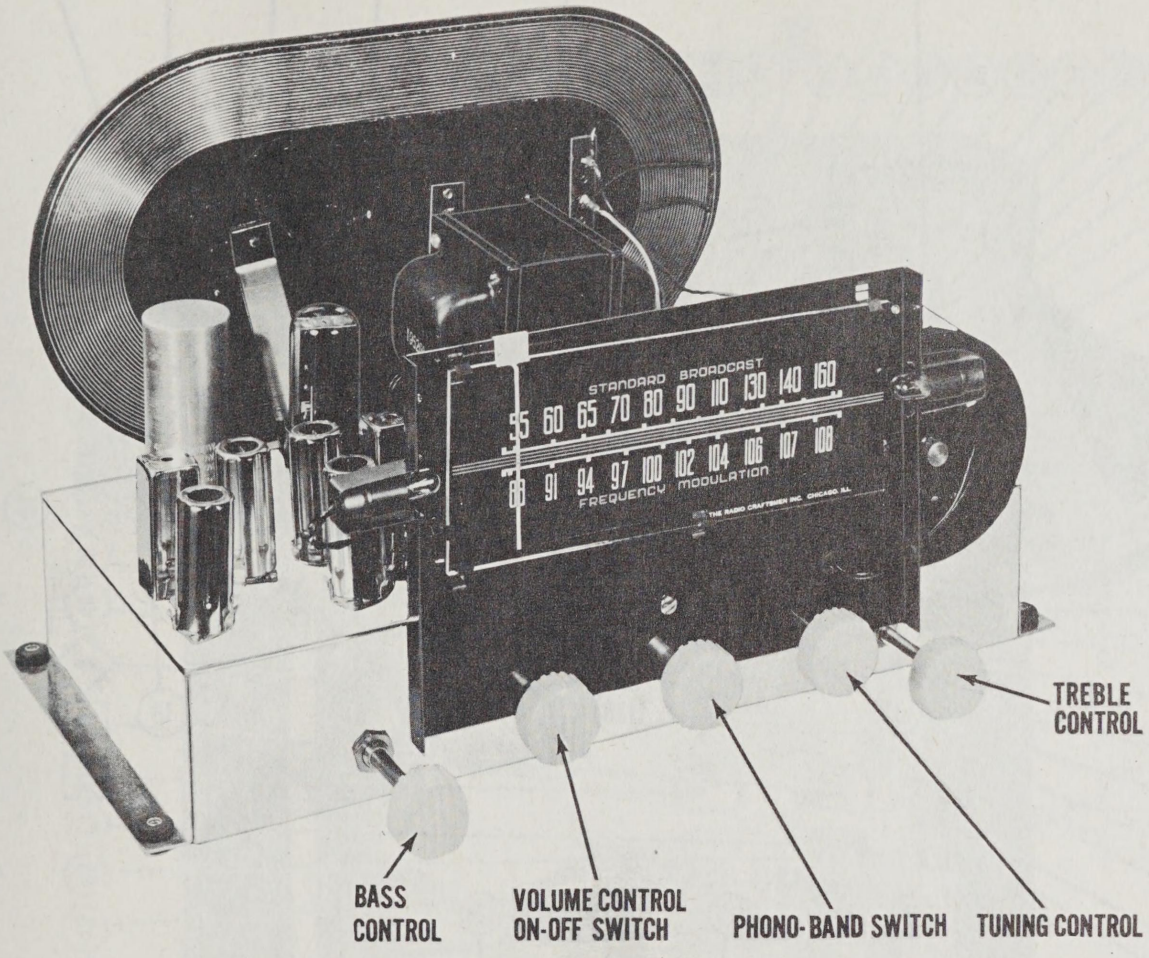
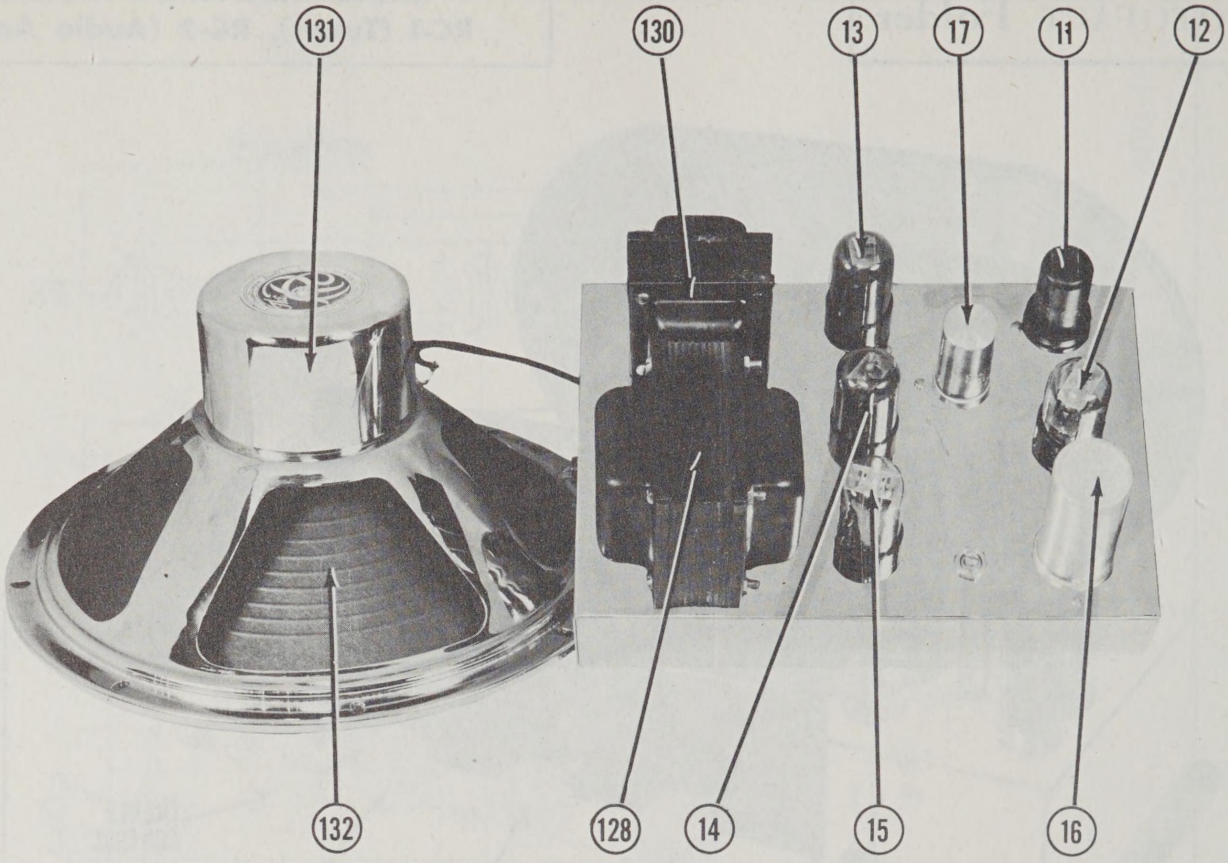
RADIO CRAFTSMEN MODELS
RC-1 (Tuner), RC-2 (Audio Amp.)



