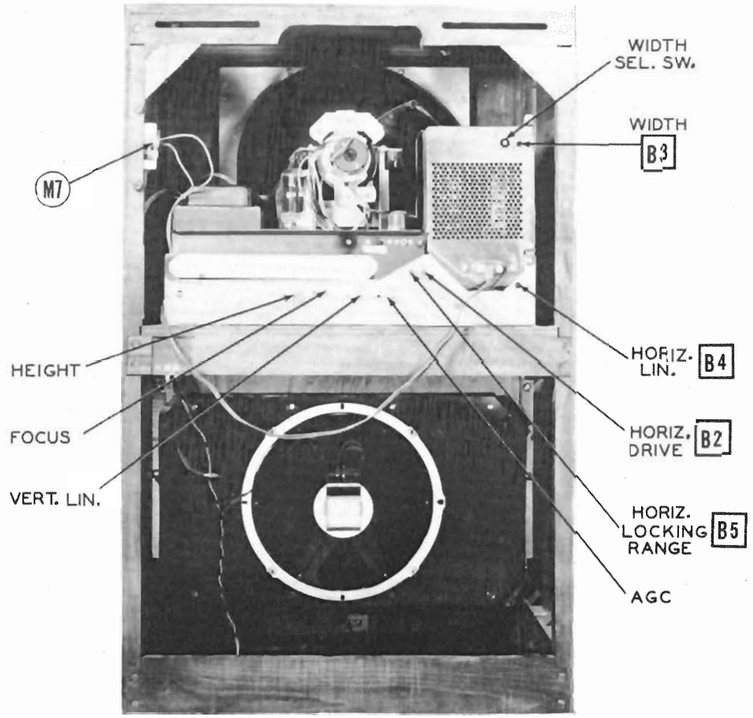



CABINET-REAR VIEW

## HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Connect a short between terminals C and D of L39.
Turn the set on and tune in a TV station, preferably a test pattern.
Turn the horizontal hold control fully clockwise and adjust the horizontal frequency slug (B1) until the blanking signal appears as a single vertical line in the raster.
Turn the hold control 1/4 turn counter-clockwise to sync the picture.
Adjust the horizontal drive trimmer (B2) clockwise as far as possible without crowding the right half of the picture.
Turn the width selector switch to position 1 and adjust the width slug (B3) until the picture is of proper width. If sufficient width cannot be obtained, turn the width selector switch to position 2 or 3. In positions 2 and 3 the width coil (B3) is removed from the circuit.
Adjust the horizontal linearity slug (B4) until the picture is symmetrical from left to right. Slight re-adjustment of B2 may be necessary.
Turn the hold control to maximum counter-clockwise and momentarily remove the signal by switching to another channel and back again.
Turn the hold control slowly clockwise and note the least number of bars present just before the picture pulls into synchronism. Adjust the horizontal lock trimmer (B5) until 7 to 9 bars are present just before pull in.

## HORIZONTAL OSCILLATOR WAVEFORM ADJUSTMENTS

Remove the short from terminals C and D of L39.
Turn the horizontal hold control to maximum clockwise, and adjust the waveform adjustment (B6) until the blanking signal appears in the picture as a single vertical line.
Turn the hold control counter-clockwise 1/4 turn to synchronize the picture.
Connect the low capacity probe of an oscilloscope to terminal C of L39 and chassis.
Adjust B6 until the broad and narrow peaks of the waveform are of equal height as shown in figure 6.
If necessary during this adjustment turn the hold control to keep the picture in synchronism.
Turn the hold control to maximum counter-clockwise and momentarily remove the signal.
Adjust B5 until 7 bars are present just before pull in as the hold control is turned clockwise.
Turn the horizontal hold control to maximum clockwise and adjust B1 until the blanking bar appears in the picture as a single vertical line.
Turn the hold control 1/4 turn counter-clockwise to synchronize the picture.

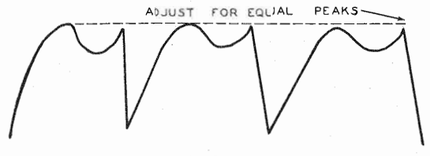


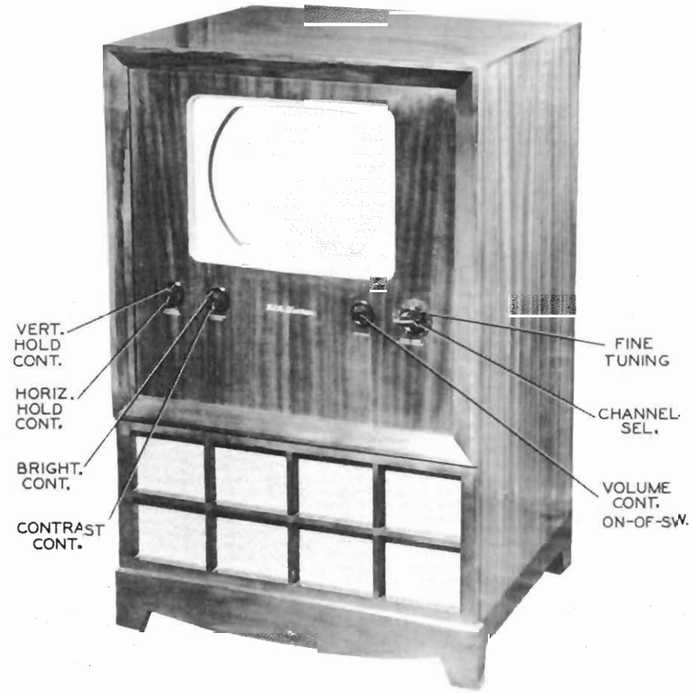

FIG. 6



PHOTOFACT* Folder

*TRADE MARK

# RCA VICTOR MODELS T100, T120, T121, TC124, TC125, TC127, 9T246, 9T256, 9TC245, 9TC247, 9TC249




RCA VICTOR MODEL 9TC245

| | |
|---|---|
| TRADE NAME | RCA Victor Models T100 (Ch. KCS38), T120, T121 (Ch. KCS34C), TC124, TC125, TC127 (Ch. KCS34, B), 9T246 (Ch. KCS38), 9T256 (Ch. KCS38C), 9TC245 (Ch. KCS34B), 9TC247, 9TC249 (Ch. KCS34, B) |
| MANUFACTURER | RCA Victor Div., Radio Corp. of America, Camden, New Jersey |
| TYPE SET | Television Receiver |
| TUBES | Twenty Four<br>Twenty Five (Ch. KCS38C) |
| POWER SUPPLY | 110-120 Volts AC-60 Cycle |
| TUNING RANGE | Channels 2 thru 13 RATING 1.9 Amp. @ 117 Volts AC |

## INDEX

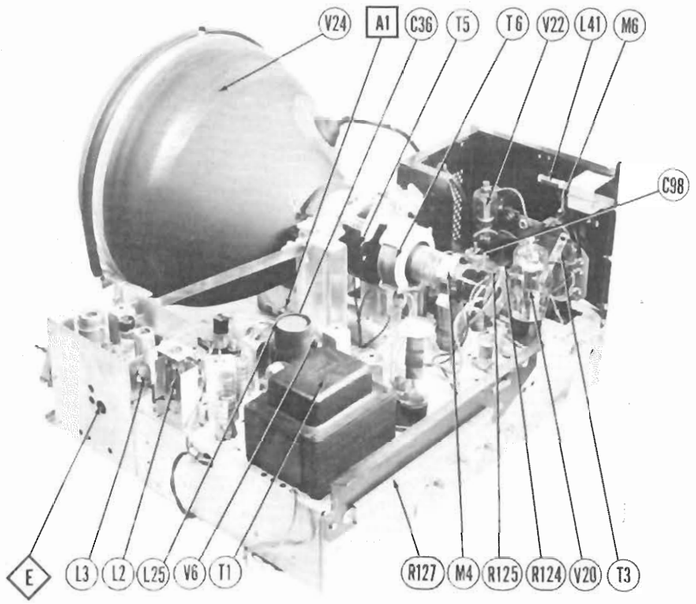


HOWARD W. SAMS & CO., INC. • Indianapolis 1, Indiana



DATE 5-50 SET 93 FOLDER 9

RCA VICTOR MODELS T100, T120, T121, TC124, TC125, TC127, 9T246, 9T256, 9TC245, 9TC247, 9TC249




## CHASSIS-TOP VIEW

## DISASSEMBLY INSTRUCTIONS

MODEL 9T246

1. Remove seven push-on type control knobs.
2. Remove four 1/4 hex head bolts holding rear cover. Remove cover.
3. Disconnect antenna lead at plug in chassis.
4. Disconnect speaker plug.
5. Remove six 3/8" hex head bolts holding chassis. Remove chassis.
6. Remove four 11/32" hex head nuts holding speaker. Remove speaker.

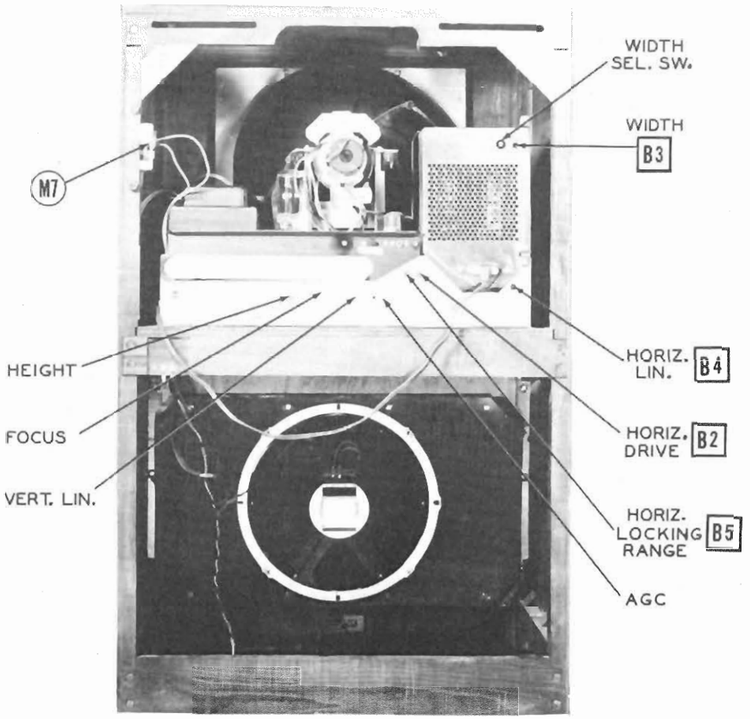
MODEL 9TC245

1. Remove seven push-on type control knobs.
2. Remove eight screws holding rear cover. Remove cover.
3. Remove three screws holding power switch to cabinet.
4. Disconnect antenna lead at plug connection in chassis.
5. Disconnect speaker at plug and remove cabinet lamp assembly. Push these leads up through hole in cabinet.
6. Remove five 3/8" hex head bolts holding chassis. Remove chassis.
7. Remove four 5/16" hex nuts holding speaker. Remove speaker.

## CRITICAL LEAD DRESSING

1. The ground bus from pin 2 and the center shield of V11 socket should not be shortened or rerouted.
2. Do not change the dress of the filament leads or the bypass capacitors in the picture or sound IF circuits. The filament leads between V11, V12 and V13 should be down against the chassis and away from grid or plate leads.
3. If it is necessary to replace any of the 1500MMF capacitors in the picture IF circuit, the lead length must be kept as short as possible.
4. Picture IF coupling capacitors C31, C37, C40 and C47 should be up and away from the chassis and should be clear of the pix IF transformer adjustments by at least 1/4 inch. If the dress of any of these capacitors is changed, the IF alignment should be rechecked.
5. Leads to L31 and L30 must be as short as possible.
6. Dress peaking coils L33, L35 and L36 up and away from the chassis.
7. Dress C61 across tube pins 5 and 6 with leads not exceeding 3/8 inch.
8. Dress the blue lead from pin 5 of V13 down against the chassis.
9. Dress C52 and C53 up and away from the chassis.
10. Dress the yellow lead from the picture control away from the chassis and away from the volume-control leads. Dress the yellow lead from pin 8 of V9 away from the chassis.
11. Dress the green lead from pin 2 of V9 away from the chassis.
12. Dress R106, R105, R109, R112 and R107 up and away from the chassis.
13. The leads to the volume control should be dressed down against the chassis and away from V11 and V12.
14. Contact between the RF oscillator frequency adjustment screws and the oscillator coils or channel switch eyelets must be avoided.
15. Dress leads from L41 (width control coil) away from the transformer frame.






