RCA Victor

SERVICE DATA

REVISED and ABRIDGED EDITION

VOLUME I

1923 - 1937

RADIO RECEIVERS AND PHONOGRAPHS

RADIO CORPORATION OF AMERICA
RCA Victor Division Camden N.J., U.S.A.


RCA

RCA-Victor Service Notes Volume I

Radio Receivers—Phonographs—Television

This Volume covers Notes previously issued for the years
1938 to 1942 inclusive

RCA VICTOR DIVISION OF RADIO CORPORATION OF AMERICA, • CAMDEN, N. J., U. S. A.

COMPLETE INDEX

TO

RCA-VICTOR SERVICE NOTES

1923 to 1942 inclusive

Notes for the years 1923 to 1932 will be found in the first section of Volume I Pages numbered 1A to 256A

Notes for the years 1933 to 1937 will be found in the second section of Volume I Pages numbered 1B to 624B

Notes for the years 1938 to 1942 will be found in Volume II Pages numbered 1C to 816C

Note: Second production models may often be identified by the letter "A" following the model number on the cabinet label. Third production may likewise be identified with the letter "B".

First Edition 1944

Printed in U. S. A.

COMPLETE INDEX OF MODELS

COMPLETE INDEX OF MODELS (Continued)

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COMPLETE INDEX OF MODELS (Continued)

COMPLETE INDEX OF MODELS (Continued)

"RC" NUMBER INDEX

(Arranged Numerically by "RC" Chassis Numbers)

Chassis No.	Model
RC-315B	86T6
RC-315C	5Q1
RC-318	8M
RC-319	87K2, 87T2
RC-319B	U-106
RC-320	8M1
RC-320A	8M2
RC-321	8M3
RC-321A	8M4
RC-323	95T, 95T1
RC-325C	5Q2
RC-325D	5Q2X
RC-331	HF-8, HF-8A
RC-331A	HF-6
RC-331B	U-134, U-134A
RC-331C	U-132
RC-332	94X
RC-333	94BK, 94BT
RC-333A	94BT6
RC-333B	94BT1, 94BK1
RC-333C	94BT61
RC-335	911K
RC-335A	98K
RC-335B	99K
RC-335C	11Q4, 11QK
RC-335D	U-126, U-128
RC-335E	11QU
RC-335F	910KG
RC-335H	99T
RC-335K	U-129
RC-335KR	U-30
RC-336	8QB, 8QBK
RC-337	8Q1
RC-337A	8Q4
RC-337B	10Q1
RC-338	12Q4, 12QK
RC-338A	12QU
RC-339	HF-1
RC-340	94X-1, 94X-2
RC-341	U-111
RC-341C	U-112
RC-345C	95X-1
RC-345D	95X
RC-345E	95XL
RC-345F	95XLW
RC-345H	U-104
RC-348	95T5
RC-348A	96T
RC-348C	96E
RC-348D	96T1
RC-348E	U-115
RC-348F	95T5LW
RC-348H	U-123 (1 band)
RC-348J	U-121
RC-348L	U-127E
RC-349	97X
RC-350	9X to 9X-4
RC-350A	9X-6, 9X-11 to 9X-14
RC-351	96K, 96T2
RC-351A	97E, 97KG, 97T
RC-351B	96K2, 96T3
RC-351C	U-124
RC-351D	U-122E
RC-351E	U-119
RC-351F	97K
RC-351K	97K2, 97T2
RC-351L	96E2, 96K5, 96K6, 96T7
RC-352	98EY, 98X, 98YG
RC-352A	97Y
RC-352B	UY-122E
RC-352C	UY-124
RC-352D	98T2
RC-354	U-130
RC-354A	HF-4
RC-354B	HF-2
RC-357	9M1
RC-357A	9M2
RC-357J	M-50
RC-357K	M-60
RC-366	5Q4
RC-381	95X-11
RC-381A	95X-6
RC-386	U-125
RC-386A	98K2, 98T
RC-386B	U-25, U-26
RC-390	94BK2, 94BT2
RC-392	96BK6, 96BT6
RC-394	M-70
RC-396	5Q5, 5Q55, 5Q56
RC-396B	5Q8
RC-396D	5Q12
RC-396E	5Q12A
RC-399	96T4, 96T5
RC-399A	96T6
RC-400	96X-1 to 96X-4
RC-400A	96X-11 to 96X-14
RC-401	9TX-1 to 9TX-5
RC-403	9TX-21, 9TX-22
RC-403A	9TX-23
RC-404A	U-8
RC-405	9TX-31
RC-405A	9TX-32
RC-405B	9TX-33
RC-405C	40X-30
RC-405D	40X-31
RC-406	5X5-W
RC-406A	5X5-1
RC-407	94BP-1 Series (94BP-61, -62, -64, -66, -80, -81)
RC-407B	94BP-1 (2nd Prod.) (94BP-61, -62, -64, -66)
RC-408	BT-40
RC-408A	BT-42
RC-408C	BK-42
RC-410	94BP4, -B, -C, -R
RC-414	6QU
RC-414A	6Q7
RC-414B	6Q8, 6QK8
RC-414C	U-50
RC-415	K-60
RC-415A	K-80
RC-415B	K-60 (Loop), K-62
RC-415C	K-80 (Loop), K-81, K-82
RC-415D	K-80 (Loop)
RC-416	T-64, T-65
RC-416A	T-80
RC-418	T-55, T-55-S, T-56
RC-418A	K-50
RC-418B	U-10
RC-421	U-123 (2 bands)
RC-425	T-60
RC-425A	U-12
RC-425D	T-62
RC-427	TRK-12
RC-427A	TRK-9
RC-427F	TRK-120
RC-427G	TRK-90
RC-429	TRK-5
RC-435	9TX-50, 9TX-50M
RC-435A	45E, 45E-M, 45E-W
RC-436	40X-50 to 40X-57
RC-440	4QB
RC-440A	4QB4
RC-441	6Q1
RC-441A	6Q4
RC-442	6Q4X
RC-443	8Q2
RC-443B	8QU5-C, 8QU5-M
RC-444	9Q1
RC-444A	9QK
RC-449	BK-41, BT-41
RC-453	40X-52, 40X-55 (2nd Prod.)
RC-454	9TX-50, 9TX-50M (2nd Prod.)
RC-455	BP-55, -56, -85
RC-456	46X-11, 46X-12
RC-456A	46X-13
RC-457	45X-1, 45X-2
RC-457A	45X-1, 45X-2 (2nd Prod.)
RC-457D	45X-5, 45X-6
RC-457E	45X-3, 45X-4
RC-459	45X-11, 45X-12
RC-459A	45X-13
RC-459B	46X-1, 46X-2
RC-459C	46X-3
RC-459D	45X-11, 45X-12 (2nd Prod.)
RC-459E	45X-13 (2nd Prod.)
RC-459F	46X-1, 46X-2 (2nd Prod.)
RC-459H	46X-3 (2nd Prod.)
RC-459J	45X-111, 45X-112, Radiola 510
RC-459K	45X-113
RC-459L	45X
RC-459M	45X-16, 45X-17
RC-459T	45X-11, 45X-12 (3rd Prod.)
RC-461	46X-24
RC-461A	46X-23
RC-461B	46X-21
RC-462	15X
RC-462A	16X-1, 16X-2, 36X
RC-462B	16X-3
RC-462C	16X-4
RC-464	Radiola 500, 501
RC-464A	Radiola 511
RC-464B	Radiola 512, 513
RC-465	Radiola P-5
RC-465A	Radiola P-5
RC-472F	T-63
RC-473A	X-55
RC-474D	X-60
RC-476	K-105
RC-477	5Q5 (2nd Prod.), Q18
RC-477A	5Q6
RC-477B	5Q8 (2nd Prod.)
RC-477C	5Q66
RC-478	9Q4
RC-478A	7Q4
RC-478B	7QK4
RC-482B	U-9
RC-482C	U-9 (2nd Prod.)
RC-486B	U-44
RC-486C	U-45
RC-490	96X-5
RC-496	7QB, 7QBK
RC-497	K-50 (2nd Prod.)
RC-498	U-20
RC-498A	U-40
RC-498B	U-42
RC-498E	U-43
RC-498F	K-61
RC-501	U-46
RC-501A	K-130
RC-502	7Q4X
RC-507	Q22
RC-507A	Q25
RC-507B	QK23

"RC" NUMBER INDEX (Continued)

Chassis No.	*Model*
RC-507C	QU2C
RC-507D	QU2M
RC-507F	QU3C
RC-507H	QU3M
RC-507J	Q26
RC-507K	Q27
RC-507L	QU52C
RC-507N	QU52M
RC-508	Q24
RC-509	16T4
RC-509A	16T3
RC-509B	16T2
RC-509C	16K
RC-509F	16T4 (2nd Prod.)
RC-509H	16T3 (2nd Prod.)
RC-509J	16T2 (2nd Prod.)
RC-511	18T
RC-512	17K
RC-512A	19K
RC-513	110K, 110K2
RC-513A	111K
RC-514	Q20, Q21
RC-517	V-100
RC-517C	V-105
RC-517F	Radiola R-560P
RC-517H	V-135
RC-517J	Radiola R-566P
RC-518	V-300
RC-518A	V-301, V-302
RC-519	V-200
RC-521	V-205
RC-521B	V-405
RC-522	V-201
RC-523	V-170
RC-524	V-102
RC-525	14BT-1
RC-525A	14BT-2
RC-525B	14BK
RC-526	15BT
RC-527	15BP-1, -2, -4, -6
RC-527A	15BP-3, -5
RC-527C	15BP-7
RC-527D	25BP
RC-529	QB2
RC-529A	QB1
RC-529D	QB6
RC-529H	QB9
RC-530	QU5
RC-531	Q44
RC-538B	Q30
RC-538C	Q31
RC-539	Q33
RC-539D	QB-3
RC-540	V-101
RC-541C	45X18
RC-544	BP-10
RC-547	VHR-207
RC-547A	VHR-407
RC-548	VHR-202
RC-551	QU7, QU8
RC-555	VHR-307
RC-559	26BP
RC-561	Q-16
RC-561A	Q-17
RC-561C	Q-16E
RC-563A	QB5
RC-563B	Q12
RC-563C	Q12
RC-563D	Q12
RC-563E	Q11
RC-563F	Q11
RC-564	V-215, V-221
RC-564A	V-219
RC-564B	V-225
RC-566	Q14, Q15
RC-566A	QU56C, QU56M
RC-566B	Q14E, Q15E
RC-567	27K
RC-568	QU51C, QU51M
RC-568A	QU55
RC-569	28T
RC-570	29K
RC-570C	29K2
RC-570D	29K2 (2nd Prod.)
RC-571	211K
RC-572A	V-140
RC-573	V-209
RC-573A	V-210
RC-574	VHR-212
RC-582	V175
RC-592	Q23
RC-1000	16X11
RC-1000A	16X13
RC-1000B	16X14
RC-1000C	Radiola 515
RC-1001	10X
RC-1001A	11X1
RC-1001B	12X, 12X2
RC-1001B	10X (2nd Prod.)
RC-1001C	12AX, 12AX2, 35X, Radiola 516, 517, 522
RC-1001D	14X, 14X2
RC-1001E	14AX, 14AX2, 34X, Radiola 526, 527
RC-1002	28X
RC-1002A	28X5
RC-1003	1X, 1X2, 25X
RC-1003A	1AX, 1AX2
RC-1003B	Radiola 510 (2nd Prod.), 511 (2nd Prod.)
RC-1003C	55X
RC-1003D	Radiola 510 (3rd Prod.), 520
RC-1004A	25BT2
RC-1004B	25BK, 25BT3
RC-1004D	Radiola B-52
RC-1004F	24BT1, 24BT2
RC-1004H	Radiola B-50
RC-1011	15X (2nd Prod.), 36X (2nd Prod.)
RC-1013	6X2
RC-1014	26X1
RC-1014A	26X3, Radiola 515 (2nd Prod.)
RC-1014B	26X4
RC-1020	25BP (2nd Prod.)
RC-1020B	Radiola P-5 (2nd Prod.)
RC-1022	34X (2nd Prod.)
RC-1022A	12X (2nd Prod.), 35X (2nd Prod.),Radiola 522 (2nd Prod.)

CROSS-INDEX to RCA Victor, General Electric, Westinghouse, and Graybar Models

[Revised January, 1936]

RCA Victor	G. E.	West.	Gray-bar
SW-2	JZ-30	—	—
R-4	J-70	WR-17	GT-7
R-5	T-12	WR-14	4
R-5 (DC)	T-12-D	WR-14 (DC)	—
R-5-X	T-12-E	WR-14-CR	—
T-5	E-52	WR-9	—
R-6	J-75	—	GC-13
R-7 (Superette)	S-22 & S-22-X	WR-10	8
R-7-A	S-22 (Pentodes)	WR-10-A	8-A
R-7 (DC)	S-22-D	WR-10 (DC)	—
R-8	J-80	WR-18	GT-8
R-8 (DC)	—	WR-18 (DC)	—
R-9	S-42	WR-12	—
R-9 (DC)	S-42-D	WR-12 (DC)	—
R-10	S-132	WR-15-A	980
R-11	K-62	WR-15	9
R-12	J-85	—	GC-14
Rad. 16	—	—	300
RE-16	SZ-42-P	WR-13	—
RE-16-A	—	WR-13-A	—
R-17-M	BX or K-41	WR-26-M	—
RE-18 & RE-18-A	KZ-62-P	—	—
R-18-W	K-40-A	—	—
Rad. 18	—	—	310
Rad. 21	B-1	—	—
Rad. 22	B-2	—	—
R-22-S	L-50	—	—
R-22-W	L-51	—	—
RO-23	JZ-835	WR-16	—
R-24	JZ-822	—	—
R-24-A (47)	JZ-822-A	WR-24	—
R-24-A (2A5)	—	WR-24	—
R-27	K-40	WR-26	—
R-28	K-50	—	—
R-28-B	K-51	WR-27	—
R-28-P	K-50-P	—	—
R-28-PB	K-51-P	WR-27-P	—
M-30	A-90	—	—
P-31	A-81	—	—
M-32	A-60	—	—
Rad. 33	—	—	311
M-34	B-40	WR-33	—
R-37	K-60	—	—
R-37-P	K-60-P	WR-28	—
R-38	K-65	—	—
R-38-P	K-65-P	—	—
RE-40	K-54	—	—
RE-40-P	K-54-P	WR-29	—
R-43	S-42-B	—	—
Rad. 44	—	—	500
Rad. 46	—	—	550
Rad. 48	T-41	WR-4	678
R-50	H-32	—	—
Rad. 51	—	—	320
R-55	—	—	100
RAE-59	H-72	—	—
Rad. 60	—	—	330
Rad. 62	—	—	340
Rad. 66	—	—	600
R-70 & R-70-N	J-72	WR-21	—
R-71	J-82	WR-19	—
R-72	J-86	—	—
R-73 (47)	J-83	WR-22	—
R-73 (2A5)	J-83-A	—	—
R-74	J-100	WR-20	—
R-75 (47)	J-87	—	—
R-75 (2A5)	J-87-A	—	—
R-76	J-105	—	—
R-77	J-107	—	—
R-78	J-125	—	—
R-78 (2)	J-125-A	—	—
RE-80	—	WR-23	—
RE-80-SW	—	WR-25	—
Rad. 80	H-31	WR-5	700
Rad. 82 and 82-R	H-51 and 51-R	WR-6 and 6-R	770
Rad. 86 and 86-R	H-71 and 71-R	WR-7 and 7-R	900
R-90	K-106	—	—
R-90-P	K-106-P	—	—
91-B	C-30	—	—
R-93	—	WR-93	—
M-101	D-50	—	—
100	K-43	WR-32	—
101	M-41	—	—
102	M-40	—	—
103	M-42	—	—
M-104	D-51	—	—

RCA Victor	G. E.	West.	Gray-bar
M-105	C-41	WR-41	—
M-107	C-60	—	—
M-108	D-52	—	—
M-109	D-72	—	—
110	K-52	—	—
111	K-53	WR-35	—
112	L-52	WR-34	—
112-A	L-52-A	—	—
114	L-53	—	—
115	K-53-M	—	—
M-116	B-52	WR-42	—
117	M-50	—	—
118	M-51	WR-48	—
118 (Mod.)	M-51-A	WR-48-A	—
119	M-52	—	—
120	K-63	WR-36	—
121	K-64	WR-37	—
M-123	C-61	—	—
124	M-63	—	—
125	M-62	WR-53	—
126-B	C-62	—	—
127 (DC)	K-64 (DC)	—	—
128	M-61	WR-46	—
128 (Mod.)	M-61 (Mod.)	WR-46-A	—
128-E	—	WR-50	—
135-B	C-70	WR-47	—
140 and 141	K-80	WR-30	—
140-E and 141-E	K-80-X	WR-31	—
142-B	B-81	—	—
143	M-81	WR-45	—
143 (Mod.)	M-81 (Mod.)	WR-45-A	—
210	K-55	—	—
211	M-56	—	—
214	M-55	—	—
220	K-66	—	—
221	M-65	—	—
222	K-66-M	—	—
223	C-67	—	—
224	M-67	—	—
225	M-655	—	—
226	M-66	—	—
235-B	C-75	—	—
240	K-85	—	—
241-B	B-86	—	—
242	M-86	—	—
243	M-85	—	—
260	K-107	—	—
261	K-105	—	—
262	M-106	—	—
263	M-107	—	—
280	K-126	—	—
281	M-125	—	—
300	K-48	—	—
301	M-49	—	—
310	K-58	—	—
321	M-68	—	—
322	M-69	WR-49	—
330	K-78	—	—
331	K-79	—	—
340	K-88	WR-38	—
340-E	K-88-X	WR-39	—
341	M-89	—	—
380	M-128	—	—
380-HR	M-128-R	—	—
381	M-129	—	—

Brand Models Without RCA Victor Equivalents

WR-8	Westinghouse WR-6 Chassis with Clock in Columnaire Cabinet.
WR-8-R	Westinghouse WR-6-R Chassis modified for Vertical operation in Columnaire Cabinet.
K-82	G. E. K-62 in Clock Cabinet.
J-88	G. E. J-82 with Manual Motor Board.
H-91	G. E. H-51 (Modified) in Clock Cabinet.
H-91-R	G. E. H-51-R (Modified) in Clock Cabinet.
J-109	G. E. J-100 Chassis and Automatic Motor Board.
JZ-826	G. E. JZ-822 in Console Cabinet.
JZ-828	G. E. J-88 with Short-Wave Adaptor.

NOTE: RCA Victor Models Without Brand Equivalents are not Listed

RCA CRYSTAL PICKUP DATA

CRYSTAL CARTRIDGE DRAWING CODE

"A" Top Needle Hole
"B" Viscoloid Damper
"C" Thick (5/16-in.) Mtg. Hole
"D" Thin (7/32-in.) Mtg. Hole
"E" Grounded Lug
"F" Small Weight
"G" Large Weight
"H" Large "Cut" Weight
"J" 5/8-in. Needle Screw
"K" 11/16-in. Needle Screw
"L" 13/16-in. Needle Screw
"M" 15/16-in. Needle Screw

FIG. 1

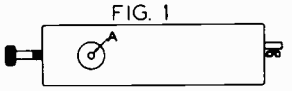


FIG. 2

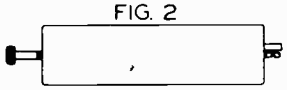


FIG. 3

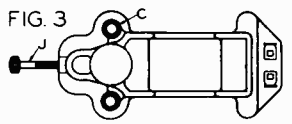


FIG. 4

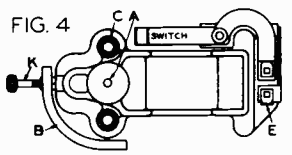


FIG. 5

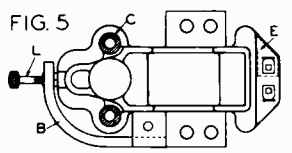


FIG. 6

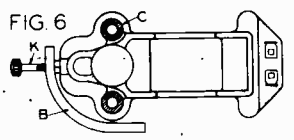
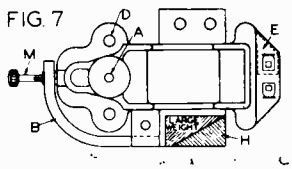


FIG. 7



Model Number	Arm Stock Number	Arm Fig. No.	Crystal Cartridge Stock No.	Crystal Cartridge Fig. No.
QU2-C	33906	3	33905	7
QU3-C	33906	3	33905	7
*QU5	34011	2	33905	7
6QU	33125	5	33122	5
8QU5-C	34305	2	34307	9
U-8	33121	5	33122	5
U-9	33591	5	33122	5
U-10	33591	5	33122	5
*11-QU	31159	1	31156	4
*12-QU	31159	1	31156	4
U-12	33906	3	33905	7
*VA-15	33906	3	35171	7
U-20	33906	3	33905	7
VA-20	9842	4	31050	3
VA-21	33591	5	33122	5
*VA-22	33096	3	31156	4
			33905**	7
*U-25	33096	3	31156	4
*U-26	33096	3	31156	4
*U-30	33096	3	31156	4
*U-40	33906	3	35171	7
*U-42	33906	3	35171	7
*U-43	33906	3	35171	7
*U-44	33906	3	35171	7
*U-45	33906	3	35171	7
*U-46	34011	2	33905	7
O-50	33216	4	33217	6
U-50	33216	4	33217	6
R-60	33591	5	33122	5
R-89	31887	4	31050	3
R-91	9842	4	31050	3
R-93-B	9842	4	31050	3
R-93-C	9842	4	31050	3
R-93-F	33591	5	33122	5
R-94-B	31211	4	31050	3
R-98	33399	1	31156	4
R-100	33121	5	33122	5
V-100	33591	5	33122	5
V-101	33591	5	33122	5
V-102	36768	3	33905	7
R-103-S	33591	5	33122	5
U-104	32227	4	31050	3
U-106	14818	6	14820	1
U-107	14818	6	14820	1
U-109	14818	6	14820	1
U-111	9842	4	31050	3
U-112	9842	4	31050	3
U-115	32137	4	31050	3
U-119	31468	1	31156	4
U-121	32137	4	31050	3
U-122E	31468	1	31156	4
UY-122E	32016	1	31156	4
*U-123	32884	1	31156	4
U-124	31468	1	31156	4
UY-124	32016	1	31156	4
*U-125	31159	1	31156	4
*U-126	31468	1	31156	4
U-127E	32137	4	31050	3
*U-128	31159	1	31156	4
*U-129	33096	1	31156	4
*U-130	31159	1	31156	4
*U-132	31159	1	32632	4
*U-134	31159	1	32632	4
*RP-139A	33906	3	35171	7
*RP-139C	34776	1	34710	10
*RP-145	33906	3	35171	7
*RP-152	33906	3	35171	7
*RP-152A	36321	3	35171	7
*RP-152B	36322	2	37158	11
*RP-152C	36591	3	35171	7
*RP-152D	37181	2	33905	7
*RP-152J	36322	2	37158	11
*RP-153	36513	2	33905	7
*V-170	33906	3	35171	7
*V-200	36321	3	35171	7
*V-201	36321	3	35171	7
*VHR-202	36322	2	33905	7
*V-205	33906	3	37158	11
*VHR-207	36322	2	33905	7
*V-300	33906	3	37158	11
*V-301	36513	2	33905	7
*V-302	36513	2	33905	7
*VHR-307	36322	2	33905	7
*V-405	33906	3	37158	11
*VHR-407	36322	2	33905	7
	33586	4	34225	8
	30707		30708	2

*Automatic Record Changers.
**Used on 25 cycle model only.

FIG. 8

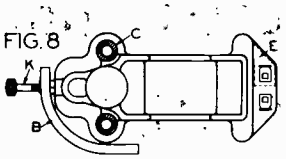


FIG. 9

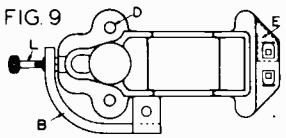


FIG. 10

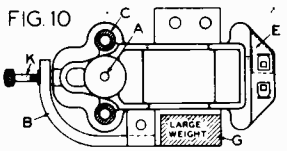


FIG. 11

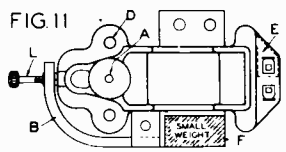


FIG. 1

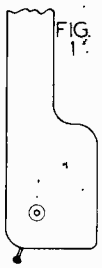


FIG 2

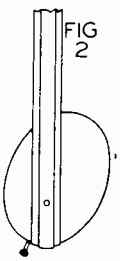


FIG 3

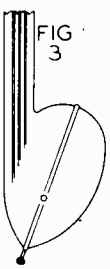


FIG 4

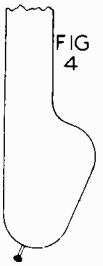
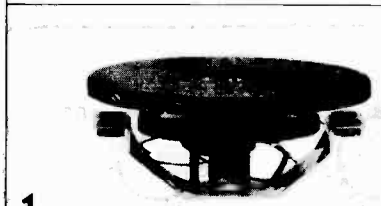


FIG 5

FIG. 6

RCA Victrola Motor Data

** CI—Capacitor—Induction—Self Starting
CS—Capacitor—Synchronous—Self Starting
I—Induction—Self Starting
S—Synchronous—Self Starting
SG—Series-Governor—Self Starting
SM—Synchronous—Manual Starting
IG—Induction—Governor—Self Starting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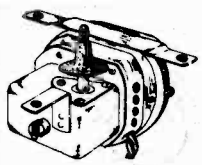
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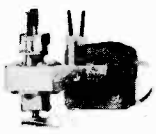
3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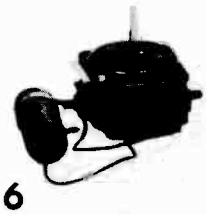
5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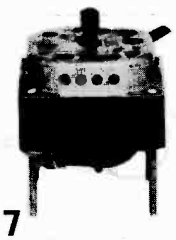
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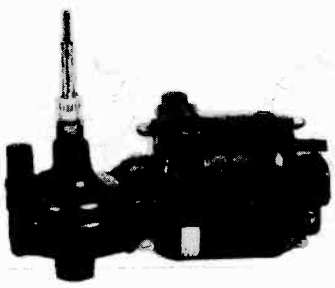
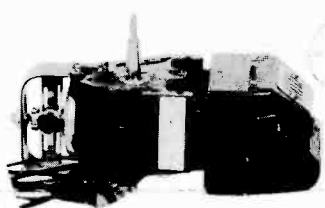

8

Dwg. No.	Fig.* No.	** Type	Used in RCA Model	Power Supply Voltage	Cycles	Watts	Stock No.
72565-1	8	CS	U-107, U-109, 9U, 9U2, 15U	105-125	60	27.0	9650
72565-4	8	CS	U-107, U-109, 9U, 9U2, 15U	"	50	33.5	9651
72565-8	8	CS	U-107, U-109, 9U, 9U2, 15U	"	25	30.0	9735
72986-1	11	IG	R-97, U-103, U-105, U-101	"	60	23.0	9799
84237-1	1	SM	PRP-1, R93B-C, R-91	"	60	10	9841
72444-1	10	IG	D8-28, D9-19	"	50 60	25 22	11701
72444-2	10	IG	D8-28, D9-19	"	25	30	11702
72933-1	11	IG	7U2	"	60	23.0	13576
72444-3	10	IG	7U2	"	50 60	25 22	13577
72444-4	10	IG	7U2	"	25	30	13578
72933-3	11	IG	R-94	"	60	23.0	14325
72933-4	11	IG	R-94	"	50 60	25.5	14326
72933-5	11	IG	R-94	210-250V	50 60	25.5	14327
72986-2	11	IG	R-97, U-103, U-105, U-101	105-125V	50 60	25.5	14465
84008-1	11	IG	R-97, U-103, U-105, U-101	"	25	24.0	14466
72933-6	11	IG	R-96, U-102E, R-94B	"	60	23.0	14800
81861-1	10	IG	88U	"	50 60	25.5	14912
72933-7	11	IG	U-102E, R-94B	"	50 60	25.5	30475
84237-1	2	SM	VA-21, R-93F, R-93B-C, R-91	"	50	10	31034
72986-3	11	IG	U-125, U-126, U-128, U-130, U-132, U-25, U-26, U-30, U-129, U-134, U-46	105-125V	60	23.0	31157
72986-4	11	IG	"	"	50 60	25.5	31163
84008-4	11	IG	"	"	25	24.0	31448
84323-1	11	IG	R-98, U-119, U-124, U-122E	"	60	23.0	31461
84323-2	11	IG	R-98, U-119, U-124, U-122E	"	50 60	25.5	31462
84388-1	11	IG	U-119, U-124, U-122E	"	25	24.0	31724
84333-1	10	IG	11QU, 12QU	"	50 60	25.5	31876
84237-25 60	1	SM	R-89	55-70V	60	10	31923
84237-25 50	1	SM	R-89	"	50	10	31924
84323-3	10	IG	8QU, 8QU1, 8QU2, M-81, M-82, M-83	105-125	50 60	25.5	31983
84415-1	9	SG	UY-122E, UY-124	"	50 60 dc	26 28.5 18.0	32006
84441-34	1	SM	R-93F	"	25	10	32077
84430-1	3	I	U-115	"	60	19	32135
84484-2	2	I	U-115	"	60	19	32558
84237-50	1	SM	PRP-1	"	60	10	32469
84237-52 60	1	SM	VA-21, VA-20	80-90V	60	10	32508
84484-2	2	I	U-121, U-127E	105-125	60	19	32558
84484-3	2	I	U-121, U-127E	"	50	19	32637
84484-4	2	I	U-121, U-127E	"	25	19	32638
84237-52 50	1	SM	VA-20	80-90V	50	10	32643
84484-3	2	I	U-115	105-125	50	19	32650
84484-4	2	I	U-115	"	25	19	32652
84564-1	3	I	VA-22, U-123, RP-139A	"	60	21	32871
84564-2	3	I	VA-22, U-123, RP-139A	105-125	50	21	32872
84564-3	3	I	VA-22, U-123, RP-139A	"	25	22	32873
84569-7	2	I	6QU, 8QU5-C-M, U-50, O-50	"	60	19	33219
84569-8	2	I	6QU, 8QU5-C-M, O-50, U-50	"	50	19	33220
84632-1	1	SM	R-100	"	60	10	33343
84599-1	1	SM	U-8, R-100	"	50	10	33351
84599-2	1	SM	U-8, R-100	"	25	12	33355
86852-1	4	I	U-9, U-10, U-12	"	60	21	33902
84599-1	1	SM	U-8, R-100	"	60	10	33940
84683-1	5	I	R-60	"	60	23	34263
90767-1	6	CI	QU-5, RP-145	"	60	14.5	34364
84754-1	6	S	QU2-C-M, U-20	"	60	14	34412
86852-2	4	I	U-9, U-10, U-12	"	50	23.5	34496
84754-2	6	S	U-20	105-125	50	11	35604
90767-2	6	CI	QU5	"	50	14.5	36114
91655-1	6	CS	RP-152, RP-152A	"	60	14.0	36254
91647-3	4	I	V-100, V-102, V-101	"	60	21	36404
91655-2	6	CS	RP-152	"	50	14.0	36725
91655-3	6	CS	RP-152	"	25	14.0	36726
91779-1	7		VHR-202, VHR-207, VHR-407	"	60	35.5	36820
92127-1	6	S	QU3-C-M	"	60	14.0	36984
92127-2	6	S	QU3-C-M	"	50	14.0	36985
84976-1	12	I	RP-153	"	60	24.0	37295
84976-3	12	I	RP-153	"		24.0	37296
91779-2	7		VHR-202, VHR-207, VHR-407	"	50	39.0	37941

*The illustrations show the general appearance of motors; details maybe different in various numbers for the same general type of motor.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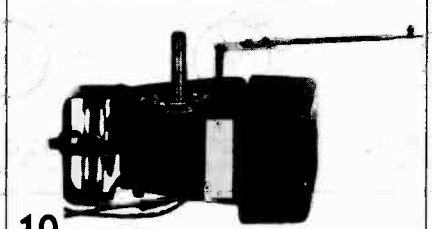
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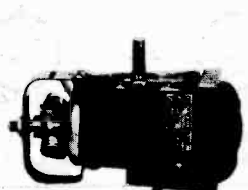
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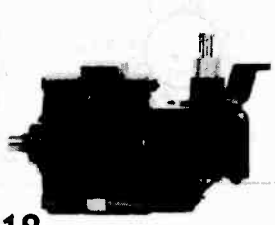
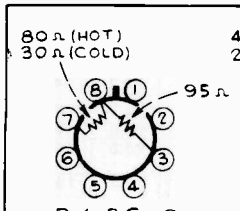
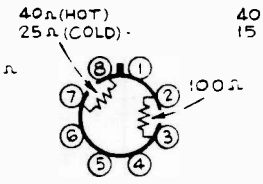

12

RCA Resistor Ballast Tube Data

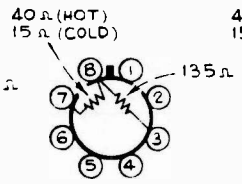
(Nos. in parenthesis are original designations)



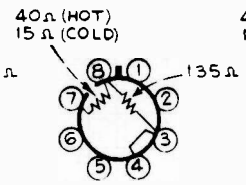
BK-36-C
(95-K2)
STK. # 30284



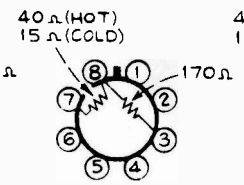
K-36-F
STK. # 31005



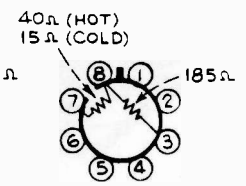
BK-42-B
(135-K1)
STK. # 14649



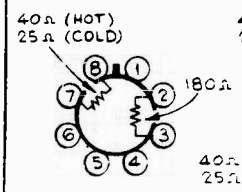
BK-49-B
STK. # 32544



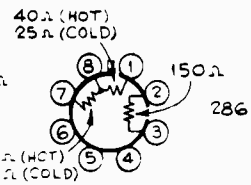
BK-55-B
STK. # 31198



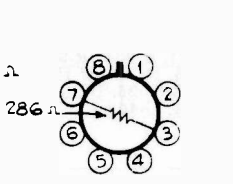
BK-61-B
(BK-61-H)
STK. # 31585



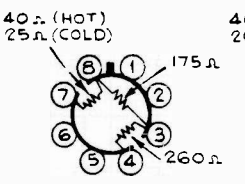
K-61-F
STK. # 31019



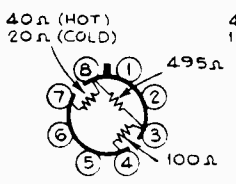
K-61-H
STK. # 32109



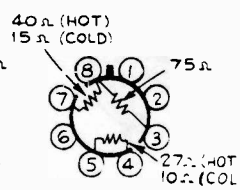
B-86-A
STK. # 33793



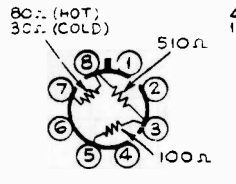
260-K1
STK. # 30300



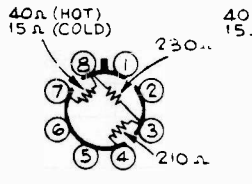
495-K1
STK. # 30599



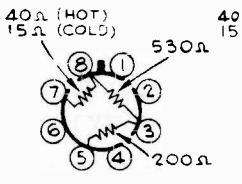
K-83747-6
(BK-36-B)
STK. # 31577



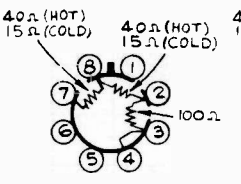
K-85277-3
STK. # 32247



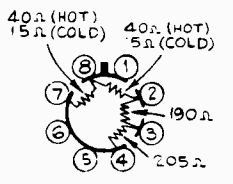
K-85277-4
STK. # 32850



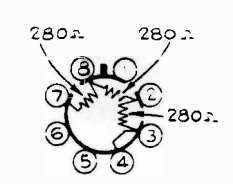
K-85277-5
STK. # 32849



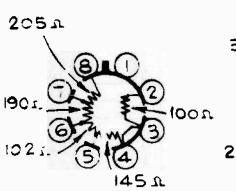
M-86892-1
STK. # 33811



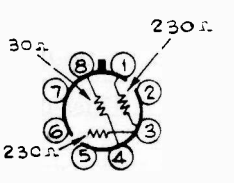
M-86892-2
STK. # 33812



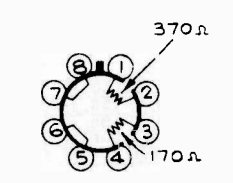
M-86892-3
STK. # 33813



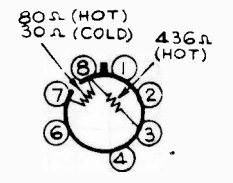
M-86892-4
STK. # 33947



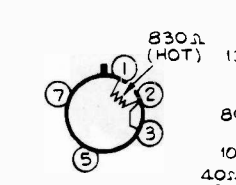
M-86892-6
STK. # 34563



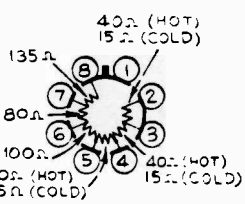
M-86892-7
STK. # 34458



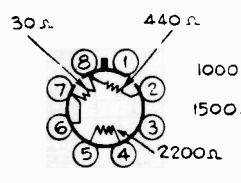
M-86892-8
STK. # 34805



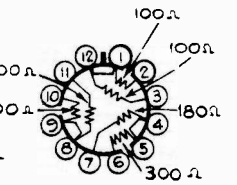
M-86892-9
STK. # 35000



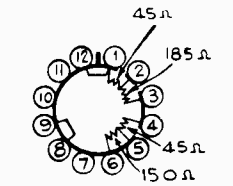
M-86892-10
STK. # 35183



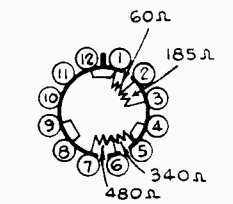
M-86892-11
STK. # 37847



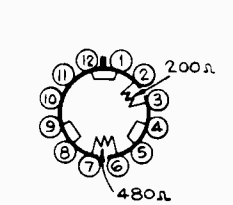
M-91462-1
STK. # 35748



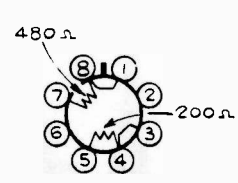
M-91462-2
STK. # 35635



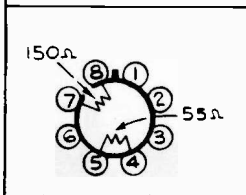
M-91462-3
STK. # 37891



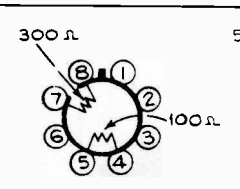
M-91462-5
STK. # 37983



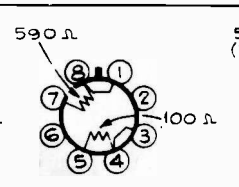
M-91462-6
STK. # 38289



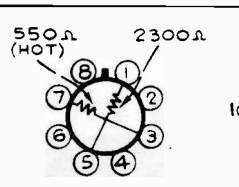
M-91462-7
MI-8159-1



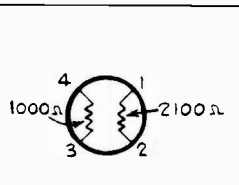
M-91462-8
MI-8159-2



M-95178-10
STK. # 39346



K-920117-1
STK. # 38702



K-920146-1
STK. # 39575

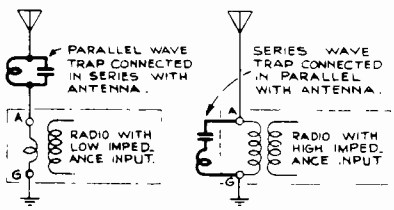
RCA WAVE TRAP DATA

Complete electrical specifications for all available RCA wave traps are given below.

On sets with a **low-impedance input** (few turns on primary of antenna coil, with a d-c resistance usually less than 10 ohms) the trap should be connected in **series with the antenna.**

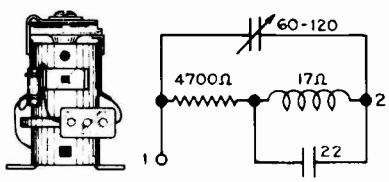
On sets with a **high-impedance input** (large number of turns on primary of antenna coil, with a d-c resistance of 10 ohms or more) the trap should be connected in **parallel with** the antenna.

Frequency ranges and "Q" are approximate.



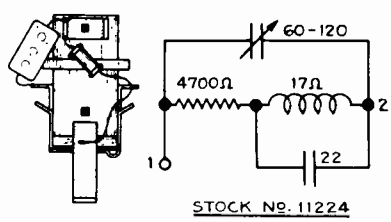
FUSE DATA Tubular Glass Fuses:

Stock No.	Rating (Amps.)	Type	Length (In.)	Diam. (In.)	Voltages Up To
23563	0.1	3AG	1¼	¼	250 V.
3748	0.5	3AG	1¼	¼	250 V.
34527	0.75	3AG	1¼	¼	250 V.
14133	1.0	3AG	1¼	¼	250 V.
2725	1.5	3AG	1¼	¼	250 V.
3883	2.0	3AG	1¼	¼	250 V.
14582	2.0	8AG	1	¼	250 V.
10907	3.0	3AG	1¼	¼	250 V.
14158	3.0	1AG	⅝	¼	250 V.
37884	3.0 Time Delay	Little Fuse No. 1043	1¼	¼	250 V.
5140	5.0	3AG	1¼	¼	25 V.
37883	5.0 Time Delay	Little Fuse No. 1358	1¼	¼	250 V.
12958	6.0	3AG	1¼	¼	25 V.
28463	6.0	3AG	1¼	¼	250 V.
43518	6.0	5AG	1¾	13/32	250 V.
6148	10.0	3AG	1¼	¼	25 V.
5023	15.0	3AG	1¼	¼	25 V.
3646	20.0	3AG	1¼	¼	25 V



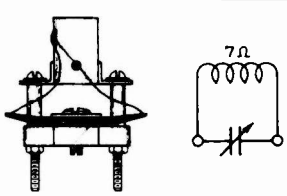
IND. 1 MILLIHENRY
CAP. 60-120 MMF.
RANGE 400-520 KC
Q = 50
IMPEDANCE 150,000 Ω
(WITH 4700 Ω RESISTOR SHORTED)

STOCK Nº. 11649



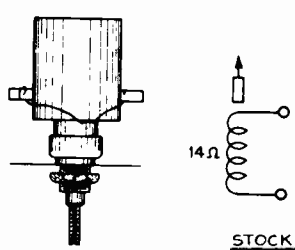
IND. 1 MILLIHENRY
CAP. 60-120 MMF.
RANGE 400-520 KC
Q = 50
IMPEDANCE 150,000 Ω
(WITH 4700 Ω RESISTOR SHORTED)

STOCK Nº. 11224



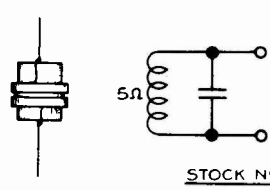
IND. 106 MICROHENRIES
CAP. 800-1300 MMF.
RANGE 440-560 KC.
Q = 50
IMPEDANCE 17,500 Ω

STOCK Nº. 11667



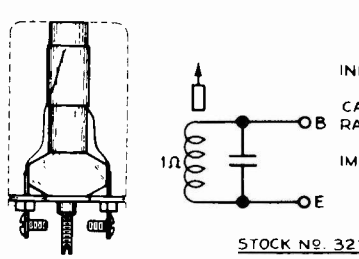
IND. 1.55 MILLIHENRY MIN.
2.35 MILLIHENRY MAX.
USUALLY USED WITH 56 MMF. CAP.
RANGE 400-520 KC
Q = 110
IMPEDANCE PARALLEL 660,000 Ω
SERIES 58 Ω

STOCK Nº 12654



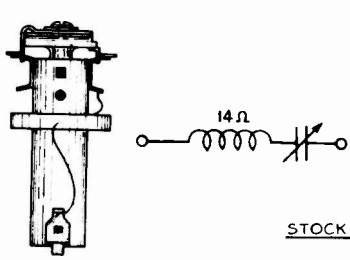
IND. 280 MICROHENRIES
CAP. 400 MMF.
RANGE 460 KC
Q = 80
IMPEDANCE 64,000 Ω

STOCK Nº. 13838



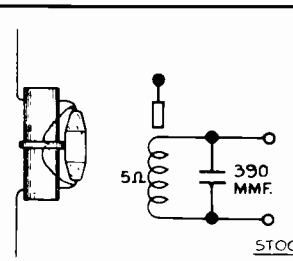
IND. 14 MICROHENRIES MIN.
40 MICROHENRIES MAX.
CAP. 750 MMF.
RANGE 920-1550
Q = 110
IMPEDANCE 25,000 Ω

STOCK Nº. 32189



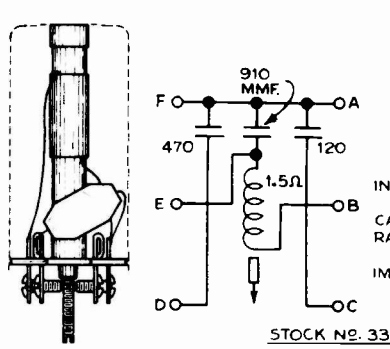
IND. 2.4 MILLIHENRY
CAP. 34-100 MMF.
RANGE 300-500 KC.
Q = 60
IMPEDANCE PARALLEL 400,000Ω
SERIES 120Ω

STOCK Nº. 31952



IND. 26 MICROHENRIES
CAP. 390 MMF.
RANGE 1600 KC
Q = 90
IMPEDANCE 36,000Ω

STOCK Nº. 32032

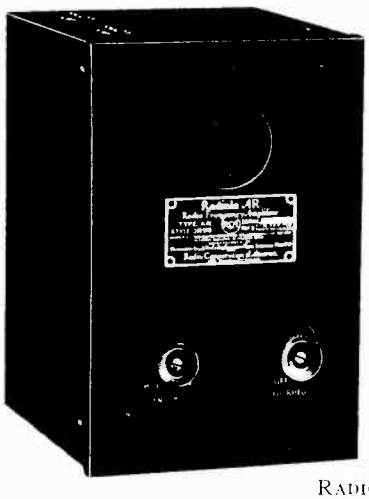


IND. 70 MICROHENRIES MIN.
140 MICROHENRIES MAX.
CAP. (3) 120 MMF; 470 MMF; 910 MMF.
RANGE 450-2100 KC
Q = 110
IMPEDANCE (460 KC) PARALLEL 40,000Ω
SERIES 4Ω

STOCK Nº. 33033

ILLUSTRATIONS ARE SLIGHTLY LESS THAN ½ SIZE

RADIOLA AR, RT & RC



RADIOLA AR

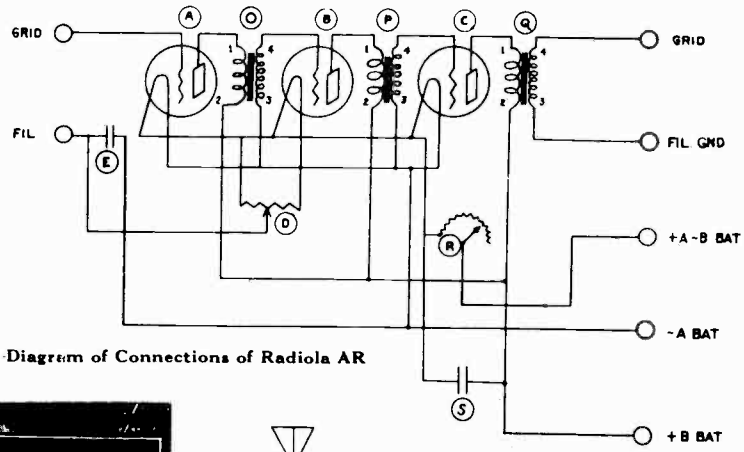
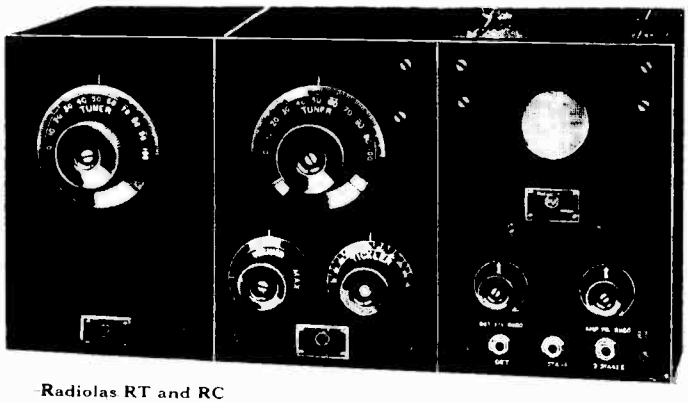


Diagram of Connections of Radiola AR



Radiolas RT and RC

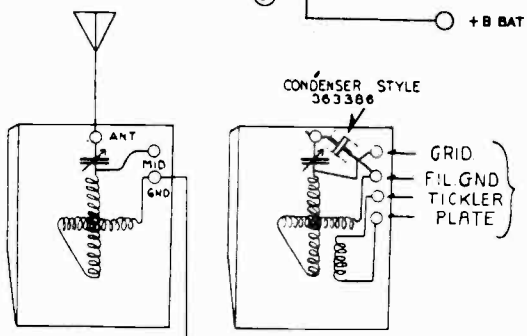
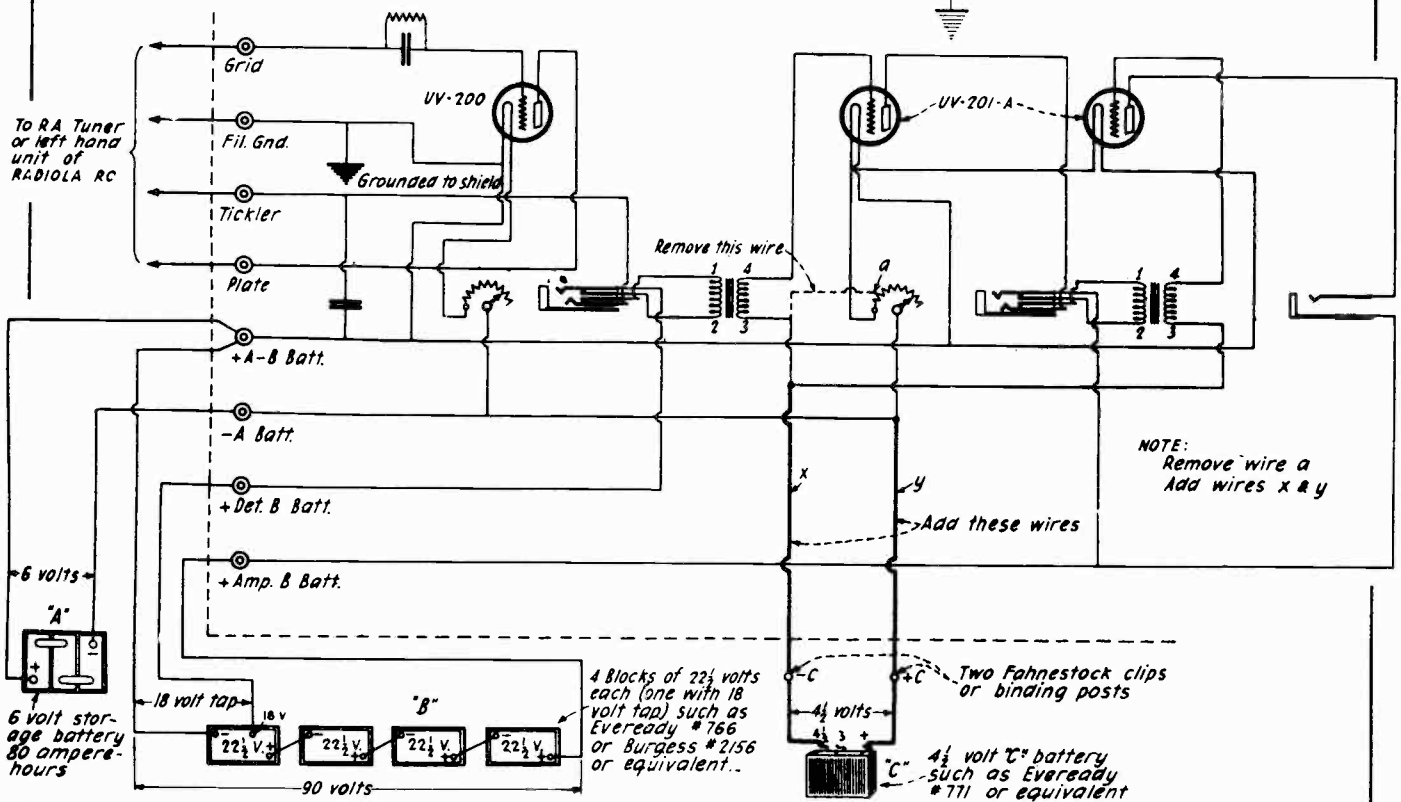
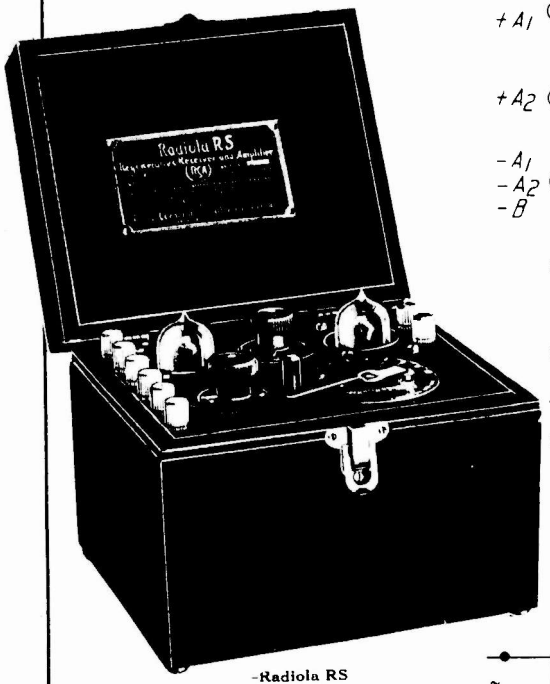


Diagram of Connections for Radiolas RT andRA



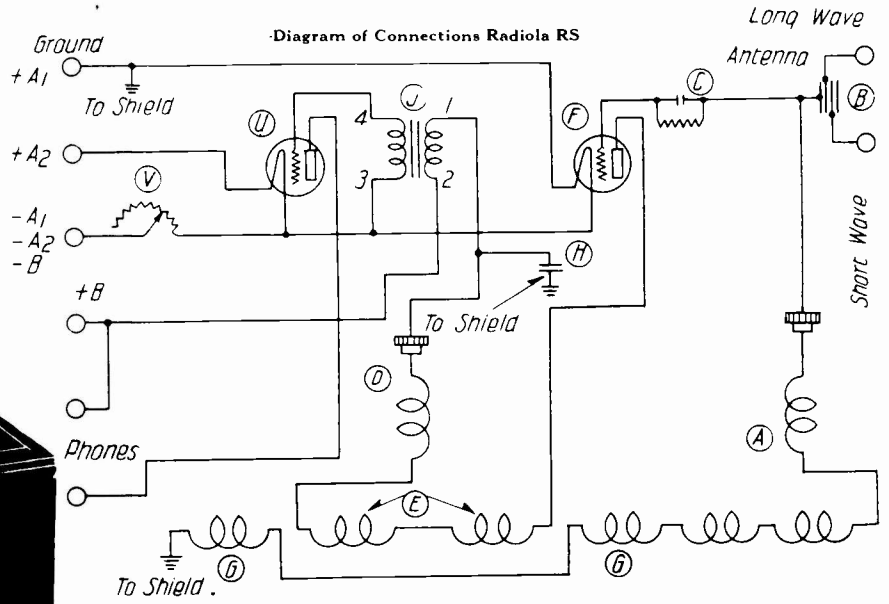
RADIOLA RC (DA DETECTOR AMPLIFIER UNIT) MODIFIED
TO USE UV-200 DETECTOR AND UV-201-A AMPLIFIER RADIOTRONS
ARRANGED FOR "C" BATTERY

RADIOLA RS, SR. & A.C. AUDIO AMPLIFIER

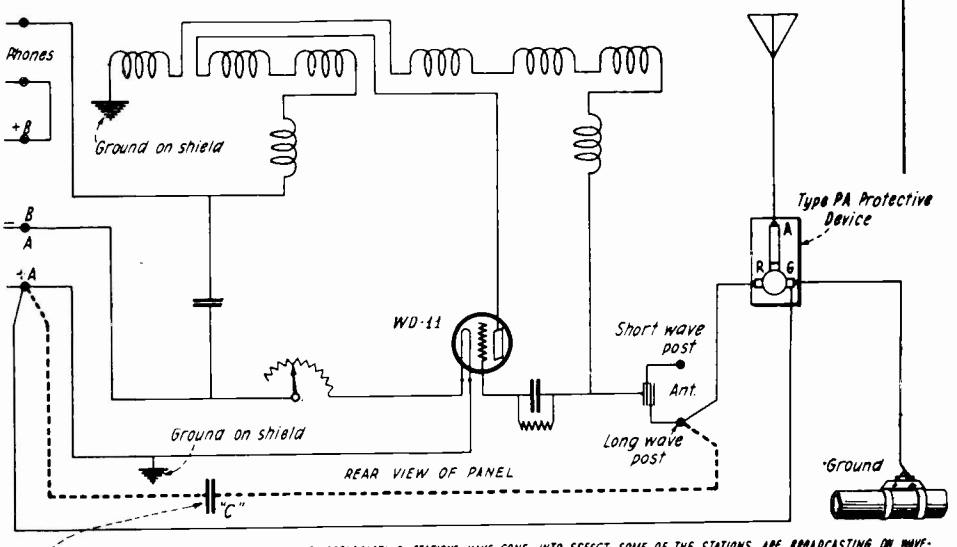


-Radiola RS

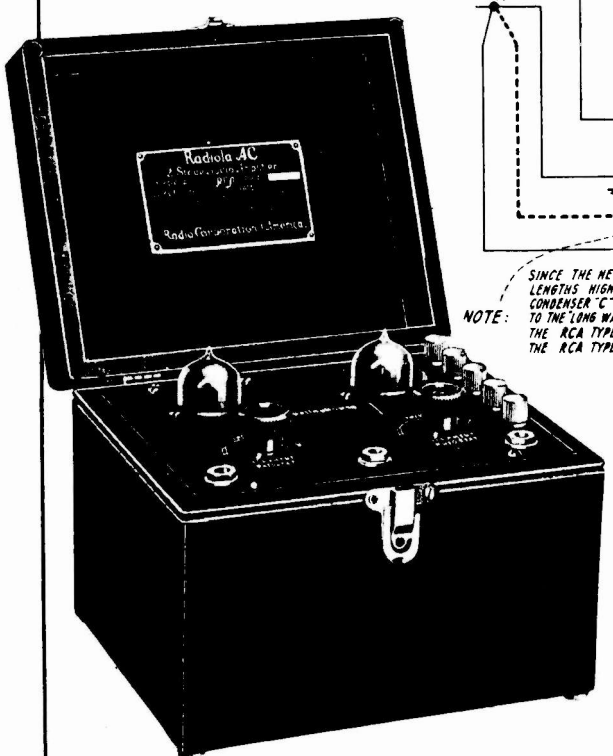
Diagram of Connections Radiola RS



RADIOLA SR.

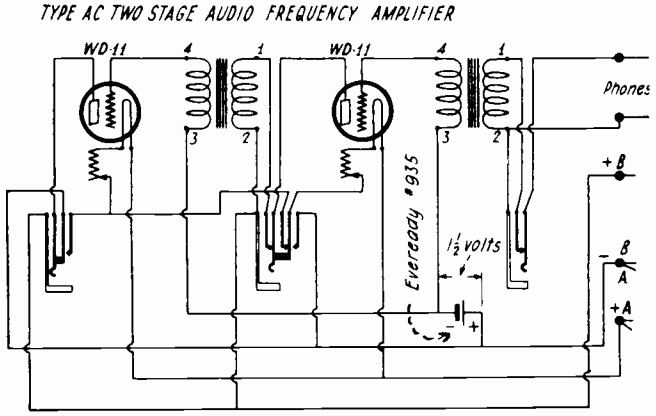


NOTE: SINCE THE NEW WAVELENGTHS ASSIGNED TO BROADCASTING STATIONS HAVE GONE INTO EFFECT, SOME OF THE STATIONS ARE BROADCASTING ON WAVE-LENGTHS HIGHER THAN THOSE WHICH CAN BE EFFICIENTLY RECEIVED ON THE AERIOLA SENIOR. FOR RECEPTION FROM THESE LONG WAVE STATIONS, A MICA CONDENSER "C" CAN BE CONNECTED EXTERNALLY BETWEEN THE "LONG WAVE POST" AND THE "+A OR GROUND POST." THE ANTENNA IS ALWAYS CONNECTED TO THE "LONG WAVE POST" WHEN THE CONDENSER IS USED. ON A LONG ANTENNA (100 FEET OR MORE) CONDENSER "C" SHOULD BE 0.00025 mfd. AND MAY BE THE RCA TYPE UC-567 WITH UX-543 MTG. ON A SHORT ANTENNA (50 FEET OR LESS) CONDENSER "C" SHOULD BE 0.0005 mfd. AND MAY BE THE RCA TYPE UC-568 WITH UX-543 MTG. WAVELENGTH IS THEN INCREASED TO APPROXIMATELY 580 METERS OR 517 KILOCYCLES.



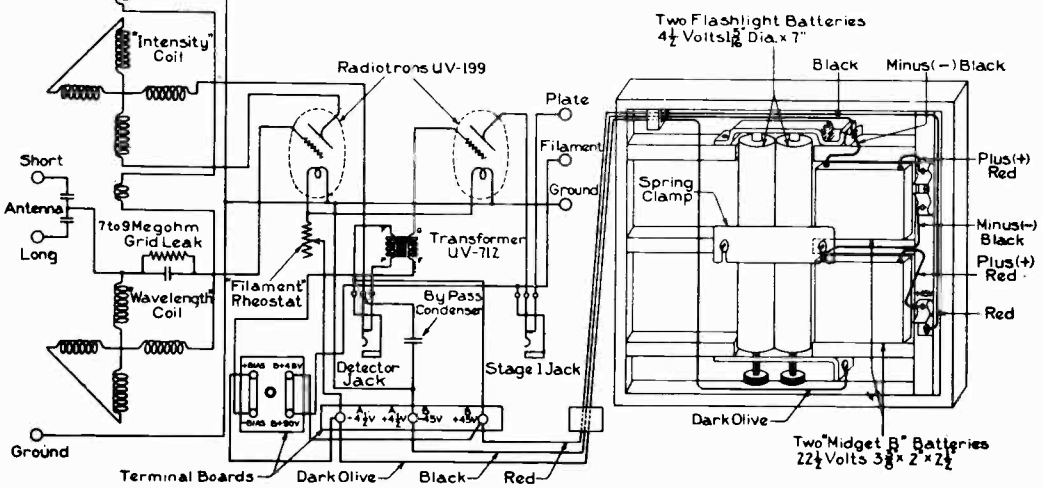
-Radiola AC Audio Amplifier

TYPE AC TWO STAGE AUDIO FREQUENCY AMPLIFIER

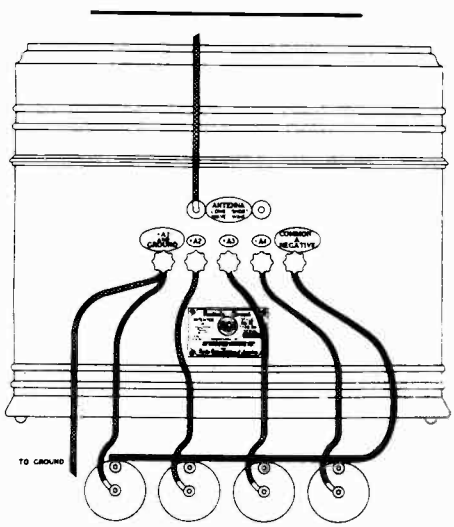


RADIOLA II, RADIOLA GRAND

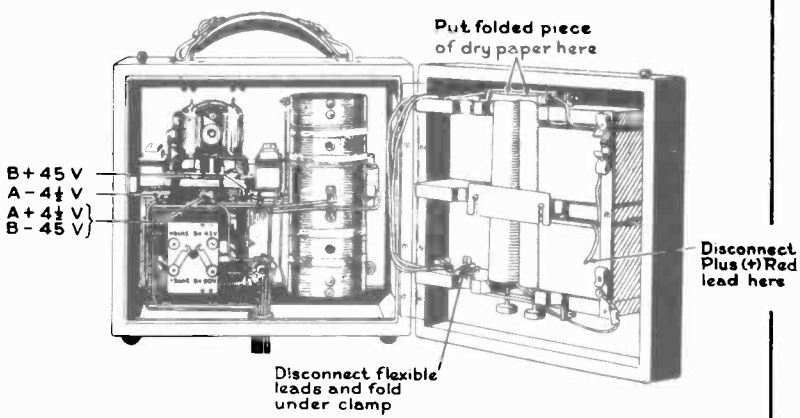
MODEL AR-800



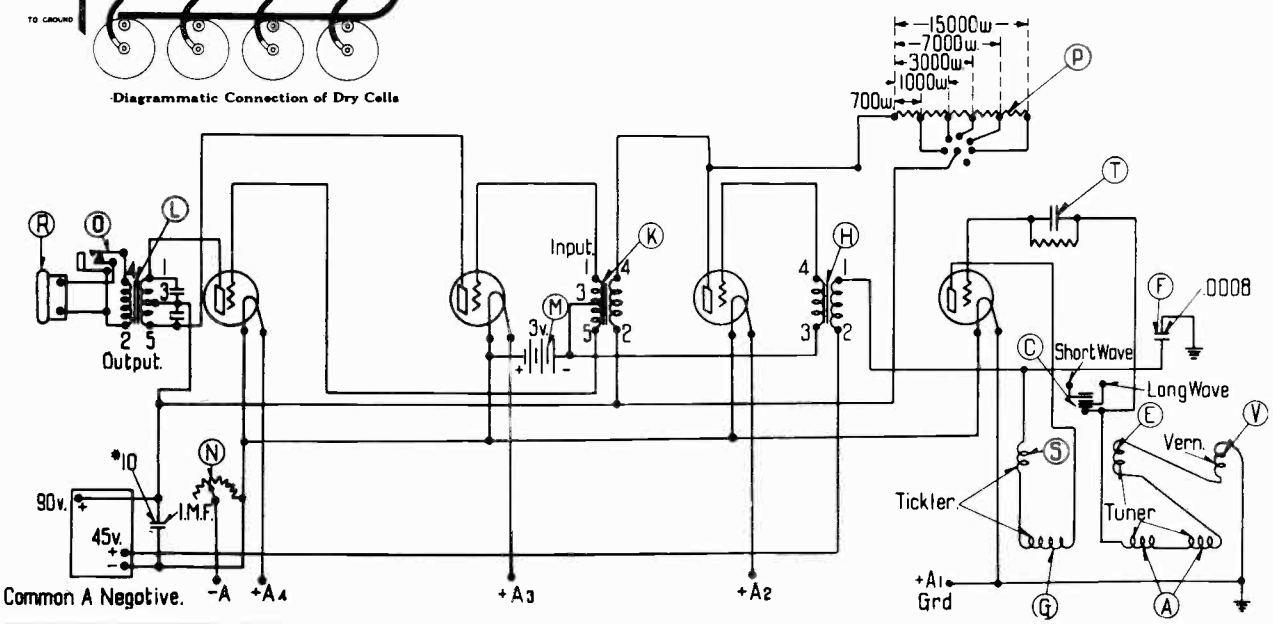
Run a wire from the antenna terminal of the protector to the lower antenna post (marked "LONG") in the center left side of the receiver panel. This is for wavelengths of from 375 to 600 meters. For wavelengths of from 200 to 375 meters, use the upper post (marked "SHORT"). Connect the "GROUND" post on the receiver panel with the ground terminal of the protective device. The foregoing connections are as shown in the diagram.



Diagrammatic Connection of Dry Cells

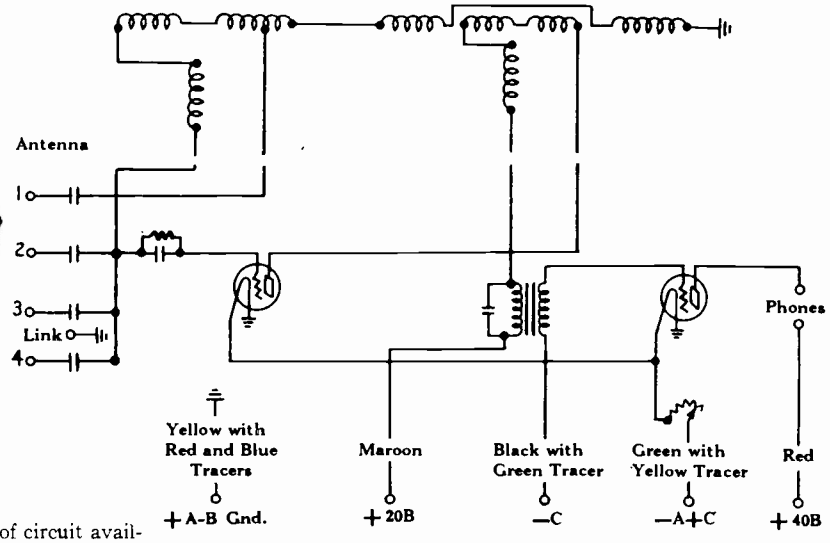


Radiola Grand



RADIOLAS III, III-A AND BALANCED AMPLIFIER

Radiola III



—Diagram of Connections

Antenna Binding Posts—There are two types of circuit available. One is a straight single tuning circuit noted for its sensitivity and ease of operation. The other is a type of coupled circuit affording more selectivity. Either may be had at will by connecting the antenna to the proper binding post and putting the link in the proper position. Fig. 3 shows the suggested combinations which have the following properties.

No. 1—Antenna on 4, link open. This is a single circuit connection which on an average antenna will cover the approximate wavelength range of 200 to 360 meters corresponding to a frequency range of 1500 to 830 kilocycles.

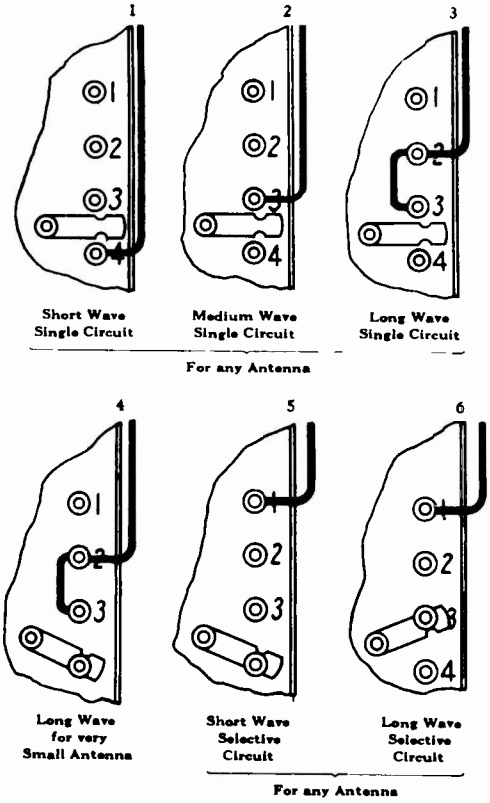
No. 2—Antenna on 3, link open. This is a single circuit connection which on an average antenna will cover the approximate wavelength range of 250 to 480 meters corresponding to a frequency range of 1200 to 625 kilocycles.

No. 3—Antenna on 2 and 3, link open. This is a single circuit connection which on an average antenna will cover the approximate wavelength range of 315 to 560 meters corresponding to a frequency range of 950 to 535 kilocycles.

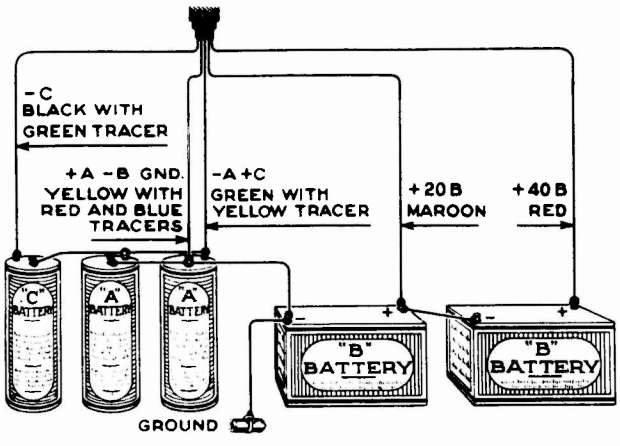
No. 4—Antenna on 2 and 3, link on 4. This is a closed single circuit which on a very small antenna, such as an indoor one, will cover the approximate wavelength range of 290 to 575 meters corresponding to a frequency range of 1070 to 520 kilocycles.

No. 5—Antenna on 1, link on 4. This is a selective single circuit connection which on an average antenna will cover the approximate wavelength range of 195 to 375 meters corresponding to a frequency range of 1540 to 800 kilocycles.

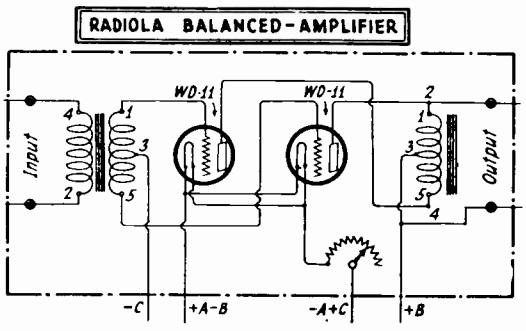
No. 6—Antenna on 1, link on 3. This is a selective single circuit connection which on an average antenna will cover the approximate wavelength range of 310 to 640 meters corresponding to a frequency range of 970 to 470 kilocycles.



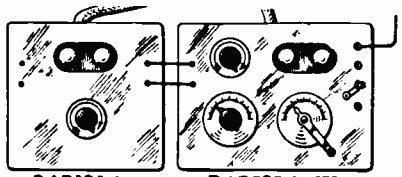
—Showing Antenna Connections to Different Binding Posts



—Battery Connections

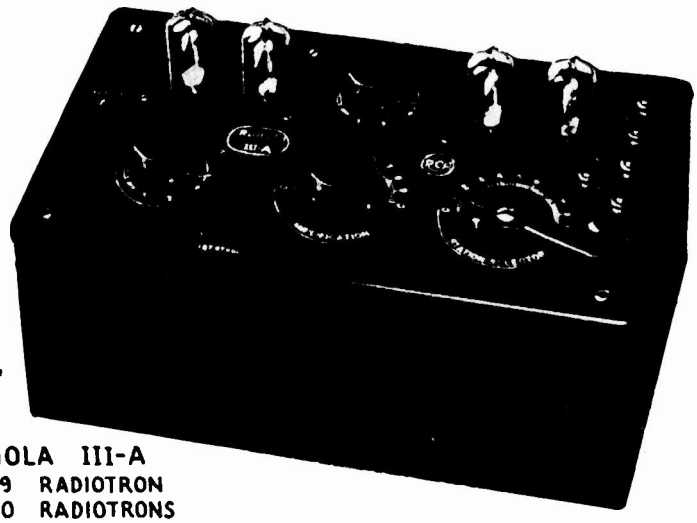


RADIOLAS III, III-A & BALANCED-AMPLIFIER



RADIOLA
BALANCED-AMPLIFIER

RADIOLA-III



RADIOLA III-A
1 UX-199 RADIOTRON
3 UX-120 RADIOTRONS

Radiola III-A

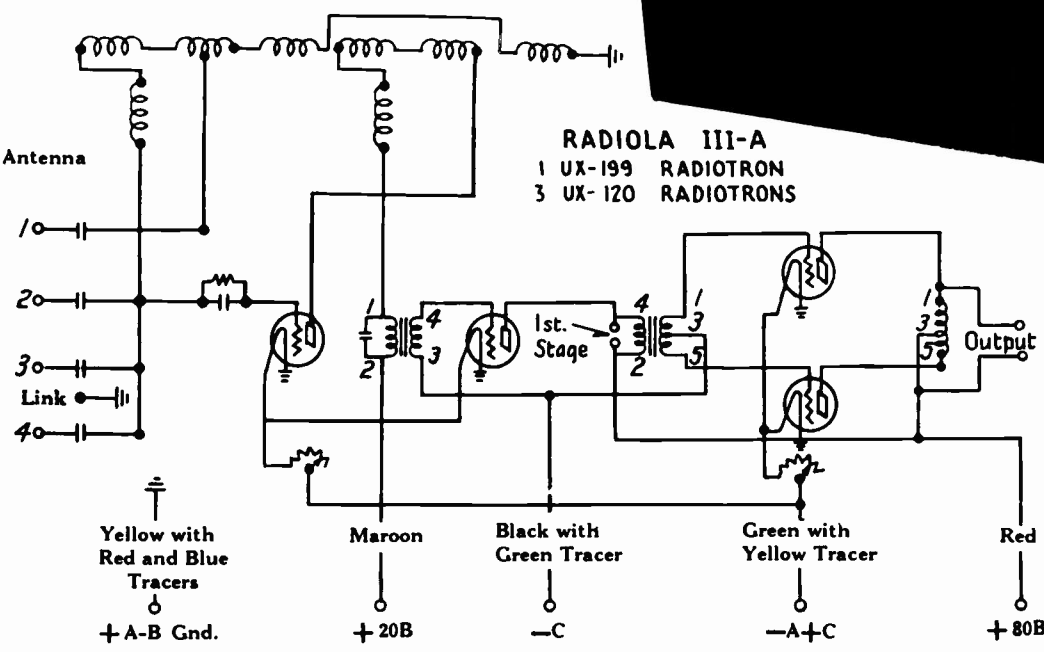
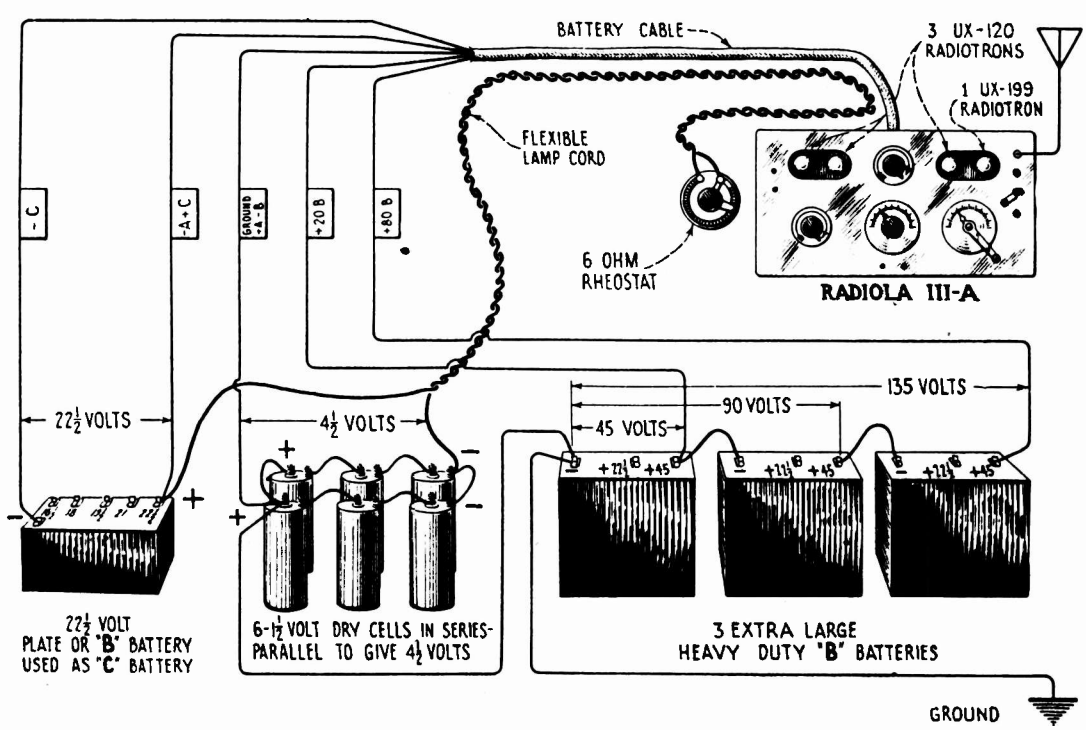
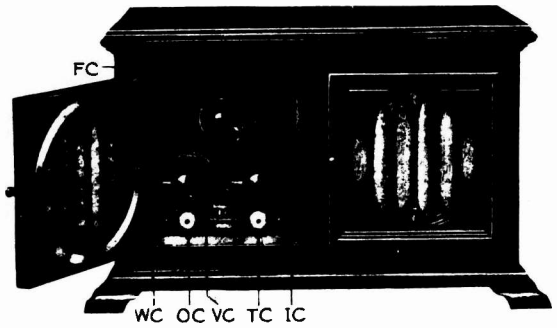


Diagram of Connections

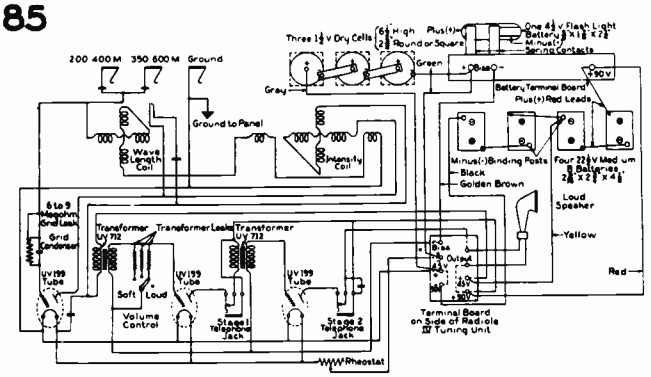


RADIOLA IV & RADIOLA V

MODEL AR-885



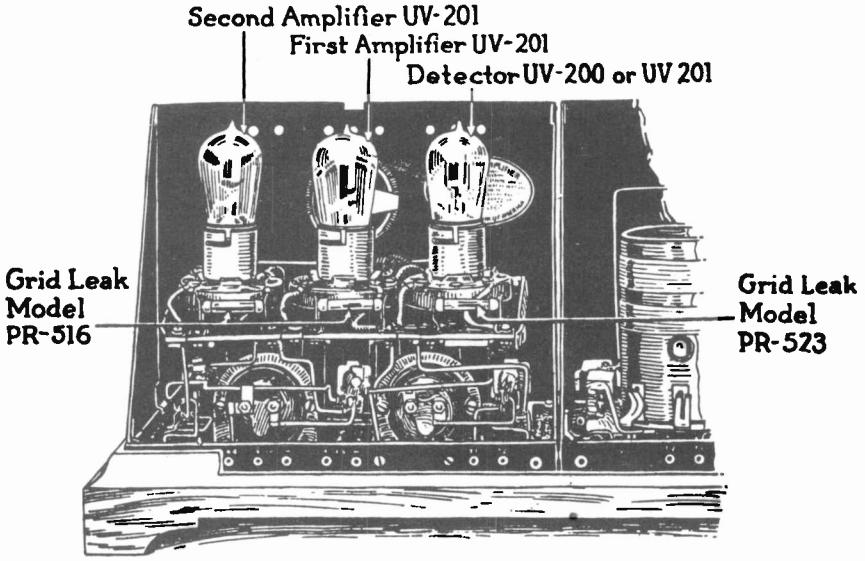
Front View of Control Panel

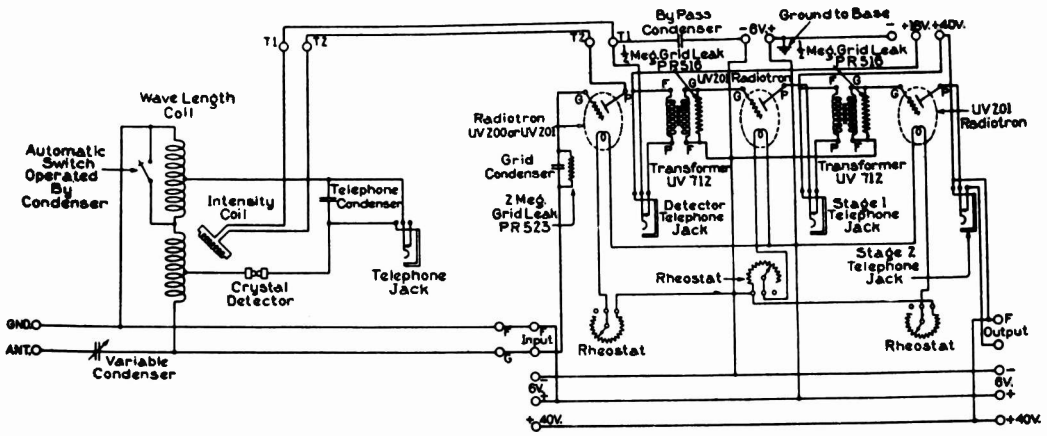


Schematic Wiring Diagram of Radiola IV

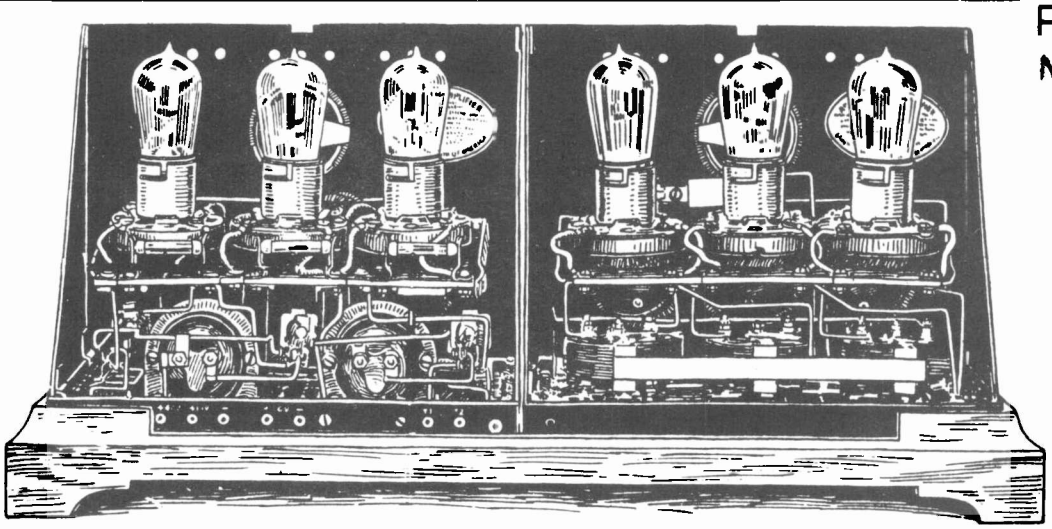
There are two antenna jacks, one for wavelengths between 200 and 400 meters, and one for wavelengths between 350 and 600 meters.

RADIOLA V, when used with an average antenna, will receive radio telephone and telegraph signals of any wavelength between 180 and 700 meters. By the use of the easily installed longwave coil system (Model UL-1340), the set can be changed to receive wavelengths of from 650 to 1150 and 1450 to 2800 meters. A regenerative tuning system, vacuum tube detector, and two stages of audio frequency amplification are provided. For head telephone reception from nearby broadcasting stations, a sensitive mineral detector is supplied.





RADIOLA VI
MODEL AR-895



AA-1400 MODIFIED
FOR "C" BATTERY OF 4½ VOLTS
(DET. AUDIO FREQUENCY UNIT)

AA-1520
3 STAGE R. F. AMPLIFIER UNIT

RADIOLA VI provides three stages of RADIO FREQUENCY AMPLIFICATION, a VACUUM TUBE DETECTOR, and two stages of AUDIO FREQUENCY AMPLIFICATION over a wavelength range of from 200 to 5000 meters. It is designed for use on a loop antenna with a parallel variable air condenser for tuning purposes.

This method of radio receiving combines the advantages of directivity with a minimum of interference from static, and local electrical disturbances. The use of a loop eliminates the necessity of erecting an outdoor antenna.

Set the wavelength switch knob in the lower left corner to the proper position, pulling it out to receive wavelengths between 200 and 500 meters, and pushing it in for wavelengths between 500 and 5000 meters.

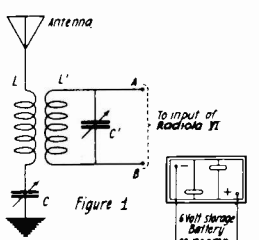
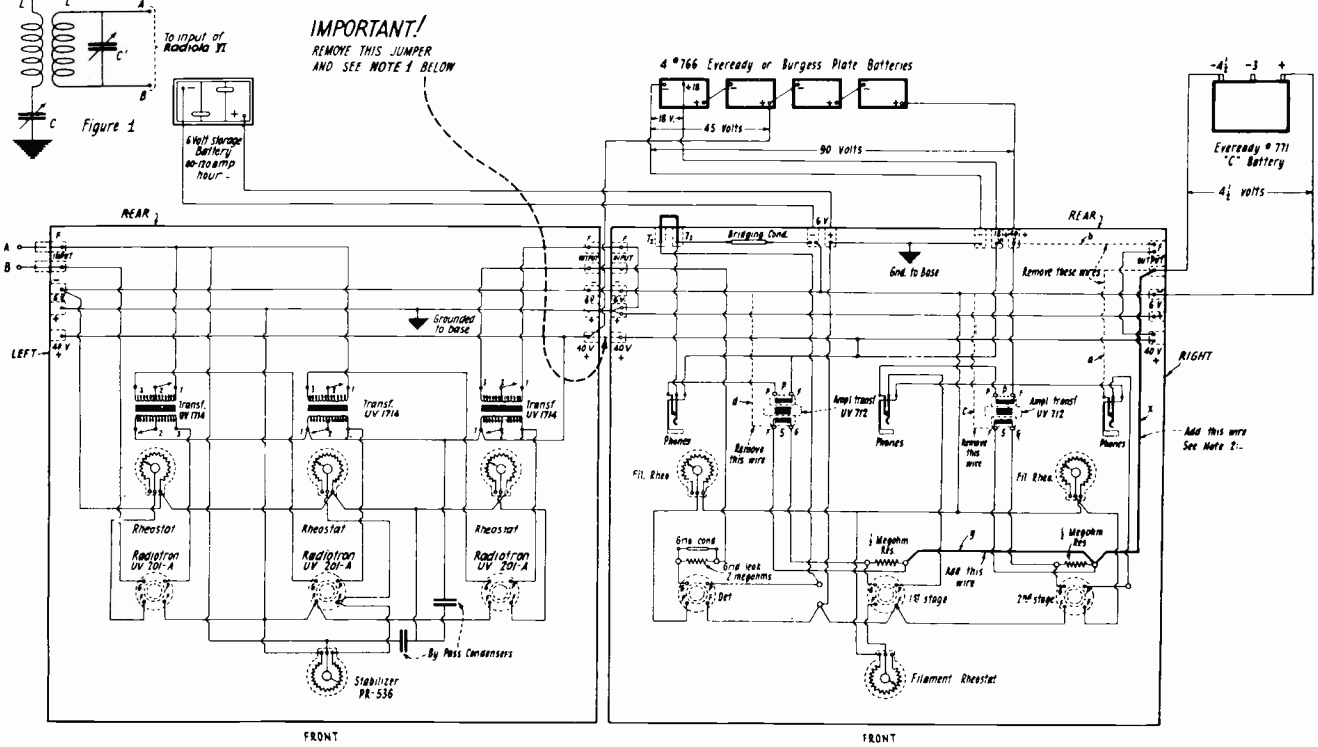


Figure 1



RADIOTRONS AND PLATE VOLTAGES

USE	3	UV-201-A	RADIOTRONS	FOR	AA-1520 RADIO FREQUENCY UNIT..	PLATE VOLTAGE	45	VOLTS..
USE	1	UV-200	RADIOTRON	FOR	DETECTOR..	PLATE VOLTAGE	18	VOLTS..
USE	2	UV-201-A	RADIOTRONS	FOR	AUDIO FREQUENCY AMPLIFIER..	PLATE VOLTAGE	90	VOLTS..

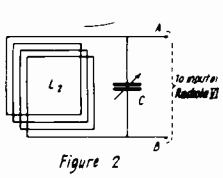


Figure 2

Note 1:- It is extremely important to remove this strap, thus dividing the plate voltage supply between the AA-1520 and AA-1400 Units.. Use 45 volts only on the AA-1520 unit; and 90 volts (with 4½ V "C" battery) on two audio amplifier Radiotrons.

Note 2:- Remove wires a-b-c-d
Add wires x and y

COMPLETE CONNECTIONS FOR RADIOLA VI
With Detector-Amplifier Unit (AA-1400) Modified
To Permit Use of 4½ Volt "C" Battery
ARRANGED FOR EITHER ANTENNA OR LOOP RECEPTION

RADIOLA VII & VII-B

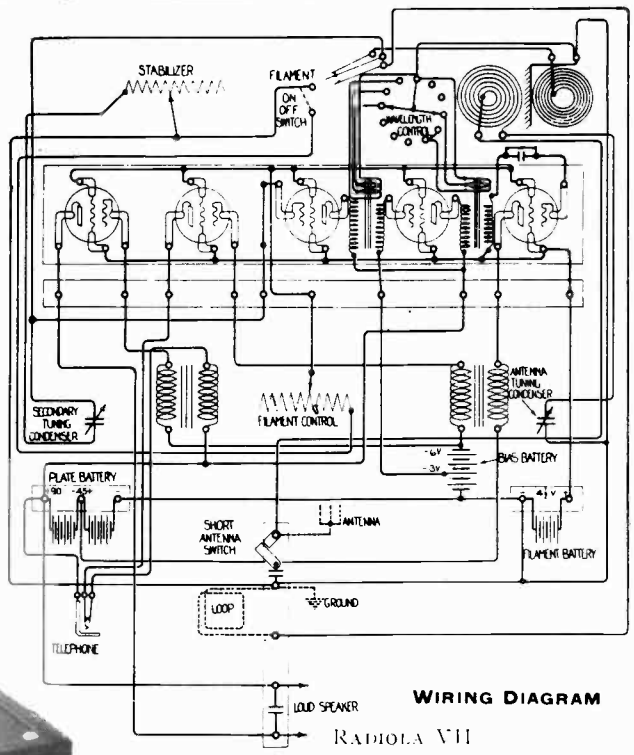
Radiola VII is a new type of radio receiver, designed for use with Radiotron UV 199, which operates entirely from dry cells. Electrically, it consists of a highly selective 2-circuit tuner and a 5-tube detector-amplifier, self-contained and ready to connect to antenna and ground (or to a loop antenna), and a loud speaker.

The design is such that all batteries are contained within the cabinet.

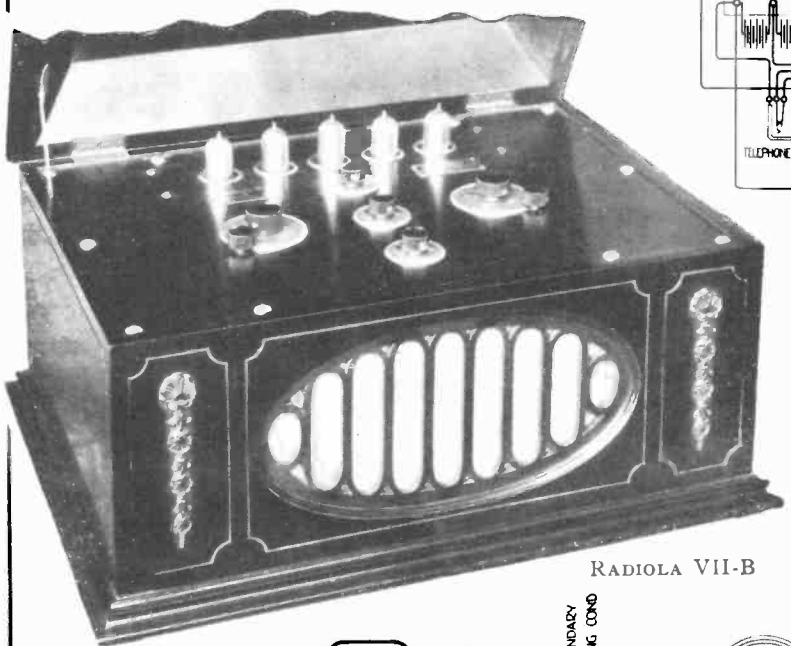
Radiola VII-B is a complete receiving unit comprising a set with its batteries and loud speaker mounted within an attractive cabinet.

Electrically, Radiola VII-B consists of a highly selective two circuit tuner, with detector and radio-audio amplifier, using five UV-199 Radiotrons. These tubes are dry-cell operated and all necessary "A," "B" and "C" batteries are contained within the cabinet, and connected to the receiver by a multi-conductor cable.

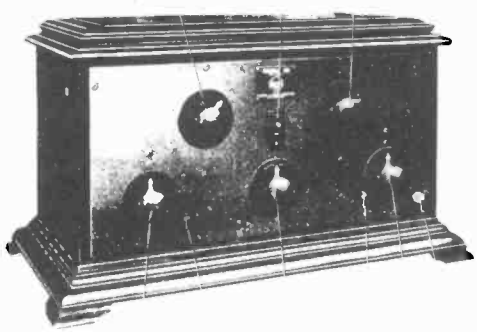
The wave-length range of the Radiola VII-B covers the broadcasting band of 220 to 550 meters and through the use of specially designed radio frequency transformers practically equal sensitivity is secured over the entire wave-length band. Good results may be

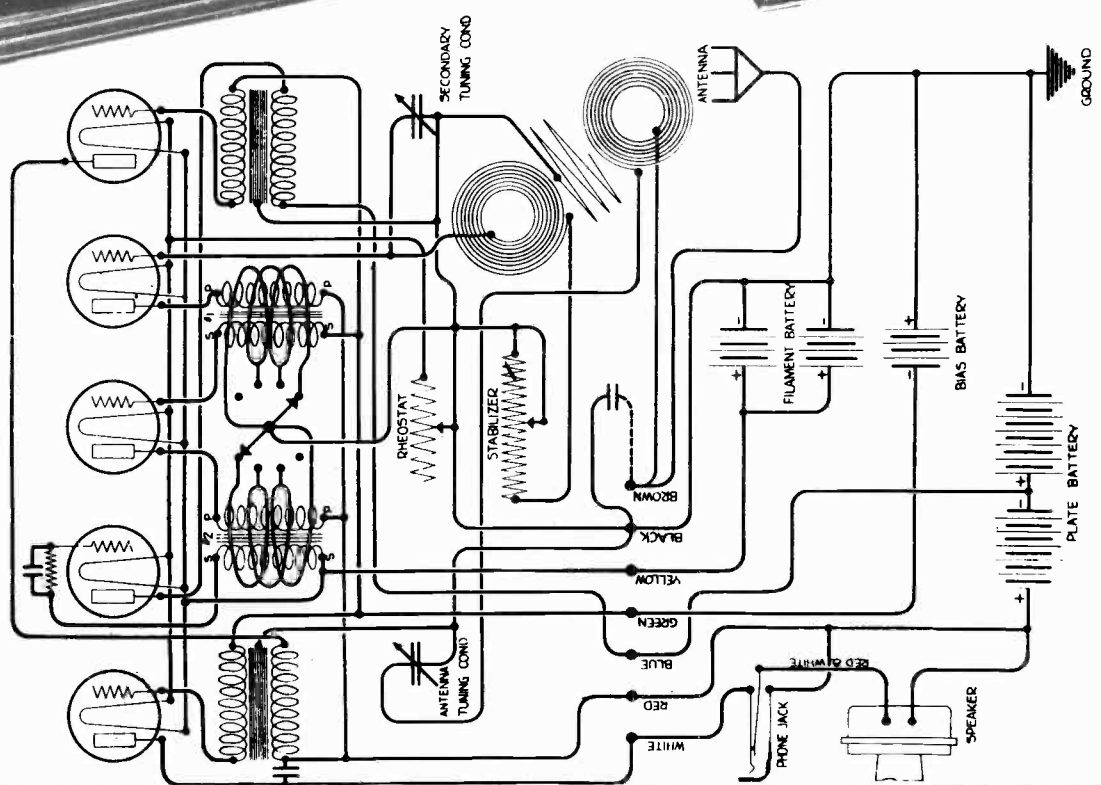


WIRING DIAGRAM
RADIOLA VII



RADIOLA VII-B

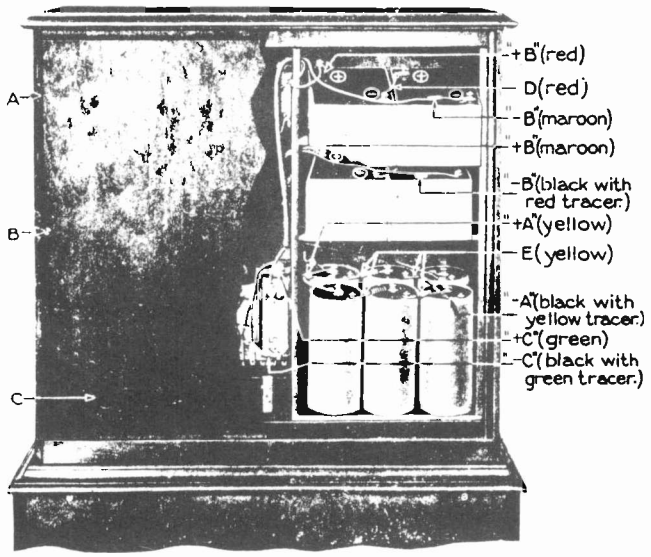




SCHEMATIC WIRING DIAGRAM RADIOLA VII-B

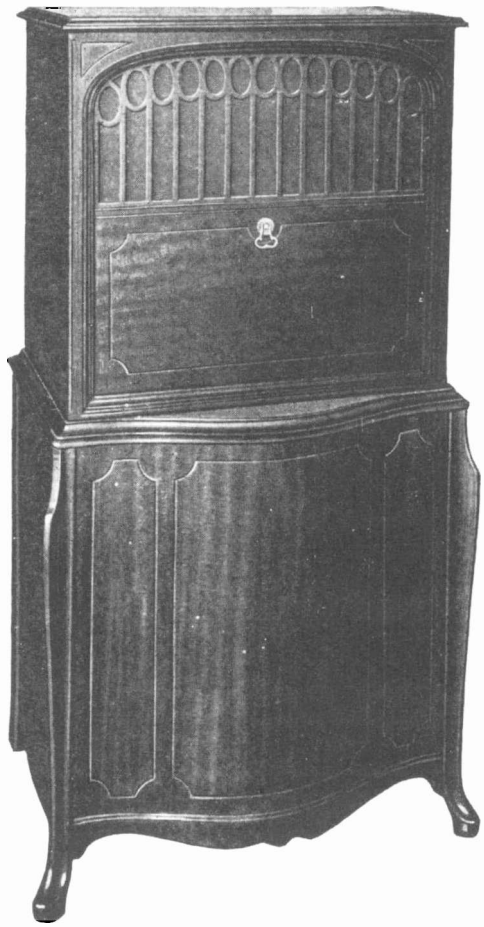
RADIOLA SUPER-VIII

RADIOLA SUPER-VIII is a radio broadcast receiving instrument, utilizing the Super-Heterodyne principle which provides unusual simplicity of operation, selectivity and sensitivity. The cabinet contains the operating mechanism, a loud speaker, and the battery equipment, as well as a loop antenna, making the set *completely* self-contained. It is designed for reception over the broadcast wavelength band 220 to 550 meters (approximately 550 to 1350 kilocycles).

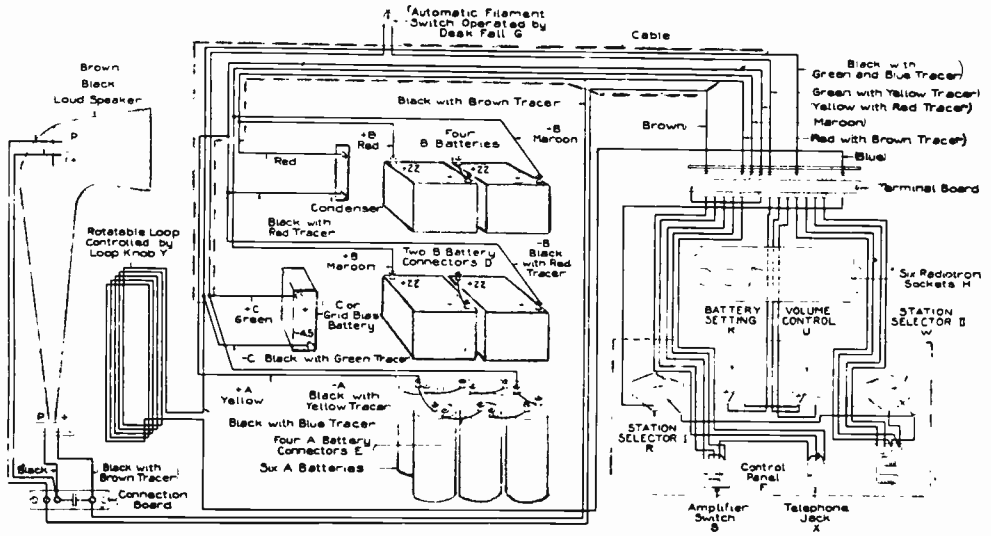


Rear View, Showing Battery Connections

A—Upper Rear Panel
B—Screws Holding Upper Rear Panel
C—Thumb-hole in Upper Rear Panel
D—Two "B" Battery Connectors (red)
E—Four "A" Battery Connectors (yellow)



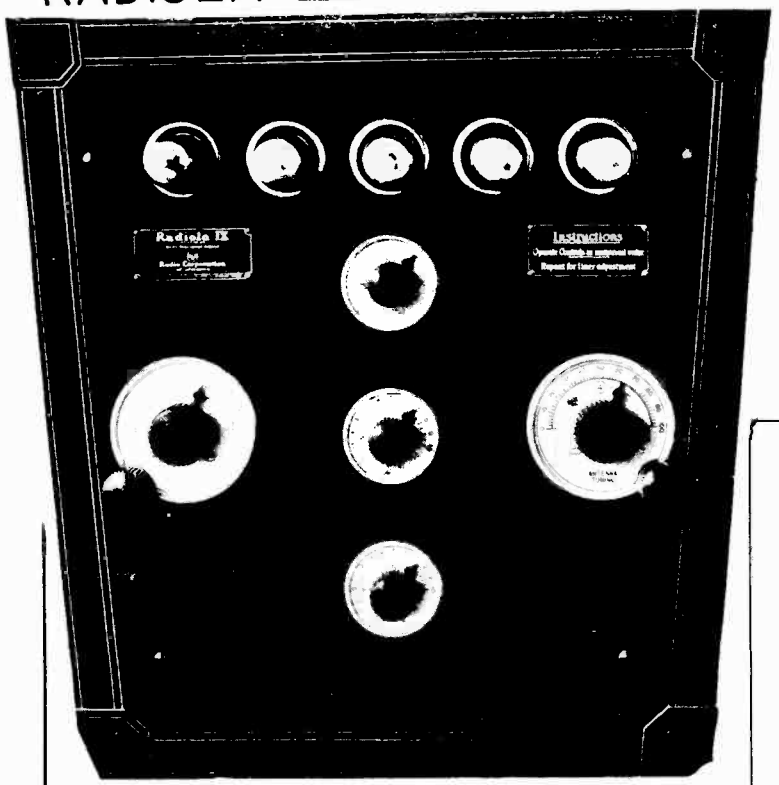
Radiola Super-VIII



Connection Diagram of Radiola Super-VIII

REFER TO RADIOLA 24 FOR ADDITIONAL INFORMATION

RADIOLA IX

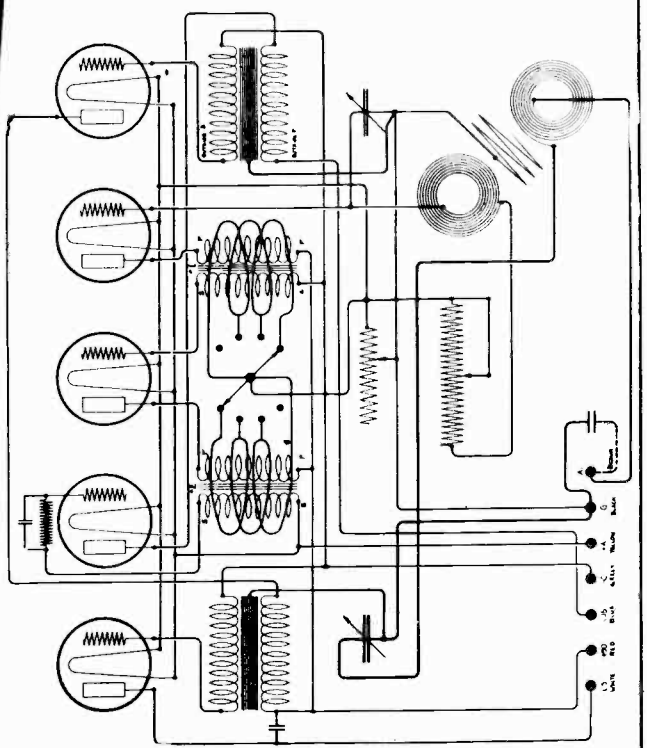


FRONT VIEW RADIOLA IX

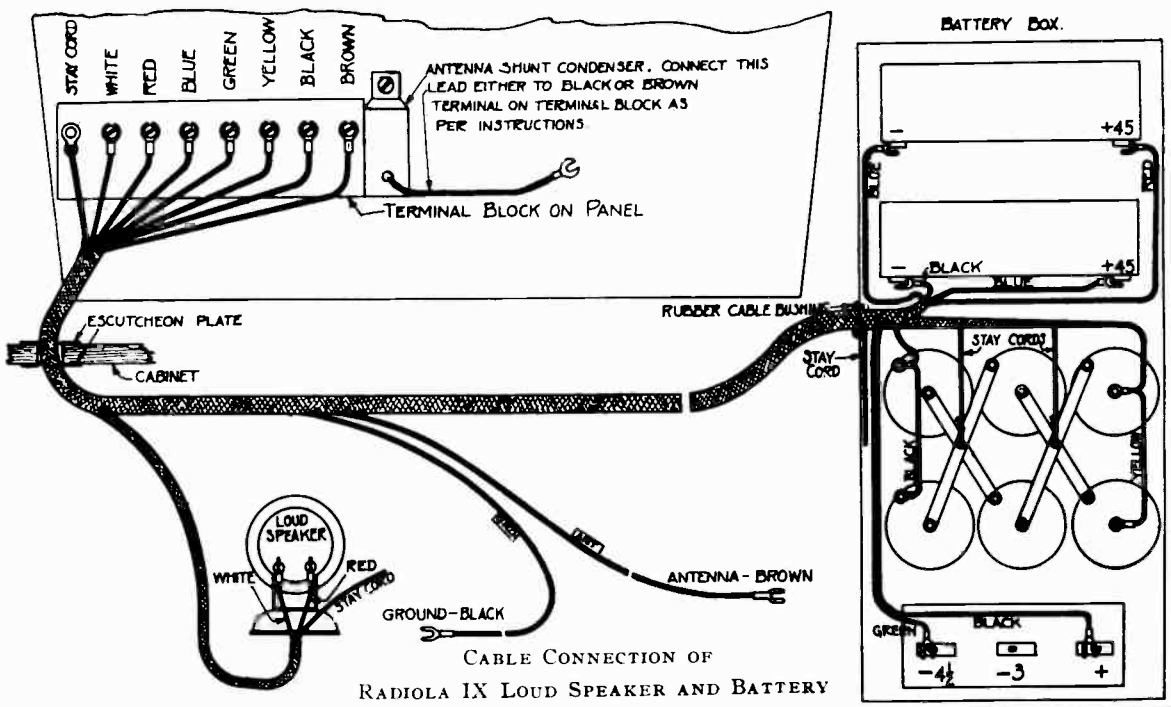
Radiola IX is designed to be used in combination with a phonograph. It is so constructed that it may be placed in the lid, in the record cabinet or in the upper left section of console models.

Electrically, Radiola IX consists of a highly selective two circuit tuner, with detector and radio-audio amplifier, using five UV-199 Radiotrons. These tubes are dry-cell operated and all necessary "A," "B" and "C" batteries are contained in a separate battery box furnished with the receiver, and connected to the receiver by a multi-conductor cable. The amplifier supplies energy to a loud-speaker unit which has a special attachment for connection to the tone arm of the phonograph, thus preserving good quality of reproduction through the original tone arm and horn of the phonograph. Local signals produce an extraordinary volume for dancing purposes.

The wave-length range of the Radiola IX covers the entire broadcasting band of 220 to 550 meters.

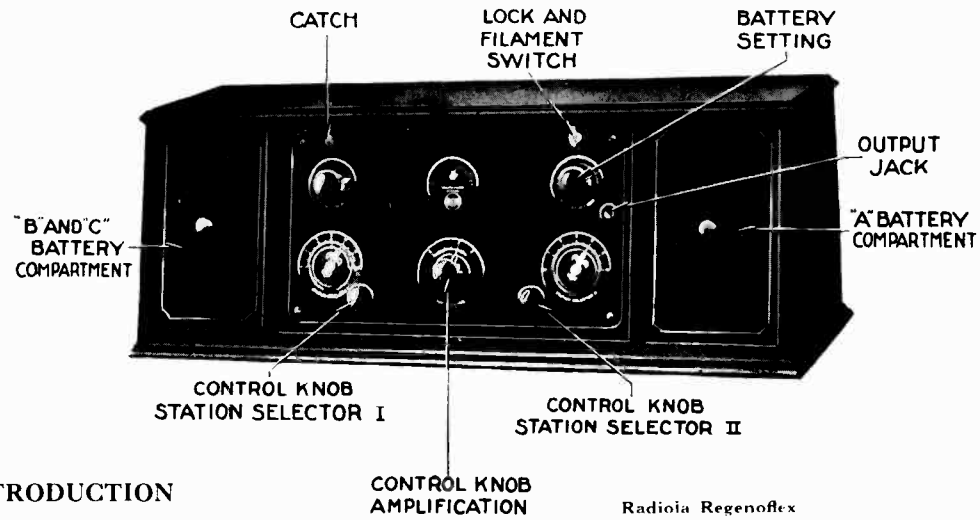


SCHEMATIC WIRING DIAGRAM OF RADIOLA IX



CABLE CONNECTION OF RADIOLA IX LOUD SPEAKER AND BATTERY

RADIOLA X & REGENOFLEX



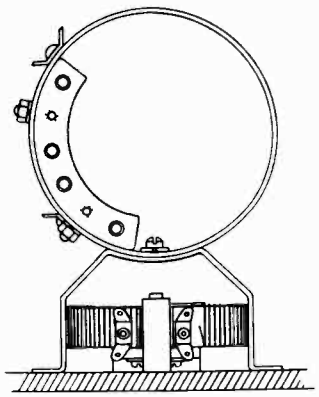
Radiola Regenoflex

INTRODUCTION

The Radiola X Receiver using four WD-11 Radiotrons is a complete radio receiving set with self-contained loud speaker and provision for internal batteries, mounted in an attractive mahogany cabinet.

The Radiola Regenoflex Receiver, using four WD-11 Radiotrons, is a complete radio receiving set with self-contained batteries mounted in an attractive mahogany cabinet and contains everything necessary for operation, except the loud speaker, antenna and ground connections and the necessary batteries. It is designed especially for broadcast reception and will tune to all frequencies between 1400 and 540 kilocycles (220 to 550 meters).

Circuit—The circuit employed is the newly developed "REGENOFLEX" circuit which eliminates radiation and gives excellent sensitivity and selectivity. The REGENOFLEX circuit combines radio frequency amplification, regeneration, audio amplification and freedom from radiation.



View Showing Top of Antenna Coil

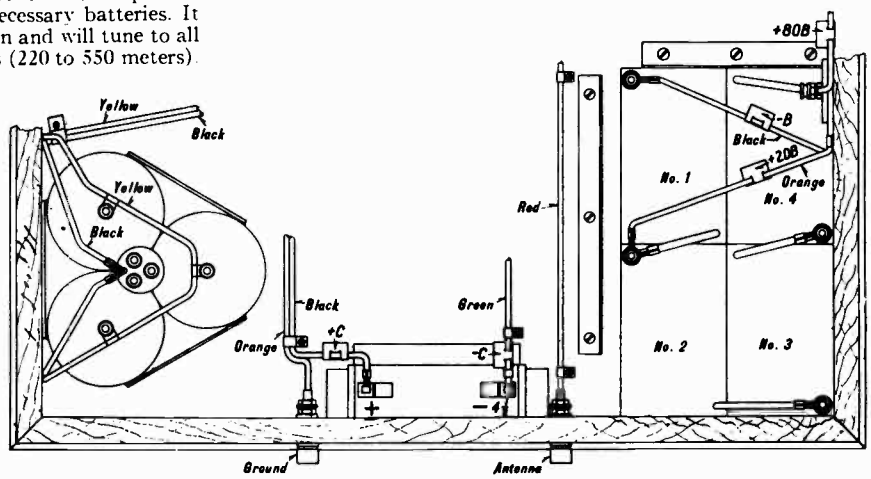
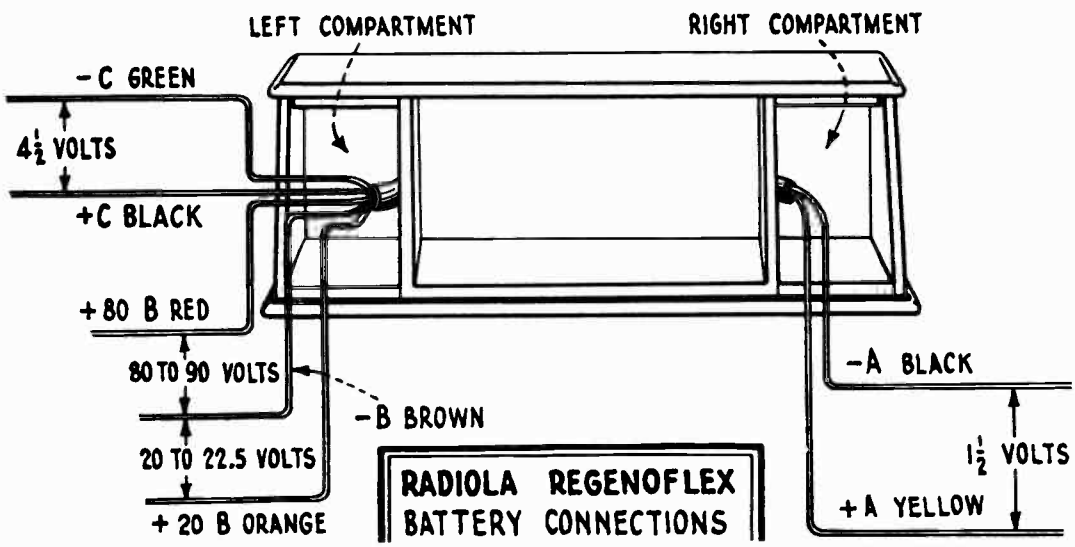
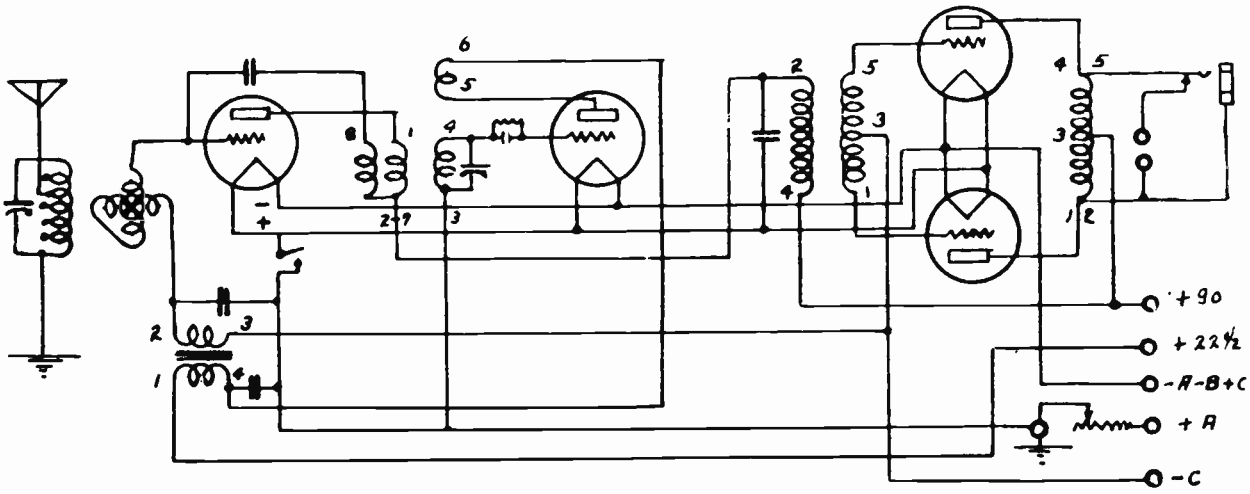


Diagram of Battery Connections

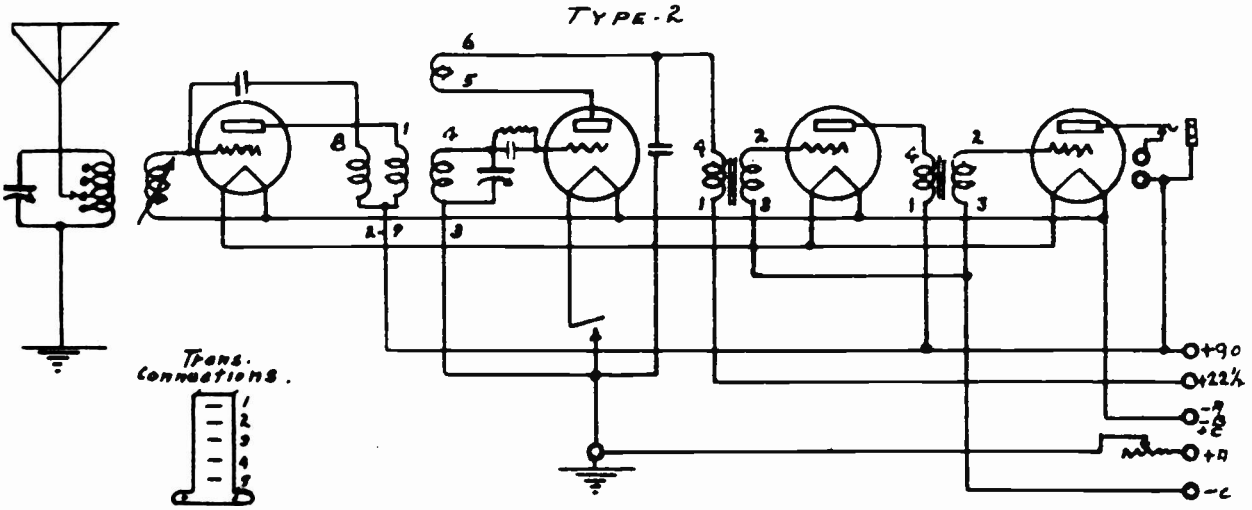


RADIOLA X & REGENOFLEX

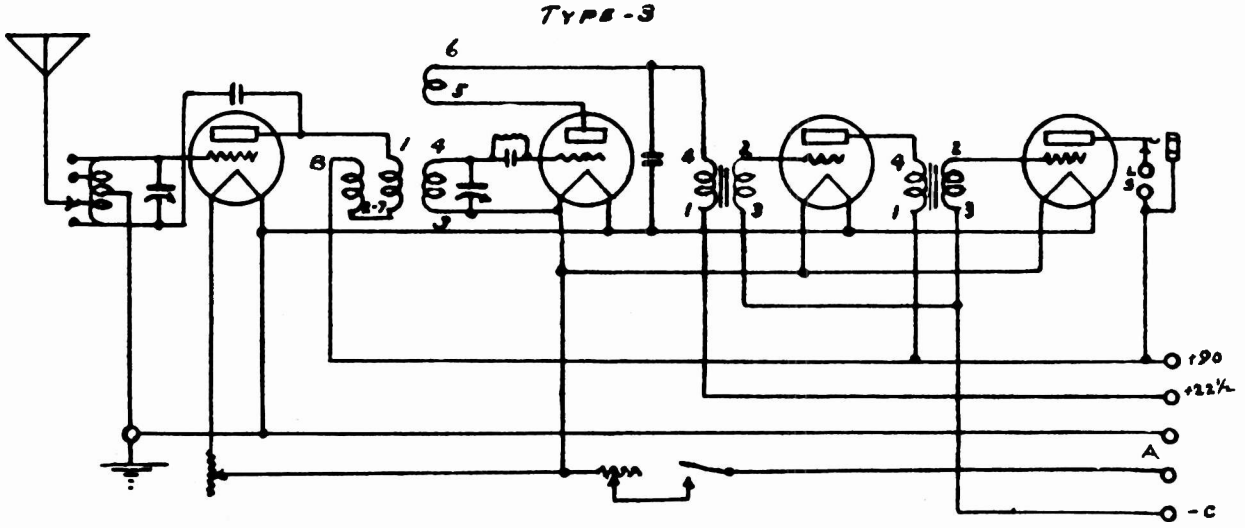
TYPE-1



TYPE-2



TYPE-3



SCHEMATIC DIAGRAMS FOR R-X AND REGENOFLEX

MODELS MB-1, MB-2, MB-3, SR-1, SR-2 & SR-3

TWO SPEED REPLACEMENT MOTOR BOARDS NOS. 1, 2 AND 3

REPLACEMENT PARTS

Stock No.	DESCRIPTION
2758	Cup - Needle cup.
2908	Spring - Pawl carrier spring.
3157	Gear - Driving gear - Located on turntable spindle above top plate.
3159	Friction brake - Gear reducing friction brake spring with pad.
3160	Escutcheon - Speed escutcheon plate with mounting screws.
3161	Spring - Shift lever spring.
3211	Washer - Turntable spindle leather washer.
3212	Spring - Turntable spindle plunger spring.
3278	Bearing - Rotor shaft fibre thrust bearing and cork button.
3279	Screw and nut - Rotor shaft thrust bearing adjusting screw and lock nut.
3280	Washer - Metal washer - Located on turntable spindle underneath gear reducing unit.
3281	Pawl - Gear reducing pawl with mounting stud
6119	Stud - Motor hanging stud.
6120	Screw - For holding turntable spindle bearing and grease cap.
6121	Bearing - Turntable spindle bearing and grease cap.
6194	Weight - Counter balance weight - Complete with two mounting rivets - For suspension type pickup arm.
6195	Weight - Counter balance weight complete with mounting screw and nut - For inertia type pickup arm.
7084	Turntable covering.
7305	Gear - Gear reducing unit complete.
7388	Spindle - Turntable spindle with fibre gear - 60 cycles.
7389	Rotor and shaft - 60 cycles.
7390	Motor mounting washer and spring - Comprising 3 "C" washers, 9 cup washers and 6 springs
7400	Spincle - Turntable spindle with fibre gear - 25 cycles.
7401	Rotor and shaft - 25 cycles.
7443	Rotor and shaft - 50 cycles.
7444	Spindle - Turntable spindle with fibre gear - 50 cycles.
8731	Lever - Shift lever assembly complete.
8733	Turntable - Turntable with cover.
8795	Motor - Motor complete - 110 volts - 60 cycles
8800	Motor - Motor complete - 110 volts - 25 cycles
8856	Motor - Motor complete - 110 volts - 50 cycles

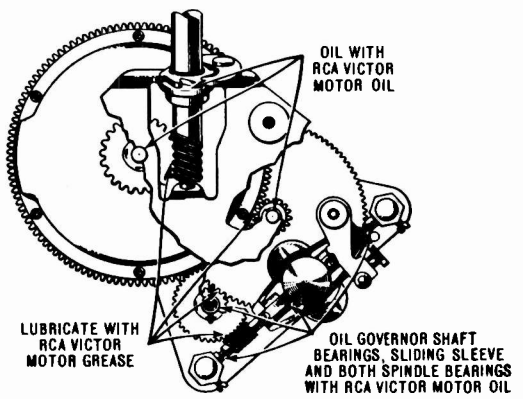
DUAL-SPEED TURNTABLE MODELS SR-1, SR-2 AND SR-3

REPLACEMENT PARTS

Stock No.	DESCRIPTION
3338	Ring - Clamp ringassembly - Comprising spring, latch lever and stud (SR-1, 2 and 3).
3339	Sleeve - Sleeve complete with ball race (SR-2 only).
3340	Washer - Thrust washer (SR-1, 2 and 3).
3341	Pin - Groove pin (SR-1, 2 and 3).
3342	Spring - Latch spring located on clamping ring (SR-1, 2 and 3).
3343	Sleeve - Sleeve assembly complete with ball race (SR-1 and 3).
3343	Cover - Grease retainer cover (SR-1, 2 and 3).
3345	Lever - Speed shifter lever with mounting screws (SR-1, 2 and 3).
3346	Bushing - Speed shifter lever bushing - (SR-1, 2 and 3).
3347	Spring - Speed shifter lever spring (SR-1, 2 and 3).
3348	Bushing - Turntable drive bushing with set screw (SR-2 only).
3349	Weight - Counter weight for inertia arm (SR-1 and 2).
3350	Weight - Counter weight for straight arm (SR-3)

MODELS 2-19 & 2-25
Portable Victrola

STOCK No.	MODEL 2-19 DESCRIPTION
2872	Governor ball and spring assembly—Comprising ball, spring mounting screws, and washers
2937	Gear—Winding gear and sleeve
2947	Leather—Friction leather for brake
4107	Brake—Turntable brake and bracket
4108	Lever—Speed regulator lever
4109	Cup—Needle cup
4110	Holder—Needle holder
4111	Cap—Turntable spindle cap
4112	Plate—Speed regulator plate
4113	Bracket—Sound box rest bracket
4114	Support—Lid support
4115	Screw and washer—Motor board mounting screw and washer—
4116	Catch—Cabinet catch complete with mounting rivets—
4117	Strap—Record pocket strap assembly
4118	Screw—Needle holding screw—
6837	Key—Winding key
6838	Handle—Carrying handle
6839	Extension—Winding shaft extension
6933	Sound box—Complete with needle screw
7210	Spindle—Turntable spindle with pins and ball bearing—Less gear
7211	Gear—Turntable spindle gear complete, with set screw
7214	Governor assembly — Comprising governor spindle, disc, sleeve, collar, governor balls and springs
7719	Board—Motor board with horn—Less hardware and motor—Green
7720	Arm—Tone arm assembly
7721	Turntable—Green
7722	Turntable—Blue
7723	Board—Motor board and horn—Less hardware and motor—Blue
7729	Plate—Top plate assembly
7730	Motor—Motor complete with spindle cap
8655	Barrel—Spring barrel assembly
8656	Spring—Mainspring
8657	Gear—Intermediate gear pinion and shaft
8658	Shaft — Winding shaft — Comprising shaft, collar, pin, ratchet, and washer — Less winding extension
10116	Spring—Brake spring—



Stock No.	MOD. 2-25 DESCRIPTION
2872	Governor ball and spring assembly—Comprising ball, spring, mounting screws and washers—Package of 5
2935	Lever—Speed regulator lever complete with stud and spring—Package of 2
2936	Spring—Speed regulator lever spring—
2937	Gear—Winding gear and sleeve
2943	Cap—Turntable spindle cap screw—
2944	Screw—Sound box needle screw—Pack-
2947	Leather—Friction leather for brake—
3361	Hook—Tone arm and crank hook
3362	Hinge—Cabinet hinge with mounting screws—Package of 2
3363	Lock—Lid lock with mounting screws
3364	Extension—Winding shaft extension
3365	Handle—Carrying handle complete with bracket and mounting rivets
3366	Scale—Speed regulator scale complete with mounting screws
3367	Holder—Needle holder
6930	Sound box—Complete with needle screw
7210	Spindle—Turntable spindle complete with pins and ball bearing—Less gear
10190	Brake—Turntable hand brake—Pack-
7211	Gear—Turntable spindle gear complete with set screw
7214	Governor assembly—Comprising governor spindle, disc, collar, governor balls and springs
7216	Key—Winding key
7447	Plate—Top plate assembly comprising top and bottom plates complete
7507	Turntable—Complete with covering
7508	Tube—Taper tube with pivot pin—Less sound box—Used with sound box No. 6930
8655	Barrel—Spring barrel complete with main spring and driving gear—Less winding gear
8656	Spring—Main spring
8657	Gear—Intermediate gear complete with pinion and shaft
8658	Shaft — Winding shaft — Comprising shaft, collar, pin, ratchet and washer —Less winding extension
8661	Motor—Motor complete with spindle cap

Model 2-65
Portable Victrola

AUTOMATIC STOP MECHANISM

The Automatic Stop Mechanism is simple of design and effective in operation. Figure 2 shows its principal parts.

Failure to Start. Should pulling the tone arm to the right and then placing the sound box on the record fail to start the motor, it may be due to:

(a) Improper location of base plate. Loosen the screws A, B, and C and shift position of mechanism counter-clockwise until proper operation is secured.

(b) Worn or rounded surfaces at point D. Square these points with a small file.

(c) Insufficient tension at spring E. Remove a few turns or replace spring.

Failure to Trip. Should the mechanism fail to stop the motor at the end of a Victor record having the eccentric groove, check the following:

(a) Improperly adjusted base plate. Loosen screws A, B, and C and shift the mechanism clockwise until proper operation is obtained.

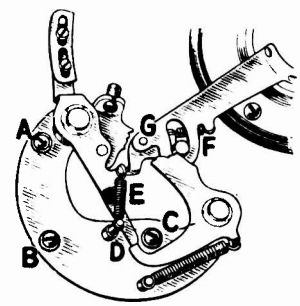
(b) Loose or improperly adjusted latch plate.

(c) Insufficient tension at spring F. Remove several turns or replace spring.

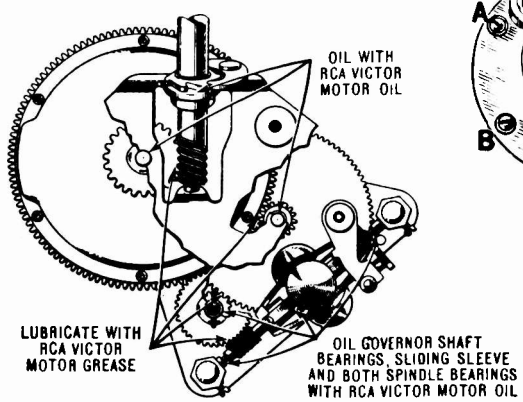
Tripping during Operation. Premature tripping during the operation of a record may be caused by:

(a) Binding at bearing G. Clean and lubricate this bearing.

(b) Insufficient bite at point D. Loosen the screws A, B, and C and adjust the base plate so that a larger bite is obtained at point D.



Automatic Stop Mechanism

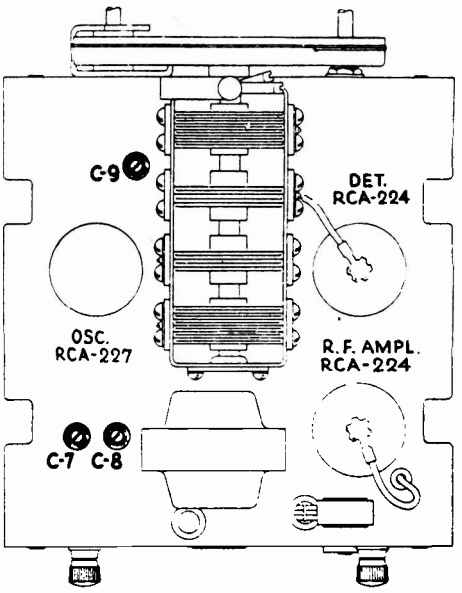


Lubrication Diagram of Model 2-65

REPLACEMENT PARTS

STOCK NO.	DESCRIPTION
2872	Governor Ball and Spring—Governor ball and spring assembly comprising ball, spring, mounting screws and washers—Package of 5
2916	Plate—Latch Plate complete with mounting screws—Package of 5
2933	Holder—Needle Holder complete with mounting screw—Package of 2
2935	Lever—Speed Regulator Lever complete with stud and spring—Package of 2
2936	Spring—Speed Regulator Lever Spring—Package of 10
2937	Gear—Winding Gear and sleeve
2938	Governor Bearing Assembly—Governor bearing, comprising 2 bearings, 2 set screws and 2 balls—Package of 3 sets
2939	Screw—Motor Mounting Screw complete with washer—Package of 2 sets—Not illustrated
2940	Lever—Speed Regulator Lever complete with springs, washers and nut—Package of 2
2941	Spring—Automatic Brake Springs—one set of 3 springs
2942	Screws—Motor Board Mounting Screws complete with finishing washers—Package of 10
2943	Cap—Turntable spindle cap screw—Package of 5
2944	Screw—Sound Box Needle Screw—Package of 20—Not illustrated
2945	Rest—Rubber Needle Rest—Package of 5
2947	Leather—Friction Leather for Brake—Package of 20
2948	Rivet—Driving Gear Rivet—Package of 100
7210	Spindle—Turntable Spindle complete with Pin and Ball Bearing—less gear
7211	Gear—Turntable Spindle Gear complete with set screw
7212	Catch—Cabinet Catch, two pieces, complete with mounting rivets—Package of 2
7213	Extension—Winding Shaft Extension
7214	Governor Assembly—Governor Assembly, comprising governor spindle, disc, collar, governor balls and springs
7215	Brake—Automatic Brake complete with mounting screws
7216	Key—Winding Key
7219	Handle—Carrying Handle complete with bracket and mounting rivets
7226	RCA Victor Motor Oil—1 pint can
7227	RCA Victor Motor Grease—1 pint can
7228	RCA Victor Spring Lubricant—1 pint can
8655	Barrel—Spring Barrel complete with mainspring and driving gear—less winding gear
8656	Spring—Mainspring—Not illustrated
8657	Gear—Intermediate Gear complete with pinion and shaft
8658	Shaft—Winding Shaft, comprising shaft, collar, pin, ratchet and washer—less winding extension
	SPECIAL PARTS SUPPLIED ON ORDER ONLY (NOT TO BE STOCKED)
2934	Scale—Speed Regulator Scale complete with mounting screw—Package of 5
2949	Hinge—One set of 2 hinges complete with mounting screws and rivets
6926	Sound Box—Sound Box complete with needle screw
7218	Support—Lid Support with mounting screws, package of 2—Not illustrated
7220	Tray—Record Carrying Tray
7221	Deflector—Sound Deflector
8659	Tube—Taper tube complete with goose neck and mounting screw—less sound box—Blue
8660	Turntable—Turntable complete with covering—Blue
8661	Motor—Spring motor complete with spindle cap screw—less mounting screws
8666	Tube—Taper Tube complete with goose neck and mounting screw—less sound box—Red
8667	Turntable—Turntable complete with covering—Red
9319	Board—Motor Board—Blue
9320	Board—Motor Board—Red
9327	Cabinet—Cabinet complete with handle and catches—less motor board—Blue
9336	Cabinet—Cabinet complete with handle and catches—less motor board—Red

SW-2 & SWA-2 SHORT WAVE CONVERTER



Location of Adjusting Capacitors

Electrical Specifications

Voltage Rating	105–125 Volts and 200–250 Volts
Frequency Rating	50–60 cycles and 25–40 cycles
Power Consumption	20 Watts
Recommended Antenna Length	25–75 feet
Type of Circuit	Super-Heterodyne Converter
Number and Type of Radiotrons	2 UY-224, 1 UY-227

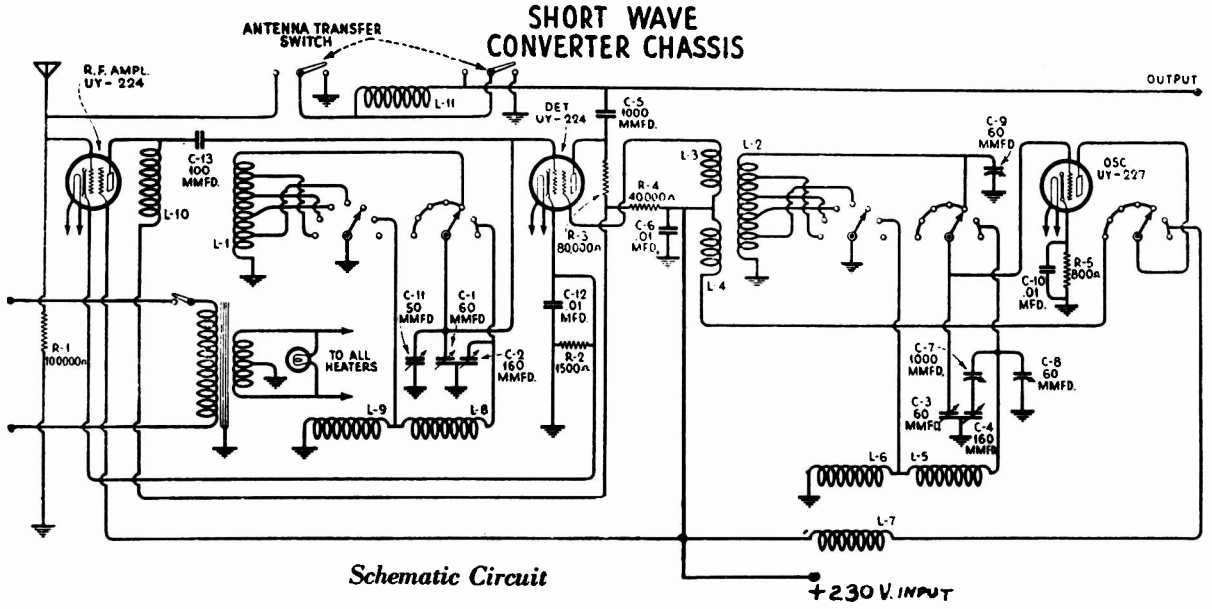
RCA Victor Short Wave Converter SWA-2 is a three tube, single control short wave unit designed to convert all short wave signals from 13.8–200 meters to a single frequency so that they may then be amplified by means of the usual broadcast receiver.

One Radiotron UY-224 is used as an R. F. Amplifying stage, one UY-224 as the detector and one UY-227 as the oscillator. Heater current for these Radiotrons is obtained from a small transformer incorporated in the unit. Plate supply is obtained from the broadcasting receiver.

When Model SWA-2 is used in conjunction with receivers employing a single Pentode output tube, fluttering may occur unless the following precaution is taken.

> Connect two 10 MFD. capacitors in series with their center point grounded to the SWA-2 chassis. Connect one capacitor to the +230 volt input to the converter and the other to the screen grid of the R. F. Amplifier in the Converter. The two capacitors will effectually prevent fluttering when receivers of this type are used.

Due to the SWA-2 being identical with the converter chassis used in the RO-23, reference to the RO-23 Service Notes should be made for data pertaining to Service work.



Schematic Circuit

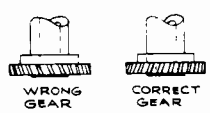
REPLACEMENT PARTS

Stock No.	DESCRIPTION
2872	Ball and spring - Governor ball and spring assembly - Comprising governor ball and spring, washers and screws - Package of 5.
2948	Rivet - Spring barrel driving gear rivet - Package of 100.
6916	Box - Soundbox.
7214	Governor - Governor assembly - Complete - Comprising spindle, collar, friction disc and sleeve, 3 governor balls and 3 springs - Assembled.
10120	Washer - Turntable spindle spring washer - Package of 10.
10129	Ball - Steel ball bearing - 3/16" - Used with turntable spindle - Package of 20.
10187	Lock - Cabinet lock - Complete with keeper, lift tap and 6 rivets.
10188	Handle - Carrying handle - Comprising handle, 2 brackets and 4 rivets.
10190	Brake - Turntable hand brake - Complete - Package of 2.
10191	Plate - Top plate assembly - Comprising top plate, pawl and stud, spring stud and governor bearing.
10192	Spindle - Turntable spindle and pin.
10193	Gear - Turntable spindle gear - Comprising spindle gear and screw.
10194	Ball - Steel ball bearing - 1/4" - Used with winding shaft - Package of 20.
10195	Lever - Regulating lever - Comprising lever, screw and friction leather - Package of 2.
10196	Spring - Regulating shaft spring - Package of 10.
10197	Shaft - Regulating shaft - Less spring - Package of 5.
10198	Shaft - Winding shaft - Comprising shaft, ratchet, extension, lock and thrust washers.
10199	Bearing assembly - Governor bearing assembly - Comprising 2 bearings, 2 steel balls and nut - 3 sets per package.
10200	Gear - Intermediate gear and pinion.
10201	Stud and nut - Intermediate gear stud and nut - Package of 5.
10202	Barrel - Spring barrel - Complete with main spring, driving gear, and washers - Less winding gear and sleeve.
10203	Gear - Winding gear and sleeve.
10204	Tube - Taper tube assembly - Comprising tube, support, gasket and three screws.
10205	Arbor - Barrel arbor with lock washer and nut - Package of 2.
10206	Turntable - Record turntable with cover.
10207	Key - Winding key with handle.
10208	Motor - Spring motor type 108 - Complete - Comprising top plate, turntable spindle and gear, regulating lever, winding shaft, governor, spring barrel and barrel arbor.

VV2-35, VV2-55

Incorrectly Cut Winding Gear:

There is a possibility that several incorrectly cut gears (No. 10203) have reached the field. The gear teeth form a left-hand spiral when viewed from either side, whereas the correct cut is a right-hand spiral.



Winding Gear in VV2-35 and VV2-55

VV 2-55 PORTABLE VICTROLA

REPLACEMENT PARTS

Stock No.	DESCRIPTION
2872	Ball and spring - Governor ball and spring assembly - Comprising ball and spring with 2 washers and 2 screws - Package of 5.
2947	Leather - Friction leather - Package of 20.
2948	Rivet - Spring barrel driving gear rivet - Package of 100.
6912	Box - Sound box.
7214	Governor - Governor assembly - Complete - Comprising spindle, collar, friction disc and sleeve, 3 governor balls and 3 springs - Assembled.
8656	Spring - Main spring.
10129	Ball - Steel ball bearing - 3/16" - Used with turntable spindle - Package of 20.
10191	Plate - Top plate assembly - Comprising top plate, pawl and stud, spring stud, and governor bearing.
10193	Gear - Turntable spindle gear - Complete with set screw.
10194	Ball - Steel ball bearing - 1/4" - Used with winding shaft - Package of 20.
10195	Lever - Regulating lever - Complete with screw and friction leather - Package of 2.
10196	Spring - Regulating shaft spring - Package of 10.
10197	Shaft - Regulating shaft - Package of 5.
10199	Bearing assembly - Governor bearing assembly - Comprising 2 bearings, 2 steel balls and nut - 3 sets per package.
10200	Gear - Intermediate gear and pinion.
10201	Stud and nut - Intermediate gear stud and nut - Package of 5.
10202	Barrel - Spring barrel - Complete with main spring, driving gear and washers - Less winding gear.
10203	Gear - Winding gear and sleeve.
10205	Arbor - Barrel arbor - Comprising arbor, washer and nut - Package of 2.
10208	Motor - Spring motor - Complete - Comprising top plate, spindle, spindle gear, regulating lever, winding shaft, governor, intermediate gear, spring barrel, driving gear and barrel arbor.
10209	Lock - Cabinet lock - Complete with keeper, key, lift tab and 6 rivets.
10210	Lever - Regulator indicator lever - Comprising lever and knob - Package of 3.
10211	Spindle - Turntable spindle and pin.
10212	Shaft - Winding shaft - Comprising shaft, ratchet, extension, lock and thrust washers.
10214	Brake - Eccentric automatic brake - Comprising plate, latch, lever, and springs - Assembled with 2 mounting screws.
10215	Plate - Brake latch plate with 2 mounting screws - Package of 5.
10216	Springs - Automatic brake springs - 2 sets of 4 springs.
10217	Tube - Taper tube - Comprising tube, support, base, ball retainer, latch trip, gasket and 3 mounting screws - Blue
10218	Tube - Taper tube - Comprising tube, support, base, ball retainer, latch trip, gasket, and 3 mounting screws - Red.
10219	Screws - Case screws - Package of 20.
10220	Turntable - Record turntable with cover - Blue.
10221	Turntable - Record turntable with cover - Red.
10222	Cap - Turntable spindle cap - Package of 5.
10223	Key - Winding key with handle.
10224	Cup - Sound box cup.
10225	Handle - Carrying handle - Complete with 2 brackets and 4 rivets.

SPECIAL PARTS FOR MODELS IN GOLD FINISH

6915	Box - Sound box.
10120	Washer - Turntable retaining washer - Package of 10.
10159	Stud - Intermediate gear stud and set screw - Package of 5.
10184	Plate - Brake trip latch plate with 2 mounting screw - Package of 5.
10192	Spindle - Turntable spindle.
10198	Shaft - Winding shaft with extension and thrust washer.
10207	Key - Winding key with handle.
10278	Ball - Steel ball bearing - 3/32" - Package of 20.
10353	Cover - Turntable cover - Brown.
10357	Brake - Automatic brake - Complete - With mounting screws.
10941	Ball - Steel ball bearing - 1/8" - Package of 20.
10950	Cup - Sound box cup.
10951	Cover - Turntable cover - Blue - Package of 2
10953	Turntable - Turntable with cover - Blue.
10954	Turntable - Turntable with cover - Brown.
10955	Pawl - Motor top plate pawl and stud - Package of 4.
10956	Tube - Taper tube complete - Comprising support, base, retainer, ball and tube.
10957	Springs - Brake springs - Set of 3 - Package of 2 sets.
10958	Arbor - Barrel arbor with set screws - Comprising barrel arbor, set screw, grease retainer and retainer screws - Package of 42.
10959	Gear - Spring barrel winding gear.
10960	Gear - Spring barrel drive gear.
10961	Barrel - Spring barrel complete with main spring - Comprising barrel, spring, driving gear, winding gear and sleeve.
10962	Lock - Cabinet lock - Comprising lock, lock keeper lift tab, keeper pad, lock key and 6 mounting screws.
10963	Screw - Winding shaft set screw - Package of 20.
10964	Ratchet - Winding shaft ratchet - Package of 4.

MODELS R-4 & R-6

ELECTRICAL SPECIFICATIONS

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

Model R-4 is a table model and R-6 is a small console. Except for the cabinet, speakers and output circuit, both models are identical.

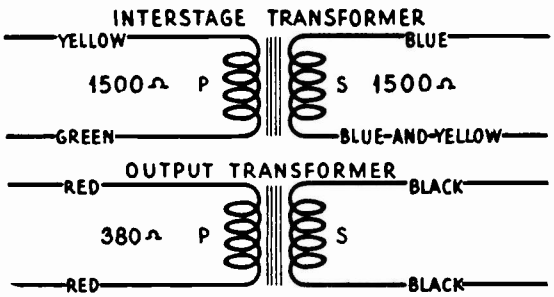
Alignment Procedure

DIAL CALIBRATION:

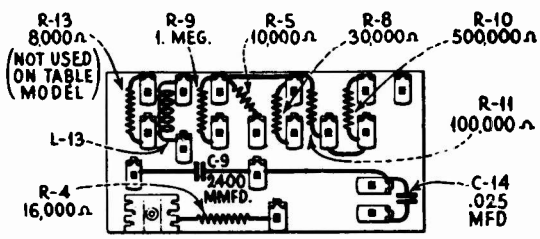
With tuning condenser fully meshed, set dial so that end calibration coincides with pointer.

STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO -	ADJUST THE FOLLOWING FOR MAX. OUTPUT
1	1st Det. Grid in series with .01 mfd	175 kc	Quiet Point	S & P of 1st I-F Trans.
2	Antenna in series with 200 mmfd	1400 kc	140	Osc., Det. and R-F Trimmers on gang condenser

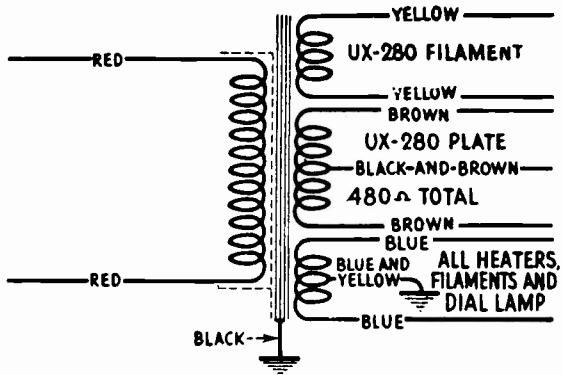
NOTE: *Connect low side of test oscillator to ground wire of receiver during 1400 kc alignment.*



INTERNAL CONNECTIONS OF AUDIO PACK

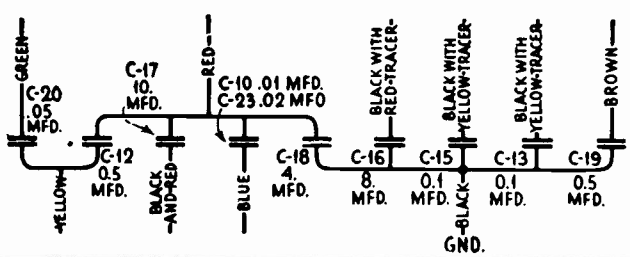


RESISTOR BOARD CONNECTIONS

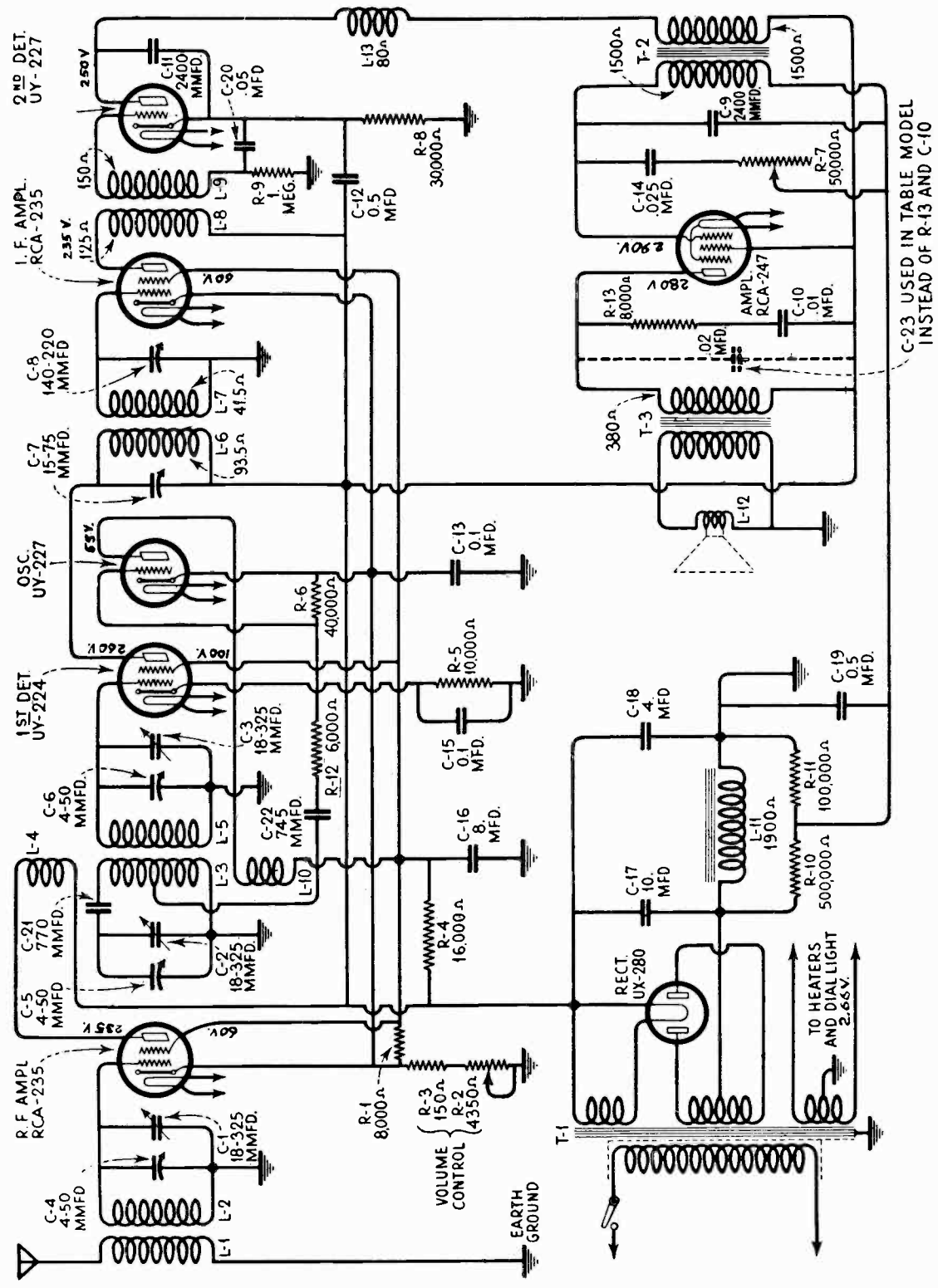


INTERNAL CONNECTIONS OF POWER TRANSFORMER

INTERNAL CONNECTIONS OF CAPACITOR PACK



R-4 & R-6



Schematic Wiring Diagram

REPLACEMENT PARTS

Stock No.	DESCRIPTION
	PARTS COMMON TO R-4 AND R-6
2563	Resistor—6000 ohms—Carbon type—1 watt—Package of 5
2746	Socket—Dial lamp socket
2747	Cap—Grid contactor cap—Package of 5
2749	Capacitor—2400 mmfd.
2875	Knob—Tuning control, volume control or tone control knob—Package of 5
2881	Bracket—Dial lamp bracket—Package of 5
2882	Socket—Five contact Radiotron socket—Complete with insulator—6 used
2963	Resistor—8000 ohms—Carbon type—1 watt—Package of 5
2968	Socket—Four contact Radiotron socket—Complete with insulator—1 used
2991	Transformer—1st intermediate transformer
2994	Coil—R.F. choke coil
2995	Volume control—Volume control complete with mounting nut—Package of 5
2997	Coil—R.F. coil
2999	Shaft—Tuning condenser drive shaft complete
3000	Scale—Dial drum and scale with set screws
3003	Cushion—Receiver chassis sponge rubber cushion—Package of 4
3048	Resistor—500,000 ohms—Carbon type—½ watt—Package of 5
3056	Shield—Radiotron shield—3 used—Package of 2
3060	Resistor—40,000 ohms—Carbon type—1 watt—Package of 5
3076	Resistor—1 megohm—Carbon type—½ watt—Package of 5
3077	Resistor—30,000 ohms—Carbon type—½ watt—Package of 5
3078	Resistor—10,000 ohms—Carbon type—½ watt—Package of 5
3081	Resistor—16,000 ohms—Carbon type—3 watt
3082	Board—Resistor board complete—Less resistors, capacitors and coil
3234	Tone control—Tone control complete with mounting nut
3252	Resistor—100,000 ohms—Carbon type—½ watt—Package of 5
6179	Terminal—Single ground terminal—Complete with mounting rivet—Package of 5
6180	Capacitor—0.025 mfd.—Package of 5
6181	Capacitor—770 mmfd.—Package of 5
6193	Rubber strip—Rubber clamping strip located inside of chassis shield—Package of 4
7054	Cord—Power cord
7241	Capacitor—3 gang tuning capacitor
7299	Capacitor—745 mfd.
7436	Coil—1st detector and oscillator coil
8837	Support—Receiver chassis metal mounting support—Package of 4
8841	Transformer—2d intermediate transformer
8842	Transformer—Power transformer—105–125 volts, 50–60 cycles
8843	Transformer—Power transformer—105–125 volts, 25–40 cycles
8844	Transformer—Power transformer—220 volts, 60 cycles

Stock No.	DESCRIPTION
	RECEIVER PARTS SPECIAL FOR R-4
8839	Capacitor—Comprising one 0.05 mfd., two 0.5 mfd., one 10.0 mfd., one 8.0 mfd., one 0.02 mfd., one 4.0 mfd., and two 0.1 mfd. capacitors in metal container
8840	Transformer—Audio transformer assembly—Comprising interstage and output transformer
	RECEIVER PARTS SPECIAL FOR R-6
6183	Resistor—8,000 ohms—Carbon type—½ watt—Package of 5
7343	Transformer—Audio transformer assembly—Comprising interstage and output transformer
8846	Capacitor—Comprising one 0.05 mfd., two 0.5 mfd., one 10.0 mfd., one 8.0 mfd., one 0.01 mfd., one 4.0 mfd. and two 0.1 mfd. capacitors in metal container
	R-4 LOUDSPEAKER PARTS
2975	Rivet—Cone retaining ring mounting rivet—Package of 100
3005	Screw assembly—Speaker mounting screw assembly—Comprising 4 screws, 4 eyelets, 4 washers and 4 nuts—Package of 1 set
6182	Board—Terminal board complete with 3 terminals Package of 5
7442	Cone—Speaker paper cone—Package of 5
8702	Ring—Cone retaining ring
8845	Coil assembly—Speaker field coil assembly—Comprising field coil, cone bracket and magnet
	R-6 LOUDSPEAKER PARTS
3237	Screw assembly—Speaker mounting screw assembly—Comprising 4 screws, 4 washers, 4 eyelets and 4 nuts—Package of 1 set
6184	Board—Terminal board complete with 3 terminals and mounting rivets—Package of 5
7345	Coil—Speaker field coil assembly—Comprising coil, cone housing and magnet
8559	Ring—Cone retaining ring
8601	Cone—Speaker paper cone—Package of 5

RADIOTRON SOCKET VOLTAGES

120 Volt A. C. Line

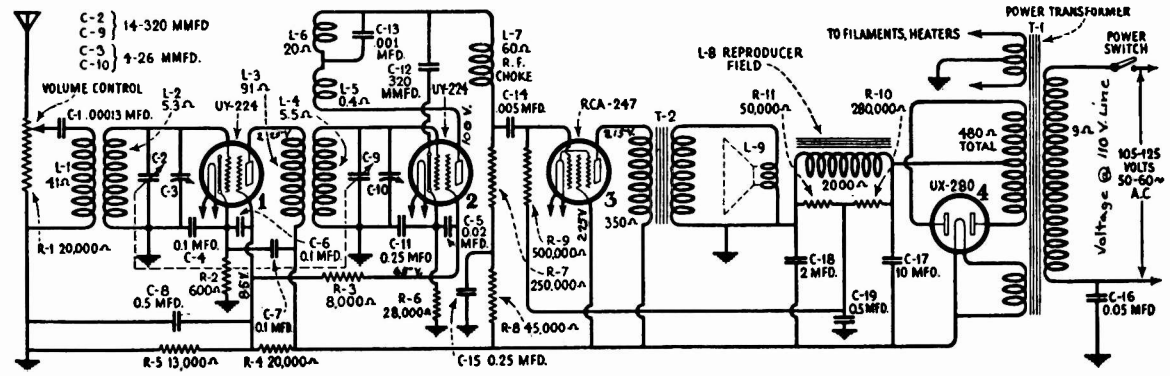
VOLUME CONTROL AT MAXIMUM

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

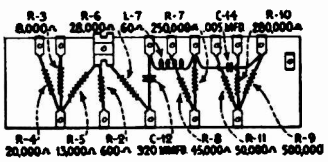
R-5 RADIOLETTE

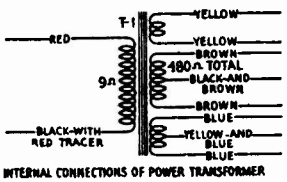
DIAL CALIBRATION:

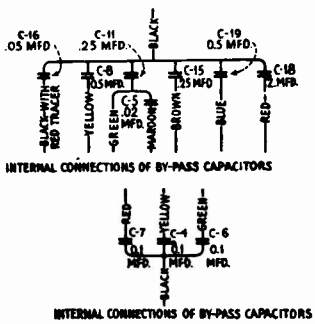
With tuning condensers fully meshed, set dial to 0. Connect high side of test oscillator to antenna lead in series with 200 mmfd. Tune test oscillator to 1400 kc. Turn receiver dial to 85. Adjust the two trimmer cond. on the tuning condenser for maximum output.

