

CABINET-REAR VIEW

DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

1. Remove 1 set screw holding each of the front knobs and remove the 2 knobs.
2. Remove 2 wood screws and a ground clip holding the escutcheon. Remove the escutcheon and 3 push-on type knobs.
3. Remove 7 wood screws holding the rear cover. Remove the rear cover. NOTE: This allows switch to operate and short the high voltage to chassis.
4. Remove 3 screws holding the front control panel.
5. Remove the picture tube socket, HV lead, yoke plug, convergence yoke plug, convergence chassis plug, dial light plug and speaker leads.
6. Remove 1 wood screw holding the convergence chassis retainer and remove the convergence chassis.
7. Remove 1 wood screw holding the antenna terminal board.
8. Remove UHF tuning and dial knobs if set is so equipped.
9. Loosen 2 metal screws holding the tuner to the vertical chassis and slide the tuner toward the back to disengage the tuner shafts.

10. Remove 1 wood screw holding the top chassis brace.

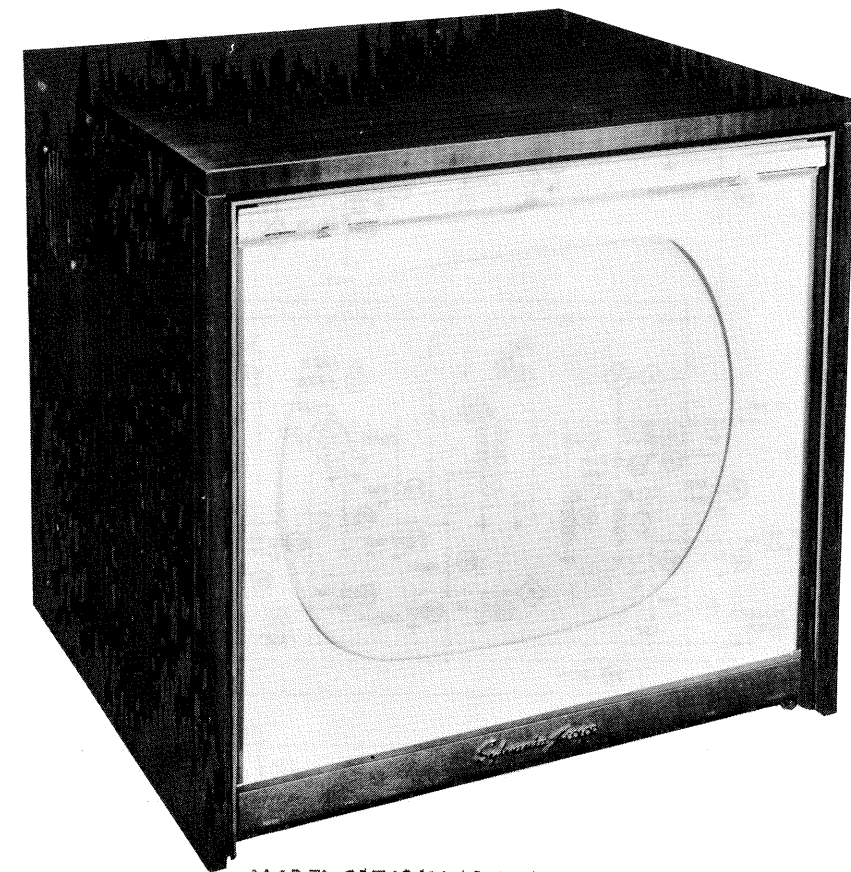
11. Remove 3 chassis bolts from the bottom.

12. Remove the chassis.

PICTURE TUBE REMOVAL

1. Remove the chassis as outlined in "Chassis removal".
2. Remove the blue lateral magnet, purity magnet and convergence yoke.
3. Lay cabinet face down on a pad.
4. Loosen and remove the 3 yoke assembly support rods. Remove the yoke assembly.
5. Remove the cone insulator from the picture tube.
6. Remove the picture tube.
7. Remove 1 screw holding the equalizer magnet assembly.
8. Remove the equalizer magnet assembly insulator and picture tube insulator.

SYLVANIA MODELS 31C606,
31T304M (Ch. 1-534-1, -2)



MODEL 21T304M (CH. 1-534-1)

| | | |
|--------------|--|---|
| TRADE NAME | Sylvania Models 31C606, 21T304 Series (Ch. 1-534-1, -2) | |
| MANUFACTURER | Sylvania Electric Prod., Inc., Radio & Television Div., 700 Ellicott St., Batavia, N. Y. | |
| TYPE SET | Color Television Receiver | |
| TUBES | Twenty-nine | |
| POWER SUPPLY | 110-120 Volts AC, 60 Cycle | RATING 420 Watts, 4.1 Amp. @ 117 Volts AC |
| TUNING RANGE | Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Inter-carrier) | |

INDEX

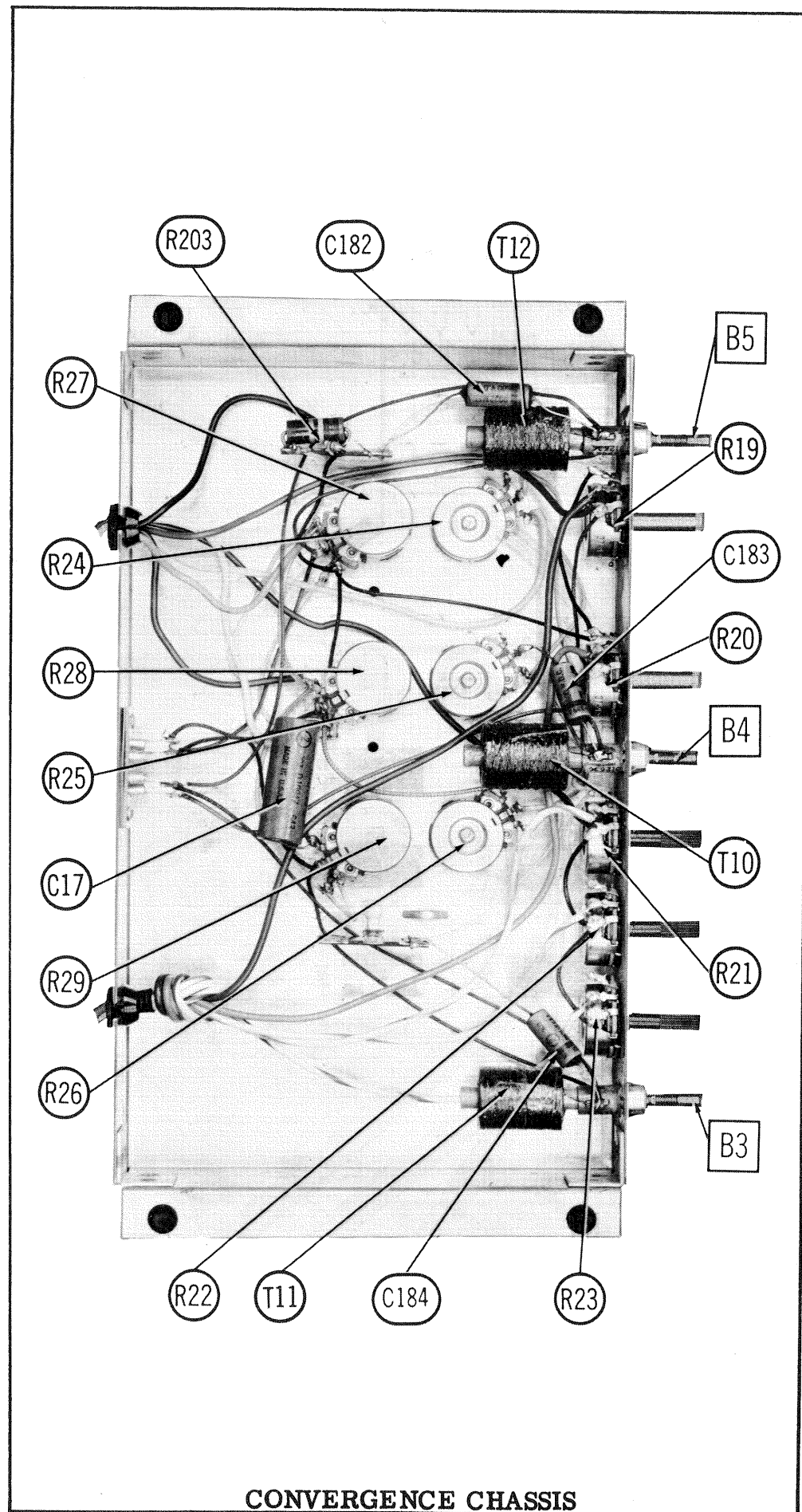
| | | | |
|--------------------------------------|------------|---|--------|
| Alignment Instructions | 6, 7, 8 | Photographs (Con't) | |
| Block Diagram | 3 | HV Compartment | 20 |
| Disassembly Instructions | 29 | RF Tuner | 28 |
| Miscellaneous Adjustments | 5 | Resistor Identification | 13, 16 |
| Parts List and Descriptions | 21 thru 25 | Trans., Inductor & Alignment Identification | 9, 14 |
| Photographs | | Video Terminal Board | 20 |
| Cabinet-Rear View | 29 | Resistance Measurements | 10 |
| Capacitor & Alignment Identification | 15 | Schematic (Alternate Tuner) | 19 |
| Capacitor Identification | 12, 17 | Schematic (Tuner) | 28 |
| Chassis-Top View | 4 | Schematic (TV) | 2 |
| Convergence Chassis | 27 | Tube Placement Chart (Bottom View) | 18 |
| | | Tube Placement Chart (Top View) | 11 |

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

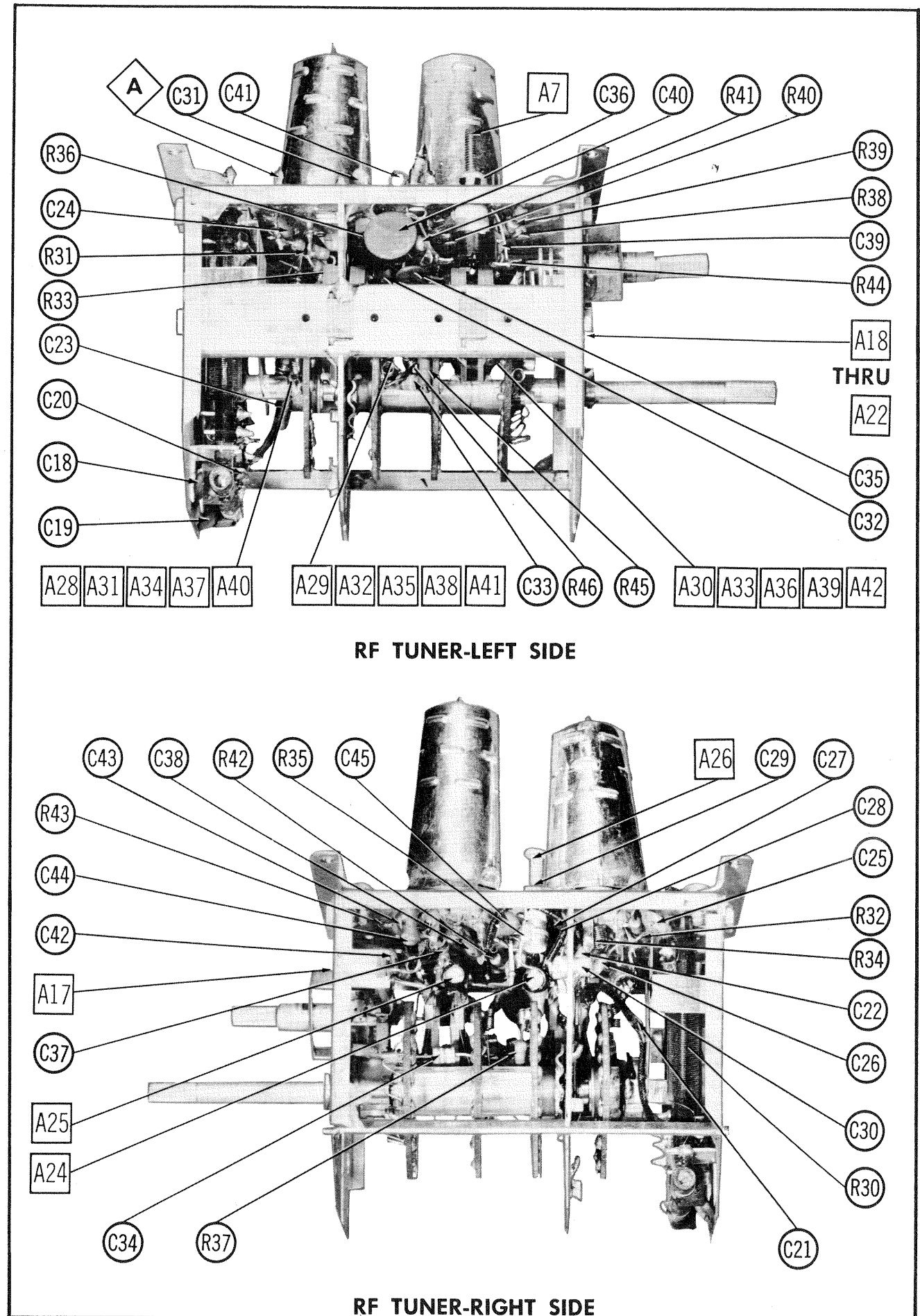
The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of H255

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. © 1958 Howard W. Sams & Co., Inc., Indianapolis 5, Indiana. Printed in U.S. of America

SYLVANIA MODELS 31C606,
31T304M (Ch. 1-534-1, -2)