## CABINET-REAR VIEW

## HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Connect a short between terminals C and D of L39.
Turn the set on and tune in a TV station, preferably a test pattern.
Turn the horizontal hold control fully clockwise and adjust the horizontal frequency slug (B1) until the blanking signal appears as a single vertical line in the raster.
Turn the hold control 1/4 turn counter-clockwise to sync the picture.
Adjust the horizontal drive trimmer (B2) clockwise as far as possible without crowding the right half of the picture.
Turn the width selector switch to position 1 and adjust the width slug (B3) until the picture is of proper width. If sufficient width cannot be obtained, turn the width selector switch to position 2 or 3. In positions 2 and 3 the width coil (B3) is removed from the circuit.
Adjust the horizontal linearity slug (B4) until the picture is symmetrical from left to right. Slight re-adjustment of B2 may be necessary.
Turn the hold control to maximum counter-clockwise and momentarily remove the signal by switching to another channel and back again.
Turn the hold control slowly clockwise and note the least number of bars present just before the picture pulls into synchronism. Adjust the horizontal lock trimmer (B5) until 7 to 9 bars are present just before pull in.

## HORIZONTAL OSCILLATOR WAVEFORM ADJUSTMENTS

Remove the short from terminals C and D of L39.
Turn the horizontal hold control to maximum clockwise, and adjust the waveform adjustment (B6) until the blanking signal appears in the picture as a single vertical line.
Turn the hold control counter-clockwise 1/4 turn to synchronize the picture.
Connect the low capacity probe of an oscilloscope to terminal C of L39 and chassis.
Adjust B6 until the broad and narrow peaks of the waveform are of equal height as shown in figure 6.
If necessary during this adjustment turn the hold control to keep the picture in synchronism.
Turn the hold control to maximum counter-clockwise and momentarily remove the signal.
Adjust B5 until 3 bars are present just before pull in as the hold control is turned clockwise.
Turn the horizontal hold control to maximum clockwise and adjust B1 until the blanking bar appears in the picture as a single vertical line.
Turn the hold control 1/4 turn counter-clockwise to synchronize the picture.

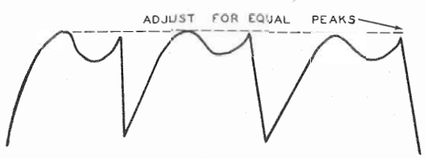
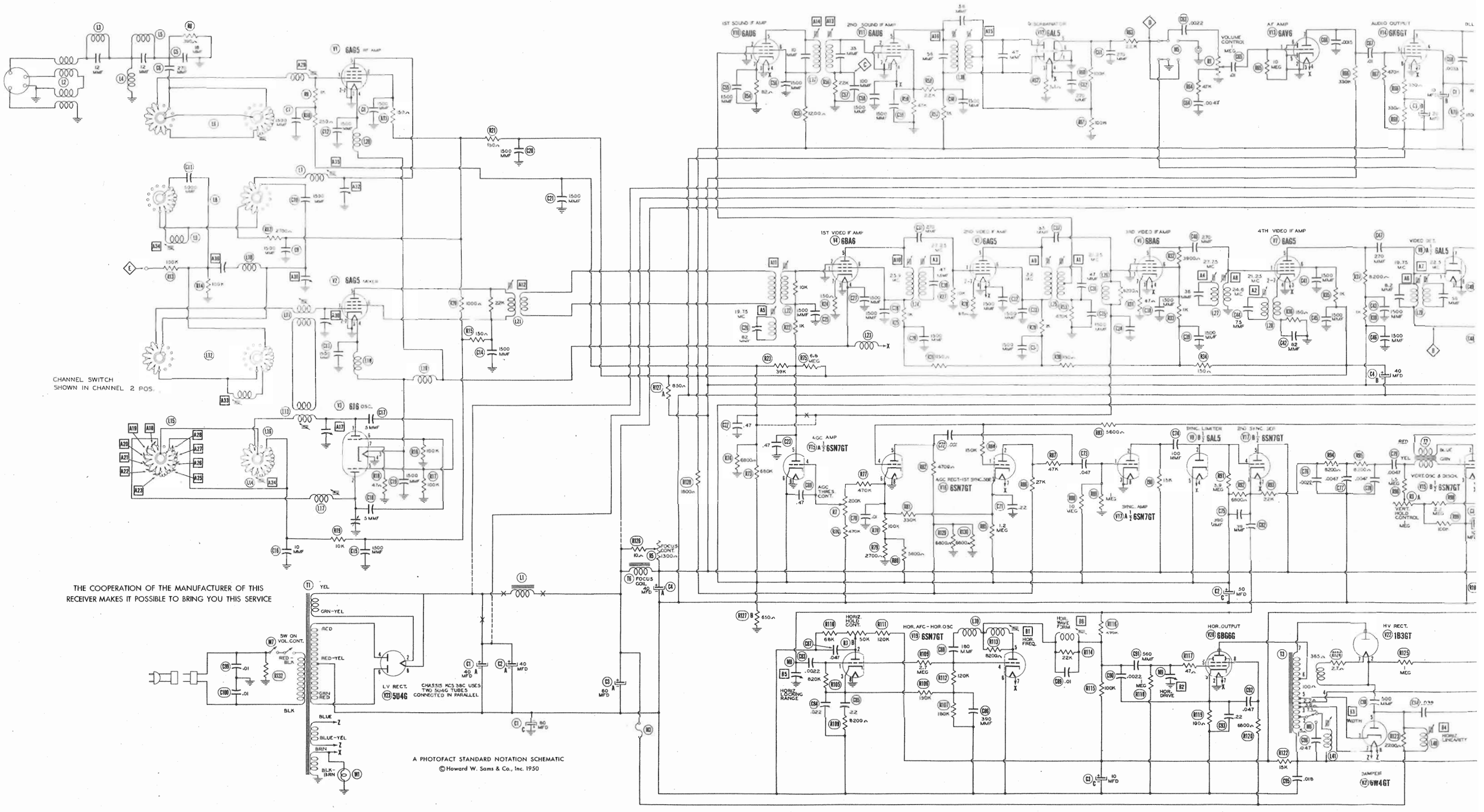
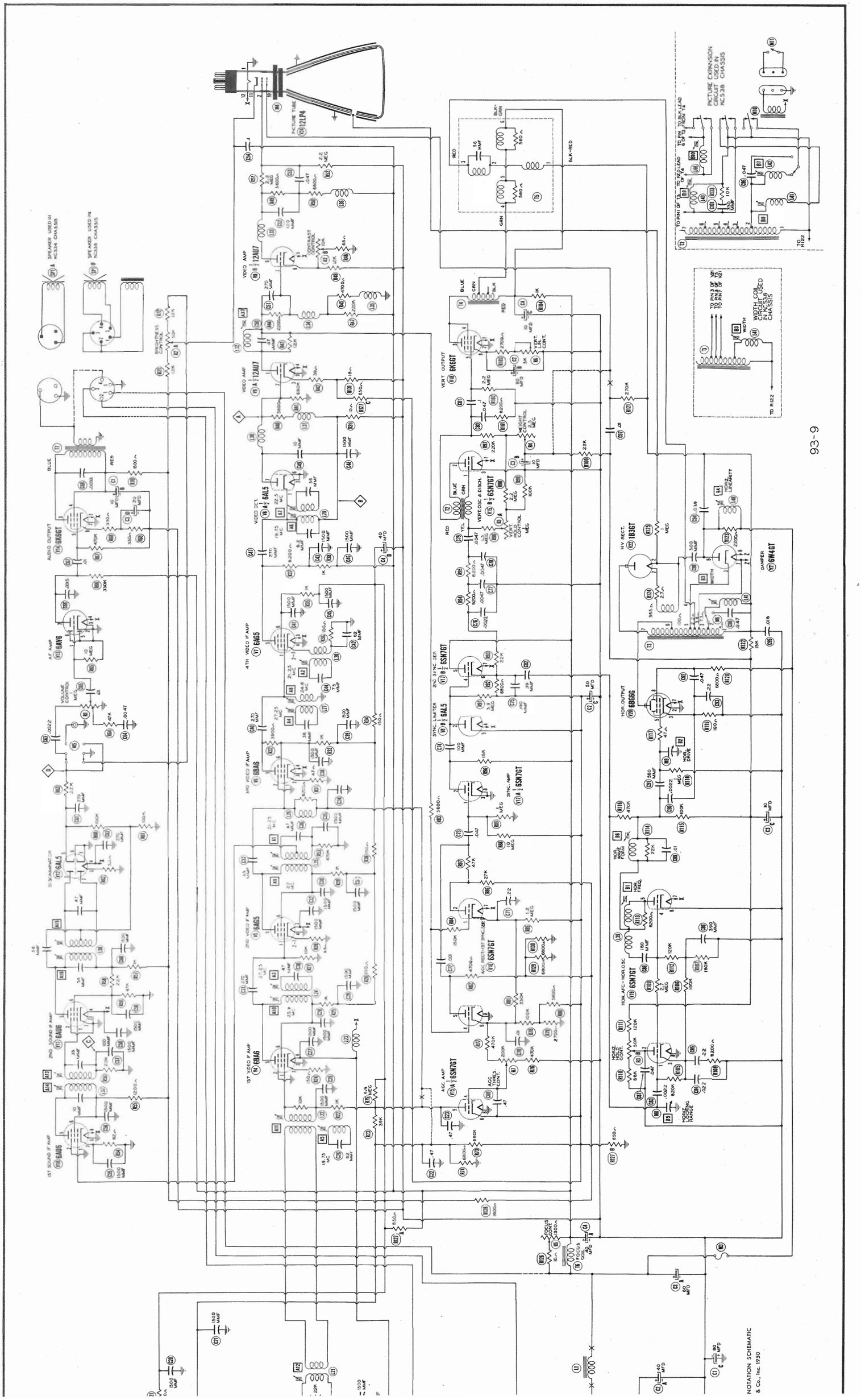
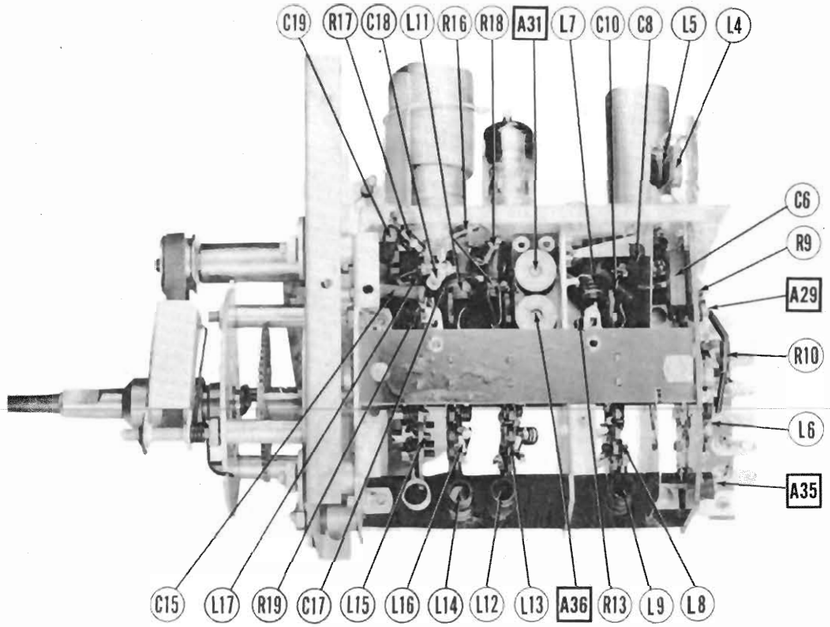



FIG. 6

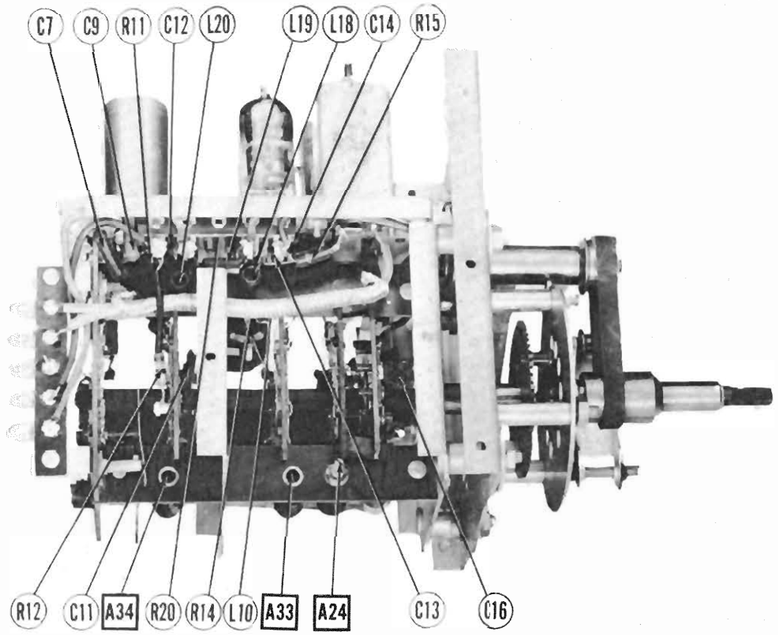

CHANNEL SWITCH
SHOWN IN CHANNEL 2 POS.
THE COOPERATION OF THE MANUFACTURER OF THIS
RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE
A PHOTOFACT STANDARD NOTATION SCHEMATIC
© Howard W. Sams & Co., Inc. 1950
CHASSIS KCS 38C USES TWO 5U4G TUBES CONNECTED IN PARALLEL
1ST SOUND IF AMP
2ND SOUND IF AMP
DISCRIMINATOR
VOLUME CONTROL
A.F. AMP
AUDIO OUTPUT
1ST VIDEO IF AMP
2ND VIDEO IF AMP
3RD VIDEO IF AMP
4TH VIDEO IF AMP
VIDEO DET.
AGC AMP
AGC RECT-1ST SYNC. SEP.
SYNC. AMP
SYNC. LIMITER
2ND SYNC SEP.
VERT. OSC. & DISCH.
VERT. HOLD CONTROL
HORIZ HOLD CONT.
HOR. AFC - HOR. OSC
HOR. FREQ.
HOR. LOCKING RANGE
HOR. DRIVE
HOR. OUTPUT
HOR. WIDTH
HOR. LINEARITY
DAMPER
H.V. RECT.
SW ON VOL. CONT.
L.V. RECT.
FOCUS CONT.
FOCUS COIL



