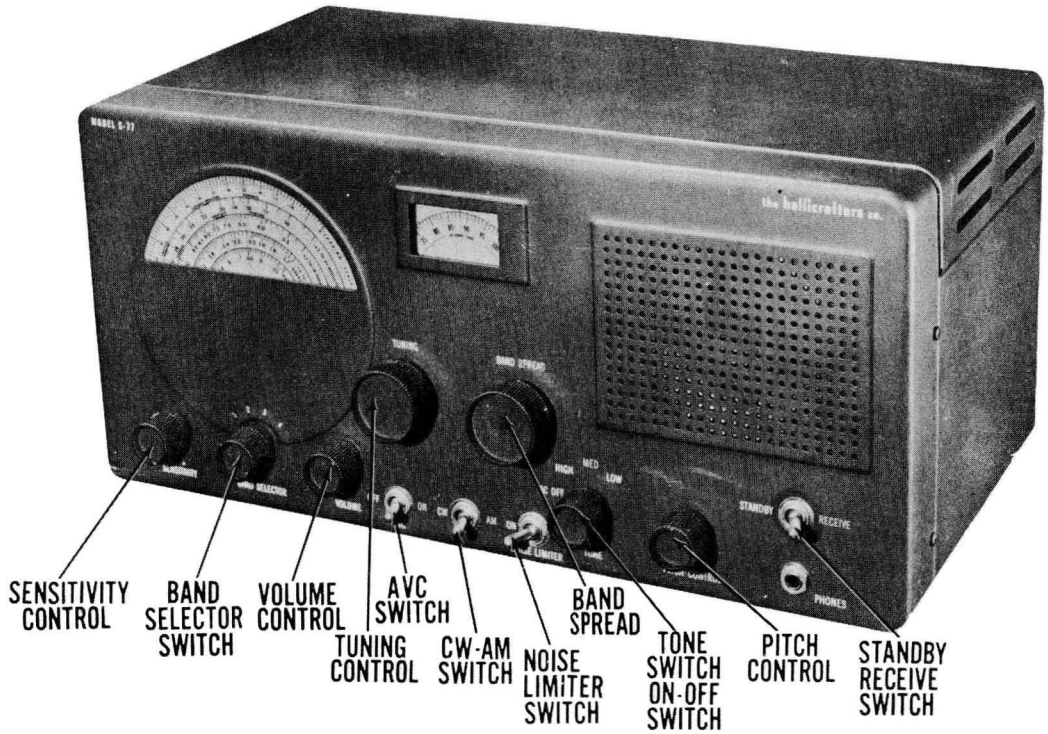
RTMA RADIO-TELEVISION MANUFACTURERS ASSOCIATION MEMBER



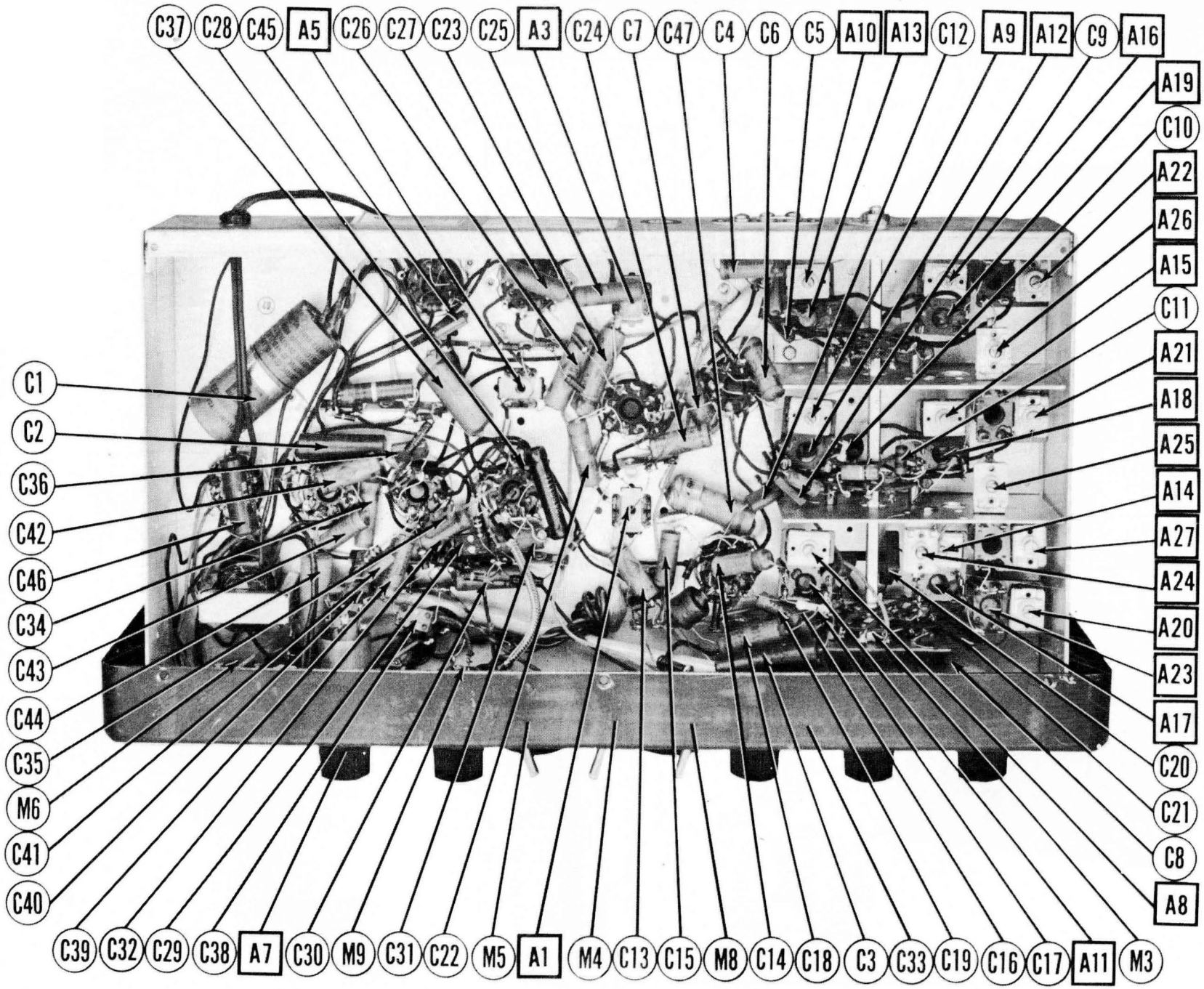
HALLICRAFTERS
MODEL S-77

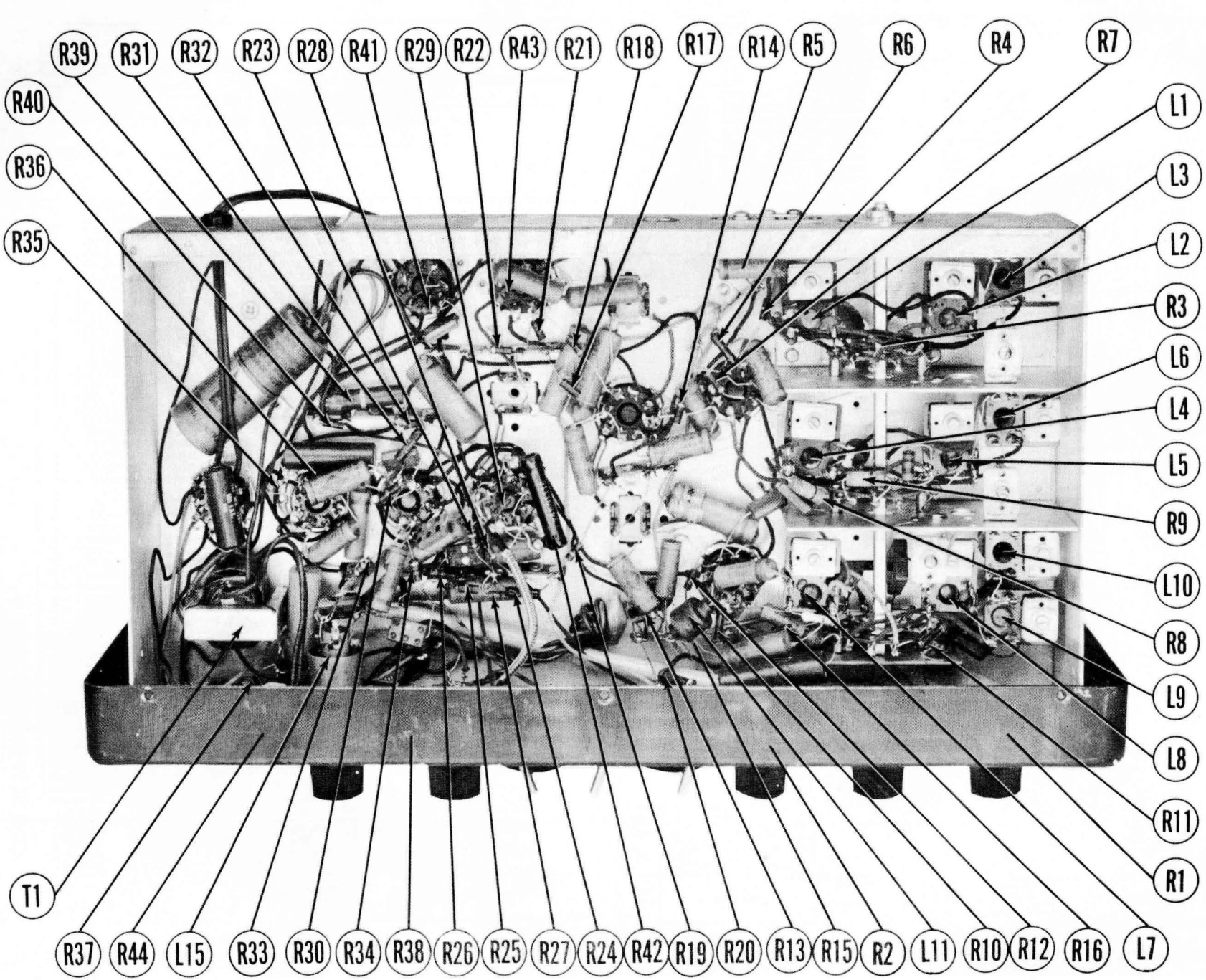


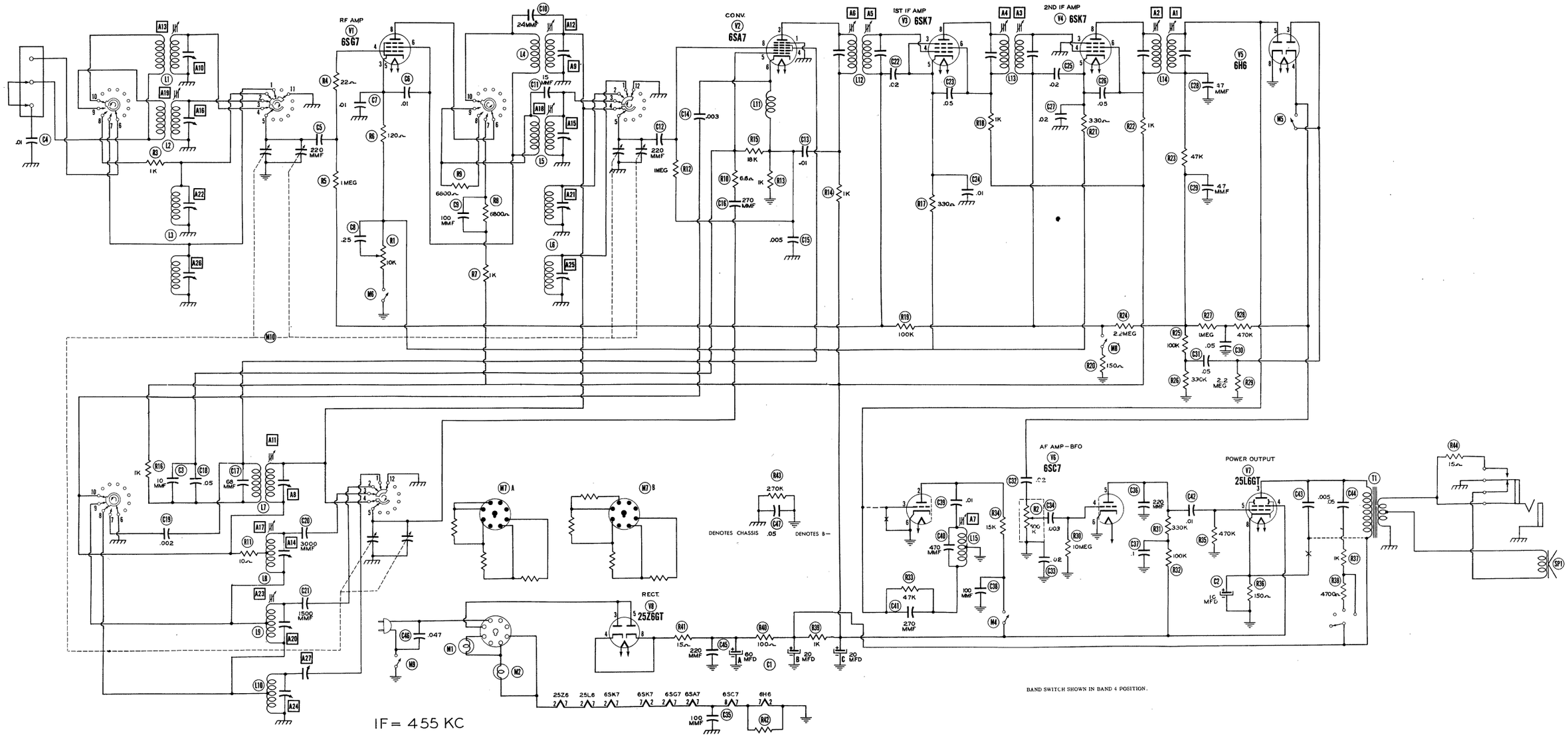

| | |
|---|---|
| TRADE NAME | Hallicrafters, Model S-77 |
| MANUFACTURER | The Hallicrafters Co., 5th and Kostner Avenues, Chicago 24, Illinois |
| TYPE SET | AC-DC Operated Communications Type Multi-Band Superheterodyne Receiver |
| TUBES (EIGHT) | Types 6SG7 RF Amp., 6SA7 Converter, 6SK7 1st IF Amp., 6SK7 2nd IF Amp., 6H6 Det.-AVC-ANL, 6SC7 AF Amp.-BFO, 25L6GT Power Output, 25Z6GT Rectifier. |
| POWER SUPPLY | 105-125 Volts AC-DC RATING .4Amp. @ 117 Volts AC |
| TUNING RANGE-- | Band #1 540-1680KC, Band #2 1.68-5.4MC Band #3 5.3-15.5MC, Band #4 15.3-44MC |

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

