	6800 ohm
R201	502310	10,000 ohm	R414	502268	6800 ohm
R202	502218	1800 ohm, ±5%	R415	502315	15,000 ohm
R203	502333	33,000 ohm, ±5%	R416	502315	15,000 ohm
R204	502182	820 ohm	R417A/B	118592	control, bass
R206	502315	15,000 ohm	R418	118593	control, balance
R207	502247	4700 ohm	R421	502233	3300 ohm
R208	502110	100 ohm	R422	502233	3300 ohm
R209	502227	2700 ohm	R423	502322	22,000 ohm
R211	502418	180,000 ohm	R424	502322	22,000 ohm
R212	502256	5600 ohm	R425A/B	118591	control, treble
R213	502312	12,000 ohm	R427	502339	39,000 ohm
R214	502210	1000 ohm	R428	502339	39,000 ohm
R216	502182	820 ohm	R431	502215	1500 ohm
R217	502110	100 ohm	R432	502215	1500 ohm
R218	502347	47,000 ohm, ±5%	R433	502347	47,000 ohm
R219	502182	820 ohm	R434	502347	47,000 ohm
R221	502356	55,000 ohm, ±5%	R435	502339	39,000 ohm
R222	502215	1500 ohm, ±5%	R436	502339	39,000 ohm
R223	502182	820 ohm	R437	502222	2200 ohm
R224	502156	560 ohm	R438	502222	2200 ohm
R226	502110	100 ohm	R441	502282	8200 ohm, RC-1218AA
R227	502315	15,000 ohm	R441	502268	6800 ohm, RC-1218AD
R228	502256	5600 ohm	R442	502282	8200 ohm, RC-1218AA
R229	502110	100 ohm	R442	502268	6800 ohm, RC-1218AD
R231	502182	820 ohm	R443	502315	15,000 ohm, RC-1218AA
R232	502133	330 ohm	R443	502282	8200 ohm, RC-1218AD
R233	502310	10,000 ohm	R444	502315	15,000 ohm, RC-1218AA
R234	502110	100 ohm	R444	502282	8200 ohm, RC-1218AD
R236	502247	4700 ohm	R445A/B	118590	control, loudness
R237	502315	15,000 ohm	R447	502315	15,000 ohm
R238	502310	10,000 ohm	R448	502315	15,000 ohm
R239	502047	47 ohm	R451	502215	1500 ohm
R241	502310	10,000 ohm	R452	502215	1500 ohm
R242	502382	82,000 ohm	R453	502327	27,000 ohm
R243	502312	12,000 ohm	R454	502327	27,000 ohm
R244	502182	820 ohm	R455	502339	39,000 ohm
R246	502215	1500 ohm	R456	502339	39,000 ohm
R247	502110	100 ohm	R457	502239	3900 ohm
R248	502210	1000 ohm, ±5%	R458	502239	3900 ohm
R249	502133	330 ohm, ±5%	R461	502256	5600 ohm
R251	502268	6800 ohm, ±5%	R462	502256	5600 ohm
R252	502268	6800 ohm, ±5%	S1	123019	Switch—6 function push button
R253	502118	180 ohm	S2	115074	Switch—AFC
R254	502210	1000 ohm			TRANSFORMERS:
R256	502418	180,000 ohm	T101	115094	antenna coil
R257	502510	1 megohm	T102	115095	1st FM IF
R258	502422	220,000 ohm	T201	115102	AM RF
R259	502210	1000 ohm	T202	115103	AM oscillator
R262	502110	100 ohm	T203	115105	2nd FM IF
R301	502339	39,000 ohm	T204	115108	1st AM IF
R302	502239	3900 ohm	T205	115104	3rd FM IF
R303	502247	4700 ohm	T206	115107	2nd AM IF
R304	502147	470 ohm	T207	115104	4th FM IF
R306	502282	8200 ohm	T208	115106	3rd AM IF
R307	502239	3900 ohm	T209	115109	FM ratio detector
R308	502210	1000 ohm	T301	115114	1st 19 KC
R309	502310	10,000 ohm	T302	115115	2nd 19 KC
R311	502222	2200 ohm	T303	115116	38 KC
R312	502212	1200 ohm			Cord—drive (250' spool)
R313	502156	560 ohm			Cover—FM tuner
R314	502227	2700 ohm, ±5%			Cover—plastic 2¾" x 2½", for indicator lamps
R316	502268	6800 ohm, ±5%			Drum—flywheel assembly
R317	502127	270 ohm			Gear—pointer drive
R318	502347	47,000 ohm			Pointer—tuning dial
R319	502310	10,000 ohm, ±5%			Pointer—audio controls
R321	502310	10,000 ohm, ±5%			Pulley—gang drive
R322	502310	10,000 ohm, ±5%			Pulley—idler
R323	502310	10,000 ohm, ±5%			
R324	502382	82,000 ohm, ±5%			

REPLACEMENT PARTS (continued)

SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
	123012	Socket—socket & lead assembly for dial lighting	CR504	121180	Diode—silicon rectifier
	31418	Spring—drive cord tension	CR505	121180	Diode—silicon rectifier
		AMPLIFIER CHASSIS RS 237A	CR506	121180	Diode—silicon rectifier
		CAPACITORS:	F501	121186	Fuse—6 amp.
C501		0.0047 µf (part of Z501)	F502	121186	Fuse—6 amp.
C502		0.0047 µf (part of Z501)	J501	36422	Connector—3 pin female
C503		0.022 µf, ±20%, 100 v., mylar	J502	111402	Connector—9 contact female, tuner power
C504		0.022 µf, ±20%, 100 v., mylar	J503	110429	Connector—3 contact female, changer power
C505	115259	470 µf, ±20%, 1000 v., ceramic	J505	121179	Connector—2 contact female, circuit breaker
C506	73960	0.01 µf, ±100—0%, 500 v., ceramic	J506	111389	Connector—3 pin female, amplifier input
C507	115627	1500 µf, 35 v., electrolytic			TRANSISTORS:
C508	115627	1500 µf, 35 v., electrolytic	Q501	119983	audio amplifier
C509	111793	500 µf, 15 v., electrolytic	Q502	119983	audio amplifier
C510	115627	1500 µf, 35 v., electrolytic	Q503		driver, RCA #40347
C511	111835	500 µf, 25 v., electrolytic	Q504		driver, RCA #40347
CR501	120503	Diode—silicon	Q505	121244	output
F501	115622	Fuse—2 amp.	Q506	121244	output
J501	111389	Connector—3 pin female, amplifier input	Q507	121244	output
J502	111402	Connector—9 contact female, tuner power	Q508	121244	output
J511	110529	Connector—3 contact female, changer power	Q509	119983	filter
J516	36422	Connector—3 pin female, lighting power	Q510	119721	filter
Q501		Transistor—driver, 2N3644			RESISTORS: ±10%, ½ watt, composition, unless noted otherwise.
Q502		Transistor—driver, 2N3644	R501	592239	3900 ohm
Q503	121243	Transistor—output	R502	502239	3900 ohm
Q504	121243	Transistor—output	R503	502222	2200 ohm
Q505	121243	Transistor—output	R504	502222	2200 ohm
Q506	121243	Transistor—output	R505	502033	33 ohm
		RESISTORS: ±10%, ½ watt, composition, unless noted otherwise.	R506	502033	33 ohm
R501		1500 ohm (part of Z501)	R507	502156	560 ohm
R502		1500 ohm (part of Z501)	R508	502156	560 ohm
R503		27,000 ohm (part of Z501)	R511	502147	470 ohm
R504		27,000 ohm (part of Z501)	R512	502147	470 ohm
R505		220 ohm, 2 w., wire wound	R513	502182	820 ohm
R506		220 ohm, 2 w., wire wound	R514	502182	820 ohm
R507		10 ohm (part of Z501)	R515	512047	47 ohm, 1 w.
R508		10 ohm (part of Z501)	R516	512047	47 ohm, 1 w.
R511		470 ohm, ±5%, 2 w., wire wound	R517	105583	470 ohm, 7 w., wire wound
R512		470 ohm, ±5%, 2 w., wire wound	R518	105583	470 ohm, 7 w., wire wound
R513		2.2 ohm, ±5%	R521		2.4 ohm, ±5%
R514		2.2 ohm, ±5%	R522		2.4 ohm, ±5%
R515		470 ohm, ±5%, 2 w., wire wound	R523	105583	470 ohm, 7 w., wire wound
R516		470 ohm, ±5%, 2 w., wire wound	R524	105583	470 ohm, 7 w., wire wound
R517		2.2 ohm, ±5%	R525		2.4 ohm, ±5%
R518		2.2 ohm, ±5%	R526		2.4 ohm, ±5%
R521		0.47 ohm, 2 w., wire wound	R527	121183	0.36 ohm, 5 w., wire wound
R522		0.47 ohm, 2 w., wire wound	R528	121183	0.36 ohm, 5 w., wire wound
R523		0.47 ohm, 2 w., wire wound	R531	121183	0.36 ohm, 5 w., wire wound
R524		0.47 ohm, 2 w., wire wound	R532	121183	0.36 ohm, 5 w., wire wound
R525	121181	0.47 ohm, ±10%, 5 w., wire wound	R533	229523	1600 ohm, ±5%, fixed film
R526	121181	0.47 ohm, ±10%, 5 w., wire wound	R537	121182	1 ohm, 15 w., wire wound
R527		82 ohm, 2 w., wire wound	R538	121182	1 ohm, 15 w., wire wound
R528	116436	39 ohm, 2 w., wire wound	R539	502233	3300 ohm
R529	502122	220 ohm	R541		240 ohm, ±5%, 2 w., fixed film
R530	502018	18 ohm	R542	502182	820 ohm
T501	115175	Transformer—driver	R543	502122	220 ohm
T502	115175	Transformer—driver	R544	502127	270 ohm
T503	121190	Transformer—power	R546	502218	1800 ohm
VR502	115123	Diode—Zener	T501	121188	Transformer—driver
Z501	121184	Circuit—printed component (includes C501, C502, R501, R502, R503, R504, R507, R508)	T502	121188	Transformer—driver
		Cable—power cord	T503	121189	Transformer—power
	115621	Contact—for connector 110529 & 111402			MISCELLANEOUS
	121185	Grommet—power cord		115621	Cable—power cord
	118604	Insulator—mica, for Q503-Q506		118748	Contact—for connector 121179
	115794	Socket—transistor, for Q503-Q506		121185	Contact—for connector 110429 & 111402
	115790			118604	Grommet—power cord
		AMPLIFIER CHASSIS RS 238A		115794	Insulator—mica, for Q510
		CAPACITORS:		121187	Insulator—nylon ⅜" x ⅜", for heat sink
C501	120264	500 µf, 6 v., electrolytic		115581	Socket—transistor, for Q510
C502	120264	500 µf, 6 v., electrolytic			BACK:
C503		0.047 µf, ±10%, 100 v., mylar		123746	cabinet, VJT 61W
C504		0.047 µf, ±10%, 100 v., mylar		123744	cabinet, VJT 62H, L
C505	115127	500 µf, 50 v., electrolytic		123747	cabinet, VJT 66S
C506	106054	25 µf, 15 v., electrolytic		123745	cabinet, VJT 67F
C507	111830	1500 µf, 50 v., electrolytic		123749	cabinet, VJT 76W
C508	121245	100 µf, 50 v., electrolytic		123748	cabinet, VJT 77S
C509	121245	100 µf, 50 v., electrolytic		123743	cabinet, VJT 98SK
C511	73960	0.01 µf, ±100—0% 500 v., ceramic		111743	Block—external speaker terminal
C512	111830	1500 µf, 50 v., electrolytic		116071	Bracket—plastic, compartment lamp mounting
CR501	118873	Diode—silicon rectifier			Breaker—circuit
CR502	118873	Diode—silicon rectifier			BUTTONS:
CR503	121180	Diode—silicon rectifier		122401	on/off
				122402	AM
				122403	FM
				122404	FM stereo
				122405	phono