CONVERGENCE CHASSIS



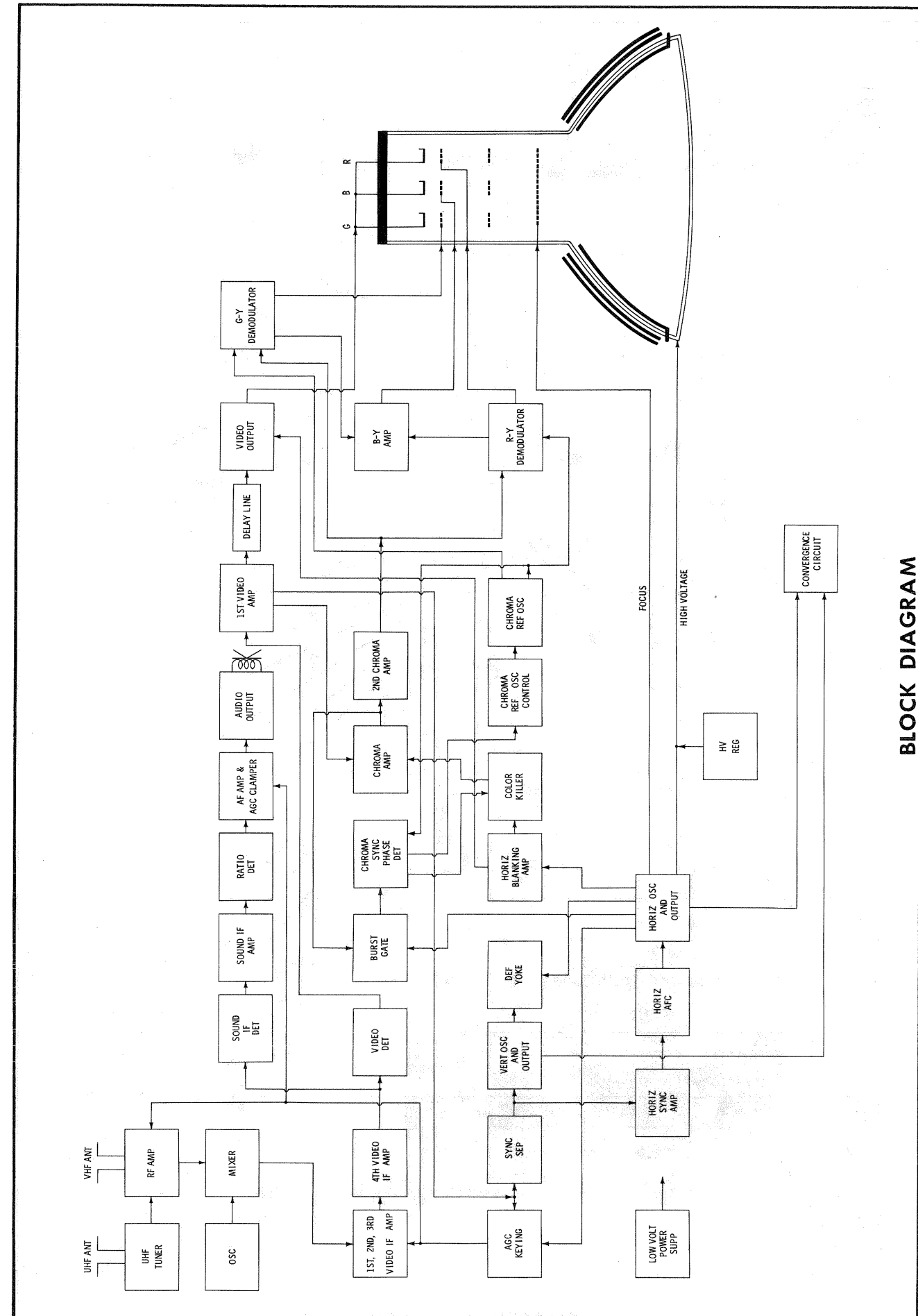
RF TUNER-LEFT SIDE

RF TUNER-RIGHT SIDE

RESISTANCE MEASUREMENTS

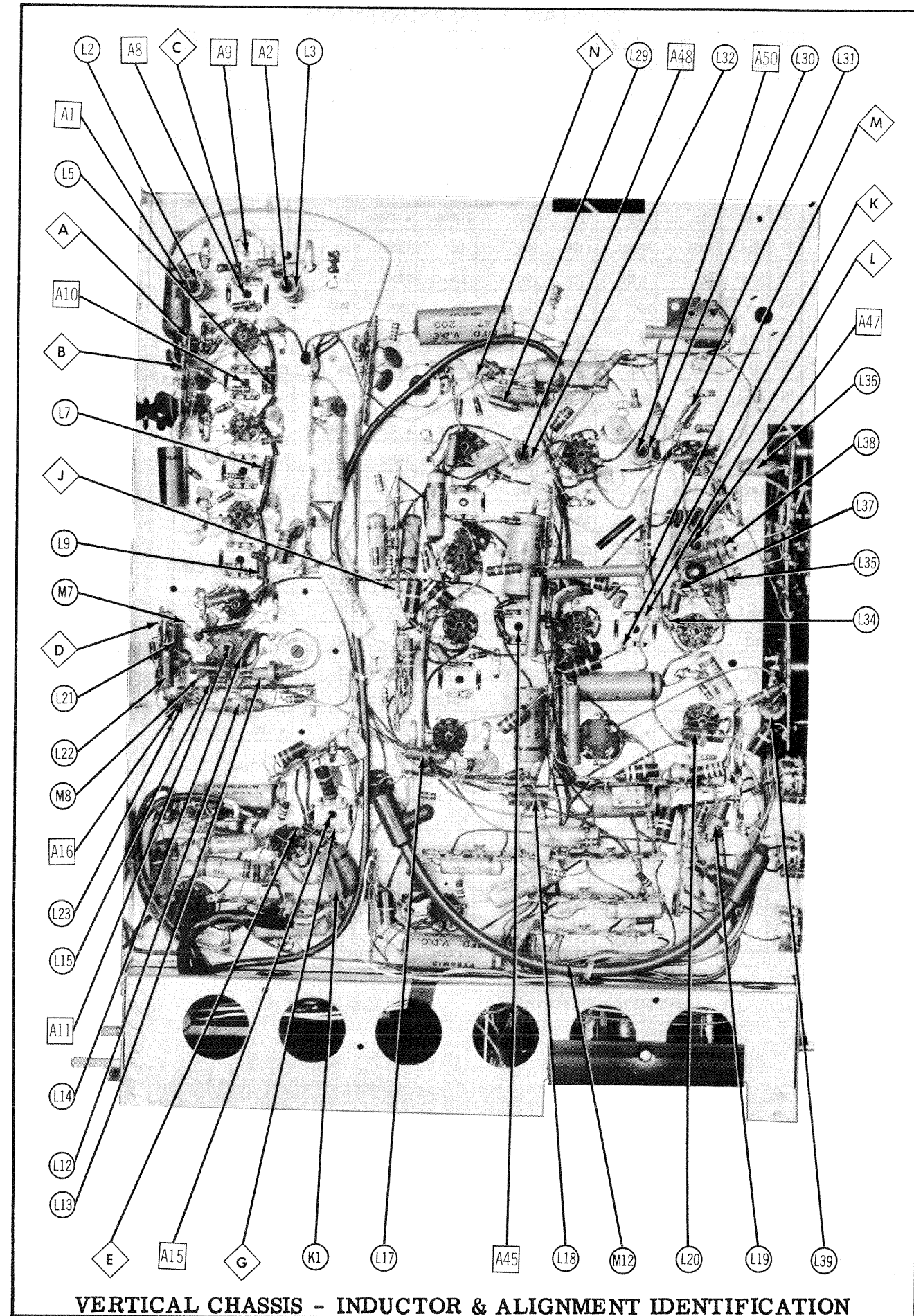
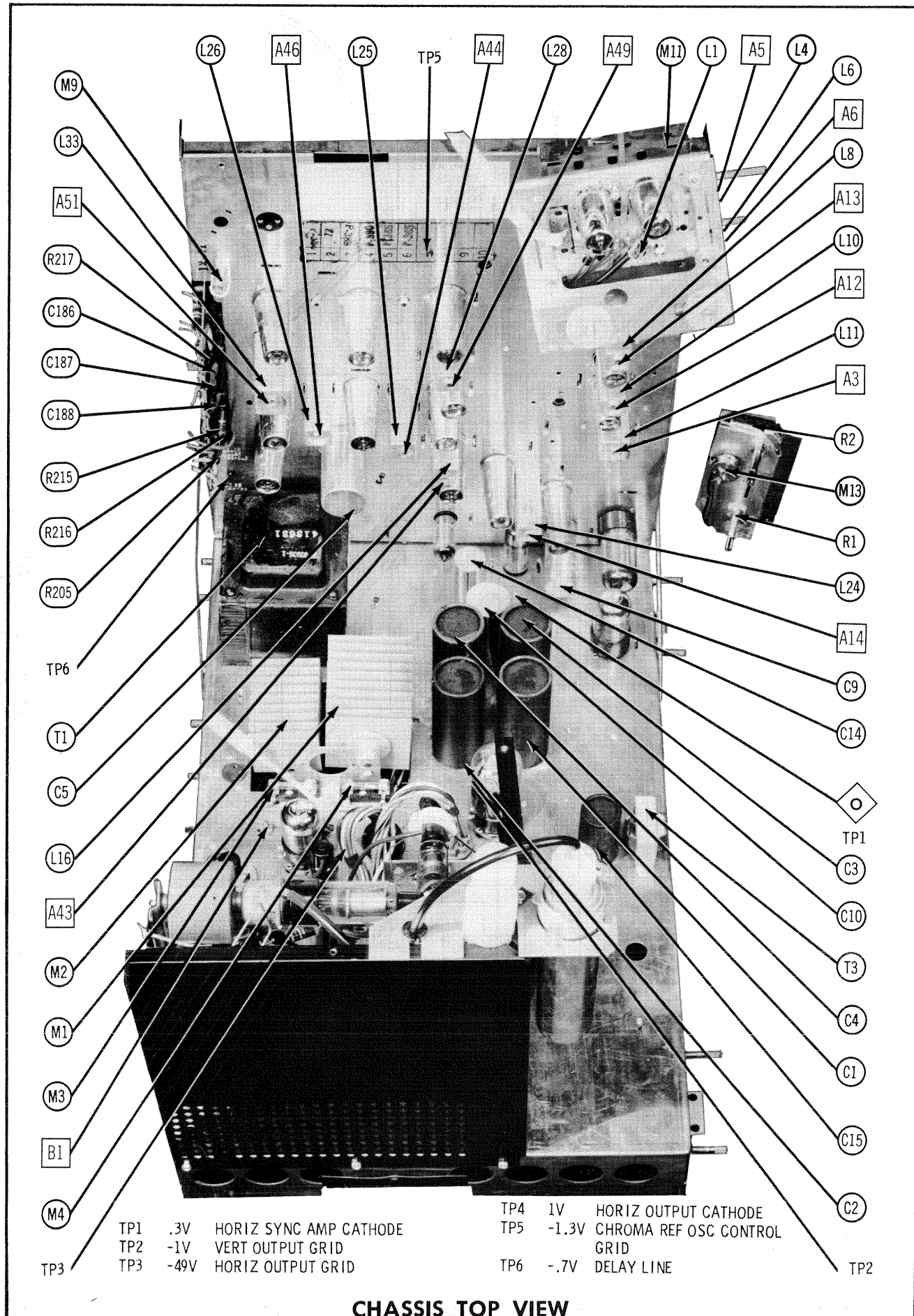
| ITEM | TUBE | Pin 1 | Pin 2 | Pin 3 | Pin 4 | Pin 5 | Pin 6 | Pin 7 | Pin 8 | Pin 9 | |
|------|---------|--|-----------------|-----------------|----------------|----------------|---------|--------|-------|----------------|------------------|
| V1 | 6BQ7A | ■ 1000Ω | 250K | INF | .1Ω | 0Ω | INF | 460K | 27Ω | 0Ω | |
| V2 | 6AT8 | 15K | ■ 5700Ω | 0Ω | 0Ω | .1Ω | ■ 3100Ω | ■ 13K | 0Ω | 133K | |
| V3 | 6BZ6 | 30K | 47Ω | .1Ω | 0Ω | ■ 1800Ω | ■ 1800Ω | 0Ω | | | |
| V4 | 6BZ6 | 30K | 47Ω | .1Ω | 0Ω | ■ 1800Ω | ■ 1800Ω | 0Ω | | | |
| V5 | 6BZ6 | 16K | 47Ω | .1Ω | 0Ω | ■ 2600Ω | ■ 2600Ω | 0Ω | | | |
| V6 | 6CB6 | .1Ω | 330Ω | .1Ω | 0Ω | ■ 1500Ω | ■ 1500Ω | 0Ω | | | |
| V7 | 6CL6 | 800Ω | 3900Ω | †12K | 0Ω | .1Ω | †6700Ω | 0Ω | †12K | 3900Ω | |
| V8 | 6CL6 | 82Ω | ●45K | †12K | 0Ω | .1Ω | †5600Ω | 0Ω | †12K | ●45K | |
| V9 | 6U8 | †2600Ω | 28K | †12K | 0Ω | .1Ω | 140K | 15K | 2.7Ω | 2.2meg | |
| V10 | 6AU6 | 5Ω | 0Ω | .1Ω | 0Ω | ■ 8200Ω | ■ 8200Ω | 120Ω | | | |
| V11 | 6T8 | INF | 27K | INF | 0Ω | .1Ω | 460K | 0Ω | 15meg | ■ 950Ω | |
| V12 | 6W6GT | NC | 0Ω | ■ 730Ω | ■ 15K | 220K | NC | .1Ω | 180Ω | | |
| V13 | 6CS6 | ●520K | 0Ω | 0Ω | .1Ω | ■ 30K | ■ 22K | 2meg | | | |
| V14 | 6SN7GTB | 10K | †270K | 1000Ω | ●1.1meg | ●†1meg | 1000Ω | .1Ω | 0Ω | | |
| V15 | 6AV5GA | 2.2meg | 0Ω | ●350Ω | NC | †400Ω | NC | .1Ω | †20K | | |
| V16 | 6BJ8 | 120K | 4.8meg | 120K | 0Ω | .1Ω | 4.8meg | ■ 10K | 1meg | 30Ω | |
| V17 | 6SN7GTB | 9.4meg | †7800Ω | 820Ω | ●60K | †120K | 820Ω | 0Ω | .1Ω | | |
| V18 | 6CB5A | †12K | 0Ω | 4.7Ω | 390K | 390K | 4.7Ω | .1Ω | †12K | TOP CAP †8Ω | |
| V19 | 6BL4 | NC | NC | INF | NC | †2.5Ω | NC | INF | INF | | |
| V20 | 3A2 | 16meg | NC | NC | NC | 16meg | NC | NC | NC | 16meg | |
| V21 | 3A2 | PINS 1 THRU 9 HAVE INFINITE RESISTANCE | | | | | | | | | TOP CAP †375Ω |
| V22 | 3A3 | PINS 1 THRU 8 HAVE INFINITE RESISTANCE | | | | | | | | | TOP CAP 16meg |
| V23 | 6AZ8 | ■ 3900Ω | ■ 3900Ω | 0Ω | .1Ω | 0Ω | 330K | 0Ω | ■ 13K | 3.5meg | |
| V24 | 6CL6 | 300Ω | 59Ω | †12K | 0Ω | .1Ω | TP | 0Ω | †12K | 59Ω | |
| V25 | 6AN8 | †5600Ω | 27K | 370Ω | 0Ω | .1Ω | ■ 1000Ω | ■ 11K | 3meg | 470Ω | |
| V26 | 6AZ8 | †18K | ■ 56K | 1.8Ω | .1Ω | 0Ω | 68K | 2000Ω | †15K | 80K | |
| V27 | 6AL5 | .3Ω | .3Ω | .1Ω | 0Ω | 4.5meg | 0Ω | 2.5meg | | | |
| V28 | 12BH7A | †22K | 2200Ω | 0Ω | .1Ω | .1Ω | †70K | 2200Ω | 0Ω | 0Ω | |
| V29 | 21AXP22 | 120K | †80K | ●530K | †9500Ω | †5000Ω | ●125K | ●550K | NC | ●13meg | |
| | | PIN 10 NC | PIN 11 ●550K | PIN 12 ●125K | PIN 13 †15K | PIN 14 120K | | | | | |

