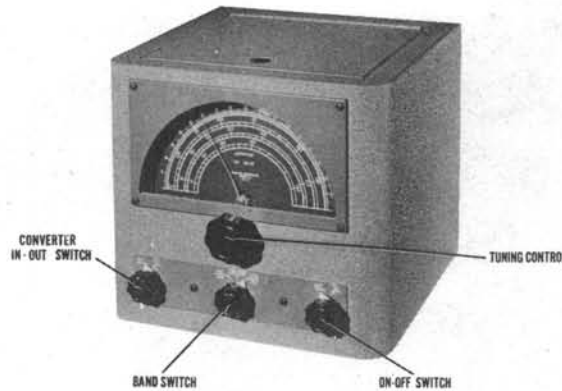


RME
MODEL HF10-20



RME MODEL HF10-20

TRADE NAME	RME, Model HF10-20
MANUFACTURER	Radio Mfg. Engineers, Inc., 300-306 1st Ave., Peoria, Ill.
TYPE SET	AC Operated Frequency Converter with Frequency of 7MC (Nominal) Out.
TUBES (FOUR)	Types, 6BA6 RF Amp., 6J6 Converter, VR150 Voltage Regulator, 5Y3G Rectifier.
POWER SUPPLY	110-120 Volts AC RATING .38 Amp. @ 117 Volts AC
SHORT WAVE	14.0-14.4MC. 21.0-21.5MC. 27.0-29.7MC

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.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1 Direct	High side to center stator of tuning cap. Low side to chassis.	6.95MC	14.0-14.4 (Counter-clock-wise)	Tuning cap. fully open.	Across voice coil of associated receiver.	A1	Adjust for maximum output.
2 300Ω Carbon Res.	High side to either 20 meter antenna terminal. Low side to other terminal.	14.4MC	"	14.4MC	"	A2	Adjust for maximum output. Tune sig. gen. to 28.3MC. If signal is not heard, retune sig. gen. to 14.4 MC and open A2 to next peak. Adjust for maximum output and recheck for image.
3 "	"	14.0MC	"	14.0MC	"	A3	Adjust for maximum output. Repeat Steps 2 & 3 until no further improvement can be made.
4 "	"	14.4MC	"	Tune for maximum output.	"	A4, A5	Rock tuning cap. and adjust A4 & A5 for maximum output.
5 "	High side to either 15 meter ant. terminal. Low side to other terminal.	21.5MC	21.0-21.5MC (center position)	21.5MC	"	A6	Adjust for maximum output. Tune sig. gen. to 35.4MC. If signal is not heard, retune sig. gen. to 21.5 MC and open A6 to next peak. Adjust for maximum output and recheck for image.
6 "	"	21.0MC	"	21.0MC	"	A7	Adjust for maximum output. Repeat Steps 5 & 6 until no further improvement can be made.
7 "	"	21.5MC	"	Tune for maximum output.	"	A8, A9	Rock tuning cap. and adjust A8 & A9 for maximum output.
8 "	High side to either 10 meter ant. terminal. Low side to other terminal.	29.7MC	27-29.7MC (clock-wise)	29.7MC	"	A10	Adjust for maximum output. Tune sig. gen. to 43.6MC. If signal is not heard, retune sig. gen. to 29.7 MC and open A10 to next peak. Adjust for maximum output and recheck for image.
9 "	"	27.0MC	"	27.0MC	"	A11	Adjust for maximum output. Repeat Steps 8 & 9 until no further improvement can be made.
10 "	"	29.7MC	"	Tune for maximum output.	"	A12, A13	Rock tuning cap. and adjust A12 & A13 for maximum output.

