

PHILCO MODEL 51-PT1208

TRADE NAME	Philco, Models 51-PT1207, 51-PT1208, 51-PT1234, 51-PT1282 (All Code 121)
MANUFACTURER	Philco Corp., Tioga And "C" Sts., Philadelphia, Pa.
TYPE SET	Television Receiver (Models 51-PT1282 Has Phonograph)
TUBES	Eighteen

POWER SUPPLY 110-120 Volts AC - 60 Cycle  
TUNING RANGE - Channels 2 thru 13

RATING 1.24 Amp. @ 117 Volts AC

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#### RECORD CHANGER UNIT FOR MODEL 51-PT1282 - PHILCO MODEL M-22

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

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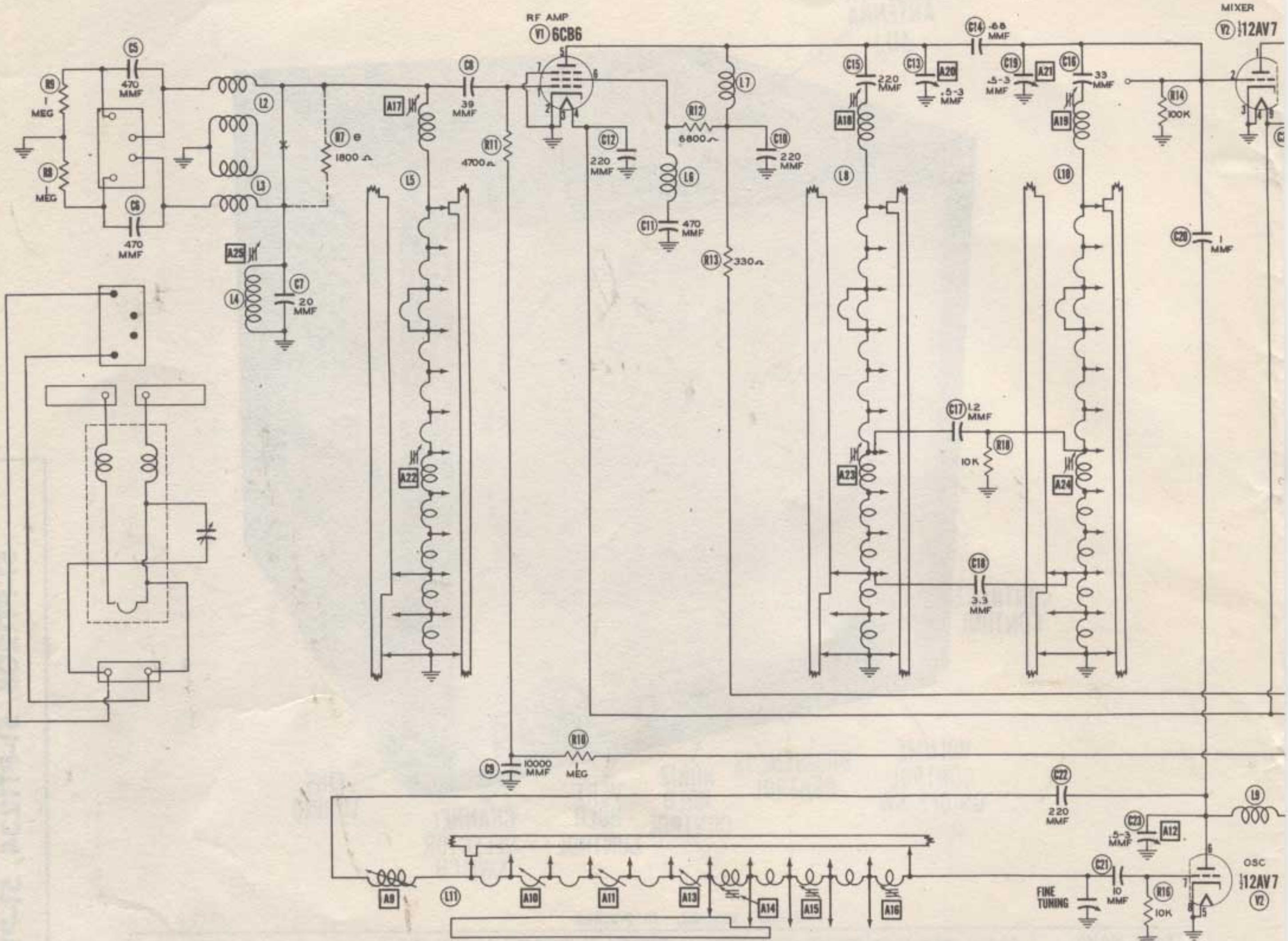
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DATE 6-51

SET 136

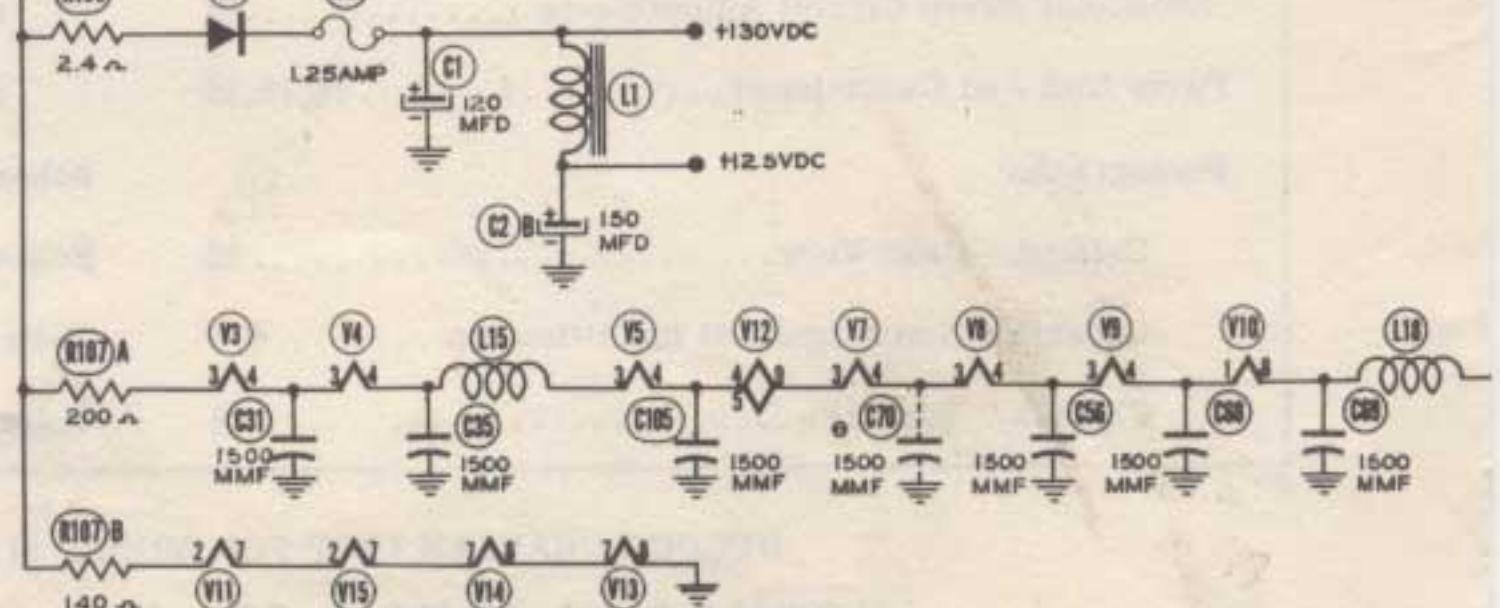
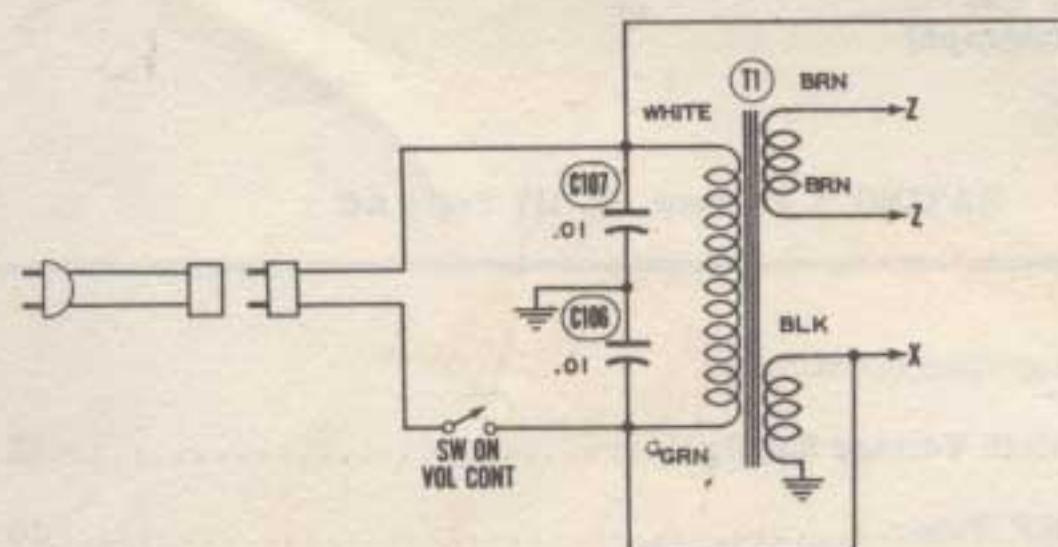
FOLDER 12

PHILCO MODELS 51-PT1207,  
51-PT1208, 51-PT1234, 51-PT1282



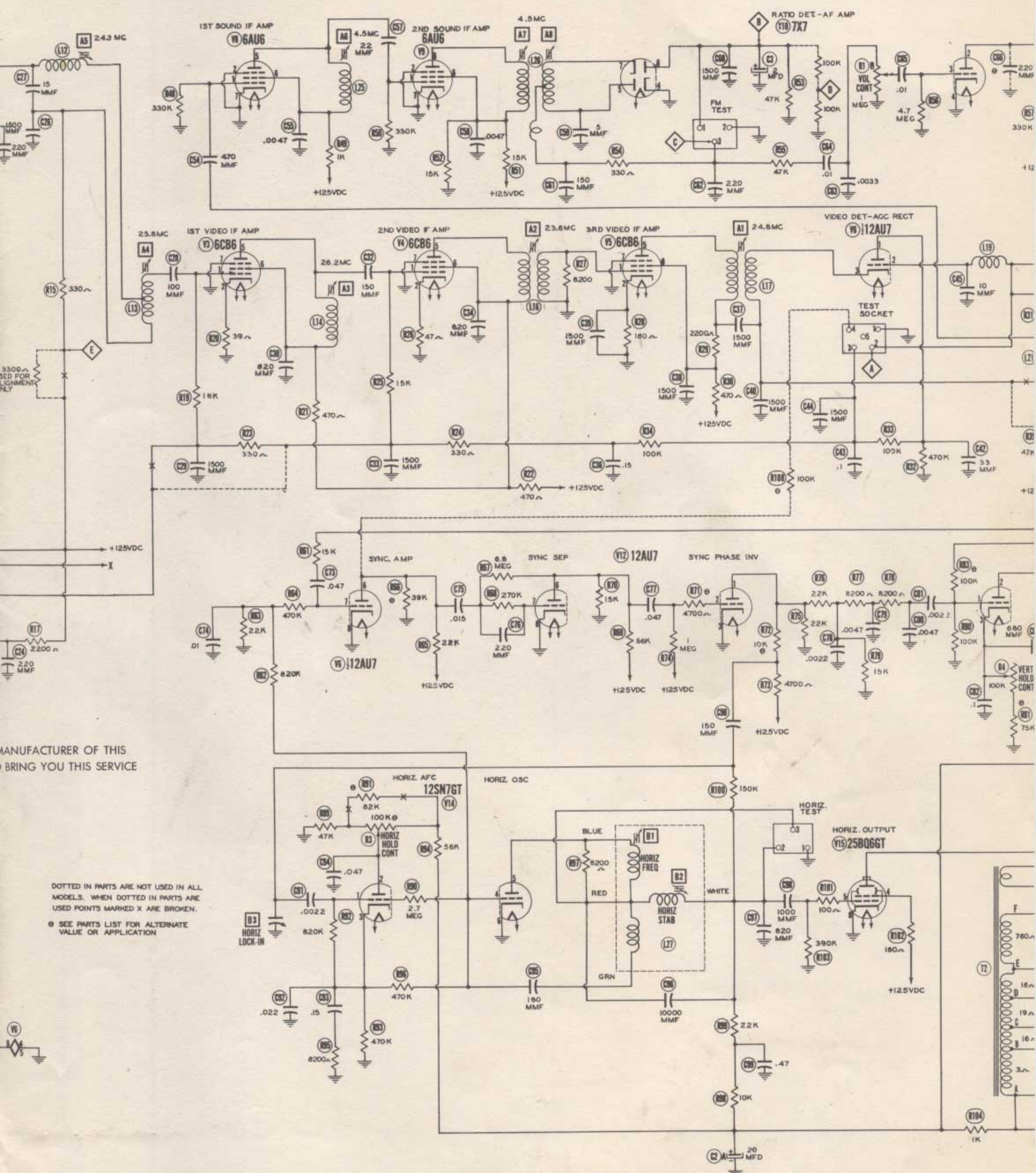
CHANNEL SW. SHOWN IN CHANNEL 13 POSITION

