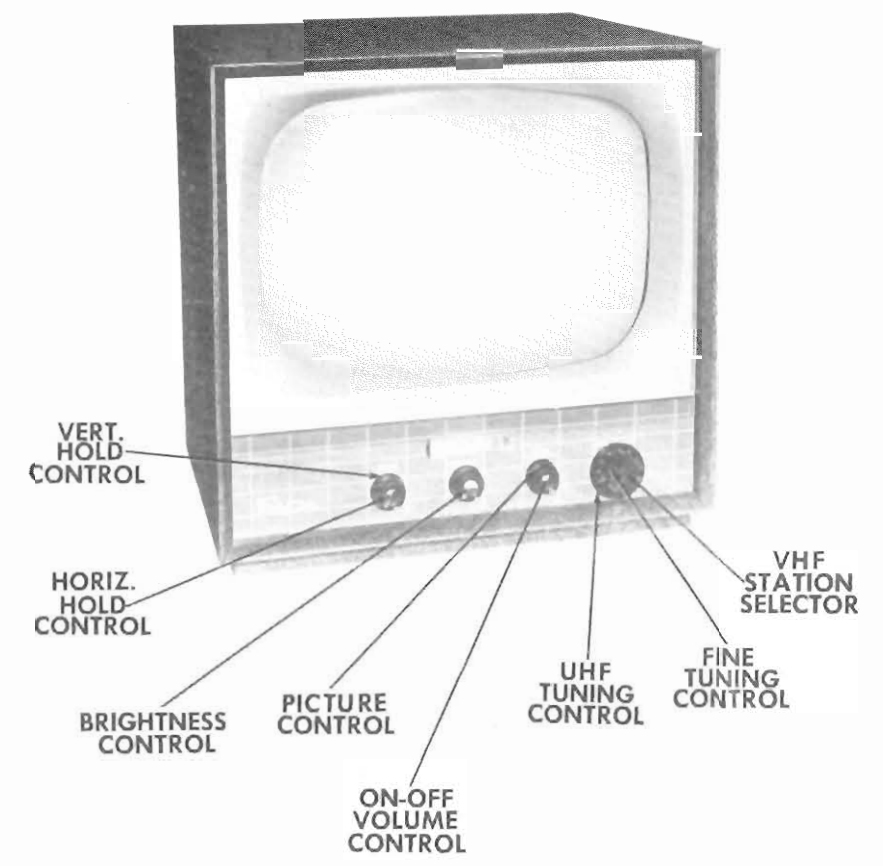


RESISTOR IDENTIFICATION



FADA MODEL UH21T	
TRADE NAME	Fada Models UDL2100T, UH21T, U2100C, U2100T, U2150C
MANUFACTURER	Fada Radio & Electric Co., Inc., 525 Main St., Belleville, N. J.
TYPE SET	Television Receiver
TUBES	Twenty-two
POWER SUPPLY	110-120 volts AC-60 cycle
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Inter-carrier)
RATING	2.24 amp. @ 117 volts AC

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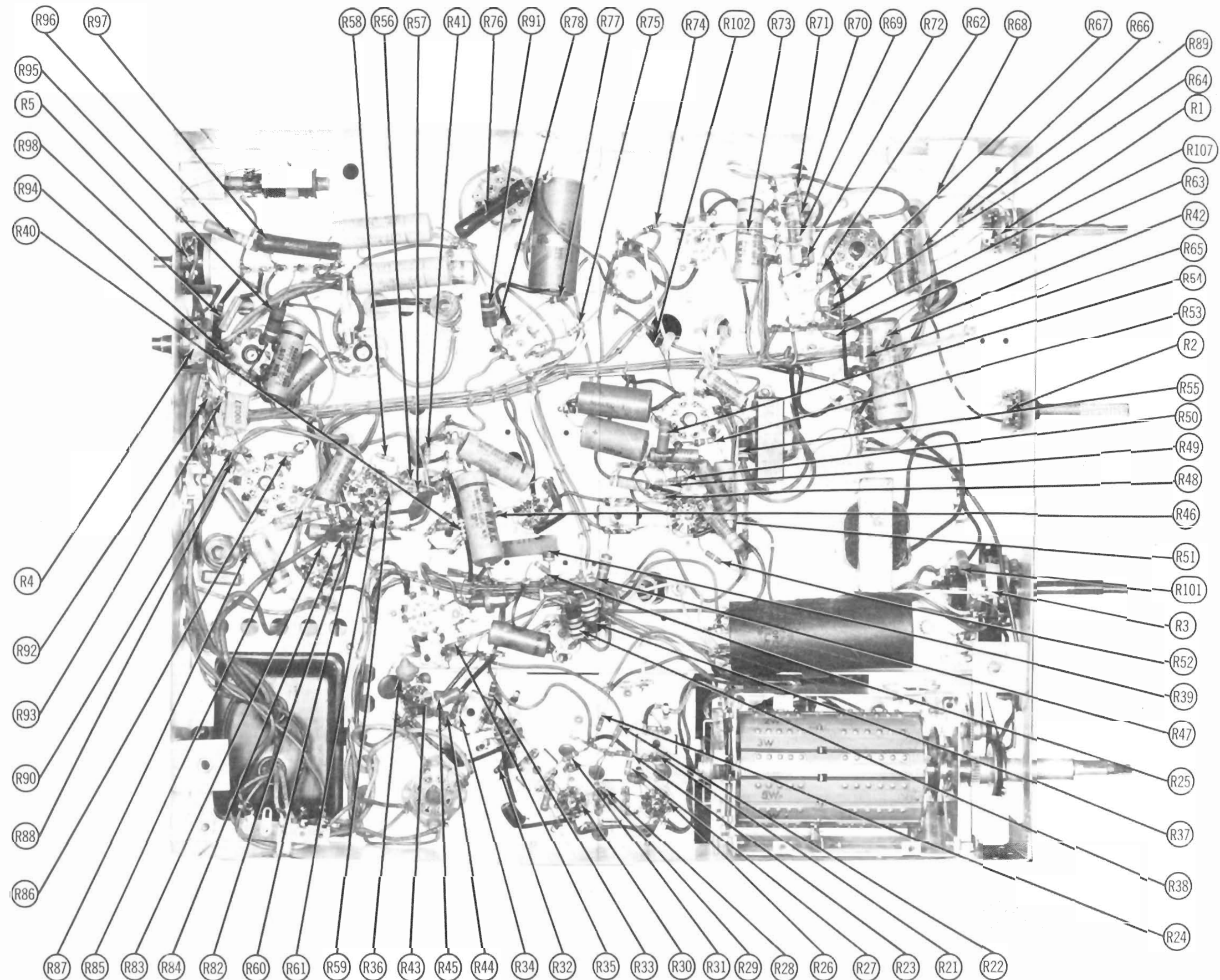
HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