## REPLACEMENT PARTS (continued)

SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
	122406	tape		122397	Panel—AM/FM tuner & amp. control panel (14 $\frac{1}{4}$ " x 8 $\frac{3}{8}$ ") VJT 76, 77
	118858	Cable—polarized, changer audio		122458	Panel—AM/FM tuner & amp. control panel (14 $\frac{1}{4}$ " x 8 $\frac{3}{8}$ ") VJT 61, 62, 66, 67, 98-K
	111831	Capacitor—4 $\mu$ f, 25 v., electrolytic (speaker wiring)		122409	Plate—metal, with solid state & RCA Victor markings (3 $\frac{1}{16}$ " x 2 $\frac{1}{2}$ ") VJT 76, 77
	115190	Capacitor—32 $\mu$ f, 25 v., electrolytic (speaker wiring) VJT 76, 77		122461	Plate—metal, with solid state & RCA Victor markings (3 $\frac{1}{16}$ " x 2 $\frac{1}{2}$ ") VJT 61, 62, 66, 67, 98-K
	115189	Capacitor—2 $\mu$ f, 25 v., electrolytic (speaker wiring) VJT 61, 62, 66, 67, 98-K		123755	Pull—doors, VJT 76W
	120766	Caster—(set of 4)		123764	Pull—decorative, VJT 66S
	123772	Cloth—grille, VJT 61W		123767	Pull—decorative, VJT 67F
	X8385	Cloth—grille, VJT 62H, L		123765	Pull—decorative, VJT 77S, VJT 98-K
	123752	Cloth—grille, VJT 66S		123732	Resistor—3.9 ohm, $\pm 10\%$ , 5 w., wire wound, (speaker wiring) VJT 76, 77
	123773	Cloth—grille, VJT 67F		123733	Resistor—6.2 ohm, $\pm 10\%$ , 15 w., wire wound, (speaker wiring) VJT 76, 77
	X8370	Cloth—grille, VJT 76W		121635	Resistor—27 ohm, $\pm 10\%$ , 5 w., wire wound (speaker 122206) VJT 61, 62, 66, 67, 98-K
	123770	Cloth—grille, VJT 77S		111964	Resistor—8.2 ohm, $\pm 10\%$ , 15 w., wire wound (speaker selector switch) VJT 61, 62, 66, 67, 98-K
	123771	Cloth—grille, VJT 98, K		502182	Resistor—820 ohm, $\pm 10\%$ , $\frac{1}{2}$ w. (speaker selector switch) VJT 61, 62, 66, 67, 98-K
	123734	Coil—speaker wiring		512182	Resistor—820 ohm, $\pm 10\%$ , 1 w. (speaker selector switch) VJT 76, 77
	74882	Connector—3 pin male, changer audio cable		115163	Resistor—10 ohm, $\pm 10\%$ , 30 w., wire wound (headphone loading) VJT 76, 77
	122675	Connector—2 contact male, circuit breaker		111648	Retainer—speakers
	110145	Connector—3 contact male, changer power		119959	Retainer—for mounting dial, plate, & escutcheon 122410 & 122462
	109442	Connector—4 contact female, changer power		112639	Screw—changer mounting
	103165	Connector—3 pin male, pilot lamp socket		115253	Slide—plastic, for doors (3 $\frac{3}{4}$ " x $\frac{1}{2}$ ") VJT 76W
	111963	Connector—headphone jack		118566	Socket—pilot lamp
	121185	Contact—for connector 109442 & 110145		113235	Socket—changer lamp
	122408	Dial—plastic, AM/FM tuning VJT 76, 77		111987	Speaker—3 $\frac{1}{2}$ " PM, 20 ohm v.c.
	122460	Dial—plastic, AM/FM tuning VJT 61, 62, 66, 67, 98-K		122206	Speaker—horn, 12 ohm v.c.
	123757	Door—R.H. sliding, VJT 76W		123750	Speaker—15" PM, 4 ohm v.c. VJT 76, 77
	123756	Door—L.H. sliding, VJT 76W		122612	Speaker—9" x 15" PM 8.5 ohm VJT 61, 62, 66, 67, 98-K
	122410	Escutcheon—metal, for tuning & AFC controls (3 $\frac{3}{16}$ " x 2 $\frac{1}{2}$ ") VJT 76, 77		115254	Spring—leaf type, for doors, VJT 76W
	122460	Escutcheon—metal, for tuning & AFC controls (3 $\frac{3}{16}$ " x 2 $\frac{1}{2}$ ") VJT 61, 62, 66, 67, 98-K		115142	Spring—retaining knobs 122398 & 122399 (set of 2)
	122411	Escutcheon—metal, for amp. control knobs (8 $\frac{11}{16}$ " x 1 $\frac{1}{2}$ ")		111962	Switch—speaker selector
	122407	Escutcheon—tuner push buttons (13 $\frac{1}{8}$ " x $\frac{7}{8}$ ") VJT 76, 77		118747	Terminal—contacts for connector 122675
	122459	Escutcheon—tuner push buttons (13 $\frac{1}{8}$ " x $\frac{7}{8}$ ") VJT 61, 62, 66, 67, 98-K		114272	Terminal—external speaker block
	121629	Escutcheon—speaker selector switch		123758	Trim—padded vinyl overlay (18" x 6") VJT 76W
	101345	Eyelet— $\frac{1}{2}$ " o.d., for mounting amplifier			<b>ACCESSORIES</b>
	123776	Grille—speaker, VJT 77S, VJT 98SK		118165	Spindle—"45" adaptor
	115353	Grommet— $\frac{3}{8}$ " o.d., for mounting tuner			<b>—order from RCA Sales Corporation—</b>
	115686	Hinge—hinge support for changer/tuner compartment lid		1407164-2	Book—customer instruction
	115687	Hinge—hinge support for changer compartment lid, VJT 62H, L, 66S			
	122373	Hinge—decorative, VJT 62H, L			
	121435	Holder—45 RPM adaptor			
	122398	Knob—AM/FM tuning			
	122399	Knob—AFC			
	122400	Knob—loudness, bass, treble, balance			
	122542	Knob—speaker selector			
	103211	Lamp, #1847, pilot			
	111481	Lamp, #159, changer compartment			
	116302	Latch—decorative, VJT 62H, L			
	111824	Lens—pilot lamp			
	120866	Nut—tee-nut, changer mounting			

**APPLY TO YOUR RCA DISTRIBUTOR FOR REPLACEMENT PARTS AND ACCESSORIES**

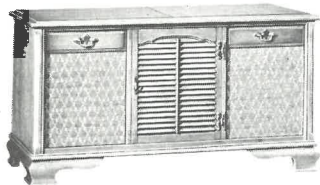




# RCA VICTOR



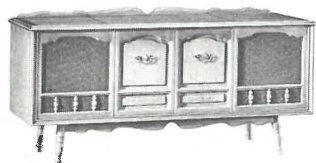
*The "Blackbeath"*  
Model VJT 38W—Walnut



*The "Attleboro"*  
Model VJT 40L—Maple



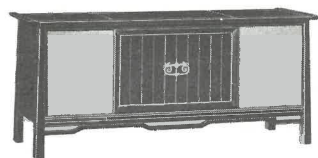
*The "Holmsund"*  
Model VJT 41W—Walnut



*The "Hagerstown"*  
Model VJT 43L—Maple



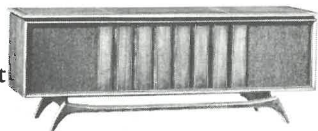
*The "Kbingan"*  
Model VJT 46E—Ebony  
Model VJT 46S—Pecan



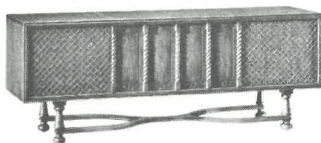
*The "Soissons"*  
Model VJT 45S—Pecan



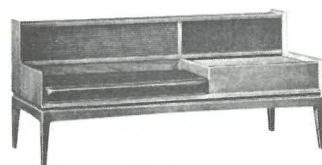
*The "San Marino"*  
Model VJT 47F—  
Fruitwood



*The "Anbolt"*  
Model VJT 54W—Walnut



*The "Beleares"*  
Model VJT 55S—Pecan



*The "Taboe"*  
Model VJT 59W—Walnut

## RADIO/"VICTROLA" PHONOGRAPH SERVICE DATA

—File: 1967 No. 41—

**VJT 38, 40, 41, 43, 45,  
46, 47, 54, 55, 59, 93-K,  
94-K, 96-K, 97-K Series**

**Tuner Chassis RC-1223C**

**Amplifier Chassis RS-215J & 239A**

**Power Chassis RK-314E & F**

**Record Changer RP-227-12D, RP-228-12C  
& 12SC**

### RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY  
PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201



*The "Hammerfest"*  
Model VJT 93WK—  
Walnut

*The "Biddeford"*  
Model VJT 94LK—Maple



*The "Alcazar"*  
Model VJT 96SK—Pecan



*The "Sezanne"*  
Model VJT 97FK—  
Fruitwood



### SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject

## SPECIFICATIONS

FREQUENCIES	Tuning	IF
AM	540-1620 kc/s	455 kc/s
FM	88-108 mc/s	10.7 mc/s

## TRANSISTOR COMPLEMENT

(Q1) RCA 36304	Left Chan. Output
(Q2) RCA 36304	Right Chan. Output
(Q3) RCA 36304	Left Chan. Output
(Q4) RCA 36304	Right Chan. Output
(Q101) RCA 108-1	FM RF Amplifier
(Q102) RCA 108-2	FM Converter
(Q201) RCA 2N1632	AM RF Amplifier
(Q202) RCA 2N1526	AM Converter
(Q203) RCA 108-3	1st AM-FM IF Amp.
(Q204) RCA 108-4	2nd AM-FM IF Amp.
(Q205) RCA 108-4	3rd FM IF Amp.
(Q301) RCA 2N1524	1st 19 kc Amplifier
(Q302) RCA 2N1524	2nd 19 kc Amplifier
(Q303) RCA 2N1524	38 kc Amplifier
(Q304) RCA 2N408	Stereo Switch
(Q401) RCA 2N2613	Left Chan. Preamp.
(Q402) RCA 2N2613	Right Chan. Preamp.
(Q403) RCA 35628	Left Chan. AF Amp.
(Q404) RCA 35628	Right Chan. AF Amp.
(Q405) RCA 2N2614	Left Chan. Driver
(Q406) RCA 2N2614	Right Chan. Driver
(Q501) RCA 40022	Power Supply Filter
(CR101) Stk. #155099	AFC Diode
(CR201) Stk. #112524	AM Detector
(CR202) Stk. #115101	FM Demodulator
(CR203) Stk. #115101	
(CR301) Stk. #112524	Multiplex Doubler
(CR302) Stk. #112524	
(CR303) Stk. #112524	Synchronous Detector
(CR304) Stk. #112524	
(CR305) Stk. #112524	
(CR306) Stk. #112524	
(CR501) Stk. #120503	Rectifier
(CR505) Stk. #120504	Voltage Reference Zener

## MUSIC POWER OUTPUT E.I.A. (Std. RS-234)

Undistorted	37.5 watts
Peak	75 watts

AUDIO FREQUENCY RESPONSE.....45 to 20,000 cycles/sec.

## LOUDSPEAKERS

15" x 9" PM "Woofers"	8.5 ohm v.c. imp.
12" x 8" PM "Woofers"	8.5 ohm v.c. imp.
6½" PM "Woofers" (VJT 59)	6.5 ohm v.c. imp.
Exponential Horn	12 ohm v.c. imp.
3½" PM "Middler" (VJT 59)	35 ohm v.c. imp.
3½" PM "Tweeter" (VJT 59)	35 ohm v.c. imp.
3½" PM "Tweeter"	20 ohm v.c. imp.

## TUNING

Vernier Slide Rule

Driver Ratio .....17:1 (8½ Turns of knob)

## RECORD CHANGERS

Turntable Speeds	16⅔, 33⅓, 45 and 78 r.p.m.
Record Sizes	7 inch, 10 inch and 12 inch
Record Capacity	Up to six of same size and speed
Pickup body	Stereophonic Ceramic
RP-227-12D	Stk. No. 115703
RP-228-12C, 12SC	Stk. No. 120695
Styli	0.7 mil dia., 3 mil syn. sap.
RP-227-12D	Stk. No. 115911
RP-228-12C, 12SC	Stk. No. 122057

## For Record Changer Servicing Information

Refer to Record Changer Service Data

—File: 1967 No. 6 &amp; 6-S1—

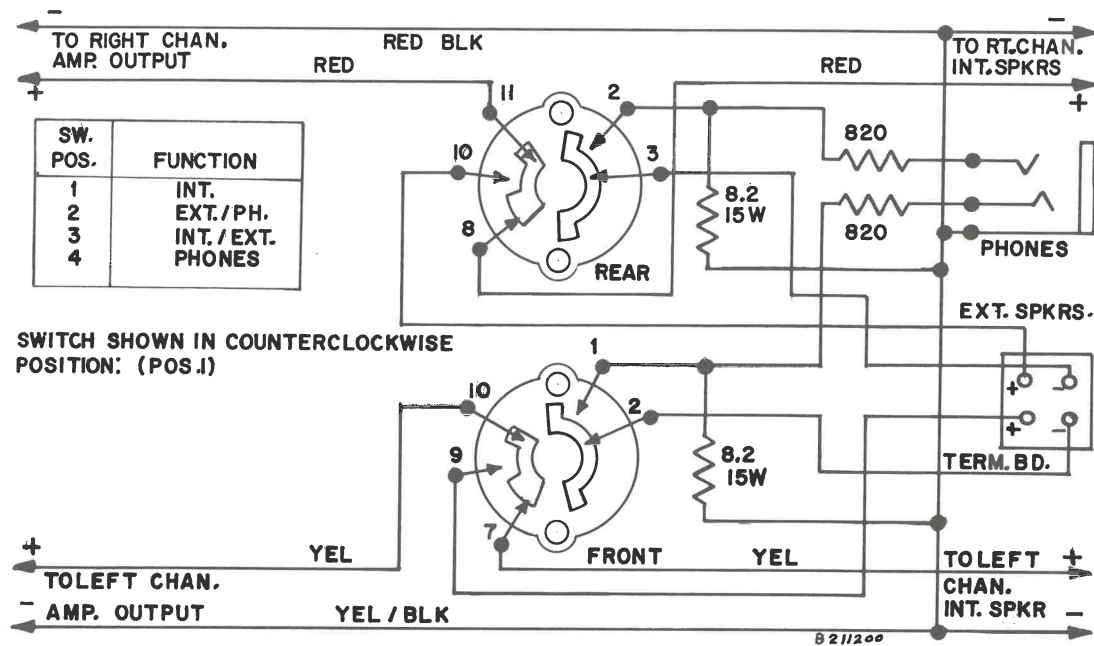
## POWER SUPPLY RATING (approx.)

