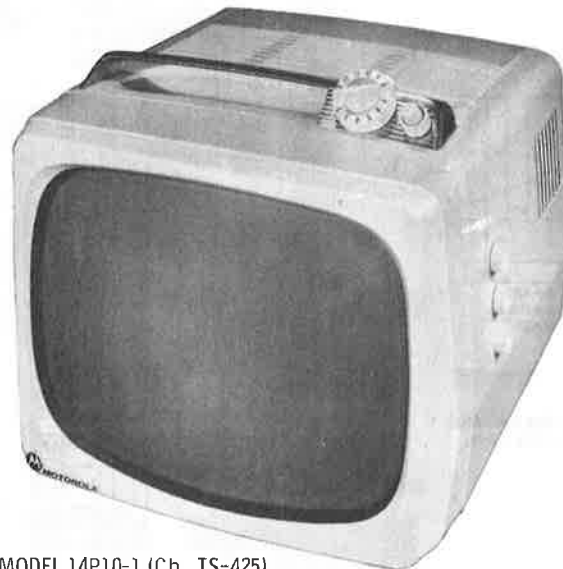




DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

1. Remove 4 push-on type control knobs from the top and 3 from the side.
2. Remove 3 metal screws and the rear cover.
3. Remove 2 speaker leads, picture tube socket, yoke plug and cabinet ground clip.
4. Remove 1 metal screw in the center of the chassis, directly above the yoke.
5. Remove 2 speaker nuts and the speaker.
6. Remove 2 chassis bolts from the bottom.
7. Partially remove the chassis. Remove the HV lead ; then remove the chassis.



MODEL 14P10-1 (Ch. TS-425)

CAUTION NOTE

ONE SIDE OF AC LINE CONNECTED TO CHASSIS

Care should be exercised when connecting test equipment or physically contacting the chassis.

MODELS

CHASSIS

Y14P10-1, Y14P10-2, Y14P11-1, Y14P11-2 ... TS-425Y
14P10-1, 14P10-2, 14P11-1, 14P11-2 TS-425

SERVICING IN THE FIELD

TUNER OSCILLATOR ADJUSTMENTS

Touch-up adjustment of the VHF oscillator is possible by removing the channel selector and fine tuning knobs. Set the fine tuning at the center of its range. The adjustments (located in a circle around the shaft) should be made in sequence from the highest to the lowest channel in the area. Channel 13 adjustment is located at 12 o'clock, proceed in a counter clockwise direction adjusting for best picture and sound.

PICTURE TUBE SAFETY GLASS CLEANING

Remove 2 metal screws from the bottom of the front. Swing front out at the bottom and up to remove.

FOCUS

The focus may be varied by the position of a strap on the base of the picture tube. The strap can be connected between pins 6 and 10 or 6 and 1. Readjust the ion trap for the best focus consistent with maximum brightness.

HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

For adjustment of the horizontal oscillator, it is necessary to remove the rear cover and supply power to set. Set the horizontal hold at the center of its range and adjust the horizontal frequency slug (B1) until the picture synchronizes horizontally. (For location see tube placement chart).

FUSES

A 5Ω fusible resistor (R93) is used for LV power supply protection. (For location, see tube placement chart).

CENTERING

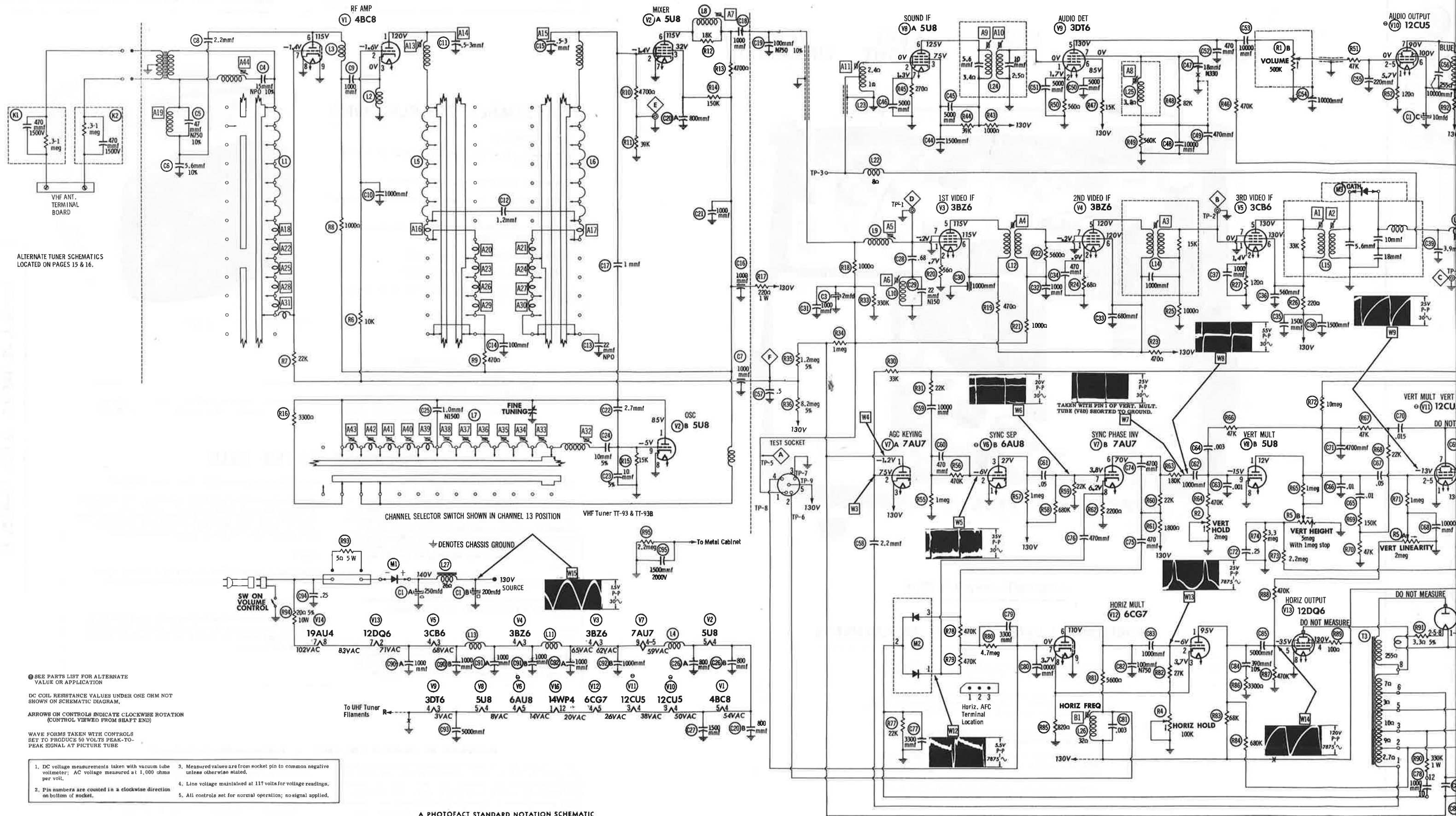
Centering is accomplished mechanically by adjusting two magnetic rings around the neck of the picture tube. Rotate the two rings around the neck of the tube until the picture is properly centered.

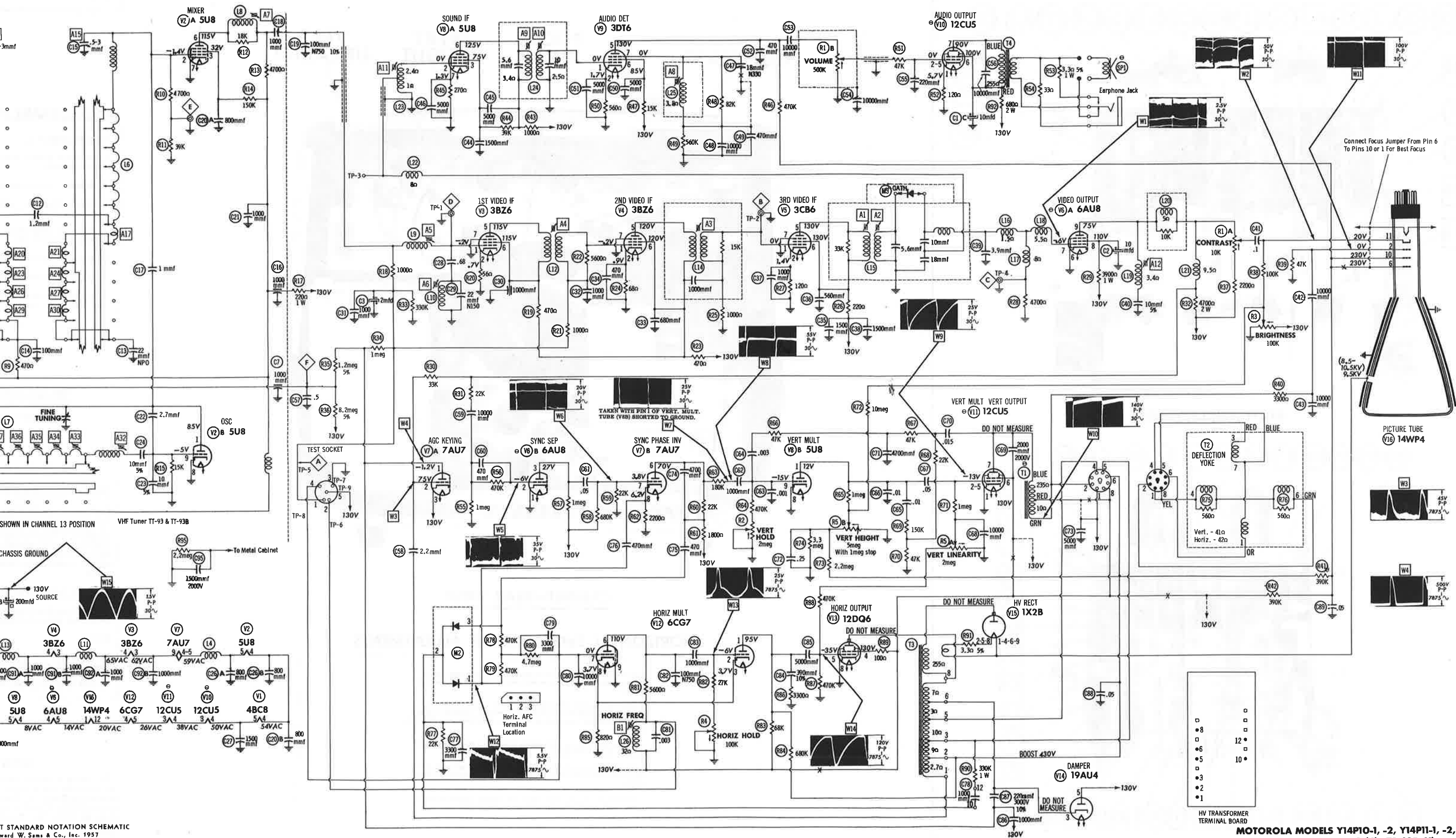
MOTOROLA MODELS Y14P10-1, -2, Y14P11-1, -2, 14P10-1, -2, 14P11-1, -2 (Ch. TS-425, Y)

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 H112

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. © 1957 Howard W. Sams & Co., Inc., Indianapolis 5, Indiana. Printed in U.S. of America