"The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed." "Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. Copyright 1951 by Howard W. Sams & Co., Inc., Indianapolis, Indiana, U. S. of America. Copyright under International Copyright Union. All rights reserved under Inter-American Copyright Union (1910) by Howard W. Sams & Co., Inc." Printed in U. S. of America


C37
C28
C45
A5
C26
C27
C23
C25
A3
C24
C7
C47
C4
C6
C5
A10
A13
C12
A9
A12
C9
A16
A19
C10
A22
A26
A15
C11
A21
A18
A25
A14
A27
A24
A20
A23
A17
C20
C21
C8
A8
C1
C2
C36
C42
C46
C34
C43
C44
C35
M6
C41
C40
C39
C32
C29
C38
A7
C30
M9
C31
C22
M5
A1
M4
C13
C15
M8
C14
C18
C3
C33
C19
C16
C17
A11
M3


R39
R31
R32
R23
R28
R41
R29
R22
R43
R21
R18
R17
R14
R5
R6
R4
R7
R40
R36
R35
L1
L3
L2
R3
L6
L4
L5
R9
L10
R8
L9
L8
R11
R1
T1
R37
R44
L15
R33
R30
R34
R38
R26
R25
R27
R24
R42
R19
R20
R13
R15
R2
L11
R10
R12
R16
L7