120 volts, 60 cycle/sec. ....70 watts

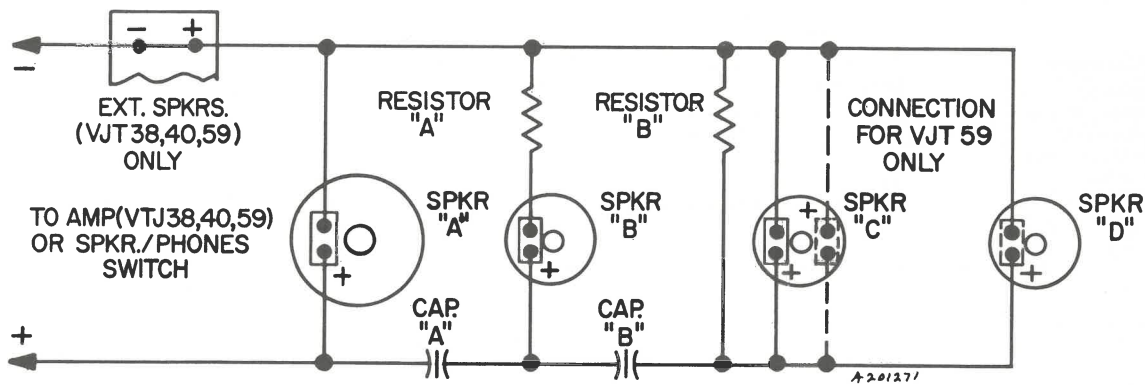
## CABINET DIMENSIONS (approx.)

Model	Height	Width	Depth
VJT 38, 40	26⅞"	51½"	18⅞"
VJT 41	26⅞"	63¼"	19"
VJT 43	28"	61½"	19⅛"
VJT 45	27⅞"	62¼"	19⅜"
VJT 46	27½"	65"	19¼"
VJT 47	27"	62¼"	19"
VJT 54	26"	73¾"	20¼"
VJT 55	27"	72"	19¼"
VJT 59	27⅞"	61"	23⅝"
VJT 93-K	27"	61½"	20"
VJT 94-K	26½"	62½"	15⅞"
VJT 96-K	26⅞"	63"	20⅞"
VJT 97-K	26½"	62½"	20⅝"

MODEL	TUNER CHASSIS	AMPLIFIER CHASSIS	POWER CHASSIS	CHANGER	SPEAKERS
VJT 38	RC-1223C	RS-215J	RK-314F	RP-227-12D	2-12" x 8", 2-horns, 2-3 ½"
VJT 40	RC-1223C	RS-215J	RK-314F	RP-227-12D	2-12" x 8", 2-horns, 2-3 ½"
VJT 41	RC-1223C	RS-215J	RK-314F	RP-227-12D	2-15" x 9", 2-horns, 2-3 ½"
VJT 43	RC-1223C	RS-215J	RK-314F	RP-227-12D	2-15" x 9", 2-horns, 2-3 ½"
VJT 45	RC-1223C	RS-215J	RK-314F	RP-227-12D	2-15" x 9", 2-horns, 2-3 ½"
VJT 46	RC-1223C	RS-215J	RK-314F	RP-227-12D	2-15" x 9", 2-horns, 2-3 ½"
VJT 47	RC-1223C	RS-215J	RK-314F	RP-227-12D	2-15" x 9", 2-horns, 2-3 ½"
VJT 54	RC-1223C	RS-215J, RS-239	RK-314F	RP-228-12SC	2-15" x 9", 2-horns, 4-3 ½"
VJT 55	RC-1223C	RS-215J, RS-239	RK-314F	RP-228-12SC	2-15" x 9", 2-horns, 4-3 ½"
VJT 59	RC-1223C	RS-215J, RS-239	RK-314F	RP-228-12SC	2-6 ½", 2-3 ½", 2-3 ½"
VJT 93-K	RC-1223C	RS-215J, RS-239A	RK-314F	RP-228-12C	2-15" x 9", 2-horns, 2-3 ½"
VJT 94-K	RC-1223C	RS-215J, RS-239A	RK-314F	RP-228-12C	2-15" x 9", 2-horns, 2-3 ½"
VJT 96-K	RC-1223C	RS-215J, RS-239A	RK-314F	RP-228-12C	2-15" x 9", 2-horns, 2-3 ½"
VJT 97-K	RC-1223C	RS-215J, RS-239A	RK-314F	RP-228-12C	2-15" x 9", 2-horns, 2-3 ½"



Speakers/Headphone Switch Wiring



Speakers—Wiring Diagram

MODEL	SPKR "A"	CAP "A"	RES "A"	SPKR "B"	CAP "B"	RES "B"	SPKR "C"	SPKR "D"
VJT 38	12" x 8"	4 $\mu$ f	15 $\Omega$ , 5 w.	Horn	2 $\mu$ f	—	3 1/2"	—
VJT 40	12" x 8"	4 $\mu$ f	15 $\Omega$ , 5 w.	Horn	2 $\mu$ f	—	3 1/2"	—
VJT 41	15" x 9"	4 $\mu$ f	27 $\Omega$ , 5 w.	Horn	2 $\mu$ f	—	3 1/2"	—
VJT 43	15" x 9"	4 $\mu$ f	27 $\Omega$ , 5 w.	Horn	2 $\mu$ f	—	3 1/2"	—
VJT 45	15" x 9"	4 $\mu$ f	27 $\Omega$ , 5 w.	Horn	2 $\mu$ f	—	3 1/2"	—
VJT 46	15" x 9"	4 $\mu$ f	27 $\Omega$ , 5 w.	Horn	2 $\mu$ f	—	3 1/2"	—
VJT 47	15" x 9"	4 $\mu$ f	27 $\Omega$ , 5 w.	Horn	2 $\mu$ f	—	3 1/2"	—
VJT 54	15" x 9"	4 $\mu$ f	27 $\Omega$ , 5 w.	Horn	2 $\mu$ f	—	3 1/2"	3 1/2"
VJT 55	15" x 9"	4 $\mu$ f	27 $\Omega$ , 5 w.	Horn	2 $\mu$ f	—	3 1/2"	3 1/2"
VJT 59	6 1/2"	4 $\mu$ f	—	3 1/2"	—	15 $\Omega$ , 5 w.	3 1/2"	—
(Polarity Reversed)								
VJT 93-K	15" x 9"	4 $\mu$ f	27 $\Omega$ , 5 w.	Horn	2 $\mu$ f	—	3 1/2"	—
VJT 94-K	15" x 9"	4 $\mu$ f	27 $\Omega$ , 5 w.	Horn	2 $\mu$ f	—	3 1/2"	—
VJT 96-K	15" x 9"	4 $\mu$ f	27 $\Omega$ , 5 w.	Horn	2 $\mu$ f	—	3 1/2"	—
VJT 97-K	15" x 9"	4 $\mu$ f	27 $\Omega$ , 5 w.	Horn	2 $\mu$ f	—	3 1/2"	—



## AM-FM ALIGNMENT PROCEDURE

## INSTRUMENTS REQUIRED

## Signal Sources

1. RF Signal Generator (RCA WR-50B or equivalent)
2. TV/FM Sweep Generator (RCA WR-69A or equivalent)
3. Marker Generator (RCA WR-99A or equivalent)

## Output Indicators

4. Vacuum-Tube Voltmeter (RCA WV-98C or equivalent)
5. Oscilloscope (RCA WO-91B or equivalent)

## Tools

6. Hex head alignment tool
7. Thin fibre shaft alignment tool

## GENERAL ALIGNMENT CONDITIONS

1. Connect low side of signal source and output indicator to chassis ground as close as possible to high side connection unless otherwise specified.
2. Signal input should be kept as low as possible to avoid AVC action. (Set output indicator to highest sensitivity.)
3. Markers should be accurate. (Crystal controlled or checked against a crystal calibrator.) The 10.7 mc marker used in each section of the alignment should be the same. (Generator dial should not be moved.)
4. Marker insertion and amplitude should not distort the oscilloscope trace.
5. Standard modulation is 400 cycle at 30% amplitude.

STEP	Signal Source— Connected to—	Set Signal to—	Set Radio Dial to—	Output Indicator— Connected to—	Adjust	Adjust for—	STEP		
1	Set Radio Function For "AM"						1		
2	RF Generator— Q202 Base through a 0.01μf capacitor	455 kc (modulated)	Quiet point on band near 1600 kc.	Tuning Meter may be used as the output indicator	T206 (3rd AM IF)	Maximum	2		
3					T204 Top (2nd AM IF)		3		
4					T203 Top & Bottom (1st AM IF)		4		
5	RF Generator— A standard radiating loop or short piece of wire placed near AM antenna	1600 kc (modulated)	1600 kc		C101F-T (Oscillator Trim)		5		
6		1400 kc (modulated)	1400 kc		C101D-T (Antenna Trim)		6		
7		600 kc (modulated)	600 kc (rock gang)		C101E-T (RF Trimmer)		7		
8		550 kc (modulated)	550 kc (rock gang)		T201 (RF Trans.)		8		
9					T202 (Oscillator Coil)		9		
10	Repeat steps 2 through 4 and steps 5 through 9 as necessary to obtain maximum sensitivity on stations						10		
11	Set Radio Function For "FM"						11		
12	RF Generator— Q204 Base through a 0.01μf capacitor	10.7 mc (unmodulated)	Quiet point on band	V.T.V.M.— Across R232	T207 Bottom core (Pri.) (Ratio Detector)	Maximum	12		
13				V.T.V.M.— (Set to center zero) Junction of C231, R236, R237	T207 Top core (Sec.) (Ratio Detector)	Zero Voltage (cross-over)	13		
14	Repeat steps 12 and 13 as necessary to obtain a balanced "S" curve with ±200 kc linearity						14		
15	TV / FM Sweep Gen.— Q205 Base through a 0.01μf capacitor	240 kc Sweep centered at 10.7 mc with markers at 10.6, 10.7 & 10.8 mc	Quiet point on band	Oscilloscope— with signal Tracing Probe (RCA WG-302A)  Q205 Base (adjust signal input to obtain a 30 mv P-P reading on oscilloscope)	*Detune T204 Bottom	Maximum symmetrical response centered at 10.7 mc with 10.6 and 10.8 mc at equal heights within 10% and approx. 40% down slope (limits-between 30 %-60 %)	15		
16	Q203 Base through a 0.01μf capacitor				T205 Top & Bottom (3rd FM IF)		16		
17					*Detune T102 Top		17		
18					T204 Bottom (2nd FM IF)		18		
19	One FM antenna terminal				T102 Top & Bottom (1st FM IF-in tuner)		19		
20	Repeat steps 15 thru 19 as necessary to obtain specified response						20		
21	Marker Generator— across FM antenna terminals through a matching network if necessary	108 mc	108 mc	V.T.V.M.— Tape jack or Across speaker voice coil (either channel)	C118 (Oscillator Trimmer)	Maximum	21		
22					C101B-T (RF-Trimmer)		22		
23					C101A-T (Antenna Trimmer)		23		
24	Repeat steps 22, 23 and 24 as necessary to obtain maximum sensitivity on stations						24		

\* When detuning T204 & T102, the specified core should be adjusted until no action appears in the trace with further adjustment of the core (2 or more turns). Opposite core will have little or no effect after specified core is fully detuned.

MULTIPLEX ALIGNMENT PROCEDURE

INSTRUMENTS REQUIRED

- Signal Source**
- 1. FM-Stereo Simulator (RCA WR-52A or equivalent)
- Output Indicator**
- 2. Oscilloscope (RCA WO-91B or equivalent)

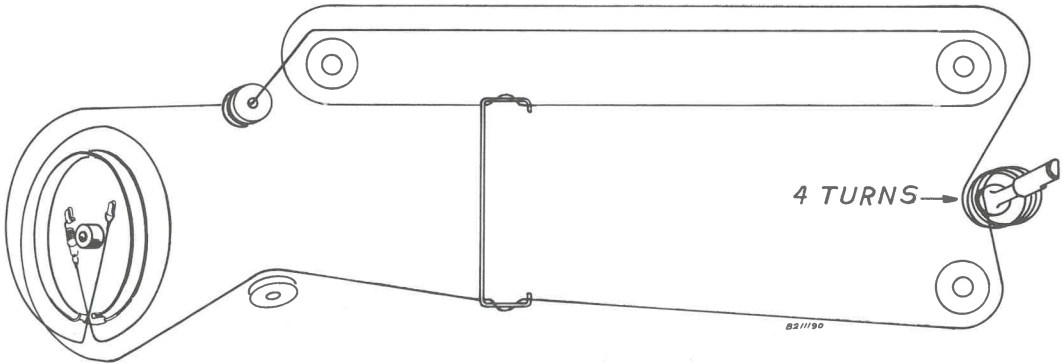
- Tools**
- 3. Hex head alignment tool

GENERAL ALIGNMENT CONDITIONS

- 1. FM-Stereo Simulator connected across FM antenna terminals. Tune radio to 100 mc. AFC on.
- 2. Connect low side of output indicator to chassis ground as close as possible to high side connection.
- 3. RF deviation should be set to approximately 75 kc.
- 4. Input signal should be held at a level that will not produce limiting.

