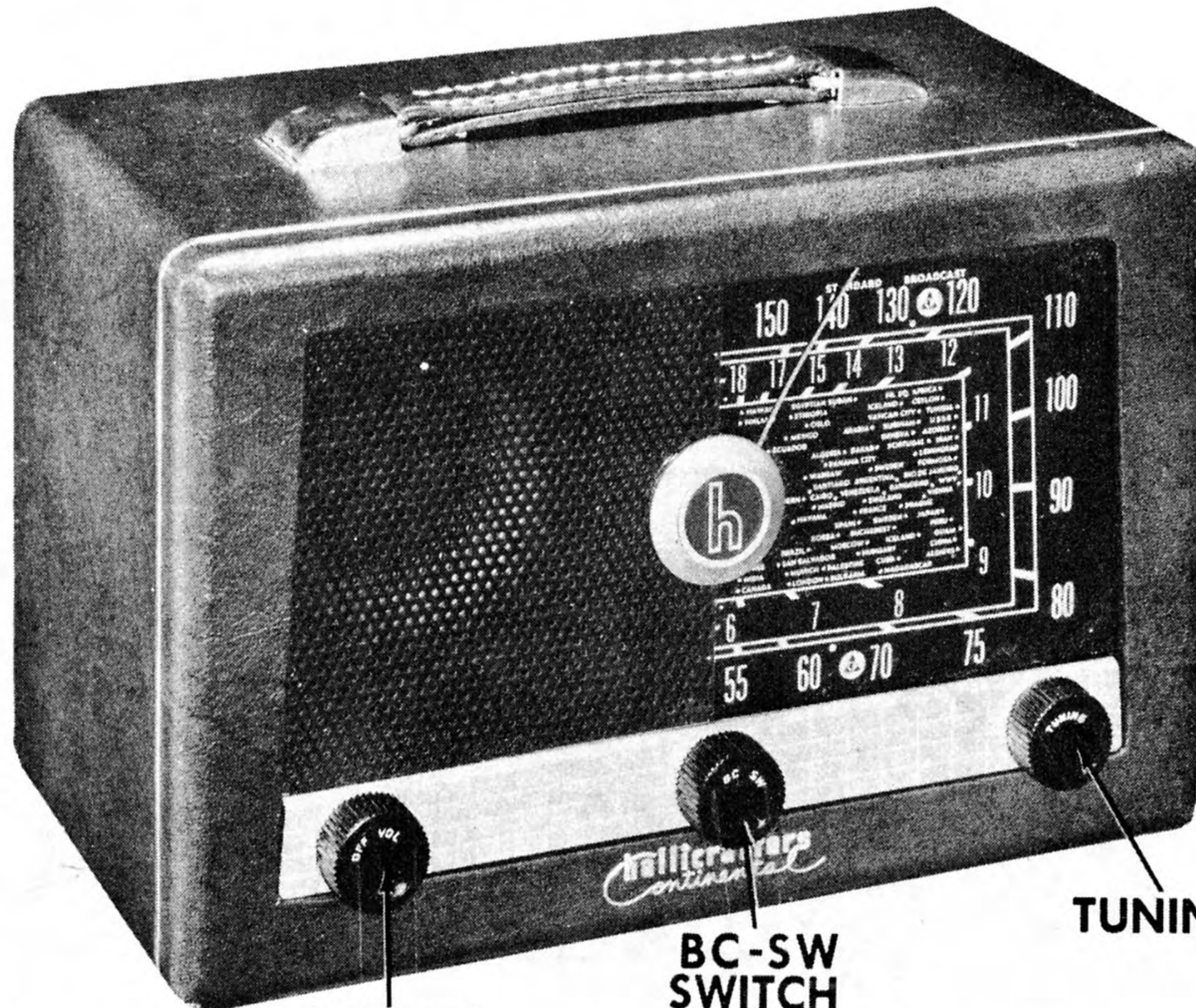




**HALLICRAFTERS MODELS  
5R40, 5R41, 5R42**



**ON-OFF  
SWITCH  
VOLUME  
CONTROL**

**BC-SW  
SWITCH**

**TUNING**

**HALLICRAFTERS MODELS  
5R40, 5R41, 5R42**

<b>TRADE NAME</b>	Hallicrafters Models 5R40, 5R41, 5R42 (Runs 1, 2, 3, 4, 4A)
<b>MANUFACTURER</b>	The Hallicrafters Co., 4401 W. 5th. Ave., Chicago 24, Ill.
<b>TYPE SET</b>	Three Power Portable 2 Band AM Superheterodyne Receiver
<b>TUBES (Four)</b>	Types: IR5 Conv., 1U4 IF Amp., 1U5 Det.-AVC-AF Amp., 3V4 Output
<b>POWER SUPPLY</b>	110-120 Volts AC-DC (or) 7.5 Volts "A" Supply & 90 Volts "B" Supply
<b>RATINGS</b>	.15 Amp. @ 117 Volts AC (or) 50MA @ 7.5 Volts DC & 13.5MA @ 90 Volts DC
<b>TUNING RANGE—BROADCAST</b>	535KC-1620KC SHORT WAVE 5.8MC-18.3MC

**ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT**

Use battery power, if possible. If AC power is used, use an isolation transformer when available. If not, connect a .1MFDC 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.

Loop should be maintained in same relative position to chassis as when receiver is in cabinet.

To set pointer, turn tuning capacitor fully closed and set pointer to last reference mark at low frequency end of dial.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.01MFDC	High side to green lead on BC antenna. Low side to B-.	455KC (400vMod)	BC	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 200 MMF to reduce hum modulation.
2.	300Ω Carbon Resistor	High side to "A" on sweep antenna terminal. Low side to B-.	14MC	SW	14MC	"	A56, A6	Adjust for maximum output.
3.		Loop (Radiated)	1400KC	BC	1400KC	"	A7, A8	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