● THIS READING WILL VARY. CONTROL SET FOR NORMAL OPERATION.
 ■ MEASURED FROM 195V SOURCE.
 † MEASURED FROM 410V SOURCE.
 ‡ MEASURED FROM PIN 3 OF V19.
 NC NO CONNECTION
 TP TIE POINT



SYLVANIA MODELS 31C606,
 31T304M (Ch. 1-534-1, -2)
 WVR9V1D K307B

FOLDER 4



SYLVANIA MODELS 31C606,
 31T304M (Ch. 1-534-1, -2)

ALIGNMENT INSTRUCTIONS (cont)

CHROMA AFC ALIGNMENT

Turn color killer threshold control (R16) fully counter clockwise.
Set the hue control to the center of its range.
Set the color control to the center of its range.
Connect the negative lead of a 5 volt bias supply to point \diamond . Positive to chassis.
Connect a clip lead from pin 8 (cathode) of the 6U8 (V9) to chassis.

| DUMMY ANTENNA | SIGNAL GENERATOR COUPLING | SIGNAL GENERATOR FREQUENCY | CHANNEL | CONNECT VTVM | ADJUST | REMARKS |
|---------------|---|----------------------------|---------|---|----------|---|
| 25. Direct | Color bar generator across antenna terminals. | Same as channel selector | Any | DC probe to pin 5 (cathode) of 6AL5 (V27). Common to chassis. | A47, A48 | Adjust for maximum deflection. After peaking both, turn A47 counter clockwise to reduce the VTVM reading 5%. |
| 26. " | " | " | " | " | A49 | Remove clip lead from V9. Adjust A49 for maximum deflection. |
| 27. " | " | " | " | Disconnect. | A50 | Connect clip lead from point \diamond to chassis. Observe picture tube face and adjust for stationary colors in bar pattern. |
| 28. " | " | " | " | DC probe to point \diamond . Common to chassis. | R18 | Remove 6AZ8 (V26) from its socket. Remove clip lead from point \diamond . Adjust chroma sync phase det. balance control (R18) for zero reading. (Use low DC scale). Replace V26 and remove bias supply. |
| 29. " | " | " | " | USE SCOPE. Vert. Amp. to pin 2 (red grid) of picture tube. Common to chassis. | | Retouch A50 for R-Y signal similar to Fig. 10. |
| 30. " | " | " | " | Vert. Amp. to pin 12 (blue grid) of picture tube. Common to chassis. | A51 | Adjust A51 for B-Y signal similar to Fig. 10. Repeat steps 29 and 30 to correct any inter-action. Remove all test and alignment equipment. |

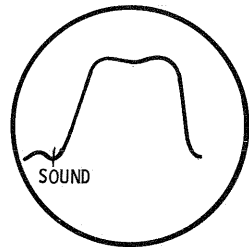


FIG. 5

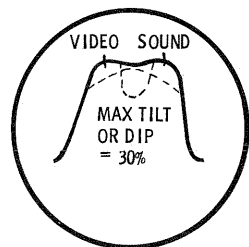


FIG. 6

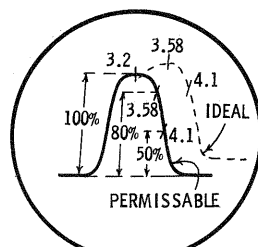


FIG. 7

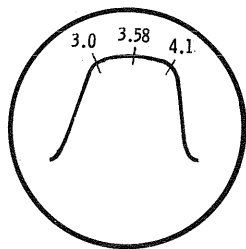


FIG. 8

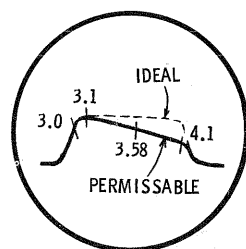


FIG. 9

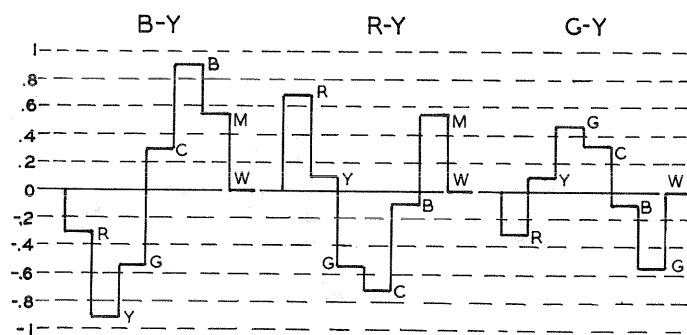


FIG. 10

MISCELLANEOUS ADJUSTMENTS

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

1. Tune in a strong TV signal, preferably with a test pattern. Adjust the fine tuning for best picture.
2. Turn blue and green screen and background controls fully counter clockwise. Turn noise gate (R15) and color killer threshold control (R16) fully counter clockwise.
3. Turn the red screen control fully clockwise.
4. Adjust the vertical size, vertical linearity, horizontal width and horizontal drive for normal picture.
5. Connect a clip lead from point \diamond to chassis.
6. Connect a short between the two pin sockets of the "Horiz. Stab. Coil" socket located on top of the main chassis near the rear.
7. Adjust the horizontal hold control until the picture moves slowly back and forth across the screen with the blanking bar vertical. (On sets containing horizontal range controls, set the horizontal hold control to the center of its range and adjust the horizontal range control until the picture floats back and forth).
8. Remove the short from the horiz. stab. coil socket.
9. Adjust the horizontal stabilizer slug (B1) until the picture again moves back and forth slowly across the screen with the vertical blanking bar vertical.
10. Remove the clip lead from point \diamond .
11. Rotate the channel selector to a blank channel, then return to the original channel. The picture should immediately fall into sync. If the picture does not fall into sync immediately, SLIGHTLY readjust hold control and repeat this step.
12. Readjust width switch and focus for normal picture.
13. Adjust the horizontal drive control (R6) clockwise until a bright vertical line appears, then turn counter clockwise for best horizontal linearity at the center of the screen.
14. Connect the DC probe of a VTVM to point \diamond . Common to chassis. Adjust the horizontal tuning (linearity) slug (B2) for MINIMUM deflection on the VTVM, then turn B2 counter clockwise until a reading of .94 volts is obtained. Leave B2 in this position. Return blue and green screen and background controls to normal position.

AGC AND NOISE GATE ADJUSTMENTS

1. Tune in the strongest local station and adjust fine tuning for best picture.
2. Adjust the contrast and brightness controls for normal picture.
3. Turn the AGC and noise gate controls fully counter clockwise.
4. Slowly turn the AGC control clockwise until the best picture is obtained without signs of overload (tearing or distortion).
5. Turn the noise gate control clockwise for best picture without distortion or tearing.

COLOR KILLER THRESHOLD CONTROL ADJUSTMENT

1. Turn to a channel on which no signal is received.
2. Turn killer threshold control (R16) clockwise until colored snow appears; then turn counter clockwise until colored snow just disappears.

COLOR PURITY ADJUSTMENTS

| STEP | ADJUST | REMARKS |
|------|---|---|
| 1. | Remove convergence chassis from hangers on cabinet and place on top of cabinet. | |
| 2. | Tune in a TV station, preferably with a test pattern. | |
| 3. | Color Killer Threshold Control | Fully counter clockwise. |
| 4. | Contrast Control | Normal picture. |
| 5. | Brightness Control | Normal picture. |
| 6. | Color Control | Fully counter clockwise. |
| 7. | Static Convergence Magnets | Close convergence in center of picture. |
| 8. | Field-Equalizing Magnets | MINIMUM (All the way out). |
| 9. | Contrast Control | MINIMUM. |
| 10. | If necessary, degauss the picture tube at this point. | |
| 11. | Blue and Green Screen Controls | Fully counter clockwise. |
| 12. | Blue and Green Background Controls | Fully counter clockwise. |
| 13. | Red, Green and Blue Horizontal Amplitude Controls | Fully counter clockwise. |
| 14. | Red, Green and Blue Vertical Amplitude Controls | Fully counter clockwise. |
| 15. | Red, Green and Blue Vertical Tilt Controls | Mid-range. |
| 16. | Brightness Control | Maximum. |
| 17. | Red screen Control | Clockwise until a dim red screen is obtained. |
| 18. | Deflection Yoke | Loosen the two wing nuts and slide yoke to the rear on neck of tube. |
| 19. | Purity Magnet Assembly | Spread the tabs apart and rotate the entire assembly for best red purity in center of screen. |

| STEP | ADJUST | REMARKS |
|------|-------------------------------------|---|
| 20. | Deflection Yoke | Move yoke forward until the best red field is obtained over entire screen. Disregard the impure colors at extreme edges. If necessary, repeat steps 19 and 20. |
| 21. | Red Screen Control | MINIMUM. |
| 22. | Blue and Green Screen Controls | Check for neck shadow and purity of blue and green fields by alternately turning up the blue and green screen controls. If either field is impure, repeat steps 17 thru 22. If neck shadow is observed, it may be necessary to recenter the yoke. |
| 23. | Deflection Yoke | Secure the yoke by tightening the two wing nuts. |
| 24. | Red, Green and Blue Screen Controls | Fully counter clockwise. |
| 25. | Brightness Control | Maximum. |
| 26. | Red Screen Control | For a dim red raster. |
| 27. | Blue and Green Screen Controls | Adjust for a white raster. If necessary, repeat steps 25 and 26. |
| 28. | Field-Equalizing Magnets. | If an impure white is noted at edge of raster, turn the magnet nearest the impurity until a white field is obtained. |

CONVERGENCE ADJUSTMENTS

| STEP | ADJUST | REMARKS |
|------|---|--|
| 1. | Connect a white dot/crosshatch generator to the receiver. | |
| 2. | Contrast and brightness Controls | Adjust for good dot or crosshatch pattern on screen. While making convergence adjustments, keep pattern in focus at all times. |
| 3. | Static Convergence Magnets | If necessary, readjust for convergence in center of raster. |
| 4. | Blue-lateral and Green-static Convergence Magnets | Misadjust to obtain a SLIGHT misconvergence of the center vertical dots or lines. |
| 5. | Red and Green Vertical Amplitude, and Red and Green Vertical Tilt Controls | Adjust until the center vertical red and green dots or lines are parallel with the center blue row. |
| 6. | Blue-lateral and Green-static Convergence Magnets | Adjust for convergence of the center vertical dots or lines. If necessary, repeat steps 3 thru 6. |
| 7. | Blue-static Convergence Magnet | Adjust to place the center of the blue horizontal dots or lines a SLIGHT distance above or below the horizontal red and green dots or lines. |
| 8. | Blue Vertical Tilt and Amplitude Controls | Adjust for equal displacement of blue horizontal dots or lines above or below green and red horizontal dots or lines. |
| 9. | Blue-static Convergence Magnet | Adjust to reconverge blue horizontal dots or lines on red and green horizontal dots or lines. |
| 10. | Blue Horizontal Amplitude Control | Maximum. |
| 11. | Blue Horizontal Phase (B3) | Adjust for maximum downward displacement of blue horizontal dots or lines in center of screen. |
| 12. | Green Horizontal Amplitude Control | Maximum. |
| 13. | Green Horizontal Phase (B4) | Adjust for maximum upward displacement of green horizontal dots or lines in center of screen. |
| 14. | Red Horizontal Amplitude Control | Maximum. |
| 15. | Red Horizontal Phase (B5) | Adjust for maximum upward displacement of red horizontal dots or lines in center of screen. |
| 16. | Blue, Red and Green Horizontal Amplitude Controls | Adjust for equal displacement of the blue, red and green horizontal dots or lines along the plane of the center horizontal line. |
| 17. | Blue-lateral Magnet and the Red, Green, and Blue static Convergence Magnets | Adjust for close convergence in center of screen. |
| 18. | Red and Green Vertical Tilt and Amplitude Controls | Recheck the vertical dots or lines and touch-up any misconvergence. |
| 19. | At this point, the dot or crosshatch pattern should be converged over the entire portion of the screen; however, in most cases, SLIGHT touch-up adjustments of all controls will benefit. | |

SYLVANIA MODELS 31C606,
31T304M (Ch. 1-534-1, -2)

FOLDER 4

ALIGNMENT INSTRUCTIONS

PRE-ALIGNMENT INSTRUCTIONS

Allow a 20 minute warm-up period for the receiver and test equipment. Disconnect the picture tube, yoke, high voltage lead, focus lead and the convergence chassis. Insert a 250Ω 20 watt resistor in series with the blue lead of the selenium rectifier (M2).

VIDEO IF ALIGNMENT

Connect the negative lead of a 2.5 volt bias supply to point \diamond . Positive to chassis. Connect the negative lead of a 3.6 volt bias supply to point \diamond . Positive to chassis. Connect separate marker generator thru a 1000mfd capacitor to point \diamond . Low side to chassis. Keep marker generator output at a MINIMUM to prevent distortion of the response curve. Connect the synchronized sweep voltage from the sweep 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. Use only enough sweep generator output to provide a usable pattern on scope.

| DUMMY ANTENNA | SWEEP GENERATOR COUPLING | SWEEP GENERATOR FREQUENCY | MARKER GENERATOR FREQUENCY | CHANNEL | CONNECT SCOPE | ADJUST | REMARKS |
|------------------------------|--|--------------------------------|--|-------------------------|---|--------------------|--|
| 1. Two 120Ω Carbon Resistors | Across antenna terminals with 120Ω in each lead. | Set to any local color channel | 39.75MC | Same as sweep generator | Vert. Amp. thru 33K to pin 2 (grid) of 6CL6 (V7). Low side to chassis. | A1 | Adjust for MINIMUM gain at marker. |
| 2. " | " | " | 47.25MC | " | " | A2 | " |
| 3. " | " | " | 41.25MC | " | " | A3 | " |
| 4. " | " | " | " | " | " | RI7 | Adjust for MINIMUM gain at marker. Not used in Ch. coded 00, 01, 02, 03. |
| 5. " | " | " | " | " | " | A4 | Adjust for MINIMUM gain at marker. Not used in Ch. coded 04 and higher. |
| 6. " | " | " | " | " | " | A5 | Adjust for MINIMUM gain at marker. |
| 7. " | " | " | " | " | " | A6 | " |
| 8. " | Across antenna terminals with 120Ω in each lead. Move marker generator connection to ungrounded tube shield floating over mixer-osc. tube (V2). Low side to chassis. | " | 39.75MC 41.25MC 42.17MC 43.0MC 45.2MC 47.25MC | " | Vert. Amp. thru detector circuit (Fig. 1) to pin 5 (plate) of 6BZ6 (V3). Low side to chassis. (Connect as shown). | A7, A8, A9 | Reduce bias at point \diamond to 1 volt. Adjust for maximum gain and symmetry of response similar to Fig. 2. A7 controls 43MC region, A8 is used to peak 44.0MC and A9 sets 42.17 marker at 50%. |
| 9. " | " | " | 39.75MC 41.25MC 42.17MC 42.85MC 45.0MC 45.75MC 47.25MC | " | Vert. Amp. thru 33K to pin 2 (grid) of 6CL6 (V7). Low side to chassis. | A10, A11, A12, A13 | Increase bias at point \diamond to 6 volts. Remove 6CL6 (V7) from its socket. Adjust for maximum gain and symmetry of response similar to Fig. 3 with markers as shown. A11 is used to position 45.75MC marker at 50%. A13 positions 42.17MC marker at 80% and A12 controls tilt of curve. Disconnect test equipment and replace V7 in its socket. |

