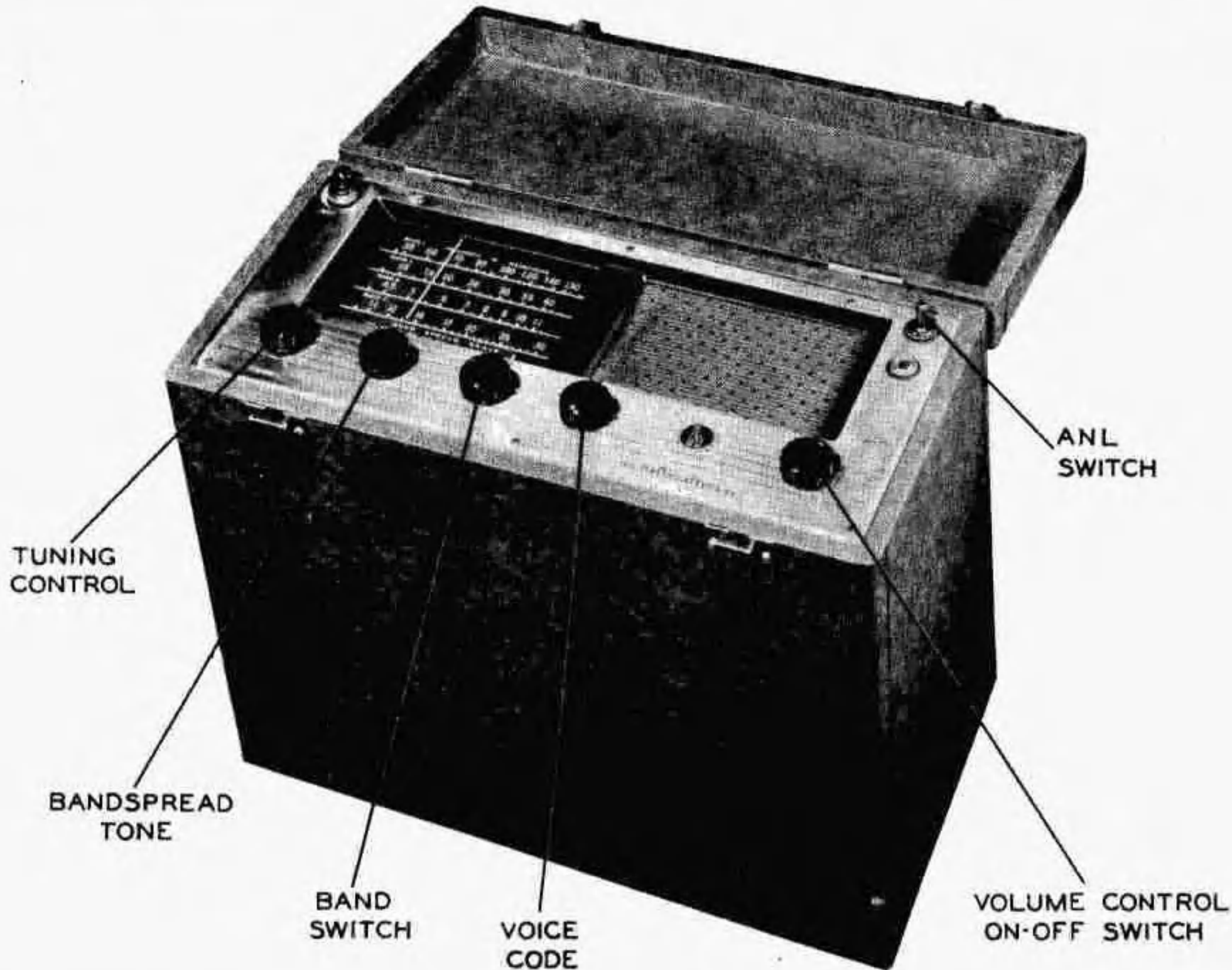




**HALLICRAFTERS  
MODEL S-72**



**HALLICRAFTERS  
MODEL S-72**

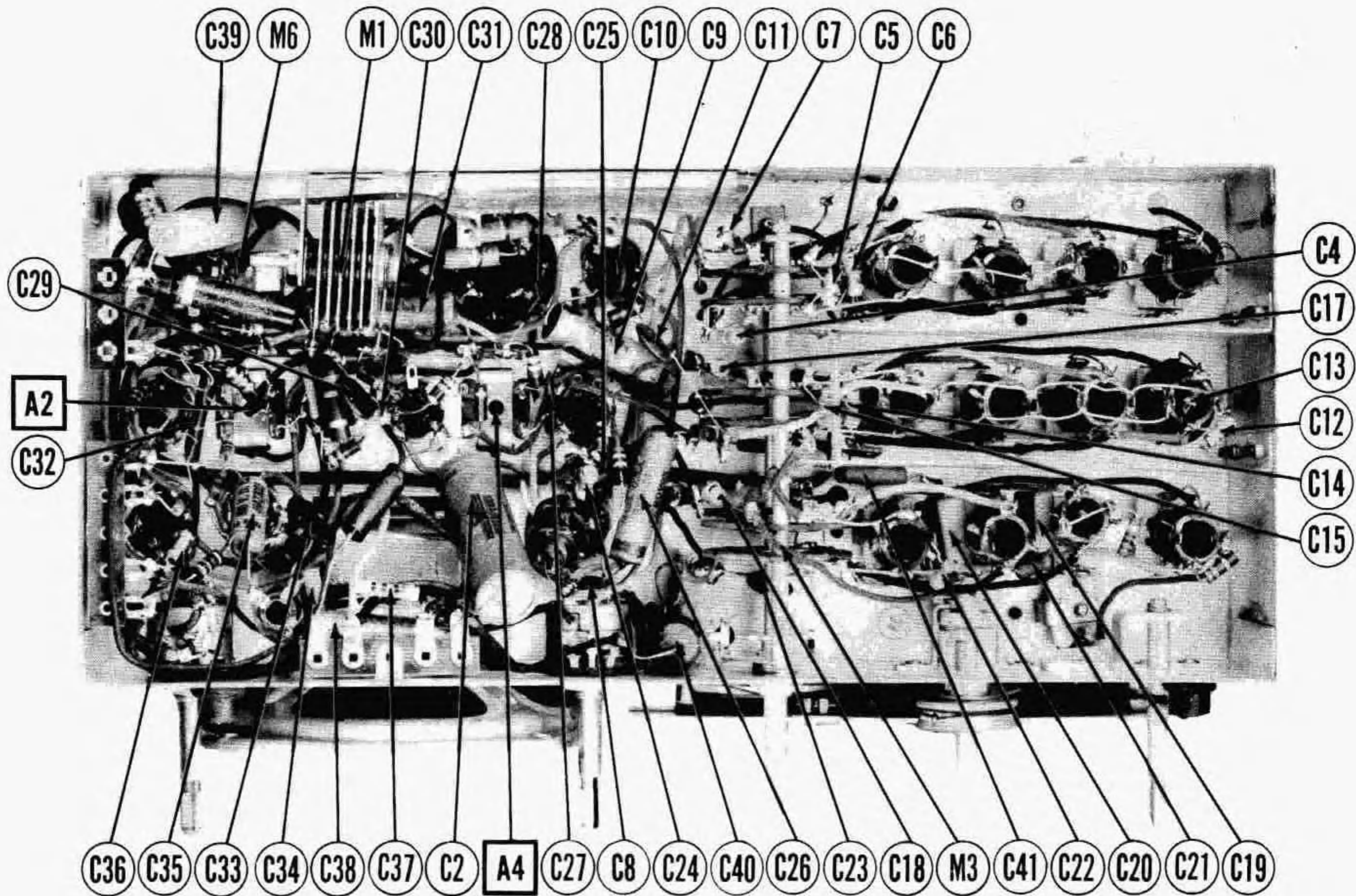
HALLICRAFTERS MODEL S-72

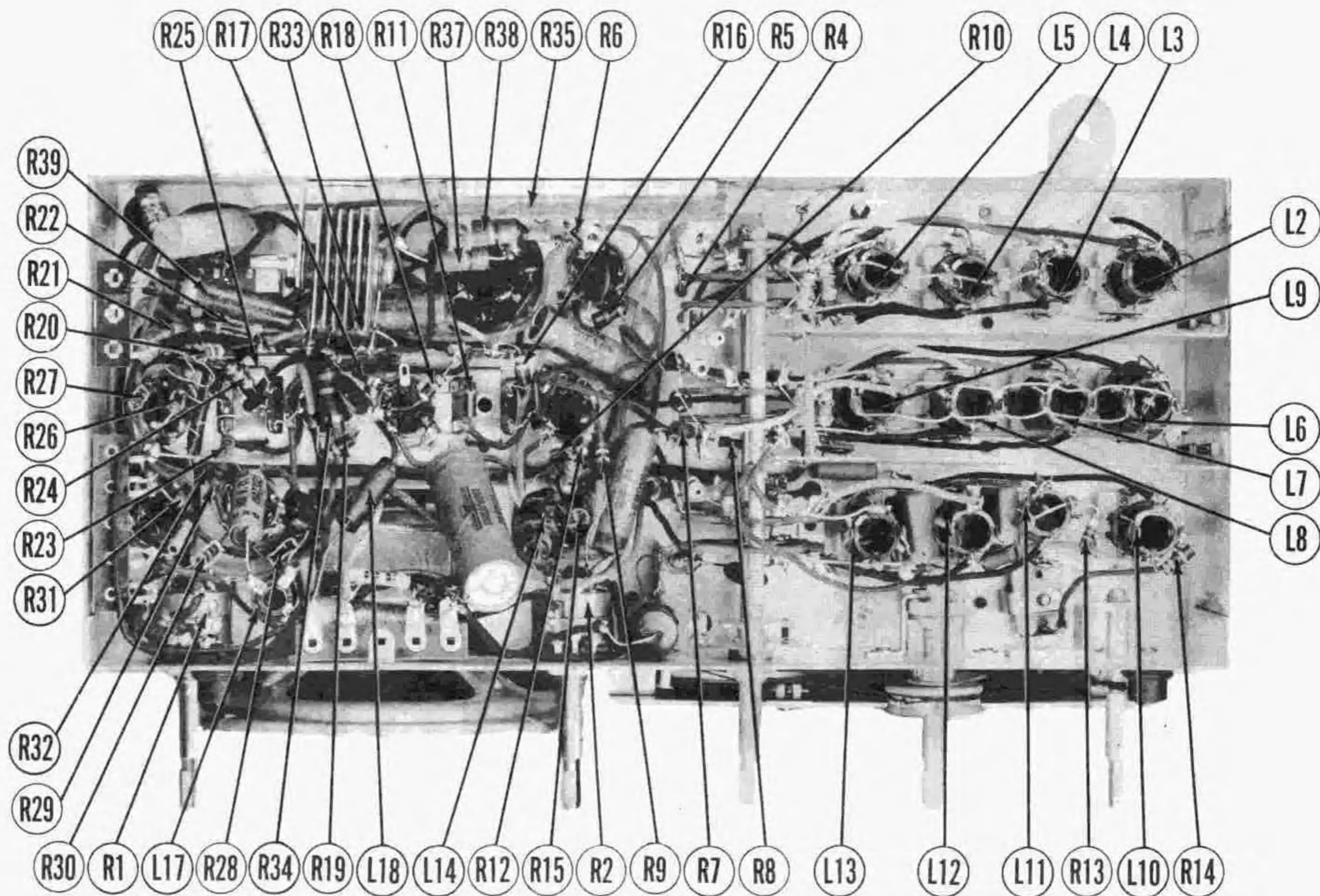
TRADE NAME	Hallicrafters, Model S-72	
MANUFACTURER	The Hallicrafters Co., 5th and Kostner Avenues, Chicago 24, Illinois	