4.		"	600KC	BC	600KC	"	A7, A8, A9	"

**HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana**

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# CHASSIS--TOP VIEW

HALLICRAFTERS  
Model 5R40 (Runs 1, 2, 3, 4, 4A)

# PARTS LIST AND DESCRIPTIONS TUBES (SYLVANIA, GENERAL ELECTRIC, WESTINGHOUSE)

ITEM No.	USE	REPLACEMENT DATA		RETM BASE TYPE	NOTES
		Hallcrafters PART No.	STANDARD REPLACEMENT		
V1	Converter	IR5	IR5	7AT	
V2	IF Amplifier	IU4	IU4	6AR	
V3	Det.-AVC-AF Amp	IU5	IU5	6BW	
V4	Audio Output	3V4	3V4	6BX	

## ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP. VOLT.	REPLACEMENT DATA			NOTES
		Hallcrafters PART No.	MALLORY PART No.	PYRAMID PART No.	
C1A	150	45B229	TCD498	TDL-8040-150	Red Green Note 1
C2	400	45C224	TC1505	TD-500-15	MTH-1550

Note 1. In Run 1, C2 is part of C1.

## FIXED CAPACITORS

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

ITEM No.	RATING CAP. VOLT.	REPLACEMENT DATA			NOTES
		Hallcrafters PART No.	CENTRALAB PART No.	ERIE PART No.	
C3	.05	46AW503J	DF-503	831-150	
C4	15	47X20UK150K	D6-150	NPOA-IR5	
C5	1.5	47A160-3	TCZ-IR5	N750L-101	
C6	100	47X25UK101K	TCN-100		
C7	5600	47X35B562K			
C8	82	47X25UK820K	TCN-82	N750L-820	
C9	10000	47A224	DD-103	811-01	
C10	10000	47A224	DD-103	811-01	
C11	1000	47C20A	D6-102	801-001	
C12	10000	47A224102M	DD-103	811-01	
C13A	150			811-151	
C13B	2000			801-002	
C13C	150			811-151	
C13D	10000			811-01	
C13E	5000			811-005	
C14	10000			811-01	
C15	.25	47A224	DD-103		
C16	5000	46AT254J	DD-502		
C17	.2	46AX204H	DD-502		

Note 2. Runs 1, 2 & 3 use a 100MMF unit in this application.

♦ Items C13A, C13B, C13C, C13D, C13E, R8A, R8B, R8C and R8D are combined in one unit.