TRADE NAME	Radio Craftsmen, Models RC-1 (Tuner), RC-2 (Audio Amp.)
MANUFACTURER	The Radio Craftsmen, Inc., 1341 South Michigan Ave., Chicago 5, Ill.
TYPE SET	AC Operated AM-FM Tuner and Audio Amplifier with Seperate Power Supplies
TUBES (FIFTEEN)	Types, 6BA6 RF Amp., 6J6 Osc.-AFC, 6BE6 Mixer, 6BA6 1st IF Amp., 6BA6 FM 2nd IF Amp.-AM Det.-AVC, 6AU6 1st Limiter, 6AU6 2nd Limiter, 6AL5 FM Det., 6C4 AF Amp., 5Y3GT Rectifier, 6J5 1st AF Amp., 6SN7GT 2nd AF-Phase Inv., (2) 6V6GT Power Output, 5Y3GT Rectifier.
POWER SUPPLY	110-120 Volts AC — RATING 1.74 Amp. @ 117 Volts AC
TUNING RANGE-BROADCAST	540-1600KC — FREQ. MOD. 88-108MC

RADIO CRAFTSMEN MODELS
RC-1 (Tuner), RC-2 (Audio Amp.)

HOWARD W. SAMS & CO., INC. Indianapolis Indiana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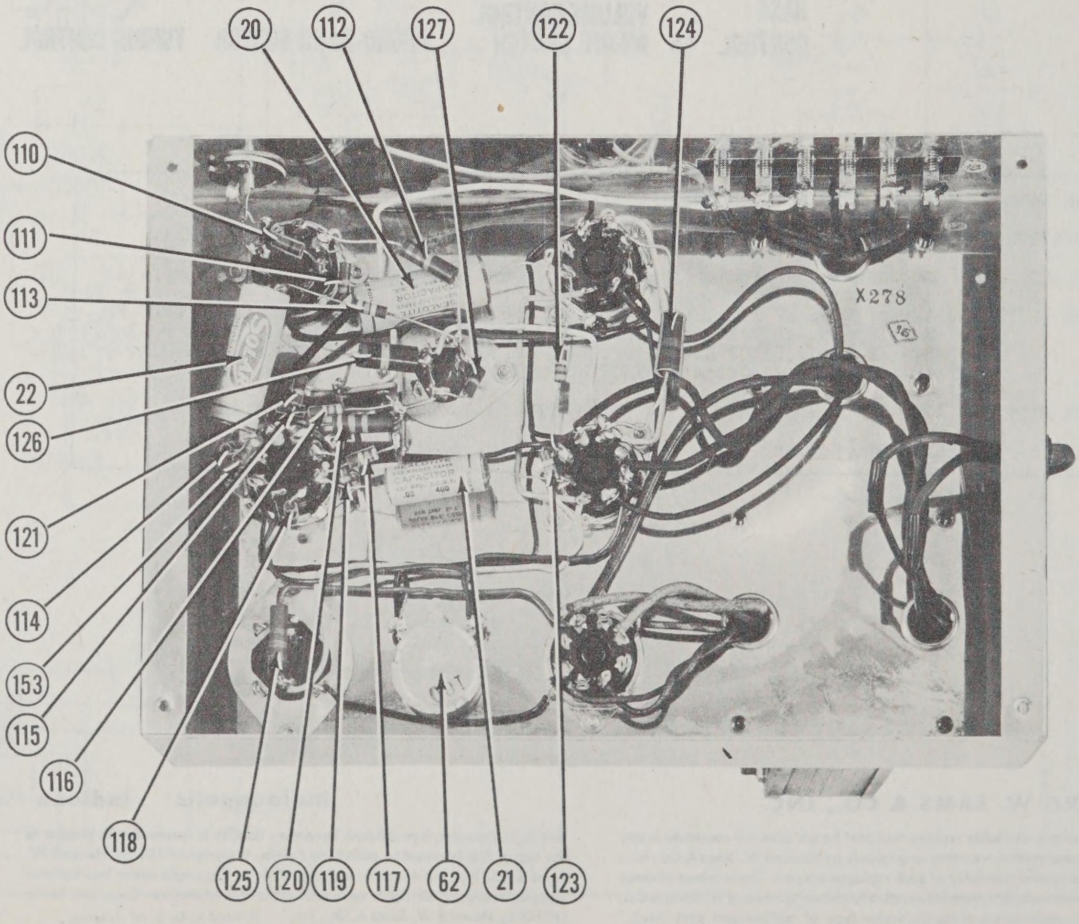
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PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA: RADIO CRAFTSMEN PART No.	REPLACEMENT DATA: STANDARD REPLACEMENT	RMA BASE TYPE	INSTALLATION NOTES
1	RF Amp.	6BA6	6BA6	7BK	
2	Osc. AFC	6J6	6J6	7BF	
3	Mixer	6BE6	6BE6	7CH	
4	1st IF Amp.	6BA6	6BA6	7BK	
5	FM 2nd IF-AM Det.-AVC	6BA6	6BA6	7BK	
6	1st Limiter	6AU6	6AU6	7BK	
7	2nd Limiter	6AU6	6AU6	7BK	
8	FM Det.	6AL5	6AL5	6BT	
9	AF Amp.	6C4	6C4	6BG	
10	Rectifier	5Y3GT	5Y3GT	5T	
11	1st AF Amp.	6J5	6J5	6Q	
12	2nd AF-Phase Inv.	6SN7GT	6SN7GT	8BD	
13	Power Output	6V6GT	6V6GT	7AC	
14	" "	6V6GT	6V6GT	7AC	
15	Rectifier	5Y3GT	5Y3GT	5T	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: RADIO CRAFTS. PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	SOLAR PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
16A	60	400	18S001	AF4444J*	UP222245*	DY-4x20-450*	EL-420*	◓ Filter
B	20	400						▲ Output Screen Bypass
17A	40	200	18S002	AF64K4A		DY-309	EL-354	▲ Filter
B	10	200						◪ AF Decoupling Cathode Bypass
C	25	25						
18A	40	400	18S003	AF88J	UP4445	DY-406#	EL-442*	◓ Filter
B	40	400						◪ "
C	20	300		PRS350/24	BR2045		UT-203	▲ "
19	.01	600	18X210	684-01	DT6S1	MPH-6-01	TC-11	Line Filter
20	.1	400	18X201	484-.1	DT4P1	ST-4-1	TC-1	Audio Coupling
21	.02	400	18X202	484-02	DT4S2	ST-4-02	TC-12	" "
22	.1	400	18X201	484-.1	DT4P1	ST-4-1	TC-1	" "
23	.01	400	18X208	484-01	DT4S1	ST-4-01	TC-11	Tone Comp.
24	.05	400	18X206	484-05	DT4S5	ST-4-05	TC-15	" "
25	.01	400	18X208	484-01	DT4S1	ST-4-01	TC-11	" "
26	.01	400	18X208	484-01	DT4S1	ST-4-01	TC-11	" "
27	.25	200	18X209	484-.25	DT2P25	ST-2-25	TC-2	Audio Coupling
28	.02	400	18X202	484-02	DT4S2	ST-4-02	TC-12	" "
29	.02	400	18X202	484-02	DT4S2	ST-4-02	TC-12	AVC Filter
30	.05	400	18X206	484-05	DT4S5	ST-4-05	TC-15	AF Bypass
31	.05	400	18X206	484-05	DT4S5	ST-4-05	TC-15	AVC Filter
32	1500	350	18X607	1467-0015	1R5D15	MW.5-215	1FM-215	De-emphasis
33	100	500	18X605	1468-0001	5W5T1	MO.5-31	1FM-31	RF Bypass
34	5000	400	18X608	1467-005	1D5D5	MW.5-25	1FM-25	2nd Lim. Decoupling
35	5000	400	18X608	1467-005	1D5D5	MW.5-25	1FM-25	2nd Lim. Screen Bypass
36	5000	400	18X608	1467-005	1D5D5	MW.5-25	1FM-25	RF Bypass Pwr. Supply