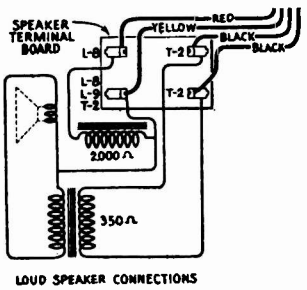


Schematic Circuit Diagram of Model R-5









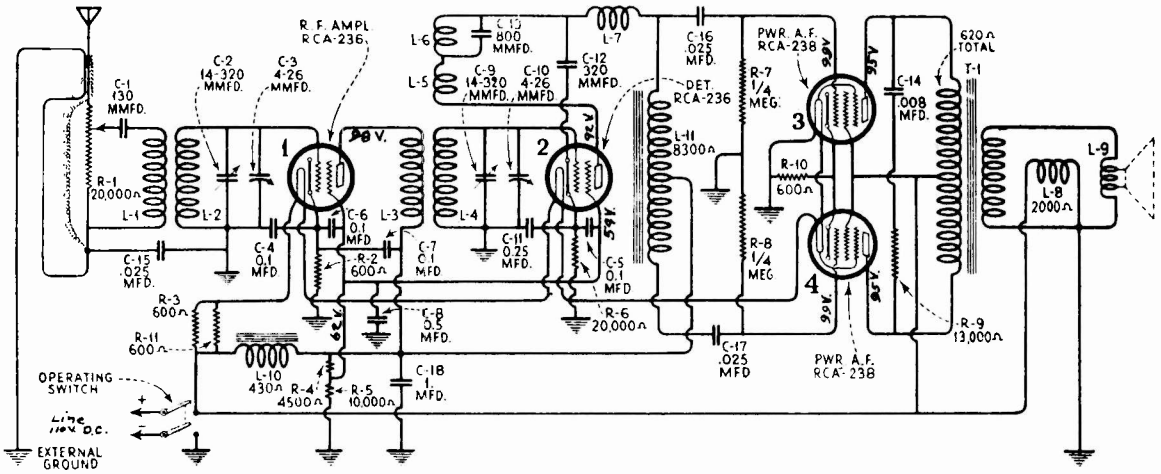
REPLACEMENT PARTS

Part No.	DESCRIPTION
2549	Resistor—250,000 Ohms—Carbon type—Package of 5.
2747	Cap—Control grid contactor cap—Package of 5.
2954	Capacitor—By-pass capacitor pack containing three 0.1 Mfd. capacitors.
2955	Transformer—First R.F. transformer complete with mounting washer and nut.
2956	Transformer—Second R.F. transformer complete with mounting washer and nut.
2957	Capacitor—10 Mfd. electrolytic type—Complete with terminal, insulating washer, mounting nut and lock washer.
2958	Switch—Operating switch complete with mounting washers and nut.
2959	Volume control—20,000 Ohm Volume control complete with mounting washers and nut.
2960	Dial—Dial scale complete with set screws—Package of 2
2961	Coil—Detector plate R.F. choke coil.
2962	Capacitor—0.005 Mfd. audio coupling capacitor.
2963	Resistor—8000 Ohms—Carbon type—Package of 5.
2964	Resistor—13000 Ohms—Carbon type—Package of 5.
2965	Resistor—600 Ohms—Carbon type—Package of 5.
2966	Resistor—28,000 Ohms—Carbon type—Package of 5.
2967	Resistor—45,000 Ohms—Carbon type—Package of 5.
2969	Resistor—50,000 Ohms—Carbon type—Package of 5.
2970	Resistor—500,000 Ohms—Carbon type—Package of 5.
2971	Resistor—280,000 Ohms—Carbon type—Package of 5.
2972	Shield—Radiotron shield complete with mounting screw, washer and nut.
2975	Rivet—Eyelet rivet for mounting cone—Package of 100.
2976	Knob—Volume control or operating switch knob—Package of 5.
2977	Knob—Station selector knob—Package of 5.
2978	Screw assembly—Loudspeaker mounting screw assembly comprising four screws, four washers, four lock washers, eight nuts and four eyelets.
2981	Capacitor—320 Mmfd. detector plate R.F. by-pass capacitor.
3006	Capacitor—.001 Mfd.—Used across low frequency tickler coil.
3007	Wrench—Special wrench for R.F. line-up condenser adjustments.
5817	Resistor—20,000 Ohms—Carbon type.
7054	Cord—Power cord complete with male connector plug
7229	Socket—Five prong Radiotron socket complete with insulating shield—3 used—Package of 2.
7230	Socket—Four prong Radiotron socket complete with insulating shield—1 used—Package of 2.
7231	Capacitor—Filter and by-pass capacitor pack—Comprising one 0.05 mfd., two 0.5 mfd., two 0.25 mfd. and one 2.0 mfd. condensers.
7232	Capacitor—2 gang variable tuning capacitor.
7234	Transformer—Output transformer—With fibre terminal board.
7236	Cone—Reproducer cone complete with voice coil and paper ring.
8669	Transformer—Power transformer—105–125 volt, 50–60 cycle—Complete with mounting washers and nuts.
8670	Transformer—Power transformer—105–125 volt, 25–40 cycle—Complete with mounting washers and nuts.
8671	Transformer—Power transformer—220 volts, 50–60 cycles—Complete with mounting washers and nuts.
10434	Resistor—Mid-tapped filament resistor—Used on early models only.
	SPECIAL PARTS SUPPLIED ON ORDER ONLY (Not to be stocked)
2979	Board—Baffle board complete with grille cloth.
2980	Escutcheon—Station selector escutcheon complete with mounting screws.
7233	Board—Resistor mounting board—Less all resistors, capacitors and coils.
7235	Coil—Field coil complete with bracket and cone ring.
9321	Cabinet—Cabinet complete—Less all equipment.
9339	Chassis—Receiver chassis complete—Less reproducer unit, knobs and Radiotrons.
9340	Reproducer unit—Reproducer unit complete.

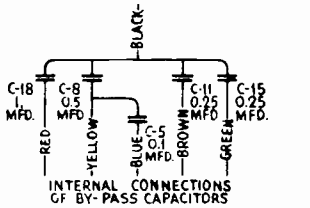
RADIOLETTE R-5 D.C.

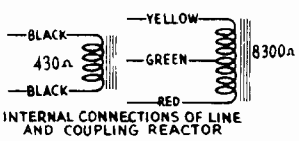
DIAL CALIBRATION:

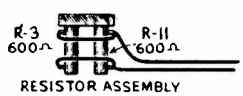
With tuning condensers fully meshed, set dial to 0. Connect high side of test oscillator to antenna lead in series with 200 mmfd. Tune test oscillator to 1400 kc. Turn receiver dial to 85. Adjust the two trimmer cond. on the tuning condenser for maximum output.

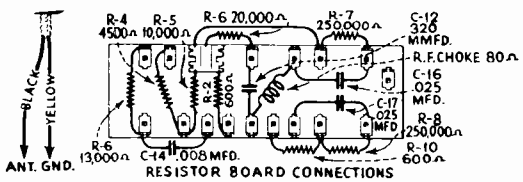


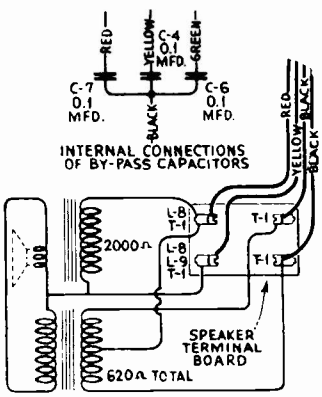
Schematic Circuit Diagram











REPLACEMENT PARTS

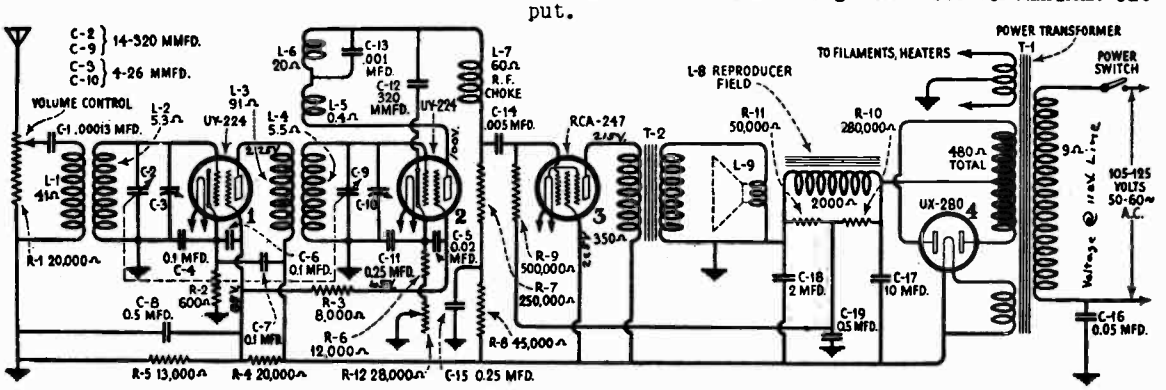
Stock No.	DESCRIPTION
2549	Resistor—250,000 ohm—Carbon type—Package of 5
2731	Resistor—10,000 ohm—Carbon type—Package of 5
2747	Cap—Contact cap for Radiotron—Package of 5
2875	Knob—Volume control or operating switch knob—Package of 5
2954	Capacitor—By-pass capacitor pack—Containing three 0.1 mfd. capacitors
2956	Transformer—Second R. F. transformer—Complete with mounting washer and nut
2959	Volume control—20,000 ohm—Complete with mounting washers and nut
2960	Dial—Dial scale—Complete with set screw—Package of 2
2961	Coil—Detector plate R. F. choke coil
2964	Resistor—13,000 ohm—Carbon type—Package of 5
2965	Resistor—600 ohm—Carbon type—Package of 5
2972	Shield—Radiotron shield—Complete with mounting screw, washer and nut
2975	Rivets—Eyelet rivet for mounting cone—Package of 100
2977	Knob—Station selector knob—Package of 5
2978	Screw assembly—Reproducer mounting screws assembly—Comprising four screws, four washers, four lock washers, eight nuts and four eyelets
2979	Board—Baffle board with grille cloth
2980	Escutcheon—Tuning escutcheon with mounting screws
2981	Capacitor—320 mmfd. detector plate R. F. by-pass capacitor

Stock No.	DESCRIPTION
2990	Resistor—4500 ohm—Carbon type—Package of 5
3007	Wrench—Special wrench for R. F. line-up condenser adjustments
3022	Transformer—First R. F. transformer—Complete with mounting washer and nut
3023	Switch—Operating switch—With mounting nut and washers
3098	Capacitor—0.008 mfd.
7229	Socket—Five prong Radiotron socket—Complete insulating shield (4 used)—Package of 2
7232	Capacitor—2 gang variable capacitor
7235	Coil—Field coil—Complete with bracket and cone ring
7236	Cone—Reproducer cone with voice coil
7250	Capacitor—Two 0.025 mfd. in one unit
7251	Capacitor—Comprising one 1.0 mfd., one 0.5 mfd., one 0.1 mfd., one 0.25 mfd., and one 0.025 mfd. in metal container
7252	Reactor—Coupling reactor
7253	Board—Resistor board—Less resistors, capacitors and coil assembly
7276	Transformer—Output transformer—With fibre terminal board
8701	Panel—Cabinet back panel
8702	Ring—Reproducer cone retaining ring
9364	Cabinet—Cabinet complete—Less all equipment

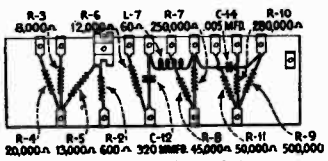
R-5-X RADIOLETTE

DIAL CALIBRATION:

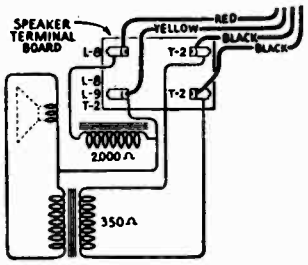
With tuning condensers fully meshed set dial to 0. Connect high side of test oscillator to antenna lead in series with 200 mmfd. Tune test oscillator to 1400 kc. Turn receiver dial to 85. Adjust the two trimmer cond. on the tuning condenser for maximum output.



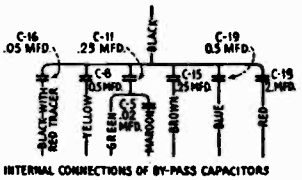
Schematic Circuit Diagram of Model R-5-X



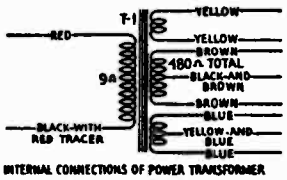
RESISTOR BOARD CONNECTIONS



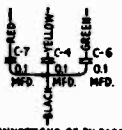
LOUD SPEAKER CONNECTIONS



INTERNAL CONNECTIONS OF BY-PASS CAPACITORS



INTERNAL CONNECTIONS OF POWER TRANSFORMER



INTERNAL CONNECTIONS OF BY-PASS CAPACITORS

REPLACEMENT PARTS

Part No.	DESCRIPTION
2549	Resistor—250,000 Ohms—Carbon type—Package of 5.
2747	Cap—Control grid contactor cap—Package of 5.
2954	Capacitor—By-pass capacitor pack containing three 0.1 Mfd. capacitors.
2955	Transformer—First R.F. transformer complete with mounting washer and nut.
2956	Transformer—Second R.F. transformer complete with mounting washer and nut.
2957	Capacitor—10 Mfd. electrolytic type—Complete with terminal, insulating washer, mounting nut and lock washer.
3069	Switch—Operating switch complete.
2959	Volume control—20,000 Ohm Volume control complete with mounting washers and nut.
2960	Dial—Dial scale complete with set screws—Package of 2
2961	Coil—Detector plate R.F. choke coil.
2962	Capacitor—0.005 Mfd. audio coupling capacitor.
2963	Resistor—8000 Ohms—Carbon type—Package of 5.
2964	Resistor—13000 Ohms—Carbon type—Package of 5.
2965	Resistor—600 Ohms—Carbon type—Package of 5.
2967	Resistor—45,000 Ohms—Carbon type—Package of 5.
2969	Resistor—50,000 Ohms—Carbon type—Package of 5.
2970	Resistor—500,000 Ohms—Carbon type—Package of 5.
2971	Resistor—280,000 Ohms—Carbon type—Package of 5.
2972	Shield—Radiotron shield complete with mounting screw, washer and nut.
2975	Rivet—Eyelet rivet for mounting cone—Package of 100.
2976	Knob—Volume control or Regeneration control knob—Package of 5.
2977	Knob—Station selector knob—Package of 5.
2978	Screw assembly—Loudspeaker mounting screw assembly comprising four screws, four washers, four lock washers, eight nuts and four eyelets.
2981	Capacitor—320 Mmfd. detector plate R.F. by-pass capacitor.
3006	Capacitor—.001 Mfd.—Used across low frequency tickler coil.
3007	Wrench—Special wrench for R.F. line-up condenser adjustments.
3066	Resistor—12,000 Ohms—Carbon type—Package of 5.
3067	Variable Resistor — Regeneration Control Variable Resistor complete with mounting washer and nut.
5817	Resistor—20,000 Ohms—Carbon type.
7054	Cord—Power cord complete with male connector plug
7229	Socket—Five prong Radiotron socket complete with insulating shield—3 used—Package of 2.
7230	Socket—Four prong Radiotron socket complete with insulating shield—1 used—Package of 2.
7231	Capacitor—Filter and by-pass capacitor pack—Comprising one 0.05 mfd., two 0.5 mfd., two 0.25 mfd. and one 2.0 mfd. condensers.
7232	Capacitor—2 gang variable tuning capacitor.
7234	Transformer—Output transformer—With fibre terminal board.
7236	Cone—Reproducer cone complete with voice coil and paper ring.
8669	Transformer—Power transformer—105-125 volt, 50-60 cycle—Complete with mounting washers and nuts.
8670	Transformer—Power transformer—105-125 volt, 25-40 cycle—Complete with mounting washers and nuts.
8671	Transformer—Power transformer—220 volts, 50-60 cycles—Complete with mounting washers and nuts.
10434	Resistor—Mid-tapped filament resistor—Used on early models only.
	SPECIAL PARTS SUPPLIED ON ORDER ONLY (Not to be stocked)
2979	Board—Baffle board complete with grille cloth.
2980	Escutcheon—Station selector escutcheon complete with mounting screws.
3068	Board—Resistor mounting board—Less all resistors, capacitors and coils.
7235	Coil—Field coil complete with bracket and cone ring.
9321	Cabinet—Cabinet complete—Less all equipment.
9339	Chassis—Receiver chassis complete—Less reproducer unit, knobs and Radiotrons.
9340	Reproducer unit—Reproducer unit complete.

END TABLE ELECTROLA MODEL T-5

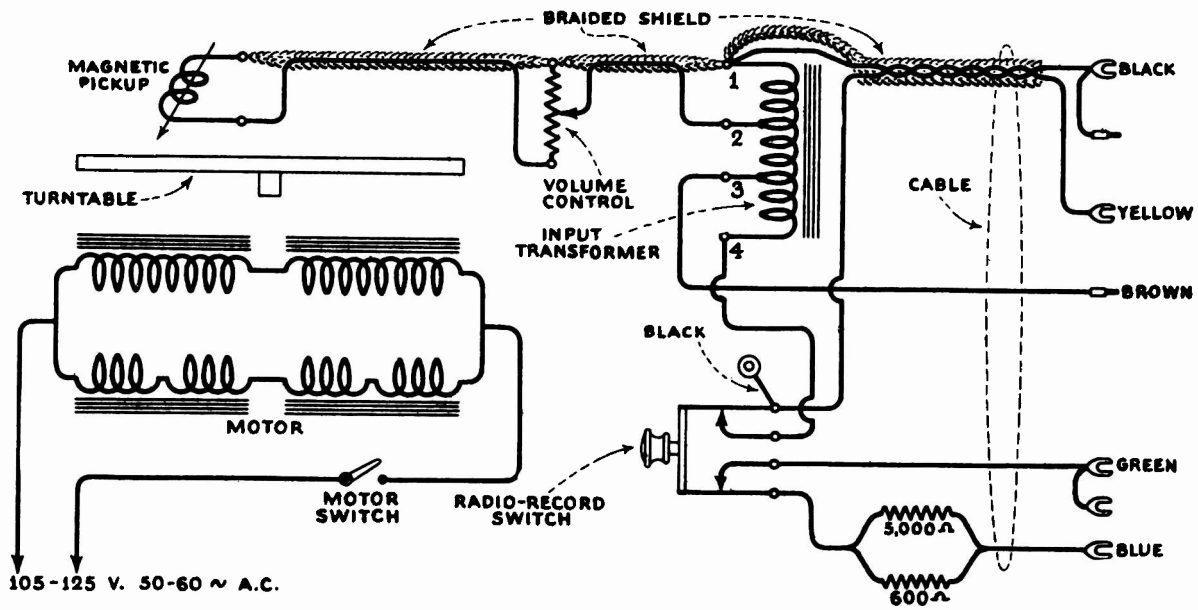
INTRODUCTION

RCA Victor End Table Electrola Model T-5 is a small compact phonograph unit which, when used with RCA Victor receivers, provides record reproduction of excellent quality. It may also be used with other types of receivers, an adaptor being provided for that purpose.

Model T-5 consists of a magnetic pickup, a motor and turntable assembly, record volume control, Radio–Record switch and input transformer assembly and a connecting cable. The entire mechanism is housed in a cabinet of pleasing design.

ELECTRICAL SPECIFICATIONS

Voltage Rating	105/125 Volts
Frequency Rating	50/60 Cycles
Power Consumption	60 Watts
Type of Magnetic Pickup	Low Impedance
Type of Tone Arm	Inertia



Schematic Diagram of Model T-5

T-5

REPLACEMENT PARTS

Insist on genuine factory tested parts, which are readily identified and may be purchased from authorized dealers

Stock No.	DESCRIPTION	List
	MOTOR BOARD ASSEMBLIES	
2614	Switch—Motor switch for automatic brake	
2620	Cushion—Rubber damping block and two spacer cushions for armature—One set (Not illustrated)	
2677	Gauge—Armature spacing tool (Not illustrated)	
2759	Box—Used needle box—Package of 2	
2762	Bearing assembly—Governor bearing assembly comprising 2 bearings, 2 set screws and 2 steel balls—3 sets per package (Not illustrated)	
2764	Spindle—Turntable spindle and pin	
2765	Screw—Pickup needle screw—Package of 10 (Not illustrated)	
2766	Screw—Pickup cover screw—Package of 10 (Not illustrated)	
2767	Spring—Magnet holding spring for pickup unit—Package of 10 (Not illustrated)	
2768	Armature—Magnetic pickup armature (Not illustrated)	
2769	Coil—Magnetic pickup coil (Not illustrated)	
2781	Felt—Friction felt—Package of 20—(Not illustrated)	
2828	Screw and nut—Pickup mounting screw and nut—10 sets per package	
2869	Spring—Springs for automatic brake—2 sets of 4 springs	
2872	Ball and spring—Governor ball and spring with mounting screws and washers—Package of 5	
2873	Screw assembly—Top plate screw, nut, lock washer and ball bearing—Package of 5 sets	
2874	Spring — Speed regulator spring — Package of 5 (Not illustrated)	
2875	Knob—Volume control or transfer switch knob—Package of 5	
2877	Cup—Twin needle cup	
7078	Volume control—60 ohm volume control—Complete, less knob	
7087	Gear—Turntable spindle gear with set screw (Not illustrated)	
7088	Disc—Rotor disc with set screw	
7093	Cover—Pickup unit cover	
7181	Cord—Power cord with male connector	
7182	Cable—Shielded connector cable, approximately 27 feet long—Used to connect end table to radio set	
	CONTROL BOARD ASSEMBLIES	
2870	Resistor—600 ohms resistor—Carbon type—Package of 5	
2871	Resistor—5000 ohms resistor—Carbon type—Package of 5	
2875	Knob—Radio-record transfer switch knob—Package of 5	
2876	Switch—Radio-record transfer switch —Complete, less knob	
2878	Cable—Control board cable	
2879	Adaptor—Special adaptor for connecting control board to detector tube —Package of 5 (Not illustrated)	
7083	Transformer—Pickup input transformer	

Stock No.	DESCRIPTION	List
	SPECIAL PARTS SUPPLIED ON ORDER ONLY (Not to be Stocked)	
2763	Bolt assembly — Motor mounting bolts, washers, nuts and rubber cushion—1 set per package (Not illustrated)	
2770	Plate—Damper plate and rubber damper—For pickup unit—Package of 5 (Not illustrated)	
2771	Screw—Damper plate mounting screw —Package of 10 (Not illustrated)	
2772	Magnet—Pickup magnet (Not illustrated)	
2773	Pole piece—Right pole piece for pickup unit (Not illustrated)	
2774	Rod—Trip rod assembly comprising threaded rod and nut—Package of 5 (Not illustrated)	
2778	Pole piece—Left pole piece for pickup unit (Not illustrated)	
2781	Leather—Friction leather for eccentric automatic brake—Package of 20 (Not illustrated)	
2785	Hinge—Lid hinge with mounting screw—Package of 2—(Not illustrated)	
7077	Regulator—Speed regulator complete with mounting screws—Package of 2 (Not illustrated)	
7084	Cover—Turntable cover (Not illustrated)	
7085	Pickup—Pickup unit complete (Not illustrated)	
7086	Lever—Speed regulating lever with friction felt and set screw—Package of 2 (Not illustrated)	
7089	Governor assembly—Complete governor comprising spindle, collar, disc, sleeve, balls and springs, washers and screws (Not illustrated)	
7092	Arm—Pickup arm and base—Complete, less pickup unit (Not illustrated)	
7151	Back—Pickup unit back (Not illustrated)	
7177	Coil—Inductor coil 105/125 volts, 60 cycles (Not illustrated)	
7178	Coil—Inductor coil 105/125 volts, 25 cycles (Not illustrated)	
7179	Block—Inductor terminal block (Not illustrated) Package of 5	
7180	Brake—Eccentric automatic brake—Complete (Not illustrated)	
7183	Support—Lid support with mounting screws—Package of 2 (Not illustrated)	
8582	Turntable—Turntable complete with cover (Not illustrated)	
8612	Motor—Induction disc motor 105/125 volts, 25 cycles (Not illustrated)	
8640	Motor—Induction disc motor 105/125 volts, 60 cycles (Not illustrated)	
9315	Post—R. H. front or L. H. back post (Not illustrated)	
9316	Post—L. H. front or R. H. back post (Not illustrated)	
9317	Lid—Less hardware (Not illustrated)	
9318	Shelf—Bottom shelf (Not illustrated)	

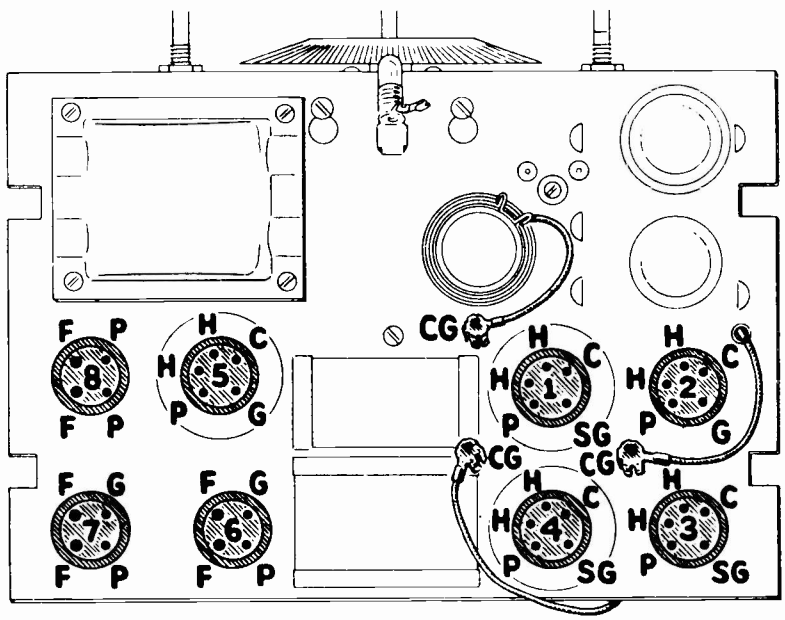
RADIOLA SUPERETTE R-7, R-9 & RE-16

ELECTRICAL SPECIFICATIONS

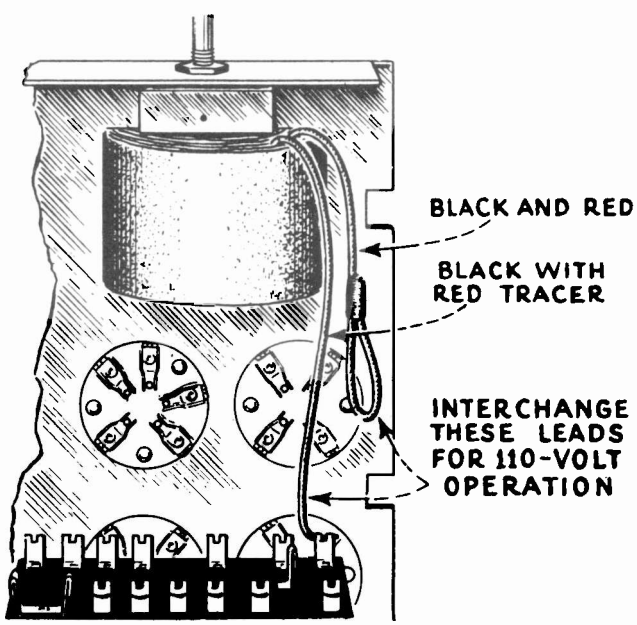
Voltage Rating	105/125 Volts
Frequency Rating	50/60 Cycles, or 25/50 Cycles
Power Consumption	60 Cycles/100 Watts—25 Cycles/100 Watts
Recommended Antenna Length	25/75 Feet
Type of Circuit	A. C. Screen Grid Super-Heterodyne
Type and Number of Radiotrons	2 RCA-235, 1 UY-224, 2 UY-227, 2 UX-245, 1 UX-280, Total of 8
Type of Loudspeaker	Dynamic
Wattage Dissipation in Loudspeaker Field	8.0 (100 Volts/80 M. A.)
Undistorted Output	3.0 Watts

The RCA Victor Model RE-16 is a radio phonograph combination instrument that utilizes the standard RCA Victor Superette chassis and loudspeaker together with the phonograph equipment used in RCA Victor combination instruments. This consists of the low impedance magnetic pickup and inertia type tone arm, induction disc motor, radio-record switch and record volume control. A manually operated automatic switch, similar to that used in the T-5 Electrola is included in the motor and turntable assembly.

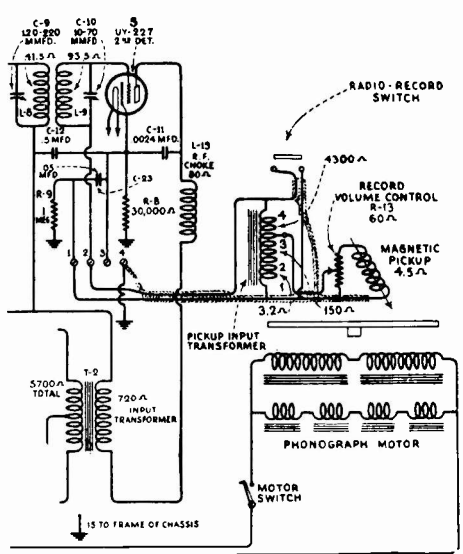
Socket No.	Radiotron Type
1	RCA-235
2	UY-227
3	UY-224
4	RCA-235
5	UY-227
6	UX-245
7	UX-245
8	UX-280



Socket Location and Contact Position

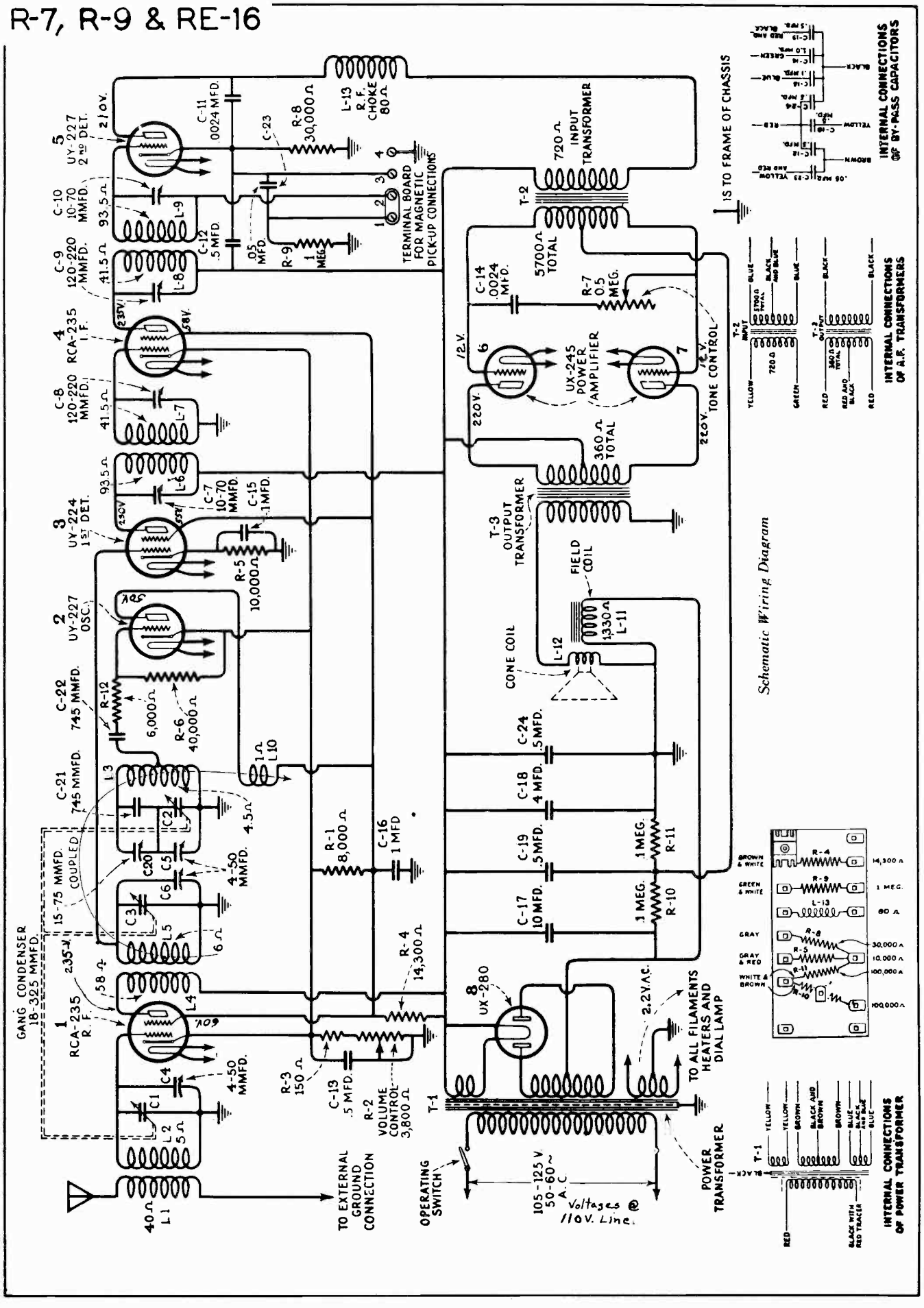


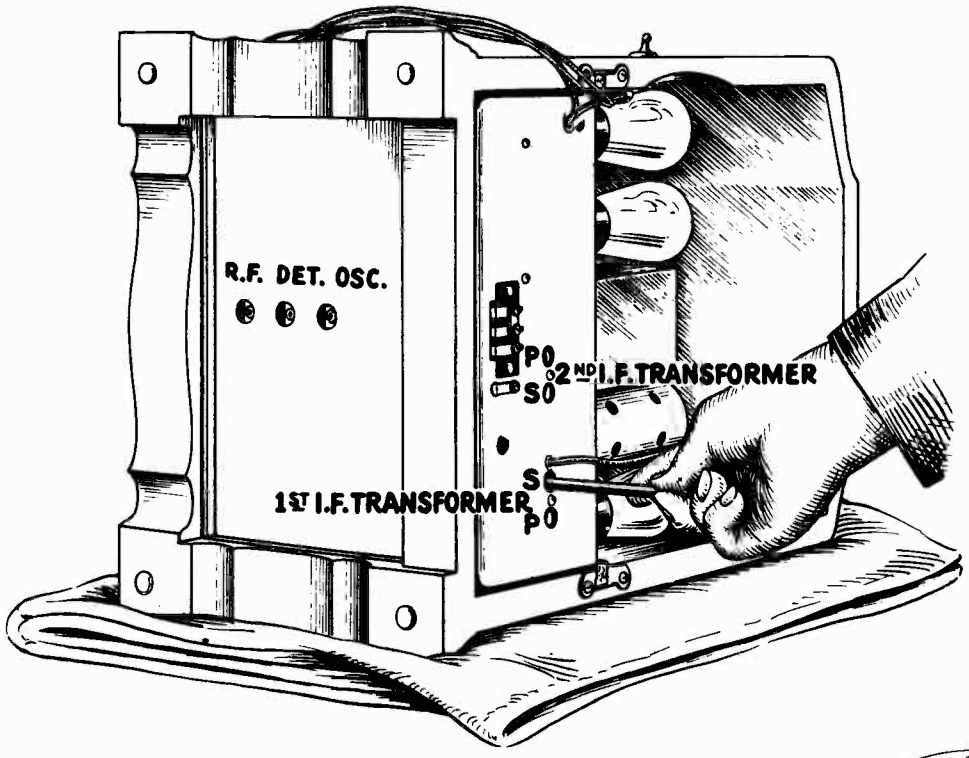
Changes Necessary for 110 Volt Operation on 25 Cycle Models

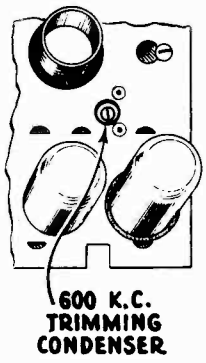


Schematic Wiring Diagram of Model RE-16

R-7, R-9 & RE-16


Schematic Wiring Diagram
GANG CONDENSER 18-325 MMFD.
15-75 MMFD. COUPLED
1 RCA-235 R. F.
2 UY-227 OSC.
3 UY-224 1ST DET.
4 RCA-235 I. F.
5 UY-227 2ND DET.
6 UX-245 POWER AMPLIFIER
7
8 UX-280
C-1 4-50 MMFD.
C-2 4-50 MMFD.
C-3 4-50 MMFD.
C-4 4-50 MMFD.
C-5 4-50 MMFD.
C-6 4-50 MMFD.
C-7 10-70 MMFD.
C-8 120-220 MMFD.
C-9 120-220 MMFD.
C-10 10-70 MMFD.
C-11 .0024 MFD.
C-12 .5 MFD.
C-13 .5 MFD.
C-14 .0024 MFD.
C-15 .1 MFD.
C-16 1 MFD
C-17 10 MFD.
C-18 4 MFD.
C-19 .5 MFD.
C-20
C-21 745 MMFD.
C-22 745 MMFD.
C-23
C-24 .5 MFD.
R-1 8,000 Ω
R-2 VOLUME CONTROL 3,800 Ω
R-3 150 Ω
R-4 14,300 Ω
R-5 10,000 Ω
R-6 40,000 Ω
R-7 0.5 MEG.
R-8 30,000 Ω
R-9 1 MEG.
R-10 1 MEG.
R-11 1 MEG.
R-12
L-1 40 Ω
L-2 5 Ω
L-3
L-4
L-5 6 Ω
L-6 93.5 Ω
L-7 41.5 Ω
L-8 41.5 Ω
L-9 93.5 Ω
L-10 1 Ω
L-11 1330 Ω FIELD COIL
L-12 CONE COIL
L-13 R.F. CHOKE 80 Ω
T-1 POWER TRANSFORMER
T-2 720 Ω INPUT TRANSFORMER
T-3 OUTPUT TRANSFORMER
5700 Ω TOTAL
360 Ω TOTAL
TERMINAL BOARD FOR MAGNETIC PICK-UP CONNECTIONS
TO EXTERNAL GROUND CONNECTION
OPERATING SWITCH
105-125 V 50-60~ A.C
Voltages @ 110V. Line.
TO ALL FILAMENTS HEATERS AND DIAL LAMP
2.2 V.A.C.
TONE CONTROL
IS TO FRAME OF CHASSIS
INTERNAL CONNECTIONS OF BY-PASS CAPACITORS
INTERNAL CONNECTIONS OF A.F. TRANSFORMERS
INTERNAL CONNECTIONS OF POWER TRANSFORMER





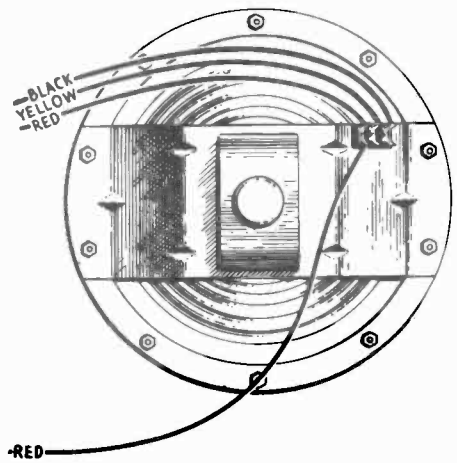
Alignment Procedure

DIAL CALIBRATION:

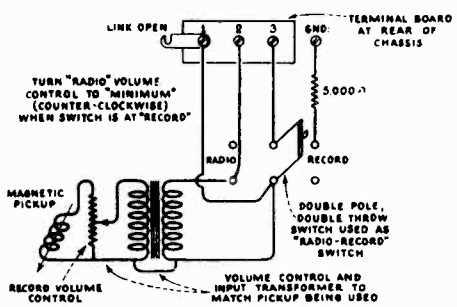
With tuning condenser fully meshed, set dial at 100.

Connect low side of test oscillator to chassis *and* ground lead during alignment.

STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO	ADJUST THE FOLLOWING FOR MAX. OUTPUT
1	I-F Grid in series with .01 mfd	175 kc	Quiet Point near 600 kc	S & P of 2nd I-F Trans.
2	1st Det. Grid in series with .01 mfd			S & P of 1st I-F Trans.
3	Antenna in series with 200 mmfd	1400 kc	11	Osc., Det. and R-F Trimmers on gang condenser
4		600 kc	near 80	600 kc Oscillator Trimmer (Rock Gang)
5		*Repeat Step 3*		

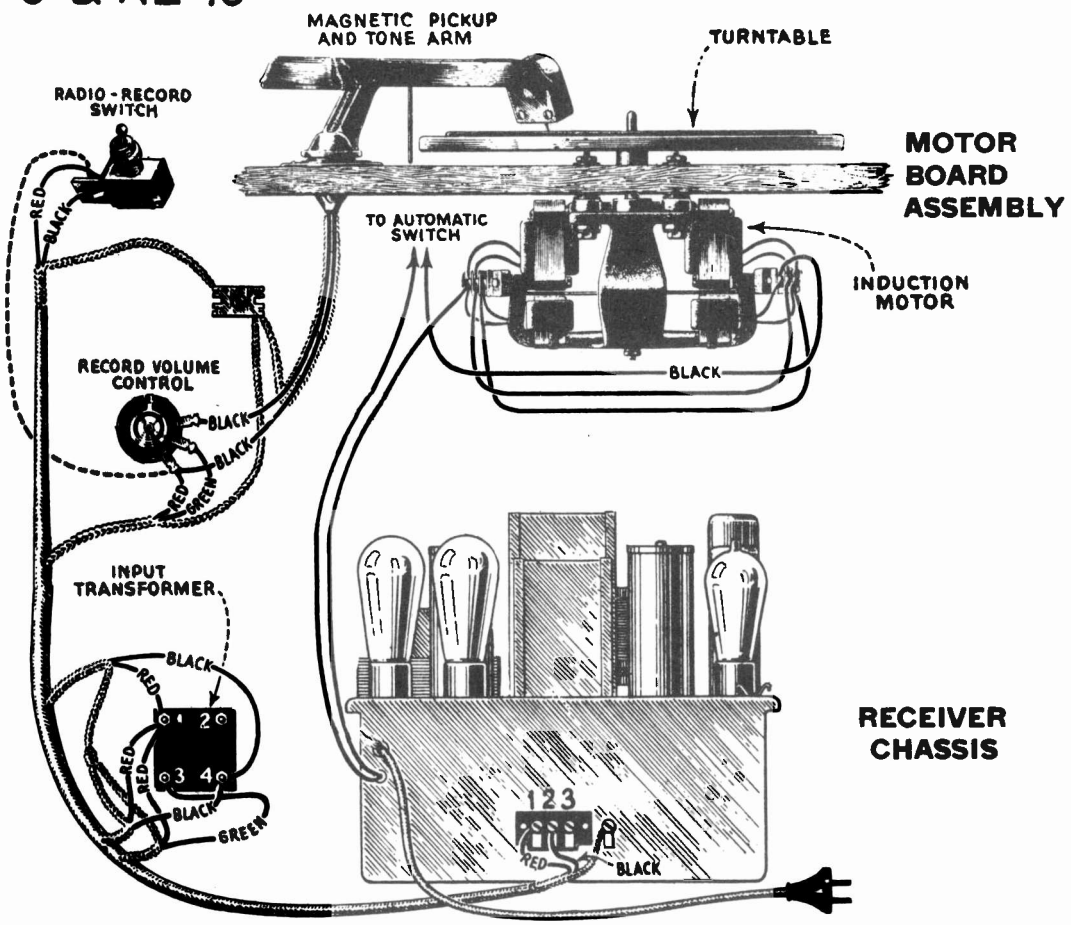


REPRODUCER UNIT



Connections for Attaching Magnetic Pick-up

R-7, R-9 & RE-16



DOTTED LINE INDICATES CONNECTIONS OF MODELS NOT HAVING RED LEAD FROM SWITCH TO TERMINAL No. 1 OF INPUT TRANSFORMER.

REPLACEMENT PARTS *Model RE-16*

Stock No.	DESCRIPTION
2614	Switch—Automatic brake switch
2620	Cushions—Pickup rubber cushions—Comprising 1 damper and 2 pivot cushions—Package of 1 set
2759	Box—Needle box with lid—Package of 2
2762	Bearing assembly—Governor bearing assembly—Comprising 2 bearings, 2 set screws and 2 steel balls—Package of 3 sets
2763	Bolts assembly—Motor mounting bolts with nuts, washers and rubber cushions—Package of 1 set
2764	Spindle—Turntable spindle
2765	Screw—Pickup needle screw—Package of 10
2766	Screw—Pickup cover mounting screw—Package of 10
2767	Spring—Pickup magnet spring—Package of 10
2768	Armature—Pickup armature
2769	Coil—Pickup coil
2770	Plate—Pickup damper plate—Package of 5
2771	Screw—Damper plate mounting screw—Package of 10
2772	Magnet—Pickup magnet
2773	Pole piece—R. H. pole piece
2778	Pole piece—L. H. pole piece
2781	Felt—Regulating lever friction felt—Package of 20
2785	Hinge—Lid hinge with mounting screws—Package of 1 set of 2
2828	Screw assembly—Pickup mounting screw, nut and washer—Package of 10 sets
2829	Knob—Motor board knob and screw—Package of 2
2872	Ball and spring—Governor ball and spring with mounting screws and washers—Package of 5
2873	Screw assembly—Top plate screw assembly—Comprising screw, nut, washer and ball bearing—Package of 5 sets
2875	Knob—Control knob—Package of 5
3020	Escutcheon—Control panel escutcheon with mounting screws
3052	Screw assembly—Pickup pole piece mounting screw, nut and washer—Package of 10 sets
3100	Control—Record volume control—Complete with mounting nut and washer—Less knob
3101	Switch—Toggle switch with mounting washer and nuts

Stock No.	DESCRIPTION
3102	Receptacle—Needle box receptacle
7077	Regulator—Speed regulator escutcheon and screw—Complete with mounting screws—Package of 2
7082	Support—Lid support with mounting screws
7083	Transformer—Input transformer with mounting screws
7084	Cover—Turntable cover
7085	Pickup—Pickup unit complete
7086	Lever—Regulating lever with friction felt—Package of 2
7087	Gear—Governor drive gear with set screw
7088	Disc—Rotor disc
7089	Governor—Governor complete with spindle
7090	Inductor—Inductor coil—60 cycles—110 Volts
7093	Cover—Pickup cover
7151	Back—Pickup housing back
7247	Cable—Main cable
7248	Inductor—Inductor coil—220 Volts
7249	Ornament—Front top rail ornament
8582	Turntable—Turntable with cover
8675	Arm—Pickup suspension arm and base
8676	Leg—Cabinet leg
8677	Foot—Cabinet foot with ferrule
8678	Baffle—Baffle board with grille cloth
9360	Cabinet—Complete less all apparatus
9361	Panel—Control panel
9362	Stretcher
9363	Lid—Cabinet lid
10129	Ball—Steel ball bearing—$\frac{1}{4}$"—Package of 20
10174	Springs—Automatic springs—Set of 4 springs—Package of 2 sets of 4 springs
10175	Holder—Needle holder with mounting screws
10181	Brake—Automatic brake complete less contact switch with mounting screws
10196	Spring—Regulating shaft spring—Package of 10
10378	Plate—Top plate
10266	Disc—Rotor disc—For 220 Volt Motor

FOR RADIO PARTS SEE RCA VICTOR SUPERETTE R-7 SERVICE NOTES

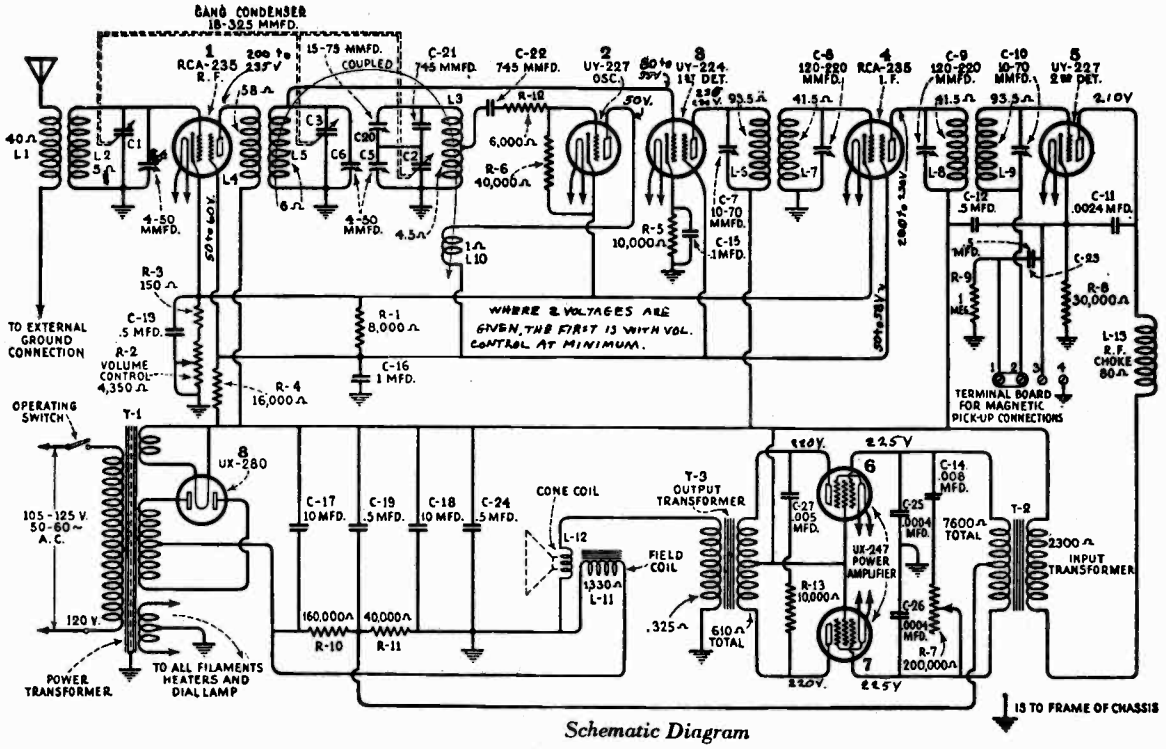
REPLACEMENT PARTS

Stock No.	DESCRIPTION
	CHASSIS PARTS
A2429	Lamp—Dial lamp.
A516	Socket—Dial lamp socket.
B2323	Bracket—For dial lamp socket.
A36	Transformer—105/125 volts, 50/60 cycles power transformer
A37	Transformer—105/125 volts, 25/50 cycles power transformer
A1727	Base—Tube shield base—3 used.
A1728	Shield—Tube shield—3 used.
A522	Socket—UY Radiotron socket—Complete with insulating shield—5 used.
A523	Socket—UX Radiotron socket—Complete with insulating shield—3 used.
A1582	Cord—Power cord complete with male connector plug.
B2326	Scale—Dial scale complete with drum and set screws.
A3276	Screw—Set screw for dial scale drum—Package of 12. doz.
B2324	Shaft—Drive shaft for operating dial.
A268	Condenser—10 mfd. electrolytic condenser.
A3031	Washer—For 10 mfd. electrolytic condenser.
A745	Terminal—For 10 mfd. electrolytic condenser.
A267	Condenser—4 mfd. electrolytic condenser.
A138	Transformer—R. F. transformer complete with mounting bracket, nut and lock washer.
B2332	Cap—Grid contactor cap for R. F. socket.
A266	Capacitor Pack—R. F. by-pass capacitor pack.
A35	Transformer assembly — A. F. transformer assembly complete in metal container.
A2398	Cap—Grid contactor cap for I. F. or 1st detector tubes.
A375	Resistor—150 ohms—Carbon type
A369	Volume Control—Complete less knob.
A2304	Knob—Volume control, station selector or tone control knob.
A2710	Nut—Volume control mounting nut
A139	Coil—1st detector and oscillator coil complete with mounting bracket, screws and lock washers
A272	Condenser — 745 mmfd. — Oscillator grid or series condenser.
A372	Resistor — 40,000 ohms — carbon type.
A373	Resistor — 6000 ohms — carbon type.
A338	Resistor — 8000 ohms — carbon type.
A135	Transformer—1st I. F. transformer complete with shield.
A136	Transformer—2nd I. F. transformer complete with shield.
A1729	Shield—Copper shield for I. F. transformer.
A744	Terminal—Single terminal complete with screw.
A959	Board—Magnetic pickup terminal board complete with terminals and screws.
A370	Tone control—Complete less knob

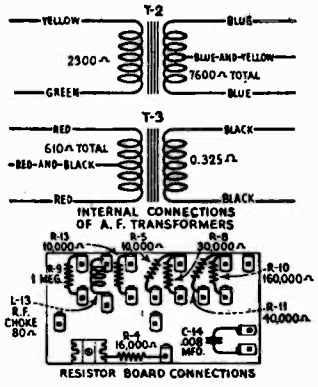
Stock No.	DESCRIPTION
A269	Condenser—Three gang tuning condenser—Complete with line-up condensers and mounting screws.
A270	Condenser—Adjustable oscillator trimming condenser.
A3275	Screw—Adjusting screw for oscillator trimming condenser — Package of 10.
A271	Condenser—.0024 mfd. fixed condenser—Used as tone control or 2nd detector by-pass condenser
A371	Resistor — 14,300 ohms — Carbon type.
A329	Resistor—1 megohm—Carbon type
A137	Coil—2nd detector R. F. choke coil complete with rivet.
A313	Resistor—30,000 ohms—carbon type
A368	Resistor—100,000 ohms—carbon type—two used.
A374	Resistor—10,000 ohms—carbon type
A960	Board—Resistor mounting board complete with terminals and mounting bracket—less resistors
B2325	Insulator — For chassis shield — complete with rivets.
B2330	Support—Rubber chassis support
A427	Switch—Operating switch complete with mounting nuts.
A1867	Escutcheon—Dial scale escutcheon
B2331	Board — Baffle board complete with grille cloth.
	LOUDSPEAKER PARTS
A2421	Ring—Cone retaining ring.
A3226	Screw—Cone mounting screw—Package of 12. doz.
A2987	Washer—Lock washer for mounting cone—Package of 12. doz.
A2702	Nut—For cone mounting screw—Package of 12. doz.
A3136	Screw—Cone centering screw—Package of 12. doz.
A2993	Washer—For cone centering screw—Package of 12. doz.
A3277	Screw—Special head screw for mouuting loudspeaker to cabinet—Package of 12. doz.
A2744	Nut—For loudspeaker mounting screw—Package of 12. doz.
A942	Board — Loudspeaker terminal board.
8653	Coil Assembly—Field coil, core and cone support.
A2446	Cone—Loudspeaker cone.
	TOOLS
A6000	Screwdriver—Non-metallic screwdriver for oscillator and I. F. adjustments. line-up condenser adjustments.
A6001	Wrench—Socket wrench for R. F.
A6004	Oscillator—Broadcast band oscillator comp. with batteries and Radiotron
	SPECIAL PARTS SUPPLIED ON ORDER ONLY (Not to be stocked)
9325	Cabinet—Cabinet complete with baffle board, grille cloth and escutcheon (Walnut).
9326	Cabinet—Cabinet complete with baffle board, grille cloth and escutcheon (Mahogany).
B2329	Loudspeaker—Dynamic loudspeaker complete.
B2328	Chasis—Receiver chasis complete—less loudspeaker.
8654	Transformer—220 Volt, 50-60 cycle power transformer.

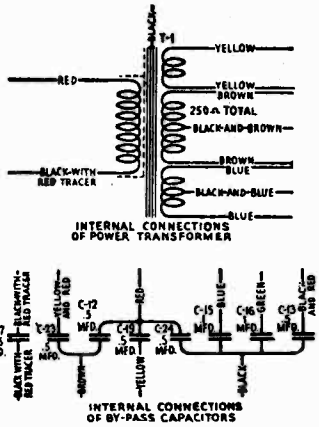
R-7A & RE-16A

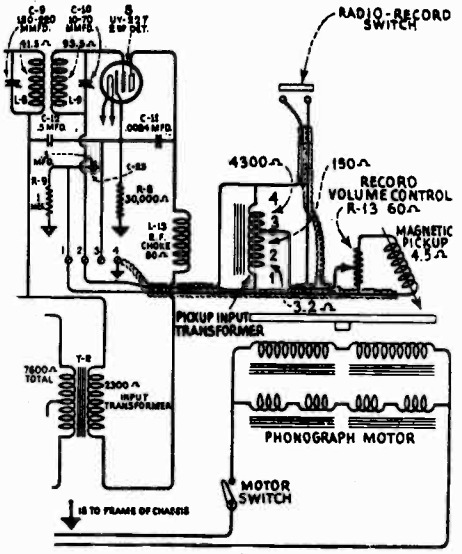
MODELS R-7A AND RE-16A ARE SIMILAR TO MODELS R-7 AND RE-16 RESPECTIVELY, REFERENCE SHOULD BE MADE TO R-7 AND RE-16 FOR FURTHER INFORMATION.



Schematic Diagram







Schematic Wiring Diagram of Model RE-16A

CABINET ASSEMBLY *Model RE-16A*

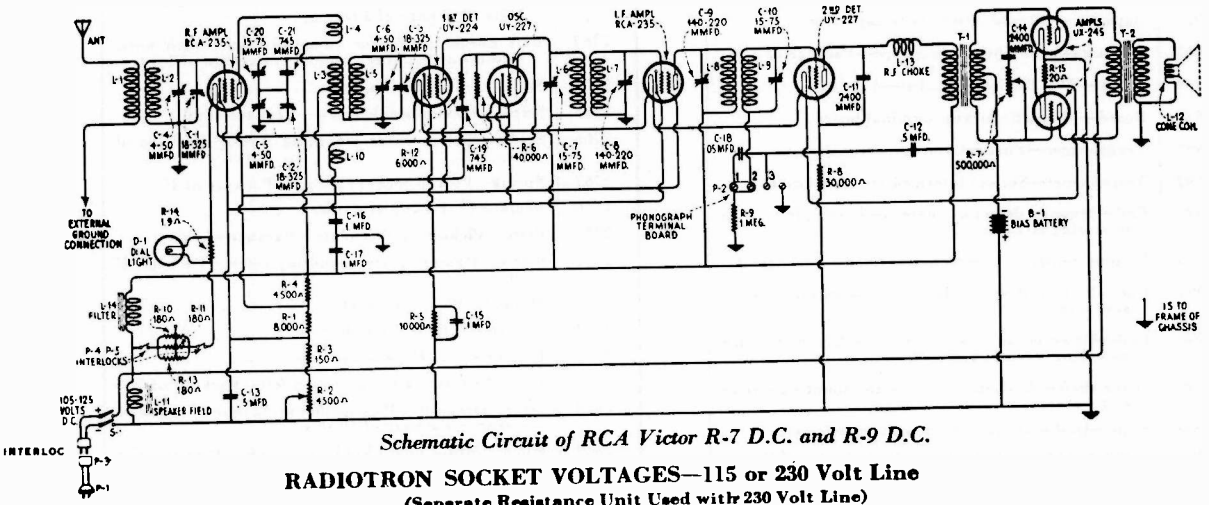
2785	Hinge—Lid hinge with mounting screws—Package of 2
3020	Escutcheon—Control panel tuning dial escutcheon—Complete with mounting screws
7082	Support—Lid support with mounting screws
7249	Ornament—Front top rail ornament

REPLACEMENT PARTS

Stock No.	DESCRIPTION
	RECEIVER ASSEMBLY
2563	Resistor—6,000 ohms—Carbon type—Package of 5
2734	Capacitor—745 mmfd.—Package of 5
2745	Screw—Adjusting condenser screw—Package of 10
2746	Socket—Dial lamp socket
2747	Cap—Grid connector cap—Package of 5
2749	Capacitor—2400 mmfd.
2875	Knob—Tuning, volume control or tone control knob—Package of 5
2881	Bracket—Dial lamp bracket—Package of 5
2882	Socket—UY Radiotron socket—7 used
2957	Capacitor—10 mfd. electrolytic capacitor
2963	Resistor—8,000 ohm carbon type—Package of 5
2968	Socket—UX Radiotron socket—1 used
2973	Board—Magnetic pickup terminal board
2991	Transformer—First intermediate transformer
2992	Transformer—Second intermediate transformer
2994	Coil—Second detector plate coil complete with mounting rivet
2995	Volume control—Complete less knob—Package of 5
2997	Coil—R. F. coil—Complete with mounting washers and nuts
2998	Coil—Detector and oscillator coil—Complete with mounting washers and nuts
2999	Drive shaft—Dial drive shaft with mounting screws and washers
3000	Scale—Dial scale and drum with set screws
3003	Cushion—Sponge rubber chassis support cushions—One set of 4
3005	Screw assembly—Speaker mounting screw assembly—Comprising one set of 4 screws, 4 eyelets, 4 nuts and 4 washers
3020	Escutcheon—Station selector escutcheon complete with 4 mounting screws
3056	Shield—Radiotron shield—3 used—Package of 2
3060	Resistor—40,000 ohm—Carbon type—Package of 5
3062	Board—Loudspeaker terminal board—Package of 3
3076	Resistor—1 megohm—Carbon type—Package of 5
3077	Resistor—30,000 ohm—Carbon type—Package of 5
3078	Resistor—10,000 ohm—Carbon type—Package of 5
3079	Resistor—40,000 ohm—Carbon type—Package of 5
3080	Resistor—160,000 ohm—Carbon type—Package of 5
3081	Resistor—16,000 ohm—Carbon type
3082	Board—Resistor board—Less resistors, coil and capacitor
3083	Tone control and switch—Tone control and operating switch—Complete less knob
3084	Capacitor—0.008 mfd.—For tone control
3085	Capacitor—400 mmfd.
7054	Cord—Power cord
7062	Capacitor—Adjustable oscillator trimming capacitor
7241	Capacitor—3 gang tuning capacitor
7242	Board—Baffle board and grille cloth
7255	Transformer—Interstage audio transformer
7256	Capacitor pack—By-pass capacitor pack
8559	Ring—Cone retaining ring
8570	Shield—Intermediate transformer shield
8601	Cone—Cone with voice coil—Package of 5
8653	Coil—Speaker field coil, core and cone support
8654	Transformer—Power transformer—220 volt, 50–60 cycle
8679	Transformer—Power transformer—105–125 volt, 50–60 cycle
8680	Transformer—Power transformer—105–125 volt, 25–40 cycle
9323	Speaker—Loudspeaker complete
	MOTOR BOARD ASSEMBLY
2614	Switch—Automatic brake switch
2620	Cushions—Pickup rubber cushions—Comprising 1 damper and 2 pivot cushions—Package of 5 sets
2759	Box—Needle box with lid—Package of 2
2762	Bearing assembly—Governor bearing assembly—Comprising 2 bearings, 2 set screws and 2 steel balls—Package of 3 sets
2763	Bolt assembly—Motor mounting bolts with nuts, washers and rubber cushions—Package of 1 set
2764	Spindle—Turntable spindle
2765	Screw—Pickup needle screw—Package of 10
2766	Screw—Pickup cover mounting screw—Package of 10
2767	Spring—Pickup magnet spring—Package of 10
2768	Armature—Pickup armature
2770	Plate—Pickup damper plate—Package of 5
2771	Screw—Damper plate mounting screw—Package of 10
2772	Magnet—Pickup magnet
2773	Pole shoe—R. H. pole shoe
2778	Pole shoe—L. H. pole shoe
2781	Felt—Regulating lever friction felt—Package of 20
2828	Screw assembly—Pickup mounting screw, nut and washer—Package of 10 sets
2829	Knob—Motor board knob and screw—Package of 2
2872	Ball and spring—Governor ball and spring with mounting screws and washers—Package of 5
2873	Screw assembly—Top plate screw assembly—Comprising screw, nut, lock washer and ball bearing—Package of 5 sets
3052	Screw assembly—Pickup pole shoe mounting screw, nut and washer—Package of 10 sets
3102	Receptacle—Tungstone needle box receptacle
6118	Coil—Pickup coil
7077	Regulator—Speed regulator escutcheon and screw—Complete with mounting screws—Package of 2
7078	Volume control—Record volume control—Complete with mounting nut and washer—Less knob
7083	Transformer—Input transformer
7084	Cover—Turntable cover
7086	Lever—Regulating lever with friction felt—Package of 2
7087	Gear—Governor drive gear with set screw
7088	Disc—Rotor disc
7090	Inductor—Inductor coil—110 volts, 60 cycles
7093	Cover—Pickup cover
7151	Back—Pickup housing back
7247	Cable—Main cable
7248	Inductor—Inductor coil—220 volts
7412	Pickup—Pickup unit complete
8582	Turntable—Turntable with cover
8675	Arm—Pickup suspension arm and base
10129	Ball—Steel ball bearing—$\frac{1}{16}$"—Package of 20
10174	Spring—Automatic brake springs—Set of 4 springs—Package of 2 sets
10175	Holder—Needle holder with mounting screws
10181	Brake—Automatic brake—Complete, less contact switch No. 2614
10196	Spring—Regulating shaft spring—Package of 10
10266	Disc—Rotor disc—For 220 volt motor
10289	Governor—Governor complete with spindle
10378	Plate—Top plate

R-7 D.C., R-9 D.C. & R-10 D.C.
(CONSOLE) (CONSOLE)

MODELS R-7 D.C., R-9 D.C. AND R-10 D.C. ARE SIMILAR TO THE RESPECTIVE A.C. MODELS. REFERENCE SHOULD BE MADE TO THE A.C. MODELS FOR FURTHER INFORMATION.



Schematic Circuit of RCA Victor R-7 D.C. and R-9 D.C.

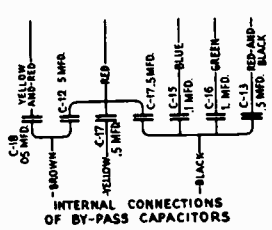
RADIOTRON SOCKET VOLTAGES—115 or 230 Volt Line

(Separate Resistance Unit Used with 230 Volt Line)

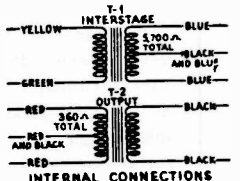
Tube No.	Cathode to Heater Volts, D.C.	Cathode or Filament to Control Grid Volts, D.C.	Cathode to Screen Grid Volts, D.C.	Cathode or Filament to Plate Volts, D.C.	Plate Current M. A.	Screen Grid Current M. A.	Heater or Filament Volts, A.C.
VOLUME CONTROL AT MINIMUM							
1	40	30	40	75	0	0	2.3
2	20	0	—	40	2.0	—	2.3
3	6.0	3.5	65	100	.25		2.3
4	17.0	26	40	75	.0	0	2.3
5	2.0	*2.0	—	90	.23	—	2.3
6	—	25.0	—	100	4.0	—	2.3
7	—	*25.0	—	100	4.0	—	2.3
VOLUME CONTROL AT MAXIMUM							
1	10.0	2.0	50	100	3.5	**0.5	2.3
2	6.0	.0		50	3.0	—	2.3
3	8.0	5.0	50	100	0.5	.0	2.3
4	10.0	2.0	50	100	2.5	**1.0	2.3
5	2.0	*2.0	—	90	.25	0	2.3
6	—	*25.0	—	100	4.0	—	2.3
7	—	*25.0	—	100	4.0	—	2.3

* Not true reading due to Resistance in circuit

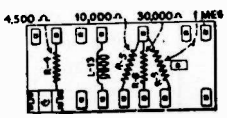
**This may be plus or minus depending on age of tubes

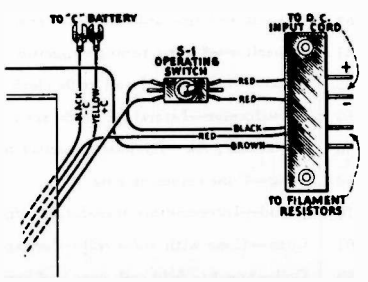


INTERNAL CONNECTIONS OF BY-PASS CAPACITORS



INTERNAL CONNECTIONS OF A. F. TRANSFORMERS





Alignment Procedure

STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO	ADJUST THE FOLLOWING FOR MAX. OUTPUT
1	I-F Grid in series with .01 mfd	175 kc	Quiet Point near 600 kc	S & P of 2nd I-F Trans.
2	1st Det. Grid in series with .01 mfd			S & P of 1st I-F Trans.
3		1400 kc	1400 kc	Osc., Det. and R-F Trimmers on gang condenser
4		600 kc	600 kc	600 kc Oscillator Trimmer (Rock Gang)
5		*Repeat Step 3*		

CAUTION:

DO NOT CONNECT EXTERNAL GROUND TO CHASSIS. Connect low side of test oscillator to chassis *and* ground lead of receiver in series with .05 mfd during alignment.

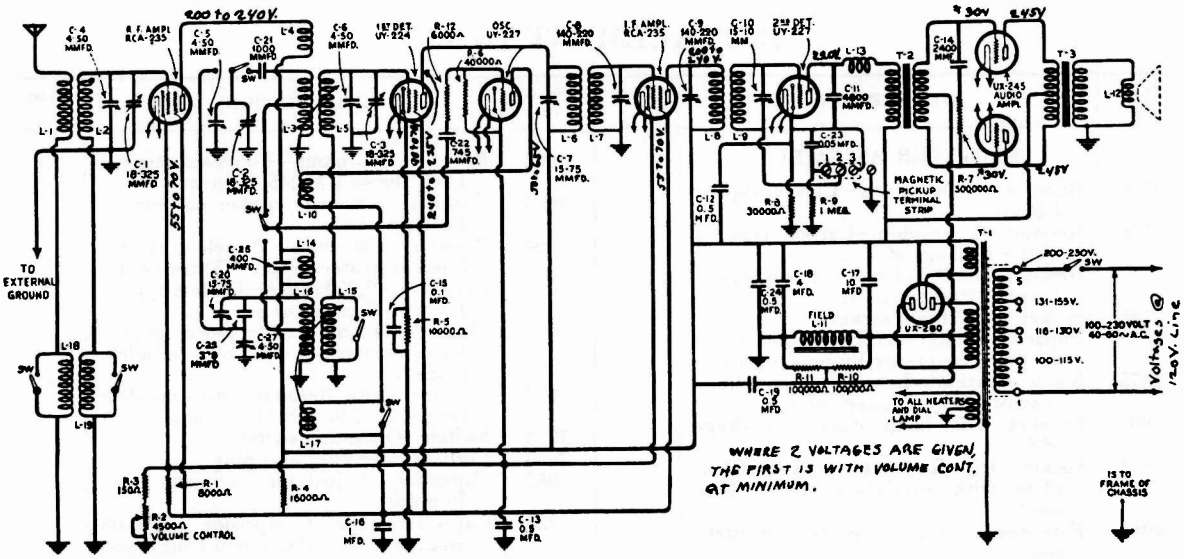
REPLACEMENT PARTS

Stock No.	DESCRIPTION	List
	RECEIVER ASSEMBLY	
2240	Resistor—30,000 ohms—Carbon type—1 Watt	
2546	Resistor—1 megohm—Carbon type—1 watt—Package of 5	
2731	Resistor—10,000 ohms—Carbon type—1 watt—Package of 5	
2746	Socket—Dial lamp socket	
2749	Capacitor—2400 mmfd.—Second detector radio frequency by-pass capacitor	
2875	Knob—Station selector, tone or volume control knob—Package of 5	
2881	Bracket—Dial lamp bracket—Package of 5	
2882	Socket—UY Radiotron socket—Complete with insulation shield—Five used	
2946	Escutcheon—Station selector escutcheon	
2968	Socket—UX Radiotron socket—Complete with insulation shield—Two used	
2973	Board — Magnetic pickup terminal board—Complete with terminals and screws—Package of 2	
2990	Resistor—4500 ohms—Carbon type—1 watt—Package of 5	
2991	Transformer—First I. F. transformer—Complete with shield and mounting screws	
2992	Transformer—Second I. F. transformer—Complete with shield and mounting screws	
2993	Board—Resistor board complete, less resistors	
2994	Coil—Second detector R. F. choke coil—Complete with mounting rivet	
2995	Volume control—Complete, less knob—Package of 5	
2996	Tone control—Complete, less knob—Package of 5	
2997	Coil—R. F. coil—Complete with mounting washer and nut	
2998	Coil—First detector and oscillator coil assembly—Complete with mounting washers and nuts	
2999	Shaft—Dial scale drive shaft assembly complete	
3000	Scale—Dial drum and scale—Complete with set screws	
3001	Resistor—1.9 ohms—Porcelain—Used in parallel with dial lamp	
3002	Resistor—20 ohms—Porcelain type—Used across UX-245 filament	
3003	Cushion — Sponge rubber cushion — Package of 4	
3004	Resistor—180 ohms—Porcelain type—Used as heater supply—Three used	
3045	Resistor—40,000 ohms—Carbon type—1 watt—Package of 5	
3071	Plug—Male and female power plug—Used as interlock—Set of 2 complete plugs	
3072	Resistor unit—Resistor unit complete for use on 220 volt D. C. lines	
3073	Switch—Operating switch	
7054	Cord—Power cord and plug	
7062	Capacitor—Adjustable capacitor—15-70 mmfd.	
7238	Capacitor pack—Comprising one 0.05 mfd., four 0.5 mfd., one 0.1 mfd. and 1.0 mfd. capacitor in metal container	
7239	Transformer—A. F. transformer assembly in metal container	
7240	Reactor—Filter reactor	
7241	Capacitor—Three gang tuning capacitor	
	LOUDSPEAKER ASSEMBLY	
3237	Screw assembly — Speaker mounting screw assembly—Comprising 4 screws 8 washers, 8 nuts and 4 eyelets—Package of 1 set	
8559	Ring—Speaker cone retaining ring	
8601	Cone—Speaker paper cone—Package of 5	
8639	Coil—Comprising field coil, magnet and cone support	
	CABINET ASSEMBLY	
X31	Back frame assembly	
6168	Hinge—Back frame hinge—Comprising 2 hinges and 12 mounting screws—Package of 1 set	
	SPECIAL PARTS FOR R-7 D.C.	
7242	Cloth—Grille cloth complete with baffle board	
9322	Panel—R-7 D.C. back panel—Less resistors and power cord	
	SPECIAL PARTS FOR R-9 D.C.	
3070	Bolts—Speaker mounting bolts, nuts and washers—Package of 2	

R-7-LW

ELECTRICAL SPECIFICATIONS

Voltage Rating	100-230 Volts
Frequency Rating	40-60 Cycles
Power Consumption	100 Watts
Antenna Length	25-75 Feet
Circuit	A.C. Screen Grid Super-Heterodyne
Radiotrons	2 RCA-235, 1 UY-224, 2 UY-227, 2 UX-245, 1 UX-280 Total of 8
Loudspeaker	Dynamic
Undistorted Output	3.0 Watts
Frequency Range	550-1500 K.C. and 150-300 K.C.

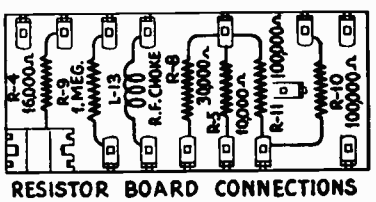


Schematic circuit diagram of R-7-LW

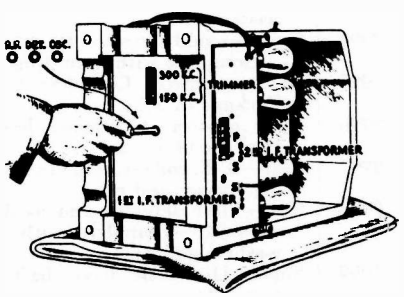
Alignment Procedure

With tuning condenser fully meshed set dial so that 100 coincides with pointer.

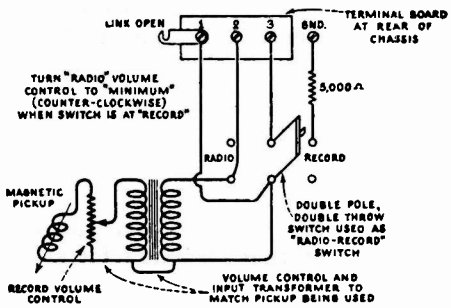
STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO	ADJUST THE FOLLOWING FOR MAX. OUTPUT
1	I-F Grid in series with 0.01 mfd	110 Kc	Quiet point near 80 "BC" Band	S&P of 2nd I-F Trans.
2	1st Det. Grid in series with 0.01 mfd			C&P of 1st I-F Trans.
3	Antenna in series with 200 mmfd	1400 Kc	11 "BC" Band	Osc., Det. & R-F Trimmers 1400 Kc Trimmers
4		300 Kc	Receive Signal "LW" Band	300 Kc Trimmers Rock Gang
5		150 Kc	Receive Signal near 80 "LW" Band	150 Kc Trimmers Rock Gang
6		*Repeat Step 3*		



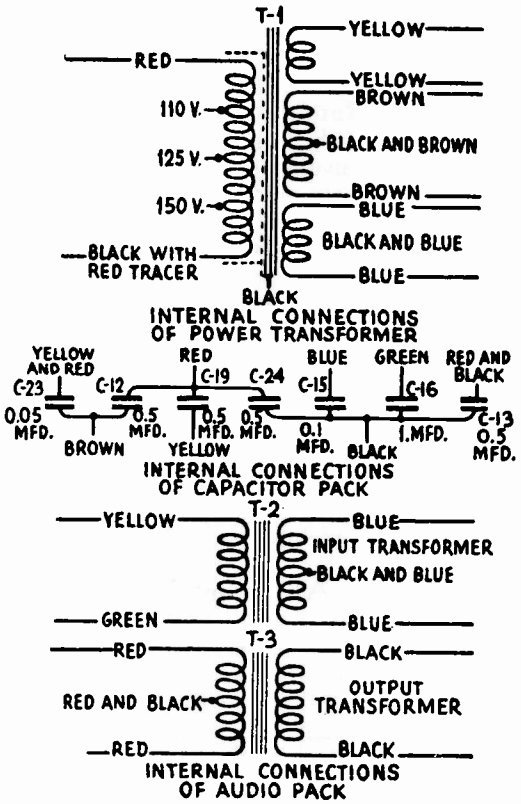
RESISTOR BOARD CONNECTIONS



Location of various line-up capacitors



Magnetic Pickup Connections



REPLACEMENT PARTS

Stock No.	DESCRIPTION	List
	RECEIVER ASSEMBLY	
2240	Resistor—30,000 Ohms—Carbon type—Package of 1	
2346	Resistor—1,000,000 Ohms—Carbon type—Package of 5	
2563	Resistor—6,000 Ohms—Carbon type—Package of 5	
2731	Resistor—10,000 Ohms—Carbon type—Package of 5	
2746	Socket—Dial lamp socket	
2747	Caps—Grid contactor caps—Package of 5	
2749	Capacitor—2400 MMFD	
2875	Knobs—Station selector, band selector or volume control knob—Package of 5	
2881	Bracket—Dial lamp bracket—Package of 5	
2882	Socket—UY Radiotron socket complete with insulator—5 used	
2957	Condenser—10 MFD Electrolytic condenser with mounting nut and washers	
2963	Resistor—8,000 Ohms—Carbon type—Package of 5	
2968	Socket—UX Radiotron socket complete with insulator—3 used	
2970	Resistor—500,000 Ohms—Carbon type—Package of 5	
2973	Board—Magnetic pickup terminal board—Package of 2	
2994	Coil—2d detector R.F. choke coil	
2997	Coil—R.F. coil	
2999	Shaft assembly—Dial scale drive shaft	
3000	Dial—Dial drum and scale complete	
3003	Cushions—Receiver chassis mounting cushions—Package of 4	
3006	Capacitor—1000 MMFD	
3056	Shield—Radiotron shield—3 used—Package of 2	
3057	Condenser—4 MFD. Electrolytic condenser with mounting nuts and washers	
3058	Resistor—100,000 Ohms—Carbon type—Package of 5	
3060	Resistor—40,000 Ohms—Carbon type—Package of 5	
3061	Switch—Toggle type—Operating switch with mounting nut	
3081	Resistor—16,000 Ohms—Carbon type—Package of 1	
3085	Capacitor—400 MMFD	
3225	Lever—Switch lever—Package of 2	
3226	Coil—Oscillator and 1st detector loading coil	
3227	Coil—Antenna loading coal	
3228	Switch—Toggle switch for band changing	
3230	Coil—1st detector and oscillator coil	
3231	Control—Volume control—Complete with mounting nut	
3232	Capacitor—280 MMFD—Package of 5	
7054	Cord—Power cord	
7062	Capacitor—Adjustable oscillator trimmer capacitor—15-70	
7063	Capacitor—Adjustable trimmer capacitor 5-40	
7065	Screwdriver—Non-metallic screwdriver for line-up adjustments	
7238	Capacitor—Comprising four 0.5 MFD., one 0.05 MFD., one 0.1 MFD. and one 1.0 MFD. capacitors in metal container	
7239	Transformer—Audio transformer assembly	
7241	Capacitor—3 gang tuning condenser	
7299	Capacitor—745 MMFD	
7336	Transformer—1st intermediate transformer	
7337	Transformer—2d intermediate transformer	
7338	Board—Resistor board complete less resistors and coil	
7339	Switch—Rotary Band Selector switch—Complete with mounting nut and washers	
8680	Transformer—Power transformer—105-125 volts—25-40 cycles	
8768	Coil capacitor and switch—Complete with mounting nuts and escutcheon	
8769	Transformer—Power transformer—100-230—40-60 cycles	
	REPRODUCER	
8559	Ring—Cone retaining ring	
8601	Cone—Reproducer paper cone—Package of 5	
8639	Coil—Reproducer field coil assembly—Comprising field coil, magnet and cone housing	
	CABINET	
3005	Screw assembly—Reproducing mounting screws, nut and washers—Package of 1 set of 4 each	
3229	Escutcheon—Station selector escutcheon—Complete with mounting screws	
7242	Baffle board and grill cloth	
9391	Cabinet—Cabinet complete less equipment	

R-8, R-10, R-12 & RE-19

ELECTRICAL SPECIFICATIONS

Voltage Rating.....105–125 Volts
Frequency Rating.....25, 30, 50 or 60 Cycles
Power Consumption.....25 ~ 135 Watts, 30 ~ 140 Watts, 50 ~ 135 Watts, 60 ~ 130 Watts
Type of Circuit.....Automatic volume control Super-Heterodyne using Super-Control Radiotrons and single Pentode output stage
Type and Number of Radiotrons....1 UY-224, 2 RCA-235, 3 UY-227, 1 RCA-247, 1 UX-280 —Total 8
Number of Audio Stages (Radio).....1
Number of Audio Stages (Phonograph).....2
Type of Magnetic Pick-Up.....Low Impedance
Type of Tone Arm.....Inertia
Diameter of Turntable.....12 inches
Type of Rectifier.....Full Wave, UX-280
Type of Loudspeaker.....Electro-Dynamic
Undistorted Output.....2.5 Watts

POWER CONSUMPTION RADIO ONLY 100 WATTS

RCA Victor RE-19 is an eight tube Super-Heterodyne combination radio receiver and electric phonograph. The chassis used is similar to the R-12 with the exception that terminals for attaching a magnetic pickup are provided.

Alignment Procedure

REFER TO MODEL R-7 FOR TRIMMER LOCATION.

Connect low side of test oscillator to chassis *and* ground lead during alignment.

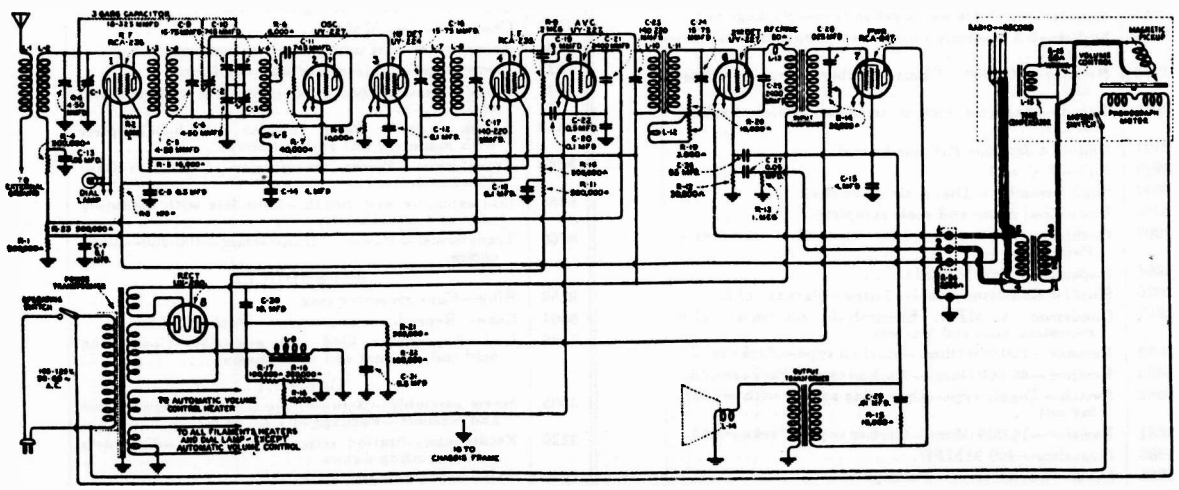
STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO	ADJUST THE FOLLOWING FOR MAX. OUTPUT
1	I-F Grid in series with .01 mfd	175 kc	Quiet Point near 600 kc	S & P of 2nd I-F Trans.
2	1st Det. Grid in series with .01 mfd			S & P of 1st I-F Trans.
3	Antenna in series with 200 mmfd	1400 kc	1400 kc	Osc., Det. and R-F Trimmers on gang condenser
4		600 kc	600 kc	600 kc Oscillator Trimmer (Rock Gang)
5		*Repeat Step 3*		

RADIOTRON SOCKET VOLTAGES

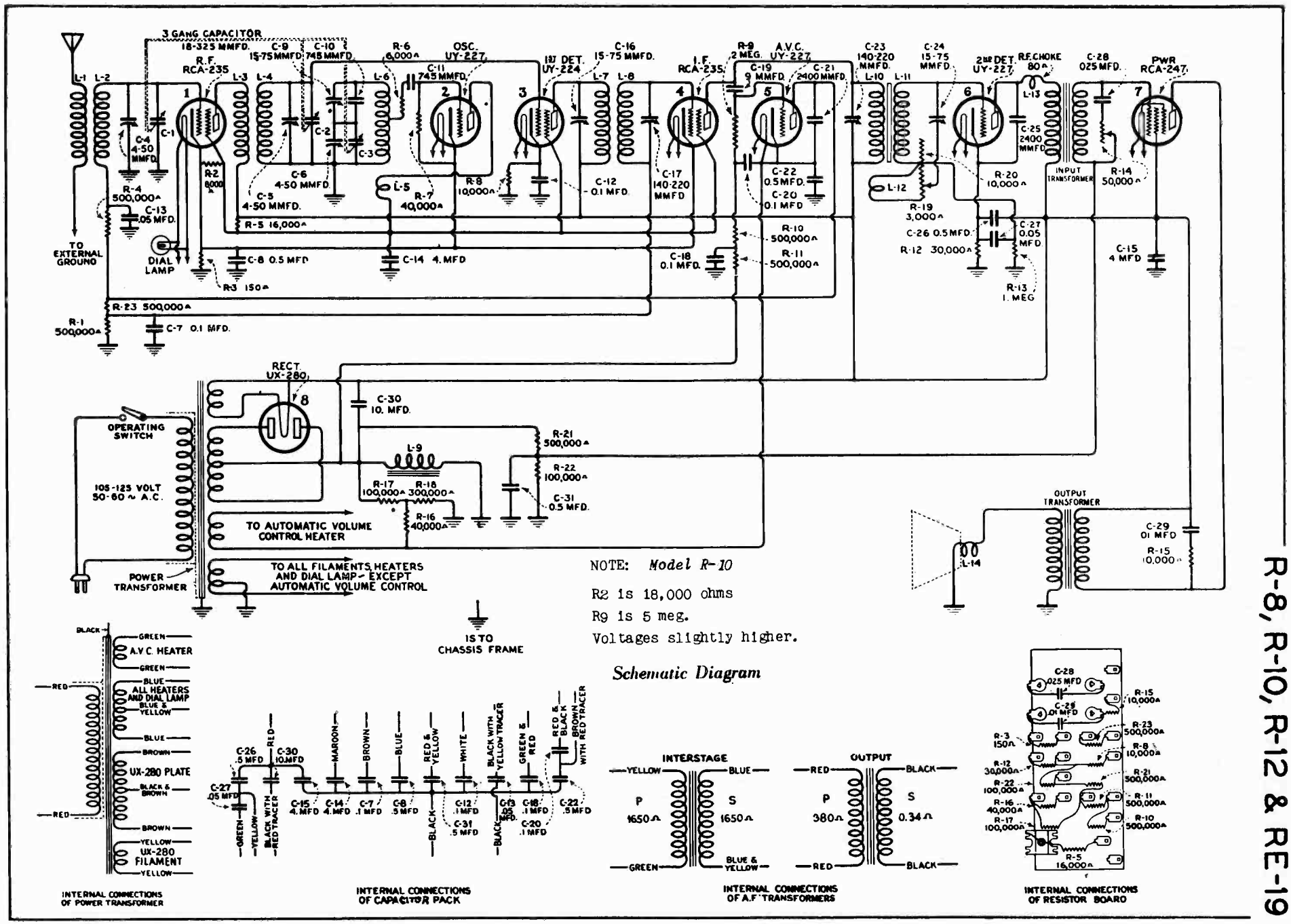
110 VOLT A. C. LINE

(Volume Control Setting Does Not Affect Voltages)

Radiotron No.	Cathode to Heater Volts, D. C.	Cathode or Filament to Screen Grid Volts, D. C.	Cathode or Filament to Plate Volts, D. C.	Plate M. A.
1	2	75	210	5.0
2	8	—	60	5.0
3	7	70	205	0.5
4	2	75	210	5.0
5	0	—	30	0
6	20	—	185	0.5
7	—	210	210	25



Schematic Circuit MODEL *RE 19*


3 GANG CAPACITOR 18-325 MMFD.
R.F. RCA-235
OSC. UY-227
1st DET. UY-224
I.F. RCA-235
A.V.C. UY-227
2nd DET. UY-227
PWR RCA-247
RECT. UX-280
INPUT TRANSFORMER
OUTPUT TRANSFORMER
R.F. CHOKE 80
TO EXTERNAL GROUND
DIAL LAMP
OPERATING SWITCH
105-125 VOLT 50-60 ~ A.C.
POWER TRANSFORMER
TO AUTOMATIC VOLUME CONTROL HEATER
TO ALL FILAMENTS, HEATERS AND DIAL LAMP - EXCEPT AUTOMATIC VOLUME CONTROL
IS TO CHASSIS FRAME
R-1 500,000Ω
R-2 6000Ω
R-3 150Ω
R-4 500,000Ω
R-5 16,000Ω
R-6 6,000Ω
R-7 40,000Ω
R-8 10,000Ω
R-9 2 MEG.
R-10 500,000Ω
R-11 500,000Ω
R-12 30,000Ω
R-13 1. MEG
R-14 50,000Ω
R-15 10,000Ω
R-16 40,000Ω
R-17 100,000Ω
R-18 300,000Ω
R-19 3,000Ω
R-20 10,000Ω
R-21 500,000Ω
R-22 100,000Ω
R-23 500,000Ω
C-1
C-2
C-3
C-4 4-50 MMFD.
C-5 4-50 MMFD.
C-6 4-50 MMFD.
C-7 0.1 MFD.
C-8 0.5 MFD
C-9 15-75 MMFD.
C-10 745 MMFD.
C-11 745 MMFD.
C-12 0.1 MFD.
C-13 .05 MFD.
C-14 4. MFD
C-15 4 MFD
C-16 15-75 MMFD.
C-17 140-220 MMFD
C-18 0.1 MFD.
C-19 9 MMFD.
C-20 0.1 MFD.
C-21 2400 MMFD.
C-22 0.5 MFD.
C-23 140-220 MMFD.
C-24 15-75 MMFD.
C-25 2400 MMFD.
C-26 0.5 MFD.
C-27 0.05 MFD.
C-28 .025 MFD.
C-29 .01 MFD
C-30 10. MFD.
C-31 0.5 MFD.
L-1 L-2 L-3 L-4 L-5 L-6 L-7 L-8 L-9 L-10 L-11 L-12 L-13 L-14
1 2 3 4 5 6 7 8
NOTE: Model R-10
R2 is 18,000 ohms
R9 is 5 meg.
Voltages slightly higher.
Schematic Diagram
BLACK
GREEN
A.V.C. HEATER
GREEN
BLUE
ALL HEATERS AND DIAL LAMP
BLUE & YELLOW
BLUE
BROWN
UX-280 PLATE
BLACK & BROWN
RED
BROWN
YELLOW
UX-280 FILAMENT
YELLOW
INTERNAL CONNECTIONS OF POWER TRANSFORMER
C-26 .5 MFD
RED
C-30 10 MFD
MAROON
BROWN
BLUE
RED & YELLOW
WHITE
BLACK WITH YELLOW TRACER
GREEN & RED
RED & BLACK
BROWN WITH RED TRACER
C-27 .05 MFD
GREEN
YELLOW
BLACK WITH RED TRACER
C-15 4. MFD
C-14 4. MFD
C-7 .1 MFD
C-8 .5 MFD
BLACK
C-12 .1 MFD
C-31 .5 MFD
C-13 .05 MFD.
BLACK
C-18 .1 MFD
C-20 .1 MFD
C-22 .5 MFD
INTERNAL CONNECTIONS OF CAPACITOR PACK
INTERSTAGE
YELLOW
BLUE
P
1650Ω
S
1650Ω
GREEN
BLUE & YELLOW
OUTPUT
RED
BLACK
P
380Ω
S
0.34Ω
RED
BLACK
INTERNAL CONNECTIONS OF A.F. TRANSFORMERS
C-28 .025 MFD
C-29 .01 MFD
R-15 10,000Ω
R-3 150Ω
R-23 500,000Ω
R-8 10,000Ω
R-12 30,000Ω
R-21 500,000Ω
R-22 100,000Ω
R-11 500,000Ω
R-16 40,000Ω
R-10 500,000Ω
R-17 100,000Ω
R-5 16,000Ω
INTERNAL CONNECTIONS OF RESISTOR BOARD

R-8, R-10, R-12 & RE-19

REPLACEMENT PARTS

Stock No.	DESCRIPTION	List
	RECEIVER PARTS COMMON TO R-8 AND R-12	
2563	Resistor—6,000 ohms—Carbon type—1 watt—Package of 5	
2734	Capacitor—745 mmfd.—Package of 5	
2746	Socket—Dial lamp socket	
2747	Cap—Grid contactor cap—Package of 5	
2749	Capacitor—2400 mmfd.	
2882	Socket—UY Radiotron socket complete with insulation strip—7 used	
2963	Resistor—8,000 ohms—Carbon type—1 watt—Package of 5	
2968	Socket—UX Radiotron socket complete with insulation strip—1 used	
2970	Resistor—500,000 ohms—Carbon type—1 watt—Package of 5	
3003	Cushion—Sponge rubber cushion—Package of 4	
3024	Capacitor—9 mmfd.—Package of 2	
3045	Resistor—40,000 ohms—Carbon type—½ watt—Package of 5	
3048	Resistor—500,000 ohms—Carbon type—½ watt—Package of 5	
3049	Resistor—150 ohms—Carbon type—½ watt—Package of 5	
3056	Shield—Radiotron shield—4 used—Package of 2	
3076	Resistor—1 megohm—Carbon type—½ watt—Package of 5	
3077	Resistor—30,000 ohms—Carbon type—½ watt—Package of 5	
3078	Resistor—10,000 ohms—Carbon type—½ watt—Package of 5	
3079	Resistor—40,000 ohms—Carbon type—½ watt—Package of 5	
3081	Resistor—16,000 ohms—Carbon type—3 watt	
3092	Volume control—Volume control complete with mounting nut	
3095	Coil—R. F. coil—Complete with mounting bracket	
3137	Knob—Tuning control, volume control and tone control knob—Package of 5	
3234	Tone control—Tone control complete with mounting nut	
3235	Coil—First detector and oscillator coil	
3251	Coil—R. F. choke coil	
6185	Resistor—100,000 ohms—Carbon type—½ watt—Package of 5	
6186	Resistor—500,000 ohms—Carbon type—½ watt—Package of 5	
6187	Resistor—300,000 ohms—Carbon type—½ watt—Package of 5	
6188	Resistor—2 megohm—Carbon type—½ watt—Package of 5	
7054	Cord—Power cord	
7062	Capacitor—Adjustable capacitor—15-70 mmfd.	
7298	Capacitor—0.01 mfd.	
7340	Transformer—First intermediate transformer	
7341	Transformer—Second intermediate transformer	
7342	Capacitor—Comprising two 0.05 mfd., four 0.5 mfd., one 10.0 mfd., two 4.0 mfd. and four 0.1 mfd. capacitor in metal container	
7343	Transformer—Audio transformer	
7344	Transformer—Power transformer	
7348	Board—Resistor board complete less resistors and capacitors	
7362	Capacitor—0.025 mfd.	
8770	Transformer—Power transformer—105-125 volts, 25-40 cycles	
8771	Transformer—Power transformer—220 volts, 60 cycles	
8837	Support—Receiver chassis metal mounting bracket—Package of 4	
	RECEIVER PARTS SPECIAL TO R-8	
2999	Shaft—Tuning condenser drive shaft complete	
3029	Bracket—Dial lamp bracket and indicator	
3097	Scale—Dial drum and scale with set screws—Package of 2	
7241	Capacitor—3 gang tuning capacitor	
6113	Foot—Cabinet felt foot—Package of 15	
7435	Escutcheon—Tuning dial escutcheon complete with mounting screws	
	RECEIVER PARTS SPECIAL TO R-12	
6189	Bracket—Dial lamp bracket and indicator—Pkg. of 2	
6190	Shaft—Tuning condenser drive shaft complete with 3 washers—Package of 5	
6191	Cord—Tuning condenser drive cord—Package of 5	
6192	Spring—Tuning condenser drive cord tension spring—Package of 10	
7438	Capacitor—Variable tuning capacitor	
7439	Drum—Dial drum with set screw	
7440	Scale—Dial and dial scale	
7441	Escutcheon—Tuning dial escutcheon complete with mounting screws	
	LOUDSPEAKER	
6174	Screw assembly—Speaker mounting screw assembly—Comprising 4 screws, 8 nuts, 4 washers and 4 eyelets—Package of 1 set—For R-8	
3237	Screw assembly—Speaker mounting screw assembly—comprising 4 screws, 8 nuts, 4 washers and 4 eyelets—Package of 1 set—For R-12	
6184	Board—Terminal board complete with 3 terminals and mounting rivets—Package of 5	
7345	Coil—Speaker field coil assembly—Comprising coil, cone housing and magnet	
8559	Ring—Cone retaining ring	
8601	Cone—Speaker paper cone—Package of 5	

REPLACEMENT PARTS - MODEL RE-19

Receiver Assembly — *Refer to Model R-12*

Add Stock No.

2875 Knob - Tuning control, volume control or tone control knob
6179 Terminal - Single ground terminal with mounting rivet
6214 Board - Magnetic pickup terminal board

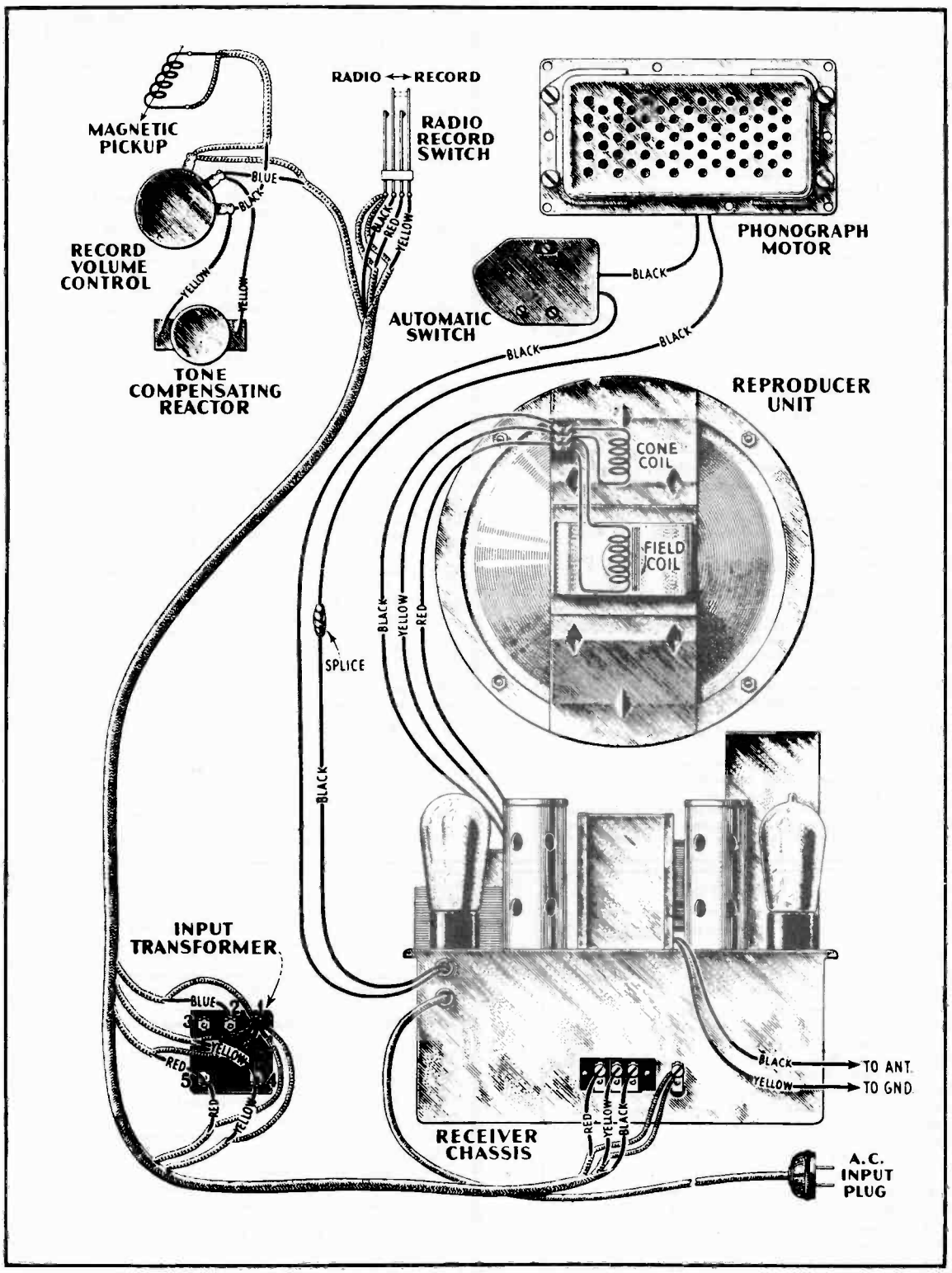
Delete Stock No. 3137 knob

REPLACEMENT PARTS—Continued

Stock No.	DESCRIPTION	List
	MOTOR BOARD ASSEMBLY	
X68	Board—Motor board	
2614	Switch—Automatic brake switch	
2620	Cushions—Pickup rubber cushions—Comprising one damper and two pivot cushions—Package of 5 sets	
2767	Spring—Pickup magnet retaining spring—Package of 10	
2768	Armature—Pickup armature	
2770	Plate—Pickup damper plate—Package of 5	
2771	Screw—Pickup damper plate mounting screw—Package of 10	
2875	Knob—Record switch knob—Package of 5	
2908	Spring—Gear reducing pawl spring—Package of 10	
3052	Screw assembly—Pickup pole shoe mounting screw assembly—Comprising nut, washer and screw—Package of 10 sets	
3157	Gear—Driving gear with set screw—Located on turntable spindle above top plate	
3159	Friction brake—Gear reducing brake spring and pad—Complete with mounting rivets—Package of 4	
3161	Spring—Shift lever spring—Package of 5	
3167	Magnet—Pickup magnet	
3168	Coil—Pickup coil	
3169	Pole shoe—Pickup pole shoe—R.H.	
3170	Pole shoe—Pickup pole shoe—L.H.	
3175	Receptacle—Tungstone needle box receptacle	
3189	Box—Needle box with lid—Package of 2	
3205	Screw—Pickup needle holding screw—Package of 10	
3207	Screw—Pickup cover mounting screw—Package of 10	
3208	Screw assembly—Pickup mounting screw assembly Compriaing one screw, one nut, and one washer—Package of 10	
3211	Washer—Turntable spindle leather washer—Package of 10	
3224	Switch—Record switch complete with mounting washer and nut	
3278	Bearing—Rotor shaft fibre thrust bearing and cork button—Package of 10	
3279	Screw and nut—Rotor shaft thrust bearing adjusting screw and lock nut—Package of 10	
3280	Washer—Metal washer—Located on turntable spindle underneath gear reducing unit—Package of 20	
3281	Pawl—Gear reducing pawl complete with mounting stud	
6119	Stud—Motor hanging stud—Package of 6	
6120	Screw—For holding turntable spindle bearing and grease cap—Package of 10	
6121	Bearing—Turntable spindle bearing and grease cap	
6215	Escutcheon—Shift lever speed escutcheon plate—Complete with mounting screws—Package of 2	
6216	Rod—Automatic brake trip rod with lock nut—Package of 5	
6217	Pickup—Pickup unit complete	
6218	Screw and washer—Motor board mounting screw and washer—Package of 10	
6221	Cover—Pickup cover	
7084	Cover—Turntable cover	
7151	Back—Pickup housing back	
7305	Gear reducing unit complete	
7387	Reactor—Compensating reactor with mounting bracket	
7388	Spindle—Turntable spindle with fibre gear—110 or 220 volts—60 cycles	
7389	Rotor and shaft—110 or 220 volts—60 cycles	
7390	Spring and washer—Motor mounting springs and washers—Comprising 9 cup washers, 3 "C" washers and 6 springs—Package of 1 set	
7393	Block—Pickup connector block and wire	
7400	Spindle—Turntable spindle with fibre gear—25 cycles	
7401	Rotor and shaft—25 cycles	
7402	Spindle—Turntable spindle with fibre gear—30 cycles	
7403	Rotor and shaft—30 cycles	
7443	Rotor and shaft—110 or 220 volts—50 cycles	
7444	Spindle—Turntable spindle with fibre gear—110 or 220 volts—50 cycles	
7445	Transformer—Input transformer	
8795	Motor—Motor complete, 110 volts, 60 cycles	
8800	Motor—Motor complete—25 cycles	
8801	Motor—Motor complete—30 cycles	
8856	Motor—Motor complete—110 volts—50 cycles	
8872	Shift lever—Speed shift lever complete with mounting screws	
8873	Brake—Automatic brake complete with mounting screws and washers	
8874	Arm—Pickup arm complete less pickup unit	
8875	Cable—Main cable from input transformer to volume control, record switch and receiver	
8876	Support—Lid support	
8877	Turntable—Turntable with cover	
8887	Motor—Motor complete—220 volts—60 cycles	
8888	Motor—Motor complete—220 volts—50 cycles	
10174	Spring—Automatic brake springs—Set of 4 springs—Package of 2 sets	
10184	Plate—Automatic brake latch trip plate complete with mounting screws—Package of 5	
6219	Hinge—Cabinet lid hinge—Complete with mounting screws—Package of 2	
7441	Escutcheon—Tuning dial escutcheon—Complete with mounting screws	
9408	Cabinet—Cabinet complete less equipment	

Stock No.	DESCRIPTION	List
	RECEIVER Model R-10	
2563	Resistor—6,000 Ohms—Carbon type—Package of 5	
2730	Resistor—18,000 Ohms—Carbon type—Package of 5	
2734	Capacitor—745 Mmfd.—Package of 5	
2746	Socket—Tuning dial lamp socket	
2747	Caps—Grid connector caps—Package of 5	
2749	Capacitor—2400 Mmfd.	
2875	Knobs—Volume control, tone control and tuning dial control knob—Package of 5	
2882	Socket—Radiotron socket with insulator—7 used	
2968	Socket—Radiotron socket with insulator—1 used	
2999	Shaft—Tuning dial drive shaft	
3003	Cushions—Receiver chassis rubber cushions—Package of 4	
3024	Capacitor—9 Mmfd.—Package of 2	
3029	Bracket—Dial lamp bracket and indicator	
3045	Resistor—40,000 Ohms—1 Watt—Carbon type—	
3048	Resistor—500,000 Ohms—Carbon type—Package of 5	
3049	Resistor—150 Ohms—Carbon type—Package of 5	
3051	Resistor—5 Megohms—Carbon type—Package of 5	
3056	Shield—Radiotron tube shield—Package of 2	
3076	Resistor—1 Megohm—Carbon type—Package of 5	
3077	Resistor—30,000 Ohms—Carbon type—Package of 5	
3078	Resistor—10,000 Ohms—Carbon type—Package of 5	
3079	Resistor—40,000 Ohms—½ Watt—Carbon type—	
3081	Resistor—16,000 Ohms—Carbon type	
3092	Control—Volume control complete with mounting nut	
3095	Coil—R. F. Coil—Complete with mounting bracket	
3097	Scale—Dial scale and drum with set screw—Package of 2	
3234	Tone Control—Tone control and operating switch complete with mounting nut	
3235	Coil—Detector and oscillator coil	
3236	Escutcheon—Tuning dial escutcheon with mounting screws	
3241	Resistor—300,000 Ohms—Carbon type—Package of 5	
3251	Coil—Choke coil	
3252	Resistor—100,000 Ohms—Carbon type—Package of 5	
7054	Cord—Power cord	
7062	Capacitor—Adjustable oscillator trimmer capacitor	
7241	Capacitor—3 gang tuning capacitor	
7298	Capacitor—0.01 Mfd.	
7340	Transformer—1st intermediate transformer	
7341	Transformer—2d intermediate transformer	
7342	Capacitor—Comprising two 0.05 Mfd., four 0.5 Mfd., one 10.0 Mfd., two 4.0 Mfd. and four 0.1 Mfd. capacitors in metal container	
7343	Transformer—Audio transformer	
7344	Transformer—Power transformer—110 volts—60 cycles	
7348	Board—Resistor board less resistors and capatitors	
7362	Capacitor—0.025 Mfd.	
8770	Transformer—Power transformer—110 volts—25 cycles	
8771	Transformer—Power transformer—220 volts—60 cycles	

R-8, R-10, R-12 & RE-19



Assembly Wiring **MODEL RE 19**

(220 VOLTS) R-8 D.C.

ELECTRICAL SPECIFICATIONS

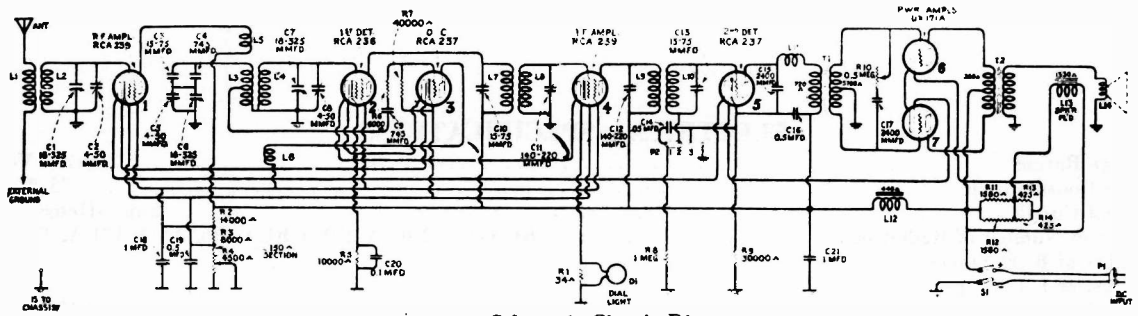
Voltage Rating	200-230 Volts
Power Consumption	75 Watts
Type of Circuit	Super-Heterodyne
Type and Number of Radiotrons	2 RCA-237, 2 RCA-239, 1 RCA-236, 2 UX-171-A, Total 7
Number of R. F. Stages	One
Number of I. F. Stages	One
Type of Second Detector	Power Self Biasing
Type of Tone Control	Variable Resistance in series with condenser across secondary of input transformer. Reduces high and increases low frequency output at "low" position.
Number of Audio Stages	One—Push-Pull UX-171-A
Undistorted Output	1.5 Watts

REPLACEMENT PARTS

Stock No.	DESCRIPTION	List
	RECEIVER ASSEMBLIES	
2240	Resistor—30,000 ohms—Carbon type—1 watt	
2546	Resistor—1 megohm—Carbon type—1 watt—Package of 5	
2563	Resistor—6000 ohms—Carbon type—1 watt—Package of 5	
2731	Resistor—10,000 ohms—Carbon type—1 watt—Package of 5	
2734	Capacitor—745 mmfd.—Oscillator grid capacitor—Package of 5	
2746	Socket—Dial lamp socket	
2747	Contact Cap—Package of 5	
2749	Capacitor—2400 mmfd.—Used as 2nd detector R.F. by-pass capacitor	
2875	Knob—Station selector, tone control or volume control knob—Package of 5	
2881	Bracket—Dial lamp bracket—Pkg. of 5	
2882	Socket—5 prong Radiotron socket with insulating shield—5 used	
2963	Resistor—8000 ohms—Carbon type—1 watt—Package of 5	
2968	Socket—4 prong Radiotron socket with insulating shield—2 used	
2973	Board—Magnetic pickup terminal board complete with terminals and screws—Package of 2	
2991	Transformer—1st I.F. transformer complete with shield and mounting screws	
2992	Transformer—2d I.F. transformer complete with shield and mounting screws	
2993	Board—Resistor mounting board complete with terminals and mounting brackets—Less resistors	
2995	Volume control—Complete less knob—Package of 5	
2996	Tone control—Complete less knob—Package of 5	
2999	Shaft—Dial scale drive shaft complete with mounting screws, washers and nuts	
3003	Cushions—Sponge rubber cushions—Package of 4	
3045	Resistor—40,000 ohms—Carbon type—1 watt—Package of 5	
3050	Resistor—14,000 ohms—Carbon type—3 watt	

Stock No.	DESCRIPTION	List
6295	Resistor—Dial lamp resistor—34 ohms—20 watt	
6296	Resistor—Filament and field supply resistor—2 used	
6299	Switch—Operating switch	
7054	Cord—Power cord and plug	
7062	Condenser—Adjustable oscillator trimming condenser	
7238	Capacitor pack—Comprising one 0.05, four 0.5, one 0.1 mfd. and one 1.0 mfd. capacitors in metal container	
7239	Transformer—A.F. transformer assembly in metal container	
7240	Reactor—Filter reactor	
7241	Condenser—3 gang tuning condenser with mounting screws and washers	
7493	Coil—R.F. coil complete with mounting washer and nut	
7494	Coil—1st detector and oscillator coil assembly complete with mounting, washers and screws	
7495	Scale—Dial scale with drum and set screws	
7496	Shield—Metal shield for Radiotrons—3 used	
	CABINET ASSEMBLIES (Prices Furnished Upon Request)	
X-32	Baffle board and grille cloth	
6113	Foot—Cabinet felt foot—Package of 15	
7497	Escutcheon—Tuning dial escutcheon with mounting screws	
9415	Cabinet—Complete less equipment	
	REPRODUCER ASSEMBLIES	
6174	Screw assembly—Reproducer mounting screw assembly—Comprising 4 screws 8 nuts, 4 washers and 4 eyelets—Package of one set	
6184	Board—Terminal complete with three terminals and mounting rivets	
7308	Coil assembly—Reproducer field coil assembly—Comprising field coil, cone bracket and magnet	
8559	Ring—Cone retaining ring	
8601	Cone—Reproducer cone with voice coil—Package of 5	

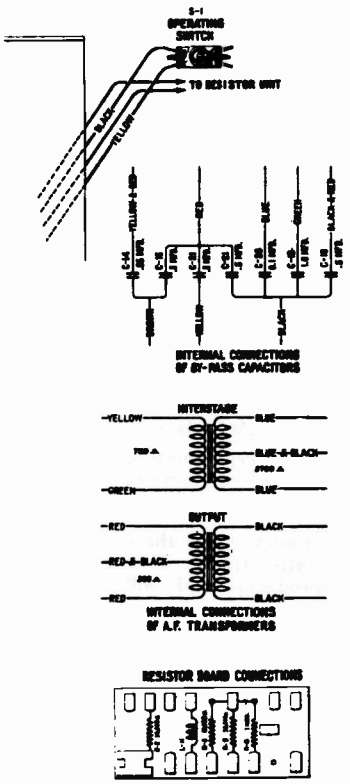
R-8 D.C. (220 VOLTS)



Schematic Circuit Diagram

230 Volt D. C. Line

Radiotron No.	Cathode to Heater, Volts, D. C.	Cathode or Filament to Control Grid, Volts, D. C.	Cathode or Filament to Screen Grid, Volts, D. C.	Cathode or Filament to Plate, Volts, D. C.	Plate Current, M. A.	Heater or Filament, Volts, D. C.
VOLUME CONTROL AT MINIMUM						
1—R. F.	+16	35	55	180	0	6.4
2—1st Det.	−12	4.5	80	210	0.5	6.4
3—Osc.	+18	—	—	60	2.0	6.4
4—I. F.	+26	35	55	175	0	6.4
5—2nd Det.	−10	5.0	—	180	0.5	6.4
6—Pwr.	—	46	—	175	17	5.0
7—Pwr.	—	36	—	180	30.0	5.5
VOLUME CONTROL AT MAXIMUM						
1—R. F.	−22	2.5	60	210	2.5	6.4
2—1st Det.	−14	3.0	60	205	0.5	6.4
3—Osc.	−20	—	—	65	2.5	6.4
4—I. F.	−10	2.5	60	210	3.0	6.4
5—2nd Det.	−10	5.0	—	175	0.5	6.4
6—Pwr.	—	46	—	170	17	5.0
7—Pwr.	—	35	—	180	30.0	5.5



Alignment Procedure

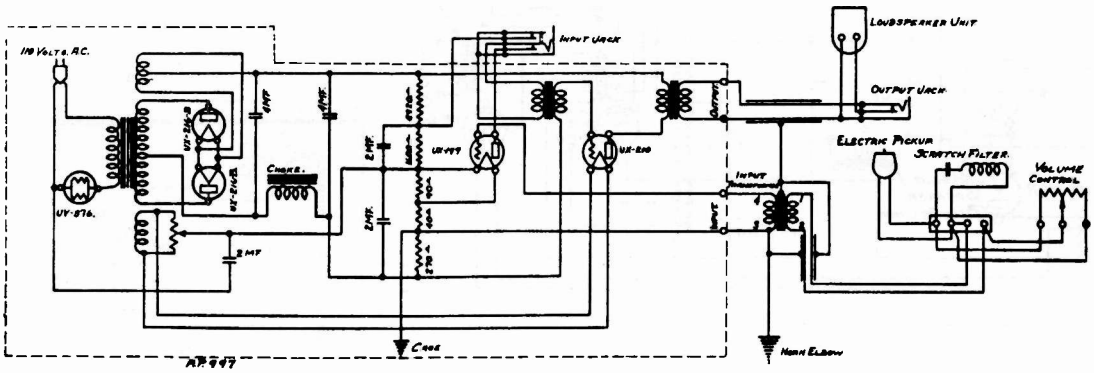
REFER TO MODEL R-7 FOR TRIMMER LOCATION.

CAUTION:

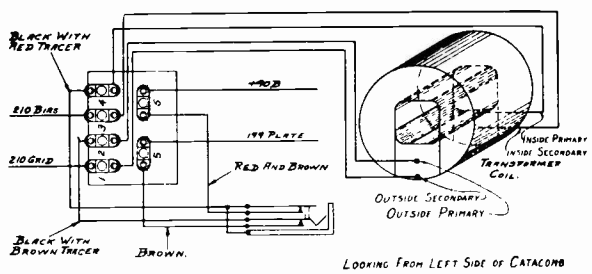
DO NOT CONNECT EXTERNAL GROUND TO CHASSIS. Connect low side of test oscillator to chassis *and* ground lead to receiver in series with .05 mfd during alignment.

STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO	ADJUST THE FOLLOWING FOR MAX. OUTPUT
1	I-F Grid in series with .01 mfd	175 kc	Quiet Point near 600 kc	S & P of 2nd I-F Trans.
2	1st Det. Grid in series with .01 mfd			S & P of 1st I-F Trans.
3	Antenna in series with 200 mmfd	1400 kc	1400 kc	Osc., Det. and R-F Trimmers on gang condenser
4		600 kc	600 kc	600 kc Oscillator Trimmer (Rock Gang)
5		*Repeat Step 3*		

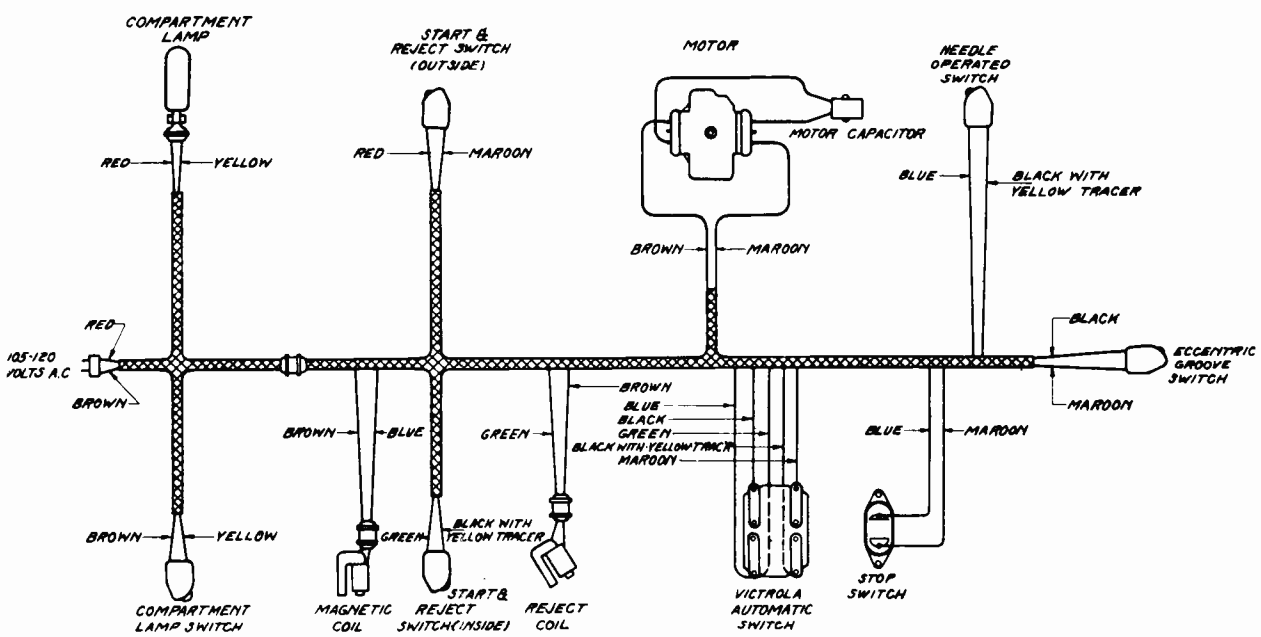
MODELS VE-8-60 & 10-35



Wiring Diagram for Electrola 8-60

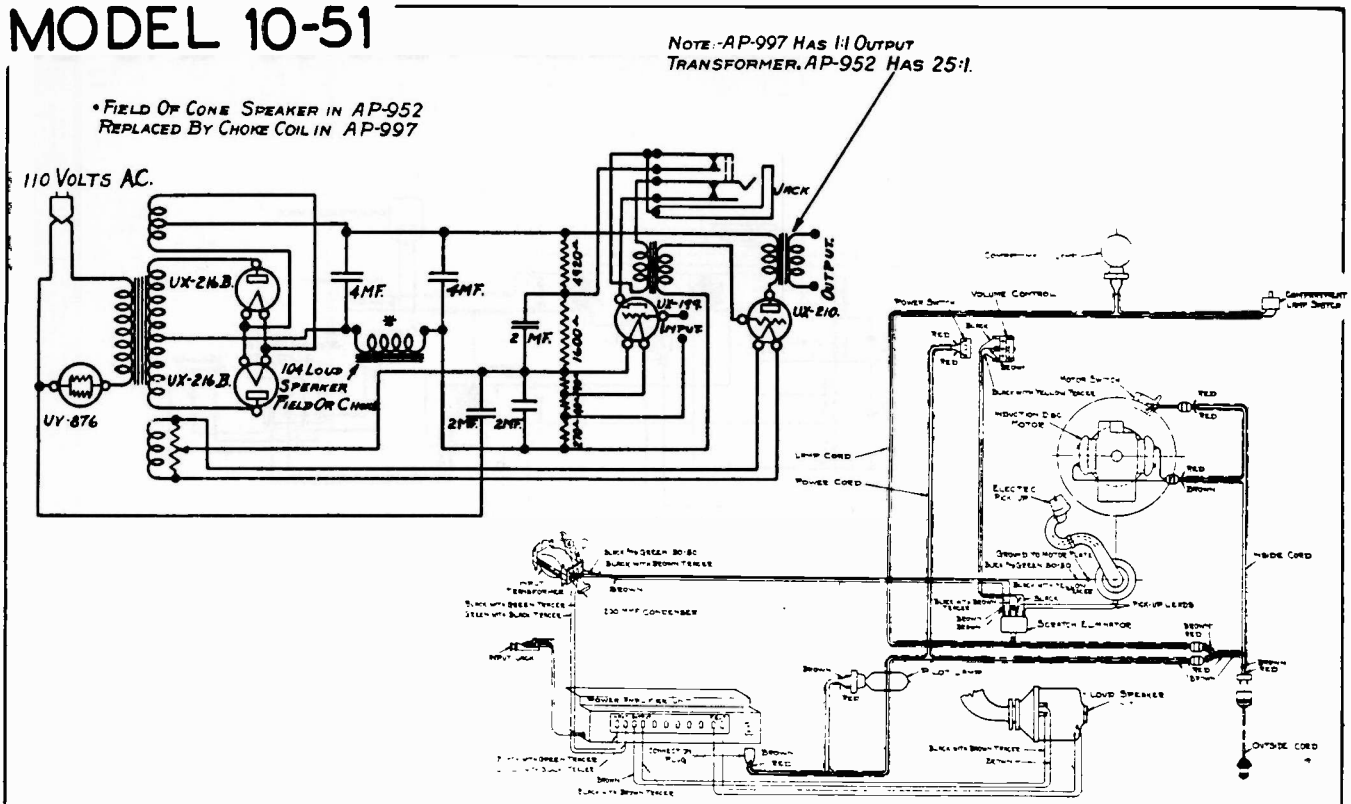


8-60 Input Transformer Wiring



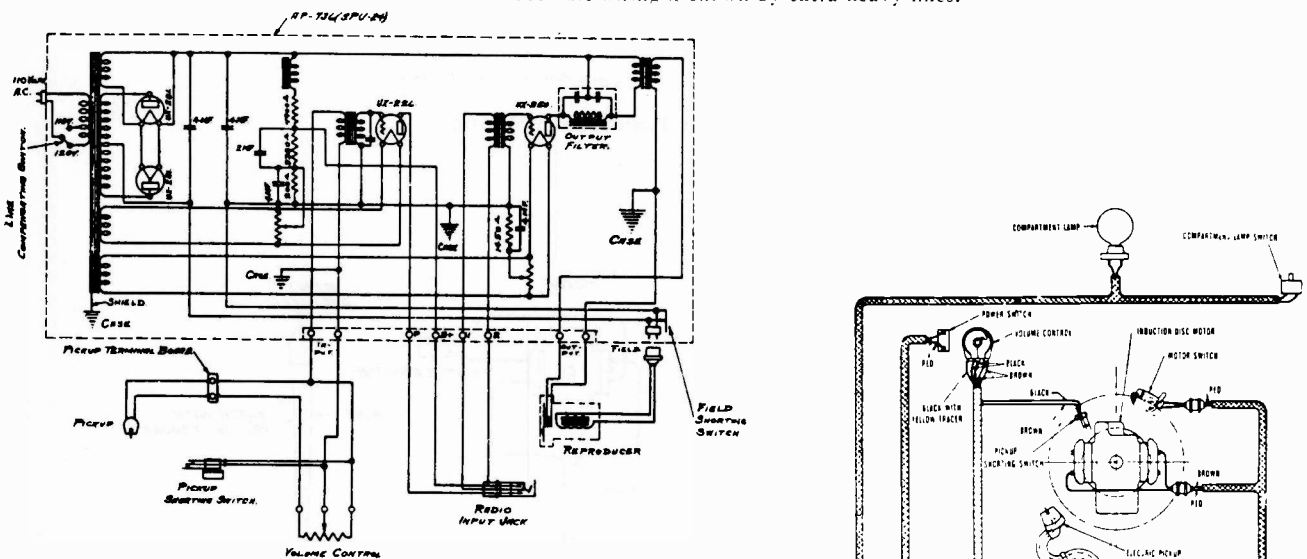
—Power Cable Wiring Diagram Automatic Orthophonic Victrola No. 10-35

MODEL 10-51



Wiring Diagram for Automatic Orthophonic Electrola No. 10-51

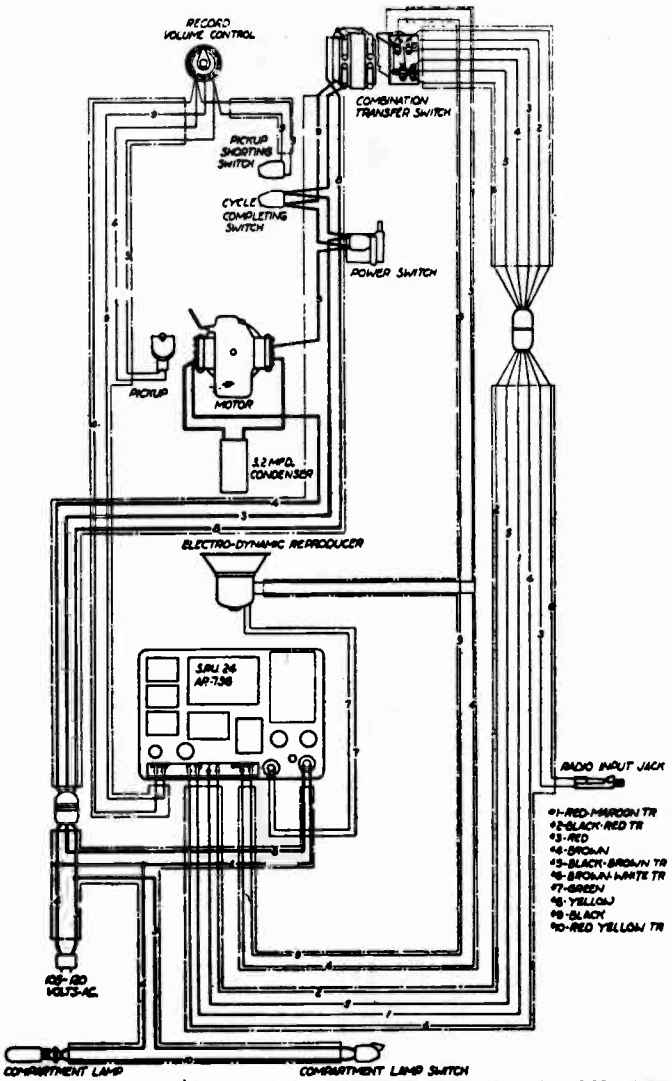
Showing connections between terminals of the various units. The 110-volt wiring is shown by extra heavy lines.



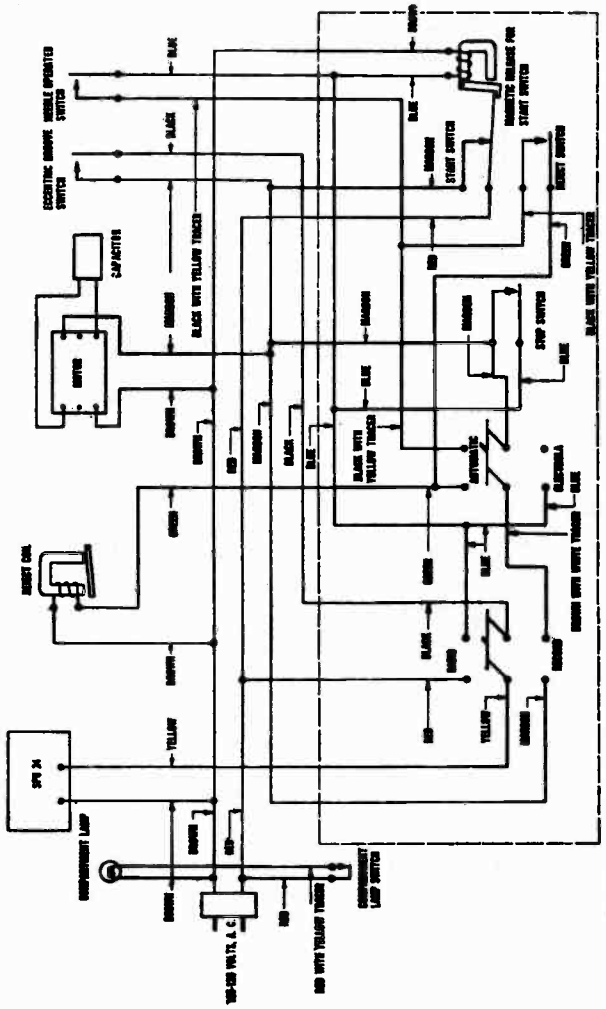
Wiring Diagram 10-51 above serial No. 800

Wiring Diagram for Automatic Orthophonic Electrola 10-51 above serial No. 800,

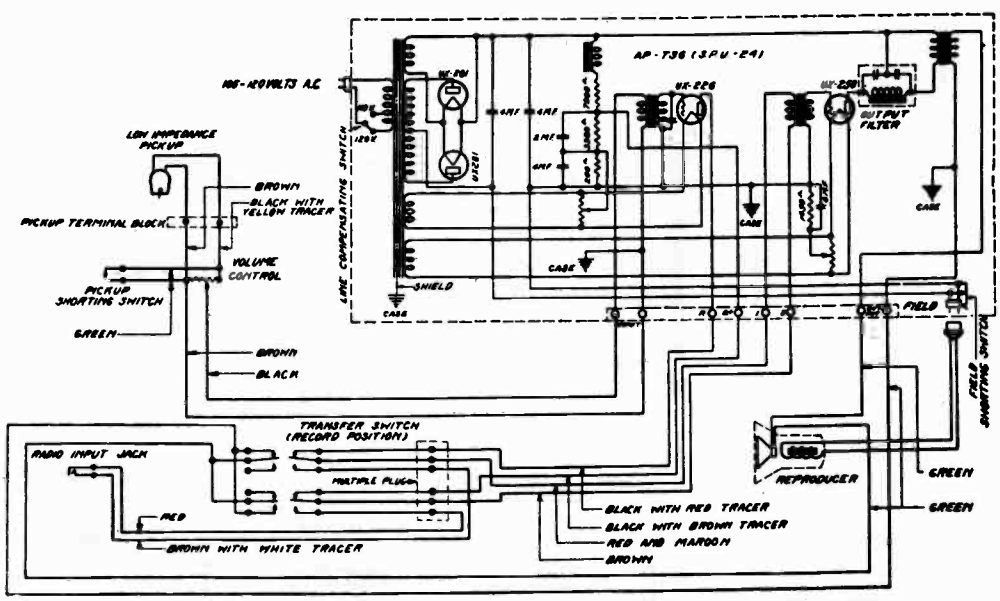
MODEL 10-69



Cable Wiring Diagram Automatic Electrola 10-69, above Serial No. 5001

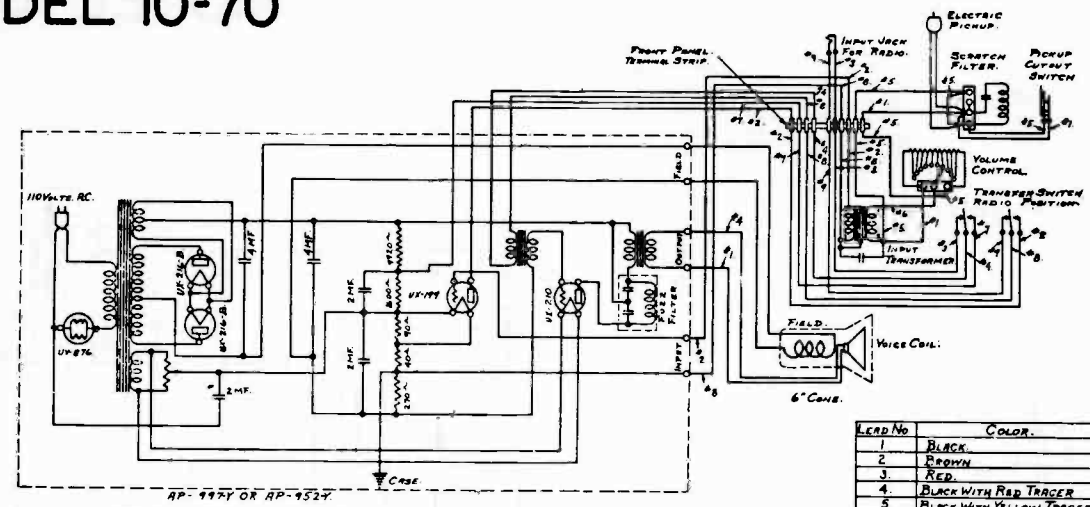


A. C. Power Wiring Diagram Automatic Electrola No. 10-69 Below Serial No. 3501



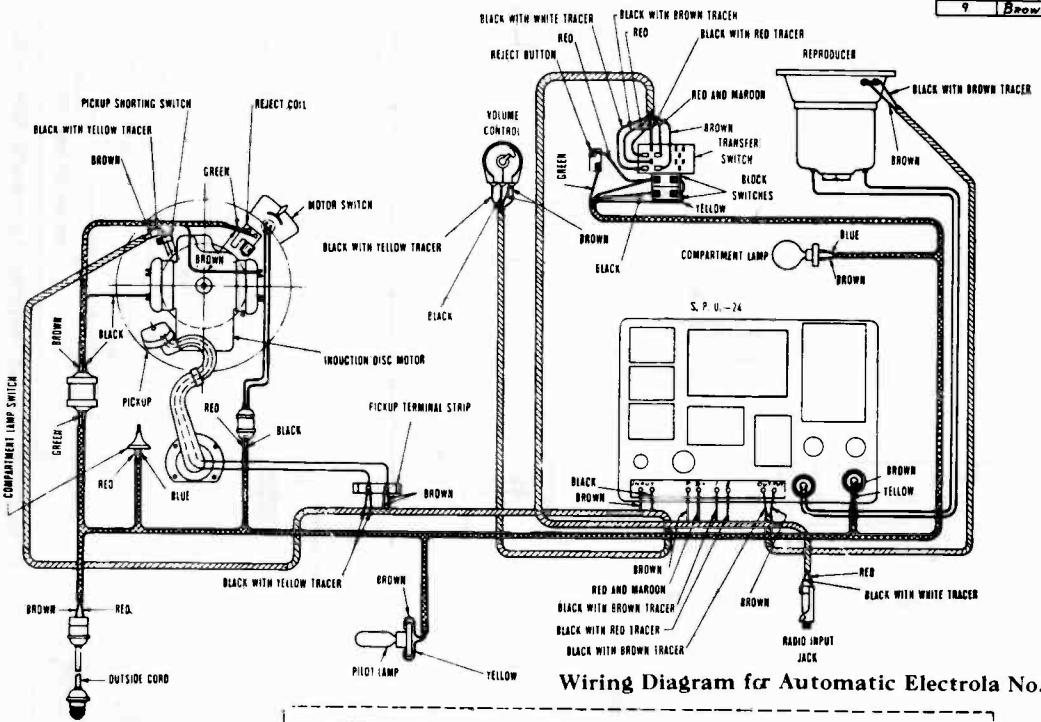
Schematic Wiring Diagram Automatic Electrola 10-69 above serial No. 2600

MODEL 10-70

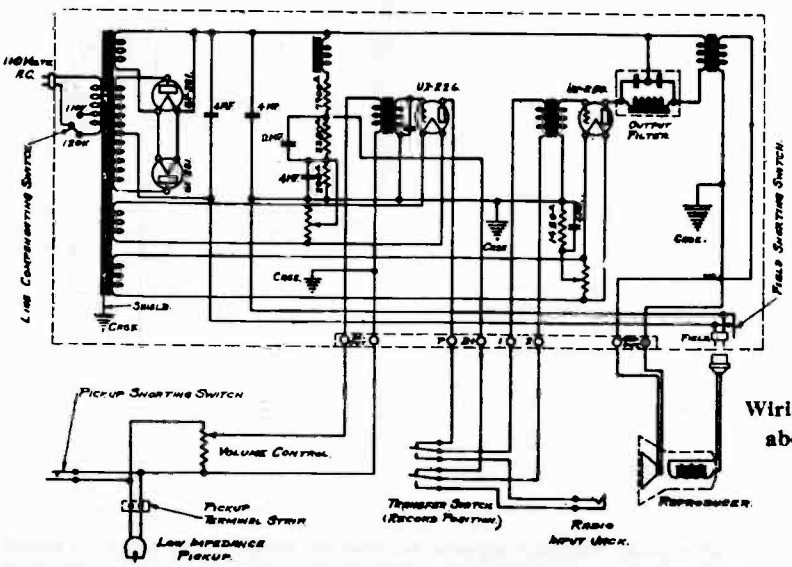


LEAD NO	COLOR
1	BLACK
2	BROWN
3	RED
4	BLACK WITH RED TRACER
5	BLACK WITH YELLOW TRACER
6	MAROON
7	MAROON AND RED
8	BLACK WITH BROWN TRACER
9	BROWN WITH WHITE TRACER

Wiring Diagram—Electrola 10-70



Wiring Diagram for Automatic Electrola No. 10-70



Wiring Diagram No. 10-70 above serial No. 2600

MODELS R-11, RE-18, RE-18-A, R-21 & RAE-26

ELECTRICAL SPECIFICATIONS

MODELS R-11 R-21

Voltage Rating.....105–125 Volts
Frequency Rating.....50–60 Cycles and 25–40 Cycles
Power Consumption...25–40 Cycles 140 Watts, 50–60 Cycles 135 Watts
Type of Circuit.....Super-Heterodyne using Super-Control Radiotrons and Push-pull Pentode output stage
Type and Number of Radiotrons...2 RCA-235, 3 UY-227, 1 UY-224, 1 UX-280, 2 RCA-247, —Total, 9

RE-18 & RE-18-A

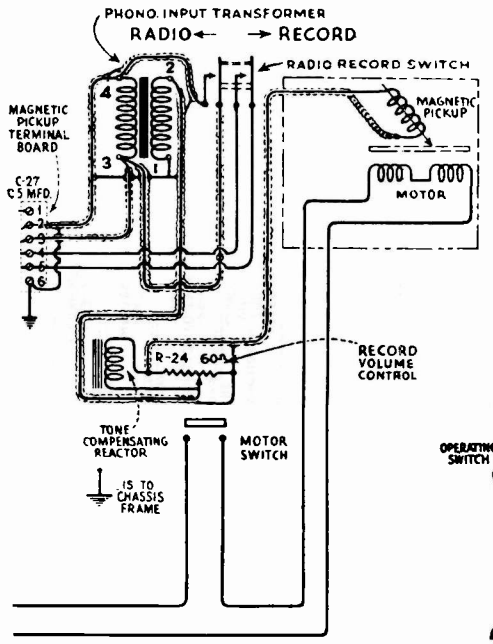
Voltage Rating.....105–125 Volts
Frequency Rating.....25, 30, 50 and 60 Cycles
Power Consumption.....25, 30 and 50 Cycles 170 Watts, 60 Cycles 160 Watts
Number of Audio Stages (Radio).....1
Number of Audio Stages (Phonograph).....2
Type of Magnetic Pick-up.....Low Impedance
Type of Tone Arm.....Inertia
Diameter of Turntable.....12 inches

Type of Loudspeaker.....8″ Electro-Dynamic
Undistorted Output.....4.0 Watts

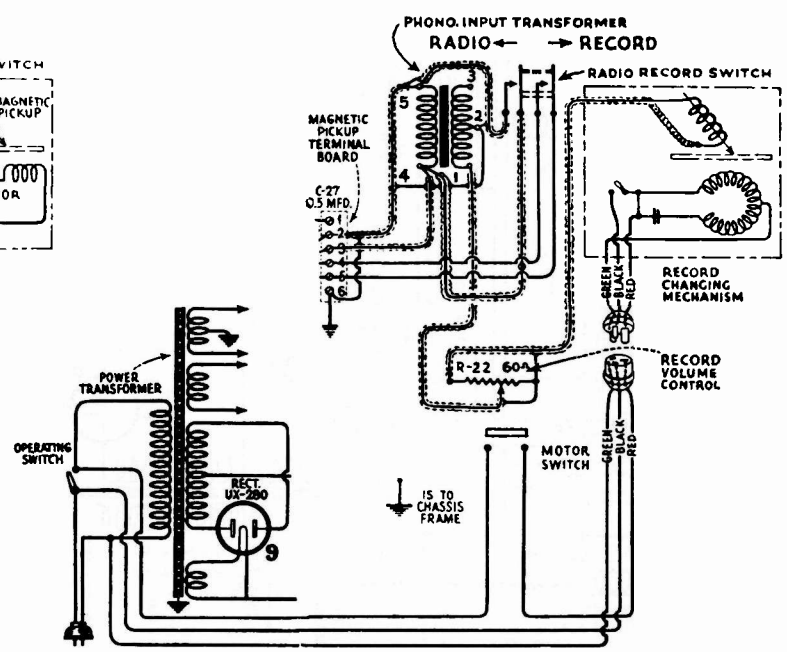
RCA Victor Radiola Automatic Electrola RAE-26 is a nine tube radio receiver combined with the perfected RCA Victor Automatic Record Changing Mechanism.

The Automatic Record Changing Mechanism provides for the continuous playing of ten 10-inch records. Provision is also made for a turntable speed of 33⅓ R.P.M. as well as 78 R.P.M. This makes the mechanism adaptable for the playing of the Program Transcription Records as well as standard records, either manually or automatically.

Model R-11 is a console model radio receiver.
Model RE-18 is a combination of Radiola R-11 with record player.
Model RE-18A is similar to RE-18 with the exception of the use of a drum type dial.
Model R-21 is a console model radio receiver similar to late production R-11 with the exception of the use of a drum type dial.

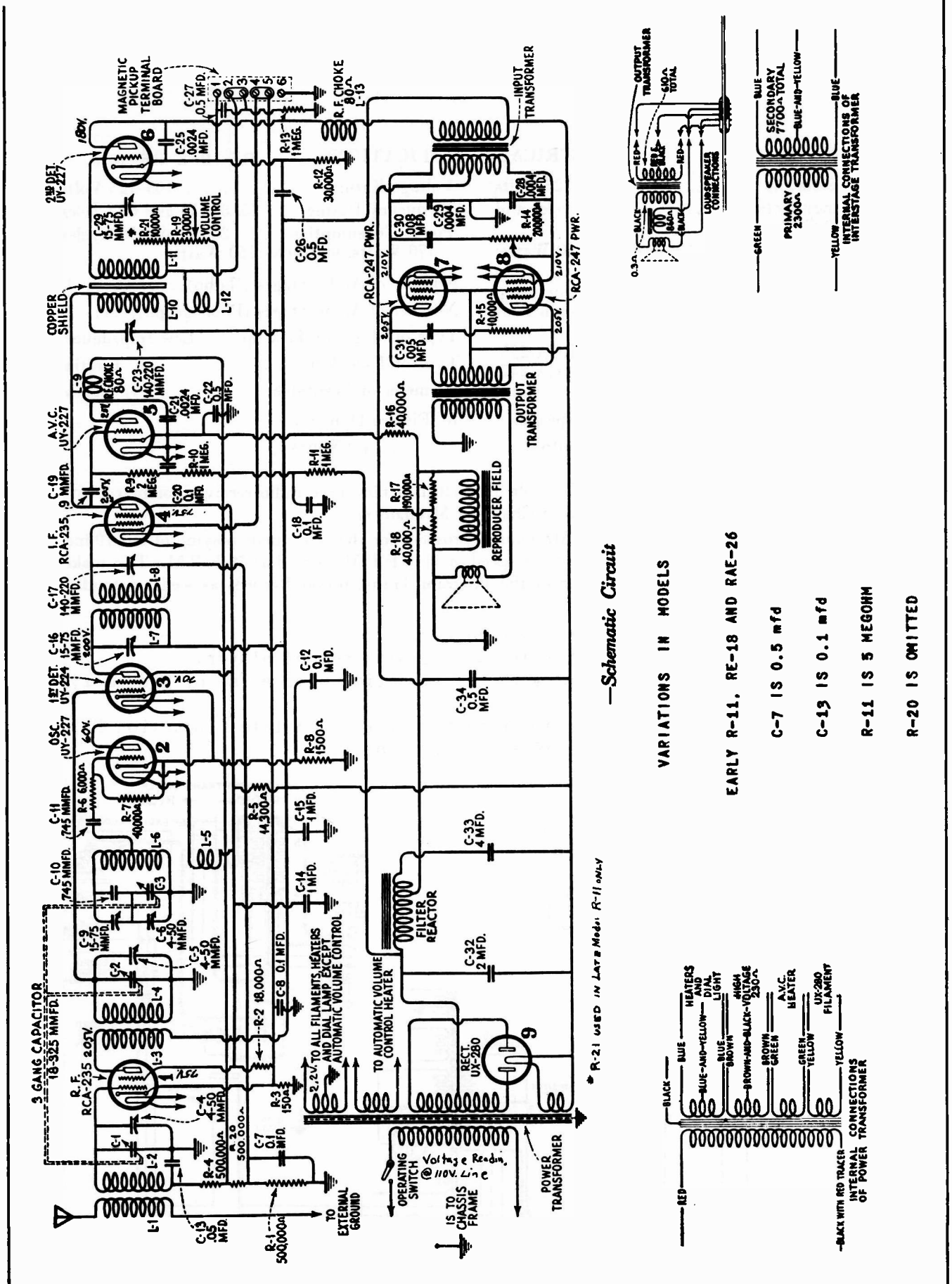


Circuit Diagram of RE-18



Circuit Diagram of RAE-26

R-11, RE-18, RE-18-A, R-21 & RAE-26



—Schematic Circuit

VARIATIONS IN MODELS

EARLY R-11, RE-18 AND RAE-26

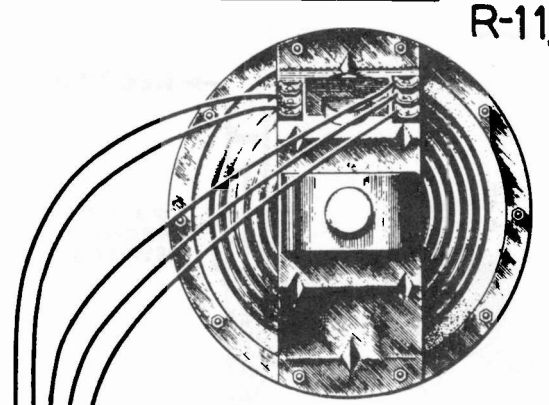
C-7 IS 0.5 mfd

C-13 IS 0.1 mfd

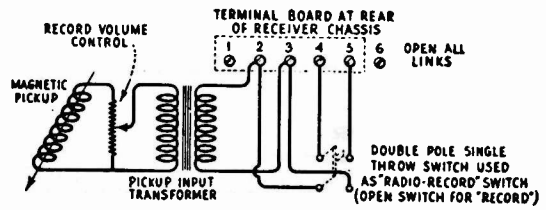
R-11 IS 5 MEGOHM

R-20 IS OMITTED

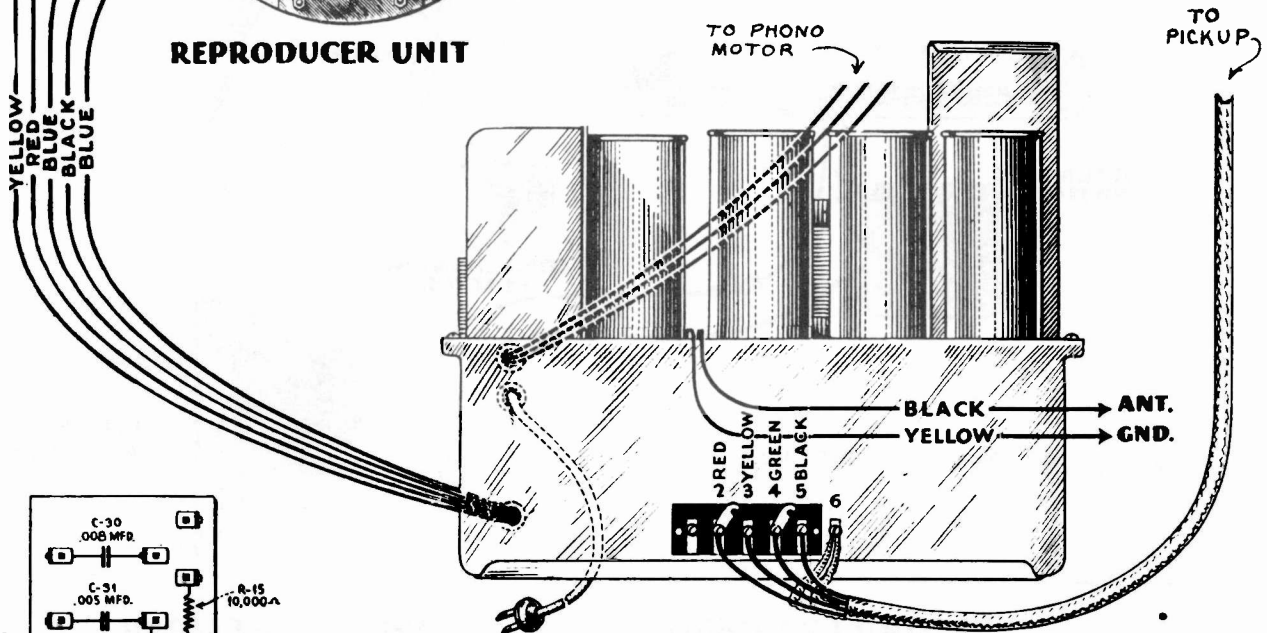
R-11, RE-18, RE-18-A, R-21 & RAE-26



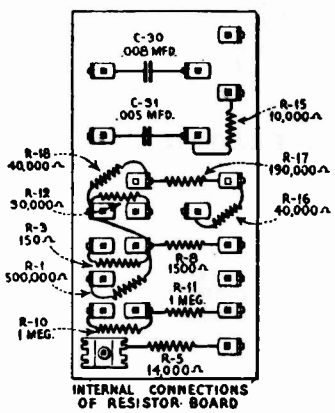
REPRODUCER UNIT



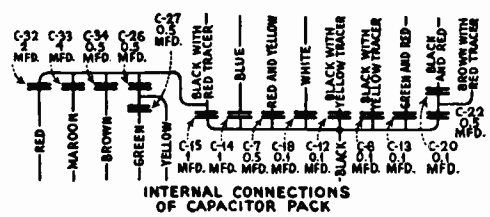
Magnetic Pickup Connections



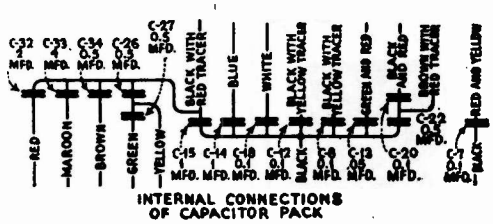
RECEIVER CHASSIS



INTERNAL CONNECTIONS OF RESISTOR BOARD



INTERNAL CONNECTIONS OF CAPACITOR PACK



INTERNAL CONNECTIONS OF CAPACITOR PACK

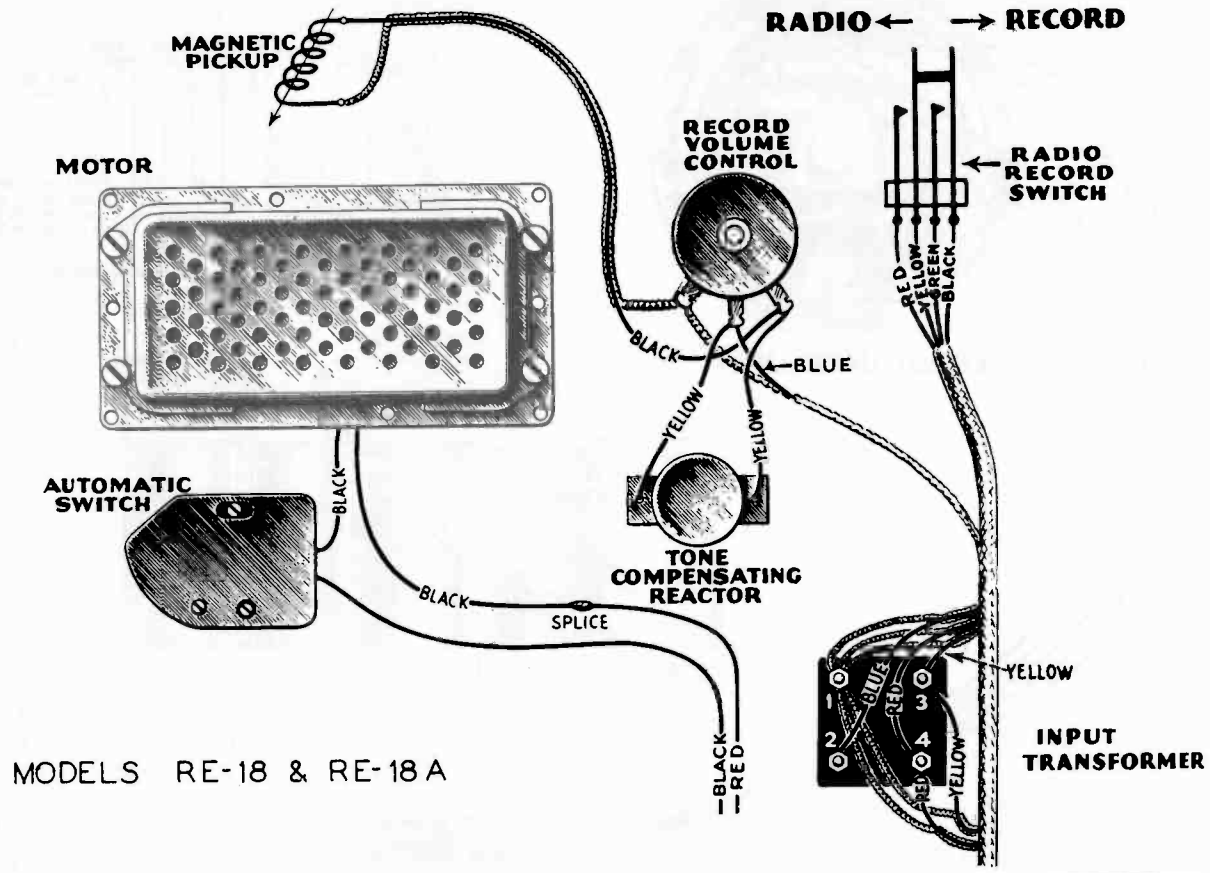
Alignment Procedure

REFER TO MODEL R-7 FOR TRIMMER LOCATION.

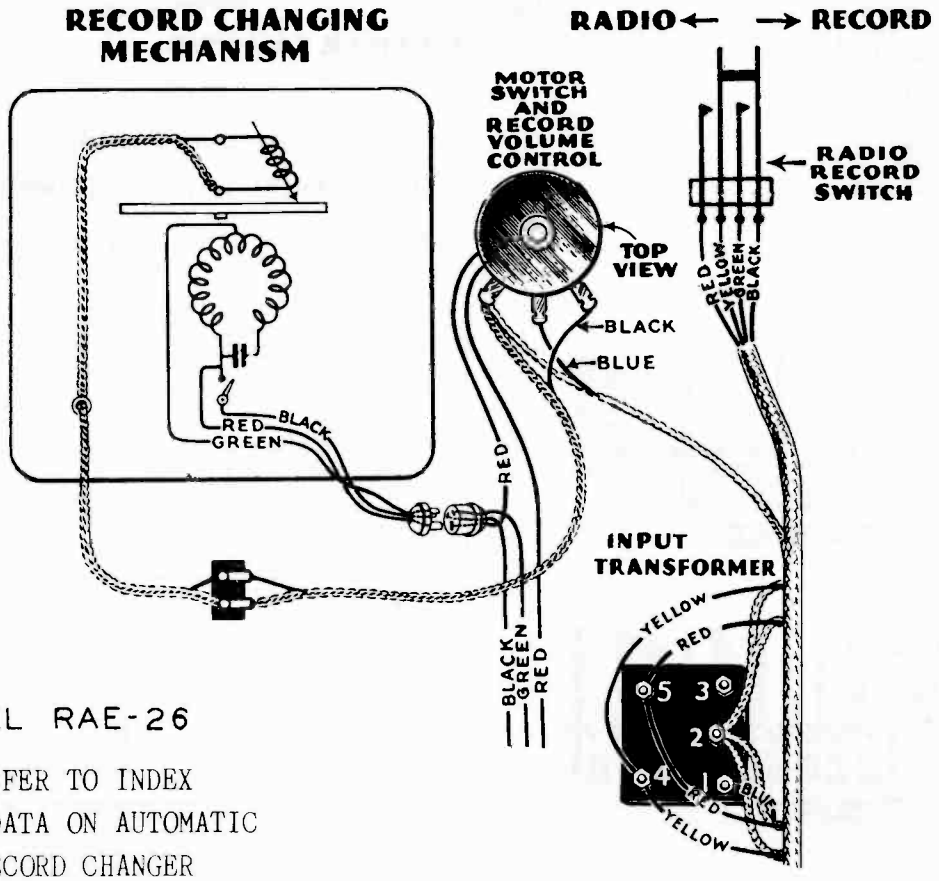
Connect low side of test oscillator to chassis *and* ground lead during alignment.

STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO	ADJUST THE FOLLOWING FOR MAX. OUTPUT
1	I-F Grid in series with .01 mfd	175 kc	Quiet Point near 600 kc	S & P of 2nd I-F Trans.
2	1st Det. Grid in series with .01 mfd			S & P of 1st I-F Trans.
3	Antenna in series with 200 mmfd	1400 kc	1400 kc	Osc., Det. and R-F Trimmers on gang condenser
4		600 kc	600 kc	600 kc Oscillator Trimmer (Rock Gang)
5		*Repeat Step 3*		

R-11, RE-18, RE-18-A, R-21 & RAE-26



MODELS RE-18 & RE-18A



MODEL RAE-26

REFER TO INDEX
FOR DATA ON AUTOMATIC
RECORD CHANGER

R-11, RE-18, RE-18-A, R-21 & RAE-26

REPLACEMENT PARTS

RECEIVER ASSEMBLIES R-11 AND RE-18

Stock No.	DESCRIPTION	List
2563	Resistor—6,000 ohms—Carbon type—Package of 5	
2730	Resistor—18,000 ohms—Carbon type—Package of 5	
2734	Capacitor—745 mmfd.—Package of 5	
2746	Socket—Dial lamp socket	
2747	Contact cap—Package of 5	
2749	Capacitor—2400 mmfd.	
2875	Knobs—Package of 5	
2882	Socket—UY Radiotron socket—Complete with insulating shield—8 used	
2968	Socket—UX Radiotron socket—Complete with insulating shield—1 used	
2999	Shaft—Dial drum drive shaft	
3029	Indicator—Tuning dial indicator—Complete with bracket	
3046	Resistor—190,000 ohms—Carbon type—Package of 5	
3047	Resistor—1500 ohms—Carbon type—Package of 5	
3048	Resistor—500,000 ohms—Carbon type—Package of 5	
3049	Resistor—150 ohms—Carbon type—Package of 5	
3050	Resistor—14,000 ohms—Carbon type—Package of 1	
3051	Resistor—5 megohm—Carbon type—Package of 5	
3053	Capacitor—9 mmfd.—Package of 2	
3054	Escutcheon—Station selector escutcheon—With 4 mounting screws	
3055	Cushion—Chassis support cushion—Package of 4	
3056	Shield—Radiotron shield—6 used—Package of 2	
3076	Resistor—1 megohm—Carbon type—Package of 5	
3077	Resistor—30,000 ohms—Carbon type—Package of 5	
3078	Resistor—10,000 ohms—Carbon type—Package of 5	
3079	Resistor—40,000 ohms—Carbon type—Package of 5	
3085	Capacitor—400 mmfd.	
3089	Terminal board—Magnetic pickup terminal board	
3090	Board—A. V. C. and 2nd detector R. F. choke mounting board—Less choke coils	
3091	Board—Resistor board—Less resistor and capacitors	
3092	Volume control—Complete with mounting nut	
3093	Tone control—Complete with mounting nut	
3094	Shield—Radiotron shield—1 used—Package of 2	
3095	Coil—R.F. coil—Complete with mounting bracket	
3096	Coil—1st detector and oscillator coil—Complete with mounting bracket	
3097	Scale—Dial drum scale with set screws—Pkg. of 2	
3098	Capacitor—0.008 mfd.	
3099	Capacitor—0.005 mfd.	
7054	Cord—Power cord	
7062	Capacitor—Adjustable oscillator trimmer capacitor	
7241	Capacitor—3 gang tuning capacitor with mounting screws and washers	
7266	Transformer—1st intermediate transformer	
7267	Transformer—2d intermediate transformer	
7268	Coil—Detector or A.V.C. R.F. choke coil—Complete with mounting rivet	
7269	Capacitor pack—In metal container—60 cycle	
7270	Reactor—Filter reactor	
7271	Transformer—Interstage transformer	
7272	Transformer—Power transformer—105–125 volt, 50–60 cycles	
7273	Capacitor pack—By-pass capacitor pack—25–40 cy.	
7274	Transformer—Power transformer—105–125 volts, 25–40 cycles	
7275	Transformer—Power transformer—220 volts, 50–60 cycles	

RECEIVER ASSEMBLY RE-18A

2563	Resistor—6,000 ohms—Carbon type—1 watt—Package of 5	
2730	Resistor—18,000 ohms—Carbon type—1 watt—Package of 5	
2734	Capacitor—745 mmfd.—Package of 5	
2746	Socket—Dial lamp socket	
2747	Cap—Grid contactor cap—Package of 5	
2749	Capacitor—2400 mmfd.	
2875	Knob—Tuning control, volume control or tone control knob—Package of 5	
2882	Socket—Five contact Radiotron socket complete with insulator—8 used	
2963	Resistor—8,000 ohms—Carbon type—1 watt—Package of 5	
2968	Socket—Four contact Radiotron socket complete with insulator—1 used	
3024	Capacitor—9 mmfd.—Package of 2	
3046	Resistor—190,000 ohms—Carbon type—½ watt—Package of 5	
3047	Resistor—1,500 ohms—Carbon type—½ watt—Package of 5	
3048	Resistor—500,000 ohms—Carbon type—½ watt—Package of 5	
3049	Resistor—150 ohms—Carbon type—½ watt—Package of 5	
3050	Resistor—14,000 ohms—Carbon type—3 watt	
3055	Cushion—Receiver chassis sponge rubber cushion—Package of 4	
3056	Shield—Radiotron shield—6 used—Package of 2	
3076	Resistor—1 megohm—Carbon type—½ watt—Package of 5	
3077	Resistor—30,000 ohms—Carbon type—½ watt—Package of 5	
3078	Resistor—10,000 ohms—Carbon type—½ watt—Package of 5	
3079	Resistor—40,000 ohms—Carbon type—½ watt—Package of 5	
3085	Capacitor—400 mmfd.	
3089	Board—Terminal board complete with 5 terminals	
3091	Board—Resistor board complete less resistors and capacitors	
3092	Volume control—Volume control complete with mounting nut	
3093	Tone control—Tone control complete with mounting nut	
3095	Coil—R. F. coil	
3096	Coil—1st detector and oscillator coil complete with mounting bracket	
3098	Capacitor—0.008 mfd.	
3099	Capacitor—0.005 mfd.	
6179	Terminal—Single ground terminal with screw complete with mounting rivet—Package of 5	
6188	Resistor—2 megohm—Carbon type—½ watt—Package of 5	
6189	Bracket—Dial lamp bracket and indicator—Package of 2	
6190	Shaft—Tuning dial shaft complete with 3 washers—Package of 5	
6191	Cord—Condenser drum drive cord—Package of 5	
6192	Spring—Condenser drum drive cord tension spring—Package of 10	
7054	Cord—Power cord	
7062	Capacitor—Adjustable capacitor—15–70 mmfd.	
7266	Transformer—1st intermediate transformer	
7267	Transformer—2nd intermediate transformer	
7268	Coil—Detector choke coil complete with mounting rivet	
7269	Capacitor—Comprising one 2.0 mfd., one 4.0 mfd., four 0.5 mfd., two 1.0 mfd., five 0.1 mfd. and one 0.05 mfd. capacitor in metal container	
7270	Reactor—Filter reactor	
7271	Transformer—Interstage transformer	
7272	Transformer—Power transformer—105–125 volts, 50–60 cycles	
7273	Capacitor—Comprising one 4.0 mfd., one 6.0 mfd., four 0.5 mfd., two 1.0 mfd., five 0.1 mfd., and one 0.05 mfd. capacitors in metal container	
7274	Transformer—Power transformer—105–125 volts—25–40 cycles	
7275	Transformer—Power transformer—220 volts—50–60 cycles	
7438	Capacitor—Variable tuning capacitor	
7439	Drum—Tuning condenser drive drum with set screw—Complete with 3 dial scale mounting nuts	
7440	Scale—Dial and dial scale	
8871	Support—Receiver chassis metal mounting support—Package of 4	

REPLACEMENT PARTS MODEL R-21

Receiver Assembly — **Refer to Model RE-18A**

Add Stock No.