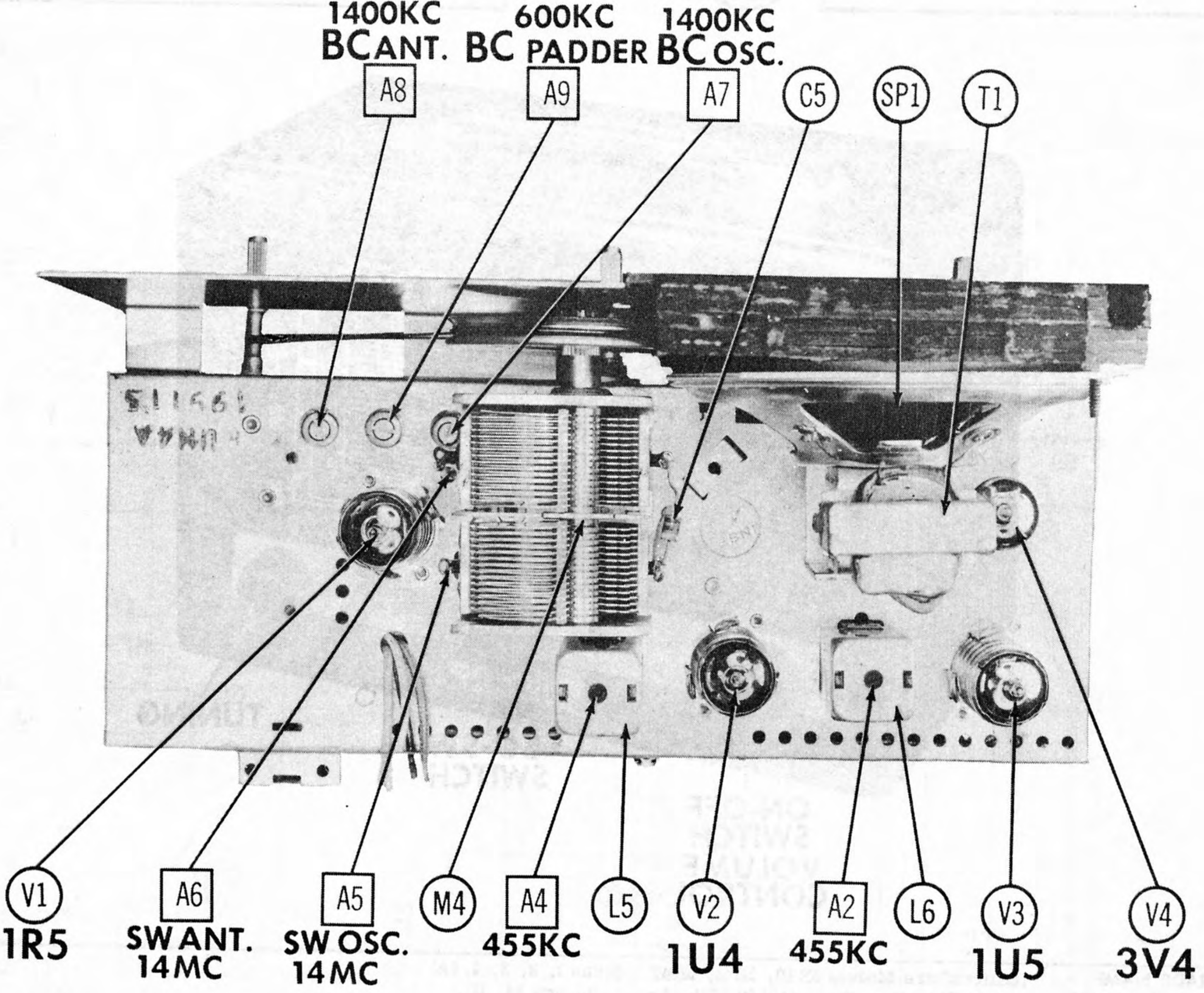
## CONTROLS

ITEM No.	RATING RESISTANCE WATTS	REPLACEMENT DATA			INSTALLATION NOTES
		Hallcrafters PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	
RIA	1Meg	25B1005	B3K-70-S	A47-1Meg-Z	Volume Attach to R1A Attach to R1A
B	Shaft	Not Req.	Not Req.	KSS-3	
C	Switch	Not Req.	Not Req.	SWE-20	

## RESISTORS

ITEM No.	RATING OHMS WATT	REPLACEMENT DATA		NOTES
		Hallcrafters PART No.	IRC PART No.	
R2	100KΩ	23X20X104K	BTS-100K	
R3	2200Ω	23X20X222K	BTS-2200	
R4	10KΩ	23X20X103K	BTS-10K	
R5	4.7Meg	23X20X475K	BTS-4.7Meg	Note 1
R6	2200Ω	23X20X222K	BTS-2200	
R7	2.2Meg	23X20X225K	BTS-2.2Meg	
R8A	10Meg	49C022	BTS-10Meg	
R8B	4.7Meg		BTS-4.7Meg	
R8C	1Meg		BTS-1Meg	
R8D	3.3Meg		BTS-3.3Meg	

