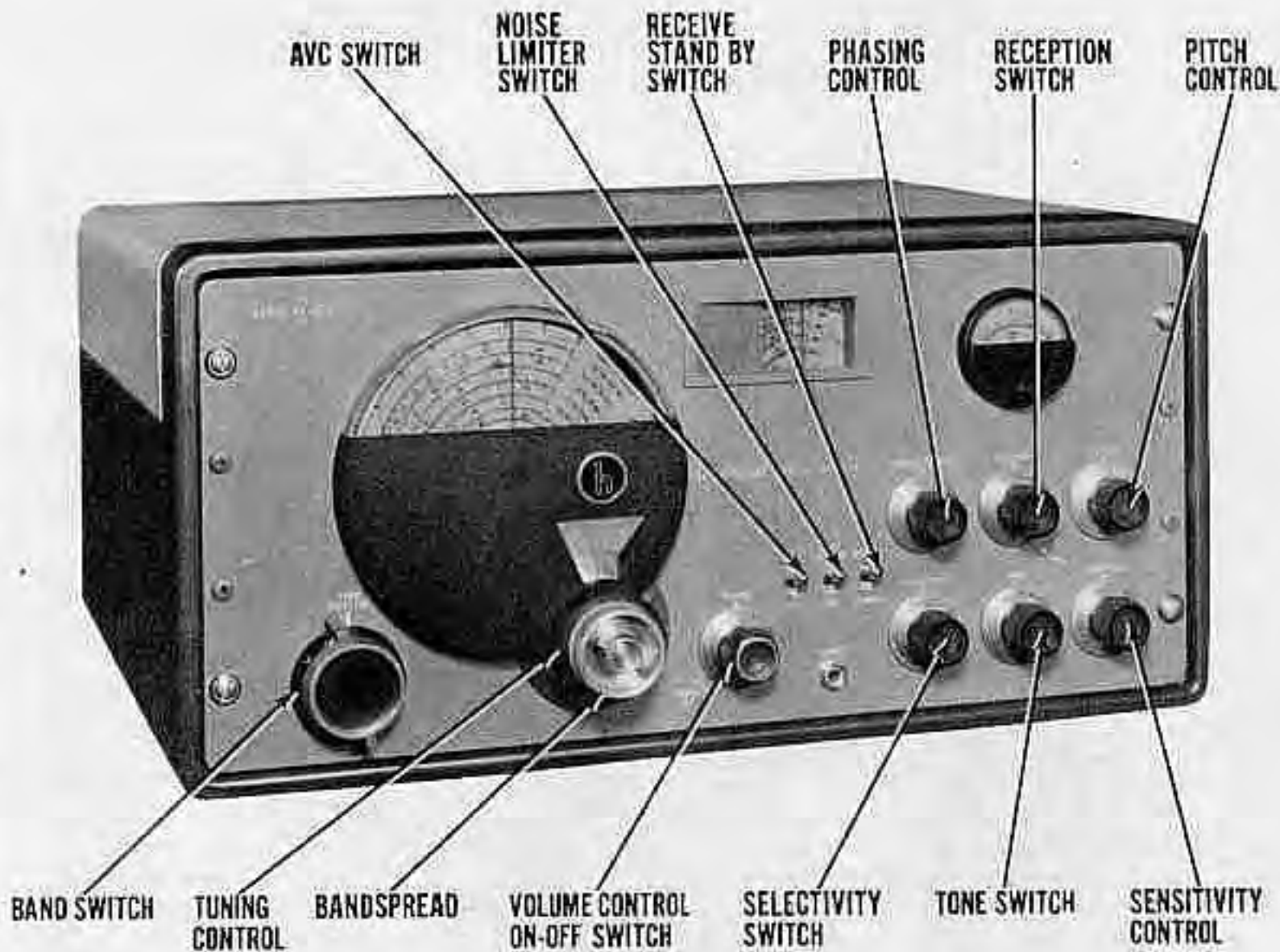


HALLICRAFTERS MODEL
SX-42



HALLICRAFTERS MODEL
SX-42

HALLICRAFTERS MODEL SX-42

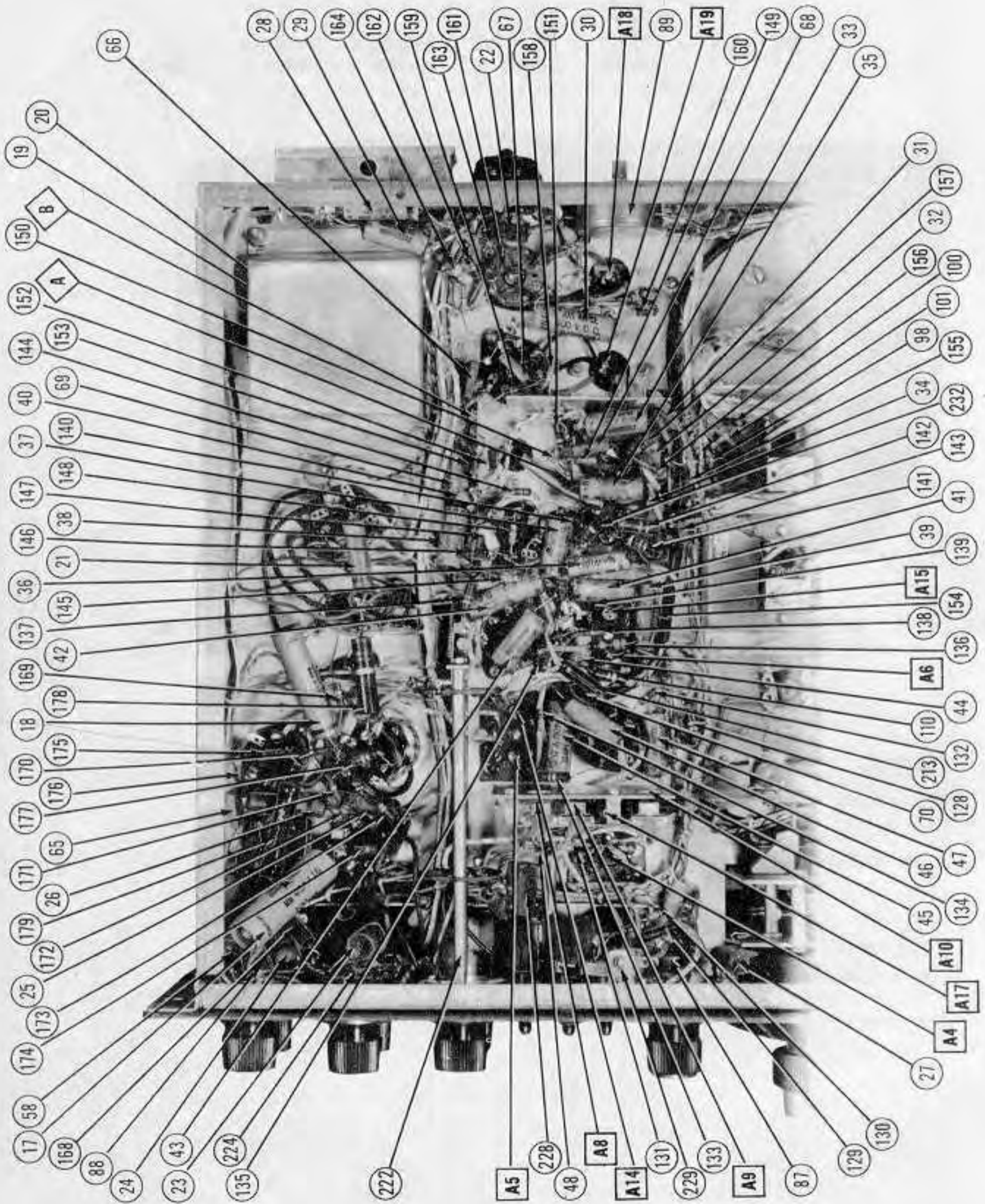
TRADE NAME	Hallcrafters, Model SX-42		
MANUFACTURER	Hallcrafters Co., 5th & Kostner Avenues, Chicago 24, Ill.		
TYPE SET	AC Operated Multi-Band Commercial Type Superheterodyne Receiver		
TUBES (FIFTEEN)	Types, 6AG5 1st RF, 6AG5 2nd RF, 7F8 Converter, 6SK7 1st IF Amp., 6SQ7 2nd IF Amp., 6HG AM Det.