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

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DATE 1-54 SET 228 FOLDER 10

FADA MODELS UDL2100T, UH21T, U2100C, T, U2150C



CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION

TRADE NAME
MANUFACTURER
TYPE SET
TUBES

POWER SUPPLY
TUNING RANGE

Alignment Instru

Drive Cord Stru

Disassembly Ins

Horizontal Swee

Parts List and I

Photographs

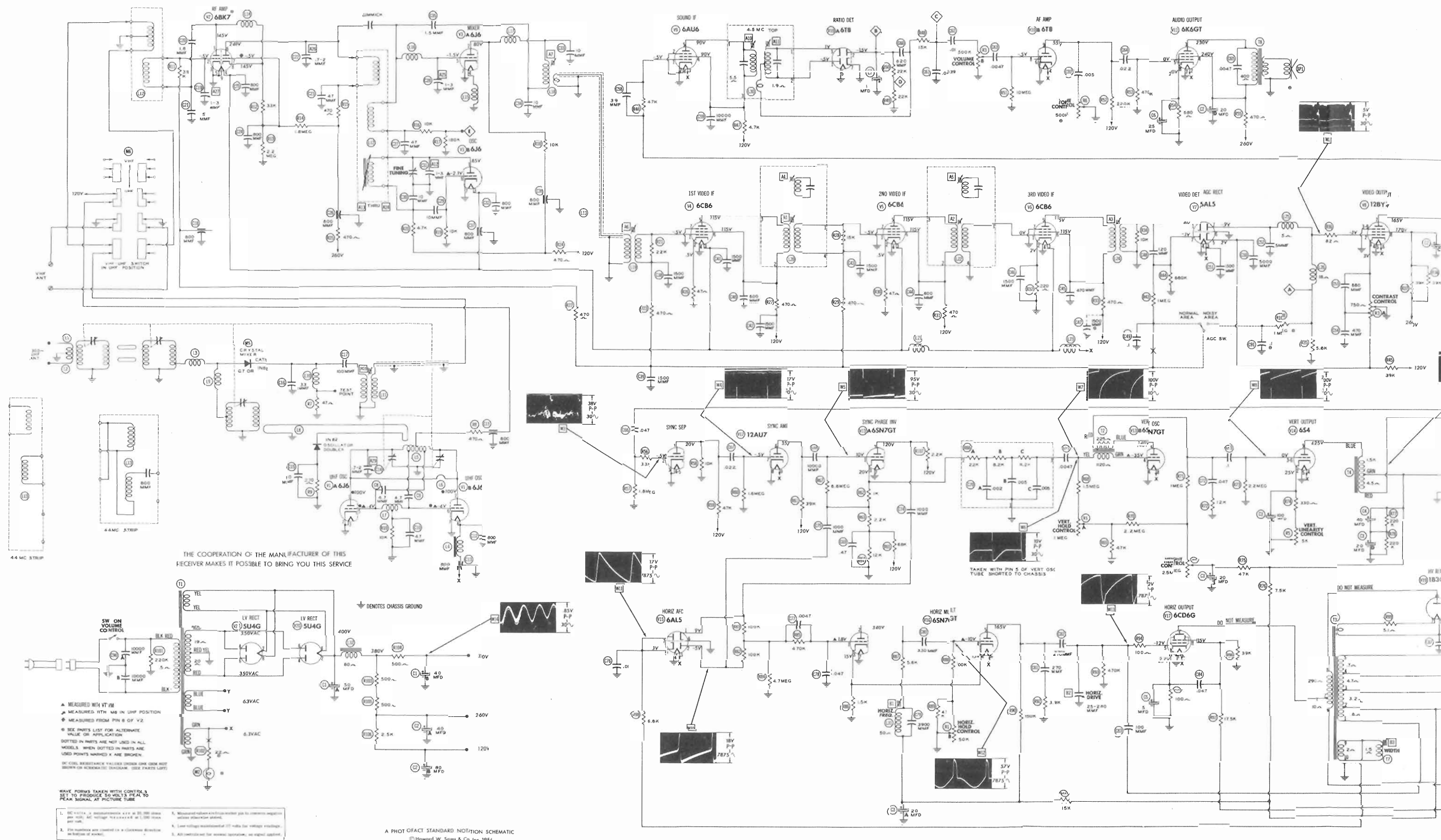
Cabinet-Res

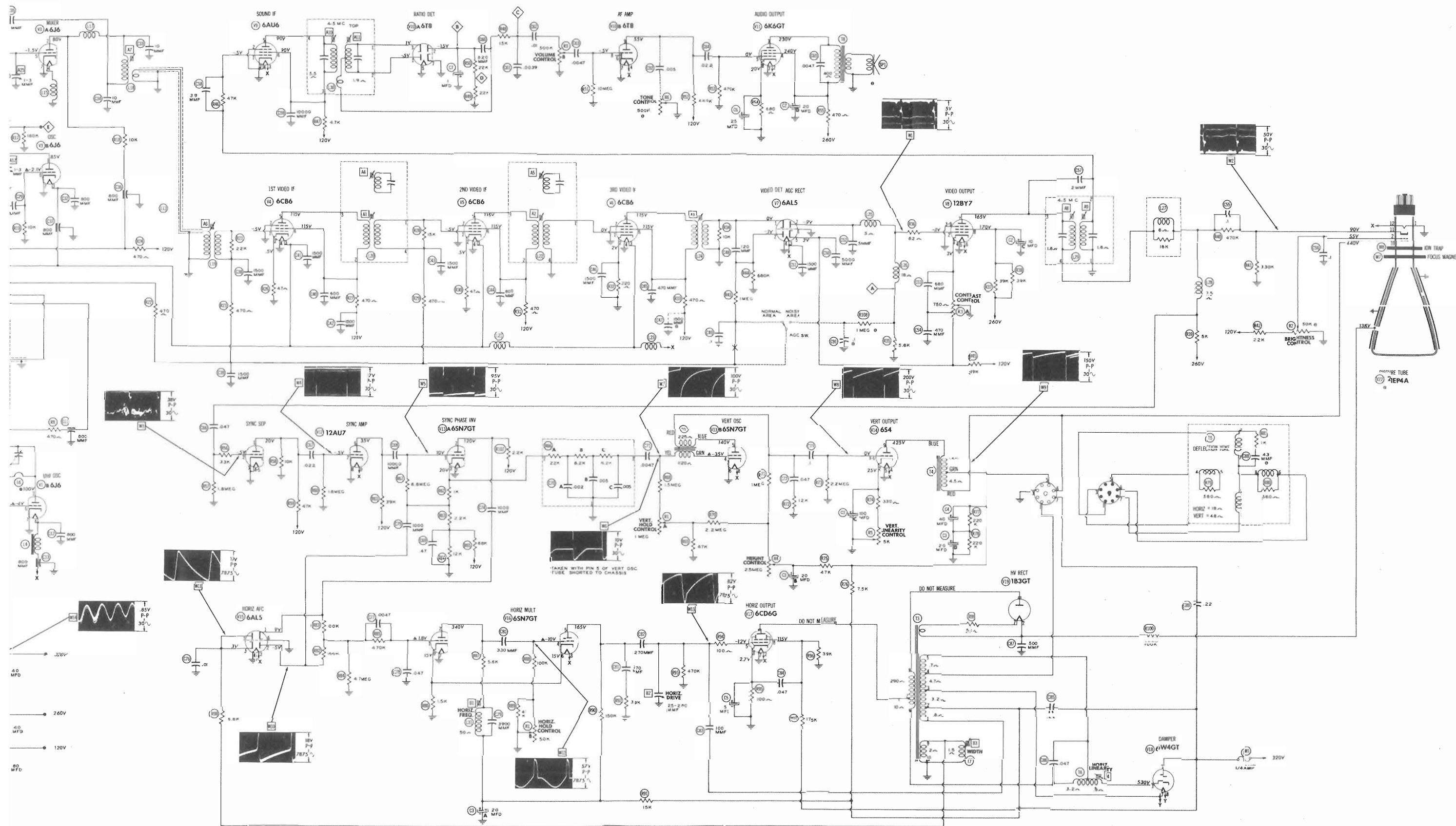
Capacitor Ic

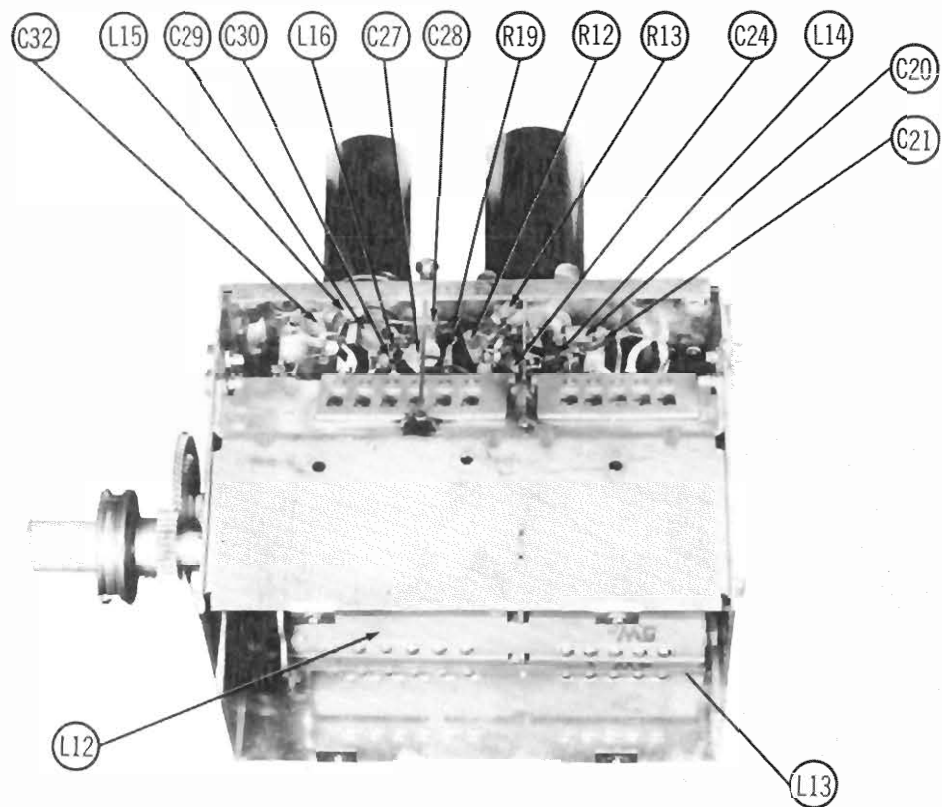
Chassis-To

RF Tuner .

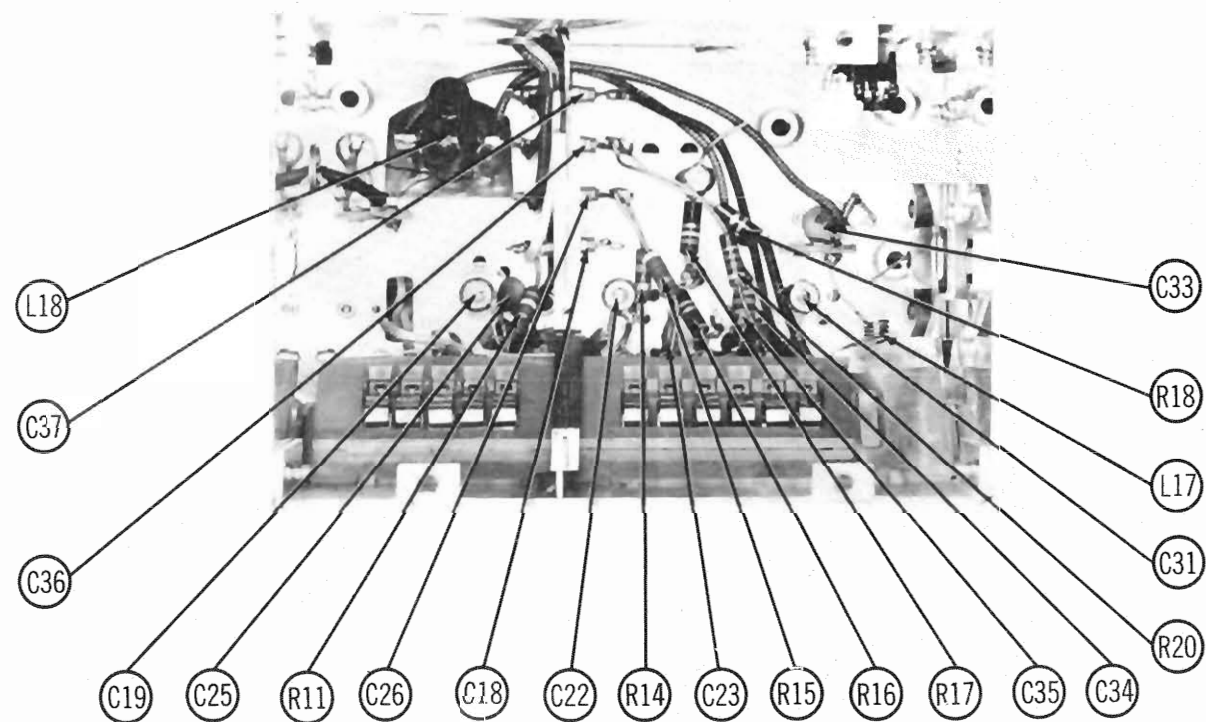
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parts have been compile
Inc., by the manufactur
"Reproduction or use, v