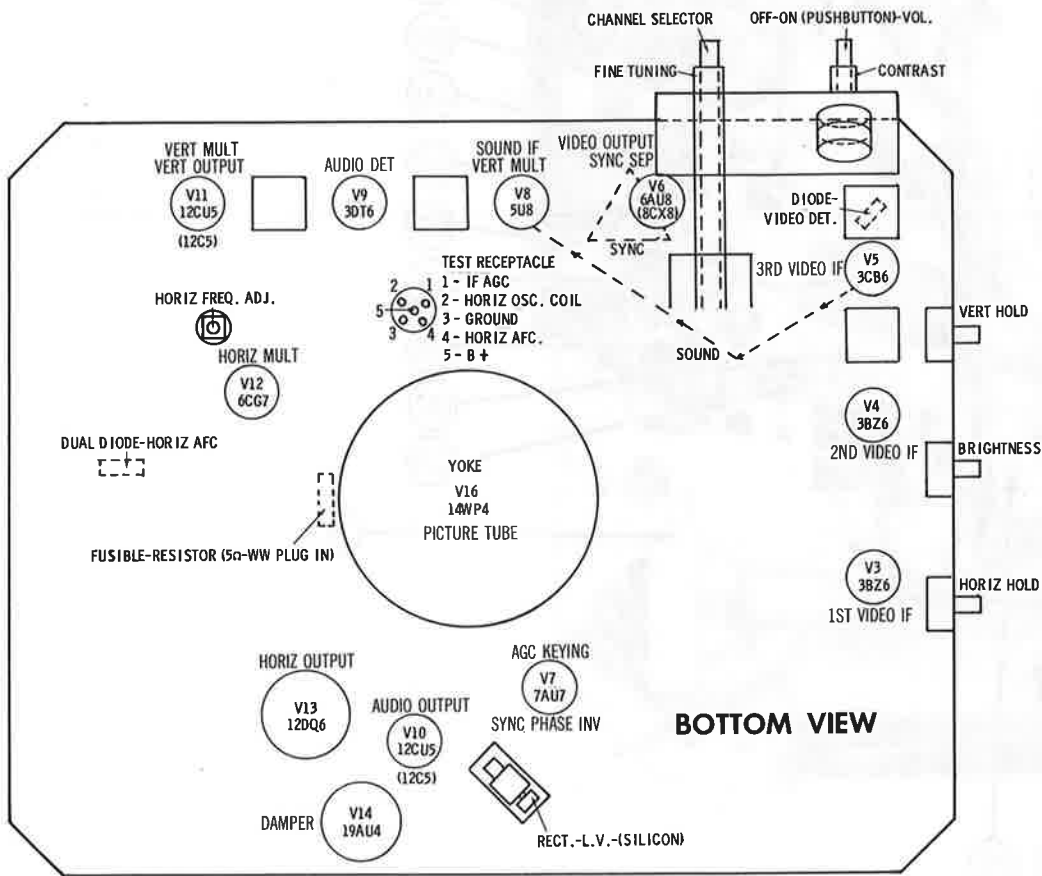




RESISTANCE MEASUREMENTS

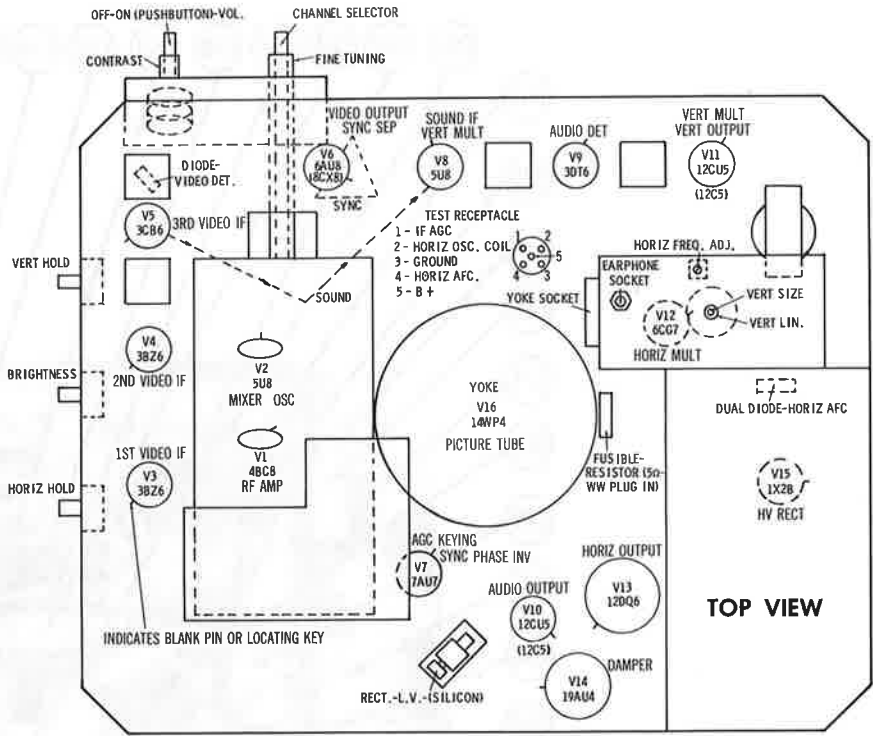
| ITEM | TUBE | Pin 1 | Pin 2 | Pin 3 | Pin 4 | Pin 5 | Pin 6 | Pin 7 | Pin 8 | Pin 9 |
|------|-------|--|----------|-----------------|------------------|------------------|--------------|--------|---------|-------------------|
| V1 | 4BC8 | † 700Ω | 1.8Meg | .1Ω | 13.5Ω | 12.5Ω | † 1200Ω | 1.8Meg | 0Ω | 0Ω |
| V2 | 5U8 | † 3500Ω | 44K | † 150K | 13.5Ω | 15Ω | † 4900Ω | 0Ω | 0Ω | 15K |
| V3 | 3BZ6 | 280K | 56Ω | 16Ω | 17Ω | † 960Ω | † 960Ω | 0Ω | | |
| V4 | 3BZ6 | 280K | 68Ω | 17Ω | 18Ω | † 500Ω | † 500Ω | 0Ω | | |
| V5 | 3CB6 | 1000Ω | 120Ω | 18Ω | 19Ω | † 250Ω | † 250Ω | 0Ω | | |
| V6 | 6AU8 | 0Ω | 1.5Meg | † 1Meg | 2Ω | 3.5Ω | 0Ω | 4700Ω | † 3900Ω | † 3300Ω |
| V7 | 7AU7 | 1.1Meg | † 35K | † 0Ω | 15Ω | 15Ω | † 24K | 20K | 2200Ω | 16Ω |
| V8 | 5U8 | 2.3Meg | 3.4Ω | † 40K | 2Ω | 1Ω | † 1000Ω | 270Ω | 0Ω | • 750K |
| V9 | 3DT6 | 2.5Ω | 560Ω | 1Ω | 0Ω | † 650K | † 15K | 560K | | |
| V10 | 12CU5 | 120Ω | 47K | 10Ω | 12.5Ω | 47K | † 700Ω | † 950Ω | | |
| V11 | 12CU5 | 0Ω | • 1.6Meg | 7.5Ω | 10Ω | • 1.6Meg | † 26Ω | † 260Ω | | |
| V12 | 6CG7 | † 320K | • 50K | 820Ω | 5Ω | 7.5Ω | † 5600Ω | 5Meg | 820Ω | 0Ω |
| V13 | 12DQ6 | TP | 19Ω | TP | † 126Ω | 390K | TP | 22Ω | 0Ω | TOP CAP † 7Ω |
| V14 | 19AU4 | NC | NC | 330K | TP | † 26Ω | TP | 25Ω | 22Ω | |
| V15 | 1X2B | PINS 1 THRU 9 HAVE INFINITE RESISTANCE | | | | | | | | TOP CAP † 262Ω |
| V16 | 14WP4 | 3.5Ω | 47K | PIN 6 † 250K | PIN 10 † 250K | PIN 11 • 110K | PIN 12 5Ω | | | |

† MEASURED FROM OUTPUT OF M1.
• THIS READING WILL VARY. CONTROL SET FOR NORMAL OPERATION.
† MEASURED FROM PIN 3 OF V14.
• THIS READING CAN VARY. CONTROL SET FOR NORMAL OPERATION.
TP TIE POINT
NC NO CONNECTION



TUBE PLACEMENT CHART

TUBE PLACEMENT CHART



TUBE FAILURE CHECK CHART

The following chart lists tubes whose failures are most likely to produce the indicated symptoms. Refer to tube placement chart for location and type of tube.

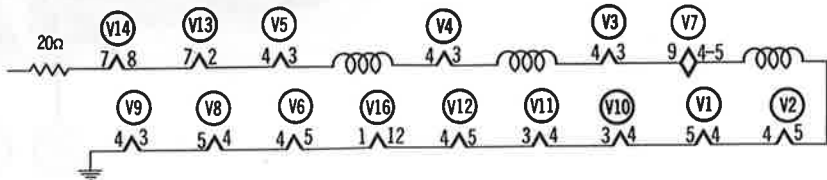
POWER SUPPLY FAILURE
No raster, no sound - Fusible Resistor (R93), Rectifier (M1)

LOSS OF PICTURE OR SOUND
No pic, no sound, has raster - V3, V4, V5, Diode (M3)
No pic, no sound, has snow - V1, V2, V3
No pic, has sound, has raster - V6, V16
Has pic, no sound - V8, V9, V10
Overloaded picture - V7

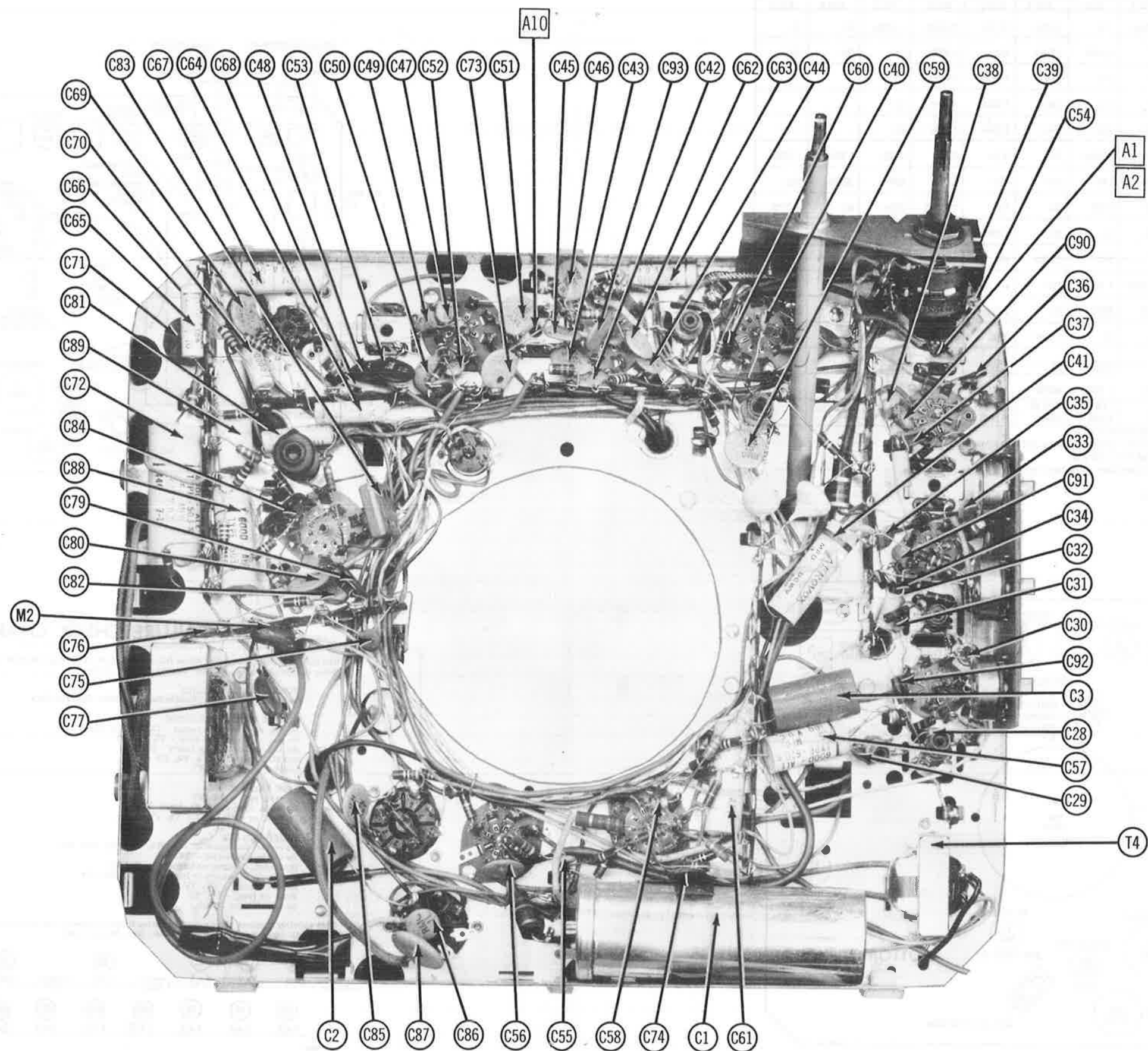
SYNC FAILURE
No vert. sync - V6, V7
No horiz. sync - V6, V7, Diode (M2)
No vert. or horiz. sync - V6, V7

SWEEP FAILURE
No raster, has sound - M2, V12, V13, V14, V15, V16
No vertical deflection - V8, V11
Poor vert. linearity or foldover - V8, V11
Poor horiz. linearity or foldover - V12, V13, V14
Narrow picture - V12, V13, V14, M1
Vert. off freq. - V8, V11
Horiz. off freq. - V12