STEP	19 kc Subcarrier Level Set to—	Audio Freq. Sel. Set to—	Function Sel. Set to—	Output Indicator— Connect to—	Adjust—	Adjust for—	STEP
1	Set Radio Function Switch To FM-STEREO						1
2	10%	72 kc (Note 1)	Audio & Mono FM	Oscilloscope— Q301E	L301 (72 kc Trap)	Minimum	2
3		Ground Q304C (Stereo Indicator light should remain lit.)					3
4		19 kc (Note 2)	Stereo Left	Oscilloscope— Junct. CR303 & CR305 (retain signal input to just below limiting)	T301 (19 kc Trans.)	Maximum	4
5					T302 (19 kc Trans.)		5
6					T303 (38 kc Trans.)		6
7		1000 cycle	Stereo Right	Stake "YEL" (Left Chan. output) (Increase signal input)	T301 (19 kc Trans.)	Retouch slightly for maximum and correct phase	7
8					R306 (Stereo Separation)	Minimum	8
9					Remove ground from Q304C. Turn R338 fully counterclockwise.		
10	6%			—	R309 (Stereo Threshold)	Clockwise until stereo indicator light just comes on. (Note 3)	10

NOTES: 1. If 72 kc is not available, tune L301 to 67 kc and then adjust core 1½ turns toward bottom of coil.  
2. If 19 kc is not available, set at 67 kc.  
3. If stereo indicator light will not extinguish with R309 fully counterclockwise, remove signal for an instant.



Dial Cord Arrangement

CHASSIS ACCESSIBILITY

RC-1223 AM/FM TUNER REMOVAL

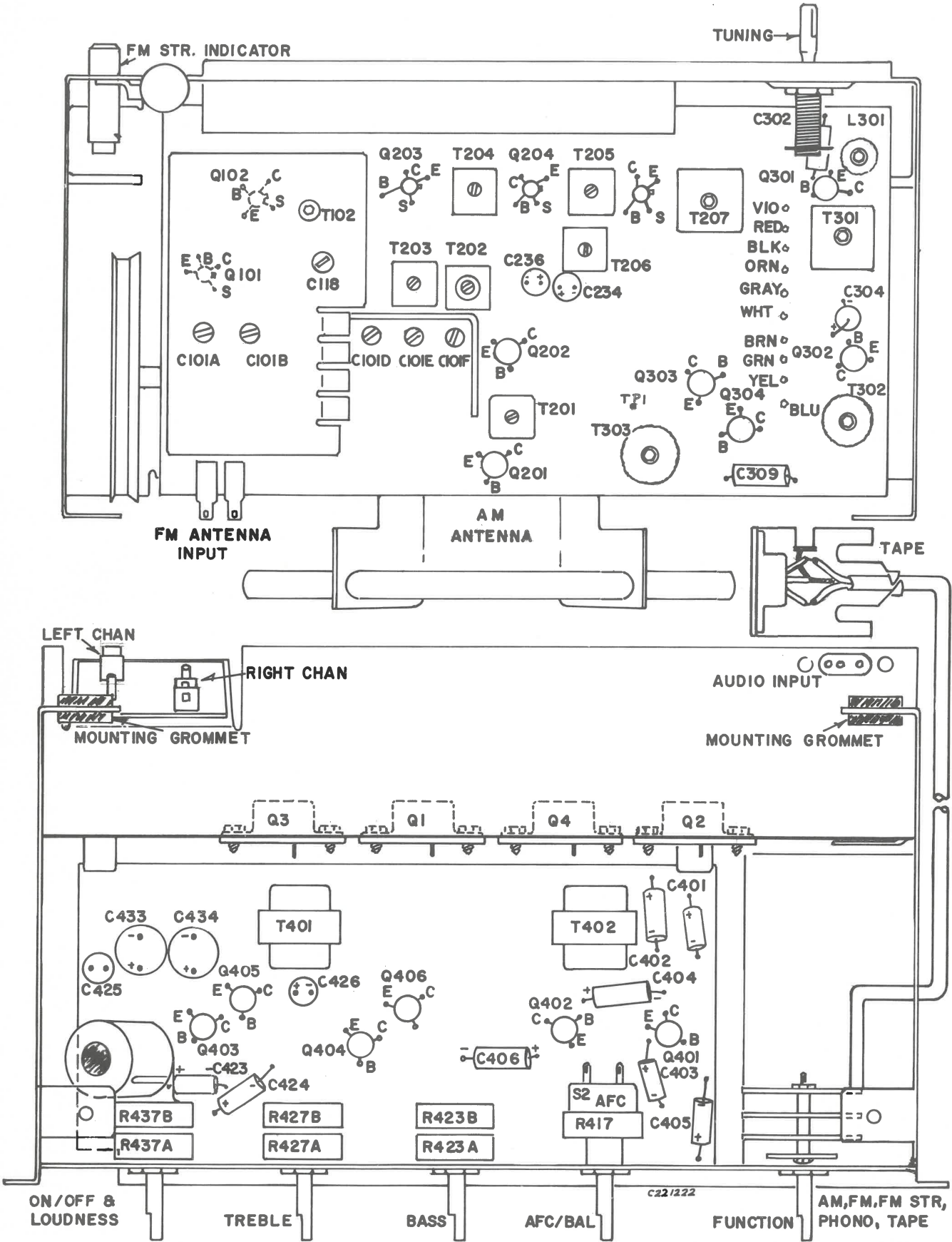
- 1. Disconnect the AC power input from the wall outlet.
- 2. Disconnect the FM antenna at the tuner terminals. Unplug the tuner power plug (P12) from the RK-314 power supply. Disconnect the left and right output speaker leads and unplug the changer audio plug from J1.
- 3. Dismount the tape recorder jack from the cabinet.
- 4. Remove all the knobs from the front panel control shafts.
- 5. Place the fingers of both hands on one end of the plastic escutcheon plate and by an upward prying motion, lift the escutcheon until the pressure fingers attached to the escutcheon plate clear the chassis.
- 6. Remove four mounting screws holding the chassis to the compartment shelf. Lift the entire assembly from the radio compartment being careful not to entangle the power cable.

RK-314 POWER SUPPLY REMOVAL

- 1. Unplug the changer power plug (P11) from J511 and compartment light cable (P16) from J516. Disconnect power plug P12 from J512.
- 2. Remove one mounting screw and loosen the other which holds the power supply chassis to the bottom deck of the cabinet. Grasp the power transformer and slide the assembly out and lift up being careful to clear all cables.

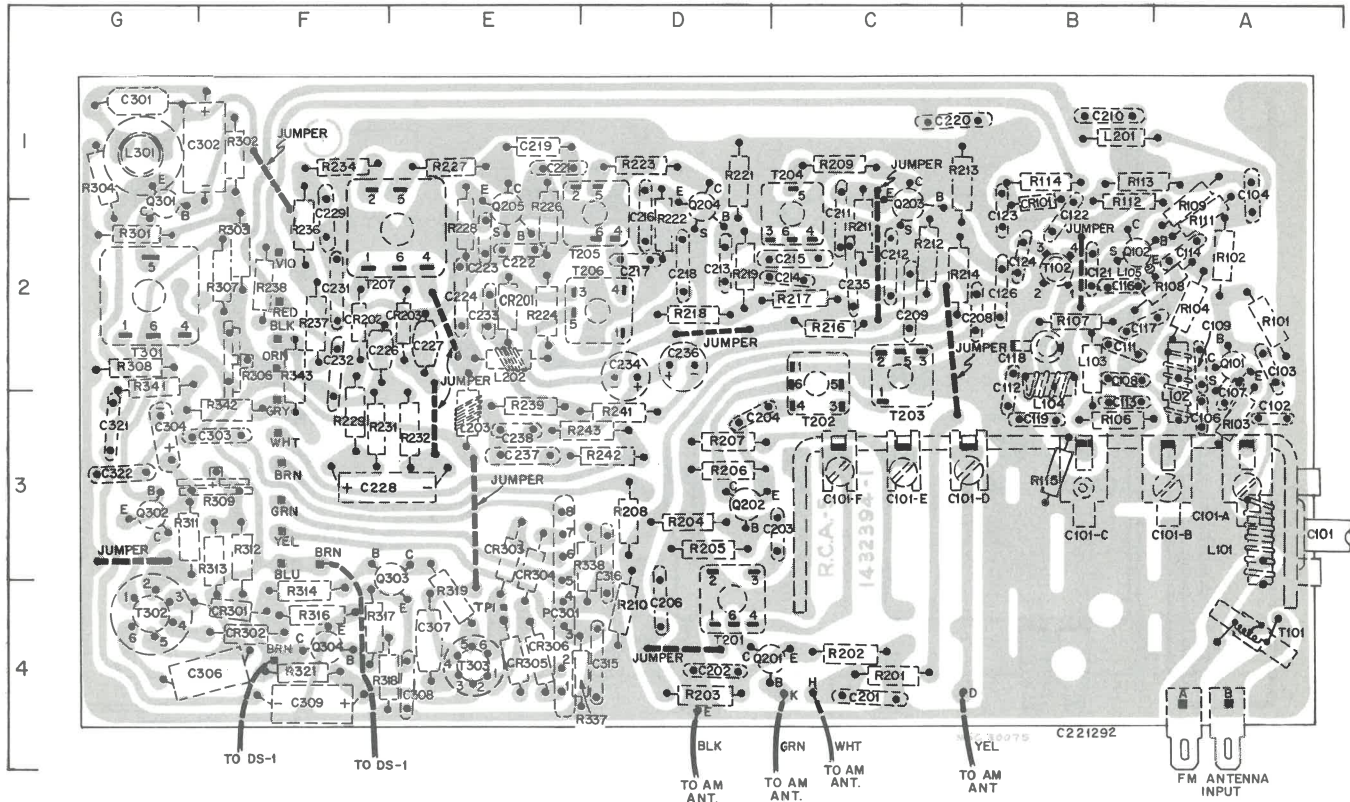
IMPORTANT:

All mounting hardware should be used as in original assembly. All leads and interconnecting cabling should be replaced in its exact original location.