SOUND IF ALIGNMENT

Connect the negative lead of a 30 volt bias supply to point \diamond . Positive to chassis. Connect the two matched 100K (±1%) resistors in series from point \diamond to chassis. The junction of these two resistors is alignment point \diamond as shown on the schematic. Use negative scale on VTVM.

| DUMMY ANTENNA | SIGNAL GENERATOR COUPLING | SIGNAL GENERATOR FREQUENCY | CHANNEL | CONNECT VTVM | ADJUST | REMARKS |
|---------------|--|----------------------------|-----------------------------|---|---------------|--|
| 10. .01mfd | High side to point \diamond . Low side to chassis. | 4.5MC (Unmod) | Any non-interfering channel | DC probe to point \diamond . Common to chassis. | A14, A15, A16 | Adjust alternately for maximum deflection. |
| 11. " | " | " | " | DC probe to point \diamond . Common to point \diamond . | A14 | Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting. |

VHF OSCILLATOR ALIGNMENT

Connect the negative lead of a 2.5 volt bias supply to point \diamond . Positive to chassis. Remove the tuner cover and set the fine tuning to the center of its range by setting the capacitor plates at half mesh. Unsolder the connections from pin 5 (plate) of the 1st. video IF amplifier (V3) and connect a 330Ω resistor from pin 5 (plate) to pin 6 (screen) of V3. Remove the 2nd. video IF amplifier tube (V4) from its socket. Connect the synchronized sweep voltage from the sweep 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. Use only enough sweep generator output to provide a usable pattern on scope. Use 10MC sweep unless otherwise noted. Coils not containing adjustable cores are adjusted by expanding or compressing coil turns.

| DUMMY ANTENNA | SWEEP GENERATOR COUPLING | SWEEP GENERATOR FREQUENCY | MARKER GENERATOR FREQUENCY | CHANNEL | CONNECT SCOPE | ADJUST | REMARKS |
|-------------------------------|--|---|---|-----------------------------|---|--|--|
| 12. Two 120Ω Carbon Resistors | Across antenna terminals with 120Ω in each lead. | 213MC 85MC 79MC 89MC 83MC 57MC | 215.75MC 87.75MC 81.75MC 71.75MC 65.75MC 59.75MC | 13 6 5 4 3 2 | Vert. Amp. thru detector probe (Fig. 4) to pin 5 (plate) of 6BZ6 (V3). Low side to chassis. | A17 A18 A19 A20 A21 A22 | Adjust to place sound marker in trap notch as in Fig. 5. |

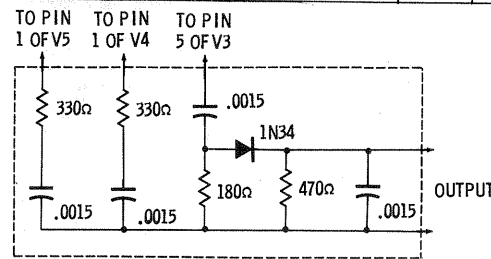


FIG. 1

TO PIN 1 OF V5
1 OF V4
TO PIN 5 OF V3

ALIGNMENT INSTRUCTIONS (cont)

VHF RF AND MIXER ALIGNMENT

Connect the negative lead of a 2.5 volt bias supply to point \diamond . Positive to chassis. Leave circuit altered as under "VHF Oscillator Alignment". Connect the synchronized sweep voltage from the sweep 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. Use only enough sweep generator output to provide a usable pattern on scope. Use 10MC sweep unless otherwise noted. Coils not containing adjustable cores are adjusted by expanding or compressing coil turns.

| DUMMY ANTENNA | SWEEP GENERATOR COUPLING | SWEEP GENERATOR FREQUENCY | MARKER GENERATOR FREQUENCY | CHANNEL | CONNECT SCOPE | ADJUST | REMARKS |
|-------------------------------|--|---|--|--------------------------|---|---------------|--|
| 13. Two 120Ω Carbon Resistors | Across VHF antenna terminals with 120Ω in each lead. | 213MC | 211.25MC 215.75MC | 13 | Vert. Amp. thru detector probe (Fig. 4) to pin 5 (plate) of 1st. video IF amp. (V3). Low side to chassis. | A23, A24, A25 | Adjust A23 for maximum gain, A24 for proper marker positions and A25 for flat-topped response similar to Fig. 6. |
| 14. " | " | 177MC | 175.25MC 179.75MC | 7 | " | A26, A27 | Adjust for maximum gain and symmetry of response similar to Fig. 6 with markers as shown. |
| 15. " | " | 207MC 201MC 195MC 189MC 183MC | 205.25MC 209.75MC 203.75MC 197.75MC 191.75MC 185.75MC | 12 11 10 9 8 | " | | Check each channel for response similar to Fig. 6. If not within limits, repeat steps 13 and 14. If necessary, make compromise adjustment of A23 thru A27 for best acceptable response. |
| 16. " | " | 85MC | 83.25MC 87.75MC | 6 | " | A28, A29, A30 | Adjust in numerical order for response curve similar to Fig. 6. First adjustment for maximum gain, next for proper marker positions and third for flat-topped response. |
| 17. " | " | 79MC | 77.25MC 81.75MC | 5 | " | A31, A32, A33 | " |
| 18. " | " | 69MC | 67.25MC 71.75MC | 4 | " | A34, A35, A36 | " |
| 19. " | " | 63MC | 61.25MC 65.75MC | 3 | " | A37, A38, A39 | " |
| 20. " | " | 57MC | 55.25MC 59.75MC | 2 | " | A40, A41, A42 | Adjust in numerical order for response curve similar to Fig. 6. First adjustment for maximum gain, next for proper marker positions and third for flat-topped response. Restore circuit to normal operation. |

UHF TUNER ALIGNMENT

This portion of the receiver has been properly aligned at the factory and is very stable. Alignment of this portion should not be required in the field.

CHROMA ALIGNMENT

Remove the G-Y and R-Y Demodulator tube (V28) from its socket. Remove the B-Y amplifier and chroma ref. osc. tube (V26) from its socket. Connect the negative lead of a 28 volt bias supply to point \diamond . Positive to chassis. Connect the negative lead of a 28 volt bias supply to pin 9 (grid) of the 6U8 (V9). Positive to chassis. Connect the negative lead of a 7 volt bias supply thru a 100K resistor to point \diamond . Positive to chassis. Use video sweep generator for the following alignment. Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection. Use only enough sweep generator output to provide a usable pattern on scope.

| DUMMY ANTENNA | SWEEP GENERATOR COUPLING | SWEEP GENERATOR FREQUENCY | MARKER GENERATOR FREQUENCY | CHANNEL | CONNECT SCOPE | ADJUST | REMARKS |
|---------------|--|---------------------------|-----------------------------------|-----------------------------|---|----------|---|
| 21. .01mfd | High side to pin 9 (grid) of 6CL6 (V7). Low side to chassis. | 3MC (6MC Swp) | 4.1MC | Any non-interfering channel | Vert. Amp. thru detector probe to pin 1 (plate) of 6AZ8 (V23). Low side to chassis. | A43 | Adjust for maximum gain at marker. Connect a 680Ω resistor between pins 1 and 2 of chroma amp. (V23) after adjusting A43. |
| 22. " | " | " | 3.2MC 3.58MC 4.1MC | " | " | " | Readjust for response curve similar to Fig. 7 with markers as shown. |
| 23. " | " | " | 3.0MC 3.58MC 4.1MC | " | Vert. Amp. thru detector probe to pin 6 (plate) of 6CL6 (V24). Low side to chassis. | A44, A45 | Remove 680Ω resistor connected to V23 and connect between points \diamond and \diamond . Adjust A44 and A45 for response similar to Fig. 8. Remove the 680Ω resistor. |
| 24. " | " | " | 3.0MC 3.1MC 3.58MC 4.1MC | " | Vert. Amp. thru detector probe to point \diamond . Low side to chassis. | A46 | Adjust for response curve similar to Fig. 9. Restore set to normal operating condition. |

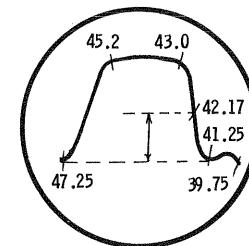


FIG. 2

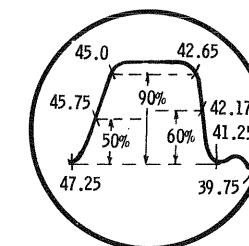


FIG. 3

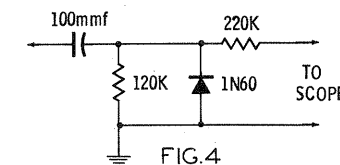
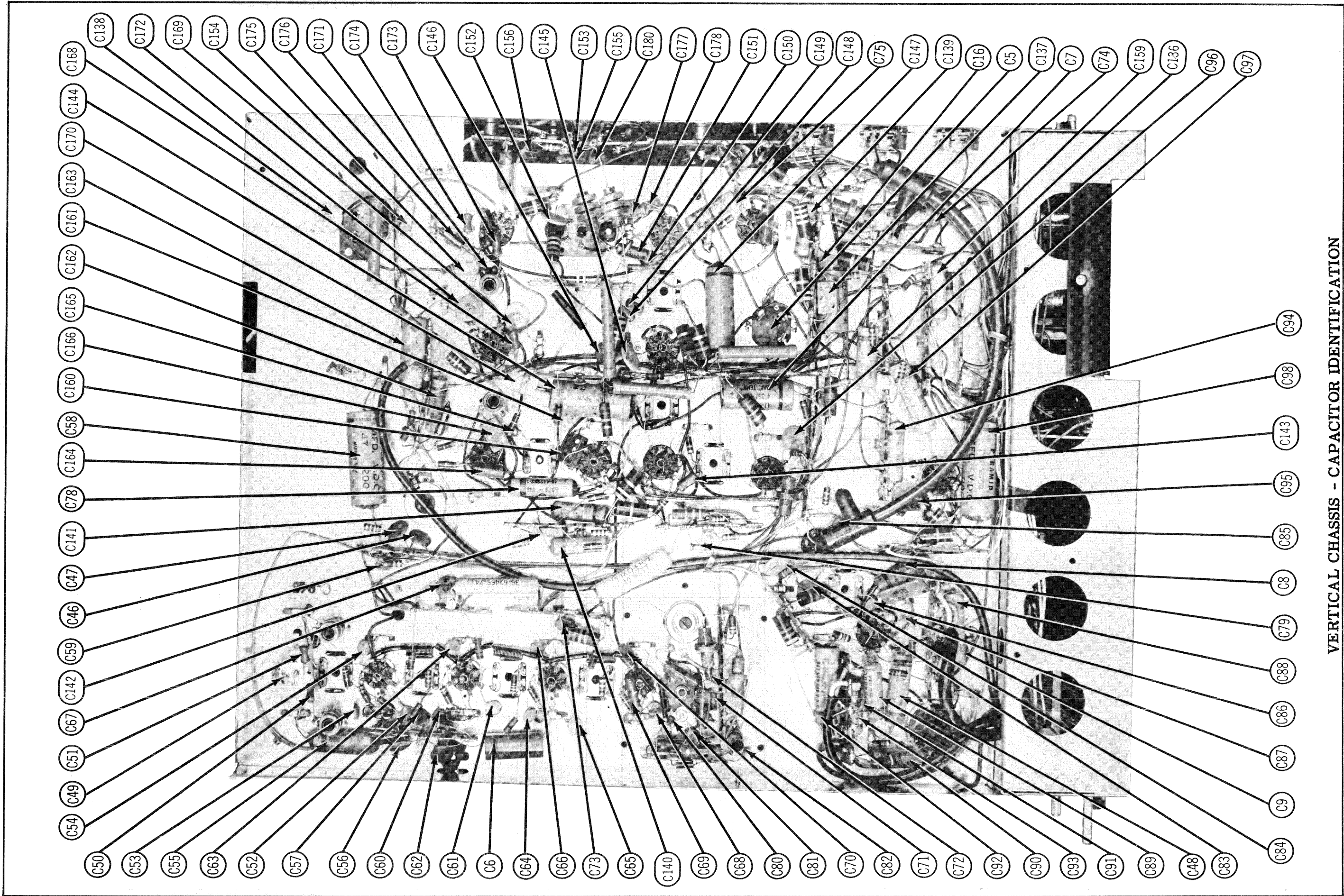