93-9

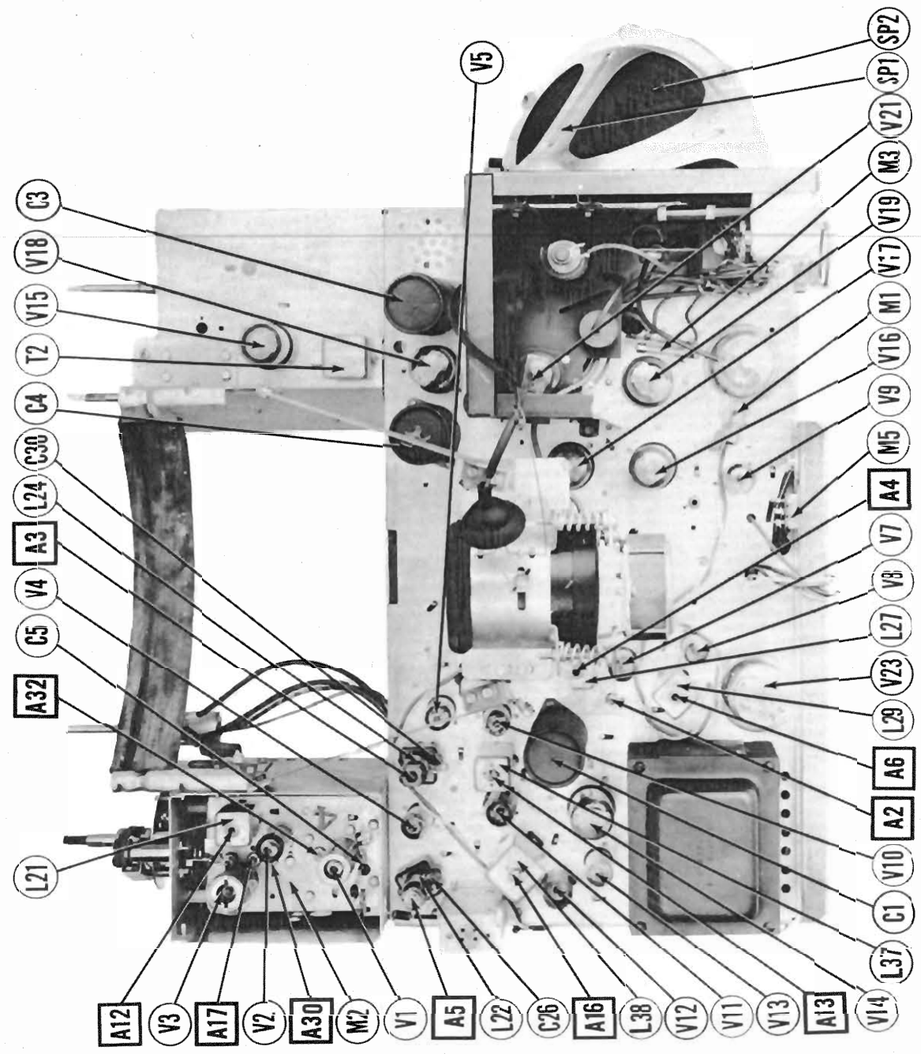



RF TUNER-RIGHT SIDE



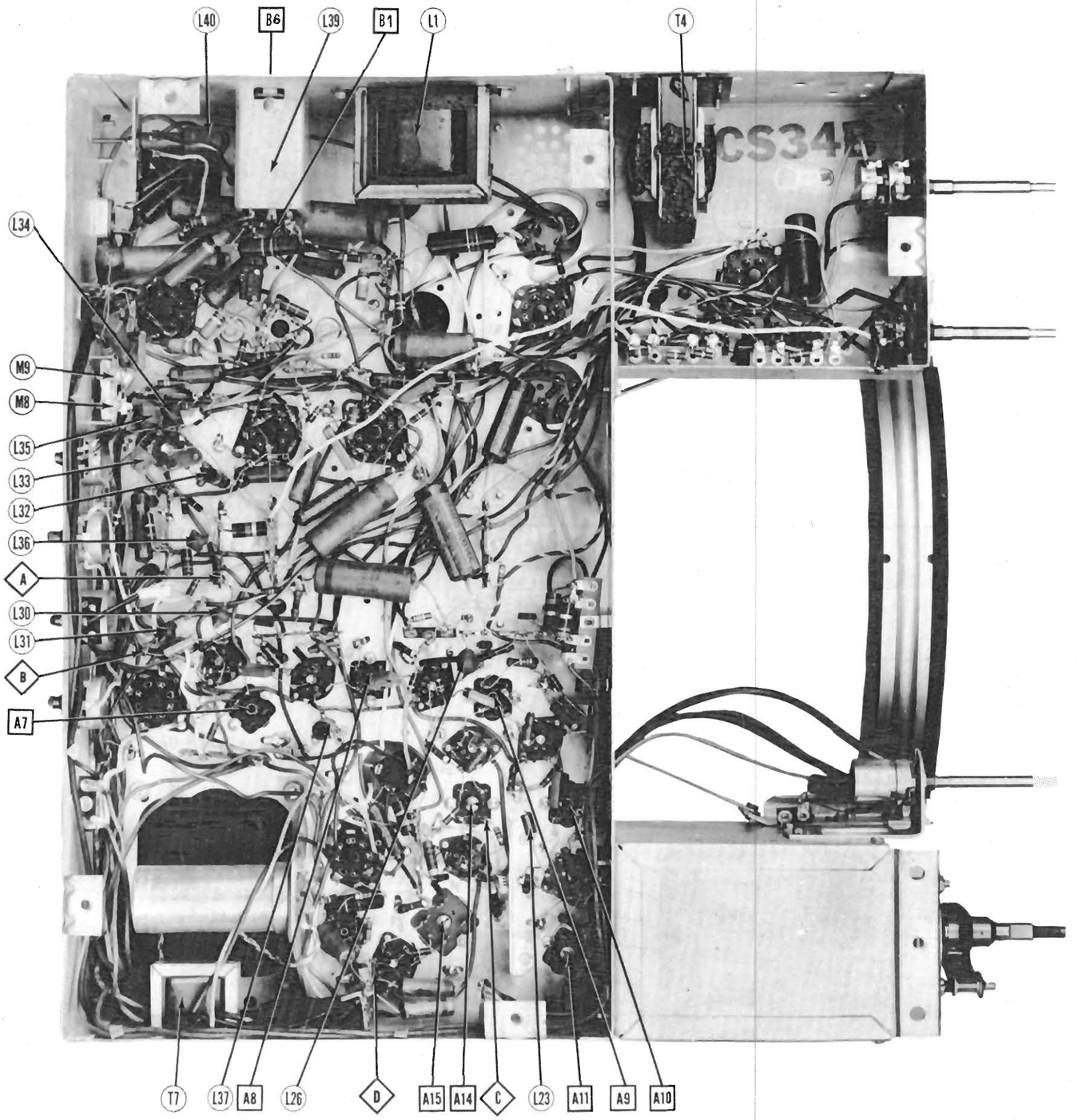

RF TUNER-LEFT SIDE






CHASSIS TOP VIEW

**RCA VICTOR MODELS T100, T121, TC124, TC125, TC127, 9T246, 9T256, 9TC245, 9TC247, 9TC249**




CHASSIS BOTTOM VIEW-TRANS., INDUCTOR AND ALIGNMENT IDENTIFICATION

# VOLTAGE AND RESISTANCE MEASUREMENTS

VOLTAGE READINGS

| Item | Tube | Pin 1 | Pin 2 | Pin 3 | Pin 4 | Pin 5 | Pin 6 | Pin 7 | Pin 8 | Pin 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| V 1 | 6AG5 | -.8VDC | 0V. | 0V. | 6.3VAC | 70VDC | 105VDC | 0V. | | |
| V 2 | 6AG5 | -1VDC | 0V. | 0V. | 6.3VAC | 95VDC | 95VDC | 0V. | | |
| V 3 | 6J6 | 90VDC | 90VDC | 6.3VAC | 0V. | §-3.2VDC | §-3.2VDC | 0V. | | |
| V 4 | 6BA6 | .2VDC | 0V. | 0V. | .6.3VAC | 90VDC | 90VDC | 1.6VDC | | |
| V 5 | 6AG5 | 0V. | .6VDC | 6.3VAC | 0V. | 90VDC | 90VDC | .6VDC | | |
| V 6 | 6BA6 | .1VDC | 0V. | 0V. | 6.3VAC | 50VDC | 90VDC | .6VDC | | |
| V 7 | 6AG5 | 0V. | 1.1VDC | 6.3VAC | 0V. | 150VDC | 105VDC | 1.1VDC | | |
| V 8 | 6AL5 | ▲0V. | #.5VDC | 0V. | 6.3VAC | #0V. | 0V. | ▲.2VDC | | |
| V 9 | 12AU7 | ▲90VDC | ▲.1VDC | ▲2VDC | 6.3VAC | 6.3VAC | ▲240VDC | ▲100VDC | ▲100VDC | 0V. |
| V 10 | 6AU6 | -.1VDC | 0V. | 0V. | 6.3VAC | 100VDC | 100VDC | .5VDC | | |
| V 11 | 6AU6 | -.2VDC | 0V. | 0V. | 6.3VAC | 100VDC | 50VDC | 0V. | | |
| V 12 | 6AL5 | 0V. | -.3VDC | 1.1VAC | 6.3VAC | .1VDC | 0V. | -.3VDC | | |
| V 13 | 6AV6 | -.5VDC | 0V. | 0V. | 6.3VAC | 0V. | 0V. | 85VDC | | |
| V 14 | 6K6GT | Inf. | 0V. | ▲180VDC | ▲190VDC | ▲0V. | 0V. | 6.3VAC | ▲14VDC | |
| V 15 | 6SN7GT | ▲-20VDC | ▲120VDC | ▲0V. | #-6VDC<br>#-18VDC | #55VDC | #0V. | 6.3VAC | 0V. | |
| V 16 | 6SN7GT | #23VDC | #125VDC | #32VDC | -30VDC | 70VDC | -23VDC | 6.3VAC | 0V. | |
| V 17 | 6SN7GT | 0V. | 140VDC | 0V. | #-.5VDC | #270VDC | #11VDC | 6.3VAC | 0V. | |
| V 18 | 6K6GT | ▲0V. | 0V. | ▲320VDC | ▲320VDC | ▲0V. | ▲14VDC | 6.3VAC | ▲35VDC<br>▲48VDC | |
| V 19 | 6SN7GT | ▲-2.6VDC | ▲90VDC | ▲-3.7VDC | ▲-38VDC | ▲175VDC | ▲0V. | 6.3VAC | 0V. | |
| V 20 | 6BG6G | ▲0V. | 0V. | ▲10VDC | ▲0V. | ▲0V. | ▲10VDC | 6.3VAC | ▲270VDC | TOP CAP * |
| V 21 | 6W4GT | 0V. | 0V. | 300VDC | 0V. | 200VDC | Inf. | 300VDC | 300VDC | |
| V 22 | 1B3GT | * DO NOT MEASURE. | | | | | | | | |
| V 23 | 5U4G | 0V. | 220VDC | 0V. | 355VAC | 0V. | 355VAC | 0V. | 220VDC | |
| V 24 | 12LP4 | 0V. | .9VDC | PIN 10<br>300VDC | PIN 11<br>90VDC | PIN 12<br>6.3VAC | | | | |

§ TAKEN WITH VACUUM TUBE VOLTMETER.
* DO NOT MEASURE.
▲ MEASURED *FROM* PIN 3 OF V15.
# MEASURED FROM PIN 5 OF V8.