THE COOPERATION OF THE  
RECEIVER MAKES IT POSSIBLE TO

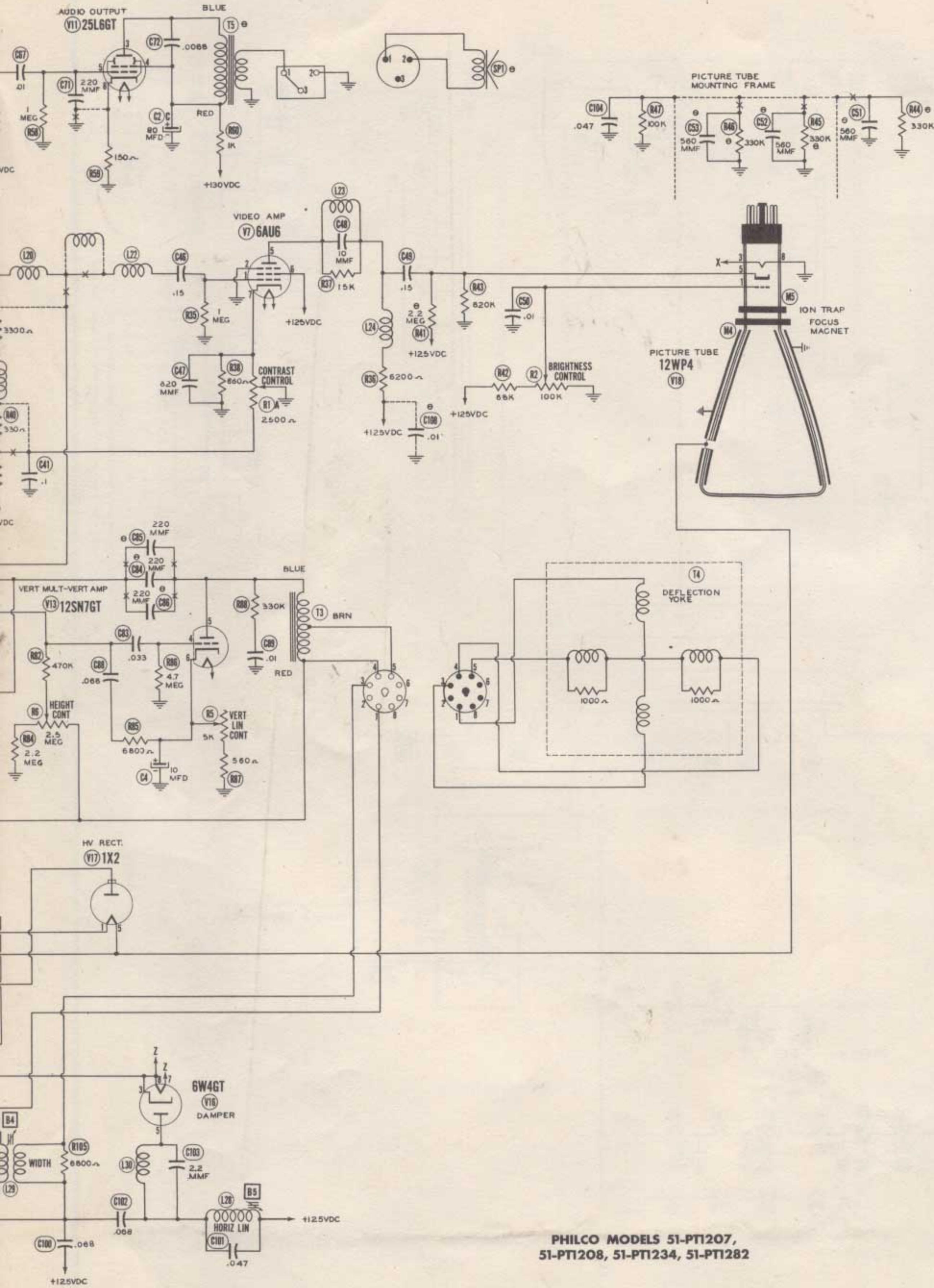


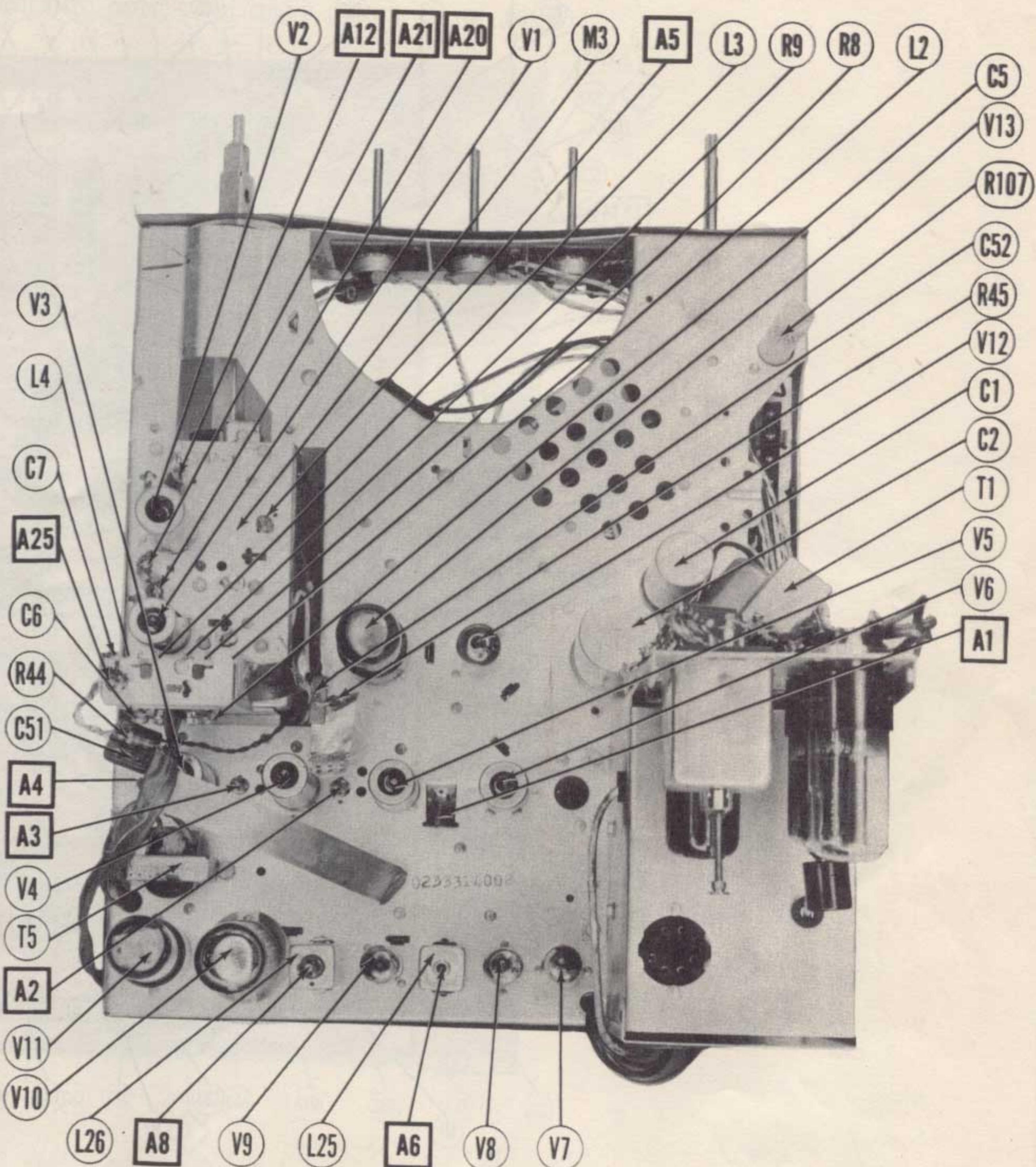
A PHOTOFAC STANDARD NOTATION SCHEMATIC

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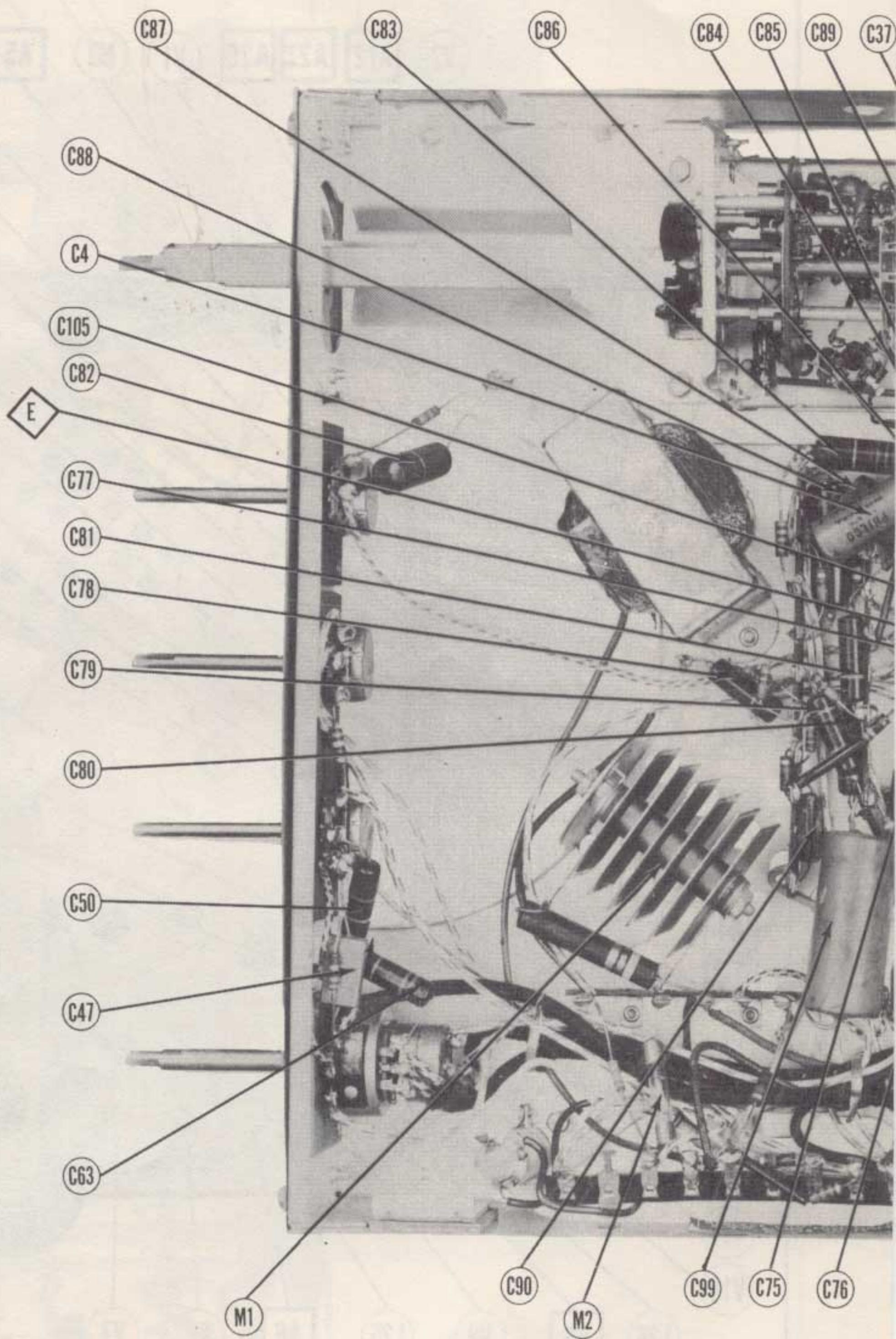