FIG. 4

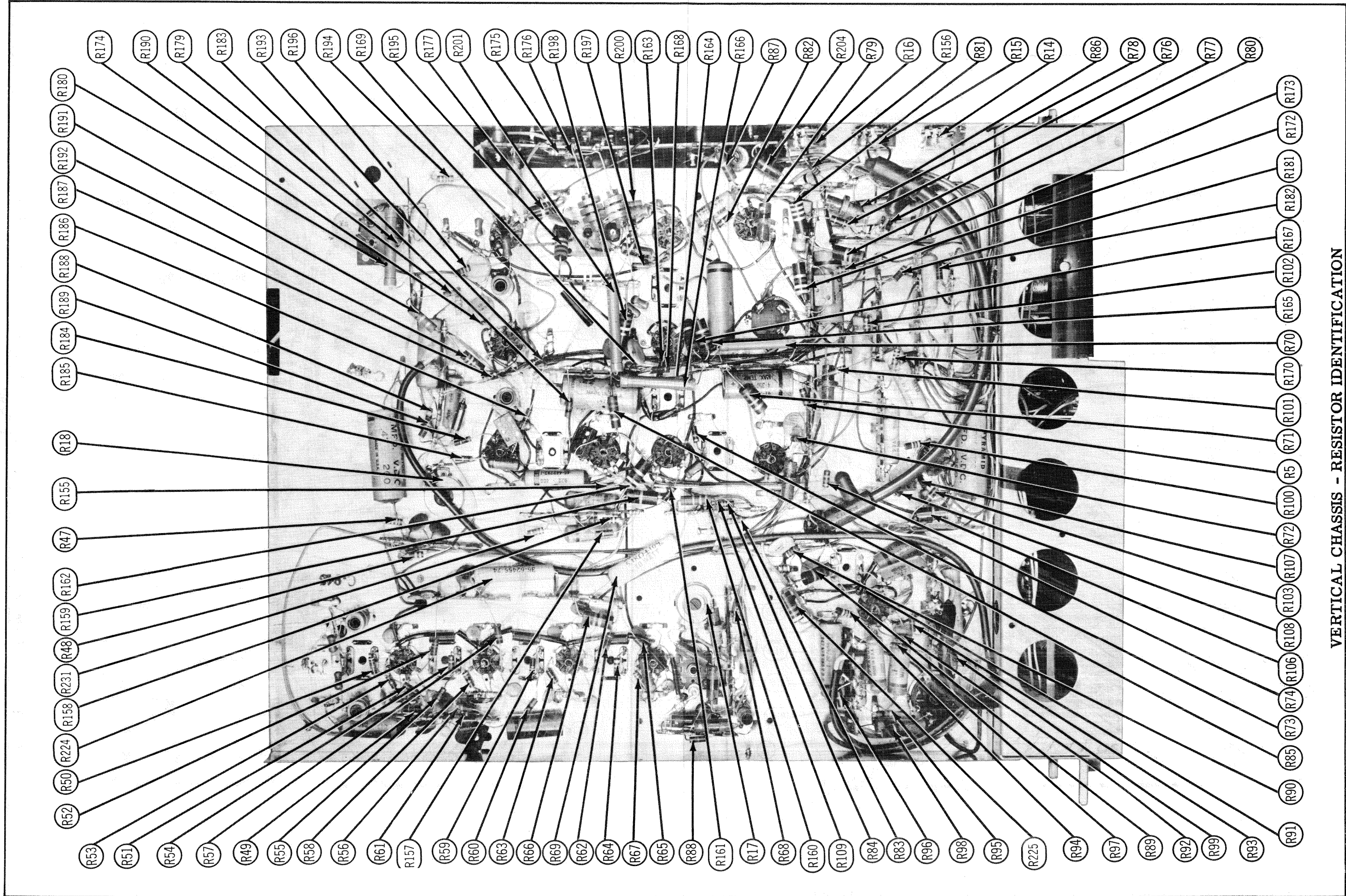
SYLVANIA MODELS 31C606,
31T304M (Ch. 1-534-1, -2)

FOLDER 4



VERTICAL CHASSIS - CAPACITOR IDENTIFICATION

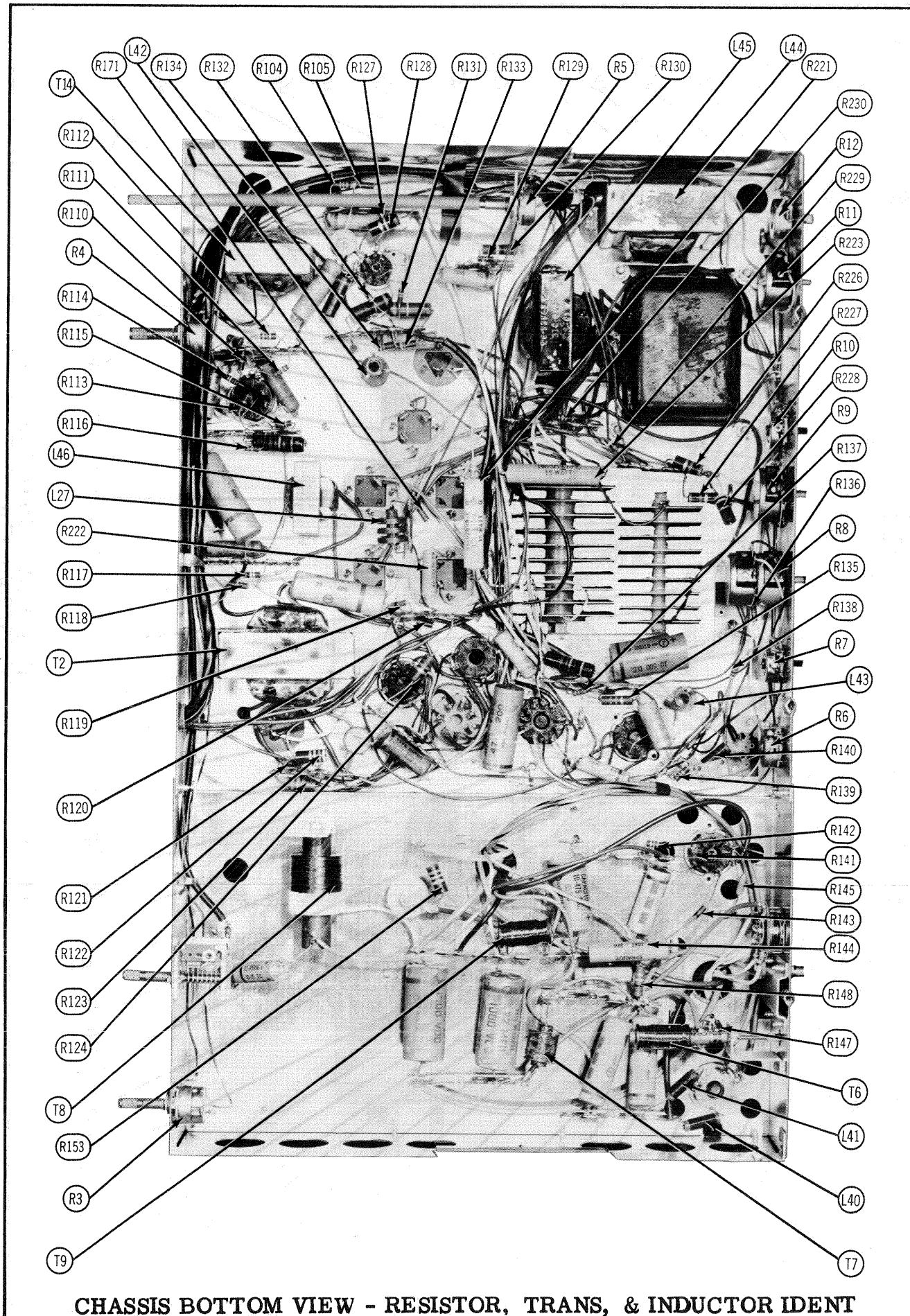
SYLVANIA MODELS 31C606,
31304M (Ch. 1-534-1, -2)



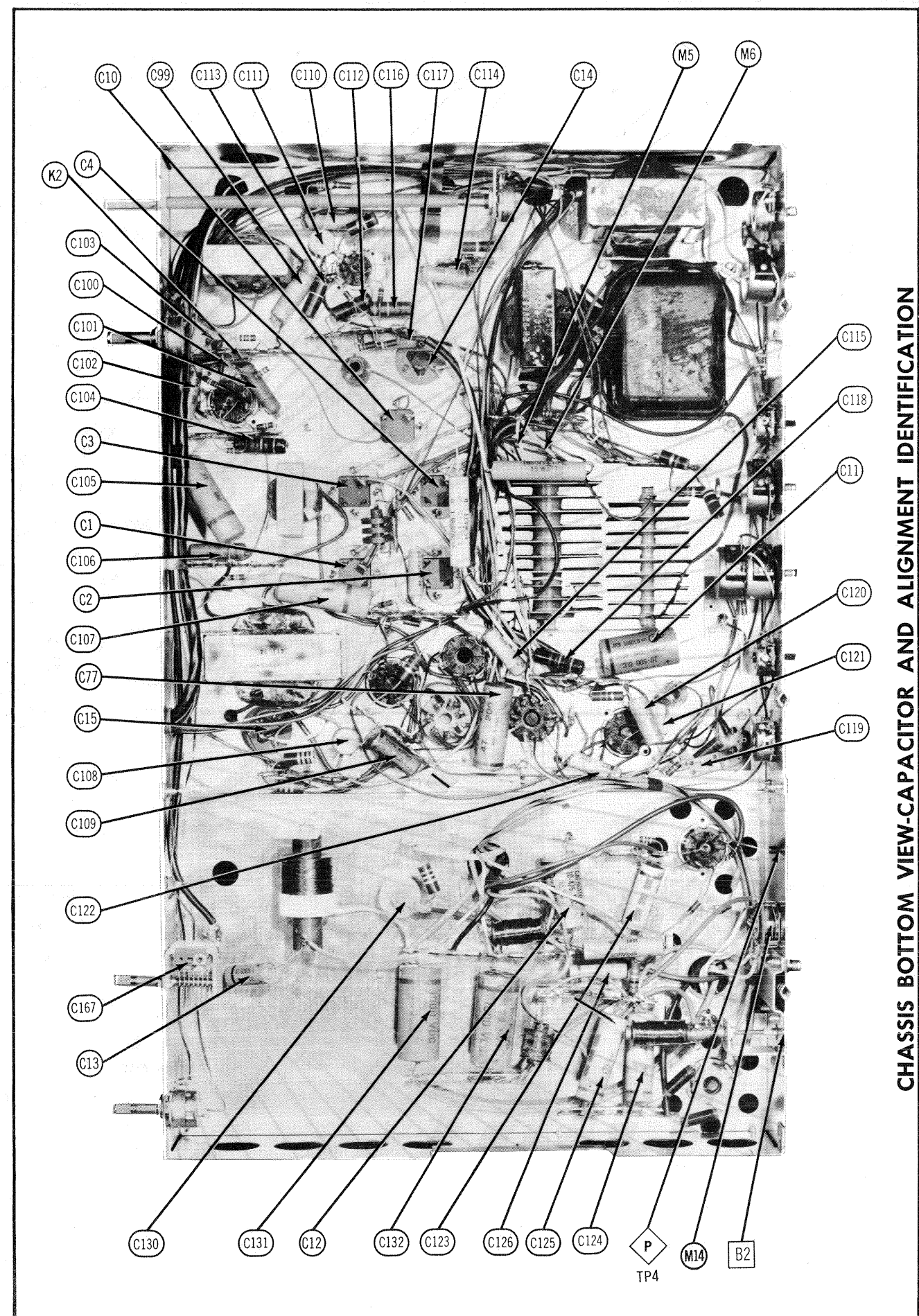
VERTICAL CHASSIS - RESISTOR IDENTIFICATION

SYLVANIA MODELS 31C606,
31304M (Ch. 1-534-1, -2)

FOLDER 4

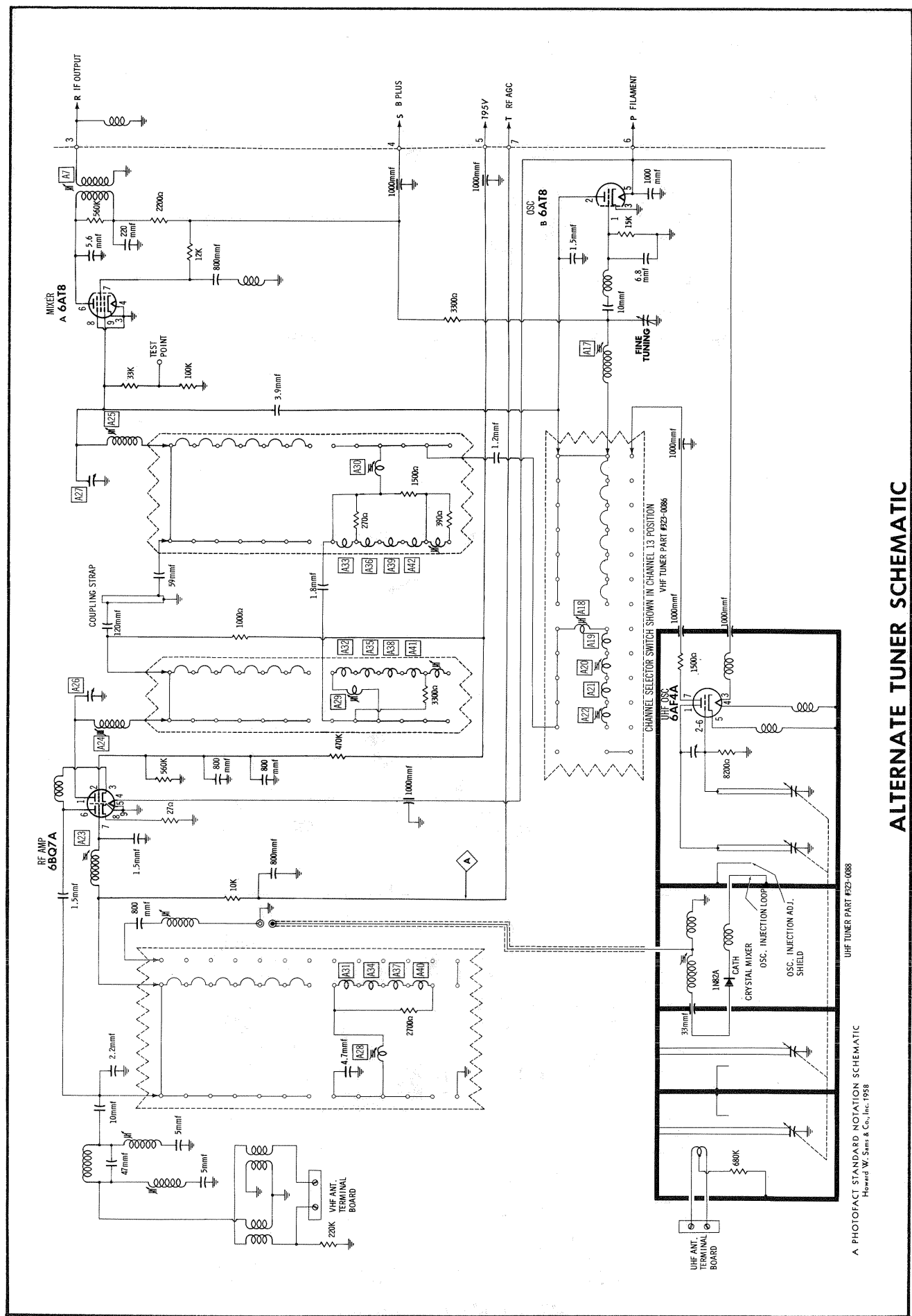
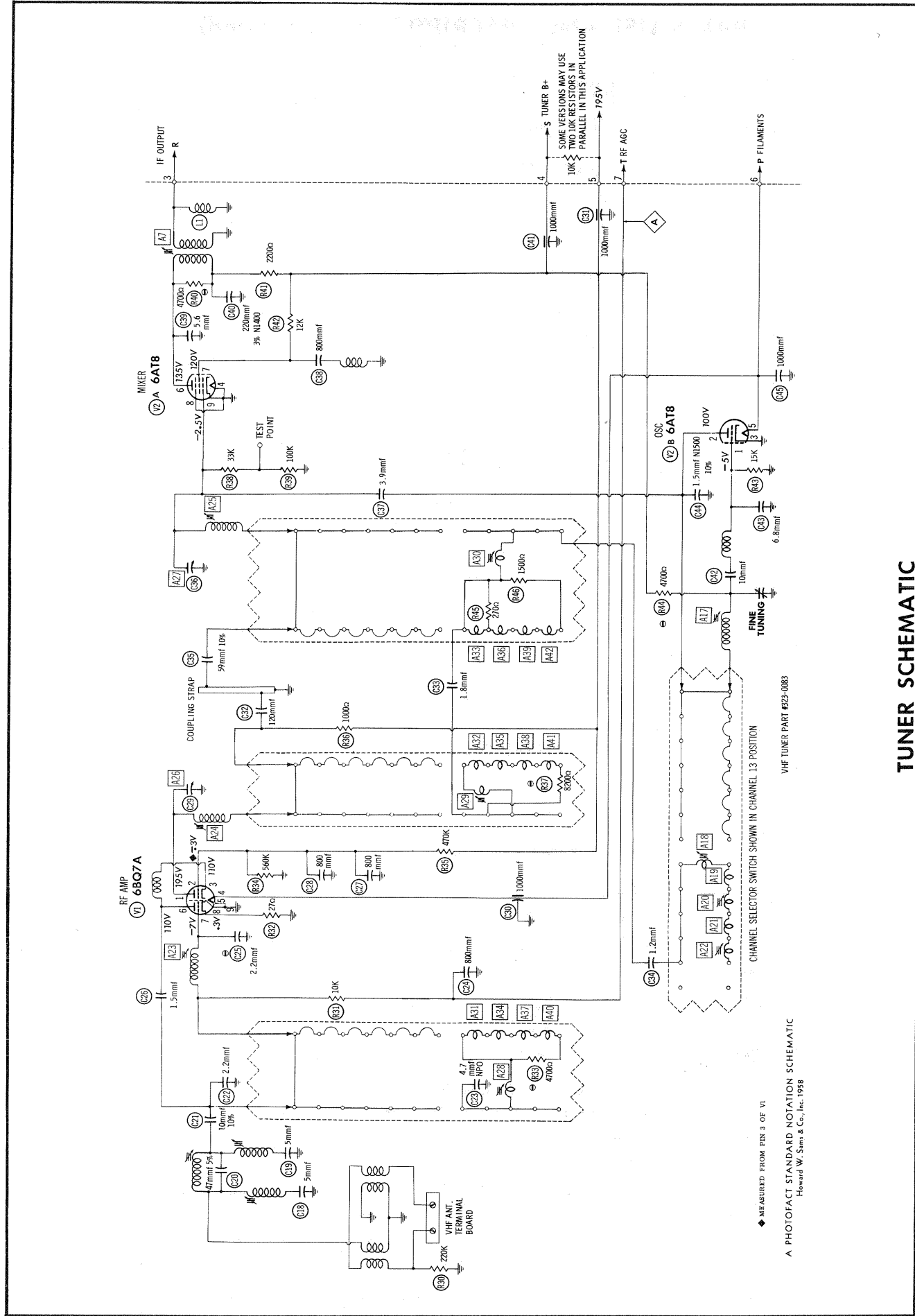