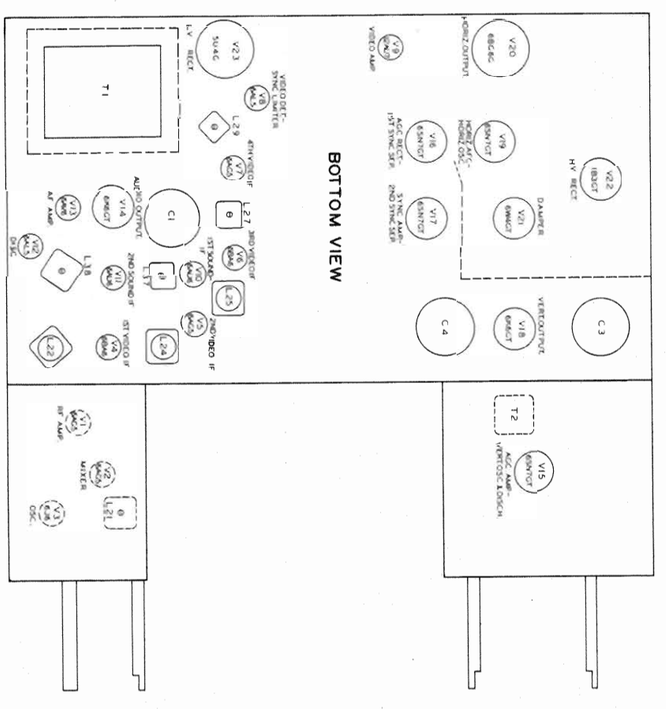
RESISTANCE READINGS

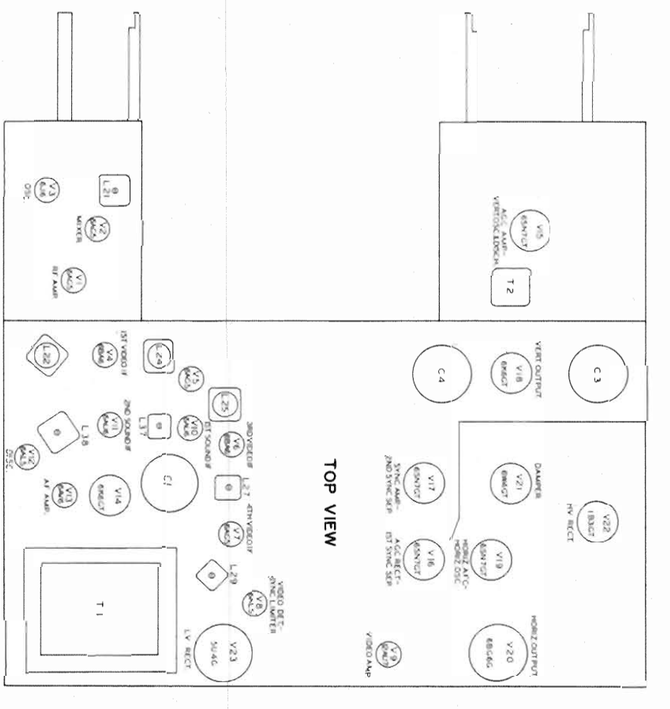
| Item | Tube | Pin 1 | Pin 2 | Pin 3 | Pin 4 | Pin 5 | Pin 6 | Pin 7 | Pin 8 | Pin 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| V 1 | 6AG5 | 8.5KΩ | 0Ω | 0Ω | .1Ω | †3.6KΩ | †1.3KΩ | 0Ω | | |
| V 2 | 6AG5 | 95KΩ | 0Ω | 0Ω | .1Ω | †2.3KΩ | †2.3KΩ | 0Ω | | |
| V 3 | 6J6 | †12KΩ | †12KΩ | .1Ω | 0Ω | 100KΩ | 100KΩ | 47Ω | | |
| V 4 | 6BA6 | 46KΩ | 0Ω | 0Ω | .1Ω | †2.4KΩ | †2.4KΩ | 150Ω | | |
| V 5 | 6AG5 | 10KΩ | 68Ω | .1Ω | 0Ω | †2.3KΩ | †2.3KΩ | 68Ω | | |
| V 6 | 6BA6 | 46KΩ | 0Ω | 0Ω | .1Ω | †6KΩ | †2KΩ | 47Ω | | |
| V 7 | 6AG5 | .2Ω | 150Ω | .1Ω | 0Ω | †10KΩ | †2KΩ | 150Ω | | |
| V 8 | 6AL5 | ▲10Ω | #3.9Meg. | 0Ω | .1Ω | #0Ω | 0Ω | ▲5.6KΩ | | |
| V 9 | 12AU7 | 7KΩ | 680KΩ | ▲60Ω | .1Ω | .1Ω | †12.5KΩ | 4.8KΩ | 6.5KΩ | 0Ω |
| V 10 | 6AU6 | 470KΩ | 0Ω | 0Ω | .1Ω | †2.2KΩ | †2.2KΩ | 82Ω | | |
| V 11 | 6AU6 | 22KΩ | 0Ω | 0Ω | .1Ω | †1.9KΩ | †18KΩ | 0Ω | | |
| V 12 | 6AL5 | 0Ω | 100KΩ | 2.5Ω | .1Ω | 200KΩ | 0Ω | 100KΩ | | |
| V 13 | 6AV6 | 10 Meg. | 0Ω | 0Ω | .1Ω | 0Ω | 0Ω | †330KΩ | | |
| V 14 | 6K6GT | Inf. | 0Ω | †3.2KΩ | †2.7KΩ | ▲470KΩ | Inf. | .1Ω | ▲660Ω | |
| V 15 | 6SN7GT | ▲2.8 Meg. | ▲1.5 Meg. | ▲0Ω | 310KΩ<br>290KΩ | †50KΩ | #0Ω | .1Ω | 0Ω | |
| V 16 | 6SN7GT | 150KΩ | †29KΩ | 290KΩ | 12.5KΩ | †7.5KΩ | 65KΩ | .1Ω | 0Ω | |
| V 17 | 6SN7GT | 1 Meg. | †15KΩ | 0Ω | #3.9Meg. | †100Ω | #6.8KΩ | .1Ω | 0Ω | |
| V 18 | 6K6GT | Inf. | 0Ω | †1.6KΩ | †1.6KΩ | ▲2.2 Meg. | 4KΩ | .1Ω | ▲2.7KΩ<br>▲2.7KΩ | |
| V 19 | 6SN7GT | ▲900KΩ | ▲65KΩ | ▲330KΩ | ▲300KΩ | ▲250KΩ | ▲0Ω | .1Ω | 0Ω | |
| V 20 | 6BG6G | Inf. | 0Ω | ▲100Ω | 1.2KΩ | ▲1 Meg. | ▲100Ω | .1Ω | 16.8KΩ | TOP CAP ¶100Ω |
| V 21 | 6W4GT | Inf. | Inf. | 250KΩ | Inf. | †85Ω | Inf. | 250KΩ | 250KΩ | |
| V 22 | 1B3GT | Inf. | Inf. | Inf. | Inf. | Inf. | Inf. | Inf. | Inf. | TOP CAP ¶440Ω |
| V 23 | 5U4G | Inf. | 4.8KΩ | Inf. | 1.2KΩ | Inf. | 1.2KΩ | Inf. | 4.8KΩ | |
| V 24 | 12LP4 | 0Ω | ▲1.1Meg. | PIN 10<br>¶300KΩ | PIN 11<br>13KΩ | PIN 12<br>.1Ω | | | | |

TV - PHONO SWITCH IN "TV" POSITION.
† MEASURED FROM PIN 8 OF V23.
# MEASURED FROM PIN 5 OF V8.
▲ MEASURED FROM PIN 3 OF V15.
¶ MEASURED FROM PIN 3 OF V21.

1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltage measured at 1,000 ohms.
2. Pin numbers are counted in a clockwise direction on bottom of socket.
3. Measured values are from socket pin to common negative unless otherwise stated.
4. Line voltage maintained at 117 volts for voltage readings.
5. Front panels controls set at minimum.
6. Where readings may vary according to the setting of the service controls, both minimum and maximum readings are given.

# TUBE PLACEMENT CHART






**RCA VICTOR MODELS T100, T121, TC124, TC125, TC127, 9T46, 9T56, 9TC245, 9TC247, 9TC249**

# ALIGNMENT INSTRUCTIONS

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

The high voltage shock hazard may be eliminated by removing the horizontal oscillator tube (V19) from its socket.

**VIDEO IF ALIGNMENT**

Remove the local oscillator tube (V3) from its socket to prevent erroneous indications.
During video IF alignment the common lead of the VTVM is connected to approximately -120 volts. Avoide grounding or touching the VTVM case.
Remove the AGC amplifier tube (V15) from its socket and connect a 250KΩ potentiometer between pins 5 and 6 of V15 socket.
If the grid circuit of the third video IF amplifier (V6) is returned to the junction of R23 and C23, adjust the potentiometer to read -6.5 volts on VTVM connected between pin 5 of V15 and chassis.
If the third video IF grid circuit is returned to the junction of R74 and C22, increase the bias to -12 volts.

| | DUMMY ANTENNA | SIGNAL GENERATOR COUPLING | SIGNAL GENERATOR FREQUENCY | CHANNEL | CONNECT VTVM | ADJUST | REMARKS |
|---|---|---|---|---|---|---|---|
| 1. | Direct | High side to an ungrounded tube shield floating over mixer tube (V2). Low side to chassis. | 21.25MC (Unmod.) | Any | DC Probe to Point (A) Common to Point (B) | A1, A2 | Adjust for MINIMUM output. |
| 2. | Direct | " | 27.25MC (Unmod.) | " | " | A3, A4 | " |
| 3. | Direct | " | 19.75MC (Unmod.) | " | " | A5, A6 | " |
| 4. | Direct | " | 22.5MC (Unmod.) | " | " | A7 | Adjust for maximum deflection. |
| 5. | Direct | " | 24.6MC (Unmod.) | " | " | A8 | " |
| 6. | Direct | " | 22MC (Unmod.) | " | " | A9 | " |
| 7. | Direct | " | 25.9MC (Unmod.) | " | " | A10 | " |

| | DUMMY ANTENNA | SWEEP GENERATOR COUPLING | SWEEP GENERATOR FREQUENCY | MARKER GENERATOR FREQUENCY | CHANNEL | CONNECT SCOPE | ADJUST | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 8. | Direct | High side to an ungrounded tube shield floating over mixer tube (V2). Low side to chassis. | 25MC (10MC SWP) | 22.05MC 24.75MC | Any | Vert. Amp. to Point (A) Low side to chassis. | A11, A12 | Shunt 300Ω resistors across the primaries of L24, L25, L27 and L29 (A7 thru A10). Adjust for response curve similar to Fig 1 with markers as shown. Remove shunts. |
| 9. | Direct | " | " | 22.1MC 25.0MC 25.75MC | " | " | | Check for response curve similar to Fig 2. If necessary retouch A7 thru A10 for proper response. If large adjustment is required, repeat the trap adjustments. |

**SOUND IF ALIGNMENT**

Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.

| | DUMMY ANTENNA | SWEEP GENERATOR COUPLING | SWEEP GENERATOR FREQUENCY | MARKER GENERATOR FREQUENCY | CHANNEL | CONNECT SCOPE | ADJUST | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 10. | .01MFD | High side to pin 1 (Grid) of 6AU6 (V10). Low side to chassis. | 21.25MC (1MC SWP) | 21.25MC | Any | Vert. Amp. thru 33KΩ to Point (C) Low side to chassis. | A13, A14 | Adjust for maximum amplitude and symmetry as per Fig 3. |
| 11. | .01MFD | " | " | " | " | Vert. Amp. to Point (D) Low side to chassis. | A15, A16 | Adjust A15 so 21.2MC occurs at the center of the diagonal line as per Fig 4. Adjust A16 for maximum amplitude and straightness of crossover lines. |

**OSCILLATOR ALIGNMENT**

The signal generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Set the fine tuning control to the mid-position of its range.
Replace the local oscillator tube (V3).

| | DUMMY ANTENNA | SIGNAL GENERATOR COUPLING | SIGNAL GENERATOR FREQUENCY | CHANNEL | CONNECT VTVM | ADJUST | REMARKS |
|---|---|---|---|---|---|---|---|
| 12. | Two 120Ω carbon res. | Across antenna terminals with 120Ω in each lead. | 215.75MC (Unmod.) | 13 | DC Probe to Point (D) Common to chassis. | A17 | Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting. |
| | | | 209.75MC | 12 | | A18 | |
| | | | 203.75MC | 11 | | A19 | |
| | | | 197.75MC | 10 | | A20 | |
| | | | 191.75MC | 9 | | A21 | |
| | | | 185.75MC | 8 | | A22 | |
| | | | 179.75MC | 7 | | A23 | |
| | | | 87.75MC | 6 | | A24 | |
| | | | 81.75MC | 5 | | A25 | |
| | | | 71.75MC | 4 | | A26 | |
| | | | 65.75MC | 3 | | A27 | |
| | | | 59.75MC | 2 | | A28 | |

