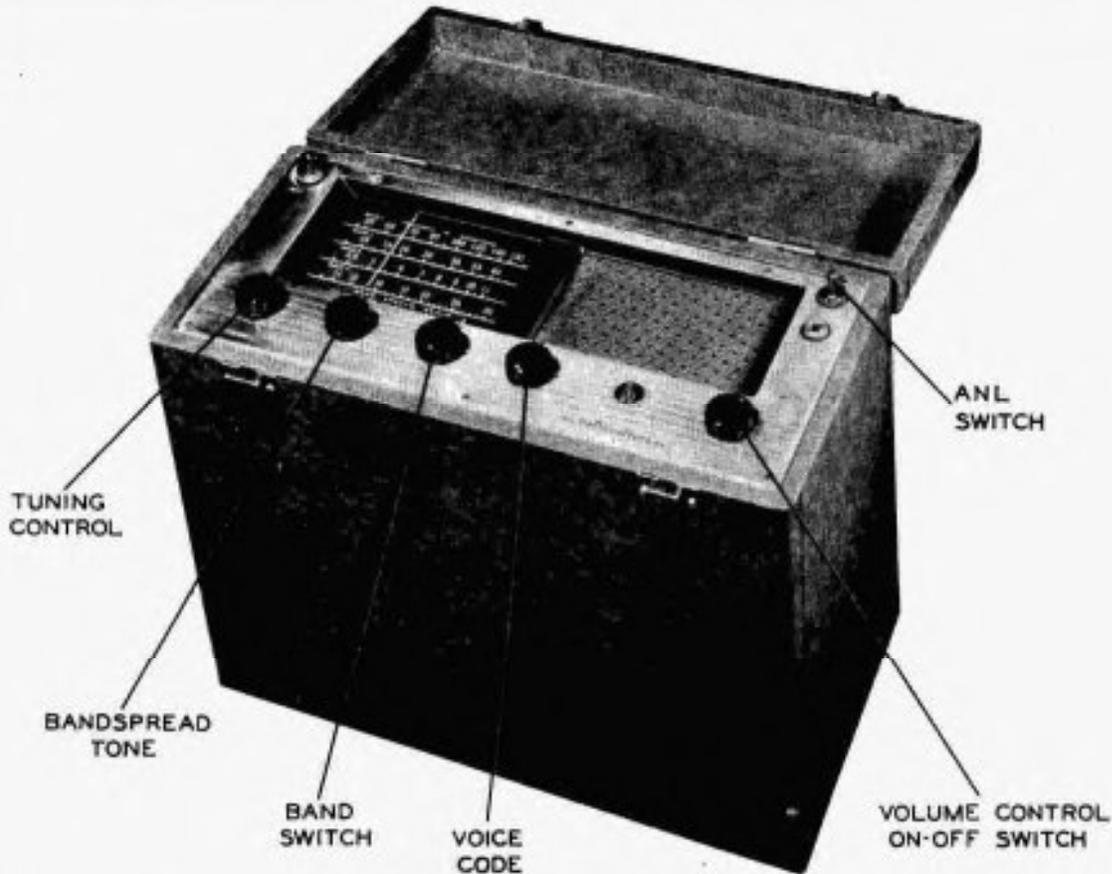




HALLICRAFTERS
MODEL S-72



HALLICRAFTERS
MODEL S-72

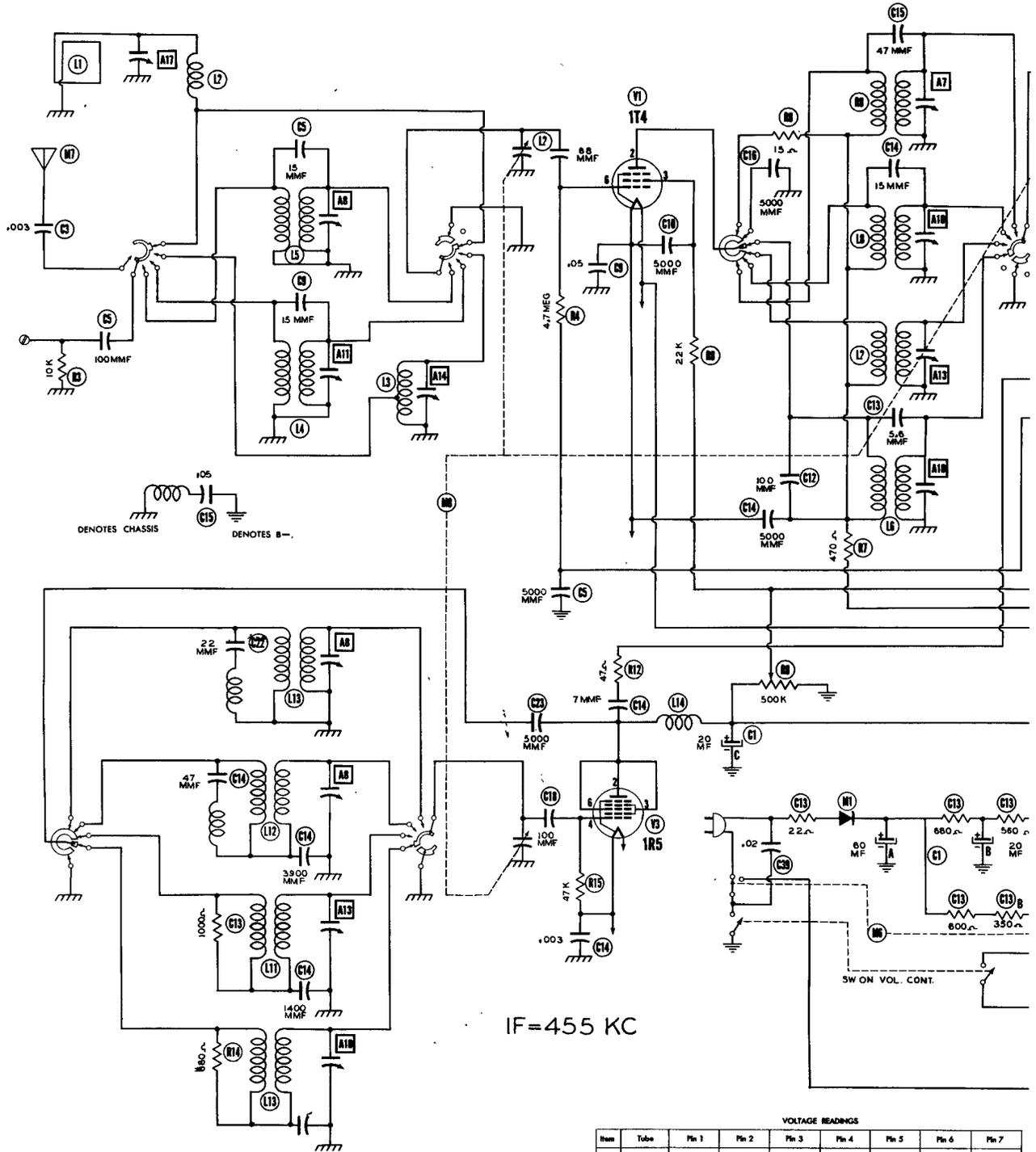
HALLICRAFTERS MODEL S-72

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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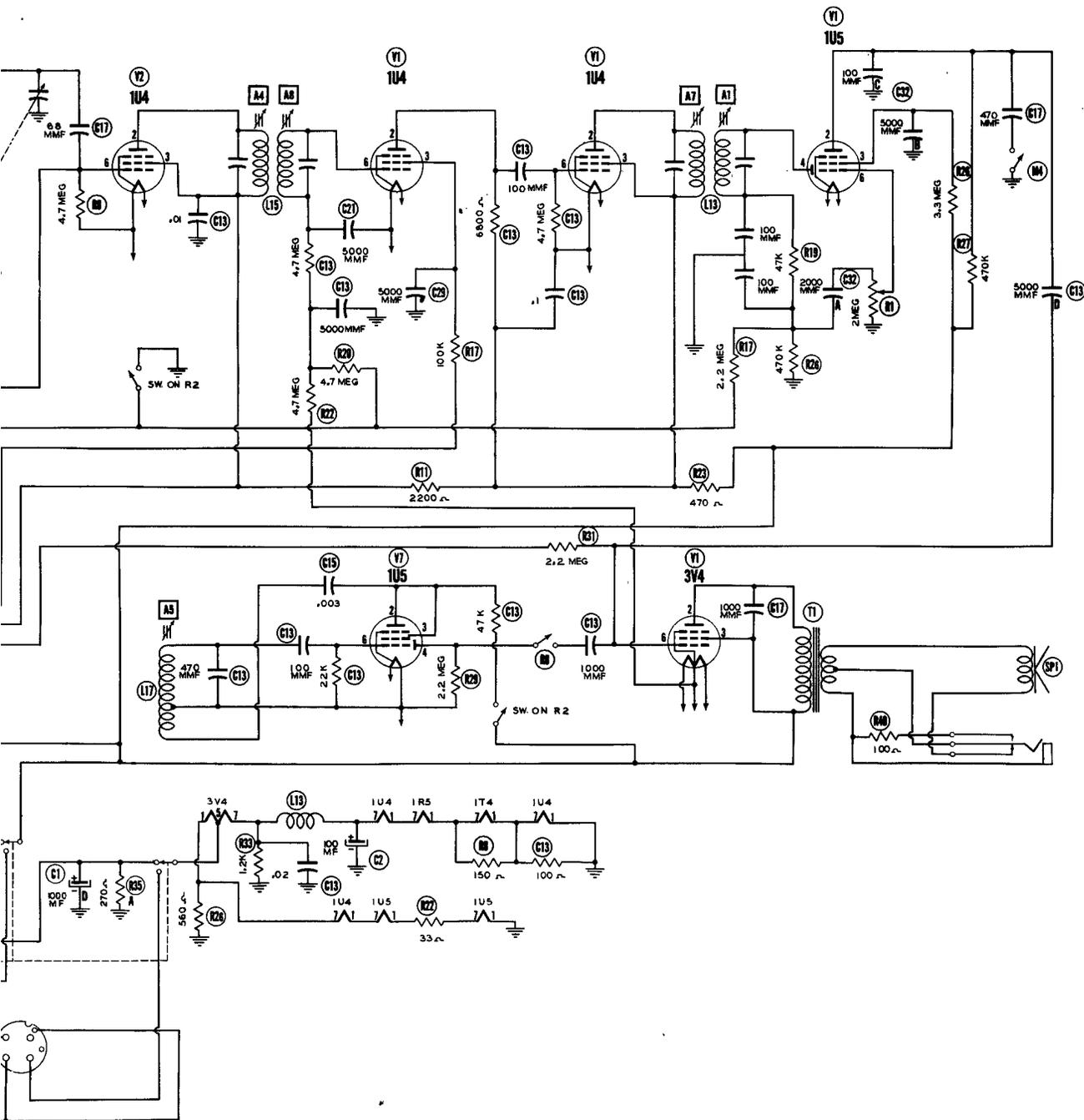
VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V 1	174	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 maximum



RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V 1	1T4	*	14,5KΩ	122KΩ	Inf.	*	7,5Meg.	*
V 2	1U4	*	14KΩ	14KΩ	Inf.	*	7,5Meg.	*
V 3	1R5	*	11,2KΩ	11,2KΩ	47KΩ	*	11,2KΩ	*
V 4	1U4	*	18,5KΩ	1100KΩ	Inf.	*	8 Meg.	*
V 5	1U4	*	11,7KΩ	11,7KΩ	Inf.	*	4,7Meg.	*
V 6	1U5	*	1470KΩ	13,3Meg.	500KΩ	500KΩ	2 Meg.	*
V 7	1U5	*	147KΩ	147KΩ	2,2Meg.	Inf.	22KΩ	*
V 8	3V4	*	12KΩ	11,2KΩ	Inf.	*	2,2Meg.	*

*DO NOT USE OHMMETER TO MEASURE FILAMENT RESISTANCE.

* Voice - Code switch in "Code" position.
† Measured from output of H1.