VOLTAGE READINGS

| Item | Tube | Pin 1 | Pin 2 | Pin 3 | Pin 4 | Pin 5 | Pin 6 | Pin 7 | Pin 8 |
|---|---|---|---|---|---|---|---|---|---|
| V 1 | 6SG7 | ▲0V | 24VAC | 16VDC | -.1VDC | 16VDC | 100VDC | 17.5VAC | 100VDC |
| V 2 | 6SA7 | ▲0V | 17.5VAC | 100VDC | 95VDC | 95.8VDC | 10.6VDC | 11.8VAC | 1.8VDC |
| V 3 | 6SK7 | ▲0V | 24VAC | 16VDC | -.1VDC | 16VDC | 100VDC | 30VAC | 100VDC |
| V 4 | 6SK7 | .9VDC | 38VAC | 0V | -.1VDC | 16VDC | 100VDC | 30VAC | 100VDC |
| V 5 | 6H6 | ▲0V | 0V | 0V | 0V | -.4VDC | -.4VDC | 4.8VAC | 0V |
| V 6 | 6SC7 | -.5VDC | ■90VDC | 0V | -.6VDC | 39VDC | 0V | 4.6VAC | 11.3VAC |
| V 7 | 25L6GT | 0V | 60VAC | 110VDC | 105VDC | 0V | 0V | 36VAC | 6.8VDC |
| V 8 | 25Z6GT | 0V | 85VAC | 117VAC | 125VDC | 117VAC | 125VDC | 60VAC | 125VDC |
| V 9 | Ballast | 0V | 95VAC | 117VAC | 117VAC | 0V | 0V | 85VAC | 90VAC |

‡ TAKEN WITH VACUUM TUBE VOLTMETER.