-Noise Limiter, 7H7 1st Limiter, 7H7 2nd Limiter, 6H6 Discriminator, 7A4 BFO-S Meter Amp., 6SL7GT Audio Inverter, (2) 6V6GT Power Output, 5U4G Rectifier, ODS/VR150 Voltage Reg.		
POWER SUPPLY	105-125 Volts AC-DC	RATING	1.07 Amp. @ 117 Volts AC
TUNING RANGE-BROADCAST	540-1620KC	SHORT WAVE	1.62-5MC, 5-15MC, 15-30MC, 27-56MC, 55-110MC
		FM	27-55MC, 55-110MC

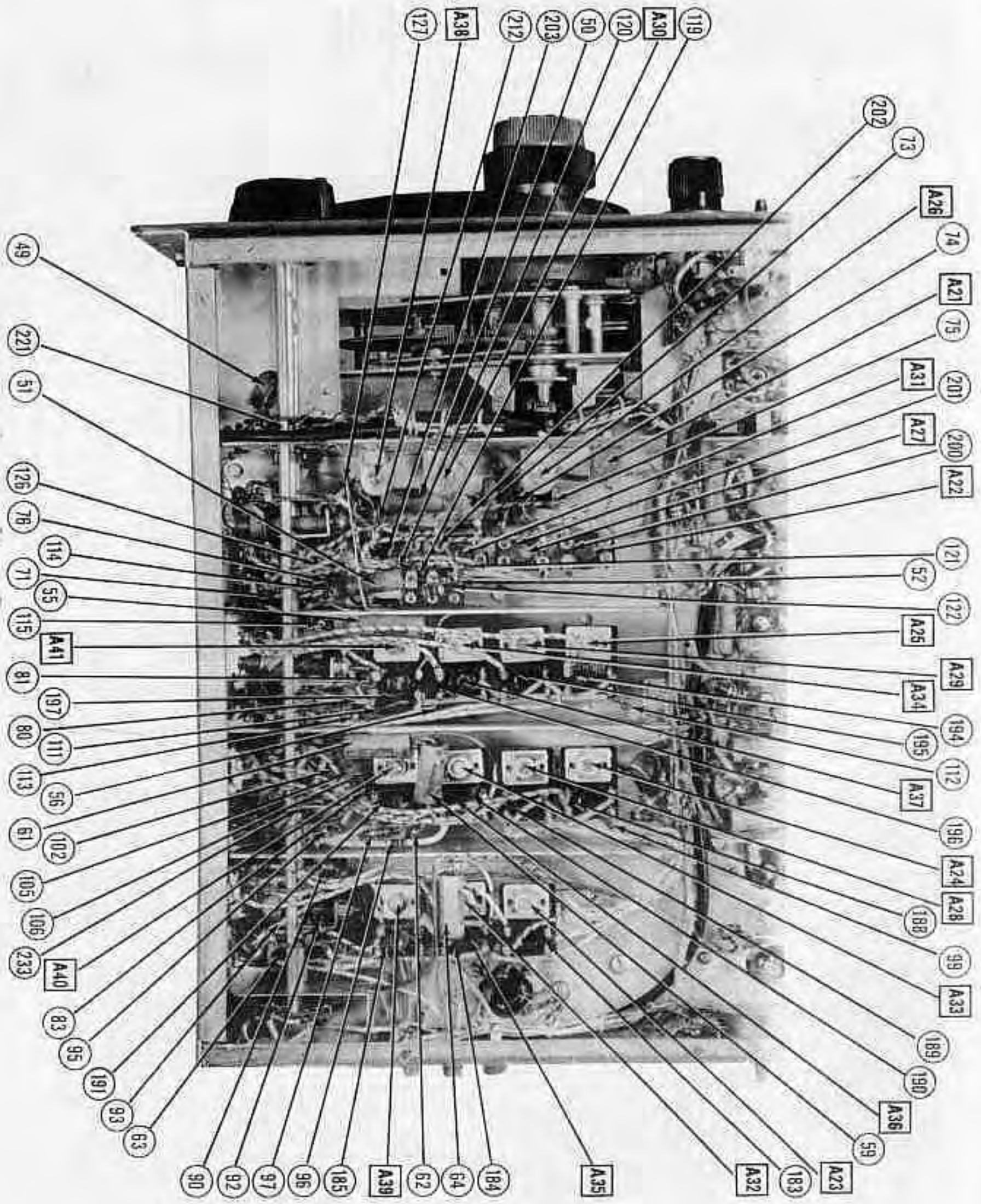
HOWARD W. SAMS & CO., INC.