Complete Chassis Layout

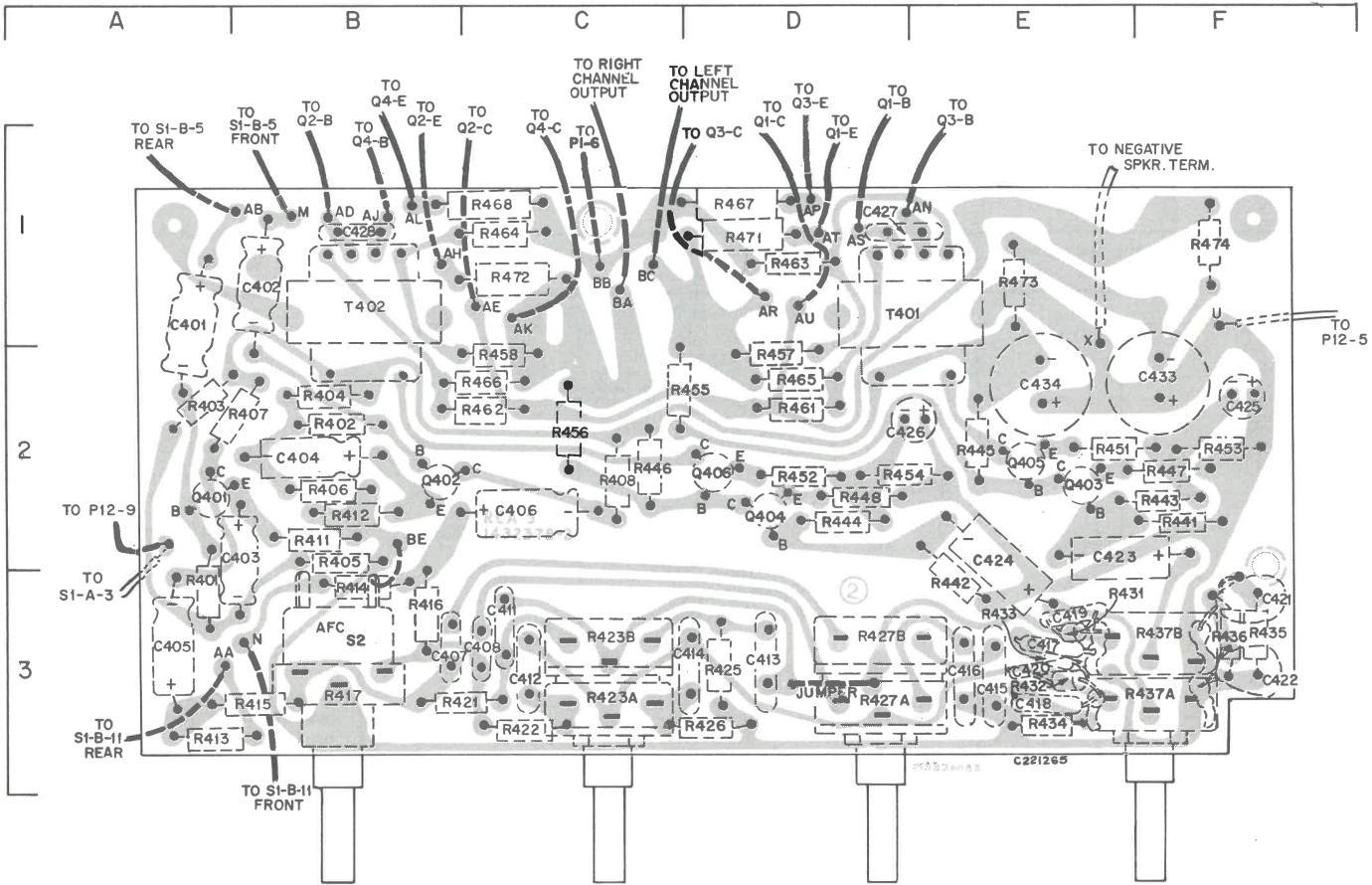




RC-1223C Board—Wiring View

RC-1223C COMPONENT LOCATION GUIDE

C101-A...3A	C203.....3D	C235.....2C	L101.....3A	R103.....3A	R221.....2D	R313.....3F
C101-B...3B	C204.....3D	C236.....3D	L102.....3B	R104.....2A	R222.....2D	R314.....4F
C101-C...3B	C206.....4D	C237.....3E	L103.....2B	R106.....3B	R223.....1D	R316.....4F
C101-D...3C	C208.....2C	C238.....3E	L104.....3B	R107.....2B	R224.....2E	R317.....4F
C101-E...3C	C209.....2C		L105.....2B	R108.....2B	R226.....2E	R318.....4F
C101-F...3C	C210.....1B	C301.....1G	L201.....1B	R109.....2A	R227.....1E	R319.....4E
C102.....3A	C211.....2C	C302.....1F	L202.....2E	R111.....2A	R228.....2E	R321.....4F
C103.....2A	C212.....2C	C303.....3F	L203.....3E	R112.....2B	R229.....3F	R337.....4E
C104.....2A	C213.....2D	C304.....3G	L301.....1G	R113.....2B	R231.....3F	R338.....3E
C106.....3A	C214.....2C	C306.....4F		R114.....2B	R232.....3E	R341.....3G
C107.....3A	C215.....2C	C307.....4E		R115.....3B	R234.....1F	R342.....3F
C108.....3B	C216.....2D	C308.....4E	PC301.....4E	R201.....4C	R236.....2F	R343.....3F
C109.....2A	C217.....2D	C309.....4F		R202.....4C	R237.....2F	
C111.....2B	C218.....2D	C315.....4D	Q101.....2A	R203.....4D	R238.....2F	T101.....4A
C112.....3B	C219.....1E	C316.....4D	Q102.....2B	R204.....3D	R239.....3E	T102.....2B
C113.....3B	C220.....1C	C321.....3G	Q201.....4D	R205.....3D	R241.....3D	T201.....4D
C114.....2A	C221.....1E	C322.....3G	Q202.....3D	R206.....3D	R242.....3D	T202.....3C
C116.....2B	C222.....2E		Q203.....2C	R207.....3D	R243.....3E	T203.....3C
C117.....2B	C223.....2E	CR101...2B	Q204.....2D	R208.....3D	R301.....2G	T204.....2C
C118.....2B	C224.....2E	CR201...2E	Q205.....2E	R209.....1C	R302.....1F	T205.....2D
C119.....3B	C226.....2F	CR202...2F	Q301.....2G	R210.....4D	R303.....2F	T206.....2D
C121.....2B	C227.....2E	CR203...2E	Q302.....3G	R211.....2C	R304.....2G	T207.....2F
C122.....2B	C228.....3E	CR301...4F	Q303.....4F	R212.....2C	R306.....3F	
C123.....2B	C229.....2F	CR302...4F	Q304.....4F	R213.....1C	R307.....2F	T301.....2G
C124.....2B	C231.....2F	CR303...3E		R214.....2C	R308.....2G	T302.....4G
C126.....2B	C232.....2F	CR304...4E		R216.....2C	R309.....3F	T303.....4E
C201.....4C	C233.....2E	CR305...4E	R101.....2A	R218.....2D	R311.....3G	
C202.....4D	C234.....3D	CR306...4E	R102.....2A	R219.....2D	R312.....3F	TP.....4E

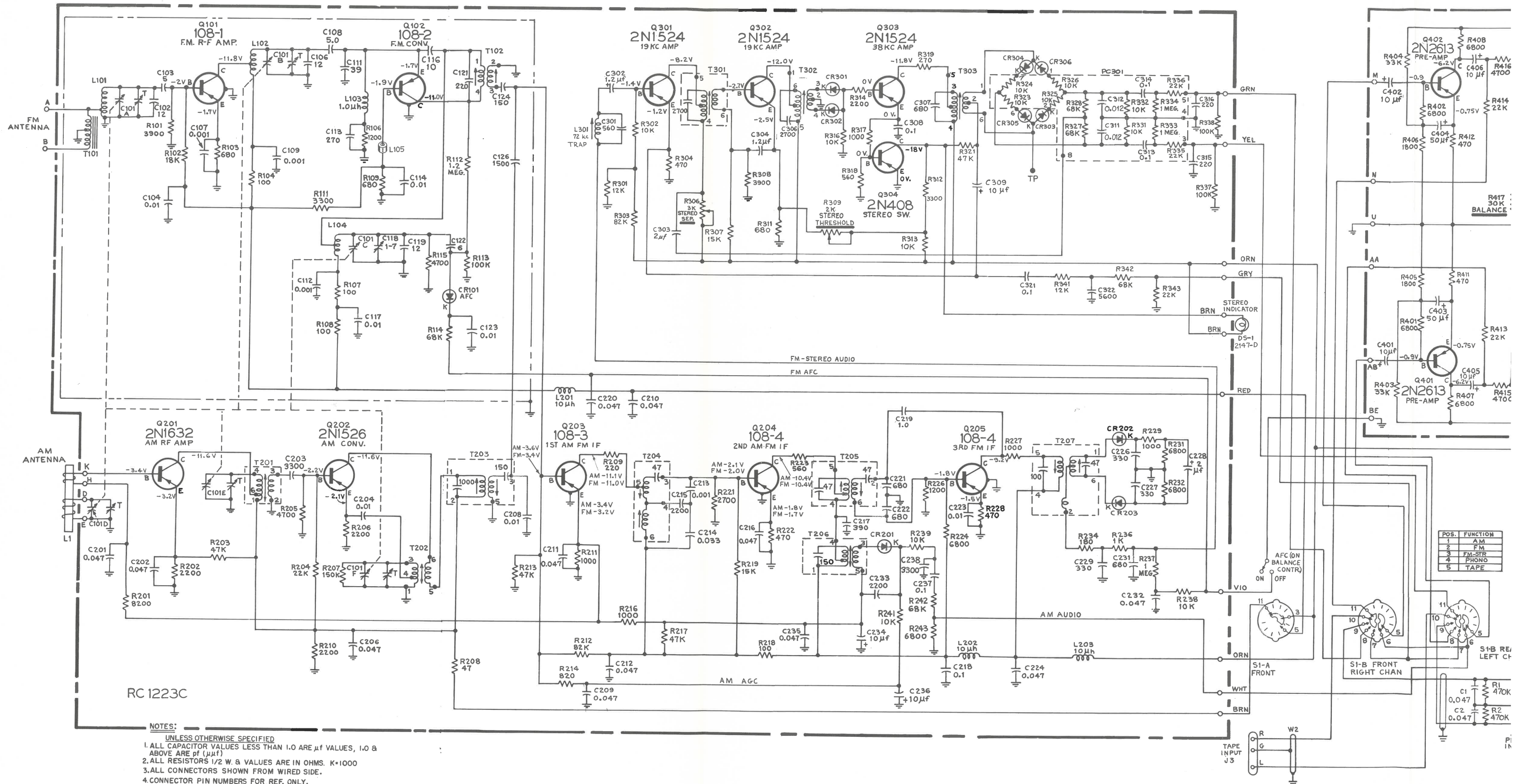


RS-215J Board—Wiring View

RS-215J COMPONENT LOCATION GUIDE

C401.....1A	C420.....3E	Q406.....2D	R421.....3B	R445.....2E	R467.....1D	AD.....1B
C402.....1B	C421.....3F		R422.....3C	R446.....2C	R468.....1C	AE.....1C
C403.....2B	C422.....3F	R401.....3A	R423A/B.3C	R447.....2F	R471.....1D	AH.....1B
C404.....2B	C423.....2E	R402.....2B	R425.....3D	R448.....2D	R472.....1C	AJ.....1B
C405.....3A	C424.....2E	R403.....2A	R426.....3D	R449.....2E	R473.....1E	AK.....1C
C406.....2C	C425.....2F	R404.....2B	R427A/B.3E	R452.....2D	R474.....1F	AL.....1B
C407.....3B	C426.....2E	R405.....2B	R431.....3E	R453.....2F		AN.....1E
C408.....3C	C427.....1D	R406.....2B	R432.....3E	R454.....2D	T401.....1E	AP.....1D
C411.....3C	C428.....1B	R407.....2A	R433.....3E	R456.....2C	T402.....1B	AR.....1D
C412.....3C	C433.....2F	R408.....2C	R434.....3E	R457.....2D		AS.....1D
C413.....3D	C434.....2E	R411.....2B	R435.....3F	R458.....2C	Terminals	AT.....1D
C414.....3D		R412.....2B	R436.....3F	R461.....2D	N.....3B	AU.....1D
C415.....3E	Q401.....2A	R413.....3A	R437A/B.3F	R462.....2C	M.....1B	BA.....1C
C416.....3E	Q402.....2B	R414.....3B	R441.....2F	R463.....1D	U.....1F	BB.....1C
C417.....3E	Q403.....2E	R415.....3B	R422.....3E	R464.....1C	X.....1E	BC.....1C
C418.....3E	Q404.....2D	R416.....3B	R443.....2F	R465.....2D	AA.....3A	BE.....2B
C419.....3E	Q405.....2E	R417.....3B	R444.....2D	R466.....2C	AB.....1B	