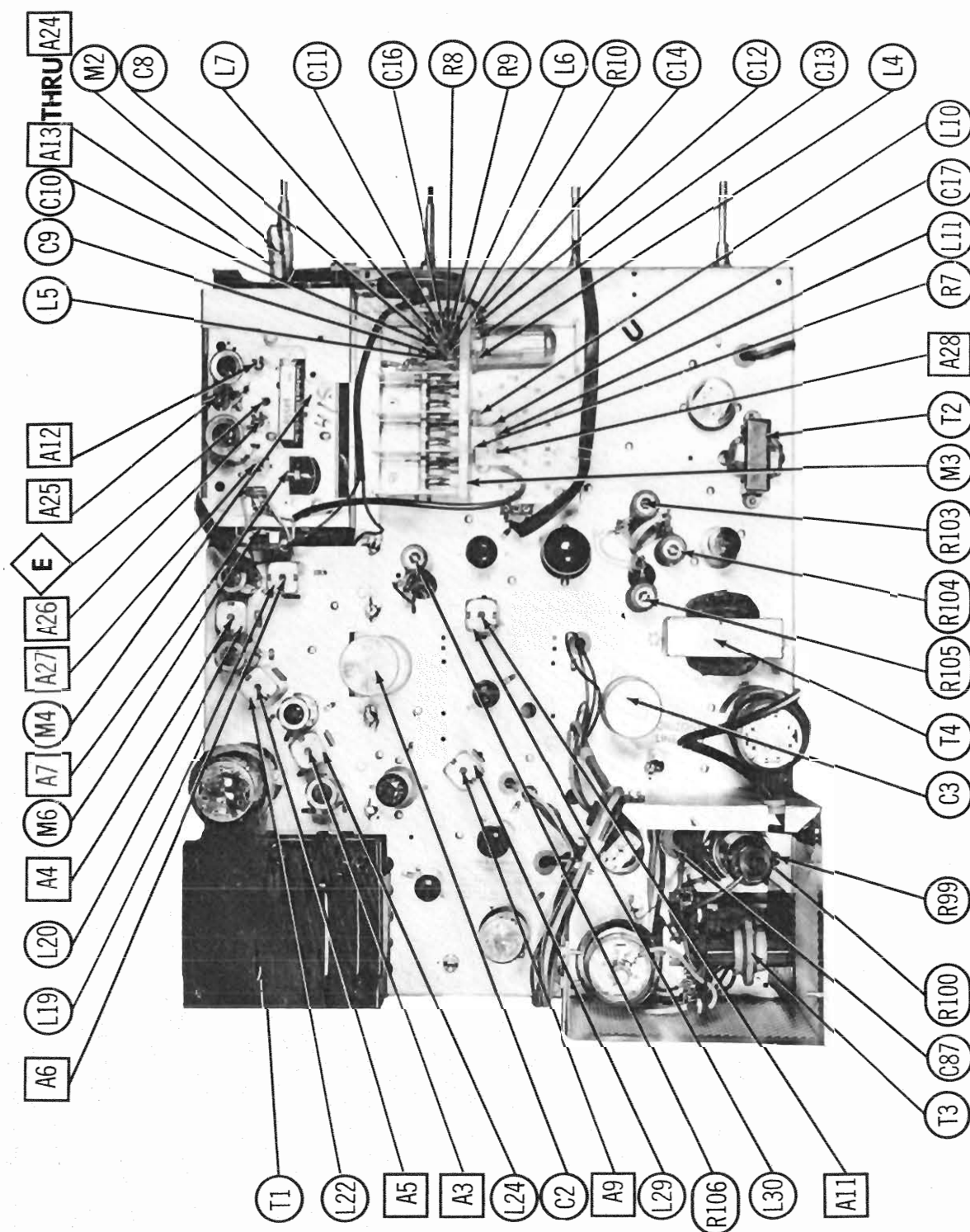




VHF TUNER-RIGHT SIDE

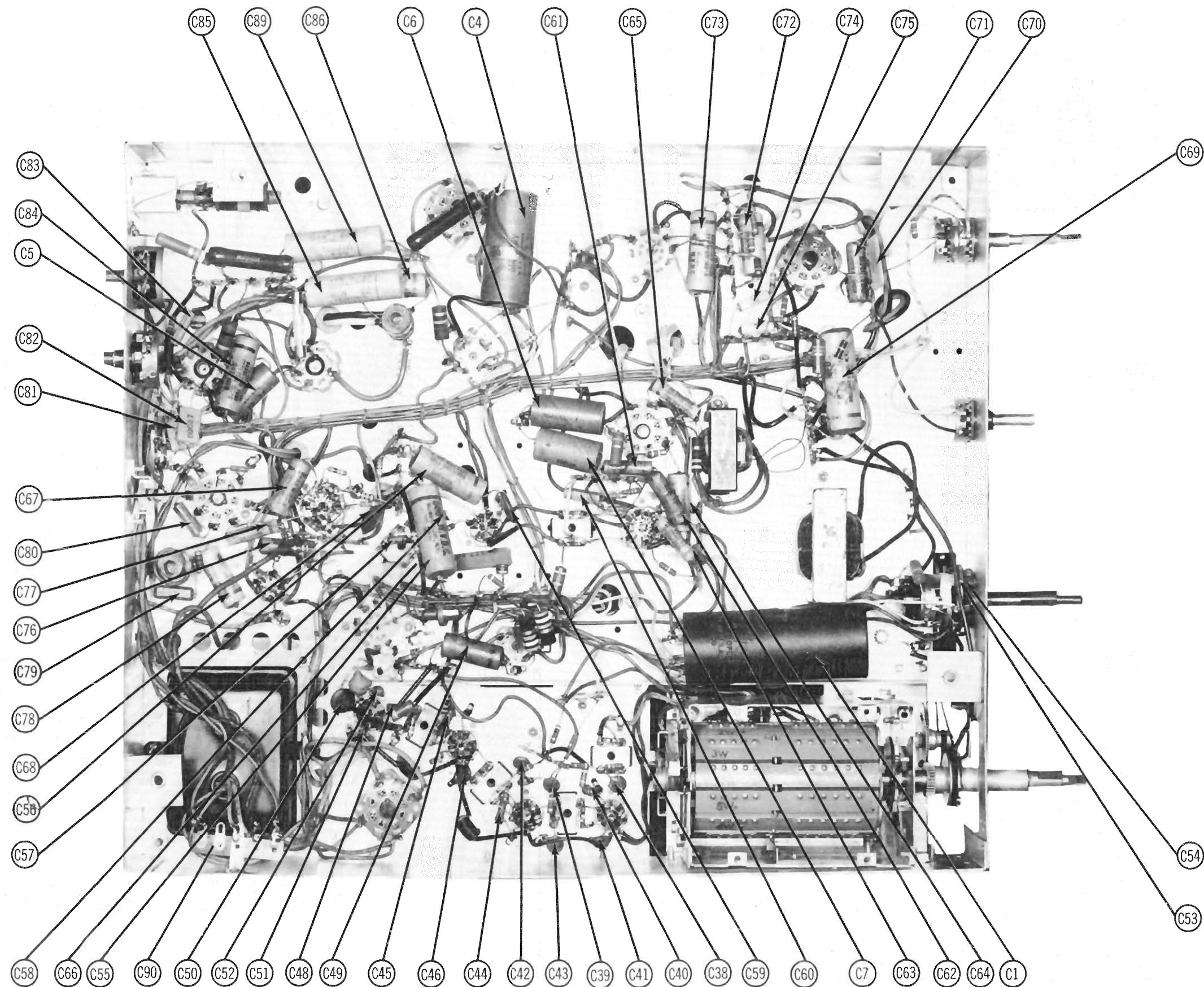


VHF TUNER-BOTTOM VIEW



For tube location see tube placement chart page 5.

FADA
MODELS UDL2100T, UH21T, U2100C, T, U2150C
VIEW TOP SISVAHC



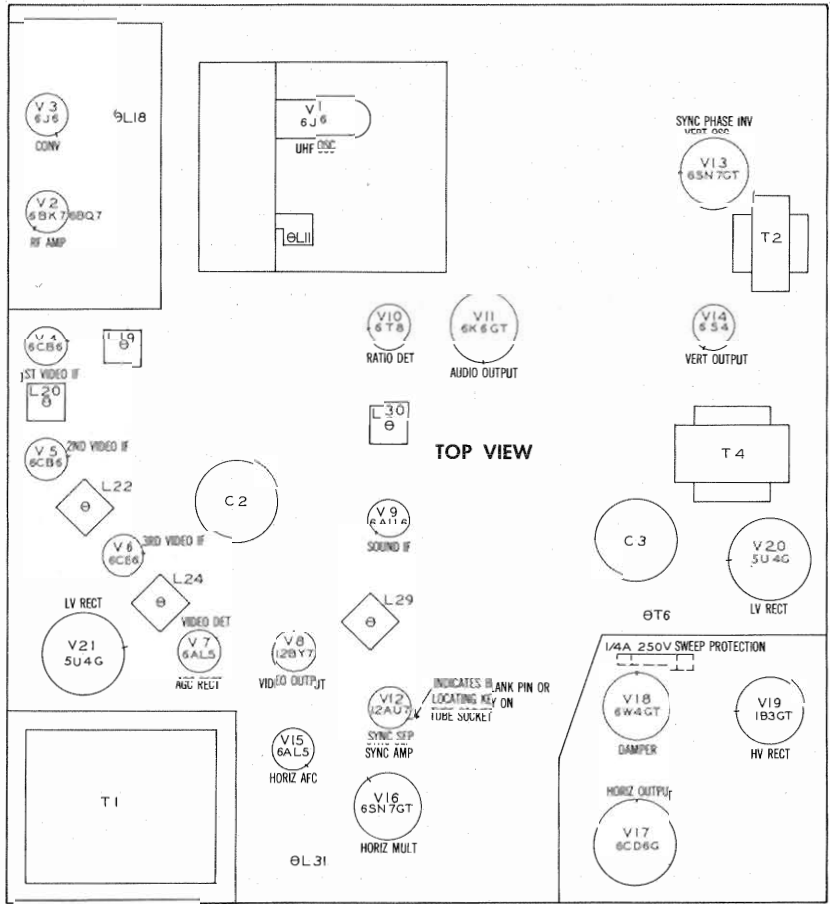
CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION