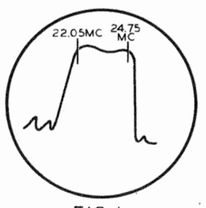


FIG. 1

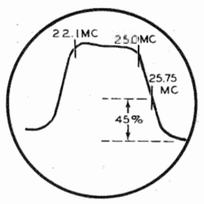


FIG. 2

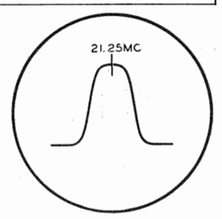


FIG. 3



# ALIGNMENT INSTRUCTIONS (CONT.)

**RF ALIGNMENT**

Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Set the fine tuning control to the mid-position of its range.
Set the bias potentiometer to -3.5 volts.

| | DUMMY ANTENNA | SWEEP GENERATOR COUPLING | SWEEP GENERATOR FREQUENCY | MARKER GENERATOR FREQUENCY | CHANNEL | CONNECT SCOPE | ADJUST | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 13. | Two 120Ω carbon res. | Across antenna terminals with 120Ω in each lead. | 177MC (10MC SWP) | 175.25MC 179.75MC | 7 | Vert. Amp. to Point (E). Low side to chassis. | A29, A30, A31, A32 | Adjust for maximum amplitude and symmetry with markers above 90% as per Fig 5. |
| 14. | " | " | 207MC (10MC SWP) | 205.25MC 209.75MC | 12 | " | A29 | Adjust for maximum response and minimum slope of top part of curve. |
| 15. | " | " | 177MC (10MC SWP) | 175.25MC 179.75MC | 7 | " | | Check for response curve similar to Fig 5. If markers fall below 80% on any channel, make slight adjustment of A29, A30, A31, and A32 with channel switch set for that channel. Recheck all high band channels to see that they have not been seriously effected. |
| | | | 183MC (10MC SWP) | 181.25MC 185.75MC | 8 | | | |
| | | | 189MC (10MC SWP) | 187.25MC 191.75MC | 9 | | | |
| | | | 195MC (10MC SWP) | 193.25MC 197.75MC | 10 | | | |
| | | | 201MC (10MC SWP) | 199.25MC 203.75MC | 11 | | | |
| | | | 207MC (10MC SWP) | 205.25MC 209.75MC | 12 | | | |
| | | | 213MC (10MC SWP) | 211.25MC 215.75MC | 13 | | | |
| 16. | " | " | 85MC (10MC SWP) | 83.25MC 87.75MC | 6 | " | A33, A34, A35, A36 | Adjust for response curve similar to Fig 5 with markers above 90%. |
| 17. | " | " | 79MC (10MC SWP) | 77.25MC 81.75MC | 5 | " | | Check for response curve similar to Fig 5. If markers fall below 80% on any channel, make slight adjustment of A33, A34, A35 and A36 with channel switch set for that channel. Recheck all low band channels to see that they have not been seriously effected. |
| | | | 69MC (10MC SWP) | 67.25MC 71.75MC | 4 | | | |
| | | | 63MC (10MC SWP) | 61.25MC 65.75MC | 3 | | | |
| | | | 57MC (10MC SWP) | 55.25MC 59.75MC | 2 | | | |

**4.5MC TRAP ADJUSTMENT**

| | DUMMY ANTENNA | SWEEP GENERATOR COUPLING | SWEEP GENERATOR FREQUENCY | MARKER GENERATOR FREQUENCY | CHANNEL | CONNECT SCOPE | ADJUST | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 18. | .01MFD | High side to pin 2 (Grid) of 12AU7 (V9). Low side to chassis. | Not used | 4.5MC (40% AM Mod.) | Any | Vert. Amp. to pin 2 (Grid) of picture tube. Low side to chassis. | A37 | Adjust for minimum 400~ response on scope. |

**AGC THRESHOLD ADJUSTMENT**

Connect the vertical amplifier of an oscilloscope between pin 1 of 12AU7 (V9) and chassis.
Turn the set on and tune in a TV station.
Turn the contrast control to maximum clockwise.
Adjust the AGC threshold control for maximum response without clipping the sync pulses.

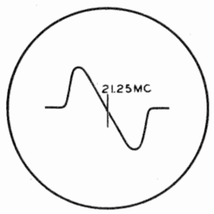


FIG. 4

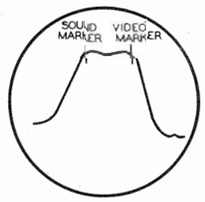
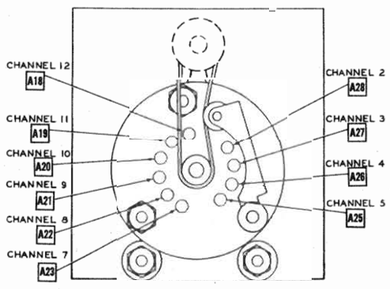
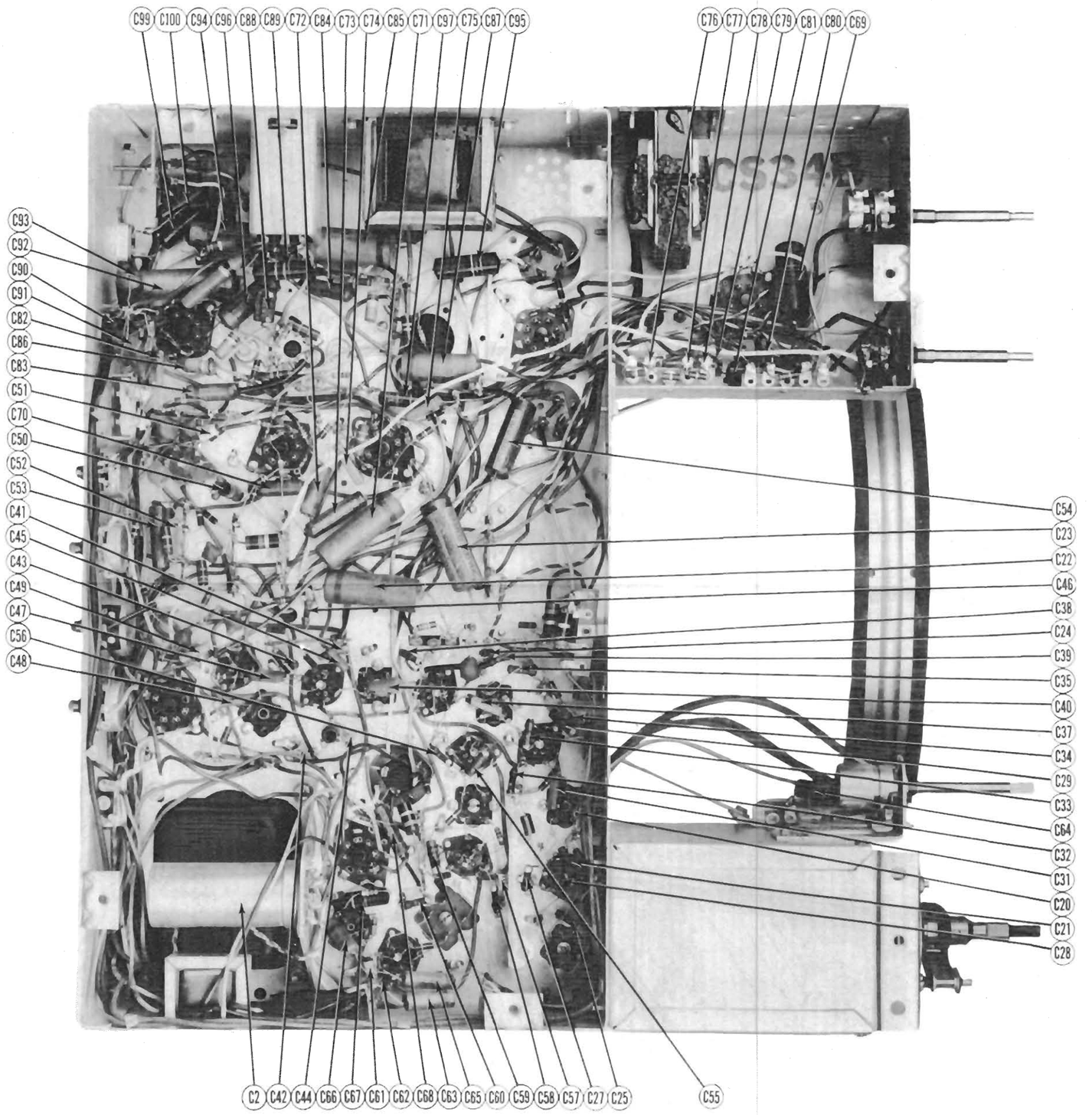