TYPE SET	Three Power Operated Portable Multi-Band Superheterodyne Receiver with Loop Antenna	
TUBES(EIGHT)	Types 1T4 RF Amp., 1U4 Mixer, 1R5 Oscillator, 1U4 1st IF Amp., 1U4 2nd IF Amp., 1U5 DET-AFC-AF, 1U5 BFO, 3V4 Power Output	
POWER SUPPLY	105-125 Volts AC-DC or 7.5 Volts "A" Supply and 90 Volts "B" Supply in Pack Form	
RATING	.37 Amp. at 117 Volts AC or 110MA at 7.5 Volts DC and 30MA at 90 Volts DC	
TUNING RANGE-BROADCAST	550-1600KC	SHORT WAVE (#1)1.5-4.4MC, (#2)4.5-11.5MC, (#3)11-30MC

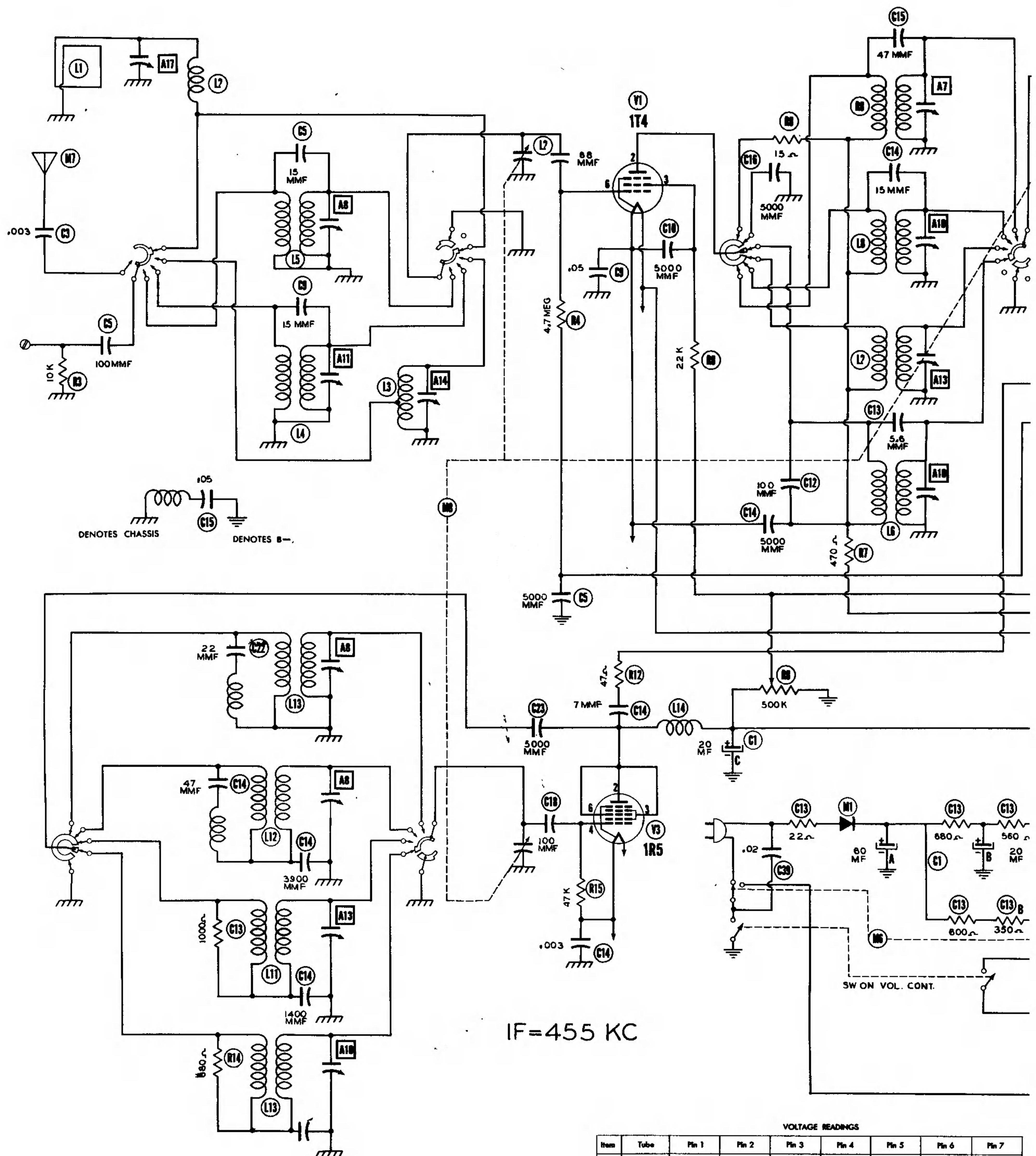
**HOWARD W. SAMS & CO., INC. • Indianapolis 1, Indiana**