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Indianapolis Indiana

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PARTS LIST AND DESCRIPTIONS
TUBES (SYLVANIA or Equivalent)

PARTS LIST AND DESCRIPTIONS (Continued)
RESISTORS

ITEM No.	USE	REPLACEMENT DATA			INSTALLATION NOTES
		HALLICRAFTER PART No.	STANDARD REPLACEMENT	RMA BASE TYPE	
1	1st RF Converter	6AG5	6AG5	7BD	
2	2nd RF Converter	7F8	6AG5	8M	
3	1st IF Amp.	6SK7	7F8	8N	
4	2nd IF Amp.	6SG7	6SK7	8BK	
5	AM Det.-Noise Limiter	6H6	6H6	7Q	
6	1st Limiter	7H7	7H7	8V	
7	2nd Limiter	7H7	7H7	8V	
8	Discriminator	6H6	6H6	7Q	
9	RF-S Meter Amp	7A4	5AC	5AC	
10	Audio Inverter	6SL7GT	6SL7GT	7AC	
11	Power Output	6V6GT	6V6GT	7AC	
12		6V6GT	6V6GT	7AC	
13		5U4G	5U4G	5T	
14	Rectifier	0B3/YR150	0B3/YR150	44J	
15	Voltage Reg.				

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 AND INSTALLATION NOTES
		HALLICRAFTER PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	
16A	30	45A041		UF4445C	EL-330
16B	20	45A041		UF4445C	EL-330
17	100	45A116	PR825-100	BRH251	UH6-102
18	10	45A064	PR825-10	BR102A	TA-10
19	0.1	46AG103J		D7681	TC-11
20	0.01	46AG103J		D7681	TC-11
21	0.1	46AY103J		D7681	TC-11
22	0.1	46AY103J		D7681	TC-11
23	0.05	46AY503J		D7685	TC-15
24	0.05	46AY503J		D7685	TC-15
25	0.02	46AW203J		D7482	TC-12
26	0.02	46AW203J		D7482	TC-12
27	0.1	46AW103J		D7481	TC-12
28	0.02	46AW203J		D7482	TC-12
29	0.05	46AW503J		D7485	TC-15
30	0.05	46AW503J		D7485	TC-15
31	0.1	46AM103J		D7481	TC-12
32	0.02	46AM203J		D7482	TC-12
33	0.02	46AM203J		D7482	TC-12
34	0.02	46AM203J		D7482	TC-12
35	0.1	46AM103J		D7481	TC-12
36	0.05	46AM503J		D7485	TC-15
37	0.05	46AM503J		D7485	TC-15
38	0.05	46AM503J		D7485	TC-15
39	0.1	46AM103J		D7481	TC-12
40	0.1	46AM103J		D7481	TC-12
41	0.05	46AM203J		D7482	TC-12
42	0.05	46AM203J		D7482	TC-12
43	0.05	46AM203J		D7482	TC-12
44	0.1	46AM103J		D7481	TC-12
45	0.05	46AM503J		D7485	TC-15
46	0.05	46AM503J		D7485	TC-15
47	0.05	46AM503J		D7485	TC-15
48	0.05	46AM503J		D7485	TC-15
49	0.05	46AM503J		D7485	TC-15
50	0.1	46AM103J		D7481	TC-12
51	0.1	46AM103J		D7481	TC-12
52	0.1	46AM103J		D7481	TC-12
53	0.1	46AM103J		D7481	TC-12
54	0.1	46AM103J		D7481	TC-12
55	0.02	46AM203J		D7482	TC-12
56	0.02	46AM203J		D7482	TC-12
57	0.05	46AM503J		D7485	TC-15