OF THE MANUFACTURER OF THIS T
SSIBLE TO BRING YOU THIS SERVICE

re at 20,000 ohms per volt; AC Voltages
volt.
n as bottom views.
:cker pin to common negative.
17 volts for voltage readings.
nent values makes possible a variation of
ance readings.
), no signal applied for voltage measure-

PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		INSTALLATION NOTES
		HALLICRAFTER PART No.	STANDARD REPLACEMENT	
V1	RF Amp.	1T4	1T4	
V2	Mixer	1U4	1U4	
V3	Oscillator	1R5	1R5	
V4	1st IF Amp.	1U4	1U4	
V5	2nd IF Amp.	1U4	1U4	
V6	DET.-AVC-AP	8B8	8B8	
V7	BFO	1U5	1U5	
V8	Power Output	3V4	3V4	

CAPACITORS

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

ITEM No.	RATING CAP. VOLT	REPLACEMENT DATA				IDENTIFICATION CODES AND INSTALLATION NOTES
		HALLICRAFTER PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	SPRAGUE PART No.	
C1A	60	45B155	AP1244D200P		TVL-68	Filter
C1B	20	45A116	PR825/100		UHC1015	Filter
C1C	150	45A116	PR825/100		UHC1015	Filter
C1D	1000	45A116	PR825/100		UHC1015	Filter
C2	100	45A116	PR825/100		UHC1015	Filter
C3	100	45A116	PR825/100		UHC1015	Filter
C4	100	45A116	PR825/100		UHC1015	Filter
C5	15	45A116	PR825/100		UHC1015	Filter
C6	15	45A116	PR825/100		UHC1015	Filter
C7	68	45A116	PR825/100		UHC1015	Filter
C8	5000	45A116	PR825/100		UHC1015	Filter
C9	65	45A116	PR825/100		UHC1015	Filter
C10	5000	45A116	PR825/100		UHC1015	Filter
C11	5000	45A116	PR825/100		UHC1015	Filter
C12	100	45A116	PR825/100		UHC1015	Filter
C13	5.6	45A116	PR825/100		UHC1015	Filter
C14	15	45A116	PR825/100		UHC1015	Filter
C15	47	45A116	PR825/100		UHC1015	Filter
C16	5000	45A116	PR825/100		UHC1015	Filter
C17	68	45A116	PR825/100		UHC1015	Filter
C18	100	45A116	PR825/100		UHC1015	Filter
C19	1400	45A116	PR825/100		UHC1015	Filter
C20	3900	45A116	PR825/100		UHC1015	Filter
C21	47	45A116	PR825/100		UHC1015	Filter
C22	22	45A116	PR825/100		UHC1015	Filter
C23	5000	45A116	PR825/100		UHC1015	Filter
C24	7	45A116	PR825/100		UHC1015	Filter
C25	003	45A116	PR825/100		UHC1015	Filter
C26	01	45A116	PR825/100		UHC1015	Filter
C27	5000	45A116	PR825/100		UHC1015	Filter
C28	5000	45A116	PR825/100		UHC1015	Filter
C29	5000	45A116	PR825/100		UHC1015	Filter
C30	100	45A116	PR825/100		UHC1015	Filter
C31	1	45A116	PR825/100		UHC1015	Filter
C32A	2000	45A116	PR825/100		UHC1015	Filter
C33	5000	45A116	PR825/100		UHC1015	Filter
C34	470	45A116	PR825/100		UHC1015	Filter
C35	003	45A116	PR825/100		UHC1015	Filter
C36	1000	45A116	PR825/100		UHC1015	Filter
C37	1000	45A116	PR825/100		UHC1015	Filter
C38	03	45A116	PR825/100		UHC1015	Filter
C39	02	45A116	PR825/100		UHC1015	Filter
C40	05	45A116	PR825/100		UHC1015	Filter
C41	470	45A116	PR825/100		UHC1015	Filter

Note: Not used in all models.
 9 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.	
SP1	V.C. IMP. 3.50 CONE DIA. 3 3/8" V.C. DIA. 9/16"	85093	ST-105 #1 MOD. P5-X 5A07 # 5	* Fabricate mounting bracket. † Remount output transformer. * Use mounting brackets provided.
SP2				