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IF=455 KC

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V 1	1T4	1.4VDC	75VDC	60VDC	0V.	1.4VDC	.1VDC	2.8VDC
V 2	1U4	0V.	75VDC	75VDC	0V.	0V.	-.1VDC	1.4VDC
V 3	1R5	2.8VDC	87VDC	87VDC	§-6.5VDC	2.8VDC	87VDC	4.4VDC
V 4	1U4	4.4VDC	80VDC	65VDC	0V.	4.4VDC	0V.	5.8VDC
V 5	1U4	4.4VDC	85VDC	85VDC	0V.	4.4VDC	0V.	5.8VDC
V 6	1U5	0V.	40VDC	15VDC	0V.	0V.	0V.	1.4VDC
V 7	1U5	3VDC	50VDC	50VDC	.1VDC	0V.	§2.8VDC	4.4VDC
V 8	3V4	5.8VDC	80VDC	87VDC	0V.	7.2VDC	0V.	6VDC*

§ TAKEN WITH VACUUM TUBE VOLTMETER.

THE COOPERATION RECEIVER MAKES IT P

1. DC Voltage measurements measured at 1,000 ohms pe
2. Socket connections are sho
3. Measured values are from s
4. Line voltage maintained at
5. Nominal tolerance on comp + 10% in voltage and resi
6. Volume control at maximu



# PARTS LIST AND DESCRIPTIONS

## TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	INSTALLATION NOTES
		HALLICRAFTER PART No.	STANDARD REPLACEMENT		
V1	RF Amp.	1T4	1T4	8AR	
V2	Mixer	1U4	1U4	8AR	
V3	Oscillator	1R5	1R5	7AT	
V4	1st IF Amp.	1U4	1U4	8AR	
V5	2nd IF Amp.	1U4	1U4	8AR	
V6	DET. - AVC- AF	1U5	1U5	8BW	
V7	BFO	1U5	1U5	8BW	
V8	Power Output	3V4	3V4	6BX	