♦ Items C13A, C13B, C13C, C13D, C13E, R8A, R8B, R8C, R8D are combined in one unit.  
 Note 1. Runs 1, 2, & 3 use a 18KΩ, 1/2 watt resistor in this application (Mfg. part #23X20X103K).  
 Note 2. Not used in runs 1 and 2.  
 Note 3. Some versions use a 2700Ω, 8 watt and a 22KΩ, 1 watt resistor connected in parallel.



# PARTS LIST AND DESCRIPTIONS (Continued)

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	Hallcrafters PART No.	Haldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	
T1	10KΩ	3Ω	Z1116 ①	A-2998 ①	A-3329 ①	24S49 ①	S-11X ①	① Bend mounting tabs down, file slots, mount on orig. mounting bracket.

## SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA		NOTES
	SIZE	FIELD	Hallcrafters PART No.	QUAM PART No.	
SP1	4"	PM 3Ω	85C129 ① 85C138 ①	4A07	① Alternate PM speaker

## COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA			NOTES
		PRI.	SEC.	Hallcrafters PART No.	MEISSNER PART No.	MILLER PART No.	
L1	SW Ant. Coil	.4Ω	0Ω	51B1535			
L2	SW Osc. Coil	0Ω	1.1Ω▲	51B1543			
L3	BC Ant. Coil	.7Ω		57C181 *			
L4	BC Osc. Coil	1.4Ω	4.6Ω	51B1762 ■	14-1074	70-O8C 12-C1	▲ Tapped @ .3Ω
L5	Input IF	26Ω	26Ω	50C233	16-6758		
L6	Output IF	26Ω▲	26Ω	50C516	19-1006	4624	▲ Tapped @ .7Ω
L7	Fl. Choke	2.2Ω		53A008			16.2 Microhenries

\* Run 1 uses part #57B167 loop stick. Runs 2 and above use 57C181 (chassis mounted) or 57B175 (cabinet mounted) loop sticks.  
 ■ Alternate part #51B1534 - Run 1 thru Run 3.

## SELENIUM RECTIFIER

ITEM No.	RATING	REPLACEMENT DATA				NOTES
		Hallcrafters PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	MALLORY PART No.	
M1	.064ADC	27A172	1003A	RS-075	6S75	5M4 75