RME
MODEL HF10-20

HOWARD W. SAMS & CO., INC. • 2924 East Washington Street • Indianapolis 7, Indiana

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PARTS LIST AND DESCRIPTIONS

CHASSIS—TOP VIEW

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA			RMA BASE TYPE	INSTALLATION NOTES
		RME PART No.	STANDARD REPLACEMENT	7BK		
1	RF Amp.	65A6	65A6	7BK		
2	Converter	6J6	6J6	7DF		
3	Voltage Reg.	VRL50	VRL50	4AJ		
4	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	REPLACEMENT DATA				IDENTIFICATION CODES AND INSTALLATION NOTES
		RME PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	SOLAR PART No.	
5A	CAP. 10	AF22J		UF1145	DY-2x10-45	Filter
B	10		684-01	D7681	ST-6-01	RF Bypass Power Supply
6	.01		684-01	D7681	ST-6-01	Osc. Decoupling
7	.01		684-01	D7681	ST-6-01	RF Screen Bypass
8	.01		684-01	D7681	ST-6-01	RF Cathode
9	.01		684-01	D7681	ST-6-01	Osc. Feedback-Cor.-Note 1
10	.25					Fixed Trimmer
11	10					
12	40					
13	30					
14	25					
15	1000		1467-001	1W5D1	PM-5-21	Osc. Grid Cap.
16	1.5					Conv. Cathode Bypass
17	20					Osc. Coupling-5%
18	100					RF Coupling-See Note 1
19	15		1468-31	5W5T1	MO-5-31	RF Coupling
20	300					Fixed Padder-Note 2

Note 1-Negative temperature coefficient.
Note 2-Not used in all models.

RESISTORS

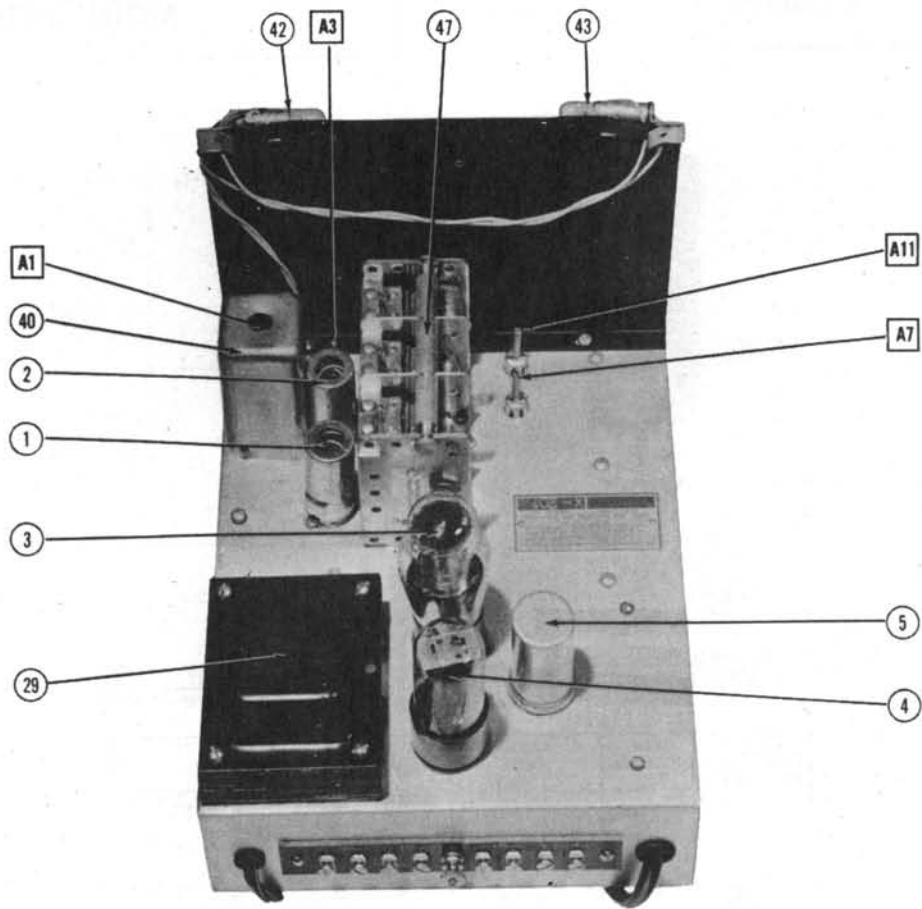
ITEM No.	RATING	REPLACEMENT DATA			IDENTIFICATION CODES
		RME PART No.	IRC PART No.	IRC PART No.	
20	18KΩ				Br.-Gray-Blk. Parasitic Suppressor
21	300Ω				Or.-White-Br. RF Cathode
22	15KΩ				Br.-Orn.-Or. RF Screen
23	27KΩ				Red-Blk.-Or. RF Plate Load
24	47KΩ				V1-V1-Or. Converter Grid
25	1000Ω				Br.-Blk.-Red Conv. Cathode-See Note
26	4700Ω				V1-V1-Red Osc. Grid
27	18KΩ				Br.-Gray-Or. Osc. Decoupling
28	3500Ω				AB-3500 Voltage Dropping

