

K4XL's **BAMA**

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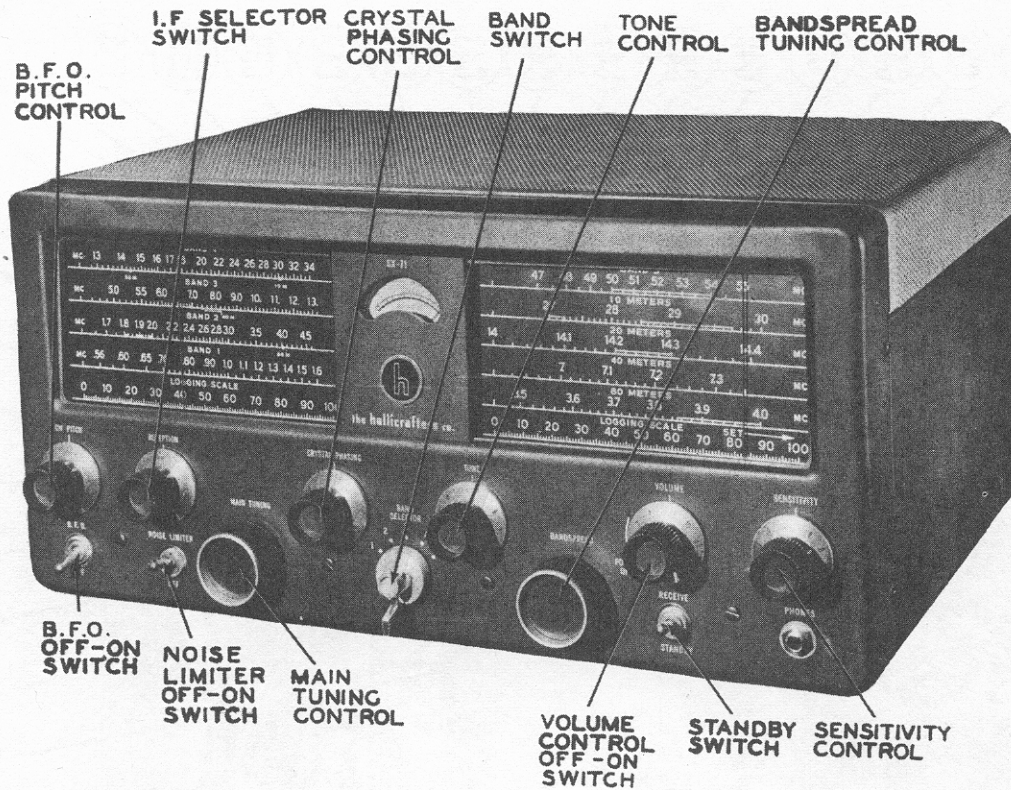
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HALLICRAFTERS
MODEL SX-71



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HALLICRAFTERS MODEL SX-71

TRADE NAME	Hallicrafters, Model SX-71		
MANUFACTURER	The Hallicrafters Co. 5th and Kostner Avenues, Chicago 24, Illinois		
TYPE SET	AC Operated Multi-Band Superheterodyne Communications Receiver		
TUBES (THIRTEEN)	Types 6BA6 RF Amp., 6AU6 Mixer, 6C4 Oscillator, 6BE6 Converter, 6SK7 1st IF Amp., 6SK7 2nd IF Amp., 6SH7 3rd IF Amp., 6AL5 Detector, 6H6 AVC Rect. -Noise Limiter, 6SC7 BFO-AF Amp., 6K6GT Power Output, 0D3/VR150 Voltage Regulator, 5Y3GT Rectifier		
POWER SUPPLY	105-125 Volts AC	RATING	.75 Amp. at 117 Volts AC
TUNING RANGE-BROADCAST	560-1600KC	SHORT WAVE	#1 1650-4700KC, #2 4.7MC-13.4MC #3 12.8-34MC, #4 46-56MC

"S" METER ADJUSTMENT

MECHANICAL:

Turn off receiver.
Remove the round metal disc directly below the meter and adjust the pivot adjustment screw in either direction until the needle indicates zero.

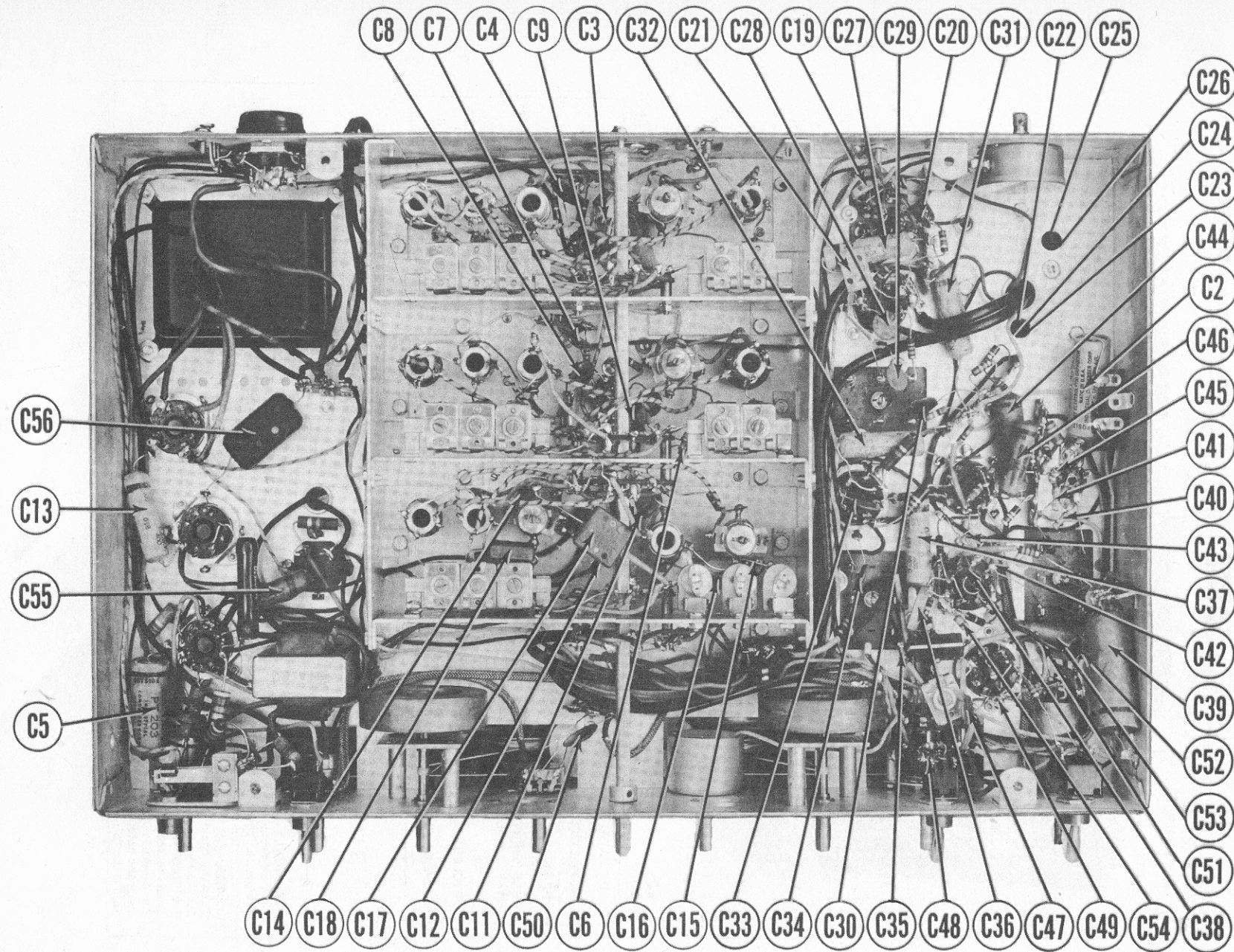
ELECTRICAL:

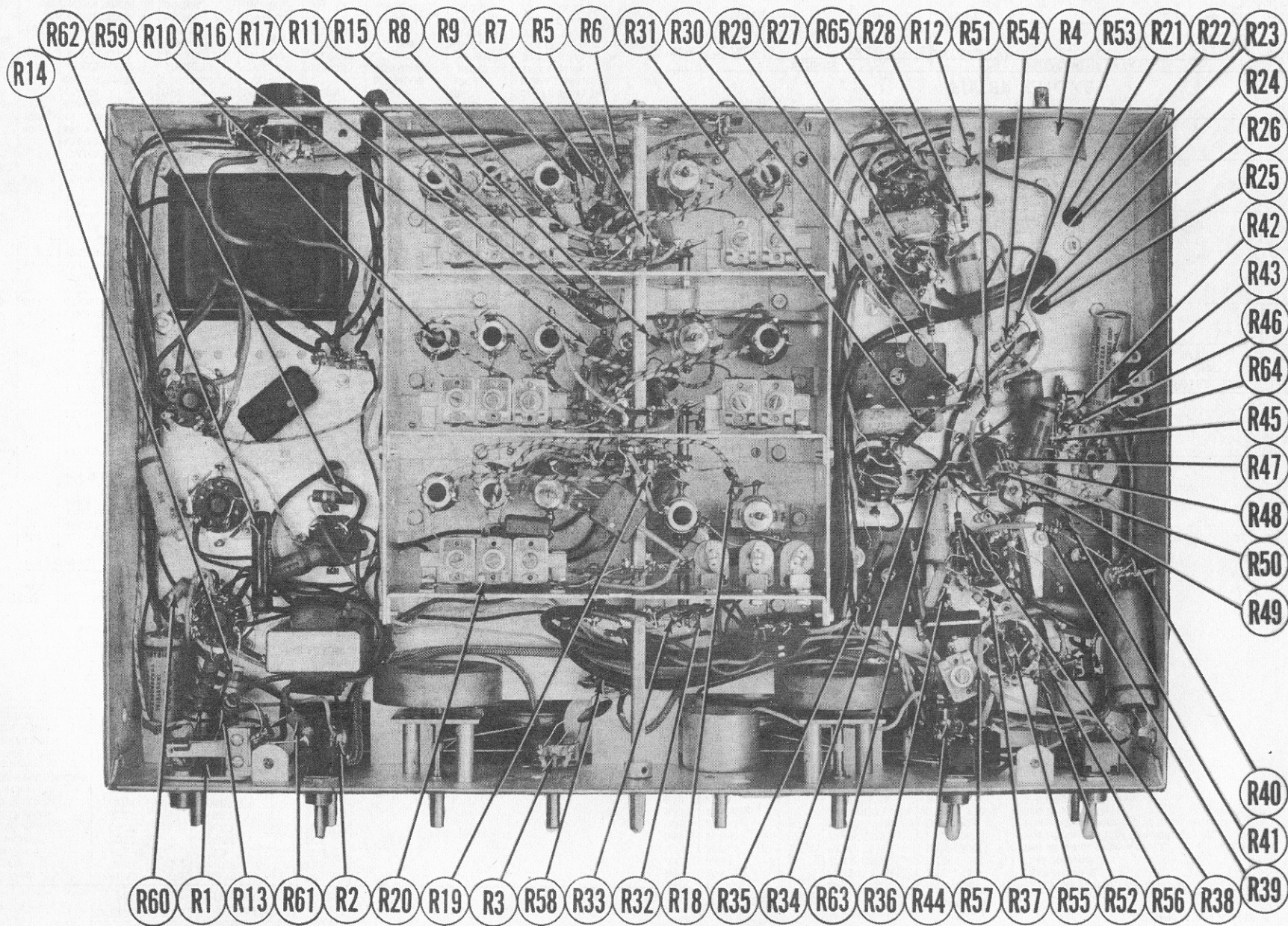
Turn the receiver on.
Set the Receive/Standby switch to Receive position.
Set "BFO" switch to "OFF" Position.
Turn the sensitivity control fully clockwise.
Set the Noise-Limiter switch to "OFF" position.
Short the antenna terminals to chassis.
Adjust the "S" meter control on rear of chassis until meter needle indicates zero.

HOWARD W. SAMS & CO., INC. • Indianapolis 1, Indiana

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**HALLCRAFTERS
MODEL SX-71**

PARTS LIST AND DESCRIPTIONS TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	NOTES
		HALLICRAFTER PART No.	STANDARD REPLACEMENT		
V1	RF Amp.	6BA6	6BA6	7BK	
V2	Mixer	6AU6	6AU6	7BK	
V3	Oscillator	6C4	6C4	6BG	
V4	Converter	6BE6	6BE6	7CH	
V5	1st IF Amp.	6SK7	6SK7	8N	
V6	2nd IF Amp.	6SK7	6SK7	8N	
V7	3rd IF Amp.	6SH7	6SH7	8BK	
V8	Detector	6AL5	6AL5	6BT	
V9	AVC Rect. -Noise Limiter	6H6	6H6	7Q	
V10	BFO-AF Amp.	6SC7	6SC7	8S	
V11	Power Output	6K6GT	6K6GT	7S	
V12	Voltage Reg.	0D3/VR150	0D3/VR150	4AJ	
V13	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
	CAP.	VOLT	HALLICRAFTER PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C1A	60	450	45B113	AF12447		UPT62245		D13409	Filter
C1B	20	450							Filter
C1C	20	450							Filter
C2	1	50	45A163	PRSL50/4			BR145	TVA-1300	Stabilizing Cap.
C3	220		47B20221K5	SI220	D6-221	5W5T2	5W5T2	19C13	RF Coupling
C4A	4000		47A218		DD-2-502	1D5D4	1D5D4	36C2	RF Cathode
C4B	4000					1D5D4	1D5D4		RF Screen
C5	.25	200	46A254J	P488-25		GT2P25	GT2P25	2TM-2	Cathode Bypass
C6	15			SI15	D6-150	5W5Q2	5W5Q2	19C22	RF Coupling
C7A	4000		47A218		DD-2-502	1D5D4	1D5D4	36C2	1st Conv. Screen
C7B	4000					1D5D4	1D5D4		1st Conv. Plate Dec.
C8	5000		47A168	BPD-005	DD-502	1D5D5	1D5D5	29C1	1st Conv. Cath.
C9	100		47X20UJ101K	SI100	D6-101	5W5T1	5W5T1	19C11	RF Coupling
C10	2		47A160-4		TCZ-2.2				Osc. Coupling
C11	100		47X20UJ101K	SI100	D6-101	5W5T1	5W5T1	19C11	Osc. Feedback
C12	100		47X20UJ101K	SI100	D6-101	5W5T1	5W5T1	19C11	Osc. Grid Cap.
C13	.05	400	46AW503J	P488-05	DF-503	PTE4S5	PTE4S5	4TM-15	Decoupling
C14	100		47X20UJ101K	SI100N750	TCN-100			29C16	Fixed Trimmer
C15	25		47X20UK250K		TCN-25			19C26	Fixed Trimmer
C16	2200	500	47X30D222J						Fixed Padder
C17	910	500	47X30D911J						Fixed Padder
C18	1500	500	47X30D152G						Fixed Padder
C19	300	500	47X20B301J						Fixed Padder
C20	5000		47A168	1469-0003	TCZ-300	5R5T3	5R5T3	MS-33	Fixed Trimmer
C21	300	500	47X20B301J	BPD-005	DD-502	1D5D5	1D5D5	29C1	1st Conv. Plate Dec.
C22	100		47X20UJ101K	1469-0003	TCZ-300	5R5T3	5R5T3	MS-33	Fixed Trimmer
C23	47		47X20UK470K	SI100N750	TCN-100			29C16	Fixed Trimmer
C24	5000		47A168	SI47	D6-470	5W5Q5	5W5Q5	19C25	Osc. Grid Cap.
C25	5000		47A168	BPD-005	DD-502	1D5D5	1D5D5	29C1	2nd Conv. Cath.
C26A	4000		47A218	BPD-005	DD-502	1D5D5	1D5D5	29C1	2nd Conv. Screen
C26B	4000								2nd Conv. Plate Dec.
C27	.05	400	46AW503J	BPD-2 x 004	DD-2-502	1D5D4	1D5D4	36C2	AVC Filter
C28	5000		47A168	P488-05	DF-503	PTE4S5	PTE4S5	4TM-15	1st IF Cath.
C29	5000		47A168	BPD-005	DD-502	1D5D5	1D5D5	29C1	1st IF Screen
C30	5000		47A168	BPD-005	DD-502	1D5D5	1D5D5	29C1	1st IF Dec.
C31	.05	400	46AW503J	BPD-005	DD-502	1D5D5	1D5D5	29C1	AVC Filter
C32	.05	400	46AW503J	P488-05	DF-503	PTE4S5	PTE4S5	4TM-15	AVC Filter
C33	5000		47A168	BPD-005	DD-502	1D5D5	1D5D5	29C1	2nd IF Cath.
C34	5000		47A168	BPD-005	DD-502	1D5D5	1D5D5	29C1	2nd IF Screen
C35	10		47X20UK100K	SI100N750	TCN-10			19C4	2nd IF Plate Dec.
C36	33	500	47X20A330K	SI33NPO	TCZ-33	5W5Q3	5W5Q3	29C13	Fixed Padder
C37	.05	400	46AW503J	P488-05	DF-503	PTE4S5	PTE4S5	4TM-15	1F Coupling
C38	5000		47A168	BPD-005	DD-502	1D5D5	1D5D5	29C1	3rd IF Cath.
C39	.25	600	46AX254J	684-25		GT6P25	GT6P25	6TM-2	3rd IF Screen
C40	220		47B20221K5	SI220	D6-221	5W5T2	5W5T2	19C13	3rd IF Dec.
C41	220		47B20221K5	SI220	D6-221	5W5T2	5W5T2	19C13	Diode Load Cap. *
C42	25		47X20UK250K	SI25	D6-25	5W5Q25	5W5Q25	19C27	Diode Load Cap. *