RESISTANCE MEASUREMENTS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6J6	†4KΩ	†4KΩ	0Ω	.1Ω	10KΩ	10KΩ	0Ω		
V 2	6BK7	†1.1Meg	1.7Meg	0Ω	.1Ω	0Ω	†2KΩ	†1Meg	†1.1Meg	0Ω
V 3	6J6	†9KΩ	†14KΩ	.1Ω	0Ω	100KΩ	10KΩ	0Ω		
V 4	6CB6	1.7Meg	47Ω	.1Ω	0Ω	†4KΩ	†4KΩ	0Ω		
V 5	6CB6	1.7Meg	47Ω	.1Ω	0Ω	†4KΩ	†4KΩ	0Ω		
V 6	6CB6	.2Ω	220Ω	.1Ω	0Ω	†4KΩ	†4KΩ	0Ω		
V 7	6AL5	.2Ω	680KΩ	.1Ω	0Ω	650Ω	0Ω	5.6KΩ		
V 8	12BY7	140Ω	5.7KΩ	0Ω	0Ω	0Ω	.1Ω	†6KΩ	†21KΩ	0Ω
V 9	6AU6	47KΩ	0Ω	.1Ω	0Ω	†8.2KΩ	†8.2KΩ	0Ω		
V 10	6T8	INF	44KΩ	INF	.1Ω	0Ω	INF	0Ω	10Meg	†225KΩ
V 11	6K6GT	INF	.1Ω	†2KΩ	†1.5KΩ	470KΩ	INF	0Ω	680Ω	
V 12	12AU7	†21KΩ	1.8Meg	0Ω	0Ω	0Ω	†42KΩ	1.8Meg	0Ω	.1Ω
V 13	6SN7GT	6.8Meg	†5.8KΩ	15KΩ	2.4Meg	†1.5Meg	0Ω	0Ω	.1Ω	
V 14	6S4	INF	2.6KΩ	INF	.1Ω	0Ω	2.2Meg	INF	INF	†9KΩ
V 15	6AL5	4.8Meg	4.8Meg	.1Ω	0Ω	6.8KΩ	0Ω	6.8KΩ		
V 16	6SN7GT	5.2Meg	†21KΩ	1.5KΩ	125KΩ	†1.5KΩ	1.5KΩ	0Ω	.1Ω	
V 17	6CD6G	INF	.1Ω	100Ω	470KΩ	470KΩ	INF	0Ω	†18KΩ	TOP CAP 114Ω
V 18	6W4GT	INF	INF	200KΩ	INF	†500Ω	†500Ω	†6.5Ω	†6.5Ω	TOP CAP 1300Ω
V 19	1B3GT	PINS 1 - 8 HAVE INF RESISTANCE								
V 20	5U4G	INF	13KΩ	INF	20Ω	INF	19Ω	INF	13KΩ	
V 21	5U4G	INF	13KΩ	INF	19Ω	INF	20Ω	INF	13KΩ	
V 22	21EP4A	0Ω	†19KΩ	PIN 10 †7.5KΩ	PIN 11 330KΩ	PIN 12 1Ω				

■ MEASURED IN UHF POSITION - ALL OTHERS IN VHF
† MEASURED FROM PIN 2 OF V20
‡ MEASURED FROM PIN 3 OF V18

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 - V20, V21

LOSS OF PICTURE OR SOUND

No pic, no sound, has raster - V3, V4, V5, V6, V7, V8, (V1 UHF only)

No pic, no sound, has snow - V2, V3, V4

No pic, has sound, has raster - V8, V22

Has pic, no sound - V9, V10, V11

SYNC FAILURE

No vert. sync - V13, V14

No horiz. sync - V13, V15, V16

No vert. or horiz. sync - V12, V13

SWEEP FAILURE

No raster, has sound - V16, V17, V18, V19, V22, Fuse (M1)

No vertical deflection - V13, V14

Poor vert. linearity or foldover - V13, V14

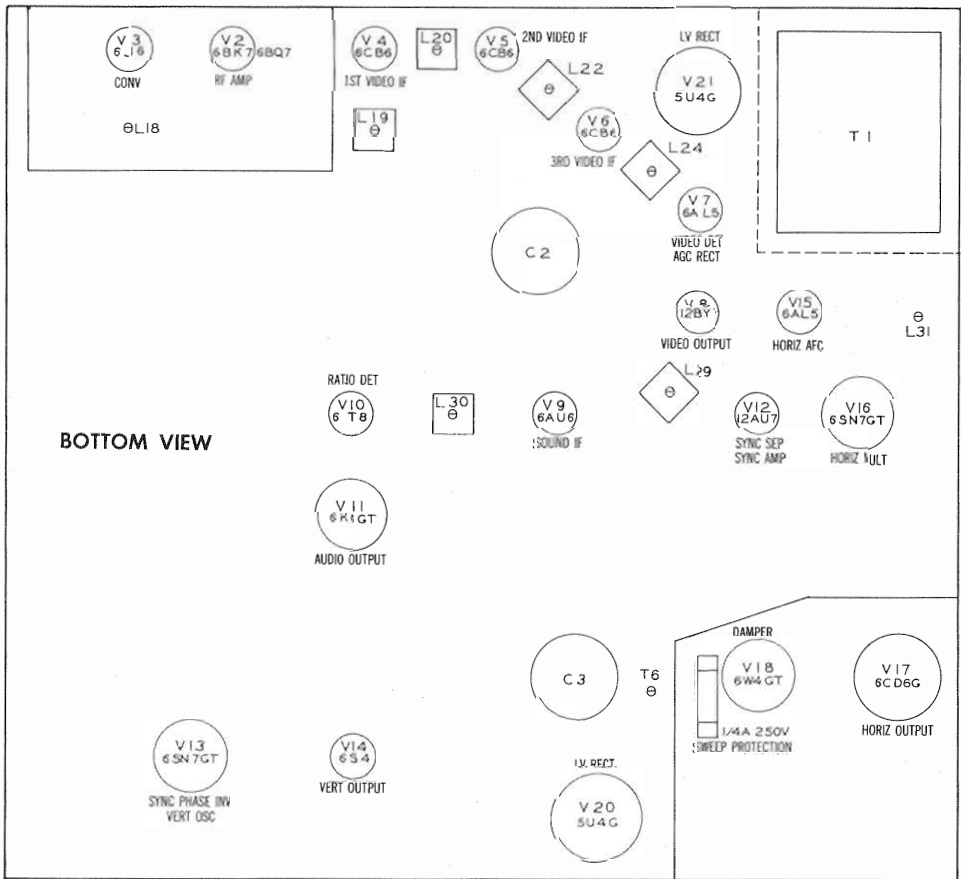
Poor horiz. linearity or foldover - V16, V17, V18

Narrow picture - V10, V11, V19, V20, V21

Vert. off freq. - V13, V14

Horiz. off freq. - V13, V15, V16

TUBE PLACEMENT CHART



ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT							
The high voltage lead should be securely taped and kept away from the chassis. Do not remove the horizontal oscillator tube to disable the high voltage.							
VIDEO IF ALIGNMENT							
Remove the converter tube (V3) from its socket and replace with a 6J6 which has pin 1 removed. This will disable the local oscillator and reduce the possibility of erroneous indications. The local oscillator may also be disabled by removing the channel 13 oscillator strip and then performing the alignment with the tuner set to channel 13. The latter method is recommended when a dummy 6J6 is not available. Connect the negative lead of a 4.5 volt battery to the ungrounded side of C49. Connect the positive lead to chassis. Connect a 47KΩ resistor in series with the DC probe of the VTVM. Connect a 47KΩ decoupling resistor in series with the high side of the vertical amplifier input of the oscilloscope. If output of sweep generator is too low to give a usable indication on the oscilloscope, reduce the bias to 3 volts. 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	ADJUST	REMARKS
1. Direct	High side to an ungrounded tube shield floating over dummy converter tube. Low side to chassis.	Not used	42.5MC (Unmod)	Any	Use VTVM	A1	Adjust for maximum deflection. Attenuate signal generator to maintain 2 volts at VTVM.
2. "	"	"	45.5MC	"	"	A2	"
3. "	"	"	44.0MC	"	"	A3	"
4. "	"	"	41.25MC	"	"	A4	Adjust for MINIMUM deflection.
5. "	"	"	47.25MC	"	"	A5	"
6. "	"	44MC (10MC Swp)	45.75MC 42.25MC	"	Vert. amp to point A Low side to chassis.	A1, A2 A3	Adjust for response curve similar to Fig. 1. Adjust A1 and A2 to place 42.25MC and 45.75 MC markers at 70%. A3 affects tilt. Attenuate generator for 1 volt peak to peak on oscilloscope.
7. "	"	"	41.25MC 42.25MC 45.75MC 47.25MC	"	"	A6, A7	Adjust for response curve similar to Fig. 2.

SOUND IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM						
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
8. .001MFD	High side to point A . Low side to chassis.	4.5MC (Unmod)	Any	DC probe to point B . Common to chassis.	A8, A9 A10	Adjust for maximum deflection.
9. "	"	"	"	Dc probe to point C . Common to chassis.	All	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

SOUND IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE							
Use frequency modulated signal with 60% modulation and 450KC sweep. Use 120% sawtooth voltage in scope for horizontal deflection.							
DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
8. .001MFD	High side to point A Low side to chassis.	4.5MC (450KC Swp)	4.5MC	Any	Vert. amp. to point B Low side to chassis.	A8, A9 A10	Disconnect stabilizer capacitor C7. Adjust for curve of maximum amplitude and symmetry as in Fig. 3.
9. "	"	"	"	"	Vert. amp. to point C Low side to chassis.	All	Reconnect stabilizer capacitor C7. Adjust so that 4.5MC occurs at center of crossover lines as in Fig. 4. SLIGHTLY retouch A10 for maximum amplitude and straightness of crossover lines.