Note-Some models use two 20002 1/2 W. resistors in parallel in this application.

TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA			
		RME PART No.	STANCOR PART No.	THORNDARSON PART No.	MERIT PART No.
29	117V AC @ .36A @ .05ADQ @ 2.0A @ 1.0A		P-547#	T22R04	P-2357#

#Add series resistor to reduce plate voltage.



PARTS LIST AND DESCRIPTIONS (Continued)

CHASSIS—BOTTOM VIEW

FILTER CHOKE

ITEM NO.	TOTAL DIRECT CURRENT	RATINGS		INDUCTANCE (0 CURRENT 1000 V)	REPLACEMENT DATA			INSTALLATION NOTES
		D. C. RESISTANCE	565Ω		RME PART NO.	STANCOR PART NO.	THORLABSON PART NO.	
30	.05 A.			20 Henries	C-1003	T2L053	C-2887	

R F COILS

ITEM No.	USE	DC RES.			REPLACEMENT DATA	
		FRI.	SEC.	PME PART No.	MEISSNER PART No.	
31	Ant. Coils		.1Ω			
32	20 Meter	0Ω	0Ω			
33	15 Meter	0Ω	0Ω			
34	10 Meter	0Ω	0Ω			
35	RF Coils	0Ω	0Ω			
36	20 Meter	0Ω	0Ω			
37	15 Meter	0Ω	0Ω			
38	10 Meter	0Ω	0Ω			
39	IF Coil	0Ω	0Ω			
40	Osc. Coils					
41	Osc. Plate Choke		42Ω			

DIAL LIGHT

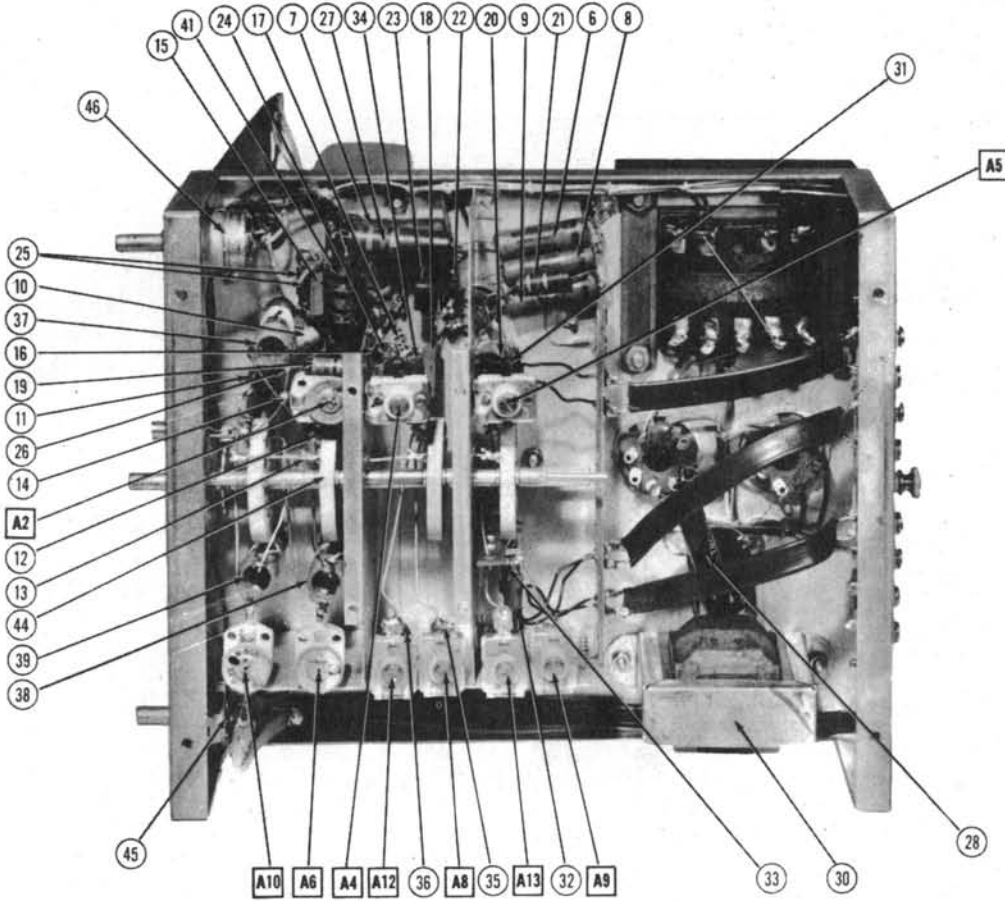
ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		INSTALLATION NOTES
					RME PART No.	MEISSNER PART No.	
42	Bayonet	6-8	0.15	Brown			Type 47
43							