3053	Capacitor - 9 mmfd
3090	Board - AVC & 2nd Det. R-F choke boardless choke coils
3137	Knob
6186	Resistor - 500,000 ohms 1/4 watt (R-20)

Delete Stock No.

2875 Knob, 2963 Resistor and 3024 Capacitor

REPLACEMENT PARTS—Continued

Stock No.	DESCRIPTION	List
	MODEL RE-18	
	MOTORBOARD ASSEMBLIES	
X13	Board—Motor board	
2614	Switch—Automatic brake switch	
2615	Spring—Automatic brake springs—Set of 4—Package of 2 sets	
2620	Cushions—Pickup rubber cushions comprising 2 pivots and 1 damper cushion—Package of 5 sets	
2765	Screw needle holding screw—Package of 10	
2766	Screw—Pickup cover mounting screw—Package of 10	
2767	Spring—Pickup magnet retaining spring—Package of 10	
2768	Armature—Pickup armature	
2769	Coil—Pickup coil	
2770	Plate—Pickup damper plate complete—Package of 5	
2771	Screw—Pickup damper plate mounting screw—Package of 10	
2774	Trip rod—Pickup arm trip rod with mounting nut—Package of 5	
2908	Spring—Shift lever and pawl carrier spring—Package of 10	
3052	Screw assembly—Pickup pole shoe mounting screw, nut and washer—Package of 10 sets	
3157	Gear—Driving gear—Located on turntable spindle above top plate	
3159	Friction brake—Gear reducing friction brake spring with mounting rivet and pad—Package of 4	
3160	Escutcheon—Speed escutcheon plate with mounting screws—Package of 2	
3167	Magnet—Pickup magnet	
3169	Pole shoe—R.H. pole shoe	
3170	Pole shoe—L.H. pole shoe	
3211	Washer—Turntable spindle leather washer—Package of 10	
3224	Switch—Radio-Record changeover switch with mounting nut and washer	
3278	Bearing—Fibre rotor shaft thrust bearing and cork button—Package of 10	
3279	Screw and Nut—Rotor shaft thrustbearing adjusting screw and lock nut—Package of 10	
3280	Washer—Metal washer located on turntable underneath gear reducing unit—Package of 20	
3281	Pawl—Gear reducing pawl with mounting stud	
6119	Motor hanging stud—Package of 6	
6120	Screw—For holding turntable spindle bearing—Package of 10	
6121	Bearing—Turntable spindle bearing and grease cap	

Stock No.	DESCRIPTION	List
7093	Cover—Pickup cover	
7151	Back—Pickup housing back	
7180	Brake—Automatic brake complete	
7305	Gear—Reducing unit complete	
7332	Cable—Main cable from receiver to input transformer radio-record switch and volume control	
7387	Reactor—Tone compensating reactor with mounting bracket	
7388	Spindle—Turntable spindle with fibre gear—60 cycle	
7389	Rotor and shaft—60 cycles	
7390	Motor mounting washers and springs—Comprising 3 "C" washers, 9 cup washers, 6 springs and 3 flat washers—Package of 1 set	
7391	Volume control—Record volume control with mounting nut and washer	
7392	Holder—Needle holder	
7393	Block—Pickup connector block and wire	
7394	Pickup—Unit complete	
7400	Turntable spindle and gear—25 cycles	
7401	Rotor and shaft—25 cycles	
7402	Turntable spindle and gear—30 cycles	
7403	Rotor and shaft—30 cycles	
7414	Top plate—Top plate with two bronze rotor shaft bearings	
7415	Field and field coils—50-60 cycles—Assembled	
7416	Field and field coils—25-30 cycles—Assembled	
8731	Lever—Shift lever assembly complete	
8795	Motor—Motor complete—60 cycles	
8796	Arm—Pickup arm complete less pickup unit	
8800	Motor—Motor complete—25 cycles	
8801	Motor—Motor complete—30 cycles	
10184	Plate—Automatic brake trip plate with mounting screws—Package of 5	
2759	Box—Needle box with lid—Package of 2	
3102	Receptacle for Tungstone needle boxes	
7084	Turntable covering	
7312	Transformer—Input transformer	
8733	Turntable with cover	
	CABINET	
2785	Hinge—Cabinet lid hinge with mounting screws—Package of 2	
3156	Label—Metal trade mark label—Package of 5	
7082	Support—Lid support	
7395	Support—Screen support	
10901	Spring—Lid support spring—Package of 2	

R-11, RE-18, RE-18-A, R-21 & RAE-26

REPLACEMENT PARTS (Continued)

Stock No.	DESCRIPTION	List
	MODEL RE-18A	
	MOTOR BOARD ASSEMBLY	
X-13	Board—Motor board less equipment	
2614	Switch—Automatic brake switch	
2620	Cushion—Pickup rubber cushions—Comprising 1 damper and two pivot cushions—Package of 5 sets.	
2767	Spring—Pickup magnet retaining spring—Package of 10	
2768	Armature—Pickup armature	
2770	Plate—Pickup damper plate—Package of 5	
2771	Screw—Pickup damper plate mounting screw—Package of 10	
2875	Knob—Volume control and record-radio switch knob—Package of 5	
2908	Spring—Pawl carrier spring—Package of 10	
3052	Screw assembly—Pickup pole shoe mounting screw assembly—Comprising screw, nut and washer—Package of 10 sets	
3157	Gear—Driving gear—Located on turntable spindle above top plate	
3159	Friction brake—Gear reducing friction brake spring with pad—Complete with mounting rivet—Package of 4	
3161	Spring—Shift lever spring—Package of 5	
3167	Magnet—Pickup magnet	
3169	Pole shoe—Pickup pole shoe—R. H.	
3170	Pole shoe—Pickup pole shoe—L. H.	
3205	Screw—Pickup needle holding screw—Package of 10	
3207	Screw—Pickup cover mounting screw—Package of 10	
3208	Screw assembly—Pickup mounting screw assembly—Comprising screw, nut and washer—Package of 10	
3211	Washer—Turntable spindle leather washer—Package of 10	
3224	Switch—Record-Radio switch complete with mounting nut and washer	
3278	Bearing—Rotor shaft fibre thrust bearing and cork button—Package of 10	
3279	Screw and nut—Rotor shaft thrust bearing adjusting screw and nut—Package of 10	
3280	Washer—Metal washer—Located on turntable spindle underneath gear reducing unit—Package of 20	
3281	Pawl—Gear reducing pawl with mounting stud	
6119	Stud—Motor hanging stud—Package of 6	
6120	Screw—For holding turntable spindle bearing and grease cap—Package of 10	
6121	Bearing—Turntable spindle bearing and grease cap	
6215	Escutcheon—Shift lever speed escutcheon plate with mounting screws—Package of 2	
6216	Rod—Automatic brake trip rod with nut—Package of 5	
6221	Cover—Pickup cover	
6222	Pickup—Pickup unit complete	
6224	Receptacle—Tungstone needle box holder	
6232	Box—Needle box with lid—Package of 2	
6237	Holder—Twin needle holder with mounting screws	
6238	Transformer—Input transformer	
7084	Cover—Turntable cover	
7151	Back—Pickup housing back	
7305	Gear—Gear reducing unit complete	
7332	Cable—Main cable from receiver to input transformer, volume control and radio record switch	
7387	Reactor—Tone compensating reactor with bracket	
7388	Spindle—Turntable spindle with fibre gear—110 volts or 220 volts—60 cycles	
7389	Rotor and shaft—110 volts or 220 volts—60 cycles	
7390	Motor mounting washer and springs—Comprising 3 "C" washers, 9 cup washers and 6 springs—Package of 1 set	
7391	Volume control—Record volume control complete with mounting nut and washer	
7393	Block—Pickup connector block and wire	
7400	Spindle—Turntable spindle with fibre gear—25 cycles	
7401	Rotor and shaft—25 cycles	
7402	Spindle—Turntable spindle with fibre gear—30 cycles	
7403	Rotor and shaft—30 cycles	
7443	Rotor and shaft—110 volts or 220 volts—50 cycles	
7444	Spindle—Turntable spindle with fibre gear—110 volts or 220 volts—50 cycles	
8795	Motor—Motor complete—110 volts—60 cycles	
8800	Motor—Motor complete—110 volts—25 cycles	
8801	Motor—Motor complete—110 volts—30 cycles	
8856	Motor—Motor complete—110 volts—50 cycles	
8872	Lever—Shift lever complete with mounting screws	
8873	Brake—Automatic brake complete with mounting screws and washers	
8876	Support—Lid support	
8877	Turntable—Turntable with cover	
8880	Arm—Pickup arm complete less pickup unit	
8887	Motor—Motor complete—220 volts—60 cycles	
8888	Motor—Motor complete—220 volts—50 cycles	
10174	Springs—Automatic brake springs—Set of 4 springs—Package of 2 sets	
10184	Plate—Automatic brake trip plate complete with screws—Package of 5	
	CABINET ASSEMBLY	
2776	Catch—Door catch and strike with nail—Package of 2 sets	
3156	Label—Metal trade mark label—Package of 5	
6210	Hinge assembly—Door hinge assembly—Comprising 4 hinges and 16 mounting screws—Package of 1 set.	
6211	Pull—Door pull with mounting screw—Package of 4.	
6219	Hinge—Cabinet lid hinge complete with mounting screws—Package of 2	
6236	Support—Metal screen support	
10901	Spring—Lid support spring—Package of 2	

R-21

CABINET ASSEMBLY

6210	Hinges—Door hinges—Comprising 4 hinges and 16 mounting screws—Package of 1 set
6211	Pull—Door pull with mounting screw—Package of 4
7441	Escutcheon—Tuning dial escutcheon complete with mounting screws

REPLACEMENT PARTS RAE-26

Receiver Assembly — **Refer to R-11**

Add Stock No.

3137	Knobs
3156	Label - Metal trade mark label
3175	Receptacle - Needle receptacle
3184	Terminal board - Pickup terminal board
3189	Box - Needle box with lid
3221	Cable - Shielded cable from record volume control to pickup terminal board
3224	Switch - Radio-record switch with mounting nut and washer
7232	Cable - Main cable from receiver to input transformer
7312	Transformer - Pickup input transformer
8761	Support - Lid support

Delete Stock No.

2875 Knobs and 3054 Escutcheon

LOUDSPEAKER ASSEMBLY - ALL MODELS

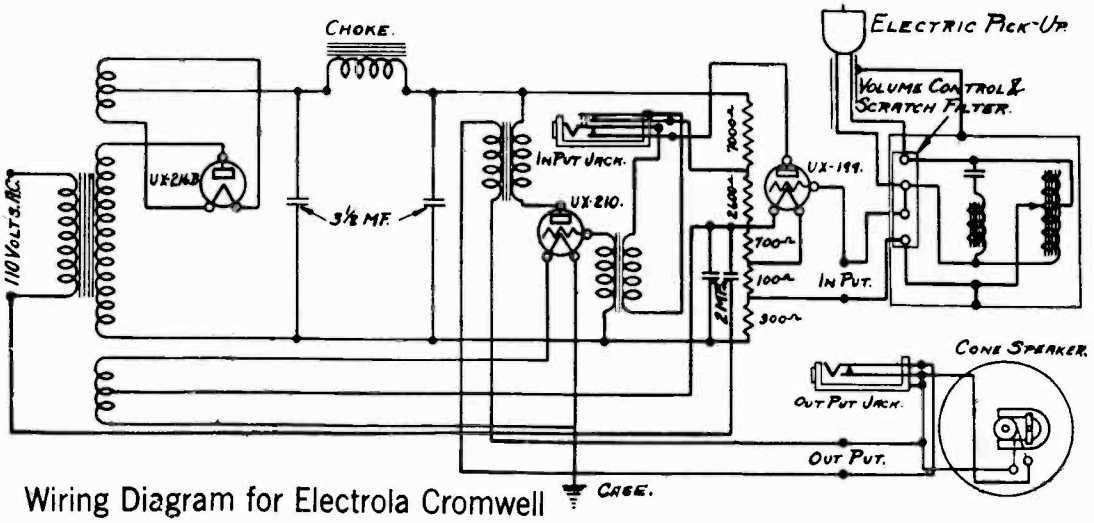
3166	Bolt assembly - Speaker mounting bolt assembly Model RAE-26
3237	Screw assembly - Speaker mounting screw assembly Models RE-18, RE-18A and R-21
7257	Coil assembly - Comprising field coil, cone bracket and magnet.
7258	Transformer - Output transformer
8559	Ring - Cone retaining ring
8601	Cone - Cone and voice coil

R-11, RE-18, RE-18-A, R-21 & RAE-26

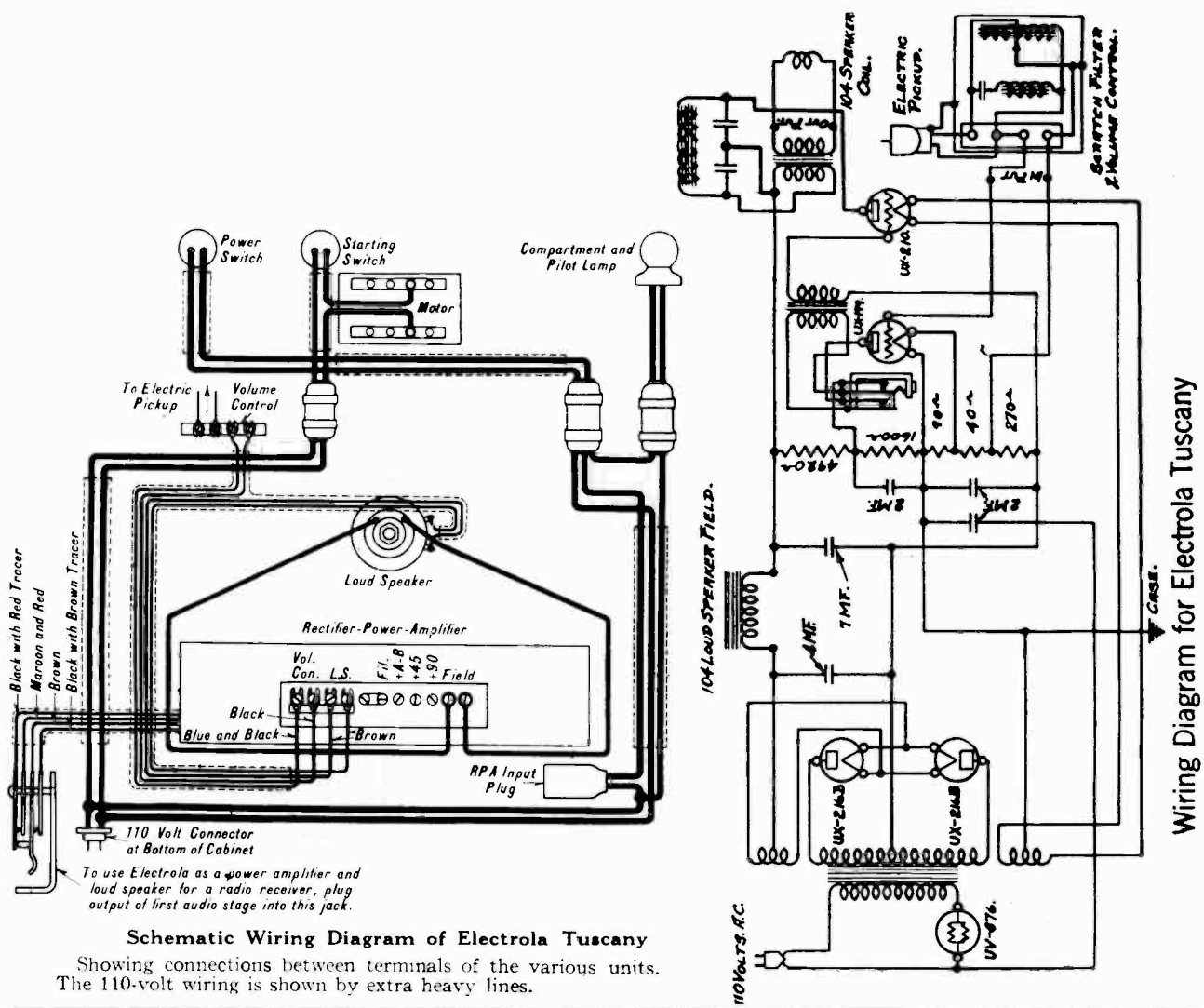
REPLACEMENT PARTS (Continued)

Stock No.	DESCRIPTION	List
	RAE-26	
	MOTOR BOARD AND AUTOMATIC RECORD CHANGER	
2614	Switch	
2620	Cushion—Pickup rubber cushions—Comprising two pivots and one damper cushion—Package of 5 sets	
2767	Spring—Pickup magnet spring—Package of 10	
2768	Armature—Pickup armature	
2769	Coil—Pickup coil	
2770	Plate—Pickup damper plate—Package of 5	
2771	Screw—Pickup damper plate mounting screw—Package of 10	
2857	Plug—Three way male connector plug	
2893	Spring—Trip lever spring—Package of 10	
2896	Spring—Cable lever spring—Package of 10	
2897	Screw and nut—Pickup arm cable adjusting screw and nut—Package of 5	
2898	Screw and nut—Adjusting screw and nut for elevator shafts—Package of 10	
2902	Screw and nut—Motor turntable spindle thrust screw and nut—Package of 10	
2903	Screw—Motor mounting screw—Package of 10	
2904	Lever—Front elevator actuating lever	
2905	Screw—Gear and bracket mounting screw—Package of 10	
2906	Spring—Check lever spring—Package of 10	
2907	Screw—Clutch set screw—Package of 10	
2908	Spring—Gear reducing pawl spring—Package of 10	
2909	Spring—Four finger lever spring—13/16" long—Package of 10	
2910	Spring—Four finger lever spring—1 1/16" long—Package of 10	
2911	Screw—Slide bracket screw—Package of 10	
2912	Roller—Slide roller complete with screw stud—Package of 5	
2913	Spring—Cable lever spring—Package of 10	
2914	Spring—Flat spring with screws—Package of 10	
2915	Spring—Locating lever spring—Package of 10	
2916	Plate—Latch plate with mounting screws—Package of 5	
2917	Washer—Spring washer—Package of 10	
2918	Spring—Index lever spring—Package of 10	
2919	Screw and nut—Stop screw and nut—Package of 10	
2920	Washer—Friction washer—Package of 10	
2929	Lever—Rear elevator actuating lever—Package of 2	
3052	Screw assembly—Pickup pole shoe mounting screw, nut and washer—Package of 10 sets	
3159	Friction brake—Gear reducing friction brake spring and pad with mounting rivet—Package of 4	
3161	Spring—Shift lever spring—Package of 5	
3167	Magnet—Pickup magnet	
3169	Pole shoe—Pickup pole shoe—R. H.	
3170	Pole shoe—Pickup pole shoe—L. H.	
3173	Plug—Three way female cord plug	
3186	Control—Record volume control and switch with mounting nut and washer	
3190	Clutch pawl	
3191	Ratchet—Ratchet and gear with set screw	
3192	Post—Roller post assembly—for supporting magazine	
3193	Screw—Magazine bearing mounting screw and nut—Package of 10	
3194	Screw—Pickup arm base mounting screw and nut—Package of 10	
3195	Lever—Record transfer lever with screws and nuts	
3196	Screw—Record transfer lever mounting screw and nut—Package of 10	
3197	Escutcheon—Turntable speed escutcheon plate with mounting rivets—Package of 2	
3198	Bushing—Insulating rubber bushing—Package of 10	
3199	Screw—Bottom plate mounting screw—Package of 10	
3200	Shaft—Front or rear elevator shaft	
3201	Rear elevator pad—Package of 5	
3202	Front elevator pad—Package of 5	
3203	Screw—Elevator pad mounting screw—Package of 10	
3204	Cable—Pickup arm cable—Package of 5	
3205	Screw—Pickup needle holder screw—Package of 10	
3206	Cover—Pickup cover	
3207	Screw—Pickup cover mounting screw—Package of 10	
3208	Screw assembly—Pickup mounting screw, nut and washer—Package of 10	
3209	Lever—Trip lever	
3210	Lever—Magazine lever	
3211	Washer—Turntable spindle leather washer—Package of 10	
3212	Spring—Turntable spindle plunger spring—Package of 10	
3213	Bolt—Motor board mounting bolt—Package of 8	
3214	Pulley—Cable pulley and mounting stud—Package of 5	
3217	Lever—Check lever	
3261	Cap—Rubber cap for turntable spindle—Package of 5	
3262	Screw and nut—Record transfer lever adjusting screw and nut—Package of 10	
7151	Back—Pickup back housing	
7186	Gear—Intermediate gear and bracket	
7188	Bracket—Slide bracket with roller	
7189	Lever—Front and rear elevator cam lever—Package of 5	
7190	Lever—Locating lever	
7191	Lever—Cable lever	
7192	Cam—Cam gear and cam	
7194	Rotor and shaft—60 cycles	
7204	Rotor and shaft—50 cycles	
7305	Gear reducing unit complete	
7315	Spindle and gear—Turntable spindle with gear—25 cycles	
7316	Spindle and gear—Turntable spindle with gear—30 cycles	
7317	Spindle and gear—Turntable spindle with gear—50 cycles	
7318	Spindle and gear—Turntable spindle with gear—60 cycles	
7319	Rotor and shaft—25 cycles	
7320	Rotor and shaft—30 cycles	
7321	Lever—Cable guide lever with pulley	
7322	Lever—Manual Index lever	
7323	Magazine bearing—Located on top of motor board	
7324	Pickup arm base	
7325	Pickup—Pickup unit complete	
7326	Turntable cover	
7330	Capacitor—Motor capacitor—3.75 Mfd.—For 25 or 50 cycles	
7363	Pad—Rubber pad for front elevator—Package of 10	
7364	Lever—Speed reducing shift lever	
8644	Capacitor—Motor capacitor—1.25 Mfd.—For 110 volts, 50 or 60 cycles	
8646	Slide—Main slide	
8647	Lever—Four finger lever	
8752	Motor—Motor complete—25 cycles	
8753	Motor—Motor complete—30 cycles	
8754	Motor—Motor complete—50 cycles	
8755	Motor—Motor complete—60 cycles	
8756	Motor board—Motor board assembled with elevator bushings, turntable speed plate and shift lever	
8757	Arm—Pickup arm complete with weight—Less pickup unit	
8758	Record Magazine	
8759	Turntable—Turntable with cover	
	CABINET	
2776	Catch—Door catch and strike with nail—Package of 2	
2785	Hinge—Lid hinge with mounting screws—Package of 2	
3222	Knob—Door knob—Package of 2	
3223	Escutcheon—Metal escutcheon	
7095	Hinge—Door hinge—Set of 4	

MODELS 12-1 & 12-2
(CROMWELL & TUSCANY)



Wiring Diagram for Electrola Cromwell

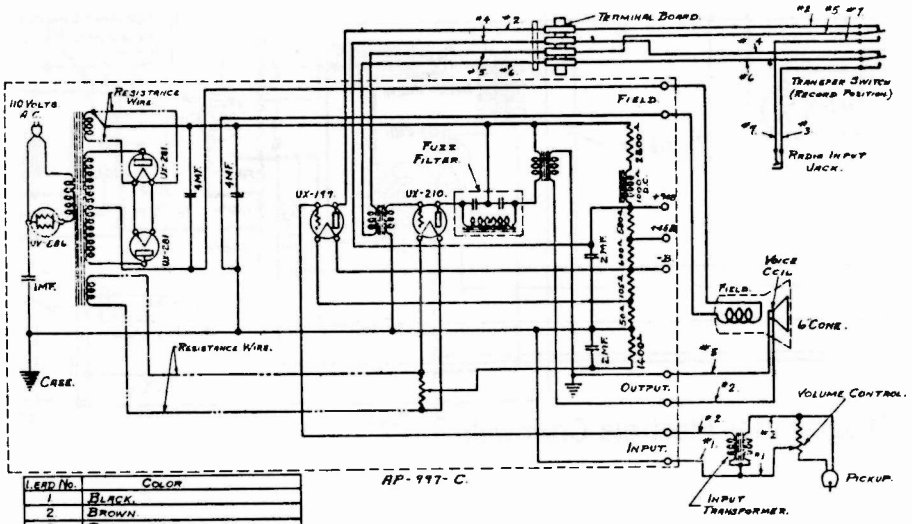


Wiring Diagram for Electrola Tuscany

Schematic Wiring Diagram of Electrola Tuscany

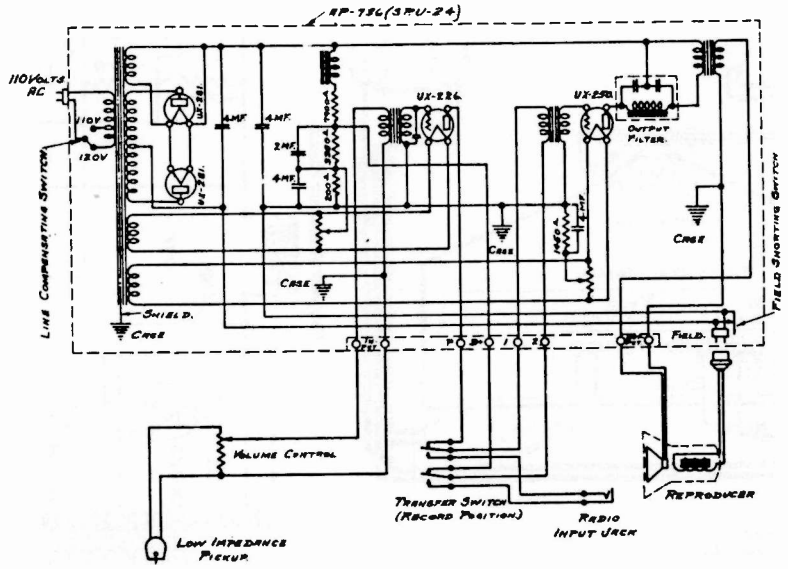
Showing connections between terminals of the various units. The 110-volt wiring is shown by extra heavy lines.

MODEL 12-15

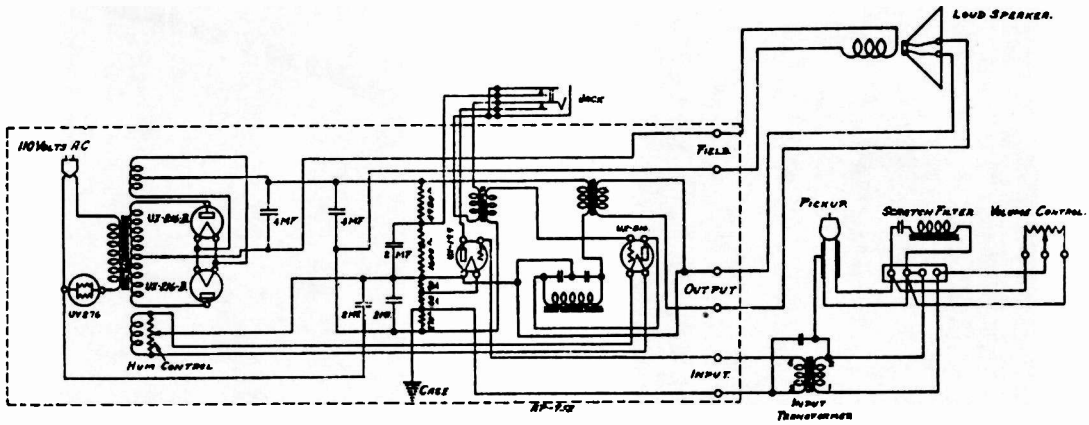


LEAD NO.	COLOR
1	BLACK
2	BROWN
3	RED
4	RED AND MAROON
5	BLACK WITH BROWN TRACER
6	BLACK WITH RED TRACER
7	BROWN WITH WHITE TRACER

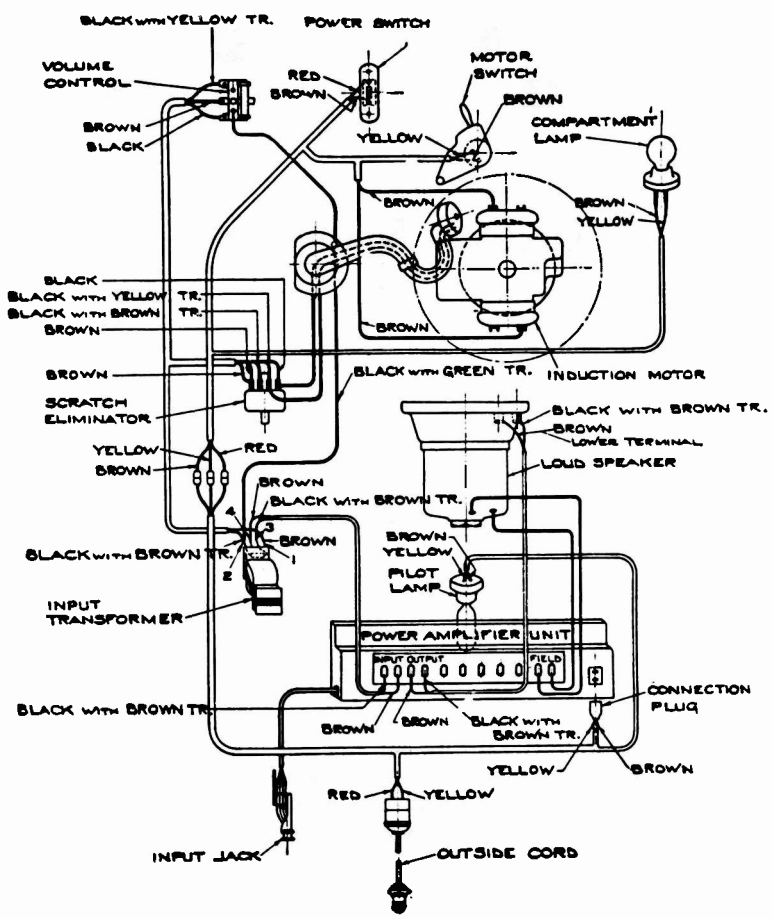
Wiring Diagram Electrola 12-15



Wiring Diagram 12-15 above serial No. 2600



Wiring Diagram for Electrola 12-25

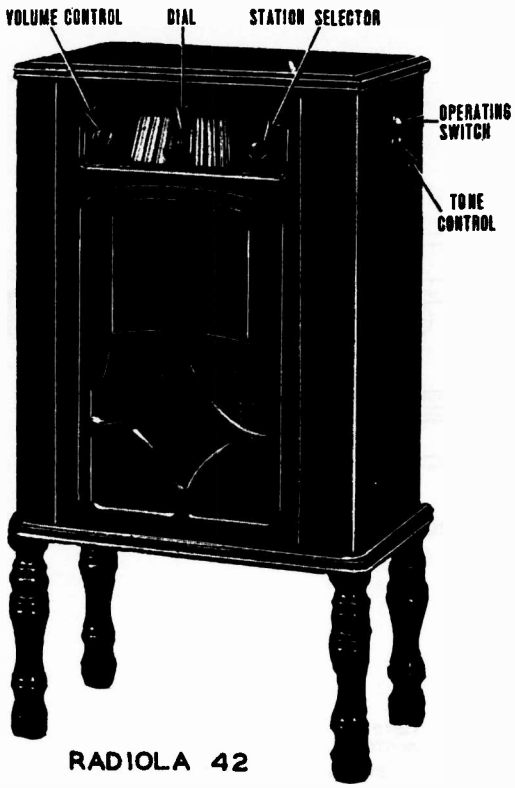


–Schematic Wiring Diagram of Electrola 12-25

Showing connections between terminals of the various units.

MODELS R-14, R-15, RE-17, 42 & 48

VICTOR MODELS——— RADIOLA



RADIOLA 42

RADIOLA 48

Electrical Specifications

Voltage rating	105 - 125 Volts
Frequency rating	25/40 and 50/60 cycles
Power consumption (Radio only)	115 Watts
Power consumption (Model RE-17)	170 Watts
Type of circuit	A.C. Screen-grid, T.R.F.
Type and Number of tubes	4 UY 224, 2 UX 245, 1 UX 280
Loudspeaker	Electro-dynamic
Wattage dissipation in L.S. Field	10 Watts, (110 V. 85 M.A.)
Undistorted output	2.5 Watts

Victor Model R-14 is identical to Radiola 42.

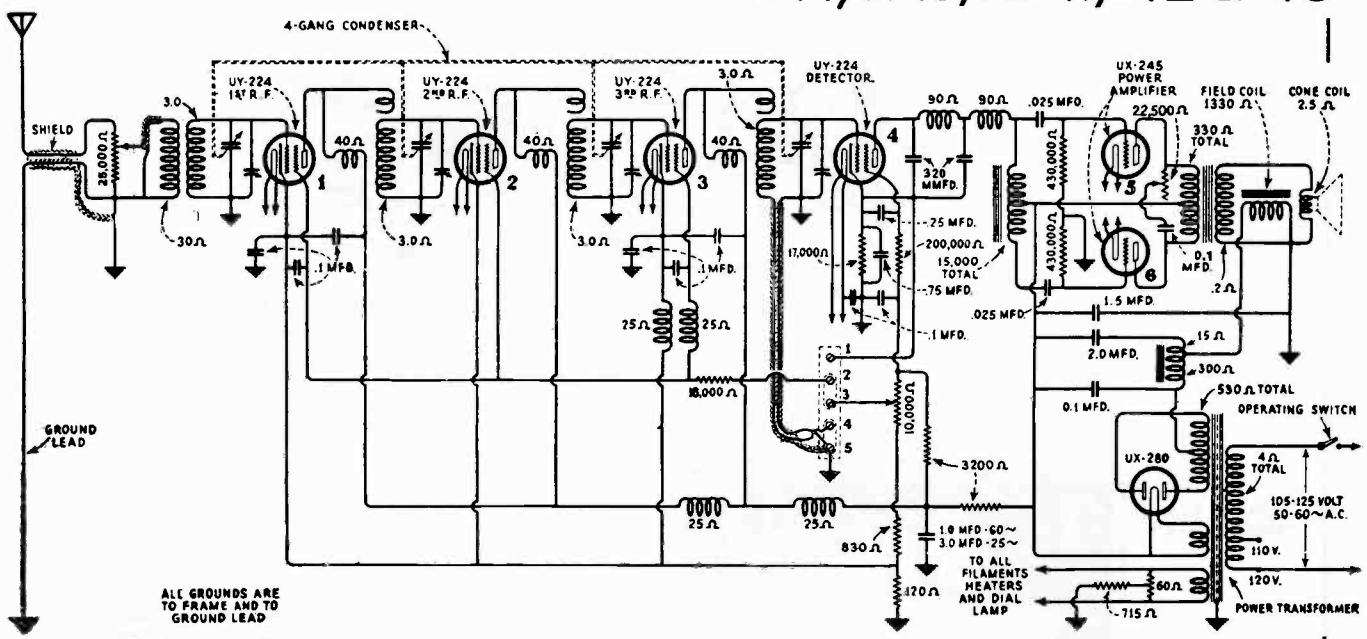
Victor Model R-15 is identical to Radiola 48.

Victor Model RE-17 is Victor Model R-15 combined with Electrola record playing equipment.

RCA Radiola 42 is a four circuit, tuned radio frequency radio receiver utilizing the chassis and reproducer unit of Radiola 48 together with a tone control. The tone control is mounted on the side directly under the operating switch.

It will be noted that a new volume control is used. The antenna section of this unit has a value of 25,000 ohms instead of 50,000 ohms as used in the Radiola 48. This volume control is also being used as a replacement in Radiola 48. The screen grid voltage section has a value of 10,000 ohms and the 12,000 ohm shunt resistor is not used. The 0.005 mfd. condenser across the plates of Radiotrons UX-245 has been omitted due to the connection of the tone control in the same position. When making replacements of the condenser and reactor unit it will be necessary to clip the two leads that are connected to the .005 mfd. condenser close to the container. The reason for this is that the replacement unit supplied is suitable for either the Radiola 42 or 48.

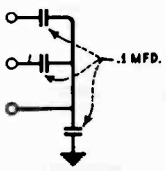
R-14, R-15, RE-17, 42 & 48



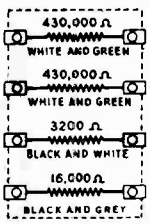
Schematic wiring diagram R-14 & RADIOLA 42

INTERNAL CONNECTIONS OF BY-PASS CONDENSERS

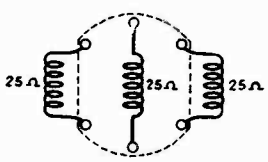
INTERNAL CONNECTIONS OF BY-PASS CONDENSERS



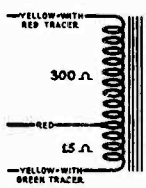
INTERNAL CONNECTIONS OF BY-PASS CONDENSERS



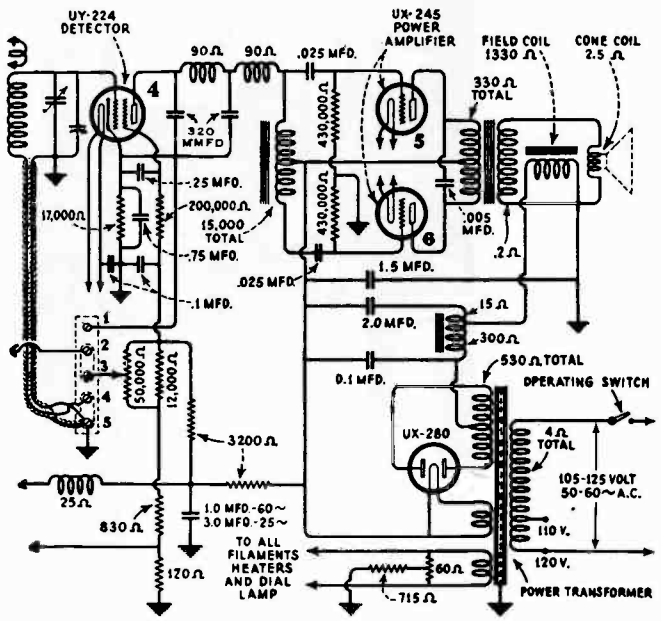
RESISTOR MOUNTING BOARD CONNECTIONS



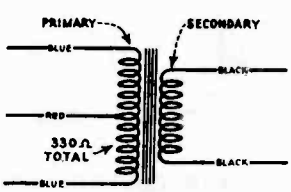
R. F. CHOKE MOUNTING BOARD CONNECTIONS



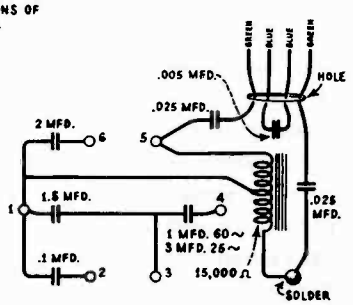
INTERNAL CONNECTIONS OF FILTER REACTOR



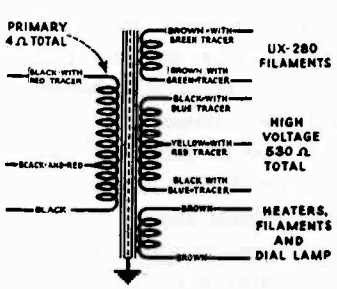
Schematic circuit diagram. R-15& RADIOLA 48



INTERNAL CONNECTIONS OF OUTPUT TRANSFORMER

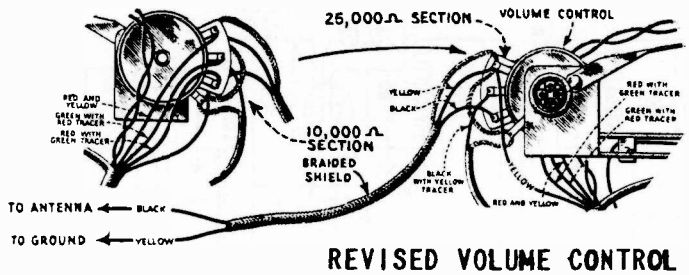


INTERNAL CONNECTIONS OF CAPACITOR AND COUPLING REACTOR PACK

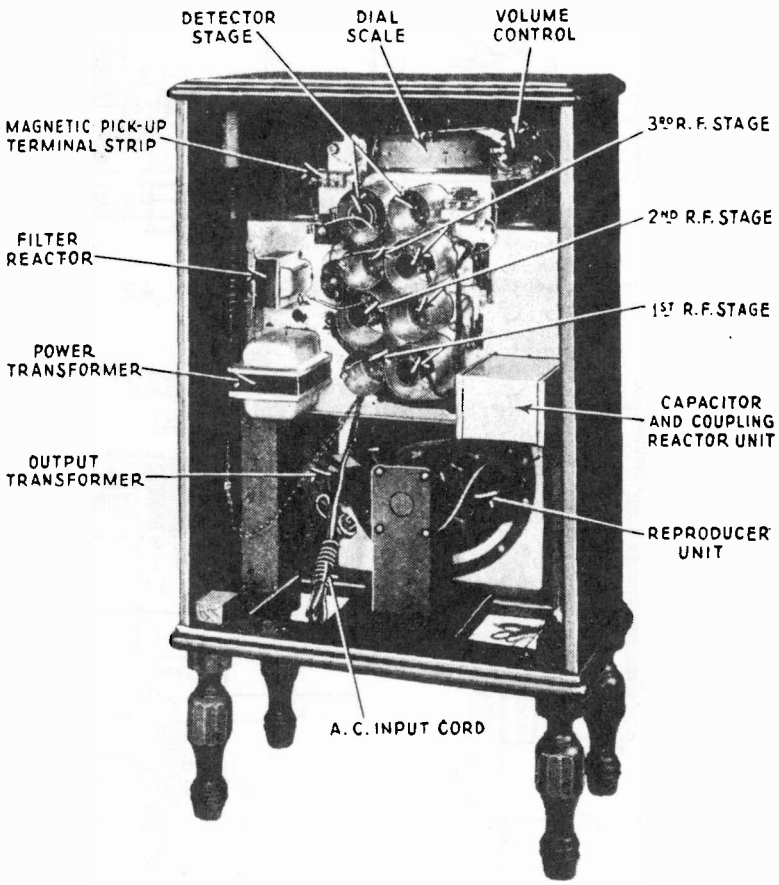


INTERNAL CONNECTIONS OF POWER TRANSFORMER

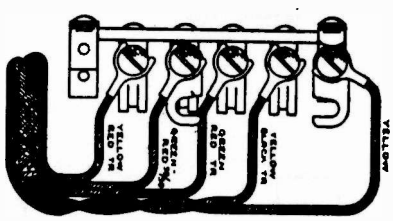
R-14 R-15 RE-17 42 & 48



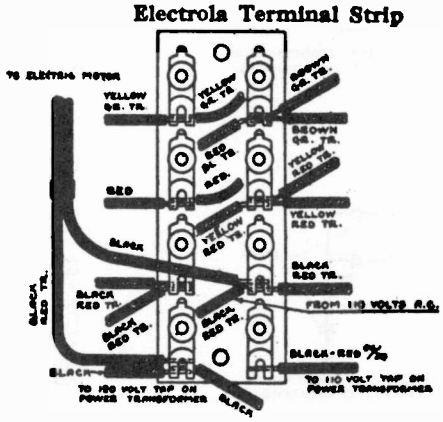
REVISED VOLUME CONTROL WIRING



Rear interior cabinet view with shields removed.

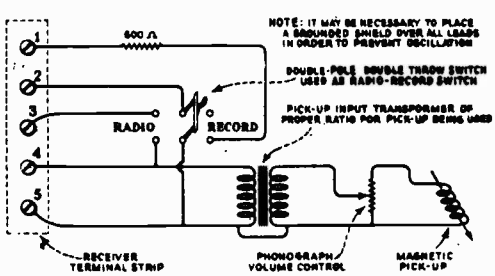


Electrola Terminal Strip



Radio Chassis Terminal Board, showing Additional Connections for Motor

The Victor Radio with Electrola RE-17 is a combination of the four circuit radio equipment in the R-15, with the Electrola equipment, less home recording, of the RE-57. A transfer switch controls the change-over from radio to record operation. When the switch is in the "Electrola" position, the power detector Radiotron becomes a first stage audio amplifier, transformer coupled, by a change in the grid bias of this tube when a 600 ohm resistor is connected into the grid bias circuit. The screen grid voltage supply to the R. F. tubes is opened during record reproduction to prevent the possibility of obtaining both radio and record reproduction simultaneously.



MAGNETIC PICKUP CONNECTIONS

R-14, R-15, RE-17, 42 & 48

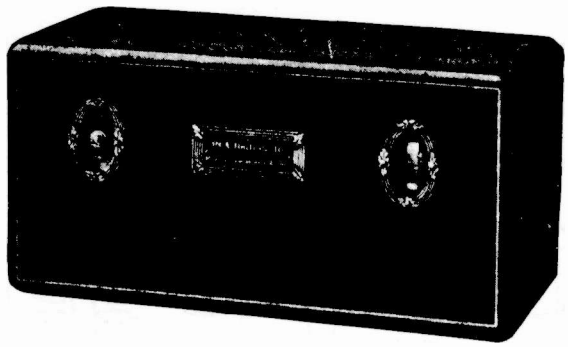
Stock No.	DESCRIPTION
2722	Resistor - 55 ohm Mid-tapped filament resistor.
2723	Switch - Power line operating switch - Toggle type - Package of 5.
2737	Escutcheon - Operating switch escutcheon - Package of 5.
2741	Idler - For Condenser drive cord - Package of 5.
2747	Cap - Contact cap for Radiotron UY-224 - Package of 5.
2786	Spring - Holding spring for Control Switch - Package of 10.
2792	Cable - Shielded twin conductor cable - 72" long - Shield 7" long (Antenna and ground leads).
2793	Cord - Shielded connector cord - 18-3/4" long.
2794	Resistor - 3200 ohms - Carbon type - Bleeder resistor - Package of 5.
2795	Resistor - 12,000 ohms - Carbon type - Volume control shunt resistor - Package of 5.
2796	Resistor - 16,000 ohms - Carbon type - Radio frequency screen grid series resistor - Package of 5.
2797	Resistor - 17,000 ohms - Carbon type - Detector bias resistor - Package of 5.
2798	Resistor - 200,000 ohms - Carbon type - Detector screen grid resistor - Package of 5.
2799	Resistor - 430,000 ohms - Carbon type - Output tube grid resistor - Package of 5.
2800	Spring - Tuning condenser shield contact spring - Makes contact with motor shaft - Package of 10.
2801	Cord - Condenser drive cord - Package of 5.
2802	Clip - Contact clip - For maintaining contact between tuning condenser shield and cast portion of tuning condenser - Package of 10.
2803	Screw - Special hex. head - No. 4-40 machine screw - Used to adjust line-up condensers -
2804	Knob - Station selector or Volume control knob - Package of 5.
2805	Screen - Station selector screen - Package of 5.
2806	Support - Metal escutcheon for dial panel.
2807	Contact spring - Tuning condenser contact spring - Located on cast partition of tuning condenser - Package of 5.
7054	Power Cord - Flexible twin conductor cord with male connector.
7066	Wrench - Special end wrench for tuning condenser line-up adjusting screw.
7105	Cable - Receiver wiring cable.
7106	Capacitor Pack - Detector by-pass capacitor pack - Comprising one 0.75 mfd. and one 0.27 mfd. capacitors in metal containers.
7107	Capacitor Pack - Detector screen grid supply and heater bus by-pass capacitor pack - Comprising two 0.1 mfd. capacitor in metal container.
7108	Capacitor Pack - Radio frequency, cathode, screen grid and plate by-pass capacitor pack - Comprising three 0.1 mfd. capacitors in metal containers.
7109	Clamp bar - Clamping bar for tuning condenser shield.
7110	Coil - R.F. plate supply filter coil mounted micarta strip.
7111	Coil - R.F. interstage filter coil assembly.
7112	Transformer - Antenna transformer.
7113	Transformer - Interstage R.F. transformer.
7114	Condenser - Adjustable line-up condenser - Capacity 5 to 15 mmfd.
7115	Filter assembly - Detector plate filter - Comprising 2 coils and 2 capacitors mounted on micarta strip.
7116	Resistor board assembly - Comprising micarta board with two 430,000 ohms, one 3200 ohm and one 16,000 ohm resistors, with mounting screws, lockwashers and nuts.
7117	Resistor - Procelain type voltage divider resistor - Comprising one 3200 ohm section and one 1865 ohm section tapped at 830 and 950 ohms.
7118	Shield - Metal shield for 1st, 2, 3d R.F. or Detector radiotrons - 2 sections - Cap and sleeve.
7119	Shield - Metal shield for antenna or R.F. interstage transformers - 2 sections - Cap and sleeve.
7120	Shield - Metal shield for phonograph input terminal board.
7121	Socket - Dial lamp socket with bracket, mounting screw, washer and nut.
7122	Socket - Single socket for Radiotron UX-280.
7123	Socket - Double socket for Radiotron UX-245.
7124	Socket - Single socket for Radiotron UY-224.
7125	Terminal strip - Distribution terminal strip for A.C. line and tapped filter inductor - Comprising micarta strip with 8 terminals, mounting screws lockwashers and nuts.
7126	Terminal strip - Heater bus distribution terminal strip - Comprising micarta strip with 2 terminals, mounting screws, lockwashers and nuts.
7127	Terminal strip - Phonograph input terminal strip - Comprising micarta strip with 4 terminals, mounting brackets, screws, washers and nuts.
7128	Scale - Dial scale - Package of 5.
7129	Volume control - Two units - With mounting washers and nuts (For 60 cycle)
7130	Grille cloth and baffle board - Assembled.
7150	Wrench - Special combination open end wrench and screw driver - For adjusting line-up condensers.
7153	Volume control - With mounting washers and nut (For 25 cycle).
8571	Transformer - Power transformer - 220 volt - 60 cycle.
8602	Condenser - Tuning condenser assembly - Comprising 4 condensers, drive, drive cord, spring dial drum, dial lamp, socket and bracket and 4 adjustable line-up Condensers.
8604	Inductor - Tapped filter inductor in metal container - Used as Filter reactor.
8605	Shield - Metal shield for tuning condenser assembly.
8606	Shield - Metal shield for (7106 and 7107) Detector by-pass capacitors.
8607	Shield - Metal shield for R.F. Filter coil and by-pass capacitor packs.
8608	Transformer and Capacitor assembly - Comprising interstage transformer one 2 mfd. and 0.1 mfd., one 1.5 mfd., one 1 mfd., two 0.025 mfd. and one 0.005 mfd. capacitors in metal container - For 60 cycle.
8609	Transformer - Power transformer - 105-125 volts - 60 cycles.

R-14, R-15, RE-17, 42 & 48

Stock No.	DESCRIPTION
2804	Knob - Transfer switch or Pickup volume control knob - Package of 5.
2825	Connector block - Pickup connector block and wire.
2827	Resistor - Motor resistor - 36 ohms for 25 cycles.
2828	Screw assembly - Pickup mounting screw, washer and nut - Package of 10 sets.
2829	Knob - Motor board lifting knob with screw - Package of 2.
2872	Governor Balls - Governor balls and spring with mounting washers and screws -
2873	Screw assembly - Top plate, screws, washer, nut and ball bearing - Package of 5 sets.
2947	Leather - Brake friction leather - Package of 20
3218	Resistor - Carbon type - 600 ohms -
3052	Screw assembly - Pickup pole piece mounting screw, washer and nut - Package of 10 sets.
7077	Regulator - Speed regulator escutcheon and screw, with mounting screws - Package of 2.
7078	Volume control - Pickup volume control - Complete less knob.
7085	Pickup - Pickup unit complete.
7086	Lever - Regulator lever - Package of 2.
7087	Gear - Turntable spindle governor driving gear with set screw.
7088	Disc - Rotor disc with set screw.
7093	Cover - Pickup unit cover.
7147	Inductor - Motor inductor - 110 volts - 25 cycles.
7148	Capacitor - Motor capacitor for 25 cycles.
7151	Back - Pickup unit back.
8582	Turntable - Turntable with cover.
10174	Springs - Brake springs - Set of 4 springs - Package of 2 sets.
10181	Brake - Complete - Less switch with mounting screws.
10184	Plate - Brake latch plate and 2 mounting screws - Package of 5.
10196	Spring - Regulator shaft spring - Package of 10.
10289	Governor - Complete - Comprising spindle, collar, friction Disc, balls and springs - Assembled.
10378	Top plate.
10688	Screw and washer - Motor board mounting screw and finishing washer - Package of 10.
10695	Cup - Needle cup - Package of 2.
10879	Panel - Cabinet front panel.
10882	Escutcheon - Tuning escutcheon.
7092	Arm - Pickup arm and base (less unit) with mounting screws.
10901	Spring - Lid support spring - Package of 2.
10904	Cushion - Lid cushion - Package of 20.
10905	Ratchet - Lid support ratchet and bracket.
10906	Support - Lid support - Complete.
10922	Switch - Radio-Record transfer switch - Complete - Less knob.
10923	Transformer - Pickup input transformer.
10924	Inductor - Motor inductor - 110 volts, 60 cycles.
10946	Foot - Cabinet foot.
11057	Dial Screen

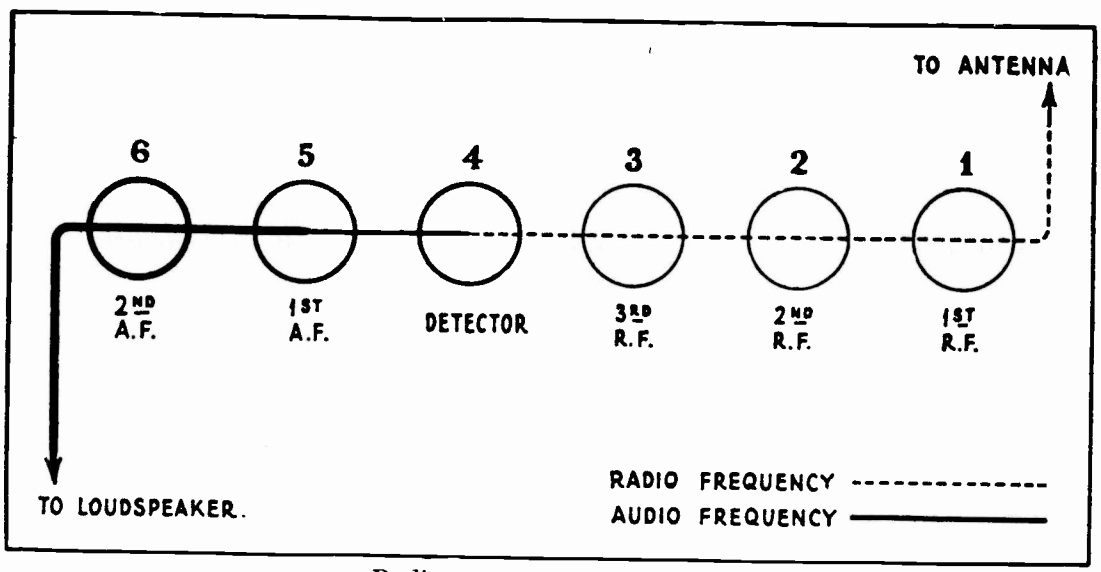
Stock No.	DESCRIPTION
8614	Transformer and Capacitor assembly - Comprising interstage transformer, one 3 mfd., one 1.15 mfd., one 2. mfd., one 0.1 mfd., two 0.025 mfd. and one 0.005 mfd. in metal container (For 25 cycle).
8615	Transformer - Power transformer - 105-125 volt - 25 cycle.
10776	Shield - Detector plate filter shield.
10834	Clip - Tube socket clip - Package of 10.
10863	Shaft - Drive shaft - Package of 2.
10864	Shaft - Idler shaft - Package of 5.
10867	Spring - Drive cord spring - Package of 5.
	LOUDSPEAKER ASSEMBLY
2791	Ring - Field coil spacing ring - One set of 2.
7103	Bolt - Nut and lockwasher assembly - One set of 4.
7104	Transformer - Output transformer with spacers, lockwashers and nuts.
8559	Ring - Cone retaining ring.
8599	Coil - Field coil.
8600	Support - Metal cone support with terminal board.
8601	Cone - Complete with Voice coil - Package of 5.
	SPECIAL PARTS FOR RCA RADIOLA 42
10885	Condenser - Tone control condenser - 0.05 mfd.
10887	Knob - Tone control knob - Package of 5.
10888	Control - Tone control - Less knob.
10890	Grille - Grille cloth and baffle board.
	SPECIAL PARTS FOR VICTOR RADIO R-14
10885	Condenser - Tone control condenser 0.05 mfd.
10887	Knob - Tone control knob - Package of 5.
10888	Control - Tone control - Complete less knob.
10889	Escutcheon - Tuning escutcheon.
10891	Scale - Tuning dial scale.
11057	Screen - Dial screen.
	SPECIAL PARTS FOR RE-17
2614	Switch - Brake motor switch.
2620	Cushion - Pickup rubber cushions - Set of 1 damper and 2 pivot cushions - Package of 1 set.
2749	Capacitor - Pickup transformer condenser - 2400 mmfd.
2759	Box - Needle box with lid - Package of 2.
2762	Bearing assembly - Governor bearing assembly - Comprising 2 bearings, 2 set screws and 2 ball bearings - Package of 3 sets.
2763	Bolt assembly - Motor mounting screw, rubber washer and cushion, Washers and nut - Package of 1 set.
2764	Spindle - Turntable spindle.
2765	Screw - Pickup needle screw - Package of 10.
2766	Screw - Pickup cover screw - Package of 10.
2767	Spring - Pickup magnet spring - Package of 10.
2768	Armature - Pickup armature.
2769	Coil - Pickup coil.
2771	Screw - Pickup damper plate screw - Package of 10.
2773	Pole piece - Pickup pole piece (R.H.).
2774	Rod - Pickup arm trip rod and nut - Package of 5.
2778	Pole piece - Pickup pole piece (L.H.).
2781	Felt - Regulator lever friction felt - Package of 20.
2785	Hinge - Lid hinge - Package of 2.
2786	Spring - Volume control or switch knob springs - Package of 10.

MODELS RADIOLA 16 & VICTOR 7-10

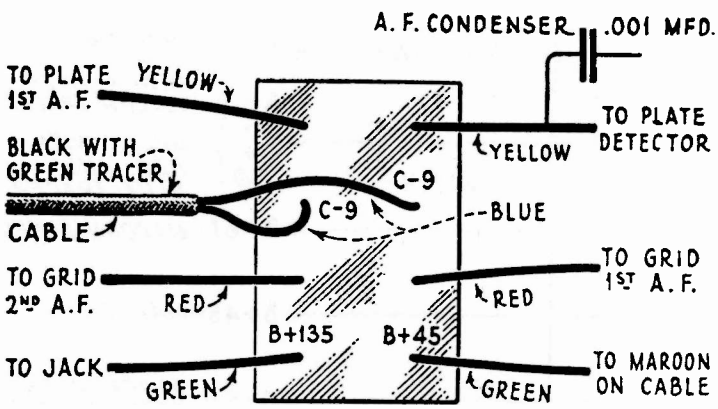


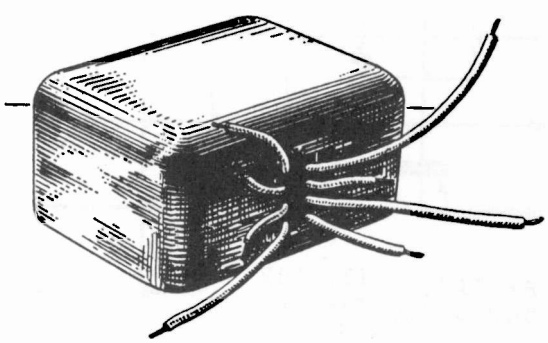
RCA Radiola 16

RCA Radiola 16 is a tuned radio frequency receiver employing five Radiotrons UX-201A and one Radiotron UX-112A. The tuning range of Radiola 16 extends from 550 to 1400 Kilocycles or 546 to 214 meters approximately.



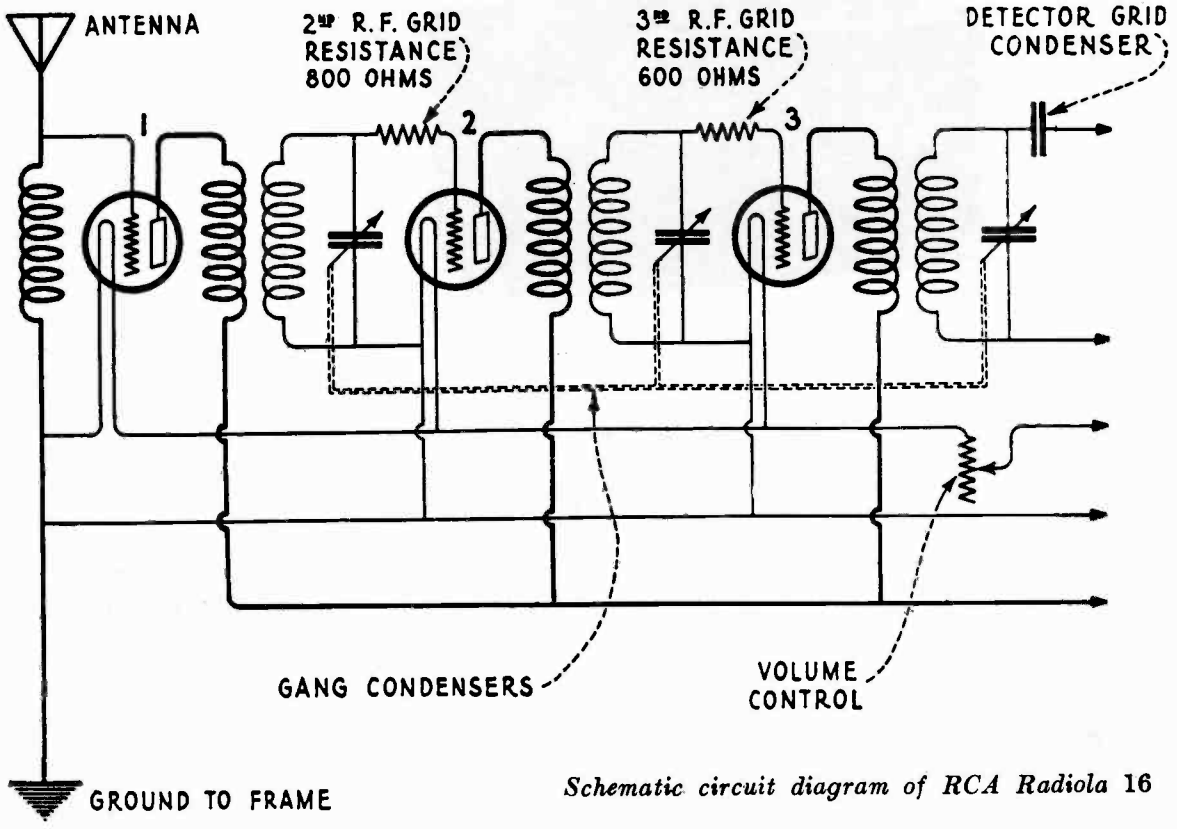
Radiotron sequence in RCA Radiola 16



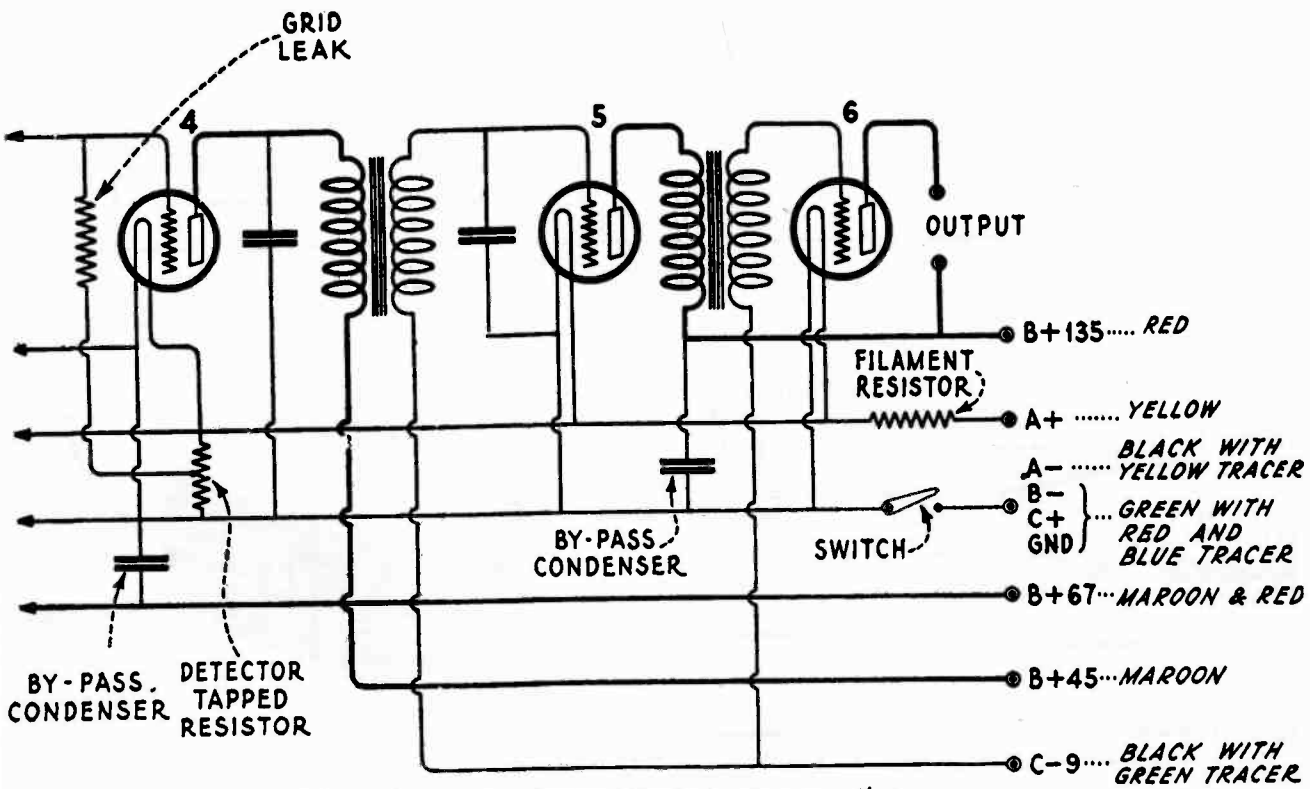


Audio frequency transformers and color scheme of connections

16 & 7-10

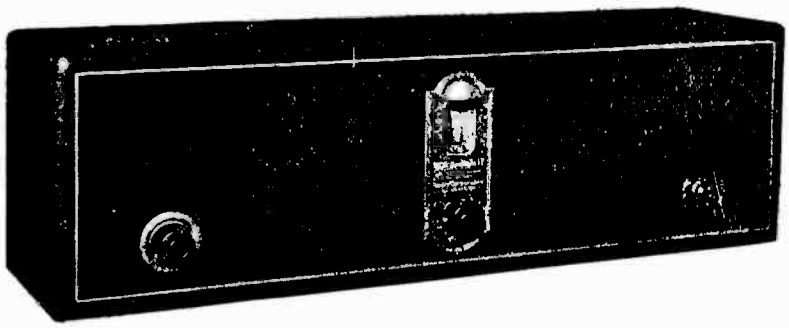


Schematic circuit diagram of RCA Radiola 16

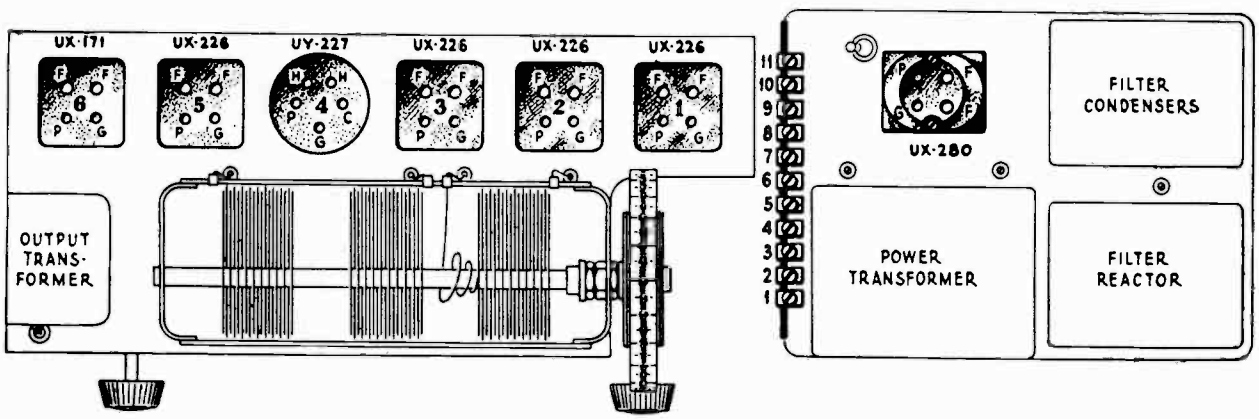


and wiring color scheme for making battery connections

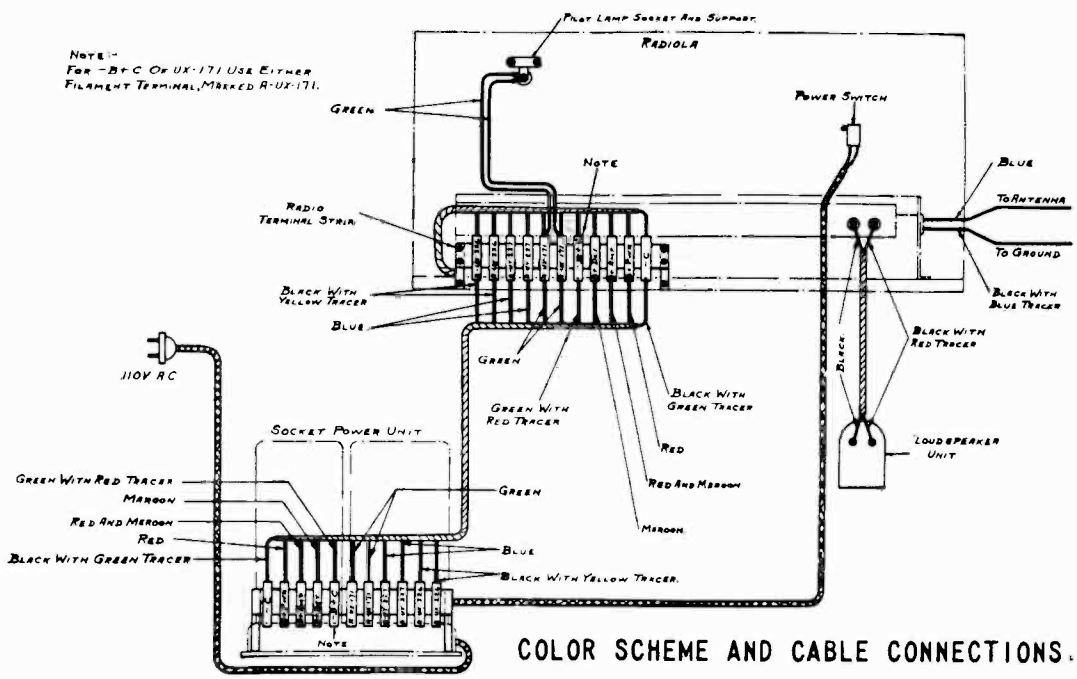
MODELS RADIOLA 17 & VICTOR 7-25



RCA Radiola 17

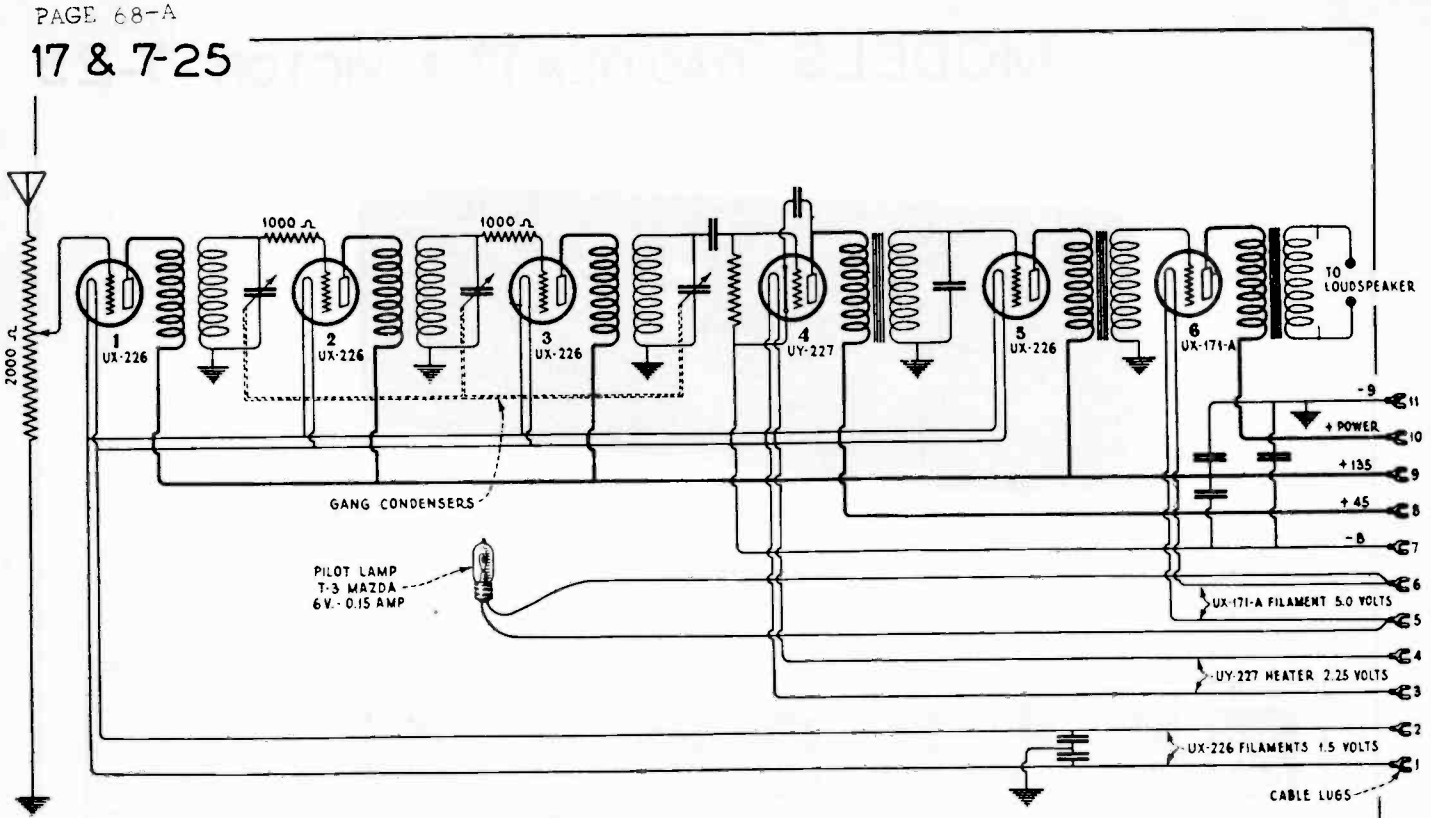


Radiotron socket contacts.

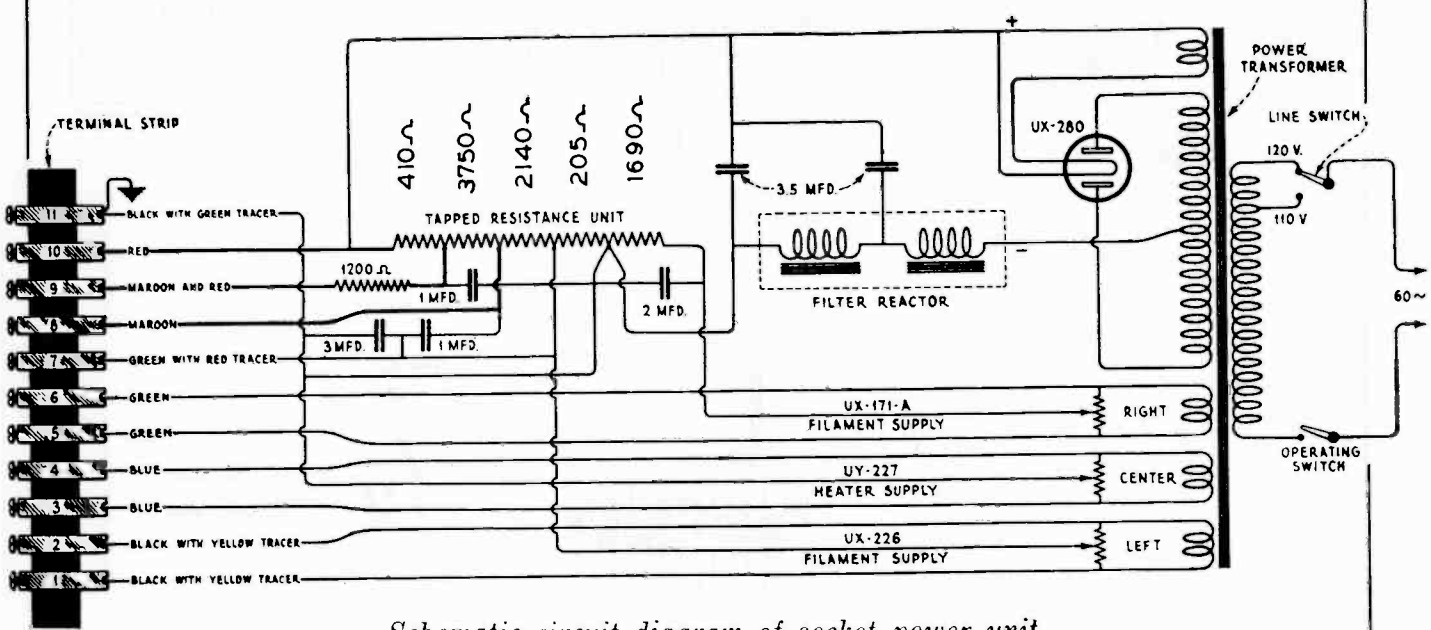


COLOR SCHEME AND CABLE CONNECTIONS.

17 & 7-25

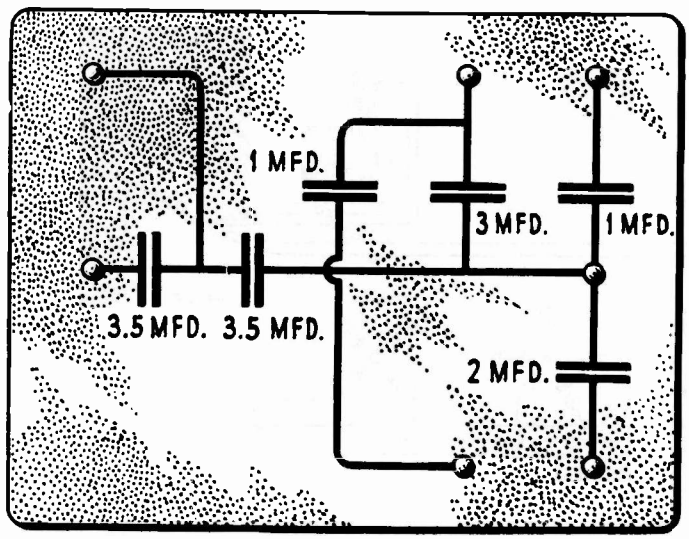


Schematic circuit diagram of receiver assembly.

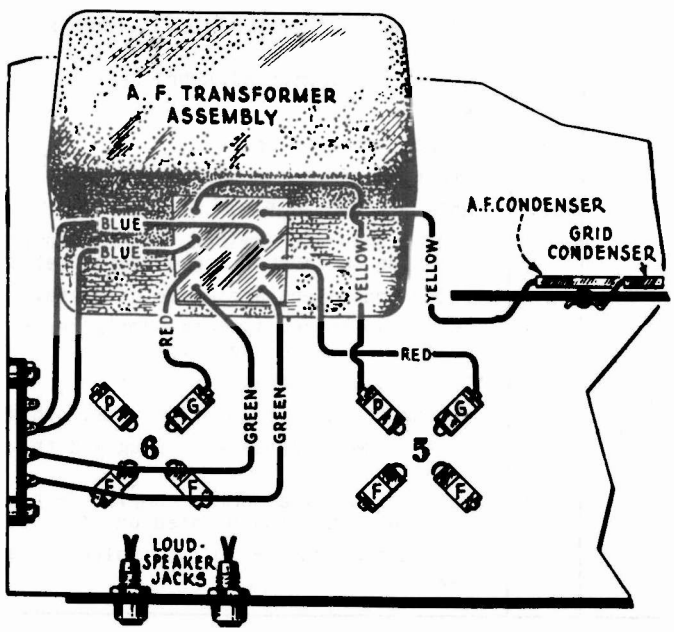


Schematic circuit diagram of socket power unit.

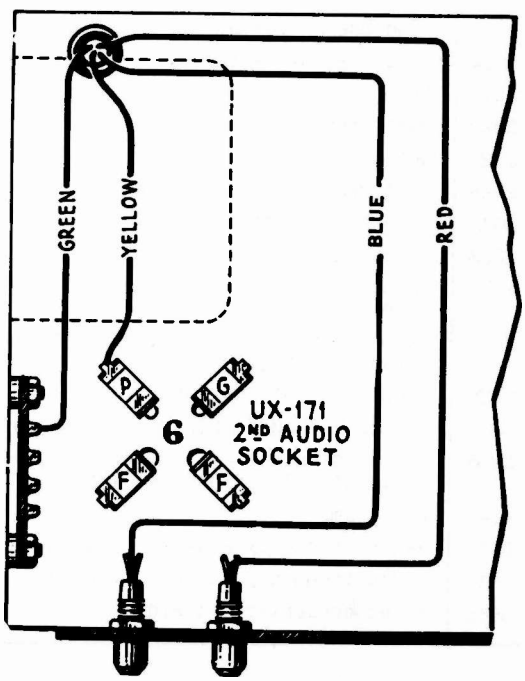
Terminals	*Correct Voltage*
1 to 2	1.5 A. C.
3 to 4	2.25 A. C.
5 to 6	5.0 A. C.
7 to 8	45 D. C.
7 to 9	135 D. C.
Gnd. to 10	165 D. C. (Approx.)
7 to 11	9 D. C.
11 to adjusting screw of UX-171A potentiometer	30 D. C.



Internal connections of filter condensers.

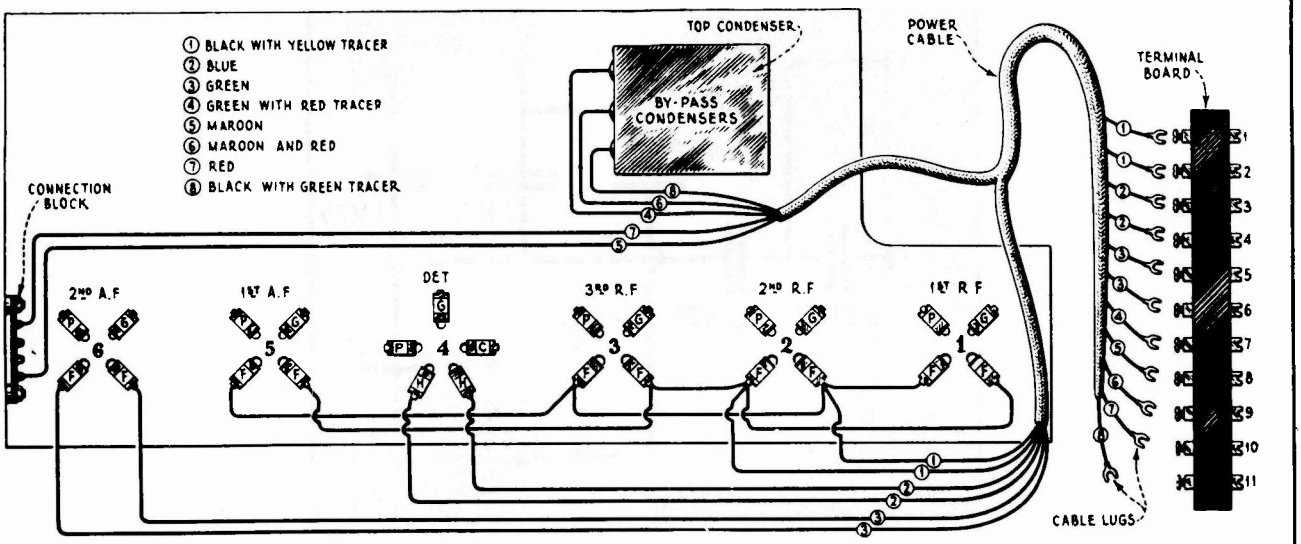


Detail of A. F. transformer connections and color scheme of wiring.



Output transformer connections.

17 & 7-25



Color scheme of power cable connections.

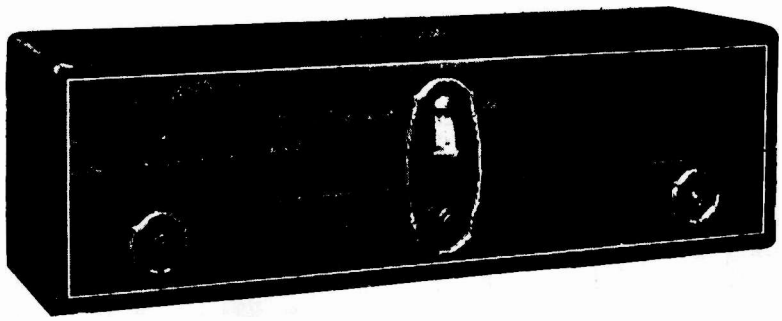
REPLACEMENT PARTS

Insist on genuine factory tested parts, which are readily identified and may be purchased from authorized dealers

Stock No.	DESCRIPTION
2006	Tube socket contact - Package of 10.
2010	Detector grid condenser.
2011	Grid leak - 4 megohms.
2012	Condenser - Primary of 1st audio - .0012 mfd.
2014	Condenser drive cable.
2017	Knob
2022	Radiotron UX Socket.
2027	Detector socket.
2028	Grid resistor - 1000 ohms.
2032	Antenna and ground leads (1 set).
2033	Resistance unit - Tapped.
2034	Switch - Power line adjustment switch (Two position).
2036	Canopy for escutcheon and pilot lamp - Package of 5.
2037	Socket for pilot lamp.
2039	Switch - Toggle Operating Switch with leads.
2238	Fixed resistance - 1200 ohms - Used in plate circuit of Radiotrons UX-226.
4340	Dial lamp
5662	Radio frequency socket - 3-gang.
5663	Audio frequency socket - 2-gang.
5665	Fixed condenser - 1 Mfd.

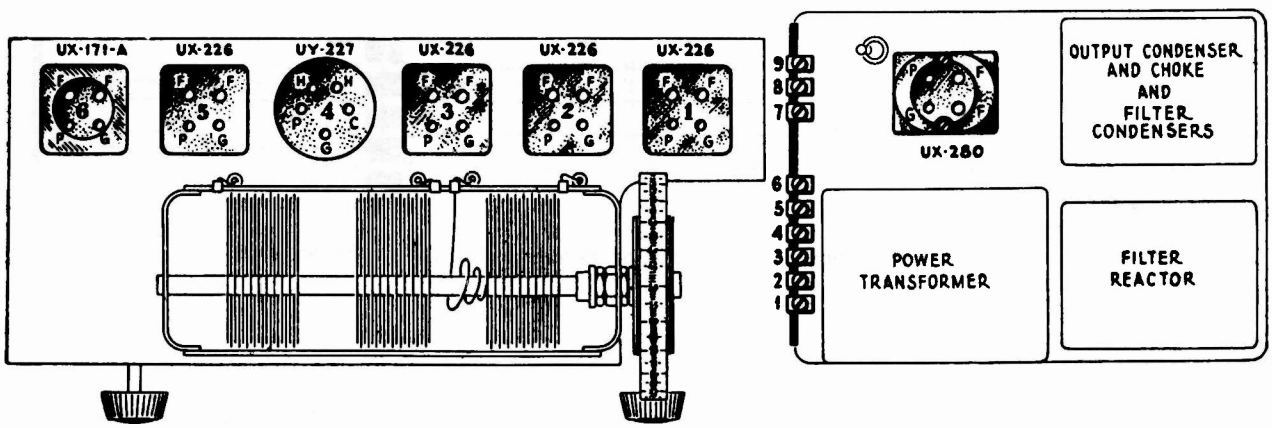
Stock No.	DESCRIPTION
5667	Audio transformer assembly.
5669	Dial scale - Package of 10.
5671	Condenser and resistor mounting strip.
5680	Volume control potentiometer, 2000 ohms.
5681	Fixed condenser - 0.5 mfd. on each side of midtap.
5683	Output transformer with bracket.
5684	Cable to S.P.U.
5685	Potentiometer 60 ohms.
5686	Potentiometer 5.5 ohms.
5688	Cable - Wiring S.P.U.
5904	Escutcheons - For switch, volume control and station selector - One complete set of 3.
8285	Tuning condensers and drive complete.
8287	Power transformer in metal container - 105-125 volt, 50-60 cycles.
8288	Choke coils in metal container.
8289	Condenser bank - 15 Mfd. in metal container.
8290	Cable - Power supply with plug and toggle switch.
8293	Radio frequency assembly complete - 3 coils and two pin jacks mounted on dilecto strip.
8301	Power transformer - 105-125 volts, 25-40 cycles.

RADIOLA 18 VICTOR 7-11, 7-26 & 9-16



RCA Radiola 18

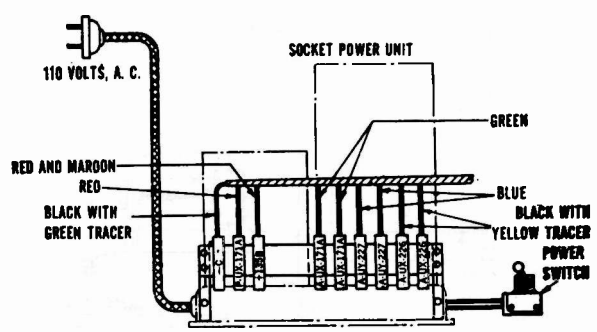
The Radiola is designed for operation on 105 to 125 volts, 50 to 60 cycles, alternating current, and consumes approximately 40 watts. It is also available with a special power unit for operation on 105 to 125 volts, 25 to 40 cycles.



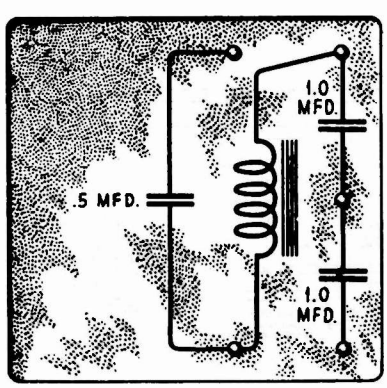
Radiotron socket contacts.

To reach the adjusting screw of the compensating condenser, break the brown paper seal and insert the screw-driver through the hole at the bottom of the tuning condenser assembly.

With the volume control at maximum intensity, turn this screw to the right until the Radiola goes into oscillation. Then turn the screw to the left until all oscillation and any howl is eliminated, with the volume control at maximum. In some cases it will be necessary to interchange the Radiotrons UX-226 in the R.F. stages before the proper adjustment is found. This is the correct adjustment to obtain maximum sensitivity and tone quality in the operation of Radiola 18.

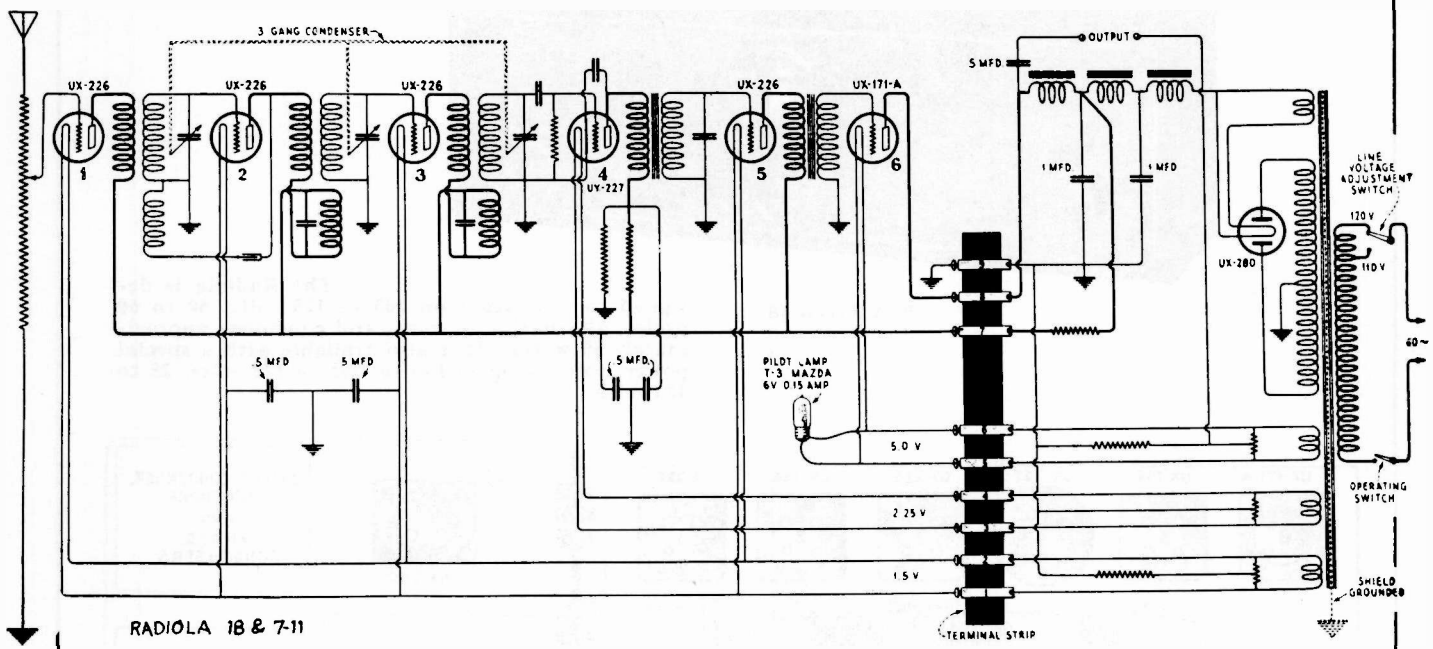


Socket Power Unit Terminals



Internal connections of condensers.

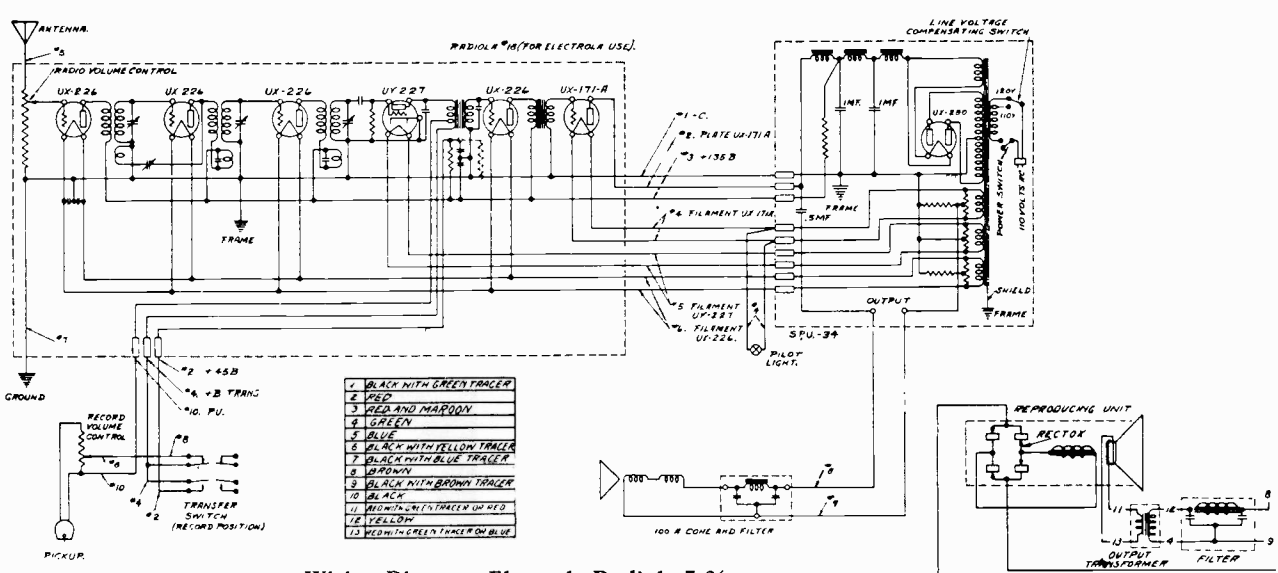
RADIOLA 18 VICTOR 7-11, 7-26 & 9-16



Schematic diagram of receiver and socket power unit.

TERMINALS	CORRECT VOLTAGE
1 to 2	1.5 A.C.
3 to 4	2.25 A.C.
5 to 6	5.0 A.C.
7 to 9	145 D.C.
8 to 9	165 D.C.

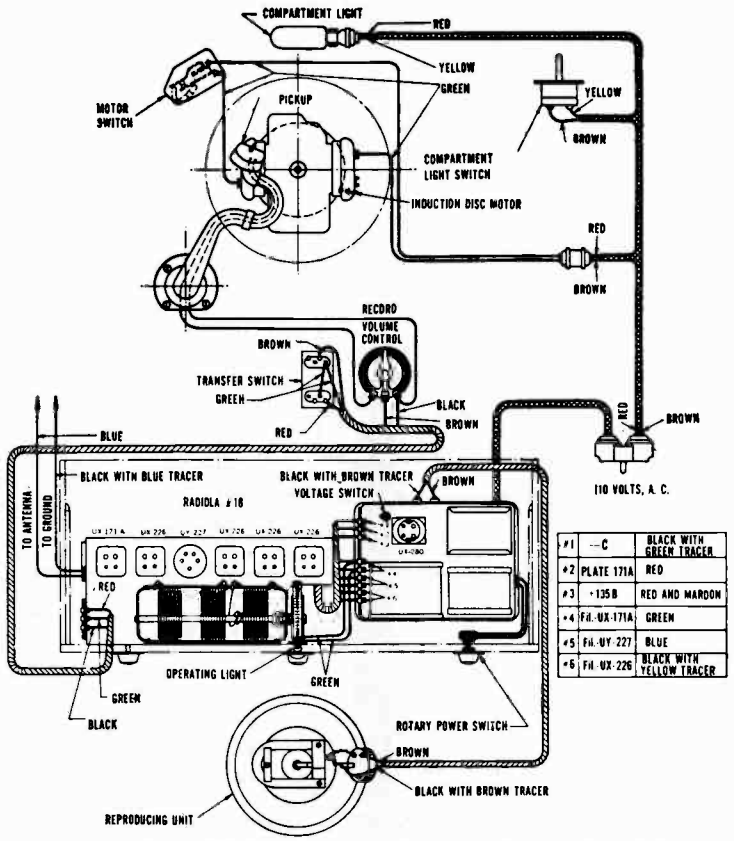
The Radiola used in the 7-26 differs slightly from that of the 7-11 in that it has a terminal strip of three connectors at the left end of the set when facing the front. Two of these are connected to the primary of the first audio frequency transformer, one to the tapped portion and the other to the end. The third terminal is connected to the UY-227 plate resistor.



Wiring Diagram Electrola Radiola 7-26

7-26 Above Serial No. 12000

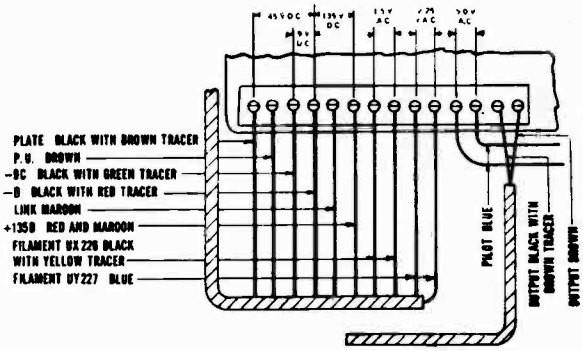
RADIOLA 18 VICTOR 7-11, 7-26 & 9-16



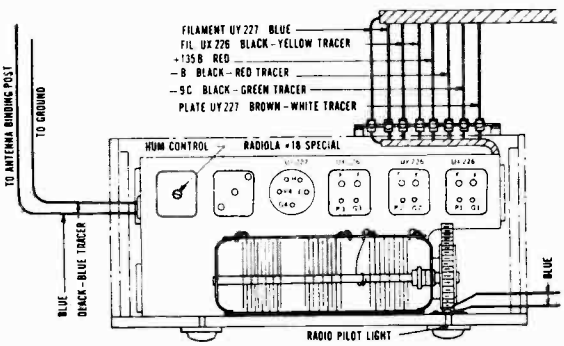
#1	—C	BLACK WITH GREEN TRACER
#2	PLATE 171A	RED
#3	+135 B	RED AND MAROON
#4	Fil. UX-171A	GREEN
#5	Fil. UY-227	BLUE
#6	Fil. UX-226	BLACK WITH YELLOW TRACER

Cable Wiring Diagram Electrola Radiola No. 7-26

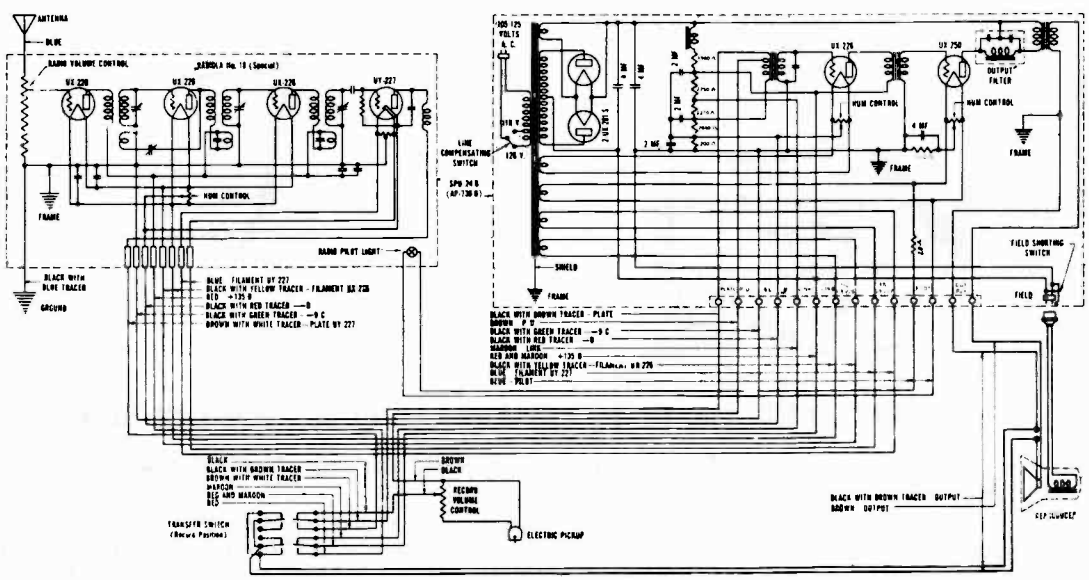
The Victor Radiola 18 used in the model 9-16 is similar to that used in the 7-11 and the 7-26, but is modified for power-amplifier operation. Three stages of tuned radio frequency amplification are used with the Radiotrons UX-226, and a detector with the UY-227. The two stages of audio amplification are used in the power-amplifier unit, AP-736-B.



-Terminal Strip of Power Amplifier Unit AP-736-B—showing proper voltages across various terminals.



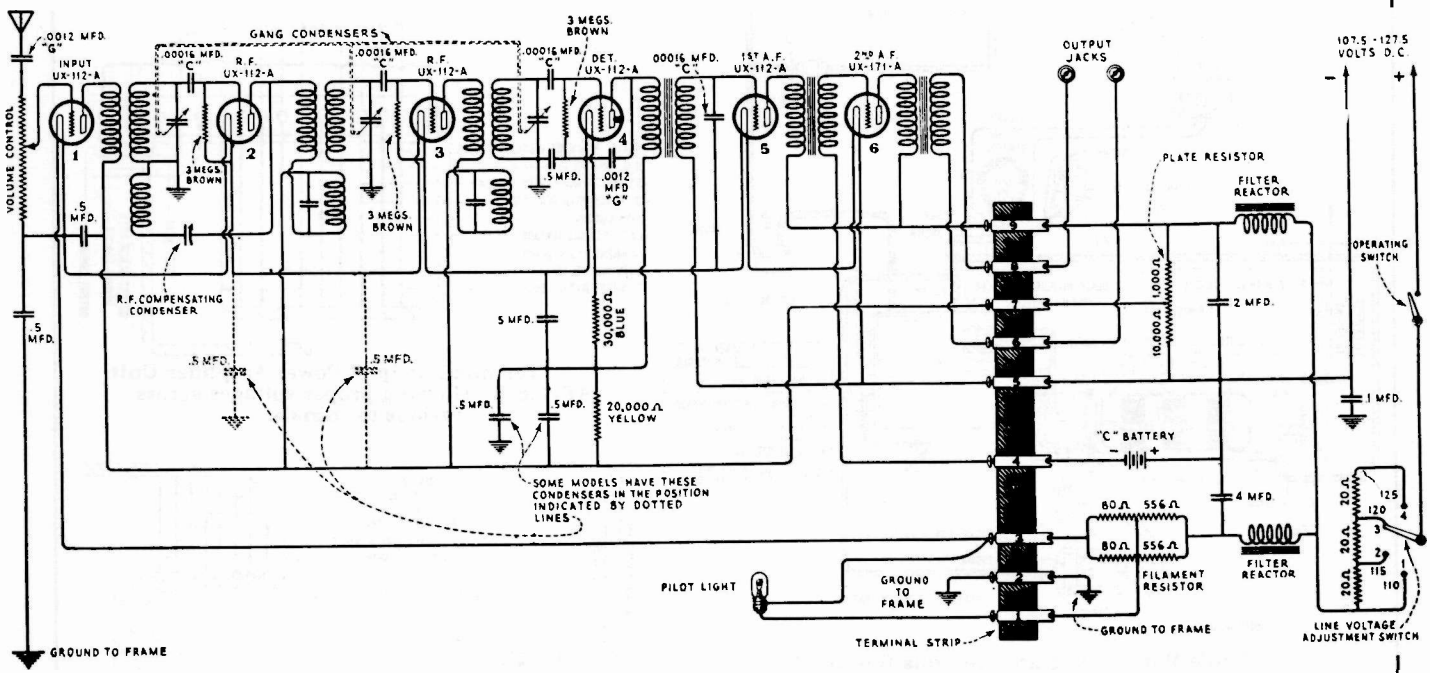
Radiola Sockets and Terminal Strip



Wiring Diagram Electrola Radiola 9-16

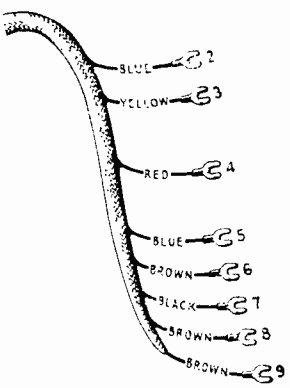
RADIOLAS 18 D.C. & 51 D.C.

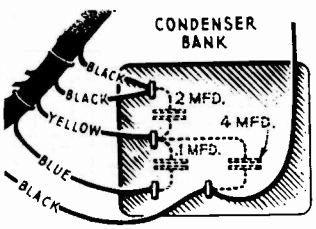
Radiola 51 d.c. is a cabinet model combination of the Radiola 18 d.c. and Loudspeaker 100A. The loudspeaker connections are made to the receiver assembly instead of to the socket power unit as in the Radiola 18 d.c. Socket power unit terminals No. 6 and 8 are omitted.



Schematic circuit diagram of Radiola 18 D.C.

TERMINALS	VOLTAGE
1 to 3	5 volts
3 to 5	30 volts
4 to 5	18 volts
5 to 7	75 volts
5 to 9	100 volts
7 to 9	25 volts





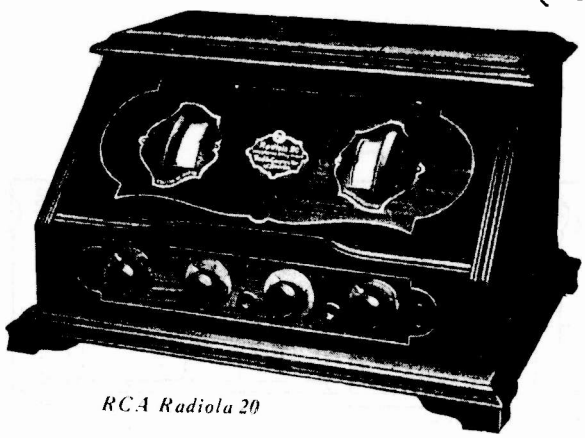
ADJUSTMENT OF R. F. COMPENSATING CONDENSER

Locate the position of the compensating condenser adjusting screw at the rear of the receiver assembly.

With the volume control at the position of maximum intensity, turn the screw to the right until the set goes into oscillation. Then turn the screw to the left until all oscillation and howl is eliminated with the volume control at maximum. In some cases interchanging the tubes in the R. F. stages will facilitate this adjustment.

RADIOLA 20 VICTOR 7-1, 7-3 & 7-30

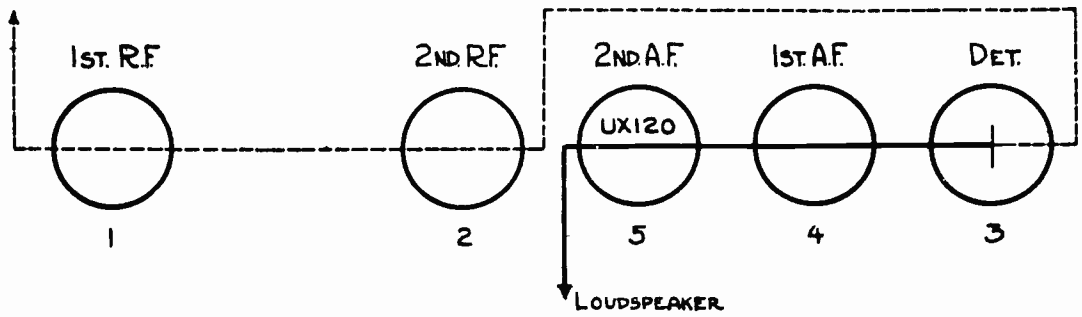
(ALHAMBRA 1)



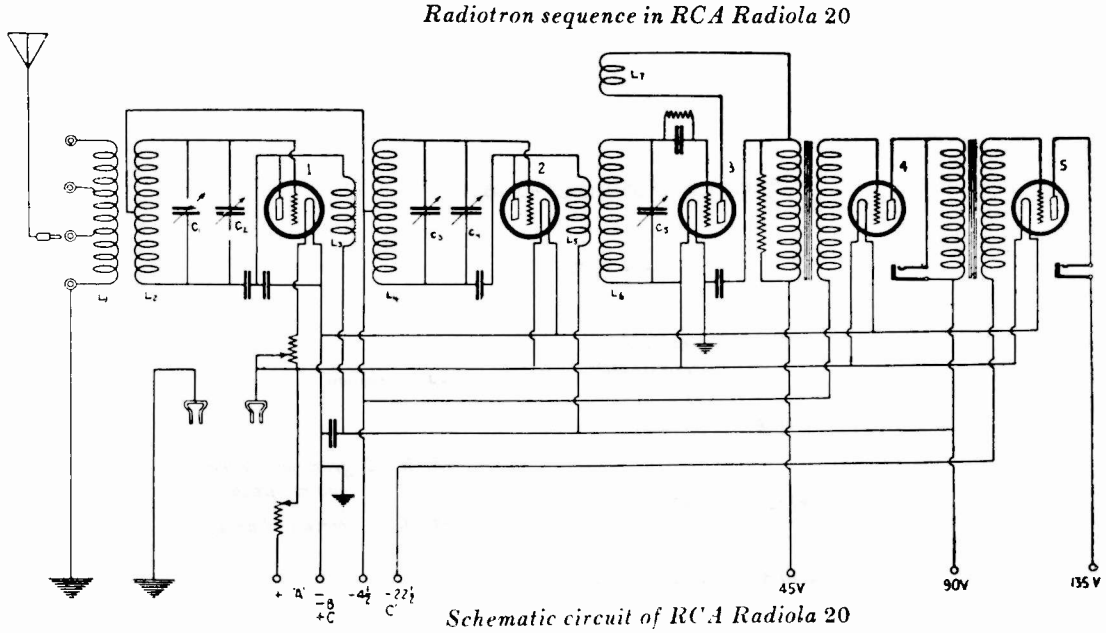
RCA Radiola 20

Radiola 20 is a tuned radio-frequency receiver with regeneration, employing four Radiotrons UX-199 and one Radiotron UX-120. It consists of two stages of balanced tuned radio-frequency, a regenerative detector and two stages of audio frequency amplification.

To have the amount of regeneration under full control at all wave-lengths the inter-element tube capacities have been compensated for by the small neutralizing condensers located on the back of the Radiotron shelf.

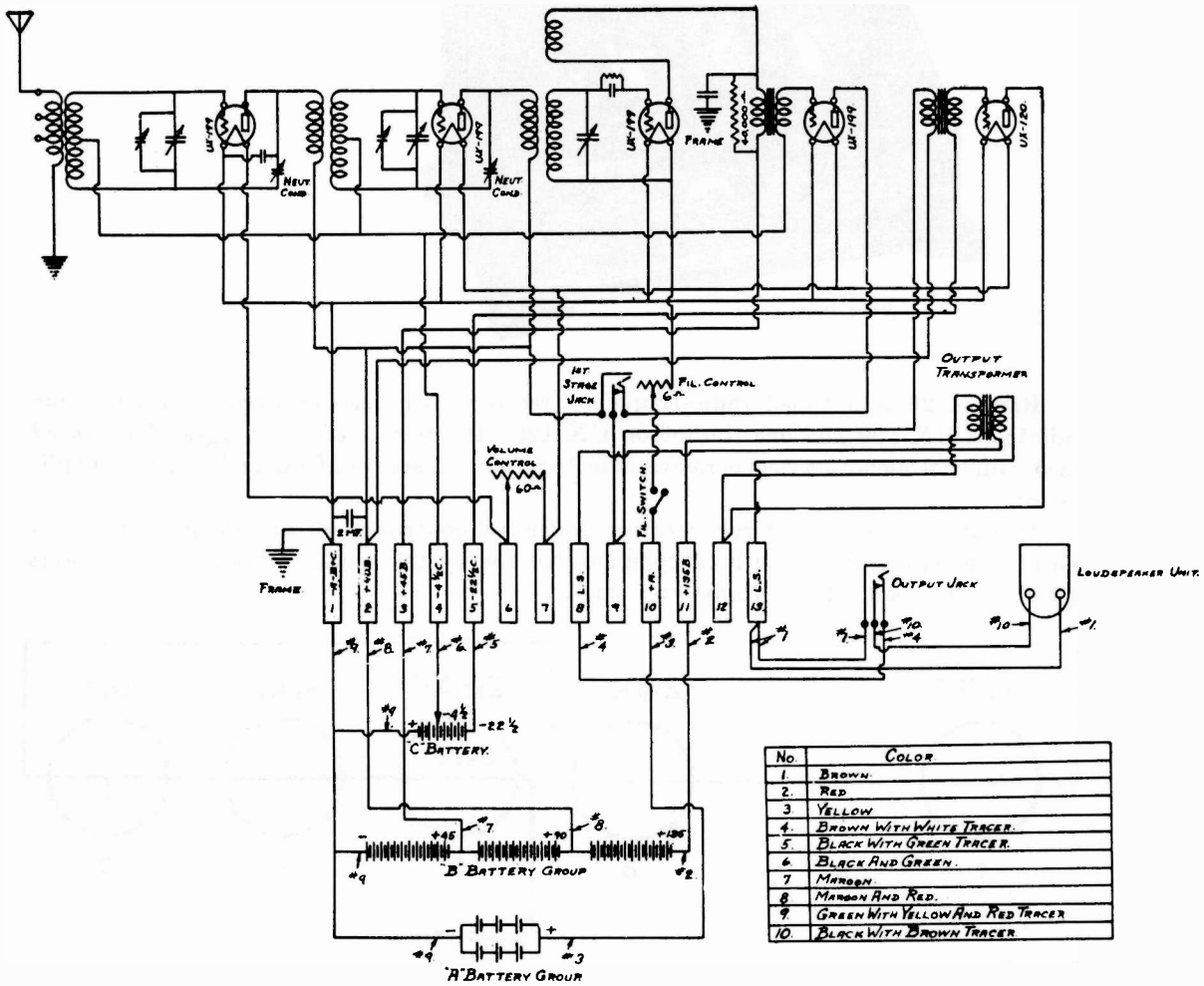


Radiotron sequence in RCA Radiola 20



Schematic circuit of RCA Radiola 20

RADIOLA 20 VICTOR 7-1, 7-3 & 7-30



No.	Color
1.	Brown.
2.	Red
3.	Yellow
4.	Brown With White Tracer.
5.	Black With Green Tracer.
6	Black And Green.
7	Maroon
8.	Maroon And Red.
9.	Green With Yellow And Red Tracer
10.	Black With Brown Tracer.

WIRING DIAGRAM MODELS 7-1, 7-3 AND 7-30

Battery Connections.

Cable To Set

-22½ C (black with green tracer)

+45 B (maroon)

+135 B (red)

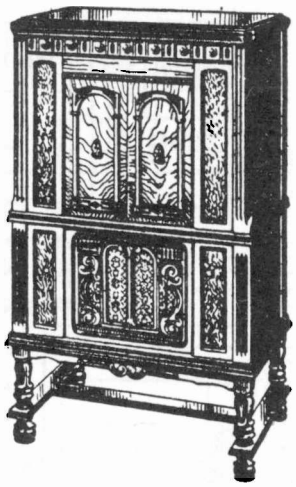
+90 B (maroon and red)

+A (yellow)

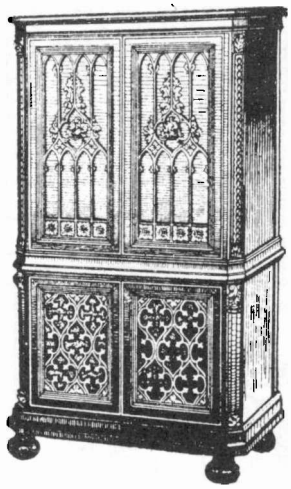
-A, -B, +C (green with yellow and red tracer)

-4½ C (black and green)

RE-20, R-50, R-55, RAE-59 & RAE-79



RCA Victor RE-20



RCA Victor RAE-79

ELECTRICAL SPECIFICATIONS

Voltage Rating	**105–125 Volts**
Frequency Rating	**25, 30, 50 and 60 Cycles**
Power Consumption (Radio only)	**145 Watts**
Power Consumption (Phonograph)	**160 Watts (Approximately)**
Type of Circuit	**A. V. C. Super-Heterodyne with Push-pull Pentode Output Stage**
Type and Number of Radiotrons	**3 RCA-235, 1 UY-224, 3 UY-227, 2 RCA-247, 1 UX-280—Total 10**
Number of Audio Stages (Radio)	**1 (Push-Pull Pentode)**
Number of Audio Stages (Phonograph)	**2 (one UY-227 and one Push-pull Pentode)**
Type of Magnetic Pickup	**Low Impedance**
Type of Tone Arm	**Inertia**
Diameter of Turntable	**12 inches**
Type of Phonograph Motor	**Induction, running at synchronous speed**
Turntable Speed	**78 and 33⅓ R. P. M.**
Type of Rectifier	**Full Wave, UX-280**
Type of Loudspeaker	**Electro-Dynamic**
Wattage Dissipation in Loudspeaker Field	**10 Watts**
Undistorted Output	**4.0 Watts**

The above ratings do not apply to Model RAE-79.

The RCA Victor RAE-59 is a Combination DeLuxe Radio and Automatic Phonograph instrument that provides a large variety of home entertainment features. The radio receiver, amplifier and loudspeaker are identical with those used in Models R-50 and 55. The automatic record changing mechanism is of simple, sturdy design and may be operated at 33⅓ R.P.M. as well as 78 R.P.M.

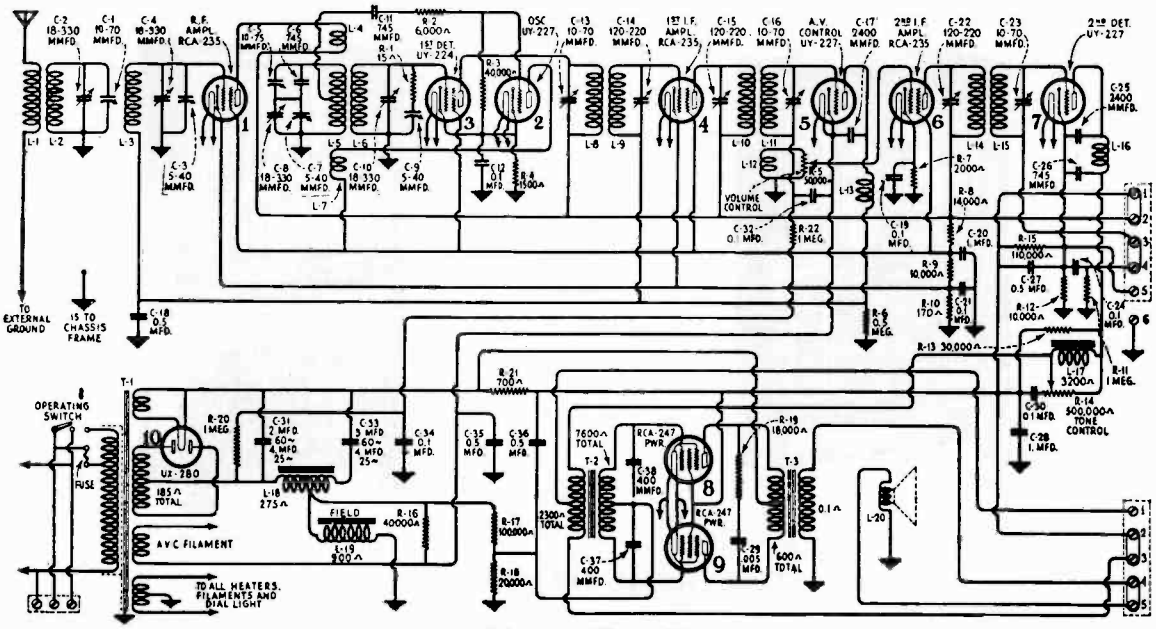
The RCA Victor Model RAE-79 is a thirteen tube, super-heterodyne radio receiver incorporated in the same cabinet with the perfected RCA Victor automatic record changing mechanism.

Features of this instrument are:

RCA Victor DeLuxe Radio Chassis incorporating Super Control Radiotrons, automatic volume control giving a new degree of quiet operation, remote control of tuning and volume, double push-pull amplifiers employing Pentode Output Radiotrons, and twin loudspeakers. The automatic record changing mechanism has provision for playing continuously, one side of ten 10-inch records of either the "standard" or Program Transcription variety and either type twelve inch records manually. Home recording on the RAE-79 reaches a new degree of perfection through the use of a studio type two button microphone and Pentode Output Radiotrons. Such records may be made either 78 or 33⅓ R.P.M. thus giving a maximum of eight minutes of home recording on a ten inch record.

Refer to index for information on automatic record changer

RE-20, R-50, R-55, RAE-59 & RAE-79

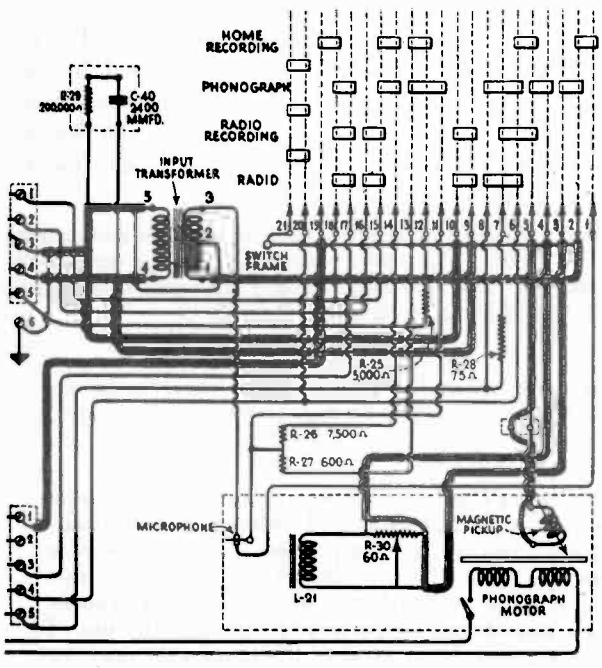


Schematic Wiring Diagram

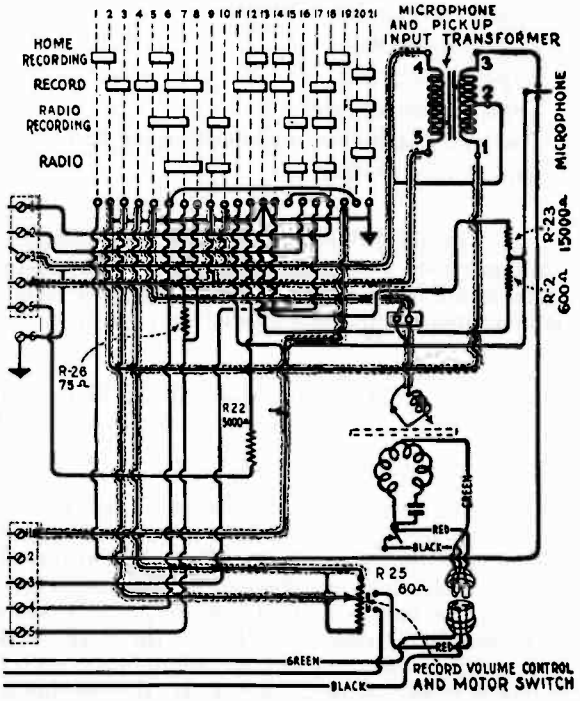
RE20, R50, R55 AND RAE59

In Model RE-20 resistor R-17 is 20,000 ohms and a capacitor 0.05 mfd is connected in series with this resistor R-19 is 30,000 ohms and capacitor C29 0.005 mfd is omitted.

It will be noted on the early Models of R-50 and R-55 that a small 9 mmfd. capacitor is inserted in series with the oscillator trimming capacitor. This capacitor is not used on later models that have a slightly different dial scale. When replacing a dial scale it may therefore be necessary to short this capacitor. A failure in the capacitor may be remedied either by replacing the capacitor or the dial scale.

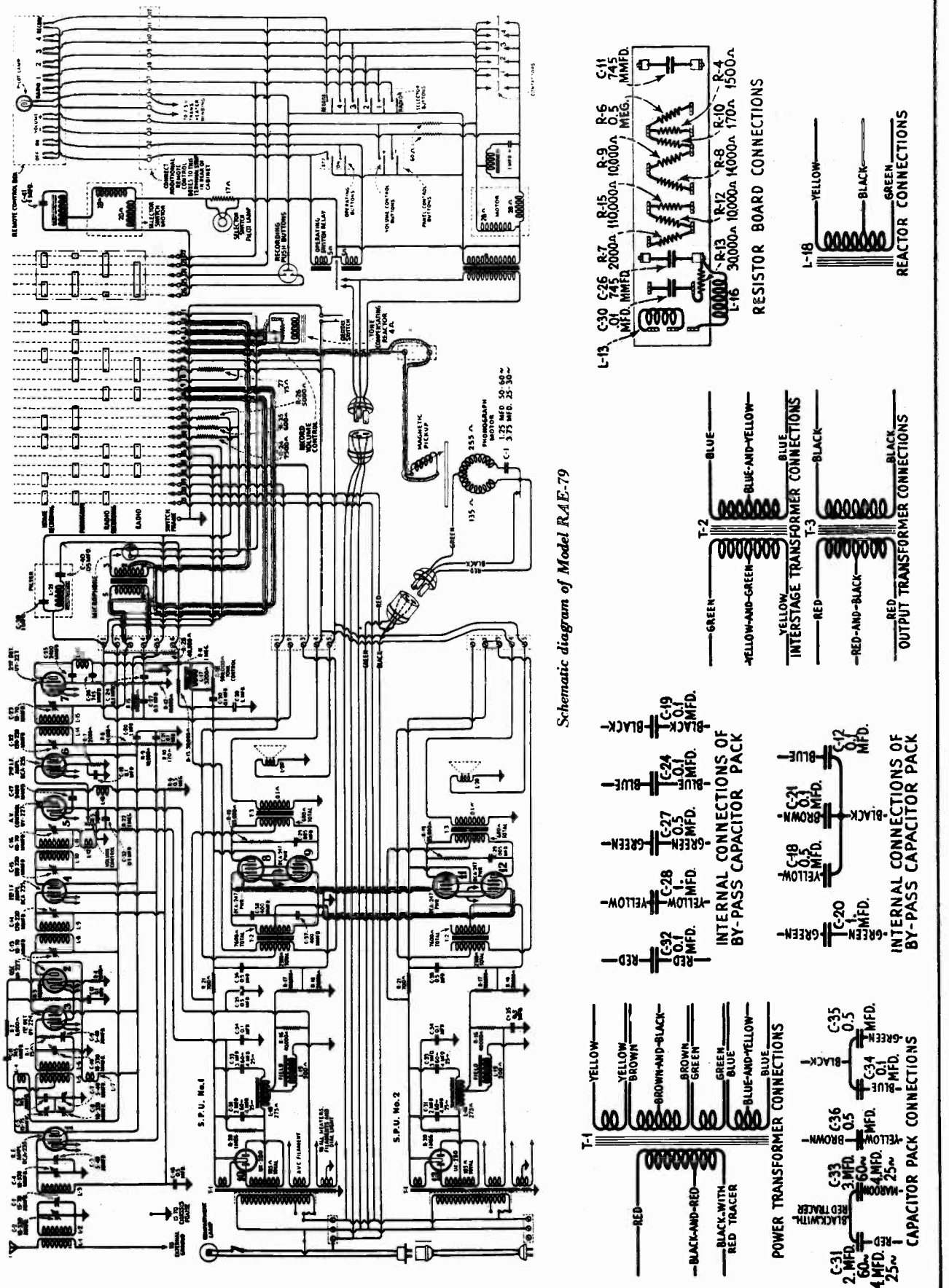


Schematic Wiring Diagram RE-20



Schematic Wiring Diagram of Model RAE-59

RE-20, R-50, R-55, RAE-59 & RAE-79



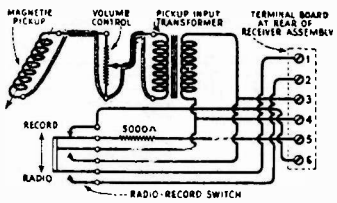
Schematic diagram of Model RAE-79

RE-20, R-50, R-55, RAE-59 & RAE-79

RADIOTRON SOCKET VOLTAGES
110 VOLT LINE

Radiotron No.	Heater to Cathode Volts	Cathode or Filament to Control Grid Volts	Cathode or Filament to Screen Grid Volts	Cathode or Filament to Plate Volts	Plate Current M. A.
1. R. F.	2.0	*0.2	60	230	3.5
2. Osc.	5.0	0	—	50	4.0
3. 1st Det.	4.0	3.5	60	230	0.5
4. 1st I.F.	2.0	*0.2	60	230	3.5
5. A.V.C.	0	0	—	30	0.1
6. 2nd I.F.	2.0	3.5	60	230	2.5
7. 2nd Det.	20.0	*8.0	—	210	0.5
8. Pwr.	—	*10.0	250	235	25.0
9. Pwr.	—	*10.0	250	235	25.0

***These readings are not correct due to the resistance in the circuits**



Magnetic Pickup connections

Note: Place the Radio-Record switch and input transformer in the receiver cabinet. Try connecting a wire from receiver terminal No. 6 to input transformer frame or braided shield to pickup and use connection that gives minimum hum.

Alignment Procedure

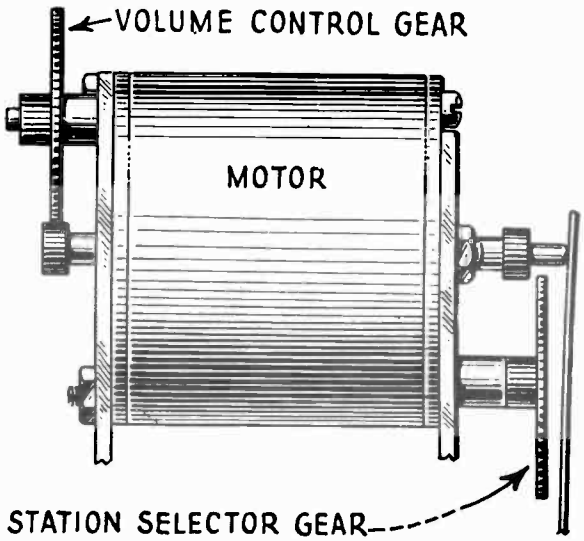
STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO -	ADJUST THE FOLLOWING FOR MAX. OUTPUT
1	2nd I-F Grid in series with .01 mfd	175 kc	Quiet Point near 600 kc	S & P of 3rd I-F Trans.
2	1st I-F Grid in series with .01 mfd			S & P of 2nd I-F Trans.
3	1st Det. Grid in series with .01 mfd			S & P of 1st I-F Trans.
4	Antenna in series with 200 mmfd	1400 kc	1400 kc	4 Trimmers on Gang Cond.
5		600 kc	600 kc	600 kc Trimmer Rock Gang
6		*Repeat Step 4*		

The remote control feature consists of a standard R-50 chassis with a special gang condenser; a capacitor motor coupled to the gang condenser through a series of gears; a series of drums and contactors by which the motor is started in the right direction for a given station and stopped at the right point; a special volume control geared to the motor; a relay to turn the set "on" or "off" and a remote control box by which these operations are controlled.

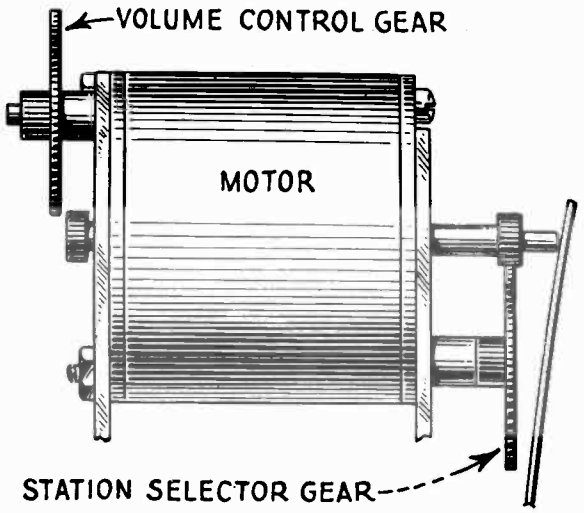
The motor is provided with a tapped reactor and condenser for changing the phase angle of the applied current so that operation in either direction may be secured. The motor operates at 23 volts for the station selector and 18 volts for the volume control.

All power transformers when replaced must have the primaries so connected that the pilot light on the remote control box lights properly. If the transformers are improperly phased, the lamp will brighten instead of dim when a selector button is pressed.

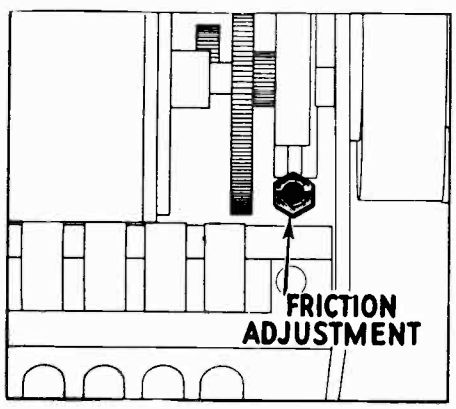
RE-20, R-50, R-55, RAE-59 & RAE-79



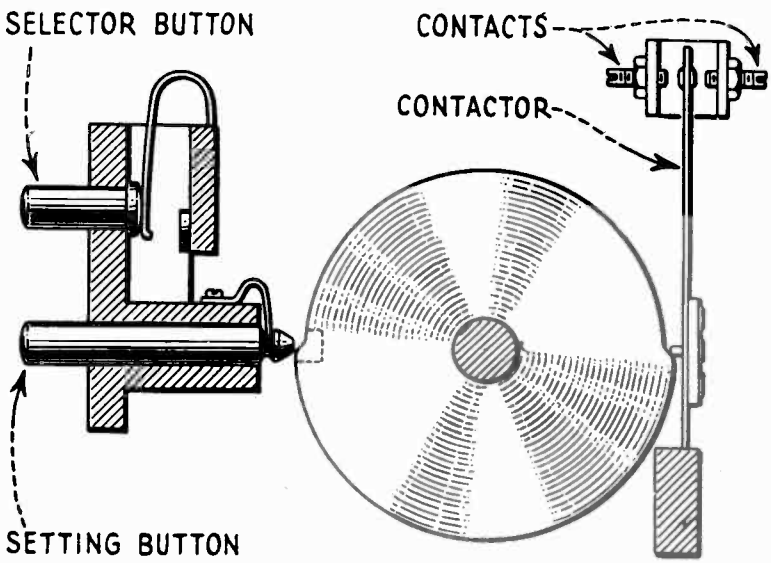
Motor with armature in volume control position



Motor with armature in station selector position

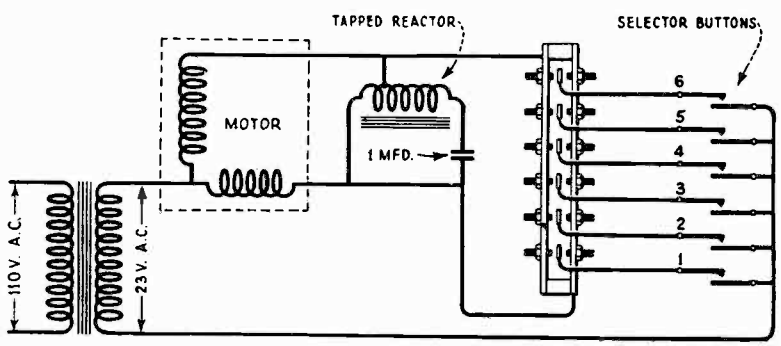


Location of Friction Adjustment



–End view of drum and contactor

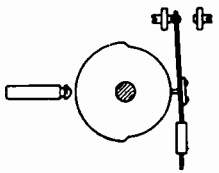
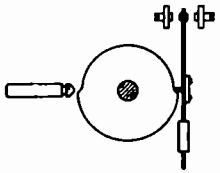
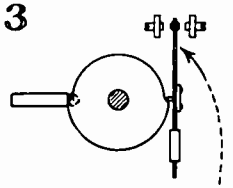
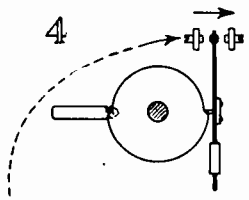
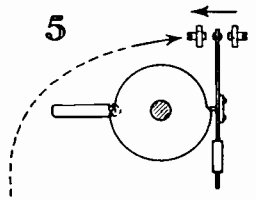
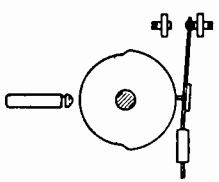
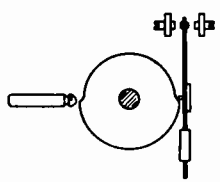
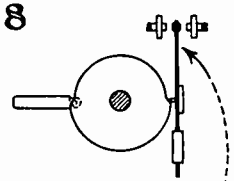
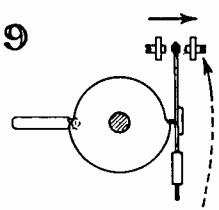
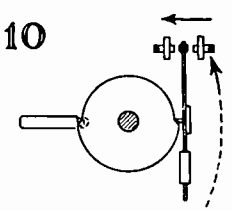
If all contactors are out of adjustment in a similar manner, then the friction screw, requires adjustment. This should be either tightened or loosened, the exact adjustment to be determined by trial. The adjustment that is correct for one contactor will be correct for all, assuming the friction screw to be at fault.



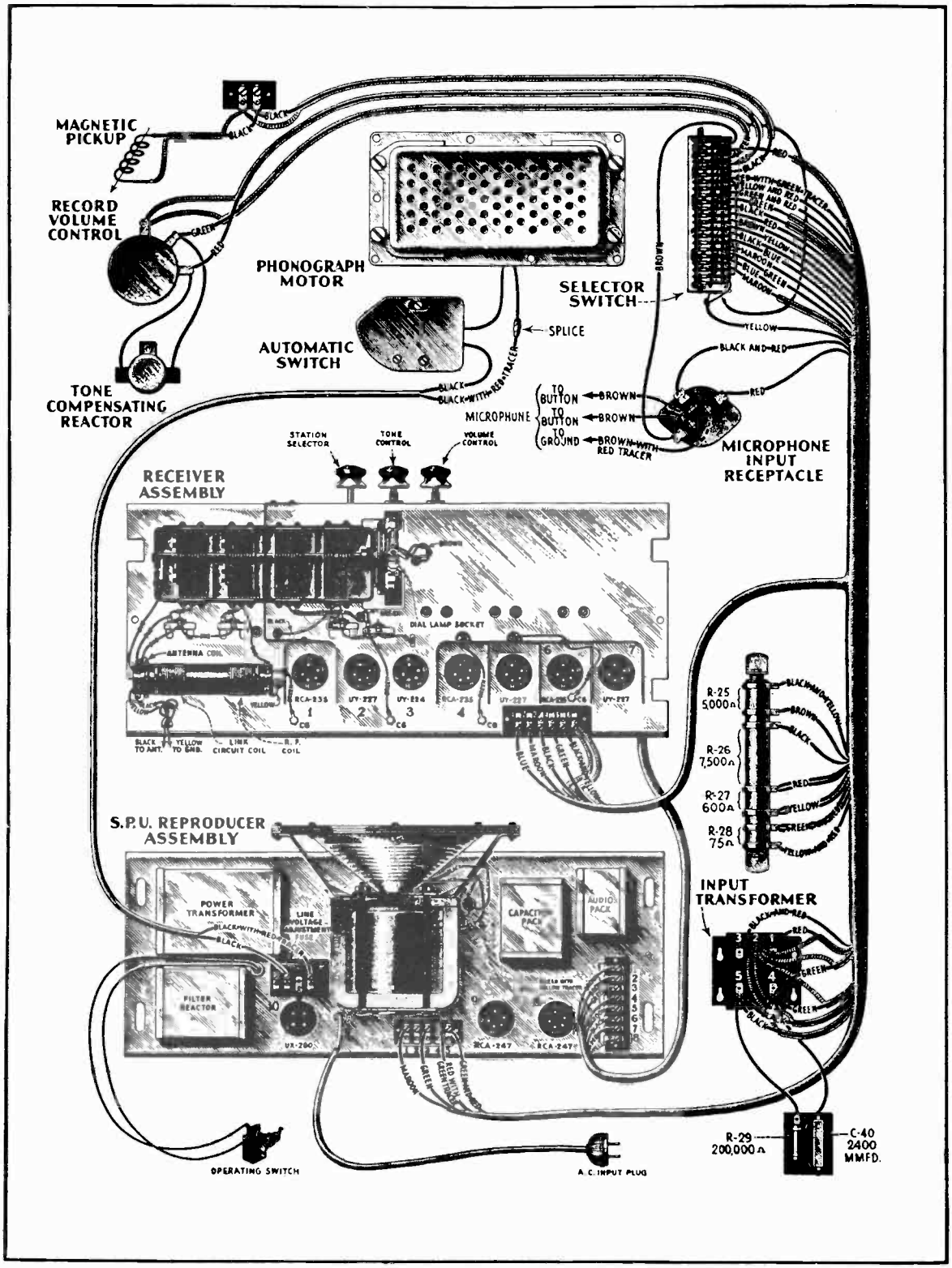
–Schematic diagram of motor circuits

MOTOR CONTACTOR ADJUSTMENT CHART

Repeat Entire Procedure on Station Selector Contactors

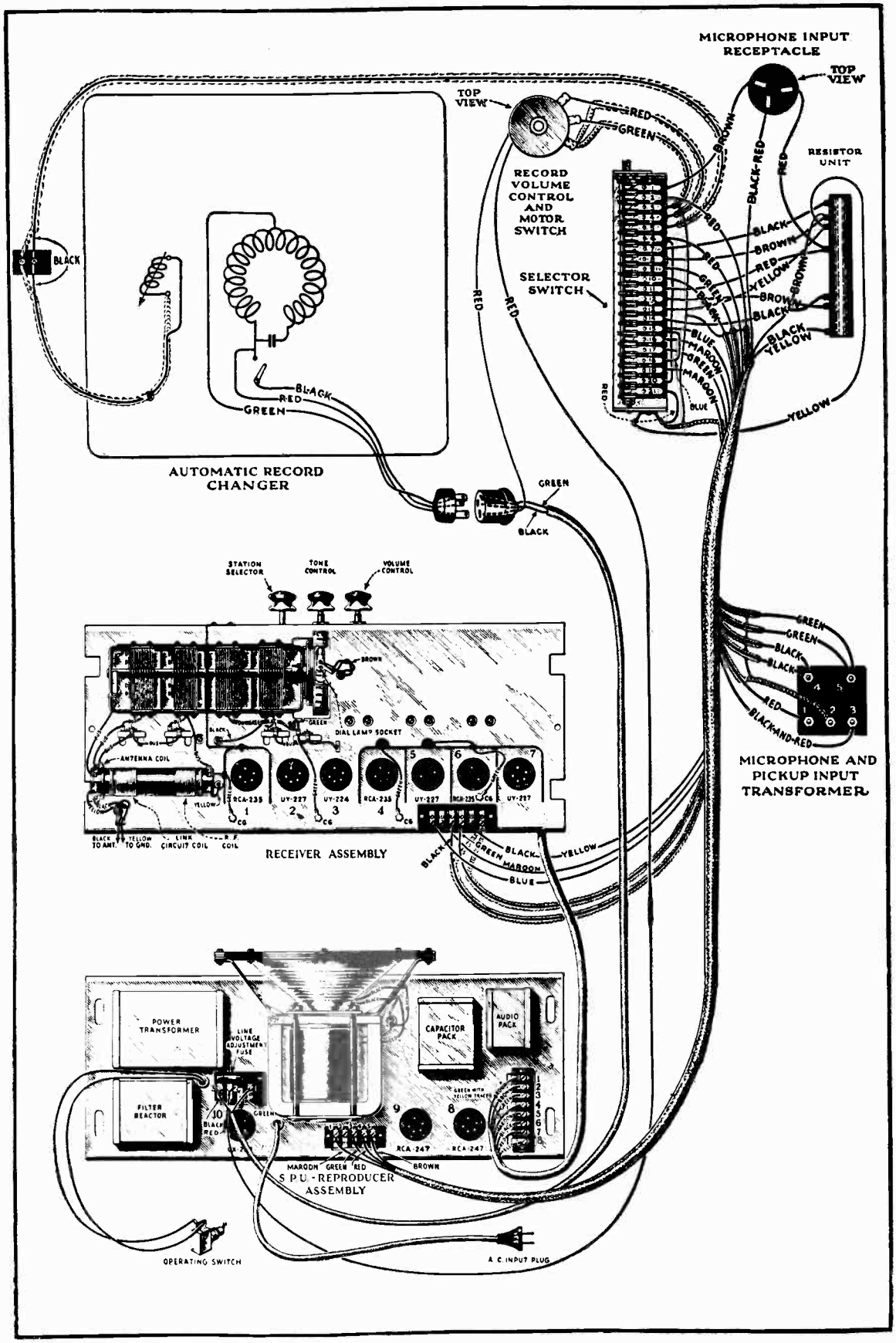
TURN STATION SELECTOR KNOB UNTIL CONTACTOR IS TO ONE SIDE  1	PUSH SELECTOR BUTTON ON PANEL UNTIL THE MOTOR STOPS AND CONTACTOR IS CENTERED  2	THEN PUSH SETTING BUTTON. IF CONTACTOR DOES NOT MOVE, ADJUSTMENT IS O.K.  3 *DOES NOT MOVE WHEN SETTING BUTTON IS PRESSED*	IF CONTACTOR MOVES IN THIS DIRECTION WHEN SETTING BUTTON IS PRESSED, ADJUST AS INDICATED.  4 *TURN THIS SCREW CLOCKWISE A LITTLE AT A TIME UNTIL CONTACTOR DOES NOT MOVE WHEN SETTING BUTTON IS PRESSED. (TURN SELECTOR KNOB AND RETUNE WITH SELECTOR BUTTON AFTER EACH TRIAL ADJUSTMENT)*	IF CONTACTOR MOVES IN OTHER DIRECTION, ADJUST AS INDICATED.  5 *TURN THIS SCREW COUNTER CLOCKWISE A LITTLE AT A TIME UNTIL CONTACTOR DOES NOT MOVE WHEN SETTING BUTTON IS PRESSED. (TURN SELECTOR KNOB AND RETUNE WITH SELECTOR BUTTON AFTER EACH TRIAL ADJUSTMENT)*
AFTER MAKING PRECEDING ADJUSTMENTS TURN STATION SELECTOR KNOB UNTIL CONTACTOR IS TO THIS SIDE  6	PUSH SELECTOR BUTTON ON PANEL UNTIL THE MOTOR STOPS AND CONTACTOR IS CENTERED  7	THEN RUSH SETTING BUTTON. IF CONTACTOR DOES NOT MOVE, ADJUSTMENT IS O.K.  8 *DOES NOT MOVE WHEN SETTING BUTTON IS PRESSED.*	IF CONTACTOR MOVES IN THIS DIRECTION WHEN SETTING BUTTON IS PRESSED, ADJUST AS INDICATED.  9 *TURN THIS SCREW COUNTER CLOCKWISE A LITTLE AT A TIME UNTIL CONTACTOR DOES NOT MOVE WHEN SETTING BUTTON IS PRESSED. (TURN SELECTOR KNOB AND RETUNE WITH SELECTOR BUTTON AFTER EACH TRIAL ADJUSTMENT)*	IF CONTACTOR MOVES IN THIS DIRECTION, ADJUST AS INDICATED. THEN REPEAT ALL ADJUSTMENTS ON ALL SIX CONTACTORS.  10 *TURN THIS SCREW CLOCKWISE A LITTLE AT A TIME UNTIL CONTACTOR DOES NOT MOVE WHEN SETTING BUTTON IS PRESSED. (TURN SELECTOR KNOB AND RETUNE WITH SELECTOR BUTTON AFTER EACH TRIAL ADJUSTMENT)*

RE-20, R-50, R-55, RAE-59 & RAE-79



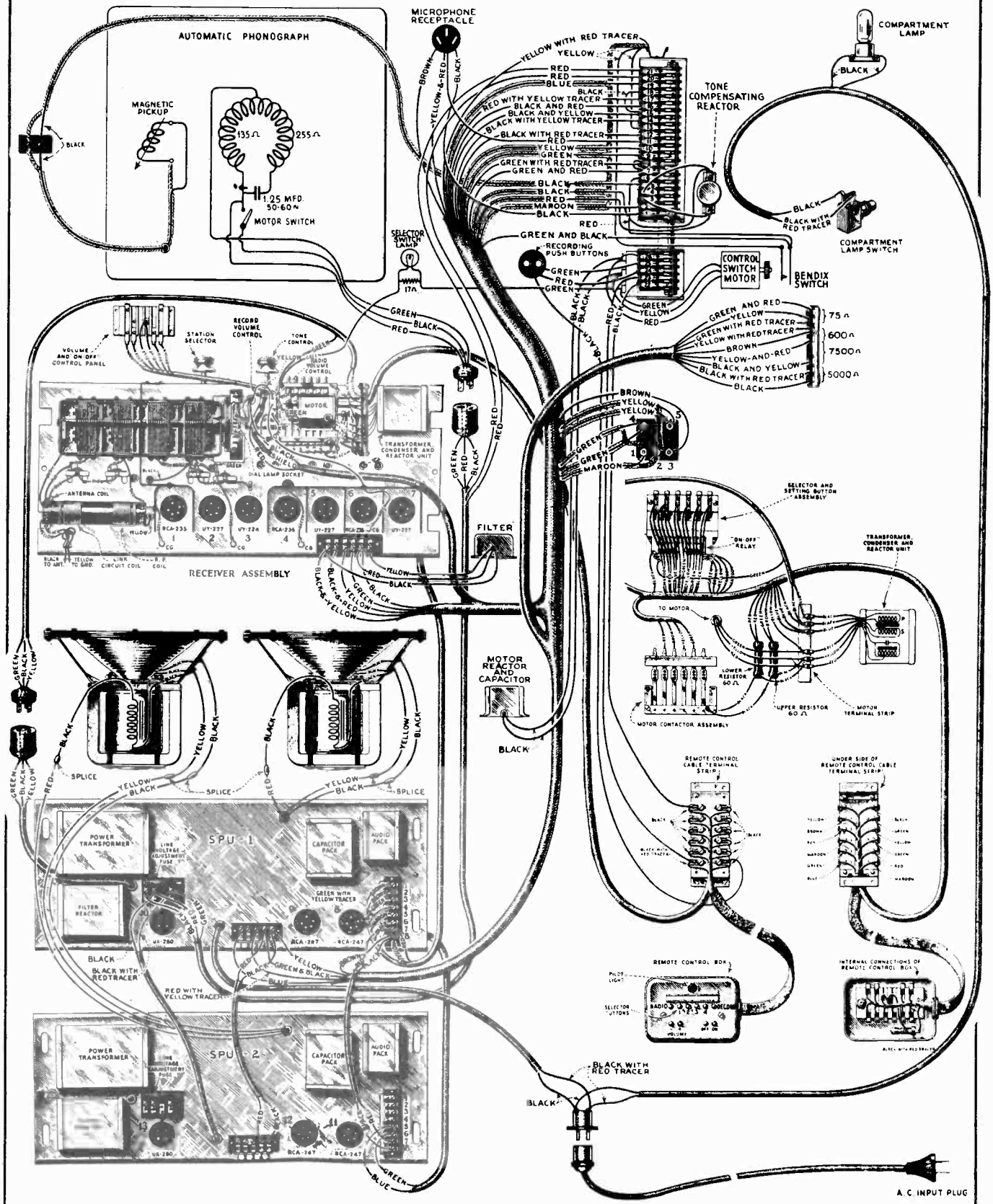
RE-20 *Assembly Wiring*

RE-20, R-50, R-55, RAE-59 & RAE-79



Assembly Wiring Diagram of Model RAE-59

RE-20, R-50, R-55, RAE-59 & RAE-79



Assembly Wiring diagram RAE-79.

RE-20, R-50, R-55, RAE-59 & RAE-79
REPLACEMENT PARTS

Stock No.	DESCRIPTION	List
	RECEIVER ASSEMBLY	
2563	Resistor—6,000 ohms—Carbon type—1 watt—Package of 5	
2726	Socket—Five contact Radiotron socket—Complete with insulator—7 used	
2731	Resistor—10,000 ohms—Carbon type—1 watt—Package of 5	
2732	Resistor—110,000 ohms—Carbon type—1 watt—Package of 5	
2736	Resistor—170 ohms—Carbon type—1 watt—Package of 5	
2740	Cord—Tuning condenser drive cord—Package of 5	
2741	Idler—Tuning condenser drive cord idler—Package of 5	
2746	Socket—Dial lamp socket	
2747	Cap—Grid contactor cap—Package of 5	
2749	Capacitor—2400 mmfd.	
2970	Resistor—500,000 ohms—Carbon type—1 watt—Package of 5	
3031	Board—Terminal board complete with insulator—Three terminals	
3033	Resistor—1 megohm—Carbon type—¼ watt—Package of 5	
3045	Resistor—40,000 ohms—Carbon type—1 watt—Package of 5	
3050	Resistor—14,000 ohms—Carbon type—3 watt	
3137	Knob—Station selector, Volume control or tone control knob—Package of 5	
3138	Board—Terminal board complete with soldering terminal	
3139	Coil—1st detector and oscillator coil complete with shield	
3142	Volume Control—Volume control complete with mounting nut	
3143	Tone control—Tone control complete with mounting nut	
3144	Inductor—Tone control inductor	
3153	Resistor—1500 ohms—Carbon type—1 watt—Package of 5	
3154	Resistor—2,000 ohms—Carbon type—1 watt—Package of 5	
3220	Resistor—15 ohms—Flexible wire type—Package of 5	
3240	Nut—Shield cover mounting nut—Package of 13	
6034	Cushion—Receiver chassis sponge rubber cushion—Package of 4	
6114	Resistor—20,000 ohms—Carbon type—1 watt—Package of 5	
6220	Capacitor—0.05 mfd.—Package of 5	
7062	Capacitor—Adjustable capacitor—15-70 mmfd.—2 used	
7063	Capacitor—Adjustable capacitor 5-40 mmfd.—3 used	
7278	Coil—R. F. and link circuit coil	
7280	Board—Terminal board complete with six terminals.	
7281	Transformer—1st intermediate transformer	
7282	Transformer—2nd intermediate transformer	
7283	Transformer—3rd intermediate transformer	
7284	Board—Resistor board complete with insulator—Less resistors, capacitors and coils	
7285	Capacitor pack—Comprising one 1.0 mfd., one 0.5 mfd., and two 0.1 mfd. capacitors in metal container—6 leads	
7286	Capacitor pack—Comprising one 1.0 mfd., one 0.5 mfd., and three 0.1 mfd. capacitors in metal container—10 leads	
7287	Bracket—Dial lamp bracket and indicator	
7288	Scale—Dial scale—Package of 5	
7297	Coil—R.F. choke coil for 2nd detector or automatic volume control	
7298	Capacitor—0.01 mfd.	
7299	Capacitor—745 mfd.	
7331	Cable—Shielded receiver cable	
7367	Drum—Dial scale drum	
7368	Shaft assembly—Drive shaft assembly—Comprising bracket, drive shaft, idler shaft and two drive cord bushings	
8708	Capacitor—Tuning capacitor assembly—Comprising four variable capacitors, drive, drive cord, spring and dial drum—Assembled	
8791	Cover—Receiver chassis shield removable cover	
8794	Shield—Receiver chassis shield complete	

ADDITIONS AND CHANGES

Add

3152 Resistor - 30,000 ohms (R13) Not used in RE-20
7279 Support - Dial Screen support.
8703 Escutcheon - Tuning dial escutcheon.
10867 Spring - Drive Cord tension spring.

6114 Resistor 20,000 ohms)
6220 Capacitor 0.05 mfd) Used in Model RE-20 only

Change **FOR MODELS R-50 AND R-55 ONLY**

7299 to 2734 Capacitor - 745 mmfd.
3033 to 3076 Resistor - 1 megohm

Change **FOR MODELS R-50, R-55 AND RAE-59 ONLY**

8791 to 8777 Cover - Removable shield cover.
8794 to 8714 Shield - Complete receiver shield.

Add **FOR MODEL RAE-79 ONLY**

3263 Screw - Special 4-40 machine screw for rotor plate adjustment.
7365 Transformer - 2nd I-F Transformer.
7366 Drum - Dial drum with star gear.
8779 Capacitor - Tuning capacitor assembly - comprising four adjustable capacitors, drive shaft, dial drum, drive cord, spring and star gear - Assembled.
8790 Shield - Complete receiver shield.

Add description 25-30 cycles.

7282 Transformer - 2nd I-F Trans.
7367 Drum - Dial drum.
8708 Capacitor - Tuning capacitor assembly.

Stock No.	S. P. U. REPRODUCER ASSEMBLY	List
2240	Resistor—30,000 ohms—Carbon type—1 watt	
2546	Fuse—Glass type—1.5 amperes—Package of 5	
2882	Socket—Five contact Radiotron socket complete with insulator	
3045	Resistor—40,000 ohms—Carbon type—1 watt—Package of 5	
3058	Resistor—100,000 ohms—Carbon type—1 watt—Package of 5	
3085	Capacitor—400 mmfd.	
3099	Capacitor—0.005 mfd.	
3145	Resistor—700 ohms—Carbon type—3 watt	
3146	Board—Terminal board complete with insulator—Less capacitor No. 3099	
3147	Cover—Fuse cover with insulator	
3149	Switch—Toggle type—Operating switch complete with mounting nuts and escutcheon plate	

RE-20, R-50, R-55, RAE-59 & RAE-79

REPLACEMENT PARTS—(Continued)

Stock No.	DESCRIPTION	List
6114	Resistor—20,000 ohms—Carbon type—1 watt—Package of 5	
7290	Reactor—Filter reactor	
7291	Board—Terminal board and four contact radiotron socket complete with all terminals and fuse clips.	
7293	Strip—Terminal strip—Complete with 8 terminals	
7294	Cover—Terminal strip cover for 7293	
7295	Strip—Terminal strip—Complete with 5 terminals	
7370	Cover—Terminal strip cover for 7295	
8710	Transformer—Power transformer—105–125 volts, 50–60 cycles	
8711	Transformer—Audio transformer	
8712	Capacitor pack—Comprising one 2.0 mfd., one 3.0 mfd., one 0.1 mfd., and two 0.5 mfd. capacitors in metal container—50–60 cycles	
8749	Transformer—Power transformer—105–125 volts, 25–40 cycles	
8750	Transformer—Power transformer—220 volts, 50–60 cycles	
8751	Capacitor pack—Comprising two 4.0 mfd., two 0.5 mfd. and one 0.1 mfd. capacitors in metal container	
10907	Fuse—Glass type—3 amperes—Package of 5	

ADDITIONS AND CHANGES

Add

7054 Cord - Power cord.
3085 Capacitor - 400 mmfd.
3219 Resistor - 18,000 ohms (Not used RE-20).

Change R-50 and R-55 only.

2882 to 7369 - Socket
7370 to 7296 - Cover

Change - For RAE-59 only.

6114 to 5817 - Resistor

Stock No. 2240 Resistor - 30,000 ohms (Used RE-20 only)

	MOTOR BOARD AND MISCELLANEOUS ASSEMBLIES	
X-75	Board—Motor board	
X-76	Block—Microphone wood block	
2614	Switch—Automatic brake switch	
2620	Cushion—Pickup rubber cushions—Comprising 1 damper and two pivot cushions—Package of 5 sets.	
2749	Capacitor—2400 mmfd.	
2767	Spring—Pickup magnet retaining spring—Package of 10	
2768	Armature—Pickup armature	
2770	Plate—Pickup damper plate—Package of 5	
2771	Screw—Pickup damper plate mounting screw—Package of 10	
2779	Pointer—Selector switch pointer—Package of 10	
3052	Screw assembly—Pickup pole shoe mounting screw assembly comprising screw, nut and washer—Package of 10 sets	
3137	Knob—Selector switch knob—Package of 5	
3157	Gear—Driving gear—Located on turntable spindle above top plate	
3159	Friction brake—Gear reducing friction brake spring with felt pad—Complete with mounting rivet—Package of 4	
3161	Spring—Shift lever spring—Package of 5	
3167	Magnet—Pickup magnet	
3169	Pole shoe—Pickup pole shoe—R.H.	
3170	Pole shoe—Pickup pole shoe—L.H.	
3183	Socket—Microphone socket—Package of 5	
3184	Board—Pickup terminal board complete with two terminals	
3205	Screw—Pickup needle holding screw—Package of 10.	
3207	Screw—Pickup cover mounting screw—Package of 10.	
3208	Screw assembly—Pickup mounting screw assembly—Comprising screw, nut and washer—Package of 10	
3211	Washer—Turntable spindle leather washer—Package of 10	
3215	Plug—Microphone cord plug	
3216	Cushions—Microphone unit suspension rubbers—Package of 6	
3261	Cap—Rubber record drive cap—Package of 5	
3278	Bearing—Rotor shaft fibre thrust bearing and cork button—Package of 10	
3279	Screw and nut—Rotor shaft thrust bearing adjusting screw and lock nut—Package of 10	
3280	Washer—Metal washer—Located on turntable spindle underneath gear reducing unit—Package of 20	
3281	Pawl—Gear reducing pawl with mounting stud	
6119	Motor hanging stud—Package of 6	
6120	Screw—For holding turntable spindle bearing and grease cap—Package of 10	
6121	Bearing—Turntable spindle bearing and grease cap.	
6216	Rod—Automatic brake trip rod with nut—Package of 5	
6218	Screw and washer—Motor board mounting screw and washer—Package of 10	
6221	Cover—Pickup cover	
6222	Pickup—Pickup unit complete	
6223	Cable—Power cable from motor and motor switch to S. P. U. terminal board	
6224	Receptacle—Tungstone needle box receptacle	
6225	Volume control—Record volume control—Complete with mounting nut and washer	
6226	Transformer—Phono input transformer	
6227	Resistor board assembly—Comprising one 200,000 ohms—Carbon type—¼ watt resistor and one 2400 mmfd. tooth pick capacitor on board	
6228	Resistor—200,000 ohms—Carbon type—½ watt—Package of 5	
6229	Cable—30" shielded red cable from selector switch to volume control—Package of 2	
6230	Cable—30" shielded green cable from selector switch to volume control—Package of 2	
6231	Cable—18" shielded black cable from selector switch to pickup terminal board—Package of 2	
6232	Box—Needle box with lid—Package of 2	
6233	Weight—Recording weight	
6234	Escutcheon—Speed escutcheon plate with mounting screws—Package of 2	
6235	Escutcheon—Selector switch escutcheon—Package of 5	
7084	Cover—Turntable cover	
7151	Back—Pickup housing back	
7305	Gear reducing unit complete	
7327	Mechanism—Microphone mechanism complete with cord	
7375	Resistor—13175 ohms tapped porcelain resistor	
7387	Reactor—Tone compensating reactor complete with mounting bracket	
7388	Spindle—Turntable spindle with fibre gear—110 volts or 220 volts—60 cycles	
7389	Rotor and shaft—110 volts or 220 volts—60 cycles.	
7390	Motor mounting washers and springs—Comprising 9 cup washers, 3 "C" washers and 6 springs—Package of 1 set	
7393	Block—Pickup connector block and wire	
7400	Spindle—Turntable spindle with fibre gear—25 cycles	
7401	Rotor and shaft—25 cycles	
7443	Rotor and shaft—110 volts or 220 volts—50 cycles.	