Schematic Diagram







## REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
		<b>RADIO CHASSIS</b> <b>RC-1223C/RS-215J</b>			
		<b>CAPACITORS:</b>			
C1	111837	0.047 $\mu$ f, $\pm$ 20%, 100 v., ceramic	C427		0.015 $\mu$ f, $\pm$ 20%, 100 v., ceramic
C2	111837	0.047 $\mu$ f, $\pm$ 20%, 100 v., ceramic	C428		0.015 $\mu$ f, $\pm$ 20%, 100 v., ceramic
C101	115655	variable tuning	C433	117524	500 $\mu$ f, 25 v., electrolytic
C102	115087	12 $\mu$ f, $\pm$ 5%, 100 v., ceramic, special	C434	117524	500 $\mu$ f, 25 v., electrolytic
C103	115084	5 $\mu$ f, $\pm$ 10%, 100 v., ceramic, special			<b>DIODES:</b>
C104	115091	0.01 $\mu$ f, $\pm$ 20%, 100v., ceramic, special	CR101	115099	varicap—AFC
C106	115087	12 $\mu$ f, $\pm$ 5%, 100 v., ceramic, special	CR201	112524	crystal—AM detector
C107	115090	0.001 $\mu$ f, $\pm$ 100—0%, 100 v., ceramic, special	CR202	115101	crystal—FM demodulator (1N542)
C108	115084	5 $\mu$ f, $\pm$ 10%, 100 v., ceramic, special	CR203	115101	crystal—FM demodulator (1N542)
C109	115659	0.001 $\mu$ f, $\pm$ 20%, 100 v., ceramic, special	CR301	112524	crystal—MPX doubler
C111	115088	39 $\mu$ f, $\pm$ 5%, 100 v., ceramic, special	CR302	112524	crystal—MPX doubler
C112	115659	0.001 $\mu$ f, $\pm$ 20%, 100 v., ceramic, special	CR303	112524	crystal
C113	115089	270 $\mu$ f, $\pm$ 10%, 100 v., ceramic, special	CR304	112524	crystal
C114	115091	0.01 $\mu$ f, $\pm$ 20%, 100 v., ceramic, special	CR305	112524	crystal
C116	115657	10 $\mu$ f, $\pm$ 5%, 100 v., ceramic, special	CR306	112524	crystal
C117	115091	0.01 $\mu$ f, $\pm$ 20%, 100 v., ceramic, special	J1	111389	Connector—3 contact, female, phono input
C118	115092	trimmer	J3	116422	Connector—2 contact, female, tape input
C119	115658	12 $\mu$ f, $\pm$ 5%, 100 v., ceramic, special	L1	115637	Antenna—ferrite
C121	115660	220 $\mu$ f, $\pm$ 5%, 100 v., mica			<b>COILS:</b>
C122	115656	6 $\mu$ f, $\pm$ 10%, 100 v., ceramic, special	L101	115096	FM antenna
C123	115091	0.01 $\mu$ f, $\pm$ 20%, 100 v., ceramic, special	L102	115097	RM RF
C124	115661	150 $\mu$ f, $\pm$ 5%, 100 v., mica	L103	105513	RF choke
C126		1500 $\mu$ f, $\pm$ 10%, 500 v., ceramic	L104	115098	FM oscillator
C201	114007	0.047 $\mu$ f, $\pm$ 100—20%, 100 v., ceramic	L105	119971	ferrite bead
C202	114007	0.047 $\mu$ f, $\pm$ 100—20%, 100 v., ceramic	L201	115639	RF choke
C203	121645	3300 $\mu$ f, $\pm$ 20%, 100 v., ceramic	L202	115639	RF choke
C204		0.01 $\mu$ f, $\pm$ 20%, 100 v., ceramic	L203	115639	RF choke
C206	114007	0.047 $\mu$ f, $\pm$ 100—20%, 100 v., ceramic	L301	117520	FM stereo 72 kc trap
C208		0.01 $\mu$ f, $\pm$ 20%, 100 v., ceramic	P12	110882	Connector—9 contact, male, tuner power
C209	114007	0.047 $\mu$ f, $\pm$ 100—20%, 100 v., ceramic	PC301	115638	Circuit—printed component
C210	114007	0.047 $\mu$ f, $\pm$ 100—20%, 100 v., ceramic			<b>TRANSISTORS:</b>
C211	114007	0.047 $\mu$ f, $\pm$ 100—20%, 100 v., ceramic	Q1	123792	power output, left channel
C212	114007	0.047 $\mu$ f, $\pm$ 100—20%, 100 v., ceramic	Q2	123792	power output, right channel
C213		1000 $\mu$ f, $\pm$ 10%, 500 v., ceramic	Q3	123792	power output, left channel
C214		0.033 $\mu$ f, $\pm$ 20%, 100 v., ceramic	Q4	123792	power output, right channel
C215		2200 $\mu$ f, $\pm$ 10%, 500 v., ceramic	Q101	115227	FM RF amp., GC1214 or T1400
C216	114007	0.047 $\mu$ f, $\pm$ 100—20%, 100 v., ceramic	Q102	115228	FM converter, GC1215 or T1401
C217	105310	390 $\mu$ f, $\pm$ 10%, 500 v., ceramic	Q201		AM RF amp., 2N1632
C218		0.1 $\mu$ f, $\pm$ 20%, 50 v., ceramic	Q202		AM converter, 2N1526
C219	115666	1 $\mu$ f, $\pm$ 5%, 500 v., headed lead	Q203	115229	1st AM & FM IF, GC1216 or T1403
C220	114007	0.047 $\mu$ f, $\pm$ 100—20%, 100 v., ceramic	Q204	115229	2nd AM & FM IF, GC1217 or T1403
C221		680 $\mu$ f, $\pm$ 10%, 500 v., ceramic	Q205	115229	3rd FM IF, GC1217 or T1403
C222		680 $\mu$ f, $\pm$ 10%, 500 v., ceramic	Q301		19 kc amp., 2N1524
C223		0.01 $\mu$ f, $\pm$ 100—20%, 100 v., ceramic	Q302		19 kc amp., 2N1524
C224	114007	0.047 $\mu$ f, $\pm$ 100—20%, 100 v., ceramic	Q303		38 kc amp., 2N1524
C226	105301	330 $\mu$ f, $\pm$ 10%, 500 v., ceramic	Q304		stereo switch, 2N408
C227	105301	330 $\mu$ f, $\pm$ 10%, 500 v., ceramic	Q401		pre-amp., left channel, 2N2613
C228	111370	2 $\mu$ f, $\pm$ 250—10%, 50 v., electrolytic	Q402		pre-amp., right channel, 2N2613
C229	150301	330 $\mu$ f, $\pm$ 10%, 500 v., ceramic	Q403	123791	pre-driver, left channel
C231	104135	680 $\mu$ f, $\pm$ 10%, 500 v., ceramic	Q404	123791	pre-driver, right channel
C232	114007	0.047 $\mu$ f, $\pm$ 100—20%, 100 v., ceramic	Q405		driver, left channel, 2N2614
C233	111130	2200 $\mu$ f, $\pm$ 20%, 100 v., ceramic	Q406		driver, right channel, 2N2614
C234	116159	10 $\mu$ f, $\pm$ 100—10%, 10 v., electrolytic			<b>RESISTORS: <math>\pm</math>10%, 1/2 watt composition</b>
C235	114007	0.047 $\mu$ f, $\pm$ 100—20%, 100 v., ceramic			unless noted otherwise
C236	116159	10 $\mu$ f, $\pm$ 100—10%, 10 v., electrolytic	R1	502447	470,000 ohm
C237		0.1 $\mu$ f, $\pm$ 20%, 50 v., ceramic	R2	502447	470,000 ohm
C238	121645	3300 $\mu$ f, $\pm$ 20%, 100 v., ceramic	R101	502239	3900 ohm
C301	115665	560 $\mu$ f, $\pm$ 10%, 125 v., plastic	R102	502318	18,000 ohm
C302	115180	1.2 $\mu$ f, $\pm$ 250—10%, 15 v., electrolytic	R103	502168	680 ohm
C303	111370	2 $\mu$ f, $\pm$ 250—10%, 50 v., electrolytic	R104	502110	100 ohm
C304	115180	1.2 $\mu$ f, $\pm$ 250—10%, 15 v., electrolytic	R106	502212	1200 ohm
C306	115662	2700 $\mu$ f, $\pm$ 5%, 125 v., plastic	R107	502110	100 ohm
C307	115663	680 $\mu$ f, $\pm$ 5%, 125 v., plastic	R108	502110	100 ohm
C308	115652	0.1 $\mu$ f, $\pm$ 20%, 100 v., mylar	R109	502168	680 ohm
C309	115597	10 $\mu$ f, 10 v., electrolytic	R111	502233	3300 ohm
C311		0.012 $\mu$ f (part of PC301)	R112	502512	1.2 megohm
C312		0.012 $\mu$ f (part of PC301)	R113	502410	100,000 ohm
C313		0.1 $\mu$ f (part of PC301)	R114	502368	68,000 ohm
C314		0.1 $\mu$ f (part of PC301)	R115	502247	4700 ohm
C315	228037	220 $\mu$ f, $\pm$ 20%, 500 v., ceramic	R201	502282	8200 ohm
C316	228037	220 $\mu$ f, $\pm$ 20%, 500 v., ceramic	R202	502222	2200 ohm
C321	115652	0.1 $\mu$ f, $\pm$ 20%, 100 v., mylar	R203	502347	47,000 ohm
C322		5600 $\mu$ f, $\pm$ 20%, 100 v., ceramic	R204	502322	22,000 ohm
C401	115597	10 $\mu$ f, $\pm$ 250—10%, 10 v., electrolytic	R205	502247	4700 ohm
C402	115597	10 $\mu$ f, $\pm$ 250—10%, 10 v., electrolytic	R206	502222	2200 ohm
C403	115598	50 $\mu$ f, $\pm$ 250—10%, 3 v., electrolytic	R207	502415	150,000 ohm
C404	115598	50 $\mu$ f, $\pm$ 250—10%, 3 v., electrolytic	R208	502047	47 ohm
C405	115597	10 $\mu$ f, $\pm$ 250—10%, 10 v., electrolytic	R209	502122	220 ohm
C406	115597	10 $\mu$ f, $\pm$ 250—10%, 10 v., electrolytic	R210	502222	2200 ohm
C407		0.01 $\mu$ f, $\pm$ 20%, 100 v., ceramic	R211	502210	1000 ohm
C408		0.01 $\mu$ f, $\pm$ 20%, 100 v., ceramic	R212	502382	82,000 ohm
C411	121648	0.033 $\mu$ f, $\pm$ 20%, 100 v., ceramic	R213	502347	47,000 ohm
C412	121648	0.033 $\mu$ f, $\pm$ 20%, 100 v., ceramic	R214	502182	820 ohm
C413		0.22 $\mu$ f, $\pm$ 30%, 10 v., ceramic	R216	502210	1000 ohm
C414		0.22 $\mu$ f, $\pm$ 30%, 10 v., ceramic	R217	502347	47,000 ohm
C415	111837	0.047 $\mu$ f, $\pm$ 20%, 100 v., ceramic	R218	502110	100 ohm
C416	111837	0.047 $\mu$ f, $\pm$ 20%, 100 v., ceramic	R219	502315	15,000 ohm
C417	115595	0.47 $\mu$ f, $\pm$ 20%, 75 v., mylar	R221	502227	2700 ohm
C418	115595	0.47 $\mu$ f, $\pm$ 20%, 75 v., mylar	R222	502147	470 ohm
C419		0.015 $\mu$ f, $\pm$ 20%, 100 v., ceramic	R223	502156	560 ohm
C420		0.015 $\mu$ f, $\pm$ 20%, 100 v., ceramic	R224	502268	6800 ohm
C421	115594	0.22 $\mu$ f, $\pm$ 20%, 75 v., mylar	R226	502212	1200 ohm
C422	115594	0.22 $\mu$ f, $\pm$ 20%, 75 v., mylar	R227	502210	1000 ohm
C423	115180	1.2 $\mu$ f, $\pm$ 20%, 15 v., electrolytic	R228	502147	470 ohm
C424	115180	1.2 $\mu$ f, $\pm$ 20%, 15 v., electrolytic	R229	502210	1000 ohm, $\pm$ 5%
C425	118880	200 $\mu$ f, 6 v., electrolytic	R231	502268	6800 ohm, $\pm$ 5%
C426	118880	200 $\mu$ f, 6 v., electrolytic	R232	502268	6800 ohm, $\pm$ 5%
			R234	502118	180 ohm
			R236	502210	1000 ohm
			R237	502510	1 megohm