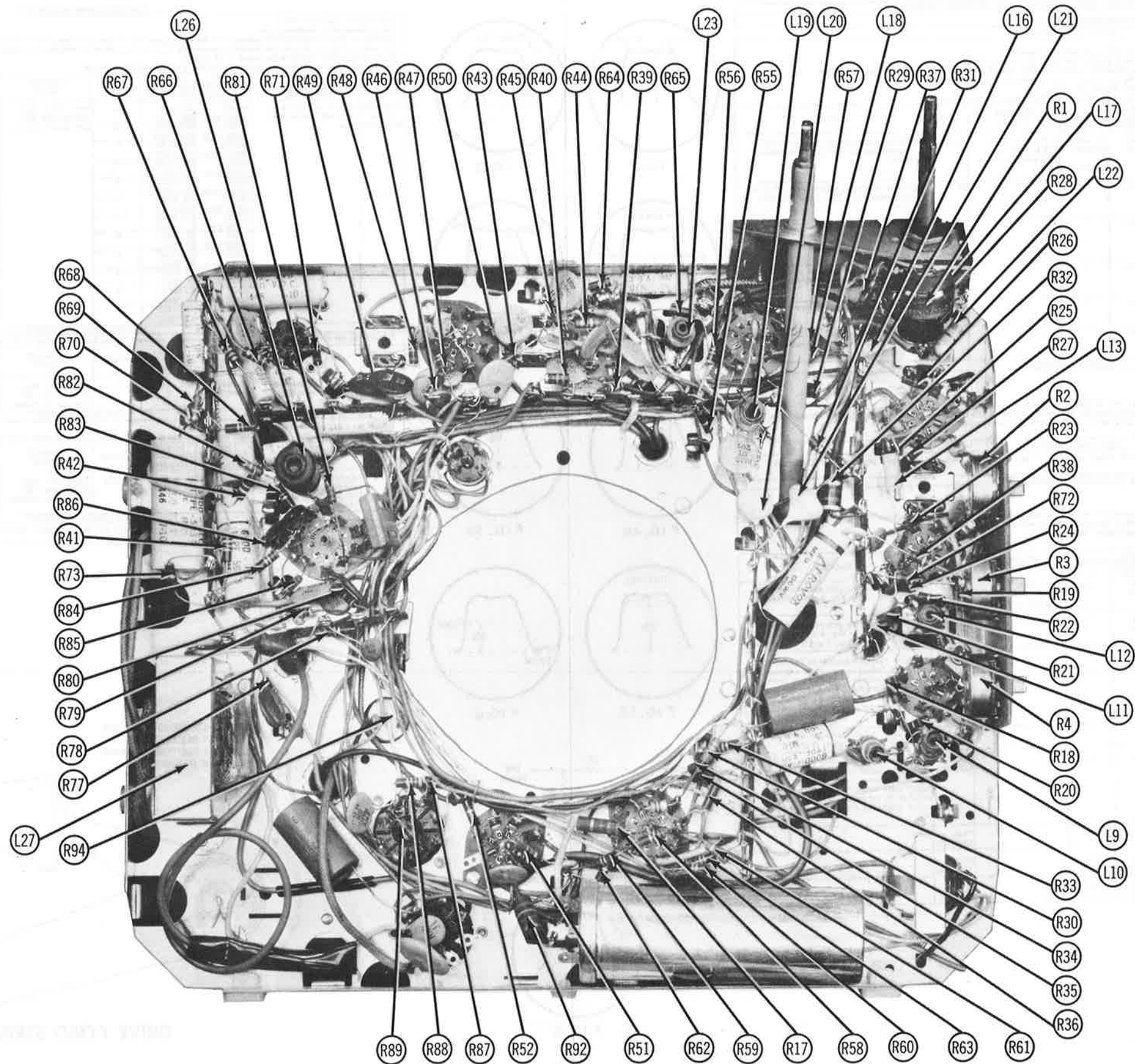
This receiver employs tubes used in a series filament network, an open filament in any tube in the series will cause the set to be inoperative. (See circuit below).



MOTOROLA MODELS Y14P10-1, -2, Y14P11-1, -2,
Y14P10-1, -2, Y14P11-1, -2 (Ch. TS-425, Y)



CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION



CHASSIS BOTTOM VIEW-RESISTOR AND INDUCTOR IDENTIFICATION

SET 369 FOLDER 14

MOTOROLA MODELS Y14P10-1, -2, Y14P11-1, -2,
14P10-1, -2, 14P11-1, -2 (Ch. TS-425, Y)

ALIGNMENT INSTRUCTIONS

| ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT | | | | | | |
|--|--|---------------------------|----------------------------|-----------------------------|--|--|
| USE AN ISOLATION TRANSFORMER TO PROTECT THE TEST EQUIPMENT. | | | | | | |
| VIDEO IF ALIGNMENT | | | | | | |
| Unplug the deflection yoke. Connect the negative lead of a 4.5 volt bias supply to point . Positive to chassis. Disable the tuner oscillator by connecting a short from pin 9 (grid) of the 5U8 (Y2) to tuner chassis. 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. Detune all slugs (A1 thru A7) by turning counter clockwise except A2 and A3. Turn these two clockwise. | | | | | | |
| DUMMY ANTENNA | SWEEP GENERATOR COUPLING | SWEEP GENERATOR FREQUENCY | MARKER GENERATOR FREQUENCY | CHANNEL | CONNECT SCOPE | REMARKS |
| 1. .001MFD | High side to point . Low side to chassis. | 44.0MC (10MC Swp) | 41.25MC 45.75MC | Any non-interfering channel | Vert. Amp. thru 47K to point . Low side to chassis. | A1, A2 Adjust for maximum gain and symmetry of response similar to Fig. 1 with markers as shown. |
| 2. " | High side to point . Low side to chassis. | " | 45.75MC | " | " | A3 Adjust for maximum gain and symmetry of response similar to Fig. 2 with markers as shown. |
| 3. " | " | " | 42.25MC | " | " | A4 Adjust for maximum gain and symmetry response similar to Fig. 2 with markers as shown. If curve is tilted retouch A1 and A2. |
| 4. " | High side to point . Low side to chassis. | " | 45.75MC | " | " | A5 Adjust for maximum gain and symmetry of response similar to Fig. 3 with markers as shown. |
| 5. " | " | " | 41.25MC | " | " | A6 Adjust to place 41.25MC marker in trap notch (See Fig. 3). |
| 6. " | " | " | 42.25MC | " | " | A7 Adjust for flat response (Fig. 3). If necessary, repeat steps 4, 5 and 6 to obtain desired response. |

SOUND IF ALIGNMENT

Plug deflection yoke back into socket.
Turn the set on and tune in a TV station.
Adjust all controls for a normal picture.
Using a strong TV signal, adjust A6 for maximum volume with MINIMUM distortion.
Reduce the signal strength by using an attenuator or disconnecting the antenna and adjust A9 and A10 for maximum sound and MINIMUM distortion.
Using the same weak signal (below limiting level of the 3DT6) adjust A11 for maximum sound and MINIMUM distortion.
If the sound is not clear at this point, repeat adjustments.

4.5MC TRAP ALIGNMENT

Tune in a strong TV signal and advance the contrast control. Check raster for 4.5MC beat interference in the picture. Adjust A12 for MINIMUM beat interference in the picture.

VHF RF AND MIXER ALIGNMENT

Unplug the deflection yoke.
Connect a short between point and chassis.
Remove the tuner cover.
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.
Preset A13, A14 and A15 at center of their range.

| DUMMY ANTENNA | SWEEP GENERATOR COUPLING | SWEEP GENERATOR FREQUENCY | MARKER GENERATOR FREQUENCY | CHANNEL | CONNECT SCOPE | ADJUST | REMARKS |
|------------------------------|--|---------------------------|----------------------------|---------|--|--------------------|--|
| 7. Two 120Ω Carbon Resistors | Across VHF antenna terminals with 120Ω in each lead. | 213MC (10MC Swp) | 211.25MC 215.75MC | 13 | Vert. Amp. thru 47K to point . Low side to chassis. | A13 | Adjust for maximum gain and symmetry of response similar to Fig. 4 with markers as shown. |
| 8. " | " | 177MC | 175.25MC 179.75MC | 7 | " | A14, A15 | Adjust for maximum gain and symmetry of response similar to Fig. 4 with markers as shown. Repeat steps 7 and 8, if necessary. |
| 9. " | " | 85MC (10MC Swp) | 83.25MC 87.75MC | 6 | " | *A16, *A17, A18 | Check for response similar to Fig. 5. If necessary, adjust in numerical sequence (by compressing or expanding coil turns). Adjust coils whose "A" numbers are preceded by (*) for proper marker positions. Adjust others for maximum gain and proper tilt. |
| 10. " | " | " | " | " | " | A19 | Adjust until A19 starts to pull down the marker on the sound side of curve. |
| 11. " | " | 79MC (10MC Swp) | 77.25MC 81.75MC | 5 | " | *A20, *A21, A22 | Check for response similar to Fig. 5. If necessary, adjust in numerical sequence (by compressing or expanding coil turns). Adjust coils whose "A" numbers are preceded by (*) for proper marker position. Adjust others for maximum gain and proper tilt. |
| 12. " | " | 69MC (10MC Swp) | 67.25MC 71.75MC | 4 | " | *A23, *A24, A25 | " |
| 13. " | " | 63MC (10MC Swp) | 61.25MC 65.75MC | 3 | " | *A26, *A27, A28 | " |
| 14. " | " | 57MC (10MC Swp) | 55.25MC 59.75MC | 2 | " | *A29, *A30, A31 | " |

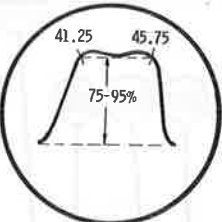


FIG. 1

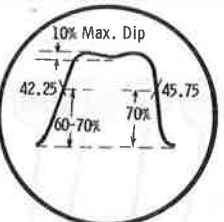


FIG. 2

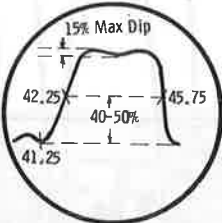


FIG. 3

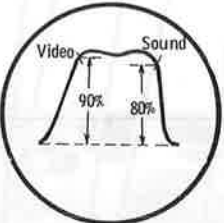


FIG. 4A

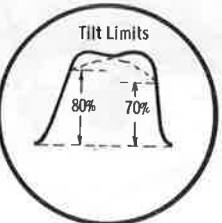


FIG. 4B

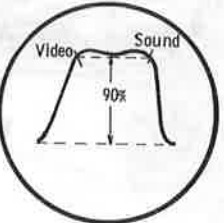


FIG. 5A

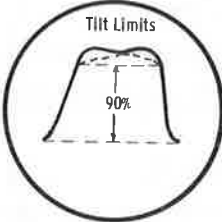


FIG. 5B

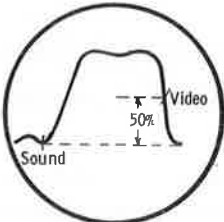


FIG. 6

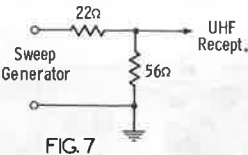


FIG. 7

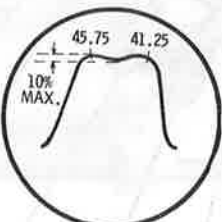


FIG. 8

VHF OSCILLATOR ALIGNMENT

| DUMMY ANTENNA | SWEEP GENERATOR COUPLING | SWEEP GENERATOR FREQUENCY | MARKER GENERATOR FREQUENCY | CHANNEL | CONNECT SCOPE | ADJUST | REMARKS |
|-------------------------------|--|---|---|--|--|--|---|
| 15. Two 120Ω Carbon Resistors | Across antenna terminals with 120Ω in each lead. | 213MC (10MC Swp) 207MC (10MC Swp) 201MC (10MC Swp) 195MC (10MC Swp) 189MC (10MC Swp) 183MC (10MC Swp) 177MC (10MC Swp) 171MC (10MC Swp) 165MC (10MC Swp) 159MC (10MC Swp) 153MC (10MC Swp) 147MC (10MC Swp) 141MC (10MC Swp) 135MC (10MC Swp) 129MC (10MC Swp) 123MC (10MC Swp) 117MC (10MC Swp) 111MC (10MC Swp) 105MC (10MC Swp) 99MC (10MC Swp) 93MC (10MC Swp) 87MC (10MC Swp) 81MC (10MC Swp) 75MC (10MC Swp) 69MC (10MC Swp) 63MC (10MC Swp) 57MC (10MC Swp) | 211.25MC 215.75MC 205.25MC 209.75MC 199.25MC 203.75MC 193.25MC 197.75MC 187.25MC 191.75MC 181.25MC 185.75MC 175.25MC 179.75MC 169.25MC 173.75MC 163.25MC 167.75MC 157.25MC 161.75MC 151.25MC 155.75MC 145.25MC 149.75MC 139.25MC 143.75MC 133.25MC 137.75MC 127.25MC 131.75MC 121.25MC 125.75MC 115.25MC 119.75MC 109.25MC 113.75MC 103.25MC 107.75MC 97.25MC 101.75MC 91.25MC 95.75MC 85.25MC 89.75MC 79.25MC 83.75MC 73.25MC 77.75MC 67.25MC 71.75MC 61.25MC 65.75MC 55.25MC 59.75MC | 13 12 11 10 9 8 7 6 5 4 3 2 | Vert. Amp. thru 47K to point . Low side to chassis. | A32 A33 A34 A35 A36 A37 A38 A39 A40 A41 A42 A43 | Adjust to place sound marker in trap notch as in Fig. 6. Video marker should fall at 50%. |