37	22	500	18X603	1468-000025	5W5Q2	MOS.5-42	MS-42	IF Coupling
38	5000	400	18X608	1467-005	1D5D5	MW.5-25	1FM-25	1st Lim. Screen Bypass
39	47	500	18X604	1468-00005	5W5Q5	MO.5-45	1FM-45	RF Bypass
40A	5000	400	18X608	1467-005	1D5D5	MW.5-25	1FM-25	Cathode Bypass
B	5000	400	18X608	1467-005	1D5D5	MW.5-25	1FM-25	Screen Bypass
C	5000	400	18X608	1467-005	1D5D5	MW.5-25	1FM-25	Decoupling
41A	150	400	†	1468-00015	5W5T15	MO.5-315	1FM-315	Diode RF Filter
B	150	400	†	1468-00015	5W5T15	MO.5-315	1FM-315	" " "
42	5000	400	18X608	1467-005	1D5D5	MW.5-25	1FM-25	1st IF Decoupling
43	5000	400	18X608	1467-005	1D5D5	MW.5-25	1FM-25	1st IF Screen Bypass
44	5000	400	18X608	1467-005	1D5D5	MW.5-25	1FM-25	Filament Bypass
45	5000	400	18X608	1467-005	1D5D5	MW.5-25	1FM-25	Mixer Decoupling
46	5000	400	18X608	1467-005	1D5D5	MW.5-25	1FM-25	Mixer Screen Bypass
47	47	500	18X604	1468-00005	5W5Q5	MO.5-45	1FM-45	Osc. Coupling
48	47	500	18X604	1468-00005	5W5Q5	MO.5-45	1FM-45	Osc. Grid Cap.
49	5000	400	18X608	1467-005	1D5D5	MW.5-25	1FM-25	Osc. Cathode Bypass
50	47	500	18X604	1468-00005	5W5Q5	MO.5-45	1FM-45	RF Bypass
51	470	500	18X606	1468-0005	5W5T5	MO.5-35	1FM-35	Osc. Feedback
52	22	500	18X603	1468-000025	5W5Q2	MOS.5-42	MS-42	Reactance Mod. Coupling
53	100	500	18X605	1468-0001	5W5T1	MO.5-31	1FM-31	Reactance Mod. Grid Cap.
54	5000	400	18X608	1467-005	1D5D5	MW.5-25	1FM-25	RF Bypass Power Supply

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: RADIO CRAFTSMAN PART No.	REPLACEMENT DATA: IRC PART No.	IDENTIFICATION CODES
100	47KΩ	½	23X022	BTS-47K	Yl.-Vi.-Or. De-emphasis
101	100KΩ	½	23X026	BTS-100K	Br.-Blk.-Yl. Discriminator Diode Load
102	100KΩ	½	23X026	BTS-100K	Br.-Blk.-Yl. " " "
103	330Ω	½	23X018	BW-½-330	Or.-Or.-Br. AF Cathode Bias
104	22KΩ	2	23X401	BT-2-22K	Red-Red-Or. AF Cathode Bias
105	47KΩ	½	23X022	BTS-47K	Yl.-Vi.-Or. AF Plate Load
106	47KΩ	½	23X022	BTS-47K	Yl.-Vi.-Or. Tone Compensation
107	22KΩ	½	23X021	BTS-22K	Red-Red-Or. " "
108	1000Ω	10		AB-1000	Filter-See Note 1
109	1000Ω	5	23X602	AB-1000	"
110	1 Meg.	½		BTS-1 Meg.	Br.-Blk.-Grn. AF Grid
111	330Ω	½	23X018	BW-½-330	Or.-Or.-Br. AF Cathode Bias
112	22KΩ	1		BTA-22K	Red-Red-Or. AF Cathode Bias
113	470KΩ	½	23X025	BTS-470K	Yl.-Vi.-Yl. AF Plate Load
114	470KΩ	½	23X025	BTS-470K	Yl.-Vi.-Yl. 2nd AF Grid
115	1000Ω	½	23X019	BTS-1000	Br.-Blk.-Red 2nd AF Cathode
116	470KΩ	½	23X025	BTS-470K	Yl.-Vi.-Yl. 2nd AF Plate Load
117	470KΩ	½	23X025	BTS-470K	Yl.-Vi.-Yl. Phase Inverter Plate Load
118	10KΩ	½	23X020	BTS-10K	Br.-Blk.-Or. Phase Inverter Cathode
119	220KΩ	½		BTS-220K	Red-Red-Yl. Phase Inverter Grid
120	47KΩ	1		BTA-47K	Yl.-Vi.-Or. Bleeder
121	10KΩ	½	23X020	BTS-10K	Br.-Blk.-Or. Feedback
122	330KΩ	½		BTS-330K	Or.-Or.-Yl. Output Grid
123	470KΩ	½	23X025	BTS-470K	Yl.-Vi.-Yl. " "
124	220Ω	2		BW-2-220	Red-Red-Br. Output Cathode
125	2200Ω	1		BTA-2200	Red-Red-Red Output Screen Dropping
126	10KΩ	2		BT-2-10K	Br.-Blk.-Or. Filter
127	10KΩ	½	23X020	BTS-10K	Br.-Blk.-Or. 1st AF Decoupling