**PHILCO MODELS 51-PT1207,  
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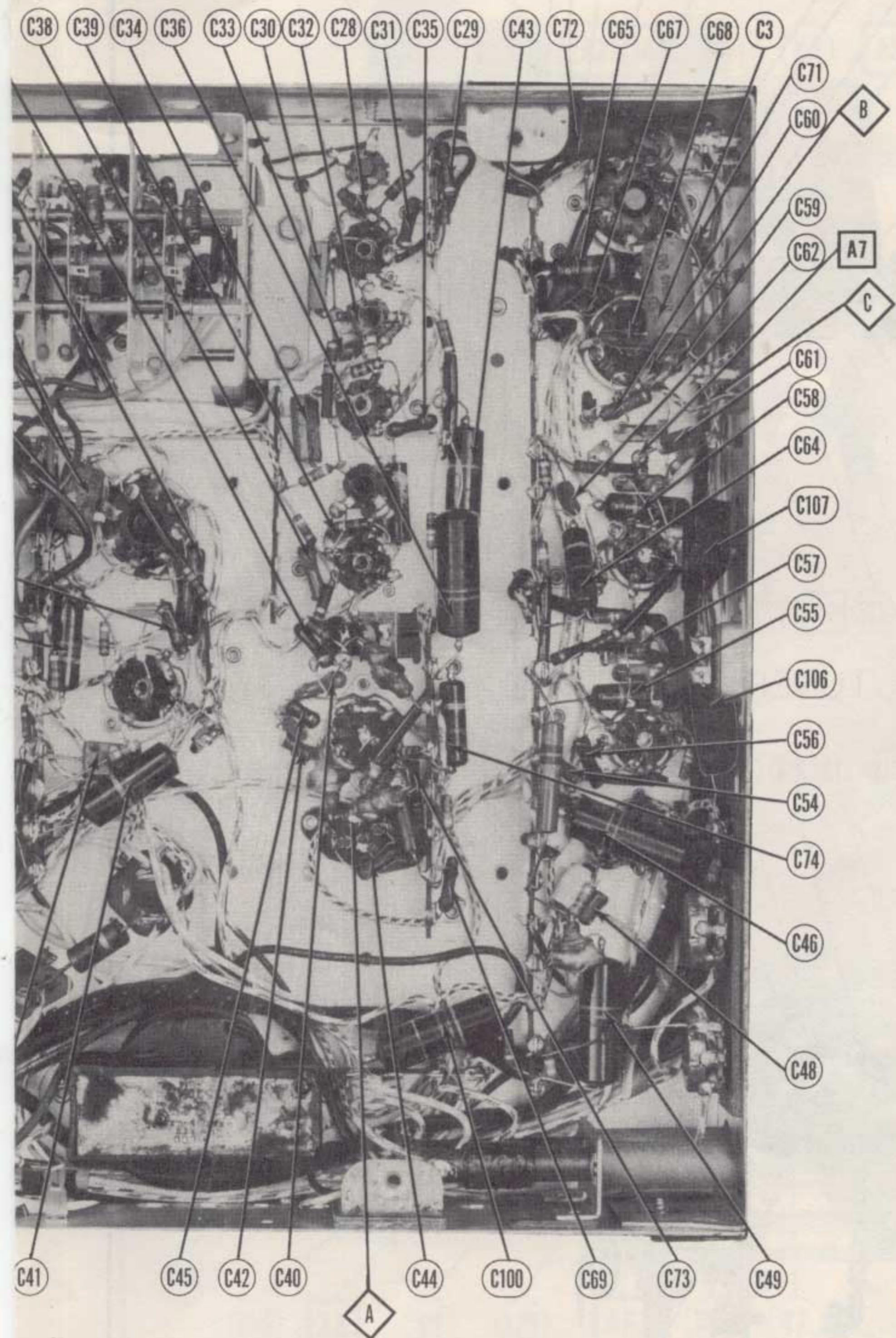


CHASSIS TOP VIEW

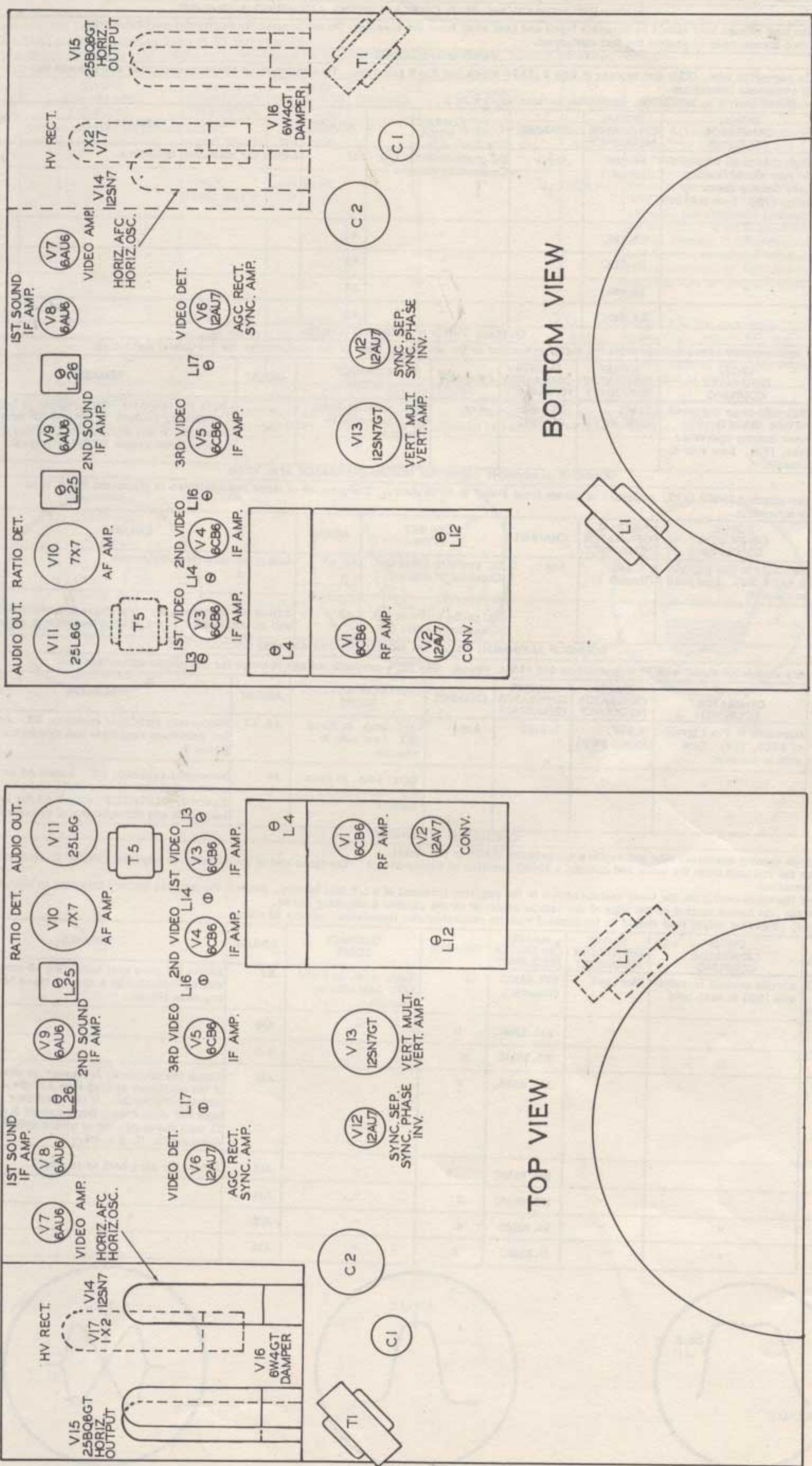


CHASSIS BOTTOM VIEW- CAPACITOR

PHILCO MODELS 51-PT1208, 51-PT1234, 51-PT1282



AND ALIGNMENT IDENTIFICATION



## TUBE PLACEMENT CHART

**PHILCO MODELS 51-PT1207,  
51-PT1208, 51-PT1234, 51-PT1282**

# ALIGNMENT INSTRUCTIONS

## ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

The end of the high voltage lead should be securely taped and kept away from the chassis. Do not remove the horizontal oscillator tube. Use an isolation transformer to protect the test equipment.

### VIDEO IF ALIGNMENT

Remove the converter tube, (V2), and replace it with a 12AV6 which has Pin 6 removed. This will disable the local oscillator and prevent the possibility of erroneous indications.

Turn the contrast control to MINIMUM, (maximum counter-clockwise).

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
1.	Direct	High side to an ungrounded tube shield floating over dummy converter tube, (V2). Low side to chassis.	24.8MC (Unmod.)	Any	DC probe to Point A. Common to chassis.	A1	Adjust for maximum deflection.
2.	"	"	23.6MC	"	"	A2	"
3.	"	"	26.2MC	"	"	A3	"
4.	"	"	25.8MC	"	"	A4	"
5.	"	"	24.3MC	"	"	A5	"

### OVERALL VIDEO IF RESPONSE CHECK

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

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
6.	Direct	High side to an ungrounded tube shield floating over dummy converter tube, (V2). Low side to chassis.	25MC (10MC SWP)	22.1MC 26.6MC	Any	Vert. amp. to Point A. Low side to chassis.		Check for response curve similar to figure 1. If necessary retouch A1 thru A5 for proper response. If any adjustment requires considerable change repeat VTVM alignment.

### SOUND IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

Connect two matched  $100\text{ k}\Omega$  ( $\pm 1\%$ ) resistors in series from Point B to chassis. The junction of these two resistors is alignment Point D as shown on the schematic.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
7.	.01MFD	High side to Pin 1 (grid) of 6AU6 (V8). Low side to chassis.	4.5MC (Unmod.)	Any	DC probe to Point B. Common to chassis.	A6, A7	Adjust for maximum deflection.
8.	"	"	"	"	DC probe to Point C. Common to Point D.	A8	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
7.	.01MFD	High side to Pin 1 (grid) of 6AU6, (V8). Low side to chassis.	4.5MC (450KC SWP)	4.5MC	Any	Vert. amp. to Point B. Low side to chassis.	A6, A7	Disconnect stabilizer capacitor C3. Adjust for maximum amplitude and symmetry as per figure 2.
8.	"	"	"	"	"	Vert. amp. to Point C. Low side to chassis.	A8	Reconnect capacitor C3. Adjust A8 so 4.5MC occurs at center of crossover lines as per figure 3. SLIGHTLY retouch A7 for maximum amplitude and straightness of crossover lines.

### OSCILLATOR ALIGNMENT

Remove the dummy converter tube and replace the original 12AV6 in its socket.

Unsolder the red lead from the tuner and connect a  $3300\Omega$  resistor in series with it. The tuner end of the resistor is alignment Point E as shown on the schematic.

Unsolder the white lead from the tuner and connect it to the negative terminal of a 1.5 volt battery, connect the positive battery terminal to chassis.

Pre-set the fine tuning control so the edge of the cam is centered on the channel 6 adjusting screw.