RE-20, R-50, R-55, RAE-59 & RAE-79

REPLACEMENT PARTS (Continued)

Stock No.	DESCRIPTION	List
7444	Spindle—Turntable spindle with fibre gear—110 volts or 220 volts—50 cycles	
8795	Motor—Motor complete—110 volts—60 cycles	
8800	Motor—Motor complete—110 volts—25 cycles	
8856	Motor—Motor complete—110 volts—50 cycles	
8872	Shift lever—Shift lever complete with mounting screws	
8873	Brake—Automatic brake complete with mounting screws and washers	
8877	Turntable—Turntable with cover	
8880	Arm—Pickup arm complete less pickup unit	
8881	Switch—Selector switch with mounting nut	
8882	Cable—Main cable—From amplifier to input transformer, tapped resistor and selector switch	
8883	Microphone—Microphone complete	
8884	Frame—Microphone frame assembly—Less cover assemblies	
8885	Cover—Microphone screen cover assembly	
8886	Cord—Microphone 3 conductor cord	
8887	Motor—Motor complete—220 volts—60 cycles	
8888	Motor—Motor complete—220 volts—50 cycles	
10174	Spring—Automatic brake springs—Set of 4 springs—Package of 2 sets	
10184	Plate—Automatic brake latch trip plate with mounting screws—Package of 5	

MOTOR BOARD AND AUTOMATIC RECORD CHANGER

RAE-59 AND RAE-79

Stock No's followed by [D] not used in RAE-79

Stock No.	DESCRIPTION	List
2614	Switch	
2620	Cushion—Pickup rubber cushions—Comprising two pivots and one damper cushion—Package of 5 sets	
2767	Spring—Pickup magnet spring—Package of 10	
2768	Armature—Pickup armature	
2769	Coil—Pickup coil	
2770	Plate—Pickup damper plate—Package of 5	
2771	Screw—Pickup damper plate mounting screw—Package of 10	
2779	Pointer—Recording control switch metal pointer—Package of 10	
2857	Plug—Three way male connector plug	
2893	Spring—Trip lever spring—Package of 10	
2896	Spring—Cable lever spring—Package of 10	
2897	Screw and Nut—Pickup arm cable adjusting screw and nut—Package of 5	
2898	Screw and Nut—Adjusting screw and lock nut for elevator shaft—Package of 10	
2902	Screw and Nut—Motor turntable spindle thrust screw and nut—Package of 10	
2903	Screw—Motor mounting screw—Package of 10	
2904	Lever—Front elevator actuating lever	
2905	Screw—Gear and bracket mounting screw—Package of 10	
2906	Spring—Check lever spring—Package of 10	
2907	Screw—Clutch set screw—Package of 10	
2908	Spring—Clutch pawl spring—Package of 10	
2909	Spring—Four finger lever spring—11/16" long—Package of 10	
2910	Spring—Four finger lever spring—1 1/16" long—Package of 10	
2911	Screw—Slide bracket screw—Package of 10	
2912	Roller—Slide roller complete with screw stud—Package of 5	
2913	Spring—Cable lever spring—Package of 10	
2914	Spring—Flat spring with screws—Package of 10	
2915	Spring—Locating lever spring—Package of 10	
2916	Plate—Latch plate with mounting screws—Package of 5	
2917	Washer—Spring washer—Package of 10	
2918	Spring—Index lever spring—Package of 10	
2919	Screw and Nut—Stop screw and nut—Package of 10	
2920	Washer—Friction washer—Package of 10	
2929	Lever—Rear elevator actuating lever—Package of 2	
3052	Screw Assembly—Pickup pole shoe mounting screws, nut and washer—Package of 10 sets	
3159	Friction brake—Gear reducing friction brake spring and pad with mounting rivets—Package of 4	
3161	Spring—Shift lever spring—Package of 5	
3167	Magnet—Pickup magnet	
3169	Pole shoe—Pickup pole shoe—R. H.	
3170	Pole shoe—Pickup pole shoe—L. H.	
3173	Plug—Three prong female connector plug	
3175	Receptacle—Needle receptacle	
3181	Cable—10" Red lead shielded cable—Volume control to control switch—Package of 2	
3182	Cable—10" Green lead shielded cable—Volume control to control switch—Package of 2	
3183	Socket—Microphone socket—Package of 5	
3184	Board—Terminal board	
3186	Control—Volume control and operating switch complete with mounting washer and nut	
3187	Weight—Recording weight	
3189	Box—Needle box with lid—Package of 2	
3190 [D]	Clutch pawl	
3191 [D]	Ratchet—Gear and ratchet with set screw	
3192	Post—Roller post assembly for supporting magazine	
3193	Screw—Magazine bearing mounting screw and nut—Package of 10	
3194	Screw—Pickup arm base mounting screw and nut—Package of 10	
3195	Lever—Record transfer lever with screw and nut	
3196	Screw—Record transfer lever mounting screw and nut—Package of 10	
3197	Escutcheon—Turntable speed escutcheon plate with mounting rivets—Package of 2	
3198	Bushing—Insulator rubber bushing—Package of 10	
3199	Screw—Bottom plate mounting screw—Package of 10	
3200	Shaft—Front or rear elevator shaft	
3201	Rear elevator pad—Package of 5	
3202	Front elevator pad—Package of 5	
3203	Screw—Elevator pad mounting screw—Package of 10	
3204	Cable—Pickup arm cable—Package of 5	
3205	Screw—Pickup needle holder screw—Package of 10	
3206	Cover—Pickup cover	
3207	Screw—Pickup cover mounting screw—Package of 10	
3208	Screw assembly—Pickup mounting screw, nut and washer—Package of 10	
3209	Lever—Trip lever	
3210	Lever—Magazine lever	
3211	Washer—Turntable spindle leather washer—Package of 10	
3212	Spring—Turntable spindle plunger spring—Package of 10	
3213	Bolt—Motor board mounting bolt—Package of 8	
3214	Pulley—Cable pulley with mounting stud—Package of 5	
3215 [D]	Plug—Microphone cord plug	
3216 [D]	Cushions—Microphone rubber cushions—Package of 6	
3217	Lever—Check lever	
3261	Cap—Rubber cap for turntable spindle—Package of 5	
3262	Screw and Nut—Record transfer lever adjusting screw and nut—Package of 10	
7151	Back—Pickup back housing	
7186	Gear—Gear and bracket	
7188	Bracket—Slide bracket with roller	
7189	Lever—Front and rear elevator cam lever—Package of 5	
7190	Lever—Locating lever	
7191	Lever—Cable lever	
7192	Cam—Cam gear and cam	
7194	Rotor and shaft—60 cycles	
7204	Rotor and shaft—50 cycles	
7305	Gear reducing unit—Complete	
7309 [Q]	Cable—40" black lead shielded cable—Record changer to control switch—Package of 2	
7310 [D]	Cable—From switch to tapped resistor	
7311	Resistor—20675 Ohm tapped porcelain resistor	
7312	Transformer—Input transformer	
7313	Switch—Selector switch with mounting nut and escutcheon	
7314 [D]	Cable—Power cable—From S.P.U. to Automatic record changer	
7315	Spindle and gear—Turntable spindle with gear—25 cycles	
7316	Spindle and gear—Turntable spindle with gear—30 cycles	
7317	Spindle and gear—Turntable spindle with gear—50 cycles	
7318	Spindle and gear—Turntable spindle with gear—60 cycles	

RE-20, R-50, R-55, RAE-59 & RAE-79

REPLACEMENT PARTS—Continued

Stock No.	DESCRIPTION	List
	AUTOMATIC RECORD CHANGER—Continued	
7319	Rotor and shaft—25 cycles	
7320	Rotor and shaft—30 cycles	
7321	Lever—Cable guide lever with pulley	
7322	Lever—Manual Index lever	
7323	Magazine bearing—Located on motor board	
7324	Pickup arm base	
7325	Pickup—Pickup unit complete	
7326 ◘	Cover—Turntable cover	
7327 ◘	Mechanism—Microphone mechanism	
7328 ◘	Cover assembly—Microphone cover frame and screen	
7329 ◘	Frame—Microphone frame with handle—Less cover assembly	
7330	Capacitor—Motor capacitor 3.75 Mfd. for 25 or 30 cycles	
7363	Pad—Rubber pad for front elevator—Package of 10	
7364	Lever—Speed reducing shift lever	
7387	Reactor—Tone compensating reactor with bracket	
8644	Capacitor—Motor capacitor 1.25 Mfd., for 105-125 volts—50-60 cycles	
8646	Slide—Main slide	
8647	Lever—Four finger lever	
8747	Cable—Main cable—From S.P.U. receiver chassis, input transformer and motor board	
8748 ◘	Microphone—Complete	
8752	Motor—Motor complete—25 cycles	
8753	Motor—Motor complete—30 cycles	
8754	Motor—Motor complete—50 cycles	
8755	Motor—Motor complete—60 cycles	
8756 ◘	Motor board—Motor board with elevator bushings, turntable speed plate and shaft lever	
8757	Arm—Pickup arm complete with weight—Less pickup unit	
8758	Magazine—Record magazine	
8759 ◘	Turntable—Turntable with cover	
	RAE-79 ONLY	
3280	Washer—Metal washer located under gear reducing unit—Package of 20	
3282	Cup—Needle cup	
6115	Pawl—Clutch pawl	
6116	Ratchet—Gear and ratchet complete with set screw	
6117	Screw and nut—Pickup arm height adjusting screw and lock nut—Package of 10	
7374	Cover—Turntable covering	
7375	Resistor—13,175 ohms—Tapped porcelain resistor	
8782	Board—Motor board assembled with speed reducing lever, lever spring, elevator bushings and speed escutcheon plate	
8783	Turntable—Turntable with cover	
	AMPLIFIER No. 1	
2546	Resistor—1 megohm—Carbon type—Package of 5	
3045	Resistor—40,000 ohms—1 watt—Carbon type—Package of 5	
3058	Resistor—100,000 ohms—Carbon type—Package of 5	
3085	Capacitor—400 mmfd	
3099	Capacitor—0.005 mfd	
3145	Resistor—700 ohms—Carbon type	
3146	Board—Capacitor terminal board complete with terminal less capacitor	
3149	Switch—Toggle type power switch	
3264	Resistor—25,000 ohms—½ watt—Carbon type—Package of 5	
6114	Resistor—20,000 ohms—Carbon type—Package of 5	
7290	Reactor—Filter reactor	
7291	Board — Terminal board and UX Radiotron socket complete with terminals and fuse clips	
7293	Board—Terminal board complete with 8 terminals and screws	
7294	Cover—Cover with insulation for No. 7293	
7295	Board—Terminal board complete with 5 terminals, screws and link	
7369	Socket—UY Radiotron socket with insulation strip—2 used	
7370	Cover—Cover with insulation for No. 7295	
7371	Cover—Fuse cover with insulator	
7372	Cable—26″ Black and black with red tracer cable—From resistor board of SPU. No. 1 to terminal board of SPU No. 2	
8711	Transformer—Audio transformer	
8749	Transformer—Power transformer 105-125 volts, 25-60 cycles	
8751	Capacitor Pack—Comprising two 4.0 mfd., one 0.1 mfd. and two 0.5 mfd. capacitors in metal container	
8780	Cable—Power cable with 3 way female polarity plug—From S.P.U. to control switch and record changer—25-30 cycle	
8781	Cable—26″ Blue and green shielded cable—From capacitor board of SPU No. 2 to terminal board of SPU No. 1	
10907	Fuse—3 amperes—Package of 5	
	AMPLIFIER No. 2 NOTE: Same as Amplifier No. 1 omitting stock No. 3085	
	RAE-79	
	MISCELLANEOUS	
2837	Button—Bronze button for Home-Radio recording double push button assembly—Package of 2	
3265	Switch—Compartment lamp switch with mounting nut and escutcheon	
3266	Bracket—Compartment lamp socket bracket—Package of 5	
3267	Bushing—Bakelite screw bushing for lamp socket—Package of 10	
3268	Gear—48 tooth micarta intermediate gear for control switch	
3269	Gear—73 tooth micarta drive gear for control switch	
3270	Cap—Friction cap for end of drive shaft on drive motor—Package of 10	
3271	Ring — Retaining ring for control switch motor—2 used—Package of 8	
3272	Screw Assembly—Comprising screw nut and spacer—For Home-Radio recording double push button assembly—Package of 10	
3273	Bracket—Lamp socket and bracket—For Home-Radio signal ruby crystal	
3274	Crystal—Ruby crystal and mounting—For Home-Radio recording signal—Package of 5	
3275	Resistor—17 ohms—Wire wound resistor—Package of 5	
3276	Receptacle—Male input power supply receptacle	

REPLACEMENT PARTS—Continued

Stock No.	DESCRIPTION	List
3277	Microphone unit suspension spring—Package of 10	
7197	Shade—Compartment lamp shade—Package of 5	
7312	Transformer—Input transformer	
7376	Home-Radio recording double push button assembly—Complete	
7377	Body—Home-Radio recording double push button body—Package of 5	
7378	Contact base—Home-Radio recording double push button base	
7379	Cable—Red and Black 16″ Cable—From terminal strip to terminal strip on S.P.U.	
7380	Cable—6″ red shielded cable—From control switch to record volume control—Package of 5	
7381	Cable—6″ black shielded cable—From control switch to record volume control—Package of 5	
7382	Cable — 46″ black shielded cable — From pickup terminal board to control switch—25-30 cycles	
7383	Cover Assembly—Microphone front cover assembly	
7384	Frame—Microphone frame less cover assemblies	
7385	Mechanism—Microphone mechanism unit	
7386	Cord—Microphone cord	
7387	Tone compensating reactor with bracket	
7396	Cover—Control switch cover	
7397	Cable—56″ black shielded cable—From pickup terminal board to control switch	
7399	Cable—Power cable with 3 way polarity plug—From record changer to control switch and S.P.U.	
7411	Cover Assembly — Microphone back cover assembly	
8784	Cable—Compartment lamp cable	
8785	Cable—Main cable—From S.P.U. to input transformer, control switch, tapped resistor and receiver	
8786	Switch—Control switch complete—Comprising switch, Intermediate gear and drive motor—For remote control only	
8787	Motor—Drive motor complete with drive shaft—For control switch	
8788	Reactor and capacitor pack—One assembly in metal container	
8789	Filter unit in metal container	
8792	Microphone	
8793	Cable—Main cable—From S.P.U. to input transformer, control switch, tapped resistor and receiver—25-30 cycles	
10270	Cord—Outside power cord with male and female connector plugs	
10371	Socket—Compartment lamp socket	

Stock No.	DESCRIPTION	List
	DRIVING UNIT ASSEMBLIES	
2837	Button—Bronze colored push button—Package of 2	
2844	Terminal strip—Complete with 6 terminals, mounting screws, spacers and nuts	
2845	Blade—Spring blade—Restores motor to normal position when power is off—Complete with micarta mounting blocks, washers and mounting screws	
2846	Gear—Micarta bendix gear, pinion and taper pin	
2847	Relay Assembly — Complete with mounting screws	
2848	Blade—Switch blade complete with clamping plate and mounting screws	
2850	Plunger — Oxidized finish — Brass plunger—Package of 2	
2851	Gear—Micarta bendix gear, pinion and taper pin—Volume control drive gear	
2852	Gear — Micarta intermediate drive gear, pinion and taper pin—For volume control	
2853	Gear — Star gear and taper pin — Located on end of condenser shaft and fits into ring	
2854	Contact—Contact screw and lock nut—Located on contact plate No. 7158—Package of 5	
2855	Switch Assembly—Plunger switch—Comprising micarta strip with 6 contact blades and 2 mounting screws	
2856	Spring—Tension spring assembly for plunger—Complete with mounting screws—Package of 5	
2857	Plug—Male section of 3 prong polarity plug	
3008	Contacts — Remote relay contact spring blades—Package of 4 sets	
7157	Gear—Ring gear with taper pin—Located on end of cam shaft	
7158	Plate—Contact plate complete with 6 contacts, lock washers and mounting screws	
7159	Cable—Braided cable—From driving unit to terminal board located in cabinet	
7160	Cable—Braided cable and male section of polarity plug—From driving unit to power supply	
7162	Switch—Auxiliary switch assembly—Comprising micarta strip with four contacts and one common plate—Located on control panel	
7163	Escutcheon — Auxiliary switch escutcheon—Complete with mounting screws, nuts and spacers	
7398	Rheostat—Volume control rheostat with bracket and gear—Assembled	
8616	Motor—Drive motor complete with two pinion gears	
8617	Capacitor Pack—In metal container	
8797	Mechanism—Driving mechanism complete	

RE-20, R-50, R-55, RAE-59 & RAE-79

REPLACEMENT PARTS—Continued

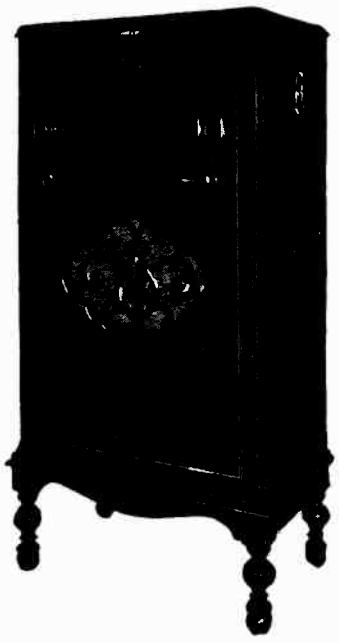
Stock No.	DESCRIPTION
	CONTROL BOX ASSEMBLIES
2833	Button—Red colored push button—Package of 2
2834	Button—Red colored push button with white insert—Package of 2
2835	Button—Black colored push button—Package of 2
2836	Button—Black colored push button with white insert—Package of 2
2837	Button—Bronze colored push button—Package of 2
2838	Bullseye — Pilot lamp indicator — Package of 2
2839	Switch Assembly—Dilecto strip with 10 contacts—Inside of control box—Package of 5
2840	Socket—Miniature base pilot lamp socket with mounting bracket, mounting screws, washers and nuts
2842	Cover—Control box metal cover with mounting screws, rubber bushings, button guide plate and stud
2843	Base Assembly—Control box base—Comprising base, felt and clamping plate
3283	Log strip assembly—Comprising 3 paper log strips and one metal holder
7154	Cable—Flat type—25 foot long—Complete with terminals
7161	Terminal board—Comprising micarta strip with 12 terminals, 12 screws, 1 rubber grominet and mounting bracket
7254	Cable—Flat type—50 foot long—Complete with terminals
8798	Control box—Complete less cable
8799	Control box—Complete with 25 foot cable
	REPRODUCER ASSEMBLIES
7373	Reproducer mounting bolt assembly—Comprising 2 bolts, 4 washers and 2 nuts—Package of 1 set
8558	Reproducer paper cone
8559	Cone retaining ring
8713	Coil—Reproducer field coil

Stock No.	DESCRIPTION
	CABINET ASSEMBLY
	RE-20
X-78	Escutcheon—Tuning dial wood escutcheon
2776	Catch—Door catch and strike with nail—Package of 2 sets
3136	Screen—Dial screen—Package of 2
3156	Label—Metal trade mark label—Package of 5
6211	Pull—Door pull with mounting screw—Package of 4
6219	Hinge—Cabinet lid hinge with mounting screws—Package of 2
7279	Support—Dial screen metal support
8876	Support—Lid support
10254	Hinge assembly—Cabinet door hinge—Comprising 4 hinges and 16 mounting screws—Package of 1 set
	RAE-59
2776	Catch—Door catch and strike with nail—Package of 2 sets
2785	Hinge—Lid hinge with mounting screws—Package of 2
3156	Metal label—Trade mark label—Package of 5
3172	Knob—Door knob and mounting screw with back plate—Package of 2
7095	Hinge—Door hinge—One set complete—Comprising 4 hinges
7279	Screen holder
8703	Escutcheon—Tuning dial escutcheon
8760	Support—Lid support
	RAE-79
X-4	Escutcheon—Tuning dial escutcheon
3136	Screen—Tuning dial screen—Package of 2
3156	Label—Metal trade mark label—Package of 5
7279	Support—Dial screen support
10254	Hinge—Cabinet door hinge with mounting screws—Package of 4

RADIOLAS 21 & 22

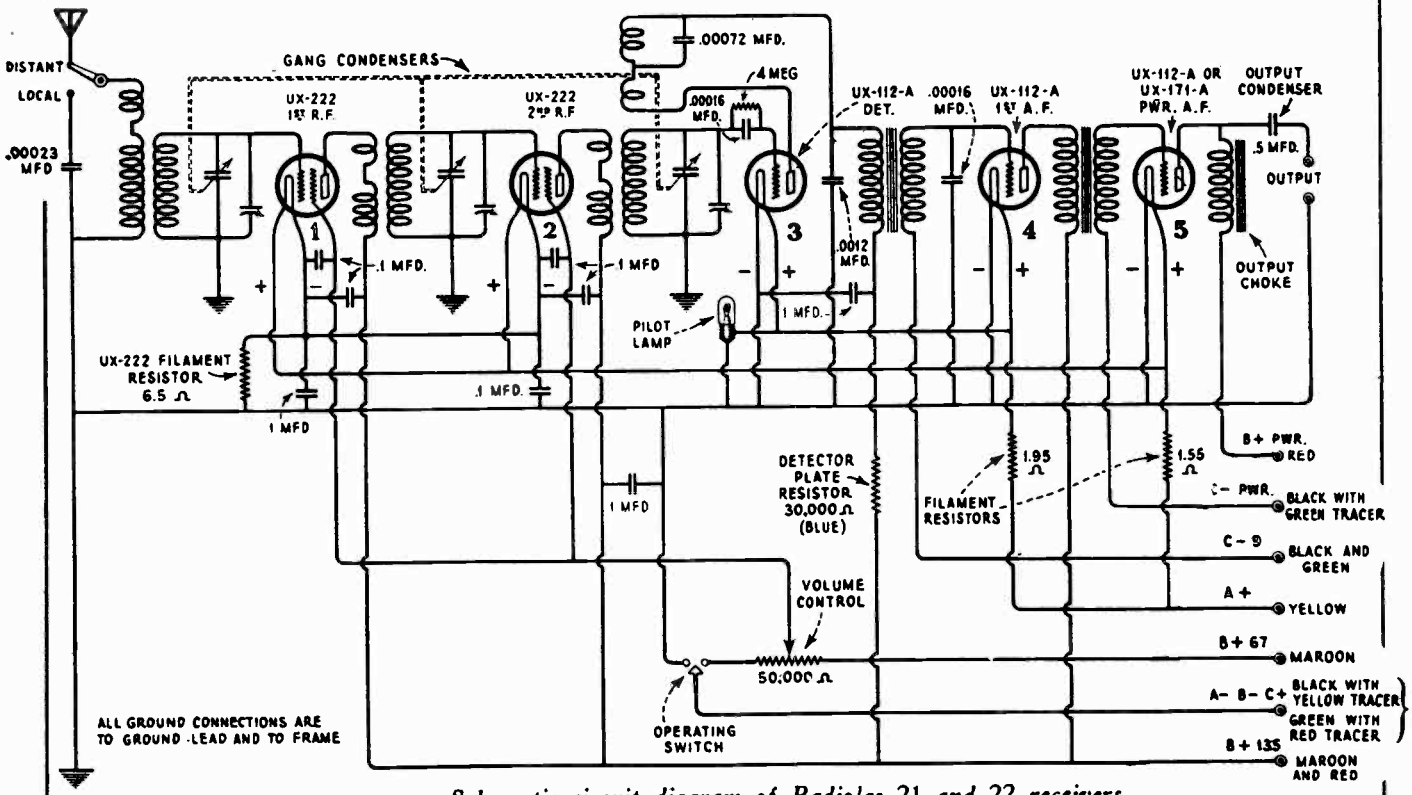
SPECIFICATIONS

Type of Receiver—Screen Grid Tuned R.F. Battery
Recommended Antenna Length—25—60 feet.
Type of Filament Power—Storage Battery or Eliminator.
Type of Plate and Grid Power—"B" and "C" Batteries or Eliminator.
Number and Type of Tubes—Two UX-222, 2 UX-112A, 1 UX-112A or UX-171A—Total 5.
Number of R.F. Stages—Two.
Type of Detector—Grid condenser and leak.
Number of A.F. Stages—Two.
Type of Loudspeaker (R22 only)—Magnetic.



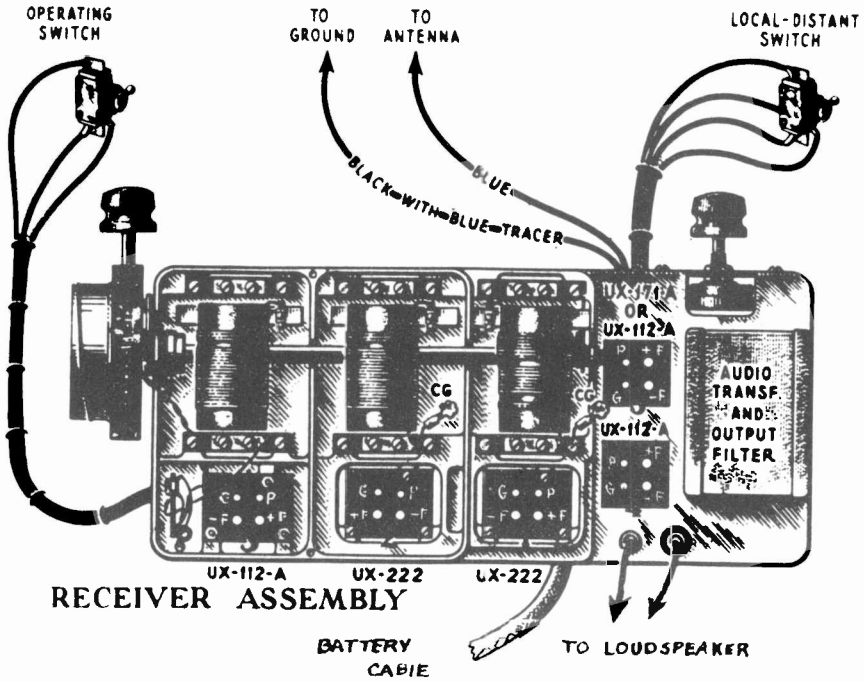
RADIOLA 22

RADIOLA 21

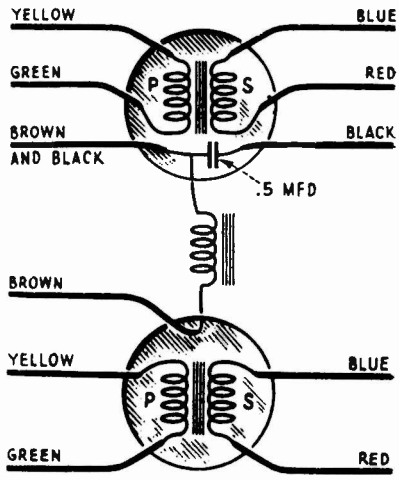


Schematic circuit diagram of Radiolas 21 and 22 receivers

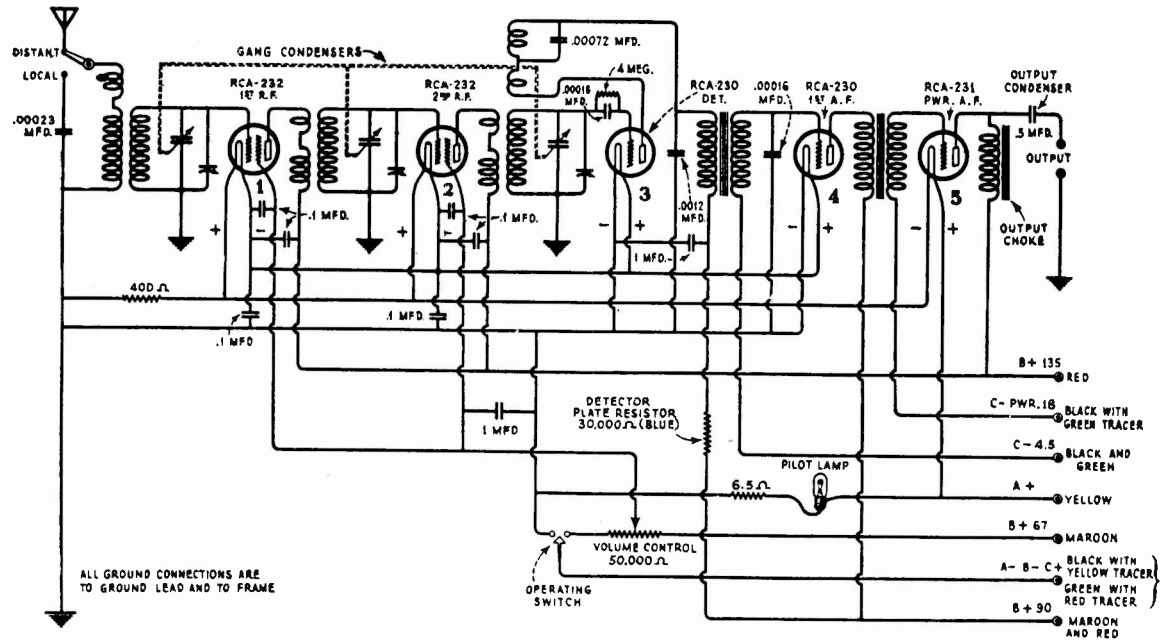
RADIOLAS 21 & 22



RECEIVER ASSEMBLY



Internal connections of A.F. coupling unit

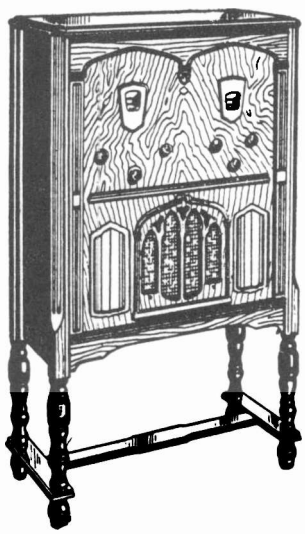


REVISED RADIOLAS 21 and 22
for use with
RADIOTRONS RCA-230, RCA-231 and RCA-232.

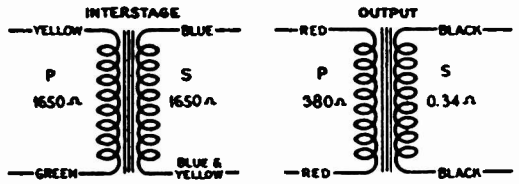
RADIOLA RO-23

ELECTRICAL SPECIFICATIONS

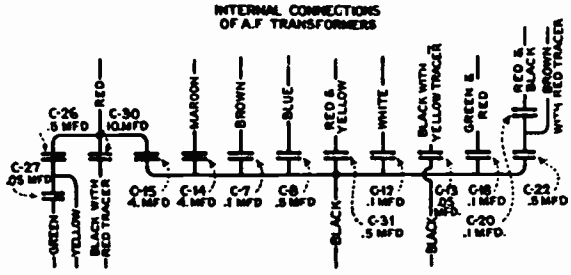
Voltage Rating..... 105–125 Volts and 200–250 Volts
Frequency Rating.. ...50–60 cycles and 25–40 cycles
Power Consumption .....120 Watts
Number and types of Radiotrons (Broadcast)
2 RCA-235, 3 UY-227, 1 UY-224, 1 UX-280, 1 RCA-247
Number and types of Radiotrons (Short Wave)
Same as Broadcast band plus 2 UY-224 and 1 UY-227
Type of Loudspeaker.....Dynamic
Wattage dissipation in L. S. Field.....10 Watts
Undistorted Output.....2.25 Watts



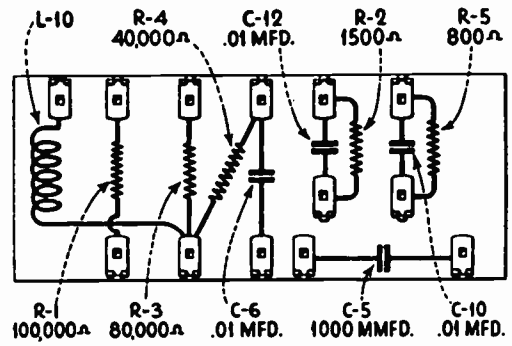
RCA Victor RO-23



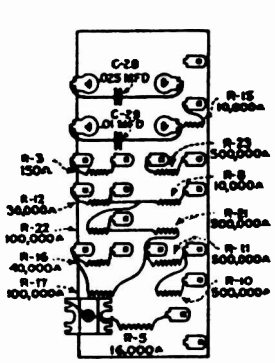
INTERNAL CONNECTIONS OF A.F TRANSFORMERS



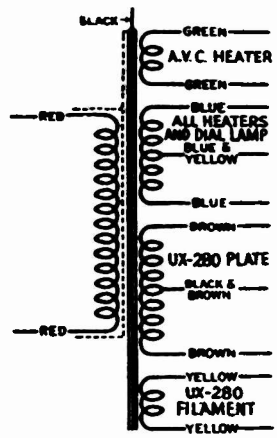
INTERNAL CONNECTIONS OF CAPACITOR PACK



RESISTOR BOARD CONNECTIONS



INTERNAL CONNECTIONS OF RESISTOR BOARD



INTERNAL CONNECTIONS OF POWER TRANSFORMER

BROADCAST RECEIVER ALIGNMENT:

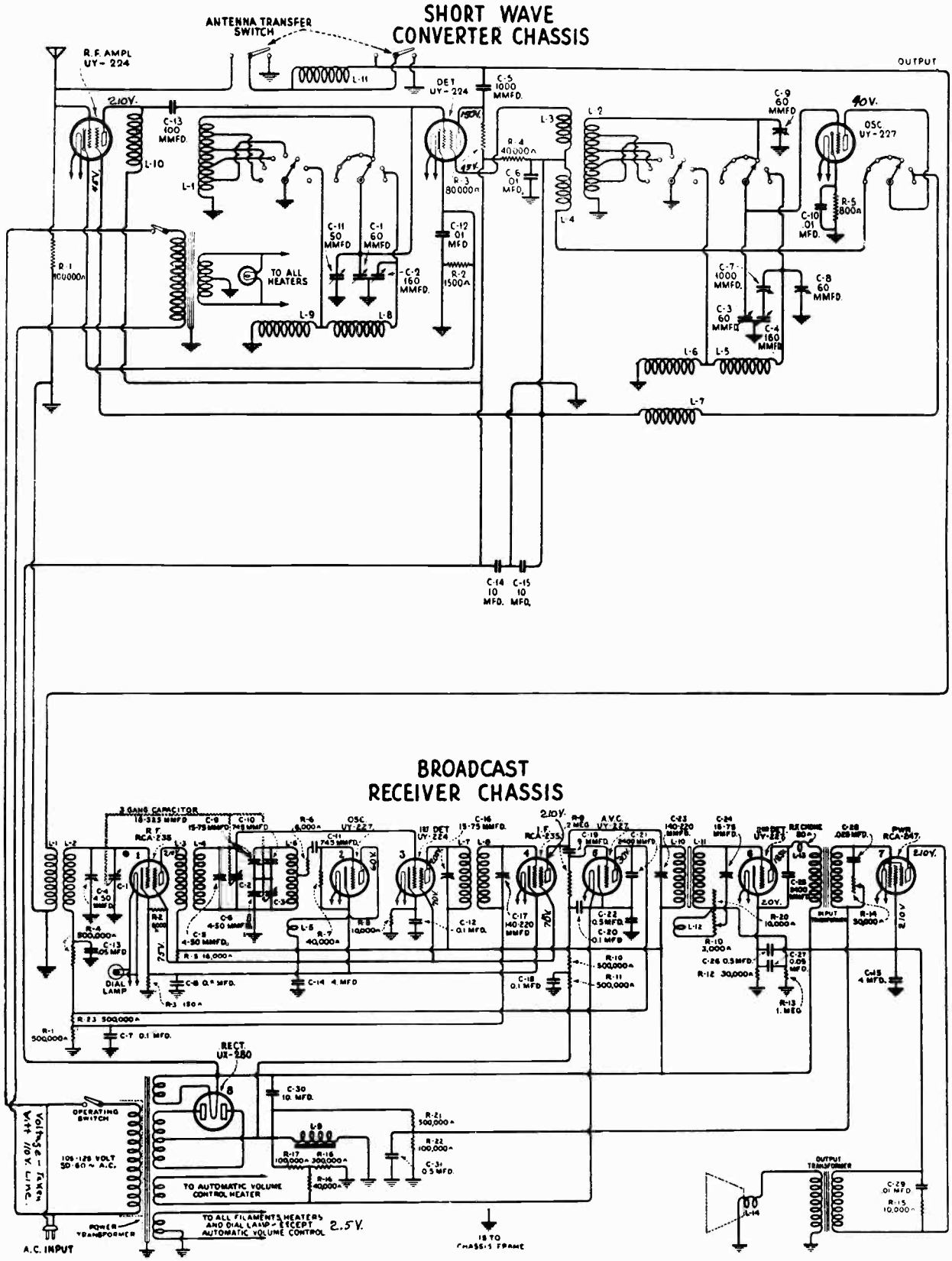
Turn range switch to "broadcast".

STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO	ADJUST THE FOLLOWING FOR MAX. PEAK OUTPUT
1	I-F Grid in series with .01 mfd	175 kc	Quiet Point near 600 kc	S & P of 2nd I-F Trans.
2	1st Det. Grid in series with .01 mfd			S & P of 1st I-F Trans.
3	Antenna in series with 200 mmfd	1400 kc	1400 kc	Osc., Det. and R-F Trimmers on gang condenser
4		600 kc	600 kc	600 kc Osc. Trimmer (Rock Gang)
5		*Repeat Step 3*		

CONVERTER ALIGNMENT:

Turn range switch to range indicated.
Set broadcast receiver dial to 1075 kc.

STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	RANGE	TURN RADIO DIAL TO	ADJUST THE FOLLOWING FOR MAXIMUM PEAK OUTPUT
1	Antenna in series with 200 mmfd	5960 kc	51.3 - 98.5 meters	Min.	c8
2		3055 kc		Max.	c7
3		*Repeat Step 1*			
4		8025 kc	38.0 51.3 meters	Min.	c9



Note—On some models operating switch for broadcast receiver is in circuit to Converter.

Schematic Circuit

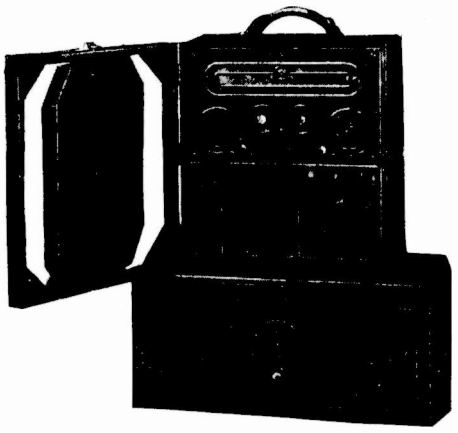
REPLACEMENT PARTS

Stock No.	DESCRIPTION	List
	LONG WAVE RECEIVER	
2563	Resistor—6,000 ohms—Carbon type—1 watt—Package of 5	
2730	Resistor—18,000 ohms—Carbon type—1 watt—Package of 5	
2746	Socket—Dial lamp socket	
2747	Cap—Grid contactor caps—Package of 5	
2749	Capacitor—2400 mmfd.	
2882	Socket—UY Radiotron socket complete with insulation strip	
2968	Socket—UX Radiotron socket—Complete with insulation strip	
2970	Resistor — 500,000 ohms — Carbon type—1 watt—Package of 5	
2977	Knob—Tuning control, volume control or tone control knob—Package of 5	
3003	Cushion — Receiver chassis rubber cushion—Package of 4	
3024	Capacitor—9 mmfd.—Package of 2	
3029	Bracket—Dial lamp bracket and indicator	
3045	Resistor—40,000 ohms—Carbon type—1 watt—Package of 5	
3048	Resistor — 500,000 ohms — Carbon type—½ watt—Package of 5	
3049	Resistor—150 ohms—Carbon type—½ watt—Package of 5	
3056	Shield — Radiotron shield — Package of 2	
3076	Resistor—1 megohm—Carbon type—½ watt—Package of 5	
3077	Resistor—30,000 ohms—Carbon type—½ watt—Package of 5	
3078	Resistor—10,000 ohms—Carbon type—½ watt—Package of 5	
3079	Resistor—40,000 ohms—Carbon type—½ watt—Package of 5	
3081	Resistor—16,000 ohms—Carbon type 3 watt	
3092	Volume control—Volume control complete with mounting nut	
3093	Tone control—Tone control complete with mounting nut	
3095	Coil—R.F. coil	
3235	Coil—1st detector and oscillator coil	
3251	Coil—Choke coil	
3284	Board—Terminal board with 1 soldering terminal—Package of 5	
3285	Cord—Drive cord—Package of 5	
3286	Spring—Drive cord tension spring—Package of 5	
6185	Resistor — 100,000 ohms — Carbon—½ watt—Package of 5	
6186	Resistor — 500,000 ohms — Carbon type—¼ watt—Package of 5	
6187	Resistor — 300,000 ohms — Carbon type—½ watt—Package of 5	
6188	Resistor—2 megohm—Carbon type—½ watt—Package of 5	
7054	Cord—Power cord	
7062	Capacitor—Adjustable capacitor 15–70 mmfd.	
7298	Capacitor—0.01 mfd.	
7299	Capacitor—745 mmfd.	
7340	Transformer—1st Intermediate transformer	
7341	Transformer—2nd Intermediate transformer	
7342	Capacitor—Comprising two 0.05 mfd., four 0.5 mfd., one 10.0 mfd., two 4.0 mfd. and four 0.1 mfd. capacitors in metal container	
7343	Transformer—Audio transformer	
7344	Transformer — Power transformer — 110 volts—60 cycles	
7348	Board—Resistor board complete less resistors and capacitor	
7362	Capacitor—0.025 mfd.	
7404	Drum—Dial drum and scale	
7405	Capacitor—20 mfd. electrolytic capacitor—In metal container	
8770	Transformer — Power transformer — 25 cycles	
8771	Transformer — Power transformer — 220 volts—60 cycles	
8805	Capacitor—Variable tuning capacitor	
8837	Support — Receiver chassis metal mounting support—Package of 4	
	LOUDSPEAKER ASSEMBLY	
3237	Loudspeaker mounting screw assembly—Comprising 4 screws, 8 nuts, 8 washers and 4 eyelets—Package of 1 set	
7345	Coil assembly—Comprising field coil, cone bracket and magnet	
8559	Ring—Cone retaining ring	
8601	Cone—Speaker cone—Package of 5	
	SHORT WAVE RECEIVER	
2747	Cap—Grid contactor cap—Package of 5	
2977	Knob—Station selector or Resonator knob—Package of 5	
3058	Resistor — 100,000 ohms — Carbon type—1 watt—Package of 5	
3153	Resistor—1500 ohms—Carbon type—1 watt—Package of 5	
3285	Cord—Drive cord—Package of 5	
3286	Spring—Drive cord tension spring—Package of 5	

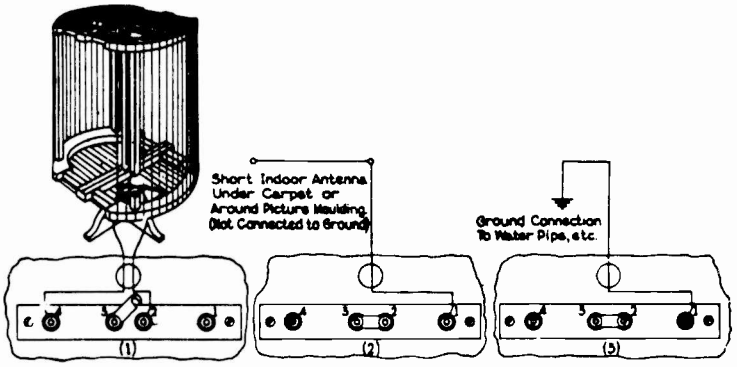
REPLACEMENT PARTS (Continued)

Stock No.	DESCRIPTION	List
	SHORT WAVE RECEIVER —Continued	
3288	Socket—UY Radiotron socket—Complete with insulation strip	
3289	Contact lug—Complete with mounting rivet—Package of 10	
3290	Switch—"Off and On"—Toggle switch complete with mounting nut	
3291	Board—Terminal board with two soldering terminals complete with mounting rivets—For switch and bracket assembly—Package of 5	
3292	Drive shaft and pulley—Package of 5	
3293	Coil—For resistor board assembly	
6100	Coil—Coil assembly complete with mounting eyelet—For switch and bracket assembly	
6101	Socket—Dial lamp socket and bracket with mounting rivets	
6102	Capacitor—1000 mmfd.—Package of 5	
6103	Resistor—800 ohms—Carbon type—1 watt—Package of 5	
6104	Resistor—80,000 ohms—Carbon type 1 watt—Package of 5	
6105	Resistor—40,000 ohms—Carbon type 3 watt—Package of 5	
6106	Coupling—Switch lever shaft coupling bushing with 2 groove pins—Package of 5	
6107	Switch — Antenna transfer toggle switch	
6108	Binding post—Complete with terminal lug, mounting washer and nut—Package of 5	
6109	Knob—Knob with pointer—Package of 5	
6110	Dial lamp shield and indicator	
6111	Escutcheon—Band selector switch knob escutcheon—Package of 5	
6112	Cushion — Receiver chassis rubber cushion—Package of 4	
7062	Capacitor — Adjustable capacitor — 15–70 mmfd.	
7298	Capacitor—0.01 mfd.	
7406	Capacitor—Double adjustable capacitor—One section 10–70 mmfd., one section 800–1000 mmfd.	
7407	Coil—High frequency detector coil	
7408	Coil—Low frequency detector and oscillator coil	
7409	Coil—High frequency oscillator coil	
7410	Capacitor—Variable capacitor 7 plate —Complete with mounting nut and washer	
8806	Transformer—Filament power transformer	
8807	Transformer—Filament power transformer—105–120 volts, 25 cycles	
8808	Transformer—Filament power transformer—220 volts, 60 cycles	
8809	Board—Resistor board less resistors, capacitors and coil	
8810	Lever—Switch lever assembly—Comprising shaft, 3 switch levers and coupling bushing	
8811	Switch—Band selector switch complete with mounting washer and nut	
8812	Capacitor—Tuning capacitor assembly	
8813	Dial drum and scale	
8837	Support — Chassis metal mounting support—Package of 4	
10820	Capacitor—100 mmfd.	
	CABINET ASSEMBLY	
X-24	Top	
X-25	Stretcher—Comprising R. H. and L. H. end rails and center rail	
X-26	Leg	
X-27	Foot assembly — Comprising foot, hanger bolt, packing nut and ferrule —Assembled	
X-28	Baffle board and grille cloth	
X-29	Escutcheon—Tuning dial escutcheon for long wave	
X-30	Escutcheon—Tuning dial escutcheon for short wave	
3223	Escutcheon—Metal bezel for dial	
3287	Label—Metal trade mark label—Package of 5	
9398	Cabinet—Cabinet complete less equipment	

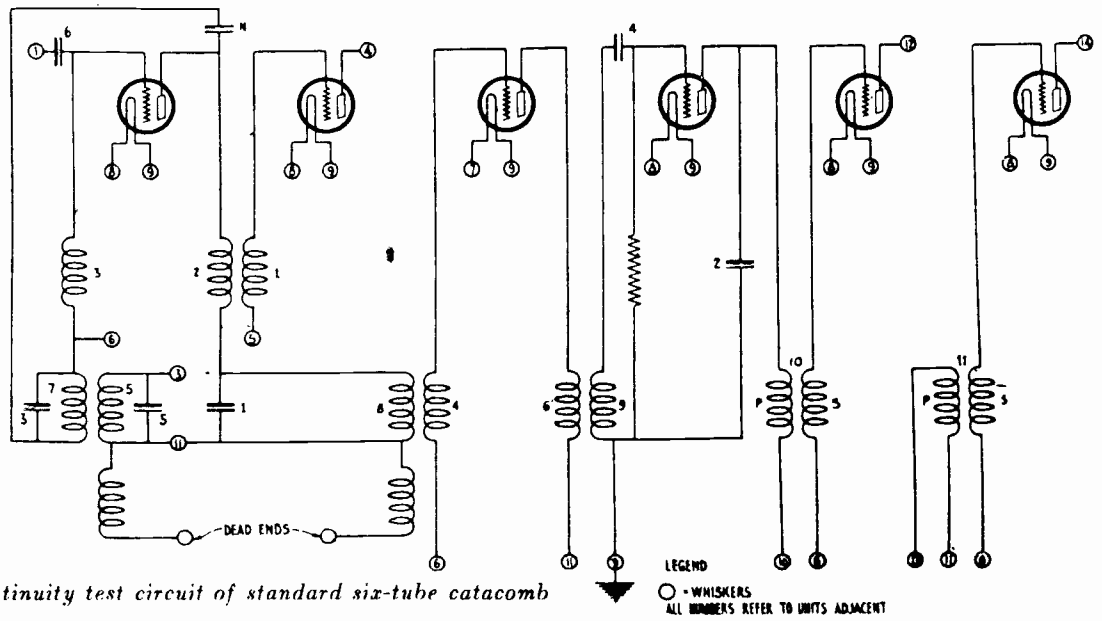
RADIOLAS 24, 26 & SUPER-HETERODYNE



RADIOLA 26



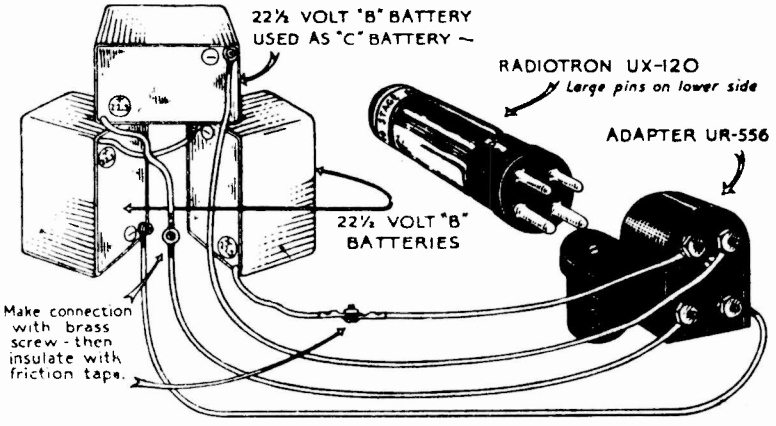
Connection of Exterior Loop, Indoor Antenna, etc.



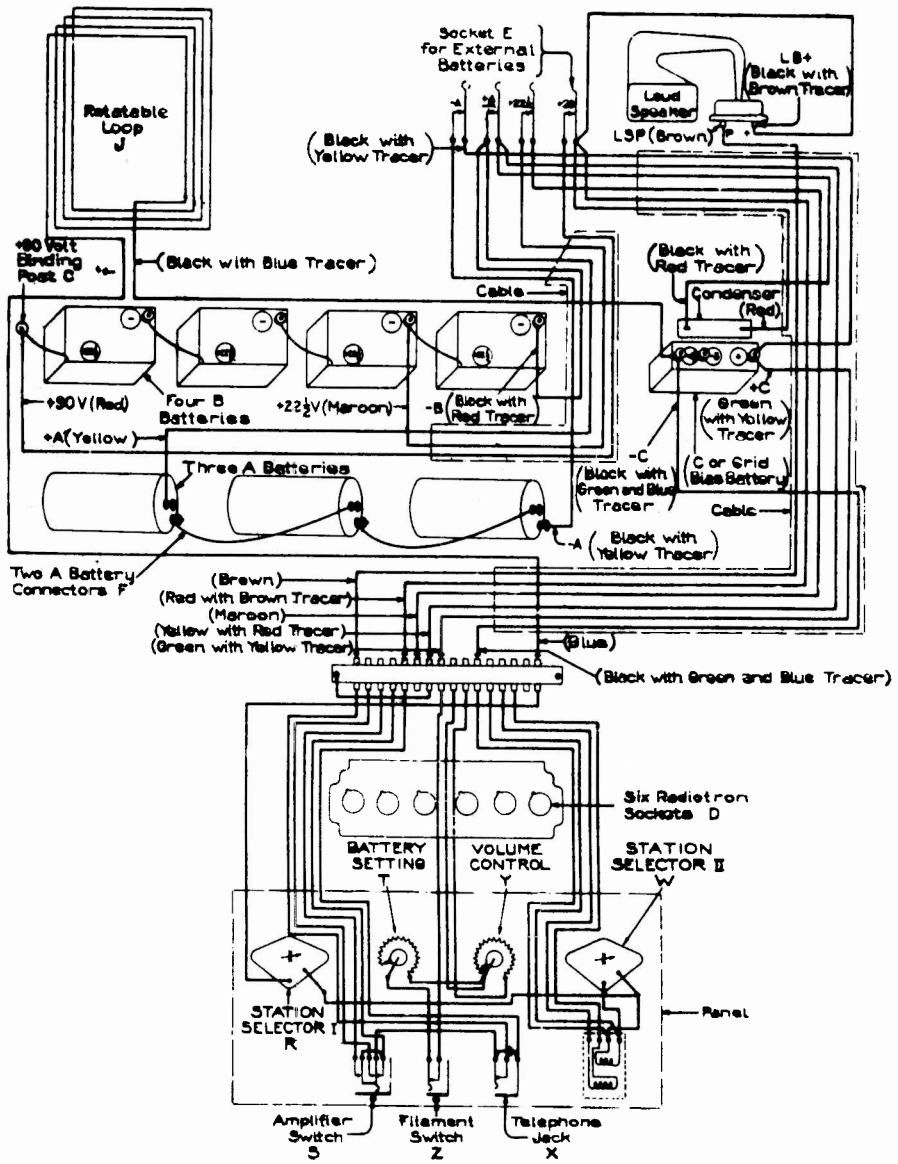
Continuity test circuit of standard six-tube catacomb

Instructions for Using Model UR-556 Adapter

The Model UR-556 Adapter is designed for using Radiotron UX-120 in the *last audio stage only* of radio receiving sets originally using Radiotrons Model UV-199, and more particularly in Radiola Super-VIII or Radiola Super-Heterodyne (Second Harmonic). The use of this Radiotron as the last audio amplifier will provide greater volume of signal along with increased quality of reproduction. The Adapter takes care of the difference in size and arrangement of the contact pins in the bases of the two Radiotrons, and provides terminals for making ready connection to the additional plate and grid bias batteries required for the new Radiotron.



RADIOLAS 24, 26 & SUPER-HETERODYNE



RADIOLA 24

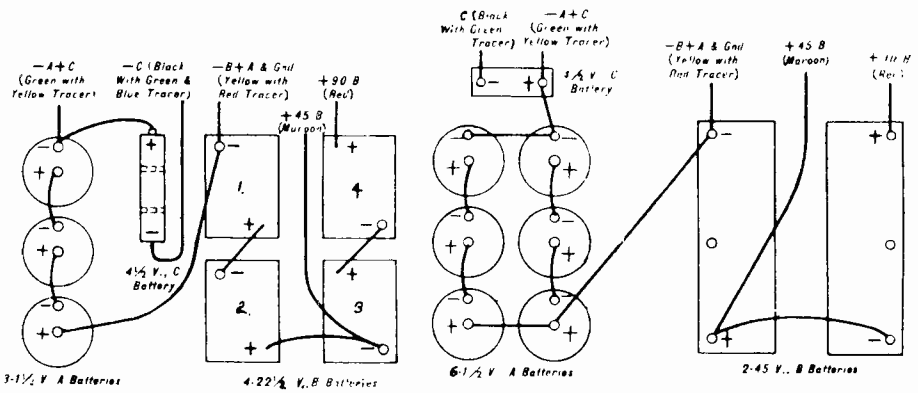
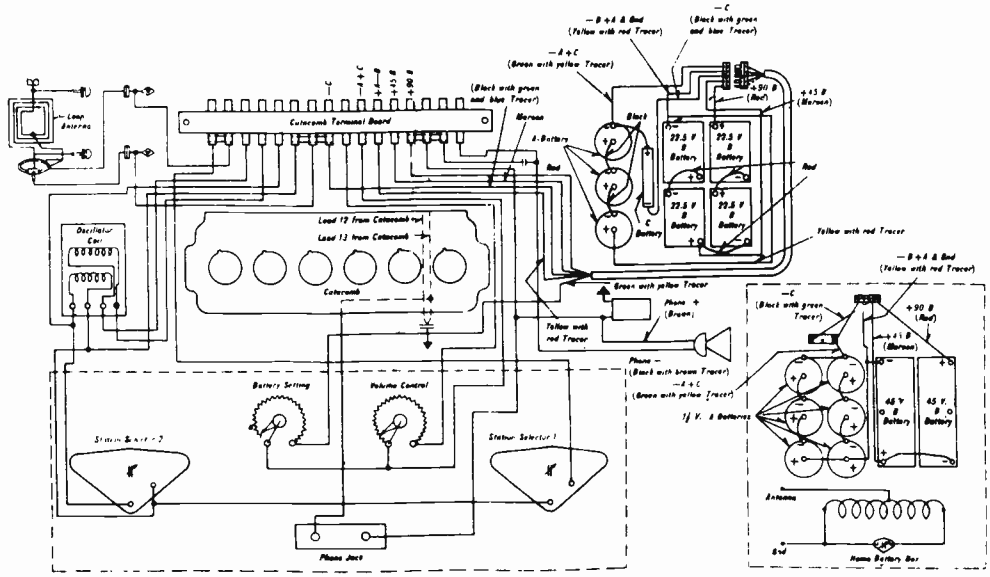


Diagram of Battery Connections for Portable Unit

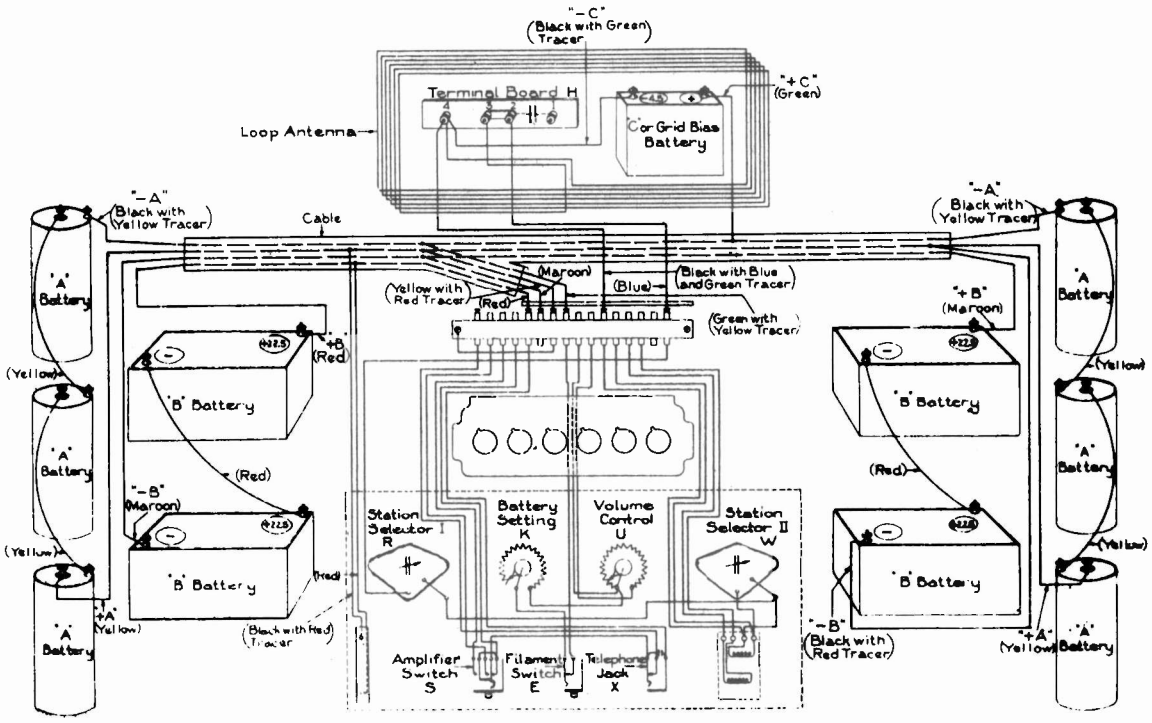
Diagram of Battery Connections When Using Home Battery Box

RADIOLAS 24, 26 & SUPER-HETERODYNE

The catacomb of Radiola 26 is mounted differently than in other Radiolas employing the standard six-tube catacomb and the connections thereto are reversed. As a stage change switch is not used, the built-in loudspeaker is at all times connected to the second audio stage and the phone tip pin jacks to the first stage.



RADIOLA 26



Connection Diagram of Radiola Super-Heterodyne

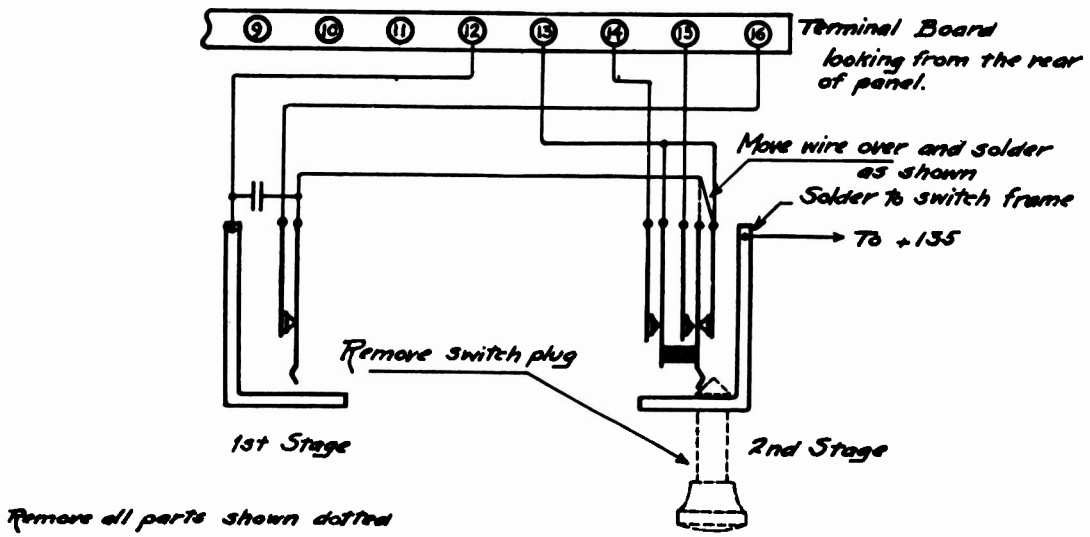
Use of RCA "B" Battery Eliminator with Radiolas Super-Heterodyne and Super VIII

(DUO-RECTRON—MODEL AP-937)

These instructions cover the operation of RCA "B" Battery Eliminator (Duo-Rectron Model AP-937) in use with Radiolas Super-Heterodyne and Super VIII employing Radiotron UX-120 in the second stage of audio frequency amplification.

RADIOLA SUPERHETERODYNE

CHANGES IN PANEL WIRING TO ENABLE DUO-RECTRON TO FURNISH 135 VOLTS TO PLATE OF POWER TUBE IN LAST STAGE



Connect a short piece of wire between the +45 terminal and the —45 terminal of the UR-556 adapter.

Connect a 22½-volt "B" battery to the +22½ and —22½ "C" battery terminals of the UR-556 adapter. (This battery may be placed in one of the battery compartments.)

Make the one wiring change shown by dotted line in Figure 1.

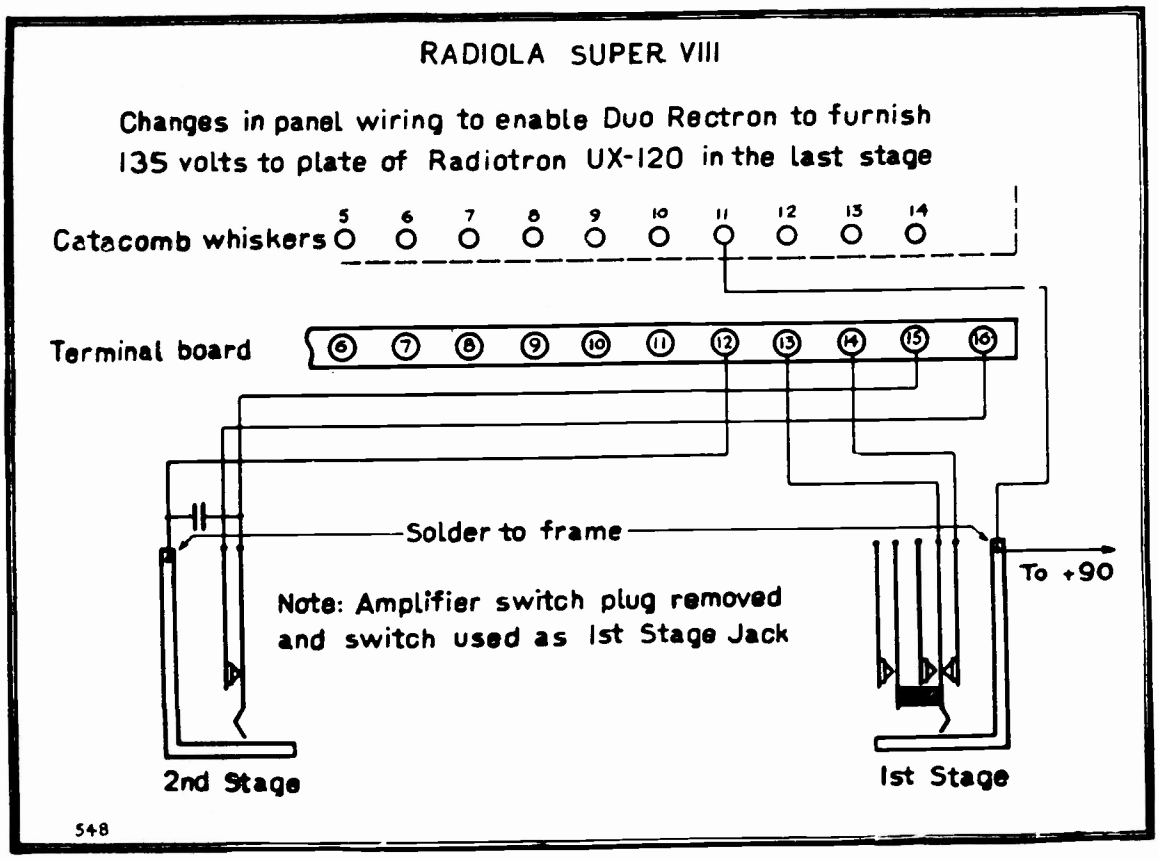
Solder an insulated wire to the switch frame (as indicated in Figure 1) and connect free end to the +135 terminal of Duo-Rectron.

Make other connections to the —B, +45 and +90 terminals of the Duo-Rectron in the usual manner as indicated in the Duo-Rectron Instruction Book No. 86996, Edition "C".

WHEN THE ABOVE ALTERATIONS HAVE BEEN MADE, THE STAGE CHANGE SWITCH WILL BECOME THE SECOND STAGE JACK AND THE PHONE JACK WILL BECOME THE FIRST STAGE JACK.

These changes apply to Radiola Super-Heterodyne *only*.

RADIOLAS 24, 26 & SUPER-HETERODYNE



Connect a short piece of wire between the +45 and —45 terminals of UR-536 adapter.

Connect a 22½-volt "B" battery to the +22½ "C" and —22½ "C" terminals of the adapter. This battery supplies the proper negative bias for the grid of Radiotron UX-120. It may be conveniently placed in the location vacated by the old "B" batteries.

Connect:

—B lead in Super-VIII (lower battery tier) to —B of Duo-Rectron.

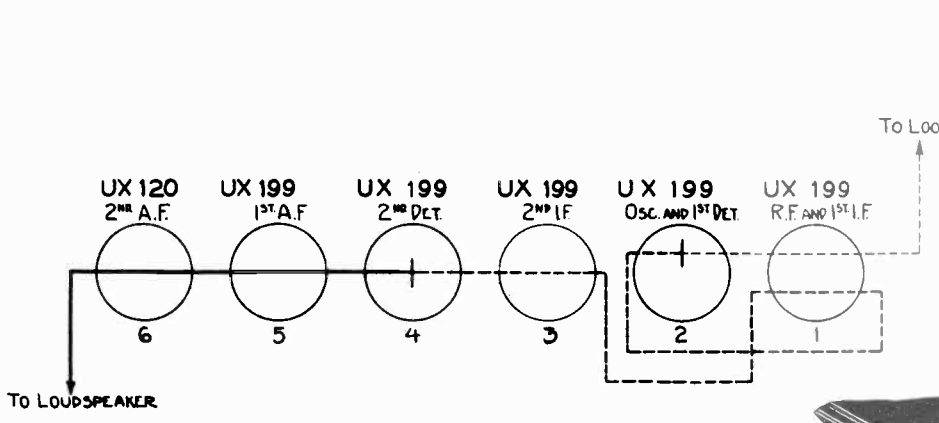
+B (lower battery tier) to +45 of Duo-Rectron.

—B (upper battery tier) to be taped up (not used).

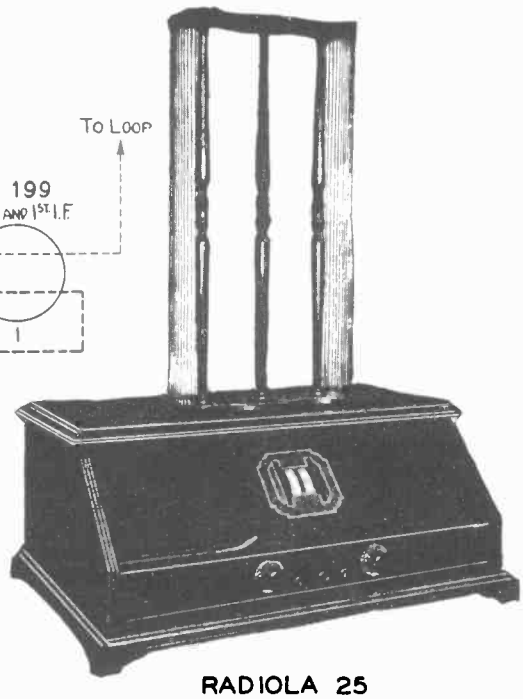
+B (upper battery tier) to +135 of Duo-Rectron.

RADIOLA 25, VICTOR 7-2 & 9-1

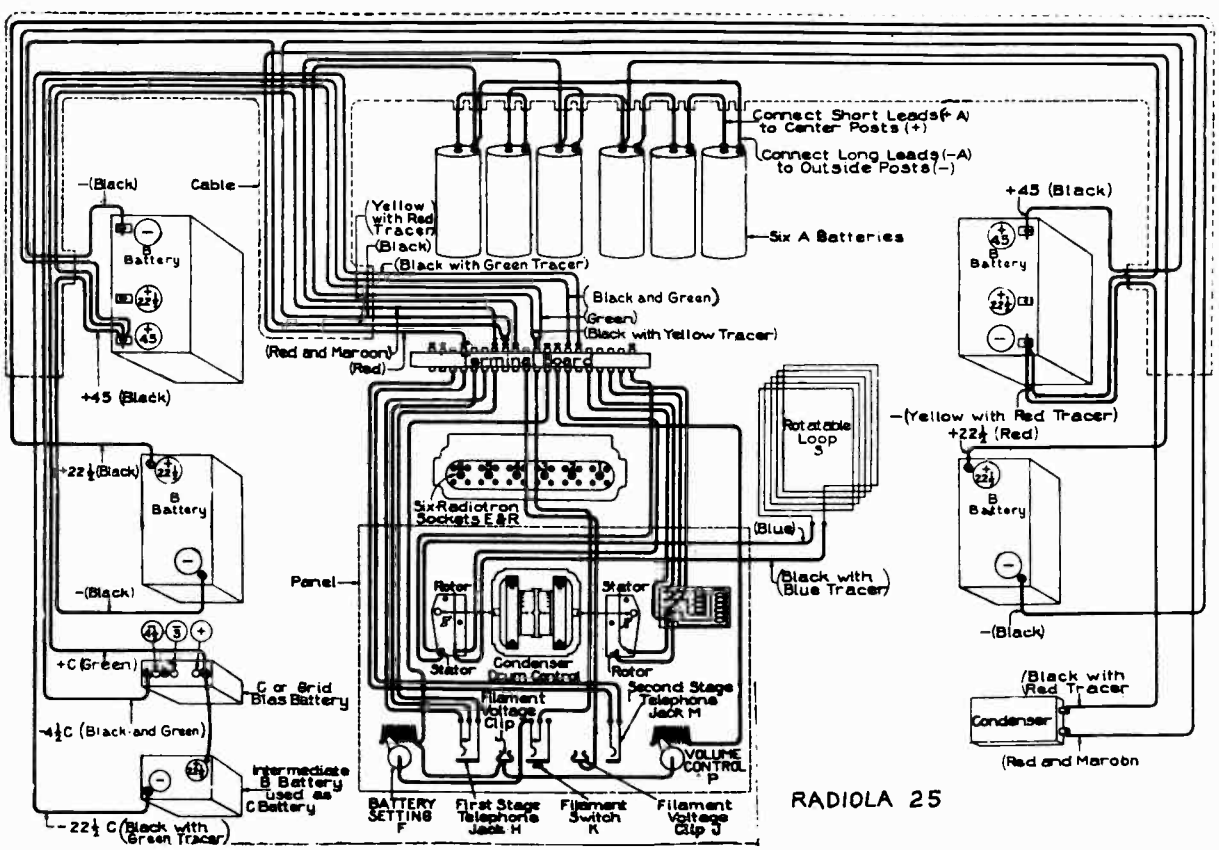
BATTERY OPERATED ALHAMBRA II FLORENZA



Radiotron Sequence



RADIOLA 25



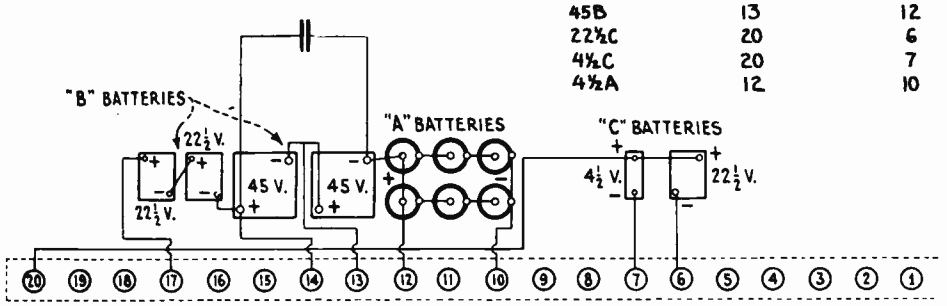
RADIOLA 25

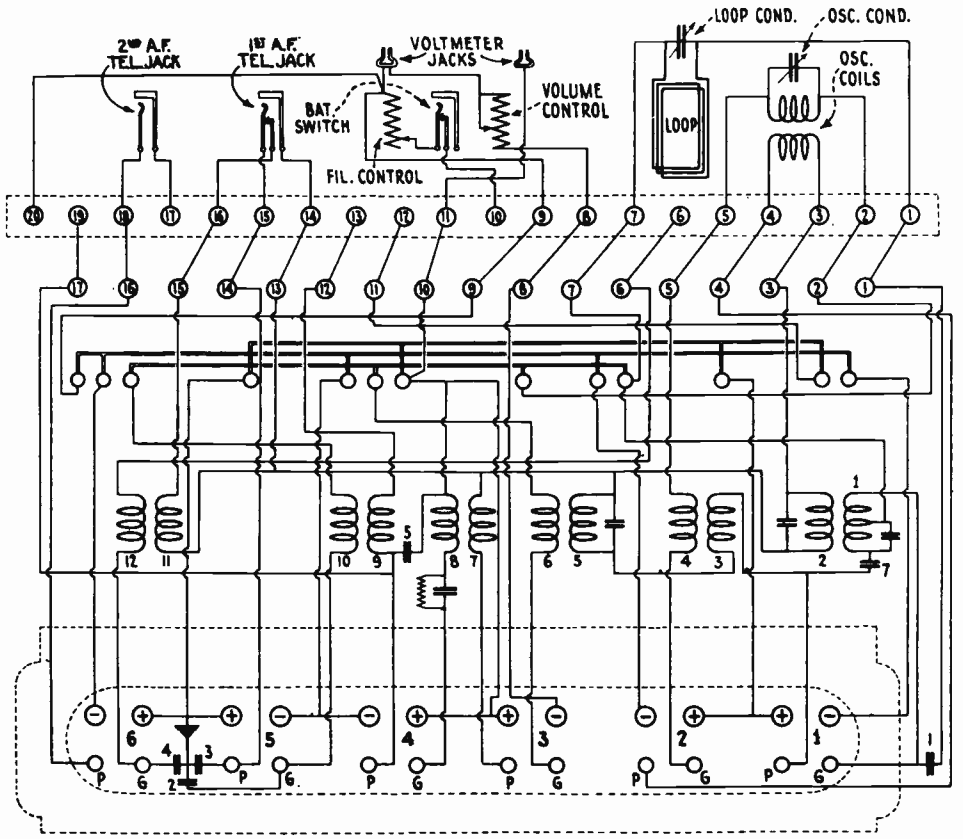
BATTERY CONNECTIONS

RADIOLA 25, VICTOR 7-2 & 9-1

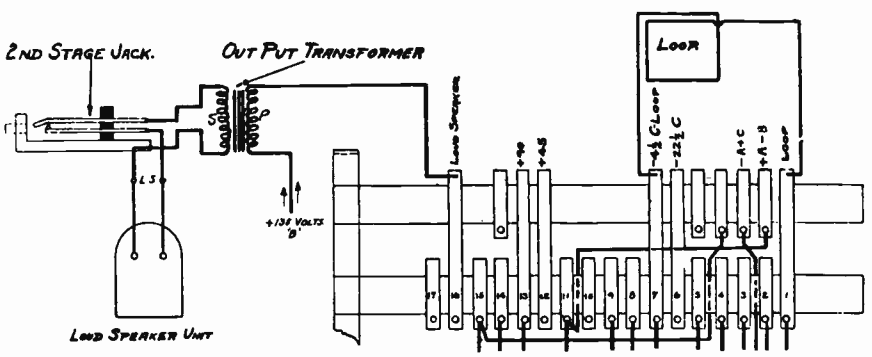
VOLTAGE READINGS TAKEN AT CATACOMB TERMINAL STRIP

VOLTS	+ TERMINAL	- TERMINAL
135B	17	12
90B	14	12
45B	13	12
22½C	20	6
4½C	20	7
4½A	12	10



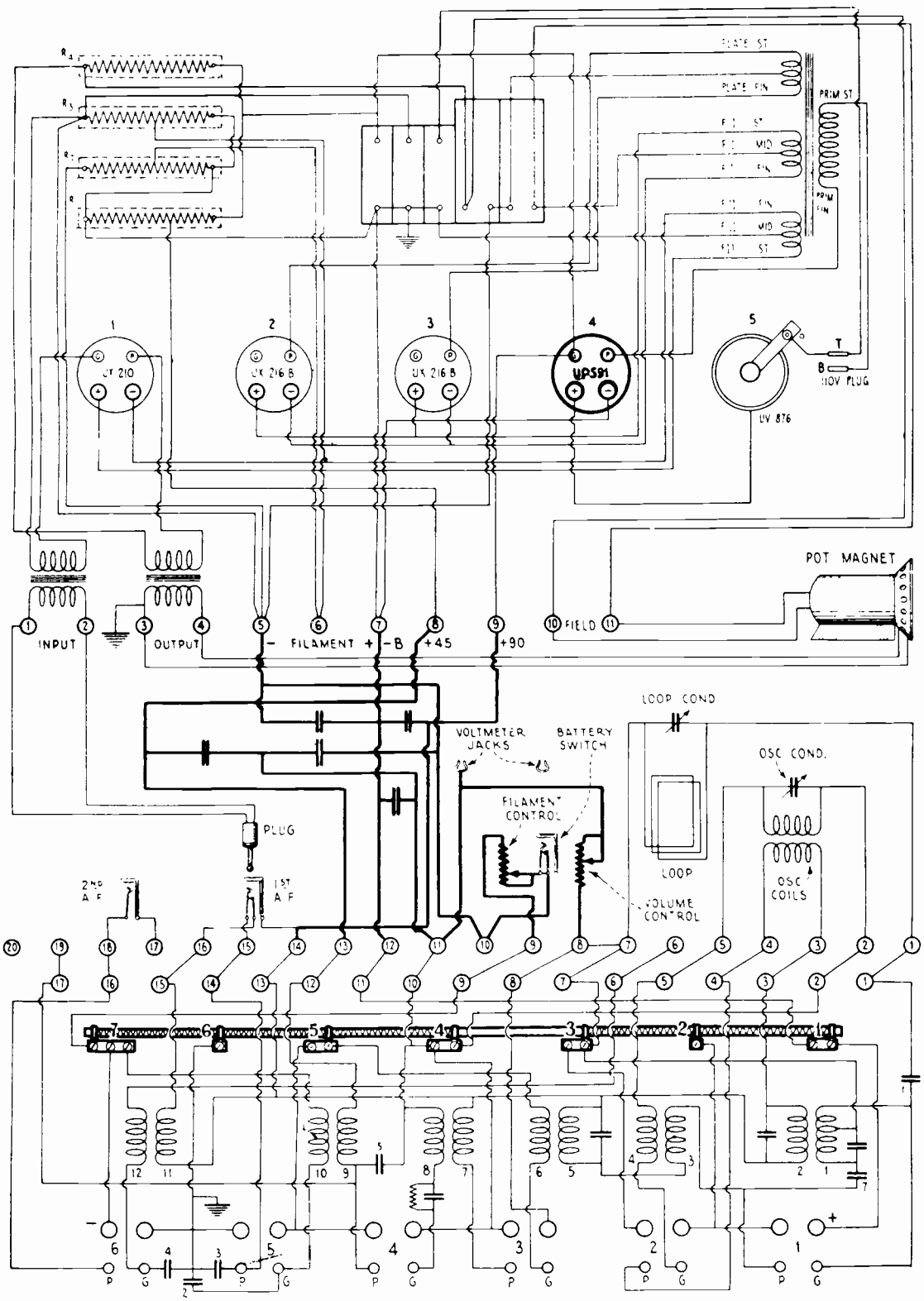


Radiola 25 continuity diagram



Wiring Diagram for Alhambra II and Florenza

RADIOLA 25 A.C. OPERATED USES A.C. PACKAGE UP-971 AND 104 LOUDSPEAKER



A.C. PACKAGE CHANGES

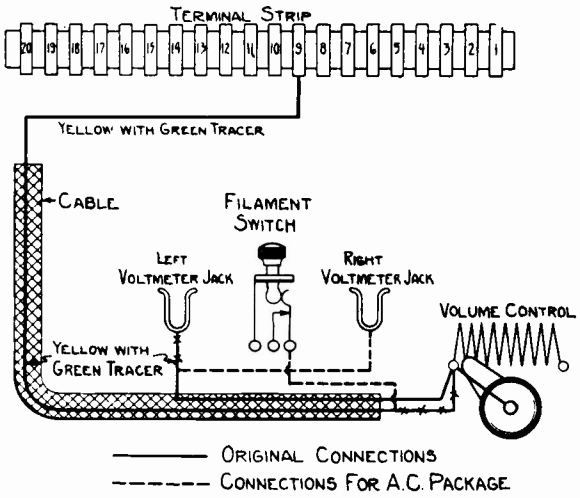
Radiola 25 A.C. operated continuity circuit diagram

RADIOLA 25

Radiola 25 may be used with Model 104 d.c. Loudspeaker for 110 volt d.c. socket power operation. Refer to Model 104 Loudspeaker.

INSTALLATION CHANGE IN A.C. PACKAGE UP-971

Some models of Radiola 25 have panel cabling instead of the regular black wire connections. When installing A.C. Package UP-971 on these models the following instructions should be observed.



Panel wiring change required for installation of UP-971 in some models of Radiola 25

VOLTAGE READINGS OF RADIOLA 25

Taken at Catacomb Terminal Strip—Count Terminals from Right to Left When Facing the Front of Radiola 25

Terminals	*Correct Effect*
10 to 12	Should measure 31 volts with all Radiotrons lighted and battery setting near "Off." Positive terminal of voltmeter to be placed on No. 12.
12 to 13	Should measure 21.5 volts normally. Positive terminal of voltmeter should be placed on No. 13.
13 to 14	Should measure 41 volts normally. Positive terminal of voltmeter should be placed on No. 14.

The allowable values in ohms for the different sections of the resistance strip in Radiola 25 are tabulated below:

RADIOLA 25 A.C. RESISTANCES

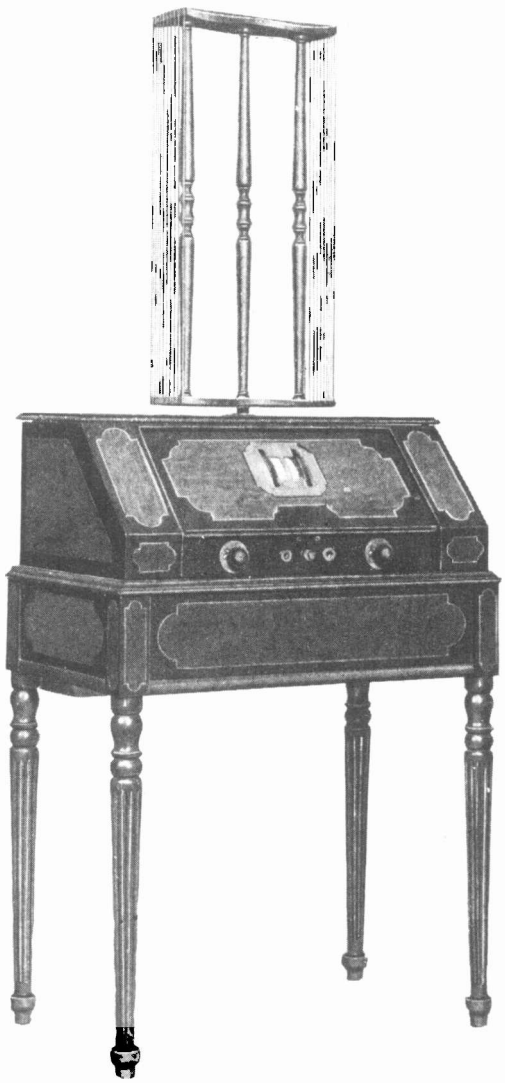
Count Terminals from Right to Left When Facing Radiola 25

Resistance Terminals	*Lower Limit*	*Normal*	*Upper Limit*
1-2	218.5	230	241.5
2-3	192	201	208
3-4	Open	Open	Open
4-5	151.9	155	158.1
5-6	143	150	153
6-7	44.75	50	55.25

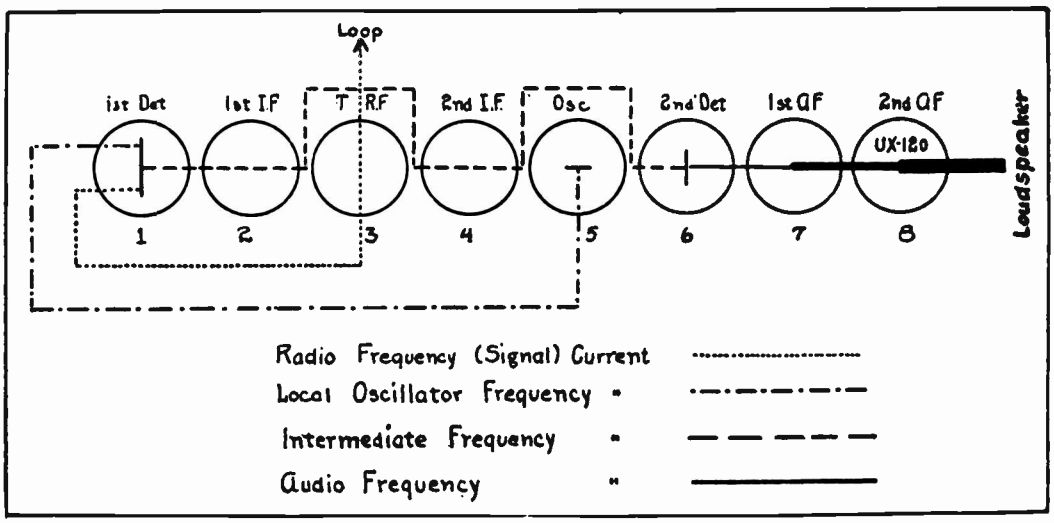
RADIOLA 28, VICTOR 9-3 & 9-15

BATTERY OPERATED BORGIA I

Orthophonic Victrola Radiola No. 9-15



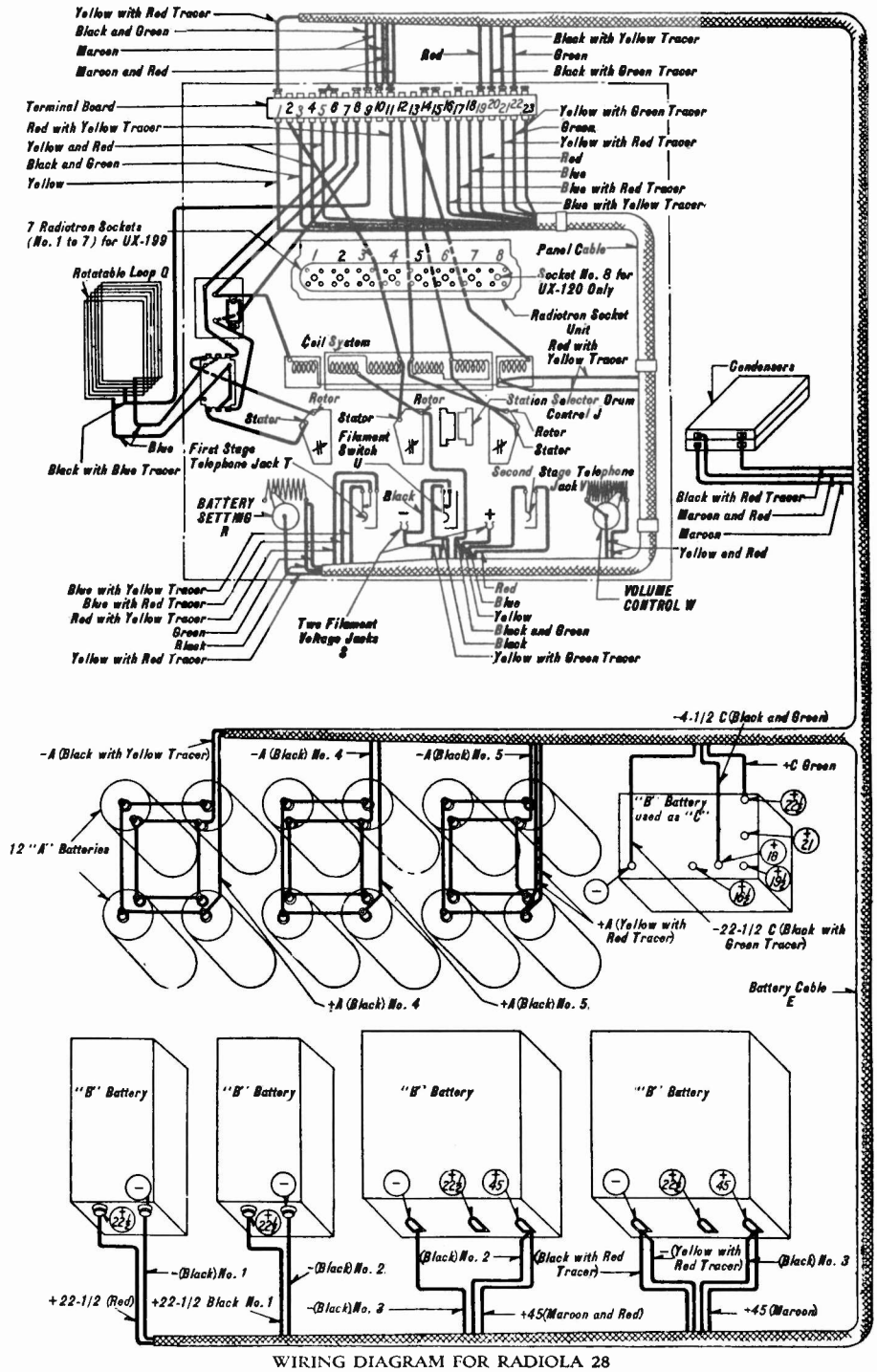
Radiola 28



—Radiola 28 Radiotron sequence

RADIOLA 28, VICTOR 9-3 & 9-15

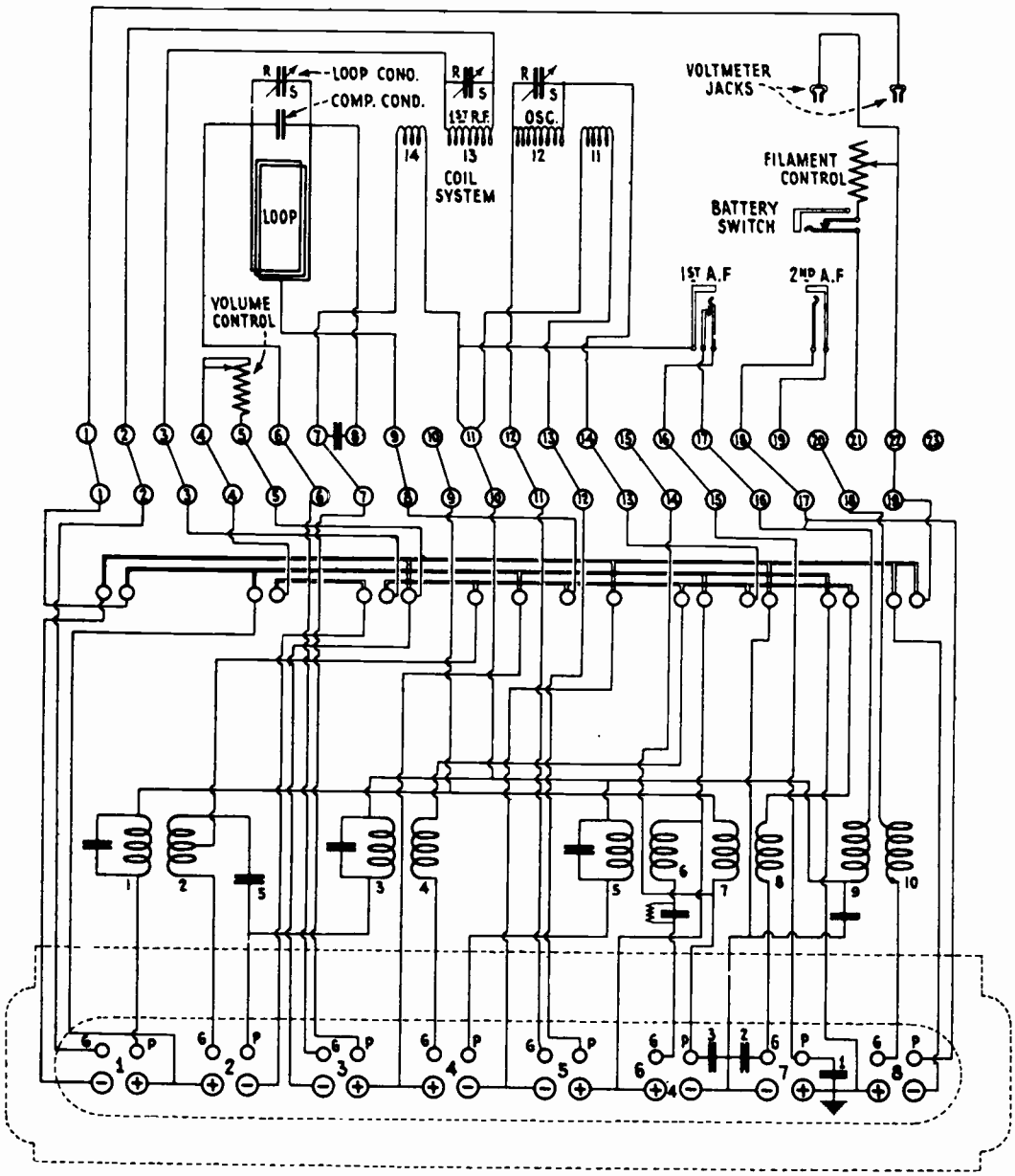
Some Radiola 28 models have adjustable loop neutralizing condensers.



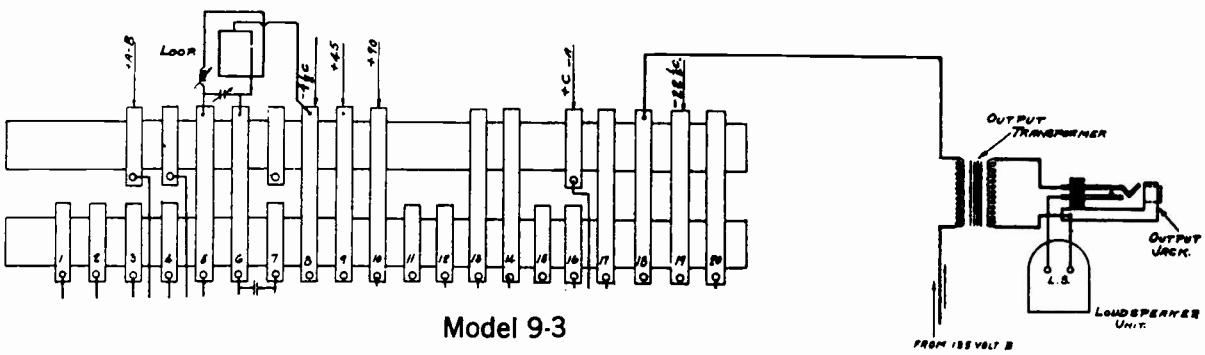
WIRING DIAGRAM FOR RADIOLA 28

In this wiring diagram, two or more leads of a like color contained in the same cable may be distinguished by the numeral following the color designation at each end of a given lead.

RADIOLA 28, VICTOR 9-3 & 9-15

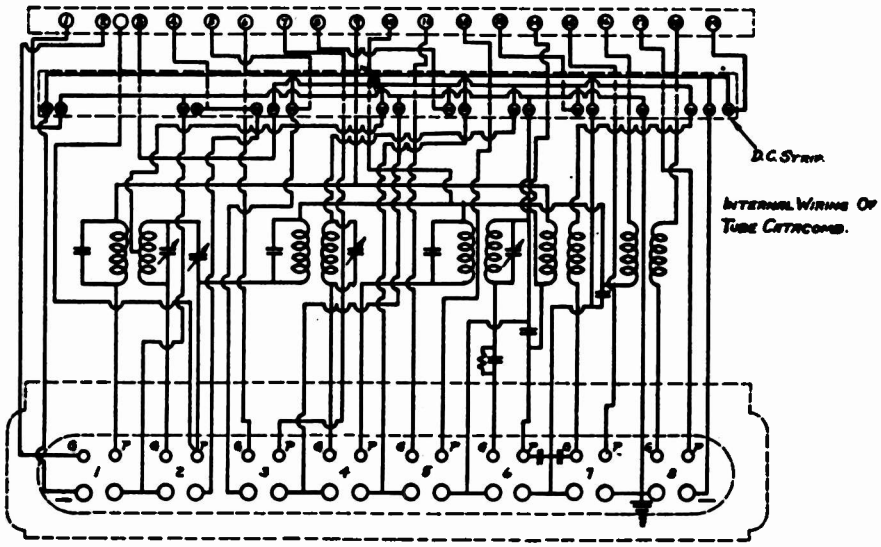


Radiola 28 continuity diagram

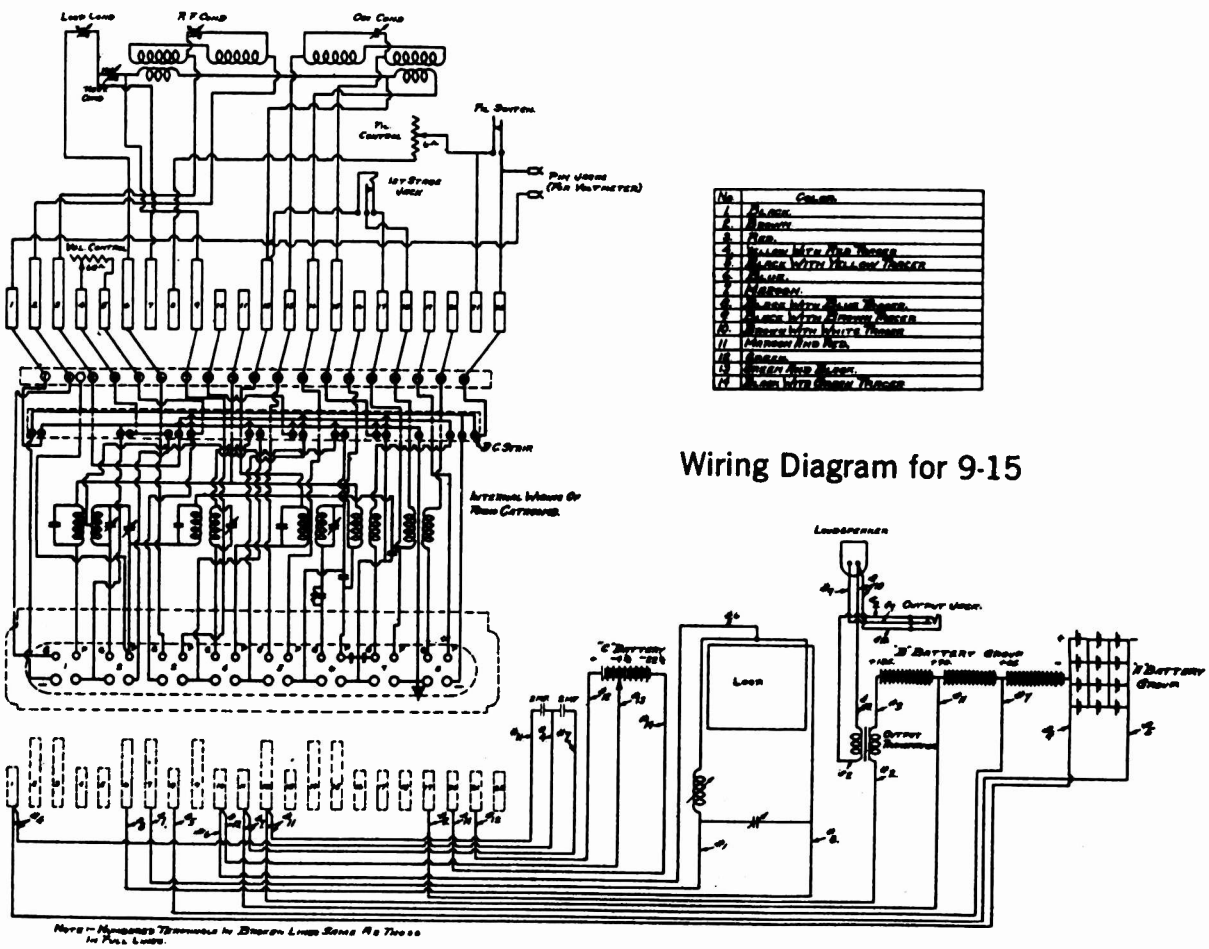


Model 9-3

RADIOLA 28, VICTOR 9-3 & 9-15

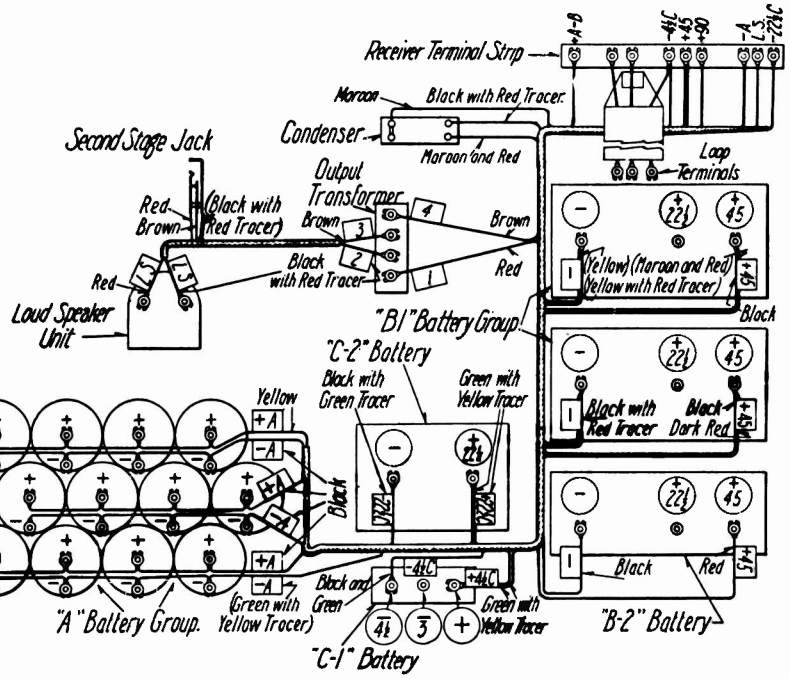


Radiola 28 Catacomb Continuity Diagram

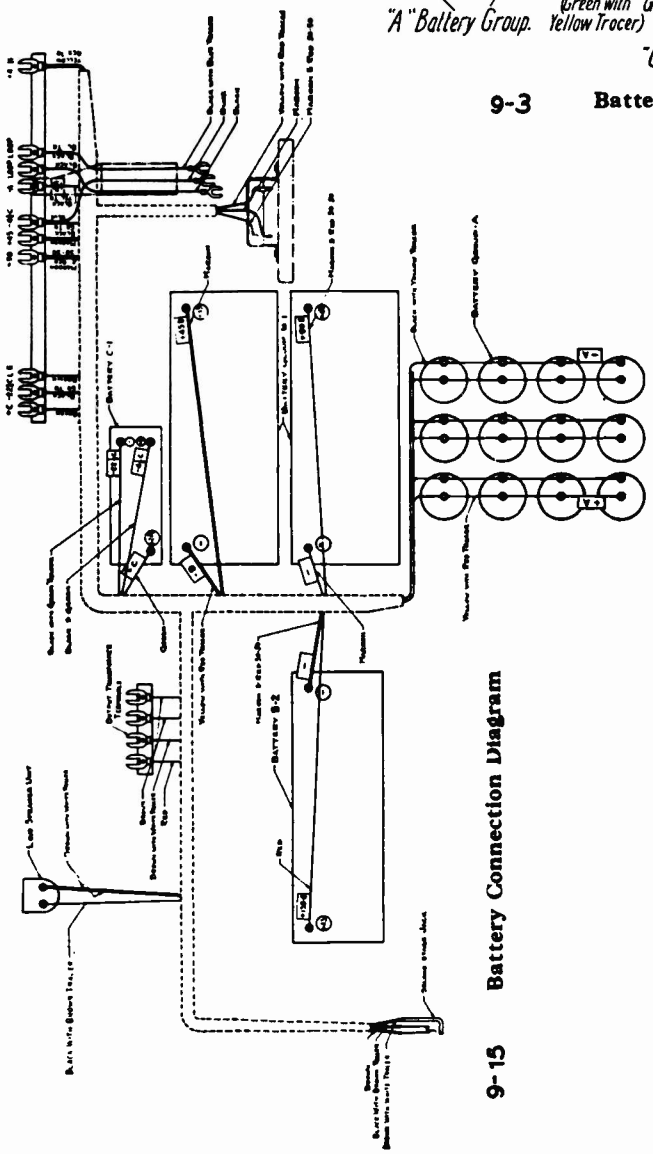


Wiring Diagram for 9-15

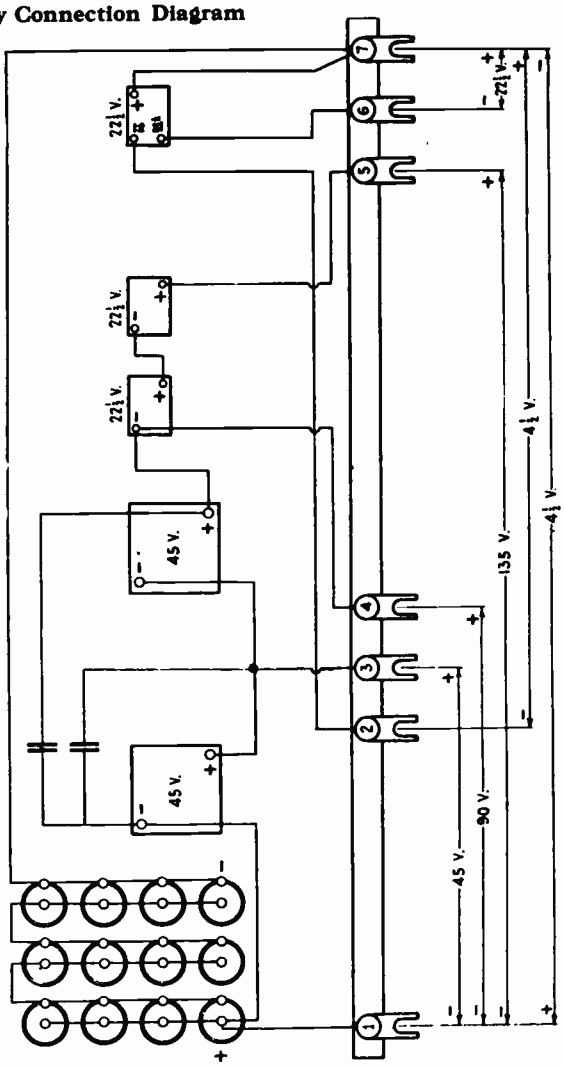
RADIOLA 28, VICTOR 9-3 & 9-15



9-3 **Battery Connection Diagram**



9-15 **Battery Connection Diagram**

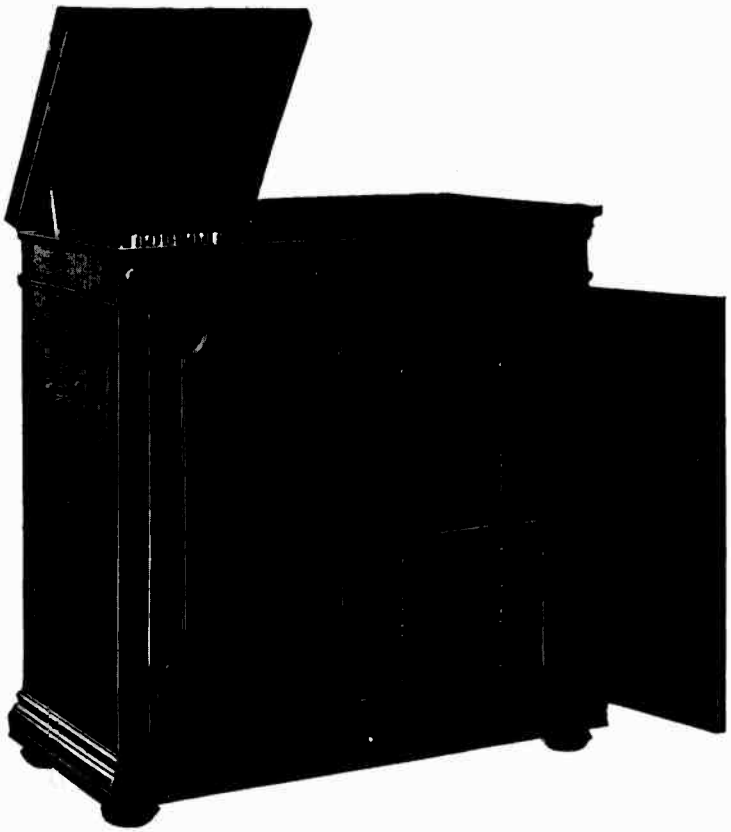


Radiola 28 Correct voltage readings across battery terminal strip

RADIOLA 28, VICTOR 9-2, 9-25, 9-40, 9-55 & 15-1

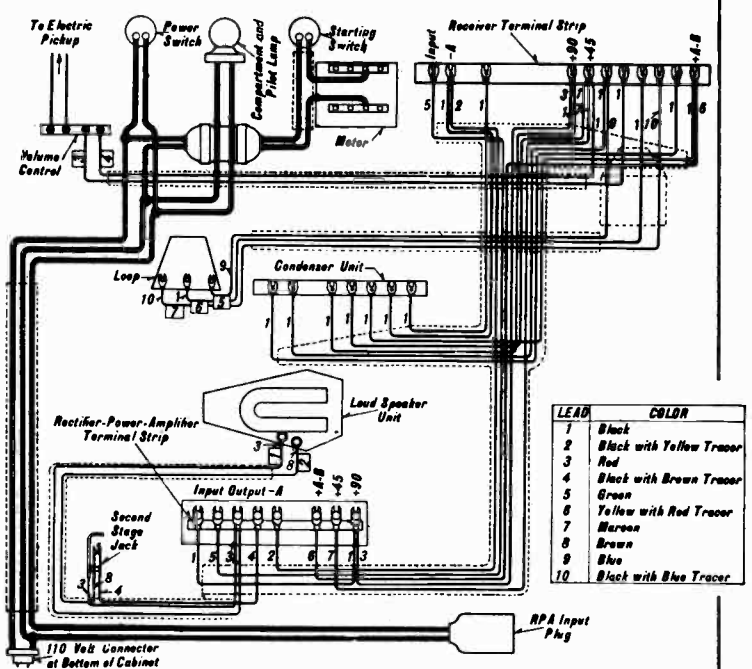
A.C. OPERATED — BORGIA II — HYPERION

Number Nine-Twenty Five



Orthophonic Electrola Radiola No. 9-40

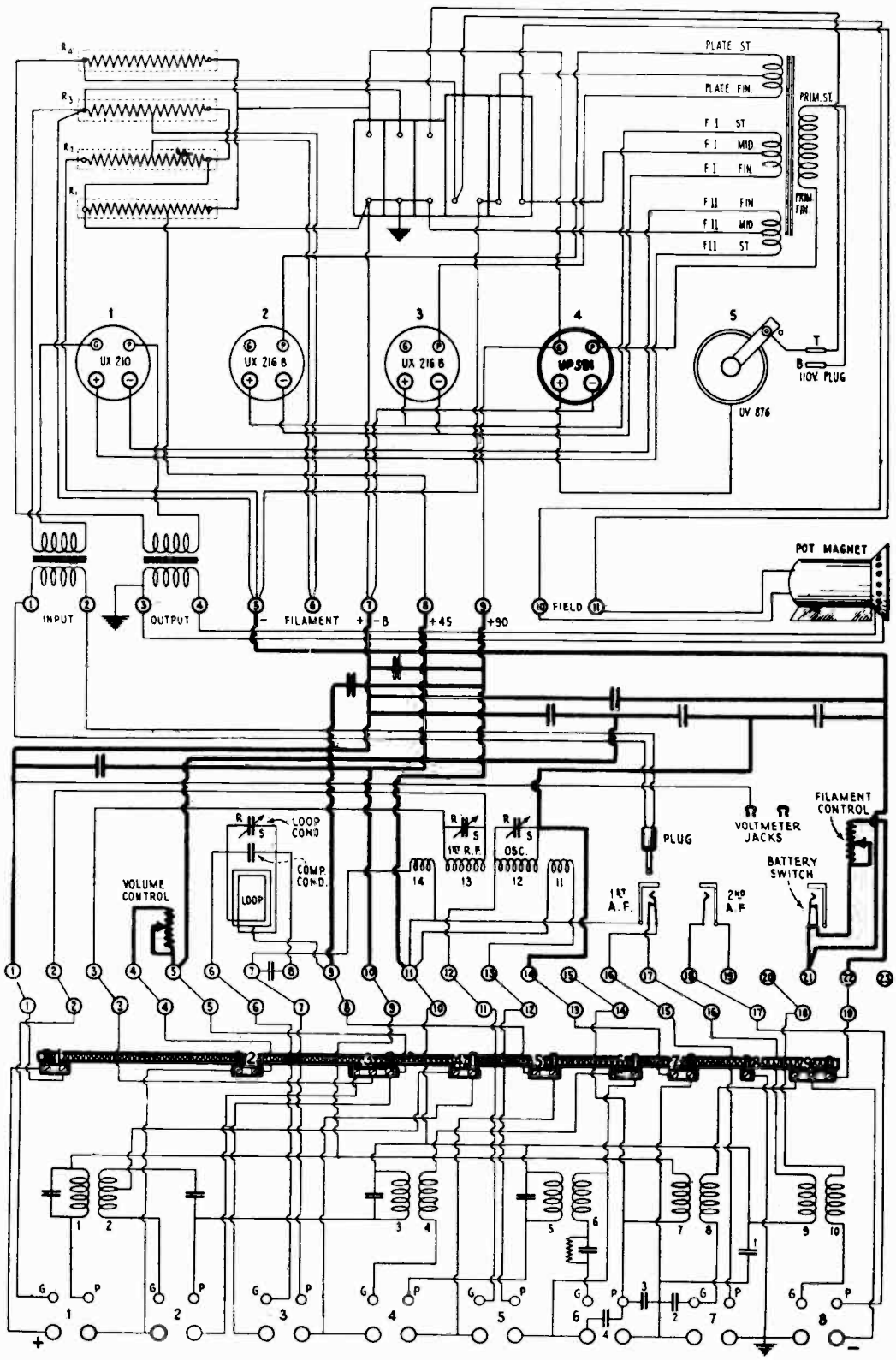
15-1
Electrola Hyperion Radiola



15-1 -Schematic Wiring Diagram

RADIOLA 28, VICTOR 9-2, 9-25, 9-40, 9-55 & 15-1

Radiola 28 a.c. uses UP-972 Power Amplifier



A.C. PACKAGE CHANGES

Radiola 28 A.C. operated continuity circuit diagram

RADIOLA 28, VICTOR 9-2, 9-25, 9-40, 9-55 & 15-1

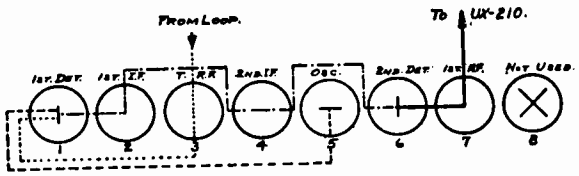
Radiola 28 may be used with Model 104 d.c. Loudspeaker for 110 volt socket power operation. Refer to Model 104 Loudspeaker

VICTOR RADIOLA 28
(AC Operated)

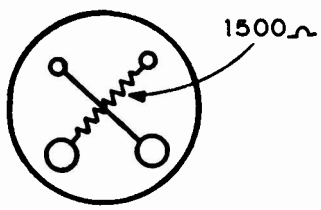
The Radiola used in combination with the Electrola in models Borgia II (9-2), Hyperion (15-1), 9-40, 9-25 and 9-55, is an eight tube superheterodyne receiver, employing a loop antenna for signal pickup and obtaining its D. C. operating current from an A. C. source through a rectifier-power-amplifier device.

Figure 1 shows in diagramatic form the sequence of tubes in the circuit, and the paths followed by the various currents which are denoted as follows:

..... Incoming Frequency
-------Oscillator Frequency
- - - - - Intermediate Frequency
_____ Audio Frequency

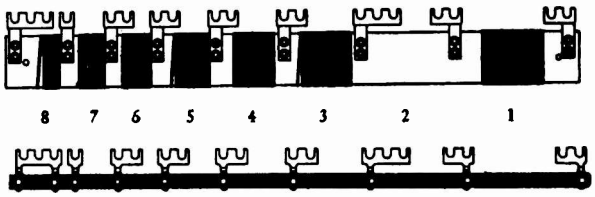


—Radiotron Sequence
(Borgia II reversed end for end)



-Bottom View of UP-591 Base Showing Internal Connections

Resistance Strip Values— illustrates the two types of filament resistance strips mounted on the catacombs of the A. C. operated models. On recent production section No. 2 of this strip has



-A. C. Strip

been left open. This has been compensated for by lowering the resistance of the volume control rheostat which is shunted across section No. 2 of the resistance strip. When replacing volume control resistors in models Borgia II and Hyperion it is advisable to use the new type resistors. It is then necessary to cut the No. 2 winding in order to provide correct filament voltage regulation in socket No. 2.

	Borgia II and Hyperion		9-40, 9-25 and 9-55	
Sec.	Lower Limit	Upper Limit	Lower Limit	Upper Limit
1	185	195	260	282
2	360	420	Open (See note)	
3	159	167	230	243
4	151	159	191	203
5	126	134	173	191
6	117	123	143	163
7	112	118	137	154
8	45	55	45	55

Note:—In the early 9-40 model which has the 20,000 ohm volume control this section has a resistance of 240 to 260 ohms.

CHANGES IN FACTORY BUILT A.C. RADIOLA 28

The following changes in connections and parts apply to factory built A.C. Radiolas 28 as distinguished from battery operated Radiolas 28 converted to A.C. operation.

Whisker 16 is connected to terminal 19 instead of terminal 17.

The condenser cable has an additional connection.

The output of the Radiola is taken direct from the terminal strip at the rear of the catacomb and the plug is not used in the first stage jack.

The filament switch voltmeter pin jacks and second audio stage phone jack are also omitted.

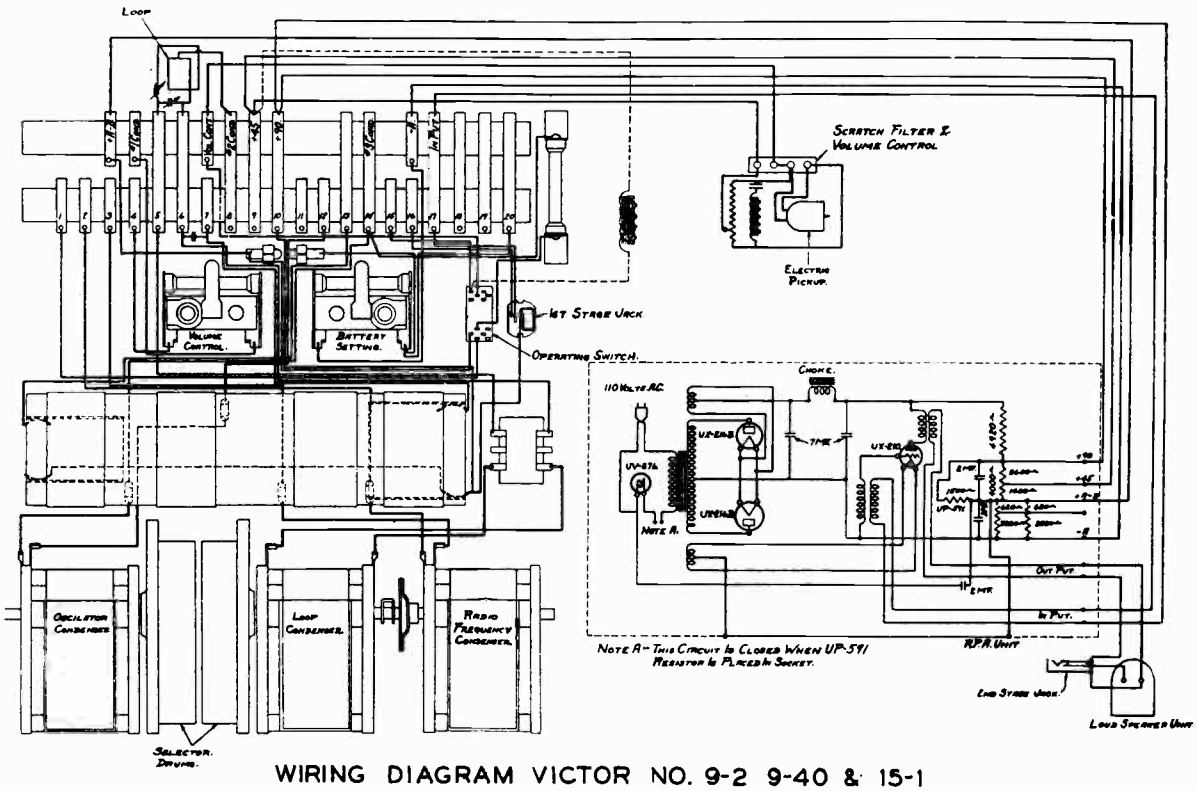
VOLTAGE READINGS OF RADIOLA 28

Taken at Catacomb Terminal Strip—Count Terminals from Left to Right When Facing Radiola 28

Terminals	*Correct Effect*
1 to 21	Should measure 31 volts, normally with all Radiotrons lit and battery setting near "Off." Positive terminal of voltmeter on No. 1.
1 to 10	Should measure 21.5 volts normally. Positive terminal of voltmeter to No. 10.
10 to 11	Should measure 41 volts normally. Positive terminal of voltmeter to No. 11.

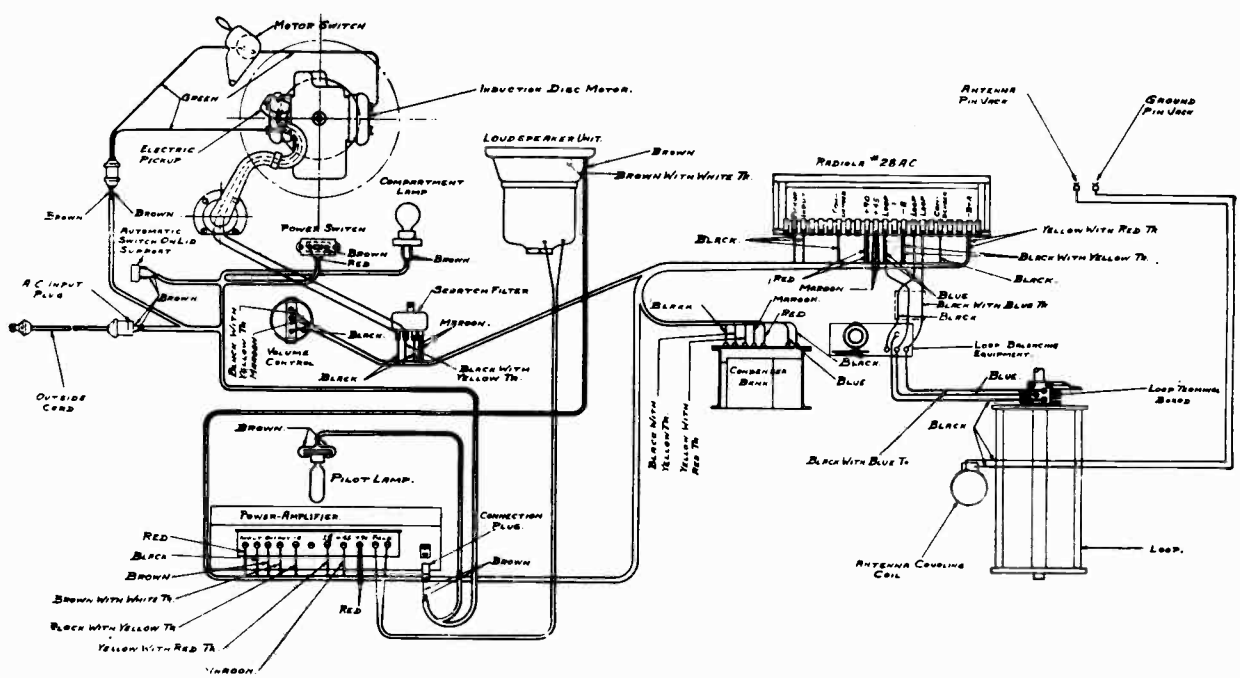
RADIOLA 28, VICTOR 9-2, 9-25, 9-40, 9-55 & 15-1

Victor Models 9-2, 9-40 and 15-1 use AP-947 Power Amplifier
Victor Model 9-25 uses AP-947A Power Amplifier
Victor Model 9-55 uses AP-997A Power Amplifier
Victor Model 9-40 may use AP-947X Power Amplifier



WIRING DIAGRAM VICTOR NO. 9-2 9-40 & 15-1

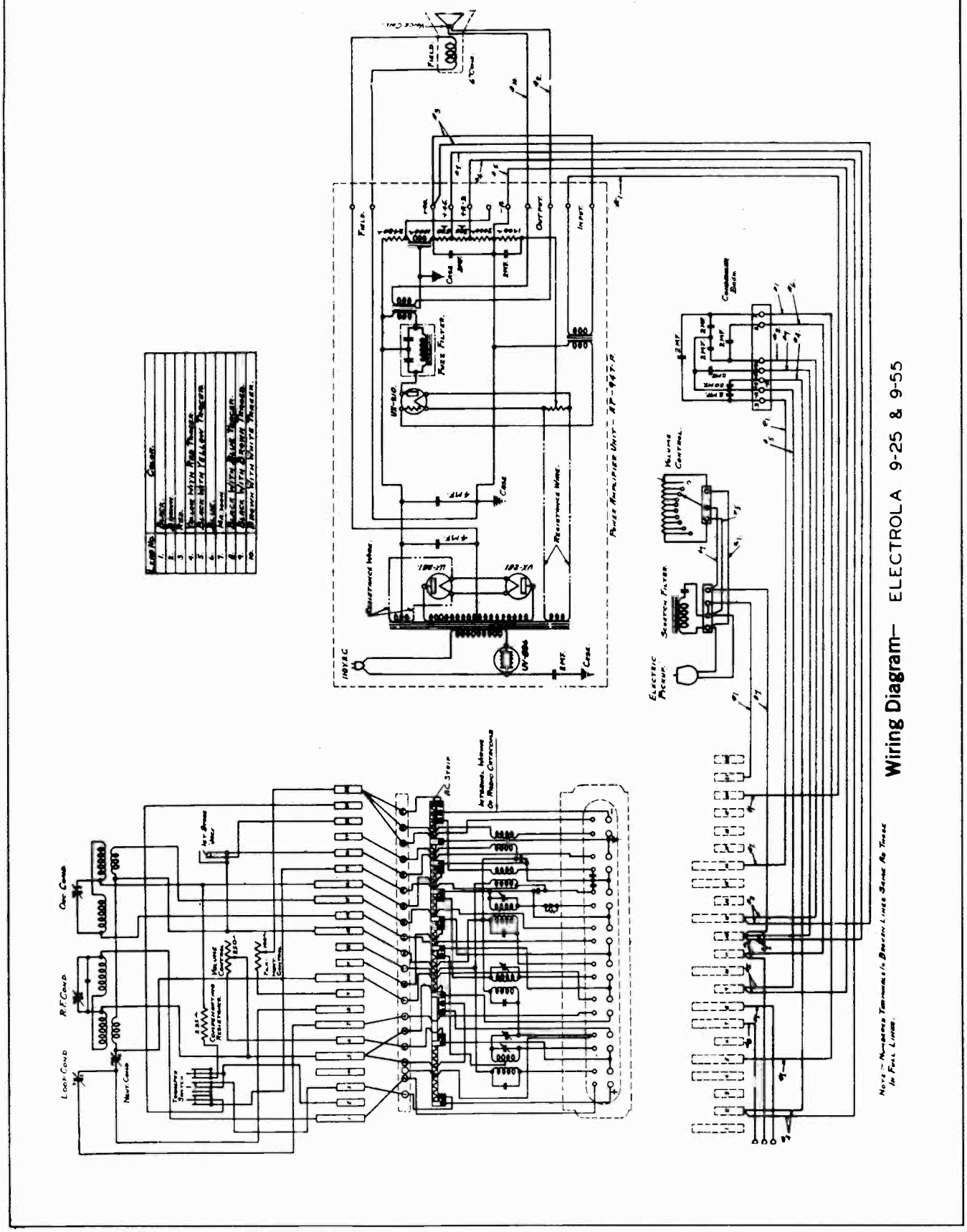
Model 9-40 using dynamic loudspeaker uses Power Amplifier AP-947X which has a 25 to 1 ratio output transformer and no filter choke.



-Wiring Diagram of Electrola Radiola No. 9-25

RADIOLA 28, VICTOR 9-2, 9-25, 9-40, 9-55 & 15-1

REFER TO INDEX FOR DATA ON AUTOMATIC RECORD CHANGER

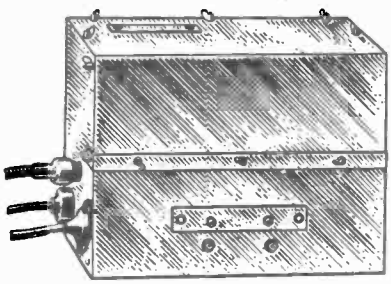


RADIOLA 28, VICTOR 9-2, 9-25, 9-40, 9-55 & 15-1

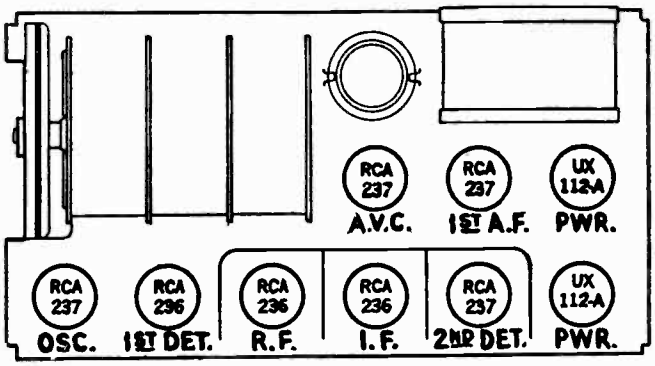
Stock No.	VE-9-55X DESCRIPTION
551	Condenser - 2 mfd. - Used in capacitor bank and amplifier.
744	Transformer - Output transformer - Ratio 1 to 1.
803	Transformer - Output transformer - Ratio 25 to 1.
1403	Block - Pickup connector block and wire.
1679	Resistor - 220-ohm tubular resistor - Filament compensator.
1698	Resistor - 100-ohm tubular resistor.
1729	Cover - Pickup cover.
1730	Block - Pickup connector block.
1731	Magnet - Pickup magnet.
1732	Mechanism - Pickup motor mechanism.
1733	Plate - Pickup magnet retaining plate - Package of 4.
1734	Screw - Pickup needle screw - Package of 5.
1737	Eliminator - Scratch eliminator.
1862	Resistor - 20,000-ohm tubular resistor - Open at one end.
1863	Control - Radio volume control - Less knob.
1865	Resistor - 20,000-ohm tubular resistor - Closed at both ends.
1906	Filter - Fuzz filter.
2168	Resistor - 2480-ohm resistor.
2214	Control - Electrola volume control.
2222	Housing - Pickup housing back.
2230	Resistor - 3400-ohm resistor.
2231	Resistor - 820-ohm resistor.
2232	Switch - Starting switch.
2255	Coil - Pickup coil.
2620	Cushion - Pickup rubber cushions - Set of 1 damper and 2 pivot cushions - Package of 1 set.
2762	Bearings - Governor bearings - Comprising 2 bearings, 2 set screws and 2 steel balls - Package of 3 sets.
2872	Ball and spring - Governor ball and spring with mounting screws and washers - Package of 5.
2947	Leather - Regulating lever friction leather - Package of 20.
5345	Condenser - 4 mfd.
5444	Choke - Filter choke coil.
5578	Coupler - Antenna coupler.
8247	Catacomb - Catacomb with red lead - 8 tube.
9084	Cone - 8" paper speaker cone.
10129	Ball - Steel ball bearing - 3/16" - Package of 20.
10268	Gear - Governor drive gear with set screw.
10271	Lever - Regulating lever with leather - Package of 3.
10289	Governor - Governor assembly - Comprising spindle, collar, friction disc, ball and springs - Assembled.
10311	Catch - Door catch with strike and nail -
10325	Box - Needle box with lid - Package of 2.
10349	Tray - Needle tray - Comprising tray, plate and spring with mounting screws.
10362	Screw - Pickup mounting screw - Package of 4.
10480	Clutch - Clutch wheel with set screw.
10492	Spring - Pawl carrier spring - Package of 10.
10500	Disc - Rotor disc with set screw.
10502	Screw - Pickup connector block screw - Package of 10.
10554	Door - Walnut cabinet door (Set of 3 doors) - Package of 1 set.
10563	Screw - Pickup cover screw - Package of 20.
10564	Holder - Pilot lens and holder - Package of 2.
10565	Socket - Pilot lamp socket.
10566	Socket - Compartment lamp socket.
10568	Screw - Pickup magnet retaining plate screw - Package of 20.
10681	Coil - Motor inductor coil - 60 cycle.
10713	Pickup - Complete pickup unit.
10714	Lever - Sound box control lever.
10715	Shaft - Index shaft.
10716	Lever - Index lever.
10717	Gear - Cam gear.
10718	Gear - Intermediate gear.
10719	Slide - Main slide.
10720	Hinges - Door hinges - Set of 3 with 24 mounting screws - Package of 1 set.
10721	Lever - Clutch release lever.
10722	Lever - Sound box lift lever.
10723	Lever - Trip lever.
10724	Lever - Taper tube return lever.
10725	Link - Connecting link.
10726	Spring - Index lever spring - Package of 10.
10727	Spring - Clutch release lever spring - Package of 10.
10728	Spring - Trip and reject lever spring - Package of 10.
10729	Carrier - Pawl carrier and pawl.
10730	Shaft - Index control shaft.
10731	Coil - Remote reject coil with mounting screws - Less spacers.
10732	Tube - Taper tube assembly - Comprising tube, arm, connector block and mounting screws - Assembled.
10733	Arm - Taper tube arm and trip pawl stem.
10734	Screw - Mounting screw for levers - 6 used - Package of 10.
10735	Screw - Mounting screw for levers - 2 used - Package of 10.
10736	Magazine - Record magazine - Comprising base, stand, latch, spindle, tilting lever and roller.
10737	Spring - Lift ring connecting link spring - Package of 10.
10738	Switch - Motor board stop switch assembly - Comprising switch plate, bottom plate, latch, trip, cord and mounting screws.
10739	Handle - Index control handle with set screw.
10740	Lift assembly - Record lift - Comprising ring, pad, shaft, and set screw.
10741	Spindle - Turntable spindle.
10742	Escutcheon - Regulating screw escutcheon with mounting screws.

RADIOLA M-30

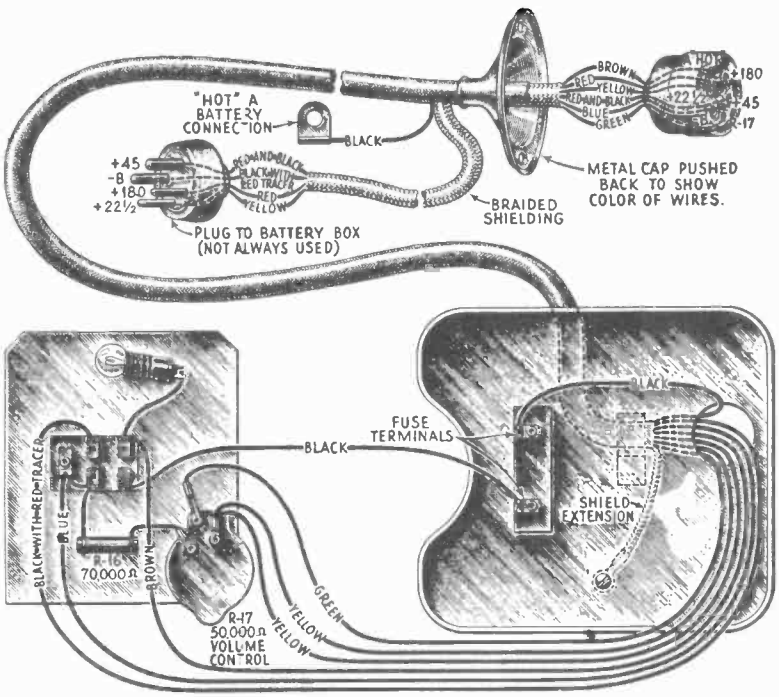
AUTOMOBILE RADIO



Receiver Assembly

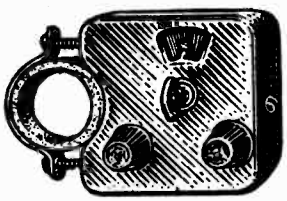


Radiotron Socket Location



Control Box Wiring

"A" battery current drain is 2.85 Amperes
"B" current 12 M.A. minimum and 25 M.A. average maximum. undistorted output—2 Watts.

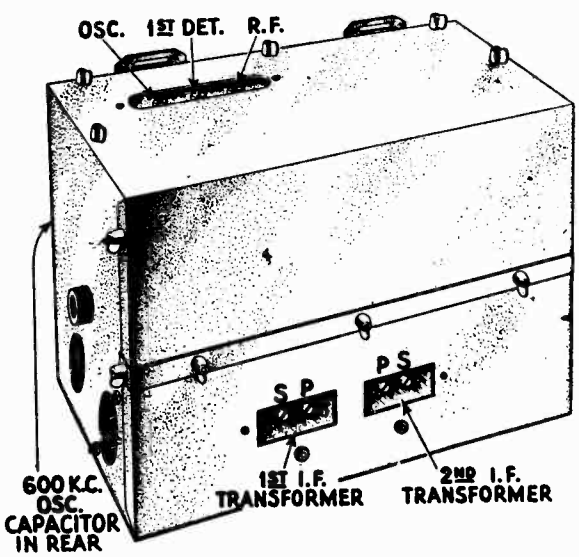


Control Box

Loudspeaker

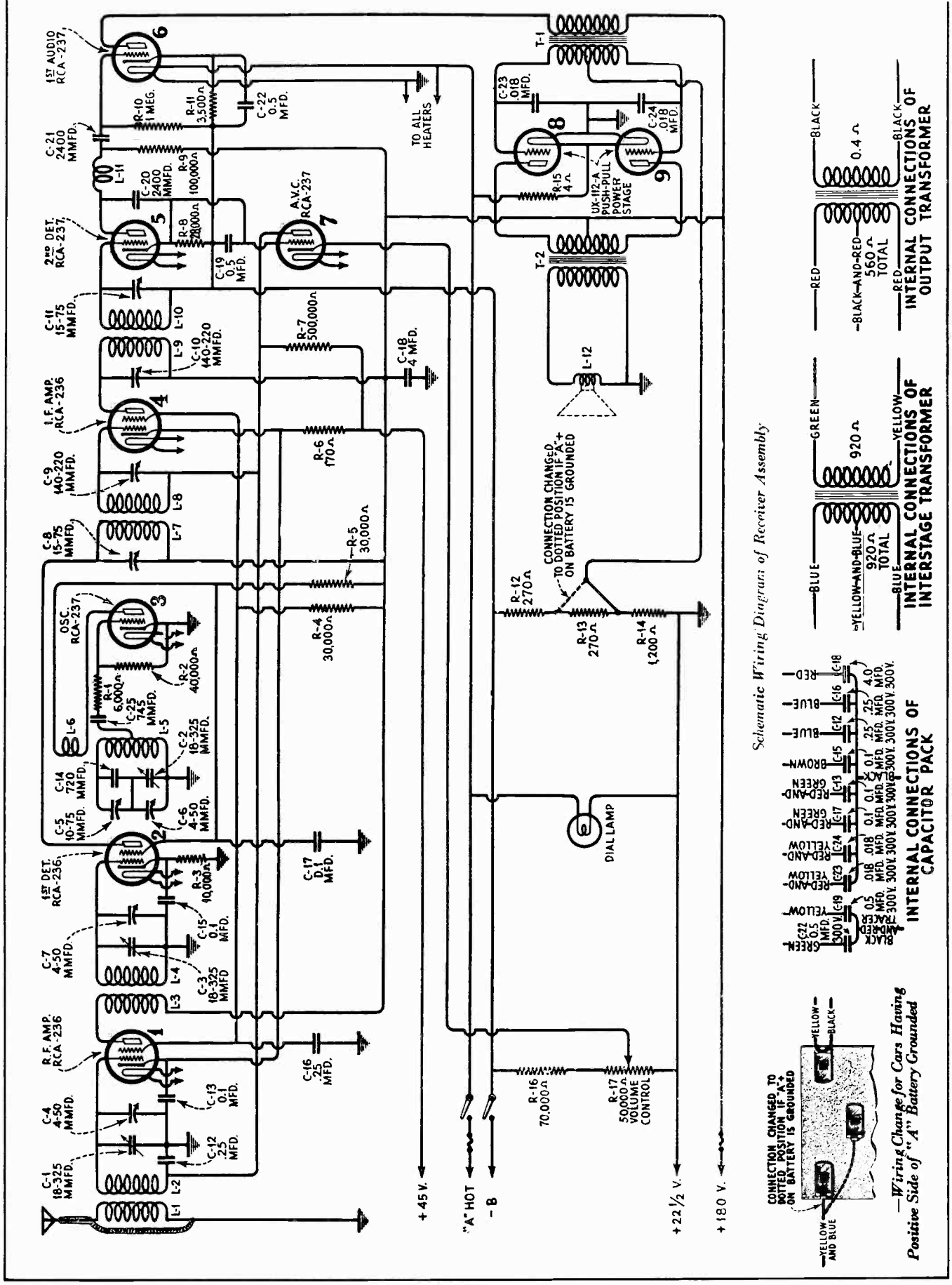
Alignment Procedure

STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO	ADJUST THE FOLLOWING FOR MAX. OUTPUT
1	I-F Grid in series with .01 mfd	175 kc	Quiet Point near 600 kc	S & P of 2nd I-F Trans.
2	1st Det. Grid in series with .01 mfd			S & P of 1st I-F Trans.
3	Antenna in series with 200 mmfd	1400 kc	1400 kc	Osc., Det. and R-F Trimmers on gang condenser
4		600 kc	600 kc	600 kc Oscillator Trimmer (Rock Gang)
5		*Repeat Step 3*		
6	With auto antenna connected to receiver, adjust R-F Trimmer for maximum output on weak station near 1400 kc.			

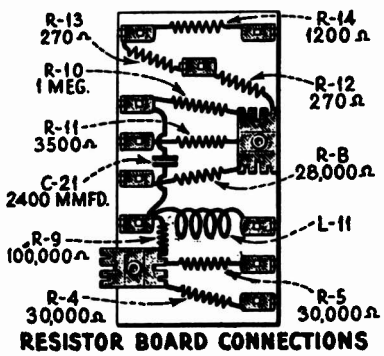


Location of Radio Frequency, Oscillator and Intermediate Frequency Adjustments

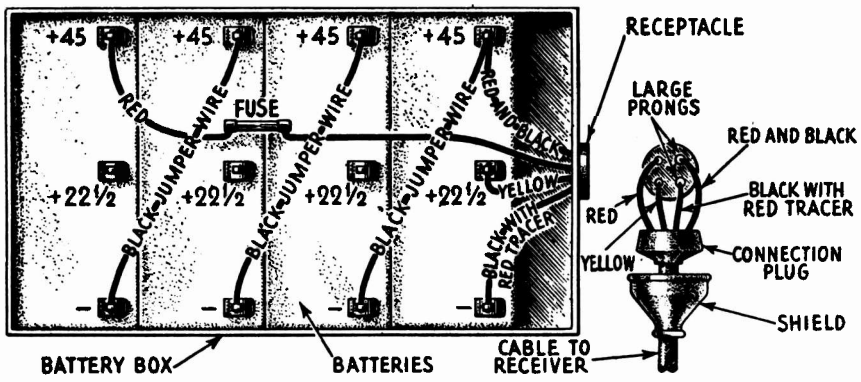
RADIOLA M-30


1ST AUDIO RCA-237
2ND DET. RCA-237
I.F. AMP. RCA-236
R.F. AMP. RCA-236
1ST DET. RCA-236
OSC. RCA-237
A.V.C. RCA-237
UX-112-A PUSH-PULL POWER STAGE
TO ALL HEATERS
DIAL LAMP
CONNECTION CHANGED TO DOTTED POSITION IF "A+" ON BATTERY IS GROUNDED
+45 V.
"A" HOT
- B
+22½ V.
+180 V.
INTERNAL CONNECTIONS OF INTERSTAGE TRANSFORMER
INTERNAL CONNECTIONS OF OUTPUT TRANSFORMER
INTERNAL CONNECTIONS OF CAPACITOR PACK
Schematic Wiring Diagram of Receiver Assembly
Wiring Change for Cars Having Positive Side of "A" Battery Grounded

RADIOLA M-30



RESISTOR BOARD CONNECTIONS



-Battery Box Connections

REPLACEMENT PARTS

Stock No.	DESCRIPTION	List
	RECEIVER ASSEMBLY	
2240	Resistor—30,000 ohms—Carbon type—1 watt	
2546	Resistor—1 megohm—Carbon type—1 watt—Package of 5	
2736	Resistor—170 ohms—Carbon type—1 watt—Package of 5	
2741	Idler—Tuning capacitor drive idler—Package of 5	
2742	Spring—Tuning capacitor drive tension spring—Package of 5	
2747	Cap—Grid contactor cap—Package of 5	
2749	Capacitor—2400 mmfd	
2966	Resistor—28,000 ohms—Carbon type—1 watt—Package of 5	
2994	Coil—2nd detector R.F. choke coil	
3048	Resistor—500,000 ohms—Carbon type—½ watt—Package of 5	
3078	Resistor—10,000 ohms—Carbon type—— watt—Package of 5	
3118	Resistor—100,000 ohms—Carbon type—¼ watt—Package of 5	
3288	Socket—UY Radiotron socket—Complete with insulation strip	
6133	Socket—UX Radiotron socket—Complete with insulation strip	
6134	Resistor—1200 ohms—Carbon type—1 watt—Package of 5	
6135	Resistor—270 ohms—Carbon type—¼ watt—Package of 5	
6136	Resistor—3500 ohms—Carbon type—1 watt—Package of 5	
6137	Coil—R.F. coil	
6138	Coil—1st detector and oscillator coil	
6139	Cord—Tuning condenser drive cord—Package of 5	
6140	Plug—6 prong male plug and plug receptacle	
6141	Receptacle—Two prong receptacle for speaker cord plug—Package of 2	
6142	Resistor—6,000 ohms—Carbon type—½ watt—Package of 5	
6143	Resistor—40,000 ohms—Carbon type—¼ watt—Package of 5	
6144	Resistor—4 ohms—Flexible wire type—Package of 5	
6145	Cover Plate—Adjustable capacitor adjustment cover plate—Located on back receiver shield—Package of 5	

Stock No.	DESCRIPTION	List
6146	Screw—Self tapping hex head screw—For mounting cover plates to shield—Package of 40	
6147	Nut—Wing nut for receiver shield—Package of 20	
6148	Fuse—10 amperes—Package of 5	
6149	Bumper—Rubber bumpers—Located on receiver mounting bracket—Package of 10	
6150	Plug—Six prong female plug—Located on main cable	
6151	Suppressor—Spark plug type suppressor	
6152	Suppressor—Distributor type suppressor	
6175	Suppressor—Distributor splice-in suppressor	
7062	Capacitor — Adjustable capacitor - 15-70 mmfd	
7065	Micarta Screw Driver—Used for I. F. and R. F. adjustment	
7299	Capacitor—745 mmfd	
7421	Capacitor pack—Comprising two 0.5 mfd., two 0.018 mfd., three 0.1 mfd., two 0.25 mfd. and one 4.0 mfd. capacitors in metal container	
7422	Transformer—1st intermediate transformer	
7423	Transformer—2nd intermediate transformer	
7424	Transformer—Output transformer	
7425	Transformer—Interstage transformer	
7426	Board—Resistor board complete, less resistors, coil and capacitor	
7427	Cover plate—Intermediate adjustment cover plate—Located on front receiver shield—Package of 5	
7428	Cover plate—Tuning capacitor trimmer adjustment cover plate—Located on top receiver shield—Package of 5	
7429	Capacitor—0.625 mfd.—In metal casing with mounting bracket	
8821	Capacitor assembly—Tuning capacitor assembly—Comprising 3 variable capacitors, drive bracket, drive cord, drive shaft and drum—Assembled	

REPLACEMENT PARTS—(Continued)

Stock No.	DESCRIPTION	List
	RECEIVER ASSEMBLY—Continued	
8822	Flexible drive shaft—Length 30"—From control box to receiver	
8823	Shield—Back cover shield for receiver chassis	
8824	Shield—Front cover shield for receiver chassis	
8825	Shield—Top cover shield for receiver chassis	
8826	Bracket—Receiver chassis mounting bracket complete with two rubber bumpers	
8827	Cable—Main cable less plug—From control box to receiver chassis and battery box	
8833	Flexible drive shaft—Length 42"—From control box to receiver	
8834	Flexible drive shaft—Length 54"—From control box to receiver	
8835	Flexible drive shaft—Length 66"—From control box to receiver	
8836	Flexible drive shaft—Length 78"—From control box to receiver	
	CONTROL BOX ASSEMBLY	
3287	Label—Metal trade mark label—Package of 5	
6153	Clamp—For clamping control box to steering wheel shaft—Package of 5	
6154	Screw — Clamp mounting screw — Package of 50	
6155	Shaft—Tuning dial shaft with gear and drive washer—Package of 5	
6156	Switch—Lock switch—Complete with mounting nut and washer	
6157	Volume control—Volume control complete with mounting nut	
6158	Nut—Knurled nut for lock switch—Package of 10	
6159	Resistor—70,000 ohms—Carbon type —½ watt—Package of 5	
6160	Dial scale—Package of 5	
6161	Knob—Tuning control knob—Package of 5	
6162	Spring—Knob tension spring—Package of 25	
6163	Knob—Volume control knob—Package of 5	
6164	Key—Lock switch key—Package of 10	
6165	Lamp—Dial scale lamp—Package of 5	
6169	Felt—Felt strip for steering column—Package of 10	
7430	Control box complete—Less flexible shaft and cable	
7431	Cover assembly—Comprising top and bottom covers	
7432	Bracket assembly—Comprising brackets, studs, stop washer and lamp socket—Located inside of control box	
	LOUDSPEAKER ASSEMBLY	
2975	Rivet—Cone retaining ring mounting rivet—Package of 100	
6166	Board—Terminal board with two terminals—Located on cone bracket —Package of 5	
6167	Plug—Two prong male plug—For cable No. 8832—Package of 5	
6170	Rivet—For mounting speaker and front grille into housing—Package of 100	
6171	Rivet—For mounting No. 8831 bracket to housing—Package of 100	
7433	Screen-Speaker housing case wire screen —Package of 5	
7434	Screen—Dust screen for back of speaker housing case—Package of 5	
8702	Ring—Cone retaining ring	
8828	Magnet assembly—Comprising cone bracket, core and magnet	
8829	Cone—Speaker paper cone. Package of 5	
8830	Housing—Speaker housing complete—Comprising front screen, back dust screen, case and mounting bracket	
8831	Bracket assembly—Speaker housing bracket — Comprising bracket, 2 mounting bolts, 4 washers and 4 nuts	
8832	Cable—Speaker shielded cable less plug	
8838	Speaker complete—Comprising Speaker, housing case and cord—Assembled	
	ANTENNA ASSEMBLY	
6129	Staple—Insulated staple—Package of 100	
6130	Screw and Nut—U bracket set screw —⅜—16 x 1¼—Complete with lock nut—Package of 10	
6131	Insulator—Insulator bushing for No. 7420—Package of 10	
7419	Bracket—U bracket for mounting antenna plates—Package of 2	
7420	Stud—Antenna plate stud—⅜—16 x 8"—Complete with 5 mounting nuts—Package of 5	
8819	Plate—Single antenna plate	
	BATTERY BOX ASSEMBLY	
2968	Receptacle—Four prong receptacle complete	
6122	Clamp—Cable clamp—Package of 15	
6123	Plug—Four prong male plug	
6124	Cap—Plug cover rubber cap for No. 6123—Package of 5	
6125	Fuse—¼ amperes—Package of 5	
6126	Clip—Fuse clip—Package of 12	
6127	Bolt—Carriage bolt for mounting top of box to car—5/16—18 x 1¼"—Complete with lock nut—Package of 5	
7418	Bolt—Hanger bolt 5/16—18 x 9¼"—Complete with two lock nuts—Package of 5	
8817	Box body assembly—Comprising bottom plate, 2 side plates, 2 bottom strips and receptacle—Assembled	
8818	Box cover assembly—Comprising cover plate, 2 strips and 2 rubber strips —Assembled	
8820	Plate and strip assembly—Cardboard plate and strip assembly comprising six strips and one plate — Package of 5	

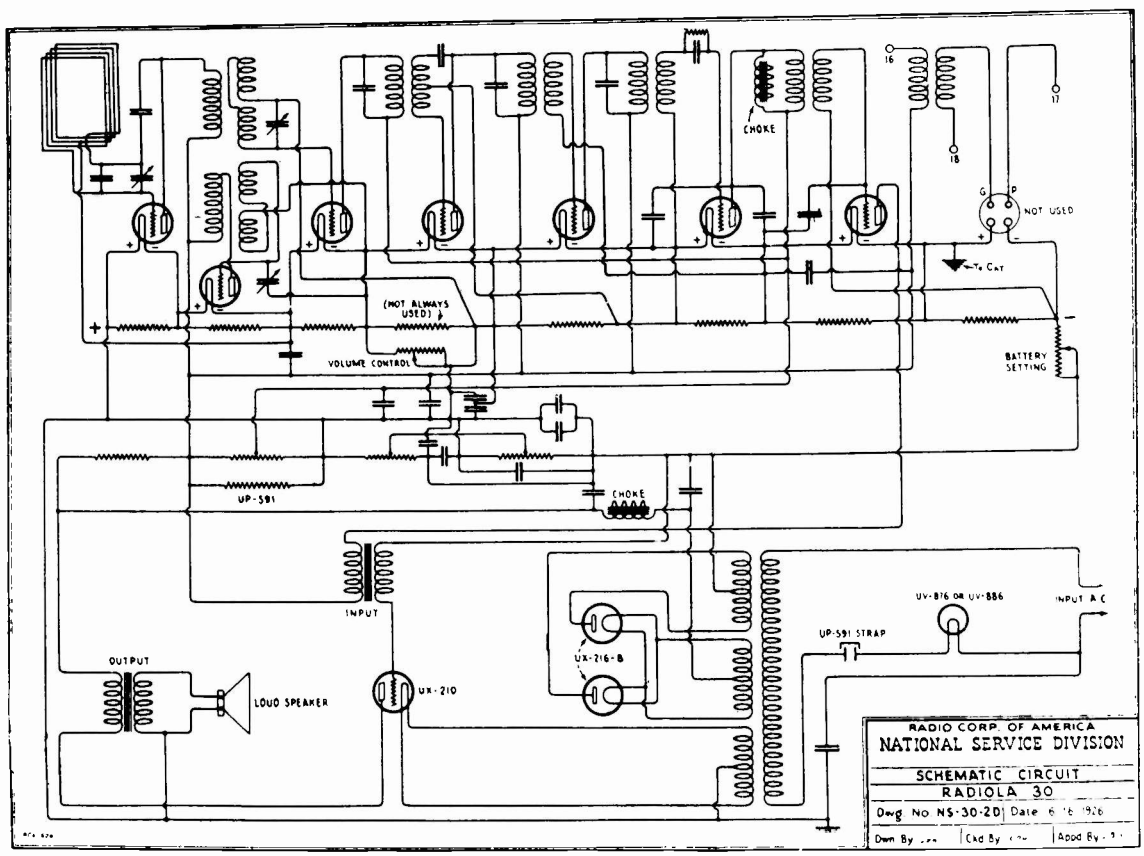
RADIOLA 30

RADIOLA 30

Radiola 30 is similar to Radiola 28 a.c.
The receiver uses Model 100 Loudspeaker.
Refer to Radiola 28 for additional data.
Two different volume controls and two different resistance strips are used.

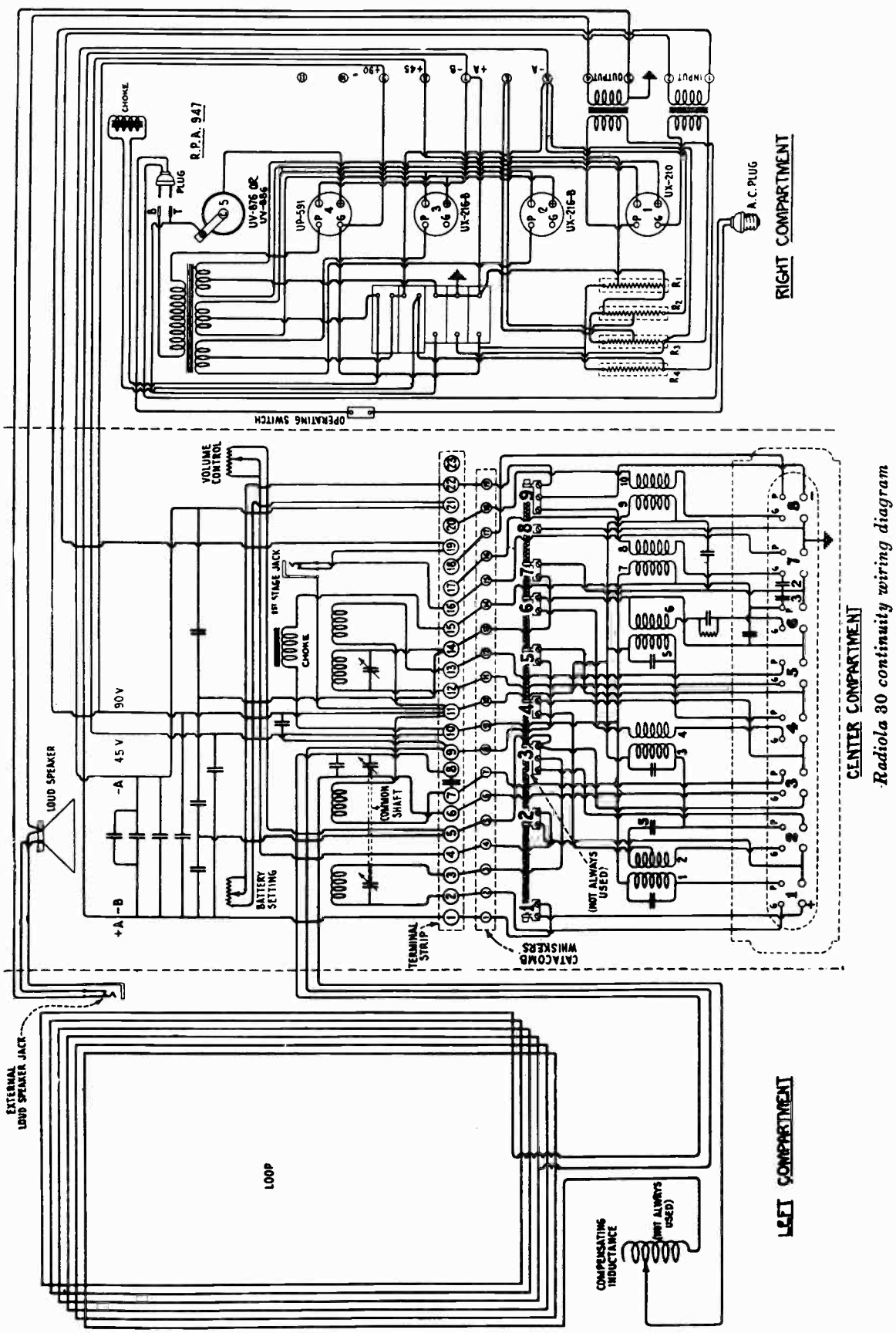
RESISTANCE STRIP VALUE IN OHMS

Resistance Terminals	250 OHM VOLUME CONTROL	375 OHM VOLUME CONTROL
1—2	271	190
2—3	Open	400
3—4	236.5	163
4—5	197	155
5—6	183.5	130
6—7	154.5	120
7—8	145.5	115
8—9	50	50



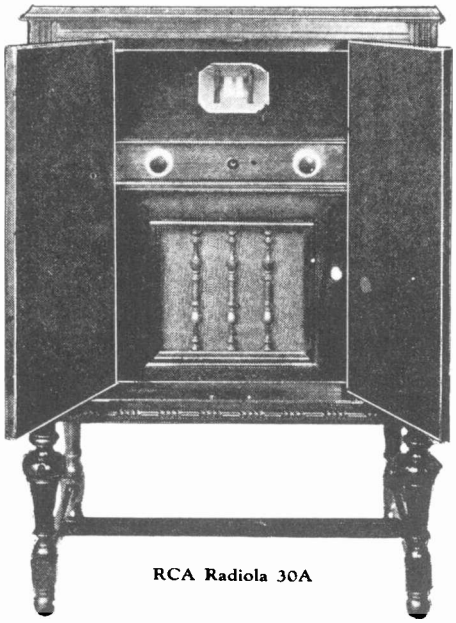
-Schematic circuit diagram of Radiola 30

RADIOLA 30



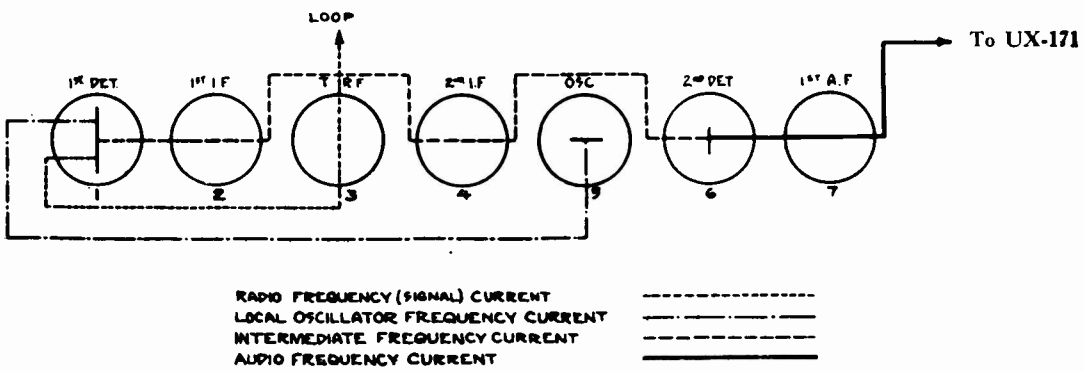
Radiola 30 continuity wiring diagram

RADIOLA 30-A



RCA Radiola 30A

Radiola 30A is made in a.c. and d.c. types.
The receiver chassis is the Radiola 28 and uses Model 100A Loudspeaker. Refer to Radiola 28 for additional data.