†Items 84, 41A & 41B can be obtained as one unit under Part #18X609.
Note 1 - Later production uses 500Ω in this application. IRC replacement AB-500.

TRANSFORMER (POWER)

ITEM No.	RATING: PRI.	RATING: SEC. 1	RATING: SEC. 2	RATING: SEC. 3	REPLACEMENT DATA: RADIO CRAFTSMEN PART No.	REPLACEMENT DATA: STANCOR PART No.	REPLACEMENT DATA: THORDARSON PART No.	REPLACEMENT DATA: MERIT PART No.
128	117V AC @ .75A	650V CT @ .092A	5.2V AC @ 2.0A	6.5V AC @ 2.0A	19S202	P-4079§	T22R31§	P-3152§
129	117V AC @ .96A	700V CT @ .115A	5.2V AC @ 2.0A	6.5V AC @ 3.2A	19S201	P-4080§	T22R32§	P-3153§

§Drill new mounting holes.

TRANSFORMER (OUTPUT)

ITEM No.	RATING: IMPEDANCE PRI.	RATING: IMPEDANCE SEC.	RATING: DC RES. PRI.	RATING: DC RES. SEC.	REPLACEMENT DATA: RADIO CRAFTSMEN PART No.	REPLACEMENT DATA: STANCOR PART No.	REPLACEMENT DATA: THORDAR'N PART No.	REPLACEMENT DATA: MERIT PART No.	INSTALLATION NOTES
130	10KΩ CT	4Ω 6Ω 8Ω 15Ω 500Ω	500Ω CT	.7Ω .8Ω .9Ω 1.2Ω 32Ω	19S004		T22S64	A-3132	

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA: RADIO CRAFTSMEN PART No.	REPLACEMENT DATA: JENSEN PART No.	REPLACEMENT DATA: QUAM PART No.	INSTALLATION NOTES
	FIELD	VC IMP.		ST-103 ‡		‡Use 8Ω tap.
131	PM	5.3Ω	RC12M	Mod. P12-R	12AD6	
	CONE DIA.	VC DIA.				
132	11½"	1"				

PARTS LIST AND DESCRIPTIONS (Continued)

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA					IDENTIFICATION CODES AND INSTALLATION NOTES
	CAP.	VOLT	RADIO CRAFTS. PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	SOLAR PART No.	SPRAGUE PART No.	
55	15	500	18X602		5W5Q2	MOS.5-42	MS-415	Conv. Grid Leak Cap.
56	470	500	18X606	1468-0005	5W5T5	MO.5-35	1FM-35	RF Coupling
57	15	500	18X602		5W5Q2	MOS.5-42	MS-415	RF Coupling
58A	5000	400	18X608	1467-005	1D5D5	MW.5-25	1FM-25	RF Cathode Bypass
B	5000	400	18X608	1467-005	1D5D5	MW.5-25	1FM-25	RF Screen Bypass
C	5000	400	18X608	1467-005	1D5D5	MW.5-25	1FM-25	RF Decoupling
153	470	300	18X606	1468-0005	5W5T5	MO.5-35	1FM-35	AF Plate Bypass

†Items 41A, 41B and 84 can be obtained as one unit under Part #18X606.
*Parallel sections to obtain desired capacity.
#Omit one section.

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA			INSTALLATION NOTES
	RESISTANCE	WATTS	RADIO CRAFTSMEN PART No.	IRC PART No.	CLAROSTAT PART No.	
59A	500KΩ-Dual	½	23S704	33-3333		Volume Control
B	Shaft		Not Req.	C3#		Attach to 59A per instructions
C	Switch		" "	21	" " " "	"
60A	10KΩ	½	23S702	D11-116	AM-27-S	Treble Control
B	Shaft		Not Req.	E	KSS-3	Attach to 60A per instructions
61A	500KΩ	½	23S703	D13-133	AM-58-S	Bass Control
B	Shaft		Not Req.	E	KSS-3	Attach to 61A per instructions
62	100Ω	1	23S801	W-100	43-100	Hum Balance Control

#Use part of original shaft and C3 coupler to obtain knurled shaft.