PARTS LIST AND DESCRIPTIONS (Continued) RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	HALLICRAFTER	IRC	
			PART No.	PART No.	
R31	1000Ω	1	23X30X102K	BTA-1000	2nd IF Amp. Cathode-See Note 1
R32	2700Ω	1	23X20X272K	BTS-2700	Bias Network
R33	680Ω	1	23X20X681K	BTS-680	Bias Network
R34	6800Ω	1	23X20X682K	BTS-6800	2nd IF Amp. Screen
R35	3300Ω	1	23X20X332K	BTS-3300	2nd IF Amp. Plate Decoupling
R36	100KΩ	1	23X20X104K	BTS-100K	Phase Correction
R37	2.2 Meg.	1	23X20X225K	BTS-2.2 Meg.	3rd IF Amp. Grid
R38	270Ω	1	23X20X271K	BTS-270	3rd IF Amp. Cathode
R39	33KΩ	1	23X20X333K	BTS-33K	3rd IF Amp. Screen
R40	3300Ω	1	23X20X332K	BTS-3300	3rd IF Amp. Decoupling
R41	56KΩ	1	23X20X563K	BTS-56K	De-emphasis
R42	39KΩ	1	23X20X393K	BTS-39K	Ratio Det. Diode Load
R43	220KΩ	1	23X20X224K	BTS-220K	Ratio Det. Diode Load
R44	100KΩ	1	23X20X104K	BTS-100K	Voltage Divider
R45	82KΩ	1	23X20X823K	BTS-82K	Voltage Divider
R46	220KΩ	1	23X20X224K	BTS-220K	Det. Diode Load
R47	2.2 Meg.	1	23X20X225K	BTS-2.2 Meg.	Limiter Diode Load
R48	470KΩ	1	23X20X474K	BTS-470K	Limiter Filter
R49	470KΩ	1	23X20X474K	BTS-470K	Limiter Filter
R50	470KΩ	1	23X20X474K	BTS-470K	AVC Diode Load
R51	1 Meg.	1	23X20X105K	BTS-1 Meg.	AVC Network
R52	150Ω	1	23X20X151K	BTS-150	AVC Shunt
R53	180KΩ	1	23X20X184K	BTS-180K	Delayed AVC
R54	27KΩ	1	23X20X273K	BTS-27K	Delayed AVC
R55	100KΩ	1	23X20X104K	BTS-100K	BFO Grid
R56	22KΩ	1	23X20X223K	BTS-22K	BFO Plate
R57	15 Meg.	1	23X20X156K	BTS-15 Meg.	AF Amp. Grid
R58	220KΩ	1	23X20X224K	BTS-220K	AF Amp. Plate
R59	10KΩ	1	23X30X103K	BTA-10K	AF Amp. Plate Decoupling
R60	560Ω	1	23X30X561K	BTA-560	Power Output Cathode
R61	560Ω	1	23X30X561K	BTA-560	Voice Coil Shunt
R62	2500Ω	10	24B252D	1 3/4A-2500	Voltage Dropping-Wire Wound
R63	6.8Ω	1	23X30X068K	BW-1-6.8	AVC and Limiter Filter
R64	6.8Ω	1	23X30X068K	BW-1-6.8	Det. Filament
R65	3300Ω	1	23X20X332K	BTS-3300	Decoupling

Note 1. Some models use a 270Ω resistor in this application.

TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	SEC. 3	HALLICRAFTERS	STANCOR	MERIT	CHICAGO
					PART No.	PART No.	PART No.	PART No.
T1A	117VAC ① .75A	560VCT .095ADC	5VAC ② 2A	6.3VAC ③ 3.8A	52C174	P-6313		PH-90 ② ③
B					52C175 ①			

① Alternate part.

② Drill new mounting holes.

③ Add series resistor to reduce plate voltage.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		Hallcrafters	STANCOR	MERIT	CHICAGO	
	PRI.	SEC.	PRI.	SEC.					
T2	7000Ω	500Ω	880Ω	50Ω	55B120	A-3878	A-2931		

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				INSTALLATION NOTES
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 μ)	HALLICRAFT	STANCOR	MERIT	CHICAGO	
				PART No.	PART No.	PART No.	PART No.	
L1	.065ADC	335Ω	9 Henries	56B107			R-1365 ②	② Drill new mounting holes.

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	HALLICRAFTER PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.		SPRAGUE PART No.
C43	220		47B2022IK5	SI220	D6-221	5W5T25	GP2K-220	19C13	Noise Limiter Filter
C44	.1	200	46AU104J	P288-1	DF-104	PTE4P1		2TM-1	Noise Limiter Filter
C45	220		47B2022IK5	SI220	D6-221	5W5T25	GP2K-220	19C13	Noise Limiter Filter
C46	.02	200	46AU203J	P488-02	DF-203	PTE4S2		2TM-12	Audio Coupling
C47	5000		47A168	BPD-005	DD-502	ID5D5	811-005	29C1	Audio Coupling
C48	5000		47A168	BPD-005	DD-502	ID5D5	811-005	29C1	Audio Coupling
C49	220		47B2022IK5	SI220	D6-221	5W5T25	GP2K-220	19C13	AF Amp. Plate
C50A	4000		47A218	BPD-2 x 004	DD-2-502	ID5D4	882-2 x 004	36C2	Audio Coupling
B	4000					ID5D4			Tone Comp.
C51	220		47B202IK5	SI220	D6-221	5W5T25	GP2K-220	19C13	Osc. Grid Cap.
C52	470	500	47X20B471J	1469-0005		5R5T5		MS-35	Fixed Trimmer
C53	.01	600	46AY103J	P688-01	D6-103	PTE6S1	811-01	6TM-11	Osc. Feedback
C54	1		47A160-2		TCZ-1				Osc. Coupling
C55	.01	600	46AY103J	P688-01	D6-103	PTE6S1	811-01	6TM-11	Output Plate
C56	.01	600	46X35X103M	P688-01	D6-103	PTE6S1	811-01	6TM-11	Line Filter

* When either items C40 or C41 are replaced, replace both with capacitors of equal value.