ITEM No.	RATING	REPLACEMENT DATA		IDENTIFICATION CODES
		HALLICRAFTER PART No.	IRC PART No.	
106	150K	RC20AE151K	BTA-47K	Br.-Grn.-Br. 2nd RF Cathode
107	47K	RC30AE473K		Or.-Or.-Br. Parasitic Suppressor-See Note 2
108	300K	RC20AE331K		Br.-Blk.-Red 1st RF Screen Dropping
109	1000K	RC30AE102M		Br.-Blk.-Red 1st RF Screen Dropping
110	100K	RC30AE104H		Br.-Blk.-Yl. Voltage Dropping
111	2200K	RC20AE22M		Red-Red-Red 2nd RF Plate Decoupling
112	1200K	RC20AE12K		Br.-Red-Red 2nd RF Plate Decoupling
113	3000K	RC20AE15K		Or.-Blk.-Red Parasitic Suppressor-See Note 3
114	15K	RC20AE150M		Br.-Grn.-Blk.
115	2200K	RC20AE22M		Red-Red-Red Decoupling
116	2.2 Meg.	RC20AE225M		Red-Red-Grn. Converter Grid
117	1000K	RC20AE102M		Br.-Blk.-Red Converter Cathode
118	47K	RC20AE473K		Yl.-Yl.-Blk. Parasitic Suppressor
119	4700K	RC20AE472K		Yl.-Yl.-Red Converter Cathode
120	33K	RC20AE330M		Or.-Or.-Blk. Parasitic Suppressor
121	56K	RC20AE560K		Grn.-Blue-Blk.
122	4700K	RC20AE472K		Yl.-Yl.-Red Converter Cathode
123	15K	RC20AE150M		Br.-Grn.-Blk. Parasitic Suppressor
124	15K	RC20AE150M		Br.-Blk.-Blk.
125	10K	RC20AE103K		Grn.-Blk.-Or. Oscillator Grid
126	5600K	RC30AE562K		Yl.-Yl.-Br. Oscillator Plate Load
127	470K	RC20AE471K		Blue-Gray-Or. Converter Plate Decoupling
128	68K	RC30AE683K		Br.-Red-Br. AVC Shunt
129	120K	RC20AE121K		Br.-Blk.-Red AVC Network
130	1000K	RC20AE102M		Br.-Blk.-Grn.
131	270K	RC20AE271K		Red-Vl.-Br. 1st IF Cathode
132	56K	RC20AE563K		Grn.-Blk.-Red 1st IF Screen Dropping
133	1000K	RC20AE102M		Br.-Blk.-Red 1st IF Decoupling
134	1.2 Meg.	RC20AE122K		Or.-Or.-Br. 2nd IF Grid
135	33K	RC20AE331K		Or.-Or.-Br. 2nd IF Cathode
136	56K	RC20AE563K		Br.-Blue-Or. 2nd IF Screen Dropping
137	1200K	RC20AE122K		Br.-Red-Red 2nd IF Plate Decoupling
138	68K	RC30AE683K		Blue-Gray-Or. 3rd IF Transformer Shunt
139	68K	RC20AE682K		Br.-Gray-Red 3rd IF Cathode
140	470K	RC30AE473K		Vl.-Vl.-Or. 3rd IF Screen Dropping
141	10K	RC20AE103M		Br.-Blk.-Or. 3rd IF Plate Load
142	1000K	RC20AE102M		Br.-Blk.-Red 3rd IF Decoupling
143	2.2 Meg.	RC20AE225M		Red-Red-Grn. Noise Limiter Diode Load
144	4700K	RC20AE474M		Yl.-Yl.-Grn. Noise Limiter Input
145	1 Meg.	RC20AE103M		Br.-Blk.-Grn. Noise Limiter Bias Network
146	100K	RC20AE104H		Br.-Blk.-Yl. Noise Limiter Input
147	330K	RC20AE330K		Yl.-Yl.-Or. Limiter Grid Filter
148	47K	RC20AE473K		Yl.-Yl.-Or. Limiter Grid Filter
149	47K	RC20AE473K		Red-Red-Yl. Limiter Grid
150	47K	RC20AE473K		Br.-Blk.-Grn. AC Network
151	220K	RC20AE224K		Red-Red-Yl. 3rd IF Grid
152	1 Meg.	RC20AE225M		Br.-Blk.-Red 3rd IF Decoupling
153	220K	RC20AE224K		Grn.-Blue-Or. Limiter Plate Decoupling
154	2.2 Meg.	RC20AE225M		Or.-Or.-Br. Discriminator Transformer Shunt
155	1000K	RC20AE102M		Br.-Blk.-Grn. 3rd IF Grid
156	56K	RC20AE563K		Grn.-Blk.-Grn. 3rd IF Decoupling
157	330K	RC20AE331K		Yl.-Yl.-Or. Parasitic Suppressor
158	47K	RC20AE473K		Yl.-Yl.-Yl. FM Output
159	150K	RC20AE154K		Br.-Blk.-Grn. BFO Grid
160	1200K	RC20AE122K		Br.-Blk.-Red Tone Compensation
161	5100K	RC20AE512J		Br.-Blk.-Or. Feedback
162	10K	RC20AE103K		Grn.-Blue-Blk. Feedback
163	1000K	RC20AE102M		Br.-Red-Red AF Cathode
164	47K	RC20AE473K		Red-Red-Yl. AF Plate Load
165	100K	RC20AE101K		Gray-Red-Red Phase Inverter Cathode
166	470K	RC20AE474M		Red-Red-Red Phase Inverter Grid
167	1 Meg.	RC40AE102M		Red-Red-Yl. Output Grid
168	1000K	RC20AE102M		Br.-Blk.-Grn. BFO Grid
169	10K	RC20AE103K		Br.-Blk.-Or. Feedback
170	56K	RC20AE560K		Grn.-Blue-Blk. Feedback
171	1200K	RC20AE122K		Br.-Red-Red AF Cathode
172	220K	RC20AE224K		Red-Red-Yl. AF Plate Load
173	220K	RC20AE224K		Br.-Red-Red Phase Inverter Cathode
174	1200K	RC20AE122K		Gray-Red-Red Phase Inverter Grid
175	5200K	RC20AE522K		Red-Red-Yl. Output Grid
176	220K	RC20AE224K		Red-Red-Yl.
177	220K	RC20AE224K		Red-Red-Yl.