CHASSIS BOTTOM VIEW - RESISTOR, TRANS, & INDUCTOR IDENT

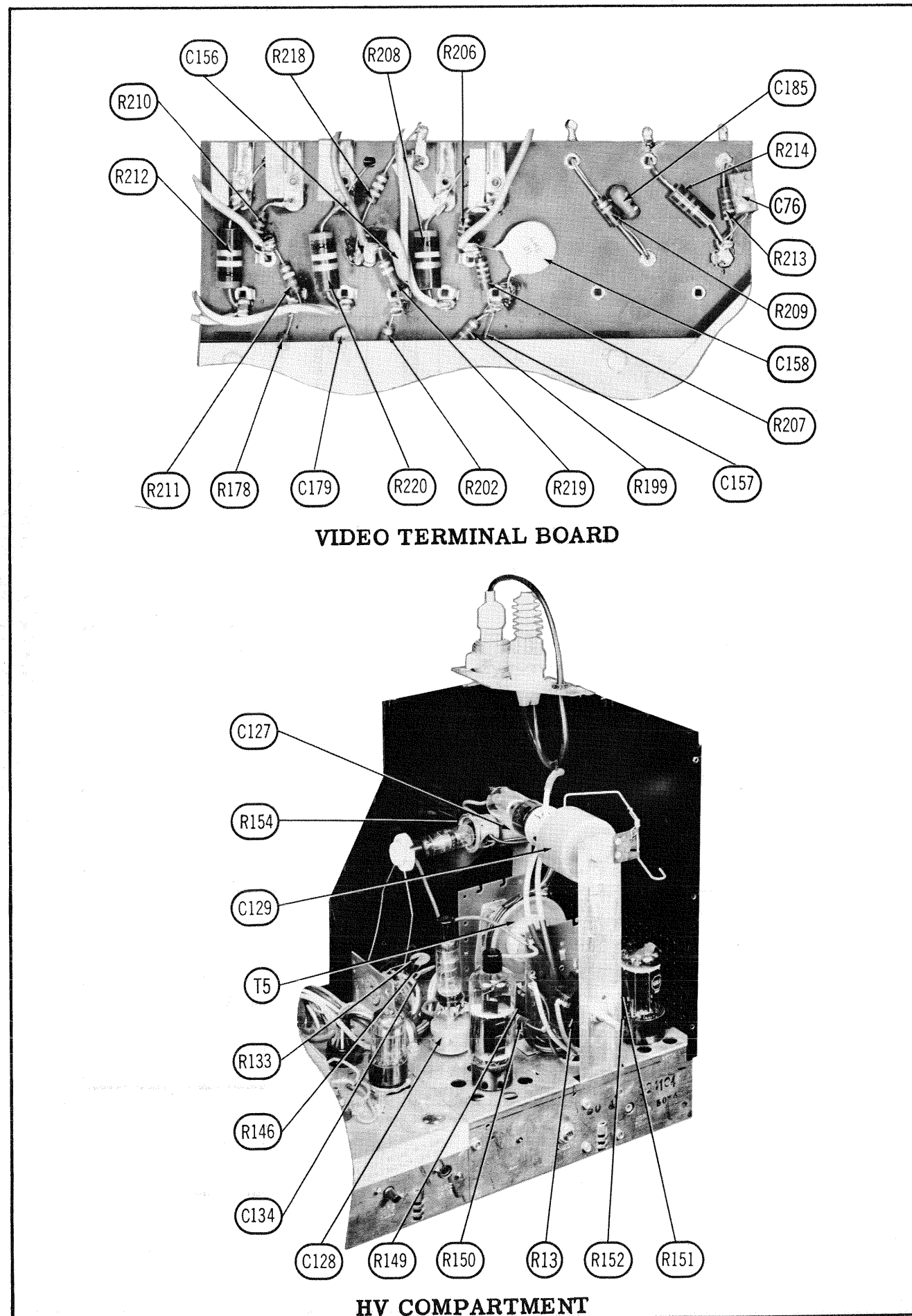


TP4

SYLVANIA MODELS 31C606,
31T304M (Ch. 1-534-1, -2)
NOTIFICATION IDENTIFICATION



SYLVANIA MODELS 31C606,
31T304M (Ch. 1-534-1, -2)
C14W5CHS3ENUN1E1ATN3L1T1V



VIDEO TERMINAL BOARD

HV COMPARTMENT

PARTS LIST AND DESCRIPTIONS (Continued)
FILTER CHOKE

| ITEM No. | RATINGS | | | REPLACEMENT DATA | | | | | |
|----------|----------------------|------------------|------------------------------------|-------------------|--------------------|----------------|------------------|---------------------|------------------|
| | TOTAL DIRECT CURRENT | D. C. RESISTANCE | INDUCTANCE (0 CURRENT 1000 μ) | SYLVANIA PART No. | Haldorson PART No. | Merit PART No. | Stancor PART No. | Thordarson PART No. | Triad PART No. |
| L44 | .425 A | 28 Ω | 1.2 Hy. | 145-0022 | | | | | |
| L45 | .160 A | 27 Ω | 1.1 Hy. | 145-0023 | C5026 | C-2974 | C-2304 | 26C43 | C-40X ① C-23X |

① Drill new mounting hole.

CONVERGENCE CHOKE

| ITEM No. | RATINGS | | | REPLACEMENT DATA | | | | | |
|----------|----------------------|------------------|------------------------------------|-------------------|--------------------|----------------|------------------|---------------------|----------------|
| | TOTAL DIRECT CURRENT | D. C. RESISTANCE | INDUCTANCE (0 CURRENT 1000 μ) | SYLVANIA PART No. | Haldorson PART No. | Merit PART No. | Stancor PART No. | Thordarson PART No. | Triad PART No. |
| L46 | 0 A | 10 Ω | 325 Millihenries | 144-0004 | | | | | |

COMPONENT COMBINATIONS

| ITEM No. | USE | DESCRIPTION | SYLVANIA PART No. | REPLACEMENT DATA |
|----------|------------------|---|-------------------|--|
| K1 | De-Emphasis | 1000mmf, 10000mmf, 4000mmf, 22K | 190-0022 | Centralab Sprague PC-186 PB-3 |
| K2 | Vert. Integrator | 2000mmf, 5000mmf, 5000mmf, 22K, 8200 Ω , 8200 Ω | 190-0007 | Aerovox PA-110 Centralab PC-100 Cornell-Dubilier 115TMI Erie 1405-01 Sprague V-1 |

RECTIFIERS

| ITEM No. | RATING | REPLACEMENT DATA | | | | | NOTES |
|----------|--------------------|-------------------|------------------|---------------------------|------------------------|-------------------------|-----------------|
| | CURRENT (Measured) | SYLVANIA PART No. | FEDERAL PART No. | GENERAL ELECTRIC PART No. | INTERNATIONAL PART No. | SARKES TARZIAN PART No. | |
| M1 | .580 A | 517-0013 ① | | | | 759 ① | ① Selenium type |
| M2 | .425 A | 517-0014 ① | | | | 759 ① | |

FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA | | | | | |
|----------|------|--------------------|-------------------|--------|------------------------------|--------|---------------|--------|
| | | | SYLVANIA PART No. | | LITTELFUSE PART No. | | BUSS PART No. | |
| | | | FUSE | HOLDER | FUSE | HOLDER | FUSE | HOLDER |
| M3 | 3 AG | 1/2A 250V S/B | 191-0016 | | 313-500 (3 AG 1/2A-250V S/B) | 357001 | MDL 1/2 | 4405 |
| M4 | 3 AG | 1/4A 250V S/B | 191-0014 | | 313-250 (3 AG 1/4A-250V S/B) | 357001 | MDL 1/4 | 4405 |
| M5 | | 1 1/2" of #26 Wire | | | | | | |
| M6 | | 1 1/2" of #26 Wire | | | | | | |

CRYSTAL DIODES

| ITEM No. | ORIG. TYPE | REPLACEMENT DATA | | | NOTES |
|----------|------------|-------------------|--------------|-------------------|--|
| | | SYLVANIA PART No. | CBS PART No. | SYLVANIA PART No. | |
| M7 | 1N60 | 1N60 | 1N60 | 1N60 | Sound Detector (Pigtail) Video Detector (Pigtail) |
| M8 | 1N60 | 1N60 | 1N60 | 1N60 | |

MISCELLANEOUS

| ITEM No. | PART NAME | SYLVANIA PART No. | NOTES |
|----------|--------------|-------------------|---|
| M9 | Crystal | 917-0002 | 3.579545MC |
| M10 | Dial Lamp | 611-0012 | |
| M11 | Tuner | 323-0083 | VHF (54-94925-3) Used in VHF Models coded 04 and higher |
| | Tuner | 323-0080 | VHF (54-94925-1) Used in VHF Models coded 00, 01, 02, 03 |
| | Tuner | 323-0086 | VHF (UHF Models) |
| | Tuner | 323-0088 | UHF |
| M12 | Delay Line | 129-0007 | |
| M13 | Switch | 571-0015 | On-off |
| M14 | Switch | 573-0017 | Width Control, rotary wafer type - Models coded 04 and higher |
| | Switch | 573-0015 | Width Control, Models coded 00, 01, 02, 03 |
| M15 | Magnet | 400-0028 | Purity |
| M16 | Magnet | 400-0029 | Blue Lateral |
| M17 | Magnet | | Field Equalizing (6 used) |
| M18 | HV Regulator | 624-0004 | |

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

| NAME | PART NO. | DESCRIPTION |
|--------------|----------|-------------|
| Safety Glass | 710-0032 | |

WIRING DATA

| | |
|-------------------------------------|--|
| High Voltage Lead | Use BELDEN No. 8869 |
| Shielded Hook-up Wire | Use BELDEN No. 8885 (Single Conductor) 8738 (Two Conductor) |
| General-use Unshielded Hook-up Wire | Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors |
| Power Cord (Interlock Type) | Use BELDEN No. 8874 |
| 300 Ω Tuner Input Lead | Use BELDEN No. 8225 |
| 300 Ω Antenna Lead-in | Use BELDEN No. 8230 or 8275 |
| Antenna Rotor Cable | Use BELDEN No. 8464 (Flat) or 8484 (Round) - 4 Conductor 8485 (Round) - 5 Conductor 8488 (Round) - 8 Conductor |

SYLVANIA MODELS 31C606,
31T304M (Ch. 1-534-1, -2)

FOLDER 4

PARTS LIST AND DESCRIPTIONS (Continued)
TRANSFORMERS (SWEEP CIRCUITS)

| ITEM No. | USE | REPLACEMENT DATA | | | | | | | NOTES |
|----------|--|-------------------|--------------------|----------------|--------------|------------------|---------------------|----------------|-------|
| | | SYLVANIA PART No. | Haldorson PART No. | Merit PART No. | Ram PART No. | Stancor PART No. | Thordarson PART No. | Triad PART No. | |
| T2 | Vert. Output | 241-0040 | | | | | | | |
| T3 | Vert. Isolation Trans. | 144-0003 | | | | | | | |
| T4A | Yoke-Horiz. (12MH) | 100-0027 | | | | | | | |
| T5 | Vert. (118MH) | 241-0039 | | | | | | | |
| T6 | Horiz. Output | | | | | | | | |
| T7 | Horiz. Tuning Coil (.4-2.1MH) | 132-0013 | | | | | | | |
| T8 | Width Choke (.5MH) | 132-0014 | | | | | | | |
| T9 | Horiz. Centering Isolation Choke (285MH) | 133-0005 | | | | | | | |
| T10 | Horiz. Centering Isolation Choke (17MH) | 133-0004 | | | | | | | |
| T11 | Green Horiz. Phase Coil | 132-0015 | | | | | | | |
| T12 | Blue Horiz. Phase Coil | 132-0015 | | | | | | | |
| T13 | Red Horiz. Phase Coil | 132-0015 | | | | | | | |
| | Convergence Yoke Assembly | 100-0028 | | | | | | | |
| | Convergence Magnet | 400-0030 | | | | | | | |

TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE | REPLACEMENT DATA | | | | | | | NOTES |
|----------|-----------|-------------------|--------------------|----------------|--------------|------------------|---------------------|----------------|-------|
| | | SYLVANIA PART No. | Haldorson PART No. | Merit PART No. | Ram PART No. | Stancor PART No. | Thordarson PART No. | Triad PART No. | |
| T14 | 4500Ω | 143-0054 | Z1402 | A-3019 | AU-804 | A-8092 | 26S49 | 8-5Z | |