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES
	RESISTANCE	WATTS	HALLICRAFTERS PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	
R1	10KΩ		25B582				Sensitivity control
R2A	500KΩ		25B604	Q13-133	AG-60-Z	B-60-S	Volume control
B	Shaft		Not Req.	Not Req.	FS-3	Not Req.	Attach to R2A per instructions
C	Switch		Not Req.	76-1	SWB	Not Req.	Attach to R2A per instructions
R3A	500KΩ		25B589	Q13-133	AG-60-Z	B-60	Tone control
B	Shaft		Not Req.	Not Req.	FS-3	Not Req.	Attach to R3A per instructions
R4	500Ω	4	25C022		RTV-126		S-Meter adjustment-Wire Wound

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	HALLICRAFTER PART No.	IRC PART No.	
R5	10Ω		23X20X100K		Parasitic Suppressor
R6	1 Meg.		23X20X105K	BTS-1 Meg.	RF Amp. Grid
R7	82Ω		23X20X820K	BTS-82	RF Amp. Cathode
R8	15Ω		23X20X150K		Parasitic Suppressor
R9	8200Ω		23X20X822K	BTS-8200	RF Amp. Screen
R10	100Ω		23X20X101K	BTS-100	RF Transformer Shunt
R11	3300Ω		23X20X332K	BTS-3300	RF Amp. Plate Decoupling
R12	82Ω		23X20X820K	BTS-82	Series S-Meter
R13	47KΩ		23X30X473K	BTA-47K	Voltage Divider
R14	47KΩ		23X40X473K	BTB-47K	Voltage Divider
R15	2.2 Meg.		23X20X225K	BTS-2.2 Meg.	Mixer Grid
R16	2200Ω		23X20X222K	BTS-2200	Mixer Cathode
R17	330KΩ		23X20X334K	BTS-330K	Mixer Screen
R18	10Ω		23X20X100K		Parasitic Suppressor
R19	22KΩ		23X20X223K	BTS-22K	Osc. Grid
R20	10KΩ		23X30X103K	BTA-10K	Osc. Plate
R21	22KΩ		23X20X223K	BTS-22K	Osc. Grid
R22	15Ω		23X20X150K		Parasitic Suppressor
R23	150Ω		23X20X151K	BTS-150	Conv. Cathode
R24	10KΩ		23X30X103K	BTA-10K	Conv. Screen
R25	220Ω		23X20X221K		Parasitic Suppressor
R26	100KΩ		23X20X104K	BTS-100K	AVC Network
R27	270Ω		23X20X271K	BTS-270	1st IF Amp. Cathode
R28	2700Ω		23X20X272K	BTS-2700	Bias Network
R29	33KΩ		23X20X333K	BTS-33K	1st IF Amp. Screen
R30	100KΩ		23X20X104K	BTS-100K	AVC Network

PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	HALLICRAFTER	MEISSNER	
				PART No.	PART No.	
L2	Ant. Coil	25Ω	3.7Ω	51B1088		Band 1
L3	Ant. Coil	.8Ω	1.4Ω	51B1089		Band 2
L4	Ant. Coil	.7Ω	.1Ω	51B1090		Band 3
L5	Ant. Coil	.5Ω	.1Ω	51B1091		Band 4
L6	Ant. Coil	.5Ω	.1Ω	51B1092		Band 5
L7	RF Choke	10Ω		53A107		
L8	RF Coil	.7Ω		51B1093		Band 1
L9	RF Coil	.5Ω		51B1094		Band 2
L10	RF Coil	14Ω		51B1095		Band 3
L11	RF Coil	2.2Ω		51B1096		Band 4
L12	RF Coil	.3Ω		51B1097		Band 5
L13	Osc. Coil	5Ω		51B1098		Band 1 Tap at 3.5Ω
L14	Osc. Coil	1.5Ω	1.6Ω	51B1099		Band 2 Tap at .5Ω
L15	Osc. Coil	3.2Ω	.1Ω	51B1100		Band 3 Taps at .2Ω and .4Ω
L16	Osc. Coil	1.7Ω	0Ω	51B1101		Band 4 Taps at .1Ω and .3Ω
L17	Osc. Coil	.4Ω	0Ω	51B1160		Band 5 Tap at .2Ω
L18	Osc. Coil	0Ω		50H448		Bands, 3, 4, 5 (2.53MC)
L19	2.075MC IF		.5Ω	50H414		
L20	455KC 1st IF		4.8Ω	50H416		
L21	455KC 2nd IF		4.8Ω	50H416		
L22	455KC 3rd IF	5.5Ω	5.5Ω	50H415		Taps at 4.2Ω and 4Ω
L23	Det. Trans.	9Ω		50H418		Tap at 4.5Ω
L24	BFO Coil	16Ω		54B039		Tap at 4Ω

DIAL LIGHTS

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					HALLICRAFTER	PART No.	
M1	Bayonet	6-8	.25	Blue	39A003		Type #44
M2	Bayonet	6-8	.25	Blue	39A003		Type #44
M3	Bayonet	6-8	.15	Brown	39A004		Type #47
M4	Bayonet	6-8	.15	Brown	39A004		Type #47

MISCELLANEOUS

ITEM No.	PART NAME	HALLICRAFTERS	NOTES
		PART No.	
M5	Crystal	19A123	455KC
M6A	Switch	62B051	Band (Antenna and Mixer)
B		62B049	Band (Oscillator Grid)
C		62B050	Band (Oscillator Plate)
D		62B048	Band (Conv. Plate and Bias)
M7	Switch	60B343	Function
M8	Switch	60A285	BFO-Off
M9	Switch	60A138	Noise Limiter-Off
M10	Switch	60A139	Receive-Standby
M11	Meter	82B166	Carrier Level Indicator
M12	Tuning Gang	48D209	Main (3 section)
M13	Tuning Gang	48C210	Bandspread(3 section)
M14	Variable Cap.	48A182	Crystal Phasing
A7	Trimmer	44A047	
	Trimmer Strip	44B383	A13, A16, A17
	Trimmer Strip	44B382	A14, A18, A31
	Trimmer Strip	44B381	A15, A19, A32
	Trimmer	44A378	A20, A24, A30
	Trimmer Strip	44B380	A22, A28
	Trimmer Strip	44B379	A23, A29
	Dial Pointer	82A169	
	Dial Scale	83D358	

SET 111

FOLDER 6

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set pointers of the main tuning and bandsread dials turn the tuning gangs fully closed and set pointer to 0 reference mark on the logging scale.
 Set the tone control to maximum. Sensitivity control to maximum. Volume control to maximum. Noise limiter switch to "off" position, and Receiver- Standby switch to receive position.