RESISTANCE READINGS

| Item | Tube | Pin 1 | Pin 2 | Pin 3 | Pin 4 | Pin 5 | Pin 6 | Pin 7 | Pin 8 |
|---|---|---|---|---|---|---|---|---|---|
| V 1 | 6SG7 | ▲0Ω | 20Ω | 10KΩ | 3.7Meg | 10KΩ | ‡2.1KΩ | 14Ω | 19KΩ |
| V 2 | 6SA7 | ▲0Ω | 14Ω | ‡2.1KΩ | ‡2.1KΩ | 19KΩ | 1.1Ω | 8Ω | 1Meg |
| V 3 | 6SK7 | ▲0Ω | 20 | 10KΩ | 2.7Meg | 10KΩ | ‡3.1KΩ | 26Ω | ‡3.1KΩ |
| V 4 | 6SK7 | 270KΩ | 32Ω | 0Ω | 2.6Meg | 10KΩ | ‡2.1KΩ | 26Ω | ‡2.1KΩ |
| V 5 | 6H6 | ▲0Ω | 0Ω | 1Meg | 1Meg | 475KΩ | 475KΩ | 5Ω | 0Ω |
| V 6 | 6SC7 | 50KΩ | ■116KΩ | 0Ω | 10Meg | ‡430KΩ | 0Ω | 5Ω | 8Ω |
| V 7 | 25L6GT | Inf. | 37 | ‡295Ω | ‡1.1KΩ | 470KΩ | 0Ω | 32Ω | 150Ω |
| V 8 | 25Z6GT | Inf. | 49Ω | 117Ω | 30KΩ | 117Ω | 30KΩ | 37Ω | 30KΩ |
| V 9 | Ballast | 0Ω | 55Ω | 117Ω | 117Ω | Inf. | 0Ω | 49Ω | 52Ω |

† MEASURED FROM PIN 8 OF V8.

ALL MEASUREMENTS TAKEN IN BAND 1 (AM) POSITION.
▲ MEASURED FROM CHASSIS.
■ MEASURED IN CW SWITCH POSITION.
SENSITIVITY CONTROL-FULLY COUNTERCLOCKWISE.
AVC SWITCH IN "ON" POSITION.
CW-AM SWITCH IN AM POSITION.
NOISE LIMITER IN "OFF" POSITION.
TONE IN "MED." POSITION.
STANDBY AND RECEIVE SWITCH IN "RECEIVE" POSITION.
PITCH CONTROL FULLY COUNTERCLOCKWISE POSITION.

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

1. **DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1,000 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 ± 10% in voltage and resistance readings.**
6. **Volume control at maximum, no signal applied for voltage measurements.**

A PHOTOFACT STANDARD NOTATION SCHEMATIC
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# PARTS LIST AND DESCRIPTIONS (Continued)

## CONTROLS

| ITEM No. | RATING | | REPLACEMENT DATA | | | | INSTALLATION NOTES |
|---|---|---|---|---|---|---|---|
| | RESISTANCE | WATTS | Hallicrafters PART No. | IRC PART No. | CLAROSTAT PART No. | CENTRALAB PART No. | |
| R1A | 10KΩ | ½ | 25B590 | Q13-116 | AM-81-Z | B-15 | Sensitivity Control |
| B | Shaft | | Not Req. | Not Req. | RS-2 | Not Req. | Attach to R1A Per Instructions |
| R2A | 500KΩ | ½ | 25B586 | Q13-133 | AG-60-Z | B-60 | Volume Control |
| B | Shaft | | Not Req. | Not Req. | RS-2 | Not Req. | Attach to R2A Per Instructions |