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	RADIO CRAFTSMEN PART No.	IRC PART No.	
63	68Ω	½	23X016		Blue-Gray-Blk. RF Cathode
64	22KΩ	½	23X021	BTS-22K	Red-Red-Or. RF Screen Dropping
65	2200Ω	½	23X011	BTS-2200	Red-Red-Red RF Plate Load
66	1000Ω	½	23X019	BTS-1000	Br.-Blk.-Red RF Decoupling
67	1000Ω	½	23X019	BTS-1000	Br.-Blk.-Red Oscillator Plate Load
68	22KΩ	½	23X021	BTS-22K	Red-Red-Or. Oscillator Grid
69	220Ω	½	23X017		Red-Red-Br. Oscillator Cathode
70	220Ω	½	23X017		Red-Red-Br. Parasitic Suppressor
71	100KΩ	½	23X023	BTS-100K	Br.-Blk.-Yl. Reactance Modulator Grid Isolation
72	470KΩ	½	23X026	BTS-470K	Yl.-Vi.-Yl. AF Filter
73	6800Ω	1	23X201	BTA-6800	Blue-Gray-Red Reactance Plate Load
74	47KΩ	½	23X022	BTS-47K	Yl.-Vi.-Or. Converter Grid
75	1 Meg.	½	23X026	BTS-1 Meg.	Br.-Blk.-Grn. Converter Grid
76	22KΩ	½	23X021	BTS-22K	Red-Red-Or. Oscillator Grid
77	1 Meg.	½	23X026	BTS-1 Meg.	Br.-Blk.-Grn. AVC Network
78	10KΩ	1	23X203	BTA-10K	Br.-Blk.-Or. Converter Screen Dropping
79	1000Ω	½	23X019	BTS-1000	Br.-Blk.-Red Converter Decoupling
80	47KΩ	½	23X022	BTS-47K	Yl.-Vi.-Or. AVC Network
81	68Ω	½	23X106		Blue-Gray-Blk. 1st IF Cathode
82	33KΩ	1	23X206	BTA-33K	Or.-Or.-Or. 1st IF Screen Dropping
83	1000Ω	½	23X019	BTS-1000	Br.-Blk.-Red 1st IF Decoupling
84	47KΩ	½	†	BTS-47K	Yl.-Vi.-Or. Diode RF Filter
85	470KΩ	½	23X026	BTS-470K	Yl.-Vi.-Yl. Diode Load
86	68Ω	½	23X016		Blue-Gray-Blk. 2nd IF Cathode
87	33KΩ	1	23X206	BTA-33K	Or.-Or.-Or. 2nd IF Screen Dropping
88	1000Ω	½	23X019	BTS-1000	Br.-Blk.-Red 2nd IF Decoupling
89	100KΩ	½	23X023	BTS-100K	Br.-Blk.-Yl. Limiter Grid
90	2.2 Meg.	½	23X027	BTS-2.2 Meg.	Red-Red-Grn. AVC Network
91	2.2 Meg.	½	23X027	BTS-2.2 Meg.	Red-Red-Grn. " "
92	470KΩ	½	23X026	BTS-470K	Yl.-Vi.-Yl. Tone Compensation
93	10KΩ	½	23S702	BTS-10K	Br.-Blk.-Or. 1st Limiter Plate Load
94	22KΩ	1		BTA-22K	Red-Red-Or. 1st Limiter Screen Dropping
95	22KΩ	½	23X021	BTS-22K	Red-Red-Or. Bleeder
96	150KΩ	½	23X024	BTS-150K	Br.-Grn.-Yl. 2nd Limiter Grid
97	22KΩ	1		BTA-22K	Red-Red-Or. 2nd Limiter Screen Dropping
98	22KΩ	½	23X021	BTS-22K	Red-Red-Or. Bleeder
99	1000Ω	½	23X019	BTS-1000	Br.-Blk.-Red 2nd Limiter Plate Decoupling

DATE 5/48-#489-19 SET #39-FOLDER #19

PARTS LIST AND DESCRIPTIONS (Continued)

R F COILS

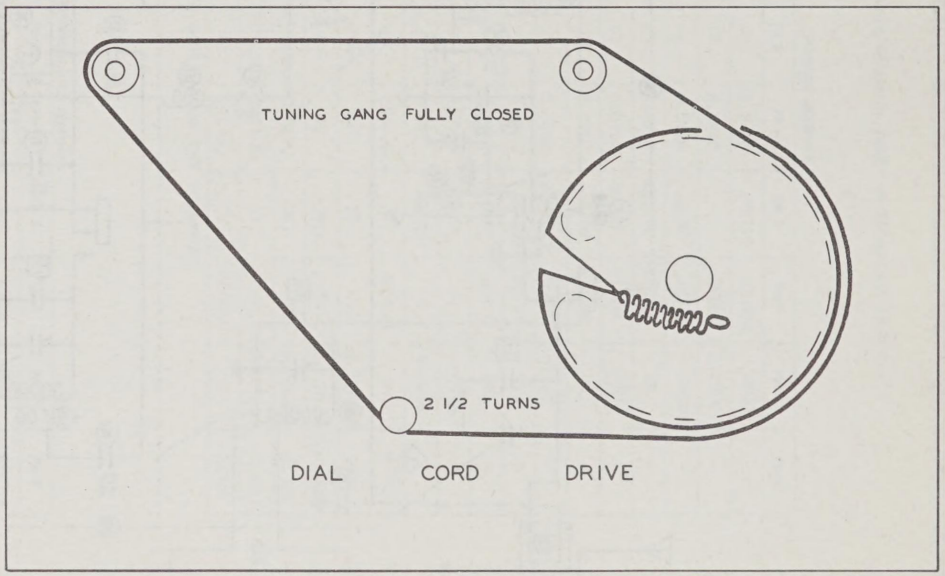
ITEM No.	USE	DC RES.		REPLACEMENT DATA	
		PRI.	SEC.	RADIO CRAFTSMEN PART No.	MEISSNER PART No.
133	Loop Ant.	.1Ω	.8Ω	5B602	
134	Wave Trap		32Ω	5S207	
135	FM Ant.			7X401	
136	FM Ant.Coil		0Ω	5A210	
137	FM RF Coil		0Ω	5A209	
138	AM Osc.Coil	1Ω	5Ω	5S206	14-1060
139	FM Osc.Coil	0Ω	0Ω	5A208	
140	1st AM IF	15Ω	15Ω	5X003	16-6678
141	1st FM IF	.4Ω	.4Ω	5X004	
142	2nd AM IF	15Ω	15Ω	5X003	16-6678
143	2nd FM IF	.4Ω	.4Ω	5X004	
144	3rd FM IF	.4Ω	.4Ω	5X004	
145	FM Disc.	.4Ω	.4Ω	5X005	
146	FM RF Plate Load		.1Ω	5S402	
147	RF Choke		.1Ω	5S402	