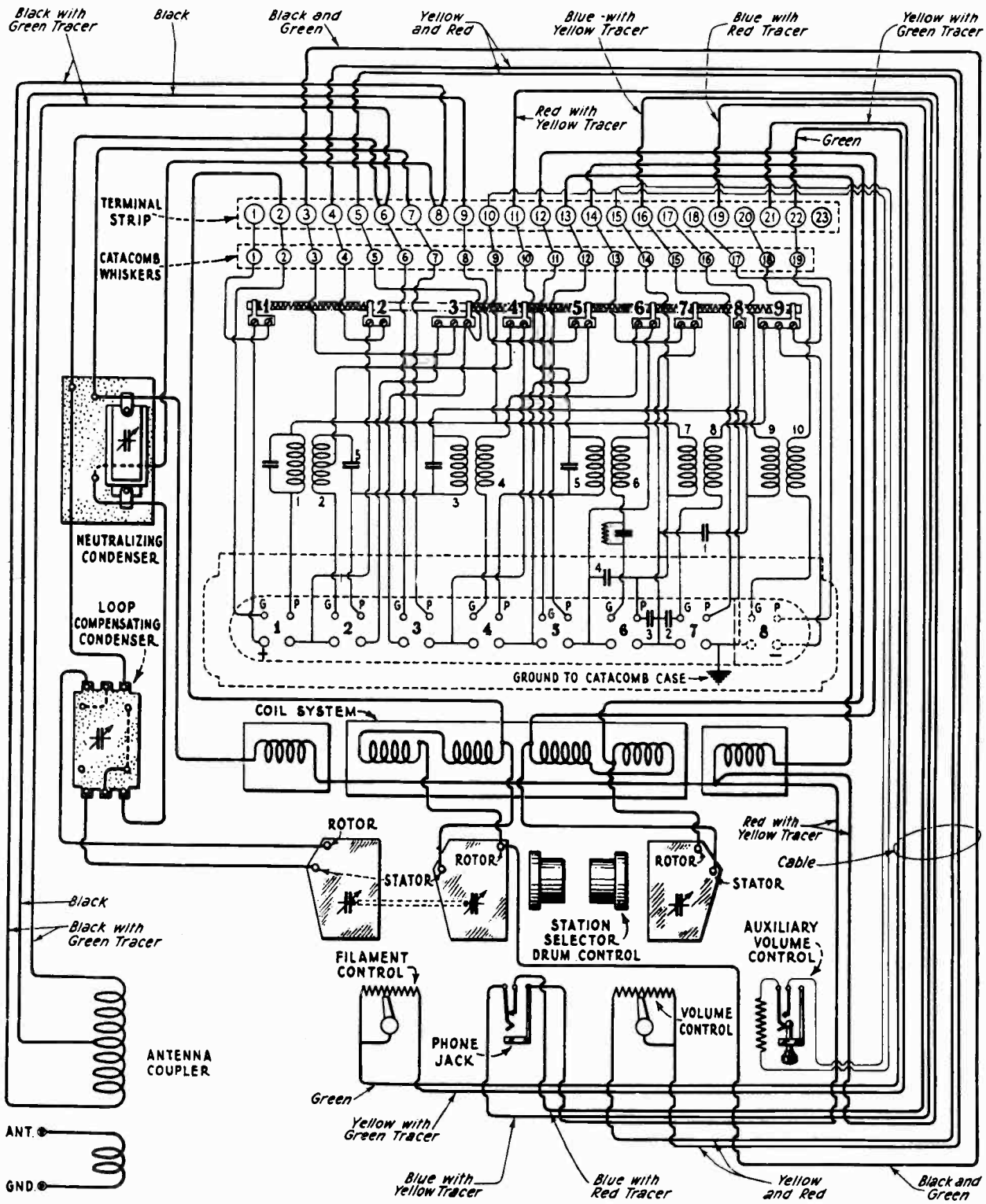


Radiola 30A Radiotron sequence and path of the different currents

VOLTAGE READINGS OF RADIOLA 30A

Taken at Catacomb Terminal Strip—Count Terminals from Left to Right When Facing Front of Radiola 30A

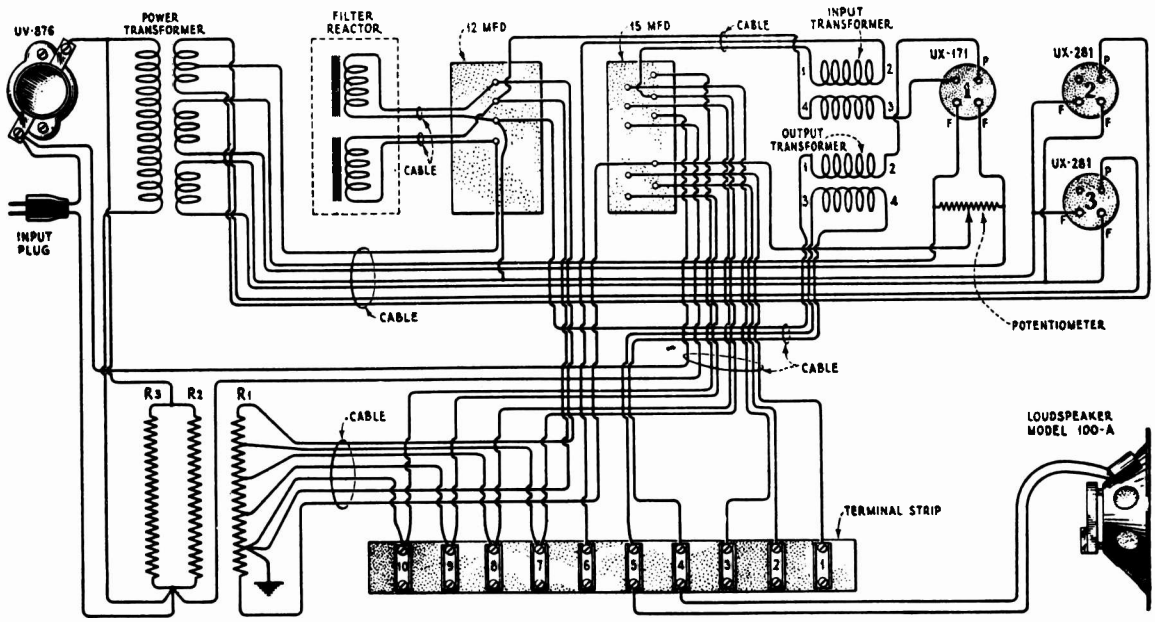
Terminals	*Correct Effect*
1 to 21	Should measure 31 volts, normally, with all Radiotrons lit and battery setting near "Off." Positive terminal of voltmeter on No. 1.
1 to 10	Should measure 21.5 volts, normally. Positive terminal of voltmeter to No. 10.
10 to 11	Should measure 41 volts, normally. Positive terminal of voltmeter to No. 11.



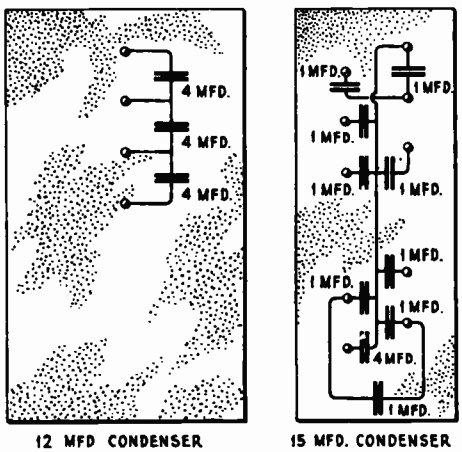
Panel and antenna coupler assembly continuity wiring diagram

The allowable values in ohms for the different sections of the resistance strips in Radiola 30A are tabulated below:

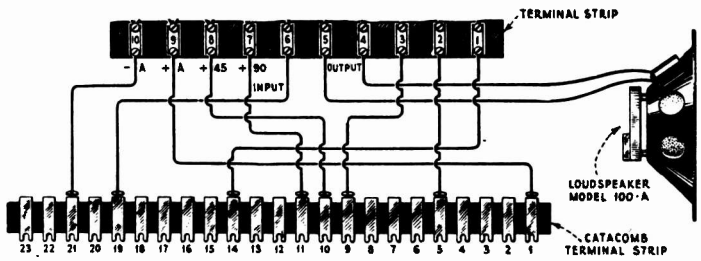
Terminals	*Lower Limit*	*Normal*	*Upper Limit*
1-2	260	271	282
2-3	Open	Open	Open
3-4	230	236.5	243
4-5	191	197	203
5-6	176	183.5	191
6-7	146	154.5	163
7-8	137	145.5	154
8-9	45	50	55



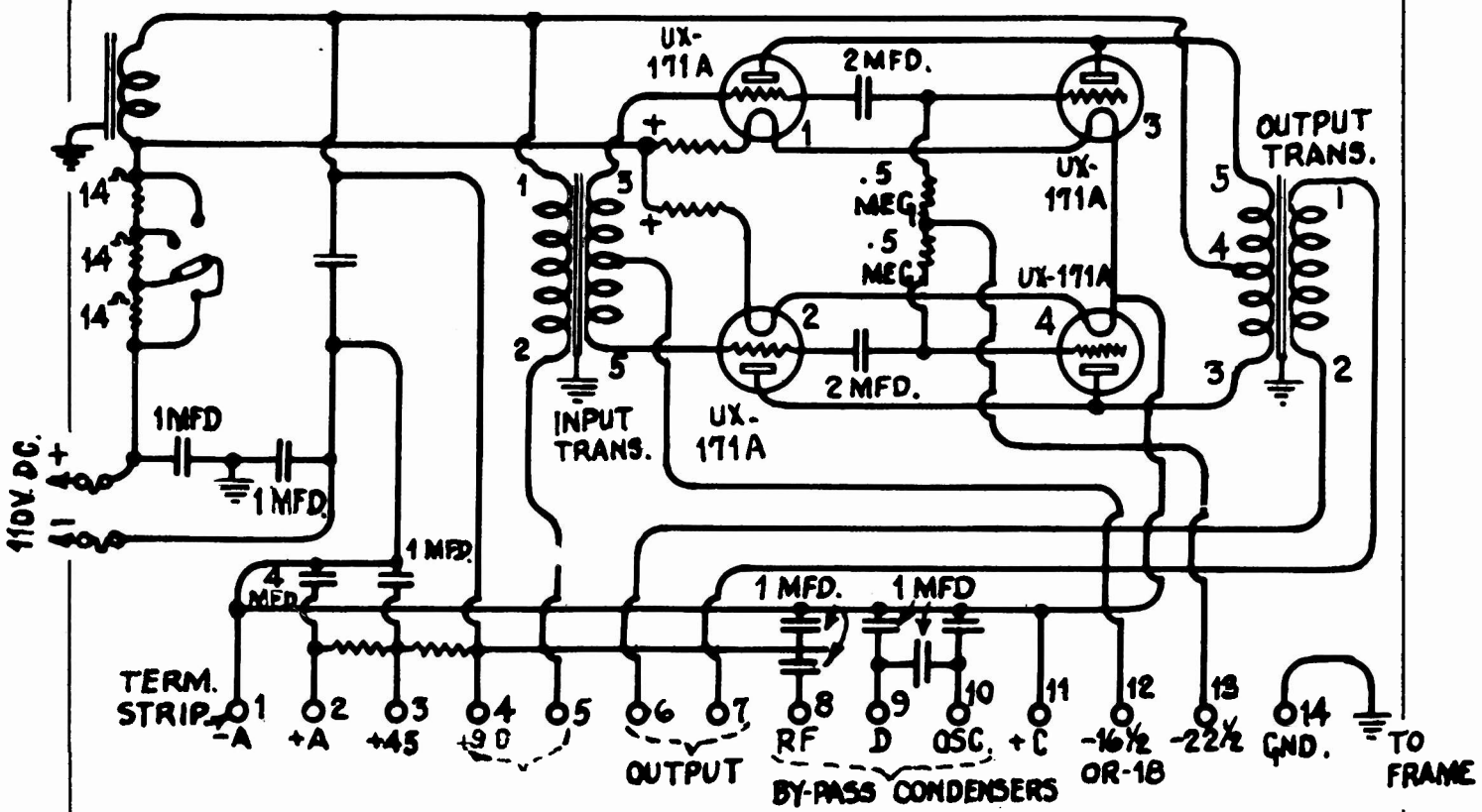
Continuity wiring diagram of the R.P.A. unit



Internal connections of filter condensers



D.C. socket powered Radiola 30A is identical to the A.C. Model in all respects with the exception of the Socket Power Unit consisting of four Radiotrons UX-171A connected in a push-pull amplifying circuit. The output transformer is designed for use with RCA Loudspeaker 100A.



Radiola 30A D.C. Socket Power Unit schematic circuit with terminal connections, plate, grid and filament voltages.

CONDENSER BANK

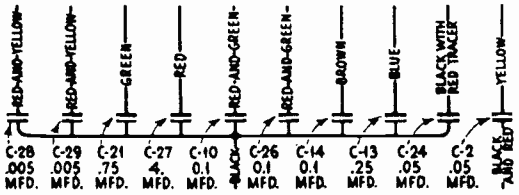
Two condenser banks are incorporated in D.C. socket powered Radiola 30A, one 10 Mfd. and one 12 Mfd. The 12 Mfd. condenser block consists of one 6 Mfd. filter condenser and two 2 Mfd. grid blocking condensers and two 1 Mfd. grounding condensers. The 10 Mfd. condenser block contains the extra filter condensers normally in the A.C. package used with the eight-tube catacomb. The internal connections of each condenser bank are shown on a diagram mounted on the side of each unit.

RADIOLA P-31
PORTABLE

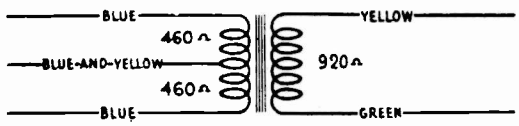
ELECTRICAL SPECIFICATIONS

"A" Batteries required	Two No. 6 Dry Cells
"B" Batteries required	Four 45 volt blocks such as Burgess 5308
"A" Battery Current	0.48 Amps.
Average "B" Battery Current	18 M. A.
Type of Circuit	Super-Heterodyne with A. V. C.
Type and Number of Radiotrons	3 RCA-234, 1 RCA-232, 4 RCA-230
Type of Audio Output Amplifier	Class "B"
Undistorted Output	0.75 Watts

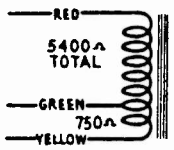
RCA Victor Portable Radiola P-31



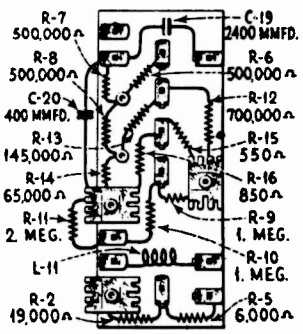
INTERNAL CONNECTIONS OF CAPACITOR PACK



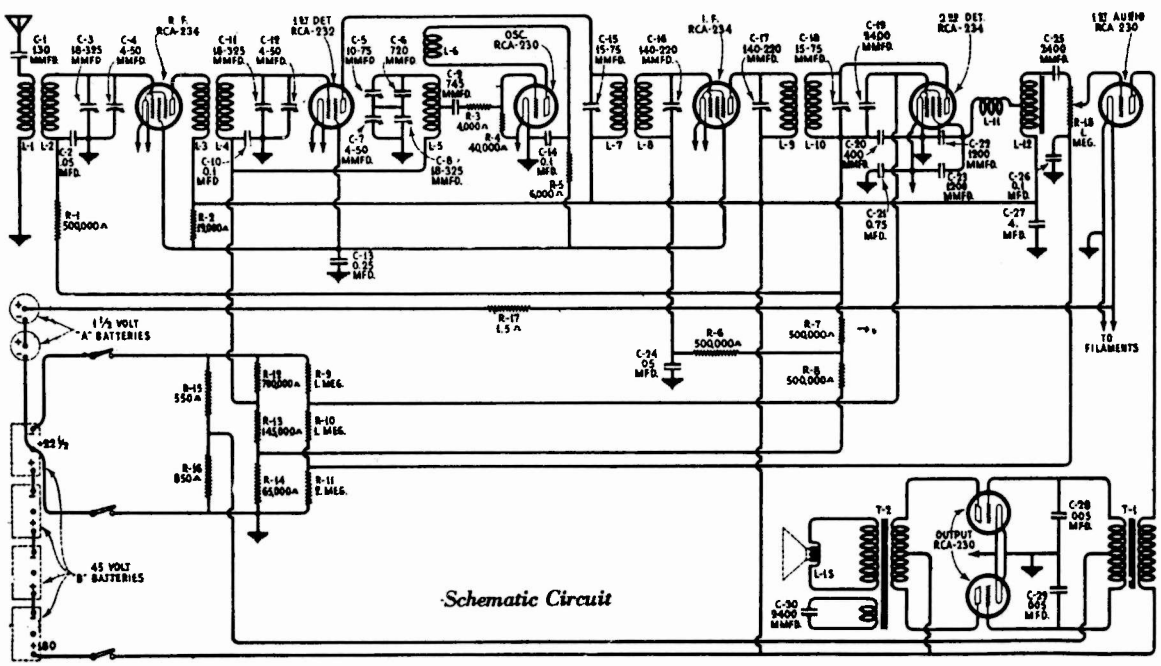
INTERNAL CONNECTIONS OF INTERSTAGE AUDIO TRANSFORMER



INTERNAL CONNECTIONS OF COUPLING REACTOR

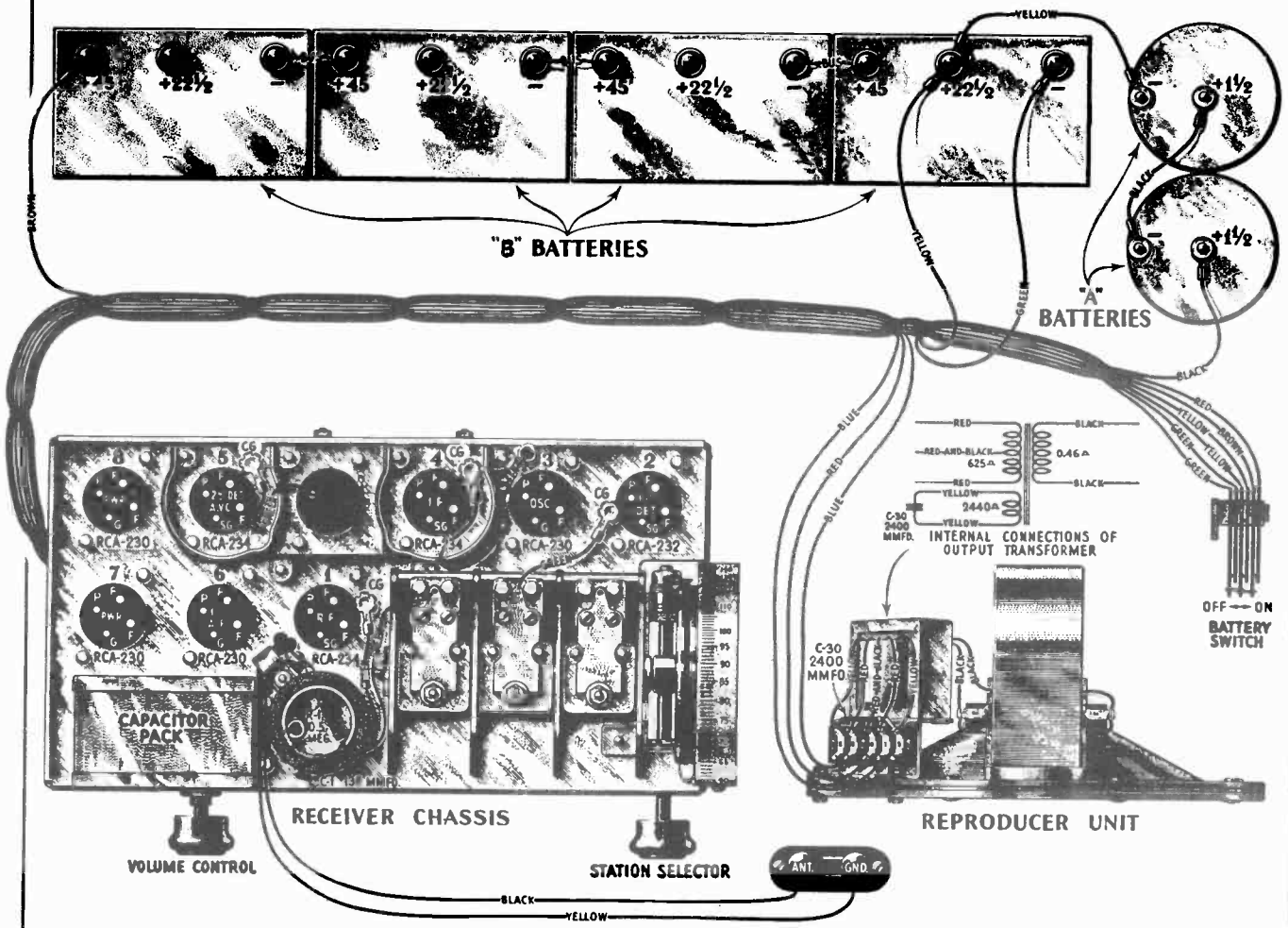


RESISTOR BOARD CONNECTIONS



Schematic Circuit

RADIOLA P-31



–Assembly Wiring Diagram

RADIOTRON SOCKET VOLTAGES

(No Signal Being Received)

Radiotron No.	Control Grid to Filament Volts	Screen Grid to Filament Volts	Plate to Filament Volts
1. R. F.	0.2	65	150
2. 1st Det.	0.5	65	150
3. Osc.	1.0	—	45
4. I. F.	0.5	65	150
5. 2nd Det.	2.0	150	—1.5
6. 1st A. F.	1.0	—	145
7. Power	14.0	—	150
8. Power	14.0	—	150

Alignment Procedure

Connect lowside of test oscillator to chassis and ground lead during alignment.

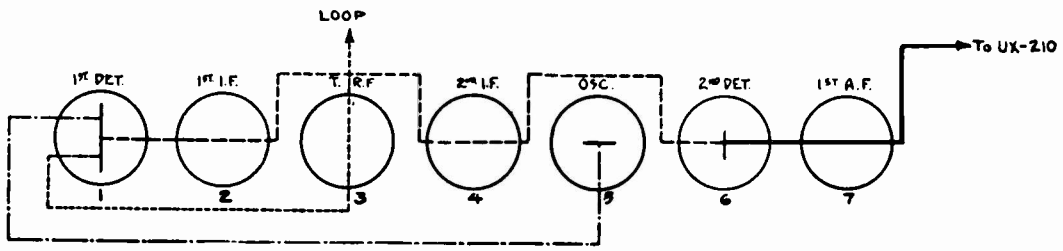
STEP	CONNECT HIGH SIDE OF TEST OSC. TO –	TUNE TEST OSC TO –	TURN RADIO DIAL TO	ADJUST THE FOLLOWING FOR MAX. OUTPUT
1	I-F Grid in series with 0.01 mfd	175 kc	Quiet point near 60	S & P of 2nd I-F Trans.
2	1st Det. Grid in series with 0.01mfd			S & P of 1st I-F Trans.
3	Antenna in series with 200 mmfd	1400 kc	140	Osc. Det. & R-F Trimmers (1400 kc Trimmers
4		600 kc	60	600 kc Osc. Trimmer Rock Gang
5		*Repeat Step 3*		

REPLACEMENT PARTS

Stock No.	DESCRIPTION	List
	RECEIVER ASSEMBLY	
2269	Capacitor—720 mmfd.	
2740	Cord—Tuning condenser drive cord—Package of 5	
2741	Idler—Tuning condenser drive cord idler—Package of 5	
2742	Spring—Tuning condenser drive cord tension spring—Package of 5	
2748	Binding post—Ground—Antenna twin binding post	
2749	Capacitor—2400 mmfd.	
2994	Coil—Detector choke coil complete with mounting rivet	
3033	Resistor—1 megohm—Carbon type—½ watt—Package of 5	
3079	Resistor—40,000 ohms—Carbon type—½ watt—Package of 5	
3085	Capacitor—400 mmfd.	
6133	Socket—Four contact Radiotron socket complete with insulator—8 used	
6138	Coil—1st detector and oscillator coil complete with mounting brackets	
6186	Resistor—500,000 ohms—Carbon type—½ watt—Package of 5	
6239	Volume control—Volume control complete with mounting nut—Package of 5	
6240	Resistor—19,000 ohms—Carbon type—½ watt—Package of 5	
6241	Resistor—140,000 ohms—Carbon type—½ watt—Package of 5	
6242	Resistor—2 megohm—Carbon type—½ watt—Package of 5	
6243	Resistor—6,000 ohms—Carbon type—½ watt—Package of 5	
6244	Resistor—700,000 ohms—Carbon type—½ watt—Package of 5	
6245	Resistor—65,000 ohms—Carbon type—½ watt—Package of 5	
6246	Resistor—550 ohms—Carbon type—½ watt—Package of 5	
6247	Resistor—850 ohms—Carbon type—½ watt—Package of 5	
6248	Capacitor—130 mmfd.—Package of 5	
6249	Resistor—1.5 ohms—Flexible type—Package of 5	
6250	Resistor—4,000 ohms—Carbon type—½ watt—Package of 5	
6251	Capacitor—1200 mmfd.—Package of 5	
6252	Scale—Dial scale—Package of 5	
6256	Switch—Off and On switch	
6258	Knob—Off and On switch knob—Package of 5	
6259	Screw—Receiver chassis mounting bracket self tapping screw—Package of 25	
6260	Brackets—Receiver chassis mounting brackets R.H. and L.H.—Package of 5 sets	
6261	Knob—Tuning control knob and screw—Package of 5	
6262	Screw assembly—Receiver mounting screw assembly—Comprising 4 screws, 4 eyelets, 4 lock washers, 2 flat washers and 12 nuts—Package of 1 set	
7062	Capacitor—Adjustable capacitor—15-70 mmfd.	
7299	Capacitor—745 mmfd.	
7425	Transformer—Interstage transformer	
8889	Transformer—Input transformer	
8890	Capacitor pack—Comprising two 0.005 mfd., one 0.75 mfd., one 4.0 mfd., three 0.1 mfd., one 0.25 mfd. and two 0.05 mfd. capacitor in metal container	
8891	Transformer—1st intermediate transformer	
8892	Transformer—2d intermediate transformer	
8893	Board—Resistor board complete less resistors, coil and capacitor	
8894	Coil—R.F. coil—Complete with mounting bracket	
8895	Capacitor—3 gang variable tuning capacitor—Comprising 3 variable capacitors drive drum, drive cord, drive cord spring, idlers and drive cord guides—Assembled	
8898	Cable	
	LOUDSPEAKER ASSEMBLY	
2749	Capacitor—2400 mmfd.	
2975	Rivet—Cone retaining ring mounting rivet—Package of 100	
6166	Board—Terminal board with two terminals—Located on cone bracket—Package of 5	
6253	Board—Speaker terminal board—5 terminals—Complete with mounting eyelets—Package of 5	
6254	Transformer—Output transformer	
6255	Screw assembly—Speaker mounting screw assembly—Comprising 4 screws, 4 eyelets, 4 cushions, 4 bushings, 8 nuts and 8 lock washers—Package of 1 set	
8828	Magnet assembly—Comprising cone bracket core and magnet	
8829	Cone—Speaker paper cone—Package of 5	
8896	Ring—Speaker cone retaining ring	
	CABINET ASSEMBLY	
X-89	Grille and grille cloth—Receiver side—Package of 2	
X-90	Board—Speaker baffle board and grille cloth—Package of 2	
X-91	Panel—Control panel less equipment	
X-92	Escutcheon—Tuning dial escutcheon complete with mounting screws	
6257	Escutcheon—Off and On escutcheon—Package of 10	
6263	Knob and screw—Located on bottom of control panel—Package of 5	
6264	Knob—For locking control panel in cabinet—Package of 5	
6265	Lock—Lid lock—Comprising lock, lock keeper, lock spacer and six mounting rivets—NOT KEY TYPE—Package of 5	
6266	Clamp—Battery clamp—Package of 10	
6267	Lock—Lid lock—Comprising lock, lock keeper, lock spacer, key and six mounting rivets—KEY TYPE—Package of 5	
6268	Key—Cabinet lock key—Package of 10	
6269	Bracket—Corner bracket with mounting rivets—Package of 10	
6270	Hinge—Cabinet bottom swivel hinge with mounting rivets—Case side—Package of	
6271	Hinge—Cabinet bottom swivel hinge with mounting rivets—Lid side—Package of 5	
8897	Coverings—Cabinet coverings—Comprising one bottom outside cover, one top outside cover, one top inside cover and eight corner bindings—Package of 1 set	
9411	Cabinet—Cabinet complete less equipment	
10123	Handle—Carrying handle with 2 brackets	

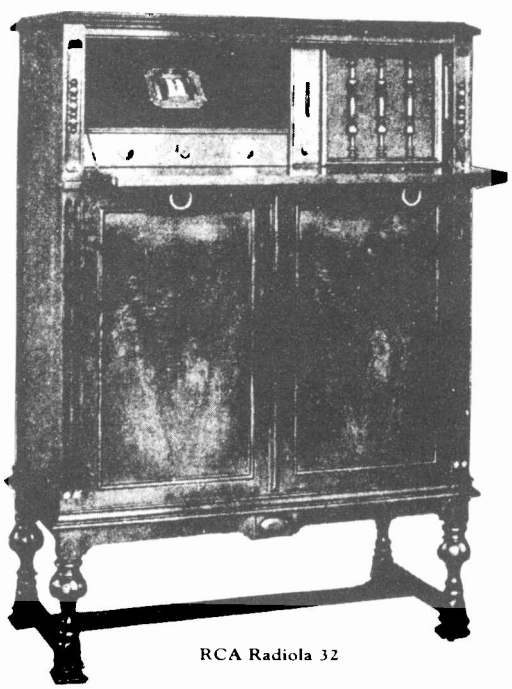
RADIOLA 32

RCA Radiola 32 is a complete, self contained socket power radio broadcast receiver of the super-heterodyne type. Essentially it consists of the well known RCA Radiola 28 and RCA Loudspeaker Model 104 combined in a de luxe cabinet



RADIO FREQUENCY (SIGNAL) CURRENT
LOCAL OSCILLATOR FREQUENCY CURRENT
INTERMEDIATE FREQUENCY CURRENT
AUDIO FREQUENCY CURRENT

Radiotron sequence and path of the different currents



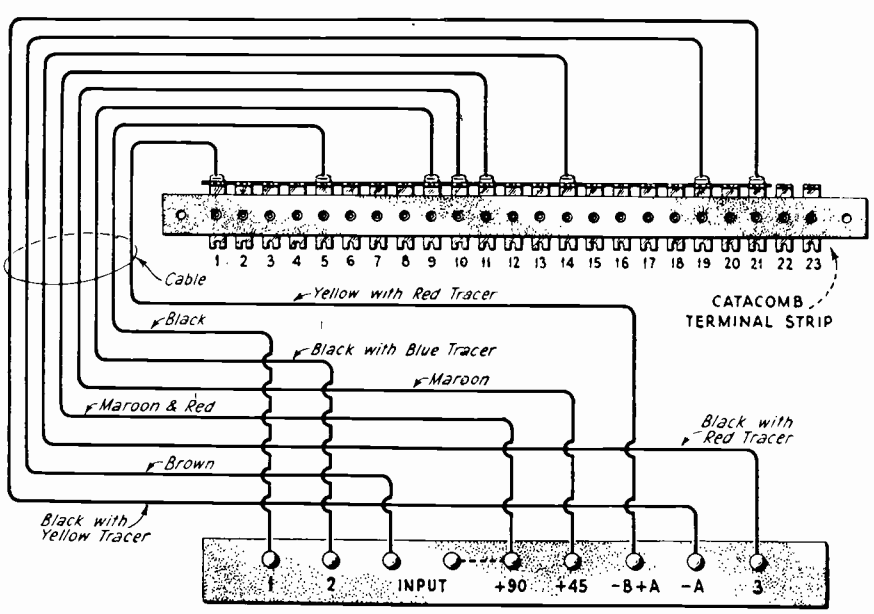
RCA Radiola 32

VOLTAGE READINGS OF RADIOLA 32

Taken at Catacomb Terminal Strip–

–Count Terminals from Left to Right When Facing Front of Radiola 32

Terminals	*Correct Effect*
1 to 21	Should measure 31 volts normally with all Radiotrons lit and battery setting near "Off." Positive terminal of voltmeter on No. 1.
1 to 10	Should measure 21.5 volts normally. Positive terminal of voltmeter on No. 10.
10 to 11	Should measure 41 volts normally. Positive terminal of voltmeter on No. 11.



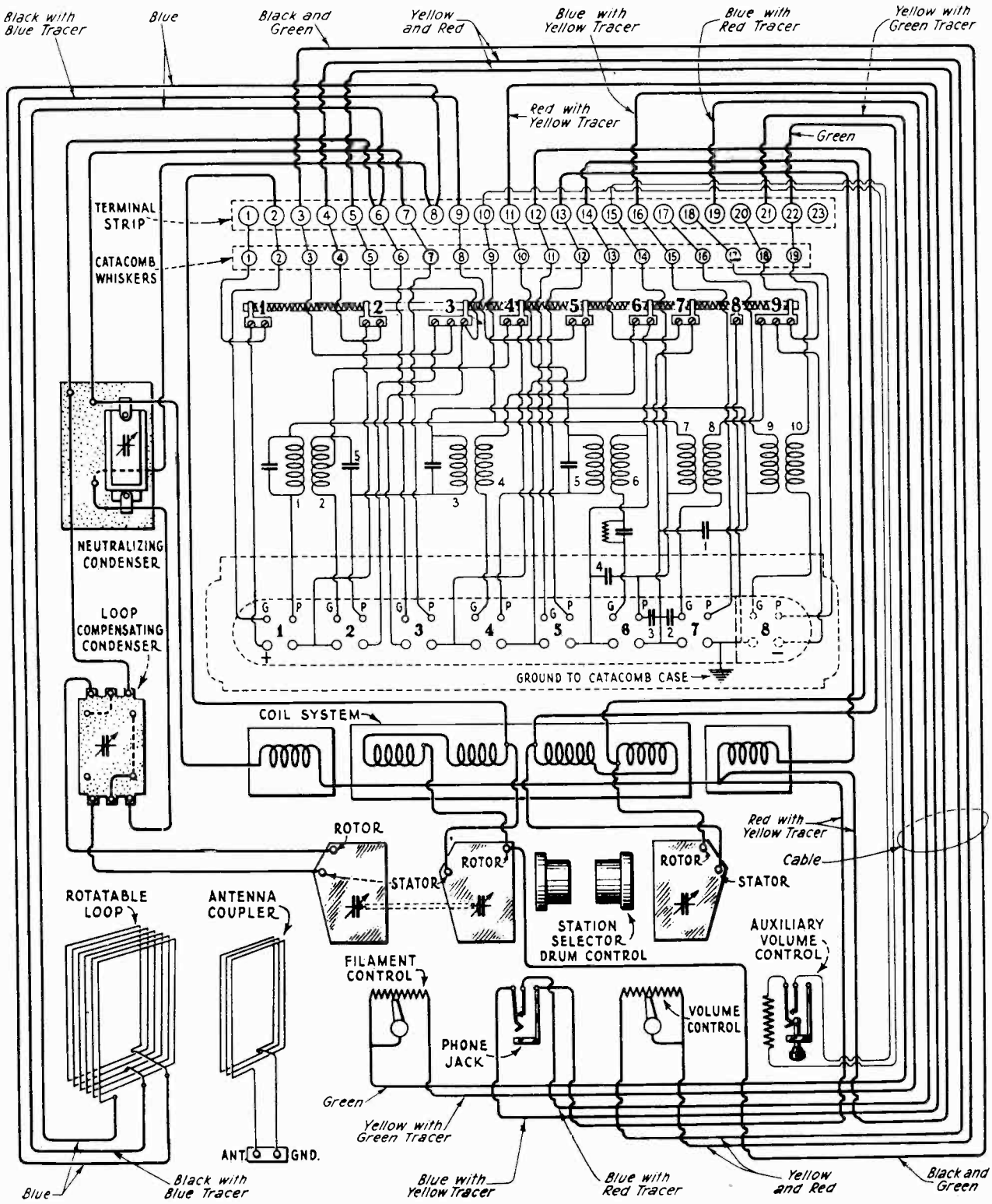
TERMINAL BOARD ON A.C. PACKAGE CONDENSER ASSEMBLY

–Panel and R.P.A. connecting cable with color scheme

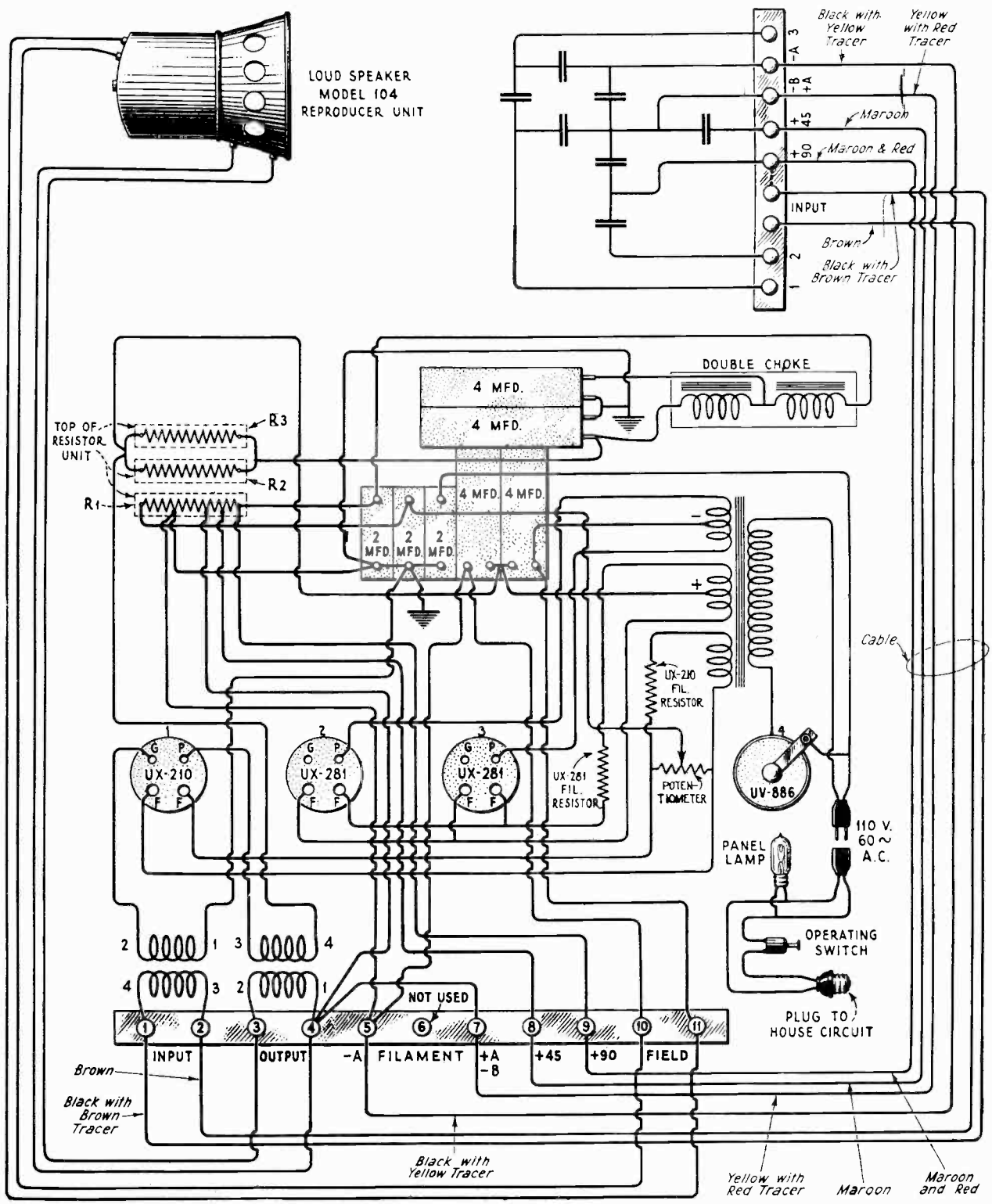
Radiola 32 resistance strip values in ohms

Terminals	*Normal*
1-2	271
2-3	Open
3-4	236.5
4-5	197
5-6	183.5
6-7	154.5
7-8	145.5
8-9	50

RADIOLA 32

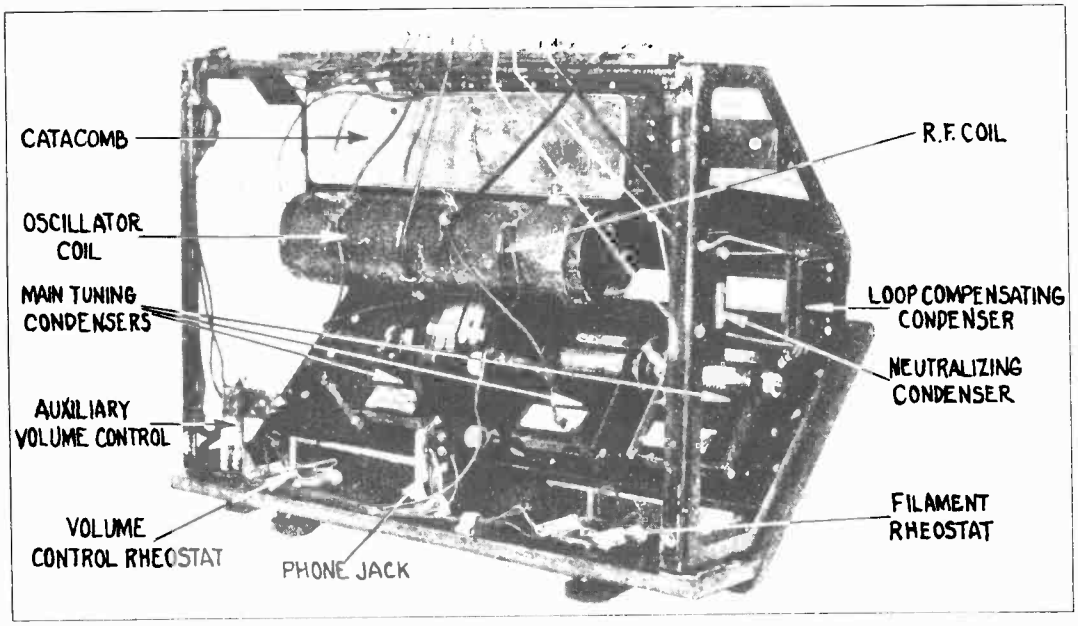


Panel and loop assembly continuity wiring diagram



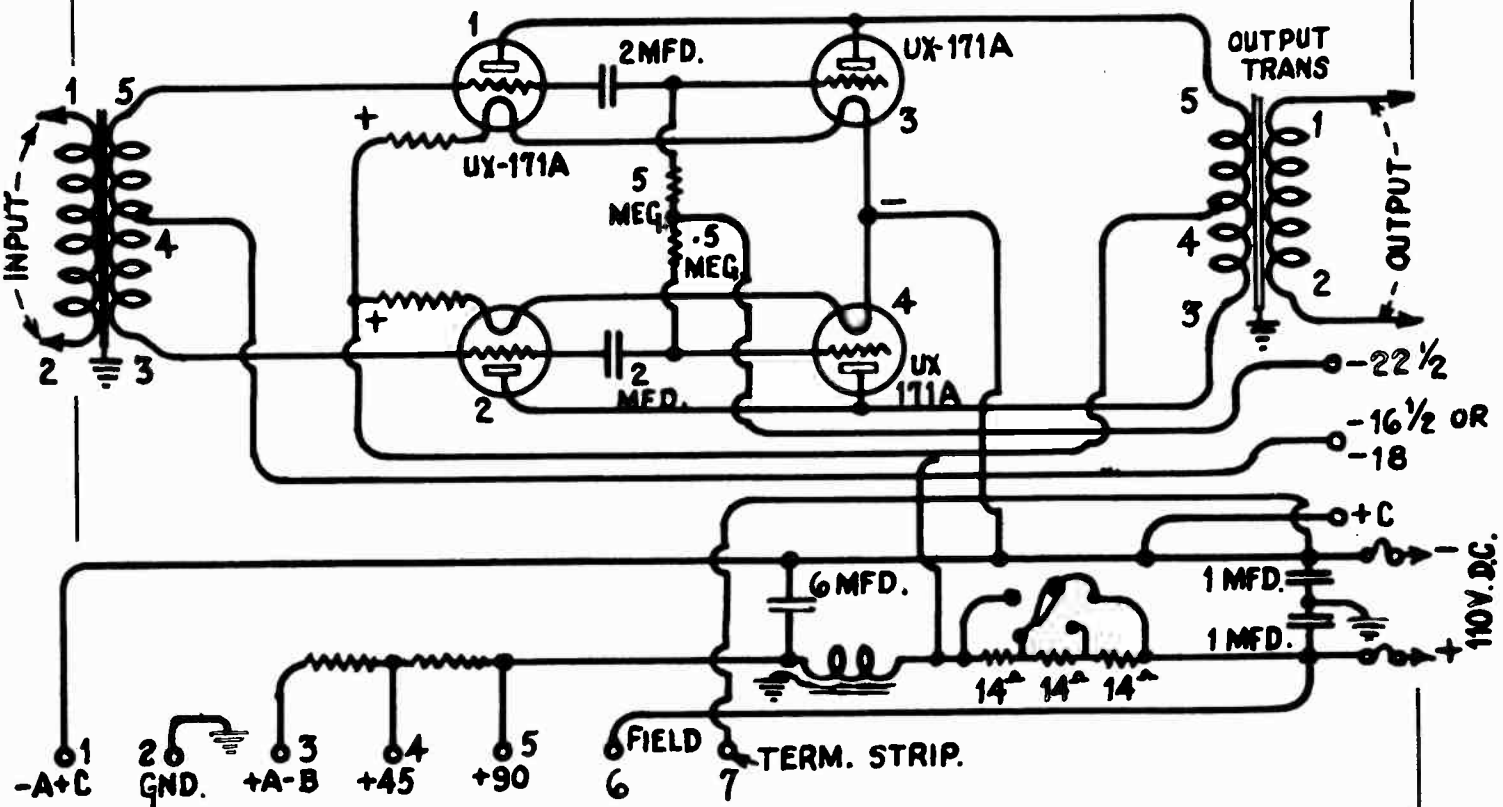
Rectifier power amplifier and reproducer unit continuity wiring diagram

RADIOLA 32



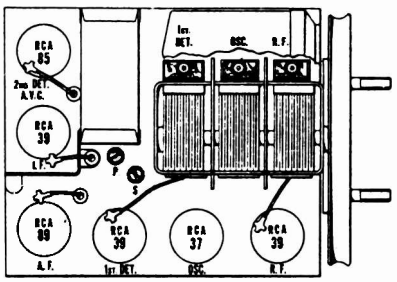
Rear view of panel assembly

D.C. Socket powered Radiola 32 is identical to the regular A.C. model with the exception of the socket power unit. In the D.C. Model the power amplifier consists of four Radiotrons UX-171A connected in a parallel push-pull circuit,



— Radiola 32 D.C. socket power unit schematic circuit with terminal connections and voltages.

RADIOLA M-32
AUTOMOBILE RADIO



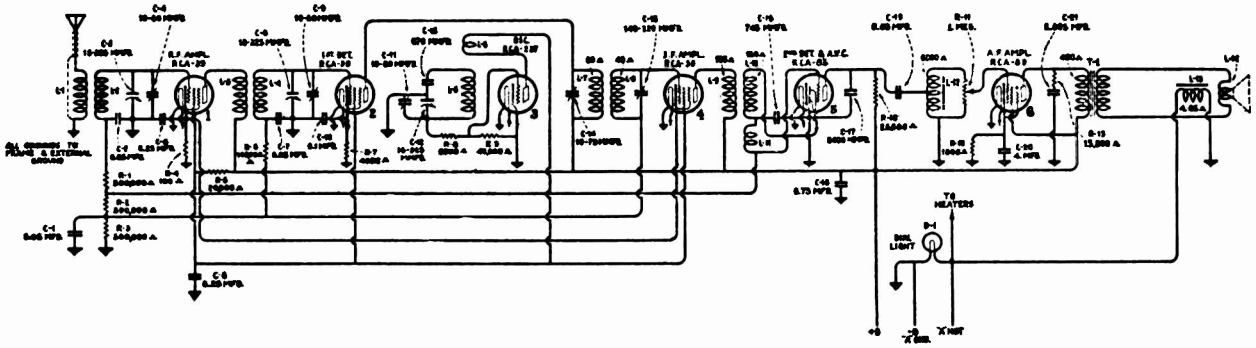
Location of Radiotrons and Line-up Capacitors

Electrical Specifications

Radiotrons Required
1 RCA-237, 3 RCA-239, 1 RCA-85, 1 RCA-89, Total—6

"A" Battery Consumption—Loudspeaker.....1.35 Amperes
Receiver.....2.15 Amperes
Converter.....3.0 Amperes

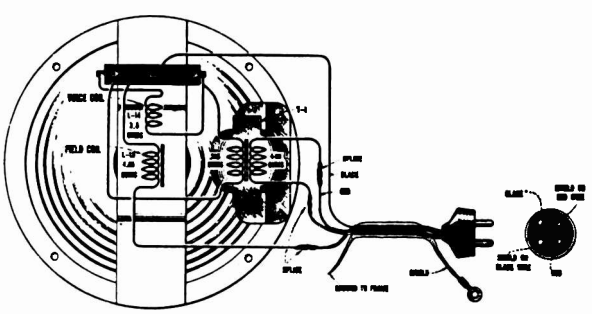
Plate Power Consumption.....35 M. A.
Undistorted Output.....1.25 Watts
Intermediate Frequency.....175 K. C.
R. F. Line-up Frequency.....1400 K. C.
Oscillator Line-Up Frequency.....1400 Only



Schematic Wiring Diagram

Alignment Procedure

STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO -	ADJUST THE FOLLOWING FOR MAX. OUTPUT
1	1st Det. Grid in series with .01 mfd	175 kc	Quiet Point near 600 kc	S & P of 1st I-F Trans.
2	Antenna in series with 200 mmfd	1400 kc	1400 kc	Osc., Det. and R-F Trimmers on gang condenser
3	With auto antenna connected to receiver, adjust R-F Trimmer for maximum volume on wear station near 1400 kc.			



Loudspeaker Wiring Diagram

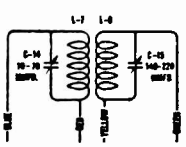
RADIOTRON SOCKET VOLTAGES

Radiotron No.	Cathode or Filament to Control Grid Volts	Cathode or Filament to Screen Grid Volts	Cathode or Filament to Plate Volts	Plate Current M. A.	Filament or Heater Volts
1. R.F. RCA-39	0.9	71	177	4.5	5.2
2. 1st Det. RCA-39	6.0	67	172	1.35	5.2
3. Osc. RCA-37	—	—	72	5.5	5.2
4. I.F. RCA-39	0.9	71	177	4.5	5.2
5. 2nd Det. and A.V.C. RCA-85	—	—	175	4.5	5.2
6. PWR. RCA-89	18	178	160	18.0	5.2

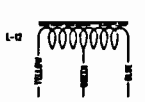
Voltages are those at which Radiotrons are operating and with no signal impressed on input.

OTHER IMPORTANT VOLTAGES

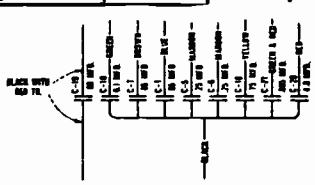
Battery Voltage.....6.0 Volts
Input to Dynamotor.....5.75 Volts
Battery Drain.....6.5 Amperes
Output from Dynamotor.....178 Volts at 34.5 M.A.
Loudspeaker Field Drain.....1.35 Amperes



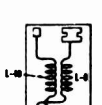
INTERNAL CONNECTIONS OF INTERSTAGE TRANSFORMER



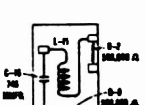
INTERNAL CONNECTIONS OF INTERSTAGE AUTO TRANSFORMER



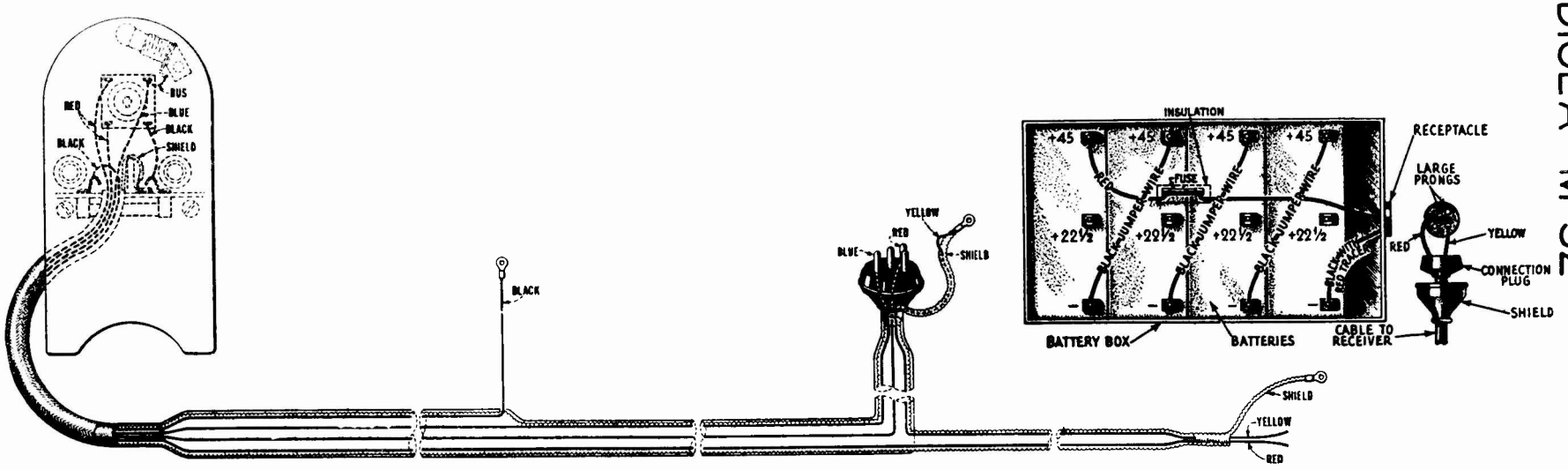
INTERNAL CONNECTIONS OF CAPACITOR PACK

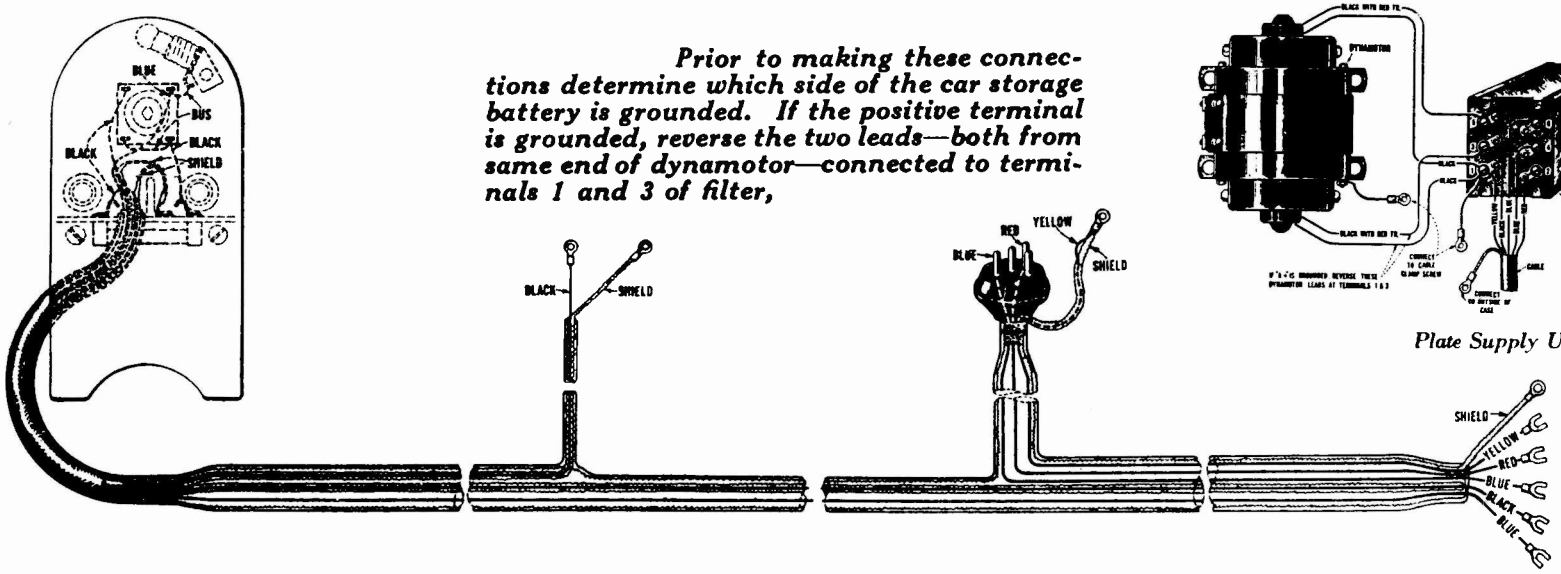


TRANSFORMER BOARD CONNECTIONS



TERMINAL BOARD CONNECTIONS





Prior to making these connections determine which side of the car storage battery is grounded. If the positive terminal is grounded, reverse the two leads—both from same end of dynamotor—connected to terminals 1 and 3 of filter,

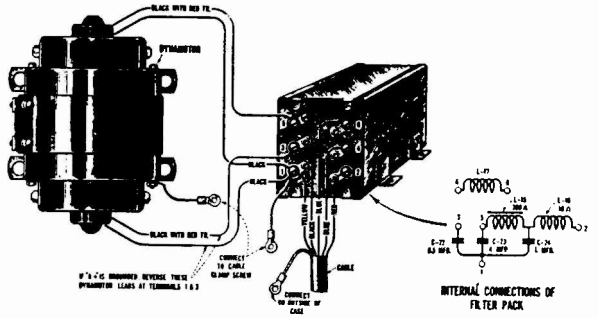


Plate Supply Unit Wiring

Wiring Diagram of Control Box and Cables (top for Battery Model and bottom for Dynamotor Model)

REPLACEMENT PARTS

(Replacement parts may be purchased from authorized Distributors or Dealers Only)

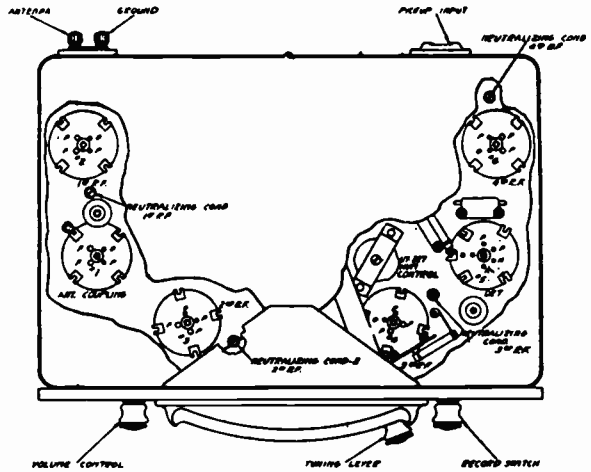
Stock No.	DESCRIPTION	List
	RECEIVER ASSEMBLIES	
2734	Capacitor—745 mmfd.—Package of 5	
2747	Contact cap—Package of 5	
2749	Capacitor—2,400 mmfd.	
2816	Resistor — 1,000 ohm — Carbon type — ½ watt—Package of 5	
3264	Resistor—25,000 ohms—Carbon type—½ watt—Package of 5	
3442	Resistor—100 ohms—Carbon type—¼ watt—Package of 5	
3443	Resistor—140 ohms—Carbon type—¼ watt—Package of 5	
3447	Coil—Automatic volume control coupling coil	
3448	Cord—3 gang tuning capacitor drive cord	
3454	Scale—Dial Scale	
6114	Resistor — 20,000 ohms — Carbon type — 1 watt—Package of 5	
6143	Resistor—40,000 ohms—Carbon type—¼ watt—Package of 5	
6186	Resistor—500,000 ohms—Carbon type—¼ watt—Package of 5	
6192	Spring—3 gang tuning capacitor drive cord tension spring—Package of 10	
6241	Resistor—140,000 ohms—Carbon type—¼ watt—Package of 5	
6243	Resistor — 6,000 ohms — Carbon type — ¼ watt—Package of 5	
6250	Resistor — 4,000 ohms — Carbon type — ½ watt—Package of 5	
6300	Socket—4 contact Radiotron socket	
6317	Capacitor—0.05 mfd. capacitor	
6320	Capacitor—670 mmfd.—Oscillator series capacitor—Package of 5	
6358	Socket—3 contact socket	
6359	Shield—Radiotron tube shield	
6360	Transformer—First intermediate frequency transformer	
6361	Transformer — Second intermediate frequency transformer	
6362	Shaft—Tuning capacitor drive shaft with two "C" washers	
6363	Volume control-Complete with mounting nut	
6365	Coil—Detector and oscillator coil	
6366	Coil—R. F. coil assembly	
7484	Socket—UY type Radiotron socket	
7485	Socket—Radiotron 6 contact socket	
7545	Transformer—Interstage auto transformer	
7546	Capacitor pack—Comprising one 0.08 mfd., one 0.1 mfd., two 0.05 mfd., two 0.25 mfd., one 0.75 mfd., one 0.005 mfd., and one 4.0 mfd. capacitors in metal container	
7547	Drum—For 3 gang tuning capacitor	
7548	Capacitor—3 gang variable tuning capacitor assembly	
	CONTROL BOX ASSEMBLIES	
3444	Socket—Dial lamp socket	
3445	Shaft—Volume control shaft with "C" washer	
3446	Shaft—Station selector shaft with "C" washer	
3454	Scale—Dial scale	
6158	Nut—Knurled nut for lock switch—Pkg. of 10	
6161	Knob—Station selector knob—Package of 5	
6163	Knob—Volume control knob—Package of 5	
6164	Key—For lock switch—Package of 10	
6357	Switch—Lock switch complete	
7543	Shaft—Flexible shaft—Volume control or station selector shaft—Approx. 27" long	
7544	Cover—Control box cover assembly comprising cover, cover mounting screws, mounting clamp and clamp mounting screws	
7562	Shaft—Volume control or station selector flexible shaft—Approximately 39" long	
7563	Shaft—Volume control or station selector flexible shaft—Approximately 51" long	

Stock No.	DESCRIPTION	List
	ANTENNA ASSEMBLY	
3465	Cable—Antenna lead-in shielded cable	
3466	Connector—Antenna lead-in connector	
3491	Washer—Rubber insulating washer—Used with insulator No. 6131—Package of 4	
6129	Staple—Insulated staple—Package of 100	
6130	Screw and nut—U bracket set screw—¼—16 x 1—Complete with lock nut—Pkg. of 10	
6131	Insulator—Insulator bushing for No. 7420—Package of 10	
6381	Cable—Shielded antenna cable—For use with antenna plate	
7419	Bracket—U bracket for mounting antenna plates—Package of 2	
7420	Stud—Antenna plate stud—¼—16 x 8"—Complete with 5 mounting nuts—Pkg. of 5	
8819	Plate—Single antenna plate	
	MISCELLANEOUS PARTS	
6148	Fuse—10 amperes—Package of 5	
6151	Suppressor—Spark plug suppressor	
6152	Suppressor—Distributor suppressor	
6169	Felt—Felt strip for steering column—Pk. of 10	
7065	Screwdriver—Non metallic Screwdriver—For line-up adjustments	
7429	Capacitor—0.625 mfd. capacitor in metal casing with mounting bracket	
7553	Cable—Inter-connecting cable complete with male section of connector plug—For eliminator operation	
7561	Cable—Inter-connecting cable complete with male section of connector plug—For battery operation	
	REPRODUCER ASSEMBLIES	
6182	Terminal board—Reproducer terminal board with 3 terminals—Package of 5	
6364	Transformer—Output transformer	
8702	Ring—Cone retaining ring	
8961	Coil assembly—Comprising field coil, magnet and cone support	
8962	Cone—Reproducer cone	
8963	Bracket — Reproducer mounting bracket complete with washer and nuts	
8964	Housing—Reproducer housing	
8965	Screen—Dust screen	
	BATTERY BOX ASSEMBLY	
2968	Receptacle—Four prong receptacle complete	
6122	Clamp—Cable clamp—Package of 15	
6123	Plug—Four prong male plug	
6124	Cap—Plug cover rubber cap for #6123-Pk. of 5	
6125	Fuse—¼ ampere—Package of 5	
6126	Clip—Fuse clip—Package of 12	
6127	Bolt—Carriage bolt for mounting top of box to car—¼—18 x 1¼"—Complete with lock nut—Package of 5	
7418	Bolt—Hanger bolt ¼—18 x 9½"—Complete with two lock nuts—Package of 5	
8817	Box body assembly—Comprising bottom plate, 2 side plates, 2 bottom strips and receptacle—Assembled	
8818	Box cover assembly—Comprising cover plate, 2 strips and 2 rubber strips—Assembled	
8820	Plate and strip assembly—Carboard plate and strip assembly comprising six strips and one plate—Package of 5 sets	
	"B" ELIMINATOR ASSEMBLIES	
3473	Brushes—One set of 2—For low voltage end of dynamotor	
3474	Brushes—One set of 2—For high voltage end of dynamotor	
7554	Filter pack—Comprising one 0.5 mfd., two 4.0 mfd. capacitors, one reactor and two choke coils	
7555	Dynamotor complete	

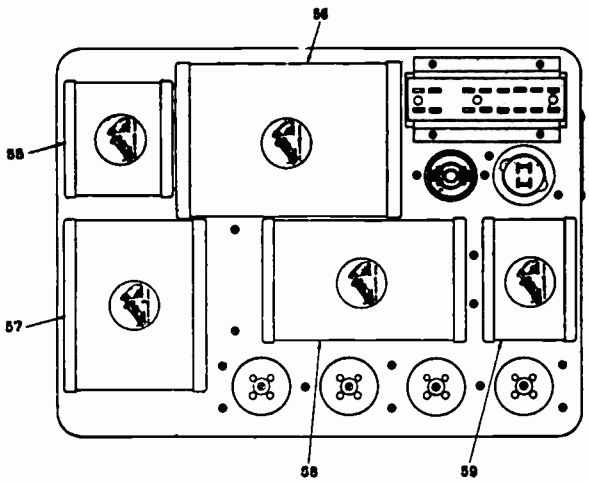
VICTOR R-32, E-35, RE-45, R-52 & RE-75

Six Radiotrons UX-226 are used in the R. F. and first audio amplifier stages, a UY-227 detector, and two UX-245 in the power stage. The Radiotron UX-280 is used as a rectifier.

The Victor Radio is designed for operation on 105 to 120 volts, 50 to 60 cycles, alternating current. Special equipment is available for operation on 105 to 120 volts, 25 to 40 cycles. The power consumption when operating the radio is approximately 105 Watts, and approximately 160 watts when operating the Electrola.



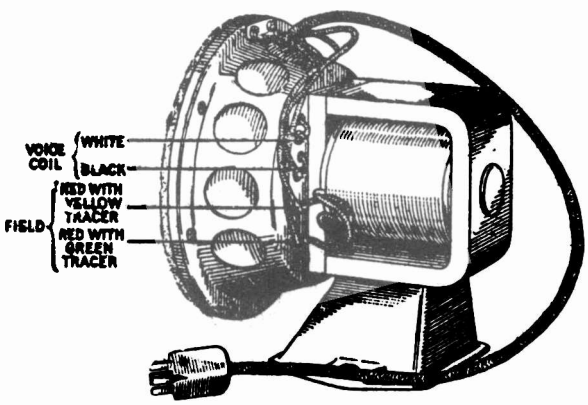
-Top View of Radio, Showing Radiotron Sockets



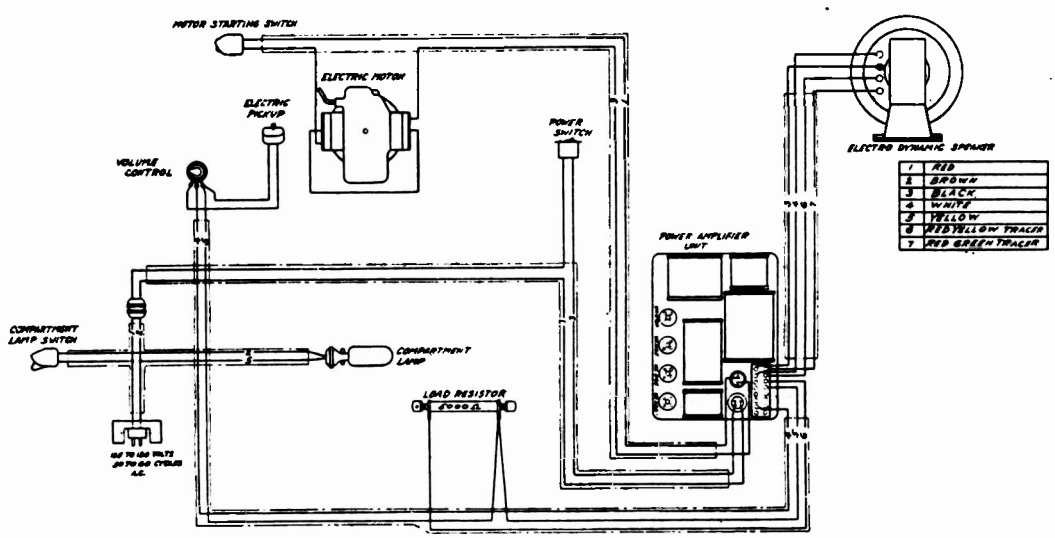
Top View of Power Amplifier Unit, Showing Parts

PARTS LIST POWER AMPLIFIER UNIT

55. Filter Choke Coil
56. Filter Condenser Bank
57. Power Transformer (60 Cycles)
    Power Transformer (25 Cycles)
58. Interstage and Output Transformer
59. Input Transformer



-Terminal Strip
Electro Dynamic Reproducer



Cable Wiring Electrola E-35

R32, E35, RE45, R52 & RE75

-Multi-Plug Terminals

1. Brown-white tracer—UX-226 Filament
2. Blue—Transfer Switch
3. Brown-white tracer—UX-226 Filament
4. White—Transfer Switch
5. Brown-blue tracer—UY-227 Filament
6. Black-red tracer—Power Switch
7. Brown-blue tracer—UY-227 Filament
8. Black-red tracer—Power Switch
9. Braided Copper Shield—Ground
10. Brown-red tracer—Pilot Lamp
11. Red-yellow tracer—B UX-226
12. Brown-red tracer—Pilot Lamp
13. Red-yellow tracer—Field
14. White—Voice Coil
15. Red-green tracer—Field
16. Black—Voice Coil

CABLE TERMINAL VOLTAGE TESTS

TEST BETWEEN TERMINALS	NORMAL VOLTAGE
1 and 3	1.70 Volts A. C.
5 and 7	2.35 Volts A. C.
2 and 9	39 Volts D. C.
9 and 11	105 Volts D. C.
13 and 15	185 Volts D. C.

1. NEUTRALIZING—Improper neutralization is characterized by oscillation and lack of sensitivity. First be sure that the instrument has a good ground connection, since a poor ground will also cause oscillation. If oscillation still persists, the set should be neutralized in the following manner, using a dummy tube, made by cutting off one of the filament prongs of a UX-226, and a neutralizing screw driver such as Stock No. A6000.

a. Remove the four hex nuts which hold the plate.

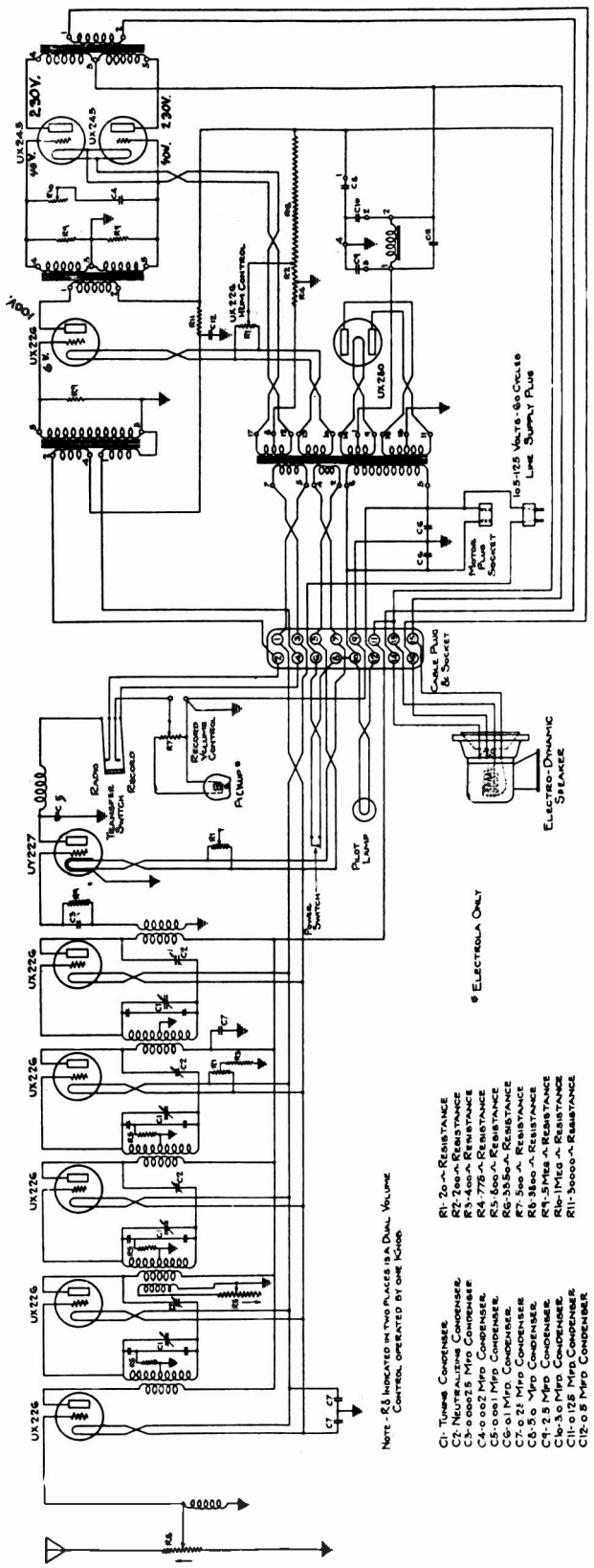
b. Tune in a powerful local station, preferably near the high frequency end of the scale. If such a signal is not available, a modulated oscillator, such as shown in Fig. 6, can be used to supply the signal. If the oscillator is used, it should be placed near the radio set and approximately three feet of wire used as an antenna on the set.

c. Remove the UX-226 from the first tuned R. F. stage (socket No. 2, Fig. 5), replace with the dummy UX-226, and adjust the corresponding neutralizing condenser to give minimum signal in the loudspeaker. The volume control may be set to obtain a signal loud enough for accurate neutralization, but not so loud as to cause the minimum to be blurred.

d. Replace the UX-226 in socket No. 2, and repeat the procedure for sockets 3, 4 and 5, adjusting the corresponding neutralizing condenser in each case. After completing the neutralization in this manner, turn back the neutralizing condenser for socket No. 5 approximately ½ turn counter-clockwise.

Note:—The first UX-226, antenna coupling stage, is not neutralized.

If the instrument continues to oscillate, it is probable that the condensers are out of alignment. This adjustment requires special attention, and it is recommended that you consult your distributor before making any changes in the setting.



—Schematic Wiring Diagram Victor Radio and Victor Radio with Electrola
Model R-32, R-52, RE-45, RE-75

R32, E35, RE45, R52 & RE75 REPLACEMENT PARTS

Insist on genuine factory tested parts, which are readily identified and may be purchased from authorized dealers

Stock No.	Description
	RECEIVER ASSEMBLIES
2723	Switch - Toggle operating switch with hex nut, ring washer and knurled nut - Package of 5.
2875	Knob - Volume control, switch or station selector knob - Package of 5.
2970	Resistor - 1/2 megohm grid leak - Package of 5.
10420	Resistor - 400 ohm resistor - Package of 5.
10421	Resistor - 800 ohm resistor - Package of 5.
10422	Transformer - Detector input transformer with spacer and rivet.
10423	Socket - UX-226 socket - Plain.
10424	Socket - UY-227 socket.
10425	Socket - UX-226 socket assembly - Comprising socket, neutralizing condenser and brackets - Package of 1.
10426	Screws - Cam wheel adjusting screws - Package of 20.
10427	Springs - Variable condenser tension springs - Package of 5.
10428	Shield - Metal shield for RF coils and condenser - Complete with lock washers and nuts.
10429	Switch - Transfer switch with hex nut, washer and nut.
10430	Socket - Pilot lamp socket - Comprising base, insulating strip, cover, screw, lock washers and nuts.
10431	Shield - UY-227 tube shield - For combination models only.
10432	Shaft - Tuning knob shaft - Package of 2.
10433	Resistor - Hum control resistor with nuts and washers - 20 ohms.
10434	Resistor - 20 ohm mid-tap resistor.
10435	Roller - Tuning cam friction roller with shaft - Package of 5.
10436	Post - Twin binding post with nuts and lock washers - Antenna and ground.
10437	Panel - Walnut receiver panel.
10438	Lamp - Pilot lamp.
7196	Compartment lamp.
10439	Jacks - Twin pickup pin jacks - Complete with eyelets.
10440	Indicator - Celluloid dial indicator - Package of 5.
10441	Dial - Station selector dial - Package of 5.
10442	Condenser - By-pass condenser - 0.001 mfd.
10443	Condenser - 0.00025 mfd. grid condenser.
10444	Coil - Antenna choke coil.
10445	Coil - Detector plate choke coil with rivets.
10446	Cam wheel - Tuning condenser cam wheel - Used on all instruments except those with cast iron base.
10447	Coil - R. F. coil with volume control winding - Used in 2d R. F. stage.
10448	Coil - R. F. coil - Used in 1st, 3d and 4th R. F. stages.
10449	Condenser - Variable tuning condenser with lock washers, washers and nuts - (Used in all instruments except those with cast iron base).
10450	Control - Volume control - Complete with hex nut, washers and nut.
10451	Cover - Pilot lamp reflector cover.
10452	Cable - Receiver cable and plug - 12 prong.
10453	Cable - Receiver cable - For internal wiring.
10454	Cam wheel - Tuning condenser cam wheel - Used only on cast iron base type receivers.
10455	Condenser - Variable condenser with washer and cotter pin - Used only in cast iron base receivers.
10949	Link - Tuning condenser bakelite link - Package of 5.
10993	Capacitor - By-pass capacitor - Three 0.25 mfd. capacitors.
10994	Screw - Neutralizing capacitor screw - Package of 20.
10995	Capacitor - Neutralizing capacitor - Package of 2.
10996	Plug - 12 prong plug for connecting receiver cable to S. P. U.
	AMPLIFIER ASSEMBLIES
2240	Resistor - 30,000 ohm carbon type resistor - Package of 1.
2970	Resistor - 1/2 megohm carbon type - Package of 5.
10398	Cable - Amplifier cable No. 3 - From 16 contact receptacle to voltage divider, interstage and output transformer, etc.
10399	Cable - Amplifier cable No. 1 - From tube socket to power transformer.
10400	Condenser - By-pass condenser pack - Comprising 3 condensers 0.1, 0.1 and 0.55 mfd. For 25 cycle.
10401	Cable - Amplifier cable No. 2 - From 16 contact receptacle to filter condenser to choke and power transformer.
10402	Choke - Filter choke coil.
10403	Condenser - 0.5 mfd. condenser.
10404	Condenser - By-pass condenser pack - Comprising 3 condensers 0.1, 0.1 and 0.125 mfd. - For 60 cycle.
10405	Condenser - 0.002 mfd. by-pass condenser.
10406	Potentiometer - 20 ohm hum control potentiometer - Complete with bracket and rivets.
10407	Resistor - Tapped voltage divider resistor - Complete with tie rod, washer, cup washer, spring and clip washer.
10408	Resistor - Variable tone control resistor - 1 megohm - Complete with bracket and rivets.
10409	Receptacle - 16 cent[illegible] female receptacle.
10410	Receptacle - Motor female receptacle.
10411	Receptacle - 110 volt A. C. male input receptacle with mounting bracket.
10412	Socket - Tube socket strip - 4 gang - Without fuse clips.
10413	Socket - Tube socket strip - 4 gang - With fuse clips.
10414	Transformer - Input transformer.

REPLACEMENT PARTS (Continued)

Stock No.	Description
10415	Transformer - Power transformer - 110 volt 60 cycle.
10416	Transformer - Power transformer - 25 cycle.
10417	Condenser - Filter condenser bank - 60 cycle.
10418	Transrormer - Interstage and output transformer assembly.
10419	Condenser - Filter condenser bank - 25 cycle.
	LOUDSPEAKER ASSEMBLIES
10792	Coil - Speaker coil.
10800	Ring - Cone retaining ring.
10801	Cone - Burtex cone.
10803	Cable - Speaker cable with 4 prong plug.
10872	Housing - Cone housing.
10873	Washer - Field coil washer - Package of 3.
10874	Spacer - Field coil spacer - Package of 10.
10875	Washer - Insulating washer - Package of 10.
10876	Ring - Shading ring.
10877	Plate - Yoke plate.
10997	Gasket - Cone retaining ring gasket - Package of 5.
	SPECIAL PARTS FOR RE-45
2614	Switch - Automatic brake contact switch.
2620	Cushion - Pickup rubber cushions - Comprising 2 pivot and 1 damper cushion - Package of 1 set.
2759	Box - Needle box with lid - Package of 2.
2765	Screw - Pickup needle screw - Package of 10.
2766	Screw - Pickup cover mounting screw - Package of 10.
2767	Spring - Pickup magnet spring - Package of 10.
2768	Armature - Pickup armature.
2770	Plate - Pickup damper plate - Package of 5.
2771	Screw - Pickup damper plate screw - Package of 10.
2772	Magnet - Pickup magnet.
2773	Pole piece - Right hand pickup pole piece.
2776	Catch - Door catch and strike with nail - Package of 2 sets.
2778	Pole piece - Left hand pickup pole piece.
2762	Bearing assembly - Governor bearing - Comprising 2 bearings, 2 set screws and 2 steel balls - Package of 3 sets.
2763	Bolts - Motor mounting bolts with nuts, washers and cushions - Package of 1 set.
2785	Hinge - Lid hinges with mounting screws - Package of 2.
2872	Ball and spring - Governor ball and spring with mounting screws and washers - Package of 5.
2873	Screw assembly - Motor plate screw - Comprising 1 screw, 1 nut, 1 washer, and 1 ball - Package of 5 sets.
2947	Leather - Regulating lever leather - Package of 20.
3052	Screw - Pickup pole piece mounting screw with nut and lockwashers - Package of 10 sets.
7077	Regulator - Speed regulator screw with escutcheon and mounting screws - Package of 2.
7151	Housing - Pickup housing back.
10129	Ball - Steel ball bearing - 3/16" - Package of 20.
10174	Springs - Automatic brake springs - Set of 4 springs - Package of 2 sets.
10181	Brake - Automatic brake with mounting screws - Less switch - Assembled.
10184	Plate - Latch plate with screws - Package of 5.
10196	Spring - Regulating lever spring - Package of 10.
10264	Coil - Inductor coil - 60 cycles.
10266	Disc - Rotor disc with set screw.
10278	Ball - Steel ball bearing - 3/32" - Package of 20.
10285	Coil - Inductor coil - 25 cycles.
10289	Governor - Governor complete with spindle, collar, friction disc, balls and springs - Assembled.
10291	Spindle - Turntable spindle.
10292	Gear - Governor drive gear with set screw.
10293	Lever - Regulating lever - Package of 3.
10367	Cover - Turntable cover.
10370	Turntable - Turntable with cover.
10378	Top plate - Motor top plate.
10450	Control - Record volume control - Comprising 1 volume control, 1 washer and 1 nut.
10524	Block - Pickup connector block and wire.
10574	Rail - Cabinet front cross rail.
10575	Escutcheon - Radio chassis panel escutcheon.
10608	Bracket - Cabinet leg bracket (Corner brace) - Package of 2.
10688	Screw and washer - Motor board mounting screws and washers - Package of 10.
10695	Cup - Needle cup - Package of 2.
10744	Rod - Pickup arm trip rod - Package of 5.
10747	Screw assembly - Pickup mounting screw, nut and lock washer - Package of 10 sets.
10777	Coil - Pickup coil.
10778	Cover - Pickup cover.
10779	Pickup - Pickup unit complete.
10780	Support - Lid support complete - Comprising 1 ratchet, 1 support, with mounting screws, nuts and washers - Package of 1 set.
10781	Arm - Pickup arm complete - Less pickup unit.
10782	Cord - Volume control cord - Package of 2.
10783	Handle - Door pull handle with escutcheon plate and mounting screw - Package of 1 set.
10784	Hinge - Door hinge - Set of 4 hinges with mounting screws - Package of 1 set.

R32, E35, RE45, R52 & RE75

REPLACEMENT PARTS (Continued)

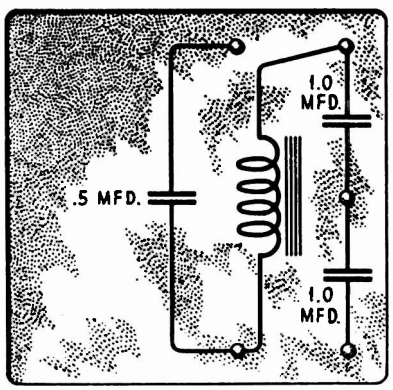
Stock No.	Description
	SPECIAL PARTS FOR RE-75
2814	Switch - Automatic brake contact switch.
2820	Cushion - Rubber cushion - Comprising 1 damper and 2 pivot cushions - Package of 1 set.
2758	Cup - Needle cup - Package of 2.
2759	Box - Needle box with lid - Package of 2.
2762	Bearing assembly - Governor bearing - Comprising 2 bearings, 2 set screws and 2 steel balls - Package of 3 sets.
2763	Bolt assembly - Motor mounting bolts with nuts, washers and cushions - Package of 1 set.
2765	Screw - Pickup needle screw - Package of 10.
2766	Screw - Pickup cover mounting screw - Package of 10.
2767	Spring - Pickup magnet spring - Package of 10.
2768	Armature - Pickup armature.
2770	Plate - Pickup damper plate - Package of 5.
2771	Screw - Pickup damper plate screw - Package of 10.
2772	Magnet - Pickup magnet.
2773	Pole piece - Pickup right hand pole piece.
2776	Catch - Door catch and strike with nail - Package of 2 sets.
2778	Pole piece - Pickup left hand pole piece.
2872	Ball and spring - Governor ball and spring - With mounting screws and washers - Package of 5.
2873	Screw assembly - Motor plate screw - Comprising 1 screw, 1 nut, 1 washer and 1 ball - Package of 5 sets.
2947	Leather - Regulating lever leather - Package of 20.
3052	Screw - Pole piece mounting screw - Package of 10.
7077	Regulator - Speed regulator with escutcheon, screw and mounting screws - Package of 2.
7151	Back - Pickup housing back.
7197	Shade - Compartment lamp shade.
10129	Ball - Steel ball - Package of 20.
10174	Spring - Automatic brake springs - Set of 4 springs - Package of 2 sets.
10181	Brake - Automatic brake - Complete with mounting screws.
10184	Plate - Latch plate with screws - Package of 5.
10196	Spring - Regulating lever spring - Package of 10.
10266	Disc - Rotor disc with set screw.
10278	Ball - Steel ball bearing - 3/32" - Package of 20.
10289	Governor - Governor complete with spindle.
10291	Spindle - Turntable spindle.
10292	Gear - Governor drive gear with set screw.
10293	Lever - Regulating lever - Package of 3.
10371	Socket - Compartment lamp socket.
10378	Top plate - Motor top plate.
10450	Control - Record volume control - Comprising 1 volume control, 1 washer and 1 nut.
10482	Coil - Inductor coil - 60 cycles.
10524	Block - Pickup connector block and wire.
10575	Escutcheon - Radio chassis panel escutcheon.
10691	Cover - Pickup cover.
10692	Pickup - Pickup unit complete.
10693	Arm - Pickup arm and base complete - Less pickup unit.
10694	Turntable - Turntable with cover.
10777	Coil - Pickup coil.
10782	Cord - Volume control cord - Package of 2.
10868	Capacitor - Motor capacitor - 1.75 mfd.
10870	Cover - Turntable cover.

RADIOLA 33

(105-125 Volts, 50-60 Cycle A. C.)

INTRODUCTION

RCA Radiola 33 is a socket powered six-tube, tuned radio frequency receiver utilizing RCA Radiotrons UX-226, UY-227, UX-171A and the full wave rectifier Radiotron UX-280 in the Socket Power Unit. It operates on 105-125 volts, 50 to 60 cycle A.C. lines. Radiola 33 is also supplied in models designed for 105-125 volts, 25-40 cycle A.C. lines.



Internal connections of output condenser and choke and filter condensers

RCA Radiola 33

VOLTAGE READINGS

Tube No.	*Filament to Grid Volts*	*Filament or Cathode to Plate Volts*	*Plate Current Milliamperes*	*Filament Voltage*
1	9	130	4.5	1.5
2	9	130	4.5	1.5
3	9	130	4.5	1.5
4	—	30	2.0	2.5
5	9	130	4.5	1.5
6	30	135	17.0	5.0

ADJUSTMENT OF R. F. COMPENSATING CONDENSER

(a) Put receiver in operation in usual manner and tune in a station preferably at the middle or upper wave lengths.

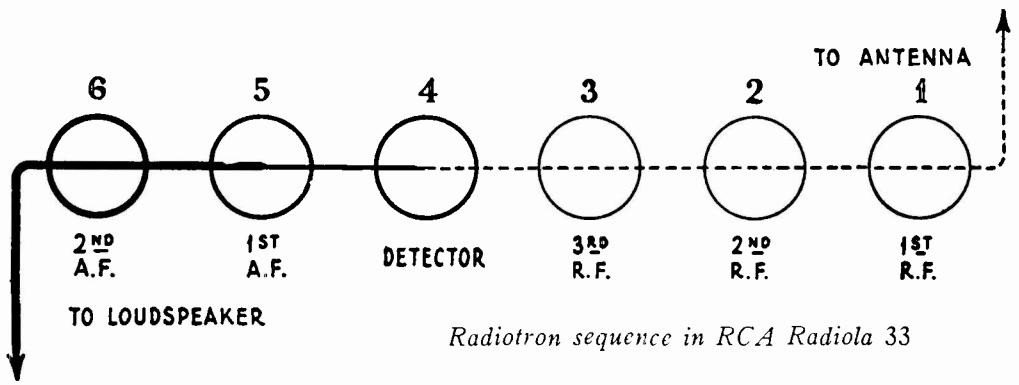
(b) Locate the position of the compensating condenser adjusting screw at the rear of the receiver assembly. (See Figure)

(c) With the volume control at the position of maximum intensity, turn the screw to the right until the set goes into oscillation. Then turn the screw to the left until all oscillation and howl is eliminated with the volume control at maximum. In some cases interchanging the tubes in the R.F. stages will facilitate this adjustment.

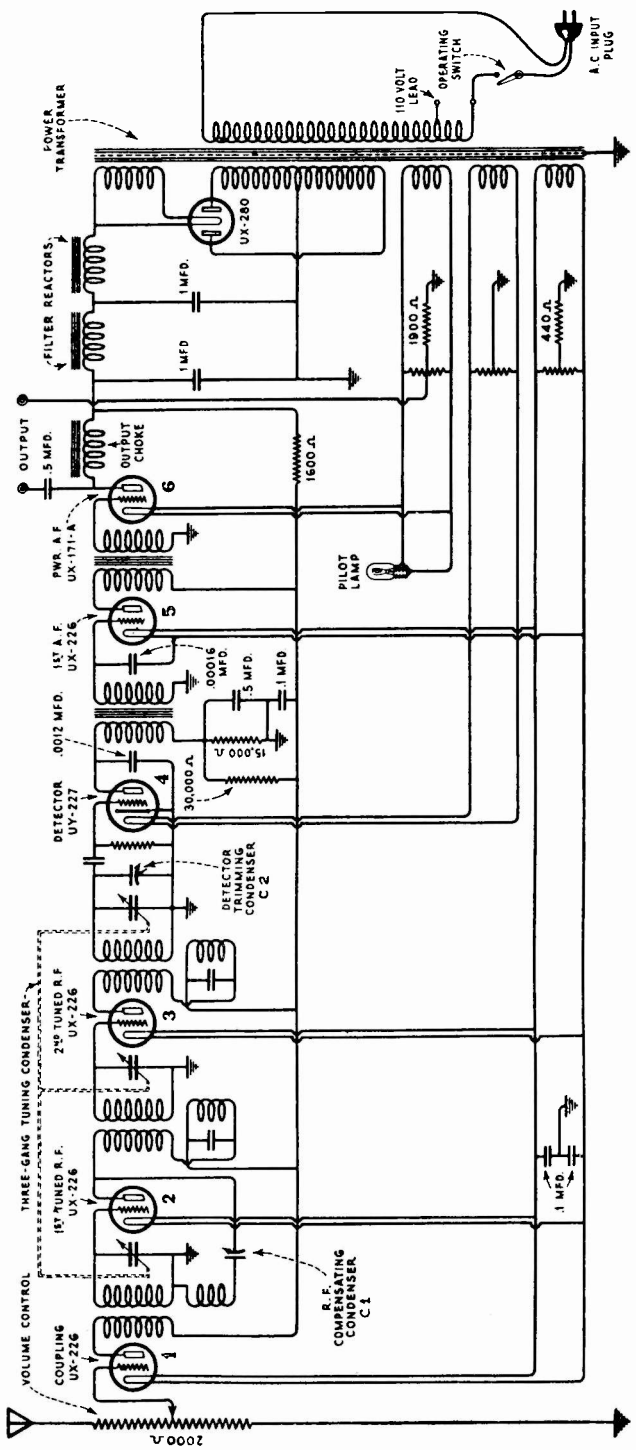
(d) Tune in stations with maximum volume and note if the receiver goes into oscillation at any wavelength. If it does, turn the screw still further to the left.

(e) When the adjusting screw has been turned to the right as far as possible without oscillation occurring at any wavelength, the correct adjustment has been found for best sensitivity.

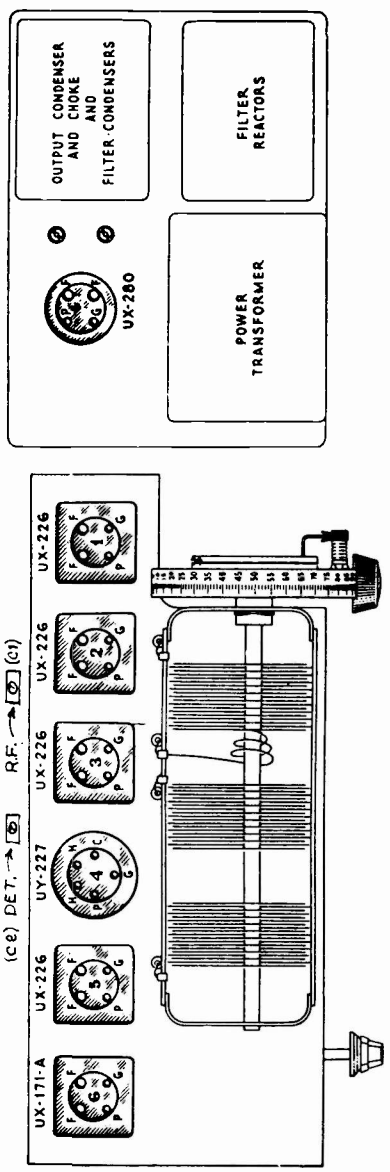
33



Radiotron sequence in RCA Radiola 33



-Schematic circuit diagram of receiver and socket power unit—all grounds are connected to frame and metal cabinet

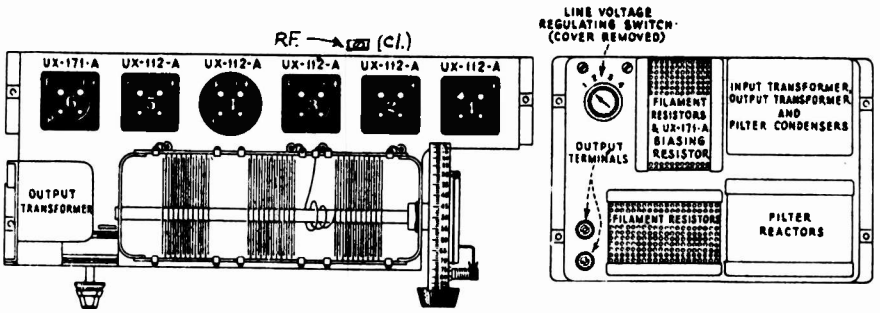


-Diagram showing location of Radiotron socket contacts

RADIOLA 33 (D.C.) 220 V.

ELECTRICAL SPECIFICATIONS

Direct Current Line Voltage ---------- 200-240 volts
Maximum Power Consumption ---------- 72 watts

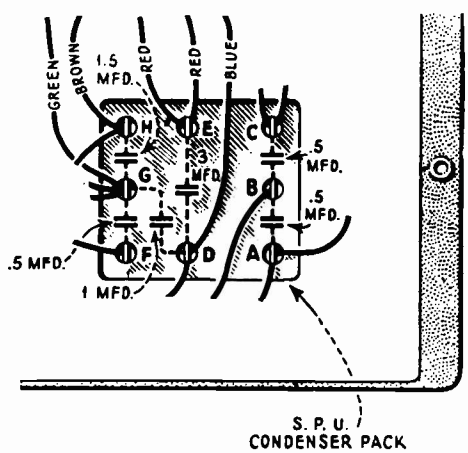


—Radiotron socket contacts

VOLTAGES AT RADIOTRON SOCKETS

Tube No.	Filament to Grid (Volts)	Filament to Plate (Volts)	Plate Current Milliamperes	Filament Voltage
1	3.5	63	4.0	4.9
2	*2.0	68	4.5	4.8
3	*2.0	73	4.0	4.7
4	*2.0	30	1.8	4.7
5	8	78	5	5.1
6	33	150	16	5.1

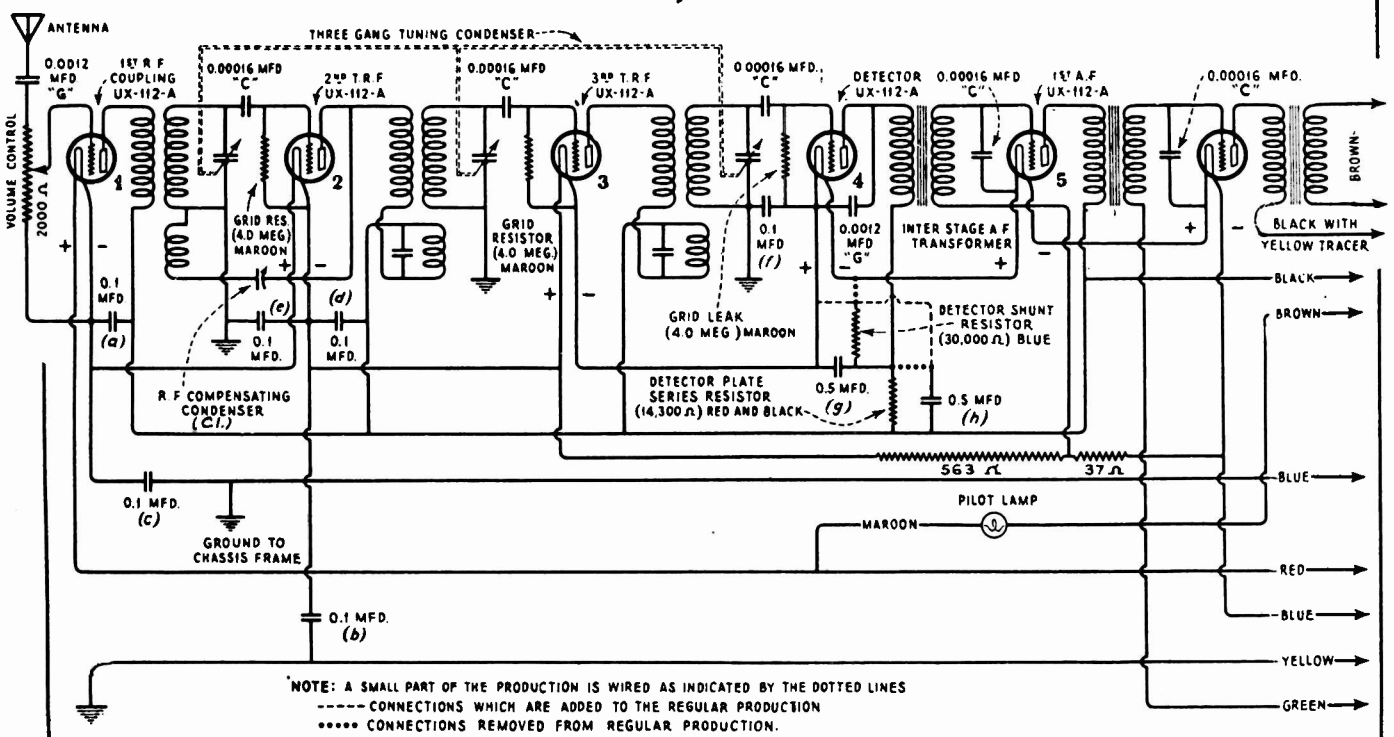
*Will vary with type of Tester used.



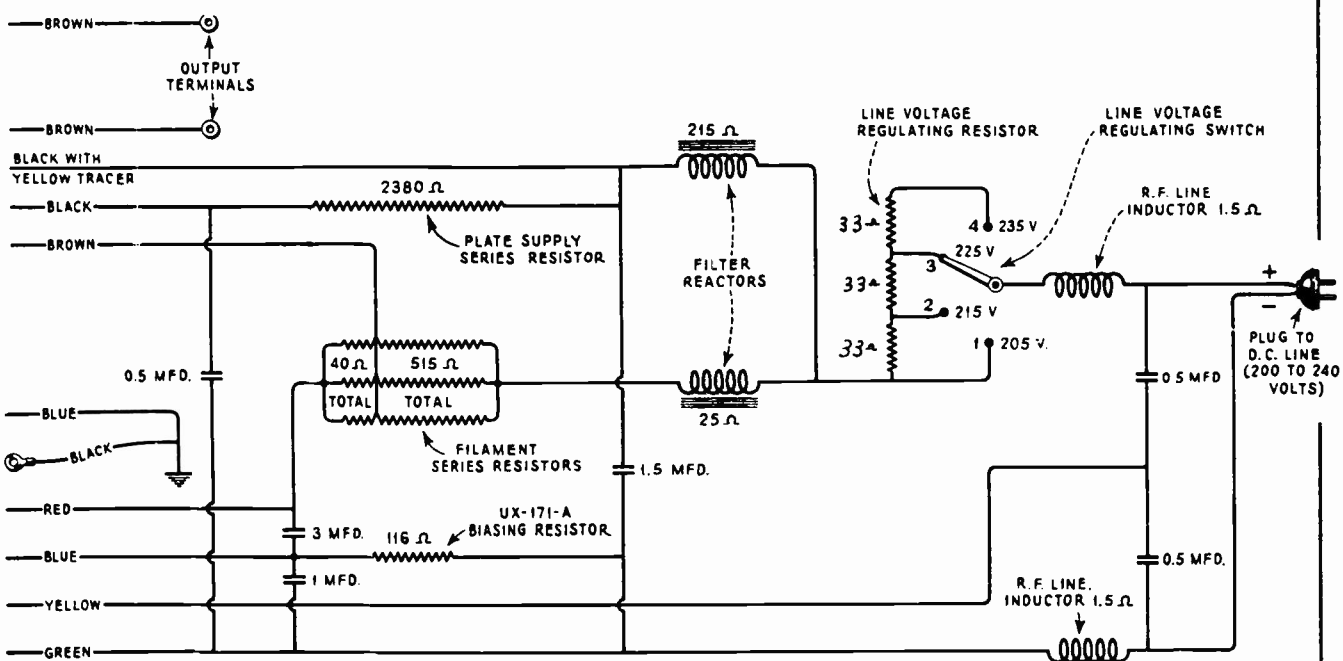
CABINET OF RADIOLA 33 DC IS IDENTICAL IN APPEARANCE TO RADIOLA 33 A.C.

LOCATION AND ADJUSTMENT OF R-F COMPENSATING CONDENSER IS IDENTICAL TO THAT OF RADIOLA 33 A.C.

33 (D.C.) 220 V.



–Schematic Circuit Diagram



Schematic circuit diagram of socket power unit.

Approx. Trans. Resistance Values

1st & 2nd Interstage Trans.

Primary 1000 ohms
Secondary 5000 ohms

Output Trans.

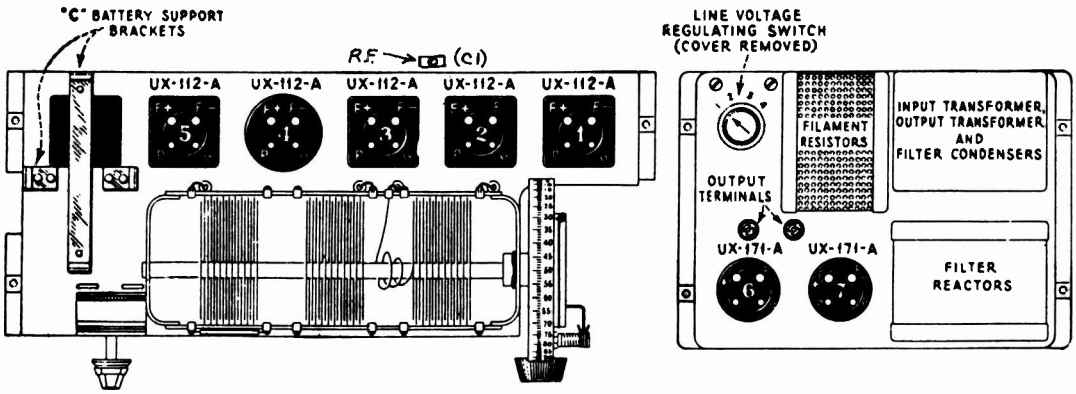
Primary 580 ohms
Secondary 770 ohms

RADIOLA 33 (D.C.) 110 V.

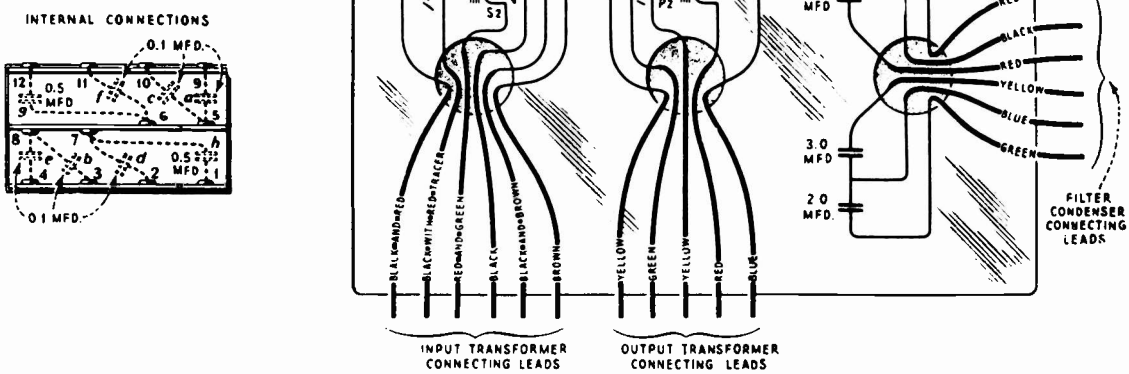
107.5—127.5 Volts Direct Current—40 Watts

CABINET OF RADIOLA 33 DC IS IDENTICAL IN APPEARANCE TO RADIOIA 33 A.C.

LOCATION AND ADJUSTMENT OF R-F COMPENSATING CONDENSER IS IDENTICAL TO THAT OF RADIOLA 33 A.C.



-Radiotron socket layout showing filament, plate and grid terminals

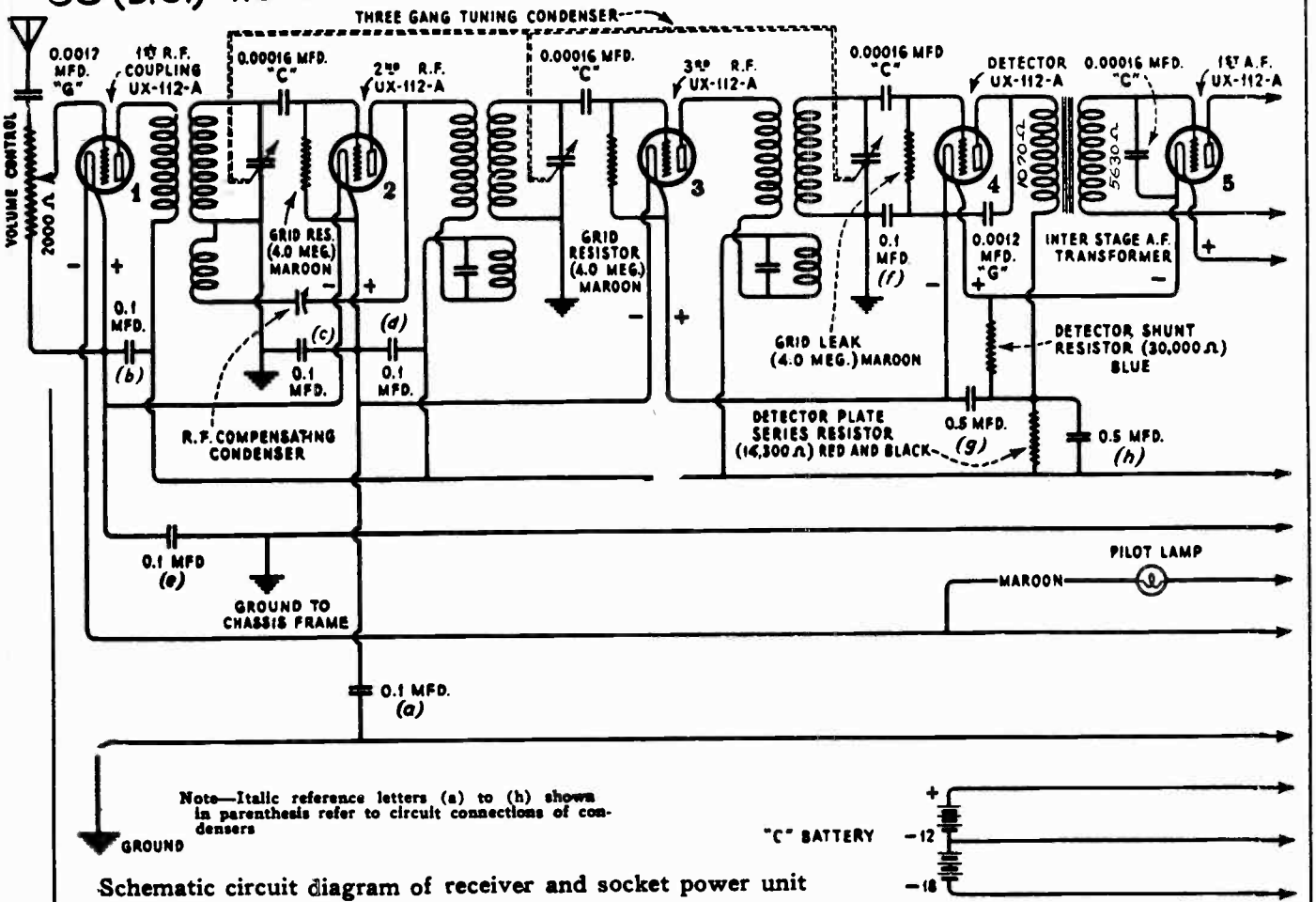


-Internal connections of input transformer, output transformer and filter condenser

Radiola 33 (D.C.) when connected to a 118-volt D.C. line and with the proper "C" battery. Line voltage regulating switch at position No. 3.

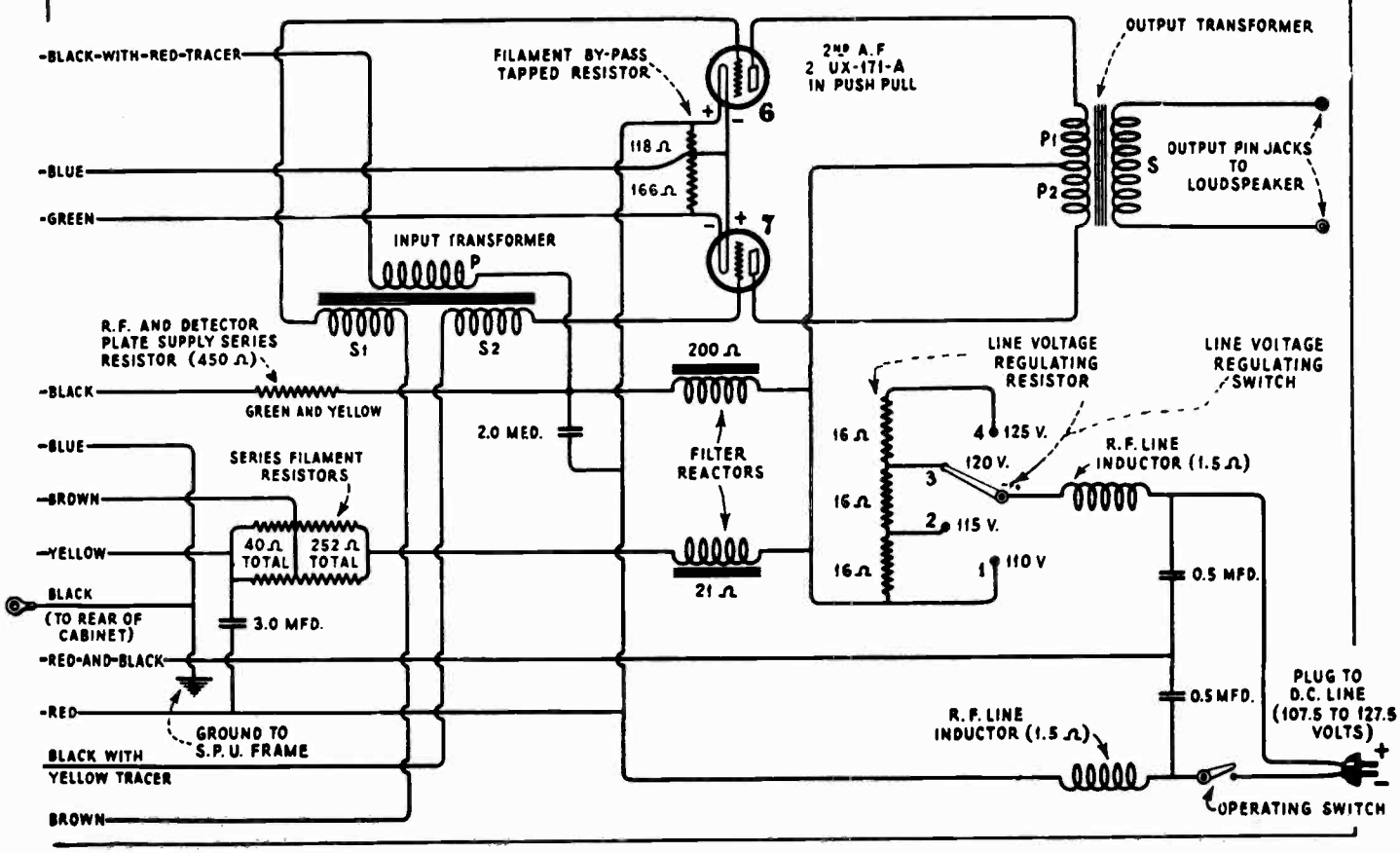
Tube No.	*Filament to Grid Volts*	*Filament to Plate Volts*	*Plate Current Milliamperes*	*Filament Voltage*
1	3.5	50	5.0	4.6
2	3.5	58	5.5	4.8
3	3.5	60	6.5	5.0
4	3.5	25	1.5	5.1
5	10.	75	7.0	5.25
6	23.	95	11.0	4.5
7	21.	95	11.0	4.75

33 (D.C.) 110 V.



Note—Italic reference letters (a) to (h) shown in parenthesis refer to circuit connections of condensers

Schematic circuit diagram of receiver and socket power unit

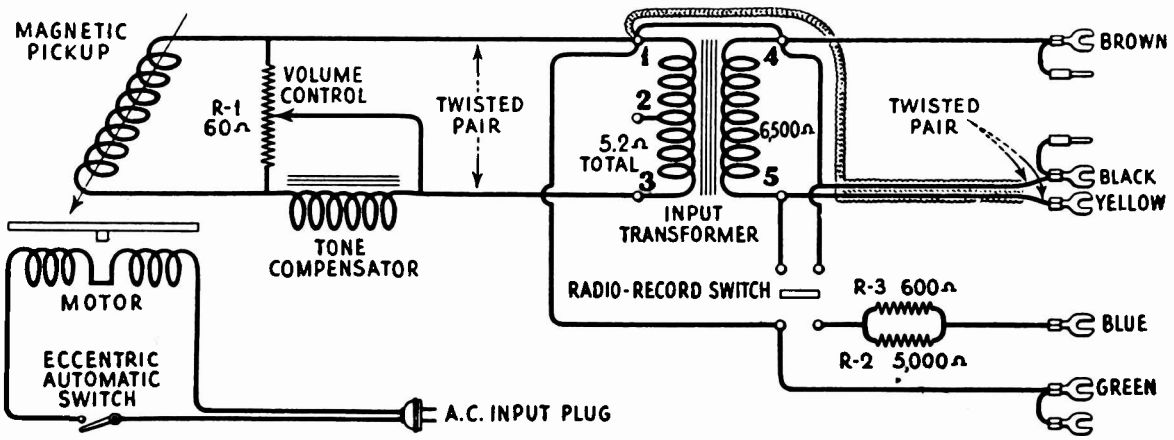


RECORD PLAYER PT-33

ELECTRICAL SPECIFICATIONS

Voltage Rating.....105–125 Volts
Frequency Rating.....25, 30, 50 and 60 Cycles
Power Consumption..... 25" 30 Watts, 30" 33 Watts, 50" 32 Watts, 60" 30 Watts

Type of Magnetic Pickup.....Low Impedance
Type of Tone Arm.....Straight
Diameter of Turntable.....12 inches



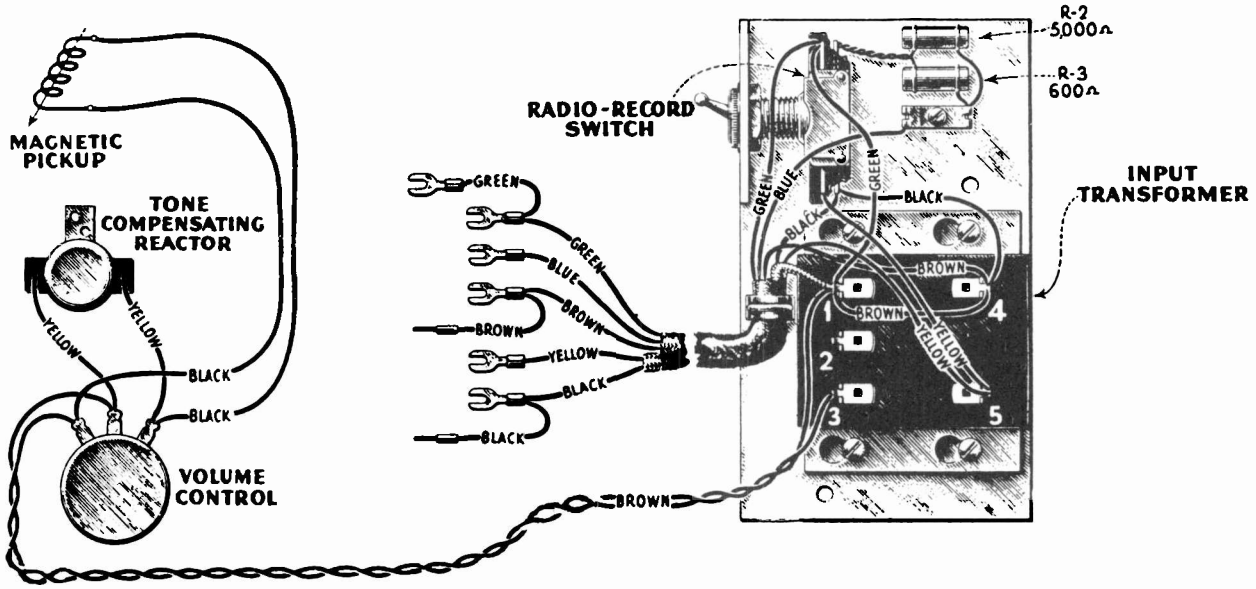
-Schematic Circuit

REPLACEMENT PARTS

Stock No.	DESCRIPTION	List
	MOTOR BOARD ASSEMBLY	
X-53	Motor board	
2614	Switch—Automatic brake switch	
2620	Cushions—Pickup rubber cushions comprising 2 pivots and 1 damper cushion—Package of 5 sets	
2765	Screw—Pickup needle holding screw—Package of 10	
2766	Screw—Pickup cover mounting screw—Package of 10	
2767	Spring—Pickup magnet retaining spring—Package of 10	
2768	Armature—Pickup armature	
2769	Coil—Pickup coil	
2770	Plate—Pickup damper plate complete—Package of 5	
2771	Screw—Pickup damper plate mounting screw—Package of 10	
2828	Screw assembly — Pickup mounting screw nut and washer—Package of 10 sets	
2870	Resistor—600 ohms—Carbon type—¼ watt—For control panel—Package of 5	
2871	Resistor—5,000 ohms—Carbon type—¼ watt—For control panel—Package of 5	
2875	Knob—Record volume control knob—Package of 5	
2878	Cable—Control board cable	
2879	Adapter—Special adapter to connect control board to detector tube—Package of 5	
2908	Spring—Pawl carrier spring—Package of 10	
3052	Screw assembly—Pickup pole shoe mounting screw, nut and washer—Package of 10 sets	
3157	Gear—Driving gear—Located on turntable spindle above top plate	
3159	Friction brake—Gear reducing friction brake spring with pad—Complete with mounting rivet—Package of 4	
3160	Escutcheon—Speed escutcheon plate with mounting screws—Package of 2	
3161	Spring—Shift lever spring—Package of 5	
3167	Magnet—Pickup magnet	
3169	Pole shoe—R. H. pole shoe	
3170	Pole shoe—L. H. pole shoe	
3211	Washer — Turntable spindle leather washer—Package of 10	
3212	Spring — Turntable spindle plunger spring—Package of 10	
3278	Bearing—Rotor shaft fibre thrust bearing and cork button—Package of 10	
3279	Screw and nut—Rotor shaft thrust bearing adjusting screw and locknut—Package of 10	
3280	Washer—Metal washer—Located on turntable spindle underneath gear reducing unit—Package of 20	
3281	Pawl—Gear reducing pawl with mounting stud	
6119	Stud—Motor hanging stud—Package of 6	
6120	Screw—For holding turntable spindle bearing and grease cap—Package of 10	
6121	Bearing—Turntable spindle bearing and grease cap	
6196	Switch—Radio record switch complete with mounting nuts and escutcheon plate	

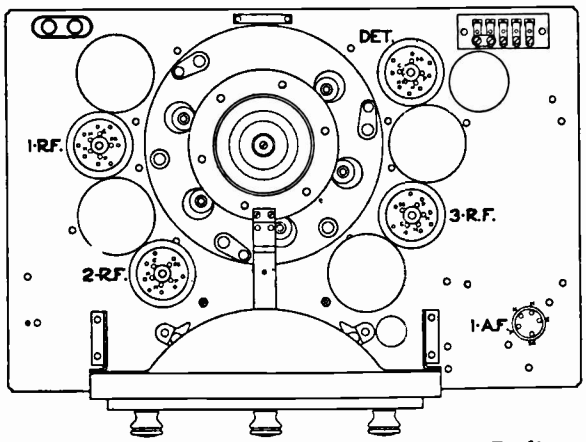
REPLACEMENT PARTS (Continued)

Stock No.	DESCRIPTION	List
6197	Trip rod—Automatic brake trip rod with lock nut—Package of 10	
6198	Screw and nut—Pickup arm height adjusing screw and lock nut—Package of 20	
7054	Cable—Motor power cable with plug	
7084	Turntable covering	
7093	Cover—Pickup cover	
7151	Back—Pickup housing back	
7180	Brake—Automatic brake complete	
7305	Gear—Gear reducing unit complete	
7387	Reactor—Tone compensating reactor with mounting bracket	
7388	Spindle—Turntable spindle with fibre gear—60 cycles	
7389	Rotor and shaft—60 cycles	
7390	Motor mounting washers and springs—Comprising 3 "C" washers, 9 cup washers and 6 springs—Package of 1 set	
7391	Volume control—Record volume control complete with mounting nut and washer	
7394	Pickup—Pickup unit complete	
7400	Spindle—Turntable spindle with fibre gear—25 cycles	
7401	Rotor and shaft—25 cycles	
7402	Spindle—Turntable spindle with fibre gear—30 cycles	
7403	Rotor and shaft	
7443	Rotor and shaft—50 cycles	
7444	Spindle—Turntable spindle with fibre gear—50 cycles	
7445	Transformer—Input transformer	
7446	Cable—Twisted twin conductor cable from volume control to input transformer	
8733	Turntable—Turntable with cover	
8795	Motor—Motor complete—110 volts—60 cycles	
8800	Motor—Motor complete—110 volts—25 cycles	
8801	Motor—Motor complete—110 volts—30 cycles	
8856	Motor—Motor complete—110 volts—50 cycles	
8857	Control board assembly—Complete—Comprising board, switch plate, input transformer, switch, resistors and cable	
8858	Arm—Pickup arm complete—Less pickup unit	
10174	Spring—Automatic brake springs—Set of 4—Package of 2 sets	
10184	Plate—Automatic brake trip plate with mounting screws—Package of 5	
10524	Connector block — Pickup connector block and wire	
	CABINET ASSEMBLY	
6113	Foot—Felt foot—Package of 15	
6199	Cushion—Lid felt cushion—Package of 40	
6200	Hinge—Cabinet lid hinge complete with mounting screws—Package of 8	
6201	Label—Metal trade mark label—Package of 5	
10125	Support—Lid support	
10688	Screw and washer—Motor board mounting screw and washer—Package of 10	

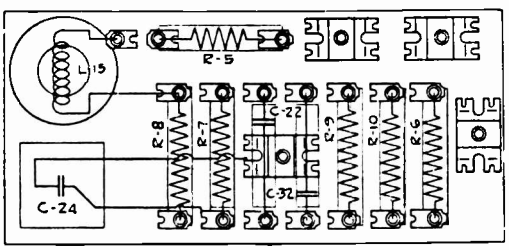


-Assembly Wiring

VICTOR R-34, R-35, R-39, RE-57 & RADIOLA RE-73

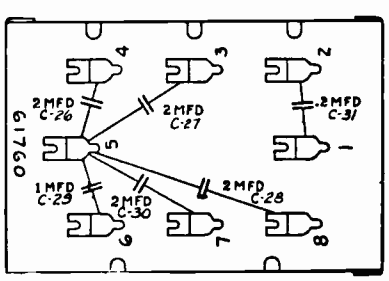


Location of Radiotron Sockets in Radio Chassis.

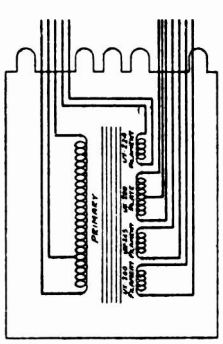


CAPACITORS		RESISTOR COLOR CHART		
C-22	100 MMF.	R-5	1500000 OHMS	WHITE (WITH RED END)
C-24	0.01 MF.	R-6	28000 OHMS	BUFF (WITH BROWN END)
C-32	1200 MMF.	R-7	1000000 OHMS	GREEN (WITH WHITE END)
		R-8	900000 OHMS	BLUE (WITH GREEN END)
		R-9	500000 OHMS	BLUE (WITH GREEN END)
		R-10	2800 OHMS	BLUE (WITH WHITE END)

Resistor Board on Radio Chassis



-Internal Connections of Filter Condenser Bank.



POWER TRANSFORMER

105-125 VOLTS	PRIMARY START BLACK-RED TR.
	PRIMARY TAP BLACK-RED 50/50
	PRIMARY FINISH BLACK
700 VOLTS	UX-280 PLATE START BLACK-BLUE TR.
	UX-280 PLATE MIDTAP YELLOW-RED TR.
	UX-280 PLATE FINISH BLACK-BLUE TR.
5 VOLTS	UX-280 FILAMENT START BROWN-GREEN TR.
	UX-280 FILAMENT FINISH BROWN-GREEN TR.
2½ VOLTS	UY-224 & UY-227 FILAMENT START BROWN
	UY-224 & UY-227 FILAMENT FINISH BROWN
2½ VOLTS	UX-245 FILAMENT START BROWN-YELLOW TR.
	UX-245 FILAMENT FINISH BROWN-YELLOW TR.

-Internal Connections of Power Transformer

The new Victor Micro-Synchronous Radio is a screen grid five circuit tuned radio frequency receiver of the antenna type. It employs three stages of tuned radio frequency amplification and a power detector, all of which are screen grid Radiotrons UY-224. A UY-227 Radiotron is used as a first stage audio amplifier, resistance coupled; two UX-245's are used in the push-pull power amplifier stage, and a UX-280 as rectifier.

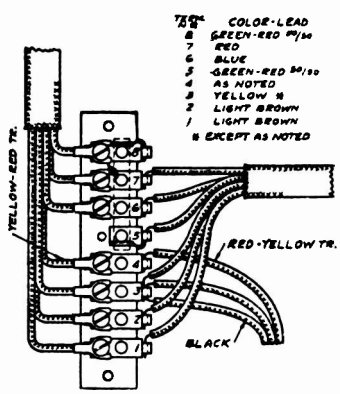
Through the use of the screen grid Radiotrons, which produce an extremely high degree of amplification, and the five circuits, tuned with the micro-synchronous principle, extremely high sensitivity and selectivity are obtained without sacrifice of tone quality.

Both the radio and the combination instruments contain two standard interchangeable units. The radio chassis contains the r. f. amplifiers, the power detector, and the first audio amplifier. The amplifier-speaker unit contains the push-pull stage of audio amplification, the rectifier-power supply, and the new Victor electro-dynamic speaker.

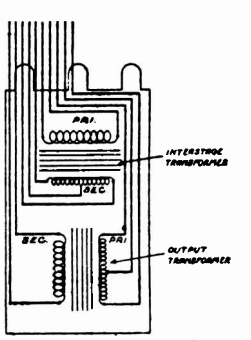
The Victor Micro-Synchronous Radio is designed for operation on 105 to 125 volts, 50 to 60 cycles, alternating current. Special instruments are also available for 25 to 30 cycle operation.

Power Consumption:

Radio only	120 watts
Radio & phono.	170 watts



-Top View of Amplifier Terminal Strip.

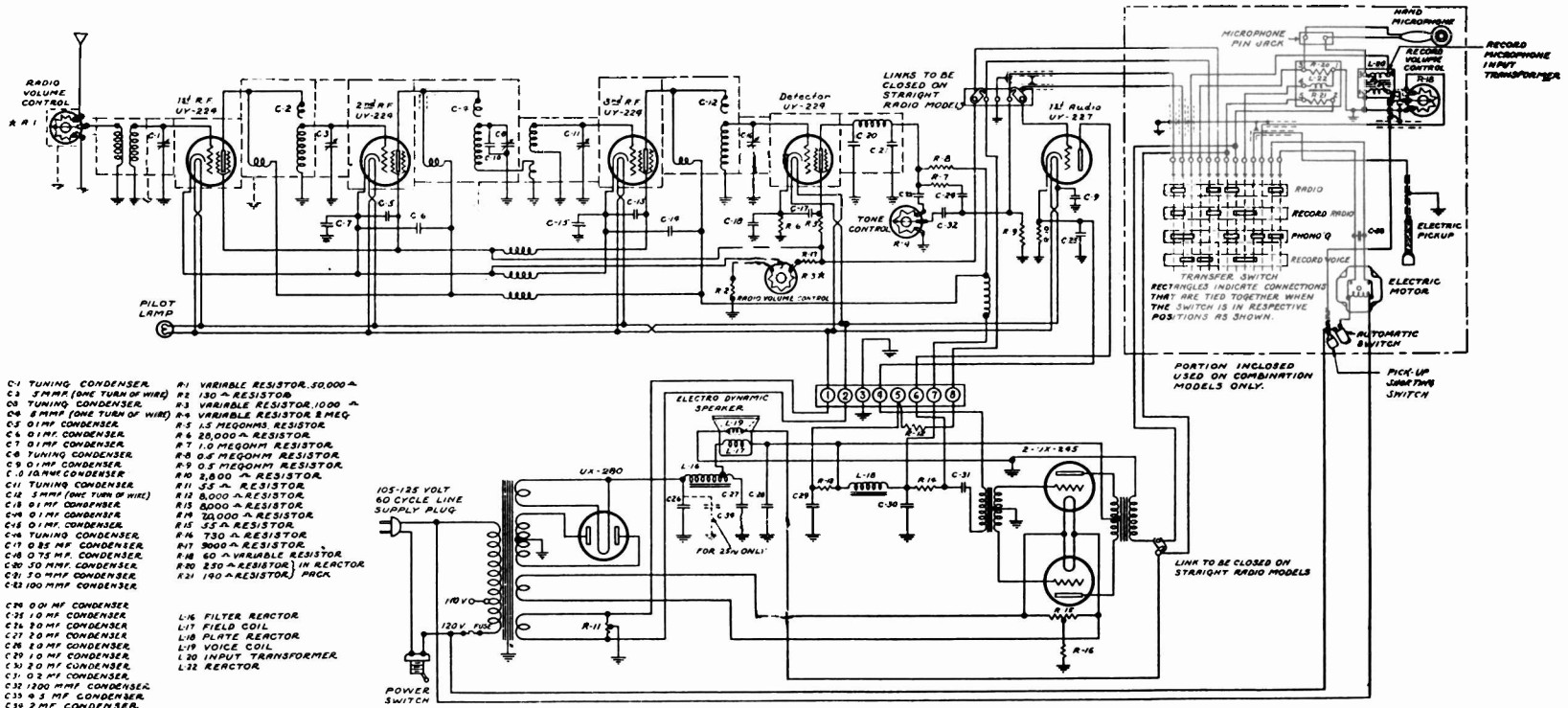


COLOR CODE OF LEADS

INTERSTAGE TRANSFORMER	OUTPUT TRANSFORMER
PRIMARY START-RED-YELLOW 50/50	PRIMARY START - BLUE
PRIMARY FINISH RED-YELLOW TR	PRIMARY FINISH - BLUE
SECONDARY START - GREEN	PRIMARY MIDTAP - RED
SECONDARY FINISH - GREEN	SECONDARY START - BLACK
SECONDARY TAP - YELLOW	SECONDARY FINISH - BLACK

-Internal Connections of Interstage and Output Transformer.

R34, R35, R39, RE57 & RE73



C-1 TUNING CONDENSER
C-3 5 MMF. (ONE TURN OF WIRE)
C-4 TUNING CONDENSER
C-5 8 MMF. (ONE TURN OF WIRE)
C-5 .01 MF. CONDENSER
C-6 .01 MF. CONDENSER
C-7 .01 MF. CONDENSER
C-8 TUNING CONDENSER
C-9 .01 MF. CONDENSER
C-10 .01 MF. CONDENSER
C-11 TUNING CONDENSER
C-12 5 MMF. (ONE TURN OF WIRE)
C-13 .01 MF. CONDENSER
C-14 .01 MF. CONDENSER
C-15 .01 MF. CONDENSER
C-16 TUNING CONDENSER
C-17 .02 MF. CONDENSER
C-18 .075 MF. CONDENSER
C-20 50 MMF. CONDENSER
C-21 50 MMF. CONDENSER
C-22 100 MMF. CONDENSER
C-26 .001 MF. CONDENSER
C-26 1.0 MF. CONDENSER
C-27 2.0 MF. CONDENSER
C-28 2.0 MF. CONDENSER
C-29 1.0 MF. CONDENSER
C-30 2.0 MF. CONDENSER
C-31 .02 MF. CONDENSER
C-32 1200 MMF. CONDENSER
C-33 .4.5 MF. CONDENSER
C-34 2 MF. CONDENSER
* R-1 AND R-3 ARE DUAL TYPE BOTH OPERATED BY THE SAME KNOB

R-1 VARIABLE RESISTOR, 50,000 Ω
R-2 130 Ω RESISTOR
R-3 VARIABLE RESISTOR, 1000 Ω
R-4 VARIABLE RESISTOR 2 MEG.
R-5 1.2 MEGOHMS RESISTOR
R-6 28,000 Ω RESISTOR
R-7 1.0 MEGOHM RESISTOR
R-8 0.6 MEGOHM RESISTOR
R-9 0.5 MEGOHM RESISTOR
R-10 2,800 Ω RESISTOR
R-11 35 Ω RESISTOR
R-13 8,000 Ω RESISTOR
R-15 8000 Ω RESISTOR
R-19 20,000 Ω RESISTOR
R-15 35 Ω RESISTOR
R-16 730 Ω RESISTOR
R-17 3000 Ω RESISTOR
R-18 60 Ω VARIABLE RESISTOR
R-20 250 Ω RESISTOR } IN REACTOR PACK
R-21 190 Ω RESISTOR }

L-16 FILTER REACTOR
L-17 FIELD COIL
L-18 PLATE REACTOR
L-19 VOICE COIL
L-20 INPUT TRANSFORMER
L-32 REACTOR

NOTE—Broken lines akng wires indicate grounded shielding.

–Schematic Wiring Diagram Victor Mico-Synchronous Radio, Models R-35, R-39, and RE-57.

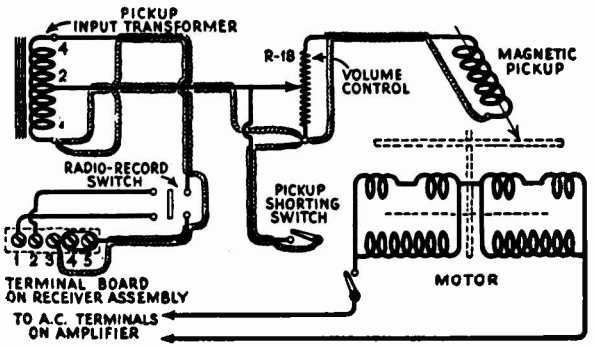
Power line voltage
110 volts, 60 cycle, A.C. volume control at maximum

Amplifier Terminal Strip

TEST ACROSS AMPLIFIER TERMINALS	VOLTAGE SUPPLY	NORMAL VOLTAGE
1 and 2	UY-224 and UY-227 Filament	2.4 Volts A.C.
3 and 7	UY-224 Plate	170 Volts D.C.
3 and 6	UY-227 Plate	65 Volts D.C.
3 and 8	Screen Grid	89 Volts D. C.

Amplifier Tube Socket Tests

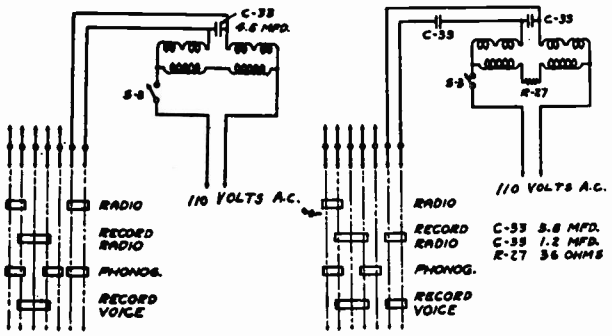
TEST	SOCKET	NORMAL VOLTAGE
Filament	UX-245 UX-245	2.25 2.25
	UX-280	4.9
Plate	UX-245 UX-245	222 222
	UX-280	40 M. A.
Grid	UX-245 UX-245	37 37



-Schematic Diagram of Motor Board

RE-73

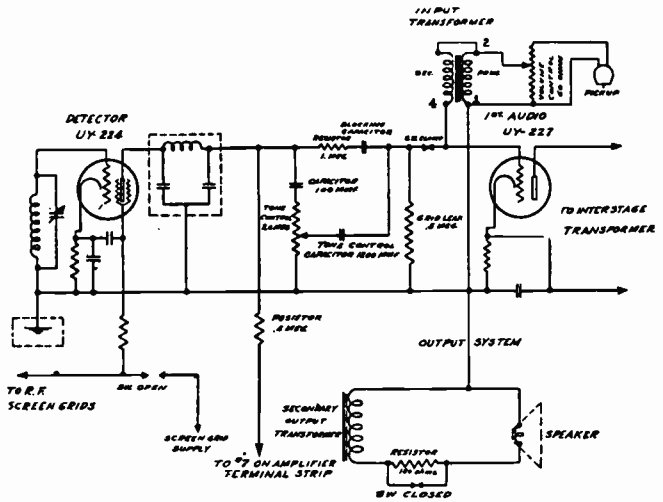
R34, R35, R39, RE57 & RE73



—Electric Motor Connections for 60 cycles.

—Electric Motor Connections for 25 Cycles.

RE-57



-Schematic Connections Between Detector and First Audio Tubes with Transfer Switch in "Record Reproduction" position

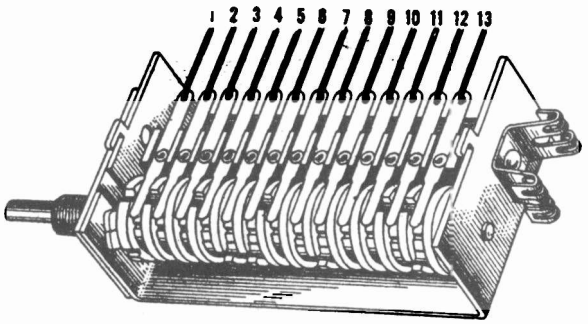
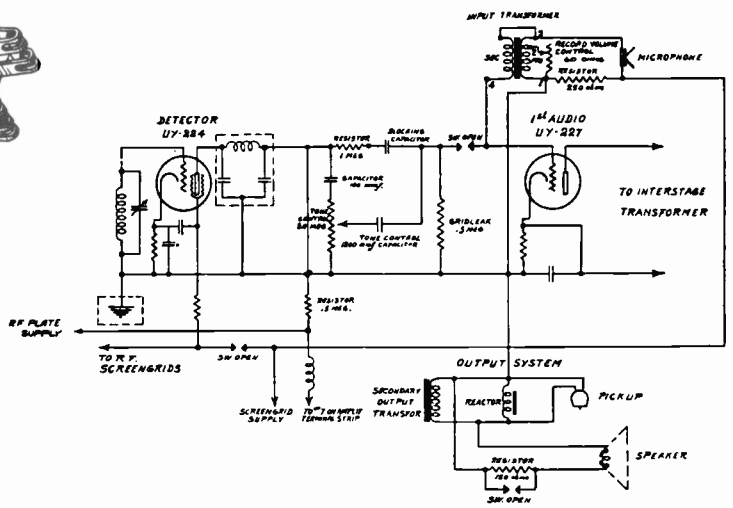


Fig. 27—Control Switch

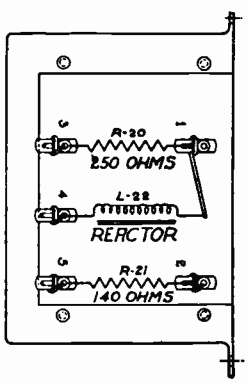
COLOR CODE

1. Black
2. Black
3. Black—Yellow Tracer
4. Pickup Lead
5. Yellow—Black Tracer
6. Black and Red—50-50
7. Black—Red Tracer
8. Green—Yellow Tracer
9. Green and Red—50-50
10. Black and Yellow—50-50
11. Green and Yellow—50-50
12. Green
13. Green—Red Tracer

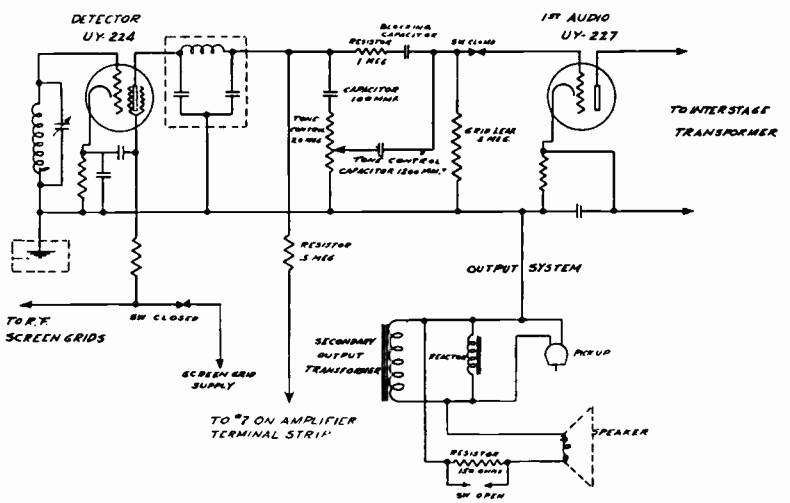
Connection to Switch Case—Yellow



—Schematic Connections Between Detector and First Audio Tubes with Transfer Switch in "Home Recording" position.

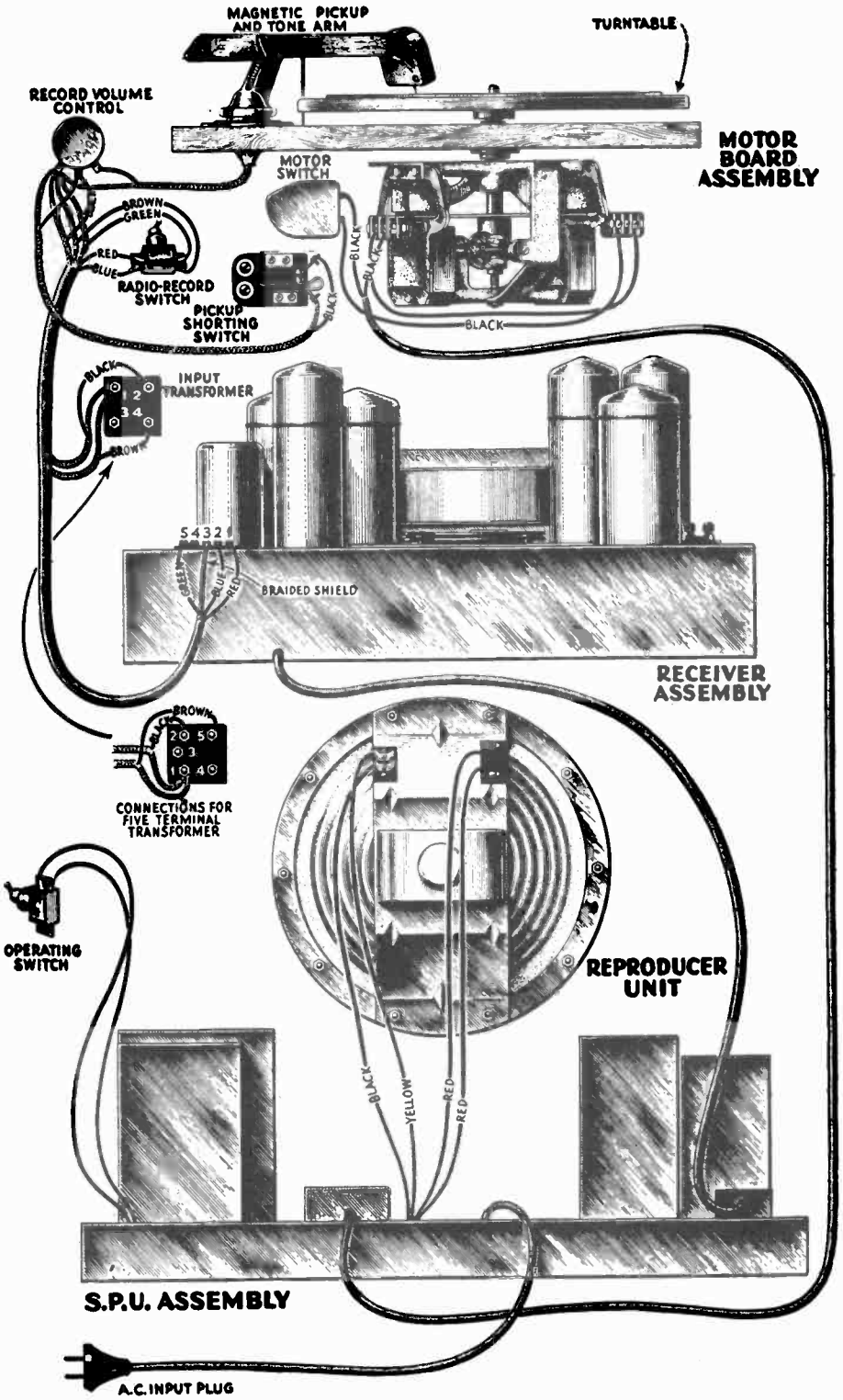


Microphone Reactor Terminals



-Schematic Connections Between Detector and First Audio Tubes with Transfer Switch in "Radio Recording" position.

R34, R35, R39, RE57 & RE73



-Assembly Wiring Diagram RE 73

R34, R35, R39, RE 57 & RE 73

REPLACEMENT PARTS

Stock No.	Description
	RECEIVER ASSEMBLIES
2012	Condenser - 1200 mfd. condenser.
2546	Resistor - 1 megohm - Package of 5.
2746	Socket - Lamp socket.
2747	Cap - Contact cap - Package of 5.
2804	Knob - Volume or tone control knob - Package of 5.
2966	Resistor - 28,000 ohms - Package of 5.
2970	Resistor - 1/2 megohm - Package of 5.
7124	Socket - Tube socket - UY type.
10426	Screw - Cam wheel adjusting screw - Package of 20.
10436	Posts - Twin binding posts with lockwashers and nut - Antenna and ground.
10804	Knob - Tuning knob - Package of 5.
10805	Shield - Round condenser shield.
10806	Shield - Variable condenser shield.
10807	Shield - White enamel lamp shield.
10808	Indicator - Dial indicator - Package of 5.
10809	Plate - Cover plate with screw - Package of 5.
10810	Roller - Cam roller - Package of 5.
10811	Condenser - Variable condenser.
10812	Shaft - Cam roller shaft with washers and nuts - Package of 2.
10813	Control - Tone control with plate washers and nut.
10814	Shield - Filter coil and capacitor shield with washers and nuts - Package of 2.
10815	Coil - Filter coil and capacitor with mounting screws, lockwashers and nuts.
10816	Coil - 3rd R.F. coil.
10817	Coil - Link coil.
2755	Pilot light 2 1/2 v.
10818	Condenser - Bank of 2 condensers - 0.25 and 0.75 mfds.
10819	Condenser - Bank of three condensers - 0.1 0.1 and 0.1 mfds.
10820	Condenser - 100 mmfd. condenser.
10821	Coil - Resistor board coil.
10822	Wheel - Cam wheel with spring washers, cup washer and pin.
10823	Chassis - Receiver chassis complete - 60 cycle.
10824	Strip - Terminal strip with insulation and rivet - 2 contact.
10825	Inductor - Stabilizing inductor with screw, lockwasher and nut.
10826	Control - Volume control with nut, washer and locking plate.
10827	Cable - Internal wiring cable.
10828	Coil - Antenna coupling coil.
10829	Coil - 1st R. F. coil.
10830	Coil - 2d R. F. coil.
10831	Strip - Terminal strip with link.
10832	Socket - UX socket strip - Complete.
10833	Strip - Terminal strip with insulation and rivets - 6 contact.
10834	Clip - Tube socket clip - Package of 10.
10835	Capacitor - 0.01 MFD.
10837	Capacitor - Bank of three 0.1mfd. capacitors.
10838	Resistor - 9000 ohms - Carbon type - Package of 5.
10839	Resistor - 130 ohms - Carbon type - Package of 5.
10840	Resistor - 2800 ohms - Package of 5.
10841	Resistor - 1 1/2 megohms - Package of 5.
10842	Capacitor - 10 MMFD condenser - Package of 2.
10843	Shield - Tube shield body with cap - Package of 1 set.
10844	Shield - Coil shield body with cap - Package of 1 set.
10851	Panel - Radio chassis escutcheon panel (less dial).
10920	Cable - Wiring cable - Used to connect receiver to amplifier.
10947	Dial - Station selector dial scale.
10948	Spring - Tuning condenser spring - Package of 5.
10949	Link - Tuning condenser link - Bakelite - Package of 5.
10969	Roller - Tuning condenser roller and shaft - With eyelet screw and nut - Package of 5.
10971	Clamp - Chassis clamp - For holding chassis in cabinet - Package of 4.
	AMPLIFIER ASSEMBLIES
2721	Socket - UX-245 socket with strip and rivets.
2722	Resistor - 55 ohms - Mid-tapped - Wire wound.
2723	Switch - Operating switch - Package of 5.
2725	Fuse - 1 1/2 amp fuse - Package of 5.
2757	Strip - Terminal strip - 2 contact.
2880	Resistor - 70,000 ohms - Carbon type - Package of 5.
2963	Resistor - 8000 ohms - Carbon type - Package of 5.
7053	Resistor - 715 ohms - Wire wound.
7054	Cord - Amplifier power cord - With male connector.
10907	Fuse - 3 ampere fuse - Package of 5.
10908	Cover - Terminal strip cover - Package of 2.
10909	Condenser - Condenser bank - 60 cycles.
10910	Capacitor - Extra filter capacitor for 25 cycles.
10911	Reactor - Filter reactor.
10912	Strip - Terminal strip - 8 contact.
10913	Cable - Amplifier wiring cable.
10914	Strip - Speaker cone support terminal strip - Package of 3.
10915	Transformer - Power transformer - 105-125 volts, 25-40 cycles.
10916	Transformer - Power transformer - 60 cycles - 220 volts.
10917	Transformer - Power transformer - 105-125 volts, 50-60 cycles.

R34, R35, R39, RE57 & RE73
REPLACEMENT PARTS (Continued)

Stock No.	Description
7075	Socket - UX-280 socket with rivets.
7224	Cover - Fuse cover with bushing and insulation.
	REPRODUCER ASSEMBLY
	R 34
8559	Ring - Cone retaining ring.
8599	Coil - Loudspeaker field coil.
8600	Support - Cone support.
8601	Cone - Speaker cone with voice coil - Package of 5.
10845	Transformer - A. F. transformer.
10847	Strip - Speaker terminal strip - (2 contact) - Package of 2.
	REPRODUCER ASSEMBLIES
	R 35, R 39 & RE 57
7055	Bolt assembly - Used to mount cone support - Package of 4.
7056	Ring - Felt spacing ring for speaker field coil - Package of 2.
8554	Transformer - Audio transformer.
8557	Support - Speaker cone support and housing.
8558	Cone - Speaker cone and voice coil-Package of 5.
8559	Ring - Cone retaining ring.
8560	Coil - Loudspeaker field coil.
9302	Speaker - Loudspeaker complete.
	REPRODUCER ASSEMBLIES
	RE 73
3166	**Bolt assembly—Reproducer mounting bolt assembly—Comprising two bolts, two nuts, two lock washers and two plates**
7308	**Coil assembly—Reproducer field coil assembly—Comprising field coil, cone bracket and magnet**
8559	**Ring—Cone retaining ring**
8601	**Cone—Reproducer cone with voice coil—Package of 5**
10845	**Transformer—A. F. transformer**
	SPECIAL PARTS FOR RE-57
2614	Switch - Brake motor switch.
2620	Cushion - Pickup rubber cushions - Set of 1 damper and 2 pivot cushions - Package of 1 set.
2758	Cup - Needle cup - Package of 2.
2759	Box - Needle box with lid - Package of 2.
2761	Jack - Microphone pin jack.
2762	Bearing assembly - Governor bearing assembly - Comprising 2 bearings, 2 set screws, 2 ball bearings - Package of 3 sets.
2763	Bolt assembly - Motor mounting bolt assembly - Comprising bolts, C washer, rubber washer and cushion, flat washers and nut - Package of 3 sets.
2764	Spindle - Turntable spindle.
2765	Screw - Pickup needle screw - Package of 10.
2766	Screw - Pickup cover screw - Package of 10.
2767	Spring - Pickup magnet spring - Package of 10.
2768	Armature - Pickup armature.
2769	Coil - Pickup coil.
2771	Screw - Pickup damper plate screw - Package of 10.
2772	Magnet - Pickup magnet.
2773	Pole piece - Pickup pole piece (R.H.).
2774	Rod - Pickup arm trip rod and nut - Package of 5.
2776	Catch - Door catch, strike and nail - Package of 2 sets.
2778	Pole piece - Pickup pole piece (L.H.).
2779	Pointer - Control switch pointer - Package of 10.
2781	Felt - Regulating lever friction felt - Package of 20.
2782	Weight - Recording weight.
2783	Escutcheon - Control switch escutcheon - Package of 5.
2784	Tray - Needle tray plate and spring with mounting screws - Package of 2.
2785	Hinge - Lid hinge - Package of 2.
2787	Switch - Pickup shorting switch.
2804	Knob - Volume control and switch control knob - Package of 5.
2825	Connector block - Pickup connector block and wire.
2827	Resistor - Motor resistor - 36 ohms - for 25 cycles.
2828	Screw assembly - Pickup mounting screw, lockwasher and nut - Package of 10 sets.
2872	Ball and spring assembly - Comprising governor ball and spring with mounting screws and washers - Package of 5.
2873	Screw assembly - Top plate screw, lockwasher, nut and ball bearing - Package of 5 sets.
3052	Screw assembly - Pickup pole piece mounting screw and nut - Package of 10 sets.
7076	Brake - Eccentric automatic brake - Complete with mounting screws.
7077	Regulator - Speed regulator escutcheon with screw and mounting screws - Package of 2.
7078	Volume control - Electrola control - complete less knob.
7079	Capacitor - Motor capacitor (60 cycles).
7082	Support - Lid support (complete).
7083	Transformer - Pickup input transformer.
7084	Cover - Turntable cover.
7085	Pickup - Pickup unit.
7086	Level - Regulating lever - Package of 2.
7087	Gear - Governor drive gear.
7088	Disc - Rotor disc with set screw.
7090	Coil - Motor inductor coil - 120 volts - 60 cycles.
7093	Cover - Pickup unit cover.
7095	Hinge - Door hinge - Set of 4 - Package of 1 set.
7096	Handle - Door pull handle - Package of 2.

REPLACEMENT PARTS—Continued

R34, R35, R39, RE57 & RE73

Stock No.	Description
7097	Microphone complete with cord.
7098	Cord - Microphone cord.
7147	Coil - Motor inductor coil - 120 volts - 25 cycles.
7148	Capacitor - Motor capacitor - 25 cycles.
7151	Back - Pickup back housing.
8582	Turntable - Turntable with cover.
10174	Springs - Brake springs - Set of 4 springs - Package of 2 sets.
10196	Spring - Speed regulator lever spring - Package of 10.
10289	Governor - Complete - Comprising spindle, collar, friction disc, springs and balls - Assembled.
10378	Top plate.
7092	Arm - Pickup arm and base with mounting screws.
10901	Spring - Lid support spring - Package of 2.
10938	Reactor - or Compensating unit.
10939	Switch - Control switch - 13 contact - Complete less knob (25 cycles).
10940	Switch - Control Switch - 13 contact - Complete less knob (60 cycles).
10967	Panel - Control panel.

RE 73

PHONOGRAPH PARTS

2614	Switch—Automatic brake contact switch
2615	Springs—Brake springs—Set of 4 springs—Package of 2 sets
2620	Cushions—Pickup rubber cushion—Comprising 1 damper and 2 pivot cushions—Package of 5 sets
2622	Coil assembly—Located nearest governor—105–125 volts, 25 cycles—Comprising 2 current coils, 1 voltage coil, laminated core, end bracket, terminal board, nuts, bolts, screws and washers—Completely assembled ready for mounting
2623	Coil assembly—Located farthest from governor—105–125 volts, 25 cycles—Comprising 2 current coils, 1 voltage coil, laminated core and bracket, terminal board nuts, bolts, screws and washers—Completely assembled ready for mounting
2691	Governor—Comprising shaft with worm, brake disc, weights, springs and screws—Assembled
2692	Bearings—Governor shaft bearings—One set of 2
2693	Gear—Governor drive worm gear with set screw
2695	Bearings—Threaded thrust bearing with lock nut for end of turntable spindle
2759	Box—Needle box with lid—Package of 2
2765	Screw—Pickup needle holding screw—Package of 10
2766	Screw—Pickup cover mounting screw—Package of 10
2767	Spring—Pickup magnet spring—Package of 10
2768	Armature—Pickup armature
2770	Plate—Pickup damper plate—Package of 5
2771	Screw—Pickup damper plate mounting screw—Package of 10
2787	Switch—Pickup shorting switch
2789	Cord—Motor cord—Connects motor coil and starting switch
2826	Cable—Shielded cable from shorting switch to record volume control
2829	Knob—Motor board lifting knob and screw—Package of 2
2858	Rest—Pickup rubber rest with mounting brad—Package of 5
3052	Screw assembly—Pickup pole piece mounting screw, nut, washer—Package of 10 sets
3101	Switch—Record-radio toggle switch with mounting nuts and escutcheon plate—Located on top of motor board
3102	Receptacle—Needle receptacle
3158	Screw assembly—Motor mounting screw assembly—Comprising 3 screws, 3 bushings, 3 metal washers and 12 cushion washers
3162	Regulator—Speed regulator with mounting screws—Comprising cam and shaft, bushing and bracket
3163	Escutcheon—Speed regulator escutcheon with mounting screw—Package of 5
3164	Control—Record volume control with mounting washer and nut—Less knob
3167	Magnet—Pickup magnet
3168	Coil—Pickup coil
3169	Shoe—Pickup pole shoe R. H.
3170	Shoe—Pickup pole shoe L. H.
6067	Lever—Speed control regulator lever for motor—Comprising lever, spring, mounting bolt, nut and washer
6069	Coil assembly—Located nearest governor—105–125 volts, 60 cycles—Comprising 2 current coils, 1 voltage coil, laminated core end bracket, terminal board, nuts, bolts, screws and washers—Completely assembled ready for mounting
6070	Coil assembly—Located farthest from governor—105–125 volts, 60 cycles—Comprising 2 current coils, 1 voltage coil, laminated core, end bracket, terminal board, nut, bolts, screws and washers—Completely assembled ready for mounting
7076	Brake—Automatic brake with mounting screws
7082	Support—Lid support complete with mounting screws
7083	Transformer—Input transformer
7084	Cover—Turntable cover
7093	Cover—Pickup cover
7151	Housing—Pickup housing back
7304	Spindle—Turntable spindle
7306	Cable—Braided cable from volume control switch
7307	Pickup—Pickup unit complete
8732	Arm—Pickup arm and base complete with mounting screws—Less pickup unit
8733	Turntable—Turntable with cover
10175	Needle holder

RE 73

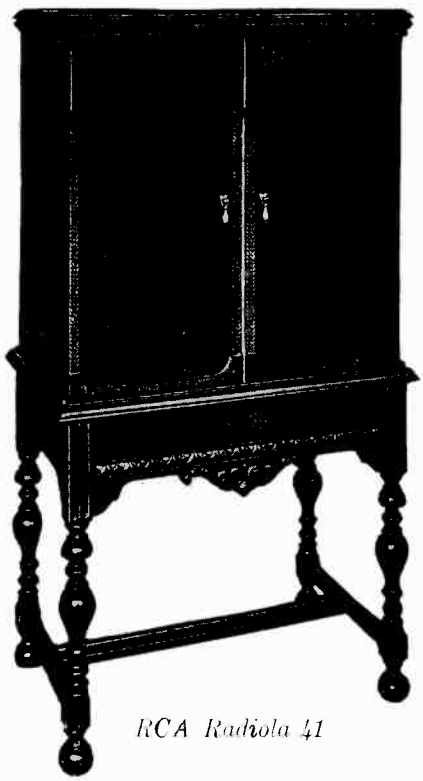
CABINET ASSEMBLY

2785	Hinge—Lid hinge with mounting screws—Package of 1 set of 2
3156	Label—Metal trade mark label—Package of 5
7300	Baffle board and grille cloth
7301	Escutcheon—Tuning dial control escutcheon

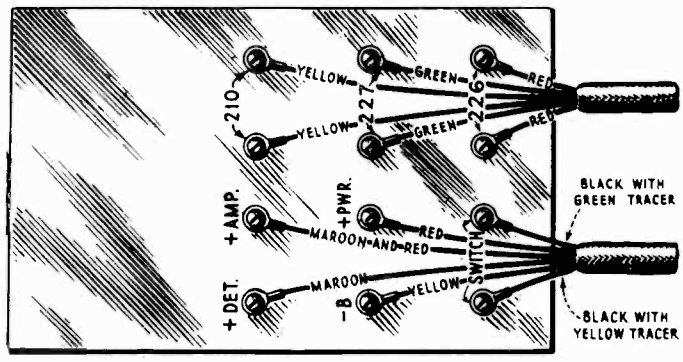
RADIOLA 41

(105-125 Volts. 50-60 Cycle A. C.)