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 CAP. VOLT	REPLACEMENT DATA				IDENTIFICATION AND INSTALLATION NOTES	
		HALLICRAFTERS PART No.	AEROVOX PART No.	CORNELL FABRILER PART No.	SOLAR PART No.		
58	.25	46AT254J	484-.25	D72P25	SP-2-25	TC-2	Sensitivity Cont. Byp.
59	.05	46AU503J	484-.05	D72S5	SP-4-05	TC-15	AVC Filter
60	.01	46AU503J	484-.01	D74S1	SP-4-01	TC-11	1st RF Screen Decoupl.
61	.02	46AM203J	484-.02	D74S2	SP-4-02	TC-12	Decoupling
62	.02	46AM203J	484-.02	D74S2	SP-4-02	TC-12	
63	.05	46AU503J	484-.05	D72S5	SP-4-05	TC-15	1st RF Cathode Byp.
64	.05	46AU503J	484-.05	D72S5	SP-4-05	TC-15	
65	.60	CM25A68LK	1468-00075	1M5T7	MO.3-37	IFM-37	Output Grid Bypass
66	.50	CM25A56LK	1468-0005	1M5T6	MO.5-36	IFM-36	De-emphasis
67	.47	CM20A470K	1468-00005	5M5Q5	MO.5-45	IFM-45	RP Bypass
68	.180	CM20A181K	1468-0002	5M5T2	MO.5-32	IFM-32	Limiter Grid Filter
69	.180	CM20A181K	1468-0002	5M5T2	MO.5-32	IFM-32	
70	5000	47A168	1467-0005	1D5D5	MM.5-25	IFM-25	Fl. Bypass
71	.110	CC20UK111J	1468-0001	5M5T1	MO.5-31	IFM-31	Osc. Coupling
72	.7	CC20UK070K		1R5D15	MMS.5-215		Fixed Trimmer
73	4700	CM350472R					Fixed Pad
74	1500	CM20A471G					"
75	470	CM25E221G					"
76	220	CM25K111J	1468-0001	5M5T1	MO.5-31	IFM-31	Osc. Grid Cap.
77	.110	CM20A470K	1468-00005	5M5Q5	MO.5-45	IFM-45	RP Coupling
78	.47	CM20A470K					Fixed Pad
79	.15	CC20UK150K	1467-0006	1D5D6	MM.5-26	IFM-26	RP Bypass
80	5600	CM35A562M					RP Coupling
81	2	49A002					Fixed Trimmer
82	15	CC20UK150K					RP Coupling
83	2	49A002	1467-0006	1D5D6	MM.5-26	IFM-26	RP Bypass
84	5600	CM35A562M	1469-000005	SR5V5	MOS.5-55	MS-55	RP Coupling-See Note
85	2	CC20UK050D					
86	2	49A002					

Note-Not used in some models.

CONTROLS

ITEM No.	RATING RESIST. ANCE	WATTS	REPLACEMENT DATA		INSTALLATION NOTES
			HALLICRAFTERS PART No.	CLAROSTAT PART No.	
87A	1 Meg.	1/2	D13-137	M-63-2	Volume Control
87B	Switch	1/2	Not Req.	A	Attach to 87A per instructions
88A	10K Ω	1/2	D16-116	M-30-V	Sensitivity Control
88B	Shaft	2	Not Req.	A	Attach to 88A per instructions
89	500 Ω	2	W-500	58-500	"S" Meter Adjust

RESISTORS

ITEM No.	RATING RESISTANCE	WATTS	REPLACEMENT DATA		IDENTIFICATION CODES
			HALLICRAFTERS PART No.	IRC PART No.	
90	100K Ω	1/2	RC20AE104M	BTS-100K	Br.-Blk.-Yl. 1st RF Grid
91	15K Ω	1/2	RC20AE150M		Br.-Grn.-Blk. Parasitic Suppressor
92	12K Ω	1/2	RC20AE120K		Br.-Grn.-Blk.
93	150 Ω	1/2	RC20AE151K		Cr.-Grn.-Br. 1st RF Cathode
94	330 Ω	1/2	RC20AE331K		Cr.-Or.-Br. Parasitic Suppressor-See Note 1
95	15K Ω	1/2	RC20AE150M		Cr.-Grn.-Blk.
96	330 Ω	1/2	RC20AE331K		Cr.-Or.-Br.
97	2200 Ω	1/2	RC20AE222N		Red-Red-Red 1st RF Plate Decoupling
98	1200 Ω	1/2	RC20AE122K		Br.-Red-Red
99	2.2 Meg.	1/2	RC20AE225M		Br.-Red-Red 1st RF Network
100	2.2 Meg.	1/2	RC20AE225M		Grn.-Blue-Grn. "r"
101	470K Ω	1/2	RC20AE474M		Yl.-Vl.-Yl.
102	100K Ω	1/2	RC20AE104M		Br.-Blk.-Yl. 2nd RF Grid
103	15K Ω	1/2	RC20AE150M		Br.-Grn.-Blk. Parasitic Suppressor
104	15K Ω	1/2	RC20AE150M		Br.-Grn.-Blk.
105	2200 Ω	1/2	RC20AE222M		Red-Red-Red 1st RF Decoupling

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

ITEM No.	RATING RESISTANCE	WATTS	REPLACEMENT DATA		IDENTIFICATION CODES
			HALLICRAFTERS PART No.	IRC PART No.	
178	2200 Ω	2	RC40AE221K	BM-2-220	Red-Red-Br. Output Cathode
179	2000 Ω	10	24BGS202D	AB-2000	Filter
232	2000 Ω	1/2	RC20AE222K	BTS-2200	Red-Red-Red 3rd IF Cathode
233	1000 Ω	1/2	RC20AE102M	BTS-1000	Br.-Blk.-Red RF Coil Shunt
234	100 Ω	1/2	RC20AE101K		Br.-Blk.-Br. 3rd IF Cathode

Note 1-Part of Item 214. See same for replacement.
 Note 2-Part of Item 215. See same for replacement.
 Note 3-Some models use 330 Ω in this application. Replacement same as #94.

TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA		STANCOR PART No.	THORDARFN PART No.	MERRIT PART No.
		HALLICRAFTERS PART No.	SEC. 3			
180	117V AC 500V CT 5.0V AC 16.3V AC @ 1.07A 142ADC @ 3.0A @ 5.5A	SEC. 1	SEC. 2	520141	P-63144	122R067

Use universal mounting brackets.
 Add series resistor to reduce plate voltage.

FILTER CHOKE

ITEM No.	TOTAL DIRECT CURRENT	RATINGS D. C. RESISTANCE	INDUCTANCE (1000 μ)	REPLACEMENT DATA		
				HALLICRAFTERS PART No.	STANCOR PART No.	THORDARFN PART No.
181	.085A	290 Ω	17 Henries	56B067	C-1709	T-20353

*Drill one new mounting hole.