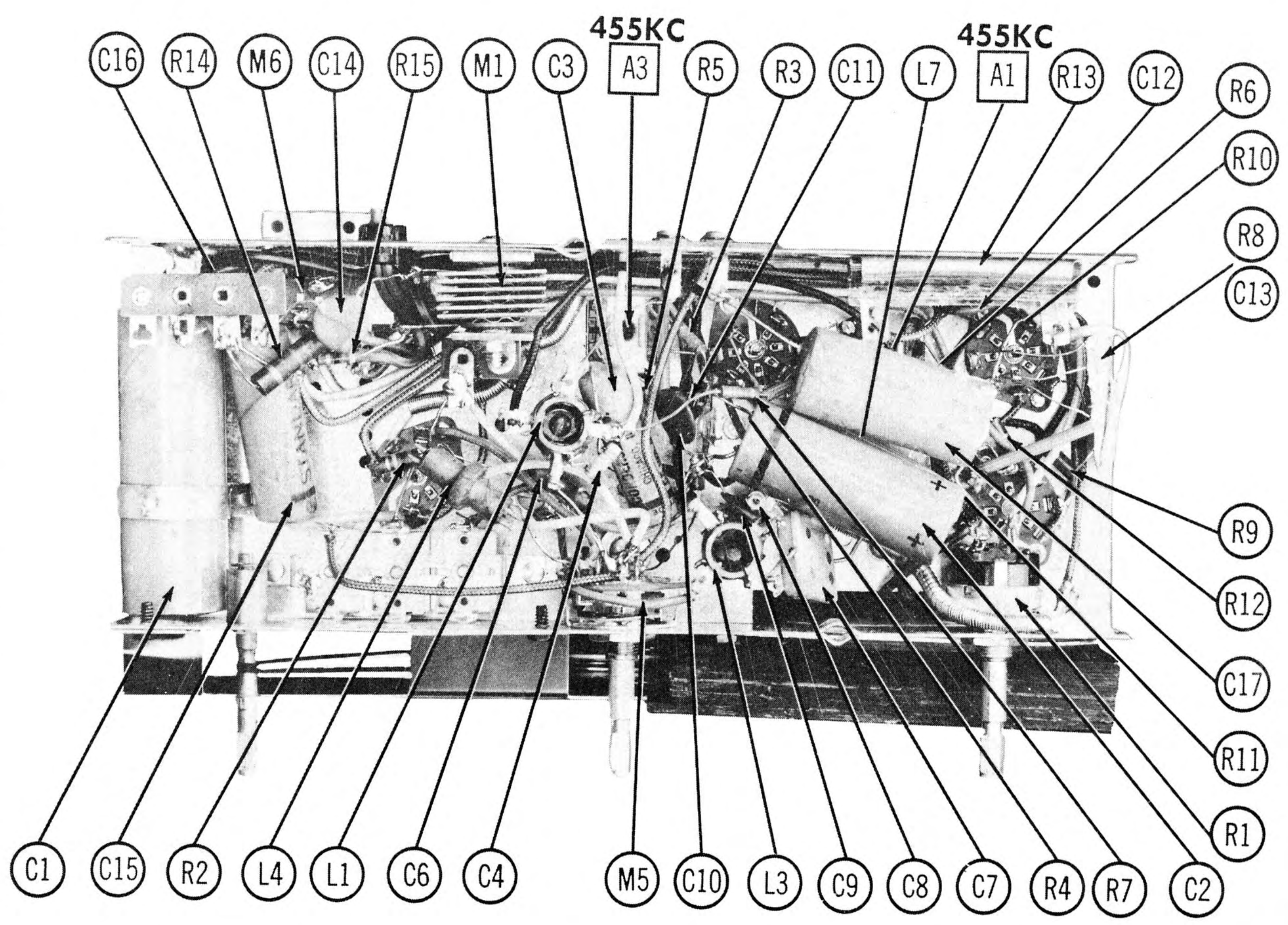
## BATTERIES

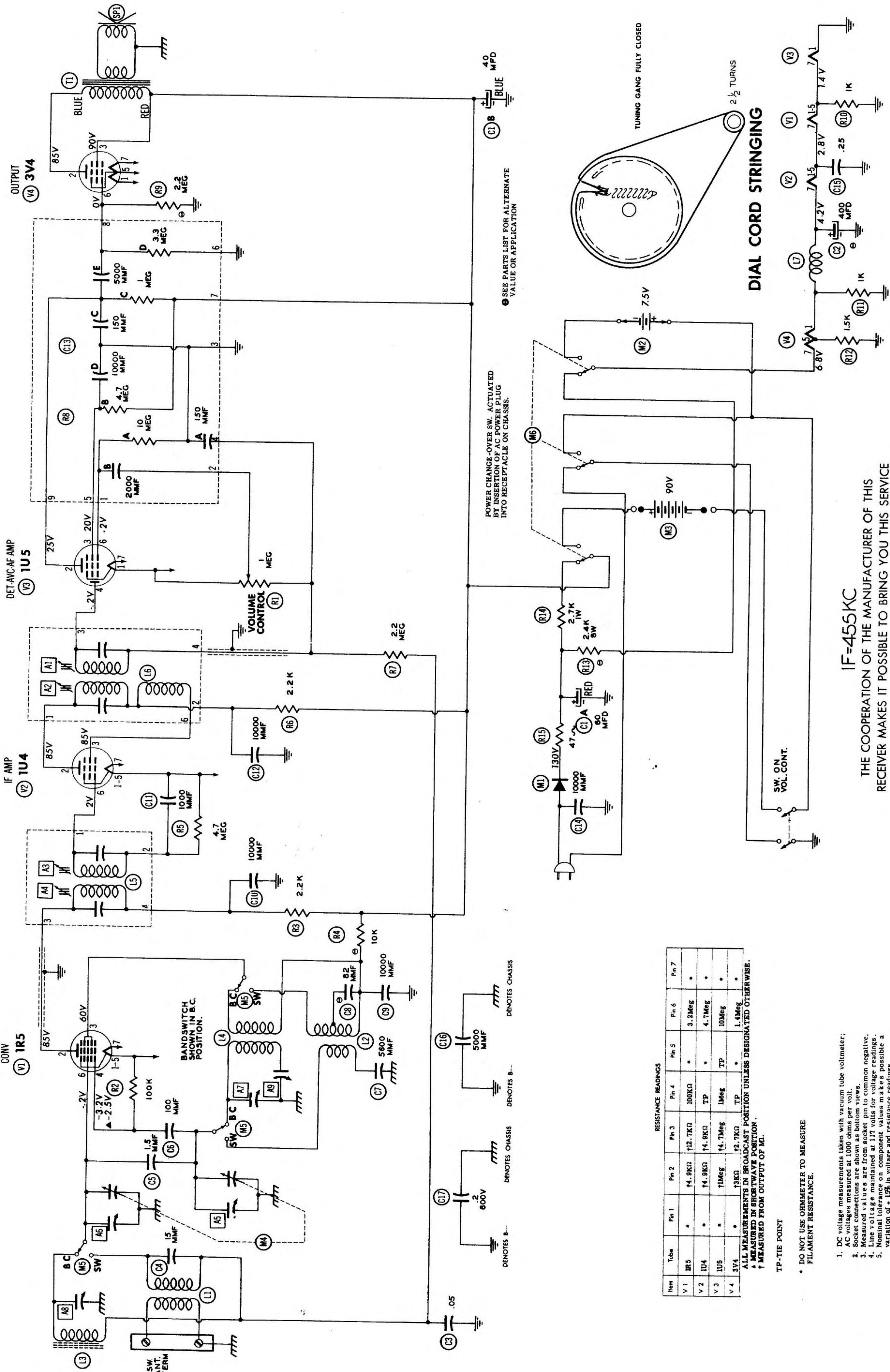
ITEM No.	VOLTAGE	Hallcrafters PART No.	REPLACEMENT DATA			INSTALLATION NOTES
			EVEREADY	"A"	"B"	
M2	7.5V"A"	P13				
M3	90V"B"	P231	717	"A-B" C5	"B" N60	"A-B"