## RESISTORS

| ITEM No. | RATING | | REPLACEMENT DATA | | IDENTIFICATION CODES |
|---|---|---|---|---|---|
| | RESISTANCE | WATTS | Hallicrafters PART No. | IRC PART No. | |
| R3 | 1000Ω | ½ | 23X20X102K | BTS-1000 | Antenna Loading |
| R4 | 22Ω | ½ | 23X20X220K | | Parasitic Suppressor |
| R5 | 1Meg | ½ | 23X20X105M | BTS-1Meg | RF Amp. Grid |
| R6 | 120Ω | ½ | 23X20X121K | BTS-120 | RF Amp. Cathode |
| R7 | 1000Ω | ½ | 23X20X102K | BTS-1000 | RF Amp. Decoupling |
| R8 | 6800Ω | 1 | 23X30X682K | BTA-6800 | RF Amp. Plate |
| R9 | 6800Ω | 1 | 23X30X682K | BTA-6800 | RF Amp. Plate |
| R10 | 6.8Ω | ½ | 23X20X068K | | Parasitic Suppressor |
| R11 | 10Ω | ½ | 23X20X100K | | Parasitic Suppressor |
| R12 | 1Meg | ½ | 23X20X105M | BTS-1Meg | Conv. Grid |
| R13 | 1000Ω | ½ | 23X20X102K | BTS-1000 | Conv. Cathode |
| R14 | 1000Ω | ½ | 23X20X102K | BTS-1000 | Conv. Decoupling |
| R15 | 18KΩ | ½ | 23X20X183K | BTS-18K | Osc. Grid |
| R16 | 1000Ω | ½ | 23X20X102K | BTS-1000 | Osc. Anode |
| R17 | 330Ω | ½ | 23X20X331K | BTS-330 | 1st IF Amp. Cathode |
| R18 | 1000Ω | ½ | 23X20X102K | BTS-1000 | 1st IF Amp. Decoupling |
| R19 | 100KΩ | ½ | 23X20X104M | BTS-100K | AVC Network |
| R20 | 150Ω | ½ | 23X20X151K | BTS-150 | AVC Load |
| R21 | 330Ω | ½ | 23X20X331K | BTS-330 | 2nd IF Amp. Cathode |
| R22 | 1000Ω | ½ | 23X20X102K | BTS-1000 | 2nd IF Amp. Decoupling |
| R23 | 47KΩ | ½ | 23X20X473K | BTS-47K | Diode Filter |
| R24 | 2.2Meg | ½ | 23X20X225M | BTS-2.2Meg | AVC Network |
| R25 | 100KΩ | ½ | 23X20X104M | BTS-100K | Diode Load |
| R26 | 330KΩ | ½ | 23X20X334M | BTS-330K | Diode Load |
| R27 | 1Meg | ½ | 23X20X105M | BTS-1Meg | AVC Network |
| R28 | 470KΩ | ½ | 23X20X474M | BTS-470K | AVC Network |
| R29 | 2.2Meg | ½ | 23X20X225M | BTS-2.2Meg | ANL Load |
| R30 | 10Meg | ½ | 23X20X106M | BTS-10Meg | AF Amp. Grid |
| R31 | 330KΩ | ½ | 23X20X334M | BTS-330K | AF Amp. Plate |
| R32 | 100KΩ | ½ | 23X20X104M | BTS-100K | AF Amp. Decoupling |
| R33 | 47KΩ | ½ | 23X20X473K | BTS-47K | BFO Grid |
| R34 | 15KΩ | ½ | 23X20X153K | BTS-15K | BFO Plate |
| R35 | 470KΩ | ½ | 23X20X474M | BTS-470K | Output Grid |
| R36 | 150Ω | ½ | 23X20X151K | BTS-150 | Output Cathode |
| R37 | 1000Ω | ½ | 23X20X102K | BTS-1000 | Tone Compensation-See Note |
| R38 | 4700Ω | ½ | 23X20X472K | BTS-4700 | Tone Compensation-See Note |
| R39 | 1000Ω | 2 | 23X40X102K | BTB-1000 | Filter |
| R40 | 100Ω | ½ | 23X20X101K | BTS-100 | Filter |
| R41 | 15Ω | ½ | 23X20X150K | | Surge Limiter |
| R42 | 110Ω | 10 | 24BG111E | | Filament Shunt-Wire Wound |
| R43 | 270KΩ | ½ | 23X20X274K | BTS-270K | Isolation |
| R44 | 15Ω | 1 | 23X30X150M | BW-1-15 | Output XFMR Shunt |

## 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 | 2.2KΩ | 15Ω Tap 3.2Ω | 180Ω | .9Ω | 55B110 | | A-2902 ① | | ① Drill new mounting holes. |

# PARTS LIST AND DESCRIPTIONS (Continued)

## SPEAKER

| ITEM No. | RATINGS | | REPLACEMENT DATA | | | INSTALLATION NOTES |
|---|---|---|---|---|---|---|
| | | | Hallicrafters PART No. | JENSEN PART No. | QUAM PART No. | |
| | FIELD RES. | V.C. IMP. | | | | |
| SP1 | PM | 3.2Ω | 85B050 | ST105 Mod. P5-X | 5A1 | |
| | CONE DIA. | V.C. DIA. | | | | |
| SP2 | 5" | 9/16" | | | | |

## R F COILS

| ITEM No. | USE | DC RES. | | REPLACEMENT DATA | | |
|---|---|---|---|---|---|---|
| | | PRI. | SEC. | Hallicrafters PART No. | MEISSNER PART No. | |
| L1 | Ant. Coil | .2Ω | 0Ω | 51B783 | | Band 4 Incluees Trimmer |
| L2 | Ant. Coil | .2Ω | 0Ω | 51B782 | | Band 3 Includes Trimmer |
| L3 | Ant. Coil | A0Ω | B0Ω | 51B1241 | | Band 2 and 1 |
| L4 | RF Coil | 1.4Ω | 0Ω | 51B786 | | Band 4 Includes Trimmer |
| L5 | RF Coil | 8.5Ω | 0Ω | 51B786 | | Band 3 Includes Trimmer |
| L6 | RF Coil | A0Ω | B0Ω | 51B1240 | | Band 2 and 1 |
| L7 | Osc. Coil | .4Ω | 0Ω | 51B791 | | Band 4 Includes Trimmer |
| L8 | Osc. Coil | .1Ω | Tap0Ω | 51B913 | | Band 3 Includes Trimmer |
| L9 | Osc. Coil | 1.2Ω | Tap0Ω | 51B789 | | Band 2 Includes Trimmer |
| L10 | Osc. Coil | 3Ω | Tap0Ω | 51B912 | | Band 1 Includes Padder |
| L11 | Cathode Choke | 120Ω | | 53A138 | | |
| L12 | 1st IF | 9Ω | 9Ω | 50C243 | | |
| L13 | 2nd IF | 9Ω | 9Ω | 50C243 | | |
| L14 | 3rd IF | 16Ω | 16Ω | 50C242 | | |
| L15 | BFO Osc. | 17Ω | Tap6Ω | 54B044 | | |

## DIAL LIGHTS

| ITEM No. | BASE TYPE | VOLTS | AMPS. | BEAD COLOR | REPLACEMENT DATA | | NOTES |
|---|---|---|---|---|---|---|---|
| | | | | | Hallicrafters PART No. | | |
| M1 | Bayonet | 6-8 | .15 | Brown | 39A004 | | Type number 47. |
| M2 | Bayonet | 6-8 | .15 | Brown | 39A004 | | Type number 47. |