IF ALIGNMENT

Before attempting step 5 connect two matched 100K Ω ($\pm 1\%$) resistors in series from point A to chassis. The junction of these two resistors is alignment point B as shown on the schematic.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	Direct	High side to stator of middle section of main tuning gang. Low side to chassis.	455KC (Unmod.)	Band 2	Both dials at 50 on logging scale.	Across voice coil		Turn reception switch to broad crystal, and BFO switch to BFO. Remove the knob from "CW" pitch control and adjust shaft for zero beat. Replace knob with zero at index line.
2.	Direct	"	"	"	"	"	A1	Adjust "CW" pitch for 1000 Ω note. Rock the signal generator while turning the slug very slowly in one direction. As the adjustment is made, the output goes thru a maximum, dips down and goes up again. The correct setting of the slug is at the center of the dip.
3.	Direct	"	"	"	"	"		Turn the reception switch to "sharp crystal" position and set the signal generator frequency for maximum output on the crystal frequency.
4.	Direct	"	455KC (400% Mod.)	"	"	"	A2, A3, A4, A5, A6, A7, A8	Turn reception switch to "Normal IF" position. BFO switch to "OFF" position. Adjust for maximum output.
5.	Direct	"	455KC (Unmod.)	"	"	Use VTVM. DC Probe to Point A. Common to Point B.	A9	Turn reception switch to NBFM position. Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
6.	Direct	"	2.075MC (400% Mod.)	Band 4	"	Across voice coil	A10, A11, A12	Turn the reception switch to "Normal IF" position. Adjust A10 until a signal is heard. Adjust A-11 and A12 for maximum output. Repeat until no further improvement can be made.

RF ALIGNMENT

Connect a jumper between "A2" and "G" terminals of the antenna terminal strip.
 Set the bandsread dial at 100 on the logging scale for all steps except step 16. In step 16 the main tuning dial should be set at 100 on the logging scale.
 Turn the reception switch to "normal IF" position and the "BFO" switch to "BFO" position.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
7.	300 Ω carbon res.	High side to antenna terminal "A1". Low side to chassis.	1500KC	Band 1	1500KC	Across voice coil	A13, A14	Adjust A13 until a signal is heard. Adjust A14 for maximum output.
8.	"	"	600KC	"	600KC	"	A15	Adjust for maximum output.
9.	"	"	1500KC	"	1500KC	"	A16	Adjust until a signal is heard. Repeat steps 7, 8 and 9 until no further improvement can be made.
10.	"	"	4MC	Band 2	4MC	"	A17, A18, A19	Adjust A17 until signal is heard. Adjust A18 and A19 for maximum output. Repeat until no further improvement can be made.
11.	"	"	12MC	Band 3	12MC	"	A20	Adjust until signal is heard.
12.	"	"	5.2MC	"	5.2MC	"	A21	"
13.	"	"	12MC	"	12MC	"	A20, A22, A23	Adjust for maximum output while "rocking" tuning gang. Repeat steps 11, 12 and 13 until no further improvement can be made.
14.	"	"	30MC	Band 4	30MC	"	A24	Adjust until signal is heard.
15.	"	"	14MC	"	14MC	"	A25, A26, A27, A28, A29	Adjust A25 until signal is heard. Adjust A26, A27, A28 and A29 for maximum output while "rocking" tuning gang. Repeat steps 14 and 15 until no further improvement can be made.
16.	"	"	54MC	Band 5	Bandsread dial at 54MC	"	A30, A31, A32	Adjust A30 until signal is heard. Adjust A31 and A32 for maximum output while "rocking" the tuning gang. Repeat until no further improvement can be made.

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	6BA6	0V. #.1VDC	48VDC	0V.	6.3VAC	260VDC	150VDC	48VDC	
V 2	6AU6	.5VDC	0V.	6.3VAC	0V.	260VDC	85VDC	4.4VDC	
V 3	6C4	90VDC	0V.	6.3VAC	0V.	90VDC	§-3.2VDC	0V.	
V 4	6BE6	§-.2VDC §1.1VDC	0V. 11.7VDC	6.3VAC	0V.	260VDC	150VDC	0V.	
V 5	6SK7	0V.	0V.	52VDC	0V. #.2VDC	52VDC	250VDC	6.3VAC	260VDC
V 6	6SK7	0V.	0V.	48VDC	0V. #.2VDC	48VDC	150VDC	6.3VAC	260VDC
V 7	6SH7	0V.	0V.	2VDC	0V.	2VDC	130VDC	6.3VAC	235VDC
V 8	6AL5	0V.	-50VDC	0V.	4.4VAC	-50VDC	0V.	-5.4VDC	
V 9	6H6	0V.	0V.	-20VDC	-20VDC	0V. #-.2VDC	150VDC	4.3VAC	23VDC
V 10	6SC7	0V.	100VDC	-.6VDC	-5.4VDC	225VDC	0V.	6.3VAC	0V.
V 11	6K6GT	0V.	6.3VAC	260VDC	265VDC	0V.	48VDC	0V.	19VDC
V 12	OD3/VR150	0V.	0V.	150VDC	0V.	150VDC	0V.	150VDC	0V.
V 13	5Y3GT	0V.	290VDC	0V.	280VAC	0V.	280VAC	0V.	290VDC

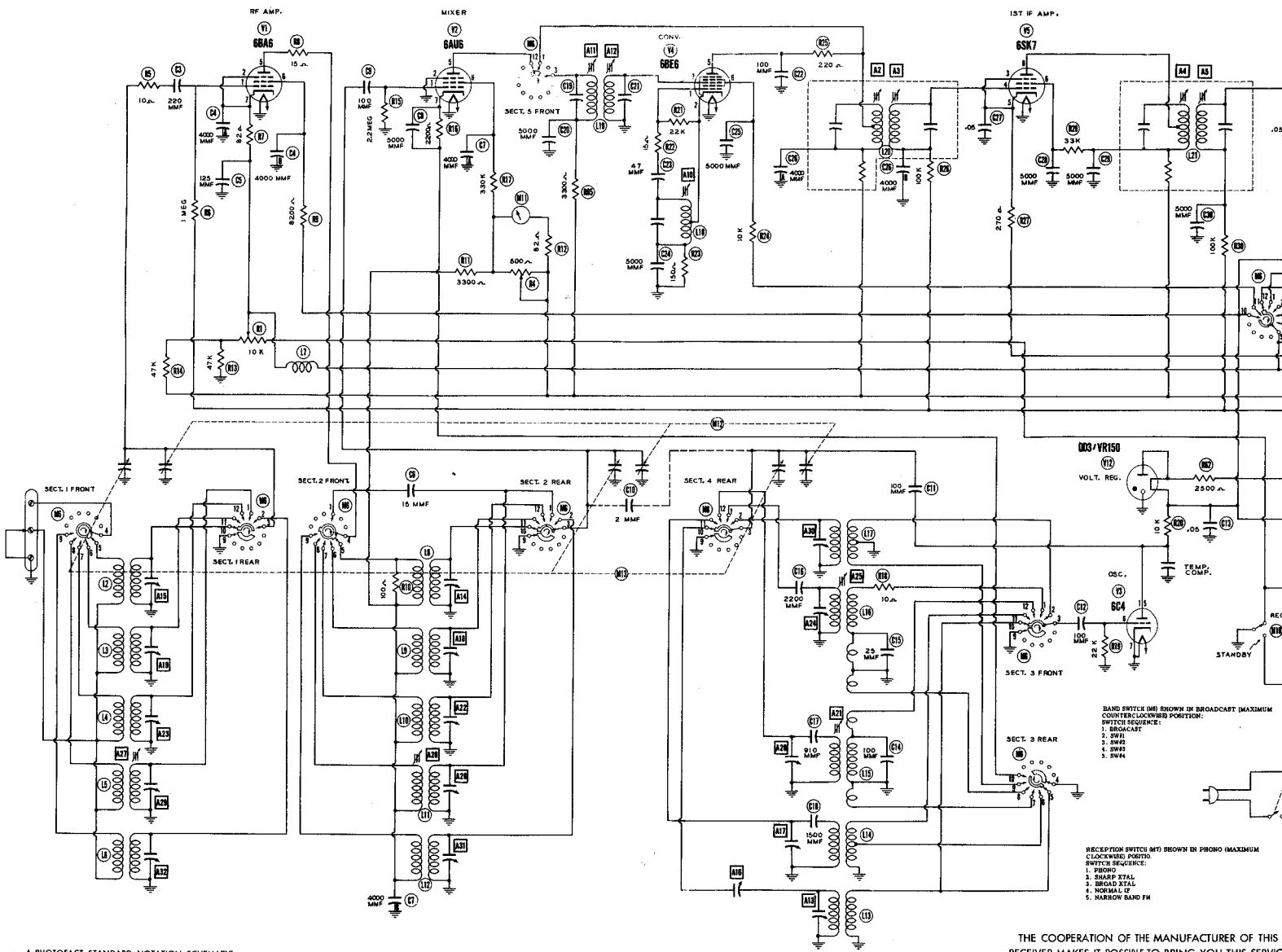
RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	6BA6	1 Meg. #2.5 Meg.	8KΩ	0Ω	.1Ω	14KΩ	11KΩ	8KΩ	
V 2	6AU6	2.2 Meg.	0Ω	.1Ω	0Ω	13.8KΩ	1330KΩ	2.2KΩ	
V 3	6C4	113KΩ	0Ω	.1Ω	0Ω	113KΩ	22KΩ	0Ω	
V 4	6BE6	22KΩ	150Ω	.1Ω	0Ω	13.8KΩ	113KΩ	.5Ω	
V 5	6SK7	0Ω	0Ω	13KΩ	100KΩ #1.5 Meg.	13KΩ	136KΩ	.1Ω	13.6KΩ
V 6	6SK7	0Ω	0Ω	14KΩ	100KΩ #1.5 Meg.	14KΩ	19.6KΩ	.1Ω	13.6KΩ
V 7	6SH7	0Ω	0Ω	270Ω	2.2 Meg.	270Ω	136KΩ	.1Ω	13.6KΩ
V 8	6AL5	0Ω	340KΩ	0Ω	3.7Ω	Inf.	0Ω	Inf.	
V 9	6H6	0Ω	0Ω	2.2 Meg. 900KΩ	1.2 Meg. 900KΩ	320KΩ 470KΩ	12.8KΩ	3.2Ω	27KΩ
V 10	6SC7	0Ω	1230KΩ	15 Meg.	100KΩ	122KΩ	0Ω	.1Ω	0Ω
V 11	6K6GT	Inf.	.1Ω	1880Ω	1335Ω	500KΩ	8KΩ	0Ω	560Ω
V 12	OD3/VR150	Inf.	0Ω	12.8KΩ	Inf.	12.8KΩ	Inf.	12.8KΩ	Inf.
V 13	5Y3GT	Inf.	35KΩ	Inf.	60Ω	Inf.	60Ω	Inf.	35KΩ