TRANSFORMER (OUTPUT)

ITEM No.	RATING IMPEDANCE	DC RES.	REPLACEMENT DATA		INSTALLATION NOTES
			HALLICRAFTERS PART No.	STANCOR PART No.	
182	600 Ω	480 Ω	55B077		

R F COILS

ITEM No.	USE	DC RES.	REPLACEMENT DATA	
			HALLICRAFTERS PART No.	MEISSNER PART No.
183	Ant. Coil 1	.5 Ω	51B823	
184	"	.5 Ω	51B826	
185	"	.12	51B990	
186	"	.02	51B828	
187	"	.02	51B829	
188	RF	2.5 Ω	51B824	
189	"	1.2	51B825	
190	"	.42	51B957	
191	"	.02	51B959	
192	"	.02	51B832	
193	"	.02	51B833	
194	Conv.	2.8 Ω	51B986	
195	"	2.5 Ω	51B986	

PARTS LIST AND DESCRIPTIONS (Continued)

R F COILS

ITEM No.	USE	DC RES.		REPLACEMENT DATA	
		PRI	SEC	HALLICRAFTERS PART No.	MESSNER PART No.
186	CORV. "	3	.14	51B838	
187	"	4	.02	51B839	
188	"	5	.02	51B844	
189	"	6	.02	51B855	
200	Osc.	1	1.72	51B854	
201	"	2	.52	51B855	
202	"	3	.22	51B856	
203	"	4	.12	51B951	
204	"	5	.02	51B838	
205	"	6	.02	51B839	
206A	1st IF AM	42	.152	50C198	
207A	2nd IF AM	72	.32	50C190	
208A	3rd IF AM	132	.32	50C220	
209	FM IF Comp.	108	.72	53B104	
210	Disc. Trans.	.32	.32	50C191	
211	BFO Trans.	.22	.112	50C032	
212	RF Choke	.22	.22	53B008	
213	"	.22	.22	53B009	
214	"	.12	.12	53A117	
215	"	.12	.12	53A117	

1 Incl. both primaries.
 2 Band pass winding

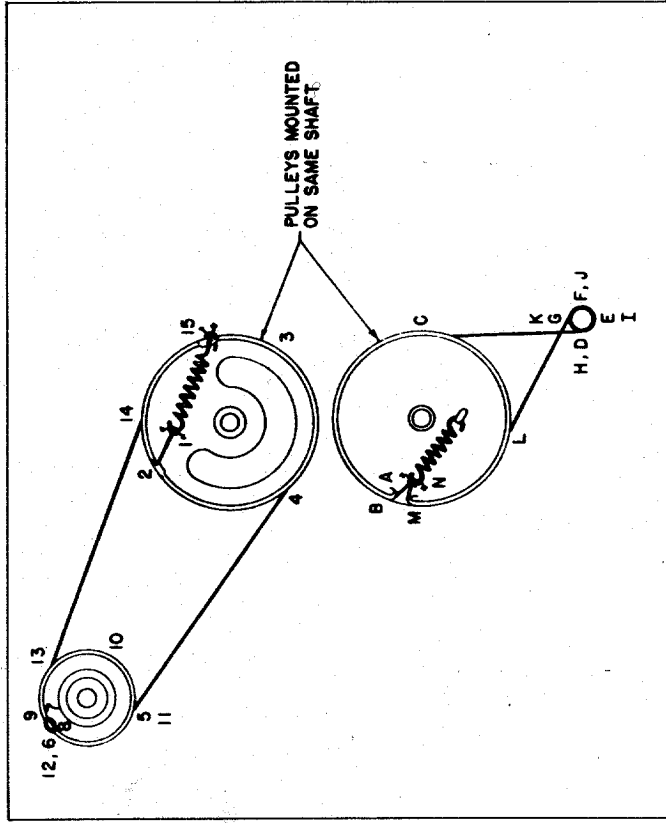
**AM Osc. winding only.

DIAL LIGHT

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		INSTALLATION NOTES
					HALLICRAFTERS PART No.	MESSNER PART No.	
217-	Bayonet	6-8	0.25	Blue	39A018		Type 44
220							

MISCELLANEOUS

ITEM No.	PART NAME	HALLICRAFTERS PART No.	NOTES
221	Switch	60D241	Band
222	"	60A234	Selectivity
223	"	60C235	Reception
224	"	60C236	Tone
225	"	60A138	AVC
226	"	60A138	Noise Limiter
227	"	60A138	Receive-Standby
228	Crystal	19A123	(19MMF-397MMF) each section
229	Phone Jack	56A029	(12MMF-90MMF) each section
230	4 Gang Var. Cap.	48C-158	Band 1 Osc. Adj.
231	4 Gang Band Spread Cap.		Band 2 " " " "
421	Trimmer	44A076	Band 3 " " " "
422	"	44A077	Band 4 " " " "
423	"	44A077	Band 5 " " " "
424	"	44A047	Band 6 " " " "
425	"	44A078	Band 7 " " " "
426	Dual Trimmer	44B165	Band 8 Apt. Adj.
427	"	44B165	Band 9 1st RF Adj.
428	"	44B165	Band 10 2nd RF Adj.
429	"	44B165	Band 11 Carrier Level
430	"	82B100	Main Tuning
431	"	82C330	Bandspread
432	"	82B238	Main Tuning
433	"	82A110	Dial Pointer