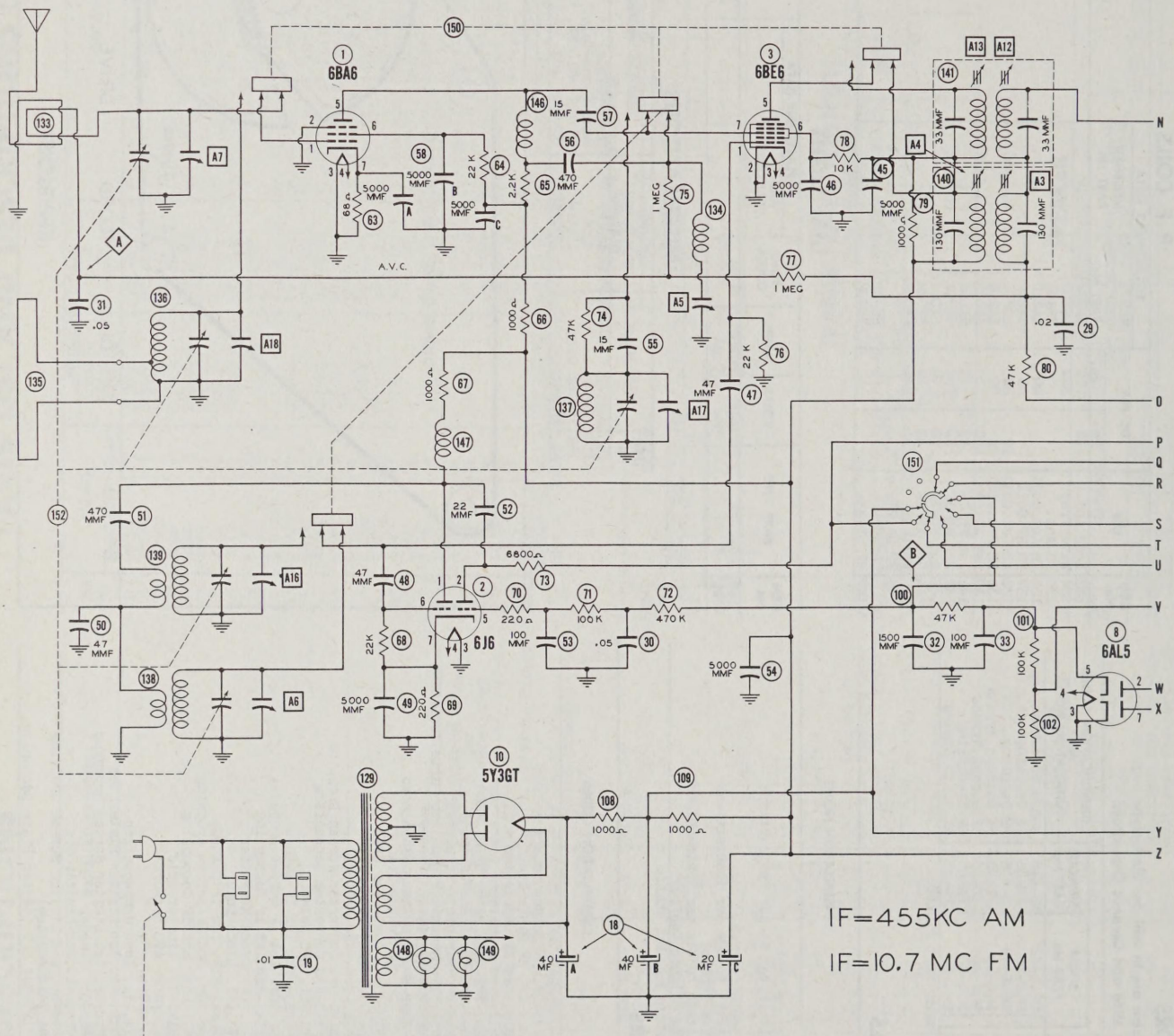
DIAL LIGHT

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		INSTALLATION NOTES
					RADIO CRAFTSMEN PART No.		
148	Bayonet	6-8	0.25	Blue			Type 44
149	"	6-8	0.25	"			" "

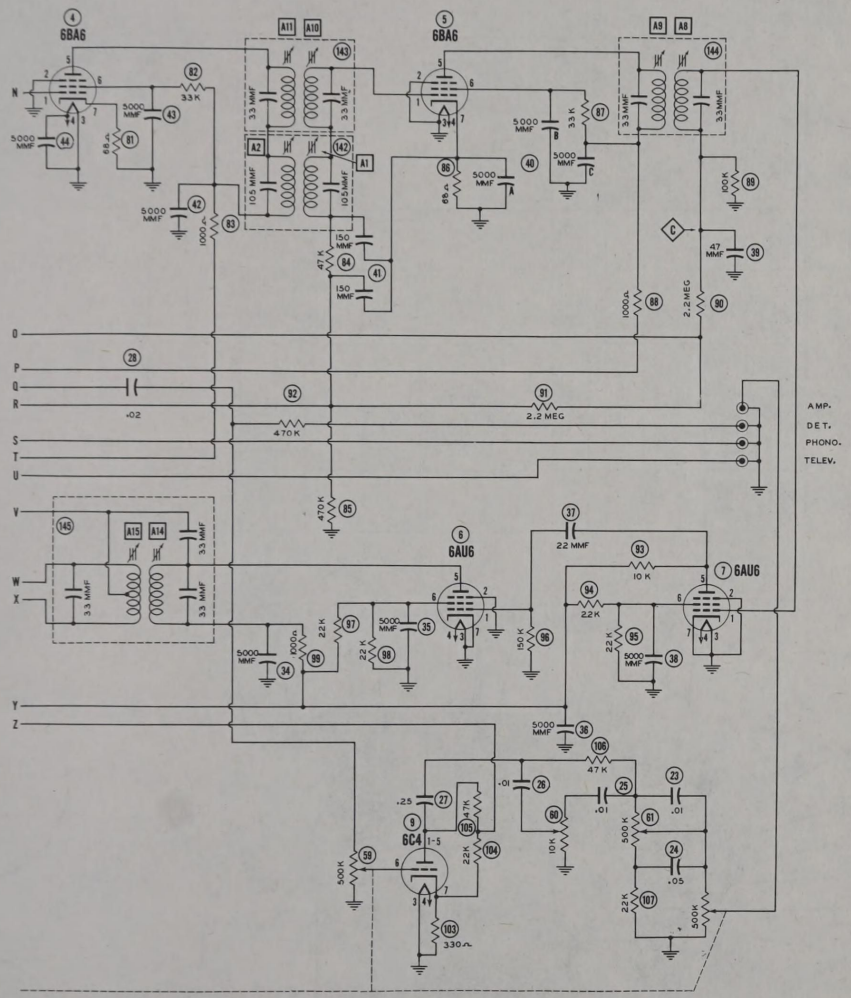
MISCELLANEOUS

ITEM No.	PART NAME	RADIO CRAFTSMEN PART No.	NOTES
150	Switch	4B002	Band (Slide)
151	"	4S003	Band-Phono-Tele. (Rotary)
152	Tuning Gang	17B004	AM (11-431 MMF, 8-170 MMF)
A5	Padder	17X202	BC Osc. Adj.