## 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.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C1A	60	150	45B155	AF1244D200P			TVL-68	Filter
B	20	150					UHC1015	Filter
C	20	150						Filter
D	1000	15						Filter
C2	100	25	45A116	PRS25/100	BRH251A		UHC-103	Filament Bypass
C3	.003	600	46AZ302J	P688-003	GT6D3	GP2M-003	TM-23	Filament Bypass
C4	100		47B20101K5	1468-0001	5W5T1	GPIK-100	1FM-31	Ant. Coupling
C5	15		47B20150K5			GPIK-15	MS-415	RF Coupling
C6	16		47B20150K5			GPIK-15	MS-415	RF Coupling
C7	68		47B20680K5	1468-00007	5W5Q7	GPIK-68	MS-47	RF Coupling
C8	5000		47A168	1467-005	1D5D5	81L-005	29C1	AVC Filter
C9	.05	400	46AU503J	P488-05	GT4S5		TM-15	Bias Filter
C10	5000		47A168	1467-005	1D5D5	81L-005	29C1	RF Screen Bypass
C11	5000		47A168	1467-005	1D5D5	81L-005	29C1	RF Plate Decoupling
C12	100		47B20101K5	1468-0001	5W5T5	GPIK-100	1FM-31	Fixed Trimmer
C13	5.6		47A160-7					RF Coupling
C14	15		47B20150K5			GPIK-15	MS-415	RF Coupling
C15	47		47B20470K5	1468-00005	5W5Q5	GPIK-47	1FM-45	RF Coupling
C16	5000		47A168	1467-005	1D5D5	81L-005	29C1	RF Plate Decoupling See Note
C17	88		47B20680K5	1468-00007	5W5Q7	GPIK-68	MS-47	RF Coupling
C18	100		47B20101K5	1468-0001	5W5T1	GPIK-100	1FM-31	Osc. Grid Cap.
C19	1400	500	47X30A142J					Fixed Padder
C20	3900	500	47X35A392J					Fixed Padder
C21	47		47B20500K5	1468-00005	5R5Q5	NPOM-50	MS-45	Fixed Padder
C22	22		47B20220K5			GPIK-22	81L-005	Fixed Padder
C23	5000		47A168	1467-005	1D5D5	81L-005	29C1	Osc. Feedback
C24	7		47X20UK070K			NPOM-8.8		Osc. Coupling
C25	.003	600	46AZ302J	P688-003	GT6D3	GP2M-003	TM-23	Osc. Fil. Bypass
C26	.01	600	46AY103J	P688-01	GT6S1	GP2-335-01	TM-11	Decoupling
C27	5000		47A168	1467-005	1D5D5	81L-005	29C1	AVC Filter
C28	5000		47A168	1467-005	1D5D5	81L-005	29C1	AVC Filter
C29	5000		47A168	1467-005	1D5D5	81L-005	29C1	1st IF Screen Bypass
C30	100		47B20101K5	1468-0001	5W5T1	GPIK-100	1FM-31	IF Coupling
C31	.1	200	46AU104J	P288-1	GT2P1		TM-1	Decoupling
C32A	2000		47A203	P688-002	GT6D2	GP2M-002	TM-22	Audio Coupling
B	5000			P688-005	GT6D5	GP2M-005	TM-25	AF Amp. Screen Bypass
C	100			1468-0001	5W5T1	GPIK-100	1FM-31	AF Amp. Plate Bypass
D	5000			P688-005	GT6D5	GP2M-005	TM-25	Audio Coupling
C33	100	500	47X20A101M	1468-0001	5W5T1	GPIK-100	1FM-31	BFO Grid Cap.
C34	470	500	47X20A471K	1468-0005	5R5T5		MS-35	Fixed Trimmer
C35	.003	800	46AZ302J	P688-003	GT6D3	GP2M-003	TM-23	Osc. Feedback
C36	1000		47B20103K5	1468-0001	1W5D1	GP2L-001	1FM-21	BFO Coupling
C37	1000		47B20103K5	1468-0001	1W5D1	GP2L-001	1FM-21	Output Plate Bypass
C38	.03	600	46AU203J	P688-03	GT6S2		TM-12	Filament Bypass
C39	.02	600	46BR203L8	P688-02	GT6S2		TM-12	Lian Filter
C40	.05	600	46A150	P688-05	GT6S5		72P51	Line Isolation
C41	470	500	47X20A471K	1468-0005	5W5T5	GP2K-470	1FM-35	Tone Compensation

Note. Not used in all models.

§ When replacing item C40, wind 21 turns of hookup wire on capacitor and connect in circuit as per original capacitor.

# PARTS LIST AND DESCRIPTIONS (Continued)

## SPEAKER

ITEM No.	RATINGS	REPLACEMENT DATA			INSTALLATION NOTES	
		HALLICRAFTER PART No.	JENSEN PART No.	QUAM PART No.		
SP1	FIELD PM CONE DIA. 4 3/8"	V. C. IMP. 3.8Ω V. C. DIA. 9/16"	85093	ST-105 *† MOD. P5-X	5A07 † #	* Fabricate mounting bracket. † Remount output transformer. # Use mounting brackets provided.
SP2						

## R F COILS

ITEM No.	USE	DC RES.		REPLACEMENT DATA		INSTALLATION NOTES
		PRI.	SEC.	HALLICRAFTER PART No.	MEISSNER PART No.	
L1	Loop Ant.	1Ω		57C125		Band #1
L2	Ant. Loading	3.5Ω		51B136		Band #2
L3	Ant. Trans.	2Ω		51B137		Band #3
L4	Ant. Trans.	.2Ω	7Ω	51B138		Band #4
L5	Ant. Trans.	.2Ω	4Ω	51B139		Band #1
L6	RF Trans.	65Ω	9Ω	51B140		Band #2
L7	RF Trans.	3Ω	2Ω	51B141		Band #3
L8	RF Trans.	2Ω	0Ω	51B142		Band #4
L9	RF Trans.	2Ω	0Ω	51B143		Band #1
L10	Osc. Coil	1.5Ω	5Ω	51B144		Band #2
L11	Osc. Coil	1Ω	2.5Ω	51B145		Band #3
L12	Osc. Coil	5Ω	.8Ω	51B146		Band #4
L13	Osc. Coil	0Ω	.7Ω	51B147		Band #1
L14	RF Choke	54Ω		53A008	16-6668	Band #2
L15	1st IF	23Ω	23Ω	50C233		Band #3
L16	2nd IF	25Ω	25Ω	50C234		Band #4
L17	BFO Osc.	5Ω		50B402		
L18	Fl. Choke	4Ω		53A121		