## REPLACEMENT PARTS (Continued)

SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
R238	502310	10,000 ohm	T204	117516	2nd AM IF
R239	502310	10,000 ohm	T205	117515	3rd FM IF
R241	502310	10,000 ohm	T206	117514	3rd AM IF
R242	502368	68,000 ohm	T207	117513	FM ratio detector
R243	502268	6800 ohm	T301	117512	19 kc multiplex
R301	502312	12,000 ohm, $\pm 5\%$	T302	115641	19 kc multiplex
R302	502310	10,000 ohm	T303	115640	38 kc multiplex
R303	502382	82,000 ohm, $\pm 5\%$	T401	115592	driver
R304	502147	470 ohm	T402	115592	driver
R306	115653	3000 ohm, $\pm 30\%$ , variable		117511	Circuit—complete printed board, RC-1223C
R307	502315	15,000 ohm		117522	Circuit—complete printed board, RS-215J
R308	502239	3900 ohm		72953	Cord—driver tuning (250' spool)
R309	117519	control, stereo threshold		117510	Cover—multiplex lamp
R311	502168	680 ohm		115635	Lamp—multiplex indicating
R312	502233	3300 ohm, $\pm 5\%$		117509	Pointer—tuning
R313	502310	10,000 ohm, $\pm 5\%$		115633	Pulley—gang driver
R314	502222	2200 ohm		117508	Pulley—idler
R316	502310	10,000 ohm		115076	Pulley—small driver cord
R317	502212	1200 ohm		115630	Retainer—multiplex lamp
R318	502156	560 ohm			Screw—set #8-32X, 0.25" lg. for pulley
R319	502127	270 ohm		31418	Spring—driver cord tension
R321	502347	47,000 ohm		117507	Shaft—tuning driver
R323		10,000 ohm (part of PC301)		115581	Socket—transistor-for output transistors
R324		10,000 ohm (part of PC301)			
R325		10,000 ohm (part of PC301)			
R326		10,000 ohm (part of PC301)			
R327		68,000 ohm (part of PC301)			
R328		68,000 ohm (part of PC301)			
R331		10,000 ohm (part of PC301)			
R332		10,000 ohm (part of PC301)			
R333		1 megohm (part of PC301)	C501	73960	0.01 $\mu f$ , $\pm 100-0\%$ , 500 v, ceramic
R334		1 megohm (part of PC301)	C504	73960	0.01 $\mu f$ , $\pm 100-0\%$ , 500 v, ceramic
R335		22,000 ohm (part of PC301)	C505	115259	470 $\mu f$ , $\pm 20\%$ , 1000 v, ceramic
R336		100,000 ohm (part of PC301)	C506	115627	1500 $\mu f$ , $\pm 150-10\%$ , 35 v, electrolytic
R337	502410	100,000 ohm	C507	115627	1500 $\mu f$ , $\pm 150-10\%$ , 35 v, electrolytic
R338	502410	100,000 ohm	C508	111793	500 $\mu f$ , 15 v, electrolytic
R341	502312	12,000 ohm	CR501	120503	Diode—silicon rectifier (4 sect.)
R342	502368	68,000 ohm	CR505	120504	Diode—Zener, 12 v
R343	502322	22,000 ohm	F501	115622	Fuse—2 amp.
R401	502268	6800 ohm	J511	110529	Connector—3 contact, female, changer power
R402	502268	6800 ohm	J512	111402	Connector—9 contact, female, tuner power
R403	502333	33,000 ohm, $\pm 5\%$	J516	36422	Connector—3 pin female, lighting power
R404	502333	33,000 ohm, $\pm 5\%$	Q501	115268	Transistor—40022
R405	502218	1800 ohm, $\pm 5\%$	R502	512118	Resistor—180 ohm, 1 w
R406	502218	1800 ohm, $\pm 5\%$	T501	120502	Transformer—power
R407	502268	6800 ohm, $\pm 5\%$		115621	Cable—AC power cord
R408	502268	6800 ohm, $\pm 5\%$		118604	Grommet—AC power cord
R411	502147	470 ohm, $\pm 5\%$		115794	Insulator—mica, for Q1
R412	502147	470 ohm, $\pm 5\%$		115581	Socket—transistor, for Q1
R413	502322	22,000 ohm			
R414	502322	22,000 ohm			
R415	502247	4700 ohm			
R416	502247	4700 ohm			
R417	117523	control, balance		122366	BACKS:
R421	502322	22,000 ohm		122367	cabinet, VJT 38W
R422	502322	22,000 ohm		121622	cabinet, VJT 41W, 45S
R423A/B	115584	control, bass		121623	cabinet, VJT 43L
R425	502215	1500 ohm		121624	cabinet, VJT 46E-S
R426	502215	1500 ohm		121625	cabinet, VJT 47F
R427A/B	115583	control, treble		122368	cabinet, VJT 54W
R431	502256	5600 ohm		122369	cabinet, VJT 55S
R432	502256	5600 ohm		123739	cabinet, VJT 59W
R433	502168	680 ohm		123735	cabinet, VJT 93WK
R434	502168	680 ohm		123736	cabinet, VJT 94LK
R435	502210	1000 ohm		123738	cabinet, VJT 96SK
R436	502210	1000 ohm		123737	cabinet, VJT 97FK
R437A/B	115587	control, volume (includes on/off switch)		117438	Board—external speaker terminal, VJT 38, 40, 59
R441	502247	4700 ohm, $\pm 5\%$		111743	Board—external speaker terminal, all Models except VJT 38, 40, 59
R442	502247	4700 ohm, $\pm 5\%$		116071	Bracket—plastic, for compart. lamp mounting
R443	502347	47,000 ohm, $\pm 5\%$		118858	Cable—polarized, changer audio, VJT 93-K, 94-K, VJT 96-K, 97-K, 54, 55, 59
R444	502347	47,000 ohm, $\pm 5\%$		111831	Capacitor—4 $\mu f$ , 25 v, N.P. electrolytic
R445	502282	8200 ohm, $\pm 5\%$		115189	Capacitor—2 $\mu f$ , 25 v, N.P. electrolytic, all Models except VJT 59
R446	502282	8200 ohm, $\pm 5\%$		115837	Clip—spring clip for mounting panel 122371 to tuner chassis 122636
R447	502039	39 ohm, $\pm 5\%$			CLOTH:
R448	502039	39 ohm, $\pm 5\%$		121437	grille, VJT 38W
R451	502047	47 ohm, $\pm 5\%$		122375	grille, VJT 40L
R452	502047	47 ohm, $\pm 5\%$		X8385	behind louvered trim, VJT 40L, VJT 59W
R453	502156	560 ohm, $\pm 5\%$		122328	grille, VJT 41W
R454	502156	560 ohm, $\pm 5\%$		122329	grille, VJT 43L
R455	502382	82,000 ohm, $\pm 5\%$		122330	grille, VJT 45S
R456	502382	82,000 ohm, $\pm 5\%$		122326	grille, VJT 46E
R457	522139	390 ohm, $\pm 5\%$ , 2 w		122325	grille, VJT 46S
R458	522139	390 ohm, $\pm 5\%$ , 2 w		122327	grille, VJT 47F
R461	522139	390 ohm, $\pm 5\%$ , 2 w		122377	grille, VJT 54W
R462	522139	390 ohm, $\pm 5\%$ , 2 w		122376	grille, VJT 55S
R463		3 ohm, $\pm 5\%$		123753	grille, VJT 93WK
R464		3 ohm, $\pm 5\%$		120897	grille, VJT 94LK
R465		3 ohm, $\pm 5\%$		X8208	grille, VJT 96SK
R466		3 ohm, $\pm 5\%$		123754	grille (cane pattern) VJT 97FK
R467	113152	0.47 ohm, 2 w, wire wound	P11	110145	Connector—3 contact, male, changer power intermediate cable
R468	113152	0.47 ohm, 2 w, wire wound	P15	109442	Connector—4 contact, female, changer power intermediate cable
R471	113152	0.47 ohm, 2 w, wire wound	P16	103165	Connector—3 pin male, lamp socket leads
R472	113152	0.47 ohm, 2 w, wire wound	P601	74882	Connector—3 pin male, audio pickup intermediate cable
R473	502082	82 ohm			
R474	502112	120 ohm			
S1	117521	Switch—function			
		TRANSFORMERS:			
T101	115649	FM antenna balan			
T102	115647	10.7 MC IF			
T201	115651	AM RF			
T202	117518	AM oscillator coil			
T203	117517	1st AM IF			

SYMBOL NO.	



## REPLACEMENT PARTS (Continued)

mic mic
542) 542)
phono input tape input
ner power
00 401
T1403 T1403
13 613
4
mposition

SYMBOL NO.	STOCK NO.	DESCRIPTION
R238	502310	10,000 ohm
R239	502310	10,000 ohm
R241	502310	10,000 ohm
R242	502368	68,000 ohm
R243	502268	6800 ohm
R301	502312	12,000 ohm, ±5%
R302	502310	10,000 ohm
R303	502382	82,000 ohm, ±5%
R304	502147	470 ohm
R306	115653	3000 ohm, ±30%, variable
R307	502315	15,000 ohm
R308	502239	3900 ohm
R309	117519	control, stereo threshold
R311	502168	680 ohm
R312	502233	3300 ohm, ±5%
R313	502310	10,000 ohm, ±5%
R314	502222	2200 ohm
R316	502310	10,000 ohm
R317	502212	1200 ohm
R318	502156	560 ohm
R319	502127	270 ohm
R321	502347	47,000 ohm
R323		10,000 ohm (part of PC301)
R324		10,000 ohm (part of PC301)
R325		10,000 ohm (part of PC301)
R326		10,000 ohm (part of PC301)
R327		68,000 ohm (part of PC301)
R328		68,000 ohm (part of PC301)
R331		10,000 ohm (part of PC301)
R332		10,000 ohm (part of PC301)
R333		1 megohm (part of PC301)
R334		1 megohm (part of PC301)
R335		22,000 ohm (part of PC301)
R336		22,000 ohm (part of PC301)
R337	502410	100,000 ohm
R338	502410	100,000 ohm
R341	502312	12,000 ohm
R342	502368	68,000 ohm
R343	502322	22,000 ohm
R401	502268	6800 ohm
R402	502268	6800 ohm
R403	502333	33,000 ohm, ±5%
R404	502333	33,000 ohm, ±5%
R405	502218	1800 ohm, ±5%
R406	502218	1800 ohm, ±5%
R407	502268	6800 ohm, ±5%
R408	502268	6800 ohm, ±5%
R411	502147	470 ohm, ±5%
R412	502147	470 ohm, ±5%
R413	502322	22,000 ohm
R414	502322	22,000 ohm
R415	502247	4700 ohm
R416	502247	4700 ohm
R417	117523	control, balance
R421	502322	22,000 ohm
R422	502322	22,000 ohm
R423A/B	115584	control, bass
R425	502215	1500 ohm
R426	502215	1500 ohm
R427A/B	115583	control, treble
R431	502256	5600 ohm
R432	502256	5600 ohm
R433	502168	680 ohm
R434	502168	680 ohm
R435	502210	1000 ohm
R436	502210	1000 ohm
R437A/B	115587	control, volume (includes on/off switch)
R441	502247	4700 ohm, ±5%
R442	502247	4700 ohm, ±5%
R443	502347	47,000 ohm, ±5%
R444	502347	47,000 ohm, ±5%
R445	502282	8200 ohm, ±5%
R446	502282	8200 ohm, ±5%
R447	502039	39 ohm, ±5%
R448	502039	39 ohm, ±5%
R451	502047	47 ohm, ±5%
R452	502047	47 ohm, ±5%
R453	502156	560 ohm, ±5%
R454	502156	560 ohm, ±5%
R455	502382	82,000 ohm, ±5%
R456	502382	82,000 ohm, ±5%
R457	522139	390 ohm, ±5%, 2 w
R458	522139	390 ohm, ±5%, 2 w
R461	522139	390 ohm, ±5%, 2 w
R462	522139	390 ohm, ±5%, 2 w
R463		3 ohm, ±5%
R464		3 ohm, ±5%
R465		3 ohm, ±5%
R466		3 ohm, ±5%
R467	113152	0.47 ohm, 2 w, wire wound
R468	113152	0.47 ohm, 2 w, wire wound
R471	113152	0.47 ohm, 2 w, wire wound
R472	113152	0.47 ohm, 2 w, wire wound
R473	502082	82 ohm
R474	502112	120 ohm
S1	117521	Switch—function
T101	115649	FM antenna balan
T102	115647	10.7 MC IF
T201	115651	AM RF
T202	117518	AM oscillator coil
T203	117517	1st AM IF

SYMBOL NO.	STOCK NO.	DESCRIPTION
T204	117516	2nd AM IF
T205	117515	3rd FM IF
T206	117514	3rd AM IF
T207	117513	FM ratio detector
T301	117512	19 kc multiplex
T302	115641	19 kc multiplex
T303	115640	38 kc multiplex
T401	115592	driver
T402	115592	driver
	117511	Circuit—complete printed board, RC-1223C
	117522	Circuit—complete printed board, RS-215J
	72953	Cord—driver tuning (250' spool)
	117510	Cover—multiplex lamp
	115635	Lamp—multiplex indicating
	117509	Pointer—tuning
	115633	Pulley—gang driver
	117508	Pulley—idler
	115076	Pulley—small driver cord
	115630	Retainer—multiplex lamp
		Screw—set #8-32X, 0.25" lg. for pulley
	31418	Spring—driver cord tension
	117507	Shaft—tuning driver
	115581	Socket—transistor-for output transistors
POWER CHASSIS RK 314F		
CAPACITORS:		
C501	73960	0.01 $\mu$ f, +100—0%, 500 v, ceramic
C504	73960	0.01 $\mu$ f, +100—0%, 500 v, ceramic
C505	115259	470 $\mu$ f, ±20%, 1000 v, ceramic
C506	115627	1500 $\mu$ f, +150—10%, 35 v, electrolytic
C507	115627	1500 $\mu$ f, +150—10%, 35 v, electrolytic
C508	111793	500 $\mu$ f, 15 v, electrolytic
CR501	120503	Diode—silicon rectifier (4 sect.)
CR505	120504	Diode—Zener, 12 v
F501	115622	Fuse—2 amp.
J511	110529	Connector—3 contact, female, changer power
J512	111402	Connector—9 contact, female, tuner power
J516	36422	Connector—3 pin female, lighting power
Q501	115268	Transistor—40022
R502	512118	Resistor—180 ohm, 1 w
T501	120502	Transformer—power
	115621	Cable—AC power cord
	118604	Grommet—AC power cord
	115794	Insulator—mica, for Q1
	115581	Socket—transistor, for Q1
MISCELLANEOUS		
BACKS:		
	122366	cabinet, VJT 38W
	122367	cabinet, VJT 40L
	121622	cabinet, VJT 41W, 45S
	121623	cabinet, VJT 43L
	121624	cabinet, VJT 46E-S
	121625	cabinet, VJT 47F
	122368	cabinet, VJT 54W
	122369	cabinet, VJT 55S
	123739	cabinet, VJT 59W
	123735	cabinet, VJT 93WK
	123736	cabinet, VJT 94LK
	123738	cabinet, VJT 96SK
	123737	cabinet, VJT 97FK
	117438	Board—external speaker terminal, VJT 38, 40, 59
	111743	Board—external speaker terminal, all Models except VJT 38, 40, 59
	116071	Bracket—plastic, for compart. lamp mounting
	118858	Cable—polarized, changer audio, VJT 93-K, 94-K, VJT 96-K, 97-K, 54, 55, 59
	111831	Capacitor—4 $\mu$ f, 25 v, N.P. electrolytic
	115189	Capacitor—2 $\mu$ f, 25 v, N.P. electrolytic, all Models except VJT 59
	115837	Clip—spring clip for mounting panel 122371 to tuner chassis 122636
CLOTH:		
	121437	grille, VJT 38W
	122375	grille, VJT 40L
	X8385	behind louvered trim, VJT 40L, VJT 59W
	122328	grille, VJT 41W
	122329	grille, VJT 43L
	122330	grille, VJT 45S
	122326	grille, VJT 46E
	122325	grille, VJT 46S
	122327	grille, VJT 47F
	122377	grille, VJT 54W
	122376	grille, VJT 55S
	123753	grille, VJT 93WK
	120897	grille, VJT 94LK
	X8208	grille, VJT 96SK
	123754	grille (cane pattern) VJT 97FK
P11	110145	Connector—3 contact, male, changer power intermediate cable
P15	109442	Connector—4 contact, female, changer power intermediate cable
P16	103165	Connector—3 pin male, lamp socket leads
P601	74882	Connector—3 pin male, audio pickup intermediate cable