R F COILS

ITEM No.	USE	DC RES.	REPLACEMENT DATA		NOTES
			HALLICRAFTER PART No.	MEISSNER PART No.	
L1	1oop Ant.	10	87C125		Band #1
L2	Ant. Loading	3.50	5B1136		Band #2
L3	Ant. Trans.	20	5B1137		Band #3
L4	Ant. Trans.	20	5B1138		Band #4
L5	Ant. Trans.	20	5B1139		Band #1
L6	RF Trans.	650	5B1140		Band #2
L7	RF Trans.	30	5B1141		Band #3
L8	RF Trans.	20	5B1142		Band #4
L9	RF Trans.	20	5B1143		Band #1
L10	Osc. Coil	1.50	5B1144		Band #2
L11	Osc. Coil	10	5B1145		Band #3
L12	Osc. Coil	50	5B1146		Band #4
L13	Osc. Coil	50	5B1147		
L14	RF Choke	540	55A008		
L15	1st IF	280	30C233	16-6668	
L16	2nd IF	280	90C234		
L17	BFO Osc.	50	50B902		
L18	PI. Choke	40	55A121		

SELENIUM RECTIFIER

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

BATTERIES

ITEM No.	VOLTAGE	Batteries PART No.	REPLACEMENT DATA				INSTALLATION NOTES
			EVEREADY	BURGESS	"A"	"B"	
M2	7.5V "A" 90V "B"		"A"	"B"	"A-B"	"A-B"	GM60

MISCELLANEOUS

ITEM No.	PART NAME	REPLACEMENT DATA		NOTES
		HALLICRAFTER PART No.	EVEREADY PART No.	
M3	Switch	60C362		Band Tone
M4	Switch	60A361		ANT. ANL.
M5	Switch	60A365		AC/DC-Battery
M6	Switch	72A085		Whip
M7	Antenna	48C221		(12-452MMF) Each Section
M8	3 Gang. Var. Cap	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		With Det
	Pointer	15B177		Main Tuning
	Pouner	82A161		Band Spread
	Cabinet	78F423		

PARTS LIST AND DESCRIPTIONS (Continued)