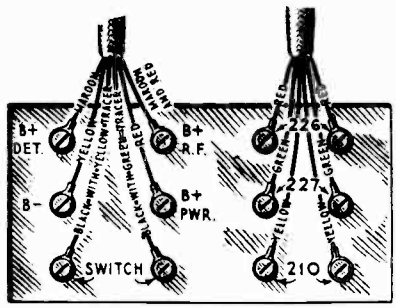
Radiola 41 is also made in models designed for 105-125 volts, 25-40 cycles A. C. operation. In this model the power transformer is different from that used in the 50-60 cycle models. All other parts are identical in both models



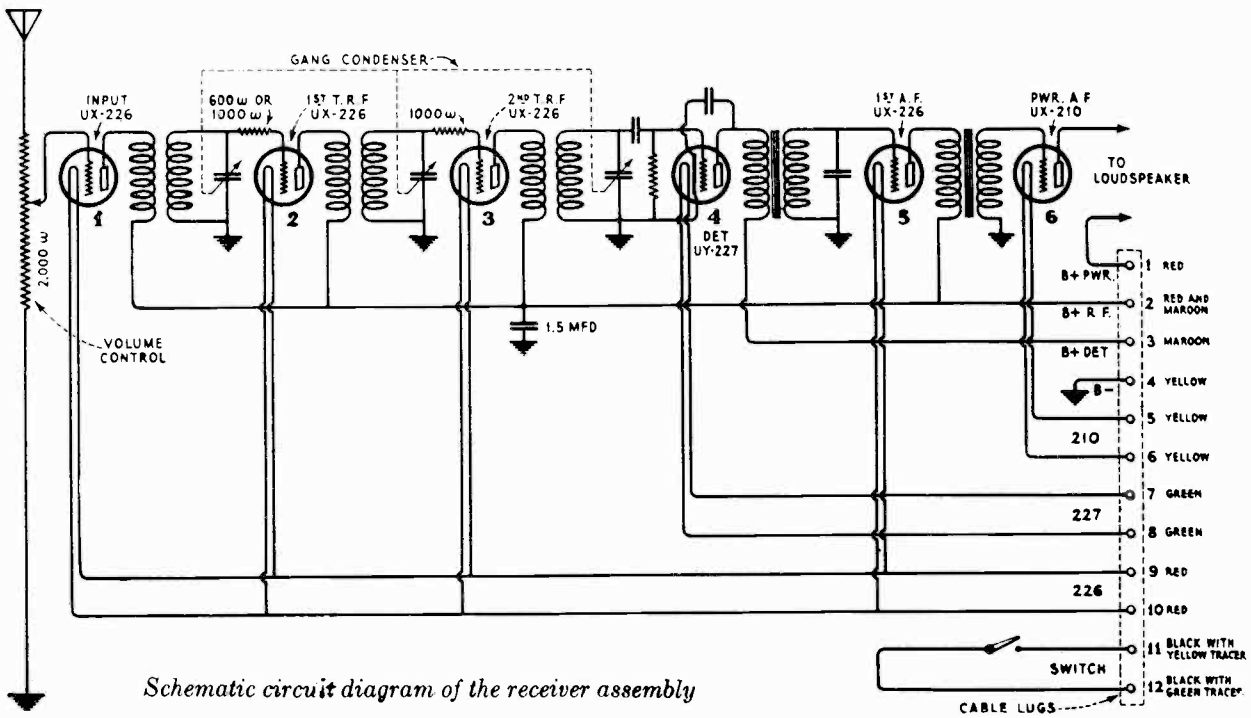
RCA Radiola 41



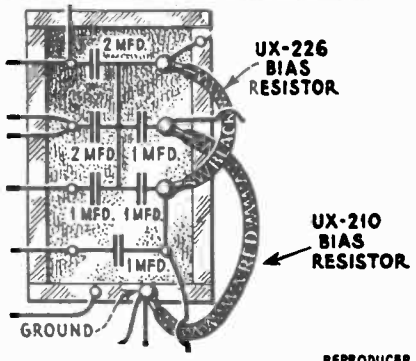
Sterling S. P. U. terminal board showing color scheme of connections



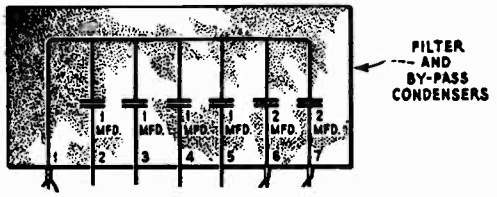
-Receptor S. P. U. terminal board and color of connections



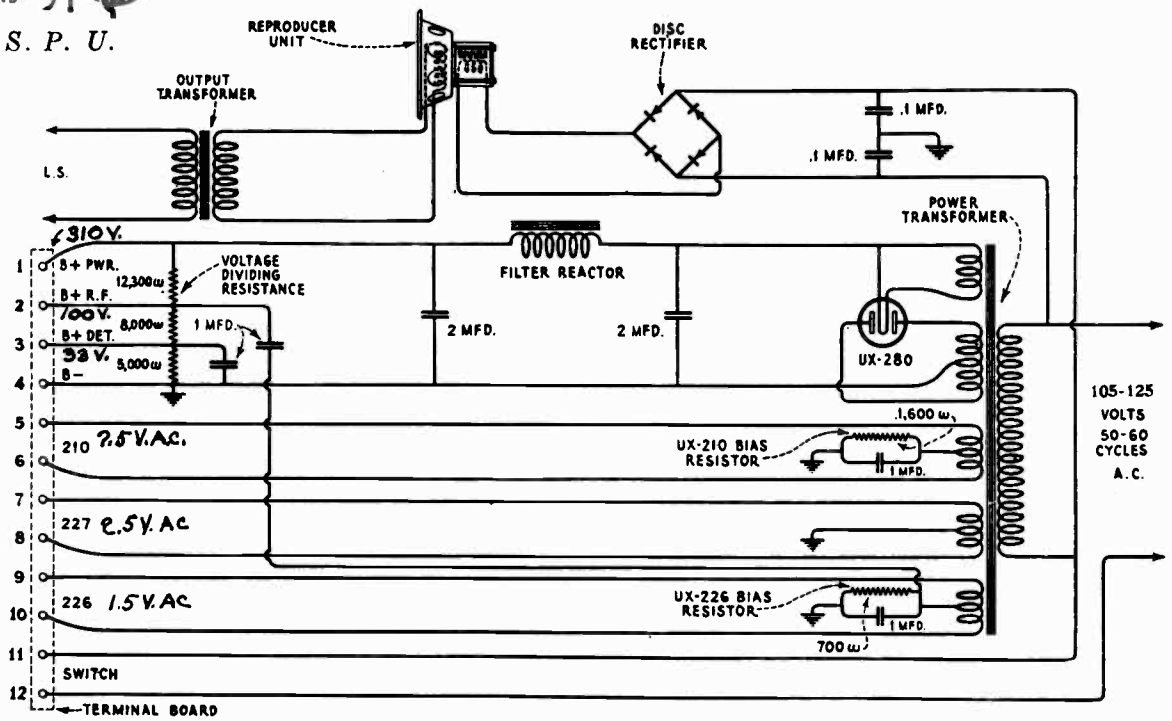
Schematic circuit diagram of the receiver assembly



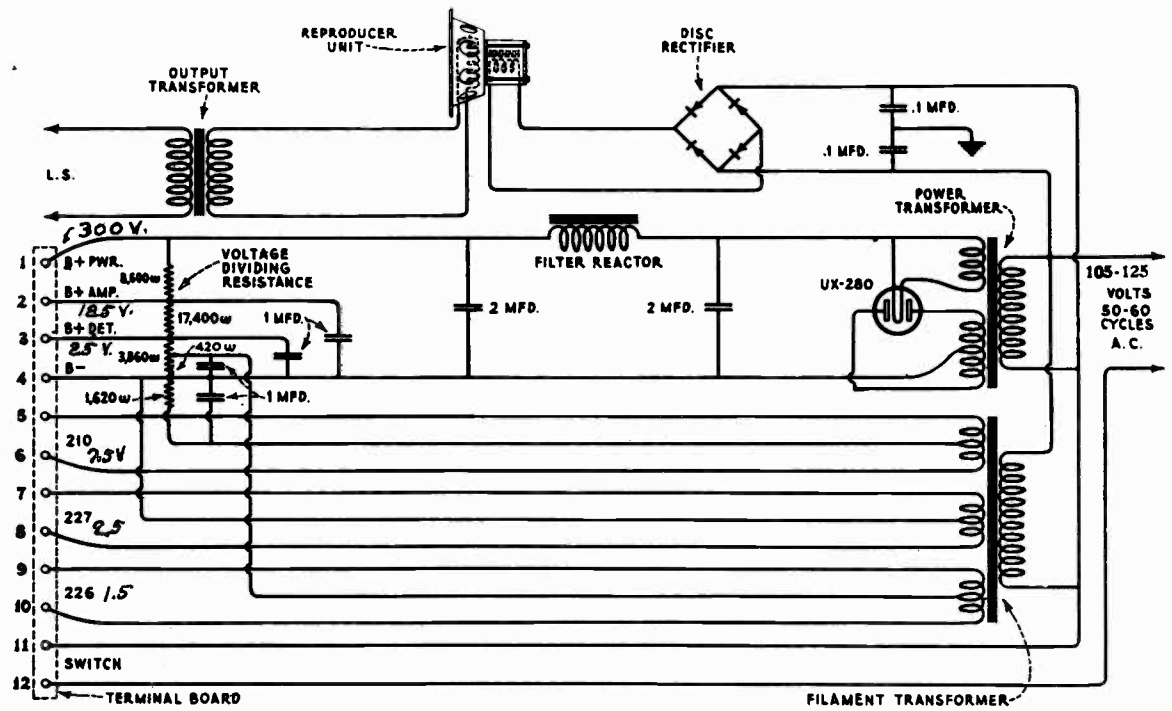
Receptor S. P. U.



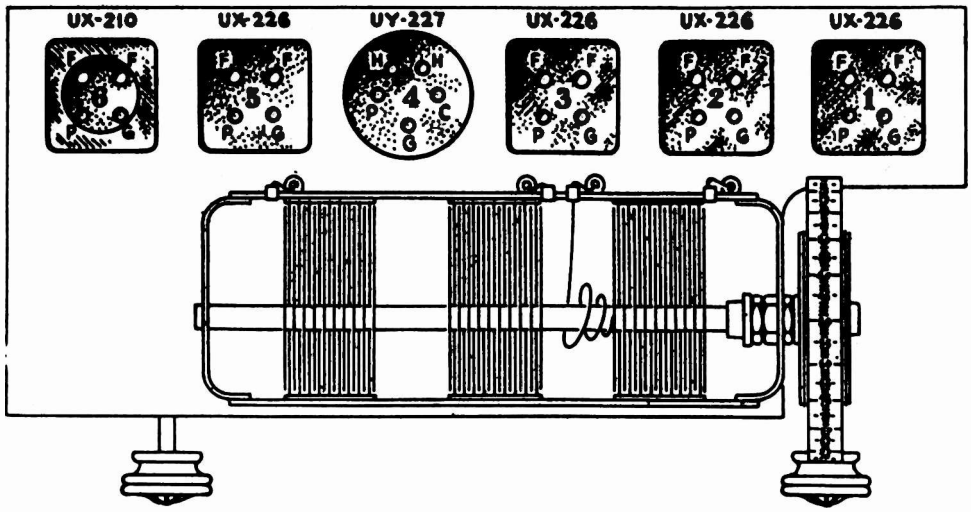
Sterling S. P. U.



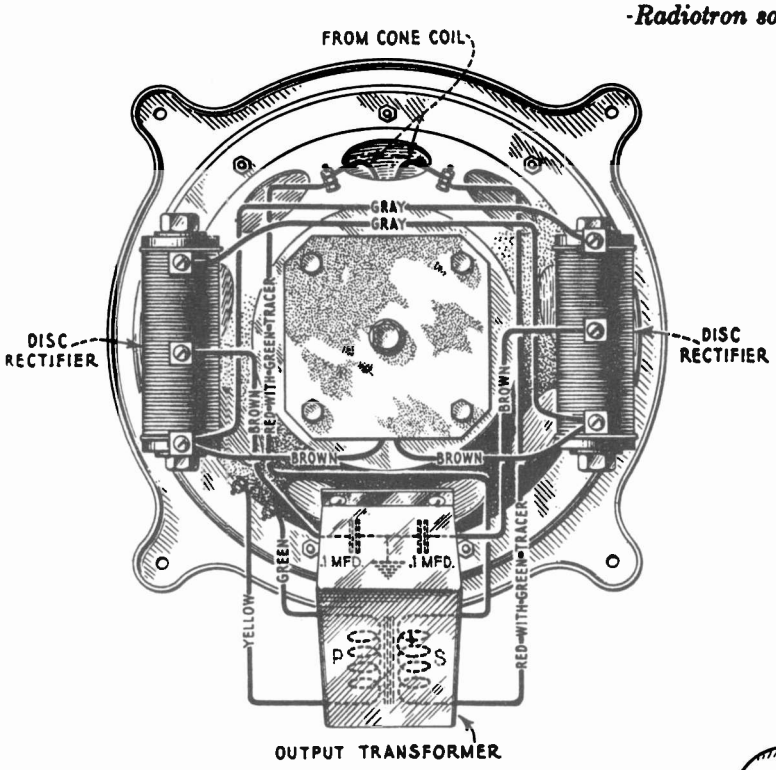
–Schematic circuit diagram of Receptor S. P. U.



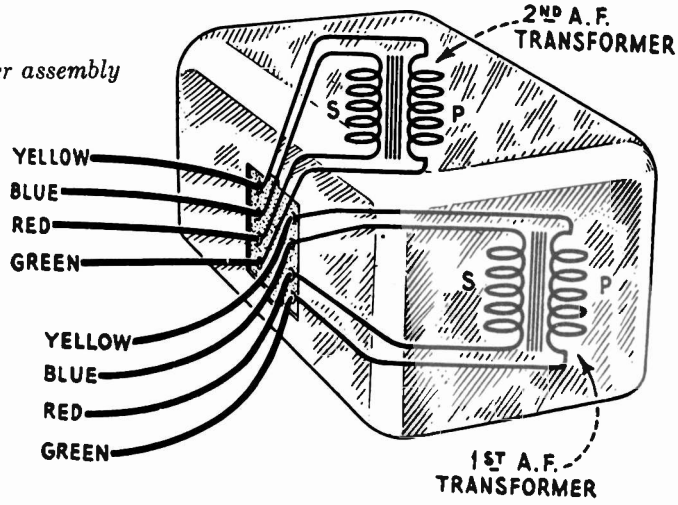
–Schematic circuit diagram of Sterling S. P. U.



-Radiotron socket contacts



-Wiring diagram of reproducer assembly

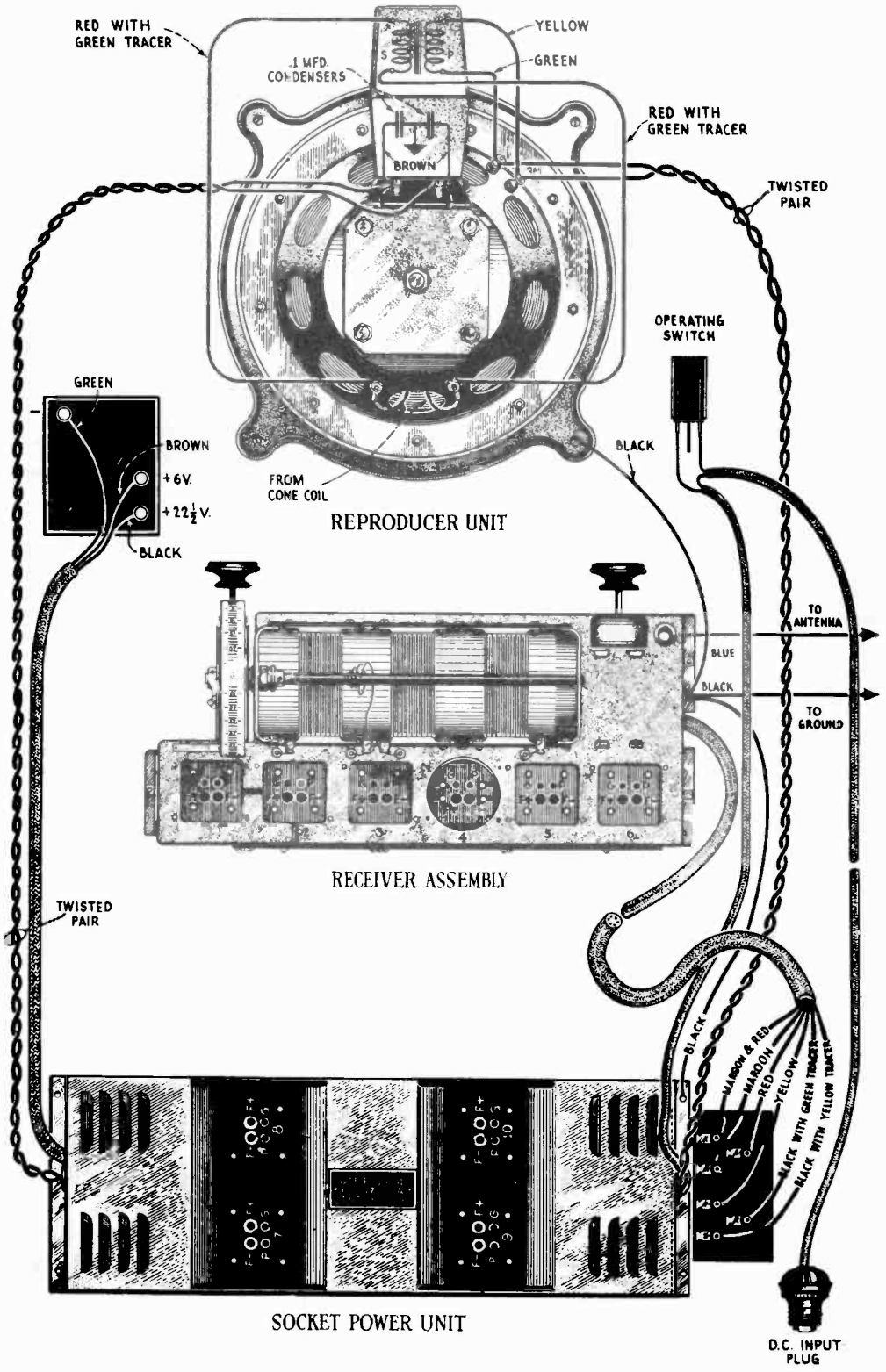


-Internal connections of A. F. transformers

RADIOLA 41 (D.C.)

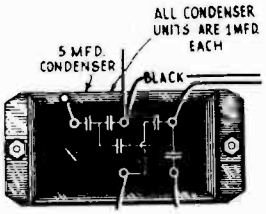
(107.5-127.5 Volts Direct Current)

Radiola 41 D.C. is identical in external appearance to Radiola 41 A.C.



Complete layout and connections of reproducer, receiver and socket power unit

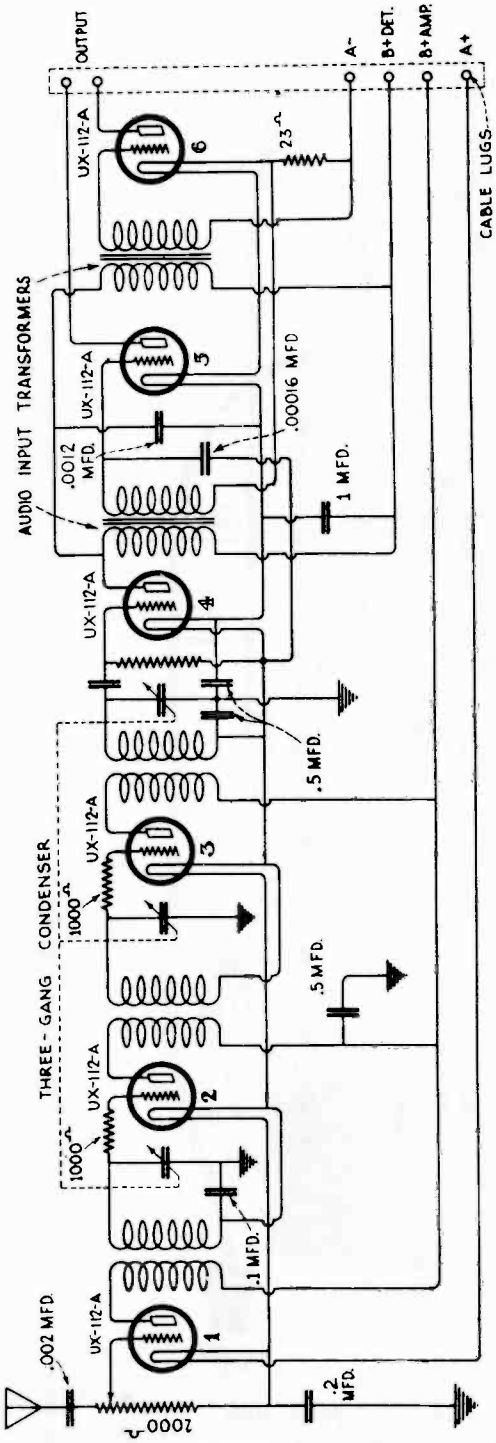
41(D.C.)



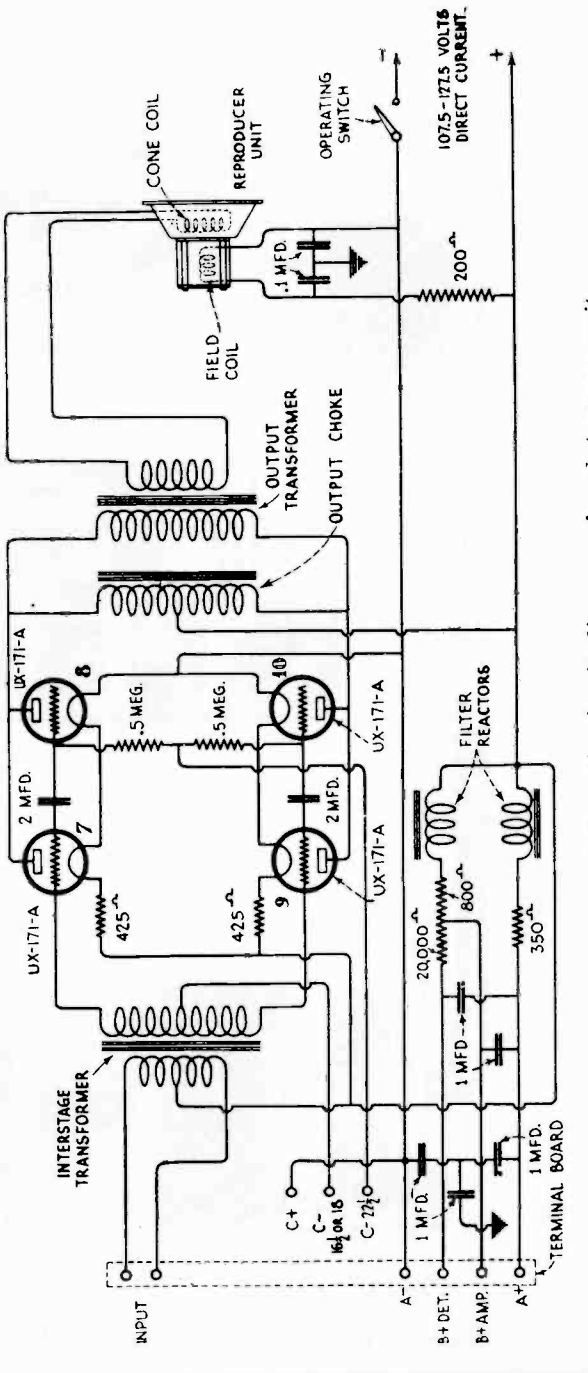
TERMINAL VOLTAGES

120-Volt D. C. Line

Terminals	*Voltage*
A— to A+	35
A+ to B+ Det.	5
A+ to B+ Amp.	21

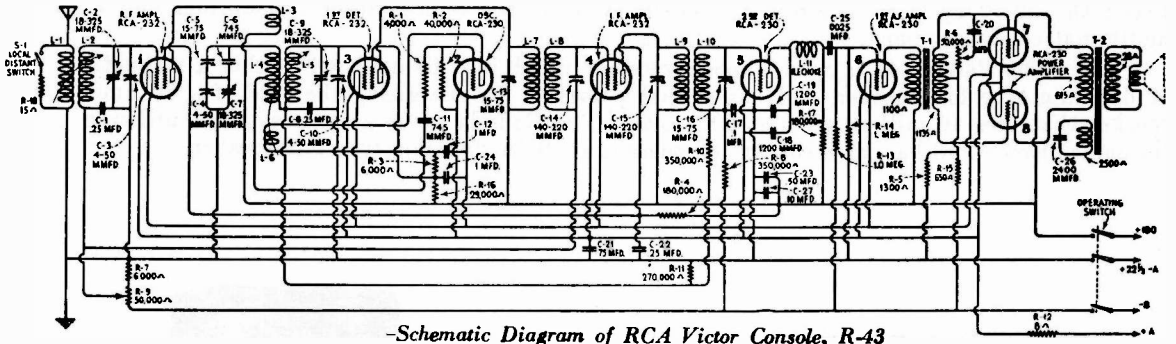


Schematic circuit diagram of receiver

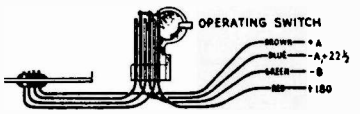


Schematic circuit diagram of socket power unit

MODEL R-43



-Schematic Diagram of RCA Victor Console, R-43

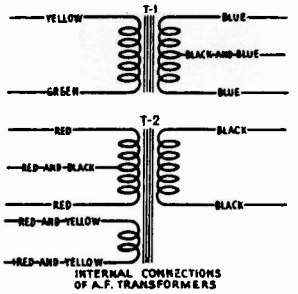


BATTERIES AND CURRENT CONSUMPTION

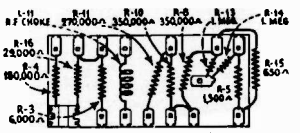
Eveready Air Cell - 0.48 Amp.
"B" 180 Volts - 8 to 15 M.A.

REPLACEMENT PARTS

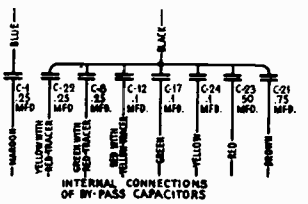
Stock No.	DESCRIPTION
	RECEIVER ASSEMBLY
2012	Capacitor—1200 Mmfd.
2563	Resistor—6000 Ohms—Carbon type—Package of 5.
2747	Cap—Radiotron grid contact cap—Package of 5.
2749	Capacitor—2400 Mmfd.—Mica type.
2875	Knob—Station selector, tone control or volume control knob—Package of 5.
2957	Capacitor—10 Mfd.—Electrolytic type.
2968	Socket—UX Radiotron socket complete with insulating shield—2 hole mounting—3 used.
2993	Board—Resistor mounting board—Less resistor and coil.
2994	Coil—2nd detector R.F. coil complete with rivet.
2998	Coil—Detector and oscillator coil—Complete with mounting washers and nuts.
2999	Shaft—Dial drive shaft—Complete with mounting screws and lock washers.
3000	Scale—Dial drum and scale complete with set screws.
3003	Cushion—Sponge rubber cushion—Package of 4.
3032	Socket—UX Radiotron socket complete with insulating shield—three hole mounting—5 used.
3033	Resistor—1 megohm—Carbon type—Package of 5.
3034	Resistor—180,000 Ohms—Carbon type—Package of 5.
3035	Resistor—1300 Ohms—Carbon type—Package of 5.
3036	Resistor—29,000 Ohms—Carbon type—Package of 5.
3037	Resistor—650 Ohms—Carbon type—Package of 5.
3038	Resistor—350,000 Ohms—Carbon type—Package of 5.
3039	Resistor—270,000 Ohms—Carbon type—Package of 5.
3040	Capacitor—.0025 Mfd.—Paper type.
3041	Board—Capacitor and resistor mounting board—Less resistor and capacitor.
3042	Capacitor—0.1 Mfd.—Paper type.
3020	Escutcheon—Station selector escutcheon complete with mounting screws.
3043	Resistor—0.8 Ohms—Wire wound.
3044	Resistor—4000 Ohms—Carbon type—Package of 5.
3045	Resistor—40,000 Ohms—Carbon type—Package of 5.
3056	Shield—Radiotron shield—Package of 2—3 used.
3086	Switch—Local distant switch.
3087	Switch—Operating switch.
3088	Knob—Operating switch or local distant switch knob—Package of 5.
7062	Capacitor—Adjustable oscillator trimming capacitor.
7241	Capacitor—3 Gang tuning capacitor complete with mounting screws and washers.
7260	Tone or Volume Control—Complete less knob.
7261	Coil—R.F. Coil complete with mounting washer and nut.
7262	Transformer—1st Intermediate transformer—Complete with shield and mounting screws.
7263	Transformer—2nd Intermediate transformer—Complete with shield and mounting screws.
7264	Capacitor Pack—R.F. by-pass capacitor in metal container.
7265	Transformer—Interstage Audio transformer in metal container.
	REPRODUCER ASSEMBLY
8559	Ring—Cone retaining ring.
8601	Cone—Reproducer cone complete with voice coil—Package of 5.
9355	Speaker—Loudspeaker complete.



INTERNAL CONNECTIONS OF A.F. TRANSFORMERS



RESISTOR BOARD CONNECTIONS



INTERNAL CONNECTIONS OF BY-PASS CAPACITORS

RADIOTRON SOCKET VOLTAGE

VOLUME CONTROL AT MAXIMUM —NO SIGNAL

Tube No.	Filament to Control Grid Volts	Filament to Screen Grid Volts	Filament to Plate Volts
1	1.5	45	150
2	—	—	50
3	0.5	60	150
4	1.5	45	150
5	5.0	—	90
6	2.0	—	150
7	15.0	—	150
8	15.0	—	150

Alignment Procedure

With tuning condenser fully meshed, set dial so that 100 calibration coincides with pointer.

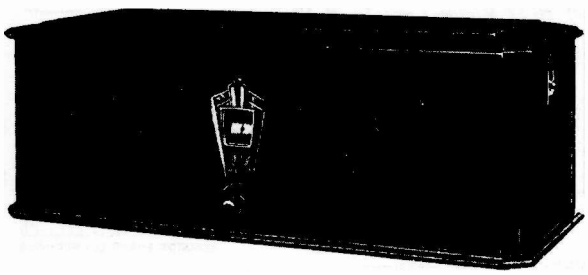
STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO	ADJUST THE FOLLOWING FOR MAX. OUTPUT
1	I-F Grid in series with .01 mfd	175 kc	Quiet Point near 80	S & P of 2nd I-F Trans.
2	1st Det. Grid in series with .01 mfd			S & P of 1st I-F Trans.
3	Antenna in series with 200 mmfd	1400 kc	11	Osc., Det. and R-F Trimmers 1400 kc Trimmers
4		600 kc	Near 80	600 kc Oscillator Trimmers (Rock Gang)
5		*Repeat Step 3*		

RADIOLA 44 & 46

105-125 Volts—50-60 Cycles—100 Watts

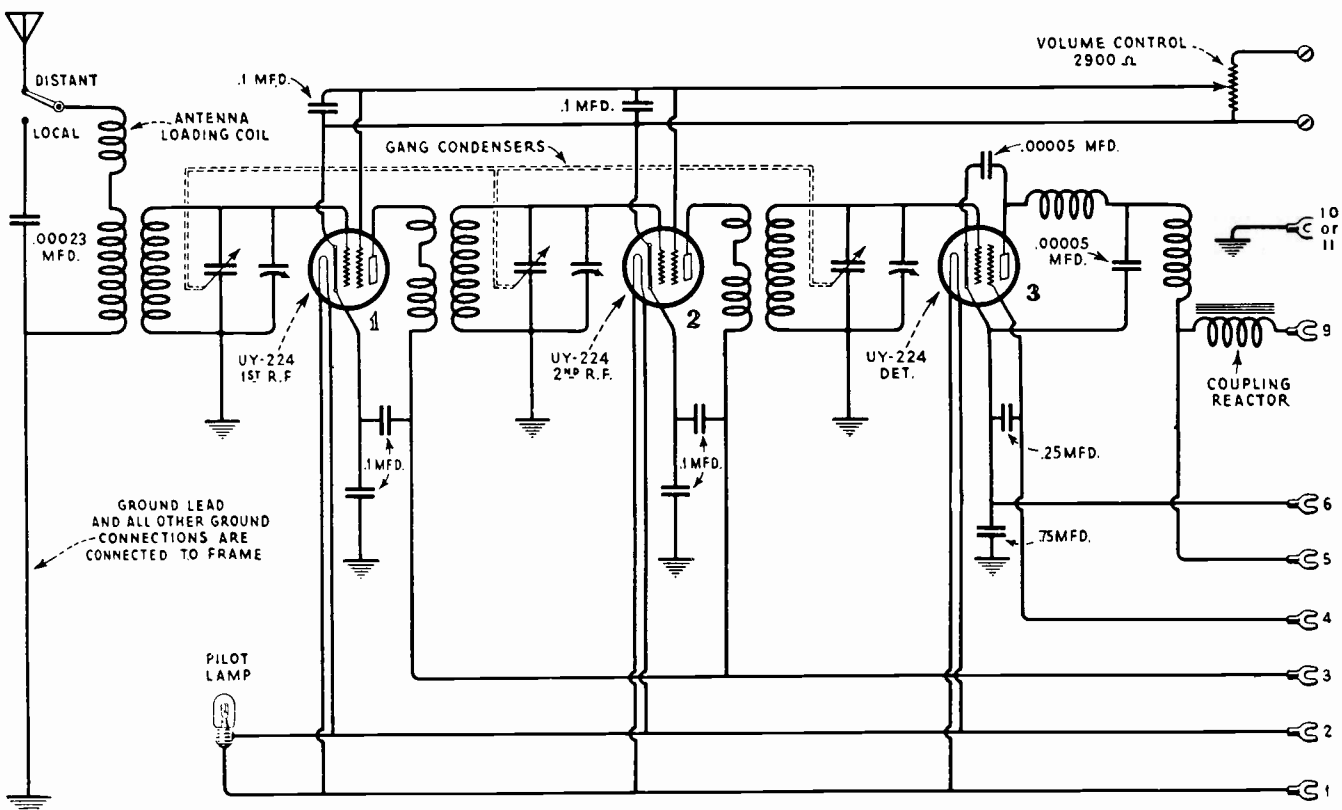
Models are also available for 105-125 volt 25-40 cycle A.C. lines. The difference between the 50-60 cycle models and the 25-40 cycle models is the power transformer and an additional condenser bank.

The Radiola 44 is a table model receiver which may be used with either a magnetic or dynamic type loudspeaker, and has special provision for energizing the field of a dynamic speaker that uses 40 milliamperes at 300 volts. The Radiola 46 is a console model utilizing the same chassis and having incorporated therein an RCA dynamic type loudspeaker.



RCA Radiola 44

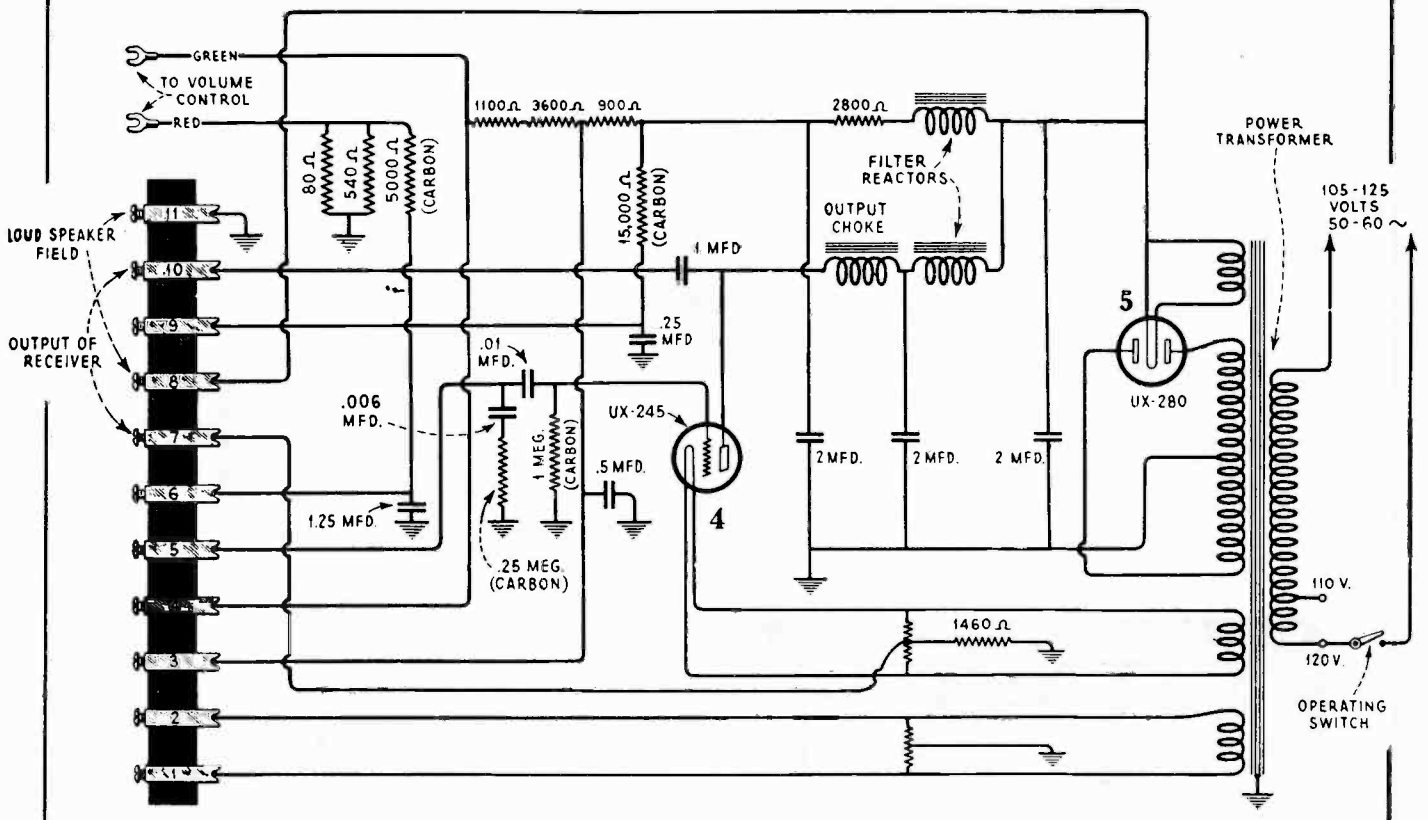
RCA Radiola 46



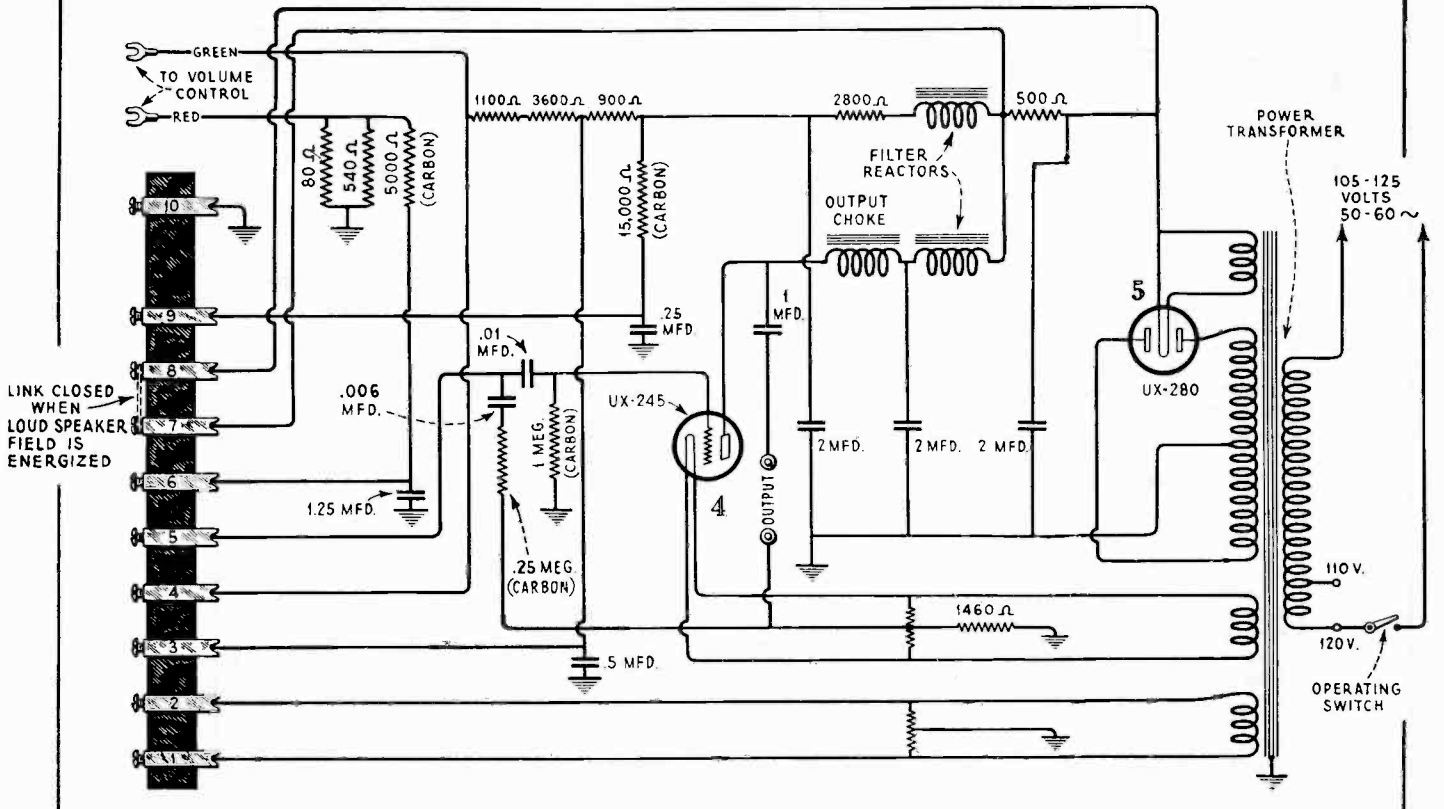
Schematic circuit diagram

Provision is made in Radiola 44 for supplying the field current to a dynamic loudspeaker the field of which has a rating of 300 volts, 40 milliamperes.

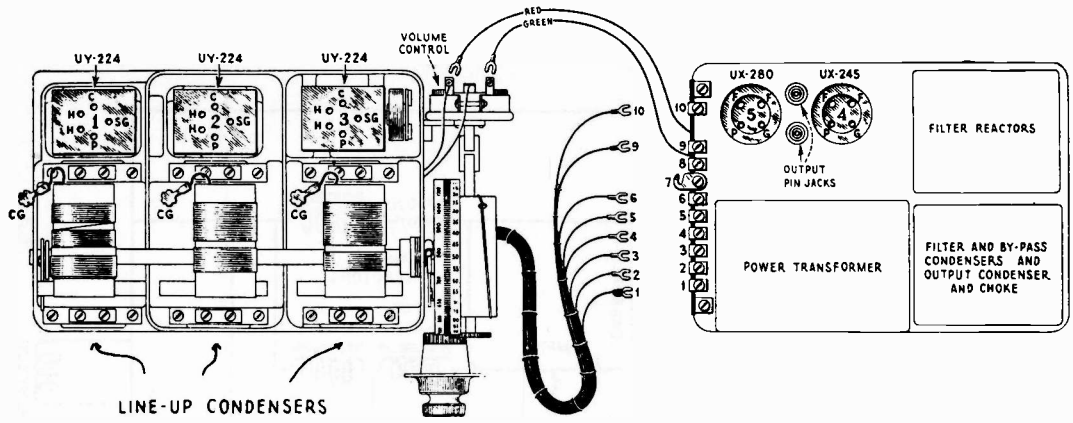
Close the link between terminals 7 and 8, Connect the loudspeaker field leads to terminals 7 or 8 (connected by link) and terminal No. 10.



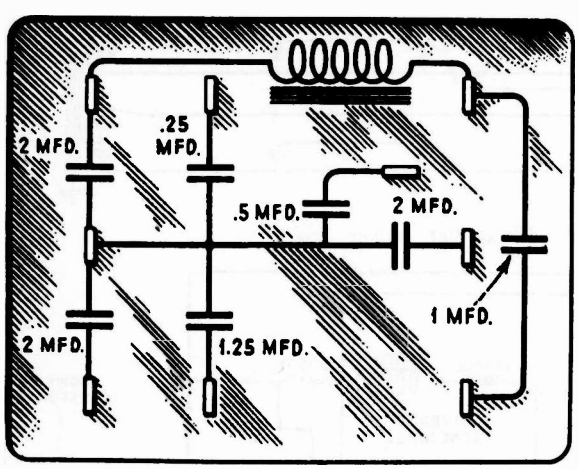
Schematic circuit diagram of Radiola 46 socket power unit



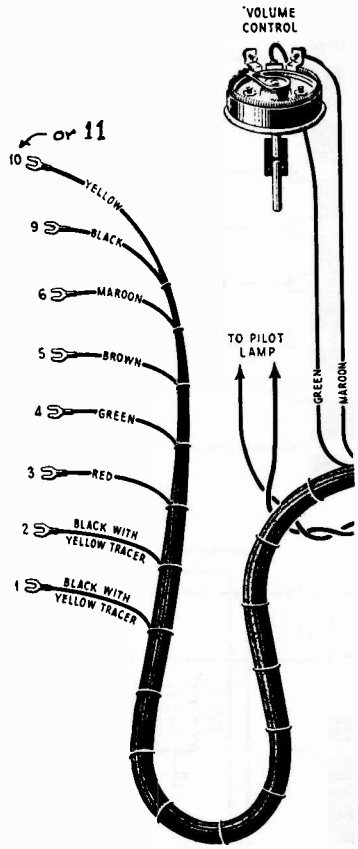
Radiola 44 receiver and socket power unit



-Layout showing location of the various Radiotron sockets, S.P.U. terminal numbers, and main parts of Radiola 44



-Internal connections of the condenser bank

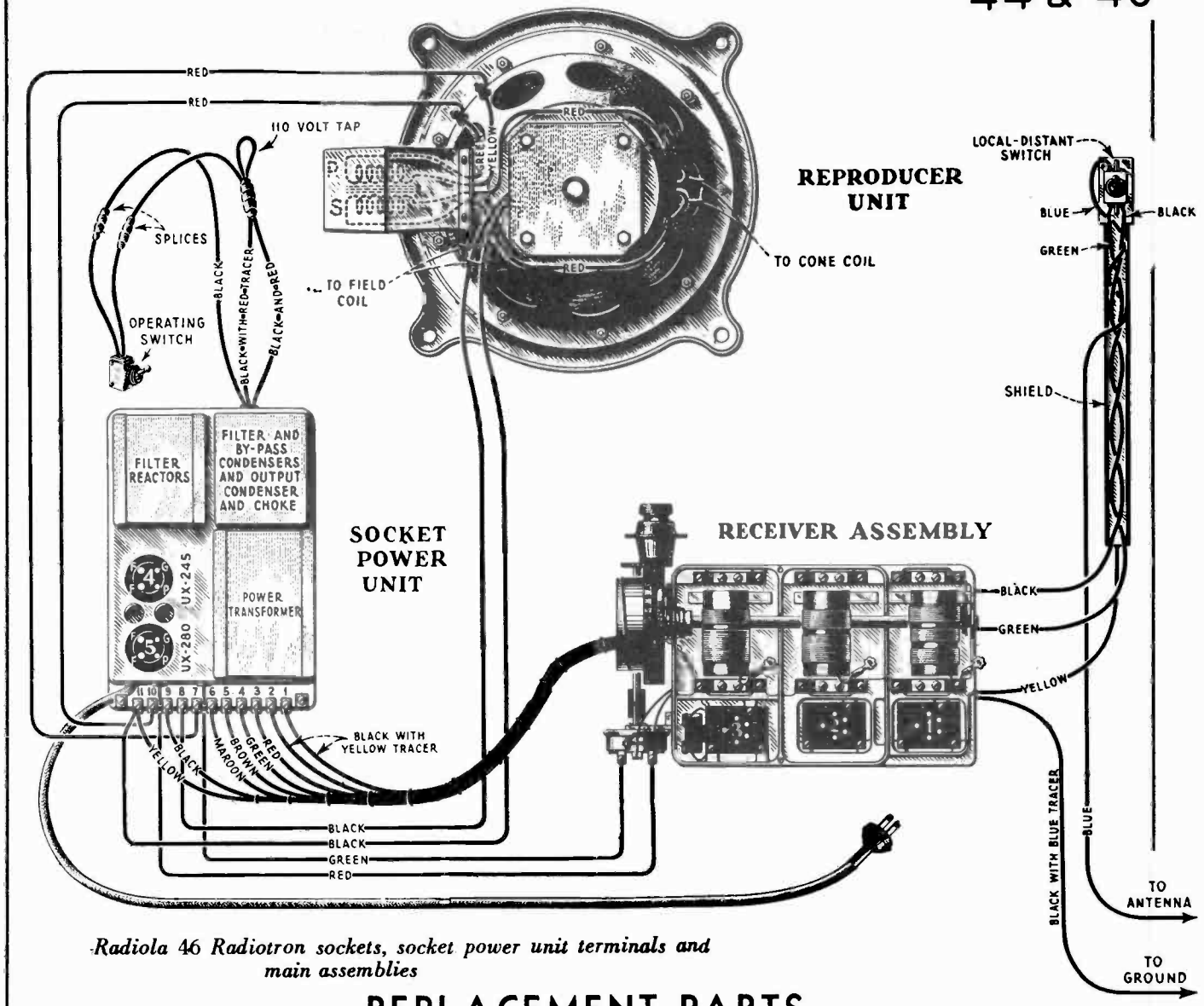


TERMINAL STRIP VOLTAGES

The following voltages taken at the S.P.U. terminal strip with the receiver operating and all tubes and shields in place are correct when the line voltage is within the limits for the transformer tap being used.

Terminals	*Volume Control at*		*Voltage Measured*
	Minimum	*Maximum*	
1 to 2	2.5 A.C.	2.5 A.C.	Heater voltage of Radiotrons UY-224
3 to red V.C. lead	185 D.C.	170 D.C.	Plate voltage of Radiotrons Nos. 1 and 2
4 to 6	70 D.C.	60 D.C	Screen grid voltage of Radiotron No. 3
6 to 9	195 D.C.	180 D.C.	Plate voltage of Radiotron No. 3
6 to 10 or 11	5.0 D.C.	5 D.C.	Control grid voltage of Radiotron No. 3
8 to 10 or 11	330 D.C.*	330 D.C.*	Total D.C. output from rectifier
Red V.C. lead to 10 or 11	2.1 D.C.	2.1 D.C.	Control grid voltage of Radiotrons Nos. 1 and 2
Arm of V.C. to red V.C. lead	0	70 D.C.	Screen grid voltage of Radiotrons Nos. 1 and 2

* This voltage is 320 when link is closed and dynamic type loudspeaker is used.



Radiola 46 Radiotron sockets, socket power unit terminals and main assemblies

REPLACEMENT PARTS

Insist on genuine factory tested parts, which are readily identified and may be purchased from authorized dealers

Stock No.	Description
	RECEIVER ASSEMBLIES
2032	Antenna and ground leads - 1 pair.
2034	Switch - Local-distant switch - 2-position - Toggle type.
2523	Loading coil - Antenna loading coil - Less Micarta mounting strip - Package of 5.
2524	Board - Antenna loading coil mounting board with 2 terminals.
2525	Drive cord - Condenser drive cord - Package of 5.
2526	Tension spring - Spiral tension spring for condenser drive cord - Package of 5.
2527	Scale - Tuning condenser perforated metal scale - Package of 5.
2529	Screen - Amber colored tuning scale screen - Package of 5.
2531	Socket - Pilot lamp socket - Less flexible leads - Package of 5.

Stock No.	Description
2532	Antenna Condenser - 230 mmfd. - Package of 5.
2533	Board - Micarta board for mounting antenna condenser.
2534	Condenser - Adjustable line-up condenser.
2535	Knob - Volume control knob - Package of 5.
2536	Knob - Station selector knob - Package of 5.
2537	Socket - Single UY Radiotron socket - Less leads - Package of 5.
2538	Cap - Contact cap with flexible lead - For Radiotron UY-224 - Package of 5.
2539	Clip - Spring contact clip for maintaining contact between tuning condenser shaft and stage metal shields - Package of 5.
2540	Shield - Metal shield for 1st or 2nd R.F. Radiotrons.
2541	Coupling strip - Micarta strip - Couples volume control and volume control drive shaft together - Package of 5.

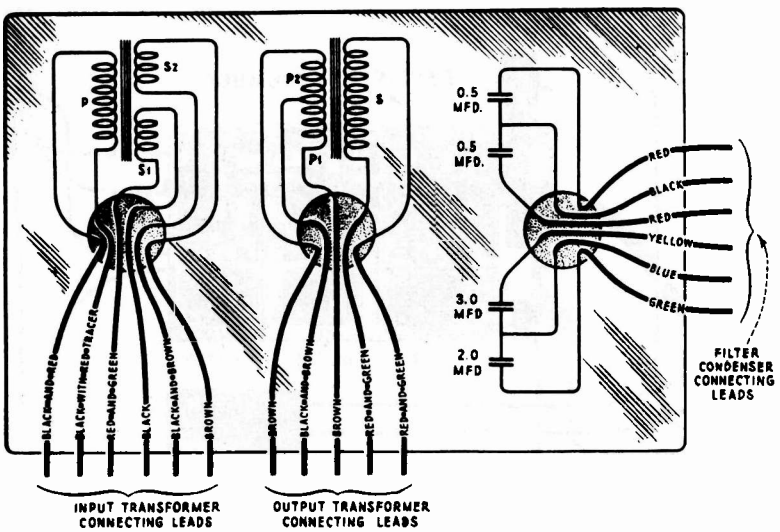
REPLACEMENT PARTS (Continued)

STOCK No.	DESCRIPTION
5999	Cable - Laced wiring cable - From receiver to S.P.U.
6000	Filter Coil and Condensers - Comprising Micarta strip with 3 terminals, 2 condensers, 1 coil and mounting bracket - Mounted on upper side of chassis.
6001	Filter Coil Assembly - Comprising 1 coil, Micarta mounting strip with 5 terminals and wooden spacer - Less mounting screw - Mounted on lower side of chassis.
6002	Condenser Assembly - One .25 mfd. and one .75 mfd. condenser in metal container.
6003	Condenser Assembly - Three .1 mfd. condensers in metal container.
6004	Coupling Reactor in metal container.
6005	Volume Control - 2,900 ohms - Porcelain base, with short slotted shaft - Package of 5.
6006	Shield - Metal shield for 2nd R.F. stage - Contact clips for condenser shaft on both sides.
6007	Shield - Metal shield for detector stage - Contact clip for condenser shaft on one side.
6008	Drive Shaft - Volume control drive shaft - Comprising shaft with gear and "U" washer.
6009	Drive Shaft - Tuning condenser drive shaft - Comprising shaft, 2 pins, stops, spacing washers, collar and threaded drum.
6010	Shield Clamp - Comprising 1 clamp, 2 studs and 2 thumb nuts for clamping second R.F. and detector shields - 1 set.
8469	R.F. Transformer - 1st R.F. transformer and antenna loading coil with mounting bracket.
8470	R.F. Transformer - 2nd or 3rd R.F. transformer including low frequency primary, complete with mounting bracket.
8471	Tuning Condenser Assembly - Comprising casting, 3 variable condensers, 3 adjustable line-up condensers and drive drum complete - less volume control shaft, drive cord, drive shaft and pilot lamp socket.
	REPRODUCER ASSEMBLIES
2365	Bracket - Metal bracket for supporting output transformer.
2366	Screw - Magnet clamping screw - Used to clamp front and back end plates together and also used to fasten complete magnet to cone support - No. 1/4 - 20 - 4 - Set of 4.
2557	Cords - Two cords from S.P.U. to reproducer coin coil - Each cord 41 inches long.
5897	Washer - Paper washer used between magnet and cone support - Package of 5.
6018	Field Coil - 330-volt.
6019	Transformer - Output transformer in metal container.
8374	Support - Cone support - Metal flange.
8375	Cone - 8" Corrugated paper cone with voice coil for dynamic speaker.
8376	Ring - Metal clamping ring for holding cone.
8390	Ring - Cardboard seal ring - Used between baffle board and cone support - Package of 10.

STOCK No.	DESCRIPTION
	S.P.U. ASSEMBLIES
2340	Resistor - Detector-cathode resistor - 5000 ohms - Carbon type.
2543	Resistor - 8,400-ohm voltage divider with 5 terminals - Porcelain type.
2545	Resistor - Detector-plate resistor - 15,000 ohms - Carbon type - Package of 5.
2546	Resistor - Power tube grid resistor - 1 megohm - Carbon type - Package of 5.
2547	Resistor - Detector cathode resistor - 2,000 ohms - Carbon type - Package of 5.
2548	Resistor - Bleeder resistor - 3,350 ohms - Carbon type - Package of 5.
2549	Resistor - Coupling reactor tuning resistor - Carbon type - 1/4 megohm - Package of 5.
2552	Socket - 2-gang UX type Radiotron socket with Micarta shield.
2553	Resistor - 2,080-ohm voltage divider with 5 terminals - Porcelain type.
2558	Switch - Power line operating switch - Toggle type.
5819	Terminal Strip - 11 terminals with screws and mounting brackets for metal shield.
5906	Insulating shield - Dilecto shield for insulating terminal strip from metal shield - Package of 5.
6014	Resistor and Condenser Assembly - Comprising two 50-ohm mid-tapped resistors, one .006 mfd condenser and one .01 mfd condenser with mounting brackets - Package of 5.
6017	Cable - Laced cable for wiring S.P.U.
6020	Shield - Metal shield for S.P.U. terminal strip.
6082	Condenser - Filter and by-pass condenser in metal container for 25-cycle model - Comprising one 2 mfd and one 1 mfd condenser - Complete with 12" leads.
8472	Transformer - Power transformer-105-125 volts - 50-60 cycles - In metal container.
8473	Transformer - Power transformer - 105-125 v 25-40 cycles - In metal container.
8474	Transformer - 220 volt - 60 cycle - Power transformer - In metal container.
8475	Reactors - Filter reactors - In metal container.
8476	Condenser and Choke Assembly - Comprising filter condensers, by-pass condensers, output coupling condenser and choke - In metal container.
	CABINET ASSEMBLIES
2522	Escutcheons - Comprising 1 antenna escutcheon marked "Distant-Local" and 1 power escutcheon marked "Off-On" - With mounting screws - Set of 2.
2528	Screen support - Metal support for tuning scale screen.
2551	Shield - Metal shield for antenna switch.
3015	Grille cloth.
3016	Escutcheon - Station selector escutcheon with mounting screws.

ELECTRICAL SPECIFICATIONS

Voltage Rating	107½-127½ Volts D. C.
Power Consumption	55 Watts Maximum
Recommended Antenna Length	25-60 Feet
Type of Circuit	Screen Grid Tuned R. F.
Number and Type of Tubes	Two UX-222. 2 UX-112A and 2 UX-171A
Type of Loudspeaker	Electro Dynamic (107½-127½ Volts D. C.) (100-125 M. A. Field)

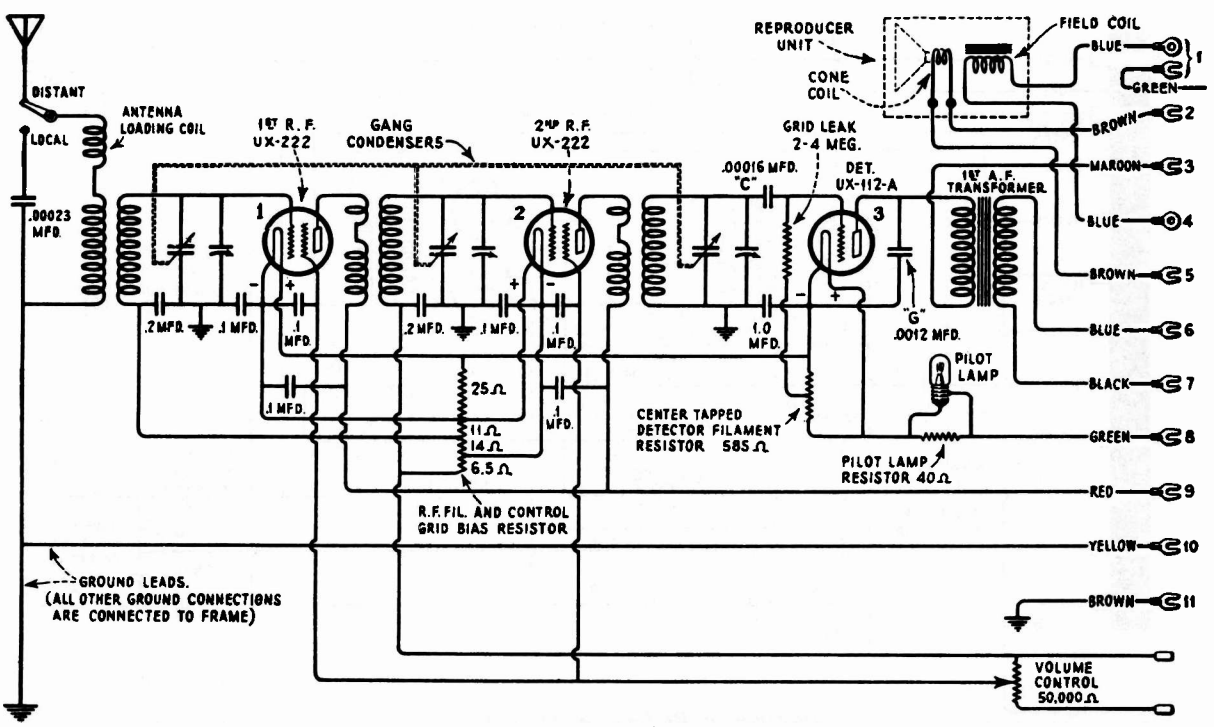


Internal connections of the A. F. coupling unit and filter condensers

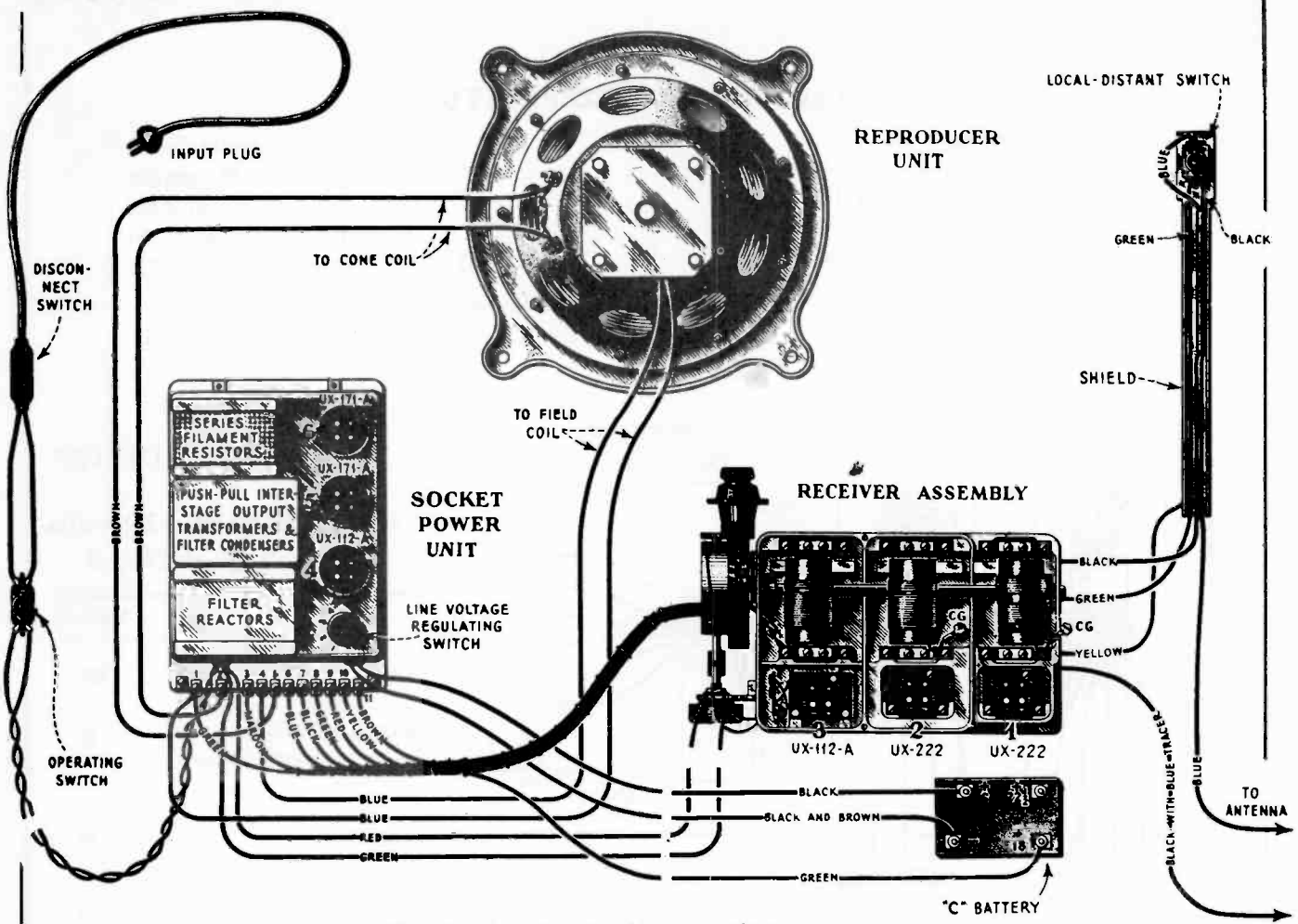
VOLTAGE READINGS

Line voltage at 120 volts—Switch Tap at No. 3

Terminals	Voltage
1 to 4	120
8 to green Volume Control lead	18
1 to 3	50
1 to 9	105
Across volume control	68



46(D.C.)



—Complete layout and cable connections

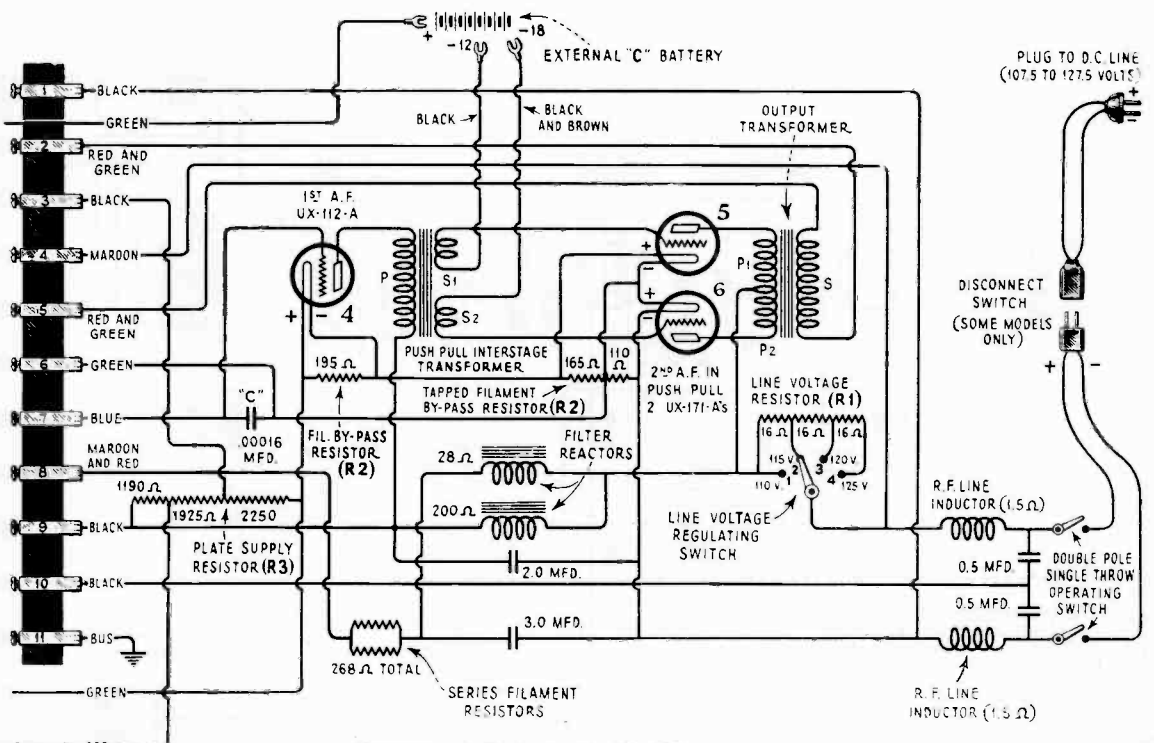


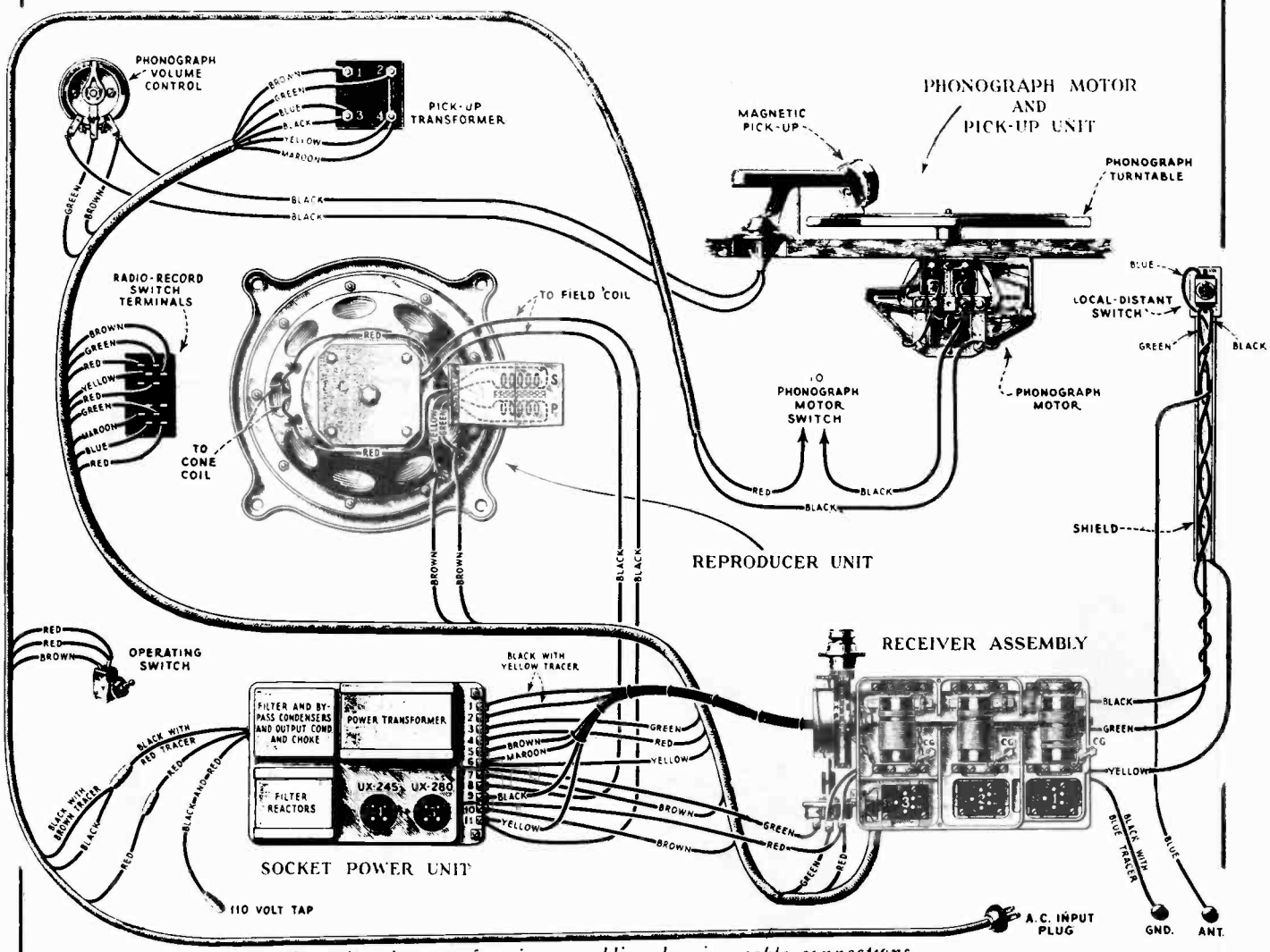
diagram of Radiola 46 (D.C.)

RADIOLA 47

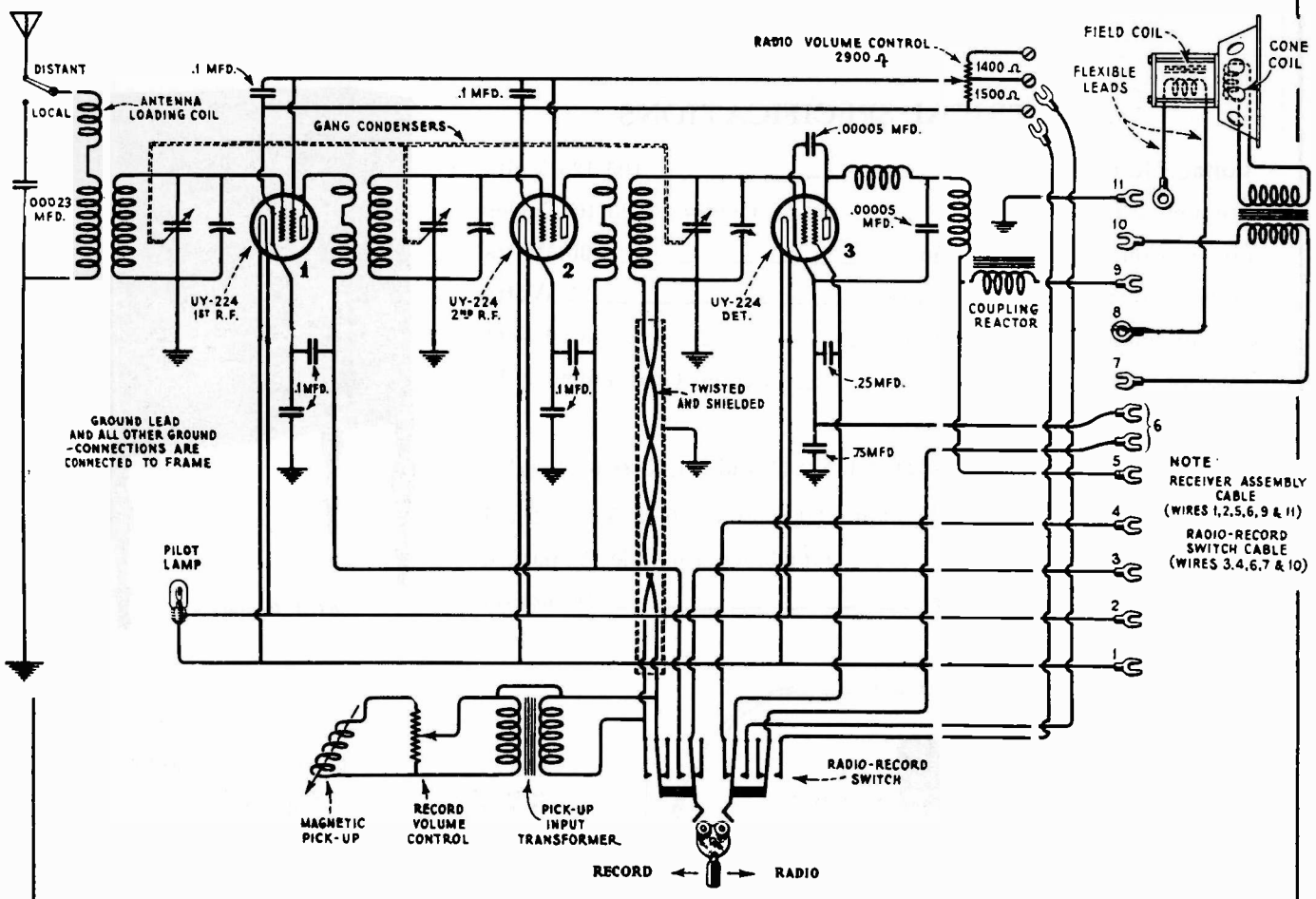
ELECTRICAL SPECIFICATIONS

Voltage Rating — 105-125 Volts
Frequency Rating — 50-60 Cycles or 25-40 Cycles
Power Consumption (Radio) — 100 Watts
Power Consumption (Phonograph) — 135 Watts
Recommended Antenna Length — 25-60 Feet
Type of Circuit — Screen Grid Tuned R.F.
Number and Types of Tubes
3 UY-224. 1 UX-245 and 1 UX-280—Total 5
Type of Loudspeaker — Dynamic 300-330 V, 40-45 M. A. Field
Type of Pick-up — Low Impedance Flexible Armature
Type of Phonograph Motor — Induction

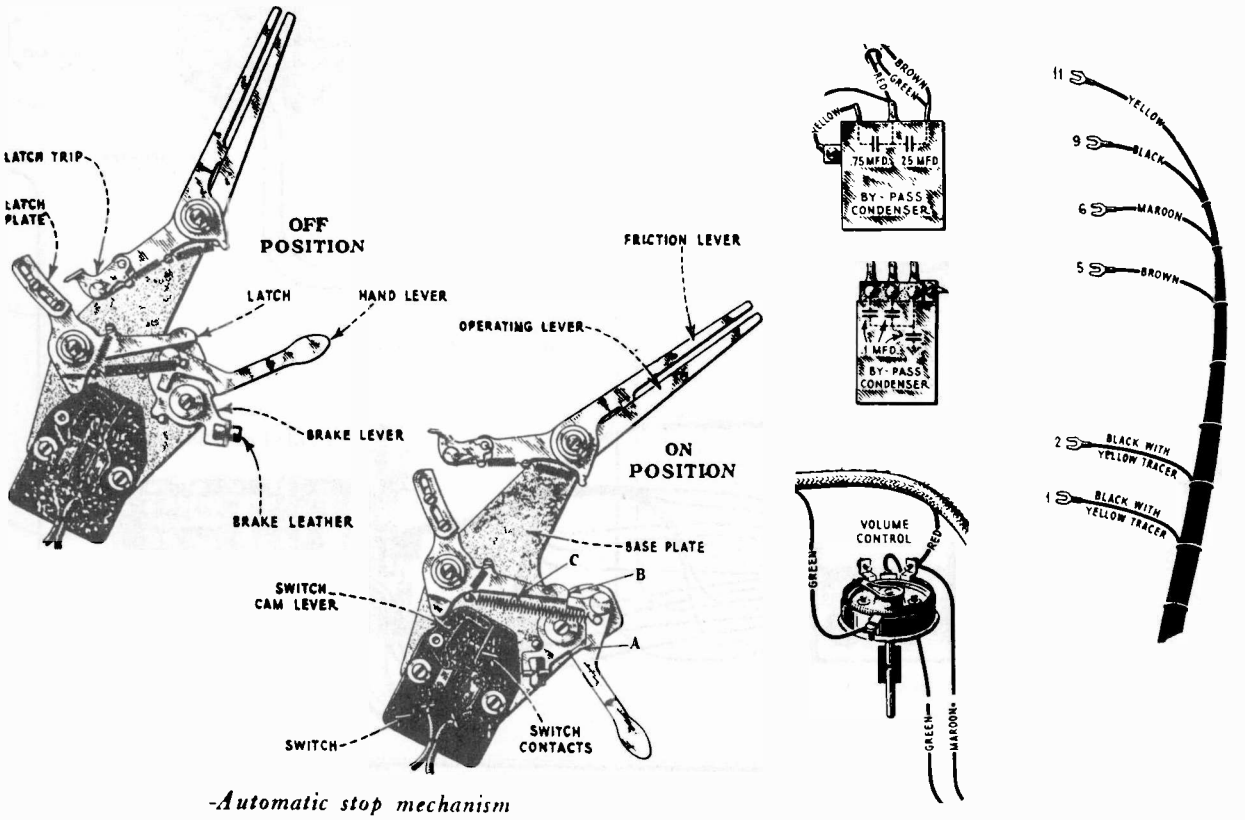
RCA Radiola 47



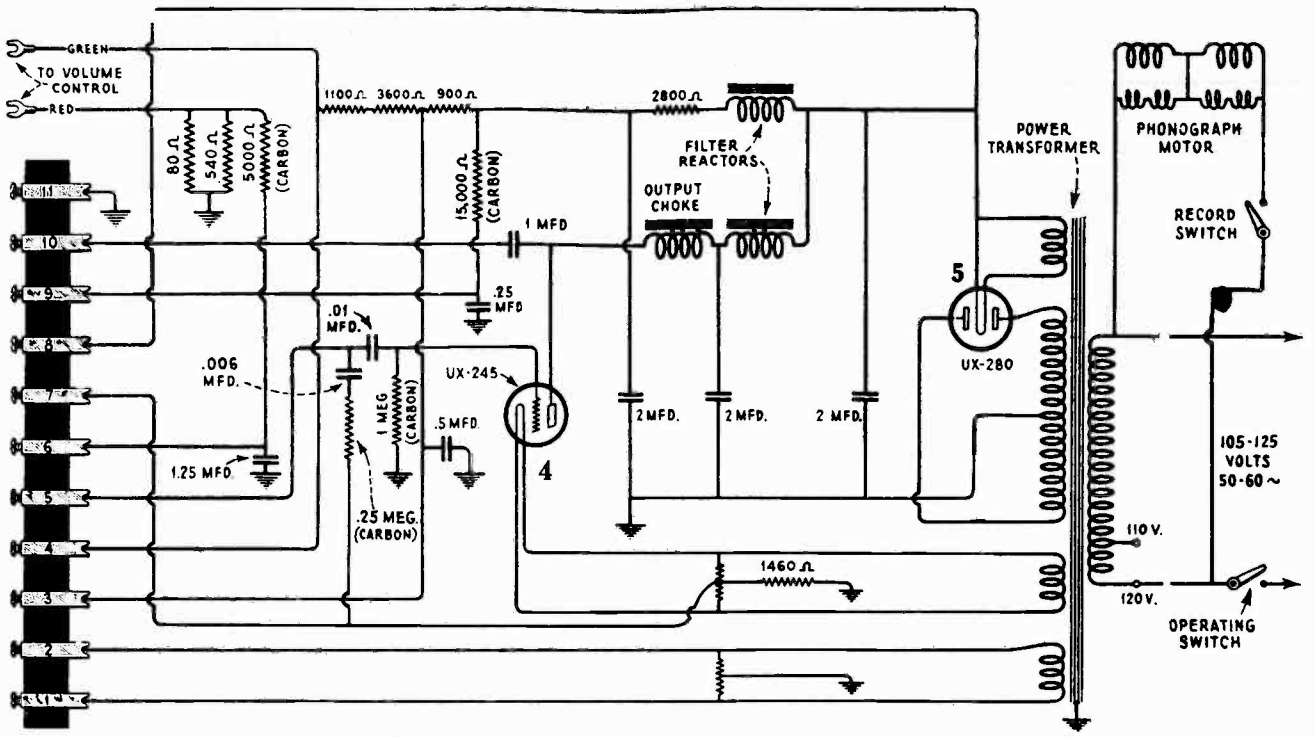
-Complete layout of main assemblies showing cable connections



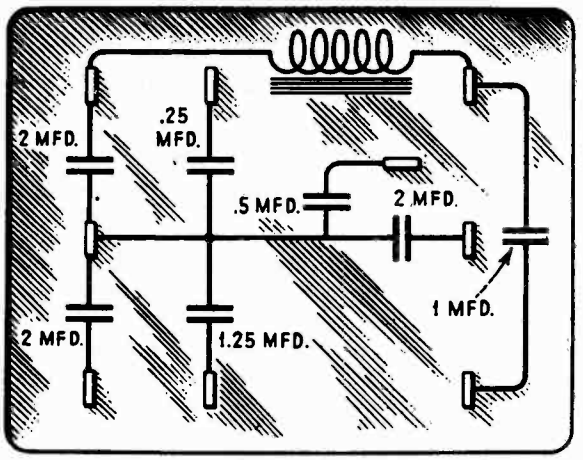
-Schematic circuit diagram of receiver, phonograph pick-up and reproducer



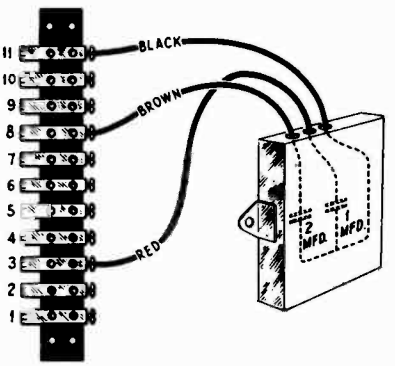
-Automatic stop mechanism



-Schematic circuit diagram of socket power unit



-Internal connections of the condenser bank

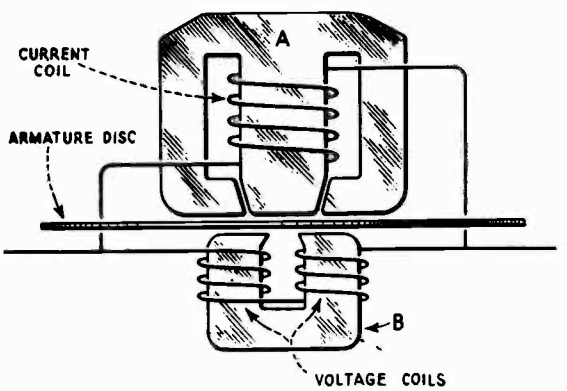


25-cycle condenser connections. This condenser is an additional part in all 25-cycle models.

TERMINAL STRIP VOLTAGES

Terminals	Volume Control at	
	Minimum	Maximum
1 to 2	2.5 A.C.	2.5 A.C.
3 to red V. C. lead	185 D.C.	170 D.C.
4 to 6	70 D.C.	65 D.C.
6 to 9	195 D.C.	180 D.C.
6 to 11	5.0 D.C.	5 D.C.*
8 to 11	320 D.C.	320 D.C.
Red V.C. lead to 11	2.1 D.C.	2.1 D.C.
Arm of V.C. to red V. C. lead	0	70 D.C.

*Be sure no signal is tuned in.



-Phonograph motor coil connections

47

REPLACEMENT PARTS

Insist on genuine factory tested parts, which are readily identified and may be purchased from authorized dealers

Stock No.	Description
	RECEIVER ASSEMBLIES
2032	Leads - Antenna and ground leads - 1 pair.
2034	Switch - "Local-Distant" switch - 2-position - Toggle type.
2039	Switch - Power line operating switch - Toggle type.
2523	Loading Coil - Antenna loading coil - less Micarta mounting strip - Package of 5.
2524	Board - Antenna loading coil mounting board with 2 terminals.
2525	Cord - Condenser drive cord - Package of 5.
2526	Spring - Spiral tension spring for condenser drive cord - Package of 5.
2527	Scale - Tuning condenser perforated metal scale - Package of 5.
2531	Socket - Pilot lamp socket - less flexible leads - Package of 5.
2532	Condenser - Antenna condenser - 230 mmfd. - Package of 5.
2533	Board - Micarta board for mounting antenna condenser.
2534	Condenser - Adjustable line-up condenser.
2535	Knob - Volume control knob - Package of 5.
2536	Knob - Station selector knob - Package of 5.
2537	Socket - Single UY Radiotron socket - Less leads - Package of 5.
2538	Cap - Contact cap with flexible lead - For Radiotron UY-224 - Package of 5.
2539	Clip - Spring contact clip for maintaining contact between tuning condenser shaft and stage metal shields - Package of 5.
2540	Shield - Metal shield for 1st or 2nd R.F. Radiotrons.
2541	Coupling Strip - Micarta strip - Couples volume control and volume drive shaft together - Package of 5.
2562	Pulley - Idler pulley for condenser drive cord - Package of 5.
2609	Screen - Amber colored tuning scale screen - Package of 5.
2617	Cable and Switch - Radio-record transfer switch and braid covered cable from receiver chassis to radio volume control, S.P.U. terminal strip, reproducer, phonograph volume control and phonograph input transformer.
6000	Filter Coil and Condensers - Comprising Micarta strip with 3 terminals, 2 condensers, 1 coil and mounting bracket - Mounted on upper side of chassis.
6001	Filter Coil Assembly - Comprising 1 coil, Micarta mounting strip with 5 terminals and wooden spacer - Less mounting screw - Mounted on lower side of chassis.
6002	Condenser Assembly - One 0.25 mfd. and one 0.75 mfd. condenser in metal container.
6003	Condenser Assembly - Three 0.1 mfd. condensers in metal container.
6004	Reactor - Coupling reactor in metal container.
6005	Volume Control - 2900 ohms - Porcelain base with short slotted shaft - Package of 5.
6006	Shield - Metal shield for 2nd R.F. stage - Contact clips for condenser shaft on both sides.
6007	Shield - Metal shield for detector stage - Contact clip for condenser shaft on one side.
6008	Drive Shaft - Volume control drive shaft - Comprising shaft with gear and U washer.
6010	Shield clamp - Comprising 1 clamp, 2 studs and 2 thumb nuts for clamping second R.F. and detector shields - 1 set.
6062	Cable - Laced wiring cable - From receiver to S.P.U.
6063	Drive Shaft - Tuning condenser drive shaft - Comprising shaft, 2 pins, stops, spacing washers, collar and threaded drum.
8469	R.F. Transformer - 1st R.F. transformer and antenna loading coil with mounting bracket.
8470	R.F. Transformer - 2nd or 3rd R.F. transformer including low frequency primary complete with mounting bracket.
8471	Tuning Condenser Assembly - Comprising casting, 3 variable condensers, 3 adjustable line-up condensers and drive drum - Less volume control shaft, drive cord, drive shaft and pilot lamp socket.
	S.P.U. ASSEMBLIES
2340	Resistor - Detector cathode resistor - 5000 ohms - Carbon type.
2543	Resistor - 8400-ohm voltage divider with 5 terminals - Porcelain type.
2545	Resistor - Detector plate resistor - 15,000 ohms - Carbon type - Package of 5.
2546	Resistor - Power tube grid resistor - 1 megohm - Carbon type - Package of 5.
2547	Resistor - Detector cathode resistor - 2000 ohms - Carbon type - Package of 5.
2548	Resistor - Bleeder resistor - 3350 ohms - Carbon type - Package of 5.
2549	Resistor - Coupling reactor tuning resistor - Carbon type - 1/4 megohm - Package of 5.
2552	Socket - 2-gang UX type Radiotron socket with Micarta shield.
2553	Resistor - 2080-ohm voltage divider with 5 terminals - Porcelain type.
5819	Terminal Strip - 11 terminals with screws and mounting brackets for metal shield.
6014	Resistor and Condenser Assembly - Comprising two 50-ohm mid-tapped resistors, one 0.006 mfd. condenser and one 0.01 mfd. condenser with mounting brackets - Package of 5.
6017	Cable - Laced cable for wiring S.P.U.
6020	Shield - Metal shield for S.P.U. terminal strip.
8472	Transformer - Power transformer - 105-125-volt - 50-60-cycle - In metal container.
8473	Transformer - Power transformer - 105-125-volt - 25-40-cycle - In metal container.
8474	Transformer - 220 volt - 60 cycle power transformer - In metal container.
8475	Reactors - Filter reactors - In metal container.

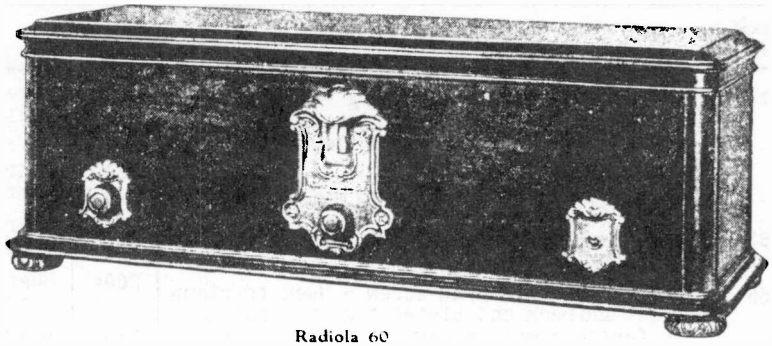
REPLACEMENT PARTS (Continued)

Stock No.	Description
8476	Condenser and Choke Assembly - Comprising filter condensers, by-pass condensers, output coupling condenser and choke - In metal container.
	REPRODUCER ASSEMBLIES
2365	Bracket - Metal bracket for supporting output transformer.
2366	Screw - Magnet clamping screw - Used to clamp front and back end plates together and used to fasten complete magnet to cone support - No. 1/4 - 20 - 4 - Set of 4.
2557	Cords - Two cords from S.P.U. to output transformer - Each cord 41 inches long.
5897	Washer - Paper washer used between magnet and cone support.
6018	Coil - 330-volt field coil.
6019	Transformer - Output transformer in metal container.
8374	Support - Cone support - Metal flange.
8375	Cone - 8 in. Corrugated paper cone with voice coil for dynamic speaker.
8376	Ring - Metal clamping ring for holding cone.
8390	Ring - Cardboard seal ring - Used between baffle board and cone support - Package of 10.
	PHONOGRAPH ASSEMBLIES
2263	Volume Control - 60-ohm porcelain base wire wound potentiometer - 1/4 in. shaft - Milled for push-on type knob - Less knob.
2332	Knob - Wood knob - Walnut finish - Push-on type for 1/4 in. shaft.
2333	Washer - Spacing washer - Package of 10.
2610	Knob - Radio-Record transfer switch knob - Walnut finish - Package of 5.
2611	Escutcheon - Switch escutcheon marked "Radio-Record" - Comprising escutcheon and mounting screws - Oxidized bronze finish.
2612	Receptacle - Needle cup - Comprising receptacle and cover for used needles - Oxidized bronze finish.
2613	Escutcheon - Escutcheon and mounting pins for needle cup receptacle - Oxidized bronze finish.
2614	Switch - Switch for automatic stop.
2616	Regulator - Speed regulator for motor - Comprising shaft, mounting bracket and screws, cam with nut and washer and escutcheon with mounting screws.
2618	Screw - Needle holding screw - Bronze oxidized finish - Package of 5.
2619	Coil - Magnet coil for low impedance pickup.
2621	Cap - Spindle cap for motor.
2622	Coil Assembly - Located nearest governor - 105-125 volt - 25-cycle - Comprising 2 current coils, 1 voltage coil, laminated core, end bracket, terminal board, nuts, bolts, screws and washers - Completely assembled ready for mounting.
2623	Coil Assembly - Located farthest from governor - 105-125 volts - 25-cycle - Comprising 2 current coils, 1 voltage coil, laminated core, end bracket, terminal board, nuts, bolts, screws and washers - Completely assembled ready for mounting.
2691	Governor - Comprising shaft with worm brake disc, weights, spring and screws - Assembled.
2692	Bearings - Governor shaft bearings - One set of two.
2693	Gear - Worm gear with set screw for drive shaft.
2694	Shaft - Drive shaft with taper pin for securing turntable.
2695	Bearing - Threaded thrust bearing with lock nut for drive shaft.
5943	Transformer - Phonograph input transformer.
6064	Pick-up - Magnetic pick-up - Low impedance - Flexible armature - Complete with leads and suspension arm set screw - Less terminals.
6065	Switch - Radio-Record transfer switch - Comprising switch, arm, mounting plate - Assembled.
6066	Stop - Automatic stop mechanism for turntable - Complete including switch.
6067	Lever - Speed control regulator lever for motor - Comprising lever, spring, mounting bolt, nut and washer.
6069	Coil Assembly - Located nearest governor - 105-125-volt - 60-cycle - Comprising 2 current coils, 1 voltage coil, laminated core, end bracket, terminal board, nuts, bolts, screws and washers - Completely assembled ready for mounting.
6070	Coil Assembly - Located farthest from governor - 105-125-volt - 60-cycle - Comprising 2 current coils, 1 voltage coil, laminated core, end bracket, terminal board, nuts, bolts, screws and washers - Completely assembled ready for mounting.
8519	Turntable - 12" turntable - Oxidized bronze finish - Brown felt covering.
8520	Arm - Suspension arm for magnetic pickup - Comprising arm with trip rod, base, pivot arm, 3 mounting screws to match and the lead clamps in place.
9295	Motor - 105-125 volt - 60 cycle - Induction motor complete with bolts, metal and felt mounting washers.
9296	Motor - 105-125 volt - 25 cycle - Induction motor complete with bolts, metal and felt mounting washers.
9297	Motor - 220 volt - 60 cycle - Induction motor complete with bolts, metal and felt mounting washers.
10174	Springs - Springs for automatic stop mechanism - One set of 4 springs - Package of 2 sets.
	CABINET ASSEMBLIES
2522	Escutcheons - Comprising 1 antenna escutcheon marked "Distant-Local" and 1 power escutcheon marked "Off-On" with mounting screws - Set of 2.
2551	Shield - Metal shield for antenna switch.
2607	Escutcheon - Station selector escutcheon.
2608	Screen support - Metal support for tuning scale screen.
6060	Cloth - Grille cloth.
6061	Arm - Special automatic stay arm (one right and one left) with guide plate, mounting and adjusting screws - 1 pair.

RADIOLA 60 & 62

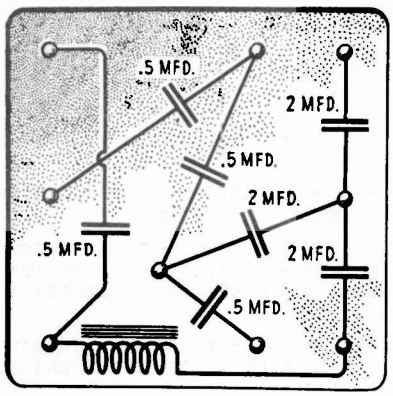
(105-125 Volts. 50-60 Cycle A. C.)

RADIOLA 62



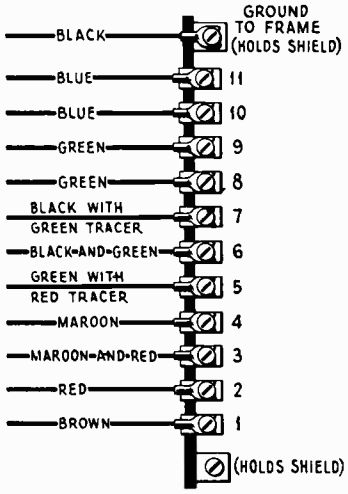
Radiola 60

Radiola 60 is a nine-tube A.C. superheterodyne receiver using the following tubes: 7-27, 1-71A and 1-80. It is designed for use with a magnetic speaker but may be used with Loudspeaker Model 104 or 105. Radiola 62 is essentially the same as Radiola 60 but using a dynamic speaker.



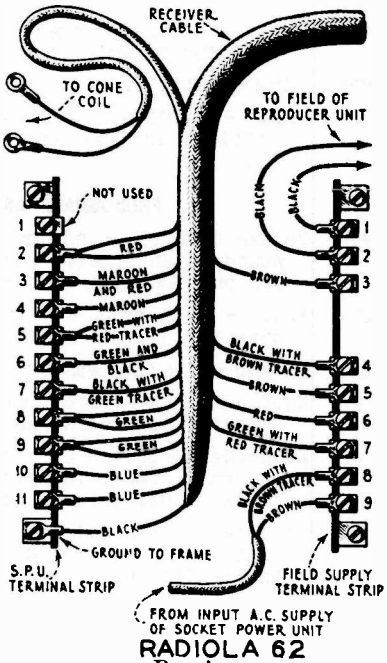
RADIOLA 60

–Internal connections of filtering and by-pass condensers, and output condenser and choke



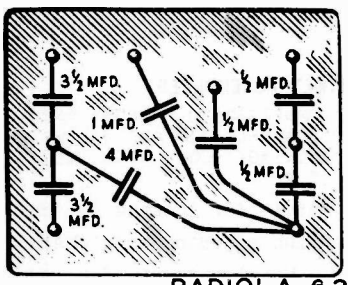
–S.P.U. terminal strip with color scheme of connections

RADIOLA 60



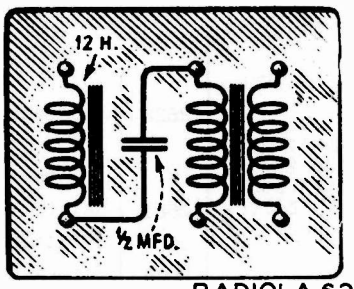
RADIOLA 62

-Receiver Cable connections to the S.P.U. and Field Supply terminal strips.



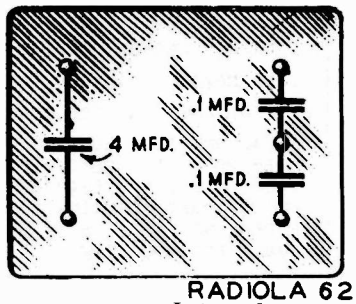
RADIOLA 62

–Internal connections of filter and by-pass condensers



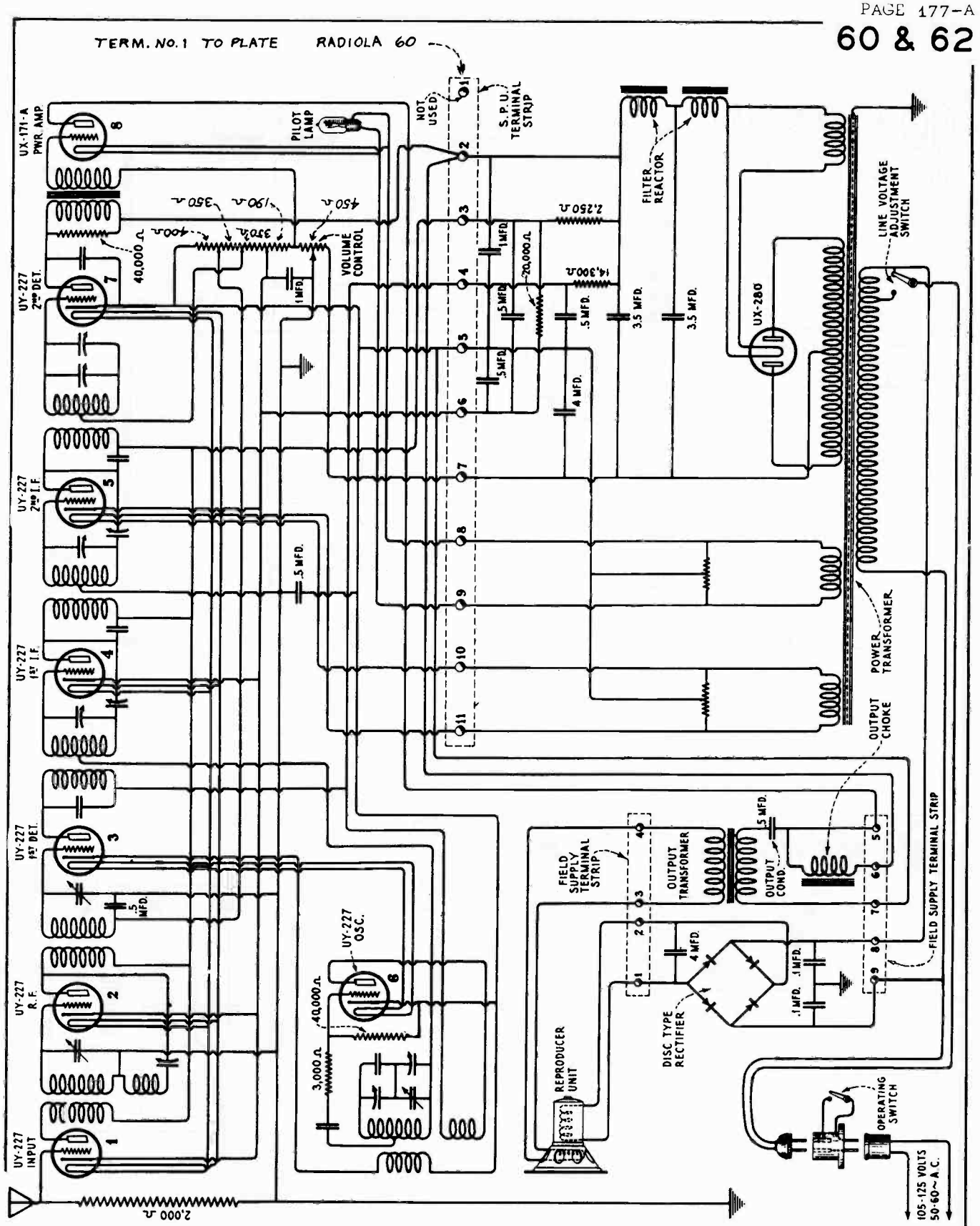
RADIOLA 62

–Internal connections of the coupling unit



RADIOLA 62

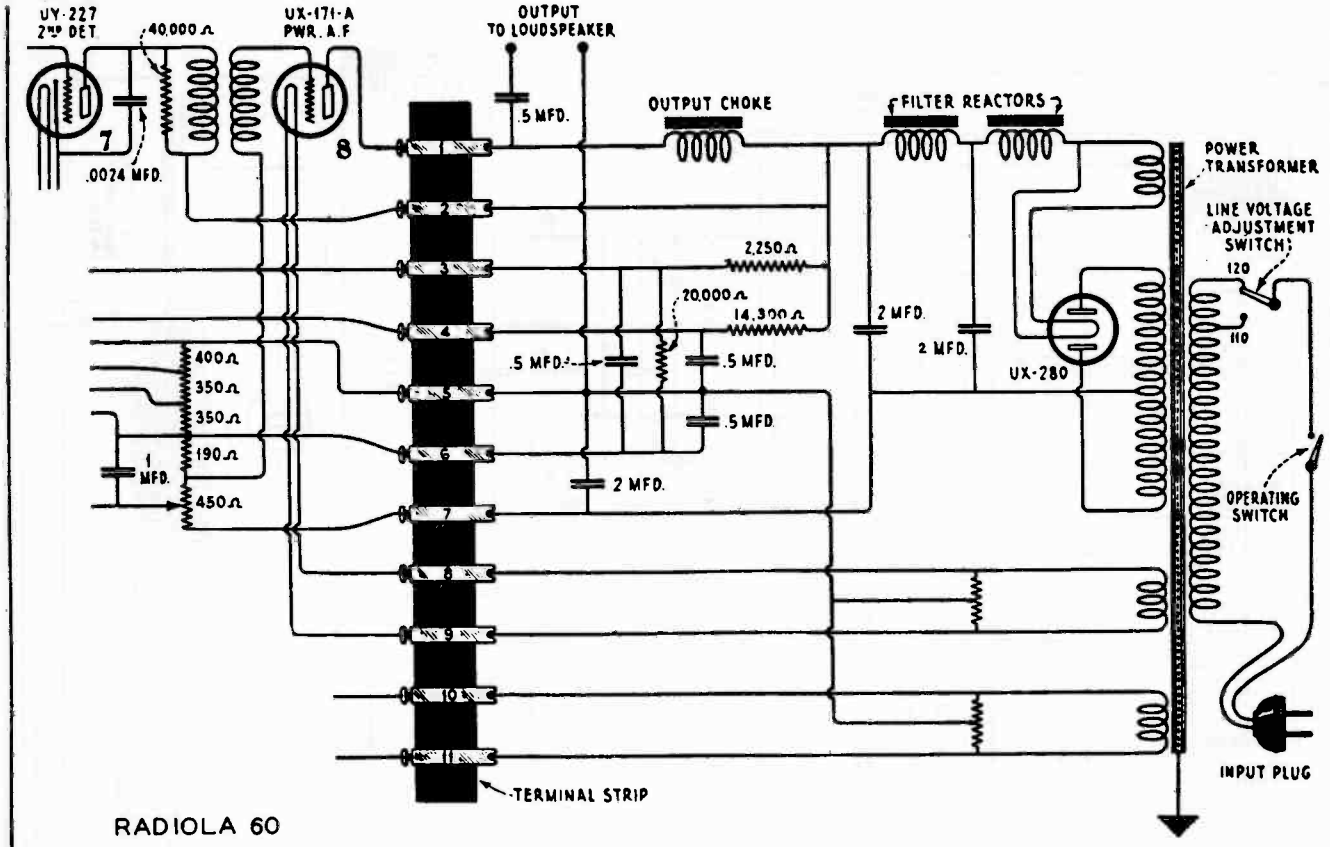
-Internal connections of condenser bank for field supply unit



-Schematic circuit diagram of Radiola 62

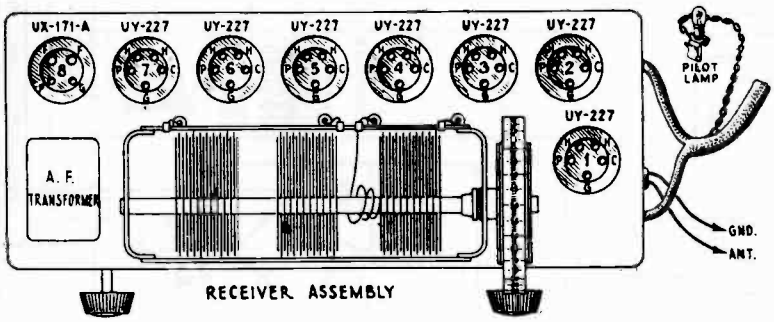
Radiola 62 is also made in models designed for 105-125 volts, 25-40 cycles A. C. operation. In this model the power transformer is different from that used in the 50-60 cycle models and the condenser shunted across the output of the disc rectifier has a capacity of 6 mfd. instead of 4 mfd., as used in the 50-60 cycle sets. All other parts are identical in both models

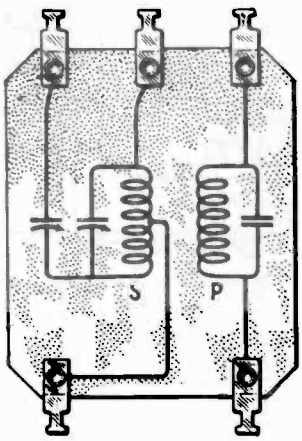
60 & 62



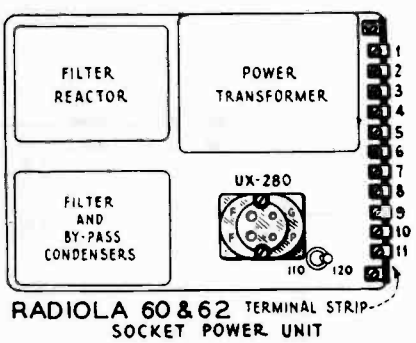
-Schematic circuit diagram of socket power unit

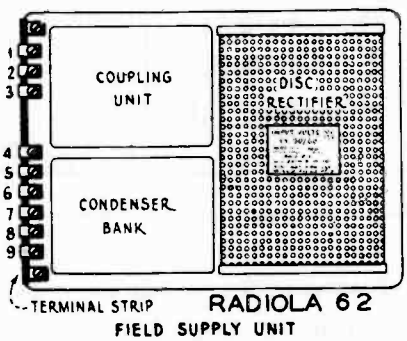
Receiver assembly of Radiola 60 and 62 are identical with the exception of the connection to terminal NO.1.



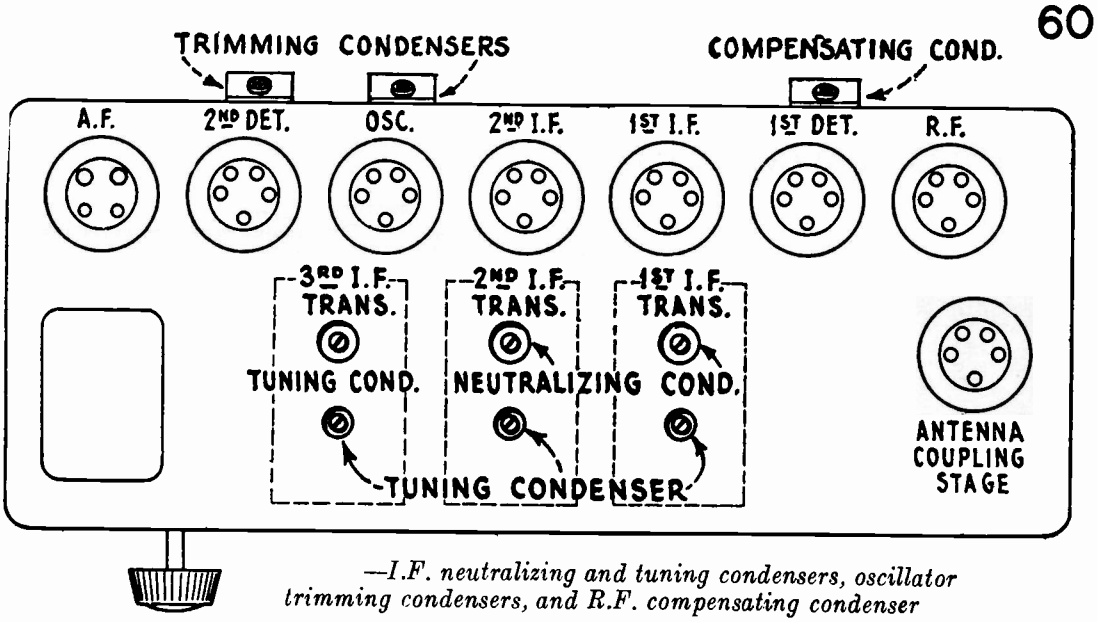


-Internal connections of I.F. transformers.





-Radiotron socket contacts, location of parts, connection lugs and terminal strips of the socket power and field supply units



—I.F. neutralizing and tuning condensers, oscillator trimming condensers, and R.F. compensating condenser

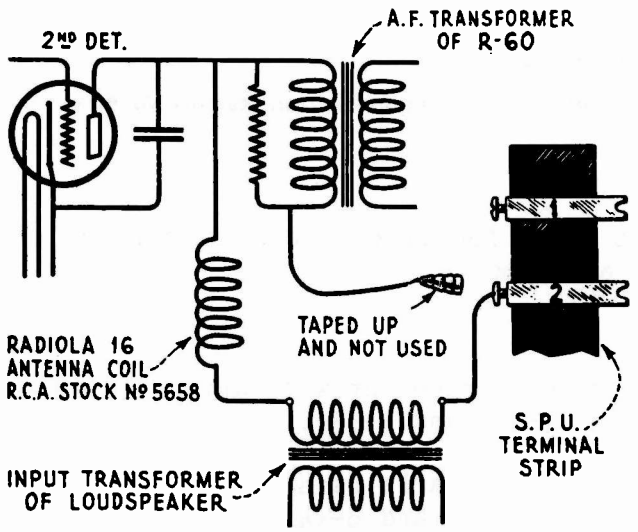
VOLTAGE READINGS

AT SOCKET POWER UNIT

Terminals	*Correct Voltage*
2 to 7	210 D.C.
3 to 7	160 D.C.
4 to 7	110 D.C.
8 to 9	5 A.C.
10 to 11	2.5 A.C.

AT FIELD SUPPLY UNIT

Terminals	*Voltage*
1 to 2	100 D.C.
5 to 6	10 D.C.
5 to S.P.U. No. 7	200 D.C.
8 to 9	120 A.C.



-Hook-up of external power amplifiers and RCA Loudspeakers 104 and 105 to Radiola 60

Alignment Procedure

Remove tuning condenser - replace all ground leads. A dummy type 27 tube is needed; that is, one with an open filament but otherwise normal.

STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO	ADJUST THE FOLLOWING	OUTPUT
1	1st Det. Grid in series with .01 mfd	180 kc	--	3rd I-F Tuning Cond. † 2nd I-F Tuning Cond. 1st I-F Tuning Cond.	Max. Max. Max.
2		Remove 1st I-F tube - replace with dummy tube			
3		180 kc	--	1st I-F Neut. Cond.	Min.
4		Remove dummy tube - replace with 1st I-F tube. Remove 2nd I-F tube - replace with dummy tube.			
5		180 kc	--	2nd I-F Neut. Cond.	Min.
6		Remove dummy tube - replace with 2nd I-F tube.			
7		*Repeat Step 1*			
8	Antenna in Series with 200 mmfd	Replace tuning condenser			
9		1400 kc	About 15	1400 kc Osc. Trimmer *	Max.
10		600 kc	About 80	600 kc Osc. Trimmer *	Max.
11		*Repeat Step 9*			
12	Connect Radio to Antenna and Ground	Set volume control at max. and sensitivity control near min. Adjust R-F Comp. Cond. for max. output without oscillation or distortion at any dial setting.			

† *3rd I-F has 2 cond. in parallel*

* *Rock gang cond.*

RADIOLA 64, VICTOR, 9-18, 9-54 & 9-56

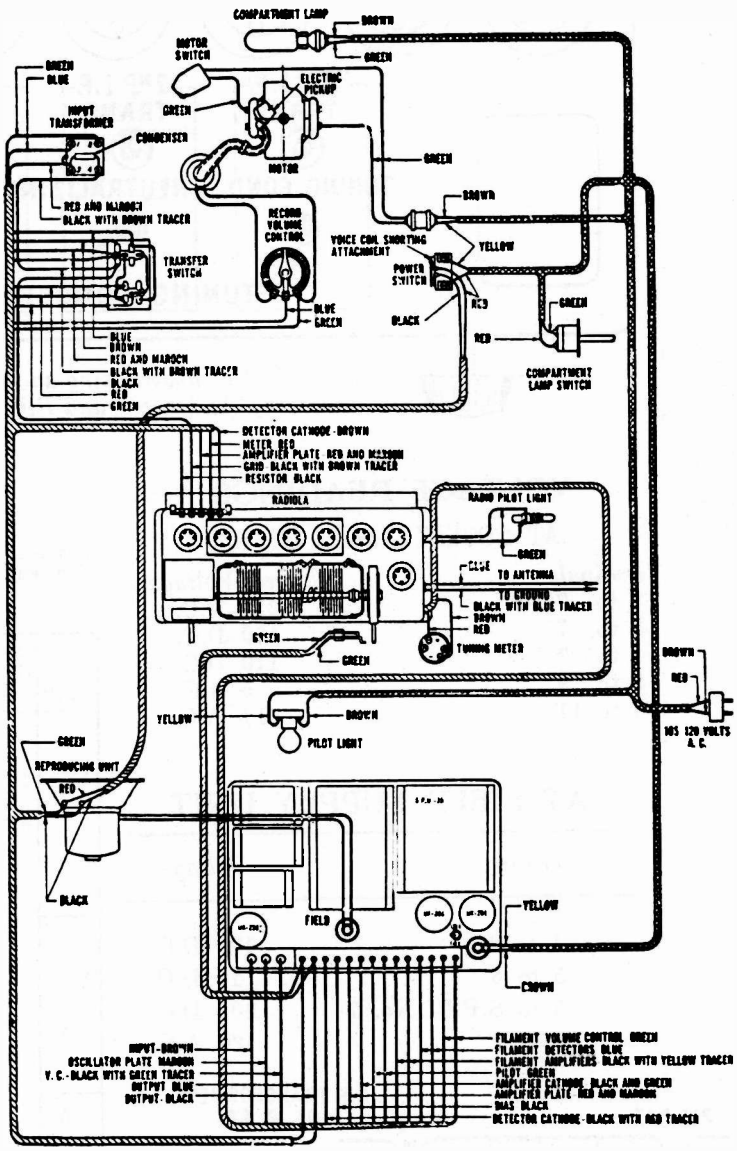
(105-125 Volts. 50-60 Cycle A. C.)

Radiola 64

VOLTAGE READINGS

AT S.P.U. TERMINAL STRIP. Volume and sensitivity controls at zero.

Terminals	*Voltage*
1 to 2	2.5 A.C.
3 to 4	2.5 A.C.
5 to 6	2.5 A.C.
7 to 8	5.0 A.C.
9 to 15	150 D.C.
10 to 15	300 D.C.
11 to 15	315 D.C.
12 to 15	320 D.C.
15 to 16	400 D.C.
15 to 17	500 D.C.



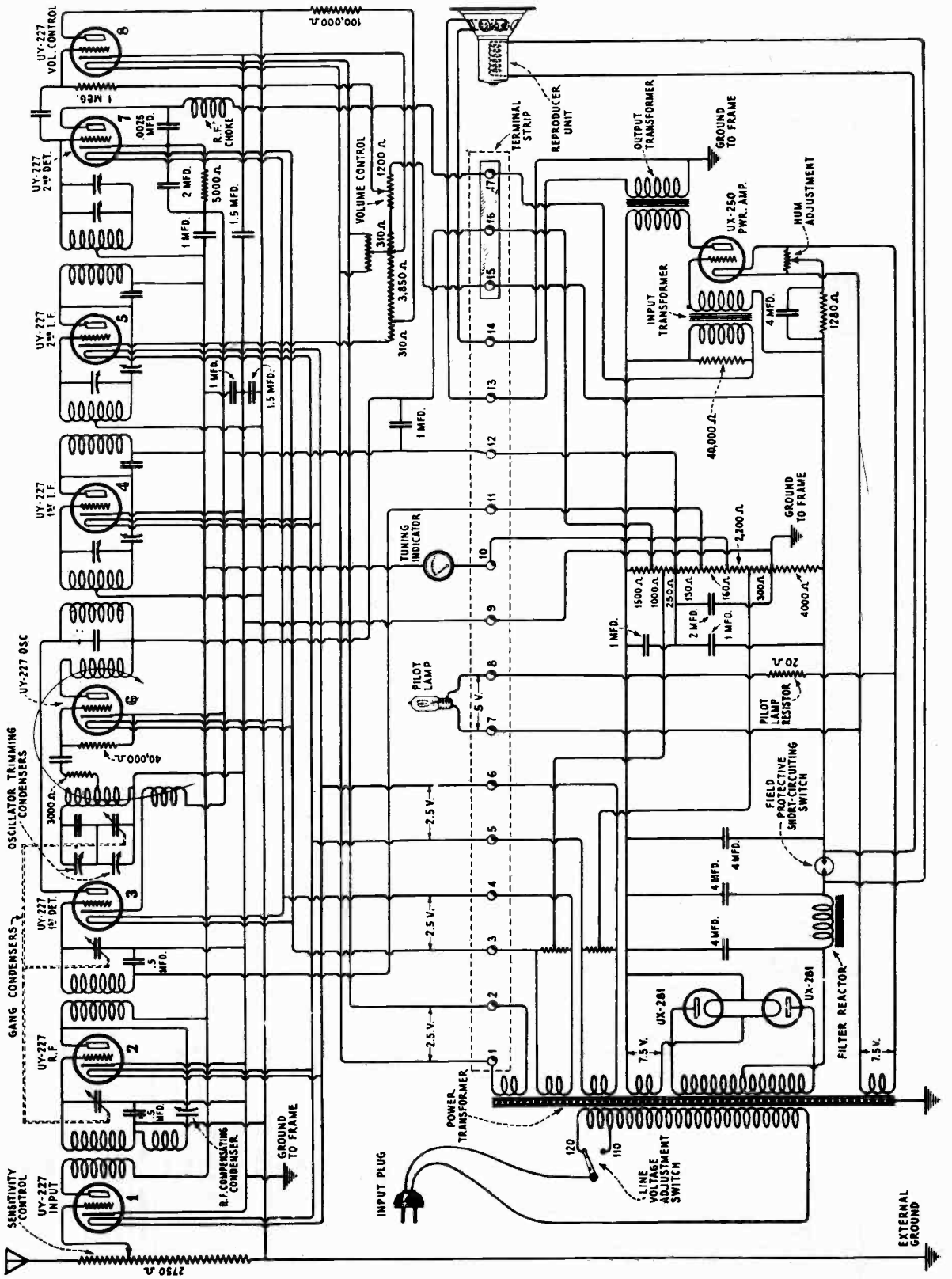
Cable Wiring Diagram Electrola Radiola No. 9-18

Refer to index for data on automatic record changer adjustments.

Radiola 64 is an eleven-tube A.C. Superheterodyne receiver with automatic volume control using the following tubes 8-27, 1-250 and 2-281.

Victor Models 9-18, 9-54 and 9-56 are radio-phonographs using Radiola 64 receiver and amplifier. Service data on Models 9-54 and 9-56 is identical.

64, 9-18, 9-54 & 9-56



Schematic circuit diagram of Radiola 64

64, 9-18, 9-54 & 9-56

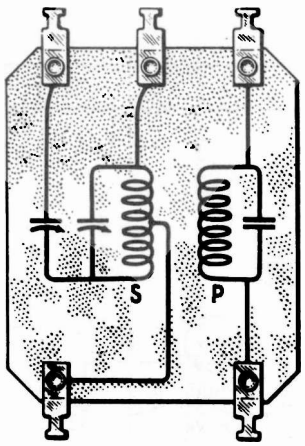
Alignment Procedure

Use tuning meter for output indicator on Radiola 64. Remove tuning condenser - replace all ground leads. A dummy type 27 tube is needed; that is, one with an open filament but otherwise normal.

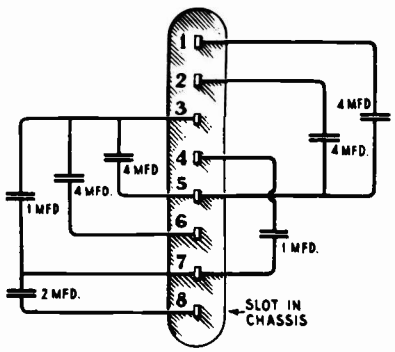
STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO	ADJUST THE FOLLOWING	OUTPUT
1	1st Det. Grid in series with 0.01mfd	180 Kc	—	3rd I-F Tuning Cond. † 2nd I-F Tuning Cond. 1st I-F Tuning Cond.	Max. Max. Max.
2		Remove 1st I-F tube - replace with dummy tube			
3		180 Kc	—	1st I-F Neut. Cond.	Min.
4		Remove dummy tube - replace with 1st I-F tube Remove 2nd I-F tube - replace with dummy tube			
5		180 Kc	—	2nd I-F Neut. Cond.	Min.
6		Remove dummy tube - replace with 2nd I-F tube			
7		*Repeat Step 1*			
8	Antenna in series with 200 mmfd	Replace tuning condenser			
9		1400 Kc	About 15	1400 KC Osc. Trimmer ▲	Max.
10		600 Kc	About 80	600 KC Osc. Trimmer ▲	Max.
11		*Repeat Step 9*			
12	Connect radio to antenna and ground	Set vol. cont. at max. and sensitivity control near min. Adjust R-F Comp. Cond. for max. output without oscillation or distortion at any dial setting.			

† *3rd I-F has 2 cond. in parallel.*

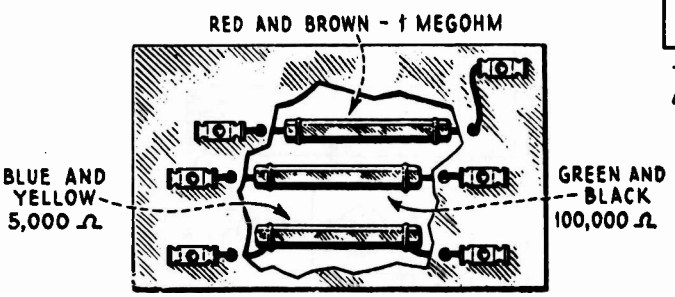
▲ *Rock Gang cond.*



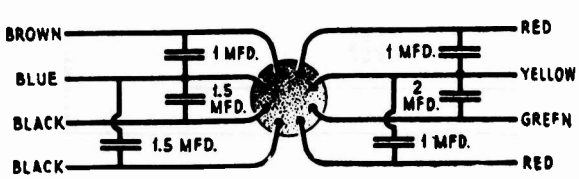
-Internal connections of I.F. transformers



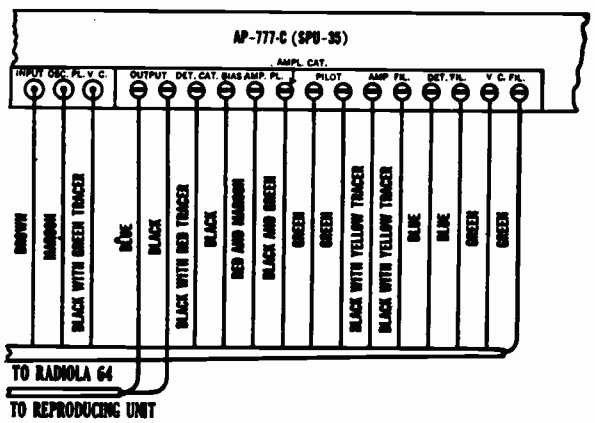
-Internal connections of filter condensers



Arrangement of resistors on terminal board

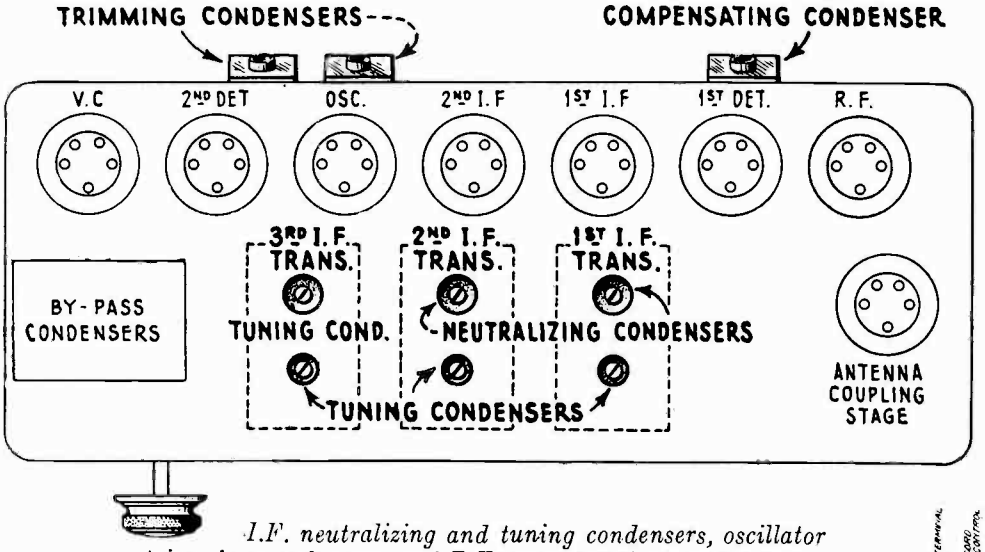


-Internal connections of the receiver by-pass condensers

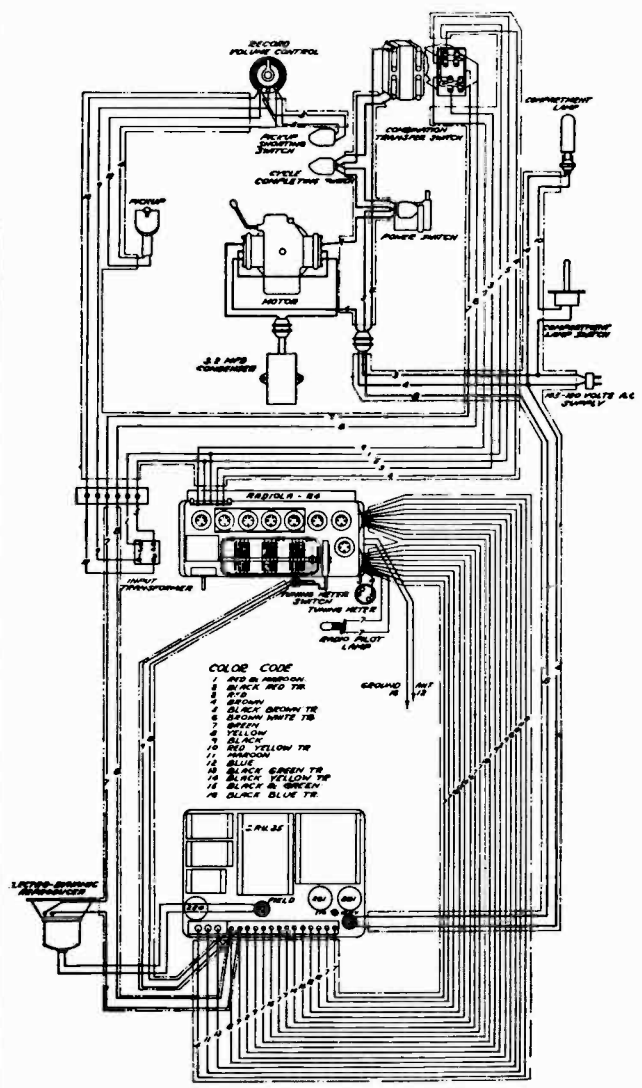


Power Amplifier Unit Terminals

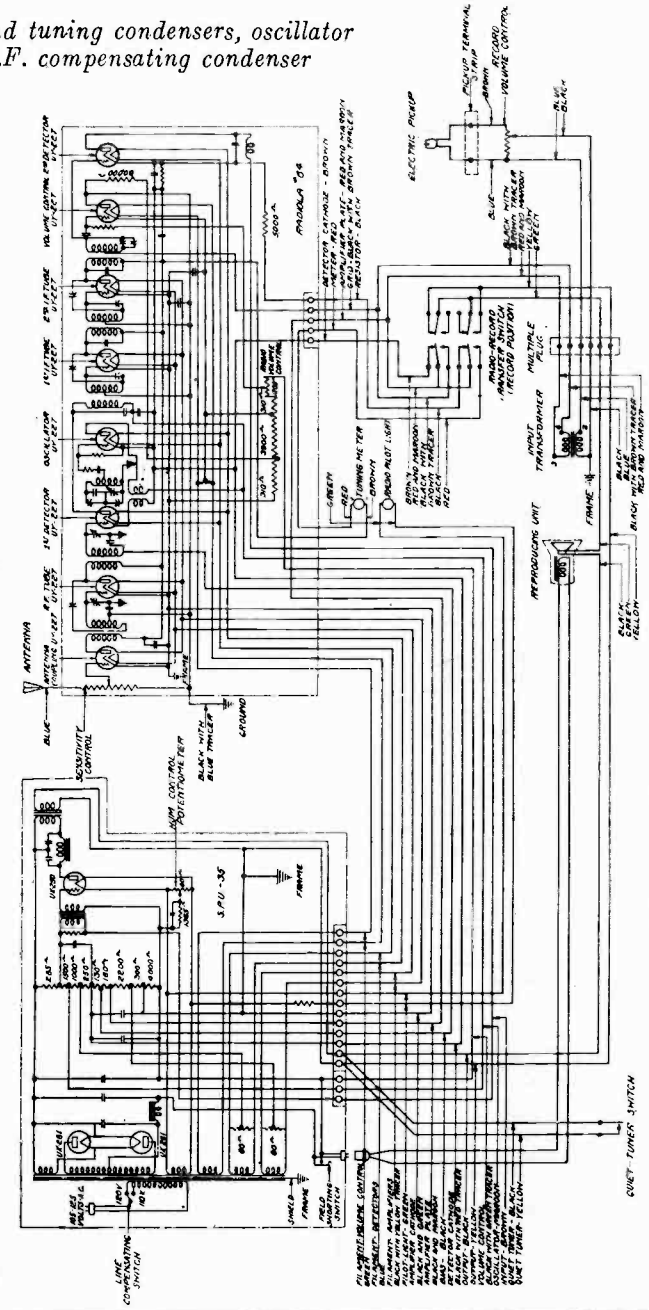
64, 9-18, 9-54 & 9-56



I.F. neutralizing and tuning condensers, oscillator trimming condensers, and R.F. compensating condenser

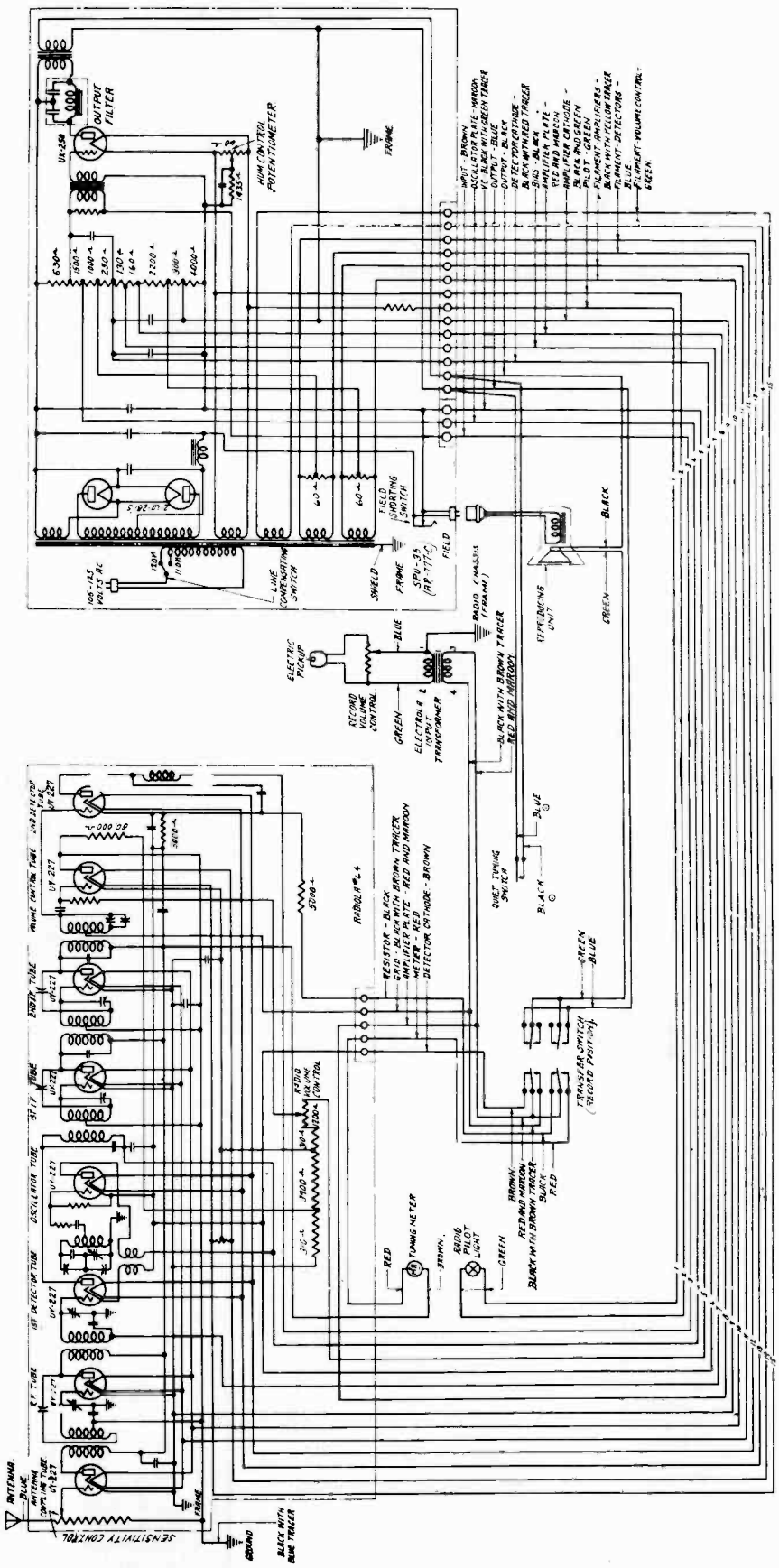


Cable Wiring Diagram Automatic Electrola Radiola 9-54 above Serial No. 6401

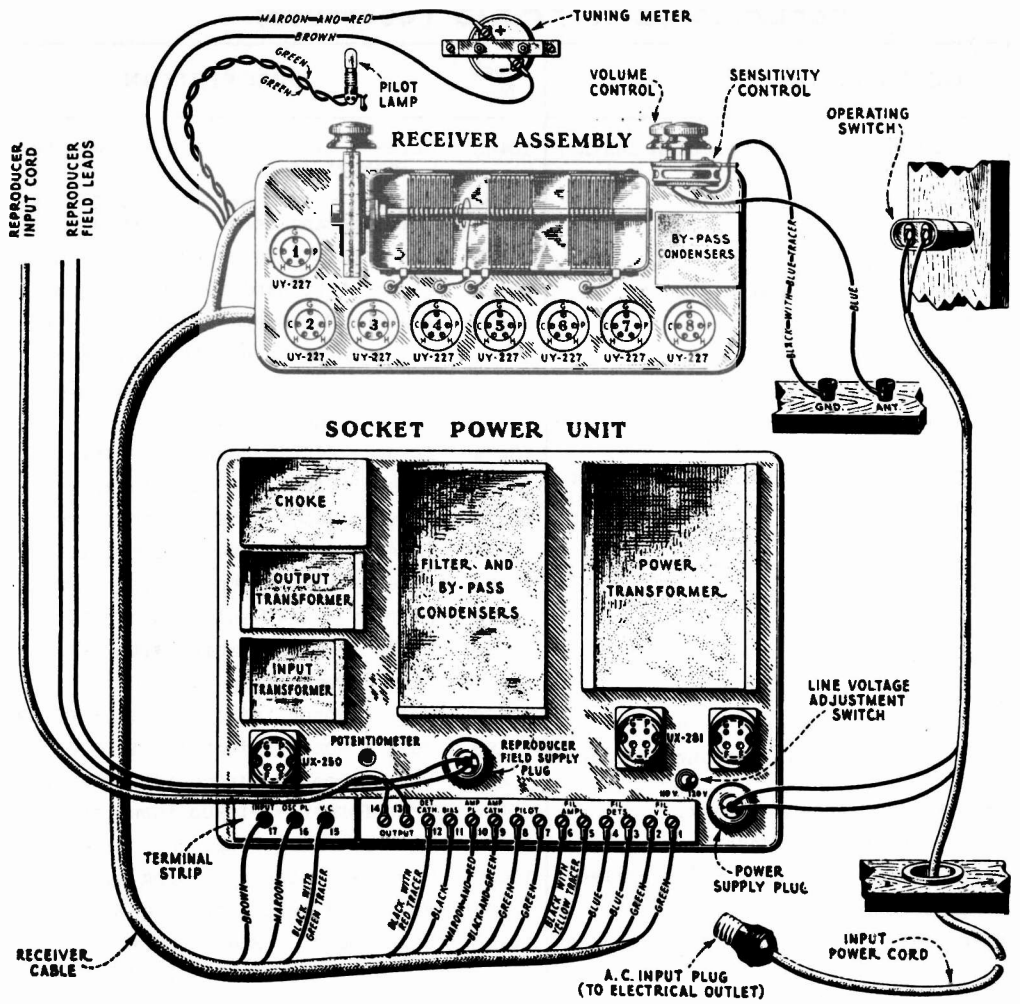


Schematic Wiring Diagram Electrola Radiola 9-54

64, 9-18, 9-54 & 9-56



Schematic Wiring Diagra Electrola Radiola Model 9-18



Receiver and socket power units with connecting wires, terminal strip, lugs and Radiotron socket contacts

REPLACEMENT PARTS

Insist on genuine factory tested parts, which are readily identified and may be purchased from authorized dealers.

STOCK No.	DESCRIPTION	STOCK No.	DESCRIPTION
1403	Block - Pickup connector block and wire.	2314	Coil - Pickup coil.
1838	Plate - Pickup magnet retaining plate - Package of 3.	2316	Pole piece - Pickup pole piece.
1845	Screw - Pickup needle screw - Package of 5.	2320	Resistor - Pilot lamp filament resistor.
2010	Condenser - 0.00016 mfd condenser.	2334	Control - Sensitivity control.
2014	Cable - Tuning condenser cable drive.	2335	Resistor - Tapped resistor - 4470 ohms.
2034	Switch - Power line adjusting switch.	2336	Control - Volume control - 1200 ohms.
2175	Magnet - Pickup magnet.	2341	Resistor - Mid-tapped resistor - 60 ohms.
2247	Knob - Tuning knob.	2342	Resistor - 5 terminal resistor - 7780 ohms.
2250	Cover - Pickup cover.	2343	Resistor - 7 terminal resistor - 3040 ohms.
2252	Block - Pickup connector block.	2620	Rubber - Damper and pivot rubbers - Comprising 1 damper block and 2 pivot rubbers - Package of 1 set.
2266	Socket - Single tube socket.	2762	Bearing assembly - Governor bearing assembly - Comprising 2 bearings, 2 set screws and 2 steel balls - Package of 3 sets.
2269	Condenser - Oscillator series condenser - 720 mmfd.	2784	Tray - Needle tray - Comprising plate, spring and 2 mounting screws - Package of 2.
2270	Resistor - 40,000-ohm resistor.	2872	Ball and spring - Governor ball and spring with mounting screws and washers - Package of 5.
2312	Armature - Pickup armature.		
2313	Plate - Pickup armature adjusting plate - Package of 10.		

64, 9-18, 9-54 & 9-56

REPLACEMENT PARTS (Continued)

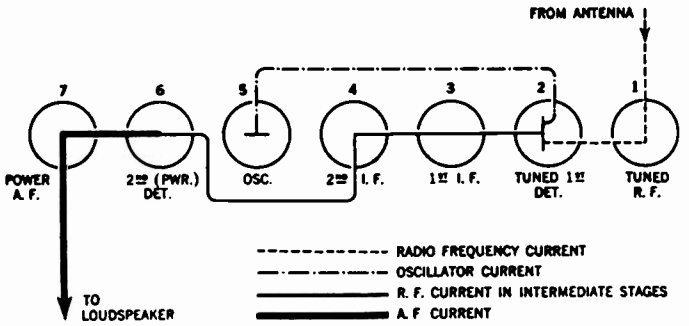
Stock No.	DESCRIPTION
2947	Leather - Regulating lever friction leather - Package of 20.
5338	Coil - Speaker field coil.
5669	Scale - Dial scale - Package of 10.
5681	Condenser - By-pass condenser - 1/2 mfd - on each side of mid-tapped resistor.
5685	Potentiometer - 60 ohms.
5742	Socket - UX type Radiotron socket.
5745	Transformer - Input transformer.
5807	Condenser - Parallel trimming condenser for oscillator.
5809	Resistor - 3000-ohm oscillator grid resistor.
5815	Resistor - Resistor assembly - Comprising 2 mid-tapped resistors - 60 ohms.
5842	Knob - Volume or sensitivity control knob.
5862	Condenser - By-pass condenser pack.
5863	Meter - Tuning meter.
5867	Coil - Choke coil.
7196	Lamp - Compartment lamp - Package of 5.
8341	Coils - Coil assembly mounted on strip.
8342	Transformer - Intermediate frequency transformer.
8368	Condenser. Filter condenser pack.
8369	Transformer - Power transformer - 25 cycles.
8373	Transformer - Power transformer (60 cycles).
8375	Cone - 8" paper cone.
10129	Ball - Steel ball bearing - 3/16" - Package of 20.
10196	Spring - Regulating lever spring - Package of 10.
10289	Governor - Governor assembly - Comprising spindle, collar, balls, springs, friction disc and screws - Assembled.
10292	Gear - Governor drive gear with set screw.
10293	Lever - Regulating lever with leather - Package of 3.
10311	Catch - Door catch with strike and nail - Package of 2 sets.
10361	Screw - Pick-up cover mounting screw - Package of 4.
10362	Screw - Pick-up mounting screw - Package of 4.
10371	Socket - Compartment lamp socket - Less clamp and mounting screws.
10456	Capacitor - Motor capacitor - 3.2 mfd.
10457	Bracket - Eccentric stop lever bracket.
10458	Button - Rubber button with rubber stop pad - Package of 3.
10459	Tube - Taper tube - Electrola - Comprising tube, pickup crook, crook stop, eccentric screw and connector block.
10461	Switch - Compartment lamp switch - Less sleeve and screw.
10462	Switch - Radio to record transfer switch with throw.
10463	Switch - Cycle completing and pickup shorting switch.
10464	Screw - 12" Eccentric screw with trip.
10465	Screw - Lift ring stop screw with lock nut - Package of 2.
10466	Spring - 10" and 12" guide pin tension spring and screw - Package of 5.
10468	Pin - Left hand record locating pin.
10469	Pin - Right hand record locating pin.
10470	Plate - Start and reject plate with switch.
10471	Pin - 12" plunger pin - Package of 5.
10472	Pin - 10" plunger pin - Package of 2.
10473	Plate - Pusher plate.
10474	Lever - Clutch release lever.
10475	Lever - Sound box lift lever.
10476	Lever - Taper tube return lever.
10477	Lever - Index lever - Complete.
10478	Lever - Lift lever toggle - Complete.
10479	Carrier - Pawl and pawl carrier.
10480	Clutch - Clutch wheel with set screw.
10481	Gear - Connecting link gear.
10482	Coil - Motor inductor coil - 60 cycle.
10483	Coil - Motor inductor coil - 25 cycle.
10484	Transformer - Output transformer and filter.
10485	Transformer - Pickup input transformer.
10486	Pickup - Pickup unit complete.
10487	Housing - Pickup housing back.
10488	Felt - 8" felt ring - Package of 2.
10489	Escutcheon - Radio panel escutcheon assembly - Comprising 1 volume control escutcheon, 1 station selector escutcheon and mounting screws - Package of 1 set.
10490	Control - Electrola volume control.
10491	Switch - Silent tuning switch with cable and spring - Less bushing, washer and mounting screws.
10492	Spring - Pawl carrier spring - Package of 10.
10495	Washer - Spring washer - Package of 20.
10496	Spindle - Turntable spindle.
10497	Index assembly - Record index assembly - Comprising index trip lever, trip cam and set screw.
10498	Handle - Large door drop handles - Set of 2 - Comprising 2 handles, 2 plates, 4 mounting pins, 2 mounting screws and 2 escutcheons.
10499	Gear - Intermediate gear.
10500	Disc - Rotor disc.
10501	Bolt - Motor board bolt with 2 rubber washers - Package of 2.
10502	Screw - Connector block screw - Package of 10.
10504	Screw - Pickup motor mechanism screw - Package of 5.

RADIOLA 66

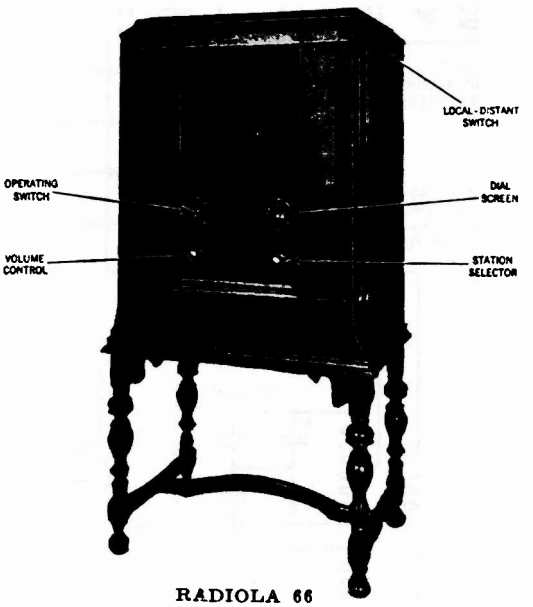
Eight-Tube, A-C, Superheterodyne Receiver

(105-125 Volts—50-60 Cycle A. C.—110 Watts)

Radiola 66 is also made in models designed for alternating current operation of 105 to 125 volts, 25 to 40 cycles. In this model the power transformer is different from that used in the 50-60 cycle models. All other parts are identical in both models



-Radiotron sequence

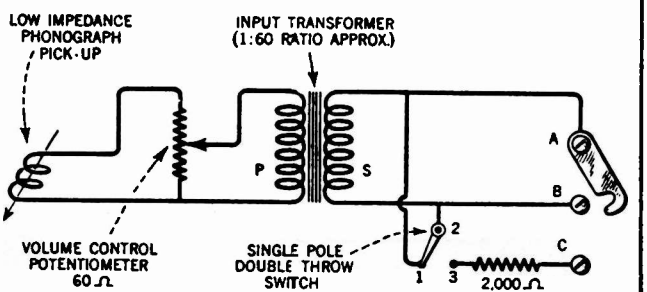


RADIOLA 66

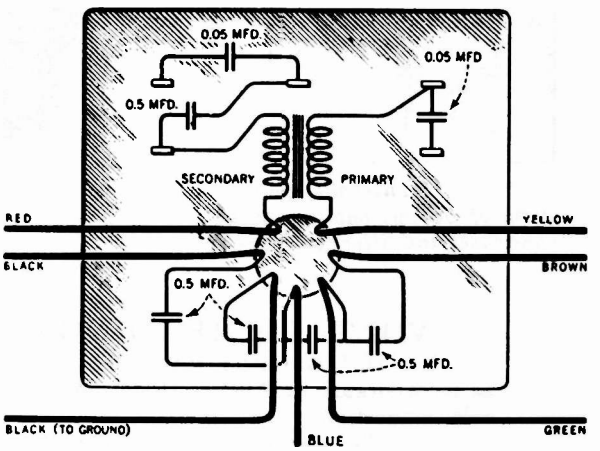
Alignment Procedure

A dummy type 27 tube is needed; that is one with an open filament but otherwise normal.

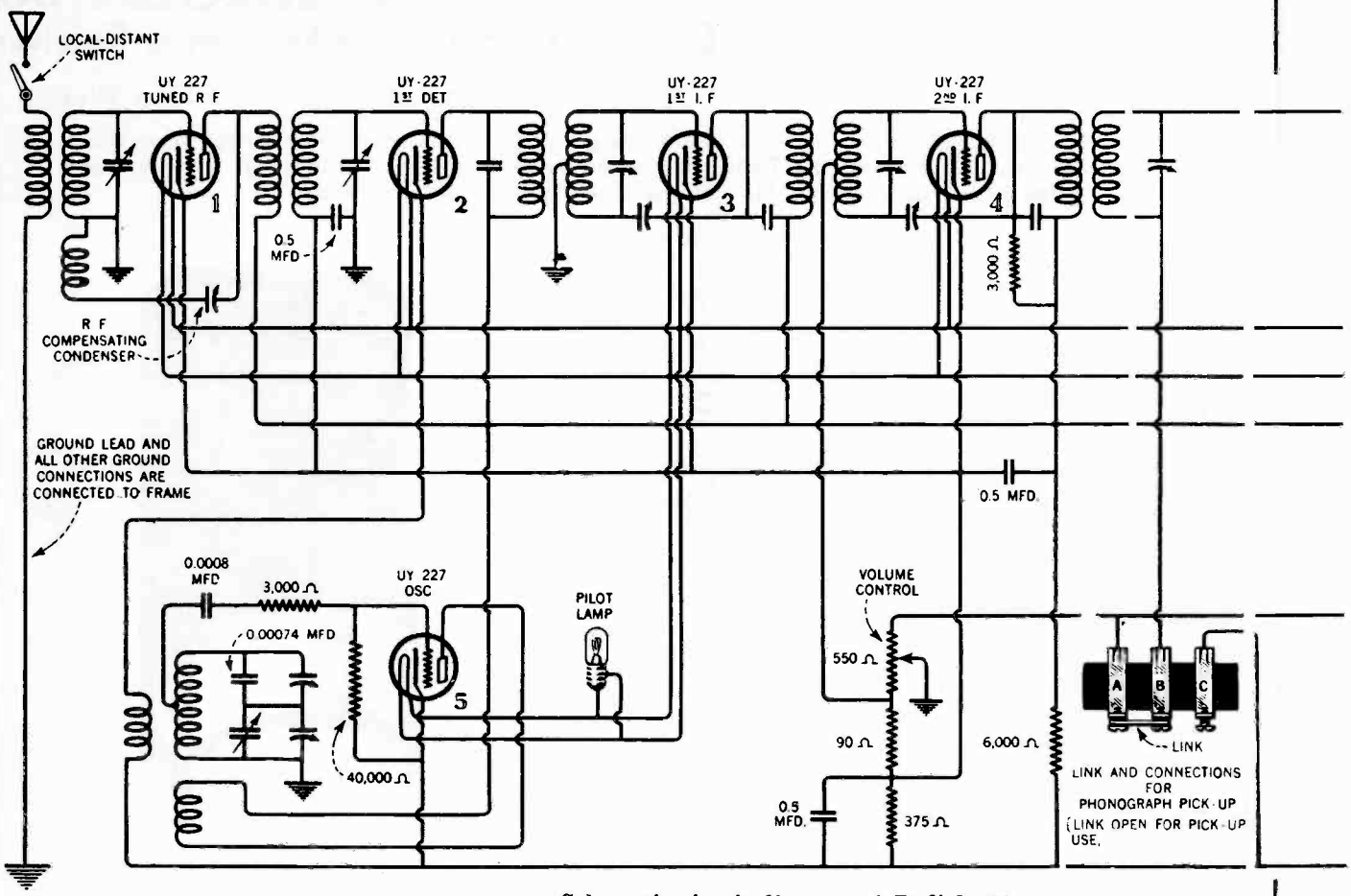
STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO	ADJUST THE FOLLOWING	OUTPUT
1	1st Det. Grid in series with .01 mfd	175 kc	Quiet Point	3rd I-F Tuning Cond. 2nd I-F Tuning Cond. 1st I-F Tuning Cond.	Max. Max. Max.
2		Remove 1st I-F tube - replace with dummy tube.			
3		175 kc	Quiet Point	1st I-F Neut. Cond.	Min.
4		Remove dummy tube - replace with 1st I-F tube. Remove 2nd I-F - replace with dummy tube.			
5		175 kc	Quiet Point	2nd I-F Neut. Cond.	Min.
6		Remove dummy tube - replace with 2nd I-F tube			
7		*Repeat Step 1*			
8	Antenna in Series With 200 mmfd	1400 kc	About 15 (1400 on Rad 67)	1400 kc Osc. Trimmer (Rock Gang)	Max.
9		600 kc	About 80 (600 on Rad 67)	600 kc Osc. Trimmer (Rock Gang)	Max.
10		*Repeat Step 8*			
11	Connect Radio to Antenna and Ground	Set volume control at max. and sensitivity control near min. Adjust R-F Comp. Cond. for max. output without oscillation or distortion at any dial setting.			



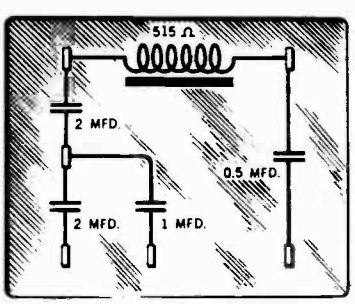
Schematic circuit diagram of phonograph pick-up connections



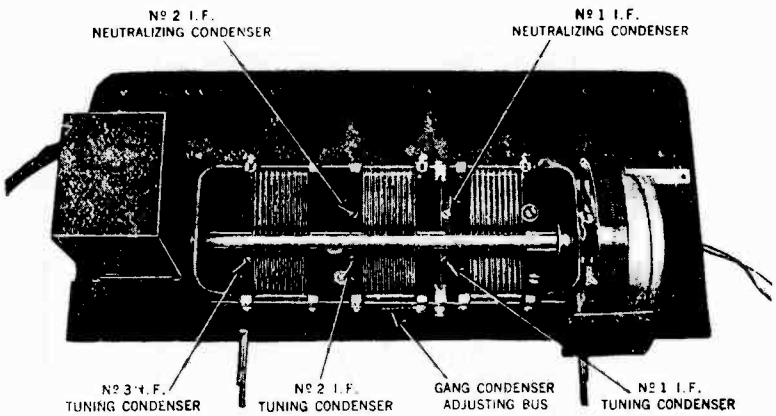
Internal connections of audio transformer and by-pass condensers



Schematic circuit diagram of Radiola 66



Internal connections of output choke, output condenser and filter condensers



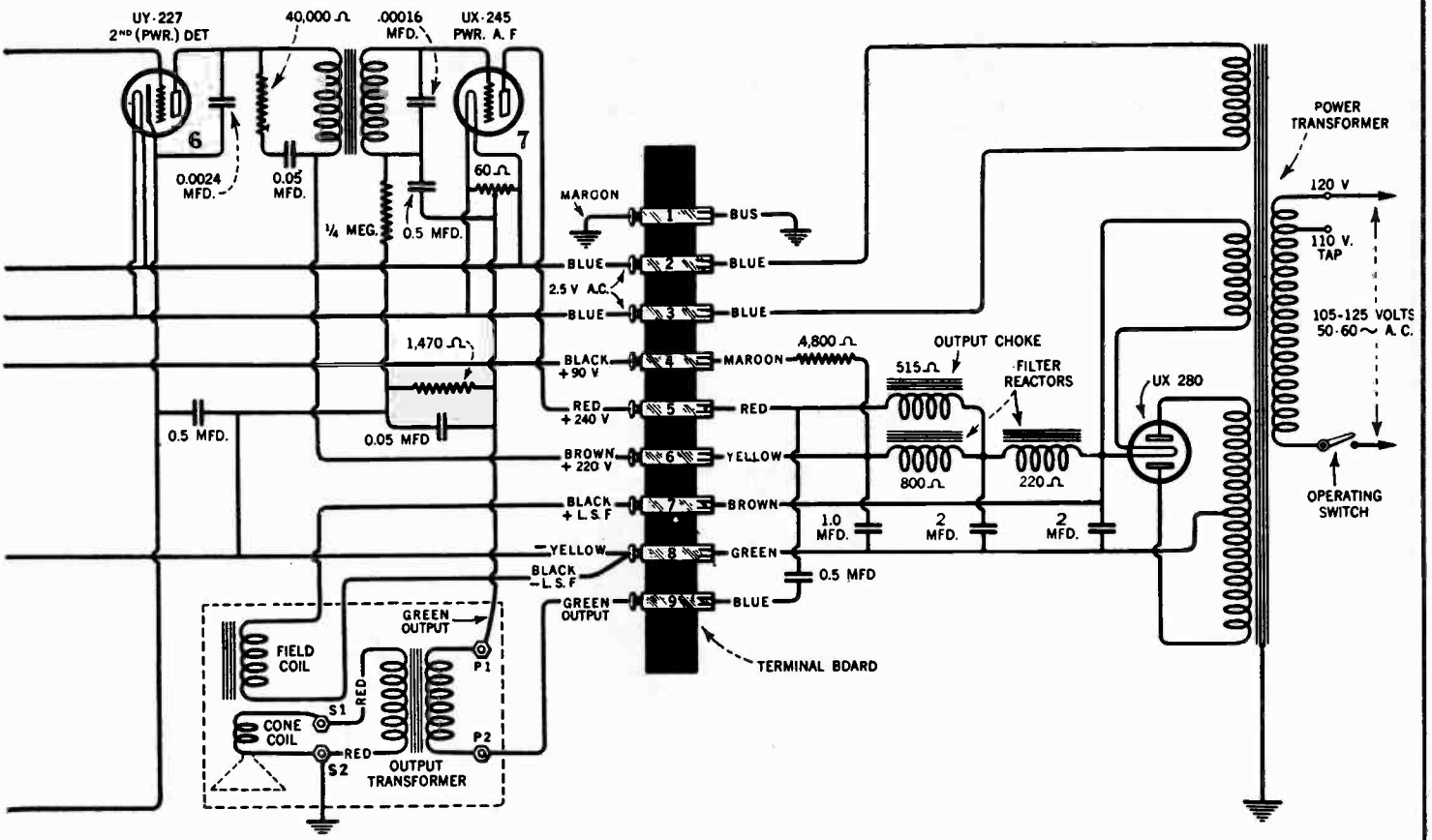
Condenser adjusting screws for I.F. transformers

VOLTAGE READINGS AT TERMINAL STRIP

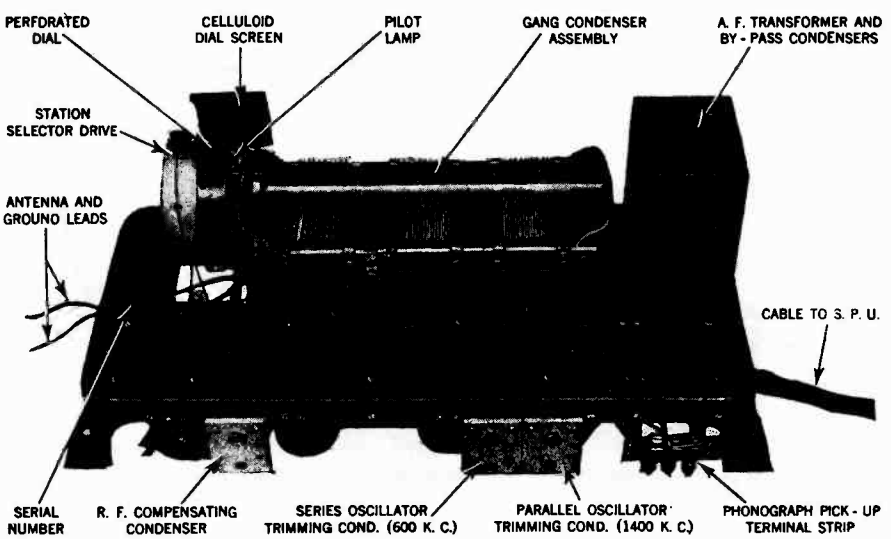
Use D.C. voltmeter with a 0-300 volt scale and at least 1,000 ohms per scale volt such as incorporated in Weston Model 537, Type 2, test set. Line volts—120 A.C.—Tap at 120 volt connection.