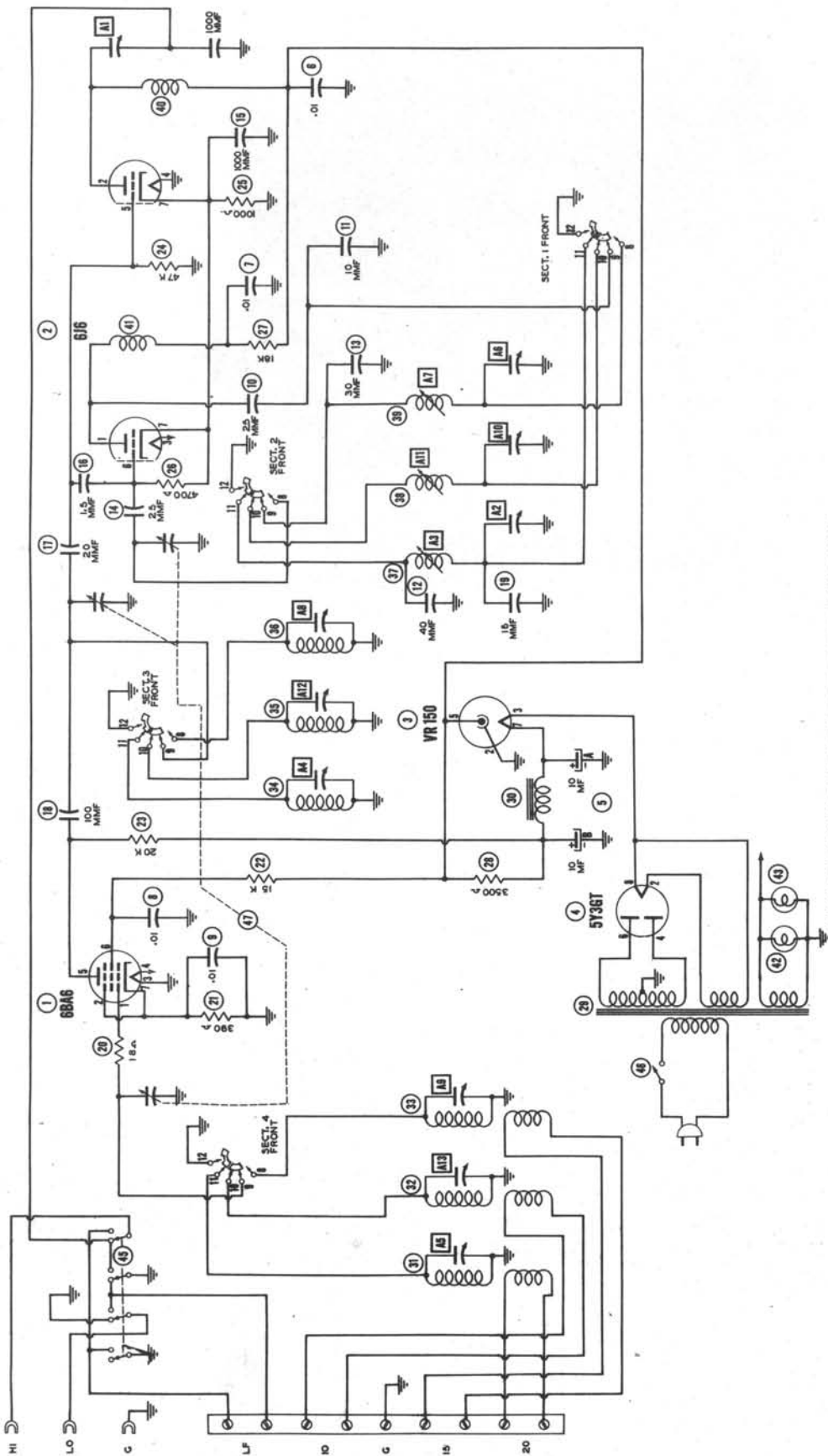
MISCELLANEOUS

ITEM No.	PART NAME	RME PART No.	NOTES
44	Switch		Band Changeover Power On-Off
45	"		Tuning
46	"		
47	3 Gang Var. Cap.		

EXTERNAL CONNECTIONS

The output cable should be connected to the antenna terminal of the receiver. The cable has two shielded leads and a ground lead each ending in a terminal lug. On receivers which have provision for doublet operation, such as the RFG-45 and the RME-84 the blue coded lead must be connected to the antenna terminal farthest from the ground terminal. This is the hot side of the converter output. The red lead, or low side, must be connected to the antenna terminal nearest to the ground terminal. The ground braid should be connected to the receiver ground. On receivers not equipped for doublet operation, the blue lead should be connected to the antenna terminal and the red and ground (shield) leads should be connected to the receiver ground. This lead is coded white. Unless the above instructions are followed, the changeover switch will not operate properly.