NOISE LIMITER SWITCH OFF UNLESS OTHERWISE NOTED.
 RECEIVE-STANDBY SWITCH IN "RECEIVE" POSITION.
 BANDSWITCH IN POSITION #1 UNLESS OTHERWISE NOTED.
 FUNCTION SWITCH IN POSITION #4.
 BFO-AVC SWITCH ON UNLESS OTHERWISE NOTED.
 † MEASURED FROM PIN 2 OF V13.
 # BFO-AVC SWITCH "OFF".
 ▲ NOISE LIMITER SWITCH "ON".
 ‡ TAKEN WITH BANDSWITCH IN POSITIONS 3, 4, or 5.
 § TAKEN WITH VACUUM TUBE VOLTMETER.

THE COOPERATION OF THE MANUFACTURER OF THIS
 RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

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

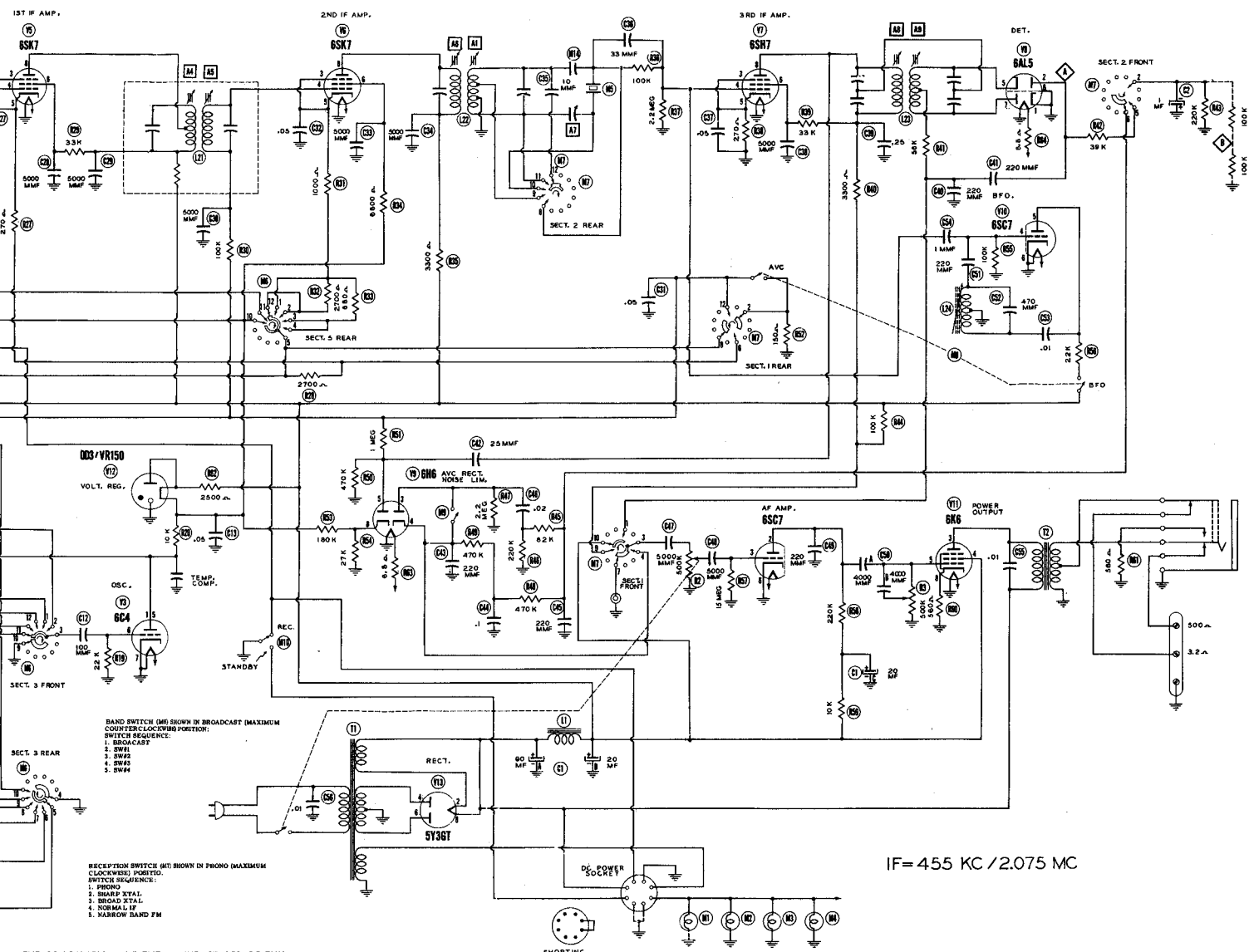


BAND SWITCH (M) SHOWN IN BROADCAST (MAXIMUM) COUNTERCLOCKWISE POSITION: SWITCH SEQUENCE:

1. BROADCAST
2. SW#1
3. SW#2
4. SW#3
5. SW#4

RECEPTION SWITCH (M) SHOWN IN PHONO (MAXIMUM) COUNTERCLOCKWISE POSITION: SWITCH SEQUENCE:

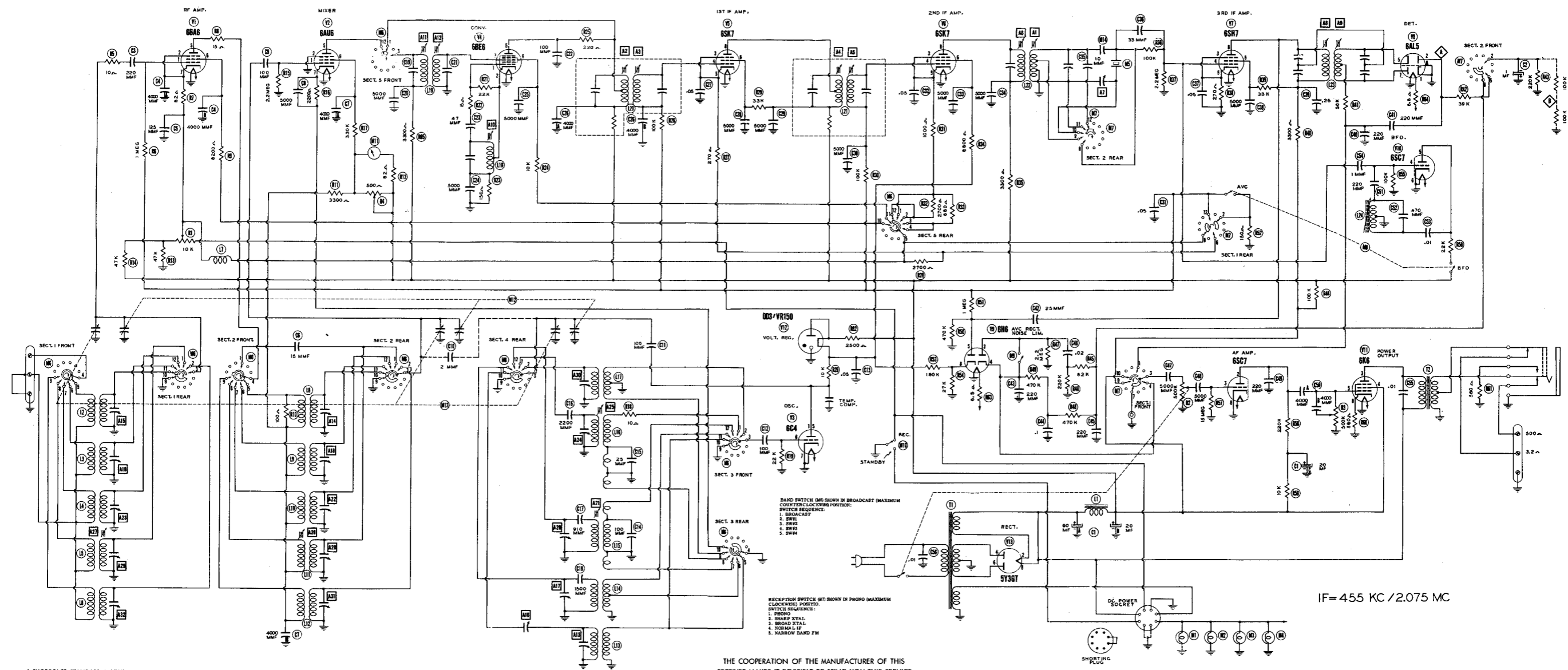
1. PHONO
2. SHARP XTAL
3. BROAD XTAL
4. NORMAL IF
5. NARROW BAND FM

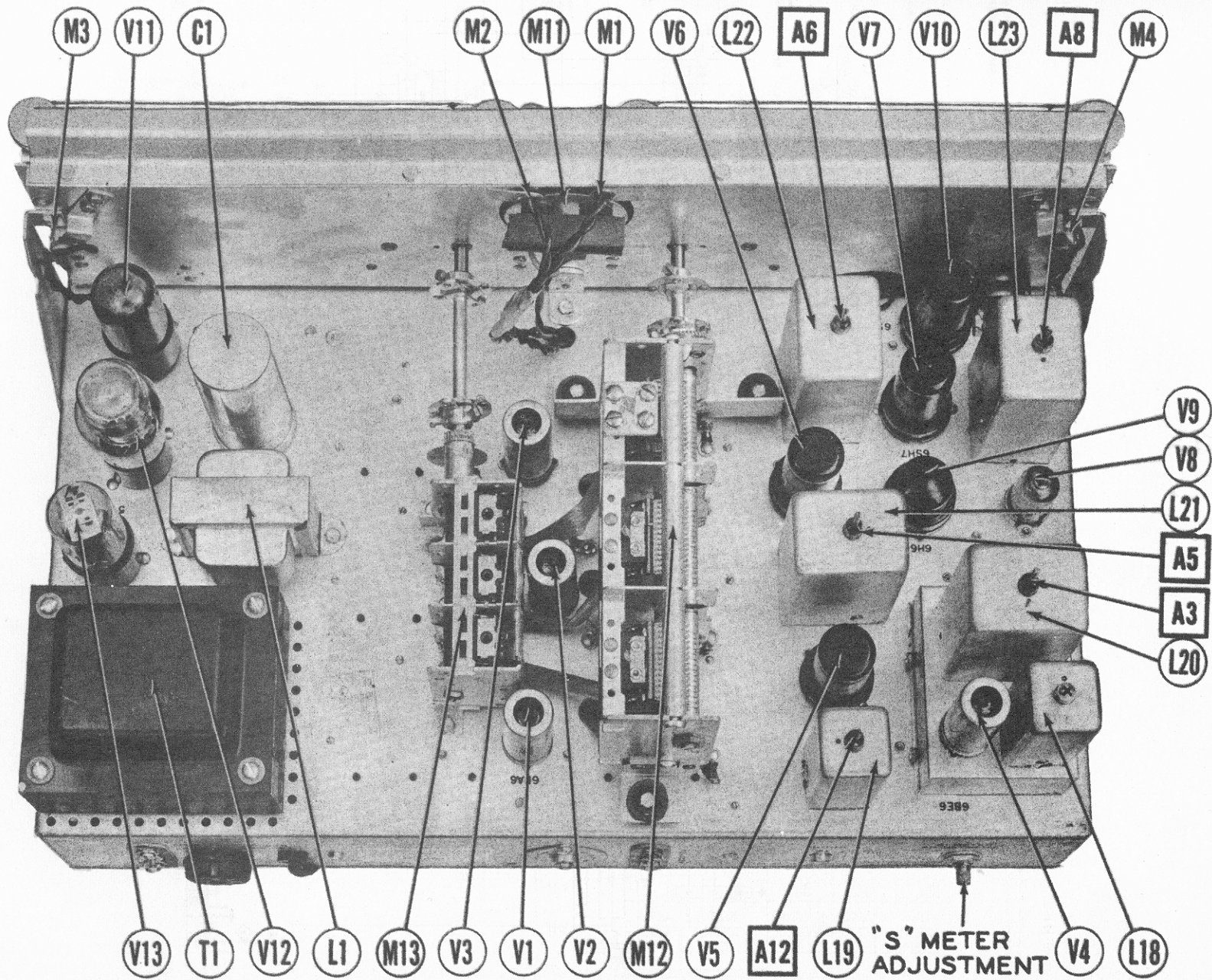


IF = 455 KC / 2.075 MC

- BAND SWITCH (SHOWN IN BROADCAST (MAXIMUM COUNTERCLOCKWISE POSITION):
 SWITCH SEQUENCE:
 1. BROADCAST
 2. SW#1
 3. SW#2
 4. SW#3
 5. SW#4
- RECEPTION SWITCH (SHOWN IN PHONO (MAXIMUM CLOCKWISE) POSITION).
 SWITCH SEQUENCE:
 1. PHONO
 2. SHARD XTAL
 3. BROAD XTAL
 4. NORMAL IF
 5. NARROW BAND FM