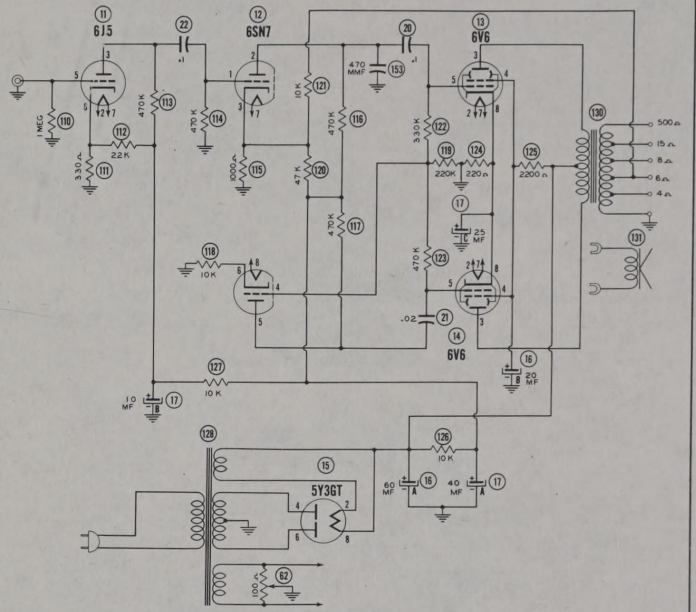




A PHOTOFACT STANDARD NOTATION SCHEMATIC



A PHOTOFACT STANDARD NOTATION SCHEMATIC



STAGE GAIN MEASUREMENTS

ANTENNA TO RF GRID	30X	600KC
RF GRID TO CONVERTER GRID	2X	600KC
CONVERTER GAIN	8.5X	IN 600KC OUT 455KC
INPUT IF TRANSFORMER	1.5X	455KC
IF TUBE	150X	455KC
OUTPUT IF TRANSFORMER	.9X	455KC
AUDIO	6X	400∿
AUDIO	10X	400∿
PHASE INVERTER	5X	400∿
OUTPUT	20X	400∿

The stage gain measured values listed above are approximate values for an average operative stage, rather than an absolute value. It should be borne in mind that it is possible to introduce so many variables into the measurement operation, such as, type of equipment used for measuring, handling and placement of probes, the accuracy of alignment, etc., that an absolute reading is impractical. AVC is made inoperative by connecting negative (-) 3 volts to the AVC line.

A PHOTOFACT STANDARD NOTATION SCHEMATIC

489-19

VOLTAGE AND RESISTANCE READINGS TAKEN IN BROADCAST POSITION.

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	6BA6	0V.	0V.	0V.	6.5VAC	175VDC	100VDC	.5VDC	-
2A	6J6	210VDC	-	0V.	6.5VAC	-	-9VDC§	2.2VDC	-
‡ 2B	6J6	-	212VDC	0V.	6.5VAC	-.3VDC	-3VDC	3VDC	-
3	6BE6	-7VDC§	0V.	0V.	6.5VAC	215VDC	115VDC	0V.	-
4	6BA6	0V.	0V.	0V.	6.5VAC	250VDC	115VDC	1VDC	-
5A	6BA6	-.7VDC	0V.	0V.	6.5VAC	-.4VDC	-.4VDC	0V.	-
‡ 5B	6BA6	0V.	0V.	0V.	6.5VAC	230VDC	100VDC	1VDC	-
‡ 6	6AU6	-.6VDC	0V.	0V.	6.5VAC	217VDC	95VDC	0V.	-
‡ 7	6AU6	-.8VDC	0V.	0V.	6.5VAC	240VDC	90VDC	0V.	-
‡ 8	6AL5	0V.	-1VDC	0V.	6.5VAC	-.4VDC	0V.	-.8VDC	-
9	6C4	95VDC	0V.	6.5VAC	0V.	95VDC	0V.	3.8VDC	-
10	5Y3GT	0V.	360VDC	0V.	325VAC	0V.	325VAC	0V.	360VDC
11	6J5	0V.	3.25VAC**	40VDC	0V.	0V.	0V.	3.25VAC**	2VDC
12	6SN7GT	0V.	90VDC	4VDC	0V.	45VDC	2.5VDC	3.25VAC**	3.25VAC**
13	6V6GT	0V.	3.25VAC**	340VDC	345VDC	0V.	0V.	3.25VAC**	20VDC
14	6V6GT	0V.	3.25VAC	340VDC	345VDC	0V.	0V.	3.25VAC**	20VDC
15	5Y3GT	0V.	350VDC	0V.	350VAC	0V.	350VAC	0V.	350VAC

§TAKEN WITH VACUUM TUBE VOLTMETER.

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	6BA6	2.5 Meg.	0Ω	0Ω	.1Ω	15KΩ	35KΩ	68Ω	-
2A	6J6	13KΩ	-	0Ω	.1Ω	-	22KΩ	220Ω	-
‡ 2B	6J6	-	18KΩ	0Ω	.1Ω	820KΩ	22KΩ	220Ω	-
3	6BE6	22KΩ	0Ω	0Ω	.1Ω	12KΩ	23KΩ	3.5 Meg.	-
4	6BA6	1.5 Meg.	0Ω	0Ω	.1Ω	12KΩ	45KΩ	68Ω	-
5A	6BA6	450KΩ	0Ω	0Ω	.1Ω	INF.	INF.	68Ω	-
‡ 5B	6BA6	450KΩ	0Ω	0Ω	.1Ω	22KΩ	45KΩ	68Ω	-
‡ 6	6AU6	85KΩ	0Ω	0Ω	.1Ω	21KΩ	14KΩ	0Ω	-
‡ 7	6AU6	150KΩ	0Ω	0Ω	.1Ω	12KΩ	12KΩ	0Ω	-
‡ 8	6AL5	0Ω	100KΩ	0Ω	.1Ω	200KΩ	0Ω	100KΩ	-
9	6C4	59KΩ	INF.	.1Ω	0Ω	59KΩ	500KΩ	330Ω	-
10	5Y3GT	INF.	10KΩ	INF.	62Ω	INF.	60Ω	INF.	10KΩ
11	6J5	0Ω	11.5Ω	10KΩ	INF.	1 Meg.	INF.	11.5Ω	330Ω
12	6SN7GT	470KΩ	480KΩ	1KΩ	220KΩ	480KΩ	10KΩ	11.5Ω**	11.5Ω**
13	6V6GT	0Ω	11.5Ω**	25KΩ	27KΩ	550KΩ	INF.	11.5Ω**	220Ω
14	6V6GT	0Ω	11.5Ω**	25KΩ	27KΩ	690KΩ	220KΩ	11.5Ω**	220Ω
15	5Y3GT	INF.	25KΩ	INF.	80Ω	INF.	75Ω	INF.	25KΩ

‡ VOLTAGE AND RESISTANCE READINGS TAKEN IN FM POSITION.