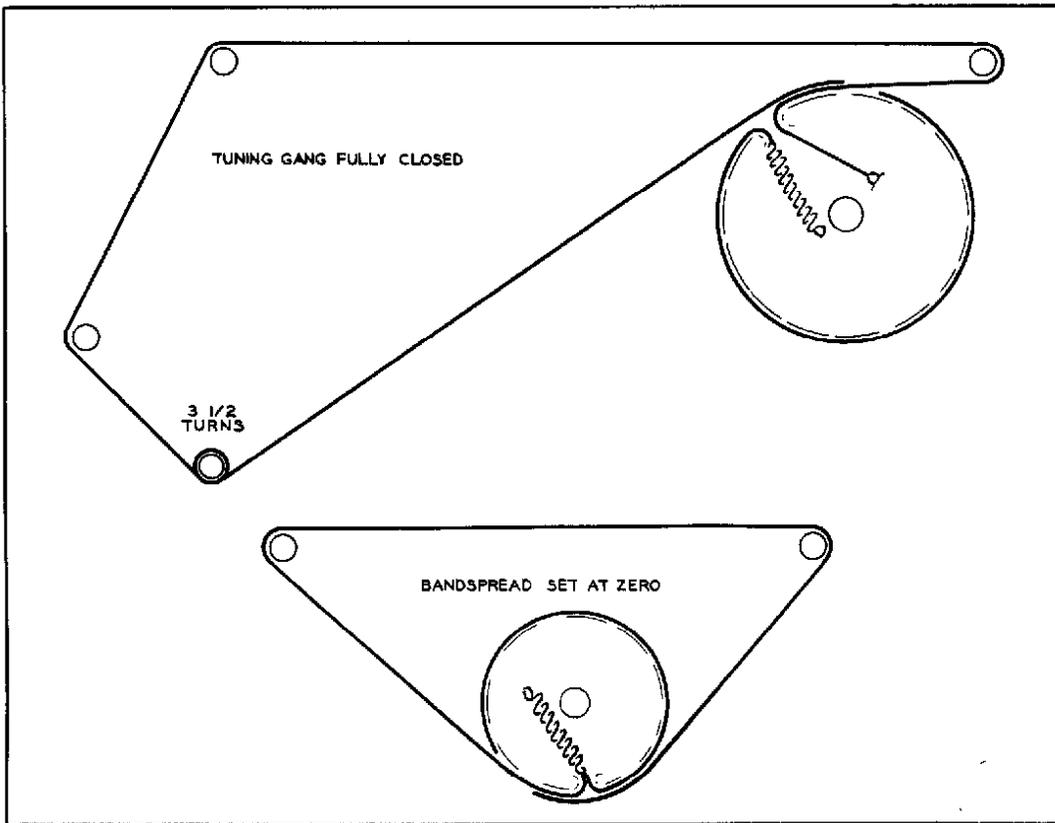
CONTROLS

ITEM No.	RATING ~ RESISTANCE	REPLACEMENT DATA			CLAROSTAT PART No.	INSTALLATION NOTES
		Resistors	IRC PART No.	IRC PART No.		
R1A	2 Meg. Switch	25BR39	Q13-139	AM-66-7	Volume control Attach to R1A per instructions Attach to R1A per instructions RF Gain Control and Voice-Code Switch	
B	500KΩ	Not Req.	Not Req.	KSR-3		
C	500KΩ	Not Req.	74-2	SW-A2		
R2	500KΩ	2BR447				

RESISTORS

ITEM No.	RATING ~ RESISTANCE	REPLACEMENT DATA			IDENTIFICATION CODES
		HALLICRAFTERS PART No.	IRC 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-1-150		RF Filament Shunt
R6	22KΩ	23X20X223K	BTS-22K		RF Screen
R7	470Ω	23X20X471K	BTS-470		RF Plate Decoupling
R8	15Ω	23X20X475M	BTS-4.7 Meg.		Parasitic Supp. See Note
R9	4.7 Meg.	23X20X475M	BW-1-100		Mixer Grid
R10	100Ω	23X20X101K	BTS-100		Mixer Filament Shunt
R11	220Ω	23X20X222K	BTS-220		Decoupling
R12	47Ω	23X20X470K			Parasitic Supp.
R13	100Ω	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	680Ω	23X20X682K	BTS-6800		2nd IF Grid
R19	4.7 Meg.	23X20X475M	BTS-4.7 Meg.		AVC Network
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.		Decoupling
R23	470Ω	23X20X471K	BTS-470		Diode Load
R24	470KΩ	23X20X474K	BTS-470K		Diode Filter
R25	47KΩ	23X20X473K	BTS-47K		AF Screen
R26	3.3 Meg.	23X20X335M	BTS-3.3 Meg.		AF Plate
R27	470KΩ	23X20X474K	BTS-470K		BFO Grid
R28	22KΩ	23X20X223K	BTS-22K		BFO Diode Load
R29	2.2 Meg.	23X20X225M	BTS-2.2 Meg.		BFO Plate
R30	47KΩ	23X20X473K	BTS-47K		Output Grid
R31	2.2 Meg.	23X20X225M	BTS-2.2 Meg.		Filament String
R32	53Ω	23X20X530K	BW-1-33		Filament String
R33	1200Ω	23X20X122K	BTS-1200		Filament String
R34	270Ω	23X20X272K	BTA-500		Filament String
R35A	270Ω	24A912	AB-250		Filament Dropping, Wire Wound
R35B	270Ω	24A913	AB-350		Filament Dropping, Wire Wound
R36	600Ω	23X30X581K	BTA-580		Filter
R37	500Ω	23X20X501K	BTA-580		Surge Limiter, Wire Wound
R38	680Ω	24BC240E	BW-1-100		Output Transformer Shunt
R39	25Ω	23X20X101K			
R40	100Ω				

Note: Not used in all models.