SPEAKER

| ITEM No. | TYPE | | | REPLACEMENT DATA | | NOTES |
|----------|--------|-------|------------|-------------------|---------------|---|
| | SIZE | FIELD | V. C. IMP. | SYLVANIA PART No. | QUAM PART No. | |
| SP1 | 5 1/4" | PM | 3-4Ω | 539-0577 ① | 52A21 | ① Used in Model 31T304M ② Used in Model 31C806 |
| | 4" | PM | | 539-0405 ② | | |
| | 8" | PM | | 539-0806 ② | | |

COILS (RF-IF)

| ITEM No. | USE | REPLACEMENT DATA | | | | NOTES |
|----------|-------------------------------|-------------------|-------------------|----------------|-----------------|------------------------------|
| | | SYLVANIA PART No. | MEISSNER PART No. | MERIT PART No. | MILLER PART No. | |
| L1 | RF Choke | 118-0029 | | | | 1.2 Microhenries |
| L2 | 39.75MC Trap | 118-0025 | | | | |
| L3 | 47.25MC Trap | 118-0026 | | | | |
| L4 | 1st. Video IF Fil. Choke | 120-0017 | 17-5002 | TV-127 | 6232 | Includes 41.25MC Trap |
| L5 | 2nd. Video IF Fil. Choke | 147-0014 | 19-3001 | TV-169 | 6175 | .7 Microhenry |
| L6 | 3rd. Video IF Fil. Choke | 118-0012 | 17-5002 | TV-127 | 6232 | Includes 41.25MC Trap |
| L7 | 4th. Video IF Fil. Choke | 147-0014 | 19-3001 | TV-169 | 6175 | .7 Microhenry |
| L8 | 5th. Video IF Fil. Choke | 118-0012 | 17-5004 | TV-126 | 6234 | .7 Microhenry |
| L9 | 6th. Video IF Fil. Choke | 147-0014 | 19-3001 | TV-169 | 6175 | .7 Microhenry |
| L10 | 7th. Video IF Fil. Choke | 118-0012 | 17-5004 | TV-126 | 6234 | .7 Microhenry |
| L11 | Series Peaking Coil | 148-0012 | 19-4060 | TV-193 | 6110 | Includes 41.25MC Trap-Note 1 |
| L12 | Series Peaking Coil | 131-2014 | 19-3180 | TV-184 | 6180 | 64 Microhenries |
| L13 | Resonant Choke | 131-2012 | | | | 180 Microhenries |
| L14 | Resonant Choke | 131-2012 | | | | 12 Microhenries |
| L15 | Resonant Choke | 131-2012 | | | | 12 Microhenries |
| L16 | Chroma Take-off Trans. | 120-0014 | | | | Includes 4.5 MC Trap & Caps. |
| L17 | Series Peaking Coil | 131-2015 | 19-3250 | TV-195 | 6161 | 250 Microhenries |
| L18 | Shunt Peaking Coil | 131-2013 | 19-3125 | TV-195 | 6153 | 120 Microhenries |
| L19 | Series Peaking Coil | 131-2014 | 19-3180 | TV-184 | 6180 | 180 Microhenries |
| L20 | Series Peaking Coil | 131-2030 | 19-3300 | TV-199 | 6155 | 300 Microhenries |
| L21 | Resonant Choke | 131-2012 | | | | 12 Microhenries |
| L22 | Resonant Choke | 131-2012 | | | | 12 Microhenries |
| L23 | Sound IF | 130-0003 | 20-1005 | | 1470 | |
| L24 | Ratio Det. | 128-0014 | 17-3497 | TV-115 | 6205 | Tertiary winding -1Ω |
| L25 | Chroma Bandpass Trans. | 120-0013 | | | | |
| L26 | Demodulation Driver Trans. | 120-0012 | | | | |
| L27 | Peaking Coil | 131-2018 | | | | 6.9 Millihenries |
| L28 | Burst Amplifier | | | | | |
| L29 | Discriminator Trans. | 120-0015 | | | | |
| L30 | Resonant Choke | 118-0010 | | | | 10.8 Microhenries |
| L31 | Reactance Tube Plate Coil | 134-0002 | 17-6011 | | | |
| L32 | Resonant Choke | 118-0010 | | | | 10.8 Microhenries |
| L33 | Chroma Det. Load Coil | 129-0008 | | | | |
| L34 | Chroma Ref. Osc. Plate Trans. | 120-0016 | 17-6014 | | | |
| L35 | RF Choke | 118-0020 | 19-2864 | BC-566 | 4612 | 10.8 Microhenries |
| L36 | Series Peaking Coil | 118-0027 | | | | 1.7 Millihenries |
| L37 | Series Peaking Coil | 118-0028 | 19-3250 | TV-185 | 6181 | 250 Microhenries |
| L38 | RF Choke | 118-0020 | 19-2864 | BC-566 | 4612 | 10.8 Microhenries |
| L39 | Series Peaking Coil | 118-0027 | | | | 1.7 Millihenries |
| L40 | Shunt Peaking Coil | 131-2015 | 19-3250 | TV-185 | 6181 | 250 Microhenries |
| L41 | RF Choke | | | | 4611 | 8.2 Microhenries |
| | RF Choke | | | | 4611 | 8.2 Microhenries |

Note 1. Alternate part #119-0015 used in chassis coded 00, 01, 02 and 03.

TRANSFORMER (HORIZ. OSC.)

| ITEM No. | DC RES. | REPLACEMENT DATA | | | | | | NOTES |
|----------|---------|-------------------|-------------------|----------------|-----------------|--------------|---------------------|--|
| | | SYLVANIA PART No. | Meissner PART No. | Merit PART No. | Miller PART No. | Ram PART No. | Thordarson PART No. | |
| L42 | 30Ω | 243-0001 | | | | | | Horiz. AFC |
| L43 | 37Ω | 132-0001 | 19-1576 * | TV-163 * | 6210 * | H-102 * | HS-5 | Horiz. Stab. (13-33 Millihenries) * Enlarge mounting hole. |

PARTS LIST AND DESCRIPTIONS
TUBES (GENERAL ELECTRIC, SYLVANIA)

| ITEM No. | USE | TYPE | NOTES | ITEM No. | USE | TYPE | NOTES |
|----------|----------------------------------|---------|-------|----------|---|---------|-------|
| V1 | RF Amplifier | 6BQ7A | | V17 | Horiz. Mult. | 6SN7GTB | |
| V2 | Mixer-Oscillator | 6AT8 | | V18 | Horiz. Output | 6CB5A | |
| V3 | 1st. Video IF Amp. | 6BZ6 | | V19 | Rectifier Damper | 6BL4 | |
| V4 | 2nd. Video IF Amp. | 6BZ6 | | V20 | HV Rectifier | 3A2 | |
| V5 | 3rd. Video IF Amp. | 6BZ6 | | V21 | Diode Coupler | 3A2 | |
| V6 | 4th. Video IF Amp. | 6CB6 | | V22 | Voltage Doubler | 3A3 | |
| V7 | Video Amp. | 6CL6 | | V23 | Chroma Amp.-Color Killer | 6AZ8 | |
| V8 | Video Output | 6CL6 | | V24 | 2nd. Chroma Amp. | 6CL6 | |
| V9 | AGC Keying-Burst Amp. | 6U8 | | V25 | Chroma Ref. Osc. Control-Horiz. Blanking Amp. | 6AN8 | |
| V10 | Sound IF Amp. | 6AU6 | | V26 | Chroma Ref. Osc.-B-Y Amp. | 6AZ8 | |
| V11 | Ratio Det.-AF Amp. - AGC Clamper | 6T8 | | V27 | Chroma Sync Phase Det. | 6AL5 | |
| V12 | Audio Output | 6W6GT | | V28 | G-Y Demodulator-R-Y Demodulator | 12BH7A | |
| V13 | Sync Sep. | 6CS6 | | | | | |
| V14 | Vert. Mult. | 6SN7GTB | | | | | |
| V15 | Vert. Output | 6AV5GA | | | | | |
| V16 | Horiz. Sync Amp. - Horiz. AFC | 6BJ8 | | | | | |

PICTURE TUBE

| ITEM No. | REPLACEMENT DATA | | | NOTES |
|----------|-------------------|---------------------------|--------------|-------|
| | SYLVANIA PART No. | GENERAL ELECTRIC PART No. | RCA PART No. | |
| V29 | 21AXP22 | 21AXP22A | 21AXP22A | |

ELECTROLYTIC CAPACITORS

| ITEM No. | RATING | | REPLACEMENT DATA | | | | | | |
|----------|--------|-------|-------------------|------------------|---------------------------|------------------|------------------|------------------|------------------|
| | CAP. | VOLT. | SYLVANIA PART No. | AEROVOX PART No. | CORNELL-DUBILIER PART No. | MALLORY PART No. | PYRAMID PART No. | SANGAMO PART No. | SPRAGUE PART No. |
| C1 | 200 | 250 | 161-1032 | AFHS1-37-30 | XA0318 | FP126 | TMS-75 | S-201 | TVL-1547 |
| C2 | 200 | 300 | 161-1033 | AFHS1-37-30 | B0332 | FP227.7 | TMT-165 | S-201 | RI557 * |
| C3 | 200 | 300 | 161-1035 | AFHS1-37-30 | B0332 | FP227.7 | TMT-165 | S-201 | RI557 * |
| C4 | 200 | 300 | 161-1035 | AFHS1-37-30 | B0332 | FP227.7 | TMT-165 | S-201 | RI557 * |
| C5A | 40 | 475 | 161-3026 | AFH3-50-07 | B0487 | FP476 | | T-197 | R2548 * |
| B | 10 | 350 | | | BRR20-25 | | | MT-0220 | |
| C | 20 | 25 | | | | | | | |
| C6 | 10 | 25 | 161-1000 | PRS25V10 | BRR10-25 | TC22 | TD-10-25 | MT-0210 | TVA-1204 |
| C7 | 4 | 350 | 161-1030 | PRS350V4 | BR435 | TC60 | TD-4-450 | MT-4504 | TVA-1601 |
| C8 | 4 | 50 | 161-1008 | PRS150V4 | BRR4-50 | TC30 | TD-4-50 | MT-0504 | TVA-1402 |
| C9A | 40 | 350 | 161-3025 | AFH3-110-50 | | FP342.7 | | D-182 | R2549 * |
| B | 20 | 350 | | | | | | MT-0250 | |
| C | 50 | 25 | | | | | | | |
| C10A | 20 | 475 | 161-3027 | AFH3-187-50 | | FP389.1 | | Q-070 | R2550 * |
| B | 10 | 150 | | | | TC2505 | | MTH-2550 | |
| C | 500 | 25 | | | | | | | |
| C11 | 10 | 500 | 161-1022 | PRS500V10 | BRI250 | TC82 | TD-10-500 | MT-5010 | TVA-1963 |
| C12 | 10 | 475 | 161-1028 | PRS500V10 | BRI250 | TC82 | TD-10-500 | MT-4710 | TVA-1802 |
| C13 | 10 | 25 | 161-1000 | PRS25V10 | BRR10-25 | TC22 | TD-10-25 | MT-0210 | TVA-1204 |
| C14 | 500 | 50 | 161-1031 | AFH1-13-05 | BR5005 | | TD-1000-6 | MTH-06100 | R2560 * |
| C15 | 500 | 6NP | 161-1034 | NP-PRS6V | BR1000-6 | TC610 | TD-1000-6 | MTH-06100 | RI324 * |
| | | | | 500 | BR1000-6 | TC610 | TD-1000-6 | MTH-06100 | |
| C16 | 4 | 350 | 161-1030 | PRS350V4 | BR435 | TC60 | TD-4-450 | MT-4504 | TVA-1601 |
| C17 | 30 | 10NP | 161-1040 | NP-PRS10V25 | BR6015 | TC1025 | | MT-0250 | R2553 * |

† Connect negative leads together.
* Non-catalog item.

FIXED CAPACITORS

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

| ITEM No. | RATING | | REPLACEMENT DATA | | | | | | | NOTES |
|----------|--------|-------|-------------------|------------------|--------------------|---------------------------|---------------|------------------|------------------|-------|
| | CAP. | VOLT. | SYLVANIA PART No. | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ERIE PART No. | MALLORY PART No. | SPRAGUE PART No. | |
| C18 | 5 | | | NPO-SI 5 | TCZ-4R7 | C10V5C | TCO-5 | ZT-555 | 5TCCB-V47 | |
| C19 | 5 | | | NPO-SI 5 | TCZ-4R7 | C10V5C | TCO-5 | ZT-555 | 5TCCB-V47 | |
| C20 | 47 | | | NPO-SI 47 | TCZ-47 | C10Q47C | TCO-47 | ZT-5447 | 5TCC-Q47 | |
| C21 | 10 | | | NPO-SI 10 | TCZ-10 | C10Q1C | TCO-10 | ZT-541 | 5TCC-Q1 | |
| C22 | 2.2 | | | NPO-SI 2.2 | TCZ-2R2 | C10V22C | TCO-2.2 | ZT-5547 | 5TCCB-V22 | |
| C23 | 4.7 | | | NPO-SI 4.7 | TCZ-4R7 | C10V47C | TCO-4.7 | ZT-5547 | 5TCCB-V47 | |
| C24 | 800 | | | BPD-0008 | DD-801 | LI0T8 | ED-0008 | | 5GA-T8 | |
| C25 | 2.2 | | | NPO-SI 2.2 | TCZ-2R2 | C10V22C | TCO-2.2 | ZT-5547 | 5TCCB-V22 ① | |
| C26 | 1.5 | | | NPO-SI 1.5 | TCZ-1R5 | C10V15C | TCO-1.5 | ZT-5515 | 5TCCB-V15 | |
| C27 | 800 | | | BPD-0008 | DD-801 | LI0T8 | ED-0008 | | 5GA-T8 | |
| C28 | 800 | | | BPD-0008 | DD-801 | LI0T8 | ED-0008 | | 5GA-T8 | |
| C29 | | | | | | | | | | |
| C30 | 1000 | | | EF-001 | MFT-1000 | | | | 503C-D1 | |
| C31 | 1000 | | | EF-001 | MFT-1000 | | | | 503C-D1 | |
| C32 | 120 | | | BPD-00012 | DD-121 | LI0T12 | ED-120 | UC-5312 | 5GA-T12 | |
| C33 | 1.8 | | | NPO-SI 1.5 | TCZ-1R5 | C10V15C | TCO-1.0 | | | |
| C34 | 1.2 | | | NPO-SI 1.0 | TCZ-1 | C10V15C | TCO-1.0 | | | |
| C35 | 59 | | | | | | | | | |
| C36 | | | | | | | | | | |
| C37 | 3.9 | | | | | | | | | |
| C38 | 800 | | | BPD-0008 | DD-801 | LI0T8 | ED-0008 | | | |
| C39 | | | | | | | | | | |