## MISCELLANEOUS

| ITEM No. | PART NAME | HALLICRAFTERS PART No. | NOTES |
|---|---|---|---|
| M3A | Switch,Band | 60B389 | Ant. Wafer |
| B | | 62B039 | RF Wafer |
| C | | 62B044 | Osc. Wafer |
| M4 | Switch | 60A138 | AM-CW |
| M5 | Switch | 60A138 | ANL |
| M6 | Switch | 60A138 | Stand-by/Receive |
| M7A | Ballast | 24B875 | 117Volt |
| B | Ballast | 24B874 | 220Volt |
| M8 | Switch | 60A138 | AVC |
| M9 | Switch | 60A225 | Off-On/Tone |
| M10 | Tuning Gang | 48C240-B | |
| A24 | Trimmer | 44A191 | Band #1 Osc. Adj. |
| A25 | Trimmer | 44A191 | Band #1 RF Adj. |
| A26 | Trimmer | 44A191 | Band #1 Ant. Adj. |
| | Dial | 83C240 | Main Tuning |
| | Dial | 83B372 | Band Spread |
| | Knob | 15A266 | Band |
| | Knob | 15A058 | Pitch Control |
| | Knob | 15A047 | Tuning and Band Spread |
| | Knob | 15A049 | Sensitivity, Volume and Tone |

# PARTS LIST AND DESCRIPTIONS

## TUBES (SYLVANIA or Equivalent)

| ITEM No. | USE | REPLACEMENT DATA | | RMA BASE TYPE | INSTALLATION NOTES |
|---|---|---|---|---|---|
| | | HALLICRAFTERS PART No. | STANDARD REPLACEMENT | | |
| V1 | RF Amplifier | 90X6SG7 | 6SG7 | 8BK | |
| V2 | Converter | 90X6SA7 | 6SA7 | 8R | |
| V3 | 1st IF Amplifier | 90X6SK7 | 6SK7 | 8N | |
| V4 | 2nd IF Amplifier | 90X6SK7 | 6SK7 | 8N | |
| V5 | Detector-AVC-ANL | 90X6H6 | 6H6 | 7Q | |
| V6 | AF Amplifier-BFO | 90X6SC7 | 6SC7 | 8S | |
| V7 | Power Output | 90X25L6GT | 25L6GT | 7AC | |
| V8 | Rectifier | 90X25Z6GT | 25Z6GT | 7Q | |