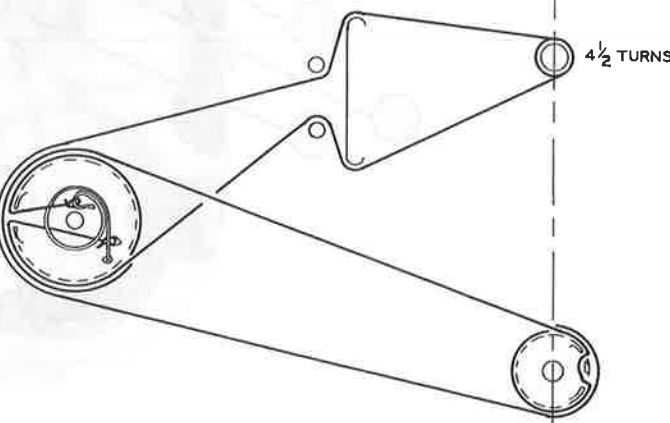
| 44.0MC TRAP ALIGNMENT | | | | | | |
|-------------------------------|--|---------------------------|----------------------------|---------|--|--|
| DUMMY ANTENNA | SWEEP GENERATOR COUPLING | SWEEP GENERATOR FREQUENCY | MARKER GENERATOR FREQUENCY | CHANNEL | CONNECT SCOPE | REMARKS |
| 16. Two 120Ω Carbon Resistors | Across VHF antenna terminals with 120Ω in each lead. | 44.0MC (10MC Swp) | Not used | 2 | Vert. Amp. thru 47K to point . Low side to chassis. | A44 Adjust until its effect is below the response curve for MINIMUM at interference frequency). |

| UHF IF ALIGNMENT | | | | | | |
|---|---|---------------------------|----------------------------|---------|--|--|
| Unplug the UHF tuner output cable from the VHF tuner. Connect the synchronized sweep voltage from the sweep 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 | REMARKS |
| 17. Fig. 7 | High side to UHF input receptacle thru network (Fig. 7). Low side to chassis. | 44.0MC (10MC Swp) | 41.25MC 45.75MC | UHF | Vert. Amp. thru 47K to point . Low side to chassis. | A45, A46, A47 Adjust A45 and A46 for proper marker positions and A47 for maximum gain and proper tilt. (Fig. 8). |

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.

START RE-STRINGING WITH LARGE UHF PULLEY IN MAX COUNTER-CLOCKWISE POSITION (AS VIEWED FROM FRONT OF TUNER).

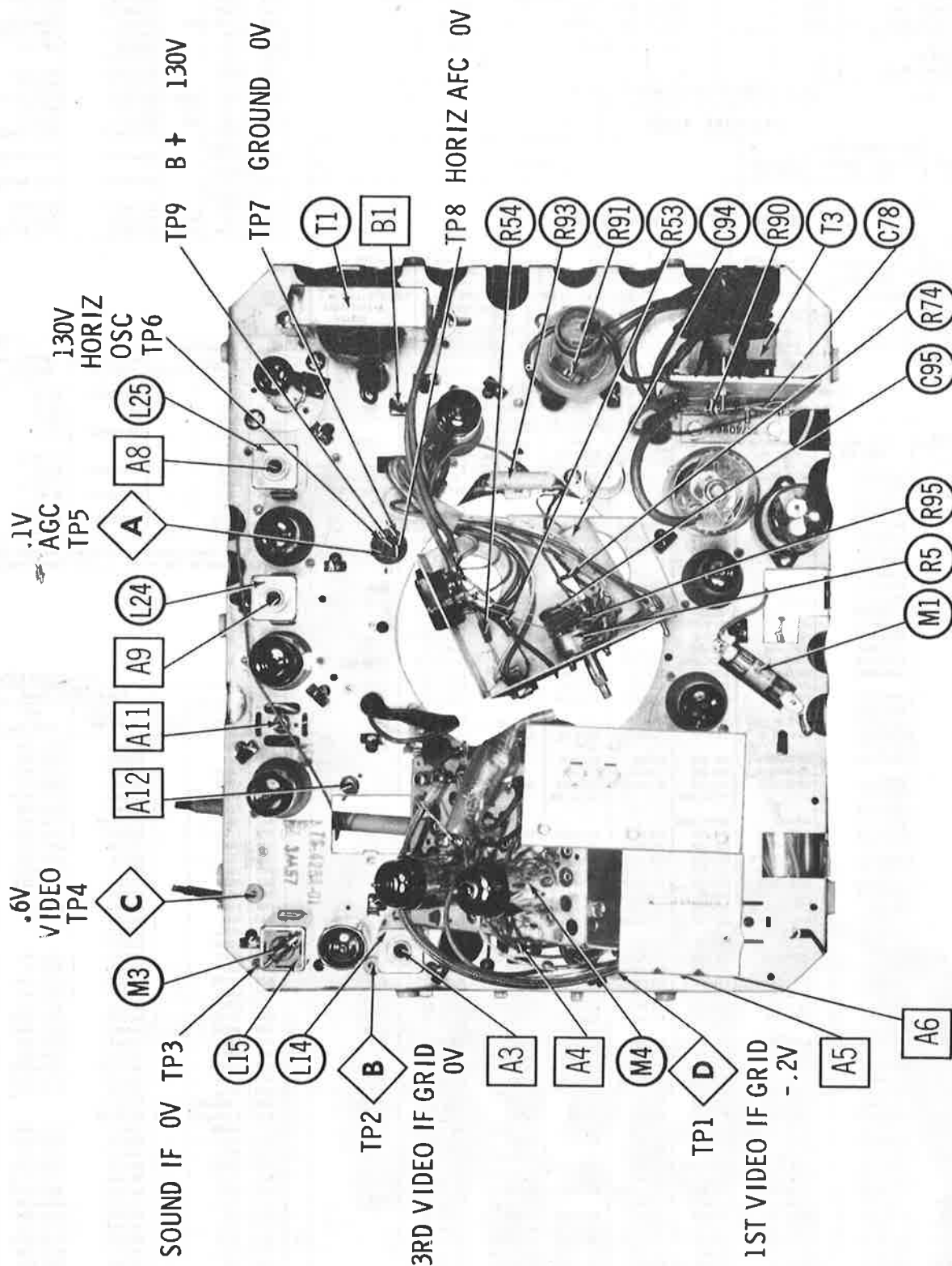


DRIVE CORD STRINGING

MOTOROLA MODELS Y14P10-1, -2, Y14P11-1, -2,
14P10-1, -2, 14P11-1, -2 (Ch. TS-425, Y)

**MOTOROLA MODELS Y14P10-1, -2, Y14P11-1, -2,
14P10-1, -2, 14P11-1, -2 (Ch. TS-425, Y)**

MAIN POL SISSVCH



TUBES (GENERAL ELECTRIC, SYLVANIA)

| ITEM No. | USE | TYPE | NOTES | ITEM No. | USE | TYPE | NOTES |
|----------|----------------------------|------|--------|----------|--------------------------|-------|--------|
| V1 | RF Amplifier | 4BC8 | | V9 | Audio Det. | 3DT8 | |
| V2 | Mixer-Osc. | 5U8 | | V10 | Audio Output | 12CU5 | Note 2 |
| V3 | 1st. Video IF Amp. | 3BZ6 | | V11 | Vert. Mult. -Vert Output | 12CU5 | Note 2 |
| V4 | 2nd. Video IF Amp. | 3BZ6 | | V12 | Horiz. Mult. | 8CE7 | |
| V5 | 3rd. Video IF Amp. | 3CB6 | | V13 | Horiz. Output | 12DQ6 | |
| V6 | Video Output-Sync Sep. | 6AU6 | Note 1 | V14 | Damper | 19AU4 | |
| V7 | AGC Keying-Sync Phase Inv. | 7AU7 | | V15 | HV Rectifier | 1X2B | |
| V8 | Sound IF-Vert Mult. | 5U8 | | | | | |

Note 1. A 8CX8 may be used in some versions.
Note 2. A 12C5 may be used in some versions.

PICTURE TUBE

| ITEM No. | REPLACEMENT DATA | NOTES |
|----------|---|-------|
| | MOTOROLA PART No. GENERAL ELECTRIC PART No. SYLVANIA PART No. | |
| V16 | 14WP4 | |

ELECTROLYTIC CAPACITORS

| ITEM No. | RATING | REPLACEMENT DATA | NOTES |
|----------|------------|--|-------|
| | CAP. VOLT. | MOTOROLA PART No. AEROVOX PART No. CORNELL-DUBILIER PART No. MALLORY PART No. PYRAMID PART No. SANGAMO PART No. SPRAGUE PART No. | |
| C1A | 250 150 | 23B740590 PR3-012 XCO129 WT302 CDB-T-1015 D-095 R2213 * | |
| B | 200 150 | | |
| C | 10 150 | 23K743900 PRS150V10 BBR10-150 TC42 TD-10-150 MT-1510 TVA-A-1408 | |
| C2 | 10 150 | 23A733205 PRS50V2 BBR2-50 TC302 TD-2-25 MT-0502 TVA-A-1201 | |