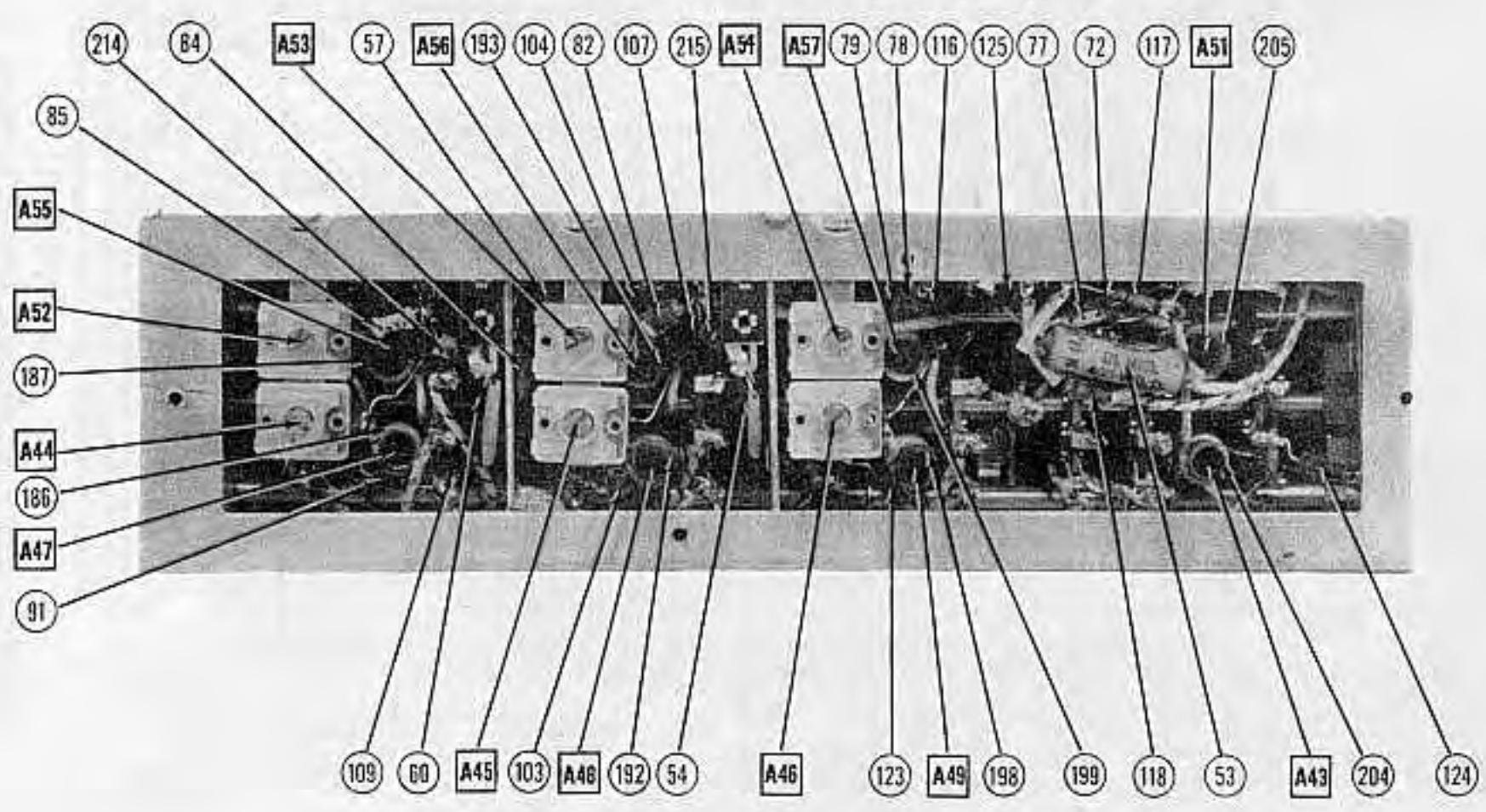
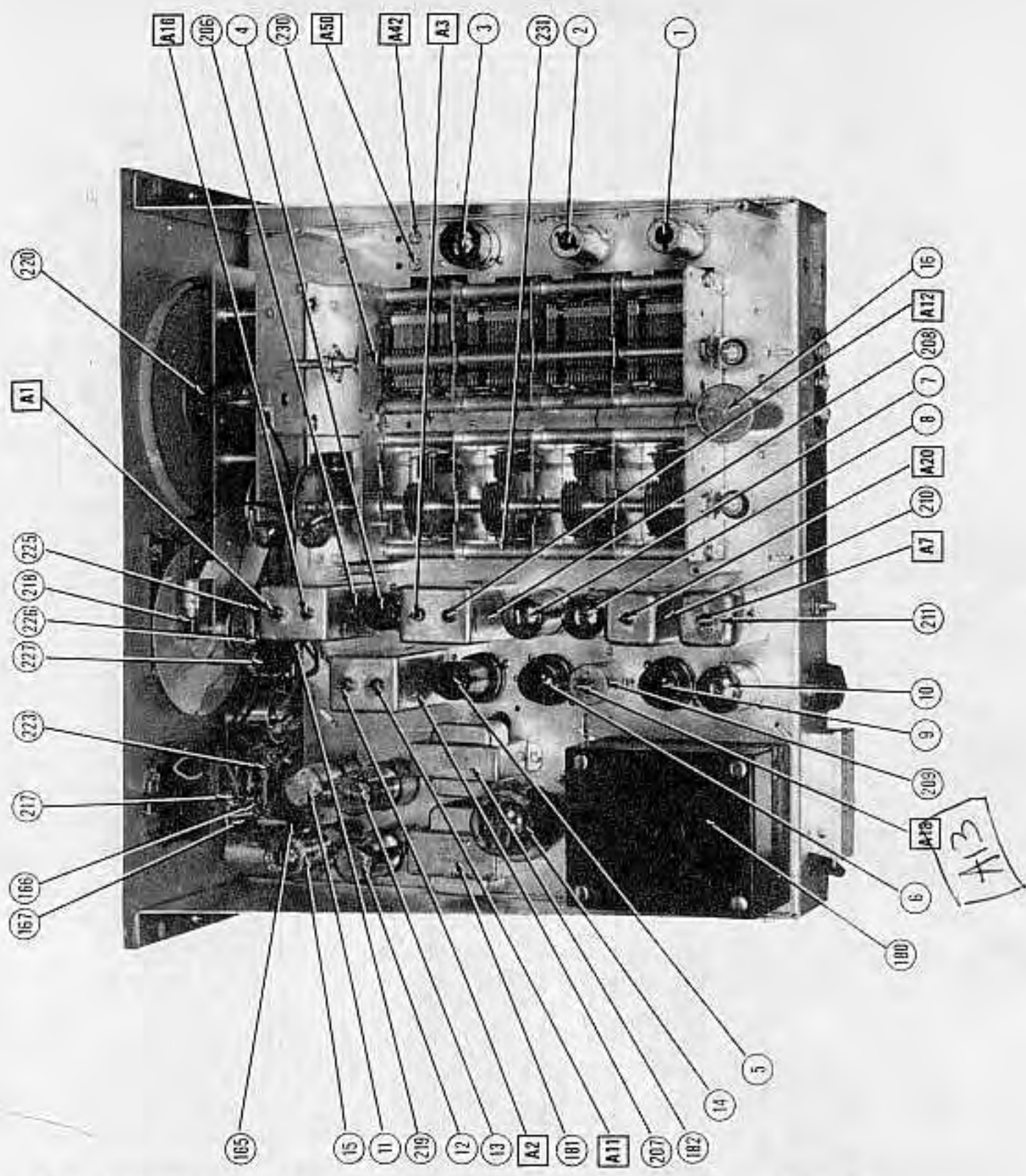