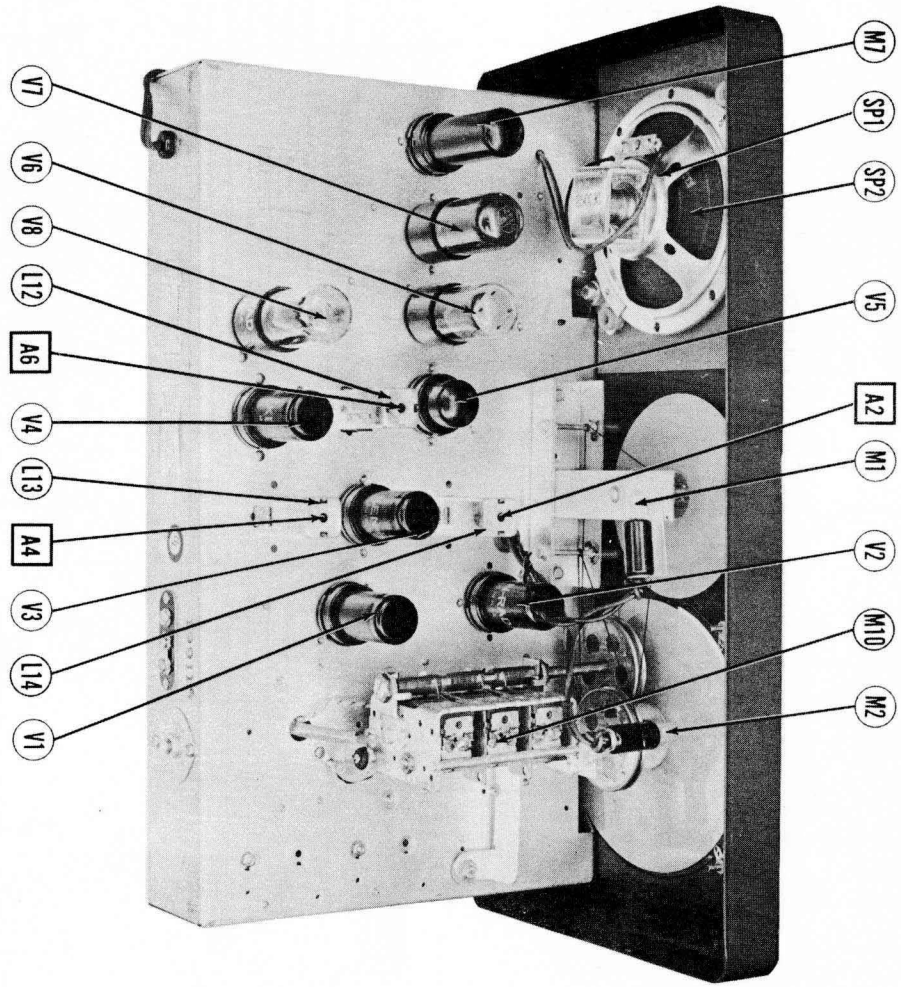
## CAPACITORS

**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 CAP. | RATING VOLT | REPLACEMENT DATA Hallicrafters PART No. | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ERIE PART No. | SPRAGUE PART No. | IDENTIFICATION CODES AND INSTALLATION NOTES |
|---|---|---|---|---|---|---|---|---|---|
| C1A | 60 | 175 | 45B128-C | PRS200/30-30 | | EDL7V225 | | R1137 | Filter |
| B | 20 | 175 | | PRS250/20-20 | | BR2025 | | | Filter |
| C | 20 | 175 | | | | | | | Filter |
| C2 | 10 | 25 | 45A121 | PRS25/10 | | BR102A | | TVA-1204 | Output Cathode |
| C3 | 10 | 150 | 45A097 | PRS150/12 | | BR1015 | | TVA-1406 | Osc. Anode Dec. |
| C4 | .01 | 600 | 46AZ103J | P688-01 | D6-103 | PTE6S1 | GP2-333-103 | 6TM-S1 | Ant. Isolation |
| C5 | 220 | 500 | 47X20B221K | 1469-00025 | D6-221 | 5R5T25 | GP2K-221 | | RF Coupling |
| C6 | .01 | 600 | 46AZ103J | P688-01 | D6-103 | PTE6S1 | GP2-333-103 | 6TM-S1 | RF Amp. Screen |
| C7 | .01 | 600 | 46AZ103J | P688-01 | D6-103 | PTE6S1 | GP2-333-103 | 6TM-S1 | RF Bypass |
| C8 | .25 | 200 | 46AT254J | P488-25 | | GT2P25 | | 2TM-P25 | Sensitivity Cont. Bypass |
| C9 | 100 | 500 | 47X20B101K | 1468-0001 | D6-101 | 5W5T1 | GP1K-101 | 1FM-31 | RF Coupling |
| C10 | 24 | | 47X25UK240M | SI25NPO | TCZ-24 | | NPOK-240 | 5TCC-Q25 | RF Coupling |
| C11 | 15 | | 47X21UK150M | | TCN-15 | | N750K-150 | 5TCU-Q15 | RF Coupling |
| C12 | 220 | 500 | 47X20B221K | 1469-00025 | D6-221 | 5R5T25 | GP2K-221 | | RF Coupling |
| C13 | .01 | 600 | 46AZ103J | P688-01 | D6-103 | PTE6S1 | GP2-333-103 | 6TM-S1 | Conv. Plate Dec. |
| C14 | .003 | 600 | 46AY302J | P688-003 | D6-302 | PTE6D3 | GP2-333-302 | 6TM-D3 | Osc. Feedback |
| C15 | .005 | 600 | 46AZ502J | P688-005 | D6-502 | PTE6D5 | GP2-333-502 | 6TM-D5 | Conv. Cathode Bypass |
| C16 | 270 | 500 | 47X20B271K | 1469-0003 | | 5R5T3 | | MS-33 | Osc. Grid Cap. |
| C17 | 68 | | 47X25UK680K | | TCZ-68 | | NPO-333-680 | 5TCC-Q68 | Fixed Trimmer |
| C18 | .05 | 200 | 46AU503J | P288-05 | DF-503 | PTE4S5 | | 2TM-S5 | Osc. Anode Dec. |
| C19 | .002 | 600 | 46AZ202J | P688-002 | D6-202 | PTE6D2 | GP2-333-202 | 6TM-D2 | Osc. Anode Bypass |
| C20 | 3000 | 500 | 47X35B302K | 1467-003 | D6-302 | 1W5D3 | GP2-333-302 | MS-23 | Fixed Padder |
| C21 | 1500 | 500 | 47X35C152J | 1467-0015 | D6-152 | 1W5D15 | GP2L-152 | 1FM-215 | Fixed Padder |
| C22 | .02 | 200 | 46AU203J | P488-02 | DF-203 | PTE4S2 | | 2TM-S2 | AVC Filter |
| C23 | .05 | 600 | 46AY503J | P688-05 | DF-503 | PTE6S5 | | 6TM-S5 | 1st IF Amp. Dec. |
| C24 | .01 | 600 | 46AZ103J | P688-01 | D6-103 | PTE6S1 | GP2-333-103 | 6TM-S1 | 1st IF Amp. Cathode |
| C25 | .02 | 200 | 46AU203J | P488-02 | DF-203 | PTE4S2 | | 2TM-S2 | AVC Filter |
| C26 | .05 | 600 | 46AY503J | P688-05 | DF-503 | PTE6S2 | | 6TM-S5 | 2nd IF Amp. Dec. |
| C27 | .02 | 200 | 46AU203J | P488-02 | DF-203 | PTE4S2 | | 2TM-S2 | 2nd IF Amp. Cathode |
| C28 | 47 | 500 | 47X20B470K | 1468-00005 | D6-470 | 5W5Q5 | GP1K-470 | 1FM-45 | Diode RF Filter |
| C29 | 47 | 500 | 47X20B470K | 1468-00005 | D6-470 | 5W5Q5 | GP1K-470 | 1FM-45 | Diode RF Filter |
| C30 | .05 | 200 | 46AU503N | P288-05 | DF-503 | PTE4S5 | | 2TM-S5 | RF Bypass |
| C31 | .05 | 200 | 46AU503J | P288-05 | DF-503 | PTE4S5 | | 2TM-S5 | Audio Coupling |
| C32 | .02 | 200 | 46AU203J | P488-02 | DF-203 | PTE4S2 | | 2TM-S2 | Audio Coupling |
| C33 | .02 | 200 | 46AU203J | P488-02 | DF-203 | PTE4S2 | | 2TM-S2 | Vol. Cont. Isolation |
| C34 | .003 | 600 | 46AY302J | P488-003 | D6-302 | PTE6D3 | GP2-333-302 | 6TM-D3 | Audio Coupling |
| C35 | 100 | 500 | 47X20B101K | 1468-0001 | D6-101 | 5W5T1 | GP1K-10 | 1FM-31 | AF Amp. Fil. |
| C36 | 220 | 500 | 47X20B221K | 1469-00025 | D6-221 | 5R5T25 | GP2K-221 | | AF Amp. Plate |
| C37 | .1 | 600 | 46AY104J | P688-1 | DF-104 | PTE6P1 | | 6TM-P1 | RF Bypass |
| C38 | 100 | 500 | 47X20B101K | 1468-0001 | D6-101 | 5W5T1 | GP1K-101 | 1FM-31 | RF Bypass |
| C39 | .01 | 600 | 46AZ103J | P688-01 | D6-103 | PTE6S1 | GP2-333-103 | 6TM-S1 | BFO Feedback |
| C40 | 470 | 500 | 47X20B471J | 1469-0005 | | 5R5T5 | | MS-35q | Fixed Trimmer |
| C41 | 270 | 500 | 47X20B271K | 1469-0003 | | 5R5T3 | | MS-33 | BFO Grid Cap. |
| C42 | .01 | 600 | 46AZ103J | P688-01 | D6-103 | PTE6S1 | GP2-333-103 | 6TM-S1 | Audio Coupling |
| C43 | .005 | 600 | 46AZ502J | P688-005 | D6-502 | PTE6D5 | GP2-333-502 | 6TM-D5 | Output Plate |
| C44 | .05 | 600 | 46AY503J | P688-05 | DF-503 | PTE6S5 | | 6TM-S5 | Tone Comp. |
| C45 | 220 | 500 | 47X20B221K | 1469-00025 | D6-221 | 5R5T25 | GP2K-221 | | RF Bypass |
| C46 | .047 | 600 | | P688-047 | DF-503 | PTE6S5 | | 6TM-S47 | Line Filter † |
| C47 | .05 | 600 | 46A150 | P688-05 * | DF-503 * | PTE6S5 * | | 6TM-S5 * | Line Isolation ‡ |