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
9.	Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	Not used	237.85MC (Unmod.)	13	Vert. amp. to Point E. Low side to chassis.	A9	Adjust for zero beat indication on scope. This will be indicated by a narrow trace between two wide traces.
10.	"	"	"	225.85MC	11	"	A10	"
11.	"	"	"	213.85MC	9	"	A11	"
12.	"	"	"	207.85MC	8	"	A12	Check the oscillator frequency on channel 8. If the oscillator is high turn A12 several turns counter-clockwise. If the oscillator is low turn A12 clockwise. Repeat steps 9, 10, 11, and 12 until the oscillator is within 500KC on channels 13, 11, 9 and 8.
13.	"	"	"	201.85MC	7	"	A13	Adjust for zero beat as in step 9.
14.	"	"	"	199.85MC	6	"	A14	"
15.	"	"	"	93.85MC	4	"	A15	"
16.	"	"	"	81.85MC	2	"	A16	"

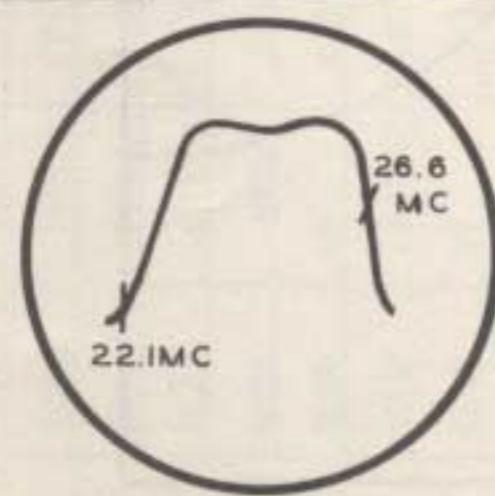


FIG. 1

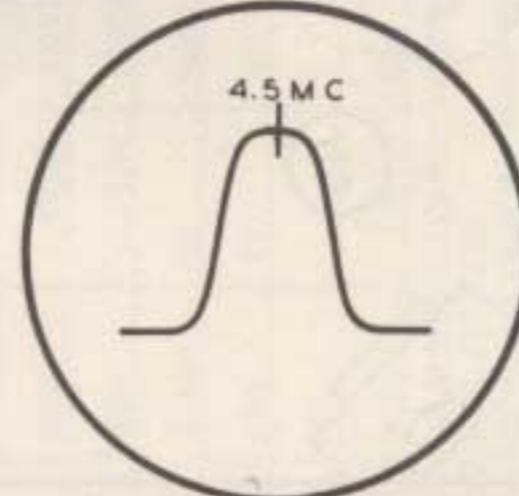


FIG. 2

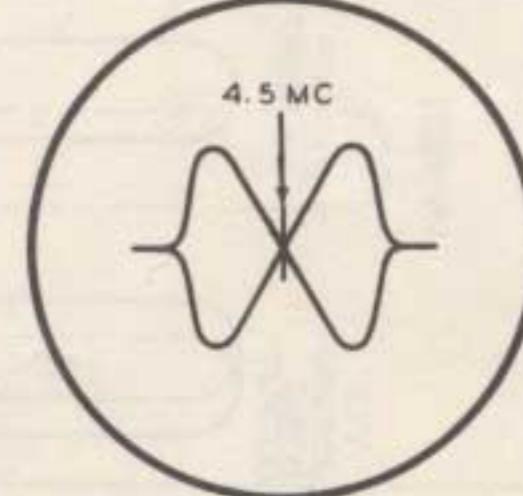


FIG. 3

# ALIGNMENT INSTRUCTIONS (CONT.)

## RF ALIGNMENT

Retain the 1.5 volt bias used during oscillator alignment.  
 Connect a  $330\Omega$  resistor between Pin 1 of V3 and chassis.  
 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
17. Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	213MC (10MC SWP)	211.25MC 215.75MC	13	Vert. amp. to Point E Low side to chassis.	A17, A18, A19	Adjust A17 for maximum curve height and symmetry. Adjust A18, and A19 for symmetrical response centered about 213MC.
18.	"	177MC (10MC SWP)	175.25MC 179.75MC	7	"	A20, A21	Examine the response curve with respect to "tilt" and center frequency. Adjust A20 and A21 until the response is a mirror image of the original. This is necessary to compensate for the channel 13 adjustments. See figure 4A and 4B for example of compensation. Repeat the adjustments of A18, A19 and step 18 until the response is correct or both channels 7 and 13.
19.	"	85MC (10MC SWP)	83.25MC 87.75MC	6	"	A22, A23, A24	Adjust A22 for maximum curve height and symmetry. Adjust A23 and A24 for a symmetrical response centered about 85MC. Recheck all channels to see if the response falls within the limits of figure 5.

## FM TRAP ADJUSTMENT

The FM trap A25 has been pre-set at the factory to reject 100MC. The trap is very broad and will not be normally require adjustment in the field. However, if interference is encountered from a strong FM station, A25 may be adjusted to reduce or eliminate the interference.

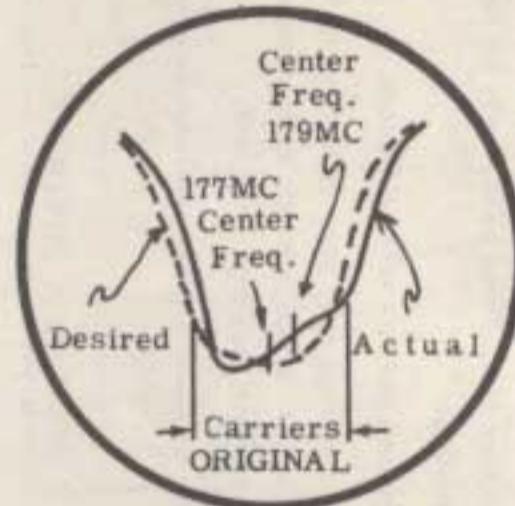


FIG. 4A

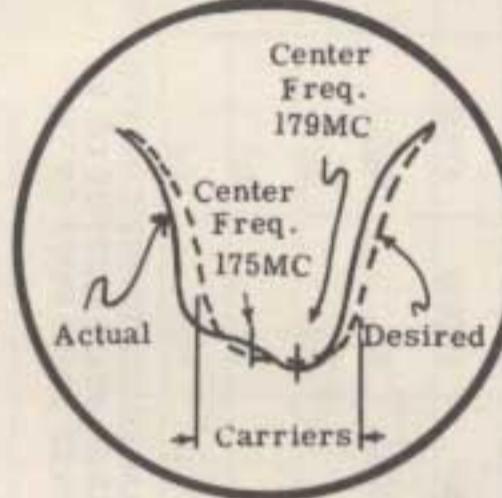


FIG. 4A  
COMPENSATED  
FIG. 4 B

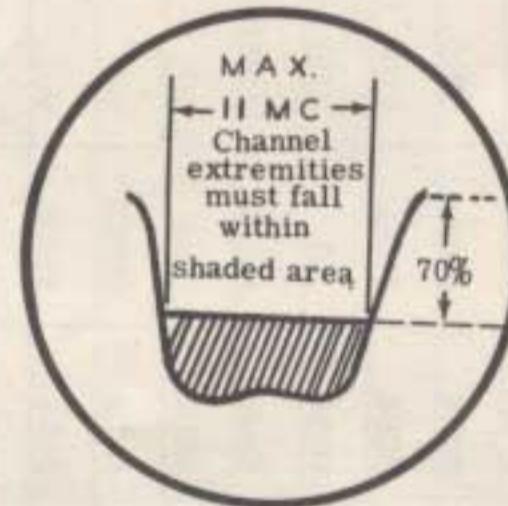


FIG. 5

# VOLTAGE AND RESISTANCE MEASUREMENTS

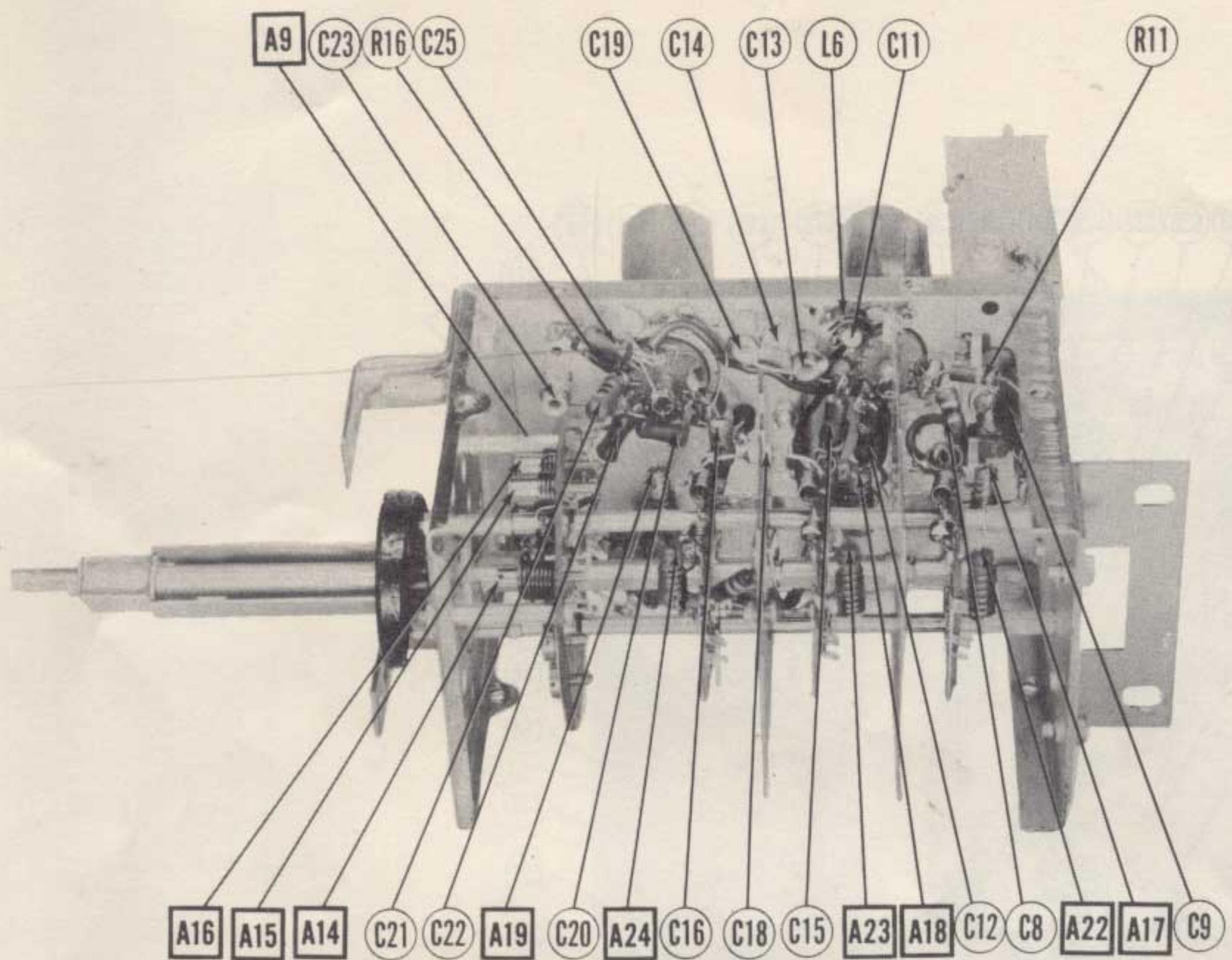
## VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6CB6	-1VDC	0V	0V	6.3VAC	120VDC	115VDC	0V	.2Ω	1360Ω
V 2	12AV7	125VDC	-1.7VDC	0V	0V	95VDC	6-3.4VDC	0V	0Ω	12.2KΩ
V 3	6CB6	-1.6VDC	.2VDC	55VAC	49VAC	105VDC	110VDC	0V	0Ω	12.2KΩ
V 4	6CB6	-.6VDC	.5VDC	49VAC	42VAC	110VDC	115VDC	0V	0Ω	10KΩ
V 5	6CB6	0V	2.2VDC	42VAC	37VAC	95VDC	120VDC	0V	0Ω	12.2KΩ
V 6	12AU7	-2.2VDC	-.6VDC	.1VDC	0V	55VDC	-2.2VDC	0V	6VAC	1470Ω
V 7	6AU6	0V	0V	31VAC	25VAC	110VDC	125VDC	2.4VDC	1.1Meg	16KΩ
V 8	6 AU6	-2VDC	0V	25VAC	18VAC	115VDC	115VDC	0V	0Ω	16KΩ
V 9	6AU6	-.3VDC	0V	18VAC	13VAC	49VDC	49VDC	0V	0Ω	16KΩ
V 10	7X7	13VAC	70VDC	-.6VDC	0V	-1.2VDC	-3.2VDC	-53VDC	6VAC	130Ω
V 11	25L6	0V	75VAC	85VDC	95VDC	0V	0V	50VAC	6.3VDC	13Ω
V 12	12AU7	37VDC	.4VDC	0V	37VAC	37VAC	26VDC	-5VDC	0V	13Ω
V 13	12SN7	-.8VDC	195VDC	6.9VDC	0V	225VDC	14VDC	12VAC	0V	13Ω
V 14	12SN7	-1.2VDC	80VDC	-1.8VDC	-41VDC	265VDC	0V	25VAC	13VDC	14KΩ
V 15	25BQ6	0V	50VAC	125VDC	125VDC	-21VDC	125VDC	25VAC	0V	1.2Meg
V 16	6W4	0V	0V	280VDC	0V	125VDC	0V.	280VDC	280VDC	1.2Meg
V 17	IX2	*	DO NOT MEASURE	*	*	*	*	*	*	1.2Meg
V 18	12WP4	.1VDC	0V	6.3VAC	0V	23VDC	0V	0V	0V	1.2Meg