## SELENIUM RECTIFIER

ITEM No.	RATING	REPLACEMENT DATA		NOTES
	CURRENT	HALLICRAFTER PART No.	SYLVANIA PART No.	
M1	.155A	27A51	ND-5	

## BATTERIES

ITEM No.	VOLTAGE	Hallcrafters PART No.	REPLACEMENT DATA			INSTALLATION NOTES
			EVEREADY		BURGESS	
			"A"	"B"	"A-B"	
M2	7.5V "A" 90V "B"				754	G6M60

## MISCELLANEOUS

ITEM No.	PART NAME	HALLICRAFTERS	NOTES
		PART No.	
M3	Switch	60C362	Band
M4	Switch	60A361	Tone
M5	Switch	60A365	ANL
M6	Switch		AC/DC-Battery
M7	Antenna	72A035	Whip
M8	3 Gang. Var. Cap	48C221	(12-452MMF) Each Section
	Trimmer Strip	44B374	A6, A9, A12, A15
	Trimmer Strip	44B374-2	A7, A10, A13, A16
	Trimmer Strip	44B374-1	A8, A11, A14, A17
	Variable Cap.	44B375	Band Spread
	Knob	15B172	
	Knob	15B177	With Dot
	Pointer	82A161	Main Tuning
	Pointer	82A161-1	Band Spread
	Cabinet	78F423	