FIG. 5

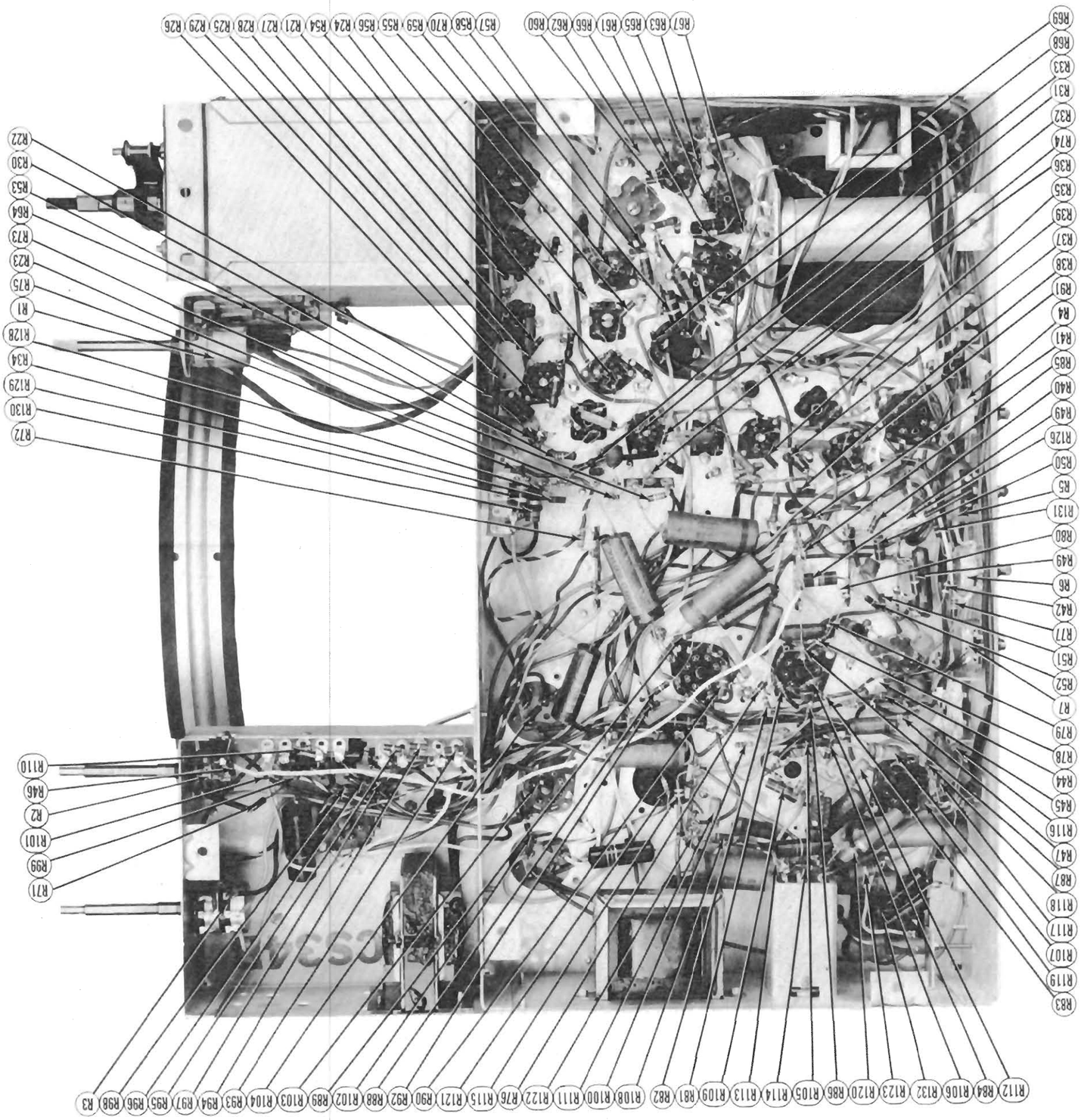


OSCILLATOR ALIGNMENT POINTS




CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION

CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION



# PARTS LIST AND DESCRIPTIONS (Continued)

## CAPACITORS (CONT.)

| ITEM No. | RATING CAP. | RATING VOLT | REPLACEMENT DATA RCA PART No. | AEROVOX PART No. | CENTRALAB PART No. | ERIE PART No. | SPRAGUE PART No. | IDENTIFICATION CODES AND INSTALLATION NOTES |
|---|---|---|---|---|---|---|---|---|
| C56 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | 1st Sound IF Decoupling |
| C57 | 100 | | 39396 | GP100M | D6-101 | GP1K-100 | 1FM-31 | Limiter Grid Filter |
| C58 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | Limiter Filament Bypass |
| C59 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | Limiter Screen Bypass |
| C60 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | Limiter Plate Decoupling |
| C61 | 270 | | 73922 | GP270M | D6-271 | GP2K-270 | 1FM-325 | RF Bypass |
| C62 | 270 | | 73922 | GP270M | D6-271 | GP2K-270 | 1FM-325 | Discriminator Filament Bypass |
| C63 | .0022 | 600 | 73595 | P688-0022 | D6-222 | GP2M-0022 | TM-22 | Audio Coupling |
| C64 | .0047 | 600 | 73920 | P688-0047 | D6-472 | GP2M-0047 | TM-25 | Tone Compensation |
| C65 | .01 | 400 | 73561 | P488-01 | D6-103 | 821-01 | TM-11 | Audio Coupling |
| C66 | .0015 | 600 | 73802 | P688-0015 | D6-152 | GP2L-0015 | 1FM-215 | De-emphasis |
| C67 | .01 | 600 | 73565 | P688-01 | D6-103 | 821-01 | TM-11 | Audio Coupling |
| C68 | .0033 | 600 | 73795 | P688-0033 | D6-332 | GP2M-0033 | TM-23 | Output Plate Bypass |
| C69 | .47 | 200 | 73787 | P288-47 | | | TC-5 | AGC Filter |
| C70 | .01 | 400 | 73561 | P488-01 | D6-103 | 821-01 | TM-11 | AGC Rect. Cathode Bypass |
| C71 | .22 | 200 | 73794 | P488-22 | | | TC-2 | 1st Sync Separator Cath. Bypass |
| C72 | .001 | 600 | 73801 | P688-001 | D6-102 | GP2L-001 | TM-21 | Sync Coupling |
| C73 | .047 | 600 | 73553 | P688-047 | | | TM-15 | Sync Coupling |
| C74 | 100 | 500 | 39628 | 1468-0001 | D6-101 | GP1K-100 | 1FM-31 | Sync Coupling |
| C75 | 390 | 500 | 68542 | 1468-0004 | D6-391 | GP2K-390 | 1FM-34 | Sync Separator Cath. Bypass |
| C76 | .0022 | 600 | 73595 | P688-0022 | D6-222 | GP2M-0022 | TM-22 | Integrator Network |
| C77 | .0047 | 600 | 73920 | P688-0047 | D6-472 | GP2M-0047 | TM-25 | Integrator Network |
| C78 | .0047 | 600 | 73920 | P688-0047 | D6-472 | GP2M-0047 | TM-25 | Integrator Network |
| C79 | .0047 | 600 | 73920 | P688-0047 | D6-472 | GP2M-0047 | TM-25 | Vert. Osc. Grid Capacitor |
| C80 | .047 | 600 | 73592 | P688-047 | | | TM-15 | Vertical Discharge |
| C81 | .1 | 400 | | P488-1 | | | TM-4 | Vert. Sweep Coupling |
| C82 | 39 | 1000 | 74726 | 1469-00004 | D6-390 | GP1K-39 | MS-44 | Horiz. Sync Coupling |
| C83 | .0022 | 600 | 73803 | P688-0022 | D6-222 | GP2M-0022 | TM-22 | HOriz. Sync Coupling |
| C84 | .022 | 400 | 73562 | P488-022 | | | TM-12 | AFC Filter |
| C85 | .22 | 400 | 73794 | P488-22 | | | TC-2 | AFC Filter |
| C86 | 390 | 500 | 68542 | 1468-0004 | D6-391 | GP2K-390 | 1FM-34 | AFC Filter |
| C87 | .047 | 600 | 73592 | P688-047 | | | TM-15 | Horiz. AFC Plate Bypass |
| C88 | 180 | 1000 | 73102 | | | | | Horiz. Osc. Grid Capacitor |
| C89 | .01 | 600 | 73594 | P688-01 | | | TM-11 | Fixed Trimmer |
| C90 | .0022 | 600 | 73595 | P688-0022 | D6-222 | GP2M-0022 | TM-22 | Horiz. Discharge |
| C91 | 560 | 500 | 74250 | | D6-561 | GP2K-560 | | Horiz. Sweep Coupling |
| C92 | .047 | 1000 | 73597 | P1088-047 | | | TR-15 | Horiz. Output Screen Bypass |
| C93 | .22 | 400 | 73794 | P488-22 | | | TC-2 | Horiz. Output Cathode Bypass |
| C94 | .039 | 1000 | 74728 | | | | | Damper Filter * |
| C95 | .018 | 1000 | 74727 | | | | | Damper Filter |
| C96 | .047 | 400 | 73553 | P488-047 | | | TM-15 | Fixed Trimmer †§ |
| C97 | .01 | 400 | 73561 | P488-01 | D6-103 | 821-01 | TM-11 | Decoupling † |
| C98 | 500 | 15000 | 74156 | | TV1-502 | | | HV Filter |
| C99 | .01 | 600 | 74727 | P688-01 | D6-103 | 811-01 | TM-11 | Line Filter |
| C100 | .01 | 600 | 74727 | P688-01 | D6-103 | 811-01 | TM-11 | Line Filter |
| C101 | 330 | 500 | 53113 | | | | | Fixed Trimmer ‡ |

* Chassis KCS38C uses .068MFD in this application.
† Not used in Chassis KCS38,
‡ Used only in Chassis KCS38C.
§ Chassis KCS38C uses .01Mfd. in this application.

## CONTROLS

| ITEM No. | RATING RESISTANCE | RATING WATTS | REPLACEMENT DATA RCA PART No. | IRC PART No. | CLAROSTAT PART No. | CENTRALAB PART No. | INSTALLATION NOTES |
|---|---|---|---|---|---|---|---|
| R1A | 1 Meg. | ½ | 38408 | Q13-137X | AT-109 | BT-72-S | Volume Control - Tapped @ 100KΩ |
| B | Shaft | | Not Req. | Not Req. | FS-3 | Not Req. | Attach to R1A per instructions. |
| C | Switch | | Not Req. | 76-1 | SW-A | # | Attach to R1A per instructions. |
| R2A | 50KΩ | ½ | | B11-123 * | | | Brightness Control - Panel |
| B | 10KΩ | ½ | 74047 | B17-116 * | 970913-11 | | Contrast Control - Rear |
| C | Shaft End | | | E-187 * | | | Attach per instructions in "Concentrikit" |
| R3A | 1 Meg. | ½ | | B11-137 * | | | Vert. Hold - Panel |
| B | 50KΩ | ½ | 72734 | B11-123 * | 970111-24 | | Horiz. Hold - Rear |
| C | Shaft End | | | E-187 * | | | Attach per instructions in "Concentrikit" |
| R4 | 2.5 Meg. | ½ | 71440 | Q11-239 | M-84-S | B-83 | Height Control |
| R5 | 1300Ω | 2 | 74597 | | 970913-15 | | Focus Control - Wire Wound |
| R6 | 5000Ω | ½ | 71441 | Q11-114 | M-19-S | B1-10 | Vert. Linearity Control |
| R7 | 200KΩ | | 74475 | | M-52-S | B1-46 | AGC Threshold Control |

* Additional parts to be used with "Concentrikit".
# Switch attached at factory.

## RESISTORS

| ITEM No. | RATING RESISTANCE | RATING WATTS | REPLACEMENT DATA RCA PART No. | IRC PART No. | IDENTIFICATION CODES ALL RESISTORS 10% UNLESS OTHERWISE STATED. |
|---|---|---|---|---|---|
| R8 | 390Ω | | | | Antenna Shunt - See note 1. |
| R9 | 1000Ω 20% | | | BTS-1000 | RF Grid - See note 2 |
| R10 | 150Ω 20% | | | | AGC Network |
| R11 | 150Ω 20% | | | | RF Screen |
| R12 | 2700Ω | | | BTS-2700 | RF Plate |
| R13 | 100KΩ 20% | | | | Series Test Point |
| R14 | 100KΩ 20% | | | | Mixer Grid |
| R15 | 150Ω 20% | ½ | | | Mixer Plate Decoupling |
| R16 | 100KΩ 20% | | | | Oscillator Grid |
| R17 | 100KΩ 20% | | | | Oscillator Grid |
| R18 | 47Ω 20% | | | | Oscillator Cat hode |
| R19 | 10KΩ 20% | | | | Oscillator Plate |
| R20 | 1000Ω 20% | | | BTS-1000 | Decoupling |
| R21 | 150Ω 20% | | | | Decoupling - See note 1. |
| R22 | 1000Ω 20% | | | BTS-1000 | AGC Network |
| R23 | 39KΩ | | | BTS-39K | AGC Network |
| R24 | 150Ω 5% | | | | 1st Video IF Cathode |
| R25 | 1000Ω 20% | | | BTS-1000 | 1st Video IF Decoupling |
| R26 | 150Ω 20% | | | | Decoupling Network |
| R27 | 10KΩ 5% | | | | 2nd Video IF Grid |
| R28 | 68Ω | | | | 2nd Video IF Cathode |
| R29 | 1000Ω 20% | | | BTS-1000Ω | 2nd Video IF Decoupling |
| R30 | 150Ω 20% | | | | Decoupling Network |
| R31 | 47Ω 5% | | | | 3rd Video IF Cathode |