* 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. | MOTOROLA PART No. AEROVOX PART No. CENTRALAB PART No. CORNELL-DUBILIER PART No. ERIE PART No. MALLORY PART No. SPRAGUE PART No. | |
| C4 | 15 | 21R123331 NPD-SI 15 TCZ-15 C10Q5C TCO-15 5TCC-Q1 NPD 10% | |
| C5 | 47 | 21R114207 N750-SI 47 TCN-47 C10Q47U TC7-47 NT-5447 5TCU-Q47 NPD 10% | |
| C6 | 5.6 | 21A732738 EF-001 MFT-1000 C10V22C TCO-2.2 503C-D1 5TCCB-V22 | |
| C7 | 1000 | 21A739920 NPD-SI 2.2 TCZ-2R2 C10V22C TCO-2.2 503C-D1 5TCCB-V22 | |
| C8 | 2.2 | 21R115948 NPD-SI 2.2 TCZ-2R2 C10V22C TCO-2.2 503C-D1 5TCCB-V22 | |
| C9 | 1000 | 21R115386 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C10 | 1000 | 21R115386 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C11 | 1.5-3 | 21K735995 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C12 | 1.2 | 21R115958 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C13 | 1.2 | 21R124554 SI 100 D8-101 LT6T1 GP-100 UC-531 5GA-T1 NPD | |
| C14 | 100 | 21R120577 SI 100 D8-101 LT6T1 GP-100 UC-531 5GA-T1 NPD | |
| C15 | 5-3 | 21K735985 EF-001 MFT-1000 TCZ-1 TCO-1 503C-D1 5TCCB-V1 | |
| C16 | 1000 | 21A739920 NPD-SI 1.0 TCZ-1 TCO-1 503C-D1 5TCCB-V1 | |
| C17 | 1.0 | 21R114071 NPD-SI 1.0 TCZ-1 TCO-1 503C-D1 5TCCB-V1 | |
| C18 | 1000 | 21R115386 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C19 | 100 | 21R410036 N750-SI 100 TCN-100 C10T15U TC7-100 NT-531 5TCU-T1 N750 10% | |
| C20A | 800 | 21R400943 BPD-0008 DD-801 BYA8DI ED-800 DC521 5HK-DI | |
| B | 800 | 21R115386 BPD-0008 DD-801 BYA8DI ED-800 DC521 5HK-DI | |
| C22 | 1000 | 21R115386 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C23 | 2.7 | 21R110063 NPD-SI 10 TCZ-10 C10Q1C TCO-10 ZT-541 5TCC-Q1 5% | |
| C24 | 10 | 21R125698 NPD-SI 10 TCZ-10 C10Q1C TCO-10 ZT-541 5TCC-Q1 5% | |
| C25 | 1.0 | 21R124552 BPD-0008 DD-801 BYA8DI ED-800 DC521 5HK-DI | |
| C26A | 800 | 21R400943 BPD-0008 DD-801 BYA8DI ED-800 DC521 5HK-DI | |
| B | 800 | 21R115386 BPD-0008 DD-801 BYA8DI ED-800 DC521 5HK-DI | |
| C27 | 1500 | 21R120100 BPD-0008 DD-801 BYA8DI ED-800 DC521 5HK-DI | |
| C28 | .68 | 21R115965 BPD-0015 DD-152 BYA10D15 TCO-.68 5HK-D15 N1500 | |
| C29 | 22 | 21R120539 EF-001 MFT-1000 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C30 | 1000 | 21K739352 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C31 | 1000 | 21R115386 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C32 | 1000 | 21R115386 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C33 | 680 | 21R410124 BPD-0008 DD-471 BYA10T47 ED-470 UC-5347 5GA-T47 N150 | |
| C34 | 470 | 21K121787 BPD-0015 DD-152 BYA10D15 ED-152 DC5215 5HK-D15 | |
| C35 | 1500 | 21R120936 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C36 | 560 | 21R120936 BPD-0015 DD-152 BYA10D15 ED-152 DC5215 5HK-D15 | |
| C37 | 1000 | 21R410127 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C38 | 1500 | 21K122498 BPD-0015 DD-152 BYA10D15 ED-152 DC5215 5HK-D15 | |
| C39 | 3.9 | 21R115953 BPD-0015 DD-152 BYA10D15 ED-152 DC5215 5HK-D15 | |
| C40 | 10 | 21R124553 D8-100 C10Q1C TCO-10 ZT-541 5TCC-Q1 5% | |
| C41 | 1.0 | 21R124553 D8-100 C10Q1C TCO-10 ZT-541 5TCC-Q1 5% | |
| C42 | 1000 | 21R121946 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C43 | 1000 | 21R121946 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C44 | 1500 | 21R122498 BPD-0015 DD-152 BYA10D15 ED-152 DC5215 5HK-D15 | |
| C45 | 5000 | 21R115312 BPD-005 DD-502 BYA10D5 ED-505 DC525 5HK-D5 | |
| C46 | 5000 | 21R115312 BPD-005 DD-502 BYA10D5 ED-505 DC525 5HK-D5 | |
| C47 | 18 | 21R125631 BPD-001 DD-103 BYA8DI ED-103 DC511 5HK-S1 N330 | |
| C48 | 10000 | 21R121946 BPD-00047 DD-471 BYA10T47 ED-470 UC-5347 5GA-T47 | |
| C49 | 470 | 21R115312 BPD-005 DD-502 BYA10D5 ED-505 DC525 5HK-D5 | |
| C50 | 5000 | 21R115312 BPD-005 DD-502 BYA10D5 ED-505 DC525 5HK-D5 | |
| C51 | 5000 | 21R115312 BPD-005 DD-502 BYA10D5 ED-505 DC525 5HK-D5 | |
| C52 | 470 | 21R121797 BPD-00047 DD-471 BYA10T47 ED-470 UC-5347 5GA-T47 | |
| C53 | 10000 | 21R121946 BPD-001 DD-103 BYA8DI ED-103 DC511 5HK-S1 | |
| C54 | 10000 | 21R121946 BPD-001 DD-103 BYA8DI ED-103 DC511 5HK-S1 | |
| C55 | 220 | 21R121946 BPD-001 DD-103 BYA8DI ED-103 DC511 5HK-S1 | |
| C56 | 10000 | 21R121946 BPD-001 DD-103 BYA8DI ED-103 DC511 5HK-S1 | |
| C57 | 2.5 | 8K122076 P288N-5 TCZ-2R2 C10V22C TCO-2.2 503C-D1 5TCCB-V22 | |
| C58 | 2.2 | 21R115948 NPD-SI 2.2 TCZ-2R2 C10V22C TCO-2.2 503C-D1 5TCCB-V22 | |
| C59 | 10000 | 21R482726 BPD-001 DD-103 BYA8DI ED-103 DC511 5HK-S1 | |
| C60 | 470 | 21K121797 BPD-00047 DD-471 BYA10T47 ED-470 UC-5347 5GA-T47 | |
| C61 | .05 | 8R122185 BPD-005 DD-502 BYA10D5 ED-505 DC525 5HK-D5 | |
| C62 | 1000 | 21R410127 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C63 | .001 | 8K740910 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C64 | .003 | 8K738744 P488N-003 DD-302 CUB6D3 GP-3000 GEM-823 6TM-D3 | |
| C65 | .01 | 8K739259 BPD-001 DD-103 BYA8DI ED-103 DC511 5HK-S1 | |
| C66 | .01 | 8K739259 BPD-001 DD-103 BYA8DI ED-103 DC511 5HK-S1 | |
| C67 | .05 | 8R121567 BPD-005 DD-503 CUB4S5 GP-10000 GEM-411 4TM-S1 | |
| C68 | 10000 | 21R482726 BPD-001 DD-103 BYA8DI ED-103 DC511 5HK-S1 | |
| C69 | 2000 | 21R125699 BPD-001 DD-103 BYA8DI ED-103 DC511 5HK-S1 | |
| C70 | .015 | 8R122256 BPD-005 DD-502 BYA10D5 ED-505 DC525 5HK-D5 | |
| C71 | 4700 | 21R120149 BPD-0047 DD-471 BYA10T47 ED-470 UC-5347 5GA-T47 | |
| C72 | .25 | 8K122264 BPD-005 DD-502 BYA10D5 ED-505 DC525 5HK-D5 | |
| C73 | 5000 | 21A738298 BPD-0047 DD-471 BYA10T47 ED-470 UC-5347 5GA-T47 | |
| C74 | 4700 | 21K121797 BPD-00047 DD-471 BYA10T47 ED-470 UC-5347 5GA-T47 | |
| C75 | 470 | 21K121797 BPD-00047 DD-471 BYA10T47 ED-470 UC-5347 5GA-T47 | |
| C76 | 470 | 21K121797 BPD-00047 DD-471 BYA10T47 ED-470 UC-5347 5GA-T47 | |
| C77 | 3300 | 21R120422 BPD-0033 DD-332 BYA10D33 ED-333 UC-5233 5HK-D33 | |

PARTS LIST AND DESCRIPTIONS
CAPACITORS (cont)

| ITEM No. | RATING | REPLACEMENT DATA | NOTES |
|----------|------------|---|-------|
| | CAP. VOLT. | MOTOROLA PART No. AEROVOX PART No. CENTRALAB PART No. CORNELL-DUBILIER PART No. ERIE PART No. MALLORY PART No. SPRAGUE PART No. | |
| C78 | 1000 | 21R410127 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C79 | 3300 | 21R120422 BPD-0033 DD-332 BYA10D33 ED-333 UC-5233 5HK-D33 | |
| C80 | 10000 | 21R482726 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C81 | .003 | 8K740910 P288N-003 DD-302 CUB6D3 GP-3000 GEM-823 6TM-D3 | |
| C82 | 100 | 21R400537 N750-SI 100 TCN-100 C10T15U TC7-100 NT-531 5TCU-T1 N750 | |
| C83 | 1000 | 21R68653 1467-001 D8-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C84 | 300 | 21R738757 BPD-005 DD-502 BYA10D5 ED-505 DC525 5HK-D5 | |
| C85 | 5000 | 21A738298 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C86 | 1000 | 21R410127 BPD-001 DD-102 BYA8DI ED-1000 DC521 5HK-DI | |
| C87 | 220 | 21R125188 HVD-30-220 DD30-220 HVB30T22 HD3-220 | |
| C88 | .05 | 8R122288 BPD-05 DD-503 CUB6S5 GP-10000 GEM-411 4TM-S1 | |
| C89 | .05 | 8R122288 BPD-05 DD-503 CUB6S5 GP-10000 GEM-411 4TM-S1 | |
| C90A | 1000 | 21R400937 BPD-2X001 DD2-102 BYC8DD1 ED2-001 DCD521 5HK-2D1 | |
| B | 1000 | 21R400937 BPD-2X001 DD2-102 BYC8DD1 ED2-001 DCD521 5HK-2D1 | |
| C91A | 1000 | 21R400937 BPD-2X001 DD2-102 BYC8DD1 ED2-001 DCD521 5HK-2D1 | |
| B | 1000 | 21R400937 BPD-2X001 DD2-102 BYC8DD1 ED2-001 DCD521 5HK-2D1 | |
| C92A | 1000 | 21R400937 BPD-2X001 DD2-102 BYC8DD1 ED2-001 DCD521 5HK-2D1 | |
| B | 1000 | 21R400937 BPD-2X001 DD2-102 BYC8DD1 ED2-001 DCD521 5HK-2D1 | |
| C93 | 5000 | 21A738298 BPD-005 DD-502 BYA10D5 ED-505 DC525 5HK-D5 | |
| C94 | .25 | 8R121788 BPD-25 DD-503 CUB4P25 GP-4000 GEM-4025 4TM-P25 | |
| C95 | 1500 | 21R124121 HVD-30-1500 DD30-152 HVD20D15 HD3-1500 DC30215 | |

CONTROLS

| ITEM No. | RATING | REPLACEMENT DATA | INSTALLATION NOTES |
|----------|------------------|---|-----------------------------|
| | RESISTANCE WATTS | MOTOROLA PART No. CENTRALAB PART No. CLAROSTAT PART No. IRC PART No. MALLORY PART No. | |
| R1A | 10K | 18B742673 F1-23 RTV-628 Not Req. A47-2Meg-5 | Contrast Volume |
| B | 500K | R2-41 Not Req. A47-2Meg-5 | Volume |
| C | Switch | KB-1 Not Req. A47-2Meg-5 | Vert. Hold |
| R2A | 2Meg | B-75 Not Req. A47-2Meg-5 | Vert. Hold |
| B | Shaft | Not Req. K88-3 A47-100K-8 | Brightness |
| R3A | 100K | Not Req. K88-3 A47-100K-8 | Brightness |
| B | Shaft | Not Req. K88-3 A47-100K-8 | Brightness |
| R4A | 100K | Not Req. K88-3 A47-100K-8 | Horiz. Hold |
| B | Shaft | Not Req. K88-3 A47-100K-8 | Horiz. Hold |
| R5A | 2Meg | Not Req. K88-3 A47-100K-8 | Vert. Height With 1Meg Stop |
| B | 5Meg | Not Req. K88-3 A47-100K-8 | Vert. Height With 1Meg Stop |

* Use a 1Meg resistor in series with the right hand terminal.
* Concentric Equivalent, K-5 Kit Base Elements & Shafts, BU-139, P9-021 (Panel) BU-141, RU-028 (Rear) *