## REPLACEMENT PARTS (Continued)

SYMBOL NO.	STOCK NO.	DESCRIPTION
	111963	Connector—headphone jack, all Models except VJT 38, 40, 59
	121185	Contact—for connector P12, P11, J511, J512
	123763	Cover—black vinyl, for seat cushion, VJT 59
	122370	Escutcheon—tuner & amp. controls, VJT 38, 40, 59
	121641	Escutcheon—tuner & amp. controls, all Models except VJT 38, 40, 59
	121629	Escutcheon—speaker selector switch, all Models except VJT 38, 40, 59
	103480	Flange—triangular, for mounting legs, VJT 43
	115353	Grommet— $\frac{5}{8}$ " o.d., for mounting tuner
	X8236	Grille—wood (22 $\frac{1}{2}$ " x 14 $\frac{1}{8}$ ") VJT 93-K
	121593	Hinge—hinge support for changer/tuner compart. lid, VJT 38
	115264	Hinge—hinge support for changer/tuner compart. lid, VJT 40, 41, 43, 46, 47
	115687	Hinge—hinge support for changer/tuner compart. lid, VJT 45, 94-K, 54, 55
	115686	Hinge—hinge support for changer/tuner compart. lid, VJT 93-K, 96-K, 97-K
	122373	Hinge—decorative, VJT 40
	121435	Holder—45 RPM adaptor
	119185	Indicator—plastic, function dial, VJT 38, 40, 59
	117485	Indicator—plastic, function dial, all Models except VJT 38, 40, 59
	123762	Key—decorative keyhole, VJT 93-K
	122564	Key—decorative key pull, VJT 97-K
KNOBS:		
	121638	tuning
	121080	function
	122364	AFC/balance, VJT 38, 40, 59
	121639	AFC/balance, all Models except VJT 38, 40, 59
	122365	loudness, treble, bass, VJT 38, 40, 59
	121640	loudness, treble, bass, all Models except VJT 38, 40, 59
	121637	speaker selector switch, all Models except VJT 38, 40, 59
	103211	Lamp—#1847, pilot
	111481	Lamp—#159, changer compart.
	121643	Leg—maple (set of 4) VJT 43L
	111824	Lens—pilot lamp
	120866	Nut—tee-nut for changer mounting
	122371	Panel—amplifier & tuner control, VJT 38, 40, 59
	121636	Panel—amplifier & tuner control, all Models except VJT 38, 40, 59
	121594	Panel—padded vinyl, VJT 41
	118614	Plate—decorative, mounts between pulls, VJT 41

SYMBOL NO.	STOCK NO.	DESCRIPTION
		PULLS:
	122220	decorative (4 required) VJT 38W
	122374	decorative, VJT 40L
	118613	decorative, VJT 41W
	121602	decorative, VJT 43L
	121604	decorative, VJT 45S
	121600	decorative, VJT 46E-S
	121599	decorative, VJT 47F
	119892	tambour door, VJT 59W
	118961	decorative (simulated doors) VJT 94LK
	119004	decorative (simulated drawers) VJT 94LK
	117480	Resistor—15 ohm, ±10%, 5 w, wire wound, VJT 38, 40, 59
	121635	Resistor—27 ohm, ±10%, 5 w, wire wound, all Models except VJT 38, 40, 59
	502182	Resistor—820 ohm, ±10%, $\frac{1}{2}$ w (speaker selector switch assembly) all Models except VJT 38, 40, 59
	111964	Resistor—8.2 ohm, ±10%, 15 w, wire wound (speaker selector switch assembly) all Models except VJT 38, 40, 59
	111648	Retainer—speakers
	112639	Screw—changer mounting (includes grommet)
	118566	Socket—pilot lamp
	122372	Socket—changer compart. lamp, VJT 38, 40, 59
	113235	Socket—compartment lamp, all Models except VJT 38, 40, 59
	111986	Speaker—3 $\frac{1}{2}$ " PM, 35 ohm v.c., VJT 59
	115890	Speaker—3 $\frac{1}{2}$ " PM, 35 ohm v.c., VJT 59
	111987	Speaker—3 $\frac{1}{2}$ " PM, 20 ohm v.c., all Models except VJT 59
	122614	Speaker—6 $\frac{1}{2}$ " PM, 6.5 ohm v.c., VJT 59
	122206	Speaker—horn, 12 ohm v.c., all Models except VJT 59
	120748	Speaker—12" x 8" PM, 8.5 ohm v.c., VJT 38, 40
	111988	Speaker—15" x 9" PM, 8.5 ohm v.c., all Models except VJT 38, 40, 59
	111962	Switch—speaker selector, all Models except VJT 38, 40, 59
	110501	Terminal—audio pickup cable
	114272	Terminal—external speaker board
	122379	Trim—cabinet door, VJT 38
	121592	Trim—louvered, VJT 40L
	121596	Trim—L.H. floral design, VJT 45S
	121597	Trim—R.H. floral design, VJT 45S
	122378	Trim—for grille area, VJT 54W
ACCESSORIES		
	121922	Adaptor—"45" spindle
	1407165-2	—order from RCA Sales Corporation—Book—customer instruction

Specifications Subject to Change Without Notice

APPLY TO YOUR RCA DISTRIBUTOR FOR REPLACEMENT PARTS AND ACCESSORIES



# RCA VICTOR



## RADIO & "VICTROLA"® PHONOGRAPH

### SERVICE DATA

—File: 1967 No. 41-S1—

#### Model VJT 50

Tuner Chassis RC-1223C

Amplifier Chassis RS-215J

Power Chassis RK-314F

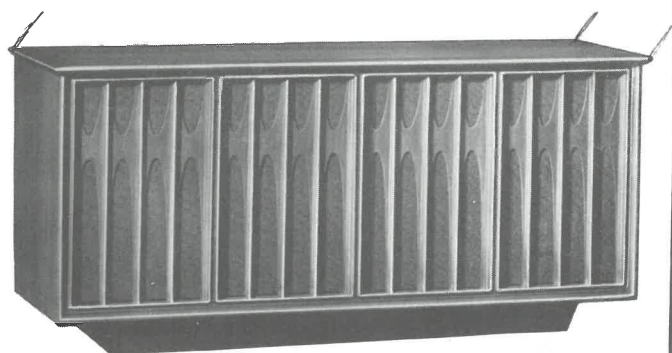
Record Changer RP-227-12D

#### RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY

PRODUCT PERFORMANCE

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201



#### *The "Campobello"*

Model VJT 50W—Walnut

### DESCRIPTION

The model VJT 50 is a self-contained transistorized stereophonic radio and "Victrola" phonograph combination. It has provisions on the rear of the cabinet for the connection of a tape recorder, an external FM antenna and external speakers. It is similar to the VJT 93WK except as noted herein.

The tape recorder jacks serve as both an input and an output. When the function switch on the radio tuner is set to any position except

tape, the tape jack provides an output for recording from the radio or phonograph. When the function switch is set to the tape position, the tape jack then becomes an input to permit playing the tape recorder through the audio system of this instrument. In utilizing this switching method it becomes unnecessary to have two sets of jacks, one for output and one for input, with the necessity of changing the connecting cables, to record or to play-back.

FOR SERVICING AND PARTS INFORMATION ON THE  
MODEL VJT 50W, REFER TO THE VJT 93WK IN SERVICE  
DATA 1967 No. 41, EXCEPT AS NOTED HEREIN.

FOR SERVICING AND PARTS INFORMATION ON THE  
RP-227-12D RECORD CHANGER, REFER TO: SERVICE  
DATA 1967 No. 6 & 6-S1.

### REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION
	123919	Back—cabinet
	X8385	Cloth—grille
	115624	Hinge—lid support

### SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject







# RCA VICTOR



*The "Deluxe Studiomatic"*

Model MJL 32W  
Walnut



*The "Mark I Studiomatic"*

Model MJL 31W  
Walnut

## MODULAR "VICTROLA" PHONOGRAPH SERVICE DATA

— File: 1967 No. 43 —

### MJL 32 Series

Record Changer RP-228-12SC

### MJL 31 Series

Record Changer RP-227-12D

**RCA SALES CORPORATION**

A RADIO CORPORATION OF AMERICA SUBSIDIARY

**PRODUCT PERFORMANCE**

600 NORTH SHERMAN DRIVE • INDIANAPOLIS, INDIANA 46201

### SPECIFICATIONS

#### RP-228-12SC

**TURNTABLE SPEEDS** .....16 $\frac{2}{3}$ , 33 $\frac{1}{3}$ , 45, 78 RPM  
**RECORD SIZE** .....7 inch, 10 inch, and 12 inch  
**RECORD CAPACITY** .....Up to six of the same size  
**POWER REQUIREMENT** 117 Volt, 60 Cycles, 15 Watts Max.  
**PICKUP** .....Integrated Floating Stereophonic Ceramic  
**BODY LESS STYL** .....Stock No. 120695  
**STYL** .....Stock No. 122057

#### RP-227-12D

**TURNTABLE SPEEDS** .....16 $\frac{2}{3}$ , 33 $\frac{1}{3}$ , 45, 78 RPM  
**RECORD SIZE** .....7 inch, 10 inch, and 12 inch  
**RECORD CAPACITY** .....Up to six of the same size  
**POWER REQUIREMENTS** 117 Volt, 60 Cycles, 15 Watts Max.  
**PICKUP** .....Stereophonic Ceramic  
**BODY LESS STYL** .....Stock No. 1120695  
**STYL** .....Stock No. 1122057

### DESCRIPTION

The Mark 1 Series Studiomatic stereo phonograph modules are designed for employment with extended range amplifiers and speaker combinations to individual requirements.

The Model MJL 32 Studiomatic Module is RCA Victor's finest automatic/manual changer, beautifully finished in polished nickel plate accents. Simplified lever controls are remarkably easy to use. Muting switch eliminates pickup noise during change cycle. Massive 11 $\frac{3}{4}$ " turntable is so accurately balanced that it continues to turn for almost a minute after shut off. Shock-mounting of changer minimizes acoustic feedback.

Studio-strobe speed control lets you adjust turntable speed while playing to compensate for line voltage variation, accuracy to within 0.33%.

Tubular feather action tone arm is scientifically angled to minimize tracking error. Floating cartridge and felt-like combiner provide unsurpassed record protection. No audible needle scratch even if tone arm is accidentally scraped across record grooves. Specially treated pad is mounted ahead of the Duralife diamond stylus to sweep away dust and debris. Convenient finger lift for manual operation.

New Solid-State integrated circuit used in the tone arm module is a silicon "chip" little bigger than the head of a pin. It contains additional amplifiers for both stereo channels—right at the sound source. When combined with the all new micro-element high compliance pickup, it results in less distortion, clearer sound unmarred by hum, plus a new high in phono reliability.

## MODULAR MODELS MJL 31, 32

### DESCRIPTION (Continued)

Mounting base of Danish-style walnut veneers and selected hardwoods. Height— $7\frac{15}{16}$ ", Width— $15\frac{1}{16}$ ", Depth— $14\frac{3}{16}$ ".

The Studiomatic module model MJL 31 is a moderately priced 4-speed changer offering many of the same features of the Mark 1 Module described above. These include simplified lever controls for automatic or manual operation massive  $11\frac{3}{4}$ " turntable and shock mounting. Record-protecting feather action tone arm is equipped with Duralife diamond

stylus. Hardwood base with wear-resistant Danish-style walnut grained finish.

**FOR RECORD CHANGER SERVICING  
REFER TO RP-227 AND RP-228 SERIES**

**RECORD CHANGER SERVICE DATA  
1967 NO. 6 AND 6-S1**

### REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION
		<b>MISCELLANEOUS</b>
	123839	Base—Walnut, changer, MJL 31W
	123838	Base—Walnut, changer, MJL 32W
	119669	Cable—Polarized, changer audio, MJL 32
	109442	Cable—4 contact, changer, power, MJL 31, 32
	74882	Cable—3 pin male, changer, audio, MJL 31
	115215	Foot—Cabinet, MJL 32W

SYMBOL NO.	STOCK NO.	DESCRIPTION
	120866	Nut—Tee-nut for changer, MJL 31, 32
	112639	Screw—Changer mounting, MJL 31,32 (Includes grommet)
	121922	Adapter—45 RPM centerpost, complete, MJL 31, 32
	1407191-1	Instruction notice

Specifications Subject to Change Without Notice

**APPLY TO YOUR RCA DISTRIBUTOR FOR REPLACEMENT PARTS AND ACCESSORIES**