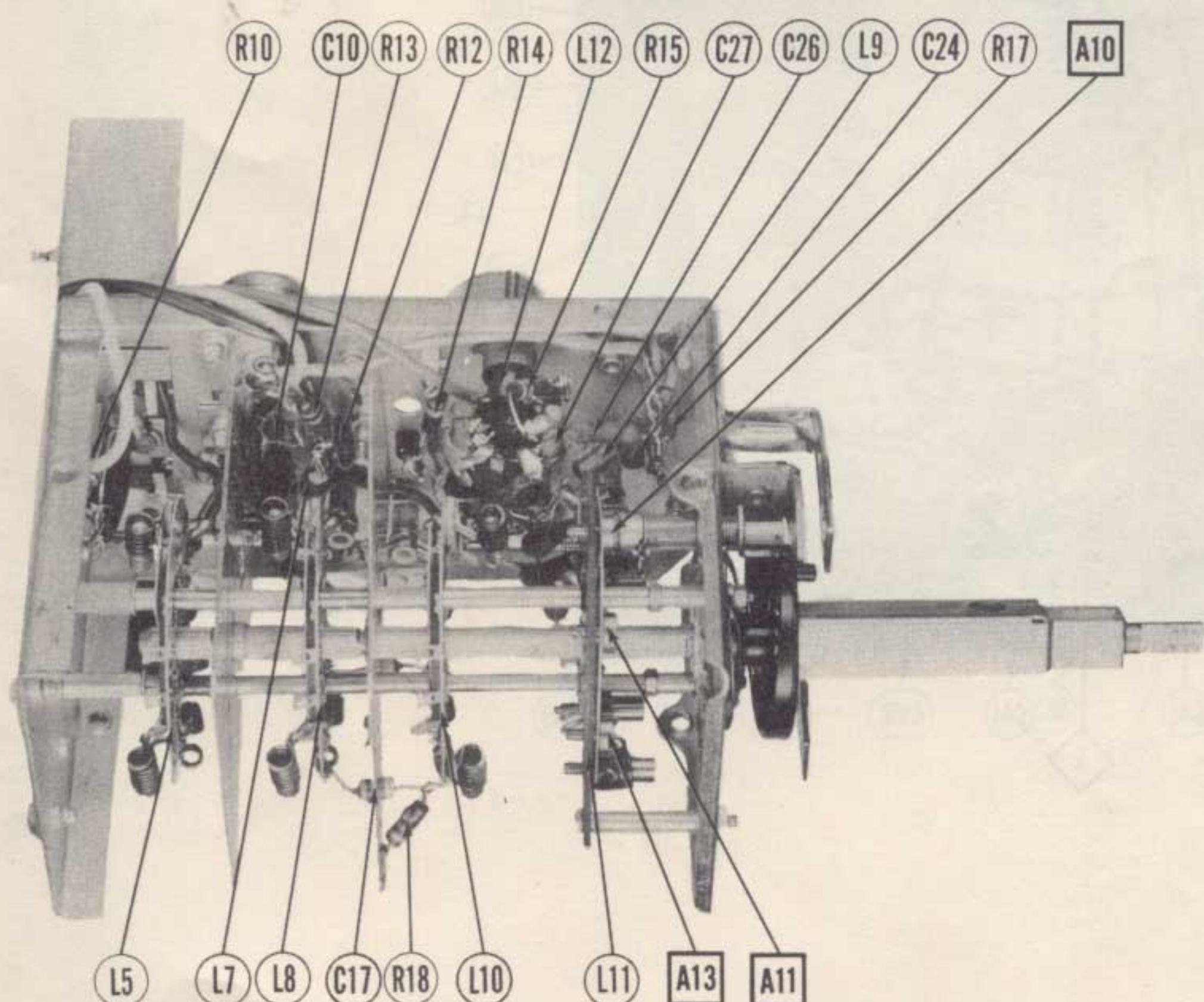
ALL MEASUREMENTS WITH PICTURE TUBE REMOVED  
 \* DO NOT MEASURE  
 # TAKEN WITH VACUUM TUBE VOLTMETER

ALL MEASUREMENTS WITH PICTURE TUBE REMOVED  
 † MEASURED FROM OUTPUT OF MI  
 # MEASURED FROM PIN 3 OF V16

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

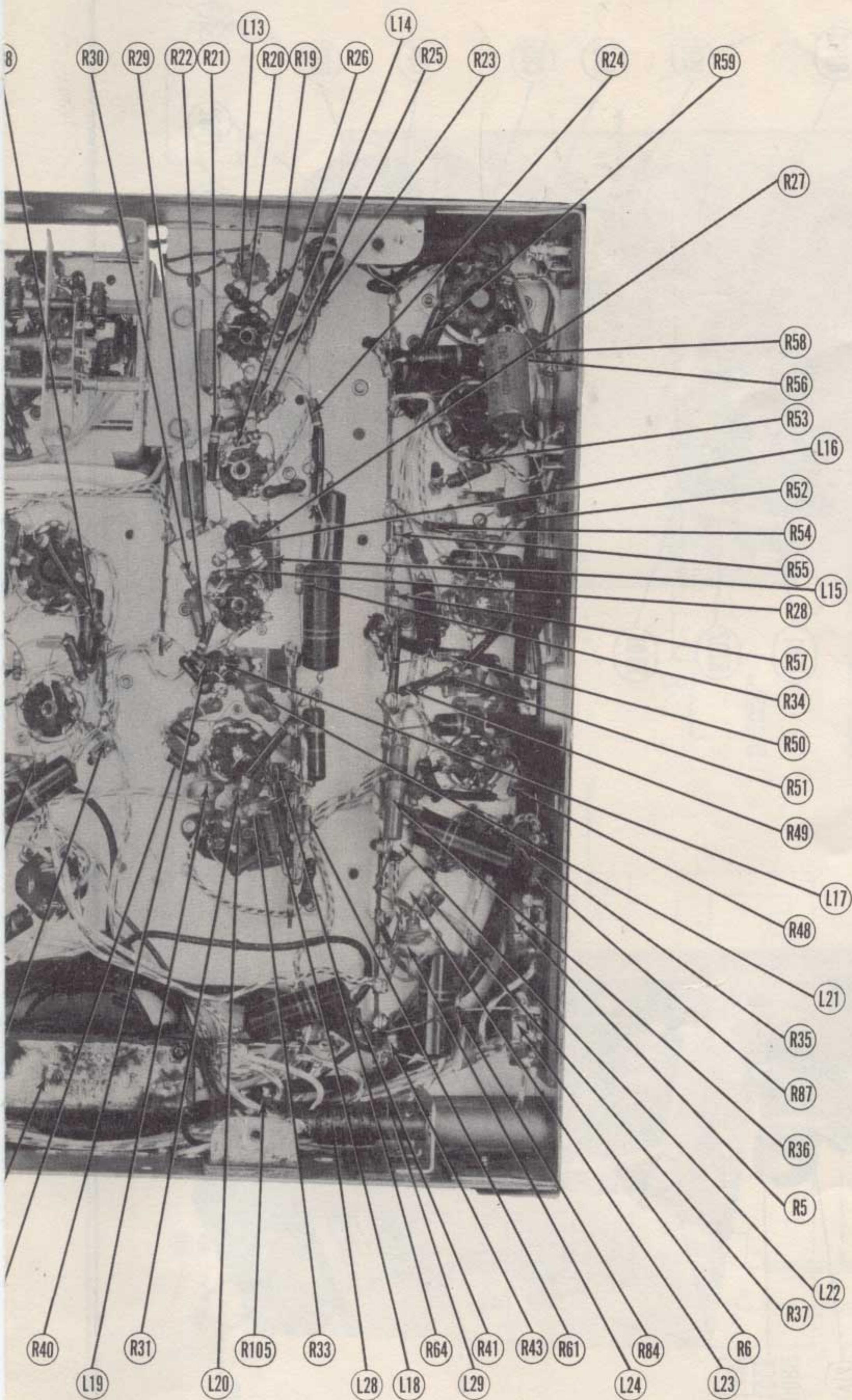


RF TUNER-RIGHT SIDE

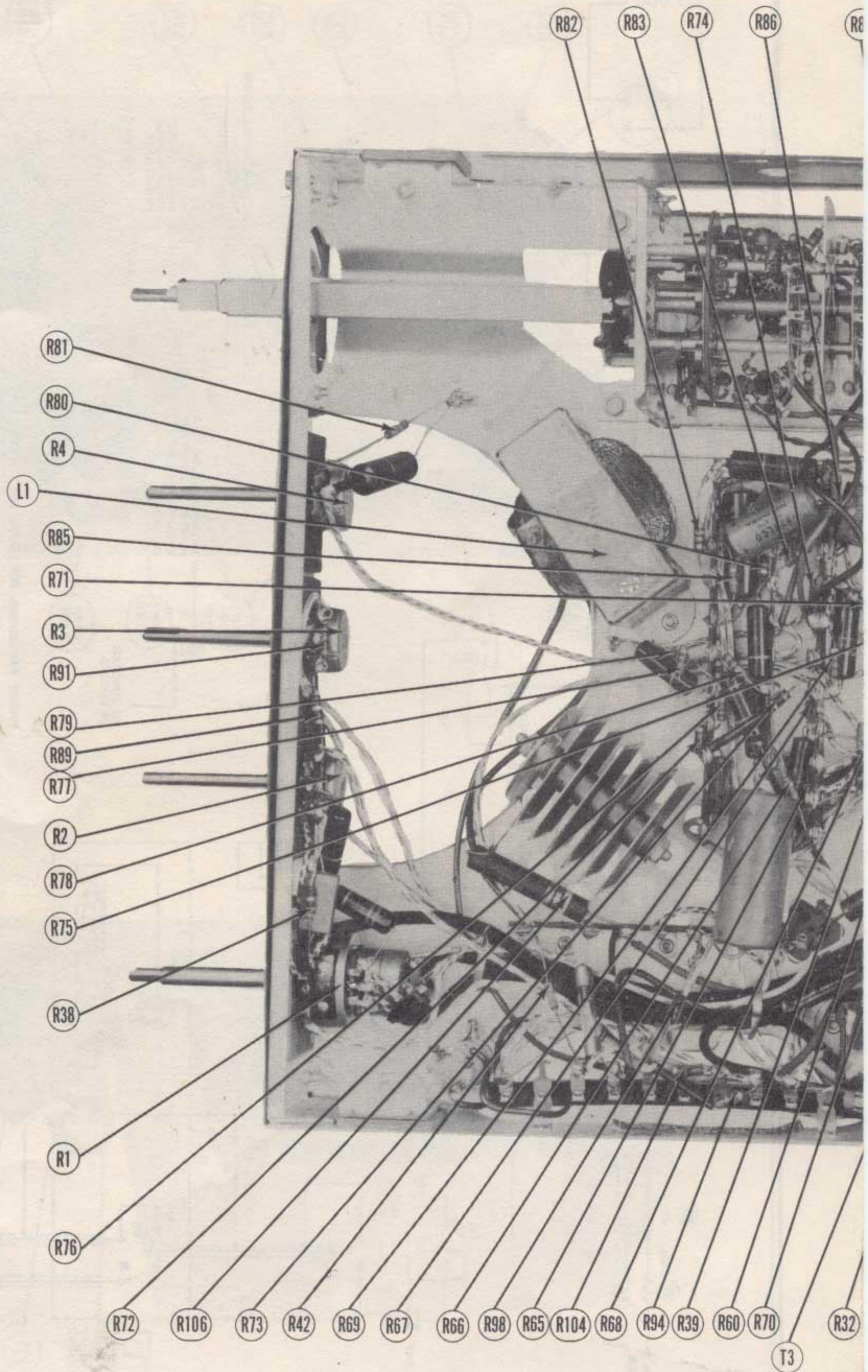


RF TUNER-LEFT SIDE

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51-PT1208, 51-PT1234, 51-PT1282