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | RATING | REPLACEMENT DATA | NOTES |
|----------|-----------|--------------------------------|-------|
| | OHMS WATT | MOTOROLA PART No. IRC PART No. | |
| R7 | 10K | 8R6054 BTS-10K | |
| R8 | 22K | 8R6028 BTS-22K | |
| R9 | 1000Ω | 8R6229 BTS-1000 | |
| R10 | 470Ω | 8R3949 BTS-470 | |
| R11 | 4700Ω | 8R6039 BTS-4700 | |
| R12 | 39K | 8R6487 BTS-39K | |
| R13 | 18K | 8K122488 BTS-18K | |
| R14 | 4700Ω | 8R6039 BTS-4700 | |
| R15 | 15K | 8R3998 BTS-15K | |
| R16 | 3300Ω | 8R6219 BTS-3300 | |
| R17 | 220Ω | 8R3989 BTS-220 | |
| R18 | 1000Ω | 8R6229 BTS-1000 | |
| R19 | 470Ω | 8R3949 BTS-470 | |
| R20 | 560 | 8R5614 BTS-56 | |
| R21 | 1000Ω | 8R6229 BTS-1000 | |
| R22 | 5600Ω | 8R6017 BTS-5600 | |
| R23 | 470Ω | 8R3949 BTS-470 | |
| R24 | 680 | 8R2039 BTS-680 | |
| R25 | 1000Ω | 8R6229 BTS-1000 | |
| R26 | 220Ω | 8R3933 BTS-220 | |
| R27 | 47K | 8R5551 BTS-47K | |
| R28 | 4700Ω | 8R6080 BTS-4700 | |
| R29 | 3900Ω | 8R5618 BTS-3900 | |
| R30 | 33K | 8R6012 BTS-33K | |
| R31 | 22K | 8R6387 BTS-22K | |
| R32 | 4700Ω | 8K119928 BTS-4700 | |
| R33 | 330K | 8R2096 BTS-330K | |
| R34 | 1Meg | 8R6046 BTS-1Meg | |
| R35 | 1.2Meg | 8K124485 BTS-1.2Meg | |
| R36 | 1.2Meg | 8K125684 BTS-1.2Meg | |
| R37 | 2200Ω | 8R6080 BTS-2200 | |
| R38 | 100K | 8R6075 BTS-100K | |
| R39 | 47K | 8R6048 BTS-47K | |
| R40 | 3300Ω | 8R5581 BTS-3300 | |
| R41 | 390K | 8R5946 BTS-390K | |
| R42 | 390K | 8R5946 BTS-390K | |
| R43 | 1000Ω | 8R6229 BTS-1000 | |
| R44 | 39K | 8R6487 BTS-39K | |
| R45 | 270Ω | 8R6432 BTS-270 | |
| R46 | 470K | 8R6032 BTS-470K | |
| R47 | 15K | 8R5477 BTS-15K | |
| R48 | 82K | 8R5644 BTS-82K | |
| R49 | 560K | 8R6097 BTS-560K | |
| R50 | 560Ω | 8R6291 BTS-560 | |

TRANSFORMERS (SWEEP CIRCUITS)

| ITEM No. | USE | REPLACEMENT DATA | | | | | | | |
|----------|---------------------------------|-------------------|---------------------|----------------|--------------|--------------|------------------|---------------------|----------------|
| | | MOTOROLA PART No. | Halldorson PART No. | Merit PART No. | RCA TYPE No. | Ram PART No. | Stancor PART No. | Thordarson PART No. | Triad PART No. |
| T1 | Vert Output | 25B741322-A | Z1800 ①② | A-2821 | | V314 | A-8147 | 26875 ①② | A-108X ①③ |
| T2 | Alt. Vert Output | 24B741322 | | | | | | | |
| M5 | Yoke-Horiz. (24MB) | 24D740942 | DF-610 ④ | MDF-92④ | 235DI ④⑤ | Y90F18/43 ④⑤ | DY-16A④ ⑤ | Y-16 ③⑤ | Y-41 & NW1 ④ |
| | (90°)-Vert (40MH) | | | | | | | | |
| | Rear cover and Centering Device | 48A721145 | | | | | | | YC1 |
| | Yoke Clamp | 42A738175 | | | | | | | CL1 |
| T3 | Yoke Wedge | 42A738257 | | | | | | | |
| | Horiz. Output | 24C742876 ⑥ | | | | | | | |
| | Primary Coll | 24C742874 | | | | | | | |
| | Secondary Coll | 24C742047 | | | | | | | |

PARTS LIST AND DESCRIPTIONS
CAPACITORS (cont)

| ITEM No. | VOLT | REPLACEMENT DATA | | | | | | NOTES |
|----------|------|-------------------|------------------|--------------------|---------------------------|---------------|------------------|----------|
| | | MOTOROLA PART No. | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ERIE PART No. | MALLORY PART No. | |
| 200 | | 21R410127 | BPD-001 | DD-102 | BYA8D1 | ED-1000 | DC521 | 5HK-D1 |
| | | 21R120422 | BPD-003 | D6-332 | BYA10D33 | ED-0033 | UC-5233 | 5HK-D33 |
| | | 21R402726 | BPD-01 | DD-103 | BYA8D1 | ED-01 | DC511 | 5HK-S1 |
| | | 8K740011 | P288N-003 | D6-302 | CUB8D3 | GP-3000 | GEM-823 | 8TM-D3 |
| | | 21R400537 | N780-S1 100 | TCN-100 | C1071U | TC7-100 | NT-531 | 5TCU-T1 |
| | | 21R6663 | 1467-001 | D6-102 | 1W5D1 | ED-1000 | DC521 | 1FM-21 |
| | | 21B735757 | | D6-301 | L10739 | ED-390 | MS-339 | MS-339 |
| | | 21A732998 | BPD-005 | DD-502 | BYA10D5 | ED-005 | DC525 | 5HK-D5 |
| | | 21R410127 | BPD-001 | DD-102 | BYA8D1 | ED-1000 | DC521 | 5HK-D1 |
| | | 31R125168 | HVD-30-220 | DD30-220 | HVB30T22 | HD3-220 | DC30322 | 30GA-T22 |
| 3000 | | 800 | 8R122288 | BPD-05 | DF-503 | CUB885 | GEM-815 | 6TM-S5 |
| | | 800 | 8R122288 | BPD-05 | DF-503 | CUB885 | GEM-815 | 6TM-S5 |
| | | 800 | 8R122288 | BPD-05 | DF-503 | CUB885 | GEM-815 | 6TM-S5 |
| | | 800 | 8R122288 | BPD-05 | DF-503 | CUB885 | GEM-815 | 6TM-S5 |
| 400 | | 21R400937 | BPD-2X001 | DD2-102 | BYC8D1 | ED2-001 | DCD521 | 5HK-2D1 |
| | | 21R400937 | BPD-2X001 | DD2-102 | BYC8D1 | ED2-001 | DCD521 | 5HK-2D1 |
| 2000 | | 21A738298 | BPD-005 | DD-502 | BYA10D5 | ED-005 | DC525 | 5HK-D5 |
| | | 21R121788 | P488N-25 | DD30-152 | HVD20D15 | HD3-1500 | DC30215 | 4TM-P25 |
| 2000 | | 21R124121 | HVD-30-1500 | DD30-152 | HVD20D15 | HD3-1500 | DC30215 | 4TM-P25 |
| | | 21R124121 | HVD-30-1500 | DD30-152 | HVD20D15 | HD3-1500 | DC30215 | 4TM-P25 |

CONTROLS

| ITEM No. | WATTS | REPLACEMENT DATA | | | | | INSTALLATION NOTES |
|----------|-------|-------------------|--------------------------------|---------------------------------------|---------------------|-------------------|---|
| | | MOTOROLA PART No. | CENTRALAB PART No. | CLAROSTAT PART No. | IRC PART No. | MALLORY PART No. | |
| 1 | | 18B742073 | F1-33 R2-41 KB-1 B-75 | RTV-628 Not Req. A47-2Meg- S | Not Req. Q11-139 | Not Req. TA26L | Contrast Volume |
| | | 18K740882 | Not Req. B-40 | K38-3 A47-100K-8 | Not Req. Q11-128 | Not Req. TA15L | Vert. Hold |
| | | 18C740880 | Not Req. B-40 | K38-3 A47-100K-8 | Not Req. Q11-128 | Not Req. TA15L | Brightness |
| | | 18C740880 | Not Req. B-40 | K38-3 A47-100K-8 | Not Req. Q11-128 | Not Req. TA15L | Horiz. Hold |
| | | 18B741520 | Not Req. F1-87 R2-83 * | K38-3 Not Req. | Not Req. UE1891 | Not Req. | Vert. Lin. Vert. Height With 1Meg Stop |

leg resistor in series with the right hand terminal.

*Kit Equivalent, K-5 Kit Base Elements & Shafts, BU-139, P9-021 (Panel)
BU-141, RU-028 (Rear) *

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

| ITEM No. | WATT | REPLACEMENT DATA | | NOTES |
|----------|------|-------------------|--------------|-------|
| | | MOTOROLA PART No. | IRC PART No. | |
| 1 | | 6R6054 | BTS-10K | |
| | | 6R6028 | BTS-22K | |
| | | 6R6229 | BTS-1000 | |
| | | 6R3949 | BTS-470 | |
| | | 6R6039 | BTS-4700 | |
| | | 6R6487 | BTS-39K | |
| | | 6K122848 | BTS-18K | |
| | | 6R6039 | BTS-4700 | |
| | | 6R6398 | BTS-150K | |
| | | 6R2119 | BTS-15K | |
| 2 | | 6R5581 | BTS-3300 | |
| | | 6R6389 | BTA-220 | |
| | | 6R6229 | BTS-470 | |
| | | 6R5614 | BTS-56 | |
| | | 6R6229 | BTS-470 | |
| | | 6R6017 | BTS-68 | |
| | | 6R2039 | BTS-1000 | |
| | | 6R3923 | BTS-220 | |
| | | 6R5551 | BTS-120 | |
| | | 6R6080 | BTS-4700 | |
| 3 | | 6R5618 | BTA-3900 | |
| | | 6R6012 | BTS-33K | |
| | | 6R6397 | BTS-22K | |
| | | 6K119928 | BTA-4700 | |
| | | 6R2096 | BTS-330K | |
| | | 6R6046 | BTS-1Meg | |
| | | 6K124495 | BTS-2200 | |
| | | 6K126984 | BTS-100K | |
| | | 6R6075 | BTS-100K | |
| | | 6R6048 | BTS-47K | |
| 4 | | 6R5581 | BTS-3300 | |
| | | 6R5646 | BTS-390K | |
| | | 6R5646 | BTS-390K | |
| | | 6R6229 | BTS-1000 | |
| | | 6R6487 | BTS-39K | |
| | | 6R6432 | BTS-270 | |
| | | 6R6052 | BTS-470K | |
| | | 6R6477 | BTS-15K | |
| | | 6R6444 | BTS-82K | |
| | | 6R6597 | BTS-560K | |
| 5 | | 6R6281 | BTS-560 | |
| | | 6R6056 | BTS-47K | |
| | | 6R5551 | BTS-120 | |
| | | 17K486412 | BTS-33 | |
| | | 6R2036 | BTS-1Meg | |
| | | 6R6229 | BTS-470K | |
| | | 6R6377 | BTS-1Meg | |
| | | 6R6046 | BTS-680K | |
| | | 6R6475 | BTS-22K | |
| | | 6R6397 | BTS-22K | |
| 6 | | 6R6048 | BTS-1800 | |
| | | 6R6069 | BTS-2200 | |
| | | 6R6444 | BTS-180K | |
| | | 6R6377 | BTS-470K | |
| | | 6R6046 | BTS-1Meg | |
| | | 6R6048 | BTS-47K | |
| | | 6R6397 | BTS-22K | |
| | | 6R6398 | BTS-150K | |
| | | 6K125892 | BTS-47K | |
| | | 6R6046 | BTS-1Meg | |
| 7 | | 6K125811 | BTS-10Meg | |
| | | 6R3927 | BTS-2.2Meg | |
| | | 6R2118 | BTS-3.3Meg | |
| | | 6K122802 | BTS-2.2Meg | |
| | | 6K122802 | BTS-2.2Meg | |
| | | 6R7397 | BTS-470K | |
| | | 6R6377 | BTS-47K | |
| | | 6R6377 | BTS-22K | |
| | | 6R6398 | BTS-150K | |
| | | 6R6047 | BTS-47K | |
| 8 | | 6R6047 | BTS-1Meg | |
| | | 6R6047 | BTS-10Meg | |
| | | 6R6047 | BTS-2.2Meg | |
| | | 6R6047 | BTS-3.3Meg | |
| | | 6R6047 | BTS-470K | |
| | | 6R6047 | BTS-470K | |
| | | 6R6047 | BTS-470K | |
| | | 6R6047 | BTS-470K | |
| | | 6R6047 | BTS-470K | |
| | | 6R6047 | BTS-470K | |
| 9 | | 6R6047 | BTS-470K | |
| | | 6R6047 | BTS-470K | |
| | | 6R6047 | BTS-470K | |
| | | 6R6047 | BTS-470K | |
| | | 6R6047 | BTS-470K | |
| | | 6R6047 | BTS-470K | |
| | | 6R6047 | BTS-470K | |
| | | 6R6047 | BTS-470K | |
| | | 6R6047 | BTS-470K | |
| | | 6R6047 | BTS-470K | |
| 10 | | 6R6047 | BTS-470K | |
| | | 6R6047 | BTS-470K | |
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| | | 6R6047 | BTS-470K | |
| | | 6R6047 | BTS-470K | |
| | | 6R6047 | BTS-470K | |
| | | 6R6047 | BTS-470K | |

TRANSFORMERS (SWEEP CIRCUITS)

| ITEM No. | USE | REPLACEMENT DATA | | | | | | | |
|----------|---|-------------------|---------------------|----------------|--------------|--------------|------------------|---------------------|----------------|
| | | MOTOROLA PART No. | Holldorson PART No. | Merit PART No. | RCA TYPE No. | Ram PART No. | Stancor PART No. | Thordarson PART No. | Triad PART No. |
| T1 | Vert Output | 25B741322-A | Z1900 ①② | A-2821 | | V314 | A-8147 | 26875 ①② | A-108X ①③ |
| T2 | Alt. Vert Output | 24B741322 | DF-610 ② | MDF-92 ② | 235D1 ③④ | Y90F19/43 ④⑤ | Y-16A ④ | Y-16 ④⑤ | Y-41 & NW1 ④ |
| M5 | (90)-Vert (40MH) Rear cover and Centering Device | 48A721146 | | | | | | | YCI CL1 |
| T3 | Yoke Clamp | 42A738175 | | | | | | | |
| | Yoke Wedge | 42A738287 | | | | | | | |
| | Horiz. Output | 24C742878 ③ | | | | | | | |
| | Primary Coll | 24C742874 | | | | | | | |
| | Secondary Coll | 24C742047 | | | | | | | |

- ① Connect as auto transformer.
② Use 6 to 1 turn ratio.
③ Drill new mounting hole (a).
④ Connect same as original.
⑤ Use original rear cover and centering device.
⑥ Complete assembly.