# PARTS LIST AND DESCRIPTIONS (Continued)

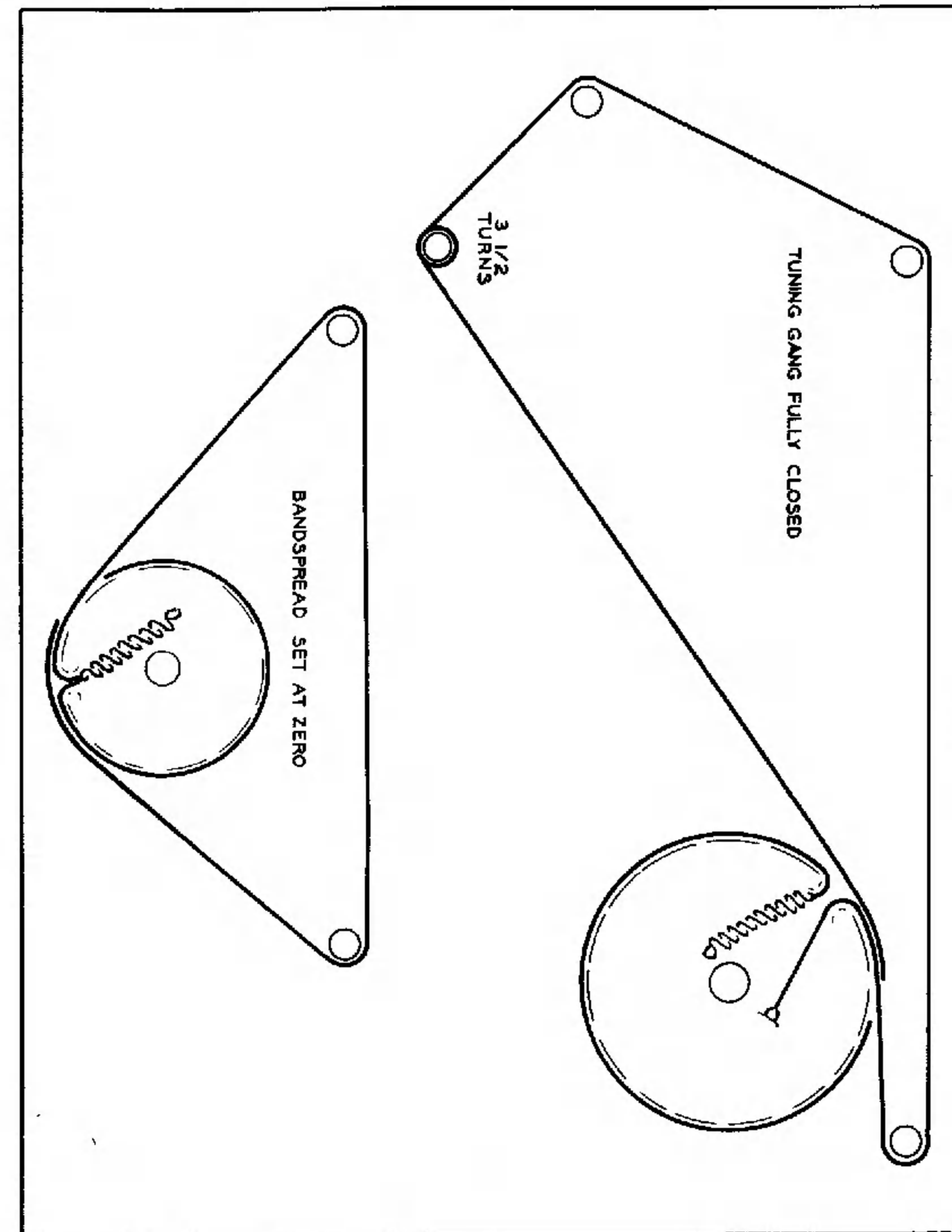
## CONTROLS

ITEM No.	RATING ~		REPLACEMENT DATA			INSTALLATION NOTES
	RESISTANCE	WATTS	Hallicrafters PART No.	IRC PART No.	CLAROSTAT PART No.	
R1A	2 Meg.	1/2	25B839	Q13-139	AM-86-Z	Volume control Attach to R1A per instructions
B	Shaft		Not Req.	Not Req.	KSS-3	
C	Switch		Not Req.	76-2	SW-A2	
R2	500KΩ	1/2	25B847			RF Gain Control and Voice-Code Switch

## RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	HALLI-CRAFTERS PART No.	IRC PART No.	
R3	10KΩ		23X20X103K	BTS-10K	Ant. Loading
R4	4.7 Meg.		23X20X475M	BTS-4.7 Meg.	RF Grid
R5	150Ω		23X20X151K	BW-1/2-150	RF Filament Shunt
R6	22KΩ		23X20X223K	BTS-22K	RF Screen
R7	470Ω		23X20X471K	BTS-470	RF Plate Decoupling
R8	15Ω				Parasitic Supp. See Note
R9	4.7 Meg.		23X20X475M	BTS-4.7 Meg.	Mixer Grid
R10	100Ω		23X20X101K	BW-1/2-100	Mixer Filament Shunt
R11	2200Ω		23X20X222K	BTS-2200	Decoupling
R12	47Ω		23X20X470K		Parasitic Supp.
R13	1000Ω		23X20X102K	BTS-1000	Osc. Coil Shunt
R14	680Ω		23X20X681K	BTS-680	Osc. Coil Shunt
R15	47KΩ		23X20X473K	BTS-47K	Osc. Grid
R16	4.7 Meg.		23X20X475M	BTS-4.7 Meg.	AVC Network
R17	100KΩ		23X20X104K	BTS-100K	1st IF Screen
R18	6800Ω		23X20X682K	BTS-6800	1st IF Plate
R19	4.7 Meg.		23X20X475M	BTS-4.7 Meg.	2nd IF Grid
R20	4.7 Meg.		23X20X475M	BTS-4.7 Meg.	AVC Network
R21	2.2 Meg.		23X20X225M	BTS-2.2 Meg.	AVC Network
R22	4.7 Meg.		23X20X475M	BTS-4.7 Meg.	AVC Network
R23	470Ω		23X20X471K	BTS-470	Decoupling
R24	470KΩ		23X20X474K	BTS-470K	Diode Load
R25	47KΩ		23X20X473K	BTS-47K	Diode Filter
R26	3.3 Meg.		23X20X335M	BTS-3.3 Meg.	AF Screen
R27	470KΩ		23X20X474K	BTS-470K	AF Plate
R28	22KΩ		23X20X223K	BTS-22K	BFO Grid
R29	2.2 Meg.		23X20X225M	BTS-2.2 Meg.	BFO Diode Load
R30	47KΩ		23X20X473K	BTS-47K	BFO Plate
R31	2.2 Meg.		23X20X225M	BTS-2.2 Meg.	Output Grid
R32	33Ω		23X20X330K	BW-1/2-33	Filament String
R33	1200Ω		23X20X122K	BTS-1200	Filament String
R34	560Ω		23X30X561K	BTA-500	Filament String
R35A	270Ω	2.3		AB-250	Filament String, Wire Wound
B	350Ω	5.5	24A912	AB-350	Filament Dropping, Wire Wound
R36	600Ω	9.3	24A913	AB-600	Filament Dropping, Wire Wound
R37	560Ω	1	23X30X561K	BTA-560	Filter
R38	680Ω	1	23X20X681K	BTA-680	Filter
R39	23Ω	2	24BC220E		Surge Limiter, Wire Wound
R40	100Ω	1/2	23X20X101K	BW-1/2-100	Output Transformer Shunt