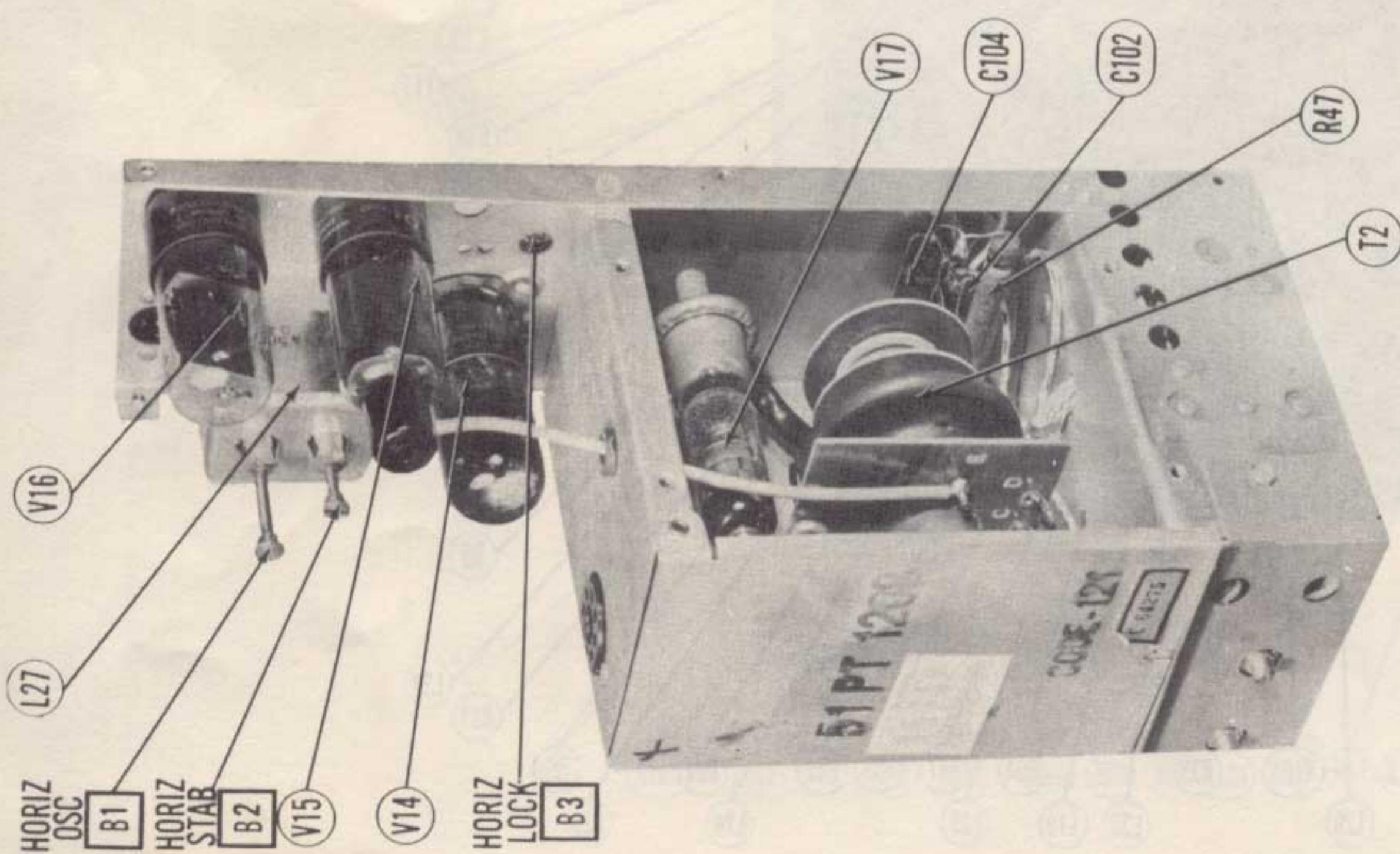
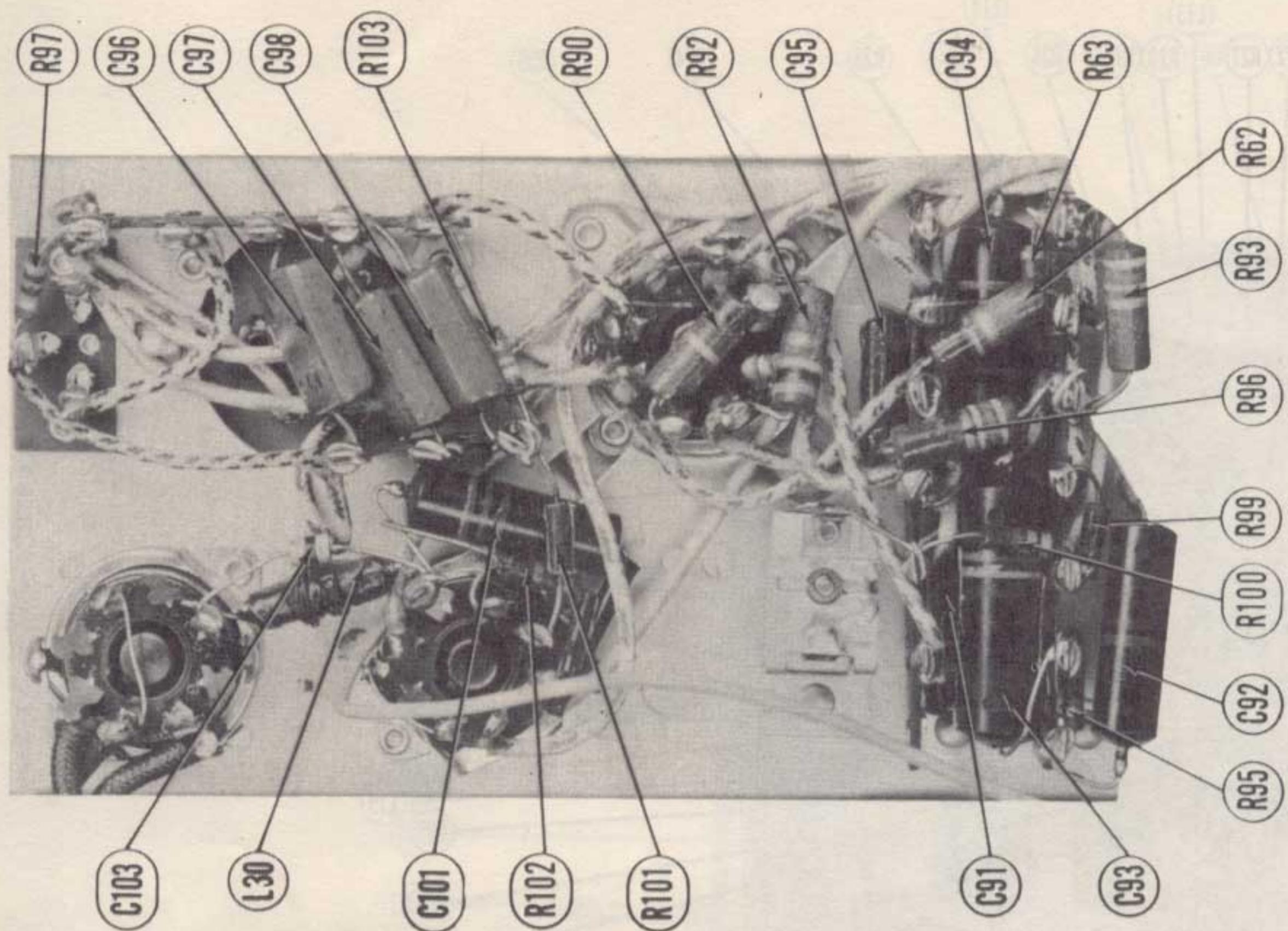


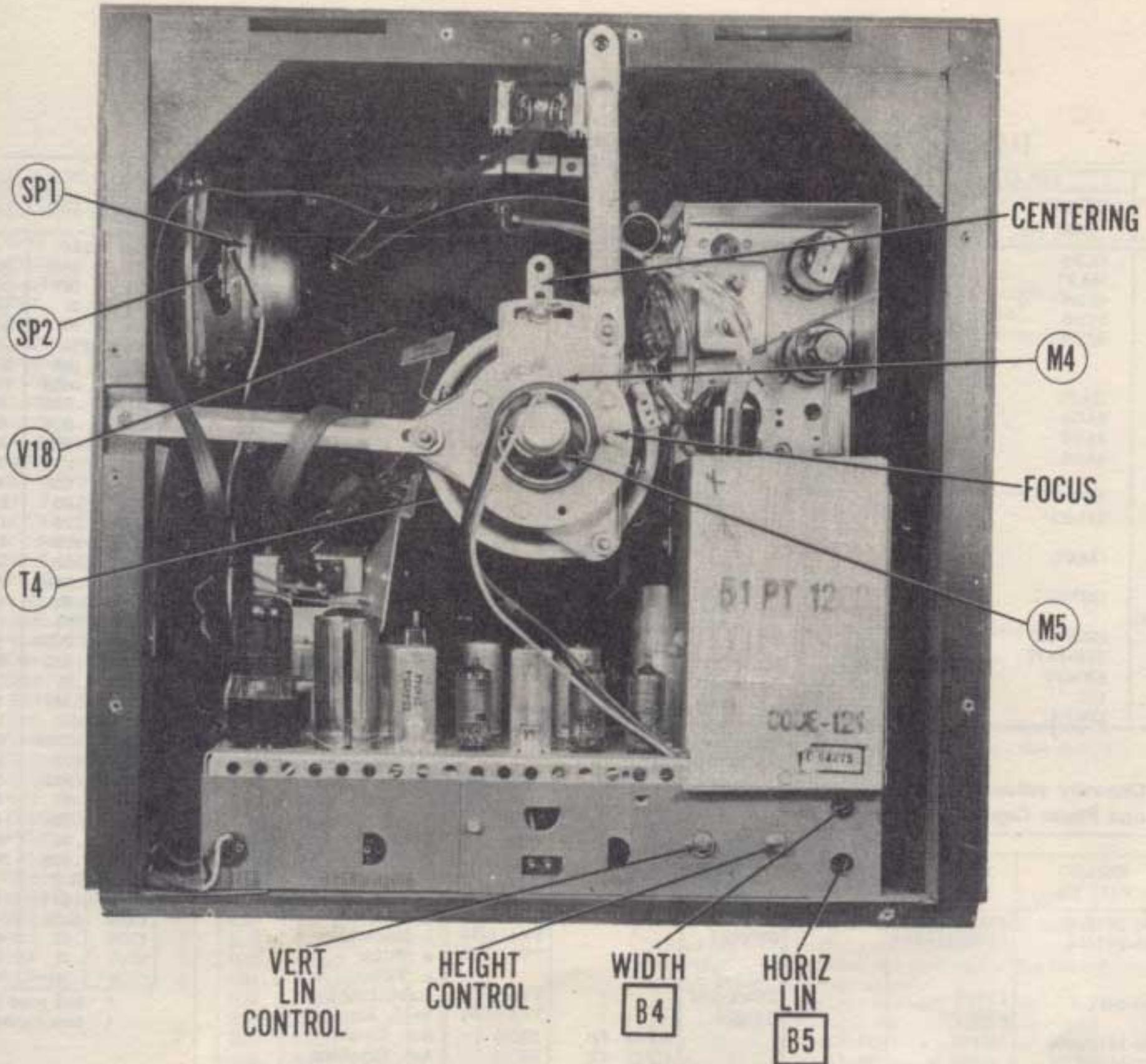
R AND INDUCTOR IDENTIFICATION



CHASSIS BOTTOM VIEW-RESISTOR

## HIGH VOLTAGE SUPPLY





### CABINET-REAR VIEW

## HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Pre-set the adjustments as follows:

Horizontal lock-in trimmer, (B3), one turn counter-clockwise from tight.  
Horizontal stabilizing core, (B2), extending 5/6 inch above the coil mounting.

Horizontal hold control to the center of its range.

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

Adjust the horizontal frequency slug, (B1), until the picture synchronizes horizontally.

Connect the vertical input lead of an oscilloscope thru a 33MMF capacitor to Pin 3 of the horizontal test socket.  
Adjust the horizontal stabilizing core, (B2) until the broad and narrow peaks of the waveform on the scope are of equal height as shown in figure 6. If necessary adjust (B1) to keep the picture synchronized.

Note: In areas of moderately strong signals, free from noise, the tendency of the oscillator to double trigger may be reduced by adjusting B2 so the rounded peak of the waveform is slightly higher than the pointed peak. Never adjust for more than a slight difference in the peaks, for to do so will render the oscillator too insensitive.

Remove the oscilloscope and turn the hold control to fully clockwise.

Adjust the lock-in trimmer, (B3), until there are four blanking bars sloping downward to the right.