Terminals	*Volts*	*Terminals*	*Volts*
8 to 7	310	8 to 5	275
8 to 6	265	8 to 4	120

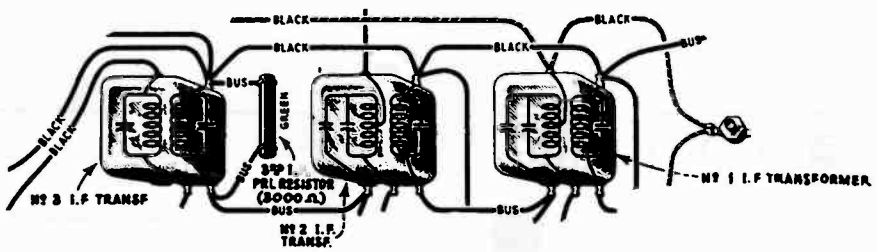
Use a 0-5 volt A.C. voltmeter for the following reading: Terminal 2 to 3, 2.7 volts A.C.



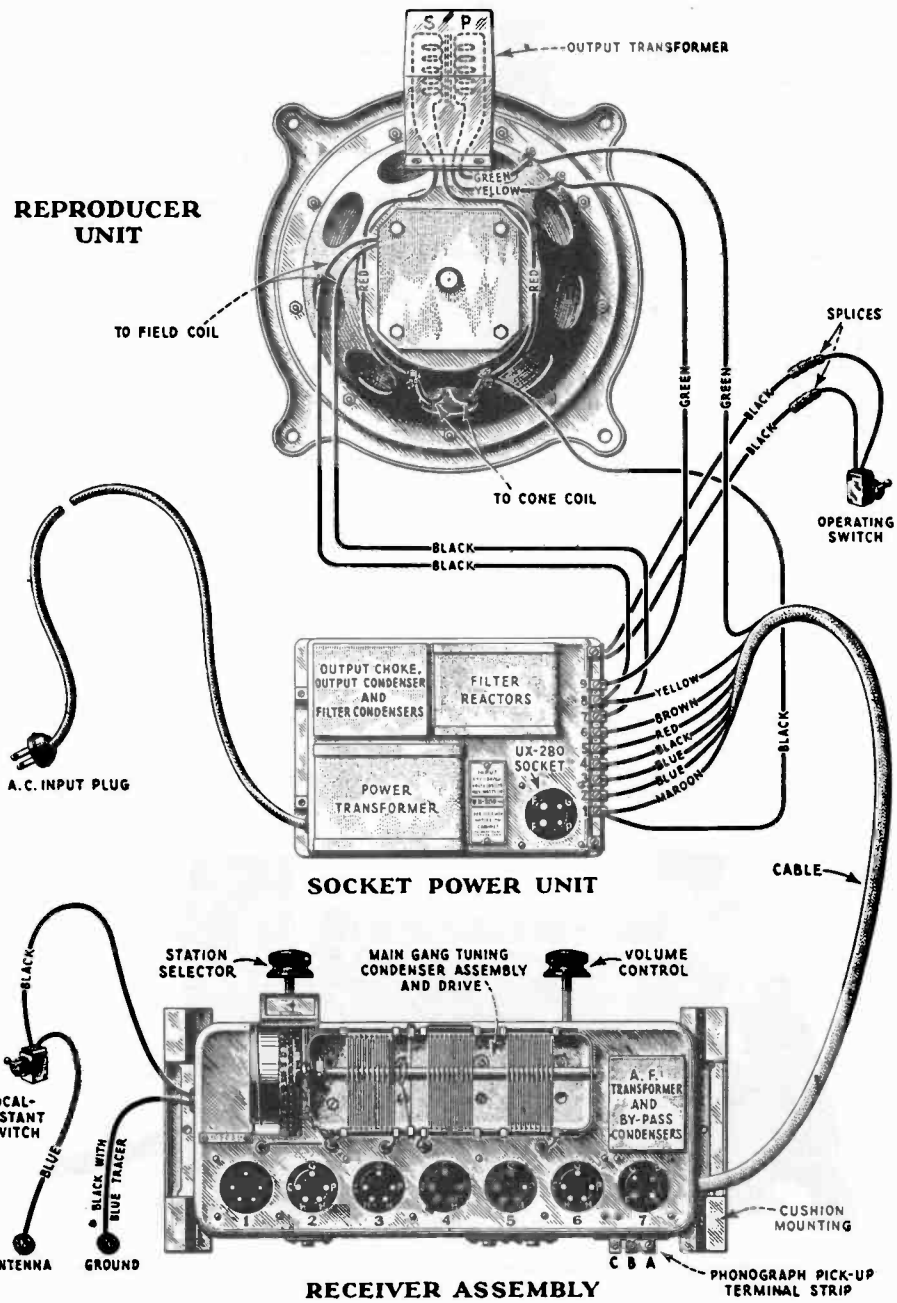
including receiver assembly, socket power unit, and reproducer assembly



Top view of receiver chassis showing principal parts



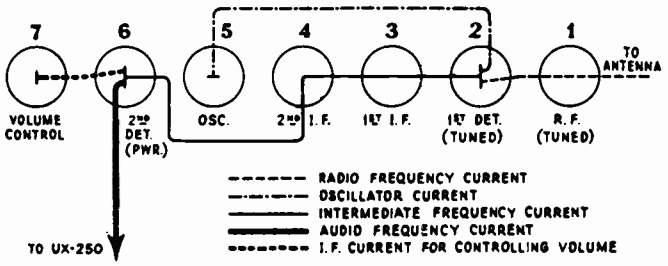
CONNECTIONS OF I-F TRANSFORMERS.



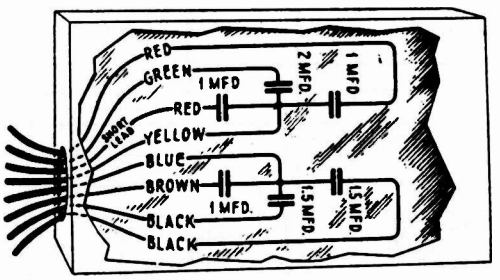
-Radiola 66 cable connections, socket contacts, reproducer unit, socket power unit and receiver assembly

RADIOLA 67

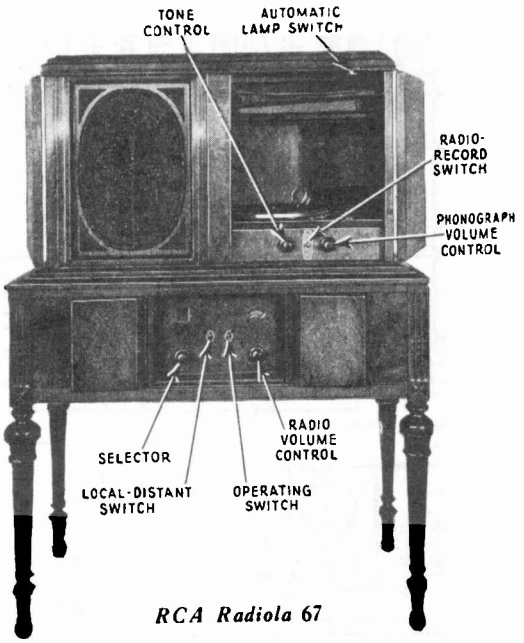
Ten-Tube, A-C, Superheterodyne Radio-Phonograph



–Radiotron sequence



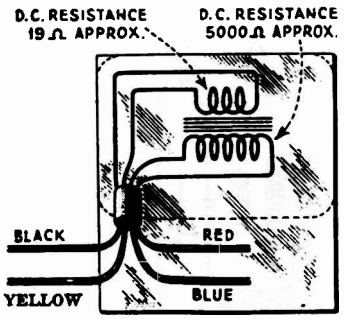
—Internal connections of receiver by-pass condensers



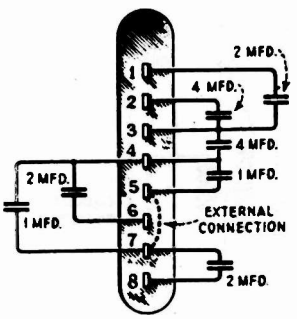
RCA Radiola 67

ELECTRICAL SPECIFICATIONS

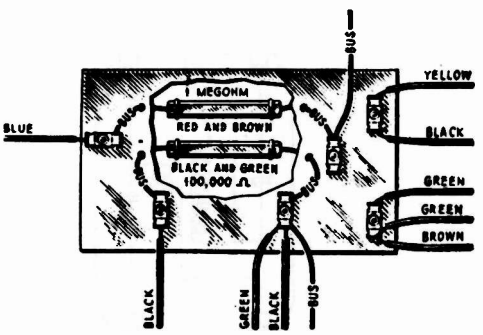
Rating .....Voltage, 105 to 125 volts—Frequency 50 to 60 cycles
Rating (Also Available).....Voltage, 200 to 250 volts—Frequency 50 to 60 cycles
Rating (Also Available).....Voltage, 105 to 125 volts—Frequency 25 to 40 cycles
Power Consumption .....210 watts (total)
Power Consumption of Phonograph Motor.....35 watts
Power Consumption of Phonograph Compartment Lamp.....15 watts
Recommended Antenna Length.....30 to 60 feet
Type of Circuit.....Superheterodyne with Automatic Volume Control
Types and Number of Radiotrons..... UY-227—7
..... UX-250—1
..... UX-281—2
Type of Loudspeaker ..... Dynamic
Type of Loudspeaker Field.....Series 100-volt, 100 M.A.
Type of Phonograph Pick-up.....Flexible—Low Impedance—Needle Diameter .035 to .070 inches
Type of Phonograph Motor.....Induction Disc



—Internal connections of phonograph input transformer

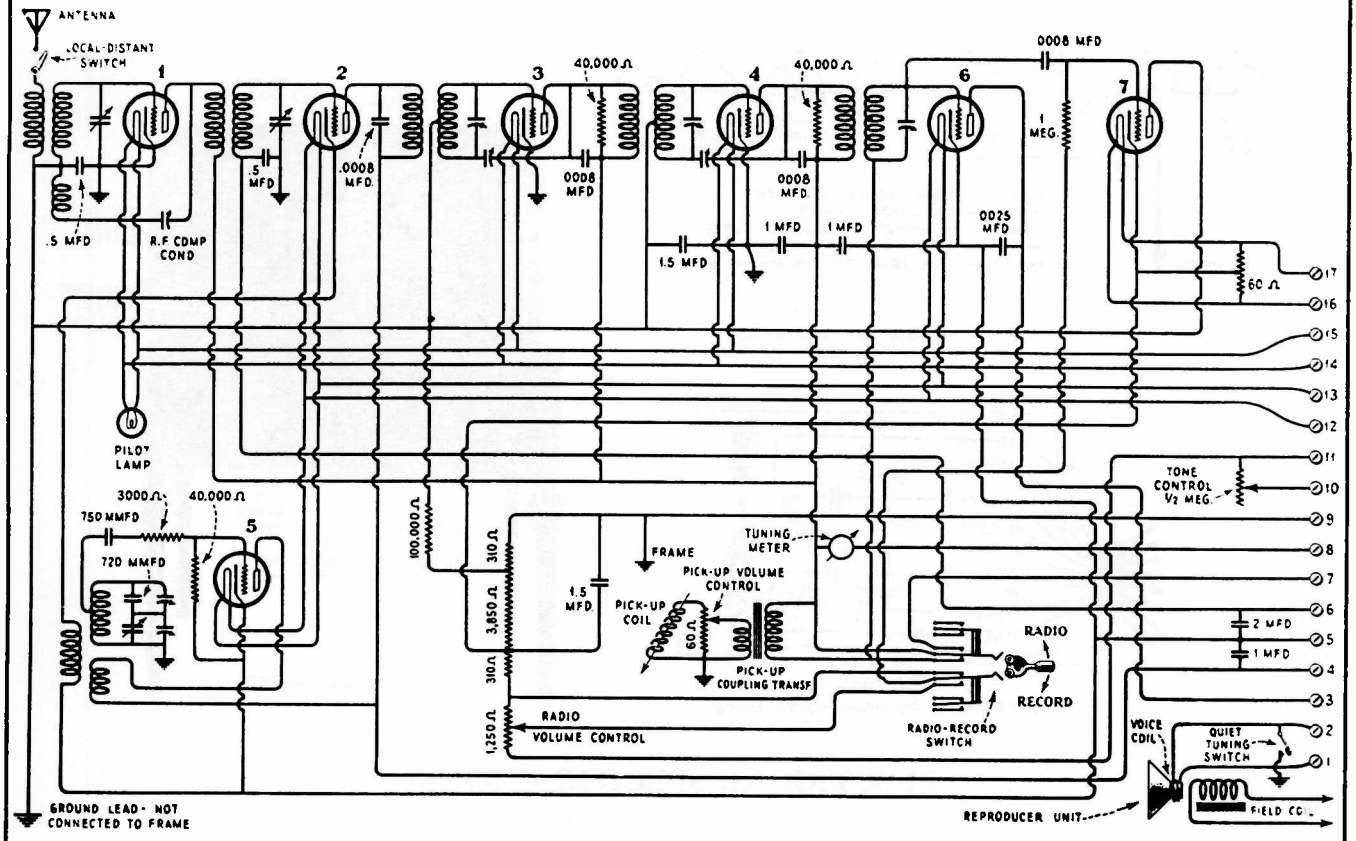


—Internal connections of SPU filter condensers



-Connections of volume control resistors

REFER TO RADIOLA 66 FOR ALIGNMENT PROCEDURE.



– Schematic circuit diagram of receiver assembly

25-40 CYCLE RADIOLA 67

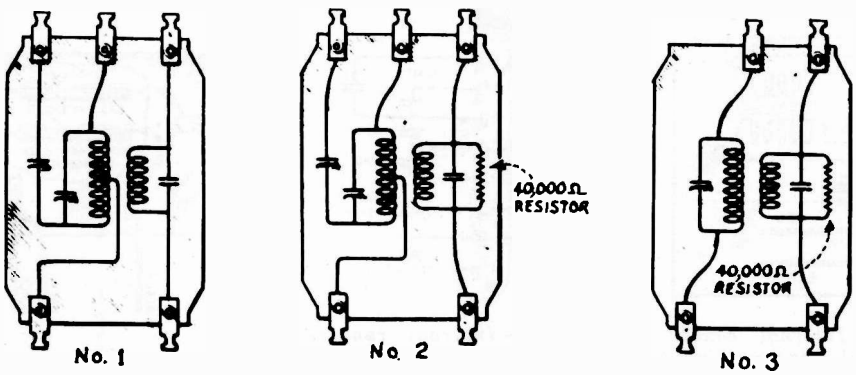
This model differs from the 50-60-cycle set in four details:

(a) A 25-40 cycle power transformer is used. The voltages and position of the terminals are standard, however.

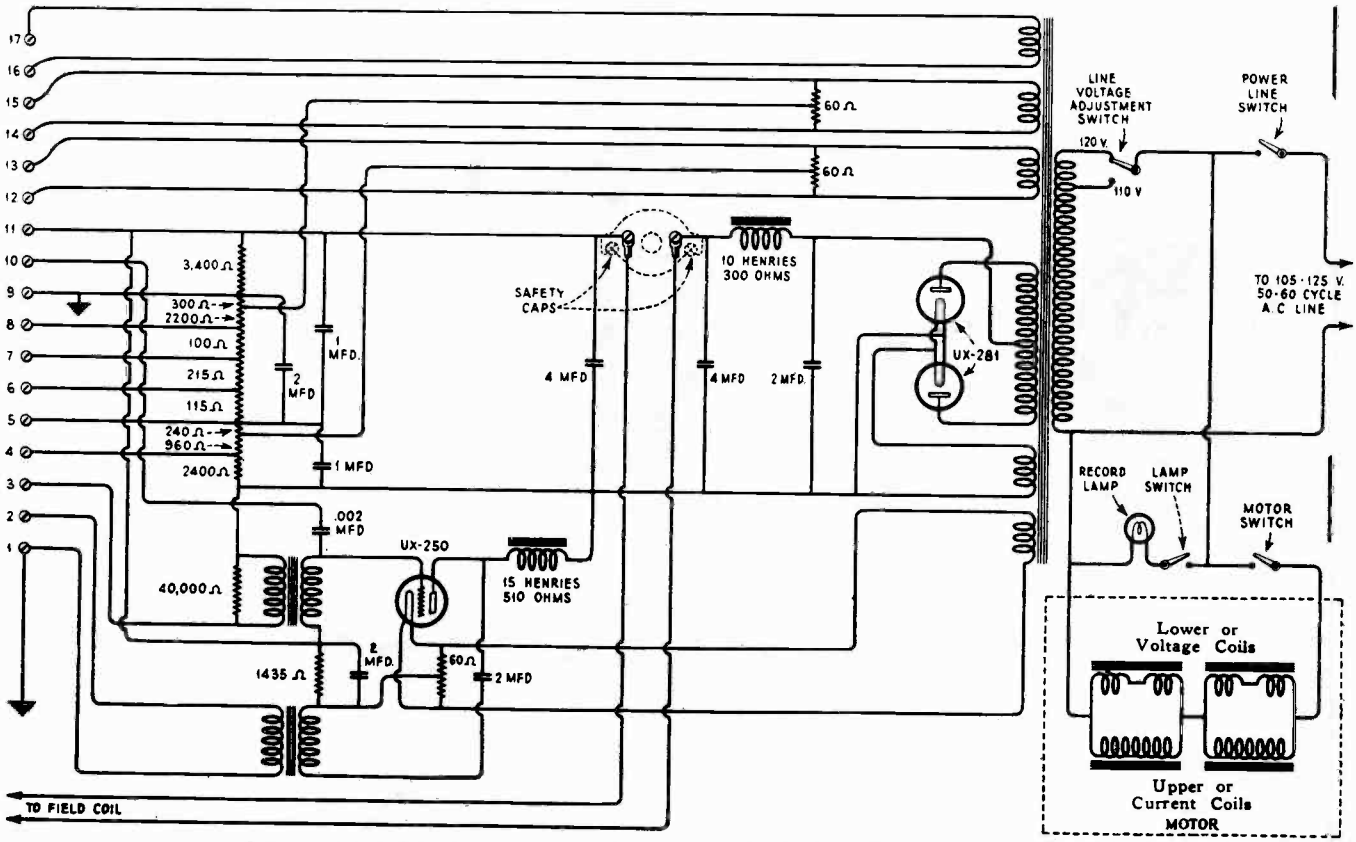
(b) A 25-40 cycle motor is used in the phonograph.

(c) A 1 mfd. condenser—contained in can affixed to vertical cabinet partition—is connected in parallel to the first (2 mfd.) filter condenser.

(d) A 3 mfd. condenser—contained in can referred to in Paragraph (c)— is connected from the mid-point (arm) of the UX-250 filament potentiometer to the high side of the reproducer field coil.



Internal connections of I. F. transformers

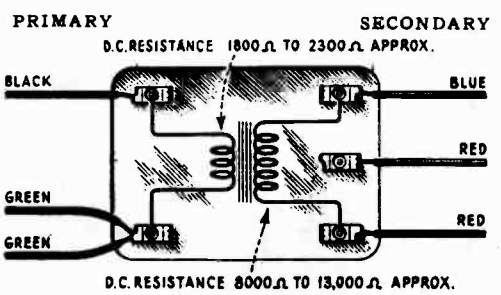


Schematic circuit diagram of socket power unit, phonograph motor and adjacent circuits

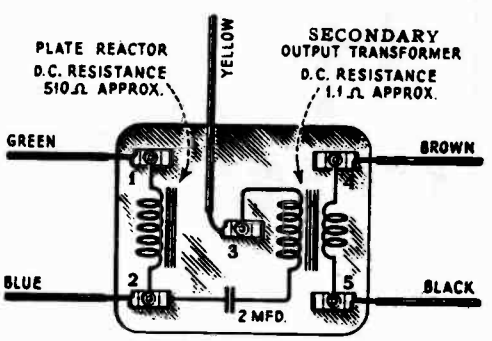
POWER UNIT TERMINAL STRIP VOLTAGES

Volume Control at Maximum

Terminal Nos.	Cable Connected and Tubes Lighted Volts
12 to 13 (Heater Tubes 2-5-6)	2.55
14 to 15 (Heater Tubes 1-3-4)	2.58
16 to 17 (Heater Tube 7)	2.55
9 to 3	358.
9 to 4	235.
9 to 5	174.
9 to 6	167.
9 to 7	153.
9 to 8	147.
9 to 11	134.

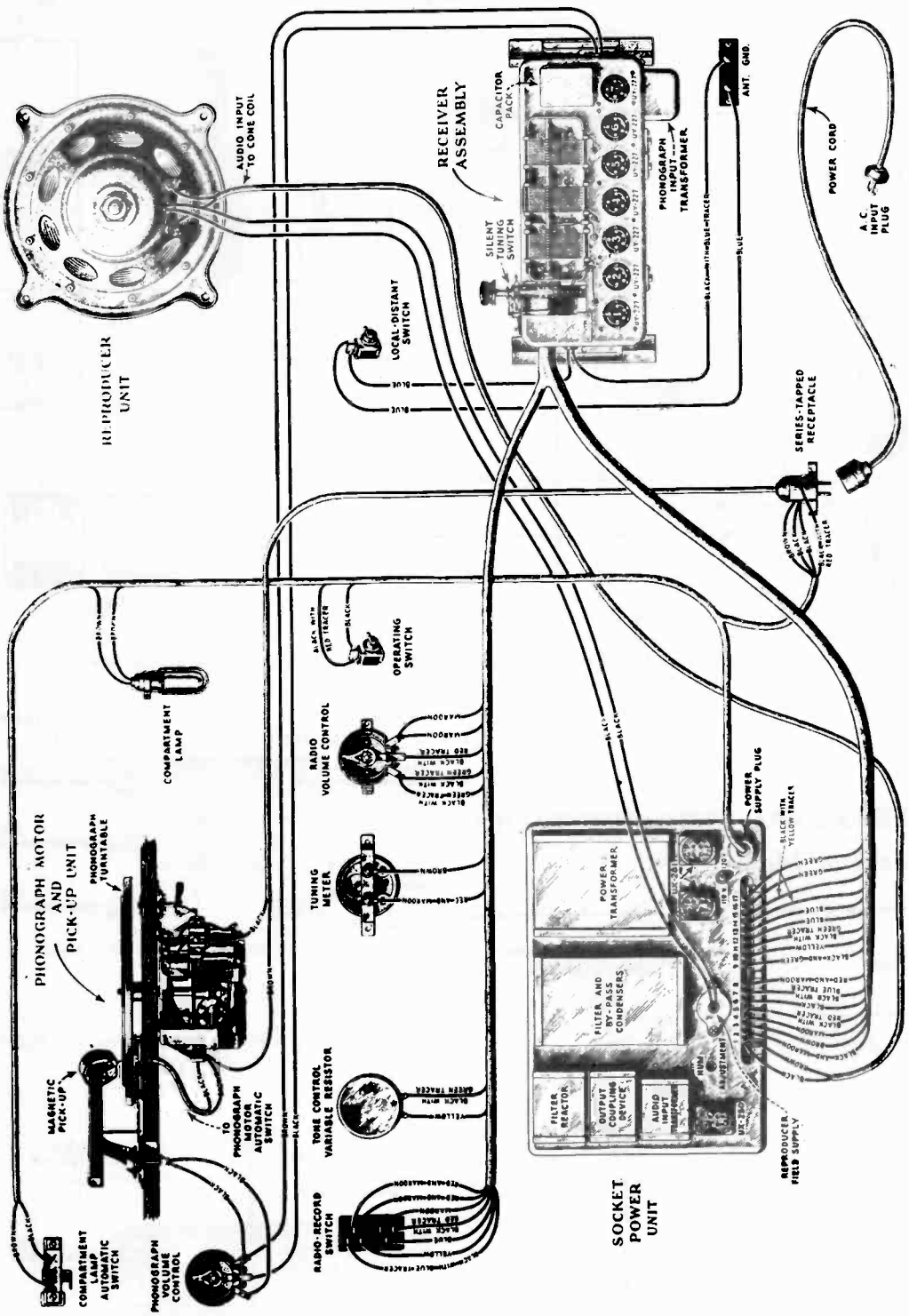


Internal connections of input transformer



Output coupling device

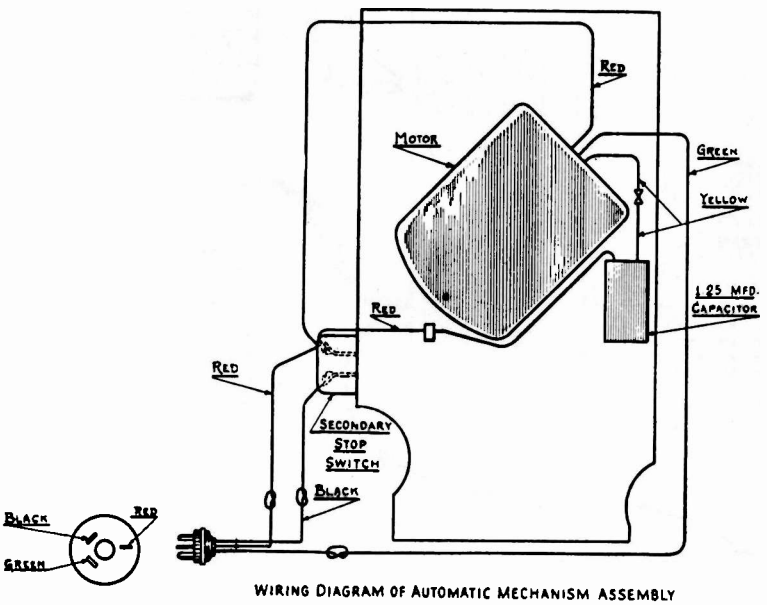
67



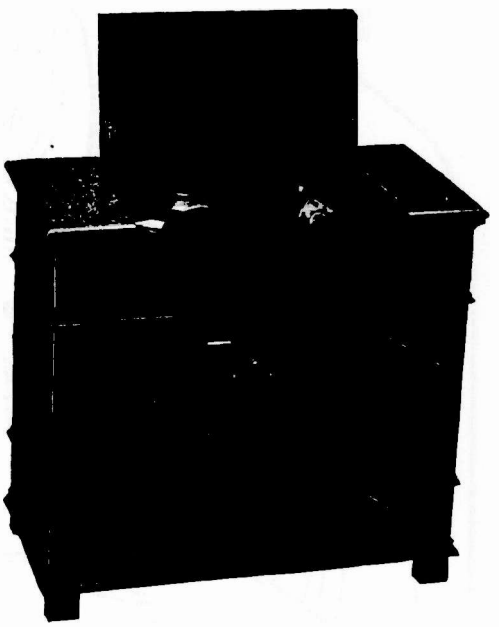
Complete layout of assemblies and cable connections

Model RAE-68

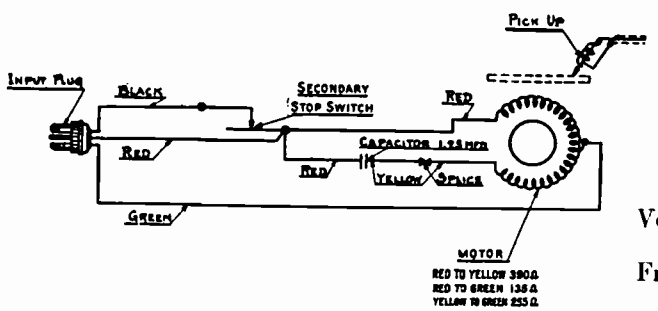
Nine-Tube Superheterodyne A-C, Automatic Radio-Phonograph



WIRING DIAGRAM OF AUTOMATIC MECHANISM ASSEMBLY



Model RAE-68



SCHEMATIC WIRING DIAGRAM OF MOTOR CIRCUIT

-Wiring Diagram of Automatic Mechanism

SPECIFICATIONS

Voltage Rating.....105/125 Volts.

Frequency Rating.....50 and 60 Cycles

Maximum Power Consumption .60 Cycles—150 Watts

Maximum Power Consumption .50 Cycles—155 Watts

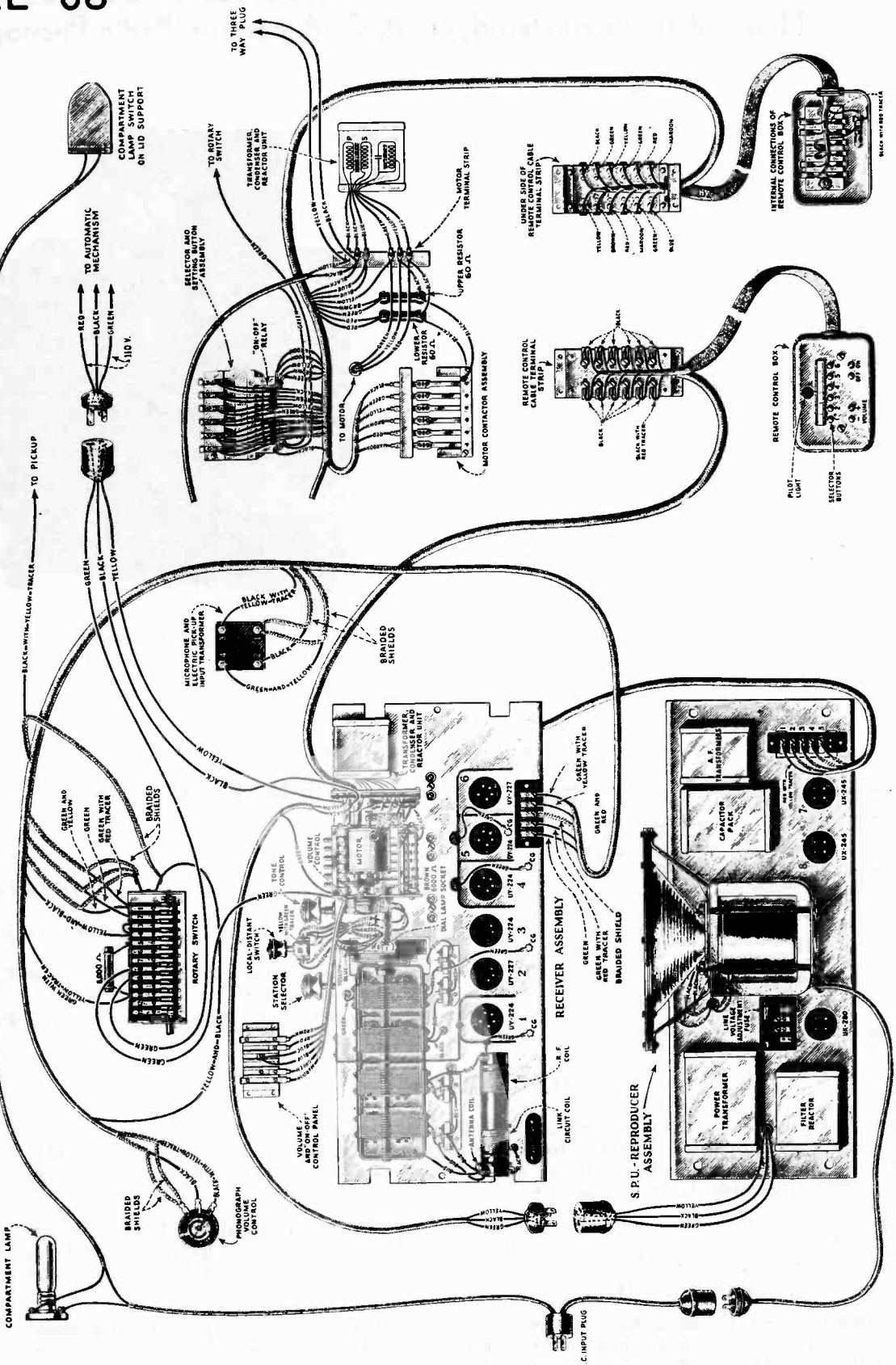
DESCRIPTION

The Model RAE–68 is a combination instrument containing the RCA Radiola 82 receiver with remote control and the RCA Victor automatic electric phonograph. The instrument will play ten 10-inch records automatically, or it can be set by means of a convenient lever to play either 10-inch or 12-inch records singly without the automatic feature.

One of the features of the instrument is the safety clutch arrangement which prevents the mechanism from jamming during the cycle should any of the moving parts happen to bind. A spring on the tone arm also prevents the possibility of damage being caused to the mechanism by moving the arm while the mechanism is in cycle.

Another feature is the capacitor type motor which furnishes more than ample power for operation of the instrument with a minimum power consumption. The motor is dependent upon proper power supply frequency to maintain its speed and, therefore, does not require a speed regulator or governor. A 1.25 mfd. condenser connected in the motor field circuit produces sufficient phase displacement to cause the motor to be self starting. The standard instruments are designed for operation on 105 to 125 volts, 60 cycles. Maximum power consumption is 150 watts. Special instruments are available for operation on 105 to 125 volts, 50 cycles.

RAE 68



Wiring Diagram of Model RAE-68

REFER TO RADIOLA 82 FOR SERVICE DATA ON RECEIVER AND AMPLIFIER.

REFER TO INDEX FOR AUTOMATIC RECORD CHANGER ADJUSTMENTS.

REPLACEMENT PARTS

Insist on genuine factory tested parts, which are readily identified and may be purchased from authorized dealers

Miscellaneous Parts

Stock No.	DESCRIPTION
2923	Knob—Tuning knob and tone control knob (Pkg. of 5)
2924	Knob—Local-Distance switch knob (Pkg. of 5)
2925	Knob—Pickup volume control and control switch knob (Pkg. of 5)
7078	Volume control—60 ohms volume control
2775	Stop—Door stop with mounting screws (Pkg. of 5)
2776	Catch—Door catch and strike with nail (Pkg. of 2)
2922	Hinge—Lid hinge with mounting screws (Pkg. of 2)
2926	Pull—Door pull complete (Pkg. of 3)
2927	Hinge—Door hinge with mounting screws (Pkg. of 2)
7197	Shade — Compartment lamp Shade (Pkg. of 5)
7083	Transformer—Pickup input transformer
7196	Lamp—Compartment lamp (Pkg. of 5)
7198	Switch—Control switch
2563	Resistor—6000 ohms resistor (Used on control switch) (Pkg. of 5)
7199	Support—Lid support R. H. with mounting screws
7200	Support—Lid support L. H. with mounting screws
7201	Cable—Inside cable
7202	Bolt assembly—For mounting mechanism in cabinet (Set of 4)
8584	Escutcheon — Tuning dial escutcheon
8585	Grille
8587	Baffle Board—Complete with grille cloth and pad

Refer to Radiola 82 for receiver and amplifier replacement parts.

AUTOMATIC RECORD CHANGER PARTS.

Stock No.	DESCRIPTION
8644	Capacitor—Motor capacitor—1.25 mfd
8645	Base—Motor base
2901	Springs—Motor base springs complete with 8 screws (Pkg. of 2)
2902	Screw and nut—Motor thrust (Pkg. of 10)
2903	Screw—Motor mounting screw (Pkg. of 10)
7194	Rotor and shaft (60 cycles)
7204	Rotor and shaft (50 cycles)
7195	Spindle and gear—Turntable spindle complete with gear (60 cycles)
7205	Spindle and gear—Turntable spindle complete with gear (50 cycles)
2921	Tip — Turntable spindle tip, spring and pin (Pkg. of 5)
7206	Bearing — Turntable spindle bearing
8648	Motor complete (60 cycles)
8649	Motor complete (50 cycles)
2752	Support—Screen support
2891	Screw—Trip lever set screw (Pkg. of 10)
2892	Lever—Trip lever, complete with set screws
2893	Spring—Trip lever spring (Pkg. of 10)
2894	Pulley—Complete with stud screw (Pkg. of 5)
2895	Cable—Pickup arm operating cable (Pkg. of 5)
2885	Screw — Elevator pad screw (Pkg. of 10)
2886	Pad—Rear elevator pad (Pkg. of 5)
8642	Turntable
2887	Washer — Turntable leather washer (Pkg. of 10)
2912	Roller—Slide roller complete with screw stud (Pkg. of 5)
7189	Lever — Elevator cam lever (Pkg. of 5)
2913	Spring—Four finger lever spring (Pkg. of 10)
2914	Spring—Flat spring complete with two screws (Pkg. of 10)
7190	Lever—Locating lever
2915	Spring—Locating lever spring (Pkg. of 10)
2916	Plate—Latch plate complete with 2 screws (Pkg. of 5)
7191	Cable lever
2917	Washer—Spring washer (Pkg. of 10)
2918	Spring—Index lever (Pkg. of 10)
2919	Screw and nut—Stop screw complete with nut (Pkg. of 10)
7192	Cam and gear
7193	Pawl—Clutch pawl
9314	Plate—Bottom plate
2920	Washer—Friction washer (Pkg. of 10)
2896	Spring — Pickup arm cable spring (Pkg. of 10)
2897	Screw and nut—For pickup arm cable (Pkg. of 5)
2898	Screw and nut—For elevator shaft (Pkg. of 10)
2899	Shaft—Elevator shaft complete with screw and nut
2900	Screw—Magazine lever screw (Pkg. of 10)
2928	Lever—Magazine lever
8641	Magazine — Record magazine complete with washer
2883	Screw and nut—For record transfer lever (Pkg. of 10)
2884	Lever—Record transfer lever complete with screw and nut
2904	Lever—Front elevator shaft actuating lever
2929	Lever — Rear elevator shaft actuating lever (Not illust.) (Pkg. of 2)
8646	Slide
2905	Screw—Gear and bracket mounting screw (Pkg. of 10)
2906	Spring—Check lever spring (Pkg. of 10)
7186	Gear and bracket
7187	Clutch—Complete with set screw
2907	Screw—Clutch set screw (Pkg. of 10)
2908	Spring — Clutch pawl spring (Pkg. of 10)
8647	Lever—Four finger lever
2909	Spring—Four finger lever spring (Pkg. of 10)
2614	Switch—Motor switch complete
2910	Spring — Four finger spring (Pkg. of 10)
7188	Bracket — Slide bracket complete with screws
2911	Screw—For slide bracket (Pkg. of 10)
8643	Arm—Tone arm and base complete with screws and nuts
2825	Block—Pickup connector block and wire (Not illustrated)
2888	Lever — Manually operated lever
7085	Pickup—Magnetic pickup complete, less tone arm
	Switch—Not used
2889	Screw—Bottom plate mounting screw (Pkg. of 10)
9313	Motor board
2890	Pad—Front elevator pad (Pkg. of 5)

MODEL R 70

Seven-Tube A-C, Superheterodyne Receiver

Electrical Specifications

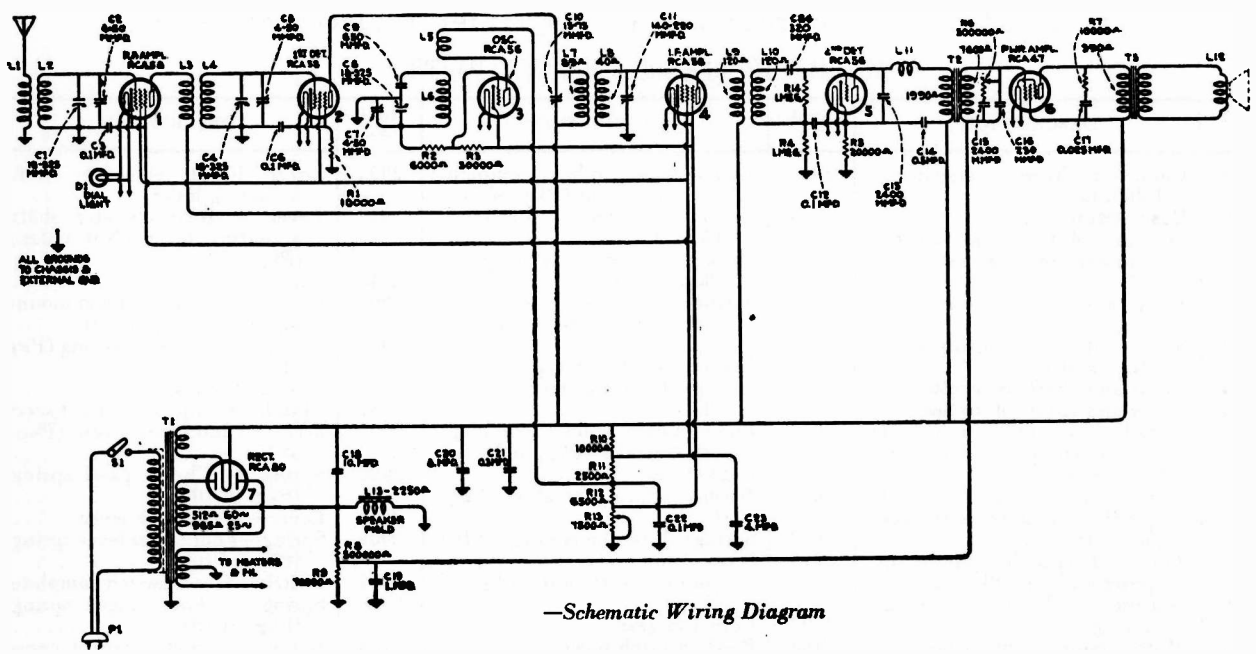
Voltage Rating.....105–125 Volts
Power Consumption.....85 Watts

Radiotrons Required
3 RCA-58, 2 RCA-56, 1 RCA-247, 1 UX-280—Total 7
Undistorted Output.....2.25 Watts
Intermediate Frequency.....175 K. C.
R. F. and Oscillator Line-up Frequency.....1400 K. C. Only

Alignment Procedure

With tuning condenser fully meshed, set dial so that end calibration coincides with pointer.

STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO -	ADJUST THE FOLLOWING FOR MAX. OUTPUT
1	1st Det. Grid in series with .01 mfd	175 kc	Quiet Point	S & P of 1st I-F Trans.
2	Antenna in series with 200 mmfd	1400 kc	140	Osc., Det. and R-F Trimmers on gang condensers

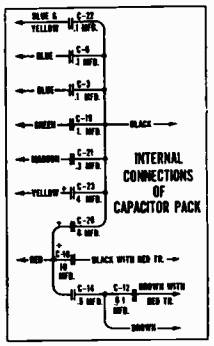


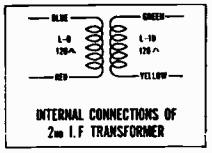
—Schematic Wiring Diagram

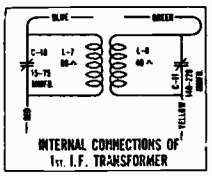
RADIOTRON SOCKET VOLTAGES

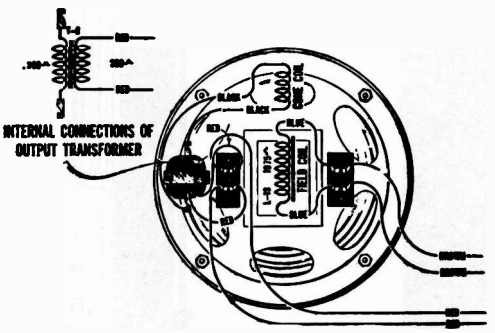
All Voltages Measured at Maximum Volume with No Signal Impressed on Input. 120 Volt 60 Cycle A. C. Source Used

Radiotron No.	Cathode or Filament to Control Grid Volts	Cathode or Filament to Screen Grid Volts	Cathode or Filament to Plate Volts	Plate Current M. A.	Heater or Filament Volts
1. R. F. RCA-58	4.5	100	245	6.0	2.37
2. Oscillator RCA-56	—	—	60	4.5	2.37
3. First Detector RCA-58	13.0	90	235	1.3	2.37
4. I. F. RCA-58	4.5	100	245	6.0	2.37
5. Second Detector RCA-56	18.0	—	230	1.0	2.37
6. Power RCA-247	16.5	250	240	30.0	2.37
7. Rectifier UX-280	370 Volts R. M. S. each plate			70.0	5.0

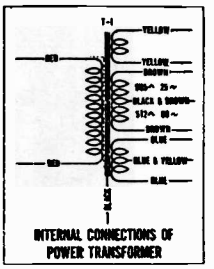


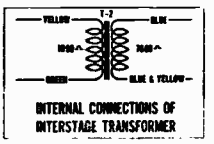






Loudspeaker Wiring





REPLACEMENT PARTS

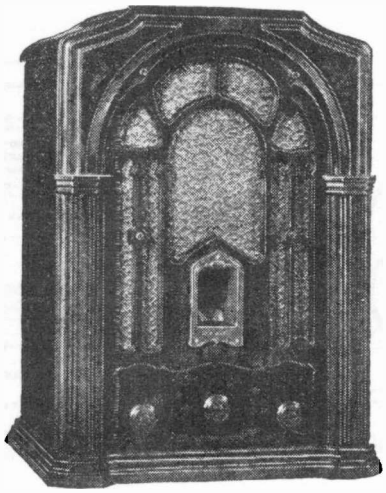
(Replacement parts may be purchased from authorized Distributors or Dealers Only)

Stock No.	DESCRIPTION
	RECEIVER ASSEMBLIES
2532	Capacitor—230 mmfd.—Package of 5
2746	Socket—Dial lamp socket
2747	Cap—Contact cap—Package of 5
2749	Capacitor—2,400 mmfd.
3048	Resistor—500,000 ohms—Carbon type—½ watt—Package of 5
3076	Resistor—1 megohm—Carbon type—½ watt—Package of 5
3077	Resistor—30,000 ohms—Carbon type—½ watt—Package of 5
3078	Resistor—10,000 ohms—Carbon type—½ watt—Package of 5
3461	Coil—Second detector plate choke coil
3462	Resistor—2,500 ohms—Carbon type—1 watt—Package of 5
3463	Resistor—6,500 ohms—Carbon type—1 watt—Package of 5
3464	Resistor—70,000 ohms—Carbon type—½ watt—Package of 5
3469	Resistor—2,500 ohms—Carbon type—1 watt—Package of 5
3470	Resistor—6,500 ohms—Carbon type—1 watt—Package of 5
3471	Capacitor—0.025 mfd.
3472	Capacitor—0.0024 mfd.
3490	Screw assembly—Chassis mounting screw assembly comprising 4 screws, 4 washers and 4 spacers—1 set
3495	Capacitor—320 mmfd.
6142	Resistor—6,000 ohms—Carbon type—½ watt—Package of 5
6192	Spring—3 gang tuning capacitor drive cord tension spring—Package of 10
6288	Knob—Station selector—Volume control or tone control knob—Package of 5
6298	Cord—3 gang variable tuning capacitor drive cord—Package of 5
6300	Socket—4 prong Radiotron socket
6303	Resistor—20,000 ohms—Carbon type—½ watt—Package of 5
6312	Capacitor—650 mmfd.—Oscillator series—Package of 5
6318	Resistor—10,000 ohms—Porcelain type—20 watts
6372	Volume control
6373	Coil—R. F. coil complete
6374	Coil—Detector and oscillator coil

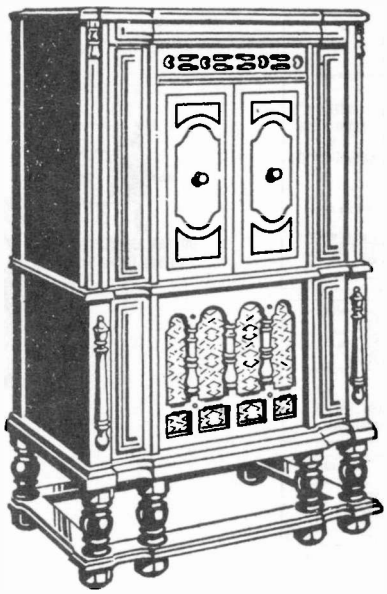
Stock No.	DESCRIPTION
6375	Transformer—Second Intermediate frequency transformer
6376	Transformer—First intermediate transformer
6377	Shaft—Tuning capacitor drive shaft with one flat washer and two "C" washers
7484	Socket—UY type Radiotron socket
7485	Socket—Radiotron 6 contact socket
7501	Capacitor—3 gang variable tuning capacitor complete with mounting screws
7510	Shield—Radiotron tube shield—Maroon finish
7522	Tone control
7557	Scale—Dial and dial scale
7558	Transformer—Interstage audio transformer in metal container
7559	Capacitor pack—Comprising one 0.05 mfd., one 0.5 mfd., one 10.0 mfd., one 8.0 mfd., one 0.3 mfd., one 1.0 mfd. and three 0.1 mfd. capacitors in metal container
7560	Transformer—Power transformer—105–125 volts—50–60 cycles
7570	Transformers—Power transformer—105–125 volts—25–40 cycles
7571	Transformer—200–250 volts—50–60 cycles
	REPRODUCER ASSEMBLIES
3005	Screw assembly—Comprising 4 screws, 8 nuts, 4 washers, and 4 eyelets—Package of 1 set
6184	Board—Terminal board with 3 terminals—Package of 5
6378	Transformer—Output transformer
8920	Ring—Cone retaining ring
8935	Cone—Reproducer cone complete with voice coil—Package of 5
9422	Coil assembly—Comprising field coil, magnet and cone support
	CABINET ASSEMBLIES
6113	Foot—Felt foot—Package of 15
7437	Escutcheon—Tuning selector escutcheon
	PARTS SPECIAL FOR NURSERY MODEL
3492	Knob—Blue knob
3493	Knob—Red knob
3494	Knob—Orange knob
X194	Escutcheon—Station selector escutcheon—Red finish

MODELS R 74, R 76, R77 & RE 81

Ten-Tube, A-C, Superheterodyne Receivers and Radio-Phonograph



RCA Victor R-74

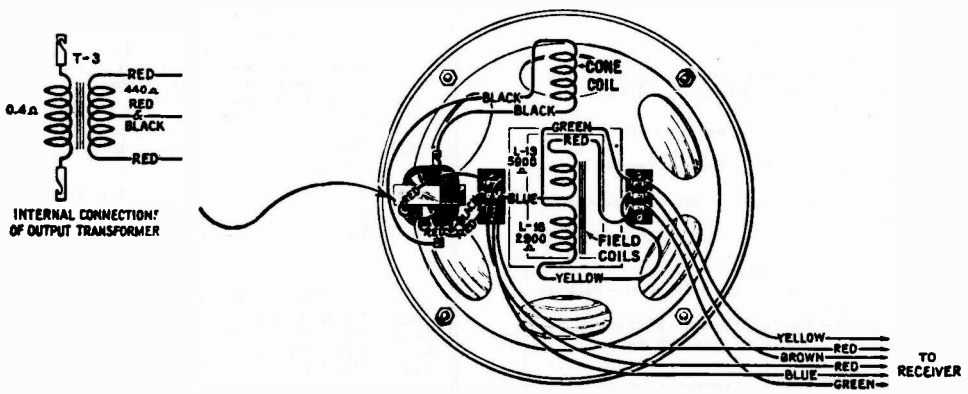


RCA Victor RE-81

The R-74 is a table model, the R-76 an open face console while the R-77 is a door model console. Except for a slight difference in the console model to improve the fidelity, all models are similar and use the same chassis and loudspeaker.

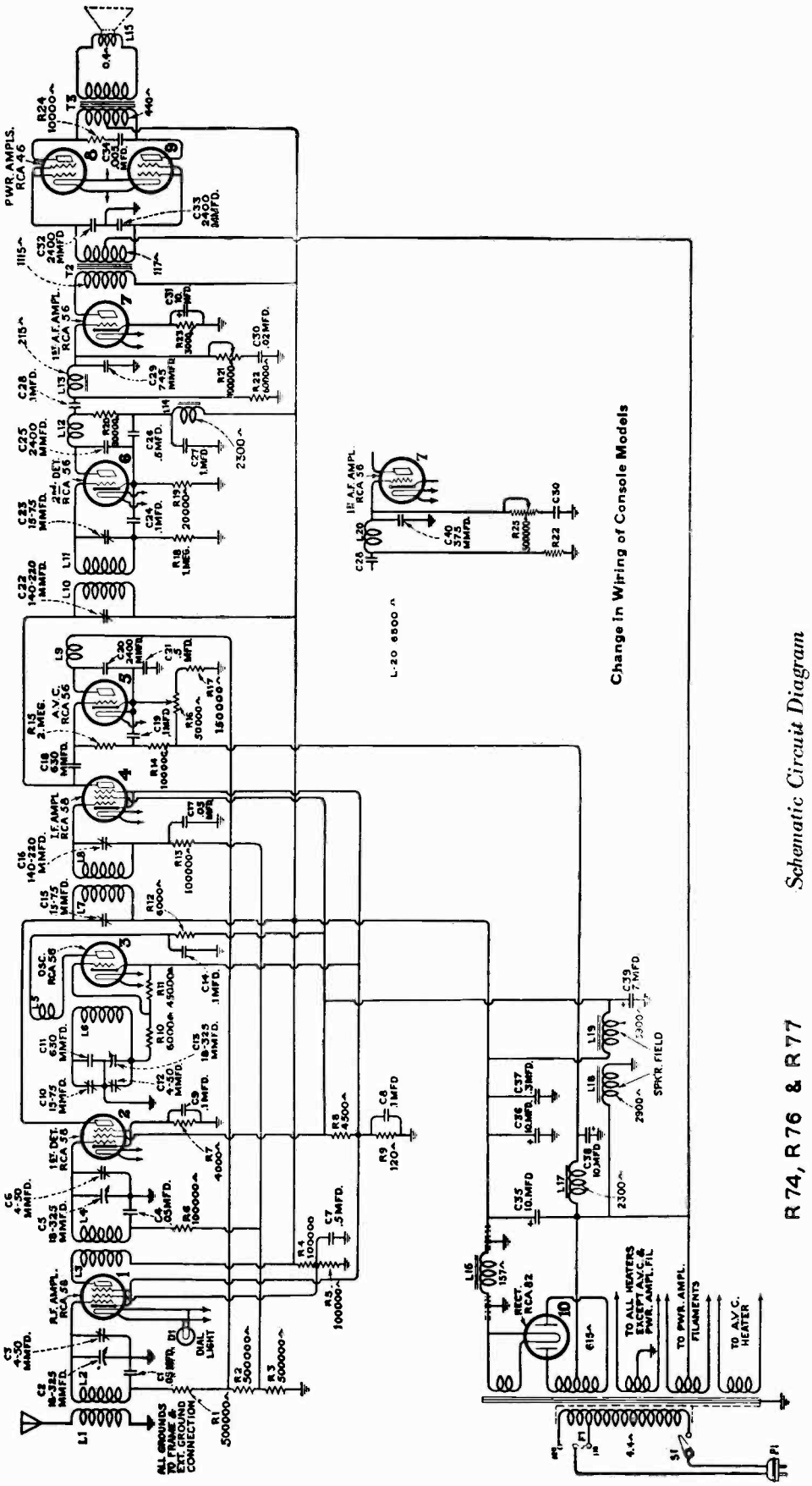
ELECTRICAL SPECIFICATIONS

Voltage Rating	105–125 Volts
Frequency Rating	50–60 Cycles
Power Consumption	100 Watts Maximum
Frequency Rating	**25, 30, 50 and 60 Cycles**
Power Consumption	**25, 135 Watts; 30, 130 Watts; 50, 139 Watts; 60, 135 Watts**
Type and number of Radiotrons	4 RCA-56, 3 RCA-58, 2 RCA-46, 1 RCA-82, Total 10
Undistorted Output	**7.0 Watts**
Type of Microphone	**Carbon Two Button**
Type of Phonograph Motor	**Induction Running at Synchronous Speed**
Diameter of Turntable	**12 Inches**
Turntable Speed	**33⅓ and 78 R. P. M.**
Type of Speed Reducer	**Ball Bearing Giving Very Smooth Operation**
Type of Pickup and Tone Arm	**Low Impedance Pickup with Inertia Type Tone Arm**



-Loudspeaker Wiring

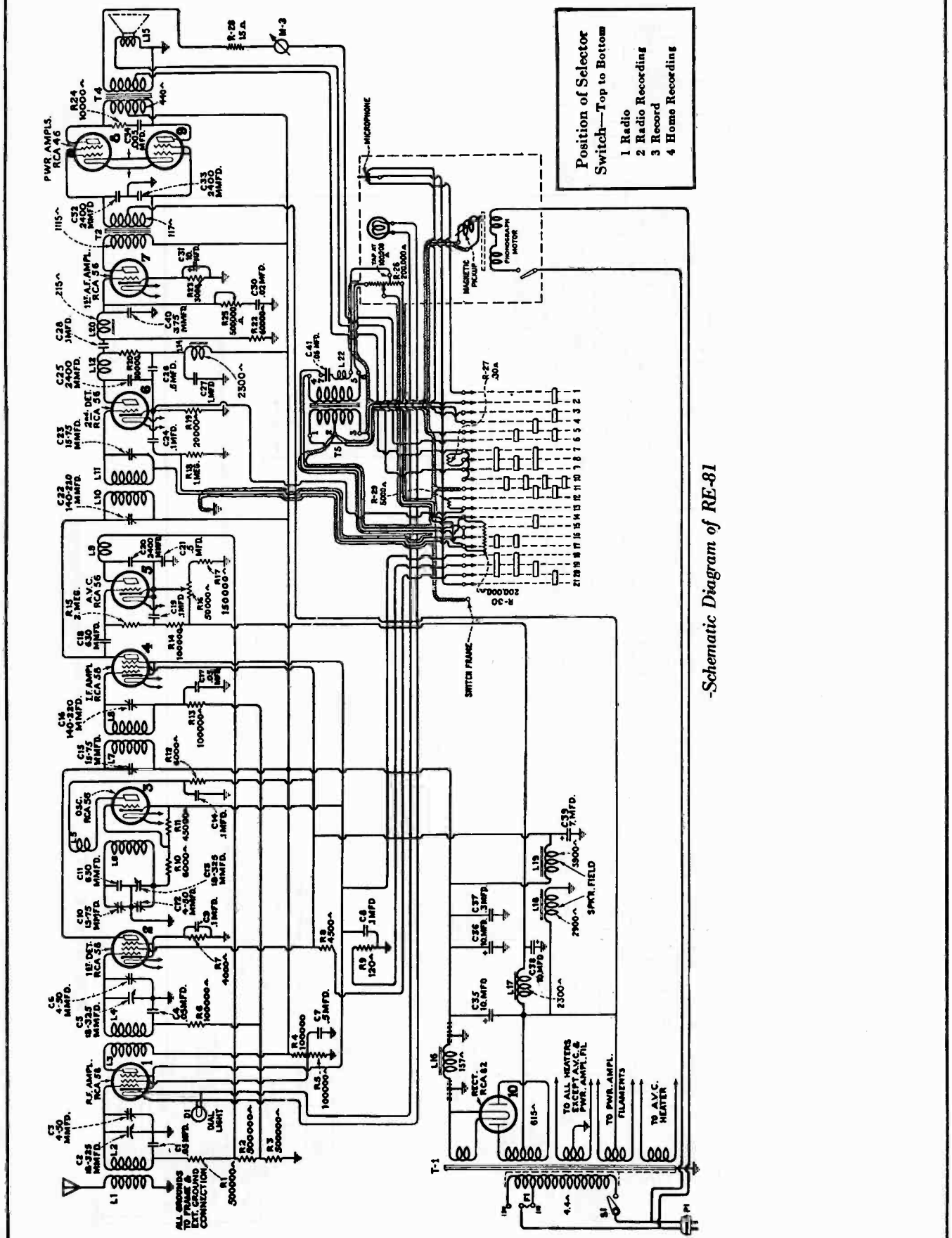
R74, R76, R77 & RE81



Schematic Circuit Diagram

R 74, R 76 & R 77

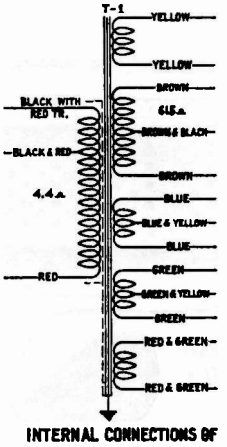
R74, R76, R77 & RE81



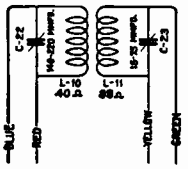
Schematic Diagram of RE-81

Alignment Procedure

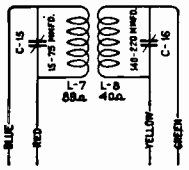
STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO	ADJUST THE FOLLOWING FOR MAX. OUTPUT
1	I-F Grid in series with .01 mfd	175 kc	Quiet Point near 80	S & P of 2nd I-F Trans.
2	1st Det. Grid in series with .01 mfd			S & P of 1st I-F Trans.
3	Antenna in series with 200 mmfd	1400 kc	11	Osc., Det. and R-F Trimmers (1400 kc Trimmers)
4		600 kc	near 80	600 kc Oscillator Trimmer (Rock Gang)
5		*Repeat Step 3*		



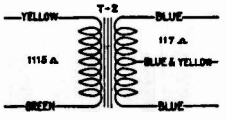
INTERNAL CONNECTIONS OF POWER TRANSFORMER



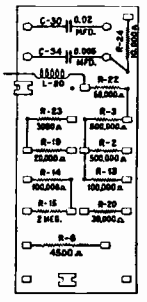
INTERNAL CONNECTIONS OF 2ND I.F. TRANSFORMER



INTERNAL CONNECTIONS OF 1ST I.F. TRANSFORMER



INTERNAL CONNECTIONS OF INTERSTAGE TRANSFORMER

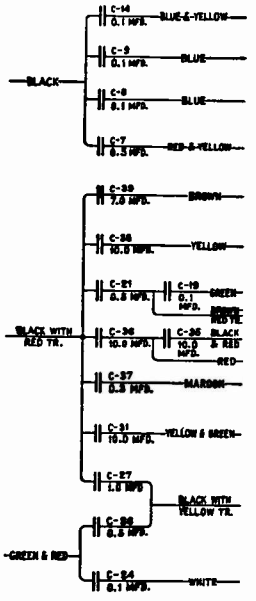

RESISTOR BOARD CONNECTIONS

RADIOTRON SOCKET VOLTAGES

120 Volt A. C. Line

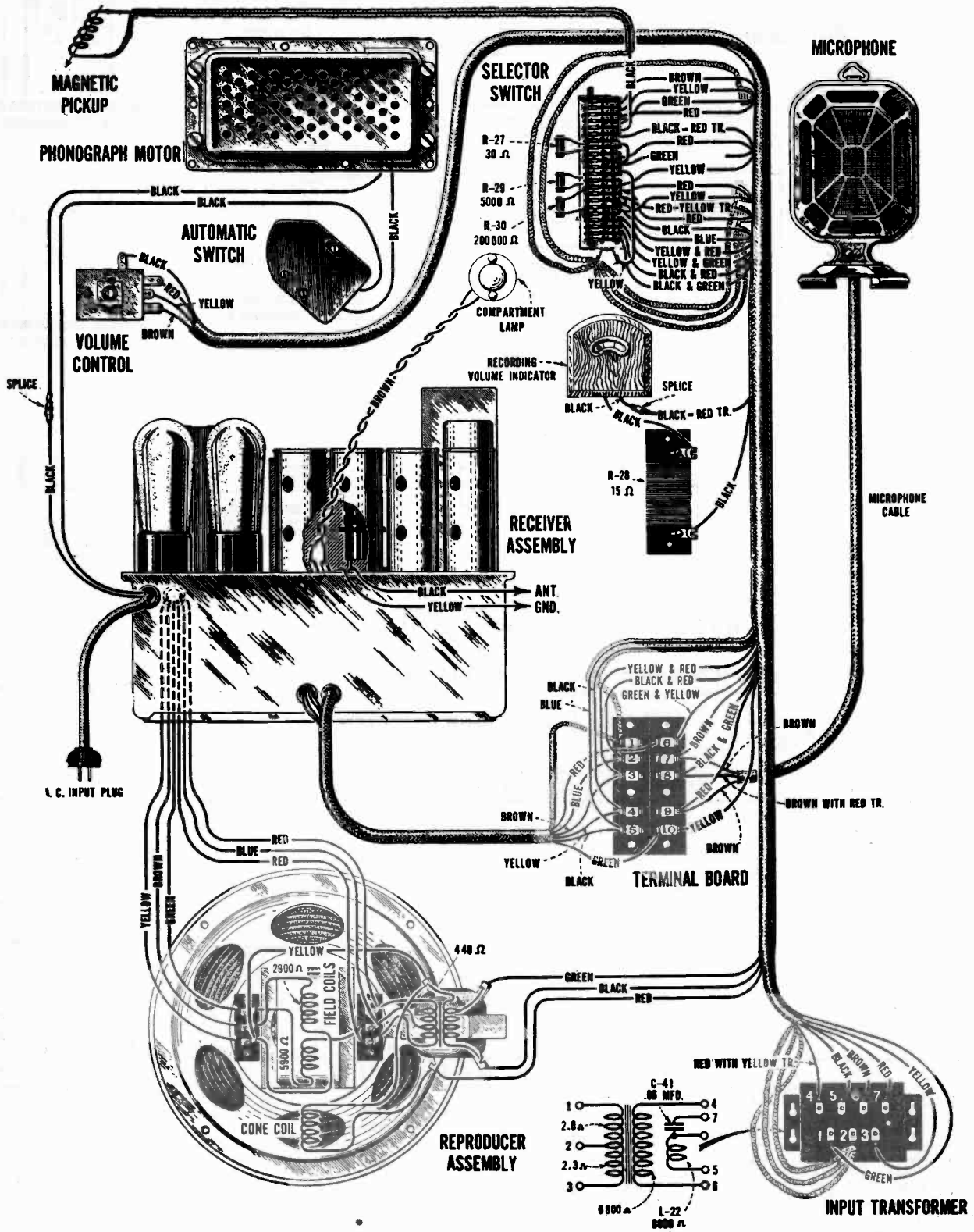
(No Signal Being Received—Antenna Lead Grounded to Chassis)

Radiotron No.	Cathode to Heater Volts, D. C.	Cathode or Filament to Control Grid Volts, D. C.	Cathode or Filament to Screen Grid Volts, D. C.	Cathode or Filament to Plate Volts, D. C.	Plate Current, M. A.
VOLUME CONTROL AT MINIMUM					
1. R. F.	+4	1.0	90	280	0
2. 1st Det.	0	1.2	90	275	0
3. Osc.	+4	0	—	55	5.0
4. I. F.	+3	1.8	90	280	0
5. A. V. C.	0	0	—	5	0
6. 2nd Det.	+15	3.0	—	225	1.0
7. 1st A. F.	+14	10.0	—	260	5.0
8. Power	—	0	—	400	6.0
9. Power	—	0	—	400	6.0
VOLUME CONTROL AT MAXIMUM					
1. R. F.	+4	0	70	250	4.5
2. 1st Det.	+6	0.6	75	235	2.0
3. Osc.	+4	0	—	50	5.0
4. I. F.	+4	1.5	84	250	4.5
5. A. V. C.	0	0	—	15	0
6. 2nd Det.	+15	3.0	—	210	1.0
7. 1st A. F.	+14	10.0	—	240	5.0
8. Power	—	0	—	400	6.0
9. Power	—	0	—	400	6.0



INTERNAL CONNECTIONS OF CAPACITOR PACK

R74, R76, R77 & RE81



Assembly Wiring Diagram of RE-81

R74, R76, R77 & RE81

REPLACEMENT PARTS

Insist on genuine factory tested parts, which are readily identified and may be purchased from authorized dealers

Stock No.	DESCRIPTION
	RECEIVER ASSEMBLIES
2725	Fuse — 1.5 Ampere — Cartridge type fuse—Package of 5
2731	Resistor—10,000 ohms—Carbon type resistor 1 watt—Package of 5
2734	Capacitor — 745 mmfd. capacitor — Package of 5...R 74 ONLY
2746	Socket—Dial lamp socket
2747	Cap—Contact cap—Package of 5
2749	Capacitor—2,400 mmfd. capacitor
3048	Resistor—500,000 ohms—Carbon type —½ watt—Package of 5
3055	Cushion—Sponge rubber chassis cushion support—One set of 4
3056	Shield—Radiotron tube shield—Package of 2
3076	Resistor—1 megohm—Carbon type—½ watt—Package of 5
3077	Resistor—30,000 ohms—Carbon type—½ watt—Package of 5
3099	Capacitor—.005 mfd. capacitor
3252	Resistor—100,000 ohms—Carbon type resistor—½ watt—Package of 5
3358	Resistor—3,000 ohms—Carbon type—½ watt—Package of 5
3359	Resistor—120 ohms—Flexible wire type —Package of 5
3360	Resistor—150,000 ohms—Carbon type —½ watt—Package of 5
3368	Socket—UX type Radiotron socket
3369	Resistor—4,500 ohms—Porcelain type —20 watt
3370	Capacitor—0.02 mfd. capacitor
3372	Cover—Fuse cover
3373	Board—Terminal board—1 terminal and insulator
3374	Reactor—A. V. C. Filter reactor
3375	Reactor—Tone compensating reactor—For R-74 only
3376	Mounting board—Fuse mounting board complete with mounting screws and lockwashers—Less fuse
3377	Coil—Choke coil
3378	Capacitor—375 mmfd. capacitor—For R-76 and R-77—Package of 5
6142	Resistor—6,000 ohms—Carbon type—½ watt—Package of 5
6186	Resistor—500,000 ohms—Carbon type —¼ watt
6188	Resistor—2 megohm—Carbon type—½ watt—Package of 5
6192	Spring—3 gang tuning capacitor drive cord tension spring—Package of 10
6250	Resistor—4,000 ohms—Carbon type—½ watt—Package of 5
6277	Capacitor — 0.1 mfd. capacitor — Located on metal shield
6282	Resistor—60,000 ohms—Carbon type—½ watt—Package of 5
3384	Capacitor—630 mmfd. oscillator series capacitor—Package of 5
6288	Knob—Station selector—Volume control or tone control knob—Package of 5
6298	Cord—3 gang tuning capacitor drive cord—Package of 5
6302	Bracket—Dial lamp bracket and indicator—Package of 2
6303	Resistor—20,000 ohms—Carbon type—½ watt—Package of 5
6308	Coil—R. F. coil complete with mounting bracket
6315	Resistor—45,000 ohms—Carbon type—½ watt—Package of 5
6317	Capacitor—0.05 mfd.—Capacitor

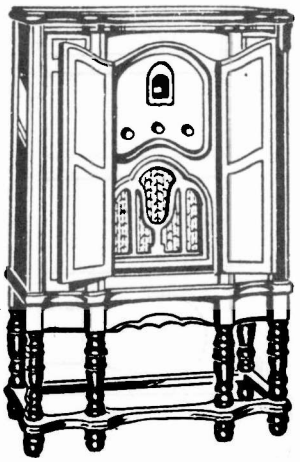
Stock No.	DESCRIPTION
6322	Volume control—Complete with mounting nut
6323	Shaft—Tuning condenser drive shaft with one flat washer and two "C" washers—Package of 2
6324	Tone control—Complete with mounting nut—For R-74 only
7054	Cord—Power cord
7062	Capacitor—Adjustable tuning capacitor —15 to 70 mmfd.
7439	Drum—Dial drum with set screws and 3 dial mounting nuts
7440	Scale—Dial and dial scale
7484	Socket—UY type Radiotron socket—6 used
7485	Socket—6 contact socket—4 used
7487	Shield—Radiotron tube shield—6 used —Plain finish
7488	Shield—Tube shield top—1 used—Plain finish
7501	Capacitor—3 gang variable tuning capacitor complete with mounting screws and washers
7504	Coil—Detector and oscillator coil complete with mounting bracket
7510	Shield—Radiotron tube shield—6 used —Maroon finish
7511	Shield—Radiotron shield top—1 used—Maroon finish
7512	Reactor—Detector plate reactor
7513	Capacitor pack—Comprising five 0.1 mfd., three 0.5 mfd., one 7. mfd., four 10. mfd., one 0.3 mfd., and one 1. mfd. capacitor in metal container
7514	Transformer—1st intermediate frequency transformer
7515	Transformer—2nd intermediate frequency transformer
7516	Board—Resistor board—Less resistors and capacitors
7517	Shield—Metal shield—Located under power transformer and Radiotron RCA-82
7518	Reactor—Filter reactor
7519	Transformer—Audio input transformer
7521	Reactor—Tone compensating reactor—For R-76 and R-77
7522	Tone control—Complete with mounting nut—For R-76 and R-77
8932	Transformer—Power transformer 105–125 volts—50–60 cycles
8933	Transformer—Power transformer—105 –125 volts—25–50 cycles
8934	Transformer—Power transformer—200 –250 volts—50–60 cycles
9034	Transformer—Power transformer step-down—220–110 volts
	REPRODUCER ASSEMBLIES
3005	Screw assembly—Comprising 4 screws, 8 nuts, 4 washers, and 4 eyelets—Package of 1 set—For R-74
3237	Screw Assembly—Comprising 4 screws, 8 nuts, 4 washers, and 4 eyelets—Package of 1 set—For R-76 and R-77
6184	Board—Terminal board with 3 terminals
6325	Transformer—Output transformer
6334	Transformer—Output transformer RE81
8920	Ring—Cone retaining ring
8935	Cone — Reproducer cone complete — Package of 5
9420	Coil assembly—Comprising field coil, cone bracket and magnet

REPLACEMENT PARTS (Continued)

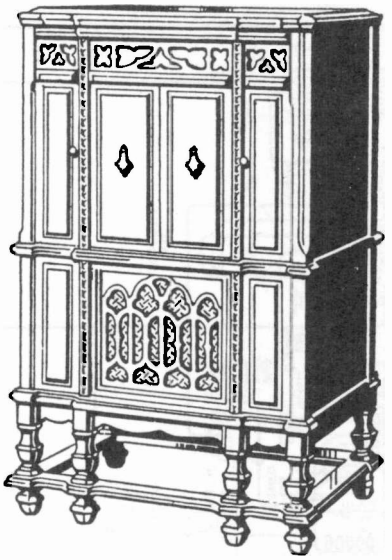
Stock No.	DESCRIPTION
	MOTOR BOARD ASSEMBLIES
2779	Pointer—Selector switch pointer—Package of 10
2947	Leather—Friction leather—Package of 20
3021	Resistor—5,000 ohms—Carbon type—½ watt—Package of 5
3116	Resistor—200,000 ohms—Carbon type ½ watt—Package of 5
3322	Switch—Automatic brake switch with mounting screws
3391	Suspension spring and washer assembly for motor board—Comprising 1 bolt, 1 top spring, 1 bottom spring, 1 "C" washer, 2 cup washers and 1 nut
3392	Spacer—Volume control spacer block
3393	Spacer—Selector control switch spacer block
3394	Socket—Socket and base assembly—Less shade—For compartment lamp
3395	Shade—Compartment lamp shade
3396	Receptacle — Needle receptacle with mounting screws
3400	Resistor—30 ohms—Carbon type—¼ watt—Package of 5
3430	Box—Needle box with lid—Package of 2
6288	Knob—Selector switch or volume control knob—Package of 5
6337	Volume control—Complete with mounting nut
6338	Switch—Selector control switch complete—Less knob
6339	Escutcheon—Selector switch escutcheon
7529	Transformer pack—Comprising phonograph input transformer, reactor and capacitor assembly
7531	Cable—Selector switch, volume control, terminal strip, volume indicator meter phonograph input transformer and reproducer output transformer connecting cable
10174	Springs—Automatic brake springs—One set of 4 springs—Package of 2 sets
10184	Plate—Automatic brake latch trip plate with mounting screws—Package of 5
	PICKUP, PICKUP ARM, MICROPHONE AND VOLUME INDICATOR ASSEMBLIES
3216	Cushion—Microphone rubber cushions—Package of 6
3385	Coil—Pickup coil
3386	Cover—Pickup cover
3387	Screw assembly — Pickup mounting screw assembly comprising one screw, one nut and one washer—Package of 10
3388	Screw—Pickup needle holding screw—Package of 10
3389	Rod—Automatic brake trip rod with lock nut—Package of 5
3390	Escutcheon—Pickup arm escutcheon complete with mounting rivets
3397	Resistor—15 ohm—Flat type—Volume indicator meter series resistor
3417	Armature—Pickup armature
3418	Cushions—Pickup rubber cushions—Comprising one damper and two spacer cushions and one damper bushing—Package of 5 sets
3419	Screw—Pickup cover mounting screw—Package of 10
6335	Pickup—Pickup unit complete
6336	Weight—Home recording weight
6346	Back—Pickup housing back
6460	Housing—Microphone housing
7530	Arm — Pickup arm complete less escutcheon, pickup, pickup mounting screw, nut and washer
7532	Meter—Home recording volume indicator meter
7533	Mechanism — Microphone mechanism less housing
7534	Cord—Microphone cord
	TURNTABLE ASSEMBLIES
3338	Ring—Clamp ring assembly—Comprising spring, latch lever and stud
3340	Washer—Thrust washer—Package of 2
3341	Pin—Groove-Pin—Package of 2
3342	Spring — Latch spring — Located on clamping ring—Package of 2
3343	Sleeve—Sleeve complete with ball race
3344	Cover—Grease retainer cover—Package of 2
3346	Bushing—Speed shifter lever bushing—Package of 4
3347	Spring—Speed shifter lever spring—Package of 2
3399	Lever—Speed shifter lever with mounting screws
7084	Cover—Suede cover for turntable
8948	Turntable—Complete
	MOTOR ASSEMBLIES
3261	Bushing—Rubber bushing used on turntable spindle for long-playing Records—Package of 5
3398	Motor mounting washer assembly—Comprising 2 cup washers, 4 springs and 1 "C" washer—Package of 1 set
8939	Motor—Motor complete 105–125 volts—60 cycle
8940	Motor—Motor complete 105–125 volts—50 cycle
8941	Motor—Motor complete 105–125 volts—25 cycle
8942	Rotor and shaft for 105–125 volts, 60 cycle motor
8943	Rotor and shaft for 105–125 volts, 50 cycle motor
8944	Rotor and shaft for 105–125 volts, 25 cycle motor
8945	Spindle—Turntable spindle with fibre gear for 60 cycle motor
8946	Spindle—Turntable spindle with fibre gear for 50 cycle motor
8947	Spindle—Turntable spindle with fibre gear for 25 cycle motor
	CABINET ASSEMBLIES—R-77 (Prices furnished upon request)
2776	Catch—Door catch and strike with nail—Package of 2 sets
6294	Hinge—Door hinges—1 set of 4 hinges with mounting screws

MODELS R78 & RAE84

Twelve-Tube, AC, Superheterodyne Receivers and Radio-Phonograph



MODEL R78



MODEL RAE 84

ELECTRICAL SPECIFICATIONS

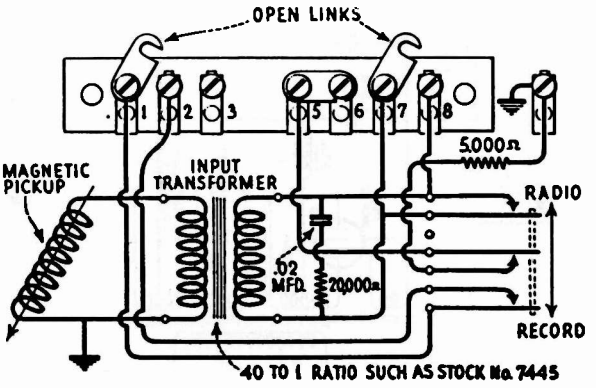
Voltage Rating.....105–125 Volts
Frequency Rating.....50–60 Cycles
Power Consumption –R 78 –.....110 Watts Average
(The input wattage may vary from 70 to 130 watts depending on the output volume being used)
Power Consumption –RAE 84 –.....130 Watts Average
(The input wattage may vary from 90 to 150 watts, depending on the output volume being used)

R 78 WITHOUT NOISE SUPPRESSION

Type of Circuit..Super-Heterodyne with A.V.C., Compensated A.F. system and Class "B" output stage
Type and number of Radiotrons.....4 RCA-58, 5 RCA-56, 2 RCA-46, and 1 RCA-82, Total 12

R78 & RAE 84 WITH NOISE SUPPRESSION

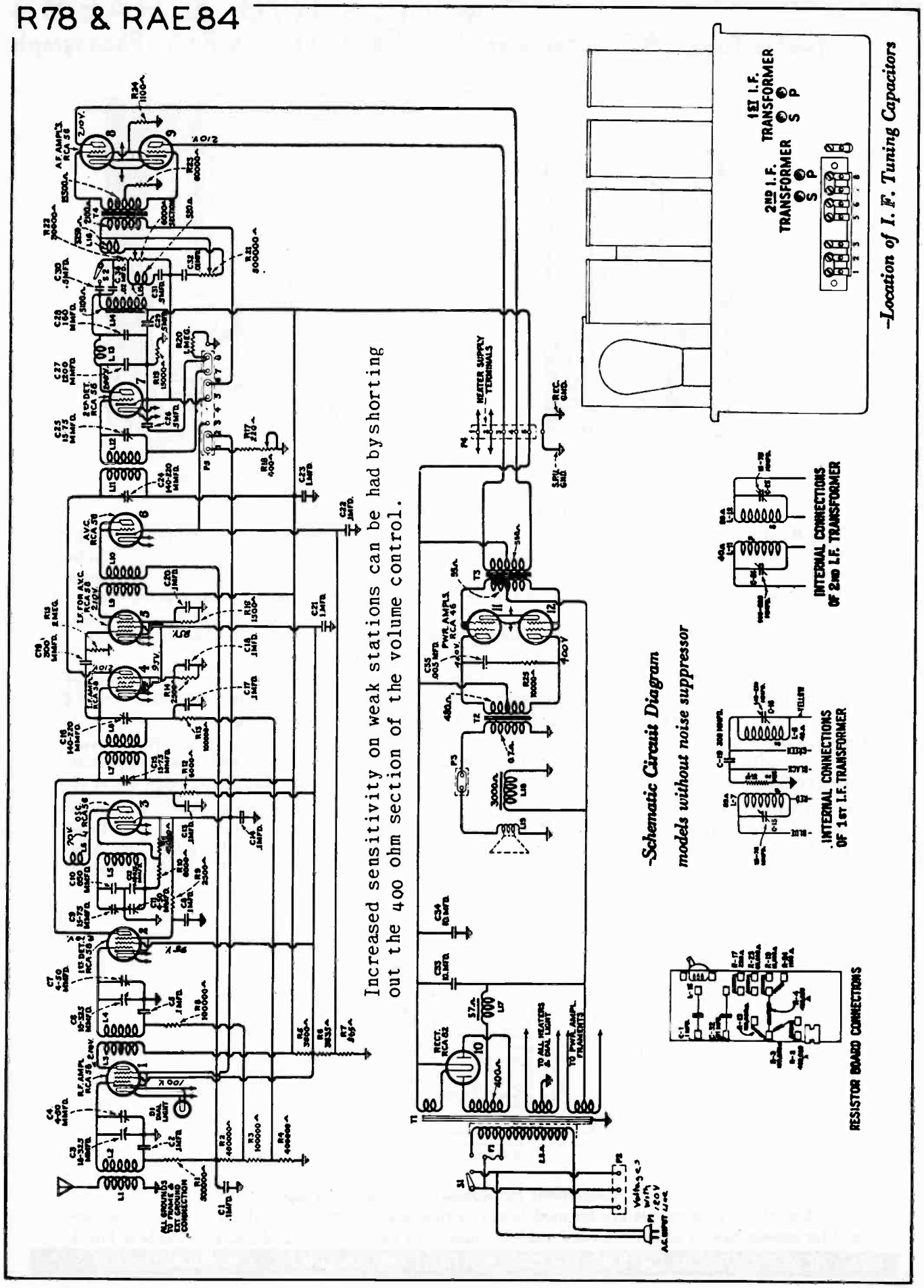
Type of Circuit.....Super-Heterodyne with A. V. C., Compensated A. F. System, Class "B" Output Stage and Noise Suppressor
Type and Number of Radiotrons..1 RCA-55, 4 RCA-58, 4 RCA-56, 2 RCA-46, 1 RCA-82—Total 12
Undistorted Output.....Approximately 20 Watts Maximum
Type of Record Changer.....Perfected RCA Victor Ten 10-Inch Record Continuous Type
Type of Pickup and Tone Arm.....Low Impedance Pickup with Inertia Tone Arm
Type of Microphone.....Two Button Carbon



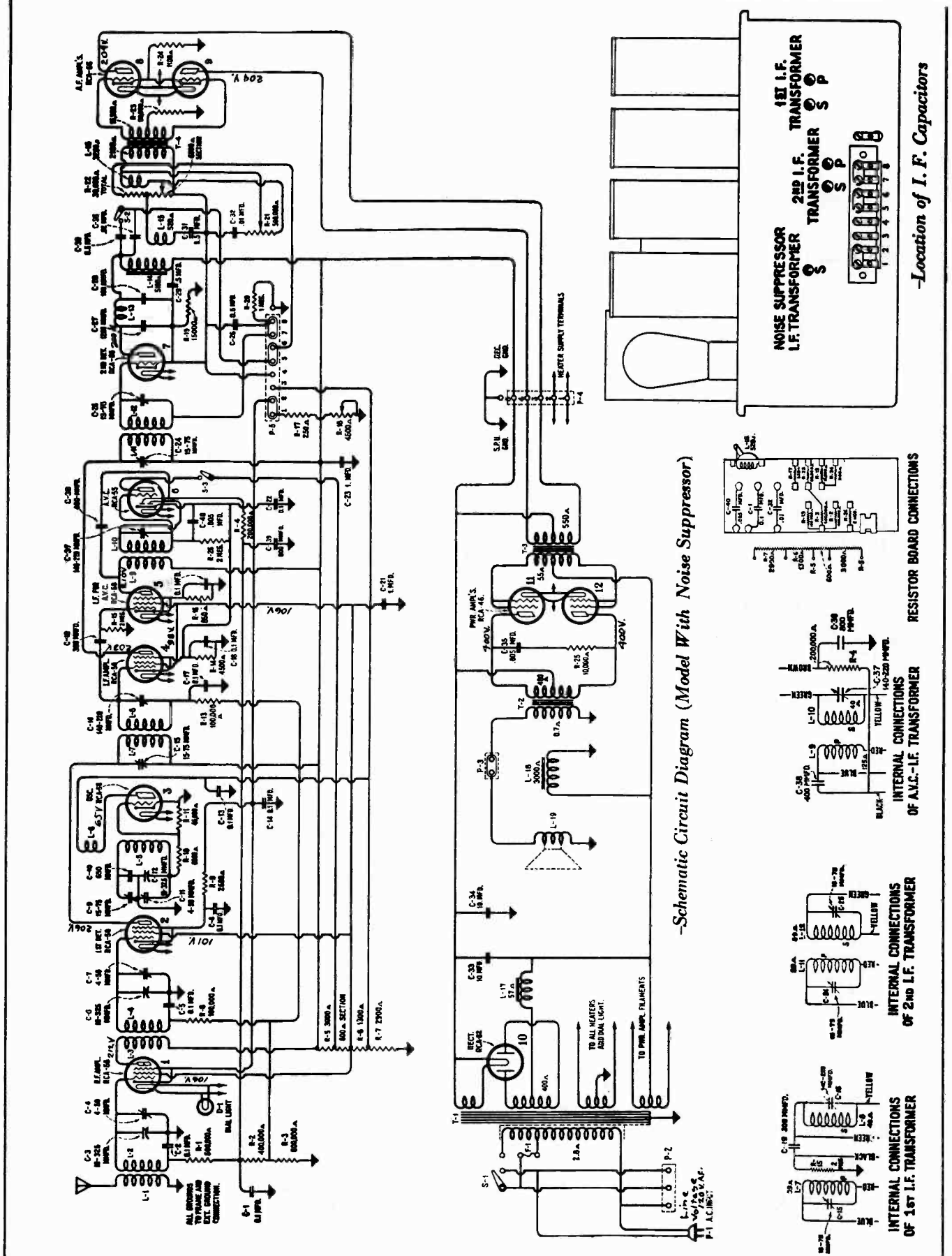
-Connections for Attaching Magnetic Pickup

Note: The above connections are for models not having noise suppressor. Identical connections are used for models having noise suppressor, except connections shown to terminal No. 5 are made to No. 4.

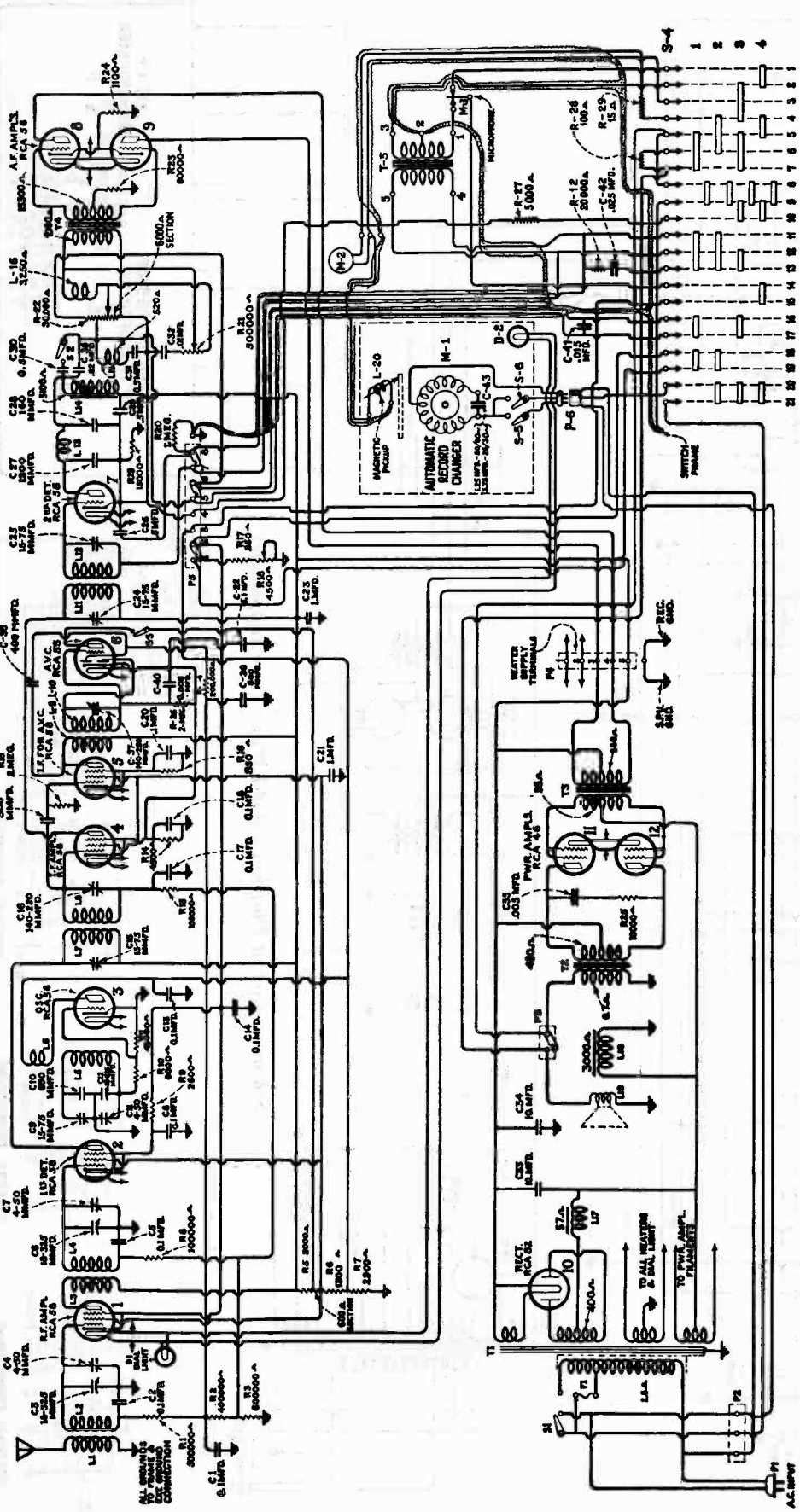
R78 & RAE84


Increased sensitivity on weak stations can be had by shorting out the 400 ohm section of the volume control.
-Schematic Circuit Diagram
models without noise suppressor
-Location of I. F. Tuning Capacitors
1ST I.F. TRANSFORMER
2ND I.F. TRANSFORMER
INTERNAL CONNECTIONS OF 2ND I.F. TRANSFORMER
INTERNAL CONNECTIONS OF 1ST I.F. TRANSFORMER
RESISTOR BOARD CONNECTIONS
HEATER SUPPLY TERMINALS
REC. GND.
SPK. GND.
TO ALL HEATERS & DIAL LIGHT
TO PWR. AMPL. FILAMENTS
RECT. RCA 82
PWR. AMPS. RCA 46
A.F. AMPS. RCA 38
2ND DET. RCA 36
AVC RCA 38
1ST DET. RCA 36
R.F. AMPS. RCA 38
OSC. RCA 36
DIAL LIGHT
ALL GROUNDS TO BE MADE AT THIS GROUND CONNECTION

R78 & RAE 84


NOISE SUPPRESSOR
I.F. TRANSFORMER
2ND I.F. TRANSFORMER
1ST I.F. TRANSFORMER
S
P
1 2 3 4 5 6 7 8
-Location of I. F. Capacitors
-Schematic Circuit Diagram (Model With Noise Suppressor)
INTERNAL CONNECTIONS OF 1ST I.F. TRANSFORMER
INTERNAL CONNECTIONS OF 2ND I.F. TRANSFORMER
INTERNAL CONNECTIONS OF A.V.C.-I.F. TRANSFORMER
RESISTOR BOARD CONNECTIONS

R78 & RAE84



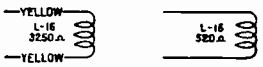
-Schematic Wiring Diagram of RAE-84

REFER TO INDEX FOR RECORD CHANGER ADJUSTMENTS

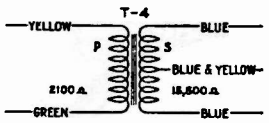
R78 & RAE 84

It is very important that a good ground always be connected to the yellow lead of the Receiver Chassis. Unless this is done excessive hum and noise will be obtained, even at low volume, from the RCA-82. Also lack of a good twist in the volume control leads will cause an undue amount of hum due to the pickup by the tone control reactor.

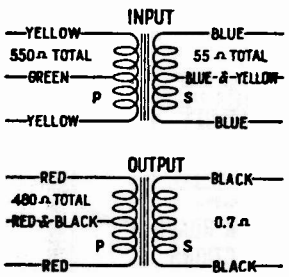
If an excessive amount of noise is still encountered it is evident that a good ground cannot be obtained. Under such conditions, connecting two .05 (1400 volt) capacitors from each RCA-82 plate to the filament connection that is also + B will remedy this condition.



Tone reactors.

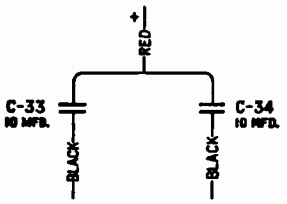


INTERNAL CONNECTIONS OF INTERSTAGE TRANSFORMER

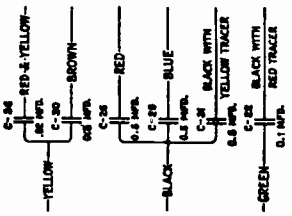


INTERNAL CONNECTIONS OF AUDIO TRANSFORMERS

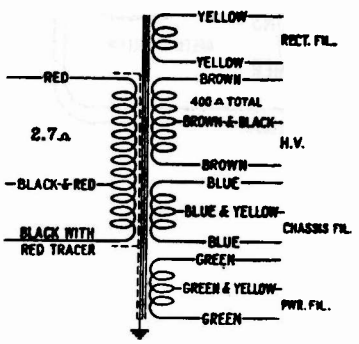
INTERNAL CONNECTIONS OF BY-PASS CAPACITOR



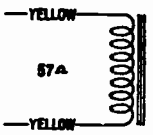
INTERNAL CONNECTIONS OF CAPACITOR PACK



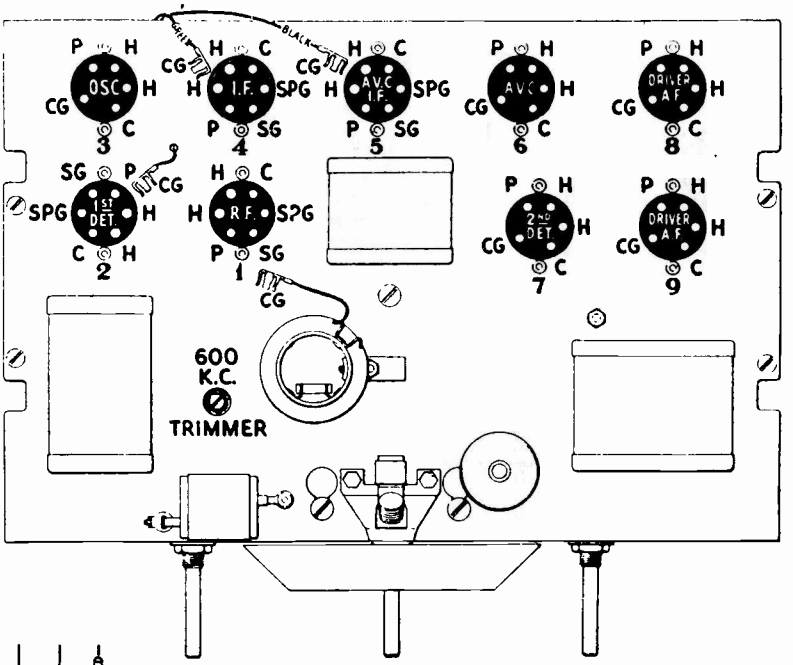
INTERNAL CONNECTIONS OF BY-PASS CAPACITOR



INTERNAL CONNECTIONS OF POWER TRANSFORMER



INTERNAL CONNECTIONS OF REACTOR



-Radiotron Socket Layout

R78 WITHOUT NOISE SUPPRESSOR

Alignment Procedure

With tuning condenser fully meshed set dial so that short line at low frequency end of dial scale coincides with pointer.

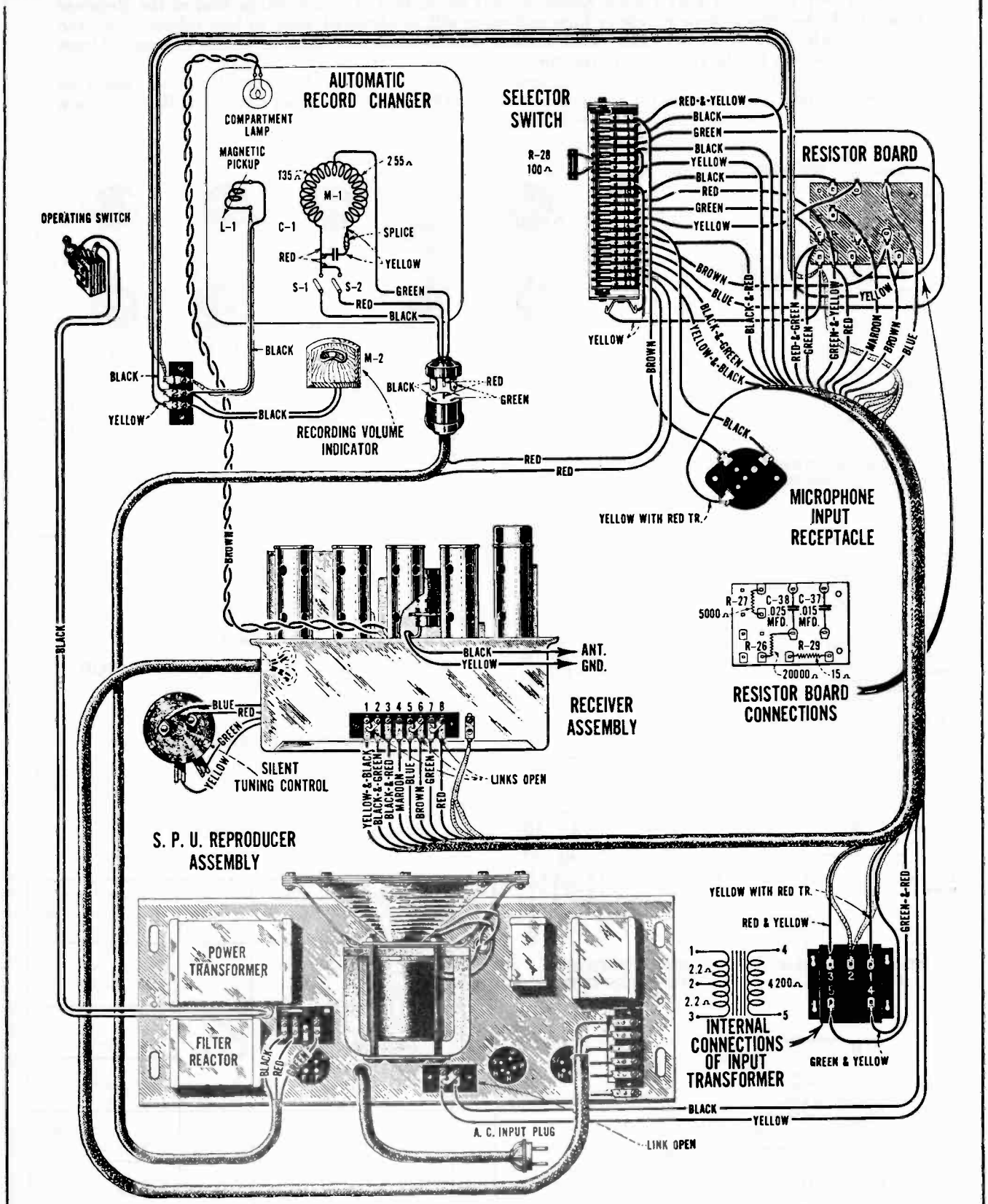
Turn noise suppressor control extreme counter clockwise.

STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO	ADJUST THE FOLLOWING FOR MAX. OUTPUT
1	I-F Grid in series with 0.01 mfd	175 Kc	Quiet point near 600 Kc	S&P of 2nd I-F Trans.
2	1st Det. Grid in series with 0.01mfd			S&P of 1st I-F Trans.
3				S† of AVC I-F Trans.
4	Antenna in series with 200 mmfd	1400 Kc	1400 Kc	Osc., Det., & R-F Trimmers
5		600 Kc	600 Kc	600 Kc Osc. Trimmers Rock Gang
6		*Repeat Step 4*		

† *Turn noise suppressor control clockwise until switch closes.*

Step 3 omitted on models without noise suppressor.

R78 & RAE 84



-Assembly Wiring Diagram of RAE-84

REPLACEMENT PARTS

Stock No.	DESCRIPTION
	RECEIVER ASSEMBLIES
2723	Switch—Fidelity switch—Package of 5
2746	Socket—Dial lamp socket
2747	Contact cap—Package of 5
3047	Resistor—1,500 ohms—Carbon type—½ watt—Package of 5
3055	Cushion—Sponge rubber chassis support cushions—One set of 4
3076	Resistor—1 megohm—Carbon type—½ watt—Package of 5
6142	Resistor—6,000 ohms—Carbon type—½ watt—Package of 5
6189	Bracket—Dial lamp bracket and indicator—Package of 2
6192	Spring—3 gang tuning capacitor drive cord tension spring—Package of 10
6251	Capacitor—1200 mmfd.—Package of 5
6275	Volume control—Complete with mounting nut
6276	Tone control—Complete with mounting nut and washer
6277	Capacitor—0.1 mfd. capacitor—Located on resistor board
6279	Resistor—15,000 ohms—Carbon type—½ watt—Package of 5
6280	Resistor—400,000 ohms—Carbon type—½ watt—Package of 5
6281	Resistor—1,100 ohms—Carbon type—½ watt—Package of 5
6282	Resistor—60,000 ohms—Carbon type—½ watt—Package of 5
6283	Resistor—Voltage divider resistor
6284	Reactor—Tone control reactor
6285	Choke coil—2nd detector plate choke coil
6286	Capacitor—0.1 mfd. capacitor
6288	Knob—Station selector—Tone control or volume control knob—Package of 5
6298	Cord—3 gang tuning capacitor drive cord—Package of 5
6308	Coil—R.F. coil complete with mounting bracket
6312	Capacitor—650 mmfd.—Oscillator series—Package of 5
6313	Resistor—220 ohms—Carbon type—½ watt—Package of 5
6314	Capacitor—160 mmfd.—Package of 5
6315	Resistor—45,000 ohms—Carbon type—½ watt—Package of 5
6316	Resistor—2,500 ohms—Carbon type—½ watt—Package of 5
6323	Shaft—Tuning condenser drive shaft with one flat washer and two "C" washers—Package of 2
7062	Capacitor—Adjustable trimming capacitor—15 to 70 mmfd.
7065	Screwdriver—Non-metallic screwdriver for oscillator and I.F. adjustments
7298	Capacitor—0.01 mfd. capacitor—Located on resistor board
7438	Capacitor—3 gang variable tuning capacitor complete with mounting screws and washers
7439	Drum—Dial drum with set screws and 3 dial mounting nuts
7440	Scale—Dial and dial scale
7477	Capacitor pack—Comprising two 1. mfd. and five 0.1 mfd. capacitors in metal container
7478	Capacitor pack—Comprising four 0.5 mfd., one .02 mfd., and one 0.1 mfd. capacitors in metal container
7479	Transformer—Interstage audio transformer in metal container
7480	Transformer—1st intermediate frequency transformer
7481	Coil—Detector and oscillator coil complete with mounting bracket
7483	Reactor—Volume control compensating reactor
7484	Socket—UY type Radiotron socket—5 used
7485	Socket—Radiotron 6 contact socket—4 used
7486	Board—Phonograph terminal board—8 terminals and 3 links
7487	Shield—Radiotron tube shield—7 used—Plain finish
7488	Shield—Tube shield top—1 used—Plain finish
7490	Board—Resistor board—Less resistors and capacitors
7492	Transformer—3rd intermediate transformer
7498	Reactor—Coupling reactor
7499	Transformer—2nd intermediate transformer
7500	Cable—6 conductor—From receiver to S.P.U.

Stock No.	DESCRIPTION
	SPECIAL PARTS FOR MODELS WITH NOISE SUPPRESSOR
3252	Resistor—100,000 ohms—Carbon type—½ watt—Package of 5
3435	Resistor—250 ohms—Carbon type—½ watt—Package of 5
3437	Knob—Noise suppressor rheostat knob
3439	Resistor—600,000 ohms—Carbon type—1 watt—Package of 5
3440	Resistor—4,500 ohms—Carbon type—½ watt—Package of 5
3441	Resistor—850 ohms—Carbon type—½ watt—Package of 5
6142	Resistor—6,000 ohms—Carbon type—½ watt—Package of 5
6188	Resistor—2 megohm—Carbon type—½ watt—Package of 5
6351	Resistor—Voltage divider resistor
6352	Transformer—Third intermediate transformer
6353	Transformer—Second intermediate transformer
6354	Rheostat—Noise suppressor rheostat
6355	Volume control—Complete with mounting nut
6356	Capacitor—0.1 mfd. capacitor—Located on resistor board
7504	Coil—Detector and oscillator coil complete with mounting bracket
7505	Shield—Tube shield top—1 used—Maroon
7506	Shield—Radiotron tube shield—7 used—Maroon
	AMPLIFIER ASSEMBLIES
2725	Fuse—1.5 ampere—Cartridge type fuse—Package of 5
2731	Resistor—10,000 ohms—1 watt—Carbon type resistor—Package of 5
2757	Strip—Terminal strip—2 terminals
3032	Socket—UX type Radiotron socket with insulator
3056	Shield—Radiotron tube shield—Package of 2
3099	Capacitor—.005 mfd. capacitor
3147	Cover—Fuse cover with bushing and insulator
6289	Strip—Terminal strip—5 terminals
6290	Board—Terminal board complete with terminals, fuse clips, and insulator
6291	Board—Terminal board complete with terminals and insulator—Less capacitor
6292	Switch—Operating switch
7054	Cord—Power cord
7370	Cover—Terminal strip cover with insulator—5 terminals
7491	Socket—UY type Radiotron socket with insulator
8910	Capacitor pack—Comprising two 10 mfd. capacitors in metal container
8911	Reactor—Filter reactor
8912	Transformer—Audio transformer pack comprising input and output transformers in metal container
8913	Transformer—Power transformer—105-125 volts, 50-60 cycles
8914	Transformer—Power transformer—105-125 volts, 25-50 cycles
8915	Transformer—Power transformer—200-250 volts, 50-60 cycles
10907	Fuse—3 ampere fuse (for 25 cycle use)—Package of 5
7578	Capacitor - 0.05 mfd - Buffer capacitor.
	AUTOMATIC RECORD CHANGING MECHANISM ASSEMBLIES
2893	Spring—Eccentric and spiral trip lever tension spring—Package of 10
2894	Pulley—Cable pulley complete with mounting stud—Mounted horizontally—Package of 5
2896	Spring—Cable lever adjustment spring—One end fastened to adjustment stud—Package of 10
2898	Screw and nut—Elevator shaft adjustment—Package of 10
2904	Lever—Front elevator actuating lever
2905	Screw—Gear and bracket mounting screw—Package of 10
2906	Spring—Check lever spring—Package of 10
2907	Screw—Gear and ratchet set screw—Package of 10
2909	Spring—Four finger lever spring—$\frac{11}{16}$" long—Package of 10
2910	Spring—Four finger extension lever tension spring—$1\frac{1}{16}$" long—Package of 10
2911	Screw—Slide bracket mounting screw—Package of 10
2912	Roller—Slide roller complete with screw and stud—Package of 5
2913	Spring—Cable lever tension spring—Package of 10
2914	Spring—Flat spring and screw for locating lever—Package of 10

R78 & RAE 84 REPLACEMENT PARTS—(Continued)

Insist on genuine factory tested parts, which are readily identified and may be purchased from authorized dealers

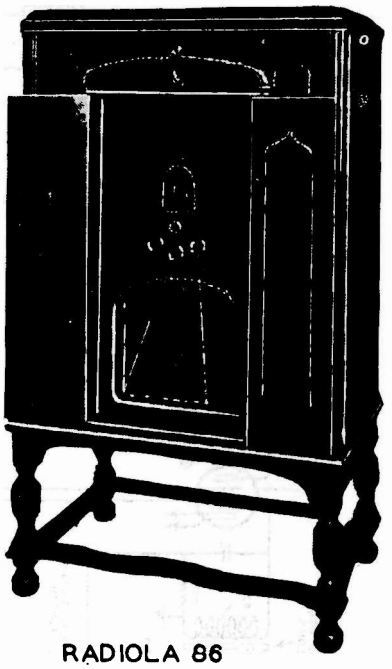
Stock No.	DESCRIPTION	List
2916	Plate—Four finger lever and motor switch latch plate with mounting screws—Package of 5	
2917	Washer—Spring "C" washer for locating cable, four finger levers and manual index levers—Package of 10	
2918	Spring—Locating and extension lever tension spring—Package of 10	
2919	Screw and nut—Locating lever stop screw with nut—Package of 10	
2920	Washer—Friction washer for slide and elevator actuating lever—Package of 10	
2929	Lever—Rear elevator actuating lever—Package of 2	
3200	Shaft—Front or rear elevator shaft	
3214	Pulley—Cable pulley with mounting stud—Mounted vertically—Package of 5	
3217	Lever—Check lever	
3322	Switch—Motor switch complete	
3401	Spring—Automatic trip lever tension spring—Package of 10	
3402	Screw—Elevator pad screw—Package of 10	
3403	Spring—Clutch pawl spring—Package of 10	
3404	Spring—Brake lever tension spring—Located on motor starting switch plate—Package of 10	
3508	Stud assembly—Four finger lever mounting stud, washer and nut assembly	
6340	Lever—Automatic trip lever	
6341	Lever—Manual index lever	
6342	Pawl—Clutch pawl complete	
6343	Gear—Gear and ratchet with set screw	
6344	Lever—Eccentric and spiral trip lever complete—For manual position	
7186	Gear—Gear and bracket	
7188	Bracket—Slide bracket with roller	
7189	Lever—Front and rear elevator cam lever—Package of 5	
7190	Lever—Locating lever	
7191	Lever—Cable lever	
7192	Cam—Cam gear and cam	
7321	Lever—Tone arm cable guide lever with pulley	
7363	Pad—Front elevator rubber pad—Package of 10	
8646	Slide	
8647	Lever—Four finger lever	
	MOTOR BOARD ASSEMBLIES	
2779	Pointer—Selector switch pointer—Package of 10	
3262	Screw and nut—Record transfer lever adjusting screw and nut—Package of 10	
3394	Socket and base assembly—For compartment lamp	
3395	Shade—Compartment lamp shade	
3405	Spring—Record transfer lever spring—Package of 10	
3406	Escutcheon—Engraved "AUTOMATIC"	
3407	Escutcheon—Engraved "MANUAL"	
3408	Escutcheon—Engraved "33—78½"	
3409	Post—Roller post assembly for supporting record magazine	
3410	Suspension spring and washer for motor board—Comprising 1 bolt, 1 top spring, 1 bottom spring, 2 cup washers, 1 "C" washer and 1 nut	
3431	Escutcheon—Selector switch escutcheon	
6288	Knob—Selector control switch knob—Package of 5	
6345	Lever—Record transfer lever assembly complete	
7535	Switch—Selector control switch complete, less knob and escutcheon	
	TURNTABLE ASSEMBLIES	
3261	Bushing—Rubber bushing for turntable spindle—Long-playing records—Package of 5	
3338	Ring—Clamp ring assembly—Comprising spring, latch lever and stud	
3340	Washer—Thrust washer—Package of 2	
3341	Pin—Groov-Pin—Package of 2	
3411	Sleeve—Sleeve assembly complete with ball race	
3570	Cap—Spindle nose cap and spring	
8950	Turntable—Turntable complete	
	MAGAZINE ASSEMBLIES	
2900	Screw—Magazine lever set screw—Package of 10	
3210	Lever—Magazine lever	
6172	Washer—Metal washer located under record magazine—Package of 20	
8951	Magazine—Record magazine	
	PICKUP, ARM, MICROPHONE AND VOLUME INDICATOR ASSEMBLIES	
3183	Socket—Microphone socket—Package of 5	
3204	Cable—Pickup arm cable—Package of 5	
3215	Plug—Microphone cord plug	
3216	Cushion—Microphone rubber cushion—Package of 6	
3385	Coil—Pickup coil	
3386	Cover—Pickup cover	
3387	Screw assembly—Pickup mounting screw assembly, comprising one screw, one nut and one washer—Package of 10	
3388	Screw—Pickup needle holding screw	
3389	Rod—Automatic brake trip rod with lock nut—Package of 5	
3390	Escutcheon—Pickup arm escutcheon complete with mounting rivets	
3412	Board—Volume indicator meter and pickup terminal board	
3417	Armature—Pickup armature	
3418	Cushions—Pickup rubber cushions—Comprising one damper, two spacer cushions and 1 damper bushing—Package of 5 sets	
3419	Screw—Pickup cover mounting screw—Package of 10	
6335	Pickup—Pickup unit complete	
6336	Weight—Home recording weight	
6346	Back—Pickup housing back	
7532	Meter—Home recording volume indicator meter	
7533	Mechanism—Microphone mechanism—Less housing	
7534	Cord—Microphone cord	
7538	Arm—Pickup arm complete less escutcheon, pickup, pickup mounting screw and washer	
	MOTOR ASSEMBLIES	
3398	Motor mounting washer assembly—Comprising 2 cup washers, 4 springs and 1 "C" washer—One set	
6389	Capacitor—2.0 mfd. for motor No. 56933-G1	
6410	Capacitor—2.5 mfd.—For motor No. 56933-G2	
7330	Capacitor—Motor capacitor—3.75 mfd.—For 25 cycle operation	
8644	Capacitor—Motor capacitor—1.25 mfd.—For 60 cycle motor 57085-2	
8952	Motor—Motor complete—105–125 volts—60 cycles	
8953	Motor—Motor complete—105–125 volts—25 cycles	
8954	Motor—Motor complete—105–125 volts—50 cycles	
8955	Rotor and shaft for 60 cycle motor No. 57085-G 2	
8956	Rotor and shaft for 50 cycle motor No. 56212-G 2	
8957	Rotor and shaft for 25 cycle motor	
8958	Spindle—Turntable spindle with fibre gear for 60 cycle motor No. 57085-G 2	
8959	Spindle—Turntable spindle with fibre gear for 50 cycle motor No. 56212-G 2	
8960	Spindle—Turntable spindle with fibre gear for 25 cycle motor	
8971	Rotor and shaft for 60 cycle motor No. 56933-G1	
8972	Spindle—Turntable spindle with fibre gear for motor No. 56933-G1	
8973	Spindle—Turntable spindle with fibre gear for motor No. 56933-G2	
8974	Rotor and shaft for 50 cycle motor No. 56933-G2	
	MISCELLANEOUS PARTS	
2737	Escutcheon—Operating switch escutcheon—Package of 5	
2857	Plug—Three prong (male section) connector plug for power cable	
3173	Plug—Three prong (female section) connector plug for power cable	
3413	Resistor—5,000 ohms—Carbon type—½ watt—Package of 5	
3414	Resistor—15 ohms—Porcelain type—20 watt	
3415	Receptacle—Needle receptacle	
3416	Box—Needle box with lid	
3433	Capacitor—0.015 mfd.	
3442	Resistor—100 ohms—Carbon type—½ watt—Located on selector switch—Package of 5	
6292	Switch—Operating switch—Toggle type located on side of cabinet	
6303	Resistor—20,000 ohms—Carbon type—½ watt—Package of 5	
6348	Cable—Power three conductor power cable	
6349	Cable—Shielded two conductor cable—From selector switch and resistor board to indicator meter and pickup terminal board	
7312	Transformer—Phonograph input transformer	
7362	Capacitor—0.025 mfd.	
7536	Cable—Braid covered interconnecting cable from receiver terminal strip to phonograph input transformer, S. P. U. terminal strip, selector switch and resistor board assembly	
	CABINET ASSEMBLIES	
	Prices Furnished Upon Request	
2776	**Catch assembly—Door catch and strike with nails—Package of 2 sets**	
6293	**Pull—Door pull with mounting screw and back plate**	
6294	**Hinges—Door hinges—Set of 4 hinges with mounting screws**	
7441	**Escutcheon—Station selector escutcheon**	
X168	**Escutcheon—Station selector escutcheon (For models with noise suppressor)**	
	RAE 84 ONLY	
X169	Support—Lid support with mounting screws	
X170	Doors—Cabinet center doors—One pair	
X171	Knob—Record compartment door knob with mounting screw	
X172	Pull—Door pull with mounting screw	
X173	Hinge—Lid hinge with mounting screw—Package of 2	
	REPRODUCER ASSEMBLIES	
7292	**Screw assembly—Comprising two screws, two nuts, two lock-washers, and 1 plate—For mounting speaker to amplifier**	
8559	**Ring—Cone retaining ring**	
8916	**Cone—Reproducer cone complete with voice coil—Package of 5**	
9418	**Coil assembly—Comprising field coil, magnet, and cone support**	

RADIOLAS 80, 82 & 86

Nine-Tube A-C, Superheterodyne Receivers and Radio-Phonograph

RADIOLA 80

RADIOLA 82



RADIOLA 86

RCA Radiola 82 is a console model radio receiver employing the same circuit and chassis as the Radiola 80 with the exception that it includes a tone control. Late models of Radiola 80 also include the tone control

RCA Radiolas 82 and 86 are supplied in models fitted with remote control attachments when desired. These receivers are identical with the standard models except for small wiring changes necessary to accommodate the remote control feature.

Radiola 86 is a radio-phonograph combination using the radio receiver of Radiola 82.

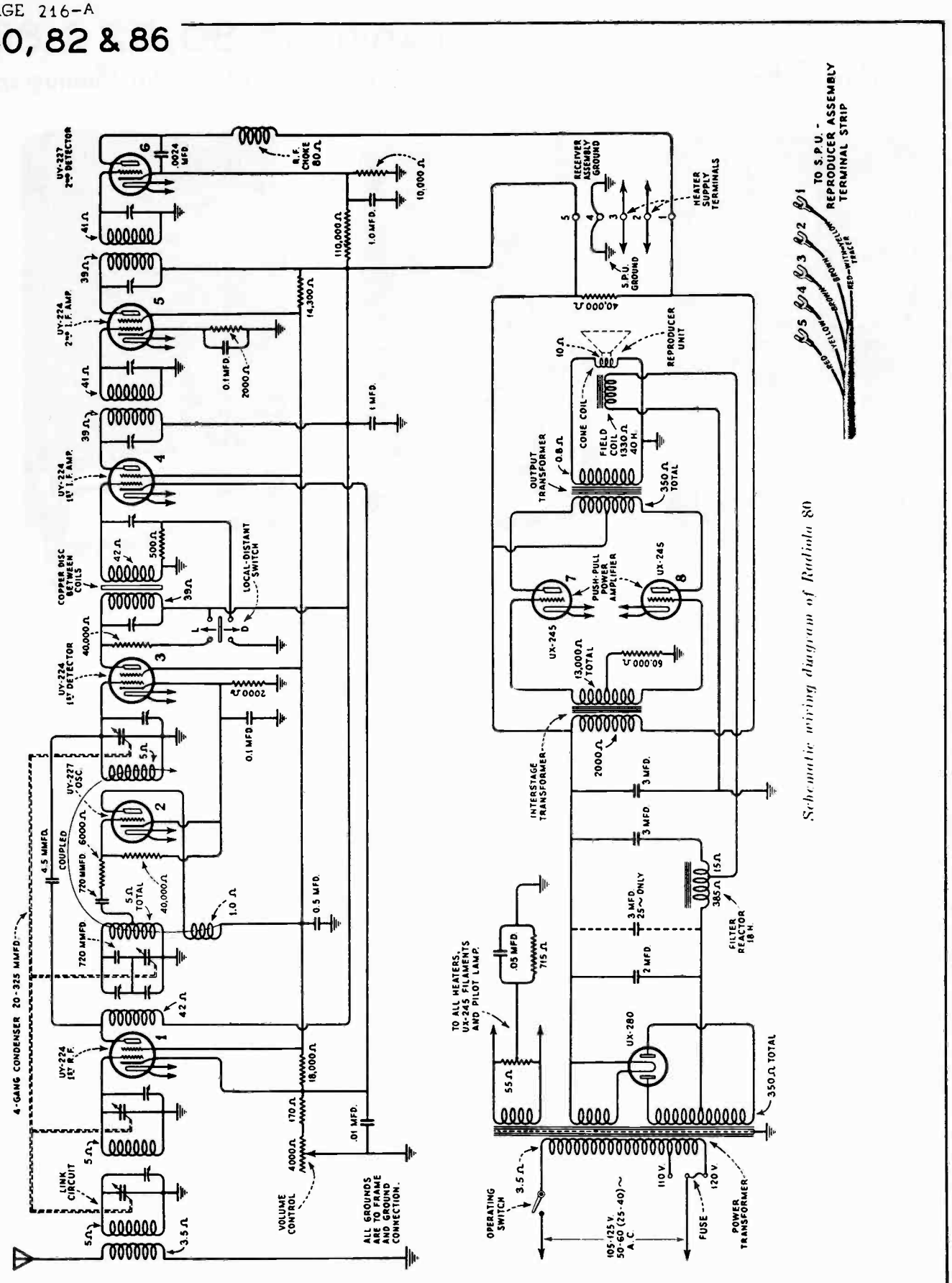
ELECTRICAL SPECIFICATIONS

Voltage Rating	105—125 Volts
Frequency Rating	50–60 Cycles, or 25–40 Cycles
Power Consumption	60 Cycles—120 Watts; 25 Cycles—120 Watts
Recommended Antenna Length	25–75 Feet
Type of Circuit	A.C. Screen Grid Super-Heterodyne
Type and Number of Radiotrons	4UY-224, 2 UY-227, 2UX-245, 1 UX-280—Total, 9
Number of Radio Frequency Stages	1
Type of First Detector	Tuned Input Grid Bias
Number of Intermediate Stages	2
Type of Second Detector	Power Grid Bias
Number of Audio Stages	1 (Push-Pull)
Type of Rectifier	Full Wave, UX-280
Type of Loudspeaker	Dynamic
Wattage Dissipation in L.S. Field	10 (110 V. 85 M. A.)
Undistorted Output	3.0 Watts

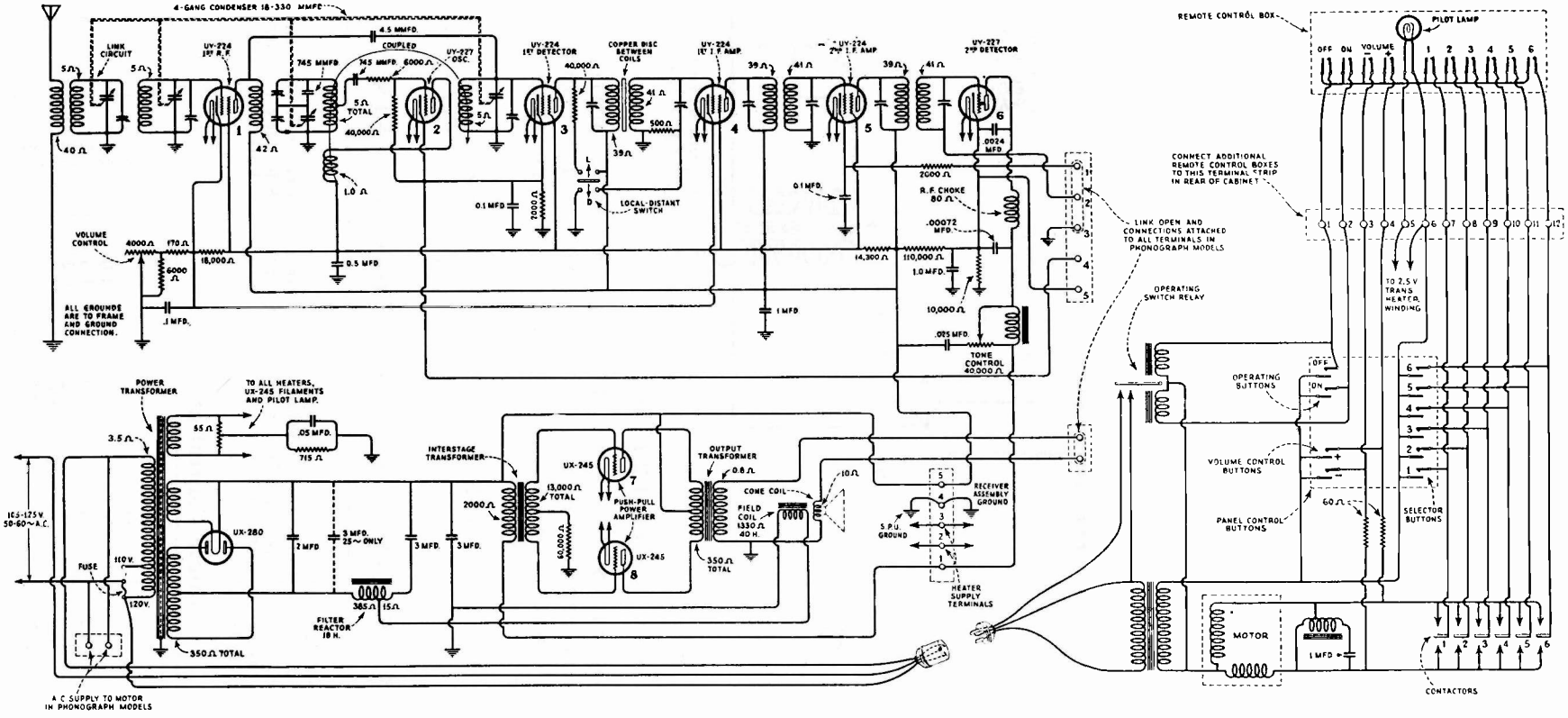
RADIOLA 86

Power consumption	60 cycle	155 watts
	25 cycle	200 watts
Phono. Pickup		Low Impedance Magnetic

80, 82 & 86

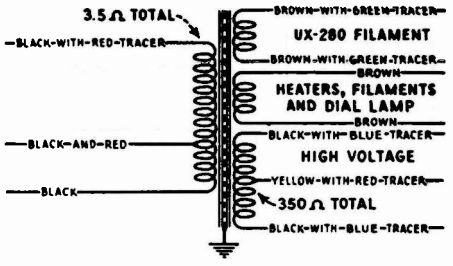


Schematic wiring diagram of Radiola 80

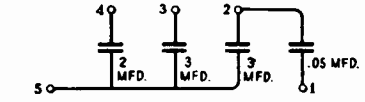


-Schematic diagram of Radiola 82 with remote control

INTERNAL CONNECTIONS OF POWER TRANSFORMER

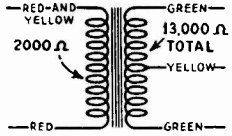


INTERNAL CONNECTIONS OF CAPACITOR PACK

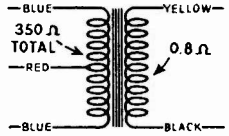


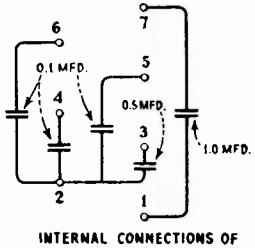
INTERNAL CONNECTIONS OF FILTER REACTOR

INTERSTAGE TRANSFORMER



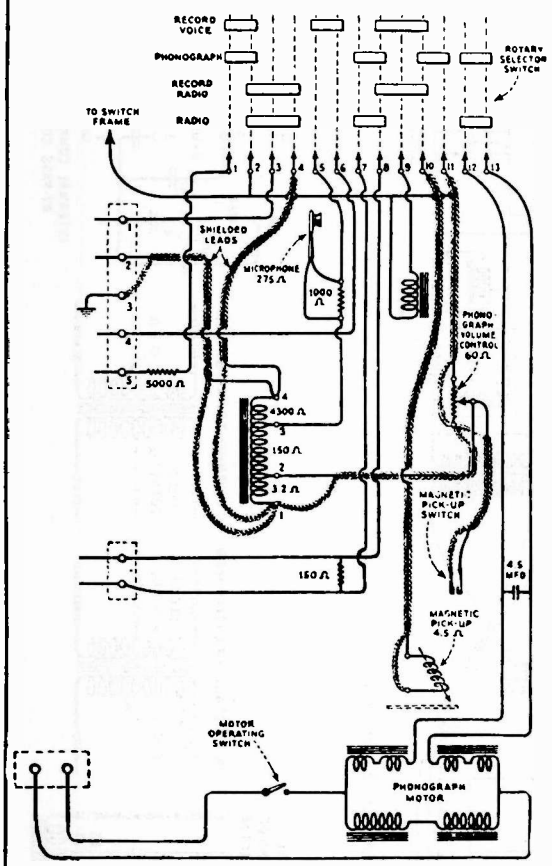
OUTPUT TRANSFORMER



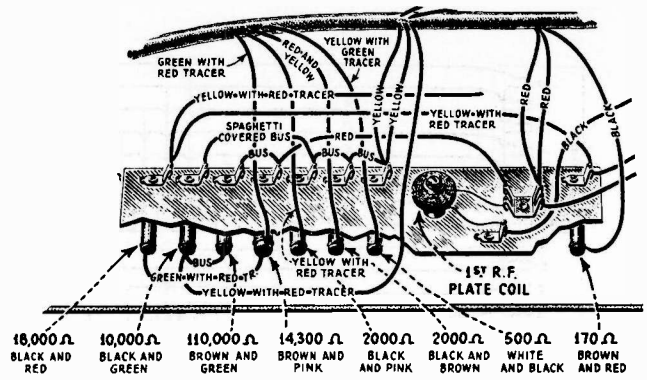


INTERNAL CONNECTIONS OF BY-PASS CONDENSERS

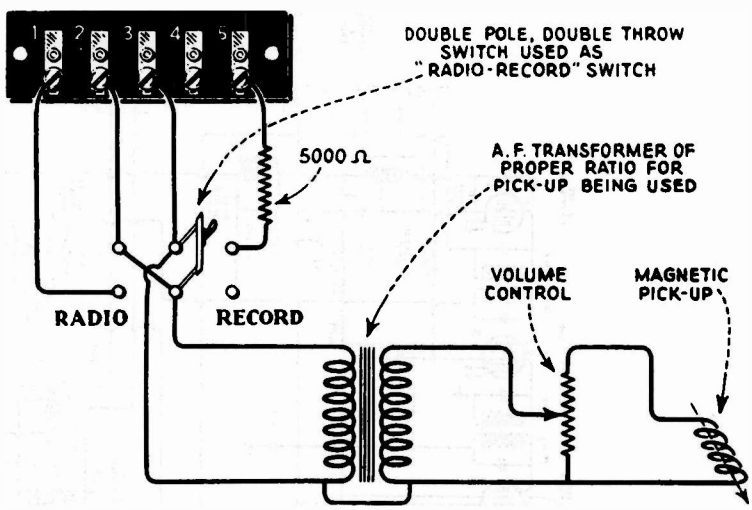
80, 82 & 86



RADIOLA 86 PHONO. WIRING



RESISTOR BOARD WIRING



—Connections for attaching a magnetic pick-up to RCA Radiola 80 with tone control and to RCA Radiola 82.

RADIOLA 86

Models for 25-30 cycle operation are available. The motor capacitor is changed to 5.6 mfd., an additional capacitor 1.2 mfd. is connected in series with the lead connected to rotary switch contact No. 13 and a 36 ohm resistor is connected in series with the lower motor coils.

To adapt 25-30 cycle models to 40 cycle operation change the 5.6 mfd. capacitor to 3.75 mfd. change the additional capacitor to 0.5 mfd. omit the 36 ohm resistor.

VOLTAGE READINGS AT RADIOTRON SOCKETS

Tube No.	Cathode to Heater Volts D. C.	Cathode or Filament to Control Grid Volts, D. C.	Cathode to Screen Grid Volts, D. C.	Cathode or Filament to Plate Volts, D. C.	Plate Current M. A.	Heater or Filament Volts	Screen Grid Current M. A.
Volume Control at Maximum							
1	—34	— 2.2	80	240	3.2	2.2	.5
2	—22	—	—	60	6.5	2.2	—
3	—25	— 9.5	72	230	0.25	2.2	.1
4	—34	— 2.2	78	240	4.0	2.2	.5
5	—31.5	— 4.2	78	240	1.6	2.2	.5
6	—12	—22	—	212	0.25	2.2	—
7	—	—19*	—	200	25.0	2.2	—
8	—	—19*	—	200	25.0	2.2	—

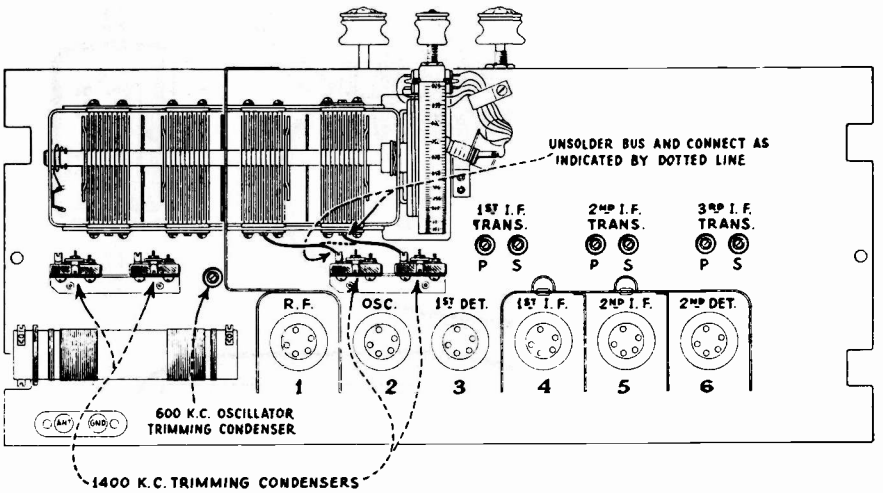
*Not true reading due to resistor in circuit.

RADIOLAS 82 AND 86 WITH REMOTE CONTROL

The motor is provided with a tapped reactor and condenser for changing the phase angle of the applied current so that operation in either direction may be secured. The motor operates at 23 volts for the station selector and 18 volts for the volume control.

It will be noted that a spring holds the armature so that the gear at one end is meshed with the volume control gears. At 18 volts, the voltage used for volume control operation, the gears remain in this position and operation of the volume control is secured. When the speed of the motor is increased by operating it at 23 volts, this voltage being used when the selector buttons are pressed, the end thrust of the armature causes it to move laterally, thereby disengaging the gear at the volume control end and engaging the gear at the station selector end.

The transformers when replaced must have the primaries so connected that the pilot light on the remote control box lights properly. If the transformers are improperly phased, the lamp will brighten instead of dim when a selector button is pressed.

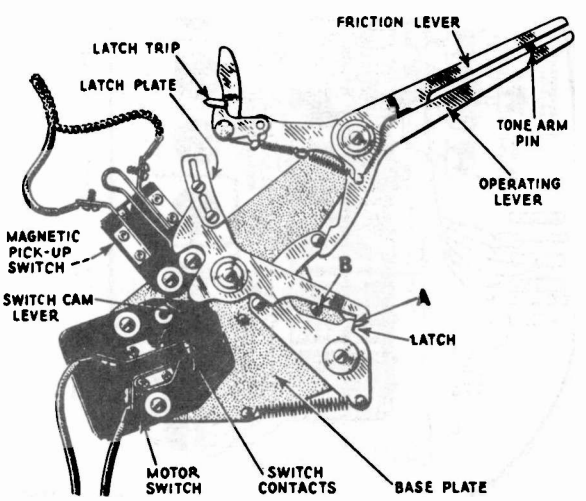


Top view of receiver assembly showing condenser adjustments

Alignment Procedure

Set local-distant switch to distant position.

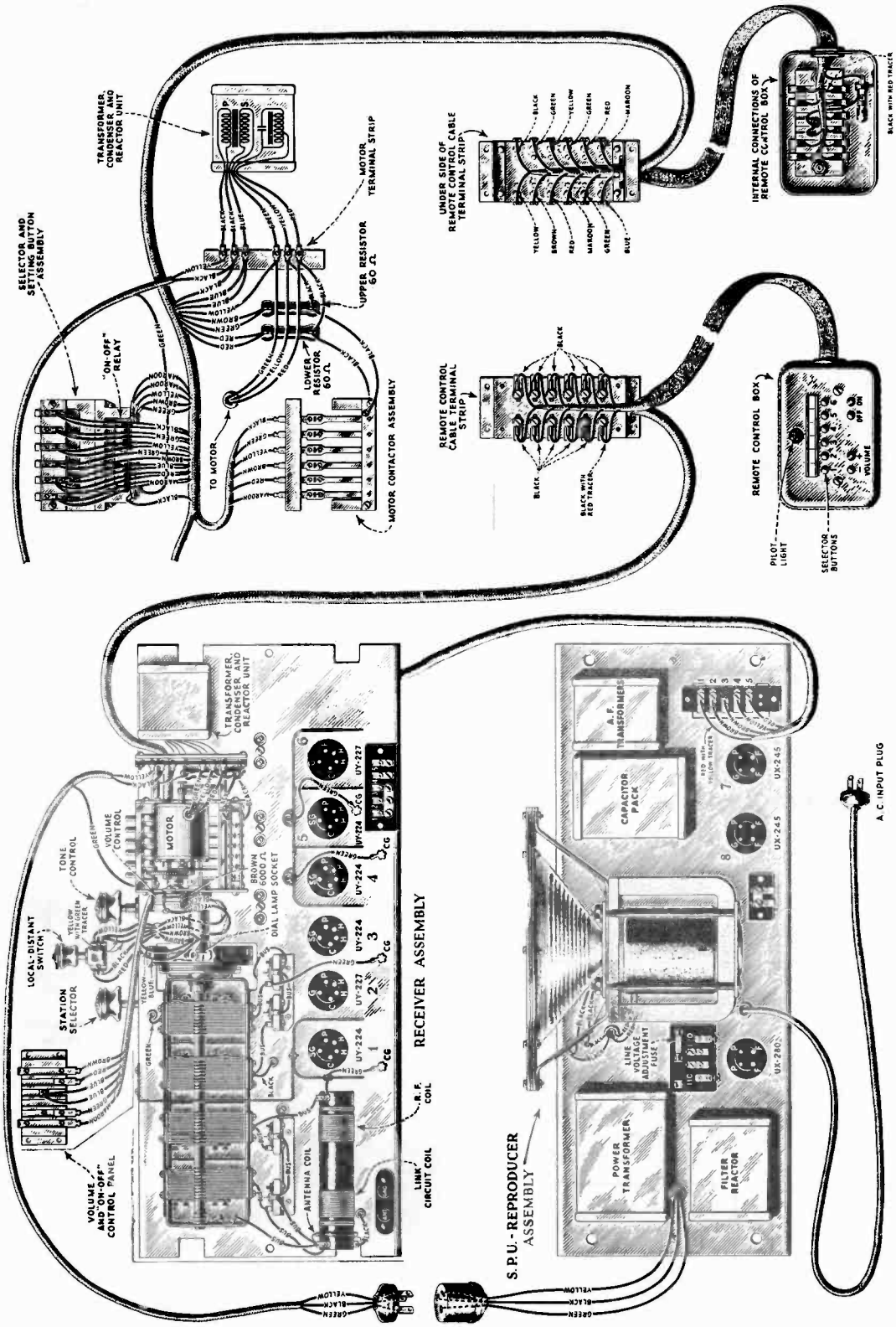
STEP	CONNECT HIGH SIDE OF TEST OSC. TO -	TUNE TEST OSC TO -	TURN RADIO DIAL TO	ADJUST THE FOLLOWING	OUTPUT
1	1st Det. Grid in series with .01 mfd	175 kc	Quiet Point	3rd, 2nd, 1st I-F Tuning Cond.	Max.
2	2nd I-F Grid in series with .01 mfd	171 to 179 kc		3rd I-F Tuning Cond.	Flat Top Resp.
3	1st I-F Grid in series with .01 mfd			2nd I-F Tuning Cond.	172.5 to 177.5 kc
4	1st Det. Grid in series with .01 mfd	175 kc		1st I-F Tuning Cond.	Max.
5	Antenna in Series with 200 mmfd	1400 kc	1400 kc	4 Trimmer Cond. on Gang Condenser	Max.
6		600 kc	600 kc	600 kc Osc. Trimmer (Rock Gang)	Max.
7		*Repeat Step 5*			



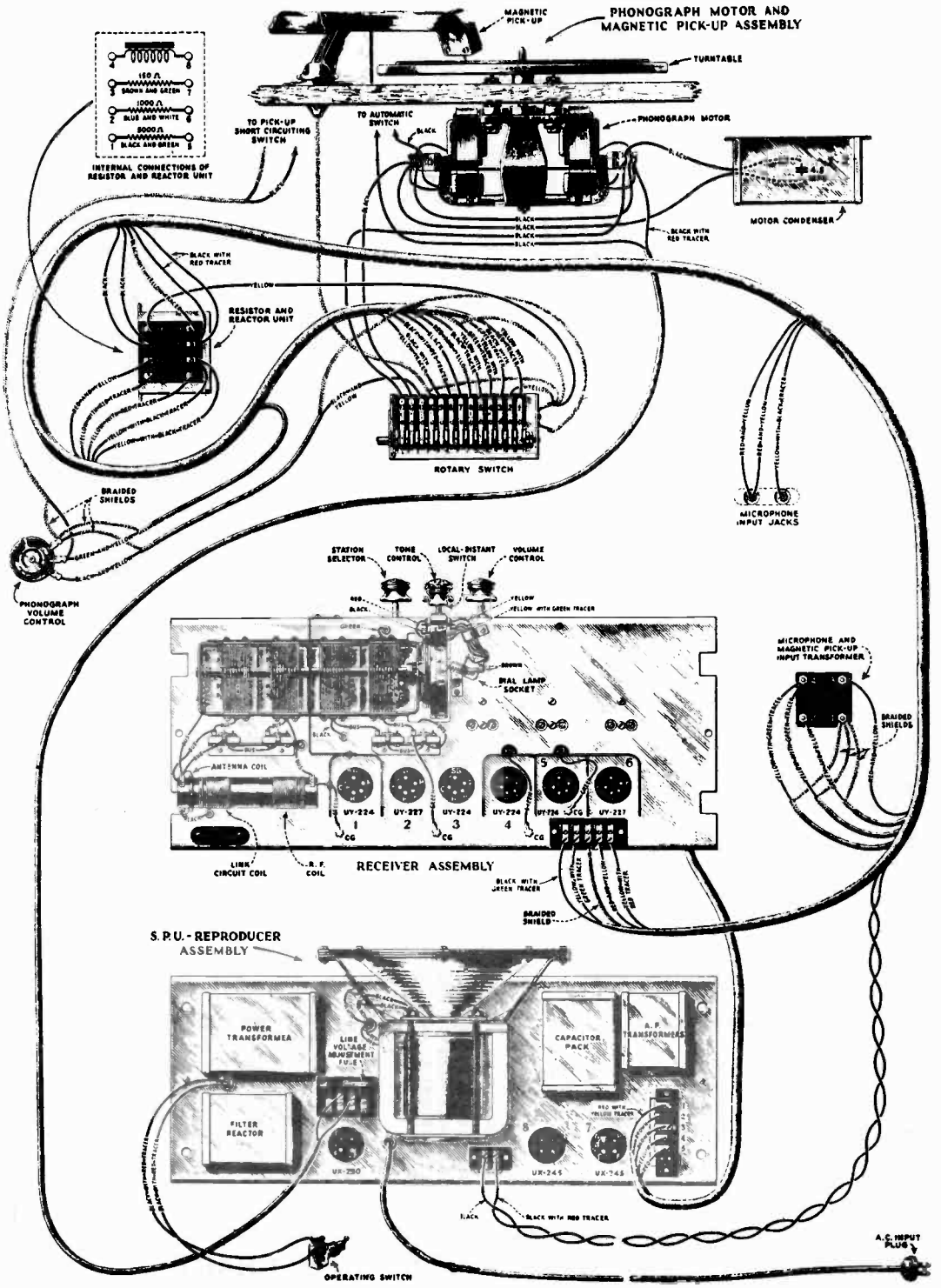
Automatic switch mechanism

RADIOLA 86

80, 82 & 86

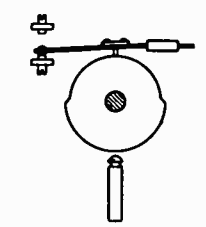
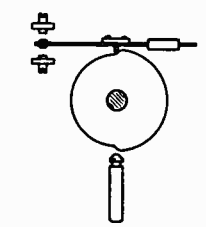
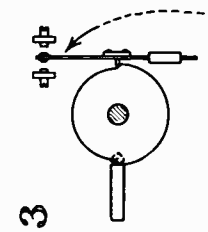
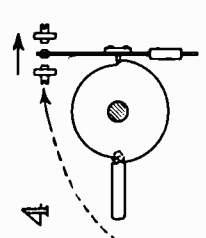
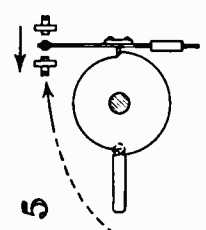


-Complete layout and wiring diagram of remote control models



Assembly wiring diagram of the radio-phonograph combination instrument

80, 82 & 86

TURN STATION SELECTOR KNOB UNTIL CONTACTOR IS TO ONE SIDE	PUSH SELECTOR BUTTON ON PANEL UNTIL THE MOTOR STOPS AND CONTACTOR IS CENTERED	THEN PUSH SETTING BUTTON. IF CONTACTOR DOES NOT MOVE, ADJUSTMENT IS O.K.	IF CONTACTOR MOVES IN THIS DIRECTION WHEN SETTING BUTTON IS PRESSED, ADJUST AS INDICATED.	IF CONTACTOR MOVES IN OTHER DIRECTION, ADJUST AS INDICATED.
 1	 2	 3 *DOES NOT MOVE WHEN SETTING BUTTON IS PRESSED*	 4 *TURN THIS SCREW CLOCKWISE A LITTLE AT A TIME UNTIL CONTACTOR DOES NOT MOVE WHEN SETTING BUTTON IS PRESSED. (TURN SELECTOR KNOB AND RETUNE WITH SELECTOR BUTTON AFTER EACH TRIAL ADJUSTMENT)*	 5 *TURN THIS SCREW COUNTER CLOCKWISE A LITTLE AT A TIME UNTIL CONTACTOR DOES NOT MOVE WHEN SETTING BUTTON IS PRESSED. (TURN SELECTOR KNOB AND RETUNE WITH SELECTOR BUTTON AFTER EACH TRIAL ADJUSTMENT)*
AFTER MAKING PRECEDING ADJUSTMENTS TURN STATION SELECTOR KNOB UNTIL CONTACTOR IS TO THIS SIDE	PUSH SELECTOR BUTTON ON PANEL UNTIL THE MOTOR STOPS AND CONTACTOR IS CENTERED	THEN PUSH SETTING BUTTON. IF CONTACTOR DOES NOT MOVE, ADJUSTMENT IS O.K.	IF CONTACTOR MOVES IN THIS DIRECTION WHEN SETTING BUTTON IS PRESSED. ADJUST AS INDICATED.	IF CONTACTOR MOVES IN THIS DIRECTION, ADJUST AS INDICATED. THEN REPEAT ALL ADJUSTMENTS ON ALL SIX CONTACTORS.
6	7	8 *DOES NOT MOVE WHEN SETTING BUTTON IS PRESSED*	9 *TURN THIS SCREW COUNTER CLOCKWISE A LITTLE AT A TIME UNTIL CONTACTOR DOES NOT MOVE WHEN SETTING BUTTON IS PRESSED. (TURN SELECTOR KNOB AND RETUNE WITH SELECTOR BUTTON AFTER EACH TRIAL ADJUSTMENT)*	10 *TURN THIS SCREW CLOCKWISE A LITTLE AT A TIME UNTIL CONTACTOR DOES NOT MOVE WHEN SETTING BUTTON IS PRESSED. (TURN SELECTOR KNOB AND RETUNE WITH SELECTOR BUTTON AFTER EACH TRIAL ADJUSTMENT)*

MOTOR CONTACTOR ADJUSTMENT CHART

Repeat Entire Procedure For All Contactors

NOTE: *If all contactors are out of adjustment in a similar manner, the friction screw, located close to volume control gear, may require adjustment.*

SCHEMATIC AUDIO CIRCUIT DIAGRAMS

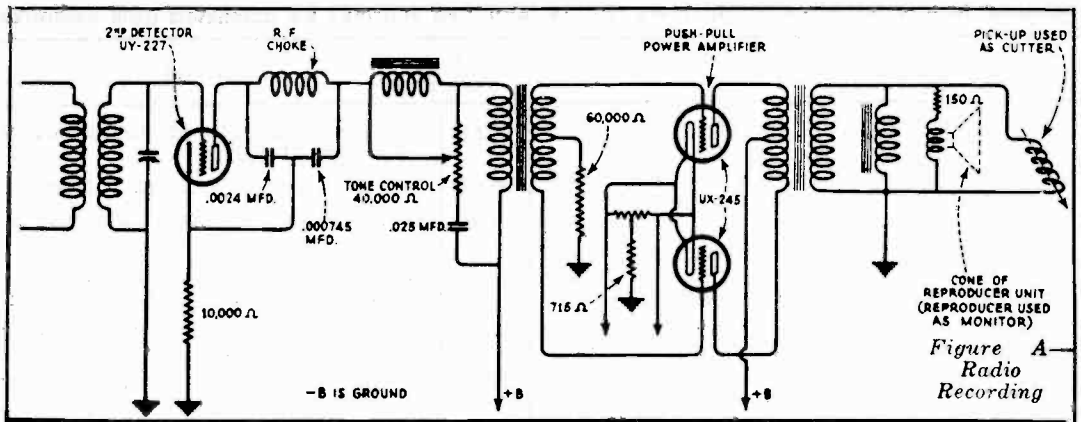


Figure A—Radio Recording

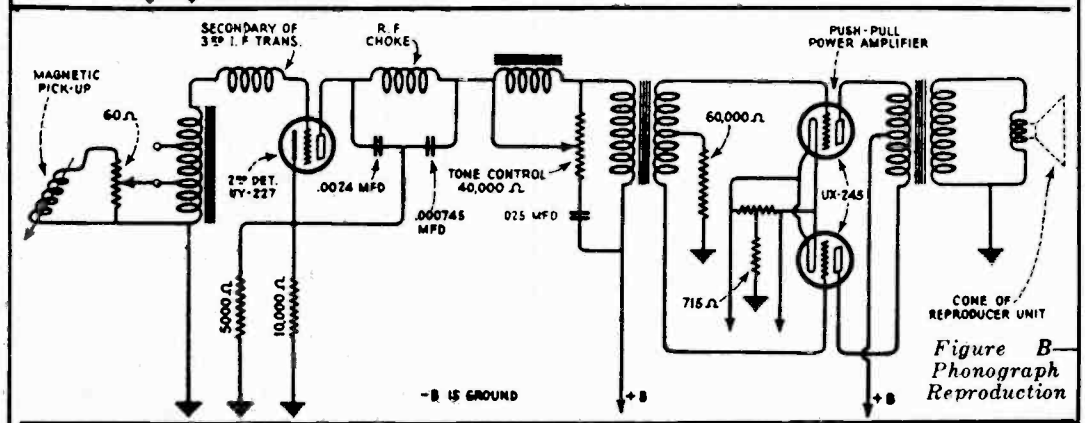


Figure B—Phonograph Reproduction

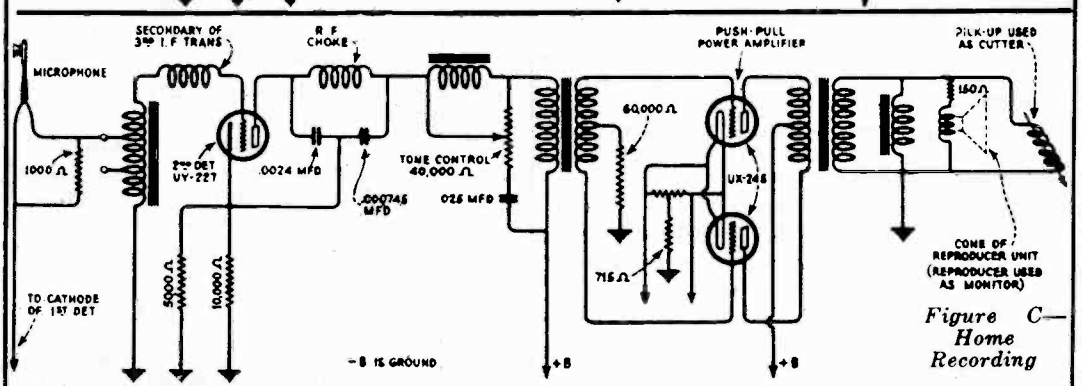


Figure C—Home Recording

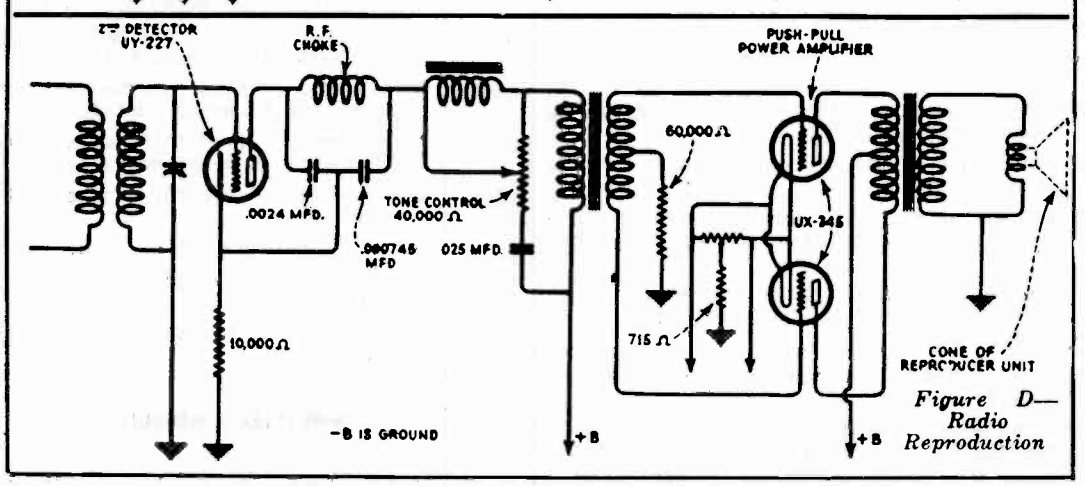


Figure D—Radio Reproduction

80, 82 & 86

REPLACEMENT PARTS

Insist on genuine factory tested parts, which are readily identified and may be purchased from authorized dealers.

Stock No.	Description
	RECEIVER ASSEMBLIES
3060	Resistor - 40,000 ohms - Carbon type - Used as oscillator grid or audio primary resistor.
2547	Resistor - 2,000 ohms - Carbon type - Used as first detector bias, or second intermediate bias resistor - Package of 5.
2563	Resistor - 6,000 ohms - Carbon type - Used as oscillator grid resistor - Package of 5.
2726	Socket - Radiotron UY-224 or UY-227 socket.
2727	Terminal strip - Micarta terminal strip with 1 terminal, bottom strip, mounting screws, lock washer and nuts.
2728	Terminal strip - Micarta terminal strip (top and bottom) with 40,000 ohm resistor.
2729	Shield - Micarta protective shield for top of Radiotron sockets.
2730	Resistor - 18,000 ohms - Carbon type - Used as screen grid bleeder resistor - Package of 5.
2731	Resistor - 10,000 ohms - Carbon type - Used as second detector bias resistor - Package of 5.
2732	Resistor - 110,000 ohms - Carbon type - Used as second detector bleeder resistor - Package of 5.
2733	Resistor - 14,300 ohms - Carbon type - Used as voltage divider resistor - Package of 5.
2734	Condenser - Fixed condenser - Used as oscillator series, or oscillator grid condenser - 745 mmfd. - Package of 5.
2735	Resistor - 500 ohms - Carbon type - Used in series with secondary coil of first I.F. transformer - Package of 5.
2736	Resistor - 170 ohms - Carbon type - Used as amplifier bias resistor - Package of 5.
2737	Escutcheon - Switch Escutcheon - Package of 5.
2738	Coil - R. F. plate coil.
2739	Coil - second detector plate choke coil assembly mounted on Micarta strip.
2740	Cord - Condenser drive cord - Package of 5.
2741	Idler - For condenser drive cord - Package of 5.
2742	Spring - Condenser drive cord tension spring - Package of 5.
2743	Eyelet - Black moulded composition - Package of 5.
2744	Condenser - Fixed condenser 4 1/2 mmfd. - Used as R.F. coupling condenser - Package of 5.
2745	Screws - Special No. 4-40 - Used to adjust trimming condenser - Package of 10.
2746	Socket - Dial lamp socket.
2747	Cap - Contact cap for Radiotron UY-224 - Package of 5.
2748	Binding posts - Twin binding posts engraved "ANT-GND" - Complete with washers and nuts.
2749	Condenser - Fixed condenser - 2400 mmfd. - Used as detector plate by-pass condenser.
2751	Screen - Amber colored station selector screen Package of 5.
2752	Support - Screen support - Less screen.
2753	Knob - "Local-Distant" switch knob - Package of 5.
2754	Knob - Station selector, volume control, or tone control knob - Package of 5.
2777	Resistor - 6000 ohms - Carbon type - Parallel with volume control - Package of 5.
2786	Spring - Holding spring for station selector volume control, tone control or local-distant switch knob - Package of 10.
2788	Shield - Bronze shield with fibre washer for dial lamp - Package of 5.
7057	Terminal board assembly - Comprising terminal board with 7 carbon resistors, R.F. plate coil and 5 flexible leads - Assembled.
7058	Capacitor pack - One assembly in metal container - Comprising three 0.1 mfd., one 0.5 mfd., and one 1 mfd. condenser.
7059	Condenser - One 1 mfd. condenser in metal container.
7060	Shield - Metal shield for Radiotron UY-224.
7061	Volume control - 4,000 ohms - Complete with mounting washer and nut.
7062	Condenser - Adjustable trimming condenser - capacity 15 to 70 mmfd.
7063	Condenser - Adjustable trimming condenser - 5 to 40 mmfd.
7064	Switch - "Local-Distant" switch - Package of 5.
7067	Scale - Dial scale - Package of 5.
8561	Condenser - Tuning condenser assembly - Comprising 4 condensers, drive, drive cord, spring, and dial drum - Assembled.
8562	Shield - Metal shield for two UY-224 and one UY-227 Radiotrons.
8563	Coils - R.F. coil assembly complete with mounting bracket.
8564	Coils - Detector and oscillator coil assembly - Complete with mounting bracket.
8565	Transformer - Second intermediate transformer - Complete in metal container.
8566	Transformer - Third intermediate transformer - Complete in metal container.
8567	Transformer - First intermediate transformer - Complete in metal container.
8568	Shield - Steel cover for second or third I.F. transformer.
8569	Cable - Receiver wiring cable.
9570	Shield - Copper shield for first I.F. transformer.
8700	Condenser - Tuning condenser assembly for remote control.
	AMPLIFIER ASSEMBLIES
2721	Socket - Double socket for Radiotrons UX-245.
2722	Resistor - 55 ohms - Mid-tapped filament resistor.

REPLACEMENT PARTS — Continued

Stock No.	DESCRIPTION
2723	Switch - Power line operating switch - Toggle type - Package of 5.
2724	Resistor - 60,000 ohms - Carbon type - Used as transformer mid-tap resistor - Package of 5.
2725	Fuse - 1.5 ampere - Cartridge type fuse - Package of 5.
7052	Terminal strip - Micarta terminal strip with 4 complete terminals and terminal screws.
7053	Resistor - 715 ohms - Wire wound - Flat type - Audio grid bias resistor.
7054	Power cord - Flexible twin conductor - Complete with male section of connector plug.
8553	Capacitor pack - One assembly in metal container - Comprising two 3 mfd., one 2 mfd. and one 0.05 mfd. condenser.
8554	Transformer assembly - Comprising push-pull interstage and output transformer in metal container.
8555	Reactor - Tapped filter reactor.
8556	Transformer - Power transformer - 105-125 volts, 50-60 cycles.
8596	Transformer - Power transformer - 105-125 volts, 25-40 cycles.
8597	Condenser - Extra filter condenser for 25 cycles.
	DYNAMIC LOUDSPEAKER ASSEMBLIES
7055	Bolt, lock washer and nut assembly - Used to mount cone support - One set of 4.
7056	Ring - Felt spacing ring - 3" I.D., 1 7/8" O.D., 1 1/8" thick - One set of 2.
8587	Support - Metal cone support with terminal board.
8558	Cone - Complete with voice coil.
8559	Ring - Cone retaining ring.
8560	Coil - Field coil.
	PARTS USED IN RADIOLA 80 ONLY
7051	Socket strip assembly - Complete with fuse clips.
	PARTS USED IN RADIOLAS 80 AND 82 ONLY
8572	Power transformer - 220 volts.
	PARTS USED IN RADIOLA 82 ONLY
8587	Cloth - Grille cloth with baffle board and felt ring.

Stock No.	DESCRIPTION
	PARTS USED IN RADIOLAS 82 AND 86 ONLY
8756	Condenser - Fixed condenser - 0.025 mfd. - Located on capacitor strip No. 7071.
2757	Terminal strip - With 2 complete terminals and 1 link.
7071	Capacitor strip - Comprising Micarta strip with one 745 mmfd. by-pass condenser and one 0.025 mfd. tone control condenser.
7072	Terminal strip - With 5 complete terminals and link.
7073	Inductor - Tone control inductor.
7074	Potentiometer - Tone control potentiometer - Complete with mounting washer and nut.
7075	Socket strip assembly - Complete with fuse clips.
7099	Cable - S. P. U. wiring cable.
7101	Cable - Braided cable from tone control potentiometer to inductor, plate choke coil, resistor board, terminal strip and tone control capacitor strip.
	PARTS USED IN RADIOLA 86 ONLY MOTOR BOARD ASSEMBLIES
2814	Switch - Motor switch for eccentric automatic brake.
2761	Jack - Twin microphone jack with mounting screws.
2762	Bearing assembly - Governor bearing assembly comprising 2 bearings, 2 set screws and 2 steel balls - 3 sets per package.
2764	Spindle - Turntable spindle and pin.
2779	Pointer - Metal pointer for recording-reproducing control switch knob - Package of 10.
2780	Springs - Springs for automatic brake mechanism - Two sets of 3 springs.
2781	Felt - Friction felt - Package of 20.
2783	Escutcheon - Recording-reproducing control switch escutcheon - Package of 5.
2787	Switch - Pickup short circuiting switch.
2789	Cord - Motor cord - Approximately 47" long with one closed and three spade terminals.
2826	Cable - Shielded cable from pickup switch to record volume control.
7076	Brake - Eccentric automatic brake mechanism - Complete with two switches and mounting screws.
7077	Regulator - Speed regulator with escutcheon plate and mounting screw - Package of 2.
7078	Volume control - 60 ohms - Complete with mounting screws.
7079	Capacitor - Motor capacitor - 4.5 mfd. with mounting screws - For 60 cycles use.
7080	Reactor and resistor assembly - One reactor and 3 resistors in container with mounting screws.
7081	Switch - Recording-reproducing control switch with mounting nut - For 60 cycles.