OSCILLATOR ALIGNMENT							
Remove the dummy converter tube and replace the original 6J6 in its socket. Complete oscillator alignment may not be necessary. If the oscillator seems to be off frequency, approximately the same amount for a majority of the channels it may be possible to correct them in one step using A12. It should be noted that this is an all channel oscillator circuit adjustment and should not be used to correct any individual channel. If adjustment of A12 will not bring all channels well within the range of the fine tuning control it will be necessary to adjust the channel strip adjustment for each channel that is off frequency. The channel adjustment screws are reached through a hole just to the right of the channel switch shaft. The correct adjustment screw is accessible through this hole as the channel switch is turned to each channel. 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. Set the fine tuning control to the mid-position of its range.							
DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
10. Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	213.25MC (10MC Swp)	211.25MC 215.75MC	13	Vert. amp. to point B Low side to chassis.	A13	Adjust to place sound marker in trap notch as in Fig. 5. Video marker should be at 50%.
		207MC (10MC Swp)	205.25MC 209.75MC	12		A14	
		201MC (10MC Swp)	199.25MC 203.75MC	11		A15	
		195MC (10MC Swp)	193.25MC 197.75MC	10		A16	
		189MC (10MC Swp)	187.25MC 191.75MC	9		A17	
		183MC (10MC Swp)	181.25MC 185.75MC	8		A18	
		177MC (10MC Swp)	175.25MC 179.75MC	7		A19	
		85MC (10MC Swp)	83.25MC 87.75MC	6		A20	
		79MC (10MC Swp)	77.25MC 81.75MC	5		A21	
		69MC (10MC Swp)	67.25MC 71.75MC	4		A22	
		63MC (10MC Swp)	61.25MC 65.75MC	3		A23	
		57MC (10MC Swp)	55.25MC 59.75MC	2		A24	

ALIGNMENT INSTRUCTIONS (cont)

RF AND MIXER ALIGNMENT							
Connect the bias battery as under video IF alignment, except use a 3 volt instead of 4.5 volt battery. 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.							
DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
11. Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	207MC (10MC Swp)	205.25MC 209.75MC	12	Vert. amp. thru 10KΩ to point E. Low side to chassis.	A25, A26 A27	Adjust for response curve similar to Fig. 6.
12. "	"	213MC (10MC Swp) 201MC (10MC Swp) 195MC (10MC Swp) 189MC (10MC Swp) 183MC (10MC Swp) 177MC (10MC Swp) 85MC (10MC Swp) 79MC (10MC Swp) 69MC (10MC Swp) 63MC (10MC Swp) 57MC (10MC Swp)	211.25MC 215.75MC 199.25MC 203.75MC 193.25MC 197.75MC 187.25MC 191.75MC 181.25MC 185.75MC 175.25MC 179.75MC 83.25MC 87.75MC 77.25MC 81.75MC 71.75MC 61.25MC 65.75MC 55.25MC 59.75MC	13 11 10 9 8 7 6 5 4 3 2	"		Check for response similar to Fig. 6. If markers fall below 70% on any channel, make compromise adjustments of A25, A26, and A27 with channel switch set to that channel. Then recheck all other channels to see that they have not been seriously affected.

UHF TUNER 44MC IF COIL 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. Turn channel selector knob to "UHF" position. Connect bias battery as under video IF alignment.							
DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
13. Two 120Ω carbon resistors	Across UHF antenna terminals with 120Ω in each lead.	677MC (10MC Swp)	675.25MC 679.75MC	48	Vert. amp. thru 47KΩ to point A. Low side to chassis.	A28	Adjust for response curve similar to Fig. 2.
14. "	"	473MC (10MC Swp)	471.25MC 475.75MC	14	"		Check for response curve similar to Fig. 2. If necessary, retouch A28 slightly to obtain acceptable response.
15. "	"	833MC (10MC Swp)	831.25MC 835.75MC	74	"		"

UHF OSCILLATOR ALIGNMENT						
If an accurately calibrated UHF signal generator is not available the UHF oscillator may be aligned when a local UHF station is on the air. Tune to the known operating channel and adjust A29 for clearest picture and best sound. If satisfactory equipment is available proceed as shown in step 16.						
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
Two 120Ω carbon resistors	Across UHF antenna terminals with 120Ω in each lead.	869MC (Unmod)	80	DC probe to point A. Common to chassis.	A29	Adjust for maximum deflection.

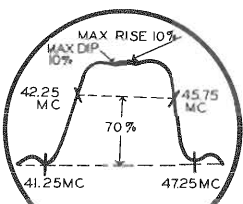


FIG. 1

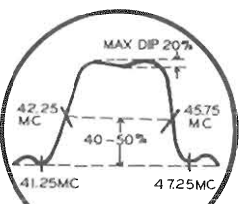


FIG. 2

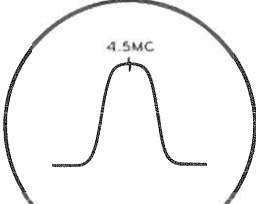


FIG. 3

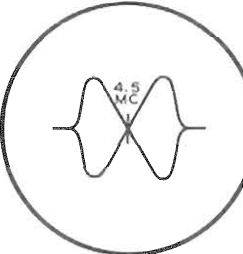


FIG. 4

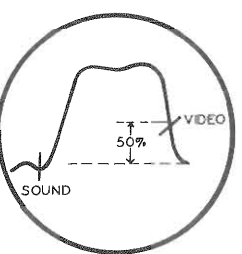


FIG. 5

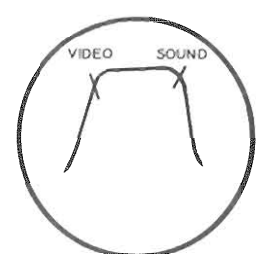


FIG. 6

FADA MODELS UDL2100T,
UH21T, U2100C, T, U2150C

SERVICING IN THE FIELD

TUNER OSCILLATOR ADJUSTMENTS

Touch-up adjustments of the RF tuner oscillator circuit may be accomplished by removing the channel selector and fine tuning knobs.

PICTURE TUBE SAFETY GLASS CLEANING

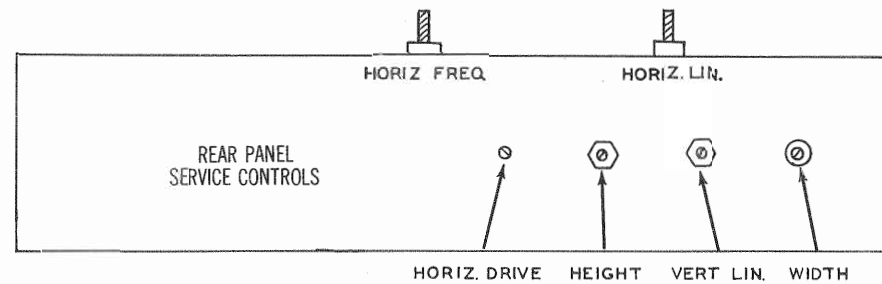
To clean safety glass remove bracket at bottom of safety glass. Bracket is covered by a snap-on name plate. Pull name plate off to expose two screws holding bracket. Remove bracket and remove safety glass.

Use extreme caution when removing safety glass.

PICTURE TUBE REMOVAL

For picture tube removal it is necessary to remove chassis. (See disassembly instructions).

SERVICE ADJUSTMENT LOCATION



HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

For adjustment of the horizontal oscillator, it is necessary to remove the rear cover and supply power to set. Adjustment is located on top of chassis. Set the horizontal hold control at the center of its range and adjust the horizontal frequency slug (L31) until picture synchronizes horizontally. (For location, see tube placement chart).

SOUND IF DETECTOR BUZZ ADJUSTMENT

To eliminate sound IF detector buzz, adjust the ratio detector secondary (L30) located on top of chassis. (See tube placement chart).

FUSES

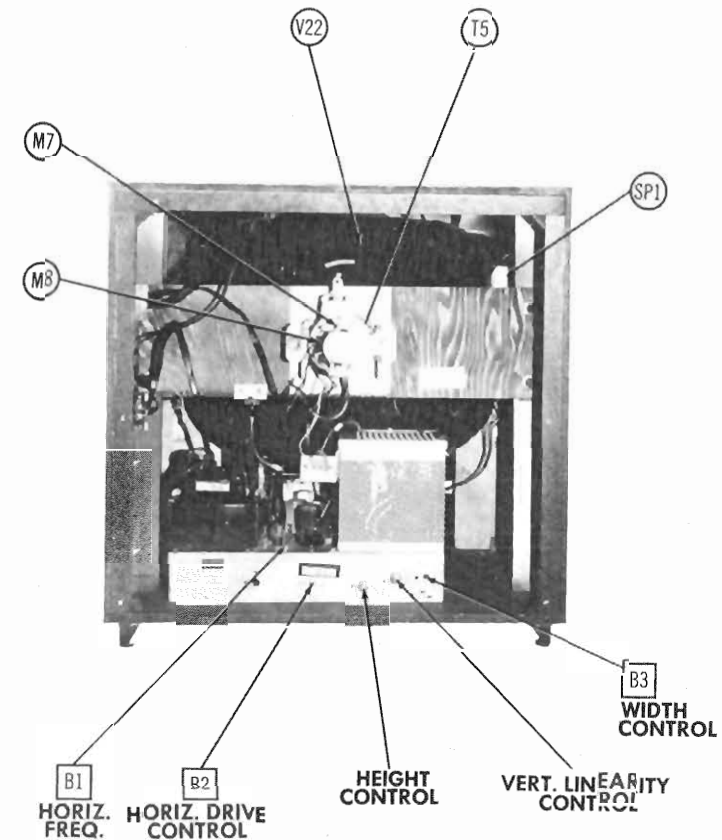
One fuse is used for horizontal sweep protection. (For location, see tube placement chart).

CENTERING

Centering is accomplished mechanically by means of a centering lever on the PM focusing assembly. Adjust the centering lever from side to side, and up and down until the picture is properly centered.