Turn the horizontal hold control to fully counter-clockwise.

The picture should fall into sync and then out again.

Slowly turn the hold control clockwise and carefully note the least number of sloping bars just before the picture pulls into sync.

If more than 3 1/2 bars are present, adjust B3 slightly clockwise. If less than 2 1/2 bars are present adjust B3 slightly counter clockwise.

Turn the hold control to fully clockwise and adjust B1 until 4 sloping bars are present. If this adjustment is made before the set is thoroughly warmed up, adjust B1 for 2 sloping bars.

Repeat the check and adjustment of B1 and B3 until the proper conditions are obtained.

Adjust the width slug, (B4), until the picture fills the mask horizontally.

Adjust the horizontal linearity slug, (B5), until the picture is symmetrical from left to right.

ADJUST FOR EQUAL PEAKS

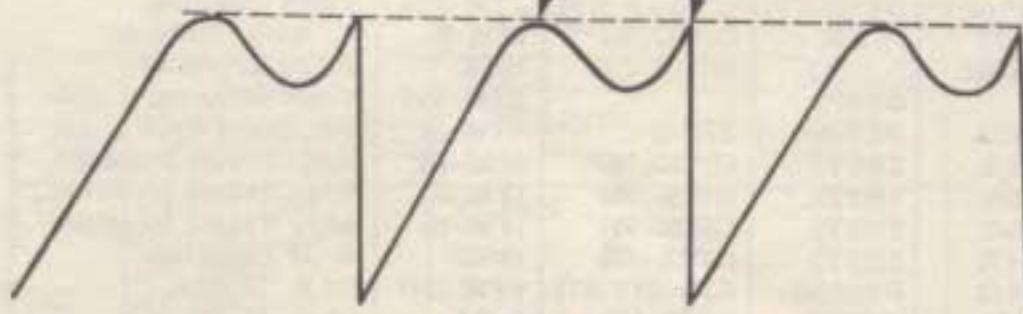


FIG. 6

## DISASSEMBLY INSTRUCTIONS

1. Remove seven push-on type control knobs.
2. Remove eight wood screws from rear cover. Remove rear cover.
3. Disconnect built-in antenna.
4. Disconnect speaker.
5. Disconnect three ground clamps.
6. Remove four hex head bolts from chassis. Remove chassis.
7. Remove four hex nuts from speaker. Remove speaker

NOTE: FOR PICTURE TUBE REMOVAL IT IS NECESSARY TO REMOVE THE CHASSIS AS OUTLINED ABOVE.

# PARTS LIST AND CAPACITORS

## TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA			RMA BASE TYPE	NOTES
		PHILCO PART No.	STANDARD REPLACEMENT			
V1	RF Amplifier	6CB6	6CB6	6CK		
V2	Converter	12AV7	12AV7	7BT		
V3	1st Video IF Amp.	6CB6	6CB6	6CK		
V4	2nd Video IF Amp.	6CB6	6CB6	6CK		
V5	3rd Video IF Amp.	6CB6	6CB6	6CK		
V6	Video Detector - AGC Rectifier - Sync. Amplifier	12AU7	12AU7	9A		
V7	Video Amplifier	6AU6	6AU6	7BK		
V8	1st Sound IF Amp.	6AU6	6AU6	7BK		
V9	2nd Sound IF Amp.	6AU6	6AU6	7BK		
V10	Ratio Detector - AF Amplifier	7X7	7X7	8AC		
V11	Audio Output	25L6G	25L6G	7AC		
V12	Sync. Separator - Sync. Phase Inv.	12AU7	12AU7	9A		
V13	Vert. Mult.-Vert. Amplifier	12SN7GT	12SN7GT	8BD		
V14	Horiz. AFC - Horiz. Oscillator	12SN7GT	12SN7GT	8BD		
V15	Horiz. Output	25BQ6GT	25BQ6GT	6AM		
V16	Damper	6W4GT	6W4GT	4CG		
V17	HV Rectifier	1X2	1X2	7CB		
V18	Picture Tube	12WP4	12WP4	12D		

## 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					IDENTIFICATION CODES AND INSTALLATION NOTES	
	CAP.	VOLT	PHILCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C1	120	150	30-2570-66	E3A162		UPE15015		TVL-1428	Filter
C2A	20	300	30-2584-4	AF4G3016D4A		UPT430		TVA-1422	Decoupling
B	150	150						TVL-4510	Filter
C	80	150							Filter
C3	2	50	30-2417-7	E26E6		BBR2-50T		TVA-1301	Stabilizing Cap
C4	10	25		E26E117		BRI02A		TVA-1204	Vert. Amp. Cathode
C5	470		62-147001021	SI470	D6-471	GP2K-471	19C15		Ant. Coupling
C6	470		62-147001021	SI470	D6-471	GP2K-471	19C15		Ant. Coupling
C7	20		62-0230309011	SI20NPO	TCZ-20	NPOK-200			Fixed Trimmer
C8	39		62-039409011	SI39	D6-390	GPIK-390			RF Coupling
C9	10000			BPD-01	DD-103	821-01	36C1		AGC Filter
C10	220		30-1225-11	SI220	D6-221	GP2K-221	19C13		RF Amp. Dec.
C11	470		62-147001011	SI470	D6-471	GP2K-471	19C15		RF Amp. Screen
C12	220		30-1225-11	SI220	D6-221	GP2K-221	19C13		RF. Amp. Fil.
C13	.5-3		31-6520-1		829-3				Variable Trimmer
C14	.68		30-1221-11		TCZ-.68				RF Coupling
C15	220		30-1225-11	SI220	D6-221	GP2K-221	19C13		RF Coupling
C16	33		62-033009001	SI33	D6-330	GPIK-330	19C24		RF Coupling
C17	1.2		30-1221-7						RF Coupling
C18	3.3		30-1221-9	SI3.3NPO	TCZ-3.3	NPOK-3R3			Variable Trimmer
C19	.5-3		31-6520-1		829-3				Osc. Coupling
C20	1		20-1224-7		TCZ-1				Osc. Grid Cap
C21	10		30-1224-51	SI10N750	TCN-10	N750K-100	19C4		Osc. Feedback
C22	220		30-1225-1	SI220	D6-221	GP2K-221	19C13		Variable Trimmer
C23	.5-3		31-6520-1		829-3				Conv. Decoupling
C24	220		30-1225-11	SI220	D6-221	GP2K-221	19C13		Conv. Fil. Bypass
C25	220		30-1225-11	SI220	D6-221	GP2L-152	29C8		Conv. Plate Dec.
C26	1500			SI1500	D6-152	GP2L-152			Fixed Trimmer
C27	15		62-015401011	SI15	D6-150	GPIK-150	19C22		IF Coupling
C28	100			SI100	D6-101	5W5T1	GPIK-101	19C11	AGC Filter
C29	1500			SI1500	D6-152	1W5D15	GP2L-152	29C8	1st V. IF Dec.
C30	820	500		1468-001	D6-102	1W5T8	GP2L-102	1FM-21	1st V. IF Fil.
C31	1500			SI1500	D6-152	1W5D15	GP2L-152	29C8	IF Coupling
C32	150			SI150	D6-151	5W5T15	GP2K-151	19C12	AGC Filter
C33	1500			SI1500	D6-152	1W5D15	GP2L-152	29C8	2nd V. IF Dec.
C34	820	500		1468-001	D6-102	1W5D1	GP2L-102	1FM-21	2nd V. IF Fil.
C35	1500			SI1500	D6-152	1W5D15	GP2L-152	29C8	3rd V. IF Fil.
C36	.15	200		P288-15		GT4P2	2TM-P15		RF Bypass
C37	1500			SI1500	D6-152	1W5D15	GP2L-152	29C8	3rd V. IF Plate Dec.
C38	1500			SI1500	D6-152	1W5D15	GP2L-152	29C8	3rd V. IF Screen
C39	1500			SI1500	D6-152	1W5D15	GP2L-152	29C8	3rd V. IF Cathode
C40	1500			SI1500	D6-152	1W5D15	GP2L-152	29C8	RF Bypass
C41	.1	200		P288-1	DF-104	PTE4P1	2TM-P1		RF Bypass
C42	33			SI33	D6-330	5W5Q3	GPIK-330	19C24	AGC Rect. Plate
C43	.1	200		P288-1	DF-104	PTE4P1	2TM-P1		AGC Filter
C44	1500			SI1500	D6-152	1W5D15	GP2L-152	29C8	V. Det. Filter
C45	10			SI10	D6-100	5W5Q1	GPIK-100	19C19	Video Coupling
C46	.15	200		P288-15		GT4P2	2TM-P15		V. Amp. Cathode
C47	820	500		1468-001	D6-102	1W5D1	GP2L-102	1FM-21	Fixed Trimmer
C48	10			SI10N750	TCN-10	N750K-100	19C4		Video Coupling
C49	.15	200		P288-15		GT4P2	2TM-P15		Pic. Tube Grid
C50	.01	400		P488-01	D6-103	PTE4S1	821-01		S. IF Coupling
C51	560	500		1468-0005	D6-561	5W5T5	GP2K-561	1FM-35	Mtg. Frame Isolation
C52	560	500		1468-0005	D6-561	5W5T5	GP2K-561	1FM-35	Mtg. Frame Isolation
C53	560	500		1468-0005	D6-561	5W5T5	GP2K-561	1FM-35	Mtg. Frame Isolation
C54	470			SI470	D6-471	5W5T5	GP2K-471	19C15	S. IF Coupling
C55	.0047	600		P688-0047	D6-472	PTE6D5	GP2-333-472	6TM-D47	1st S. IF Dec.
C56	1500			SI1500	D6-152	1W5D15	GP2L-152	29C8	1st S. IF Fil.
C57	.22			SI12	D6-220	5W5Q2	GPIK-220	19C23	S. IF Coupling
C58	.0047	600		P688-0047	D6-472	PTE6D5	GP2-333-472	6TM-D47	2nd IF Dec.
C59	5			SI5	TCZ-4.7	5W5V5	GPIK-050	MS-55	Balancing
C60	1500			SI1500	D6-152	1W5D15	GP2L-152	29C8	RF Bypass
C61	150			SI150	D6-151	5W5T15	GP2K-151	19C12	Diode Load Cap
C62	220			SI220	D6-221	5W5T25	GP2K-221	19C13	RF Bypass

## DESCRIPTIONS

CIRCUITS (CONT.)

ITEM DATA			IDENTIFICATION CODES AND INSTALLATION NOTES
B	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.
5W5T2	GP2L-221	19C13	Output Grid
PTE6D6	GP2-333-682	MB-D68	Output Plate
PTE4S5		2TM-S47	Sync. Coupling
PTE4S1	821-01	4TM-S1	Bias Filter
PTE6S15		6TM-S15	Sync. Coupling
5W5T25	GP2K-221	19C13	Sync. Coupling
PTE4S5		2TM-S47	Sync. Coupling
PTE6D2	GP2-333-222	6TM-D22	Integrator Net
PTE6D5	GP2-333-472	6TM-D47	Integrator Net
PTE6D5	GP2-333-472	6TM-D47	Integrator Net
PTE6D2	GP2-333-222	6TM-D22	Vert. Osc. Grid
PTE4P1		2TM-P1	Vert. MV Cathode
PTE6S3		6TM-S3	Vert. MV Feedback
5W5T25	GP2K-221	19C13	Vert. MV Feedback ↑
5W5T25	GP2K-221	19C13	Vert. MV Feedback ↑
5W5T25	GP2K-221	19C13	Vert. MV Feedback ↑
IW5T7	GP2K-681	19C17	Vert. MV Feedback
PTE4S1		4TM-S68	Vert. Discharge
5W5T15	GP2-333-103	4TM-S1	Vertical Shaping
PTE6D2	GP2-333-222	6TM-D22	Horiz. Sync. Coupling
PTE4S2		4TM-S22	Horiz. Sync. Coupling
GT4P2		2TM-P15	AFC Filter
PTE4S5		4TM-S47	Horiz. AFC Plate
ID3S1		1FM-11	Horiz. Osc. Grid
IW5T8		MS-38	Fixed Trimmer
IW5DI	GP2L-102	1FM-21	Horiz. Discharge
GT4P5		4TM-P5	Horiz. Sweep Coupling
PTE6S6		4TM-S68	Horiz. Output Screen
PTE4S5		2TM-S47	Damper Filter
PTE6S6		4TM-S68	Damper Filter
PTE4S5		4TM-S47	Fixed Trimmer
IW5D15	GP2L-152	29C8	Mtg. Frame Isolation
PTE6S1	821-01	6TM-S1	Sync. Amp. -Sep. Fil.
PTE6S1	821-01	6TM-S1	Line Filter
PTE6S1	821-01	6TM-S1	Line Filter
			V. Amp. Dec. *

d C86.