## RESISTORS (CONT.)

| ITEM No. | RATING RESISTANCE | RATING WATTS | REPLACEMENT DATA RCA PART No. | IRC PART No. | IDENTIFICATION CODES |
|---|---|---|---|---|---|
| R32 | 3900Ω 5% | | | | 3rd Video IF Plate |
| R33 | 10000Ω 20% | | | BTS-1000 | 3rd Video IF Decoupling |
| R34 | 150Ω 20% | | | | Decoupling Network |
| R35 | 1000Ω 20% | | | BTS-1000 | 4th Video IF Screen |
| R36 | 150Ω | | | | 4th Video IF Cathode |
| R37 | 8200Ω 5% | 1 | | | 4th Video IF Plate |
| R38 | 1000Ω 20% | | | BTS-1000 | 4th Video IF Plate Decoupling |
| R39 | 10Ω 20% | | | | Bias Network |
| R40 | 5600Ω 5% | | | BTS-5600-5% | Video Det. Diode Load |
| R41 | 680KΩ | | | BTS-680K | Video Amp. Grid - See note 3. |
| R42 | 39Ω | | | | Video Amp. Cathode |
| R43 | 12KΩ | | | BTS-12K | Trap Coil Shunt - See note 1. |
| R44 | 2200Ω | | | BTS-2200 | Video Amp. Plate |
| R45 | 4700Ω 5% | | | BTS-4700-5% | Video Amp. Plate |
| R46 | 68Ω 20% | | | | Voltage Divider |
| R47 | 220KΩ | | | BTS-220K | Voltage Divider |
| R48 | 12KΩ | 2 | | BT-2-12K | Video Amp. Cathode |
| R49 | 5600Ω | 1 | | BTA-5600 | Video Amp. Plate |
| R50 | 6800Ω 5% | 1 | | BTA-6800-5% | Video Amp. Plate |
| R51 | 2.2 Meg. | | | BTS-2.2 Meg. | Voltage Divider |
| R52 | 2.2 Meg. | | | BTS-2.2 Meg. | Picture Tube Grid |
| R53 | 470KΩ | | | | 1st Sound IF Grid |
| R54 | 82Ω | | | | 1st Sound IF Cathode |
| R55 | 1200Ω | | | BTS-1200 | 1st Sound IF Decoupling |
| R56 | 22KΩ | | | BTS-22K | Limiter Grid |
| R57 | 1000Ω 20% | | | BTS-1000 | Limiter Plate Decoupling |
| R58 | 22KΩ 20% | | | | Limiter Screen |
| R59 | 47KΩ 20% | | | BTS-47K | Voltage Divider |
| R60 | 100KΩ 5% | | | BTS-100K-5% | Discriminator Diode Load |
| R61 | 100KΩ 5% | | | BTS-100K-5% | Discriminator Diode Load |
| R62 | 5, 1Ω | | 72067 | | Discriminator Filament - Wire Wound |
| R63 | 22KΩ 20% | | | BTS-22K | De-emphasis |
| R64 | 47KΩ | | | BTS-47K | Tone Compensation |
| R65 | 10 Meg. 20% | | | BTS-10 Meg. | AF Amp. Grid |
| R66 | 330KΩ | | | BTS-330K | AF Amp. Plate |
| R67 | 470KΩ 20% | | | BTS-470K | Output Grid |
| R68 | 330Ω | | | BW-½-330 | Output Cathode |
| R69 | 330Ω | | | BW-½-330 | Output Cathode |
| R70 | 1800Ω | 2 | | BT-2-1800 | Output Decoupling |
| R71 | 12KΩ 5% | | | BTS-12K-5% | Voltage Divider |
| R72 | 12KΩ | | | BTS-12K | Voltage Divider |
| R73 | 680KΩ | | | BTS-680K | AGC Network |
| R74 | 6800Ω 5% | | | BTS-6800-5% | AGC Network |
| R75 | 6.8Meg. | | | BTS-6.8Meg | Voltage Divider |
| R76 | 470K Ω | | | BTS-470K | Voltage Divider |
| R77 | 470KΩ | | | BTS-470K | Voltage Divider |
| R78 | 100KΩ | | | BTS-100K | AGC Rect. Cathode |
| R79 | 27000Ω | | | BTS-2700 | AGC Rect. Cathode |
| R80 | 5600Ω | | | BTS-5600 | Voltage Divider |
| R81 | 330KΩ | | | BTS-330K | Voltage Divider |
| R82 | 4700Ω | | | BTS-4700 | AGC Rect. Plate |
| R83 | 5600Ω | | | BTS-5600 | Isolation |
| R84 | 150KΩ 20% | | | BTS-150K | 1st Sync Separator Grid |
| R85 | 1.2 Meg. 5% | | | BTS-1.2Meg-5% | Bias Network |
| R86 | 27KΩ | | | BTS-27K | 1st Sync Separator Plate |
| R87 | 47KΩ | | | BTS-47K | Phase Shifting |
| R88 | 10 Meg. | | | BTS-10Meg. | Voltage Divider |
| R89 | 1Meg. | | | BTS-1Meg. | Sync Amp. Grid |
| R90 | 15KΩ | 1 | | BTA-15K | Sync Amp. Plate |
| R91 | 3.9 Meg. | | | BTS-3.9Meg. | 2nd Sync Separator Grid |
| R92 | 6800Ω | | | BTS-6800 | 2nd Sync Separator Cathode |
| R93 | 22KΩ | | | BTS-22K | Integrator Network |
| R94 | 8200Ω | | | BTS-8200 | Integrator Network |
| R95 | 8200Ω | | | BTS-8200 | Integrator Network |
| R96 | 1.5Meg. 5% | | | BTS-1.5Meg.5% | Vert. Oscillator Grid |
| R97 | 220KΩ | | | BTS-220K | Vert. Oscillator Plate |
| R98 | 2.2Meg. | | | BTS-2.2Meg. | Voltage Divider |
| R99 | 100KΩ | | | BTS-100KΩ | Voltage Divider |
| R100 | 22KΩ | | | BTS-22K | Vert. Oscillator Decoupling - See note 4. |
| R101 | 8200Ω 5% | | | BTS-8200-5% | Vert. Peaking |
| R102 | 2.2Meg. | | | BTS-2.2Meg. | Vert. Output Grid |
| R103 | 2700Ω | | | BTS-2700 | Vert. Output Cathode - See note 12. |
| R104 | 1000Ω 20% | | | BTS-1000 | Vert. Output Decoupling |
| R105 | 820KΩ 5% | | | BTS-820K-5% | Horiz. AFC Grid |
| R106 | 150KΩ | | | BTS-150K | Horiz. AFC Cathode |
| R107 | 180KΩ 5% | | | BTA-180K-5% | Horiz. AFC Cathode |
| R108 | 8200Ω | | | BTS-8200 | Horiz. AFC Filter Network |
| R109 | 2.7Meg. 5% | | | BTA-2.7Meg.5% | Voltage Divider |
| R110 | 68KΩ | | | BTS-68K | Voltage Divider |
| R111 | 120KΩ | | | BTA-120K | Voltage Divider |
| R112 | 120K 5% | | | BTA-120K-5% | Horiz. Oscillator Grid |
| R113 | 8200Ω 5% | | | BTS-8200-5% | Horiz. Oscillator Trans. Shunt |
| R114 | 22KΩ | | | BTS-22K | Horiz. Oscillator Trans. Shunt |
| R115 | 100KΩ | 1 | | BTA-100K | Horiz. Oscillator Plate - See note 6. |
| R116 | 470KΩ | | | BTS-470K | Horiz. Oscillator Network |
| R117 | 47Ω 20% | | | | Parasitic Suppressor |
| R118 | 1 Meg. | | | BTS-1 Meg. | Horiz. Output Grid - See note 10. |
| R119 | 100Ω | 2 | | BW-2-100 | Horiz. Output Cathode - See note 9. |
| R120 | 6800Ω | 2 | | BT-2-6800 | Horiz. Output Screen - See note 7. |
| R121 | 270KΩ | | | BTS-270K | Accelerating Anode Load - See note 5. |
| R122 | 15KΩ | | | BTS-15K | Decoupling - See note 5. |
| R123 | 2200Ω | 1 | | BTA-2200 | Horiz. Linearity Coil Shunt |
| R124 | 2.7Ω | ½ | 74598 | | HV Rect. Filament - Wire Wound - See note 11. |
| R125 | 1 Meg. 20% | ½ | | | HV Filter |
| R126 | 10Ω | ½ | 18471 | BW-½-10 | Focus Coil Shunt - Wire Wound |
| R127A | 850Ω | 12 | | | Filter - Wire Wound |
| B | 650Ω | 6 | 73588 | | Bias Network - Wire Wound |
| C | 650Ω | 6 | | | Bias Network - Wire Wound |
| R128 | 1800Ω | 2 | | BT-2-1800 | Voltage Divider |
| R129 | 6800Ω | 2 | | BT-2-6800 | Bleeder |
| R130 | 6800Ω | 2 | | BT-2-6800 | Bleeder |

## RESISTORS (CONT.)

| ITEM No. | RATING RESISTANCE | RATING WATTS | REPLACEMENT DATA RCA PART No. | IRC PART No. | IDENTIFICATION CODES |
|---|---|---|---|---|---|
| R131 | 18Ω | ½ | | BW-½-18 | Bias Network |
| R132 | 100KΩ 20% | 1 | | BTA-100K | Line Filter |
| R133 | 10KΩ | ½ | | BTS-10K | Width Control Shunt - See note 8. |

Note 1: Not used in all models.
Note 2: Some models use 10KΩ resistor in this application.
Note 3: Some models use 560KΩ resistor in this application.
Note 4: Chassis KCS38 uses 56KΩ resistor in this application.
Note 5: Not used in Chassis KCS38.
Note 6: Not used in Chassis KCS38C.
Note 7: Chassis KCS38C uses 8200Ω - 2 Watt resistor in this application.
Note 8: Used in Chassis KCS38C only.
Note 9: Chassis KCS38 uses 2700 - 2 Watt resistor in this application.
Note 10: Chassis KCS38C uses 470KΩ resistor in this application.
Note 11: Chassis KCS38C uses 4.7Ω resistor in this application.
Note 12: Chassis KCS38C uses 2200Ω resistor in this application.

## TRANSFORMER (POWER)

| ITEM No. | RATING PRI. | RATING SEC. 1 | RATING SEC. 2 | RATING SEC. 3 | RATING SEC. 4 | REPLACEMENT DATA RCA PART No. | STANCOR PART No. | MERIT PART No. | CHICAGO PART No. |
|---|---|---|---|---|---|---|---|---|---|
| T1A | 117VAC @ 1.9A | 700VCT @ .22ADC | 5VAC @ 3A. | 6.3VAC @ 1.2A. | 6.3VAC @ 9A. | 74586 * | P-8159 & P-6134 ♦ | P-3063 | TP-370 |
| B | | | | | | 74874 # | | | |

♦ Use P-6134 for secondary #3.
* Used in Chassis KCS34, B, C and KCS38.
# Used in Chassis KCS38C only.

## TRANSFORMER (SWEEP CIRCUITS)

| ITEM No. | RATING DC RESISTANCE PRI. | RATING DC RESISTANCE SEC. | REPLACEMENT DATA RCA PART No. | STANCOR PART No. | MERIT PART No. | CHICAGO PART No. | NOTES |
|---|---|---|---|---|---|---|---|
| T2 | 164Ω | 1.4KΩ | 73569 | A-8121 | A-3000 | TBO-2 | Vert. Block. Osc Trans. |
| T3A | 465Ω | | 74588 * | | | | Horiz. Output Trans. |
| | Tapped @ .5Ω, 7.8Ω, 11.6Ω, 33.8Ω, & 114Ω | | | | | | |
| T B | | | 74876 # | | | | Horiz. Output Trans. |
| T4A | 580Ω | | 74587 * | A-8116 | A-3037 | TBO-4 | Vert. Output Trans. |
| | Tapped @ 10Ω | | | | | | |
| B | | | 74875 # | | | | Vert. Output Trans. |
| T5A | 14Ω | | 71420 | | | | Horiz. Deflection Coil |
| B | 60Ω | | | | | | Vert. Deflection Coil |
| T6 | 64Ω | | 74585 | | | | Focus Coil |

* Used in Chassis KCS34, B, C and KCS38.
# Used in Chassis KCS38C only.

## TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | RATING IMPEDANCE PRI. | RATING IMPEDANCE SEC. | RATING DC RES. PRI. | RATING DC RES. SEC. | REPLACEMENT DATA RCA PART No. | STANCOR PART No. | MERIT PART No. | CHICAGO PART No. | INSTALLATION NOTES |
|---|---|---|---|---|---|---|---|---|---|
| T7 | 5.8KΩ | 3.7Ω | 500Ω | .26Ω | 71419 | A-3877 | A-2930 | RO-9 ■ | ■ Drill one new mounting hole. |

## SPEAKER

| ITEM No. | RATINGS | REPLACEMENT DATA RCA PART No. | VIKING PART No. | QUAM PART No. | NOTES |
|---|---|---|---|---|---|
| SP1A | FIELD RES. PM | V. C. IMP. 3.8Ω | 73635 ▲ | 12J12 | 12A4A ▲ Used in Chassis KCS34, KCS34B. |
| B | 59Ω | 3.7Ω | 74599 ¶ | | 57E59S ¶ Used in Chassis KCS38, KCS38C. |
| C | PM | 4.2Ω | 73993 ▲ | 57J9 | 57A15 |
| SP2A | CONE DIA. 11 7/8" | V. C. DIA. 1" | | | |
| B | 7" x 4 7/8" | 9/16" | | | |
| C | 7" x 4 3/4" | 3/4" | | | |

## FILTER CHOKE

| ITEM No. | RATINGS TOTAL DIRECT CURRENT | RATINGS D.C. RESISTANCE | RATINGS INDUCTANCE (0 CURRENT 1000 ~) | REPLACEMENT DATA RCA PART No. | STANCOR PART No. | MERIT PART No. | CHICAGO PART No. | INSTALLATION NOTES |
|---|---|---|---|---|---|---|---|---|
| L1 | .220A | 43Ω | 1.3 Henries | 73154 † | C-2326 * | C-2911 | TR-3300* | * Drill one new mounting hole. † Used in Ch. KCS34, 34B, 34C only. |