DISASSEMBLY INSTRUCTIONS

1. Remove 8 push on type control knobs from front panel.
2. Remove 9 wood screws. Remove rear cover.
3. Disconnect VHF & UHF built-in antennas, speaker, yoke plug, HV lead and CRT socket.
4. Remove 4 wood screws. Remove VHF & UHF antenna brackets.
5. Remove 4 chassis bolts. Remove chassis.
6. Remove 4 speaker nuts. Remove speaker.



CABINET-REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and tune in a TV station, preferably a test pattern.

Set the horizontal hold control at the mid-position of its range and adjust the horizontal frequency slug (B1) until the picture synchronizes horizontally.

Adjust the horizontal drive trimmer (B2) counter clockwise as far as possible without the presence of vertical white lines or compression of the center of the picture.

Adjust the width slug (B3) for a picture slightly wider than necessary to fill the picture mask horizontally.

Adjust the horizontal linearity slug (B4) for a picture that is symmetrical from left to right.

FADA MODELS UDL2100T,
UH21T, U2100C, T, U2150C

TROUBLE SHOOTING AIDS

SWEEP

HORIZONTAL	VERTICAL								
<p><u>LOSS OF SWEEP</u></p> <p>See "Loss of High Voltage".</p> <p><u>INSUFFICIENT SWEEP</u></p> <p>Check by substitution V16, V17, V18, V20 and V21. Check adjustments B2, B3 and B4. Check waveform W13.</p> <table> <tr> <td>If Satisfactory</td><td>If Unsatisfactory</td></tr> <tr> <td>Check R96, R97, C84, T3, T5A and other associated circuit components.</td><td>Check C81, C82, C83, C80, R90, R91, R93 and other associated components.</td></tr> </table> <p><u>DRIVE LINES</u></p> <p>Check by substitution V16, V17 and V18. Check horizontal drive adjustment (B2). Check C81, C82, C85, C86, T3, T5A and other associated components.</p> <p><u>COMPRESSED LEFT SIDE</u></p> <p>Check by substitution V17 and V18. Check components associated with the horizontal output and damper stages especially T3, T5A, R96, R97, C84, C85 and C86.</p> <p><u>FOLDS</u></p> <p>Follow procedure outlined under "Drive Lines".</p> <p><u>XMAS TREE EFFECT</u></p> <p>Substitute V16. Check C79, C80, L31 and other associated circuit components.</p>	If Satisfactory	If Unsatisfactory	Check R96, R97, C84, T3, T5A and other associated circuit components.	Check C81, C82, C83, C80, R90, R91, R93 and other associated components.	<p><u>LOSS OF SWEEP</u></p> <p>Check by substitution V13 and V14. Check waveform W8.</p> <table> <tr> <td>If Satisfactory</td><td>If Unsatisfactory</td></tr> <tr> <td>Check T4, T5B, R76 and other associated circuit components.</td><td>Check C73, T2, C72, R71, R73, R75 and other associated components.</td></tr> </table> <p><u>INSUFFICIENT SWEEP</u></p> <p>Check by substitution V13 and V14. Check adjustment of height and vertical linearity controls. Proceed as outlined under "Loss of Sweep".</p> <p><u>COMPRESSED AT BOTTOM</u></p> <p>Check by substitution V13 and V14. Check R73, R71, C72, C73 and other associated circuit components.</p> <p><u>COMPRESSED AT TOP</u></p> <p>Check by substitution V13 and V14. Check T4, T5B, C3C and other associated circuit components.</p> <p><u>FOLDS</u></p> <p>Check by substitution V13 and V14. Check components associated with these stages.</p>	If Satisfactory	If Unsatisfactory	Check T4, T5B, R76 and other associated circuit components.	Check C73, T2, C72, R71, R73, R75 and other associated components.
If Satisfactory	If Unsatisfactory								
Check R96, R97, C84, T3, T5A and other associated circuit components.	Check C81, C82, C83, C80, R90, R91, R93 and other associated components.								
If Satisfactory	If Unsatisfactory								
Check T4, T5B, R76 and other associated circuit components.	Check C73, T2, C72, R71, R73, R75 and other associated components.								

SYNC

<p><u>LOSS OF HORIZONTAL AND VERTICAL SYNC</u></p> <p>Check by substitution V12 and V13. Check components associated with V12 and V13A.</p> <p><u>LOSS OF VERTICAL SYNC - HORIZONTAL SYNC SATISFACTORY</u></p> <p>Check by substitution V12 and V13. Check waveform W6.</p> <table> <tr> <td>If Satisfactory</td><td>If Unsatisfactory</td></tr> <tr> <td>Check components associated with V13B.</td><td>Check vertical integrator network and other associated components.</td></tr> </table>	If Satisfactory	If Unsatisfactory	Check components associated with V13B.	Check vertical integrator network and other associated components.	<p><u>LOSS OF HORIZONTAL SYNC - VERTICAL SYNC SATISFACTORY</u></p> <p>Check by substitution V15 and V16. Check waveform W10.</p> <table> <tr> <td>If Satisfactory</td><td>If Unsatisfactory</td></tr> <tr> <td>Check components associated with V16.</td><td>Check components associated with V13A and V15.</td></tr> </table> <p><u>HORIZONTAL BENDING</u></p> <p>Check by substitution V15, V16 and V17. Check horizontal AFC network (C77, C78, R84 and R85) for change of value or failure.</p>	If Satisfactory	If Unsatisfactory	Check components associated with V16.	Check components associated with V13A and V15.
If Satisfactory	If Unsatisfactory								
Check components associated with V13B.	Check vertical integrator network and other associated components.								
If Satisfactory	If Unsatisfactory								
Check components associated with V16.	Check components associated with V13A and V15.								

VIDEO

<p><u>LOSS OF VIDEO</u></p> <p>Check R40, R41, C55, picture tube and other associated circuit components.</p> <p><u>SOUND BARS (4.5MC Beat)</u></p> <p>Check fine tuning range and adjustment. Check adjustments A8 and A9. Check video IF alignment.</p> <p><u>NEGATIVE PIX</u></p> <p>Check by substitution V7 and V8. Check components associated with these stages especially the AGC network.</p>	<p><u>POOR CONTRAST (Strong signal areas)</u></p> <p>Check by substitution V2, V4, V5, V6, V7 and V8. Check associated circuit components.</p> <p><u>SMEAR</u></p> <p>Check by substitution V7 and V8. Check C55, L27, R37, R38, R39, R40, R41, picture tube and other associated circuit components for change of value or failure.</p> <p><u>WIDE BLACK BAR ACROSS PIX</u></p> <p>Check V2, V3, V4, V5, V6, V7 and V8 for heater to cathode leakage. In case of UHF, check V1.</p>
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AUDIO

<p><u>WEAK OR NO SOUND</u></p> <p>Check by substitution V9, V10 and V11. Check stages V10B and V11 using an audio signal generator. Apply audio signal across R51.</p> <table> <tr> <td>If Satisfactory</td><td>If Unsatisfactory</td></tr> <tr> <td>Check ratio detector and audio IF alignment and components.</td><td>Check components associated with V10B and V11.</td></tr> </table>	If Satisfactory	If Unsatisfactory	Check ratio detector and audio IF alignment and components.	Check components associated with V10B and V11.	<p><u>BUZZ</u></p> <p>Adjust A11 for minimum buzz. If buzz is still objectionable substitute V10 and realign audio section following procedure outlined in the alignment section.</p> <p><u>DISTORTED</u></p> <p>See "Weak or No Sound".</p>
If Satisfactory	If Unsatisfactory				
Check ratio detector and audio IF alignment and components.	Check components associated with V10B and V11.				

TROUBLE SHOOTING AIDS (cont)

POWER

<p><u>DEAD SET</u></p> <p>If filaments fail to light, check AC interlock assembly, switch on volume control and T1. If filaments light, substitute V20 and V21. Check B+ filter and decoupling components.</p>	<p><u>SMALL AND/OR DIM PIX</u></p> <p>Substitute V20 and V21. Check B+ filter and decoupling components.</p>
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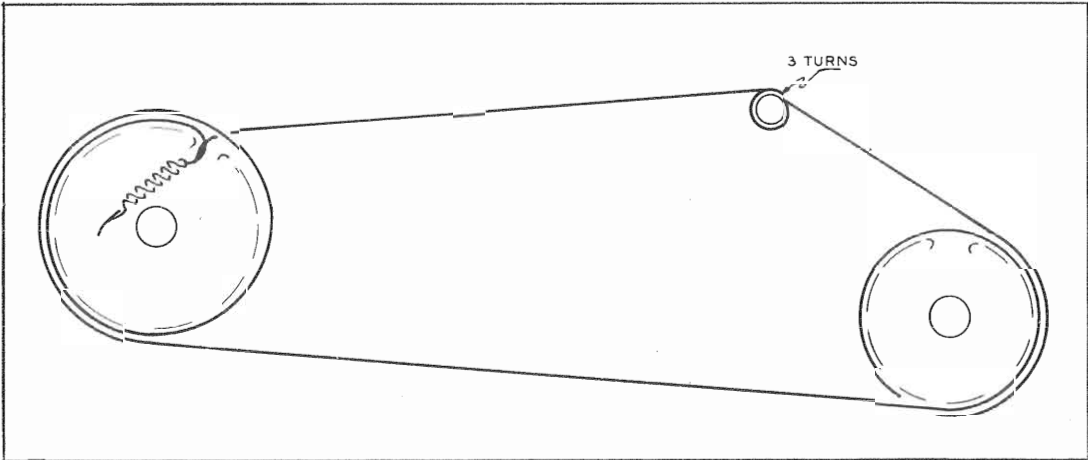
HIGH VOLTAGE

<p><u>LOSS OF HIGH VOLTAGE</u></p> <p>Check fuse M1. Check by substitution V16, V17, V18 and V19. Check waveform W13.</p> <table> <tr> <td>If Satisfactory</td><td>If Unsatisfactory</td></tr> <tr> <td>Check R99, R100, C87, T3, T5A and other associated circuit components.</td><td>Check C80, C81, C82, R90, R91, R93 and other associated components.</td></tr> </table>	If Satisfactory	If Unsatisfactory	Check R99, R100, C87, T3, T5A and other associated circuit components.	Check C80, C81, C82, R90, R91, R93 and other associated components.	<p><u>INSUFFICIENT HIGH VOLTAGE</u></p> <p>Check by substitution V16, V17, V18, V19, V20 and V21. Follow procedure outlined under "Loss of High Voltage".</p> <p><u>BLOOMING</u></p> <p>Check by substitution V19, V18, V17, V16, V20 and V21. Check R99, R100, C87, T3, T5A, picture tube and other associated components.</p>
If Satisfactory	If Unsatisfactory				
Check R99, R100, C87, T3, T5A and other associated circuit components.	Check C80, C81, C82, R90, R91, R93 and other associated components.				