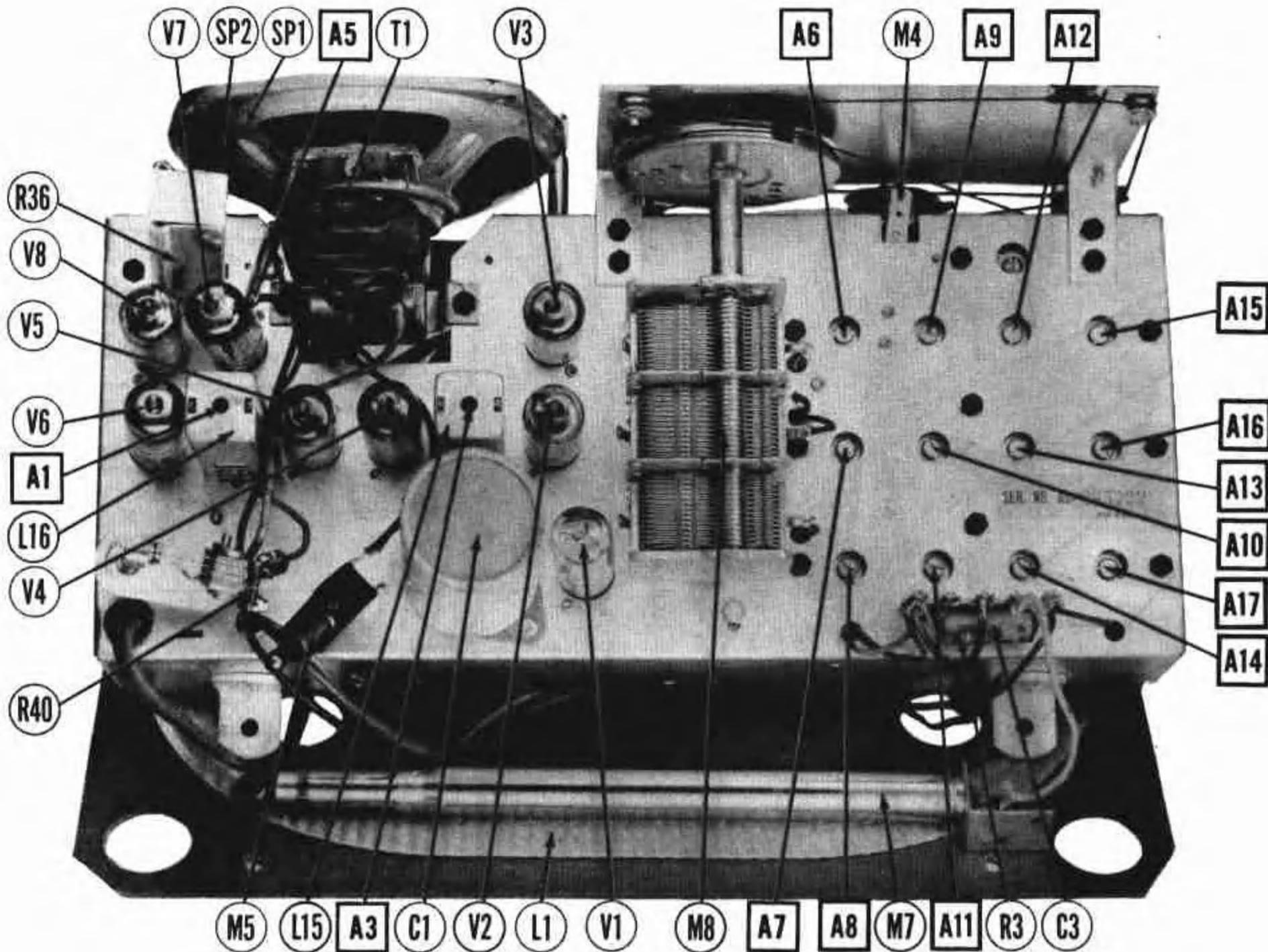
Note. Not used in all models.



## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		Hallicrafters PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.	PRI.	SEC.					
T1	7KΩ	3.6Ω and 500Ω to 5000Ω	630Ω	100.3Ω at .3Ω	Part of 85C093				

CHASSIS—TOP VIEW



ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set pointer turn tuning cap fully closed and set pointer to last reference mark at low frequency end of dial.  
 Use battery power when available. If AC power is used, use an isolation transformer when available. If not, connect a .1MF capacitor in series with low side of the signal generator and B-.  
 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.  
 Turn the band spread dial to zero. If the trimmer closes completely before the dial reaches zero, loosen the set screws on the drive drum and turn the trimmer 1/2 turn counter-clockwise from tight. Turn the band-spread pointer to zero and tighten the set screws on the drive drum.  
 Leave the band spread dial at zero during entire alignment. After completing step 2, connect a 10MMF capacitor between the external antenna lead and chassis.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.05MFD	High side to stator of center section of tuning gang. Low side to B-.	455KC (400 ~ Mod.)	#1 (maximum CCW)	1000KC	Across voice coil	A1, A2, A3, A4	Adjust for maximum output. If AC power is used without an isolation transformer reduce dummy antenna to 200MMF to reduce hum modulation.
2.	.05MFD	"	455KC (Unmod.)	"	"	"	A5	Set "VOICE - CODE" switch to "CODE" and adjust for 1000 ~ note in speaker.
3.	15MMF	High side to ext. antenna lead. Low side to B-. (See pre-alignment notes)	30MC (400 ~ Mod.)	#4 (maximum CW)	30MC	"	A6, A7, A8	Adjust in the order given for maximum output.
4.	15MMF	"	11.5MC	#3 (Third pos. CW)	11.5MC	"	A9, A10, A11	"
5.	15MMF	"	4.4MC	#2 (second pos. CW)	4.4MC	"	A12, A13, A14	"
6.		Loop	1500KC	#1	1500KC	"	A15, A16, A17	Fashion loop of a few turns of wire and radiate signal into loop. Adjust A15, A16, A17 in that order for maximum output.