TRANSFORMER (AUDIO OUTPUT)

| ITEM No. | IMPEDANCE | REPLACEMENT DATA | | | | | | NOTES |
|----------|------------|-------------------|---------------------|----------------|------------------|---------------------|----------------|--|
| | | MOTOROLA PART No. | Holldorson PART No. | Merit PART No. | Stancor PART No. | Thordarson PART No. | Triad PART No. | |
| T4 | 2700Ω 3-4Ω | 25B742849 | Z1103 ①② | A-3025 | A-3332 | 26858 ① | S-12X | ① Drill one new mounting hole. ② Tape tap on primary winding. |

SPEAKER

| ITEM No. | TYPE | REPLACEMENT DATA | | | NOTES |
|----------|-------|-------------------|---------------|------|-------------------------|
| | | MOTOROLA PART No. | QUAM PART No. | | |
| SPI | 4" PM | 60K742413 | 4A07 | 4A07 | ① Alternate part number |

COILS (RF-IF)

| ITEM No. | USE | MOTOROLA PART No. | NOTES | ITEM No. | USE | MOTOROLA PART No. | NOTES |
|----------|-------------|-------------------|---|----------|------------------|-------------------|--|
| | | | | | | | |
| L1 | Ant. Coils | 1V743064 | Channel 2-13, includes complete wafer assy. C4, C5, and C6. | L6 | Mixer Grid Coils | 1V739859 | Channel 2-13, includes complete wafer assembly and C13. |
| L2 | RF Choke | 24A743242 | | L7 | Osc. Coils | 1V743181 | Channel 2-13, includes complete wafer assy. C24 and C25. |
| L3 | Neutr. Coll | 24A738397 | | L8 | Mixer Plate Coll | 24B740435 | |
| L4 | Fl. Choke | 24K743527 | | | | | |
| L5 | RF Coils | 1V743065 | Channel 2-13, includes complete wafer assy. C12, C14, & R9. | | | | |

| ITEM No. | USE | REPLACEMENT DATA | | | | NOTES |
|----------|-------------------------------|-------------------|-------------------|-----------------|--------|---|
| | | MOTOROLA PART No. | MEISSNER PART No. | MILLER PART No. | | |
| L9 | 1st. Video IF | 24K743769 | 17-4534 | TV-131 | | |
| L10 | 41.25MC Trap | 24B736888 | 19-1001 | BC-561 | 4804 | 1.3 Microhenries |
| L11 | Fl. Choke | 24K730391 | 17-4623 | TV-130 | 6219 | |
| L12 | 2nd. Video IF | 24B742789 | 19-1001 | BC-561 | 4804 | 1.3 Microhenries |
| L13 | Fl. Choke | 24K730391 | 17-6004 * | | 6234 * | Includes Cap and Resistor |
| L14 | 3rd. Video IF | 24C743768 | | | | |
| L15 | 4th. Video IF & Det. Assembly | 24C743767 | | | | |
| L16 | RF Choke | 24K737733 | 19-1005 | BC-566 | 4812 | Includes Coil (Part #24A733225), Caps, and Resistor |
| L17 | Shunt Peaking Coll | 24K740117 | 19-3300 | TV-190 | 6132 | 10 Microhenries |
| L18 | Series Peaking Coll | 24C738006 | 19-3180 | TV-184 | 6180 | 330 Microhenries |
| L19 | 4.5 MC Trap | 24K743272 | 20-1005 * | | | 180 Microhenries |
| L20 | Series Peaking Coll | 24K742654 | 19-3180 * | TV-184 * | 6180 * | 180 Microhenries, wound on 10K Resistor |
| L21 | Shunt Peaking Coll | 24K738963 | 19-3500 | TV-189 | 6138 | 470 Microhenries |
| L22 | Resonant Choke | 24K743727 | 17-3402 | | 1470 | 7.5 Microhenries, Part #CLA |
| L23 | 1st. Sound IF | 24B742768 | 17-3495 | TV-113 | 8203 | |
| L24 | 2nd. Sound IF | 24B741846 | | | 1481 | |
| L25 | Quadrature Coll | 24B741846 | | | | |

- * Parallel secondary with 15K Resistor and replace .001MFD capacitor.
* Change parallel capacitor to series.
* Parallel with 10K Resistor.

TRANSFORMER (HORIZ. OSC.)

| ITEM No. | DC RES. | | REPLACEMENT DATA | | | | | | | NOTES |
|----------|---------|------|-------------------|-------------------|----------------|-----------------|--------------|--------------|---------------------|---------------------|
| | | | MOTOROLA PART No. | MEISSNER PART No. | MERIT PART No. | MILLER PART No. | RCA TYPE No. | Ram PART No. | Thordarson PART No. | |
| | PRI. | SEC. | | | | | | | | |
| L26 | 32Ω | | 1V742877 | | MWC-13 | | | | | 12-130 Millihenries |

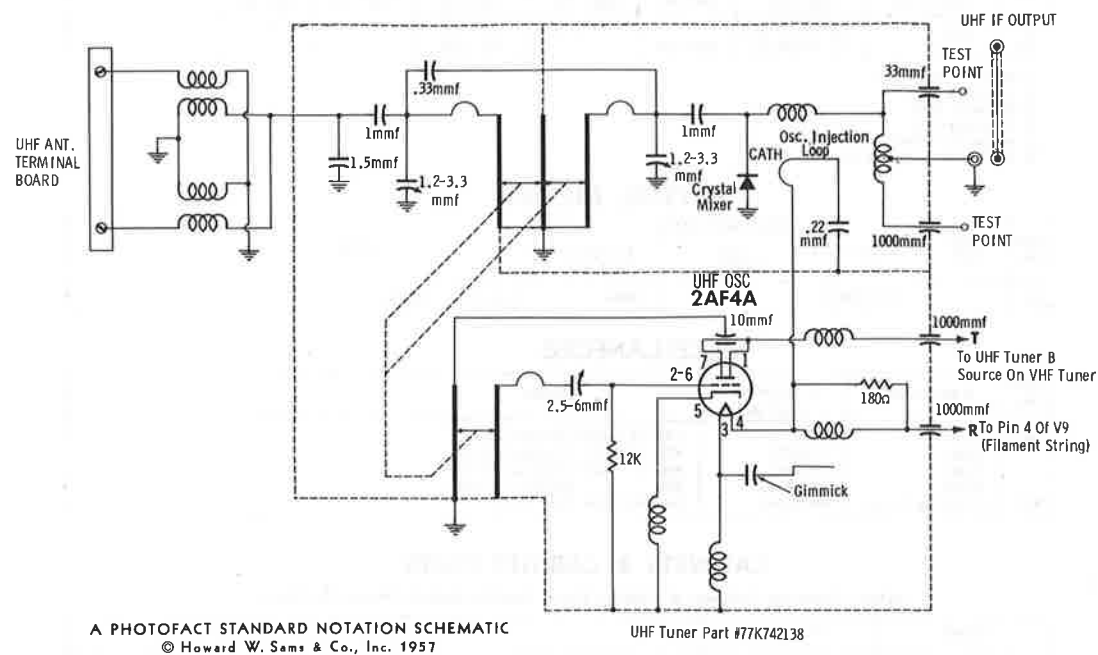
FILTER CHOKE

| ITEM No. | TOTAL DIRECT CURRENT | D. C. RESISTANCE | INDUCTANCE (0 CURRENT 1000 C.) | REPLACEMENT DATA | | | | | NOTES |
|----------|----------------------|------------------|--------------------------------|-------------------|---------------------|----------------|------------------|---------------------|---------|
| | | | | MOTOROLA PART No. | Holldorson PART No. | Merit PART No. | Stancor PART No. | Thordarson PART No. | |
| L27 | .310A | 28Ω | 1By. | 25K740874 | C5041 ① | C-2098 ① | C-2328 ① | 28C44 | C-17X ① |

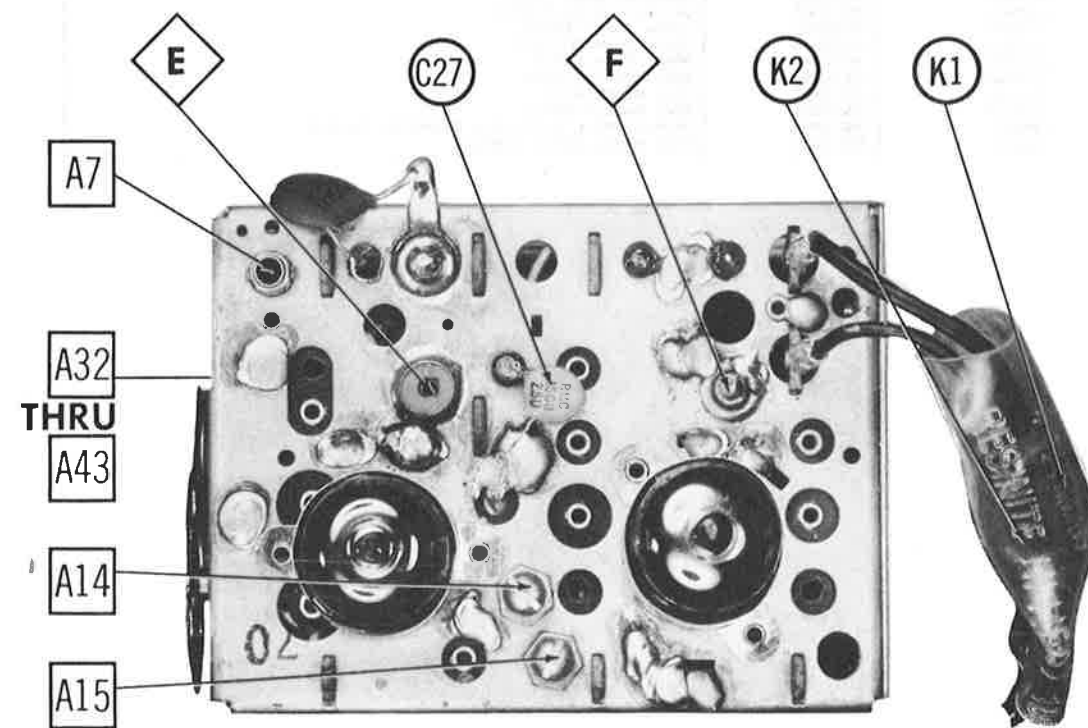
- ① Drill one new mounting hole.