REPLACEMENT PARTS—Continued

Stock No.	Description
7083	Transformer - Input transformer with mounting screws.
7084	Cover - Suede cover for turntable.
7086	Lever - Regulating lever with friction felt and set screw - Package of 2.
7087	Gear - Turntable spindle governor driving gear.
10289	Governor assembly - Complete governor - Comprising spindle, collar, disc, sleeve, balls, springs, washers and screws.
7090	Coil - Inductor coil - 60 cycles, 105-125 volts.
7091	Cable - Motor board wiring cable.
8573	Transformer - Step-down power transformer - 220-110 volts, 60 cycles.
	MAGNETIC PICKUP AND MICROPHONE ASSEMBLIES
2620	Cushions - Rubber damping block and 2 spacer cushions for armature - One set.
2765	Screw - Needle holding screw - Package of 10.
2768	Armature - Pickup armature.
2769	Coil - Pickup magnet coil.
2774	Rod - Trip rod assembly - Comprising threaded rod and nut - Used on pickup arm - Package of 5.
2782	Weight - Recording weight.
2825	Cable - Shielded pickup cable - From pickup to recording-reproducing control switch.
7085	Pickup - Magnetic pickup complete.
7092	Arm - Pickup suspension arm with mounting screws.
7097	Microphone - Hand microphone complete.
7098	Cord - Microphone cord.
	PARTS USED IN REMOTE CONTROL RADIOLA 82 AND 86 CONTROL BOX ASSEMBLIES
2833	Button - Red colored push button - Package of 2.
2834	Button - Red colored push button with white insert - Package of 2.
2835	Button - Black colored push button - Package of 2.
2836	Button - Black colored push button with white insert - Package of 2.
2837	Button - Bronze colored push button - Package of 2.
2838	Bullseye - Pilot lamp indicator - Package of 2.
2839	Switch assembly - Dilecto strip with 10 contacts - Package of 5 - (Inside of control box).
2840	Socket - Miniature base pilot lamp socket with mounting bracket, mounting screws, lock washer and nut.
2841	Log strip assembly - Comprising 3 paper log strips and one metal holder.
2842	Cover - Metal cover with mounting screws, rubber bushing, button guide plate and studs.
2843	Base assembly - Comprising base, felt and clamping plate.
7154	Cable - Flat type - 25 feet long - Complete with terminals.
7161	Terminal board - Comprising Micarta strip with 12 terminals, 12 screws and 2 mounting brackets, 1 rubber bushing and 4 mounting screws.
7254	Cable - Flat type - 50 feet long - Complete with terminals.
8619	Control box assembly complete - Less cable.
8620	Control box assembly complete with 25 foot cable.
	DRIVING UNIT ASSEMBLIES
2837	Button - Bronze colored push button - Package of 2.
2844	Terminal strip - Complete with 6 terminals, mounting screws, spacer and nuts.
2845	Blade - Spring blade - (Restores motor to normal position when power is off) - With Micarta mounting blocks, washers and mounting screws.
2846	Gear - Micarta; bendix gear, pinion and taper pins - Located near porcelain resistors.
2847	Relay assembly - Complete with mounting screws.
2848	Blade - Switch blade complete with clamping plate and mounting screws.
2850	Plunger - Oxidized finish - Brass plunger - Package of 2.
2851	Gear - Micarta, bendix gear, pinion and taper pin - Volume control drive gear.
2852	Gear - Micarta, intermediate drive gear, pinion and taper pin - For volume control.
2853	Gear - Star gear and taper pin - Located on end of condenser shaft and fits into ring gear.
2854	Contact - Contact screw and lock nut - Located on contact plate No. 7158 - Package of 5.
2855	Switch assembly - Plunger switch comprising Micarta strip with 6 contact blades and 2 mounting screws.
2856	Spring - Tension spring assembly for plunger, complete with mounting screws - Package of 5.
2857	Plug - Male section of 3 prong polarity plug.
3008	Contacts - Remote relay contacts - Package of 4 sets.
7155	Resistor - 60 ohm - Porcelain type resistor.
7156	Rheostat - Volume control rheostat with bracket and gear assembled - Complete with mounting screws.
7157	Gear - Ring gear with taper pin - Located on end of cam shaft.
7158	Plate - Contact plate complete with 6 contracts, 6 lock nuts and mounting screws.

REPLACEMENT PARTS—Continued

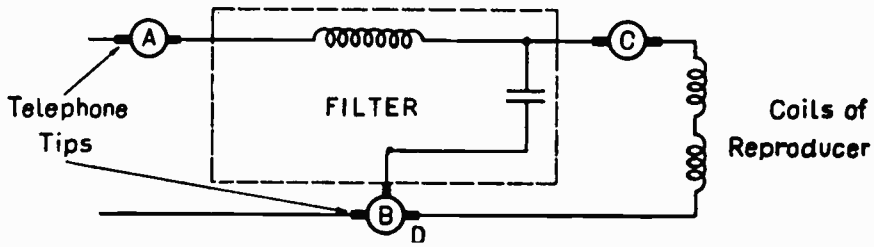
Stock No.	Description
7159	Cable - Braided cable - From driving unit to terminal board located in cabinet.
7160	Cable - Braided wiring cable and male section of polarity plug - From driving unit to power supply.
7162	Switch - Auxiliary switch assembly comprising Micarta strip with 4 contacts and 1 common plate - Located on control panel.
7163	Escutcheon - Auxiliary switch escutcheon, complete with mounting screws, nuts and spacer blocks.
8616	Motor - Complete with two pinion gears.
8617	Capacitor pack - In metal container - Complete with mounting screws, lock washers and nuts.
8618	Mechanism - Driving Mechanism complete with mounting screws and lock washers.
	PARTS SUPPLIED ON SPECIAL ORDER ONLY FOR RADIOLA 80 (NOT TO BE STOCKED)
6034	Cushion - Sponge rubber cushion - Used in mounting receiver chassis - One set of 4.
7069	Bracket - Metal bracket used in mounting receiver chassis - One set of 2.
	PARTS SUPPLIED ON SPECIAL ORDER ONLY FOR RADIOLA 82 (NOT TO BE STOCKED)
6034	Cushions - Sponge rubber cushions - Used in mounting receiver chassis - One set of 4.
7069	Bracket - Metal bracket - Used in mounting receiver chassis - One set of 2.

Stock No.	Description
	PARTS SUPPLIED ON SPECIAL ORDER ONLY FOR RADIOLA 86 (NOT TO BE STOCKED)
2758	Cup - Needle cup - Package of 2.
2759	Box - Needle box complete - 2 complete boxes per package.
2763	Mounting bolts - Washer and rubber cushion for mounting induction disc motor - One set per package.
2766	Screw - Pickup cover mounting screw - Package of 10.
2767	Spring - Pickup magnet spring - Package of 10.
2770	Plate - Pickup damper plate - Package of 5.
2771	Screw - Pickup damper plate mounting screw - Package of 10.
2772	Magnet - Pickup magnet.
2773	Pole piece - Pickup pole piece (right hand).
2775	Stop - Door stop complete with mounting screws - Set of 5.
2776	Catch assembly - One set comprising 2 door catches, 2 strikes and 2 mounting nails.
2778	Pole piece - Pickup pole piece (left hand).
2784	Needle tray - For tungstone needles - Complete with mounting screws - 2 complete trays per package.
2785	Hinges - Lid hinges - One set of 2 with mounting screws.
6034	Cushions - Sponge rubber cushions - Used in mounting receiver chassis - One set of 4.
7069	Bracket - Metal bracket - Used in mounting receiver chassis - One set of 2.
7082	Support - Lid support with mounting screws.
7093	Cover - Pickup cover.
7095	Hinges - Door hinges - One set comprising 4 complete hinges.
7096	Pull - Door pulls - One set of 2.
7100	Switch - Recording-reproducing control switch with mounting nut - For 25 cycles.
7147	Coil - Motor inductor coil - 25 cycles - 105-125 volts.
7148	Capacitor - Motor condenser - 5.8 mfd. and 1.2 mfd. - For 25 cycles.
7151	Back - Pickup back.
8582	Turntable - Complete with cover.
8588	Doors - Front doors in matched pairs - Less hardware - One pair.
9302	Speaker - Loudspeaker complete.

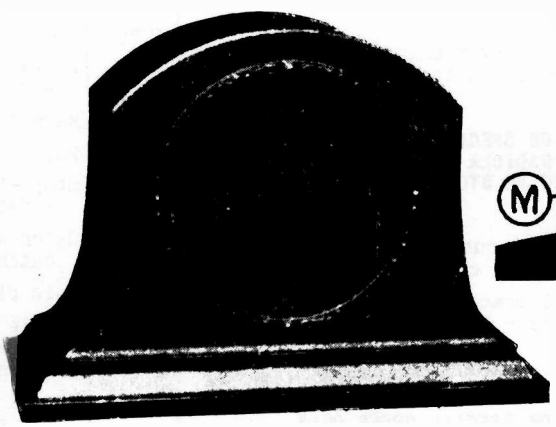
LOUDSPEAKERS 100, 100A, 100B, 102 & 103

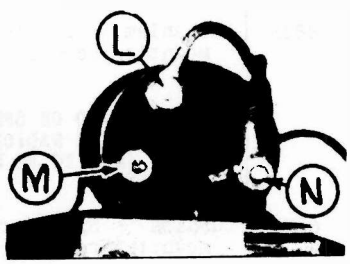
Loudspeaker Model 102 is a combination of L.S. Model 100 cone assembly (less filter unit) and Uni-Recton Model AP-935.

MODEL 100

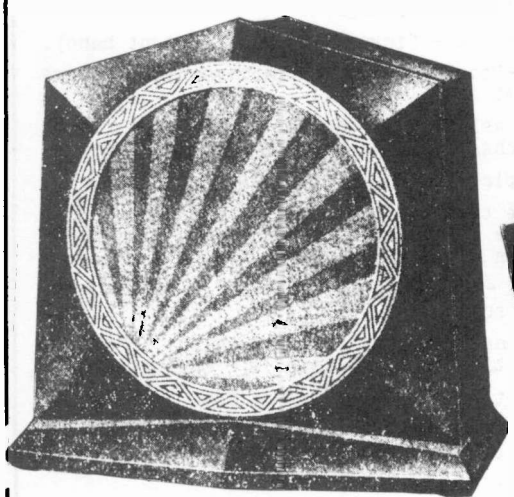


CONTINUITY DIAGRAM
MODEL 100 LOUD SPEAKER





MODEL 100A



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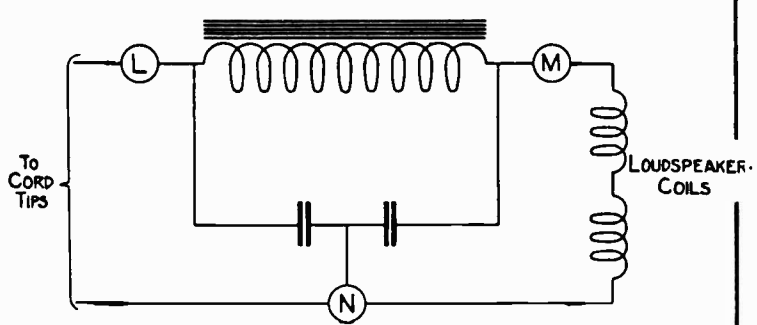
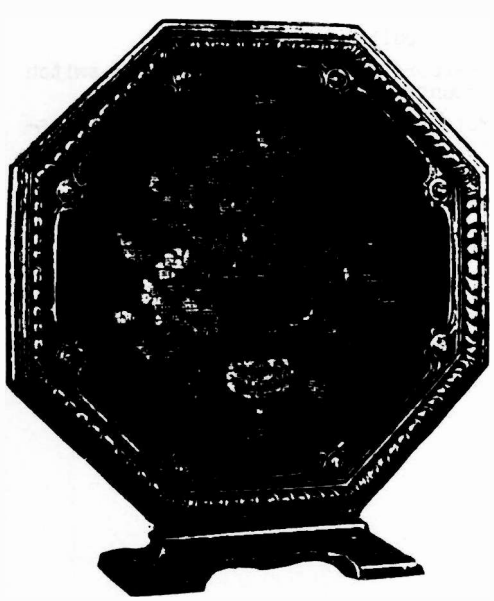
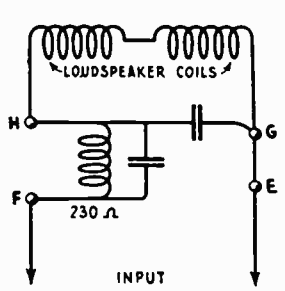
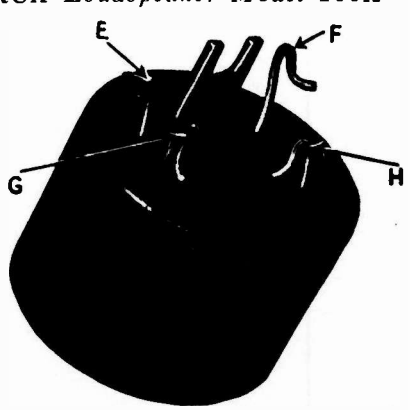


Schematic circuit diagram of RCA Loudspeaker Model 100A



MODEL 103

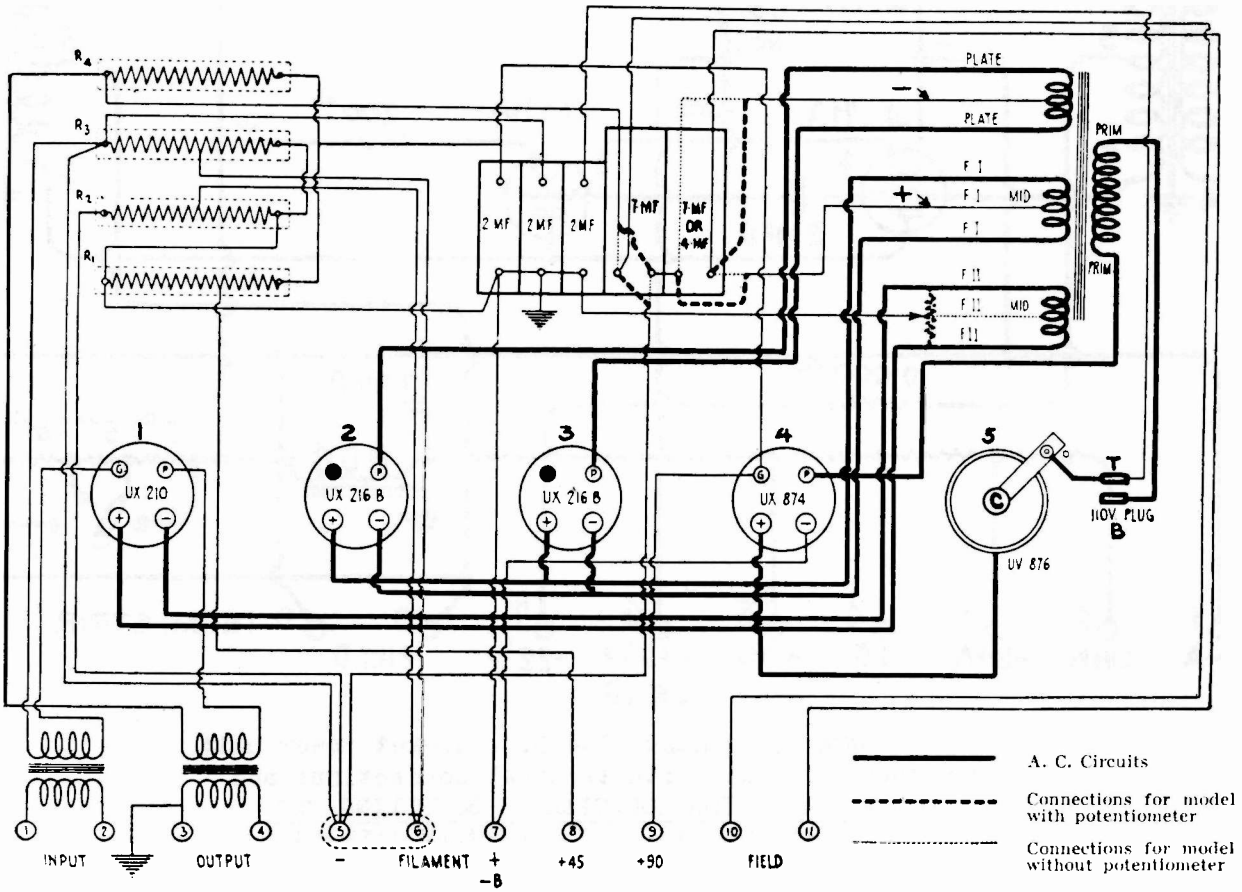




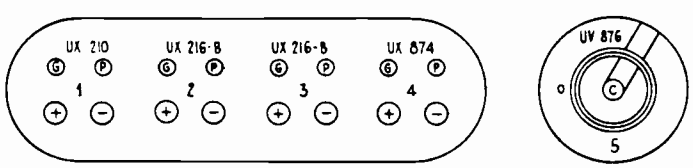
Schematic circuit of Loudspeaker 100B and Loudspeaker 103

LOUDSPEAKER 104

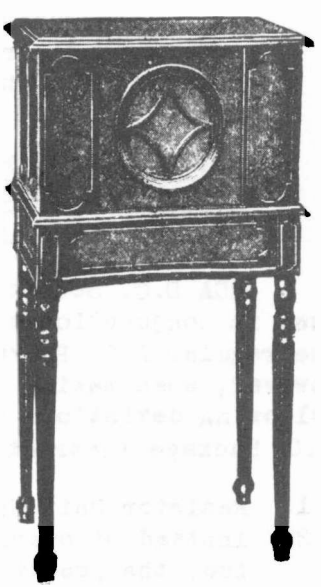
RCA Loudspeaker, Model 104, consists essentially of two main parts, the Reproducer unit and the Rectifier-Power-Amplifier unit. It is designed to operate from an alternating current supply of 105 to 125 volts, 40 to 45 cycles (using Ballast tube, Radiotron UV-886) and 50 to 75 cycles (using Ballast tube, Radiotron UV-876).



Continuity circuit of R.P.A. Unit



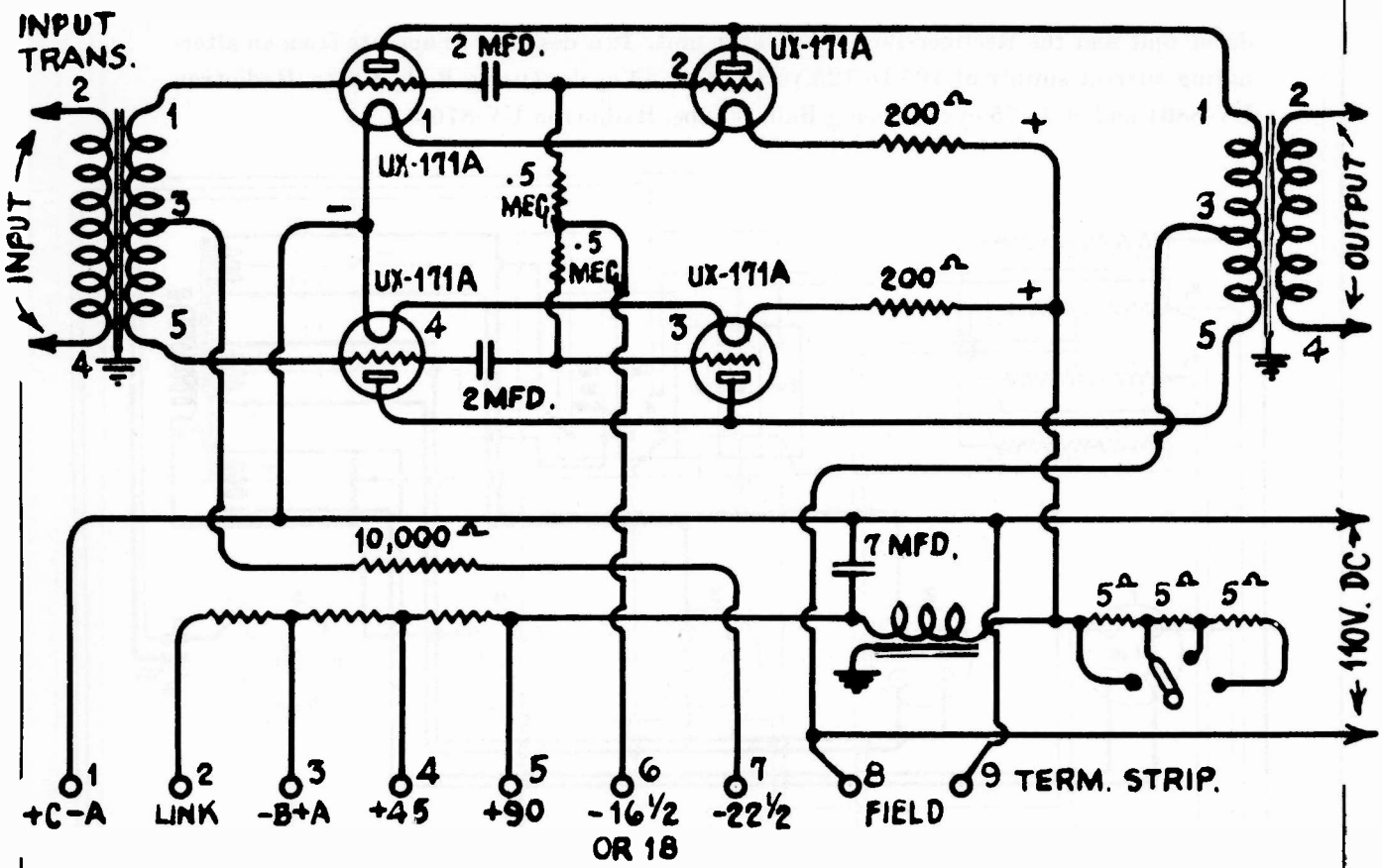
R.P.A. socket layout



RCA D.C. SOCKET POWERED LOUDSPEAKER 104

RCA D.C. Socket Powered Loudspeaker 104 is identical to the regular A.C. model with the exception that the Socket Power Unit is designed to operate from the regular 110-volt D.C. lines. This loudspeaker contains a power amplifier consisting of four Radiotrons UX-171A connected in a push-pull circuit and furnishes a "B" voltage supply to any receiver and complete plate grid and filament voltages for Radiolas 25 or 28 when used in conjunction with the proper A.C. Package.

LOUDSPEAKER 104



RCA Loudspeaker 104 D.C. socket power unit schematic circuit with terminal connections and VOLTAGES FOR LOUDSPEAKER SUPPLYING "B" CURRENT ONLY. LINK BETWEEN TERMINALS 1 AND 2

The terminal strip numbers shown in Figure are located consecutively from left to right when facing the Loudspeaker from the rear, omitting the first four terminals which are for the input and output of the loudspeaker.

USING RCA D.C. SOCKET POWERED LOUDSPEAKER 104 WITH RADIOLA 25 OR 28 FOR COMPLETE SOCKET POWER OPERATION LINK BETWEEN TERMINALS 2 AND 3

RCA D.C. Socket Powered Loudspeaker 104 may be used in conjunction with Radiolas 25 and 28 by using the regular A.C. Package furnished for this purpose. However, when making an installation of this kind the following deviations from the procedure outlined in A.C. Package Instruction Book should be observed:

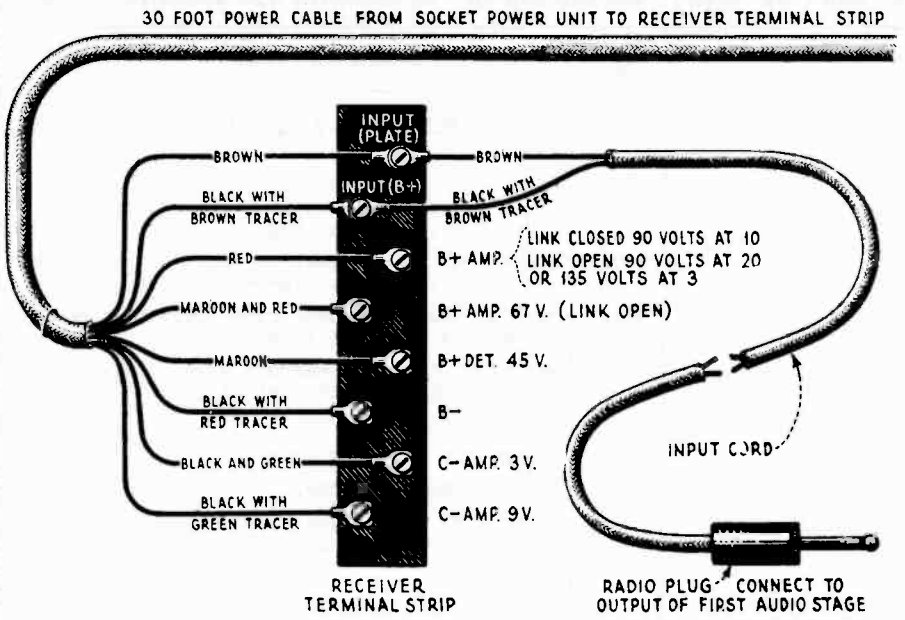
1. Resistor Unit UP-591 is not used.
2. Instead of opening the link as on an A.C. machine, the position of the link is changed to terminals 2 and 3

Terminals	Voltage
1 to 3	31
3 to 4	21.5
4 to 5	41
1 to 6	16 1/2 or 18
1 to 7	22 1/2

Should the readings on the "C" battery terminals 1 to 7, show less than 20 volts replace the "C" battery.

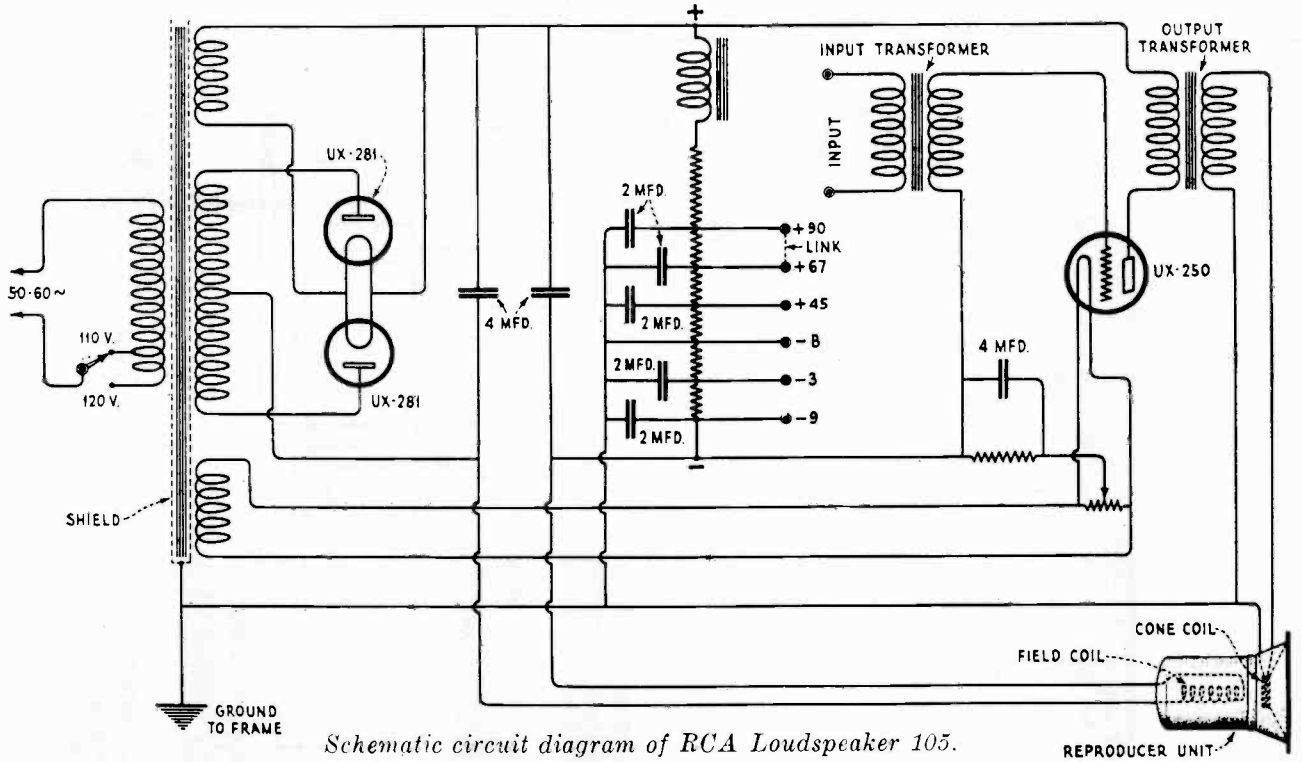
LOUDSPEAKER 105

105-125 Volts—50-60 Cycle A.C. Operation

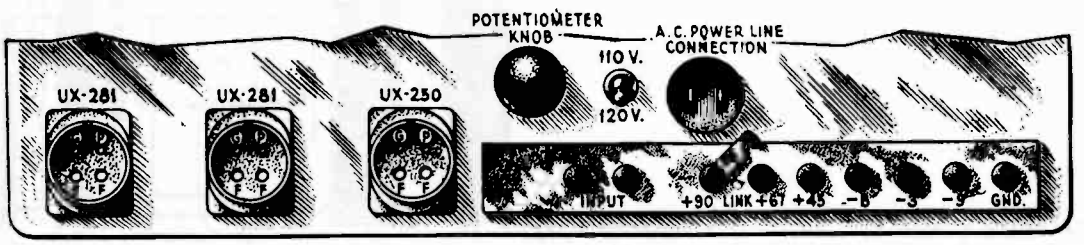


Thirty-foot power cable and receiver terminal strip.

RCA Loudspeaker 105



Schematic circuit diagram of RCA Loudspeaker 105.



Location of Radiotron socket contacts and socket power unit binding posts.

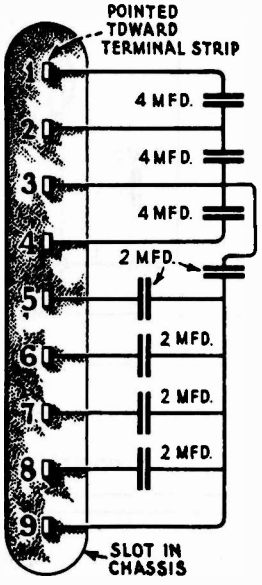
LOUDSPEAKER 105

REPLACEMENT PARTS

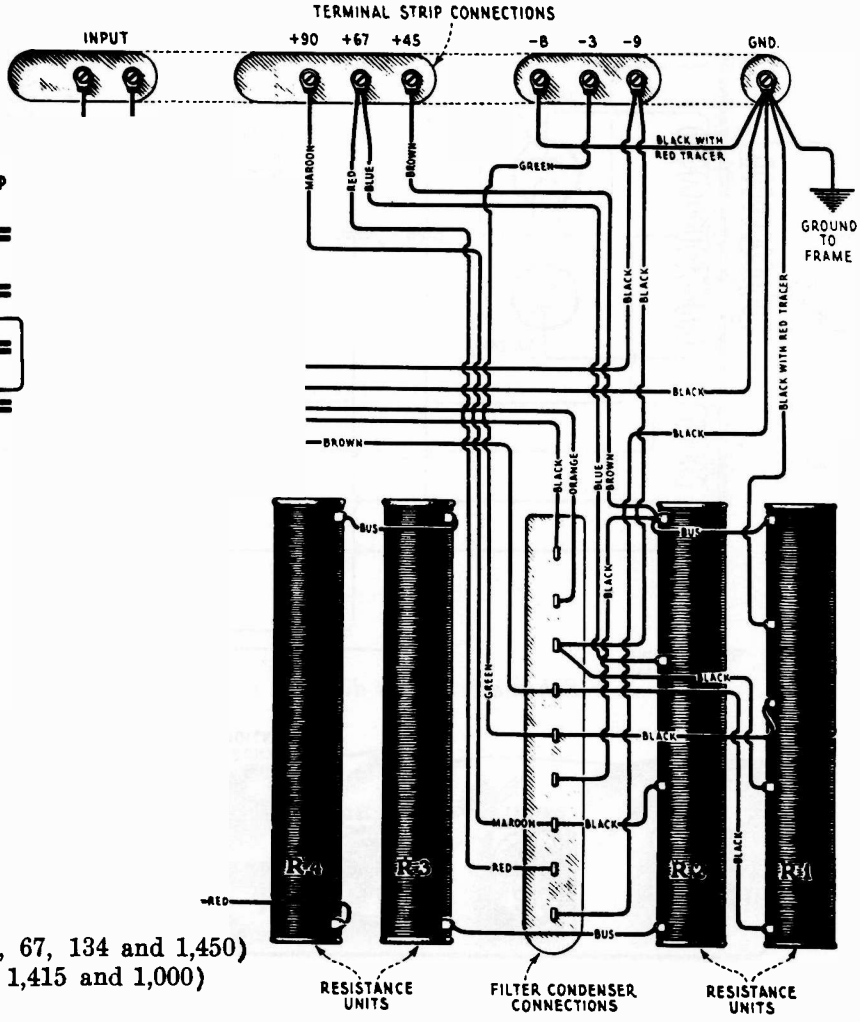
Insist on genuine factory tested parts, which are readily identified and may be purchased from authorized dealers

Stock No.	DESCRIPTION
	S.P.U. ASSEMBLIES
760	Knob - Dilecto knob for binding post - Package of 10.
2034	Switch - Two-position power line adjustment switch - Toggle type.
2185	Resistance unit No. 1 - Next to side of S.P.U. base.
2186	Resistance unit No. 2.
2187	Resistance unit No. 3 (or No. 4).
5742	Socket - Radiotron socket with metal shell and extended soldering terminals.
5746	Filter reactor (for receiver "B" and "C" voltages) complete in metal container.
5747	Transformer - Output transformer complete in metal container (located under reproducer unit).
8313	Condenser bank complete in metal container.
8314	Transformer - 60 cycle power transformer complete in container.

Stock No.	DESCRIPTION
	REPRODUCER ASSEMBLIES
793	Washer - Copper washer - O.D. 4 5/8", hole 1 3/4", thickness 1/4" - Fitted between field coil and end cap.
1401	Washer - Copper washer - O.D. 3 1/2", hole 1 1/2", thickness 1/8" - Fitted in end cap.
1648	Switch - Cabinet power line operating switch complete - Single pole.
2261	Washers - Cardboard washers used in front end of pot magnet - one set of 2.
5757	Coil - Field coil.
8139	Flange for mounting cone.
8140	Ring for holding cone.
9205	Cone - 6" corrugated paper cone with voice coil for dynamic speaker.



Filter condenser connections.

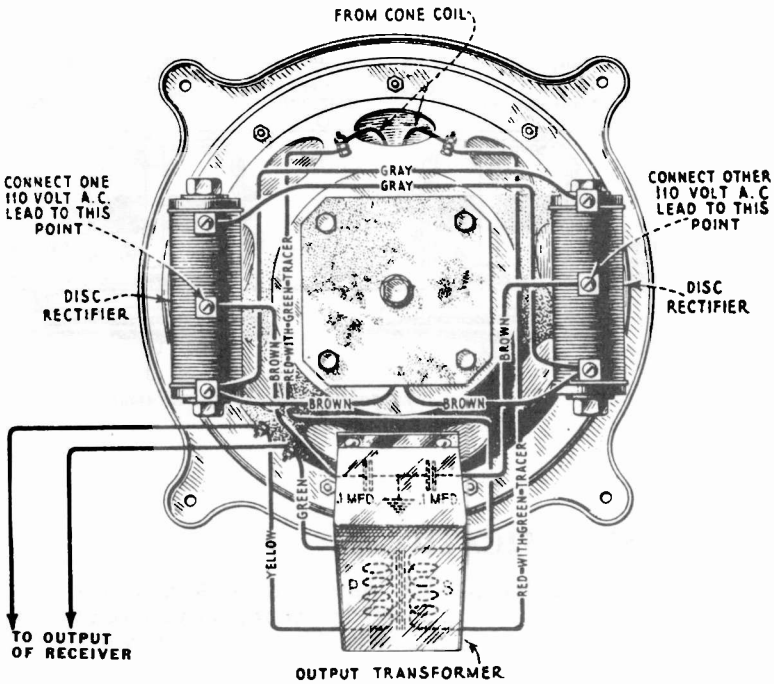


R1—2,976 ohms (Taps at 1,325, 67, 134 and 1,450)
R2—3,675 ohms (Taps at 1,260, 1,415 and 1,000)
R3—4,000 ohms
R4—4,000 ohms

LOUDSPEAKER 106

(105-125 Volts. 25-60 Cycle A. C.)

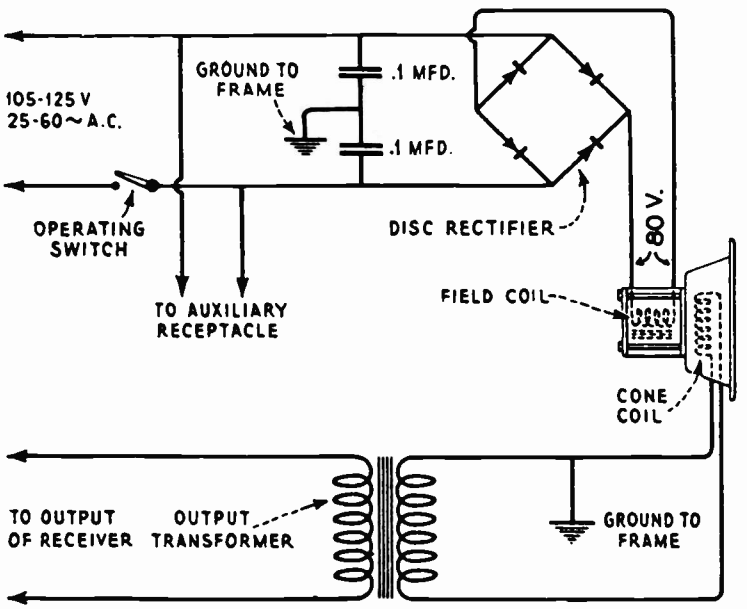
Loudspeaker 106 is also made in a model adapted to D. C. operation. This model is similar to the A. C. model except that a higher resistance field is used and no rectifiers nor .1 mfd. line condensers are used.



Wiring diagram of reproducer unit

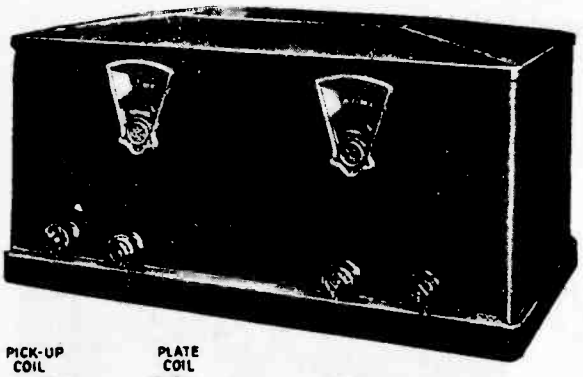
REPLACEMENT PARTS

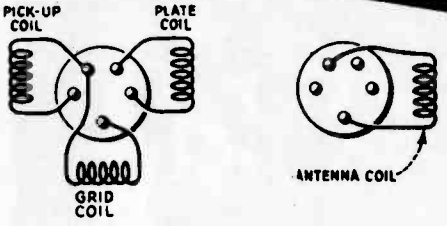
No.	*Description*
5895	Tapestry—Grille Cloth—Comprising front and side pieces stitched together.
2361	Output Cable—From receiver to loudspeaker.
5896	Power Cable—From socket outlet to operating switch, power receptacle and disc rectifier.
2015	Switch—Line operating switch.
5898	Rectifier Stack.
5899	Transformer — Comprising output transformer and two capacitors mounted in metal container.
8375	Cone—8" Corrugated paper cone.
8376	Ring—Metal clamping ring for holding cone.
8390	Ring—Cardboard seal ring—Package of 10.
8391	Coil—Field Coil.
9248	Magnet complete—Comprising field coil, core, coil case, two end plates, cone support, paper washers, four machine bolts with nuts and one cap screw.
5980	Field Coil (D. C. Model).
5981	Transformer—Output Transformer (D. C. Model).
5982	Terminal Strip Assembly — Comprising metal bracket with insulating bushings inserted, dilecto strips top and bottom, terminal screws with nuts and washers—completely assembled (D. C. Model).
9276	Magnet complete with Cone Support—Comprising two end plates, coil casing, core, field coil, damping washer, cone support, paper washers, four machine bolts with lock washers and nuts and one cap screw for holding core—completely assembled (D. C. Model).



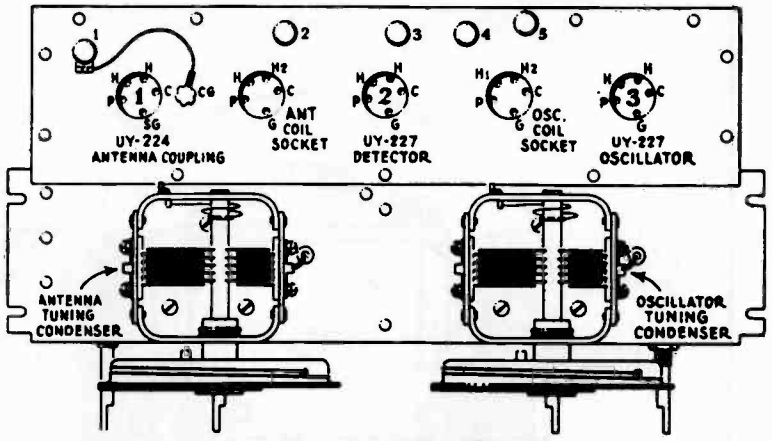
Schematic wiring diagram of Loudspeaker 106

VICTOR SHORT WAVE ADAPTOR SW-10
RADIOLA SHORT WAVE ADAPTOR





Internal connections of Plug-in Coils

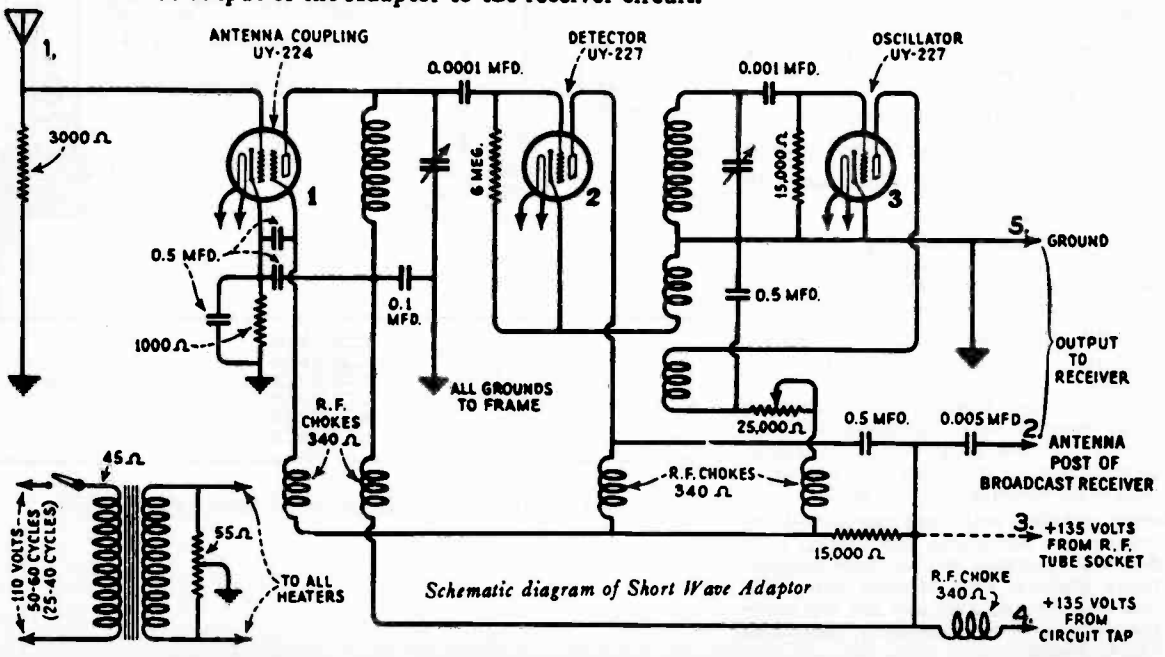


Test points of Short Wave Adaptor

ELECTRICAL SPECIFICATIONS

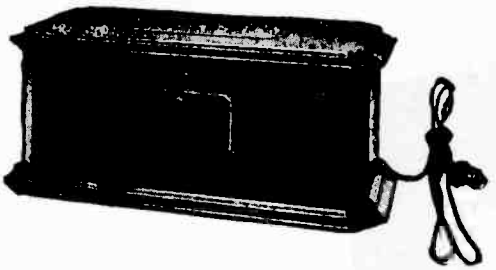
Voltage Rating	105–125 Volts (200–250 Volts 60 Cycle A. C. Only)
Frequency Rating	25–40 Cycles and 50–60 Cycles
Power Consumption	15 Watts
Plate Voltage Supply	110–140 Volts D. C.
Recommended Antenna	Single Wire, 25–75 Feet Long
Recommended Ground	To Receiver Ground
Type of Circuit	Super-Heterodyne
Wavelength Range	16.5–110 Meters
Number of Plug-in Coils	8 (2 Per Set)
Recommended Output Frequency	1000 K. C.

Two methods of connecting the Adaptor to the broadcast receiver are provided. In one, the D. C. voltage is taken from the voltage supply of the receiver at a point of zero R. F. potential, or as near to the filter system terminals as it can be attached. The alternative scheme utilizes the first R. F. stage plate contact as a source of D. C., as well as to couple the R. F. output of the Adaptor to the receiver circuit.



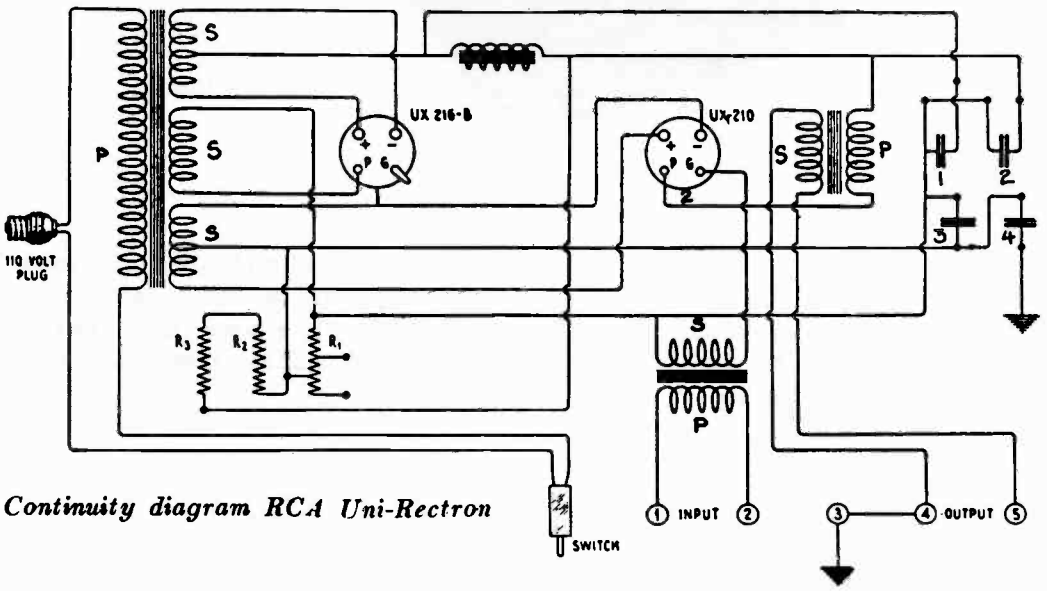
Schematic diagram of Short Wave Adaptor

POWER AMPLIFIER
(UNI-RECTRON—MODEL AP-935)
"B" ELIMINATOR
(DUO-RECTRON—MODEL AP-937)



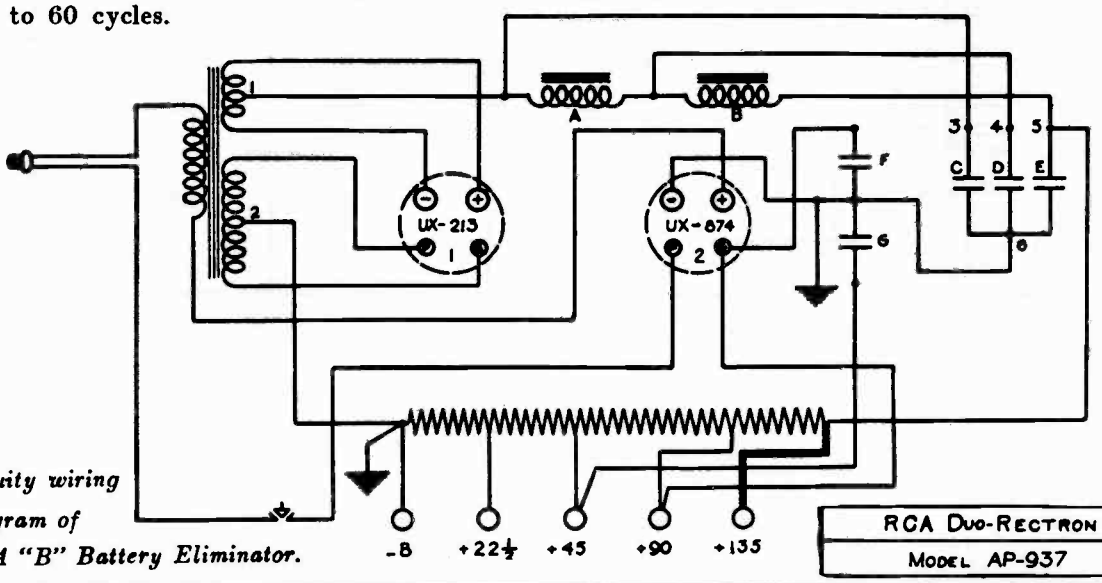
MODELS AP935 & AP937

RCA Uni-Rectron, Model AP-935, is a power amplifier unit containing suitable rectifying devices for operation from an alternating current house lighting circuit rated at 110-120 volts, 50 to 60 cycles.



Continuity diagram RCA Uni-Rectron

The RCA Duo-Rectron or "B" Battery Eliminator is a rectifier unit which will operate from an alternating current house lighting circuit rated at 110-125 volts, 50 to 60 cycles.

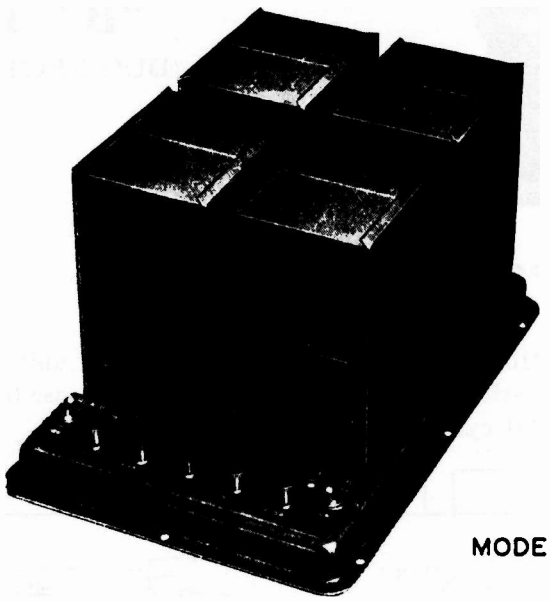


Continuity wiring diagram of RCA "B" Battery Eliminator.

RCA DUO-RECTRON
MODEL AP-937

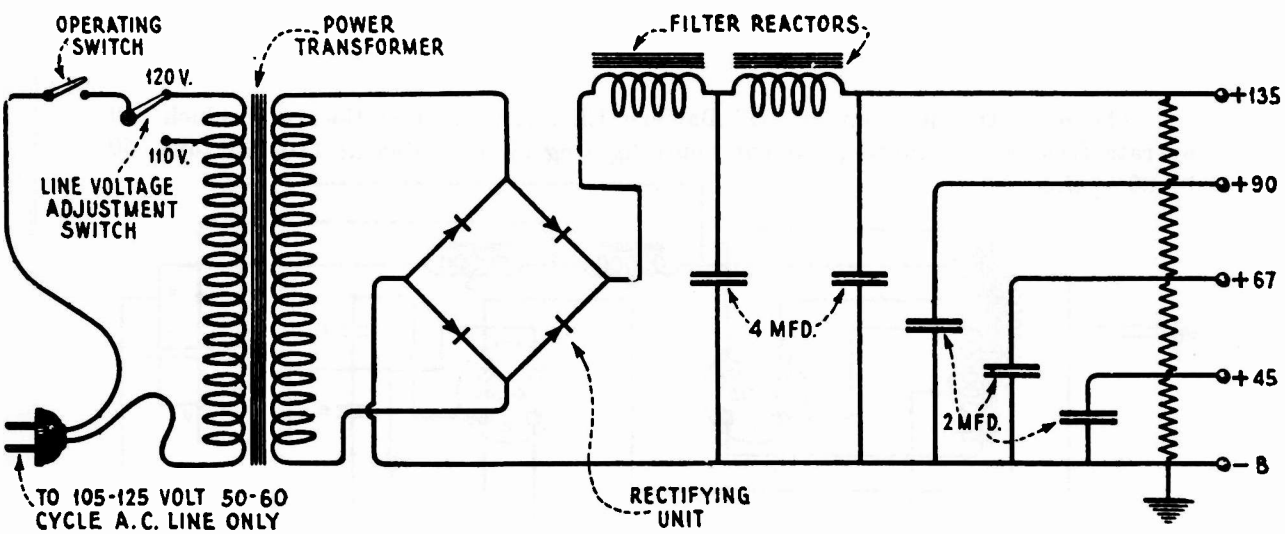
"B" ELIMINATOR

MODEL AP-1080



MODEL AP 1080

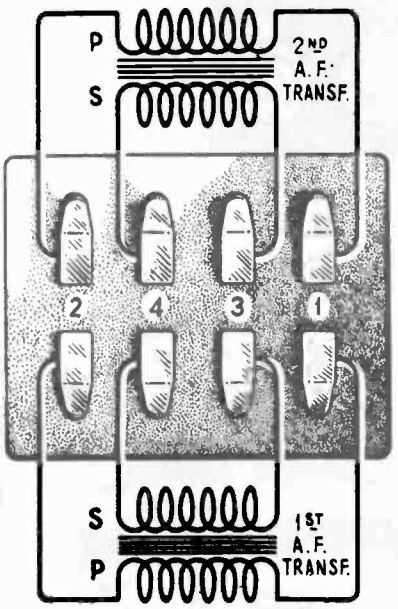
The maximum milliampere load of the B-Eliminator is 2 milliamperes for the detector or 45-volt tap; 15 milliamperes for the combined drain of the 67 and 90-volt tap; and 15 milliamperes for the 135-volt tap.



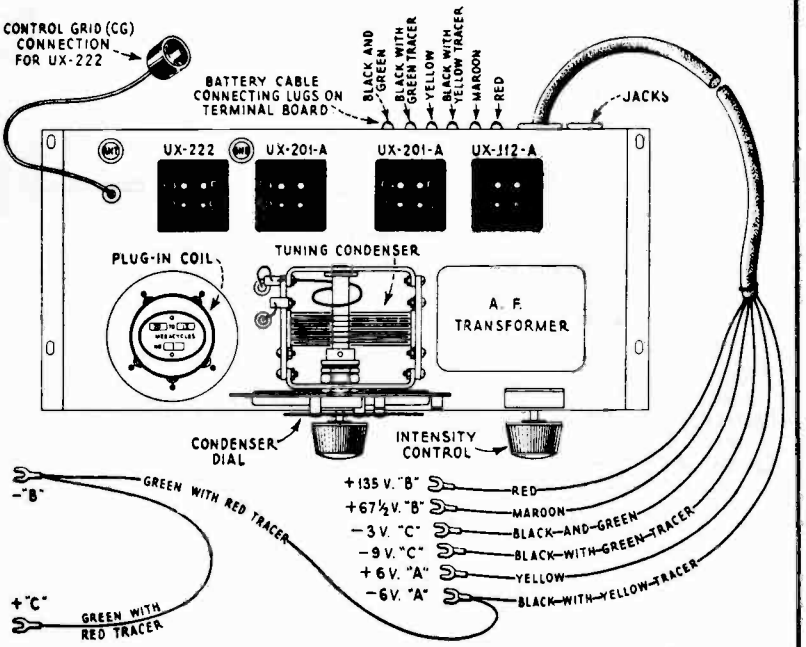
-Schematic circuit diagram of RCA B-Eliminator

(Model AR-1145) SHORT WAVE RECEIVER

RCA Short Wave Receiver, Model AR-1145 is a regenerative battery type short wave radio receiver employing one Radiotron UX-222, two Radiotrons UX-201A and power amplifier Radiotron UX-112A.

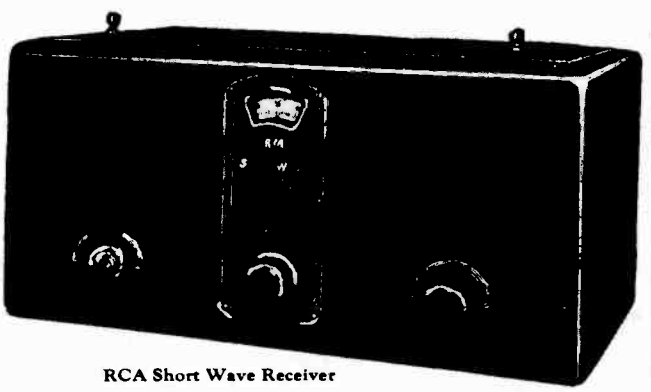


Internal connections of audio transformers

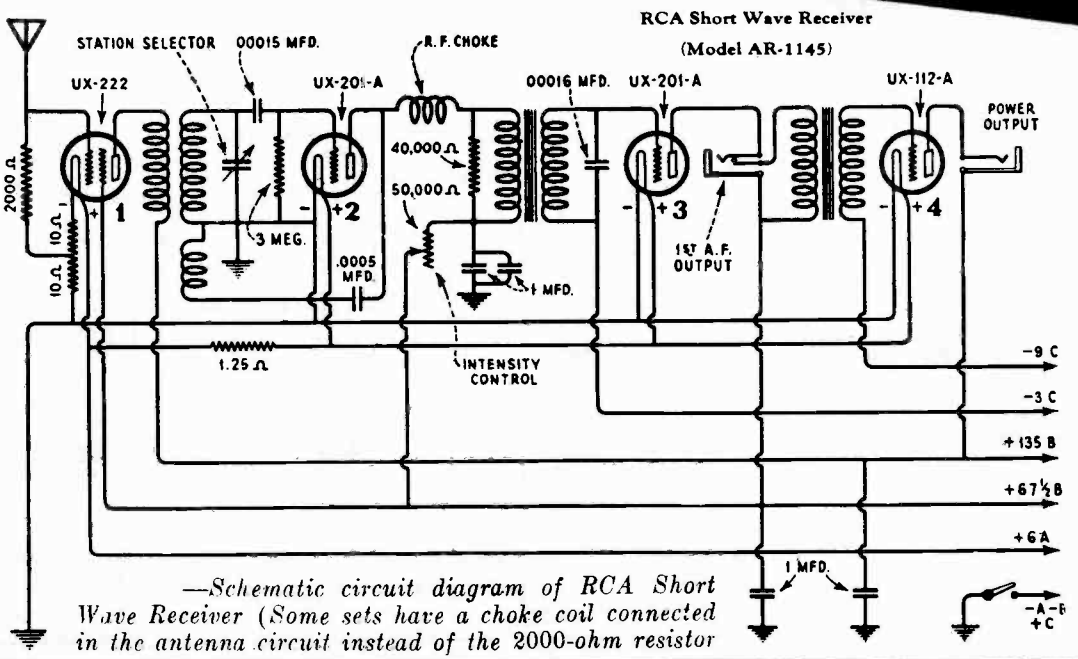


Socket layout and battery cable connections

Coil No.	*Frequency Range*	
	Megacycles	*Kilocycles*
1	20—12	20,000—12,000
2	12—7.2	12,000— 7,200
3	7.2—4	7,200— 4,000
6	. . . . .	1,500— 940
7	. . . . .	940— 550

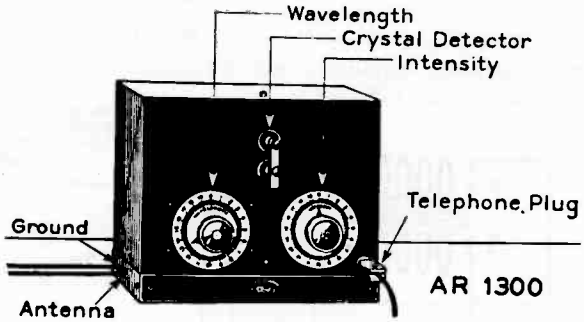


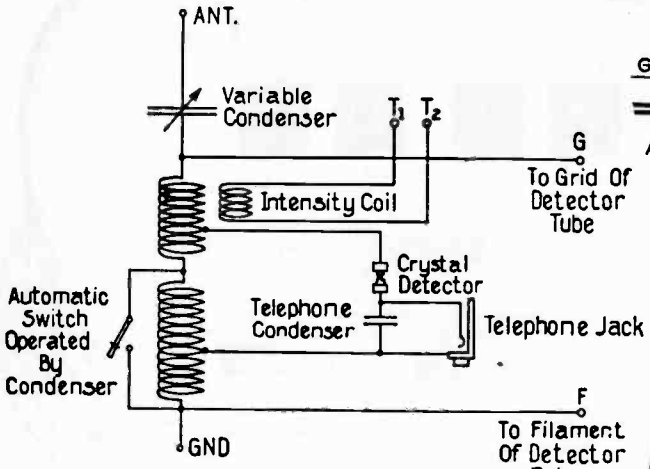
RCA Short Wave Receiver (Model AR-1145)



—Schematic circuit diagram of RCA Short Wave Receiver (Some sets have a choke coil connected in the antenna circuit instead of the 2000-ohm resistor

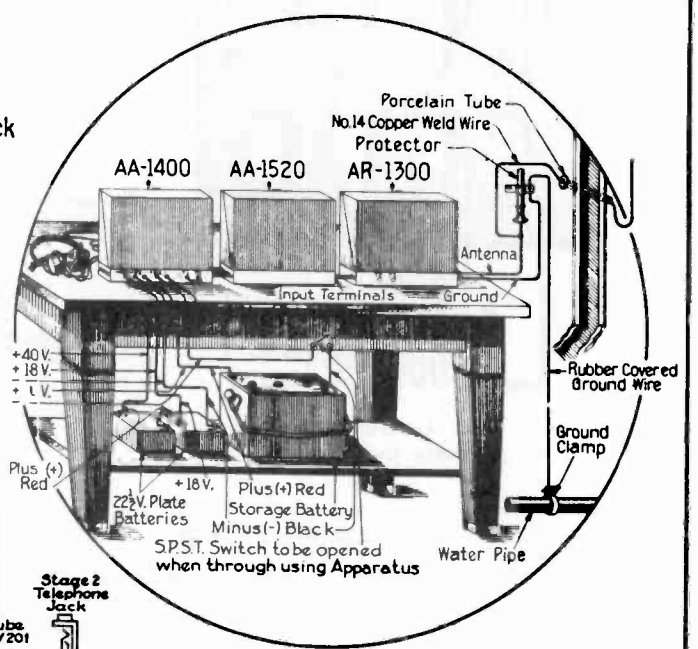
MODEL AR-1300, AA-1400 & AA-1520

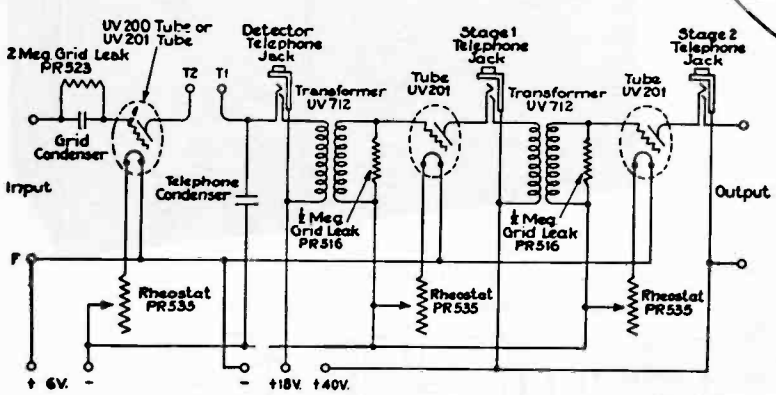




RADIO RECEIVER MODEL AR-1300

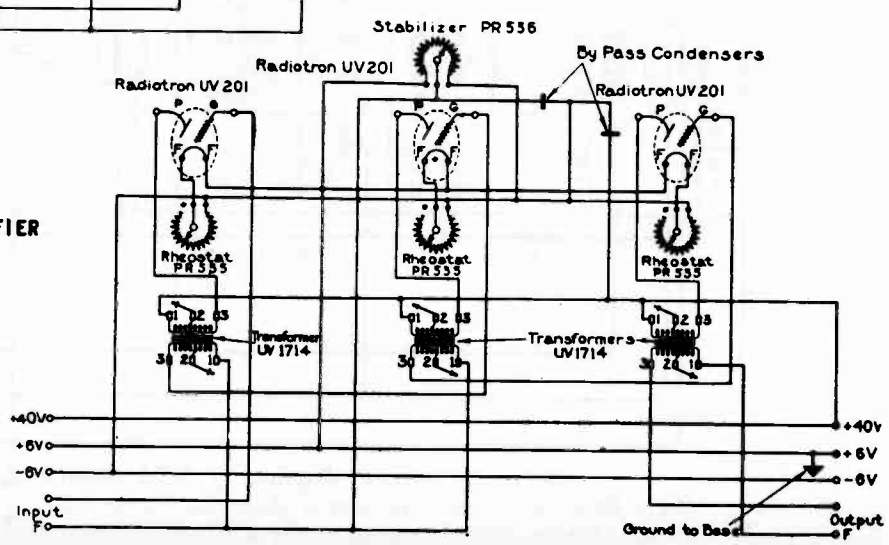
Wavelength: 180-700 meters.
Designed for use with AA-1400 or AA-1520.
Intensity coil used only when AR-1300 is used with AA-1400 or similar unit.





DETECTOR AMPLIFIER MODEL AA-1400

Designed for use with AA-1300



RADIO FREQUENCY AMPLIFIER MODEL AA-1520

Wavelength 200-5000 meters.
Designed for use with AA-1300.

AUTOMATIC RECORD CHANGER

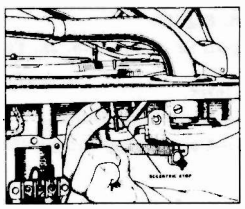
USED WITH — Automatic Victrolas and Electrolas 10-50, 10-51, 10-70 and 9-55

Re-Adjusting Tone Arm

After installing the electric pickup, it may be necessary to re-adjust the overall horizontal position of the tone arm in order to permit the needle to lower onto the smooth outside rim of the record.

a. Loosen the 12" eccentric stop clamping screw in the taper tube arm casting.

b. With a small rod or nail, turn the eccentric stop as shown in the illustration. In some cases it may be necessary to turn the stop to the right, and in other cases to the left.



c. Check the setting after successive trials until the proper position is obtained, and then re-tighten the clamping screw.

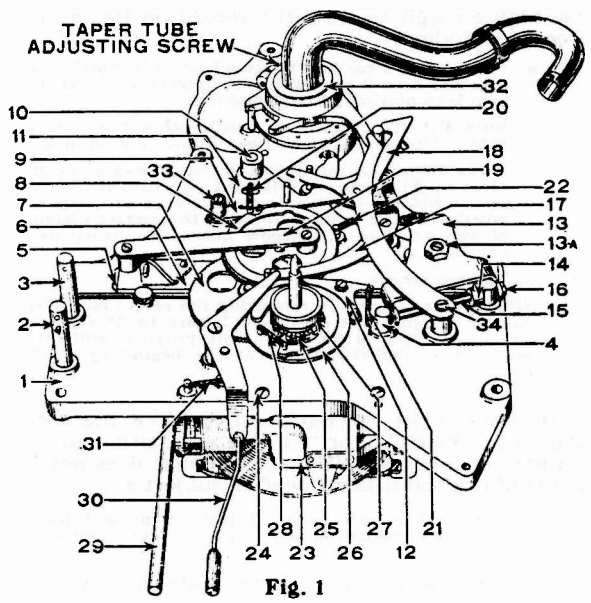


Fig. 1

Name of Part

1. Motor Plate
2. Lifter Ring Post Front
3. Lifter Ring Post Rear
4. Sound Box Lift Lever Stud
5. Slide Spring (Not Shown)
6. Main Slide
7. Intermediate Gear
8. Cam Gear
9. Index Lever
10. Index Shaft
11. Sound Box Control Lever
12. Clutch Release Lever
13. Sound Box Lifting Lever
13a Nut
Screw
14. Collar
15. Shaft
16. Nut
17. Trip Lever
18. Taper Tube Return Lever
19. Connecting Link
20. Spring
21. Spring
22. Spring
23. Motor—60 Cycle
—25-30 Cycle
—Universal
24. Screw (3 Used)
25. Thrust Washer (Not Shown)
26. Pawl Carrier
27. Clutch Wheel
28. Spring
29. Index Control
30. Reject Lever
31. Spring
32. Taper Tube Assembly
33. Screw (6 Used)
34. Screw (2 Used)

NOTE:—The operating unit of the Automatic Electrolas differs from the Automatic Victrolas in the taper tube return lever No. 18, Fig. 1, All 10-50 units above serial No. 8950, all 10-51 above serial No. 800, and all 10-70 and 9-55 have a motor plate with provision for mounting the electric pick-up shunt switch and the remote reject control.

SERVICING

1. Should the sound box (or pick up) fail to swing into the record groove after the tone arm has descended to the playing position:

Check to see that the machine is level. If the right side (facing the front of the machine) is lower than the left, the sound box will not swing over into the record groove. If the left side is low the sound box will skip the first few grooves of the record. This is because the tone arm is mounted at a slight angle to the horizontal, allowing the arm to swing into the playing groove by force of gravity after lowering upon the smooth portion of the record.

2. If the record lift ring (No. 52, Fig. 2) fails to pick up record:

a. The magazine spindle is bent either towards the front or back of the instrument.

b. The magazine spindle (No. 36, Fig. 2) should either be lowered or raised slightly as the case may warrant, by adjusting screw (Part No. 19322).

c. The record is warped.

d. Lift ring shaft is bent.

e. Operating unit and magazine stand are located either too far away or too close together, and will not permit the records to mount the buttons properly. Remove magazine stand and file bolt holes in board, if necessary, so that the stand may be placed in the correct position with reference to the operating unit.

3. If the record drops into the drawer after being lifted from the magazine spindle or fails to line up with the turntable spindle:

a. The magazine spindle is bent either towards the front or the back of the instrument.

b. A warped record has been used.

c. Warped or bent lift ring.

d. Lifter ring posts (2 and 3, Fig. 1) out of line.

4. Should binding of the record lift pad (No. 50, Fig. 2) occur:

a. Remove the shaft (No. 49, Fig. 2.) If bent, it should be replaced with a new shaft.

b. Note if sides of record lift pad are binding against nut of latch and link of record lift ring. If necessary, file the sides so as to clear the ring.

A bent shaft causes failure of the pad and lift ring to rise simultaneously. The record consequently is not raised from the turntable equally and is thus forced by the revolving turntable to strike the side of the record chute. This condition may cause breakage of records.

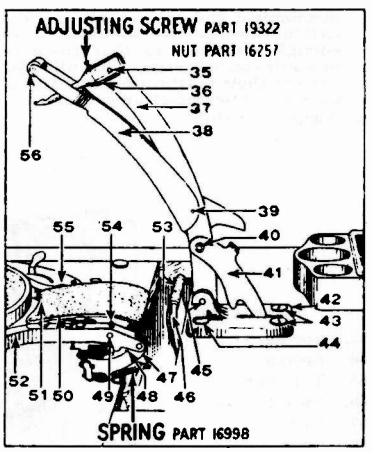


Fig. 2

Name of Part

35. Screw
Nut (Not Shown)
36. Magazine Spindle
37. Magazine Stand
38. Tilting Lever
39. Screw
Nut (Not Shown)
40. Nut
41. Latch
42. Base
43. Screw
44. Screw
45. Screw
Nut (Not Shown)
46. Record Guide
47. Latch
48. Link
49. Shaft
50. Record Lift Pad
51. Felt
52. Record Lift Ring
53. Felt
54. Screw
55. Switch
56. Roller

5. If the lift ring fails to discharge a record into the drawer after it has been played:

The small spring (Part No. 16998) shown in Fig. 2 may be broken or disconnected.

AUTOMATIC RECORD CHANGER

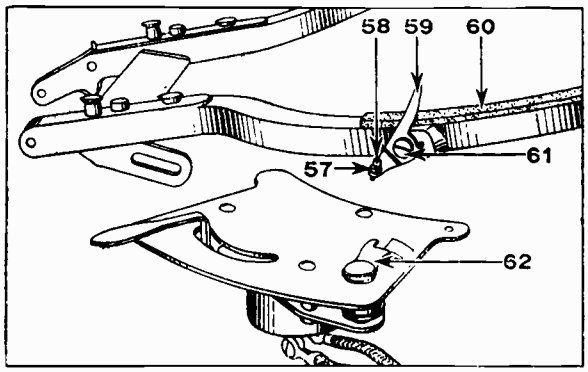


Fig. 3

Name of Part

57. Nut
58. Screw
59. Trip Lever
60. Felt
61. Screw
62. Latch Trip

6. If the brake does not shut off at end of program:

a. The small screw (No. 58, Fig. 3) on the automatic stop is not properly adjusted.

b. Set screw (No. 70, Fig. 4) located under brass plate on switch trip may be loose.

c. One of the springs (No. 63 or No. 64, Fig. 4) on the brake may not be properly adjusted, or has become loosened.

d. The electric switch contacts are sticking.

On 10-50 below serial number 8951 and 10-51 below serial number 801 proceed as follows:

Remove the bakelite cap of switch and spread contact points to permit easier operation. WHEN TAKING THE SWITCH APART BE CAREFUL TO OBSERVE THE POSITION OF THE INSULATING WASHERS SO THAT THEY CAN BE PLACED IN PROPER POSITION WHEN REASSEMBLING.

On all other automatic instruments the following procedure should be used:

Remove bakelite top, loosen screws holding contact mechanism and with switch in closed position, move switch towards the shoulder of the latch, leaving enough clearance so that there is no pressure on movable contact arm. This will allow the contacts to open to their maximum point and prevent arcing and sticking. File and clean contacts.

e. Warped lift ring.

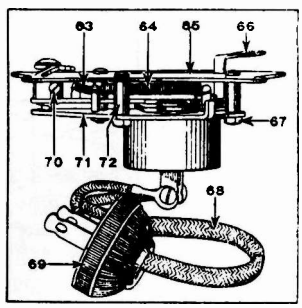


Fig. 4

Name of Part

63. Spring
64. Spring
65. Top Plate
66. Switch Lever
67. Nut
68. Cord
69. Plug
70. Screw
71. Bottom Plate and Switch Assembly
    10-50 Below Serial No. 8951
    10-51 Below Serial No. 801
    All Other Automatics Bottom Plate Only
72. Spacer
73. Switch (Used with Bottom Plate 20305A)

7. Failure to reject a record when the reject button is pushed may be caused by:

a. Reject button having been forcibly pushed in, bending connecting link to reject mechanism. This can be remedied by removing the front panel on which the index lever is mounted and bending the reject mechanism back to its original position.

b. Defective reject magnet circuit. (Models 10-70 and 9-55).

1. Bad switch—dirty contacts.
2. Burnt out coil.
3. Broken wiring.

8. Continued rejection when the button is not pushed may be caused by:

a. The button being stuck, having been forcibly pushed in by the operator.

b. Heavy grease or foreign matter in the cam notches of gear (No. 8, Fig. 1).

c. Excessive pull in spring (No. 28, Fig. 1) or worn teeth on pawl.

d. Worn trip lever

e. Mechanism improperly timed.

CAUTION:—Use nothing but specified springs throughout.

9. If the point of the needle rides over several grooves in coming to rest on the record, or does not rise high enough to clear the record on its return, proceed as follows:

a. Place index lever in "Victrola" or "Electrola" position and permit mechanism to operate until the tone arm is in playing position and free.

b. Note distance of point of needle below top of turntable. This should be between $\frac{1}{32}$ and $\frac{1}{16}$ of an inch.

c. If the distance is not approximately the same as that given in (b), make the following adjustment: Loosen screws holding crook stop to tone arm and alter the position of the crook stop until the correct distance of the point of the needle below the turntable is obtained.

d. Tighten screws.

NOTE:—Carelessness in mounting the sound box or the pick-up on the tone arm, and failure to fit screw on pick-up in hole provided for this purpose, will often result in a condition noted at the beginning of this section.

10. Should the mechanism trip when the index lever is in "Victrola" or "Electrola" position, and it has been definitely found that the cause does not lie in any of the points mentioned in subject 8:

a. Remove the back panel of instrument and loosen taper tube adjusting screw (Fig. 1) one quarter (¼) turn.

b. Force the taper tube arm (the casting containing the adjusting screw) UP until the trip lever clears the ratchet by approximately $\frac{1}{32}$ of an inch, and retighten adjusting screw.

NOTE:—The normal position of the collar should now be approximately $\frac{1}{32}$ of an inch below the base of the taper tube, PROVIDING ADJACENT PARTS HAVE NOT BEEN BENT OR TAMPERED WITH.

11. If the sound box or pick-up does not lower at the proper position onto a ten- or twelve-inch record: falls into the record groove without first striking smooth outside margin: or does not reach the outside diameter of record before lowering:

a. Place twelve-inch record on turntable with index lever in 12-inch position, start the motor and note the distance at which the needle strikes to right or to left of correct adjustment. (Needle should strike record at approximately the middle of the outside margin.)

b. Turn index lever to "Victrola" or "Electrola," allowing mechanism to complete cycle so that tone arm is free and in playing position.

c. Stop motor.

d. Move the tone arm towards the center of the record, past the eccentric groove until it strikes the stop.

e. Slightly etch the record label at this point with the needle.

f. Remove the back panel of the instrument, allowing access to "Taper Tube Adjusting Screw," as shown in Fig. 1.

g. Loosen the screw one quarter (¼) turn so that the tone arm can be moved the proper distance in the casting either to the right or left of the etched mark on the record until the proper adjustment has been obtained. The adjusting screw should again be tightened, BEING VERY CAREFUL THAT THE TAPER TUBE ARM CASTING HAS NEITHER RAISED NOR LOWERED WITH RESPECT TO THE TONE ARM.

h. Remove twelve-inch record and replace with ten-inch one.

i. Start the automatic mechanism again and allow it to run until the taper tube return lever starts to draw the taper tube towards the record. Shut off power and revolve turntable by hand (If induction disc motor is used) noting the manner in which the needle comes to rest on the record. (If it is noted that the horizontal travel of the needle changes to a slope just before reaching the record and continues so, until surface of the record is reached, it is evident that the mechanism is lowering the sound box or pick-up prior to the termination of the needle's horizontal travel towards the record.)

As a condition of this nature will sometimes cause the needle to drop outside of the record edge and damage the adjacent mechanisms, or, due to the greater velocity attained on the slope, break down the walls of the first grooves, the following adjustments should be made:

j. Slightly loosen lock nut (13A, Fig. 1) on cam button and with screw driver turn button about ten degrees in either a clockwise or counter-clockwise direction.

k. Tighten nut and start the mechanism through its cycle, again noting the manner in which the needle strikes the record. Observations should show a needle path practically horizontal until the needle is almost directly over the margin of the record: then a gradual drop to the record's surface. In the event that this adjustment has not yet been reached, turn the cam button about ten degrees more in the same direction and repeat until the mechanism functions in the desired manner.

In order that this gradual adjustment is not carried too far and to prevent the cam button from resting too much on the slope of the main slide, a check may he made from the following requirements:

With the index lever in "Victrola" or "Electrola" position, and the needle resting on the margin of a ten-inch record, the clearance between the bottom of the fulcrum pin on the taper tube assembly and the fish tail on No. 13, Fig. 1, should be about $\frac{1}{4}$ of an inch, providing the fish tail has not been bent.

From the above description it should now be evident that the main function of the cam button is to determine the time or position with respect to the horizontal travel of the sound box or pick-up, in which the needle is lowered onto the record, and its adjustment should not therefore be altered for other failures.

12. Should the pick-up shunt switch (shown dotted in Fig. 9) fail to close or should it momentarily open after the reject button has been operated, or fail to open when the first music grooves are reached:

With roller "G" engaged in pawl carrier at point "H," Fig. 9, loosen screws holding pick-up shunt switch to the operating unit base, and adjust its position so that the contacts have a clearance of about $\frac{1}{32}$ of an inch.

If the condition cannot be corrected by the above adjustment, loosen the nut shown at 13A, Fig. 1, and turn the screw *slightly* as may be required.

13. Should the mechanism fail to trip in ten- or twelve-inch position:

a. Loosen set screw under crook joint collar of tone arm and tighten collar until all side play is removed, being careful, however, that the up and down movement of the crook is not impeded.

b. Remove any possible bind from trip pawl on fulcrum pin mentioned in (k), No. 11, above.

14. If the index lever does not point to the proper position on indicator plate, adjustment can be made in the following manner:

a. Remove back of cabinet to give access to gears controlling index lever. The shaft and pinion are on a block which is attached to the top plate with two screws.

b. With a short screw driver loosen these screws until gears are clear.

c. Set index lever so that it points to proper position on indicator plate.

d. Re-tighten the screws and then replace the back of the cabinet.

Figures 5, 6 and 7 explain details of oiling and cleaning the entire mechanism. DO NOT USE HEAVY GREASE. Heavy grease or foreign matter lodging in the cam notches or gears may cause failure of operation.

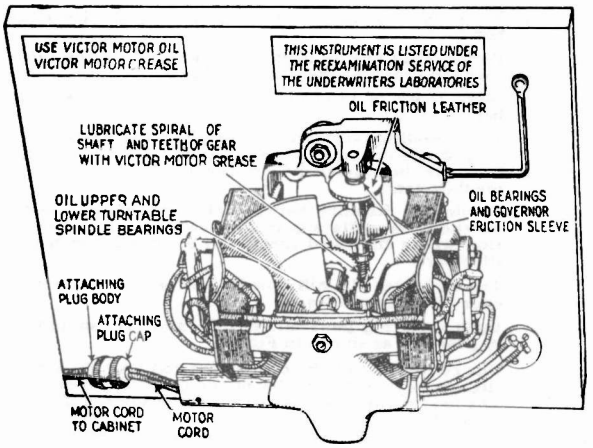


Fig. 5

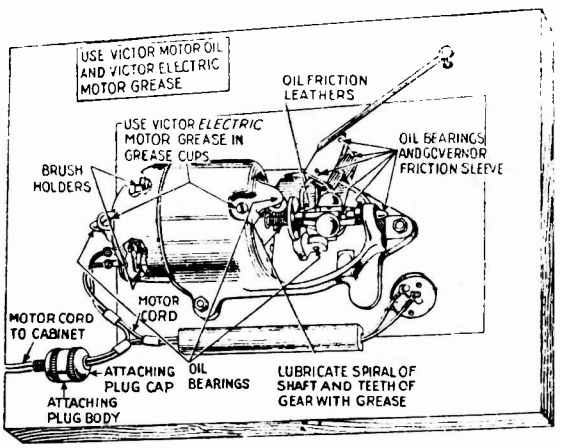


Fig. 6

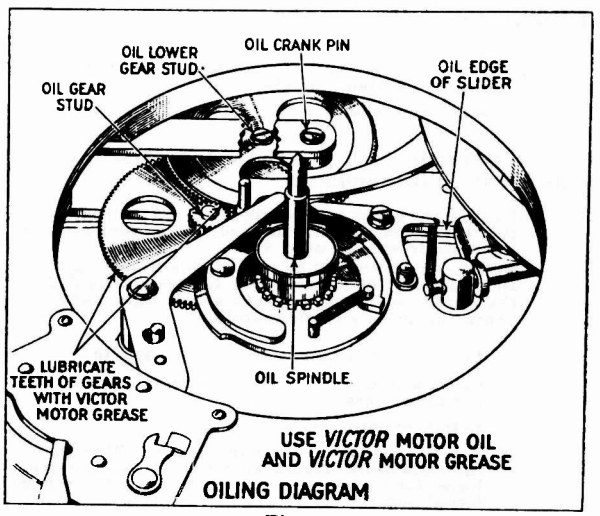


Fig. 7

AUTOMATIC RECORD CHANGER

Precautions necessary in reassembling:

a. Replace thrust washer (No. 25, Fig. 1).

b. Remount motor on bed plate.

c. Retime mechanism in the following manner, referring to Fig. 9.

1. Hold cam pin against cam slide and revolve gear in clockwise direction until pin strikes side of rise of cam.
2. Mark tooth of intermediate gear parallel with slide bar.
3. Revolve cam gear in counter-clockwise direction until cam pin touches opposite side of cam.
4. Mark tooth of intermediate gear parallel with slide bar.

   These preliminary actions will allow the determination of the extremes of the cam and permit the distance to be referenced on the teeth of the intermediate gear.
5. Divide the distance between the two marked teeth on the intermediate gear and set the gear in a position where the third mark will be parallel with the slide bar.

   The trip lever pin will now be centralized with reference to the cam sides.

   Upon replacing pawl carrier, "G" and "H" should be in position, as shown in Fig. 9.

   The center line of the connecting rod "A" should be slightly beyond the center of the gear "B" as shown. The face of the pawl "E" will then be against the trip lever "F."

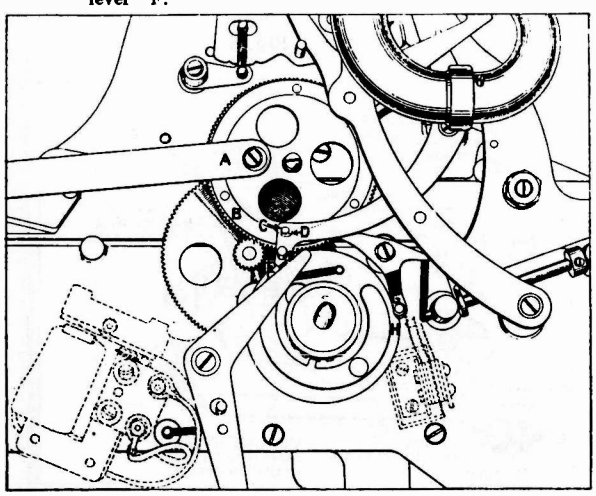


Fig. 9

(Dotted portion at left shows remote reject coil and on right electric pick-up shunt switch both used on 9-55 and 10-70.)

d. Replace clutch wheel and tighten set screw in spotted point on turntable spindle.

e. Replace reject lever.

If the tone quality of the model 10-50 instrument is not up to standard:

Replace the sound box, bearing in mind if this is done that it may be necessary to readjust the tone arm, as explained in subject nine (9).

NOTE:—It also would be well at this time to place a small amount of Victor Motor Grease on the end of the sound box crook, to make an air tight joint between this point and the sound box.

1. Loosen the horn elbow as shown in Fig. 10.
2. Insert a piece of card board large enough to block the sound passage.
3. Retighten horn elbow.
4. Remove sound box from taper tube. Blow lightly into the tube, taking care not to use too great force, for by so doing, grease at the joint will be forced out.

   NOTE:—If the passage is tight, a slight resistance will be noticed and a pressure can be established. If the passage is open, it will be impossible to establish a back pressure.

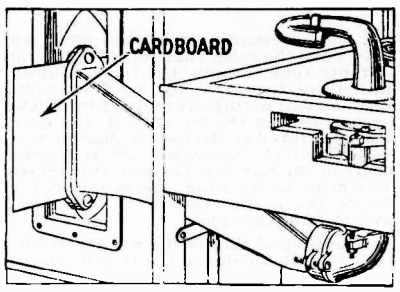


Fig. 10

If the above test shows an air leak exists:

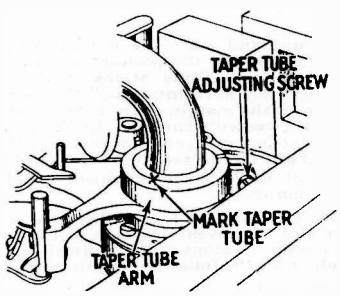


Fig. 11

a. Take the following precautions prior to loosening taper tube adjusting screw:

1. Etch a mark across the gold plated portion of the base of the tone arm and taper tube arm as shown in Fig. 11, so as to mark the position of these two parts with relation to each other. The replacement can thus be made with a minimum of adjustment.
2. Note the height of the base of the tone arm in the taper tube arm (casting).

b. Loosen the taper tube adjusting screw.

c. Remove the taper tube arm casting from the unit.

d. Remove the three (3) screws (one of which is shown in Fig. 11) on the base of the tone arm.

e. Lift the tone arm from the unit.

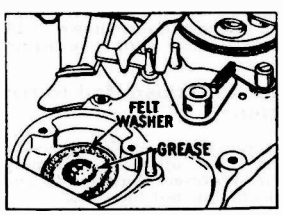


Fig. 12

f. Examine the felt washer (shown in Fig. 12) to determine that it is properly packed.

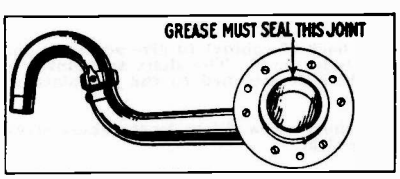


Fig. 13

AUTOMATIC RECORD CHANGER

VICTOR MODELS

10-35 ABOVE SERIAL NO. 8126
10-69 " " " 5001
9-54 " " " 6401
9-56 " " " 1701

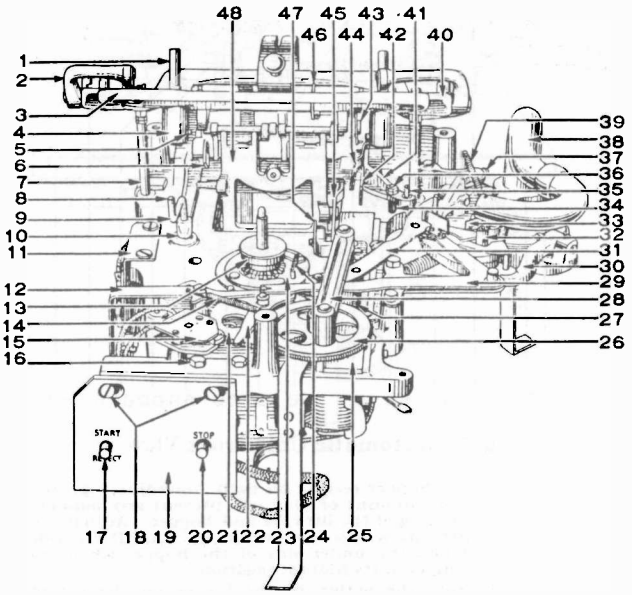


Fig. 1—Automatic Mechanism with Motor Board Removed

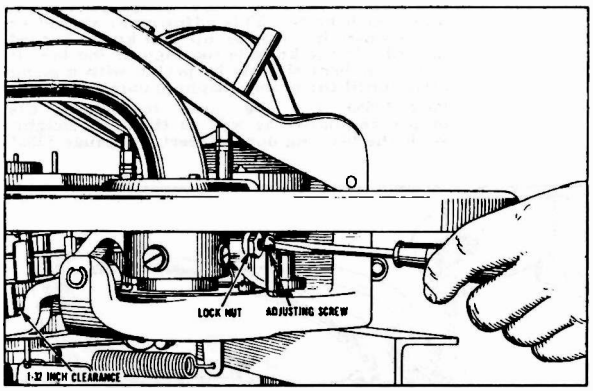


Fig. 2—Adjusting Sound Box Lift Lever

1. FAILURE OF NEEDLE TO SWING INTO FIRST RECORD GROOVE—If the needle fails to swing into the first record groove after striking the smooth outside rim:

a. Determine if the instrument is level by placing a spirit level on the turntable.

b. If the right side of the cabinet is low, raise this side slightly by placing a thin wooden wedge or other available material under the feet of the lower end.

c. If the condition is not corrected by the above adjustment:

Loosen the lock nut and adjust the sound box lift lever adjusting screw as shown in Fig. 2 until there is a clearance of approximately $\frac{1}{32}$" between the under side of the taper tube arm casting and the top of the sound box lift lever as shown. This clearance can be checked by placing a thin piece of cardboard between the two points and obeerving whether or not there is a dragging on the cardboard when the tone arm is moved toward the center of the record. ***This clearance is highly important and will affect other conditions of the mechanism if not properly adjusted.***

2. EXCESSIVE WEAR ON RECORDS—If excessive wear on the records is noted, the same adjustments as described in subject 1 above should be made. It may be possible that the needle will move into the record groove after striking the smooth outside rim, but will cause excessive wear on the record due to a slight contact between the two points shown in Fig. 2 where the $\frac{1}{32}$" clearance should exist.

There are fifteen primary mechanical adjustments to the automatic unit. A correct knowledge of these, their functions, and the method of procedure as outlined in the following pages should enable a service man to correct practically any of the more common troubles with the mechanism. It is suggested that in all cases a complete check of the adjustments be made in the order listed below.

ADJUSTER	PURPOSE	ILLUSTRATED
1. Sound box lift lever adjusting screw	Adjusting proper height of needle clearance above record	Fig. 2
2. Sound box crook stop	Adjusting height of needle above record	Fig. 3
3. Link pin adjuster	Adjusting for proper length of stroke on pusher plate	Fig. 4
4. Hopper adjusting nuts and screws	Adjusting height of hopper with respect to lift ring	Fig. 6
5. Lift ring screws	Adjusting height of lift ring with respect to hopper	Fig. 8
6. Spiral cam adjusting screws	Adjusting height of knives on record support pins	Fig. 9
7. Lift ring spring adjusting nuts	Adjusting tension of lift ring spring	No. 69, Fig. 11
8. Hopper arm adjusting screws	Adjusting hopper arms onto front of lift ring	Fig. 10
9. 12" eccentric	Adjusting overall horizontal position of tone arm	Fig. 13
10. 10" eccentric	Adjusting horizontal position of tone arm for 10" record	Fig. 14
11. Index trip lever	Adjusting for 10" and 12" indexing and stop	Fig. 15
12. Index lever adjusting nuts	Adjusting height of index lever	No. 36, Fig. 1
13. Reject rod collar	Adjusting for proper reject action	Fig. 16
14. Latch trip	Adjusting for proper eject action on eccentric groove	No. 33, Fig. 1
15. Collars on stop rod	Adjusting for proper stop action	No. 86, Fig. 12

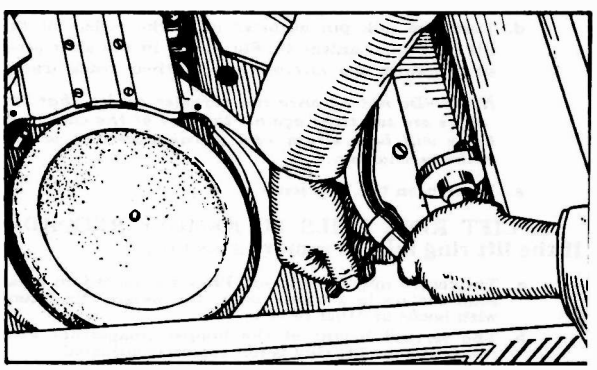


Fig. 3—Adjusting Crook Stop

3. NEEDLE DOES NOT LOWER SUFFICIENTLY—When the $\frac{1}{32}$" clearance described in c of subject 1 above is obtained, the clearance between the needle point and the record should be approximately $\frac{1}{16}$" on the return of the tone arm. If this clearance does not exist:

AUTOMATIC RECORD CHANGER

a. Examine the position of the tone arm cover plate. It should be so placed on the motor board that the tone arm does not touch the plate at any time. The screws in the plate can be loosened if necessary, care being taken not to turn these so far that the nuts on the bottom are dropped, and the plate then moved slightly to allow clearance of the tone arm. Re-tighten the screws securely when the proper clearance has been obtained.

b. Examine the sound box or pickup crook stop. Loosen the lock nuts and turn the stop screw, which is an eccentric, until the proper lowering has been obtained. Re-tighten the lock nut when the proper lowering has been obtained. See Fig. 3.

4. NEEDLE DOES NOT CLEAR RECORD—If the tone arm does not rise sufficiently for the needle to clear the record on the return of the tone arm:

a. Examine the position of the tone arm cover plate and the crook stop making the same adjustments as described in subject 3 above except that the eccentric screw must be turned in the opposite direction.

b. If the condition is still not corrected, particularly if there seems to be a sluggish action of the return of the tone arm, remove the sound box lift lever spring shown in Fig. 2, and increase its tension by shortening the straight section of the spring, bending it nearer the coiled section.

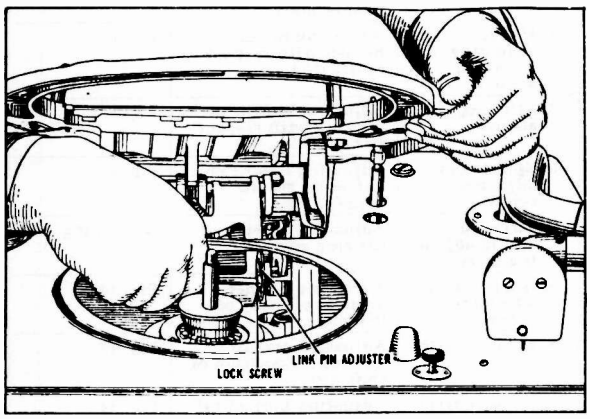


Fig. 4—Adjusting Link Pin Adjuster

5. LIFT RING DROPS SLIGHTLY WHEN DESCENDING—If the lift ring suddenly drops about ¼" when first starting down, make the following adjustments:

a. Remove the turntable.

b. Loosen the lock screw in the link pin adjuster as shown in Fig. 4.

c. Turn the mechanism until the main slide is in its extreme forward position.

d. Turn the link pin adjuster until the rollers of the lift lever mechanism 48, Fig. 1, are in the slots pressing against the extreme end of their track (cam).

NOTE—Do not advance the adjuster so far that the rollers are too tight against the end of the cam since there will be a strain and possible binding of the entire mechanism.

e. Re-tighten the lock screw.

6. LIFT RING FAILS TO REMOVE RECORD—If the lift ring fails to remove a record,

a. The record may be warped. Place the record on a flat solid surface in a warm room, and weight the record with books or other records.

b. The vertical height of the hopper (magazine) with respect to the lift ring is not correctly adjusted.

1. Loosen the hopper support screws as shown in Fig. 6.
2. With the lift ring in its highest position, turn the hopper adjusting nuts so that the top surface of the hopper is exactly flush with the top of the lift ring. A straight edge can be used as a gauge for this height. It should be placed across the two surfaces. This same method should then be used for gauging the height on the opposite side of the hopper. Turn the hopper support screws so that there can be an additional upward movement of the hopper of approximately 1/64" on each side with the hopper resting on each top adjusting nut. This amount of play will prevent any possible binding of the lift ring and hopper. Adjust the lift ring screws as shown in Fig. 8, until the ends touch the under side of the hopper when the ring is in its highest position.
3. Note the action of the knives on the record support pins. The height of these should be tested by means of the gauges 52467, 52468 and 52855. Pushing the top of the record support pins down, insert the .065"—.070" gauge, Part 53370, under each knife. This adjustment should be made when lift ring is up and knives turned inward. If the knife is too high or too low, it should be bent slightly by prying with a screw driver until the proper height is obtained.

   Part 52855 can be used to obtain the proper angularity as well as the .120" height. With the lift ring down, insert the gauge 52855

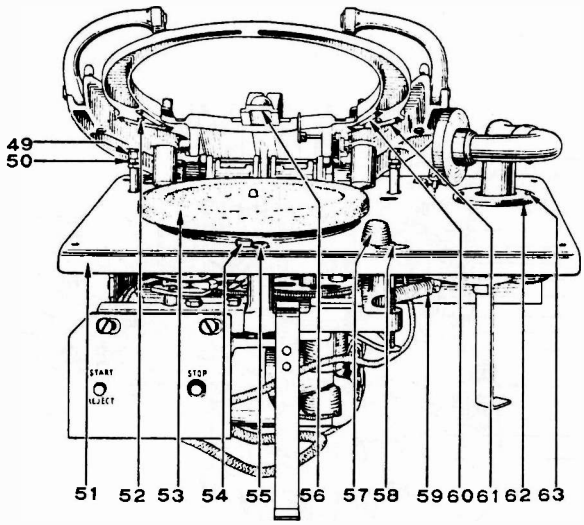


Fig. 5—Automatic Unit Front View

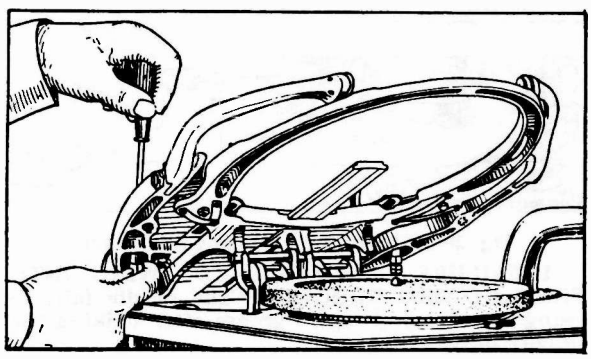
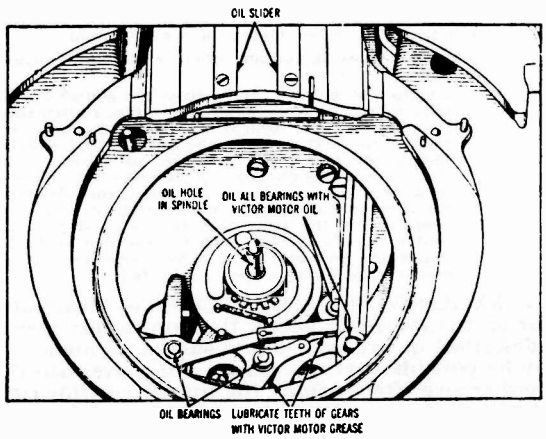


Fig. 6—Adjusting Height of Hopper



Oiling Diagram Automatic Mechanism

as shown in Fig. 9. There should be no play in the height of the knives and the sharp edge should be against the curved surface of the gauge. If this condition does not exist, loosen the set screws in the spiral cams as shown in Fig. 9. Using a socket wrench such as part 52992, make the necessary setting of the knives, pushing the spiral cams toward the back center of the mechanism, and then re-tighten the set screws.

7. LIFT RING REMOVES TWO RECORDS—If two or more records are entirely removed from the hopper and deposited on the lift ring at the same time:

a. Records are improperly loaded. (See Subject 2 under GENERAL).
b. Hopper improperly adjusted with respect to lift ring. See b of subject 6 above.
c. Hopper arm improperly aligned, allowing the two bottom records to pass under the arms. Lower the hopper arms by turning the small adjusting screws as shown in Fig. 10, so that both hopper arm spacers touch the lift ring when the latter is in its raised position and there are no records in the hopper. Spacing for gates on hopper arms should be between .093" and .107".

8. RECORD CENTER FAILS TO ALIGN WITH TURNTABLE SPINDLE—The mechanism is designed to allow a 10" record to fall directly over the turntable spindle and a 12" record to fall $\frac{1}{16}$" in back and then fall of its own weight forward over the spindle. If this condition does not exist:

a. Records are not properly loaded in hopper.
b. Record is warped.

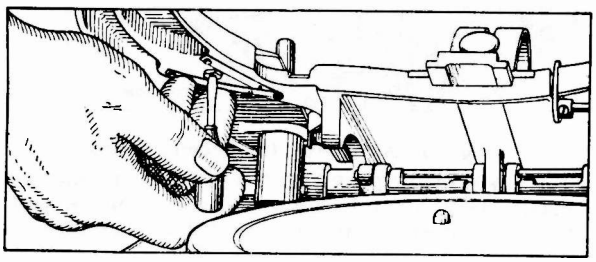


Fig. 8—Adjusting Lift Ring Screws

c. Record guide pins 74 or 75, Fig. 11, not fitting properly in holes of lift ring. This fit should allow a free vertical motion of the pins, but a minimum side motion.
d. Hopper improperly adjusted with respect to lift ring. Make the same adjustment as described in b of subject 6 above.
e. Note the position of the record pusher pins on the back edge of the record. If both pins do not touch the back edge of the record as the latter is being moved into position, loosen the upper screw in the pusher plate, and adjust the plate until proper contact is made, or, if one of the pins is below the record, bend the pusher spring slightly until proper contact is made.

9. LIFT RING RISES TOO SLOWLY—If the lift ring rises too slowly with a resulting strain on the mechanism, or if it descends too fast, increase the tension of the spring 68, Fig. 11, in the back of the mechanism in the following manner:

a. Loosen the two lock nuts on the eye screw.
b. Increase the spring tension by turning first the top and then the bottom lock nut toward the eye in the screw.
c. Test the adjustment by trial until the proper rising of the lift ring has been obtained and the ring descends slowly without a record. The ring should slightly overbalance the spring when the former is in its lowered position.

10. LIFT RING RISES TOO FAST—If the lift ring rises too fast, if it descends too slowly, or if it touches the under side of the record on the turntable during playing, decrease the tension of the spring 68, Fig. 11, in the following manner:

a. Loosen the two lock nuts on the eye screw.
b. Decrease the spring tension by turning first the bottom and then the top lock nut away from the eye in the screw.
c. Test the adjustment by trial until the proper rising of the lift ring has been obtained, and the ring descends slowly without a record.

11. LIFT RING VIBRATES IN DESCENDING—If the lift ring does not descend evenly:

a. Oil the bearings of the lift lever rollers.
b. Examine the pusher plate and the portion of the lift ring over which the plate moves, noting if there is any binding between the two when the pusher plate is advancing. Usually if there is contact between the two, a worn line will be noticeable on the lift ring, being produced by the contact of the bottom of the plate on the lift ring. This condition can be readily eliminated by bending up the plate slightly on the side which is touching the ring.

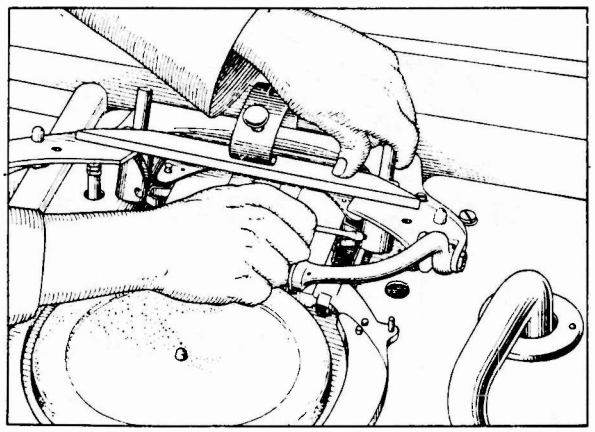


Fig. 9—Gauging Record Support Pin Knives

c. Examine the pusher slide, noting if it is properly lubricated or if there is any grit or other foreign matter in the channel of the slide. *It is important that this channel be clean and well lubricated at all times.*

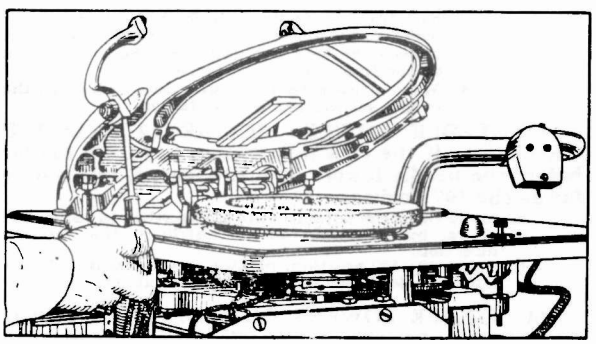


Fig. 10—Adjusting Hopper Arm Screws

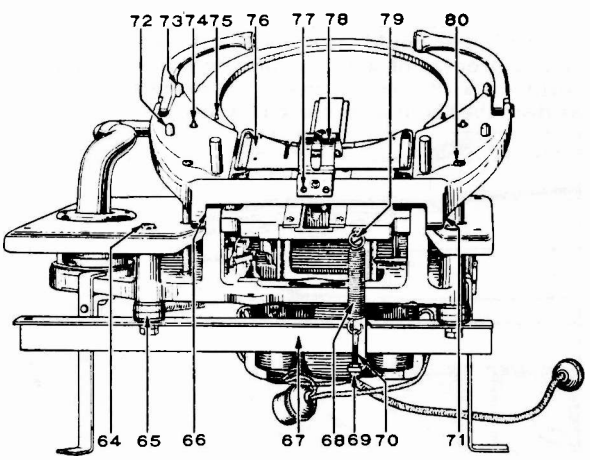


Fig. 11—Automatic Mechanism Back View

12. NEEDLE LOWERS OUTSIDE 12" RECORD DIAMETER—Should the needle fail to lower on the smooth outside rim of a 12" record, but lowers outside the record:

a. Loosen the clamping screw for the eccentric screw, 32, Fig. 1, in the taper tube arm casting with a short screw driver.
b. With a small rod or nail turn the eccentric adjustment as shown in Fig. 13.
c. Check the setting after successive trials until the proper position is obtained, and then re-tighten the clamping screw securely.

AUTOMATIC RECORD CHANGER

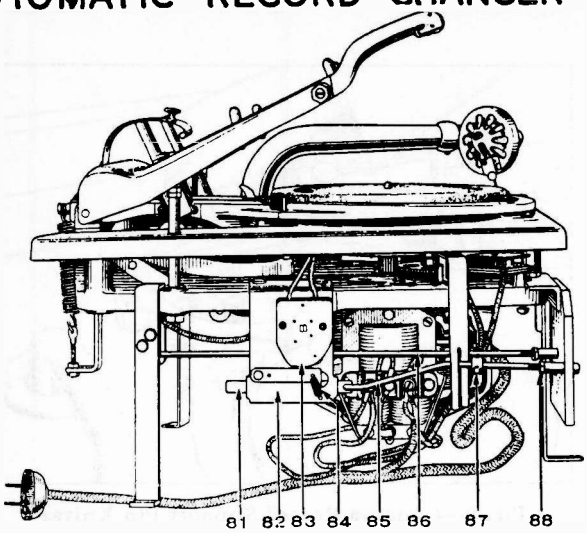


Fig. 12—Automatic Unit Side View

d. If the needle does not fall at the proper position on a 10″ record after making the above adjustment, refer to Fig. 13.
   1. Place a socket wrench such as part 52324 over the lock nut on the under side of the 10″ eccentric stop 35, Fig. 1, and a short screw driver such as part 52323 down through the hole in the motor board and into the slot of the 10″ eccentric stop.
   2. Loosen the lock nut and turn the eccentric in either direction as may be required.
   3. Make a test after each successive trial until the proper setting has been obtained.

13. NEEDLE LOWERS INSIDE 12″ RECORD GROOVES—If the tone arm swings inwardly too far before the needle lowers on a 12″ record, but not as far as the 10″ position:

a. Make the same adjustments as described in subject 12 above, but turn the 12″ eccentric in the opposite direction.
b. Check the 10″ position, making any necessary adjustments as described in d of subject 12 above.

14. NEEDLE LOWERS OUTSIDE 10″ RECORD DIAMETER—Should the needle lower outside the diameter of a 10″ record, but lowers properly on a 12″ record, make the same adjustments as described in d of subject 12 above.

15. NEEDLE LOWERS INSIDE 10″ RECORD GROOVES—Should the needle lower inside the record grooves of a 10″ record, but lowers satisfactorily on a 12″ record, make the same adjustments as described in d of subject 12 above.

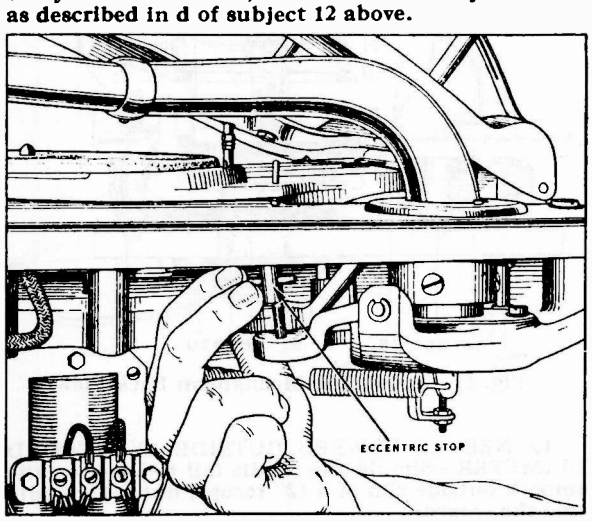


Fig. 13—Adjusting 12″ Eccentric Stop

16. FAILURE TO SELECT 10″ AND 12″ POSITION—If the mechanism does not select the 10″ and 12″ position, that is, if the needle lowers in the 10″ position on a 12″ record, or on the rubber support block when a 10″ record is on the turntable:

a. Records are improperly loaded in hopper.
b. Tighten the set screw on the index lever trip cam, shown in Fig. 15, so that it is against the flat of the index trip lever shaft. Loosen the lock nut in the index trip lever as shown in Fig. 15, and adjust the screw until the inside pin lowers on the stop lever and the outside pin lowers in the larger slot of the index lever when the lift ring comes down without a record.
c. If the mechanism still fails to select properly, adjust the lock nuts 36, Fig. 1, over the index lever so that the taper tube return lever strikes near the top of the 12″ stop face on the index lever casting 41, Fig. 1, when set for a 12″ record and the approximate midpoint of the 10″ eccentric stop pin when set for a 10″ record.

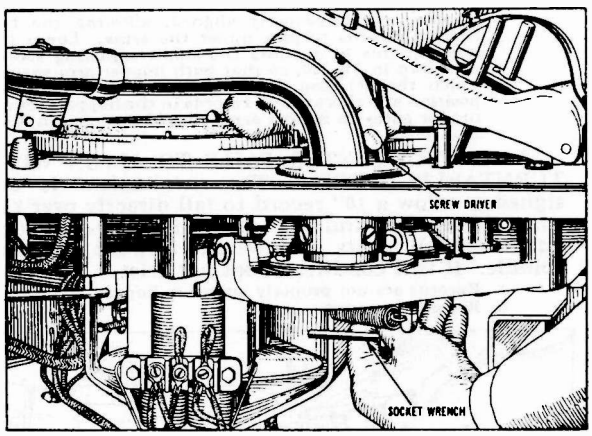


Fig. 14—Adjusting 10″ Eccentric Stop

17. FAILURE TO REJECT RECORD—If the automatic mechanism does not trip when the "Reject" button is pressed, and the record is therefore not rejected:

a. Note that the condition is not caused by a wire between the reject rod collar 87, Fig. 12, and the fork portion of the trip lever.
b. If the condition is not yet corrected, loosen the set screws in the collar as shown in Fig. 16, using a socket wrench such as part 53306, and set the collar approximately 1/8″ away from the trip lever. Re-tighten the set screws.

18. CONTINUED REJECTION—Continued rejection may be caused by any one of the following:

a. Collar on reject rod set too near trip lever, preventing latter from disengaging from end of pawl.
b. "Start" and "Reject" button stuck or binding.
c. Pawl 23, Fig. 1, sticking between teeth of clutch wheel.
d. Mechanism improperly timed. (See subject 26, below).

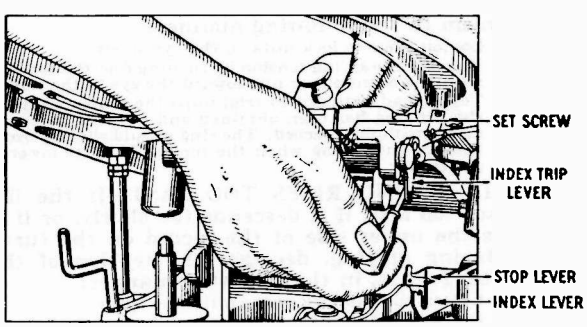


Fig. 15—Adjusting Index Trip Lever

19. FAILURE TO TRIP ON ECCENTRIC GROOVE—If the mechanism does not trip when the eccentric groove is reached:

a. Observe the action of the sound box crook, noting if it is too loose on the tone arm. The crook should be so tightened that it is free to move up and down, and yet sufficiently tight to prevent any side motion.
b. If the crook is found to be correct, remove the back of the cabinet, and with the aid of a flashlight, observe the action of the latch trip blade 33, Fig. 1, which is mounted on the 12″ eccentric screw 32, Fig. 1. If the blade does not make contact with the latch plate, loosen the screws in the latch trip, and move the blade until proper contact is made with the plate.

20. FAILURE TO EJECT—If the eject lever 9, Fig. 1, fails to remove a record from the turntable, and the record lift ring raises the record, eliminate any binding in the eject lever cam 6, Fig. 1, near the end of the eject lever, by prying the cam away from the lever with a screw driver. The cam may be stuck slightly because of dirt or other foreign matter becoming lodged between it and the eject lever.

21. SLUGGISH ACTION OF EJECT MECHANISM OR RECORD EJECTS TOWARD FRONT OF CABINET—If the record is not entirely ejected from the turntable before the lift ring starts to rise, or if a record is ejected toward the front of the cabinet rather than in the discharge compartment:

a. Note the height of the record on the motor spindle, and compare this height with the correct height as shown in Fig. 17. If the record is considerably lower, raise the height by placing one or more cork or fibre washers, part 51870, under the turntable.

b. Examine the leather on the end of the eject lever. If this is worn smooth, roughen it by scraping with a sharp knife or file.

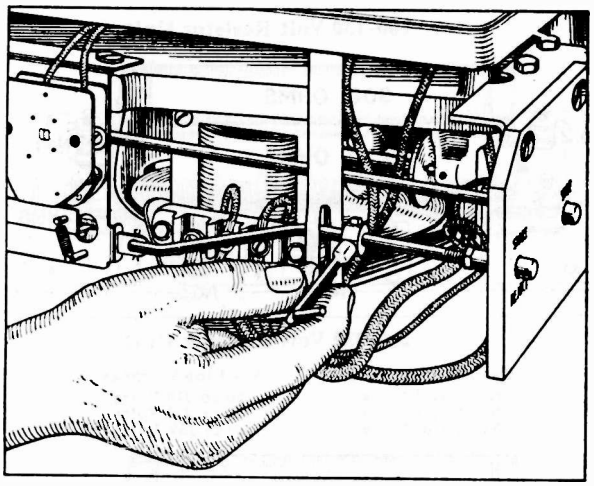


Fig. 16—Adjusting Reject Collar

22. FAILURE TO START—If the mechanism fails to start, look for any of the following:

a. Open circuit in power supply. Check all plug connections both inside and outside the instrument.

b. Defective motor coil.

c. Open or shorted 3 Mfd. condenser.

d. Start switch position 83, Fig. 12, out of adjustment, preventing switch slide 81, Fig. 12, from tripping switch.

e. Defective start switch 83, Fig. 12.

23. FAILURE TO STOP WHEN STOP BUTTON IS PRESSED—The mechanism will not stop if the button is pressed during the cycle until the cycle is completed. If the mechanism still fails to stop, look for any of the following:

a. Defective start switch 83, Fig. 12.

b. Defective cycle completing switch 15, Fig. 1.

c. Improper adjustment of mechanical connection between stop lever 44, Fig. 1, and start switch. When facing the back of the mechanism, adjust the right hand collar on the stop shaft until the collar on the stop rod just touches the stop arm on the switch when the stop button is out.

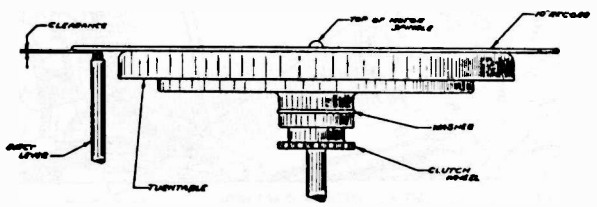


Fig. 17—Correct Height of Record on Turntable Spindle

24. FAILURE TO STOP AFTER LAST RECORD—If the mechanism fails to stop after the last record has been played, look for any of the following:

a. Improper adjustment of index trip lever, Fig. 15. See b, subject 16, above for proper adjustment.

b. Defective start switch 83, Fig. 12.

c. Defective cycle completing switch 15, Fig. 1.

25. PICKUP SHORTING SWITCH FAILURE—If the pickup shorting switch fails to open before the needle reaches the first music grooves, or fails to close after the eccentric groove has been reached:

a. Remove the turntable.

b. Loosen the screws in the switch with a small right angle screw driver, and adjust the position on the switch until the contacts are approximately $\frac{1}{16}$" apart when the tone arm is in the playing position.

c. Examine the bakelite arm of the switch, noting if there is any binding. Such binding should be removed by prying the arm loose with a screw driver.

26. TIMING MECHANISM—When the motor or any of the gears have been removed, it will be necessary to re-time the mechanism in the following manner:

a. Remove the turntable.

b. Turn the mechanism by hand until the roller A, Fig. 18, is engaged in the slot B of the cam gear C.

c. Loosen the set screw in the clutch wheel D, lift the wheel, the pawl and pawl carrier E, and turn the latter until the roller F is in line with the slot G.

d. Lower the pawl and pawl carrier and the clutch wheel, and then re-tighten the set screw, aligning the screw with the spot in the motor spindle.

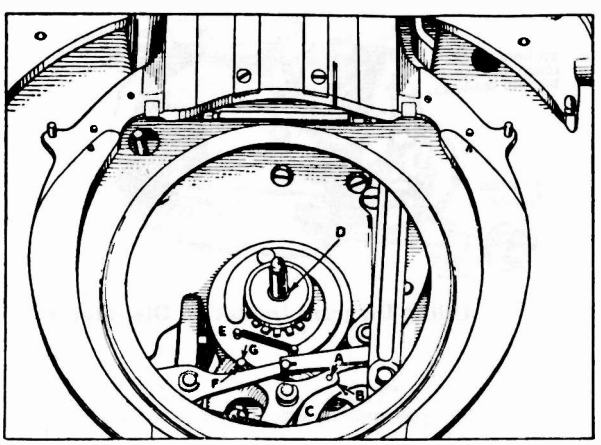


Fig. 18—Method of Timing Gears

27. POOR TONE QUALITY IN 10-35 AUTOMATIC ORTHOPHONIC VICTROLA—If the tone quality of the Automatic Orthophonic Victrola instrument is not up to standard:

a. Replace sound box, bearing in mind if this is done that it may be necessary to re-adjust the tone arm as described in subject 3 above.

b. If replacing the sound box does not correct the quality, it is possible that there is an air leak in the sound system between the end of the tone arm and the horn.

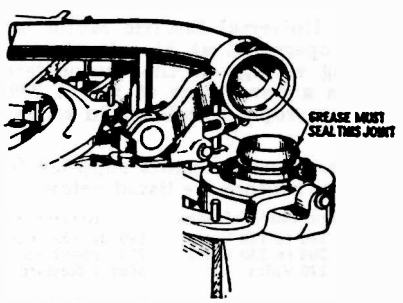


Fig. 19—Tone Arm Removed, Showing Grease Seal

PHONOGRAPH MOTOR

INDUCTION DISC AND UNIVERSAL TYPES

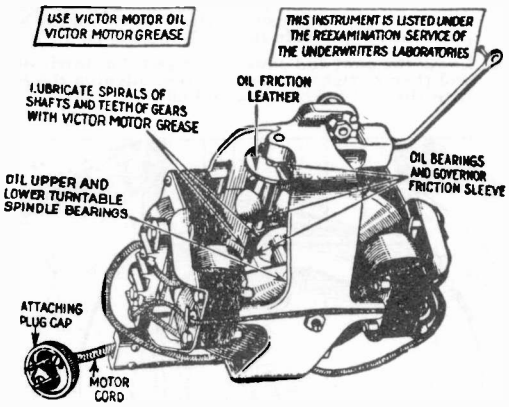
INDUCTION DISC ELECTRIC MOTOR

The induction disc motor is for use on all Victor electric instruments operating on 105 to 120 volts, 25 to 60 cycles, alternating current, and consumes approximately 50 watts power. The following motor coils are in use, depending upon the service to which the motor is applied.

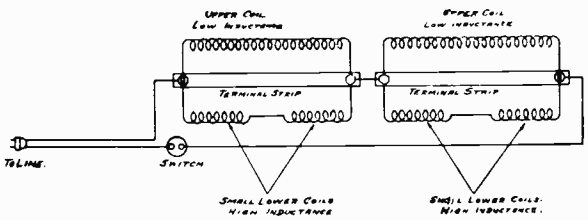
Coil	Part Number	For 105 to 120 Volts
No. 1		40 to 60 Cycles
No. 2		25 to 30 Cycles
No. 3		40 to 60 Cycles*

FOR OPERATION ON 40 CYCLES—The 31 ohm resistor unit, part 19490, should be connected in series with the induction disc motor.

The 21 ohm connection is for 110 to 115 volts, 40 cycles, and the 31 ohm connection for 115 to 130 volts. The earlier type resistor with the pig tail terminals is connected in the same manner as the 31 ohm connection shown, but does not have the resistance tap.



Oiling Diagram Induction Disc Motor



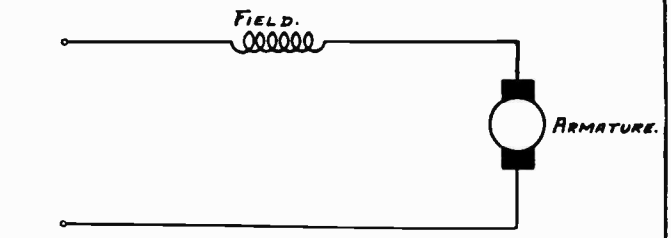
Wiring Diagram of Victor Induction Disc Motor

UNIVERSAL ELECTRIC MOTOR

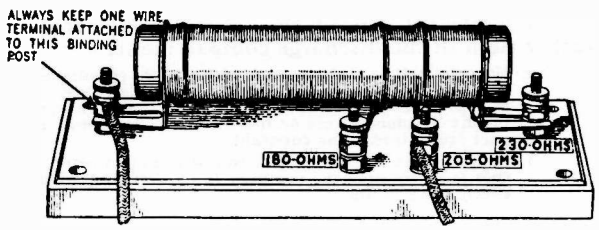
The Victor Universal Electric Motor is designed for universal operation at 32 volts A. C. or D. C. This operating voltage at the motor terminals is obtained from a power line of 100 to 230 volts by connecting the proper resistance in series with the motor.

The standard resistor units supplied for use on Victor Universal motors are listed below:

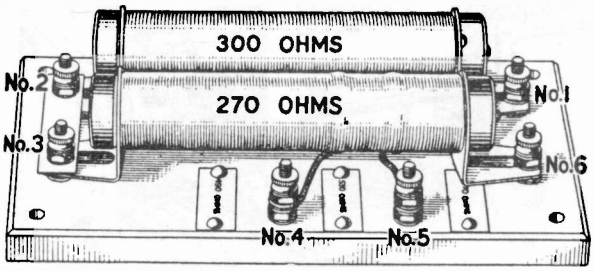
For Line Voltages	Resistance Taps
100 to 130 Volts	180–205–230 Ohms
200 to 230 Volts	270–300–490–530–570 Ohms
220 Volts	Motor Resistor 205–520 Ohms
	Lamp Resistor 1100 Ohms



Circuit of Universal Motor

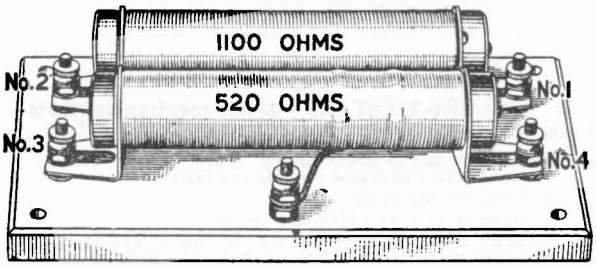


-100–130 Volt Resistor Unit



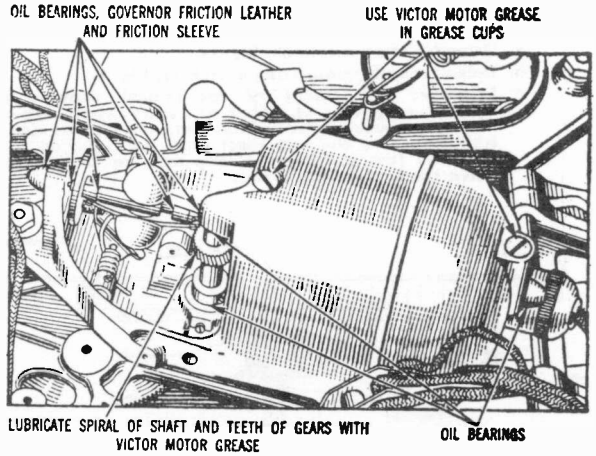
-200–230 Volt Resistor Unit

Use Binding Posts	For Line Voltages
No. 1 and No. 4	200 to 210 Volts
No. 1 and No. 5	210 to 220 Volts
No. 1 and No. 6	220 to 230 Volts



-220 Volt Resistor Unit for Operation with Compartment Lamp

Connection should be made between terminals No. 1 and No. 2 for the lamp, and between No. 3 and No. 4 for the motor.



Oiling Diagram Universal Motor

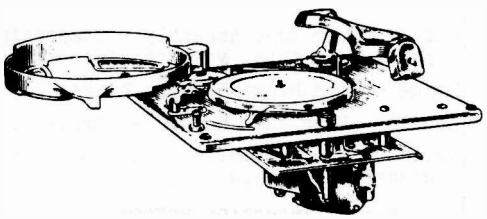
V30 PORTABLE VICTROLA

REPLACEMENT PARTS

Insist on genuine factory-tested parts, which are readily identified and may be purchased from authorized dealers.

STOCK No.	DESCRIPTION
	V-30 (SPRING MOTOR)
2759	Box - Needle box with lid - Package of 2.
2785	Hinge - Lid hinge - Package of 2.
2872	Ball and spring - Governor ball and spring with mounting screws - Package of 5.
2947	Leather - Regulating lever and brake friction leather - Package of 20.
6911	Box - Sound box.
7077	Regulator - Regulator screw with escutcheon and mounting screws - Package of 2.
7214	Governor - Governor assembly - Comprising spindle, collar, friction disc, balls and springs - Assembled.
8656	Spring - Main spring.
10146	Escutcheon - Winding key escutcheon with mounting screws - Package of 2.
10155	Spring - Regulating lever spring - Package of 10.
10174	Springs - Brake springs - Set of 4 springs - Package of 2 sets.
10177	Turntable - Record turntable with cover.
10178	Cover - Turntable cover.
10181	Brake - Automatic brake assembly - Comprising plate, latch, hand lever, brake lever and springs - Assembled.
10184	Plate - Brake latch plate with mounting screws - Package of 5.
10193	Gear - Turntable spindle gear with set screw.
10199	Bearings - Governor bearings - Comprising 2 bearings, 2 balls and nut - Package of 3 sets.
10360	Shaft - Winding shaft.
10556	Doors - Cabinet doors - 1 pair - Package of 1 pair.
10650	Key - Winding key with handle.
10688	Screw - Motor board mounting screw and washer - Package of 10.
10695	Cup - Needle cup - Package of 2.
10711	Catch - Door catch - Comprising catch and strike with nail - Package of 5 sets.
10758	Barrel - Spring barrel - Complete with 2 main springs - Comprising barrel separating plate 2 main springs, cap and retainer - Assembled.
10759	Gear - Spring barrel drive gear.
10760	Support - Spring barrel support - Package of 2.
10761	Arbor - Barrel arbor with nut and lock washer - Package of 2.
10762	Gear - Intermediate gear, stud and pinion with lock washer and nut.
10763	Spindle - Turntable spindle.
10764	Plate - Motor top plate.
10765	Support - Lid support assembly - Complete.
10766	Gear - Winding gear.
10767	Tube - Taper tube assembly - Comprising support, base, tube, yoke retainer - Assembled.
10768	Hinge - Door hinge - Strap hinge.
10770	Handle - Door pull handle - Complete.
10771	Bolts - Motor mounting bolts with nuts and washers - Package of 1 set.
	V-30 (INDUCTION MOTOR)
2614	Switch - Automatic brake contact switch.
2762	Bearings - Governor bearings - Comprising 2 bearings, 2 set screws, and 2steel balls - Package of 3 sets.
2763	Bolts - Motor mounting bolts with nuts, washers and rubber cushions - Package of 1 set.
2873	Screw - Top plate screw with nut, ball and lock washers - Package of 5 sets.
10196	Spring - Regulating lever spring - Package of 10.
10264	Coil - Motor inductor coil - 110 volts - 60 cycle.
10266	Disc - Rotor disc with set screw.
10270	Cord - Outside cord.
10289	Governor - Governor assembly - Comprising spindle, collar, friction disc, balls and springs - Assembled.
10291	Spindle - Turntable spindle.
10292	Gear - Governor drive gear.
10293	Lever - Regulating lever - Package of 3.
10378	Plate - Motor top plate.
	V-30 (UNIVERSAL MOTOR)
10129	Ball - Steel ball bearing - 3/16" - Package of 20.
10275	Wick - Motor wick and spring - Package of 4.
10279	Bushing - Turntable spindle bushing - Package of 2.
10280	Brush - Commutator brush - Package of 4.
10281	Holder - Brush holder with mounting screws.
10288	Resistor - Motor resistance with spacers and mounting screws - 230 ohms - Tapped at 180 and 205 ohms - For 110 volts.
10672	Regulator - Regulator screw with escutcheon plate and mounting screws - Package of 2.
10703	Turntable - Record turntable with cover.
10706	Resistor - Motor resistance with spacers and mounting screws - 570 ohms - Tapped at 490 and 530 ohms - For 220 volts.
10771	Bolts - Motor mounting bolts with washers and nuts - Package of 1 set.
10773	Governor - Governor assembly - Comprising spindle, collar, friction disc, balls and springs - Assembled.
10774	Spindle - Turntable spindle.

AUTOMATIC RECORD CHANGER
USED WITH MODELS—
RAE 26 RAE 59 RAE 68 RAE 79 & RAE 84



RCA Victor Automatic Record Changing Mechanism

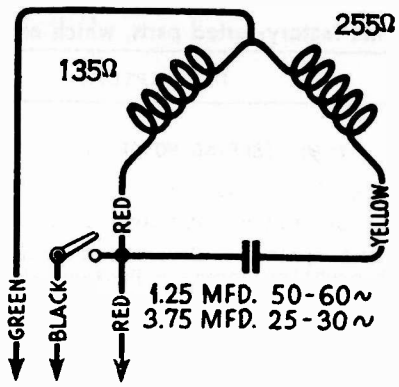


Figure 1—Schematic Diagram

The RCA Victor Automatic Record Changing Mechanism is used in RCA Victor Models RAE-26, RAE-59 and RAE-79. Except for the finish of exposed parts, these units are identical. This mechanism is of simple, fool-proof design and will perform efficiently with a minimum of service requirements. Features of this mechanism are; continuous playing of one side of ten 10-inch records, operation at either 33⅓ or 78 R.P.M. for playing standard or Program Transcription records manually or automatically, a special clutch to prevent jamming in case of failure of a part and a heavy duty motor operating at synchronous speed thereby eliminating any need for regulating devices.

The automatic mechanism used in the RAE-68 is similar to that used in RAE-26, RAE-59 and RAE-79. However it is 78 r.p.m. only.

The automatic mechanism used in the RAE-84 is similar to that used in other RCA Victor automatic combinations such as Models RAE-26, 59, or 79. Several minor changes have been made in these machines as follows:

1. Concentric Groove Trip. A trip so that either Brunswick or Columbia records may be mixed with Victor records in the automatic magazine has been provided.

2. An automatic starting switch, operated by pulling the tone arm to the right, has been added for manual playing.

3. A trip to stop the motor when playing either 10- or 12-inch records manually has been added.

4. An interlock has been provided so that the manual lever cannot be moved while the mechanism is in cycle. This prevents jamming due to improper operation.

5. A ball race speed reducer is used for changing the turntable speed from 78 to 33⅓ R. P. M. This is simple in operation and gives a greater freedom from "wows" than the gear type reducers.

6. Needle Lamp. A small electric lamp is provided so that proper illumination of the record and pickup is obtained. This assists in properly inserting the needle into the pickup as well as lowering the needle onto the record.

Service in conjunction with this mechanism will therefore be practically the same as that of the older type automatic record changing mechanims. However, due to the new trips several additional adjustments are now included.

(1) ADJUSTMENT OF AUTOMATIC SWITCH

The automatic switch should be adjusted so that the contacts are at least 0.025 inches apart when the switch mechanism has been tripped. This is important, as otherwise arcing at the switch may occur.

(2) ADJUSTMENT OF 10-INCH AUTOMATIC SPIRAL GROOVE TRIP LEVER

The 10-inch automatic spiral groove trip lever should be adjusted by means of the screw assembled thereon. Proper adjustment is obtained when it forces the four finger lever out of contact with the clutch pawl, which trips the mechanism, when the needle is between a 1⁷⁄₁₆ inch and a 1⅞ inch radius from the center of the turntable spindle.

(3) ADJUSTMENT OF 12-INCH AUTOMATIC SPIRAL GROOVE SWITCH

The 12-inch automatic spiral groove switch should be adjusted by means of the adjusting screw assembled in the trip lever so that it forces the switch lever out of contact with the switch trip lever, causing the latter to open the switch when the needle is between a 1⁷⁄₁₆ inch and a 1⅞ inch radius from the center of the turntable spindle.

AUTOMATIC RECORD CHANGER

Remember That the Control Lever Can Be Changed from Automatic to Manual Only When the Mechanism is Not Changing Records

Place a Home Recording needle into the pickup as far as it will go. Then lower the pickup on the side of the turntable. The needle should extend from 1/32" to 1/16" below the top of the metal edge of the turntable. If it does not, an adjustment can be made by means of a screw located under the tone arm. Lifting the arm provides accessibility to the screw. See Figure 2.

If when starting the automatic mechanism, the needle lowers onto the smooth outer rim of the record but fails to swing into the first groove, it may be caused by the following:

(a) Cabinet not level.

(b) Weak tension in spring. A flat spring presses against the tone arm lever on the under side of the motor board. See Figure 17 Bending it so as to increase its tension against the tone arm lever will cause the needle to swing into the first record groove. Be careful not to bend it too much as excessive tension will cause the needle to skip several grooves.

After the instrument has completed one record changing operation, a ten inch record should extend about three-quarters way over each elevator pad. If this condition does not exist, an adjustment can be made by means of the screws that hold the pads in position. A pair of pliers heavily padded with cloth or other soft material should be used to hold the elevator shafts while loosening and tightening the screws. The distance from the closest part of either pad to the edge of the spindle is approximately 4 3/16". Figure 3 shows the method of making this adjustment.

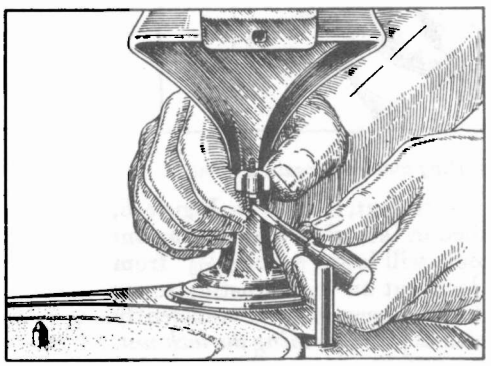


Figure 2—Adjusting height of tone arm

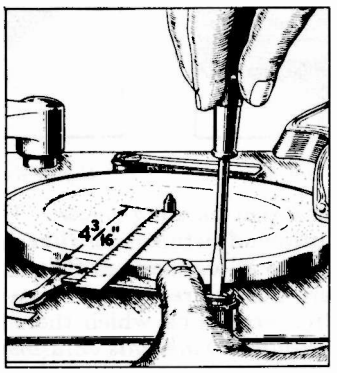


Figure 3—Adjusting elevator pad

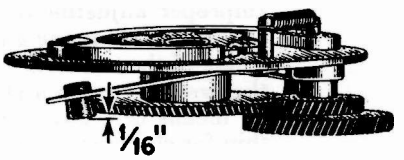


Figure 4—Adjustment of damper pads

(1) SPEED VARIATIONS (WOW)

A variation in the speed of the turntable evidenced by distortion on long sustained notes when playing Program Transcription records may be caused by any of the following:

(a) Improper operation. It is very important when changing the speed shift lever from 78 R.P.M. operation to 33⅓ R.P.M. operation, to place the hand on the turntable and hold it until it is positively engaged by the driving mechanism.

(b) Lack of proper lubrication. It is important that excessive grease on the gear reducing mechanism be avoided and that sufficient oil is present between the ratchet and the surface upon which it rests. Also clean and oil the spindle bearing and wipe off any excess lubricant that may be on the damper pads or the drive gear upon which it rests.

(c) Improper Adjustment of the Damper Pads. The damping pads with the necessary springs are provided to place a load on the 33⅓ R.P.M. driving gear at all times while it is in operation. Placing such a load on the gear takes up any possible play and reduces the possibility of a "wow" during operation at the slower speed.
Adjust these pads by slipping each spring to one side and bend them until they are 1/16" beyond the opposite surface upon which they rest. (See Figure 4).

(d) Washers Not in Place. A metal washer is placed directly under the speed reducing mechanism and a leather washer directly over it, both washers being over the spindle. These washers must be in their proper position. Also if the leather washer has become hard it must be replaced.

(e) In some cases, removing the speed reducing mechanism and turning it approximately 90° and then replacing it, may eliminate a "wow" caused by improper meshing of the gears.

(2) ADJUSTMENT OF MAGAZINE ROLLER

The magazine roller should be set in such a position that the plane of the roller is 90° to a line drawn from the center of the magazine bearing to the center of the roller. The height should be adjusted so that it will just touch the magazine when it is empty.

(3) FAILURE OF NEEDLE TO LOWER PROPERLY

Failure of the needle to lower onto the smooth outer rim of the 10-inch records when the instrument is playing automatically may be caused by:

(a) Improper Tone Arm Setting. Loosen the set screws as shown in Figure 5. With the mechanism out of its cycle, press the locating lever at a point near the flat spring until the lever strikes the stop screw. Holding the locating lever, Figure 17, in this position, move the front portion of the trip lever, Figure 15, until the pin against which the flat spring presses, is making contact with the locating lever. Holding the two levers in this position, move the pickup arm until the needle is 1/16" from the first groove of a standard 10-inch record. Now retighten the two set screws shown in Figure 5.

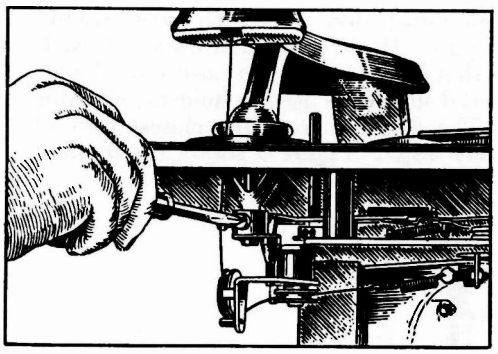


Figure 5—Adjusting position of tone arm

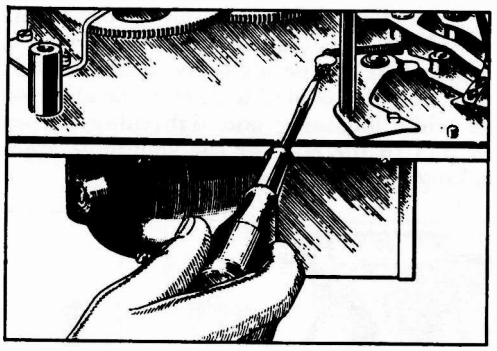


Figure 6—Adjusting tone arm locating screw

(b) Improper adjustment of tone arm locating screw. This adjustment, shown in Figure 6, can be used to make a substitute adjustment for that described in (a), when the mechanism is out of the cabinet. Make the adjustment so that the needle will lower exactly 1/16" from the first groove on a standard 10-inch record. Loosen the lock nut on the adjusting screw by means of a No. 4 Spintite wrench on which the shoulder has been ground sufficiently thin for clearance. *Do not attempt to make this adjustment without first loosening the lock nut.* Tighten the lock nut when the proper adjustment has been made.

(4) FAILURE OF NEEDLE TO LOWER ONTO RECORD SURFACE

Failure of the needle to lower onto the record surface may be caused by:

(a) Cable out of pulley. Examine the tone arm cable and ascertain that it is seated in the pulley.

(b) Shielded pickup wire improperly placed. Examine the shielded lead coming out of the tone arm base and make sure that it is free from the moving parts of the mechanism.

(c) Incorrect setting of tone arm lowering screw. Check the position of the tone arm as described in Paragraph 5,

(d) Turntable washer not in place. A leather washer is supplied to fit under the turntable. If this part is not in place, the turntable will be too low, and may cause the needle not to lower onto the record.

(e) Incorrect adjustment of cable tension screw. The cable tension screw shown in Figure 7 should be so adjusted that the needle will lower smoothly onto the record without dropping. When this adjustment is obtained, the cable will be slightly loose when the needle is lowered onto a record. Loosen the lock nuts, turn the screw to the right or left as required and retighten the lock nut. Check the adjustment to make sure that the needle clears the record on the return of the tone arm. The needle should rise 1/16" from the record before any horizontal motion takes place.

(5) NEEDLE FAILS TO CLEAR RECORD AFTER PLAYING

Failure of the needle to clear the record surface on the return of the tone arm is caused by too loose adjustment of the cable tension. Adjust this tension as described in Section 4, Paragraph (e).

(6) FAILURE OF RECORD TO DEPOSIT ON TURNTABLE

Incorrect lowering of the record onto the turntable may be caused by

(a) Improper turntable spindle height. The height of the turntable spindle nose should be approximately 1/32" above the inside bottom surface of the record magazine. Adjustment of this height made by means of the screw at the bottom of the motor. (See Figure 8).

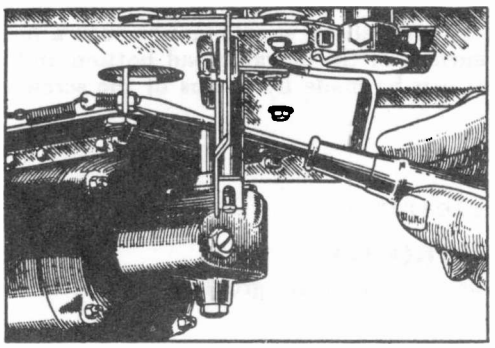


Figure 7—Adjusting tone arm cable tension screw

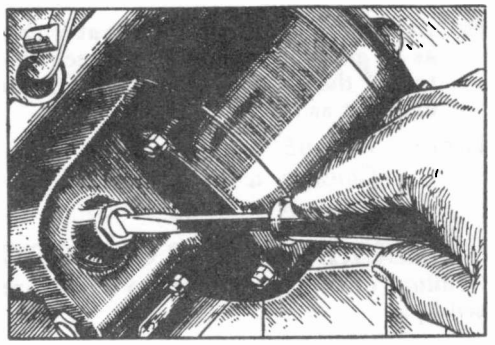


Figure 8—Adjusting spindle height

(b) Improper setting of magazine. The horizontal swing of the magazine should be so adjusted when the mechanism is out of cycle that the outer surface at its nearest point to the nearest side of the turntable spindle is 5 1/32". This can be done by loosening the two screws as shown in Figure 9, moving the magazine to its correct position and retightening the screws.

(c) Improper height of record transfer lever. The small plate on top of the motor board at the left side of the turntable should be so adjusted that it will depress approximately 1/32" when the magazine swings over the turntable. When this adjustment is made correctly, the transfer lever will engage the bottom record in the magazine as the latter is swinging back into the playing position. A small adjusting screw and lock nut are provided for this adjustment. See Figure 10.

(d) Improper Position of Record Transfer Lever. When a ten-inch record is placed so that its edge touches both pins on the record transfer lever, a line drawn from the center of the hole of the lever to the center of the record hole should pass directly over the center of the spindle. See Figure 11. The two record transfer lever mounting screws can be loosened and the lever shifted until this condition exists. Also when a record is on the turntable it should just clear this lever. Unless this adjustment is properly made the record may not center properly over the spindle.

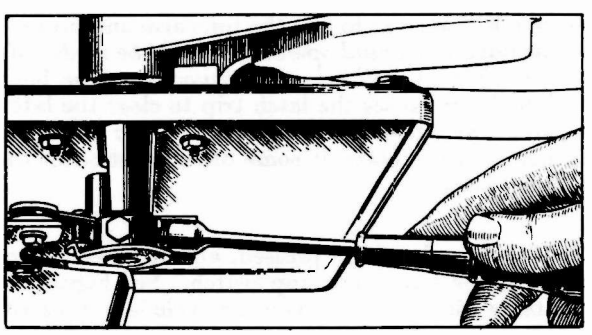


Figure 9—Magazine adjustments

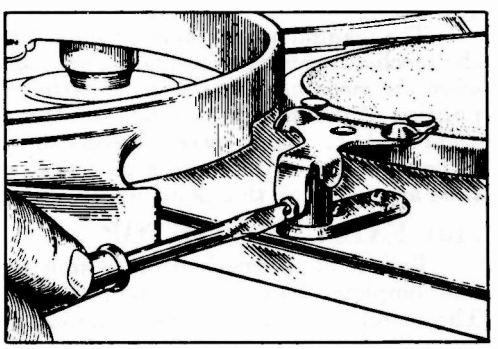


Figure 10—Record transfer lever adjustment

(e) Weak spring in turntable spindle. The spring inside the turntable spindle which holds up the spindle nose will cause the records to align improperly with the turntable spindle if the spring tension is too weak or if the spindle nose is sticking inside the spindle. Access to the spring for stretching the coils or for replacement can be obtained by removing the turntable.

(7) RECORDS DISCHARGED IMPROPERLY FROM TURNTABLE

Failure of the Record on the turntable to be removed and placed in the magazine can be caused by:

(a) Improper horizontal adjustment of elevator pads. The elevator pads Figure 16, should be so adjusted that the inside of the pad flange is *4 3/16" from the nearest side of the turntable spindle. See Figure 3. Loosen the screw on top of the elevator shaft, move the pad to its correct position, holding both the pad and the elevator shaft in position and tighten the screw. Care should be observed that the ridge in the elevator shaft is not turned against the slot in the elevator shaft actuating lever so as to cut the latter. Grip the shaft with padded pliers while this adjustment is being made in order to prevent the shaft from turning. If for any reason the elevator pads have been removed, always place the one with the rubber surface toward the front of the mechanism when replacements are being made.

(b) Improper adjustment of elevator shaft. The elevator shafts should rise to such a height as to give 1/16" clearance between the lowest surface of the elevator pad bottom and the top of the empty magazine. This adjustment can be made by means of the screw and lock nut as shown in Figure 12.

* *Note: RAE-68 only*
Change 4-3/16" to 5-1/16"
Change 1/16" to 3/32" clearance

(8) FAILURE TO TRIP ON ECCENTRIC GROOVE

Failure of the mechanism to change records when the eccentric groove is reached may be caused by:

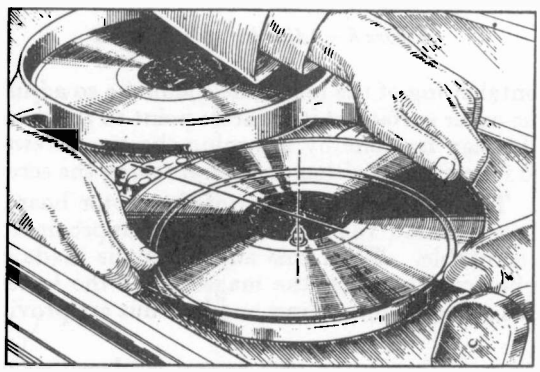


Figure 11—Method of checking transfer lever lateral adjustment

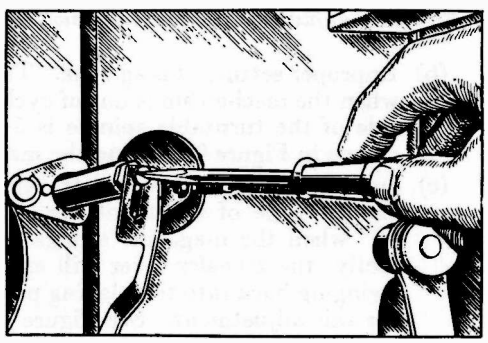


Figure 12—Adjusting height of elevator shaft

(a) Improper setting of the latch plate. Adjust the latch plate, Figure 17, by means of a small offset screw driver such as Stock No. 2930, until it makes proper contact with the latch trip when the eccentric groove is reached.

(b) Weak spring on trip lever. A weak spring on the latch trip lever will be a cause of failure to trip.

(9) INABILITY TO SET FOR MANUAL OPERATION

The manual operation lever should set in its back position so as to free the tone arm and prevent the mechanism from tripping. *This change from automatic to manual operation should be made only when the mechanism is out of its cycle, otherwise the mechanism will reject continuously.* The back position of the lever should be such that the end of the lever causes the latch trip to clear the latch plate by 1/32". An incorrect setting of the latch plate may cause the trip lever to clear the plate at one position of the tone arm, but to make contact with the plate at some other position of the tone arm. Check this point when adjusting the latch plate.

(10) FAILURE TO STOP

Failure of the mechanism to stop after the "off" button has been pressed, and the mechanism has completed its cycle is caused by improper setting of the secondary stop switch. See Figure 17. The switch body should be so mounted that the contacts will open 1/32" when the cycle is completed, but will close as soon as the mechanism has tripped.

(11) CONTINUED TRIPPING OF MECHANISM

This condition may be caused by:

(a) Manual operation lever set for non-automatic operation during cycle.

(b) Improper setting of latch plate.

(c) Improper timing of gears and associated parts. See Section 13 for the correct method of retiming.

(12) CLUTCH SLIPPING

Slipping of the clutch when the mechanism is passing through the cycle causing a loud clicking noise, may be caused by:

(a) Weak spring on pawl carrier. Remove the pawl spring Figure 17, and increase its tension by removing two or three coils.

(b) Turntable spindle shaft too low. This condition will cause binding between the pawl carrier and the clutch wheel. Raise the spindle as shown in Figure 8.

(c) Binding in any of the moving parts. Such binding may be in the slide, the magazine, the elevator shaft or the gears. The slide rollers at the left are mounted on eccentric shafts for adjustment of play. These may be so regulated as to cause excessive binding of the slide. Examine all of these parts carefully, and take any necessary steps to relieve the binding.

(13) RETIMING THE MECHANISM

Should it be necessary to retime the mechanism after replacing parts, or because of continued tripping proceed in the following manner:

(a) Allow the mechanism to operate until the slide Figure 17 is in its extreme forwarding position. When this setting is reached the straight side of the cam, Figure 17, will be parallel with the side of the slide.
Check the position of the trip lever and roller at this time to see that they are approximately as shown in Figure 13. If the various parts are not in their proper relation, the mechanism should be retimed.

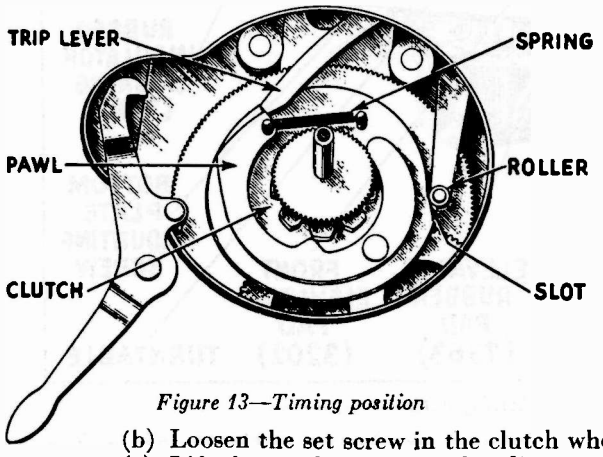


Figure 13—Timing position

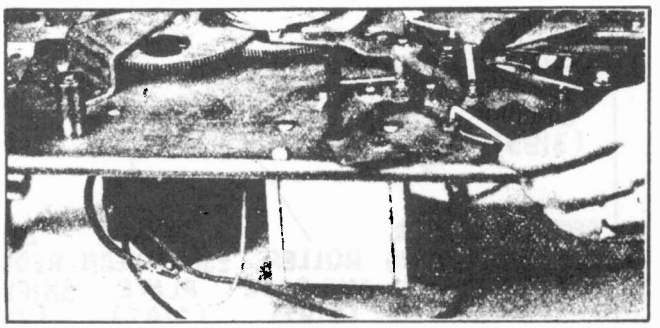


Figure 14—Adjusting Latch Plate

(b) Loosen the set screw in the clutch wheel and lift the wheel from the turntable spindle.

(c) Lift the pawl carrier until it disengages from the gear.

(d) Lower the pawl carrier into mesh with the gears so that the trip lever is touching the end of the pawl as shown in Figure 13, when the cable lever roller is engaged in the slot on the side of the pawl carrier as shown.

(e) Recheck to see that the straight side of the cam is parallel with the slide.

(f) Replace the clutch wheel and retighten the set screw, making sure that the set screw fits into the spot on the turntable spindle.

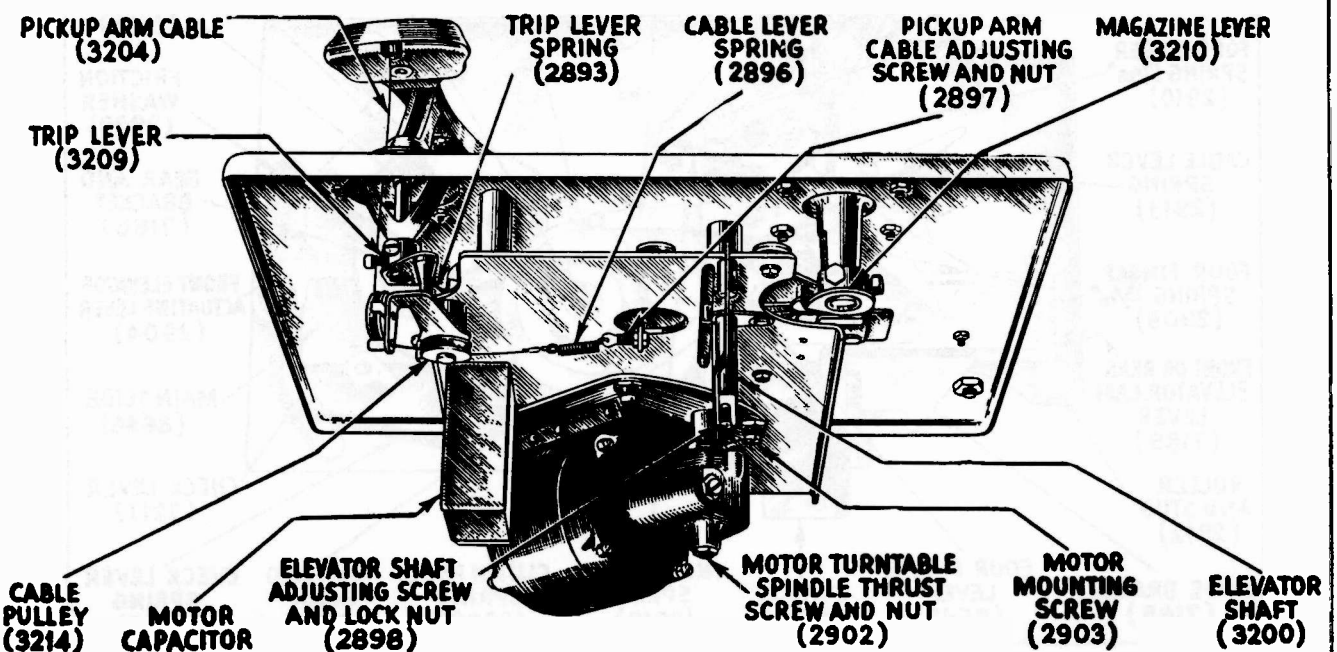


Figure 15—Bottom view of mechanism showing parts

Stock Numbers do not apply to RAE-68 or RAE-84.

AUTOMATIC RECORD CHANGER

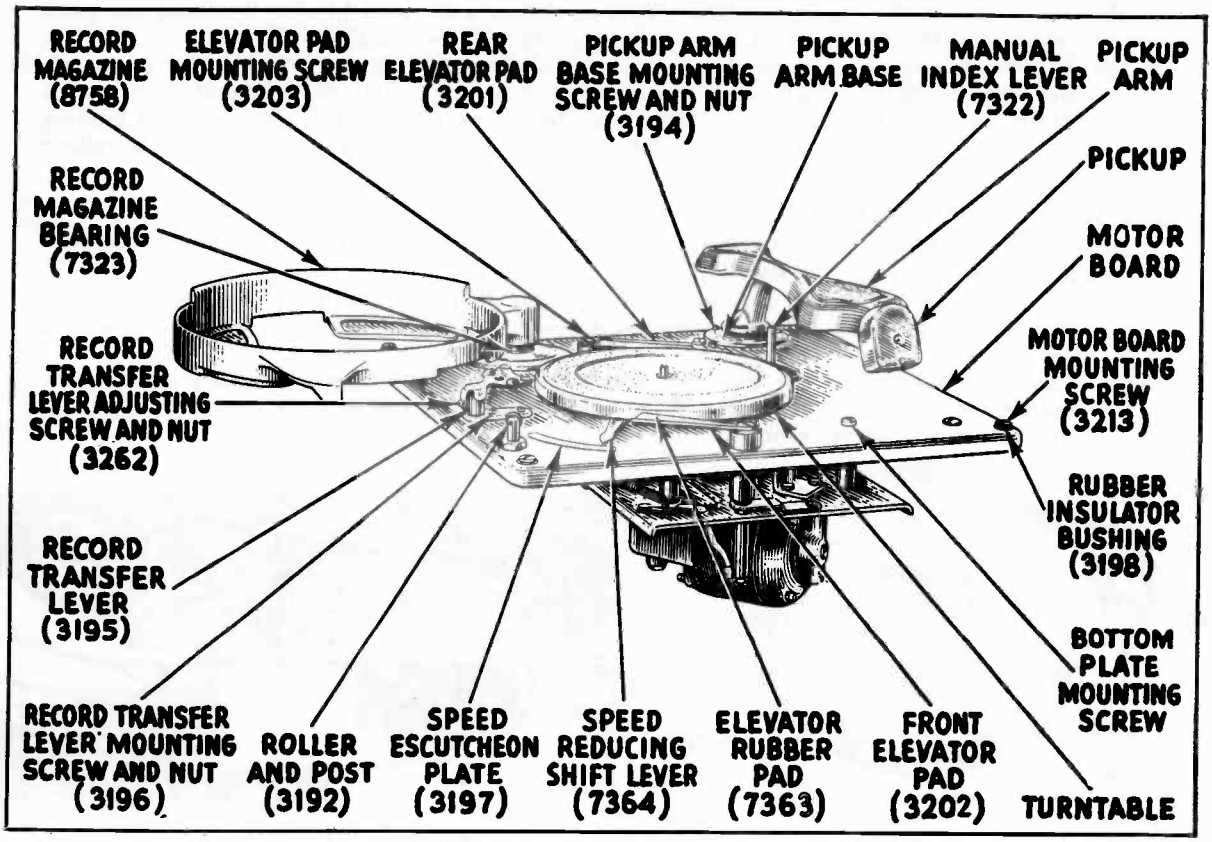


Figure 16—Top view of mechanism showing parts

Stock Numbers do not apply to RAE-68 or RAE-84.

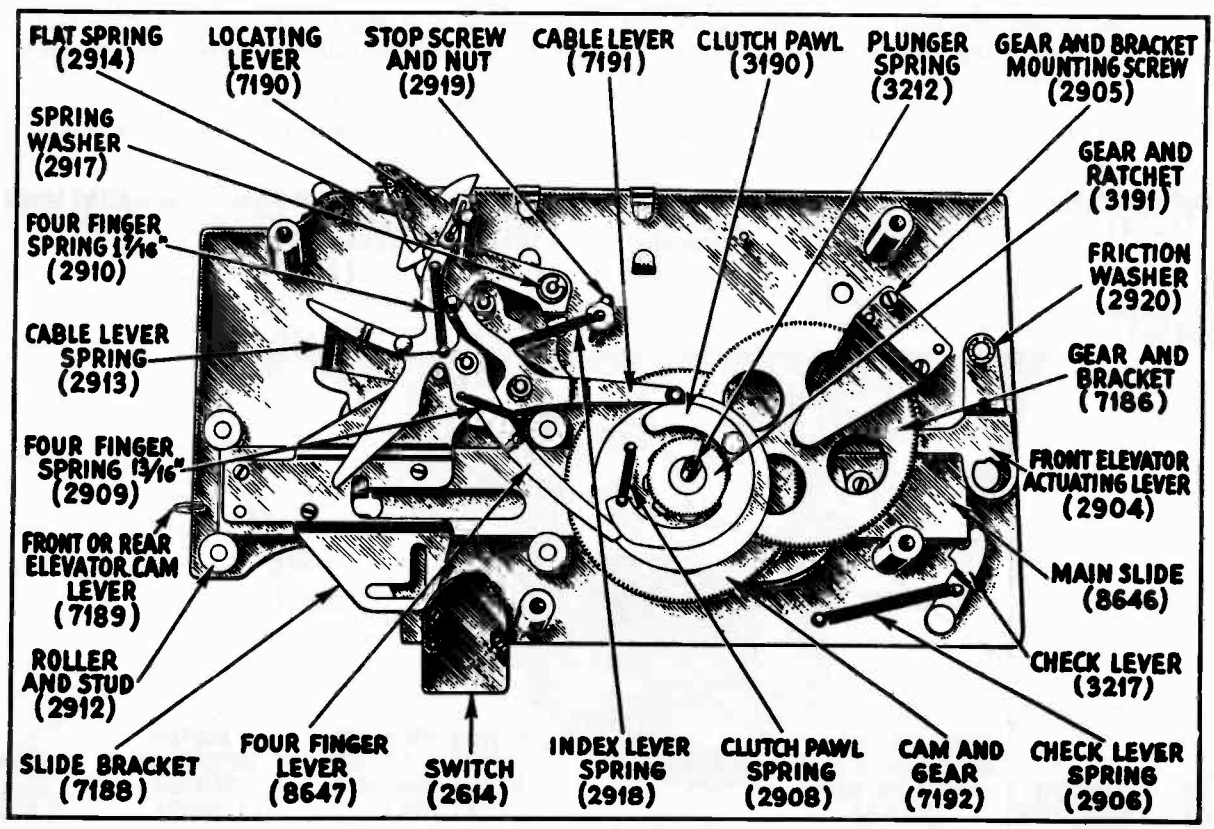


Figure 17—Top view of mechanism with plate removed

Stock Numbers do not apply to RAE-68 or RAE-84.