† Some models use .02MFD in this application (Mfgrs. Part No. 46BR203L6).
‡ Special resonate Cap.
* When replacing, duplicate original coil wound on C47.

# CHASSIS—TOP VIEW



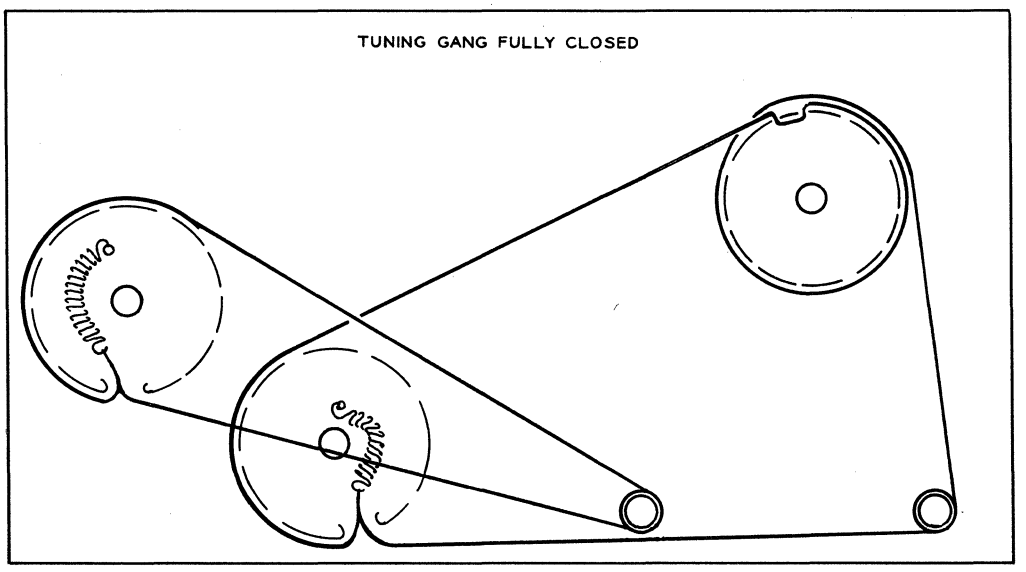
## ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set the main dial scale, turn main tuning gang fully closed and set the zero on the logging scale under the window index.
To set bandspread scale, turn band spread tuning gang fully open and set the zero on the scale under the window index.
The RMA dummy antenna consists of a 200MMF capacitor in series with a 20 microhenry coil which is shunted by a 400MMF capacitor in series with a 400Ω carbon resistor.

Set the controls as follows :

- Sensitivity to maximum
- Volume to maximum
- AVC switch to OFF
- Bandspread to zero
- CW/AM switch to AM
- Noise limiter to OFF
- Standby receive switch to RECEIVE
- Tone switch to HIGH

| | DUMMY ANTENNA | SIGNAL GENERATOR COUPLING | SIGNAL GENERATOR FREQUENCY | BAND SWITCH POS. | RADIO DIAL SETTING | OUTPUT METER | ADJUST | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 1. | Direct | High side to stator on center section of tuning gang. Low side to chassis. | 455KC (400∿Mod.) | 1 | 1000KC | Across voice coil. | A1, A2, A3, A4, A5, A6 | Adjust for maximum output. Attenuate signal generator to maintain 50MW output. |
| 2. | " | " | 455KC (Unmod.) | " | " | " | A7 | Turn CW/AM switch to CW. Remove pitch control knob. Adjust A7 for zero beat in the speaker. Replace the knob with the index mark straight up. |
| 3. | RMA | High side to antenna terminal "A1," (Connect link between A2 and G). Low side to chassis. | 36MC (400∿Mod.) | 4 | 36MC | " | A8, A9, A10 | Adjust for maximum output. |
| 4. | " | " | 18MC (400∿Mod.) | " | 18MC | " | A11, A12, A13 | Adjust for maximum output. Repeat steps 3 and 4 until no further improvement can be made. |
| 5. | " | " | 14MC (400∿ Mod.) | 3 | 14MC | " | A14, A15, A16 | Adjust for maximum output. |
| 6. | " | " | 10MC (400∿ Mod.) | " | 10MC | " | A17, A18, A19 | Adjust for maximum output. Repeat steps 5 and 6 until no further improvement can be made. |
| 7. | " | " | 5MC | 2 | 5MC | " | A20, A21, A22 | Adjust for maximum output. |
| 8. | " | " | 1.8MC | " | 1.8MC | " | A23 | Adjust for maximum output. Repeat steps 7 and 8 until no further improvement can be made. |
| 9. | " | " | 1500KC | 1 | 1500KC | " | A24, A25 A26 | Adjust for maximum output. |
| 10. | " | " | 600KC | " | 600KC | " | A27 | Adjust for maximum output. Repeat steps 9 and 10 until no further improvement can be made. |




DIAL CORD DRIVE