RESTRINGING DIAL CORD

Two dial drive cords are used on the bandspread dial drive mechanism. To restring the upper dial cord, use a length of 18 lb. test cord and tie one end to the tension spring in the large pulley at position 1 in the diagram. Follow the numbers 1 through 15, stretch the tension spring and tie the cord securely. To restring the lower dial cord, tie the cord at A and follow the lettered route A through N as illustrated.

REPLACING LAMPS

There are three dial lamps and one meter lamp. To replace the lamps, it is necessary to remove the receiver chassis from the cabinet and remove the light shield across the top of the dial drive mechanism. The chassis is fastened to the cabinet by four front panel screws and three chassis screws at the bottom rear of the cabinet. The light shield is held down by four screws, two at each end of the channel. Replace the dial lamps with 6-8 V. 250MA. #44 (Blue bead) lamps. The meter lamp is removed by pulling the socket straight out of the grommet. Replace this lamp with 6-8 V. 150MA #47 (Brown bead). Do not use a 250 MA. lamp in the meter housing as the excessive heat will discolor the meter scale.



ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set pointer turn tuning cap. fully closed and set pointer to last reference mark at low freq. end of dial.
 Band spread dial should be at zero unless otherwise specified.
 RMA dummy antenna consists of 200 MMFD cap. in series with a 20uh RF Choke with RF Choke shunted by a 400 MMFD cap. in series with a 400Ω carbon resistor.

455 KC IF 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 screw-driver for adjusting.

In step #5 it may be necessary to reduce the set gain to prevent injury to meter. This should be done only with sig. gen. attenuator or sensitivity control. Leave volume control at maximum.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1	.1 MFD. High side to Pin 1 of 7F8. Low side to chassis.	455KC	.54 - 1.62MC	1MC	Across 500Ω speaker terminals.	A1,A2, A3,A4, A5,A6.	Set sensitivity control full on, noise limiter off, AVC off, standby receive switch to receive, tone control to "HI-FI", selectivity switch to sharp IF, reception switch to AM. Adjust A1,A2,A3,A4,A5 & A6 for maximum output.
2	.1 MFD.	455KC (Unmodulated)	"	"	"	A7	Turn reception switch to "CW". Set pitch control to zero. Adjust A7 to zero beat. Then turn pitch control until BFO note is about 1000 CPS off zero beat.
3	.1 MFD.	455KC	"	"	"	A4	Turn selectivity control to "broad crystal" and while slowly adjusting A4 rock signal gen. until output (as indicated on meter) decreases and then slowly increases.
4	.1 MFD.	Tune to weaker of two signals on either side of zero beat.	"	"	"	A4	Adjust crystal phasing control for null point. Check for correct setting of A4. Adjusting A4 in either direction should cause an increase in output. If it does not, repeat Steps 2, 3 & 4. Leave crystal phasing control at present setting for following adjustments.
5	.1 MFD.	455KC	"	"	"	A8	Turn selectivity switch to "Sharp Crystal" and loosen A8 to near minimum capacity. Rock signal gen. and tighten A8 slowly until maximum output is indicated. When max. output has been obtained tighten A8 until output drops about 2 DB. See prealignment notes.
6	.1 MFD.	Tune for max. output. Turn 400 √ modulation in sig. gen. to on.	"	"	"	A9	Tune for maximum output & note meter reading. Turn selectivity switch to "Crystal Broad" and note drop in output. Turn selectivity switch to "crystal-medium" and with A9 near minimum capacity slowly tighten it while rocking sig. gen. until output meter reads midway between "crystal-sharp" and "crystal-broad" positions.
7	.1 MFD.	Tune for max. output with selectivity switch on "sharp crystal". (Do not change)	"	"	"	A1,A2, A3,A5, A6,A10	Turn selectivity switch to "crystal-sharp" and readjust A1,A2,A3,A5,A6 & A10 for maximum output.
8	.1 MFD.	"	"	"	"	A7	Turn reception switch to "CW" and CW pitch knob to "0". Turn modulation in sig. gen. to off. Adjust A7 for zero beat.

10.7MC IF ALIGNMENT USING AM SIG. GEN. & OUTPUT METER.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
9	.1 MFD. High side to Pin 1 of 7F8. Low side to chassis.	10.7MC 400 √ modulation	28-55 MC	41MC	Across 500Ω speaker terminals.	A11,A12, A13,A14, A15,A16, A17	Turn reception switch to AM, noise limiter off, AVC off, tone control to "HI-FI", volume and sensitivity at maximum and selectivity switch to "normal-sharp". Adjust A11,A12,A13,A14 & A15 for maximum output in order given once only (do not repeat) then adjust A16 & A17 for maximum output.
10	.1 MFD.	10.7MC (unmodulated)	"	"	"	A18	Set pitch control to "0". Turn reception switch to "CW". Adjust A18 for zero beat. BFO adjustment is now complete.
11	.1 MFD.	10.7MC (400 √ modulation)	"	"	"	A19	Turn reception switch to "FM". Adjust A19 for maximum output.
12	.1 MFD.	"	"	"	"	A20	Adjust for minimum output Swing sig. gen. above and below minimum output and note value of peaks. If they are unequal adjust A19 until they are equalized. Continue with step 13 below.

K4XL's **BAMA**

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