COMPONENT COMBINATIONS

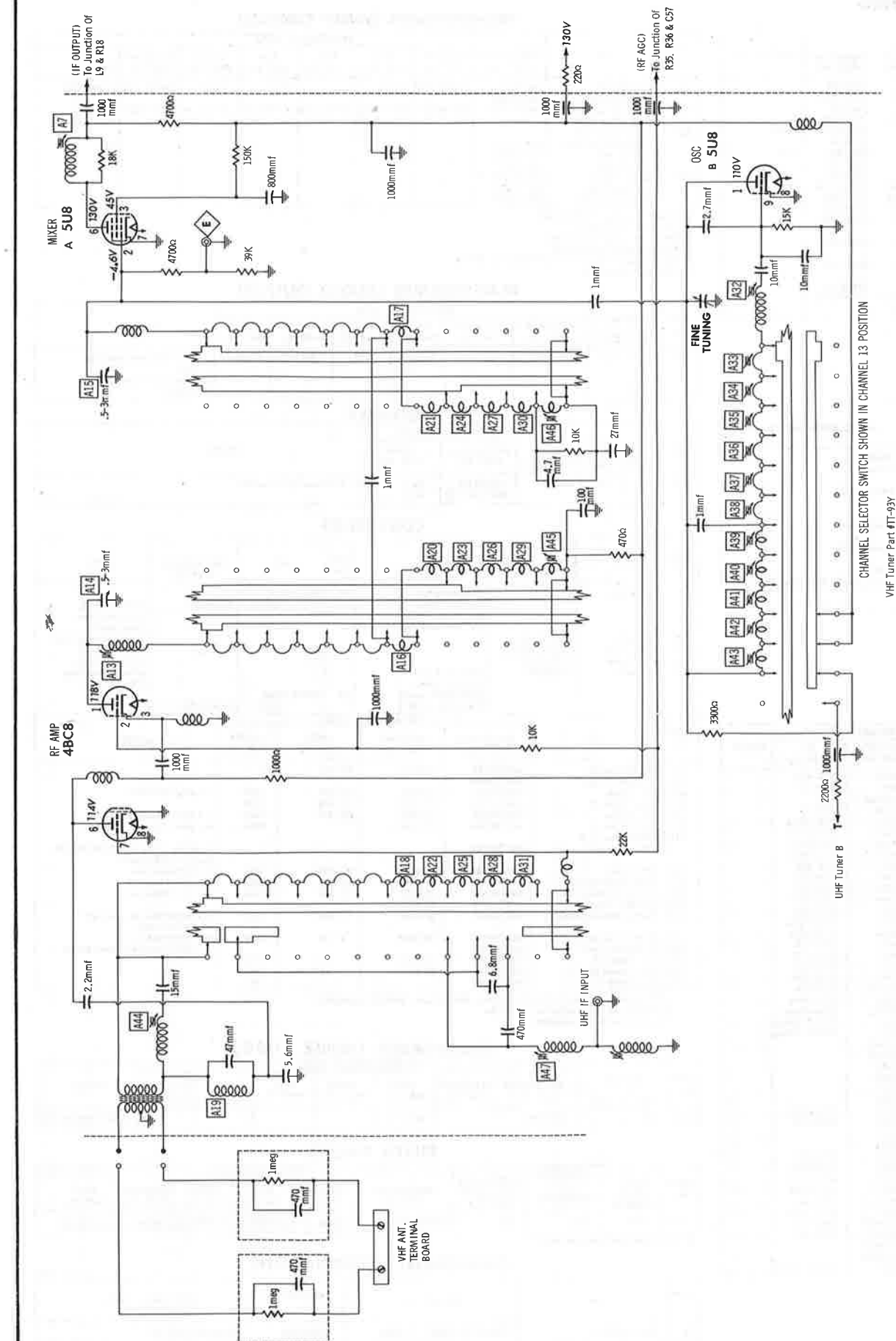
| ITEM No. | USE | DESCRIPTION | MOTOROLA PART No. | REPLACEMENT DATA |
|----------|----------------|------------------------|-------------------|------------------|
| K1 | Ant. Isolation | 470MMF@ 1500V, .3-1Meg | 51B740235 | Centralab RC-471 |
| K2 | Ant. Isolation | 470MMF@ 1500V, .3-1Meg | 51B740235 | Centralab RC-471 |



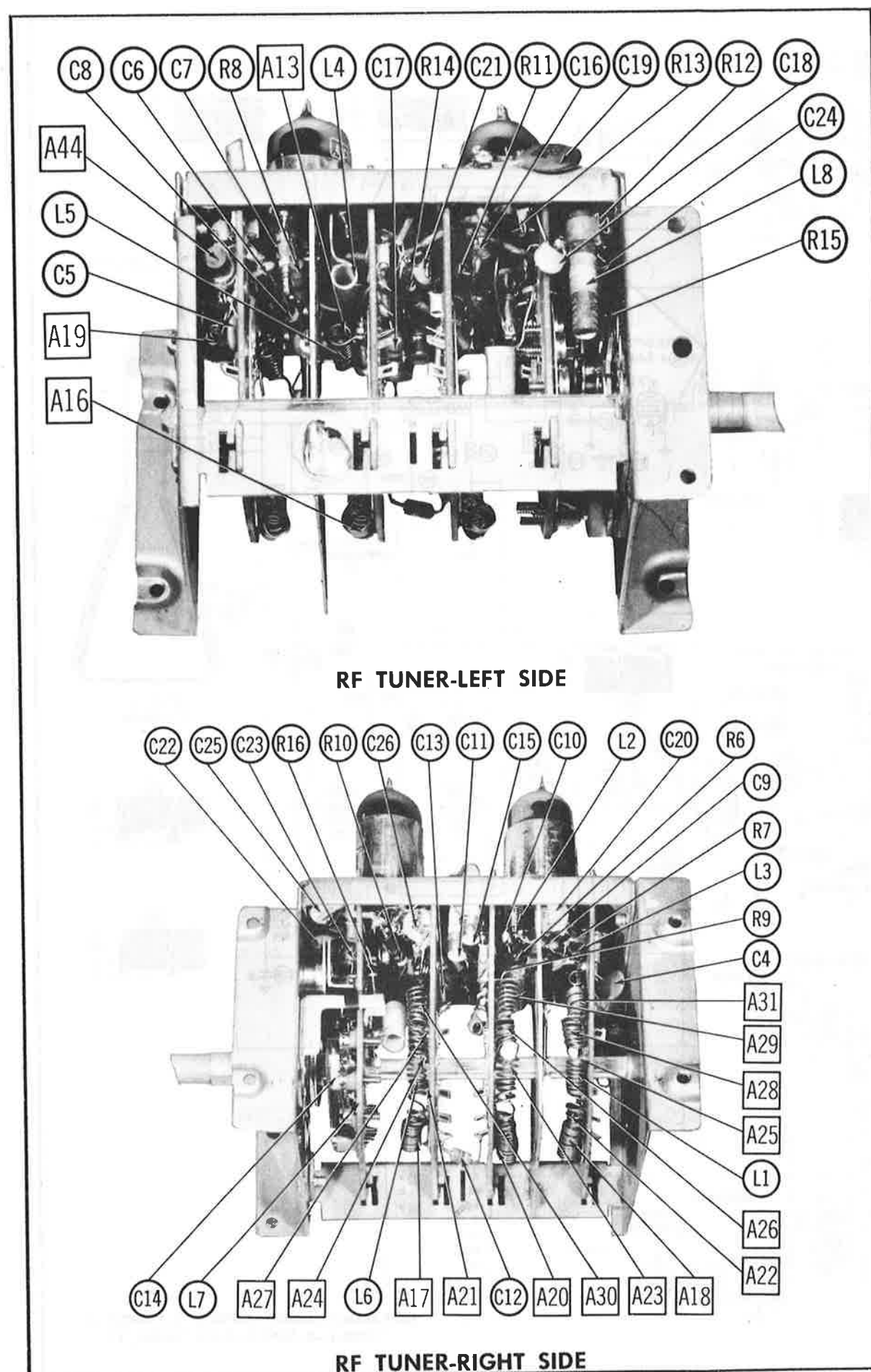
ALTERNATE TUNER SCHEMATIC



RF TUNER-TOP VIEW

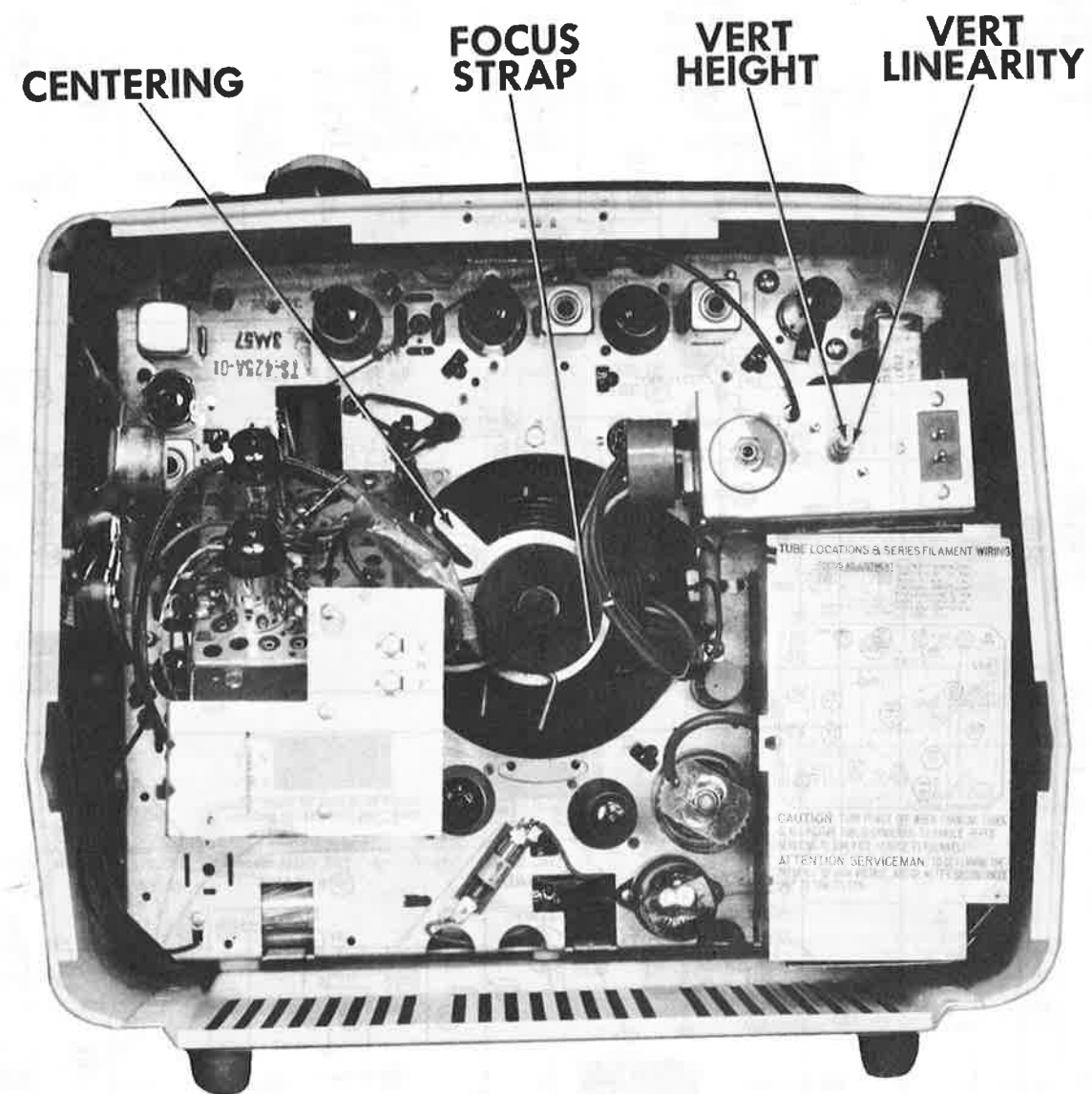


ALTERNATE TUNER SCHEMATIC



RF TUNER-LEFT SIDE

RF TUNER-RIGHT SIDE



CABINET-REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

- Turn the set on and tune in a TV station, preferably with a test pattern. Adjust the brightness and contrast controls for a normal picture.
1. Short out the AFC voltage by connecting a clip lead from pin 4 of the Service Test Receptacle (TP-8) to chassis. Connect a .1MFD, 400 volt capacitor from pin 2 of the Service Test Receptacle (TP-8) to chassis.
 2. Adjust the horizontal hold control to the point where the picture remains stable horizontally.
 3. Remove the capacitor from TP-8 and adjust the horizontal frequency slug (B1) to the point where the picture remains stable horizontally.
 4. Remove the clip lead from TP-8 and chassis. Adjust the horizontal hold control until the picture remains in sync.