# PARTS LIST AND DESCRIPTIONS (Continued)

## COILS (RF-IF)

| ITEM No. | USE | DC RES. PRI. | DC RES. SEC. | REPLACEMENT DATA RCA PART No. | REPLACEMENT DATA MEISSNER PART No. | NOTES |
|---|---|---|---|---|---|---|
| L2 | Ant. Trans. | .5Ω | .2Ω | 73578 | | Complete with connector. |
| L3 | IF Trap | .5Ω | | 73476 | | |
| L4 | IF Trap Shunt | .5Ω | | 73475 | | |
| L5 | IF Trap | .5Ω | | 73476 | | |
| L6 | RF Grid Coil | 0Ω | | 73633 | | Complete with Stator, Rotor, Coils and Segments. |
| L7 | RF Plate Trimmer | 0Ω | | 74110 | | |
| L8 | RF Plate Coil | 0Ω | | 73471 | | Complete with Stator, Rotor, Coils and Segments. |
| L9 | RF Plate Coil | 0Ω | | 73460 | | Channel 6 - Also part of 73471 (L8) |
| L10 | RF Coupling | 0Ω | | 73462 | | |
| L11 | Mixer Grid Trimmer | 0Ω | | 74109 | | |
| L12 | Mixer Grid Coil | 0Ω | | 73470 | | Complete with Stator, Rotor, Coils, and Segments. |
| L13 | Osc. Plate Trimmer | 0Ω | | 74109 | | |
| L14 | Osc. Plate Coil | 0Ω | | 73874 | | Channel 6 |
| L15 | Osc. Plate Coils | 0Ω | | 73468 | | Front Section - Complete with Stator, Rotor, Coils, and Segments. |
| L16 | Osc. Plate Coil | 0Ω | | 73469 | | Rear Section - Complete with Stator , Rotor, Coils, and Segments. |
| L17 | Osc. Plate Trimmer | 0Ω | | 74108 | | Fine Tuning |
| L18 | Fil.Choke | 0Ω | | 73477 | | |
| L19 | Fil. Choke | 0Ω | | 73477 | | |
| L20 | Fil. Choke | 0Ω | | 73477 | | |
| L21 | Conv. Trans. | .5Ω | 0Ω | 73448 | | |
| L22 | 1st Video IF | .2Ω | .8Ω | 74589 | | |
| L23 | Fil. Choke | 0Ω | | 73477 | | |
| L24 | 2nd Video IF | .2Ω | | 74590 | | |
| L25 | 3rd Video IF | .2Ω | .1Ω | 74591 | | |
| L26 | Peaking | 2.5Ω | | 74170 | | 36 Microhenries - Wound on 8200Ω resistor. |
| L27 | 4th Video IF | .2Ω | .2Ω | 74592 | | |
| L28 | 21.25MC Sound Trap | 0Ω | | 71778 | | |
| L29 | 5th Video IF | .1Ω | 0Ω | 73575 | | |
| L30 | Peaking | 6.8Ω | | 74214 | | 180 Microhenries - Red & White Identification Dot. |
| L31 | Peaking | 5Ω | | 71527 | | 93 Microhenries - Red Identification Dot. |
| L32 | 4.5MC Sound Trap | 2.5Ω | | 73577 | | |
| L33 | Peaking | 6.8Ω | | 74214 | | 180 Microhenries - Red & White Identification Dot. |
| L34 | Peaking | 7.2Ω | | 71526 | | 250 Microhenries - Green Identification Dot. |
| L35 | Peaking | 7.2Ω | | 71526 | | 250 Microhenries - Green Identification Dot. |
| L36 | Peaking | 7.2Ω | | 71526 | | 250 Microhenries - Green Identification Dot. |
| L37 | Sound IF Trans | 0Ω | 0Ω | 71424 | | |
| L38 | Disc. Trans. | 0Ω | 0Ω | 71427 | | |
| L39 | Horiz. Osc. Trans. | 120Ω | 38Ω | 73576 | | |
| L40 | Horiz. Linearity | 34Ω | | 71449 | | |
| L41 | Width Coil | .2Ω | | 71429 | | |
| L42 | Expanded Width Coil | .2Ω | | 71429 | | Chassis KCS38C |
| L43 | Series Width Coil | | | 74878 | | Chassis KCS38C |
| L44 | Vert. Peaking | | | 74877 | | Chassis KCS38C |

## DIAL LIGHTS

| ITEM No. | BASE TYPE | VOLTS | AMPS. | BEAD COLOR | REPLACEMENT DATA RCA PART No. | REPLACEMENT DATA | NOTES |
|---|---|---|---|---|---|---|---|
| M1 | Bayonet | 6 - 8 | .200 | White | 11765 | | Type #51 - Not used in models T120, T121 |

## MISCELLANEOUS

| ITEM No. | PART NAME | RCA PART No. | NOTES |
|---|---|---|---|
| M2 | RF Tuner | | |
| M3 | Fuse | 73600 | Type GJV - .25A - 250V |
| M4 | Ion Trap | 74823 | |
| M5 | Switch | 74760 | TV-Phono |
| M6A | Switch | 74147 | Width Switch - Chassis KCS34, KCS34B, KCS34C |
| B | Switch | 74872 | Width Switch - Chassis KCS38C |
| M7 | Switch | 74157 | Cabinet Interlock |
| M8 | Trimmer | 74593 | Horiz. Locking |
| M9 | Trimmer | 74593 | Horiz. Drive |
| M10 | Relay | 74873 | Picture Expander - Chassis KCS38C |
| M11 | Switch | 74881 | Remote Picture Control - Chassis KCS38C |
| | Knob | 74000 | Horiz. Hold - Chassis KCS34, B, C, KCS38, C (Dark) |
| | Knob | 74000 | Contrast - Chassis KCS34, B, C, KCS38, C (Dark) |
| | Knob | 74635 | Channel Selector - Chassis KCS38, C |
| | Knob | 74885 | Channel Selector - Chassis KCS34C |
| | Knob | 73997 | Channel Selector - Chassis KCS34, B (Tan) |
| | Knob | 73996 | Channel Selector - Chassis KCS34, B (Dark) |
| | Knob | 74636 | Fine Tuning - Chassis KCS38, C |
| | Knob | 73994 | Fine Tuning - Chassis KCS34, B, C (Dark) |
| | Knob | 73995 | Fine Tuning - Chassis KCS34, B (Tan) |
| | Knob | 73998 | Vert. Hold - Chassis KCS34C, KCS38, C |
| | Knob | 73998 | Brightness - Chassis KCS 34, B, C, KCS38, C (Dark) |
| | Knob | 74002 | Volume - Chassis KCS34, B, C, KCS38, C |
| | Knob | 74003 | Volume - Chassis KCS34, B (Tan) |
| | Knob | 73999 | Brightness - Chassis KCS34, B (Tan) |
| | Knob | 73999 | Vert. Hold - Chassis KCS34, B (Tan) |
| | Knob | 74001 | Contrast - Chassis KCS34, B (Tan) |
| | Knob | | Horiz. Hold |



# PARTS LIST AND DESCRIPTIONS

## TUBES (SYLVANIA or Equivalent)

| ITEM No. | USE | REPLACEMENT DATA RCA PART No. | REPLACEMENT DATA STANDARD REPLACEMENT | RMA BASE TYPE | NOTES |
|---|---|---|---|---|---|
| V1 | RF Amplifier | 6AG5 | 6AG5 | 7BD | |
| V2 | Mixer | 6AG5 | 6AG5 | 7BD | |
| V3 | Oscillator | 6J6 | 6J6 | 7BF | |
| V4 | 1st Video IF Amp. | 6BA6 | 6BA6 | 7BK | |
| V5 | 2nd Video IF Amp. | 6AG5 | 6AG5 | 7BD | |
| V6 | 3rd Video IF Amp. | 6BA6 | 6BA6 | 7BK | |
| V7 | 4th Video IF Amp. | 6AG5 | 6AG5 | 7BD | |
| V8 | Video Det. - Sync Limiter | 6AL5 | 6AL5 | 6BT | |
| V9 | Video Amplifier | 12AU7 | 12AU7 | 9A | |
| V10 | 1st Sound IF Amp. | 6AU6 | 6AU6 | 7BK | |
| V11 | 2nd Sound IF Amp. | 6AU6 | 6AU6 | 7BK | |
| V12 | Discriminator | 6AL5 | 6AL5 | 6BT | |
| V13 | AF Amplifier | 6AV6 | 6AV6 | 7BT | |
| V14 | Audio Output | 6K6GT | 6K6GT | 7S | |
| V15 | AGC Amp. - Vert. Osc. - Vert. Disch. | 6SN7GT | 6SN7GT | 8BD | |
| V16 | AGC Rect. - 1st Sync Separator | 6SN7GT | 6SN7GT | 8BD | |
| V17 | Sync Amp. - 2nd Sync Separator | 6SN7GT | 6SN7GT | 8BD | |
| V18 | Vert. Output | 6K6GT | 6K6GT | 7S | |
| V19 | Horiz. AFC - Horiz. Osc. | 6SN7GT | 6SN7GT | 8BD | |
| V20 | Horiz. Output | 6BG6G | 6BG6G | 5BT | |
| V21 | Damper | 6W4GT | 6W4GT | 4CG | |
| V22 | HV Rectifier | 1B3GT | 1B3GT | 3C | |
| V23A | LV Rectifier | 5U4G | 5U4G | 5T | |
| B | LV Rectifier | 5U4G | 5U4G | 5T | Used in Model 9T256 only. |
| V24A | Picture Tube | 12LP4 | 12LP4 | 12D | |
| B | Picture Tube | 10BP4 | 10BP4 | 12D | Used in Chassis KCS38 and KCS38C only. |

## 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 RCA PART No. | AEROVOX PART No. | CENTRALAB PART No. | ERIE PART No. | SPRAGUE PART No. | IDENTIFICATION CODES AND INSTALLATION NOTES |
|---|---|---|---|---|---|---|---|---|
| C1A | 40 | 450 | 73582 | AFH82J16E | | | TVL-25 | ▲ Filter |
| B | 10 | 450 | | | | | | ■ Output Decoupling |
| C | 80 | 200 | | | | | | ▲ Filter |
| C2A | 40 | 450 | 73583 | AFH8J1810D | | | TVL-27 | ▲ Filter |
| B | 90 | 150 | | | | | | ■ Vert. Output Cath. Bypass |
| C | 50 | 150 | | | | | | ▲ Filter |
| C3A | 60 | 450 | 73581 | AFH1222J4D | | | TVL-68 | ▲ Filter |
| B | 10 | 450 | | | | | | ■ Vert. Osc. Decoupling |
| C | 10 | 450 | | | | | | ▲ Decoupling |
| D | 20 | 150 | | | | | | Output Cathode Bypass |
| C4A | 40 | 450 | 71432 | AFH882J | | | TVL-30 | ▲ Filter |
| B | 40 | 450 | | | | | | ■ Filter |
| C | 10 | 450 | | | | | | ▲ Vert. Output Decoupling |
| C5 | 18 | | 54207 | CN18KNPO | D2-18 | NPOK-18 | | Fixed Trimmer |
| C6 | 270 | | 73091 | GP270M | D6-271 | GP2K-270 | | RF Coupling |
| C7 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | | AGC Filter |
| C8 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | | RF Screen Bypass |
| C9 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | | RF Bypass |
| C10 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | | RF Coupling |
| C11 | 5000 | | 73473 | BPD-5 | D6-502 | 811-005 | 29C1 | RF Coupling |
| C12 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | | RF Filament Bypass |
| C13 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | | Converter Filament Bypass |
| C14 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | | Converter Decoupling |
| C15 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | | RF Bypass |
| C16 | 10 | | 53511 | CN10DNPO | D2-10 | NPOK-10 | | Fixed Trimmer |
| C17 | 5 | | 74035 | CN5CN470 | | N470K-5 | | Oscillator Feedback |
| C18 | 5 | | 74035 | CN5CN470 | | N470K-5 | | Oscillator Feedback |
| C19 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | | Oscillator Filament Bypass |
| C20 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | RF Bypass |
| C21 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | AGC Filter |
| C22 | .47 | 200 | 73787 | P288-47 | | | TC-5 | AGC Filter |
| C23 | .47 | 200 | 73787 | P288-47 | | | TC-5 | AGC Filter |
| C24 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | AGC Filter |
| C25 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | AGC Filter |
| C26 | 82 | | | S182JNPO | D2-82 | NPOM-82 | | Fixed Trimmer |
| C27 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | 1st Video IF Filament Bypass |
| C28 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | 1st Video IF Decoupling |
| C29 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | RF Bypass |
| C30 | 47 | | | CN47JNPO | D2-47 | NPOM-50 | | Fixed Trimmer |
| C31 | 270 | 1000 | 73091 | 1468-00025 | D6-271 | GP2K-270 | 1FM-325 | IF Coupling |
| C32 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | 2nd Video IF Filament Bypass |
| C33 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | 2nd Video IF Decoupling |
| C34 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | RF Bypass |
| C35 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | 1st Sound IF Grid Filter |
| C36 | 47 | | | CN47JNPO | D2-47 | NPOM-47 | | Fixed Trimmer |
| C37 | 33 | 1000 | 74105 | 1468-00004 | D6-330 | GP1K-33 | 1FM-44 | IF Coupling |
| C38 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | 3rd Video IF Decoupling |
| C39 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | RF Bypass |
| C40 | 270 | 1000 | 73091 | 1468-00025 | D6-271 | GP2K-270 | 1FM-325 | IF Coupling |
| C41 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | 4th Video IF Screen Bypass |
| C42 | 82 | | 64062 | GP100M | D2-82 | GP1K-100 | 1FM-31 | 4th Video IF Cathode Bypass |
| C43 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | 4th Video IF Plate Decoupling |
| C44 | 75 | | | CN75JNPO | D2-75 | NPOM-75 | | Fixed Trimmer |
| C45 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | RF Bypass |
| C46 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | RF Bypass |
| C47 | 270 | 1000 | 73091 | 1468-00025 | D6-271 | GP2K-270 | 1FM-325 | IF Coupling |
| C48 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | RF Bypass |
| C49 | 10 | 500 | 72615 | 1468-00001 | D6-100 | GP1K-10 | MS-41 | Video Diode Filter |
| C50 | 47 | | | S147JNPO | D2-47 | NPOM-50 | MS-45 | Fixed Trimmer |
| C51 | 270 | | 73922 | GPZ70M | D6-271 | GP2K-270 | 1FM-325 | Video Coupling |
| C52 | 120 | | 73921 | GP120M | D6-121 | GP2K-120 | 1FM-315 | Video Coupling |
| C53 | .047 | 400 | 73543 | P488-047 | | | TM-15 | Video Coupling |
| C54 | .1 | 600 | 73547 | P688-1 | | | TM-1 | Picture Tube Cathode Bypass |
| C55 | 1500 | | 71501 | GP1500M | D6-152 | GP2L-0015 | 1FM-215 | 1st Sound IF Cathode Bypass |