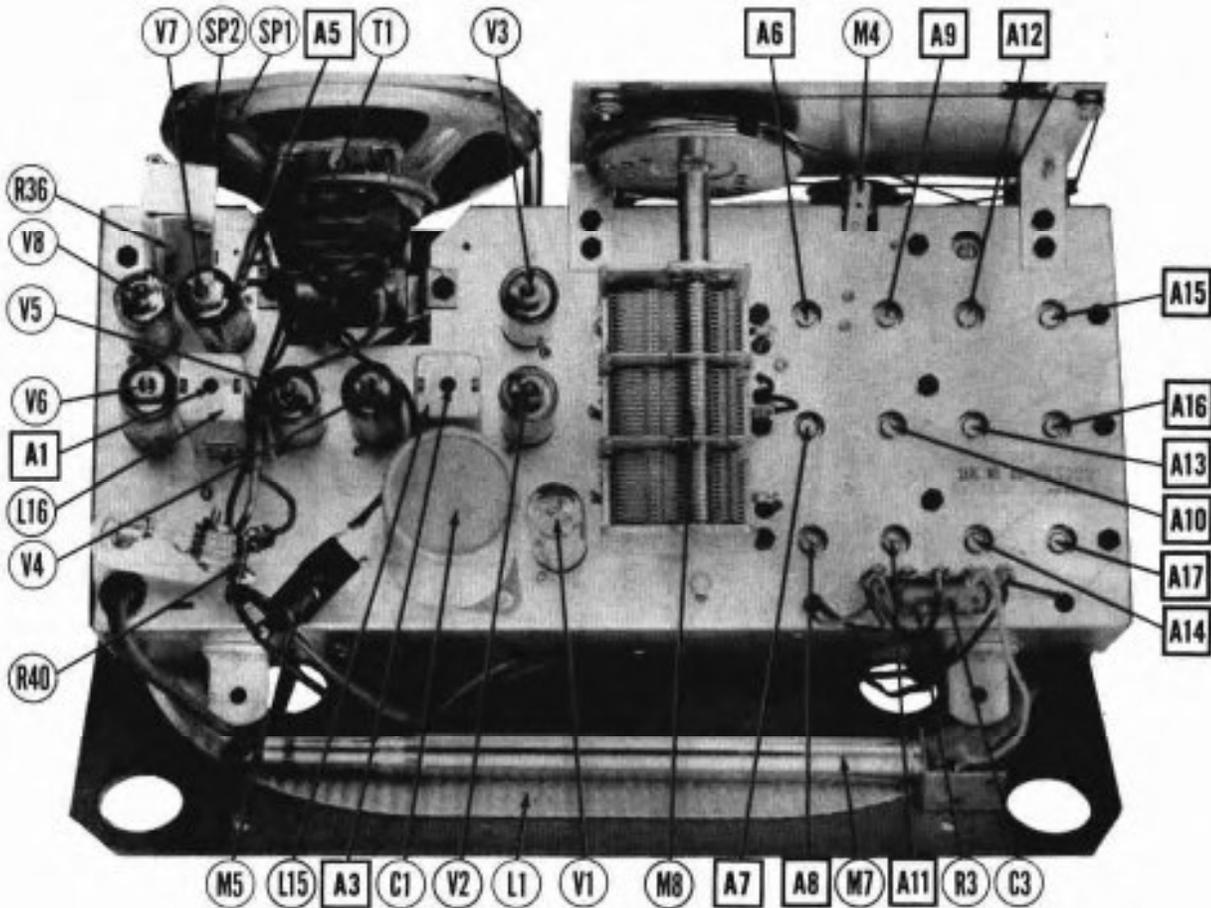


DIAL CORD DRIVE

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING ~ IMPEDANCE	REPLACEMENT DATA			STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	INSTALLATION NOTES
		DC RES. PRI. SEC.	Hallcrafters PART No.	STANCOR PART No.				
T1	7KΩ and 500Ω to 5000Ω	3.6Ω	100-30	Part of 85C093 at .3Ω				

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 .1MFD 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 3, connect a .1MFD 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 CW)	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 3000 ~ note in speaker.
3.	.15MFD	High side to ext. antenna lead. Low side to B-. (See pre-alignment notes)	30MC (600 ~ Mod.)	#4 (maximum CW)	30MC	"	A6, A7, A8	Adjust in the order given for maximum output.
4.	.15MFD	"	11.5MC	#3 (Third pos. CW)	11.5MC	"	A9, A10, A11	"
5.	.15MFD	"	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.