**READINGS TAKEN WITH HUM BALANCE CONTROL CENTERED.

RESISTANCE READINGS IN THE B+ CIRCUITS MAY VARY WIDELY ACCORDING TO THE CONDITION OF THE FILTER CAPACITORS

1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1,000 ohms.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set pointer turn tuning cap. fully closed and set pointer to last reference mark at low end of dial.
Use insulated alignment screwdriver with 1/16" thick blade for all adjustments.

AM ALIGNMENT

Volume control should be at maximum position, output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1	.01 MFD	High side to Pin 7 (grid) of 6BE6. Low side to chassis.	455KC	BC (fully counter-clock-wise)	Tuning cap. fully open.	Across voice coil	A1,A2, A3,A4.	Adjust for maximum output
2	.01 MFD	High side to ext. antenna terminal. Low side to chassis.	"	"	"	"	A5	Adjust for minimum output
3	220MMFD	"	1500KC	"	1500KC	"	A6	Adjust for maximum output
4	220MMFD	"	"	"	Tune for maximum output.	"	A7	"

FM ALIGNMENT USING AM SIGNAL GENERATOR VTVM & OUTPUT METER

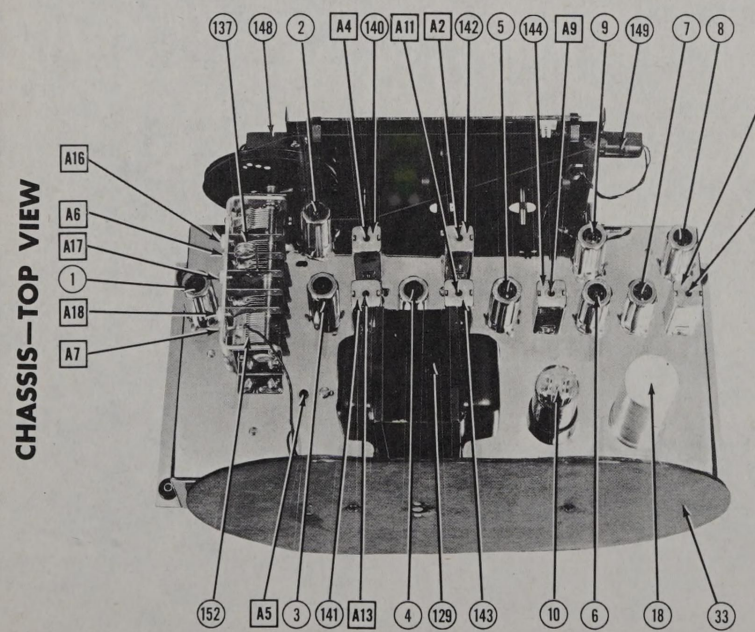
	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
5	.01 MFD	High side to Pin 7 (grid) of 6BE6. Low side to chassis.	10.7MC (unmodulated)	FM (center position)	Tuning cap. fully open.	DC probe to Point ◇. Common to chassis	A8,A9, A10,A11	Adjust for maximum deflection.
6	.01 MFD	"	"	"	"	DO probe to Point ◇. Common to chassis	A12,A13, A14.	Adjust for zero deflection.
7	300Ω carbon res.	High side to ungrounded FM Ant. terminal. Low side to grounded modulation terminal.	104MC (400Ω amplitude modulation)	"	"	OUTPUT METER across voice coil	A16	Disconnect resistor (72) from point ◇ and connect to chassis. Adjust for maximum output.
8	"	"	"	"	Tune for maximum output.	"	A17, A18	Rock tuning cap. and adjust for maximum output. Reconnect resistor (72).

FM ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Use freq. modulated signal with 60^ modulation and 450KC sweep. Use 120^ sawtooth voltage in scope for horizontal deflection.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	SCOPE CONNECT	ADJUST	REMARKS
5	.01 MFD	High side to Pin 1 of 6BA6 1st IF Tube (4). Low side to chassis.	10.7MC Freq. (center position)	FM	Tuning cap. fully open.	Vertical Input to Point ◇. Ground to chassis.	A8,A9, A10,A11	Adjust for maximum amplitude, symmetry and coincidence of pattern per Fig. 1.
6	.01 MFD	High side to Pin 7 of 6BE6. Low side to chassis.	"	"	"	"	A12, A13	"
7	.01 MFD	High side to Pin 1 of 6BA6 2nd IF Tube (5). Low side to chassis.	"	"	"	Vertical Input to Point ◇. Ground to chassis.	A14, A15	Use full vertical gain of scope and attenuate output of sig. gen. to just give usable pattern. This is to prevent saturation of limiters. Alternately adjust A14 & A15 for maximum amplitude of pattern and A15 for maximum straightness of crossover lines with crossover occurring at center of pattern per Fig. 2.
8	300Ω carbon res.	High side to ungrounded FM ant. terminal. Low side to grounded terminal.	104MC	FM	104MC	Vertical Input to Point ◇. Ground to chassis.	A16	Disconnect resistor (72) from point ◇ and connect to chassis. Adjust for coincidence of pattern per Fig. 1.
9	"	"	"	"	Tune for coincidence of pattern.	"	A17, A18	Rock tuning cap. to keep pattern coincident and adjust for maximum amplitude of pattern per Fig. 1. Reconnect resistor (72) to Point ◇.

CHASSIS—TOP VIEW



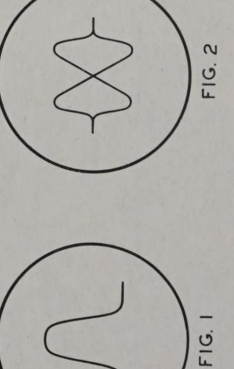


FIG. 2

FIG. 1