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M3

V11

C1

M2

M11

M1

V6

L22

A6

V7

V10

L23

A8

M4

V9

V8

L21

A5

A3

L20

V13

T1

V12

L1

M13

V3

V1

V2

M12

V5

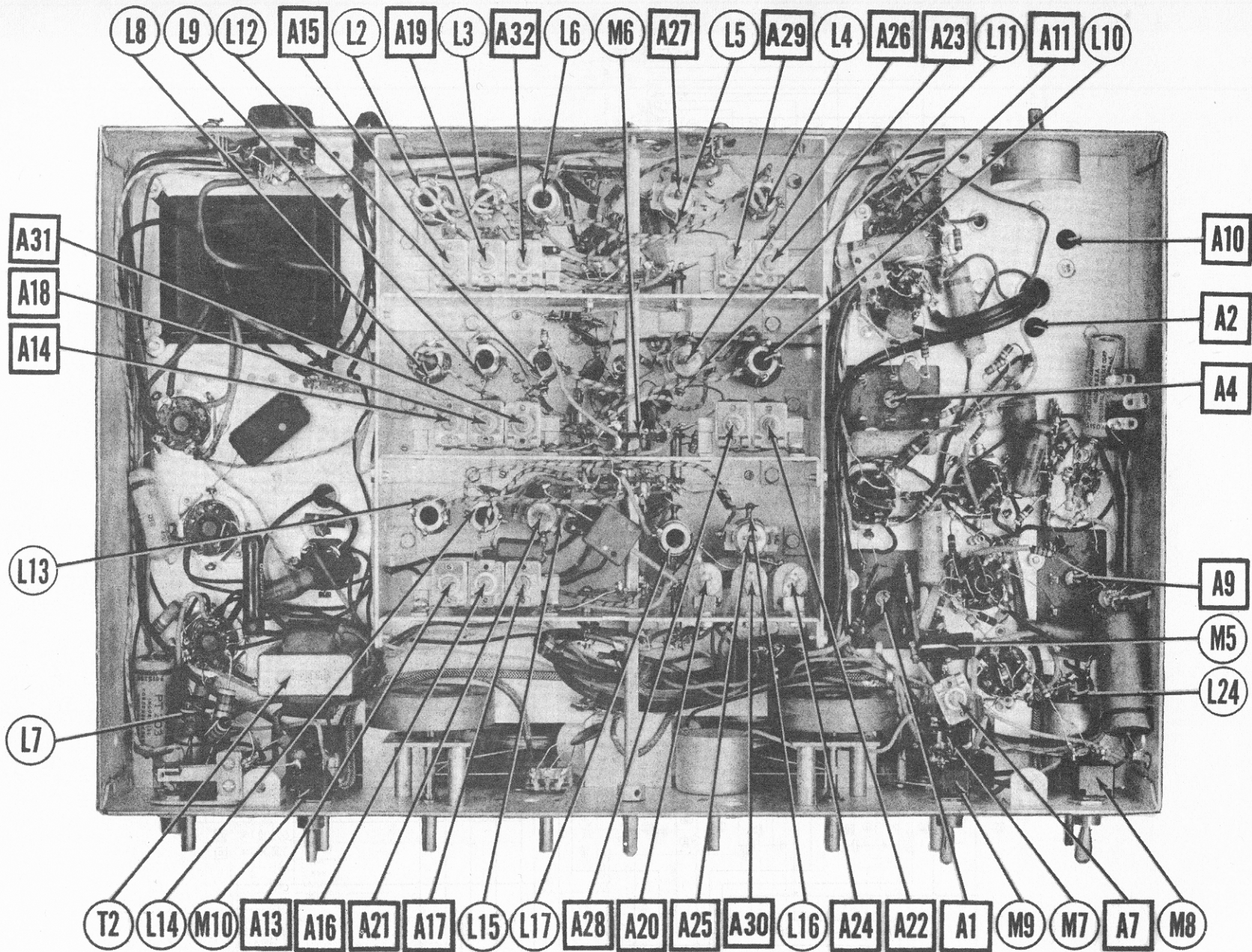
A12

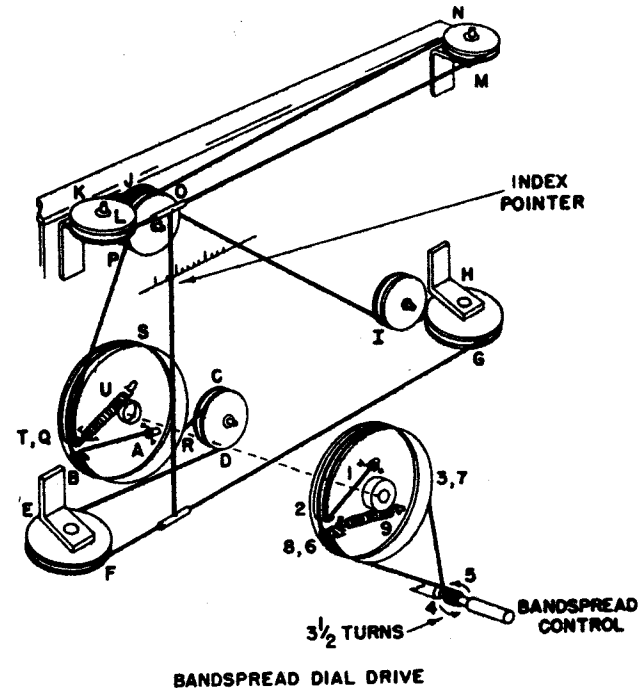
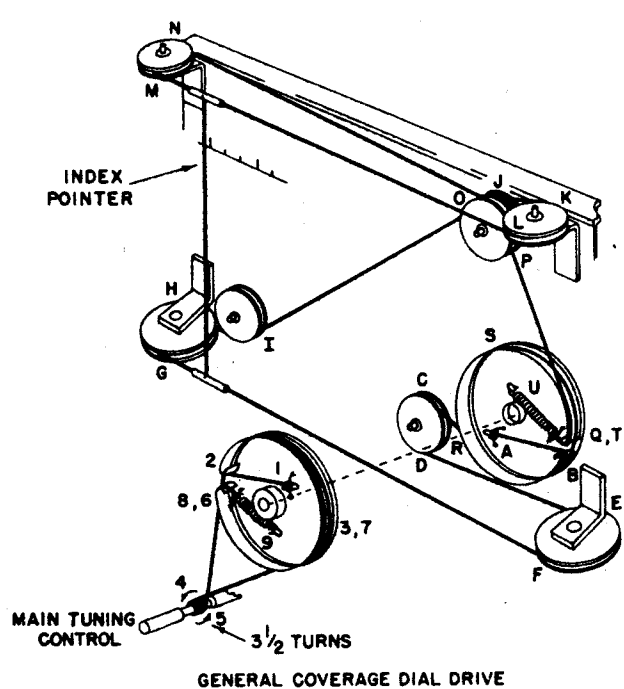
L19

"S" METER
ADJUSTMENT

V4

L18





RESTRINGING DIAL CORD

The dial drive system of the SX-71 consists of four separate spring drives. The two drive shaft string systems are identical; the two pointer drive systems are similar but right and left handed.

(1) **DRIVE SHAFT.** - To restring either one, use a 28 inch length of 30 lb. test dial cord. Tie one end of the cord to position "1" on the drum and follow the stringing sequence "1" to "9" as shown. At position "9" stretch the tension spring and tie the cord securely to the spring. Note that the dial cord is wrapped around the drive shaft three and one half times for proper traction.

(2) **POINTER DRIVE.** - To restring either one, use a 66 inch length of 30 lb. test dial cord. Tie one end of the dial cord to position "A" and follow the stringing sequence "A" to "U" as shown. At position "U" stretch the tension spring and tie the cord securely to the spring. Two small pieces of spaghetti tubing approximately one half inch long should be threaded on the cord, as shown, to provide a suitable purchase for the dial pointer. With the pointer drive, pulleys positioned as shown on the diagram, the tuning capacitor should be entirely closed. The pointer may now be fastened to the cord and aligned with the 0 position on the logging scale and the index marks on the dial scales. The ends of the pointer should be carefully crimped around the spaghetti tubing and cemented fast.