GENERAL

<p><u>RASTER SOUND NO PIX</u></p> <p>See "Loss of Video".</p> <p><u>RASTER NO SOUND NO PIX (VHF)</u></p> <p>Check V2, V3, V4, V5, V6, V7 and V8. Check components associated with these stages.</p> <p><u>RASTER NO SOUND NO PIX (UHF)</u></p> <p>Check V1. It may be necessary to try several tubes to find one that will operate satisfactorily.</p>	<p><u>NO RASTER NO SOUND</u></p> <p>See "Dead Set".</p> <p><u>INTERMITTENT STREAKS</u></p> <p>Check video signal at W1 for interference pulses. Check high voltage section for corona discharge and arcing.</p>
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Symptoms shown are assumed and are not indicative of the quality and workmanship of this receiving equipment.



UHF DRIVE CORD STRINGING

FADA MODELS UD12100T,
UD21T, U2100C, T, U2150C

PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA				NOTES
		PRI.	SEC.	FADA PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	
L1	Ant. Coupling Loop	0Ω						
L2	Ant. Coupling Loop	0Ω						
L3	RF Coupling Loop	0Ω						
L4	Fl. Choke	0Ω						
L5	Osc. Tank Coil	0Ω						
L6	Osc. Tank Coil Shunt	0Ω						
L7	Osc. Grid Coil	0Ω CT						
L8	Osc. Harmonic Coupling	0Ω						
L9	Osc. Doubler Coupling	0Ω						
L10	RF Choke	.1Ω						
L11	UHF IF Output Coil	0Ω	0Ω					
L12	Ant. RF Mixer Grid & Osc. Coils	0Ω						
L13	44MC UHF IF Strip	0Ω						
L14	Neutr. Coil	0Ω						
L15	Fl. Choke	0Ω						
L16	Mixer Grid Coil	0Ω						
L17	RF Choke	0Ω						
L18	Conv. Plate	0Ω	0Ω				6234	
L19	1st. Video IF	.1Ω		37.276			6232	
L20	2nd. Video IF	.2Ω		37.277			6175	Includes trap .6 Microhenry
L21	Fl. Choke	0Ω		37.89	19-3001	TV-189	6233	Includes trap .6 Microhenry
L22	3rd. Video IF	.2Ω		37.278			6175	
L23	Fl. Choke	0Ω		37.89	19-3001	TV-189	6234	
L24	4th. Video IF	.2Ω	.2Ω	37.279				
L25	Series Peak-ing Coil	5Ω		37.234	19-3125		6153	120 Microhenries
L26	Shunt Peak-ing Coil	18Ω		37.235	19-3660	TV-188	4650	600 Microhenries
L27	Series Peak-ing Coil	6Ω		37-236	19-3180 *	TV-184 *	6180	190 Microhenries, wound on 18KΩ resistor
L28	Shunt Peak-ing Coil	7.5Ω		37.237	19-3250	TV-185	6181	245 Microhenries
L29	Sound IF	1.8Ω	1.8Ω	37.252	16-3445 †	TV-113	6203	
L30	Ratio Det.	5.5Ω	1.9Ω CT	37.253	17-3497	TV-115	6205	
L31	Horiz. Osc.	50Ω		37.233	19-1976	TV-163	6210	Tertiary winding-.6Ω

† Drill mounting holes.
* Parallel with 18KΩ resistor.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 Hz)	FADA PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	TRIAD PART No.
L32	2.50A	60Ω	1.5HY	42.56	C-2326 ①	C-2996 ①	TR-1733 ①	

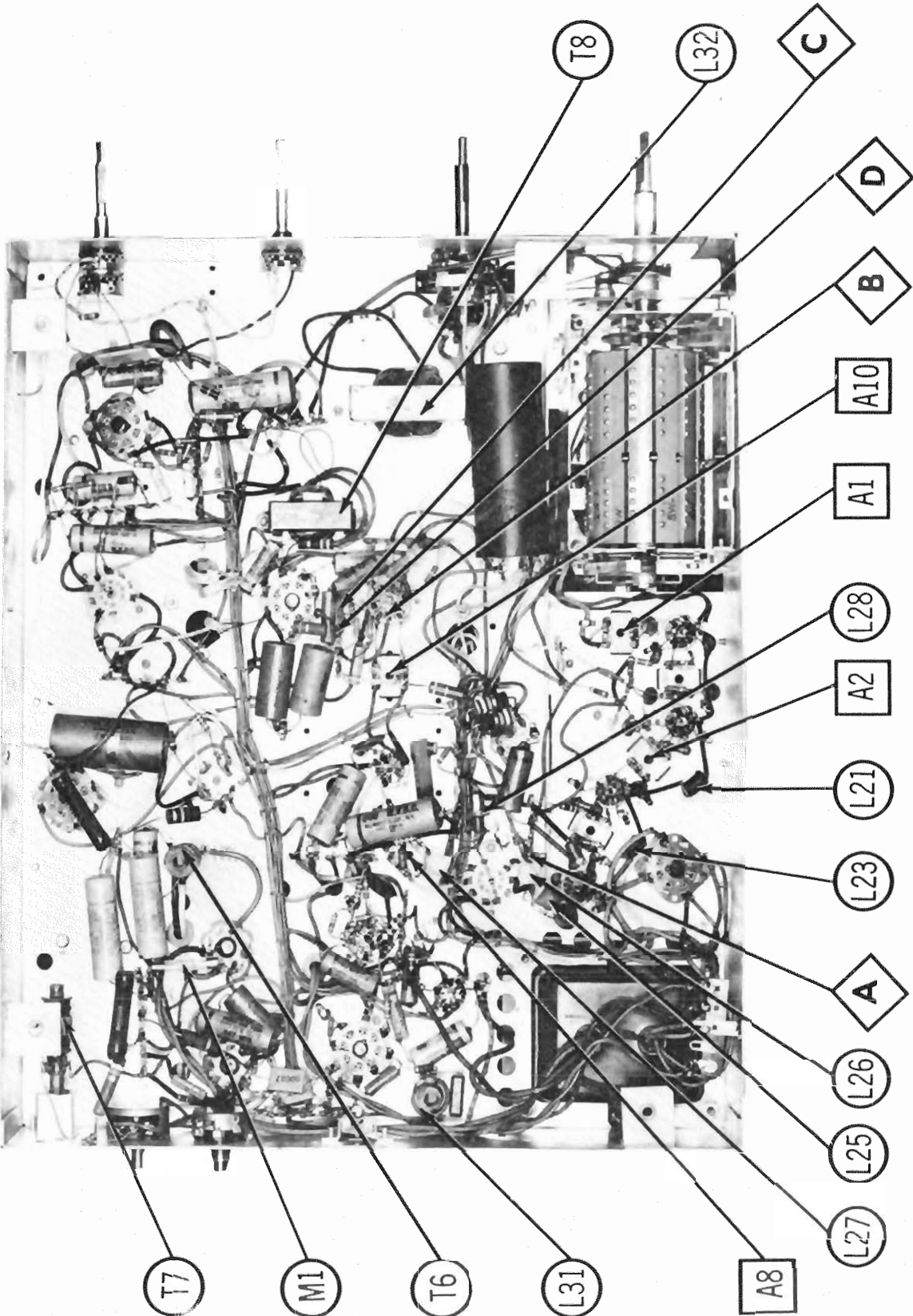
① Drill one new mounting hole.

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			FADA PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	3AG P/T	1/4A			318.250 (3AG P/T-1/4A)		GJV 1/4	

MISCELLANEOUS

ITEM No.	PART NAME	FADA PART No.	NOTES
M2	Dial Light	42.79	#47
M3	Tuner	42.78	UHF
M4	Tuner		VHF
M5	Crystal		UHF Mixer G7B
M6	Switch		UHF-VHF Selector- Slide type activated with VHF selector
M7	Focus Magnet	112.38	Includes centering arm & focus adj. cable
M8	Ion Trap	112.23	
B2	Trimmer Cap.	132.18	
	Cabinet	97.472	Horiz. Drive 25-280MMF
	Cabinet	97.473	Model UDL2100T
	Cabinet	97.473FT	Model U2100T
	Cabinet	97.360	Model UH21T
	Knob	142.94	Models U2100C, U2150C
	Knob	142.93	Outer Shaft
	Knob	142.96	Inner Shaft
	Knob	142.96	Channel Selector Models UDL2100T, U2100T, UH21T
	Knob	142.93	Channel Selector Models U2100C, U2150C
	Knob	142.98	Fine tuning
	Knob	142.97	UHF Dial
	Knob	142.95	Brightness Models UH21T, U2150C
	Safety Glass	92.533	Models U2100T, UH21T
	Safety Glass	92.537	Models UDL2100T
	Safety Glass	92.403	Models U2100C, U2150C
	Control Panel	97.482	Model U2100T
	Control Panel	97.512	Model UH21T