## ROLES

AT	CENTRALAB PART No.	INSTALLATION NOTES
		Contrast Control - Wire Wound - Front Volume Control And SW - Rear Brightness Control
		Attach to R2A Per Instructions
		Horizontal Hold Control - See Note 1
		Attach to R3A Per Instructions
		Vertical Hold Control - See Note 1
		Attach to R4A Per Instructions
AN-10		Vertical Linearity Control
AK-1		Attach to R5A Per Instructions
AN-83		Height Control
AK-1		Attach to R6A Per Instructions

old control having part number 33-5563-31.

## TORS

IDENTIFICATION CODES		
ALL RESISTORS + 10% UNLESS OTHERWISE SPECIFIED		
- Antenna Loading - See Note 2		
- Antenna Isolation		
- Antenna Isolation		
- AGC Network		
- RF Amp. Grid		
- RF Amp. Screen		
- RF Amp. Decoupling		
- Mixer Grid		
- Mixer Plate Decoupling		
- Osc. Grid		
- Osc. Plate Decoupling		
- Mixer Grid Coil Shunt		
- 1st Video IF Amp. Grid		
- 1st Video IF Amp. Cathode		
- 1st Video IF Amp. Decoupling		
- Decoupling		
- AGC Network		
- AGC Network		
- Ind Video IF Amp. Grid		
- Ind Video IF Amp. Cathode		
- 3rd Video IF Transformer Shunt		
- 3rd Video IF Amp. Cathode		
- 3rd Video IF Amp. Plate Decoupling		
- 3rd Video IF Amp. Decoupling		
- Video Det. Diode Load		
- AGC Network		
- AGC Network		
- AGC Network		
- Video Amp. Grid		
- Video Amp. Plate		
- Video Peaking Coil Shunt		
- Contrast Control Shunt		
- Voltage Divider		
- Bias Network		
- Bias Network - See Note 4		
- Voltage Divider		
- Picture Tube Cathode		
- Isolation - See Note 2		
- Isolation - See Note 2		
- Isolation - See Note 2		

## RESISTORS (CONT.)

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	PHILCO PART No.	IRC PART No.	
R47	100KΩ	.2		BTB-100K	Isolation
R48	330KΩ	.2		BTS-330	1st Sound IF Amp. Grid
R49	1000Ω	.2		BTS-1000	1st Sound IF Amp. Decoupling
R50	330KΩ	.2		BTS-330K	2nd Sound IF Amp. Grid
R51	15KΩ	.2		BTS-15K	2nd Sound IF Amp. Decoupling
R52	15KΩ	.2		BTS-15K	Voltage Divider
R53	47KΩ	.2		BTS-47K	Ratio Det. Diode Load
R54	330Ω	.2		BTS-330	Balancing
R55	47KΩ	.2		BTS-47K	De-emphasis
R56	4.7Meg	.2		BTS-4.7Meg	AF Amp. Grid
R57	330KΩ	.2		BTS-330K	AF Amp. Plate
R58	1Meg	.2		BTS-1Meg	Output Grid
R59	150Ω	.2		BW-1-150	Output Cathode - Wire Wound
R60	1000Ω	.2		BTB-1000	Output Decoupling
R61	15KΩ	.2		BTS-15K	Isolation
R62	820KΩ	.2		BTA-820K	Bias Network
R63	22KΩ	.2		BTS-22K	Bias Network
R64	470KΩ	.2		BTS-470K	Sync. Amp. Grid
R65	22KΩ	.2		BTS-22K	Sync. Amp. Plate
R66	39KΩ	.2		BTS-39K	Voltage Divider - See Note 5
R67	6.8Meg	.2		BTS-6.8Meg	Voltage Divider
R68	270KΩ	.2		BTS-270K	Sync. Sep. Grid
R69	56KΩ	.2		BTS-56K	Sync. Sep. Plate
R70	15KΩ	.2		BTS-15K	Voltage Divider
R71	4700Ω	.2		BTS-4700	Sync. Phase Inv. Grid - See Note 6
R72	10KΩ	.2		BTS-10K	Sync. Phase Inv. Plate - See Note 6
R73	4700Ω	.2		BTS-4700	Sync. Phase Inv. Plate
R74	1Meg	.2		BTS-1Meg	Bias Network
R75	22KΩ	.2		BTS-22K	Voltage Divider
R76	22KΩ	.2		BTS-22K	Integrator
R77	8200Ω	.2		BTS-8200	Integrator
R78	8200Ω	.2		BTS-8200	Integrator
R79	15KΩ	.2		BTS-15K	Integrator
R80	100KΩ	.2		BTS-100K	Vertical MV Grid
R81	75KΩ	.2		BTS-470K	Vertical MV Cathode - See Note 7
R82	470KΩ	.2		BTS-560	Vertical MV Plate
R83	100KΩ	.2		BTA-330K-5%	Vertical MV Feedback - See Note 8
R84	2.2Meg	.2		BTS-2.2Meg	Voltage Divider
R85	6800Ω	.2		BTS-6800	Vertical Peaking
R86	4.7Meg	.2		BTS-4.7Meg	Vertical MV - Vertical Amp. Grid
R87	560Ω	.2		BTS-560	Vertical MV - Vertical Amp. Cathode
R88	330KΩ 5%	.2		BTA-330K-5%	Vertical Shaping
R89	47KΩ	.2		BTS-47K	Voltage Divider
R90	2.7 Meg	.2		BTA-2.7Meg	Voltage Divider
R91	82KΩ	.2		BTS-82K	Horizontal Hold Control Shunt - See Note 3
R92	820KΩ	.2		BTA-820K	Horizontal AFC Grid
R93	470KΩ	.2		BTA-470K	Horizontal AFC Cathode
R94	56KΩ	.2		BTS-56K	Horizontal AFC Plate
R95	8200Ω	.2		BTS-8200	Horizontal AFC Filter
R96	470KΩ	.2		BTA-470K	Horizontal Osc. Grid
R97	8200Ω	.2		BTA-8200	Horizontal Osc. Coil Shunt
R98	10KΩ	.2		BTS-10K	Horizontal Osc. Plate Decoupling
R99	22KΩ	.2		BTS-22K	Horizontal Osc. Plate Decoupling
R100	150KΩ	.2		BTS-150K	Horizontal Feedback
R101	100Ω 20%	.2			Parasitic Suppressor
R102	180Ω	.2			Parasitic Suppressor
R103	390KΩ	.2		BTS-390K	Horizontal Output Grid
R104	1000Ω	.2		BTS-1000	Decoupling
R105	6800Ω 20%	.2		BTS-6800	Width Coil Shunt
R106	2.4Ω	.2	66-9245240	BW-2-2.4	Surge Limiter - Wire Wound
R107A	200Ω	.2	33-4535-3		Filament Dropping - Wire Wound
	B 140Ω	.2			Filament Dropping - Wire Wound
R108	100KΩ	.2		BTS-100K	Series Test Jack - See Note 2

| ITEM No. | RATING | | | | REPLACEMENT DATA | | | |
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# PARTS LIST AND DESCRIPTIONS (Continued)

## SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			NOTES
			PHILCO PART No.	JENSEN PART No.	QUAM PART No.	
SP1	PM	3.4Ω	36-1639-1 ④ 36-1627-5 ⑤ 36-1626-1 ⑥ 36-1631 ⑦	ST-803 Mod. P525-V	5A1	④ Used in model 51-PT1208 ⑤ Used in model 51-PT1207 ⑥ Used in models 51-PT1234 ⑦ Used in model 51-PT1282
	CONE DIA.	V. C. DIA.				
SP2	5 1/8"	9/16"				

## FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				INSTALLATION NOTES
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 μH)	PHILCO PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
L1	.250A	31Ω	1.7 Henries	32-8500	C-2326	C-2991 ③	TR-3300 ③	③ Drill one new mounting hole.

## COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	PHILCO PART No.	MEISSNER PART No.	
L2	Ant. Coil	.8Ω	.4Ω	76-6279		Part Number Includes L3
L3	Ant. Coil	.8Ω	.4Ω			
L4	FM Trap	0Ω		32-4438-1		
L5	Ant. Coils	0Ω		76-5774		
L6	RF Choke	0Ω		62-147001011		Part Number Includes Switch Wafer And Coils
L7	RF Choke	.5Ω		32-4112-22		Part of C11
L8	RF Coils	0Ω		76-5770		
L9	RF Choke	0Ω		32-4112-2		
L10	Mixer Grid Coils	0Ω		76-5772		
L11	Osc. Coils	0Ω		76-5768		Part Number Includes Switch Wafer And Coils
L12	Conv. Plate	.1Ω		32-4359-II		Part Number Includes Switch Wafer And Coils
L13	1st Video IF	.4Ω		32-4486-18		
L14	2nd Video IF	.3Ω		32-4486-9		
L15	Fil. Choke	.2Ω		32-4112-15		
L16	3rd Video IF	.3Ω	.3Ω	32-4486-12		
L17	4th Video IF	.6Ω	.3Ω	32-4486-17		
L18	Fil. Choke	.2Ω		32-4112-15		
L19	Peaking	4.6Ω		32-4480		
L20	Peaking	2.3Ω		32-4143-16		180 Microhenries
L21	Peaking	2.5Ω		32-4480		40 Microhenries
L22	Peaking	.3Ω		32-4143-18		70 Microhenries
L23	Peaking	3.8Ω		32-4143-17		10 Microhenries
L24	Peaking	16Ω		32-4143-21		100 Microhenries
L25	1st Sound IF	5.5Ω		32-4449A		600 Microhenries
L26	Ratio Det. Trans.	5.5Ω	.8Ω	32-4450		
L27	Horiz. Osc.	60Ω		32-4470-1		Tap 1. 3Ω
L28	Horiz. Lin.	13Ω		32-4448-4		Tap 48Ω
L29	Width Coil	2.5Ω		32-4502-1		
L30	Damping Coil	.1Ω		32-4143-20		2.5 Microhenries

## SELENIUM RECTIFIER

ITEM No.	RATING		REPLACEMENT DATA			NOTES
	CURRENT		PHILCO PART No.	SYLVANIA PART No.	SELETRON PART No.	
M1	.250A		34-8003-7	NH-5	6Q4	

## FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA				REMARKS	
			PHILCO PART No.		LITTELFUSE PART No.			
			FUSE	HOLDER	FUSE	HOLDER		
M2	3AG Slo-Blo PigTail	1 1/4A	45-2656		315001 *		* Recommended Replacement 1 Amp. 3AG Slo-Blo PigTail	

## MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
M3	RF Tuner	76-5747-3	
M4	Focus Magnet	76-6126-5	
M5	Ion Trap	76-6240	
M6	Switch	42-1946	Function Selector (Model 51-PT1282 Only)
	Cabinet	10827	Model 51-PT1207
	Cabinet	10831	Model 51-PT1208
	Cabinet	10837	Model 51-PT1234
	Cabinet	10830	Model 51-PT1282
	Safety Glass	54-4835	Model 51-PT1207
	Safety Glass	54-4831	Model 51-PT1208
	Safety Glass	54-7943-19	Model 51-PT1234
	Safety Glass	54-7943-18	Model 51-PT1282
	Knob	54-4814	Brightness (Models 51-PT1207, 51-PT1208, 51-PT1234)
	Knob	76-6373	Brightness (Model 51-PT1282)
	Knob	76-6260	Channel Selector
	Knob	54-4801	Contrast
	Knob	54-4800	Fine Tuning
	Knob	54-4814	Horizontal Hold (Models 51-PT1207, 51-PT1208, 51-PT1234)
	Knob	54-4845	Horizontal Hold (Model 51-PT1282)
	Knob	54-4814	Vertical Hold (Models 51-PT1207, 51-PT1208, 51-PT1234)
	Knob	76-6372	Vertical Hold (Model 51-PT1282)
	Knob	56-8310FCP	Volume

**PHILCO MODELS 51-PT1208, 51-PT1234, 51-PT1207,  
51-PT1282**

**PHONO PROVISIONS - MODEL 51-PT1282**