## MISCELLANEOUS

ITEM No.	PART NAME	Hallcrafters PART No.	NOTES
M4	Tuning Cap.	48C294	2 Gang (19-490MMF, 19-490MMF) Selector (BC-SW), (3 pole-2 position rotary) Power changeover (3 pole - 2 position -slide type) 3 Sections (BC osc. trimmer, BC osc. padder & BC Ant. trimmer) Less front panel assy. Model 5R40 Model 5R41 Model 5R42 BC-SW On-off-volume Tuning Model 5R40 Model 5R41 Model 5R42
M5	Switch	60B487	
M6	Switch	60B502	
	Trimmer Cap.	44C419	
	Cabinet	78F854	
	Front Panel Assy.	7D379	
	Front Panel Assy.	7A457	
	Front Panel Assy.	7A458	
	Knob	15B525	
	Knob	15B529	
	Knob	15B526	
	Dial Scale	83D418	
	Dial Scale	83A442	
	Dial Scale	83A443	
	Dial Pointer	82A220	

# CHASSIS—BOTTOM VIEW





RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V 1	1R5	*	14.9KΩ	112.7KΩ	100KΩ	*	3.2Meg	*
V 2	1U4	*	14.9KΩ	14.9KΩ	TP	*	4.7Meg	*
V 3	1U5	*	1Meg	14.7Meg	1Meg	TP	10Meg	*
V 4	3V4	*	13KΩ	12.7KΩ	TP	*	1.4Meg	*

ALL MEASUREMENTS IN BROADCAST POSITION UNLESS DESIGNATED OTHERWISE.  
 \* MEASURED IN BROADCAST POSITION.  
 † MEASURED FROM OUTPUT OF M1.

- TP-TIE POINT
- 1. DC voltage measurements taken with vacuum tube voltmeter;
  - 2. AC voltages measured at 1000 ohms per volt;
  - 3. Socket connections are shown as bottom views.
  - 4. Measured values are from socket pin to common negative.
  - 5. Line voltage maintained at 117 volts for voltage readings.
  - 6. Nominal tolerance on component values makes possible a variation of +15% in voltage and resistance readings.
  - 7. Volume control at maximum, no signal applied for voltage measurements.

IF=455KC  
 THE COOPERATION OF THE MANUFACTURER OF THIS RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

# **K4XL's** **BAMA**

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