NO IDENTIFICATION VIEW-TRANS-AND NOTION "SNAI-REVIEW BOTTOM WOLTON

MODELS UDL2100T, UH21T, U2100C, T, U2150C

FADA

TUBES (SYLVANIA, GENERAL ELECTRIC or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RTMA BASE TYPE	NOTES
		FADA PART No.	STANDARD REPLACEMENT		
V1	UHF Oscillator	676	676	7BF	
V2A	RF Amplifier	6BK7	6BK7	9AJ	
B	RF Amplifier	6BQ7	6BQ7	9AJ	
V3	Converter	6J6	6J6	7BF	
V4	1st Video IF Amp.	6CB6	6CB6	7CM	
V5	2nd Video IF Amp.	6CB6	6CB6	7CM	
V6	3rd Video IF Amp.	6CB6	6CB6	7CM	
V7	Video Detector-AGC Rectifier	6AL5	6AL5	6BT	
V8	Video Output	12BY7	12BY7	9A	
V9	Sound IF Amp.	6AU6	6AU6	7BK	
V10	Ratio Detector-AF Amplifier	6T8	6T8	9E	
V11	Audio Output	6K6GT	6K6GT	7S	
V12	Sync Separator-Sync Amplifier	12AU7	12AU7	9A	
V13	Sync Phase Inv. - Vert. Oscillator	6SN7GT	6SN7GT	8ED	
V14	Vert. Output	6S4	6S4	9AC	
V15	Horiz. AFC	6AL5	6AL5	6BT	
V16	Horiz. Mult.	6SN7GT	6SN7GT	8ED	
V17	Horiz. Output	6CD6G	6CD6G	5ET	
V18	Damper	6W4GT	6W4GT	4CG	
V19	HV Rectifier	1B3GT	1B3GT	3C	
V20	LV Rectifier	5U4G	5U4G	5T	
V21	LV Rectifier	5U4G	5U4G	5T	

CATHODE-RAY TUBE

ITEM No.	FADA PART No.	REPLACEMENT DATA		RTMA BASE TYPE	NOTES
		SYLVANIA PART No.	GENERAL ELECTRIC PART No.		
V22A	21EP4A	21EP4A 21EP4A ① 21EP4B 21FP4 ① 21FP4A ① 21AP4	21EP4B	12D 12D 12C 12C 12C 12D	① Circuit changes necessary

CAPACITORS

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

ITEM No.	RATING	REPLACEMENT DATA						NOTES
		FADA PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	
C1A	450 475	22.79	AFH3-54		CO41		FP397	TVL-3843
C2A	440 475	22.90	AFH3-46		D115		FP378	TVL-3727
C3A	480 350		PRS350/10				TC62	TVA-1712
C4	40 350	22.81	AFH4-80		DO53		FP437	TVL-4740
C5	5 50	22.88	PRS450/40		BR4045		TC78	TVA-1611
C6	25 50	22.86	PRS50/4		BR550		TC30	TVA-1303
C7	1 150	22.70	PRS50/25		BR255		TC36	TVA-1306
C8	4.7 450		PRS150/4		BR145		TC40	TVA-1402
C9	4.7 450							
C10	4.7 450							
C11	800 800		EF-001	MFT-1000	TM5T8	801-001	DC-521	503C-D1
C12	800 800		BPD-0008	DD-102				5HK-D1
C13	800 800		EF-001	MFT-1000				503C-D1
C14	7-2 800			829-4				
C15	10 800		SI10NP0	TCZ-10		NP0K-100		5TCC-Q1
C16	33 800		SI33NP0	TCZ-38		NP0K-330		5TCC-Q33
C17	100 800							
C18	800 800		EF-001	MFT-1000				503C-D1
C19	1.3 800			829-4				
C20	1.8 800							
C21	5 800		SI5NP0	TCZ-4.7		NP0K-050		5TCCB-V47
C22	7-2 800			829-3				
C23	47 800		BPD-000047	D6-470		GP1K-470		5GA-Q47
C24	800 800		BPD-0008	DD-102		801-001	DC-521	5HK-D1
C25	800 800		BPD-0008	DD-102		801-001	DC-521	5HK-D1
C26	800 800		EF-001	MFT-1000				503C-D1
C27	47 800		BPD-000047	D6-470		GP1K-470		5GA-Q47
C28	1-3 800			829-4				
C29	10 800		SI10N750	TCN-10		N750K-100		5TCC-Q1
C30	10 800		SI10N750	TCN-10		N750K-100		5TCC-Q1
C31	1-3 800			829-4				
C32	200 800		BPD-0008	DD-102		801-001	DC-521	5HK-D1
C33	10 800		SI10NP0	TCZ-10		NP0K-100		5TCC-Q1
C34	10 800		SI10NP0	TCZ-1.5		NP0K-100		5TCCB-V15
C35	1.5 800		EF-001	MFT-1000				503C-D1
C36	800 800		EF-001	MFT-1000				503C-D1
C37	800 800		BPD-00047	D6-470		GP1K-470		5GA-Q47
C38	1500 17.140							
C39	1500 17.140		BPD-0015	DD-152		801-0015	DC-5215	5HK-D15
C40	600 17.141		BPD-0015	DD-152		801-0015	DC-5215	5HK-D15
C41	1500 17.140		BPD-0015	DD-152		801-0015	DC-5215	5HK-D15
C42	1500 17.140		BPD-0015	DD-152		801-0015	DC-5215	5HK-D15
C43	1500 17.140		BPD-0015	DD-152		801-0015	DC-5215	5HK-D15
C44	600 17.141		SI1600	D6-601		GP2K-601		5GA-T6
C45	400 17.142		SI1470	D6-471		UC-5347		5HK-D15
C46	1500 17.140		BPD-0015	DD-152		801-0015	DC-5215	5HK-D15
C47	1500 17.140		BPD-0015	DD-152		801-0015	DC-5215	5HK-D15
C48	120 17.106		SI120	D6-121		TM5T12		5GA-T12
C49	1 200		P288-1	DF-104		PJ2P1		2TM-P1
C50	5000 17.44		BPD-005	MD-502		TM5D5		5HK-D5

Note 1

PARTS LIST AND DESCRIPTIONS

CAPACITORS (cont)

ITEM No.	RATING	REPLACEMENT DATA						NOTES
		FADA PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	
C51	1500	17.140	BPD-0015	DD-152		801-0015	DC-5215	5HK-D15
C52	5	17.79	SI5NP0	TCZ-4.7		NP0K-050	UC-5347	5TCCB-V47
C53	680	17.108	SI680	D6-681		GP2K-681		5GA-T68
C54	470	17.107	SI470	D6-471		GP2K-471		5GA-T47
C55	1.1	600	P688-1	DF-104		PTE6P1		6TM-P1
C56	1.1	400	P488-1	DF-104		PTE4P1		4TM-P1
C57	2	17.59	SI2.2NP0	TCZ-2.2		NP0K-2R2		5TCCB-V22
C58	39	17.105	SI39	D6-390		GP1K-390		5GA-Q39
C59	10000	17.80	BPD-01	DD-103		811-01	DC-521	5HK-S1
C60	620	500						
C61	1.0039	400						
C62	0.1	400						
C63	0.047	400						
C64	0.022	400						
C65	0.047	400						
C66	0.047	400						
C67	0.022	400						
C68	100000	17.80	BPD-01	DD-103		811-01	DC-521	5HK-S1
C69	47	200	P288-47					
C70A	0.022							
B	0.005							
C	0.005							
C71	0.047	800						
C72	0.047	400						
C73	1	400						
C74	1000	17.109						
C75	1000	17.109						
C76	1	400						
C77	0.047	400						
C78	0.047	400						
C79	3900	500						
C80	330	500						
C81	270	500						
C82	270	500						
C83	100	1000						
C84	0.047	600						
C85	22	400						
C86	0.047	400						
C87	500	20000						
C88	43	1500						
C89	22	400						
B	10000							
C91	1	200						
C92	0.005	400						

Note 1. Not used in all Models.

Note 2. When using yoke part #37.275, C88 is 36MMF.

Note 3. Used in Models U2100C, U2100T, UDL2100T only.

* Items C70A, C70B, C70C, R66A, R66B, R66C are combined in one unit.

CONTROLS

ITEM No.	RATING	REPLACEMENT DATA						NOTES
		FADA PART No.	IRC PART No.	CLEARSTAT PART No.	CENTRALAB PART No.	MALLORY PART No.	INSTALLATION NOTES	
R1A	1Meg	52.66	*QJ-168	RTV-110	SBB-510	UF16L	Vert. Hold-Panel	
B	50KΩ	Not Req.				UR54L	Horiz. Hold-Rear	
R2A	50KΩ	52.69	Q11-123	AG-44-S	B-31	U-35	Brightness	
B	Shaft	Not Req.		FS-3	Not Req.	Not Req.	Attach to R2A	
R3A	750Ω	52.64	*QJ-270	RTV-109		WFT51-T250	Contrast tapped at 500Ω -Panel	
B	500KΩ	Not Req.				UF55A	Volume-Rear	
C	Switch	Not Req.				US-26	Attach to R3B	
R4A	2.5Meg	52.24	Q11-239	AG-84-S	AB-83	U-565	Height	
B	Shaft	Not Req.		FKS-1/4	AK-1	Not Req.	Attach to R4A	
R5A	500Ω	52.68	WK-5000	A43-5000	VK-135	R5000L	Vert. Linearity	
B	Shaft	Not Req.		FKS-1/4	Not Req.	Not Req.	Attach to R5A	
R6A	500KΩ	52.70	*QJ-436	RTV-401		UF55A	Tone-Panel	
B	50KΩ	Not Req.				UR54L	Brightness-Rear	

† Universal replacement (Mallory exact duplicate part No. UE1601).

†† Universal replacement (Mallory exact duplicate part No. UE22WS).

* CONCENTRIKIT EQUIVALENT KIT-K-2 BASE ELEMENTS & SHAFTS BU-137 & PI-126 (Panel)

††† Universal replacement (Mallory exact duplicate part No. UE1425).

* CONCENTRIKIT EQUIVALENT KIT-K-3 BASE ELEMENTS & SHAFTS Q11-105 & P4-124 (Panel)

††† Universal replacement (Mallory exact duplicate part No. UE1425).

* CONCENTRIKIT EQUIVALENT KIT-K-2 BASE ELEMENTS & SHAFTS BU-137 & PI-126 (Panel)

††† Universal replacement (Mallory exact duplicate part No. UE1425).

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††† Universal replacement (Mallory exact duplicate part No. UE1425).

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