CAPACITORS (cont)

| ITEM No. | RATING CAP. VOLT | REPLACEMENT DATA | | | | | | | | | | NOTES |
|----------|------------------|-------------------|------------------|--------------------|---------------------------|---------------|------------------|------------------|--|--|--|-------|
| | | SYLVANIA PART No. | AEROVOX PART No. | CENTRALAB PART No. | CORNELL DUBILIER PART No. | ERIE PART No. | MALLORY PART No. | SPRAGUE PART No. | | | | |
| C53 | 1000 | 166-1000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC521 | 5HK-D1 | | | | |
| C54 | 1000 | 166-1000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC521 | 5HK-D1 | | | | |
| C55 | .047 | 200 | P288N-047 | DF-503 | CUB2847 | 2TM-547 | GEM-4147 | 5HK-D1 | | | | |
| C56 | 4700 | 166-4700D | BPD-0047 | DD-472 | BYA10D47 | ED-0047 | UC-5247 | 5HK-D47 | | | | |
| C57 | 4700 | 166-4700D | BPD-0047 | DD-472 | BYA10D47 | ED-0047 | UC-5247 | 5HK-D47 | | | | |
| C58 | .47 | 200 | P288N-47 | DF-503 | CUB2847 | 2TM-547 | GEM-4147 | 5HK-D1 | | | | |
| C59 | 4700 | 166-4700D | BPD-0047 | DD-472 | BYA10D47 | ED-0047 | UC-5247 | 5HK-D47 | | | | |
| C60 | 1000 | 166-1000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC521 | 5HK-D1 | | | | |
| C61 | 880 | 166-0680 | BPD-00068 | DD-681 | BYA10T68 | ED-680 | UC-5368 | 5GA-T68 | | | | |
| C62 | 4700 | 166-4700D | BPD-0047 | DD-472 | BYA10D47 | ED-0047 | UC-5247 | 5HK-D47 | | | | |
| C63 | 1000 | 166-1000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC521 | 5HK-D1 | | | | |
| C64 | 1000 | 166-1000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC521 | 5HK-D1 | | | | |
| C65 | 680 | 166-0680 | BPD-00068 | DD-681 | BYA10T68 | ED-680 | UC-5368 | 5GA-T68 | | | | |
| C66 | 1000 | 166-1000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC521 | 5HK-D1 | | | | |
| C67 | 4700 | 166-4700D | BPD-0047 | DD-472 | BYA10D47 | ED-0047 | UC-5247 | 5HK-D47 | | | | |
| C68 | 880 | 166-0680 | BPD-00068 | DD-681 | BYA10T68 | ED-680 | UC-5368 | 5GA-T68 | | | | |
| C69 | 270 | 166-0270N | SI 270 | D6-271 | LT6T27 | GP-270 | UC-5327 | 5GA-T27 | | | | |
| C70 | 1000 | 166-1000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC521 | 5HK-D1 | | | | |
| C71 | .47 | 200 | P288N-47 | DF-503 | CUB2847 | 2TM-547 | GEM-4147 | 5HK-D1 | | | | |
| C72 | .22 | 1000 | P288N-22 | DF-503 | CUB2847 | 2TM-547 | GEM-4147 | 5HK-D1 | | | | |
| C73 | 4700 | 166-4700D | BPD-0047 | DD-472 | BYA10D47 | ED-0047 | UC-5247 | 5HK-D47 | | | | |
| C74 | .1 | 200 | P288N-1 | DF-104 | CUB2P1 | 2TM-P1 | GEM-201 | 2TM-P1 | | | | |
| C75 | .001 | 200 | P288N-001 | D6-102 | CUB6D1 | GP-1000 | GEM-221 | 6TM-D1 | | | | |
| C76 | 120 | 166-0120 | 1469-00012 | D6-121 | 2R5T12 | ED-120 | GEM-2047 | 2TM-P47 | | | | |
| C77 | .47 | 200 | P288N-47 | DF-503 | CUB2847 | 2TM-547 | GEM-4147 | 5HK-D1 | | | | |
| C78 | .022 | 400 | P488N-022 | DD-203 | CUB4822 | ED-202 | GEM-4122 | 4TM-S22 | | | | |
| C79 | .47 | 200 | P288N-47 | DF-503 | CUB2847 | 2TM-547 | GEM-4147 | 5HK-D1 | | | | |
| C80 | 1.5 | 1000 | NPO-SI 1.5 | TCZ-1R5 | CTA6V15C | TCO-1.5 | 5GA-Q1 | 5TCOCB-V15 | | | | |
| C81 | 10 | 1000 | P288N-10 | D6-101 | CTA6Q10 | GP-1000 | UC-541 | 5TCOCB-V10 | | | | |
| C82 | 4.7 | 200 | P288N-4.7 | DF-503 | CTA6Q47 | TCO-4.7 | 5TCOCB-V47 | MS-222 | | | | |
| C83 | 2200 | 166-2200 | P288N-2200 | DF-503 | CTA6Q2200 | TCO-4.7 | 5TCOCB-V47 | MS-222 | | | | |
| C84 | 10000 | 166-10000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC521 | 5HK-S1 | | | | |
| C85 | 1000 | 166-1000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC521 | 5HK-S1 | | | | |
| C86 | 1000 | 166-1000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC521 | 5HK-S1 | | | | |
| C87 | 1000 | 166-1000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC521 | 5HK-S1 | | | | |
| C88 | .1 | 200 | P288N-1 | DF-104 | CUB2P1 | 2TM-P1 | GEM-201 | 2TM-P1 | | | | |
| C89 | .022 | 200 | P288N-022 | DD-203 | CUB4822 | ED-202 | GEM-4122 | 4TM-S22 | | | | |
| C90 | .0047 | 600 | P688N-0047 | D6-472 | CUB6D47 | GP-4700 | GEM-6247 | 6TM-D47 | | | | |
| C91 | 100 | 1000 | 1469-00100 | D6-101 | 5W5T100 | ED-100 | UC-531 | 1FM-S1 | | | | |
| C92 | .047 | 600 | P688N-047 | D6-472 | CUB6D47 | GP-4700 | GEM-6247 | 6TM-D47 | | | | |
| C93 | .0047 | 600 | P688N-0047 | D6-472 | CUB6D47 | GP-4700 | GEM-6247 | 6TM-D47 | | | | |
| C94 | .01 | 600 | P688N-01 | D6-103 | CUB6S1 | GP-10000 | GEM-611 | 6TM-S1 | | | | |
| C95 | 220 | 166-0220 | 1469-00022 | D6-221 | 5W5T22 | ED-220 | UC-5322 | 1FM-S22 | | | | |
| C96 | 3300 | 166-3300P | BPD-0033 | DD-332 | BYA10D33 | ED-0033 | GEM-201 | 2TM-P47 | | | | |
| C97 | .1 | 200 | P288N-1 | DF-104 | CUB2P1 | 2TM-P1 | GEM-201 | 2TM-P1 | | | | |
| C98 | .47 | 200 | P288N-47 | DF-104 | CUB2P47 | 2TM-P47 | GEM-2047 | 2TM-P47 | | | | |
| C99 | .1 | 200 | P288N-1 | DF-104 | CUB2P1 | 2TM-P1 | GEM-201 | 2TM-P1 | | | | |
| C100 | 1000 | 166-1000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC521 | 5HK-D1 | | | | |
| C101 | .0047 | 600 | P688N-0047 | D6-472 | CUB6D47 | GP-4700 | GEM-6247 | 6TM-D47 | | | | |
| C102 | 1022 | 400 | P488N-022 | DD-203 | CUB4822 | ED-202 | GEM-4122 | 4TM-S22 | | | | |
| C103 | 120 | 1000 | P288N-120 | D6-101 | CTA6Q120 | GP-10000 | GEM-611 | 6TM-S1 | | | | |
| C104 | .01 | 600 | P688N-01 | D6-103 | CUB6S1 | GP-10000 | GEM-611 | 6TM-S1 | | | | |
| C105 | .22 | 600 | P688N-22 | DF-503 | CUB6S47 | GP-4700 | GEM-611 | 6TM-S1 | | | | |
| C106 | .0047 | 600 | P688N-0047 | D6-472 | CUB6D47 | GP-4700 | GEM-6247 | 6TM-D47 | | | | |
| C107 | .22 | 600 | P688N-22 | DF-503 | CUB6S47 | GP-4700 | GEM-611 | 6TM-S1 | | | | |
| C108 | 1000 | 3000 | HVD-30-1000 | DD30-102 | HVB30T1 | HD3-1000 | DC3021 | 30GAB-P1 | | | | |
| C109 | .015 | 600 | P688N-015 | DD15-153 | CUB6S15 | ED-015 | GEM-611 | 6TM-S15 | | | | |
| C110 | .01 | 600 | P688N-01 | D6-103 | CUB6S1 | GP-10000 | GEM-611 | 6TM-S1 | | | | |
| C111 | 10000 | 166-10000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC511 | 5HK-S1 | | | | |
| C112 | .001 | 600 | P688N-001 | D6-103 | CUB6S1 | GP-10000 | GEM-611 | 6TM-S1 | | | | |
| C113 | .001 | 600 | P688N-001 | D6-103 | CUB6S1 | GP-10000 | GEM-611 | 6TM-S1 | | | | |
| C114 | .01 | 600 | P688N-01 | D6-103 | CUB6S1 | GP-10000 | GEM-611 | 6TM-S1 | | | | |
| C115 | .01 | 600 | P688N-01 | D6-103 | CUB6S1 | GP-10000 | GEM-611 | 6TM-S1 | | | | |
| C116 | .001 | 600 | P688N-001 | D6-103 | CUB6S1 | GP-10000 | GEM-611 | 6TM-S1 | | | | |
| C117 | .01 | 600 | P688N-01 | D6-103 | CUB6S1 | GP-10000 | GEM-611 | 6TM-S1 | | | | |
| C118 | .01 | 600 | P688N-01 | D6-103 | CUB6S1 | GP-10000 | GEM-611 | 6TM-S1 | | | | |
| C119 | 470 | 166-0470 | 1464-00047 | D6-471 | 5W5T47 | ED-470 | MS-347 | 5HK-S47 | | | | |
| C120 | .0047 | 600 | P688N-0047 | D6-472 | CUB6D47 | GP-4700 | GEM-6247 | 6TM-D47 | | | | |
| C121 | 470 | 166-0470 | 1464-00047 | D6-471 | 5W5T47 | ED-470 | MS-347 | 5HK-S47 | | | | |
| C122 | .1 | 600 | P688N-01 | D6-103 | CUB6S1 | GP-10000 | GEM-611 | 6TM-S1 | | | | |
| C123 | .01 | 600 | P688N-01 | DF-104 | CUB6P1 | 2TM-P1 | GEM-201 | 2TM-P1 | | | | |
| C124 | .22 | 600 | P688N-22 | DF-503 | CUB6P22 | 2TM-P22 | GEM-2022 | 2TM-P22 | | | | |
| C125 | .022 | 600 | P688N-022 | DF-503 | CUB6P22 | 2TM-P22 | GEM-2022 | 2TM-P22 | | | | |
| C126 | .047 | 600 | P688N-047 | DF-503 | CUB6P47 | 2TM-P47 | GEM-2047 | 2TM-P47 | | | | |
| C127 | 1200 | 15000 | 169-0041 | | | | | | | | | |
| C128 | 1200 | 15000 | 169-0041 | | | | | | | | | |
| C129 | 2000 | 30000 | 169-0042 | | | | | | | | | |
| C130 | 5000 | 12500 | 169-0045 | | | | | | | | | |
| C131 | .22 | 1000 | 169-0043 | | | | | | | | | |
| C132 | .22 | 1000 | 169-0043 | | | | | | | | | |
| C133 | 360 | 2000 | 174-0361 | | | | | | | | | |
| C134 | 360 | 2000 | 174-0361 | | | | | | | | | |
| C135 | 100 | 2500 | | | | | | | | | | |
| C136 | .047 | 200 | 166-06147 | | | | | | | | | |
| C137 | 220 | 166-0220 | 1469-00022 | | | | | | | | | |
| C138 | 10000 | 166-10000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC511 | 5HK-S1 | | | | |
| C139 | .01 | 400 | 166-0611 | | | | | | | | | |
| C140 | .01 | 400 | 166-0611 | | | | | | | | | |
| C141 | .01 | 400 | 166-0611 | | | | | | | | | |
| C142 | 1000 | 166-1000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC511 | 5HK-S1 | | | | |
| C143 | 82 | 166-0082N | 1464-001 | TCN-82 | CTA6Q82U | TC7-82 | GEM-4022 | 4TM-P22 | | | | |
| C144 | .22 | 400 | P488N-22 | DD-203 | CUB4822 | ED-202 | GEM-4122 | 4TM-S22 | | | | |
| C145 | 10000 | 166-10000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC511 | 5HK-S1 | | | | |
| C146 | 22000 | 166-22000D | BPD-002 | DD-203 | BYB6S2 | ED-202 | GEM-601 | 6TM-P1 | | | | |
| C147 | 1 | 600 | P688N-1 | DF-104 | CUB6P1 | 2TM-P1 | GEM-201 | 2TM-P1 | | | | |
| C148 | 39 | 166-0039 | P288N-39 | TCN-39 | CTA6Q39U | TC7-39 | GEM-601 | 6TM-P1 | | | | |
| C149 | 27 | 166-0027N | SI 27 | D6-180 | LT6Q18 | GP-18 | UC-5418 | 5GA-Q18 | | | | |
| C150 | .0047 | 200 | P288N-0047 | D6-472 | CUB6D47 | GP-4700 | GEM-6247 | 6TM-D47 | | | | |
| C151 | 10000 | 166-10000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC511 | 5HK-S1 | | | | |
| C152 | 10000 | 166-10000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC511 | 5HK-S1 | | | | |
| C153 | 10 | 166-0018 | 1464-00018 | SI 10 | LT6Q10 | GP-10 | UC-541 | 5GA-Q1 | | | | |
| C154 | 820 | 166-0820 | 1464-00082 | SI 18 | LT6Q18 | GP-18 | UC-5418 | 5GA-Q18 | | | | |
| C155 | 18 | 166-0018D | 1464-001 | TCN-82 | CTA6Q82U | TC7-82 | GEM-4022 | 4TM-P22 | | | | |
| C156 | 10000 | 166-10000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC511 | 5HK-S1 | | | | |
| C157 | 8.2 | 166-0019 | NPO-SI 8.2 | TCO-8.2 | CTA6Q82U | TC7-82 | GEM-4022 | 4TM-P22 | | | | |
| C158 | 10000 | 166-10000D | BPD-001 | DD-102 | BYA6D1 | ED-1000 | DC511 | 5HK-S1 | | | | |
| C159 | .022 | 600 | P288N-022 | DD-203</ | | | | | | | | |