VOLTAGE AND RESISTANCE READINGS TAKEN WITH BANDSWITCH ON 14KΩ POSITION.

Point	Table	Ph 1	Ph 2	Ph 3	Ph 4	Ph 5	Ph 6	Ph 7	Ph 8
1	6BAG	.12	350Ω	0Ω	.12	350KΩ	350Ω	-	-
2	616	370Ω	350KΩ	.12	0Ω	47Ω	5.7KΩ	1KΩ	-
3	VR150	INF.	0Ω	350KΩ	INF.	350KΩ	INF.	350KΩ	INF.
4	5Y36T	INF.	350Ω	INF.	200Ω	INF.	100Ω	INF.	350Ω

Point	Table	Ph 1	Ph 2	Ph 3	Ph 4	Ph 5	Ph 6	Ph 7	Ph 8
1	6BAG	OV.	3.2VDC	OV.	6.8VAC	1.6VDC	1.6VDC	3.2VDC	-
2	616	65VDC	150VDC	6.8VAC	OV.	OV.	-3VDC	6VDC	-
3	VR150	OV.	OV.	380VDC	OV.	1.6VDC	OV.	320VDC	OV.
4	5Y36T	OV.	320VDC	OV.	31.0VAC	OV.	31.0VAC	OV.	320VDC

RESISTANCE READINGS IN THE 8+ CIRCUITS MAY VARY WIDELY ACCORDING TO THE CONDITION OF THE FILTER CAPACITORS. THE COOPERATION OF THE MANUFACTURER OF THIS EQUIPMENT MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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- 1 - DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1000 ohms per volt.
- 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 - No signal applied for voltage measurements.