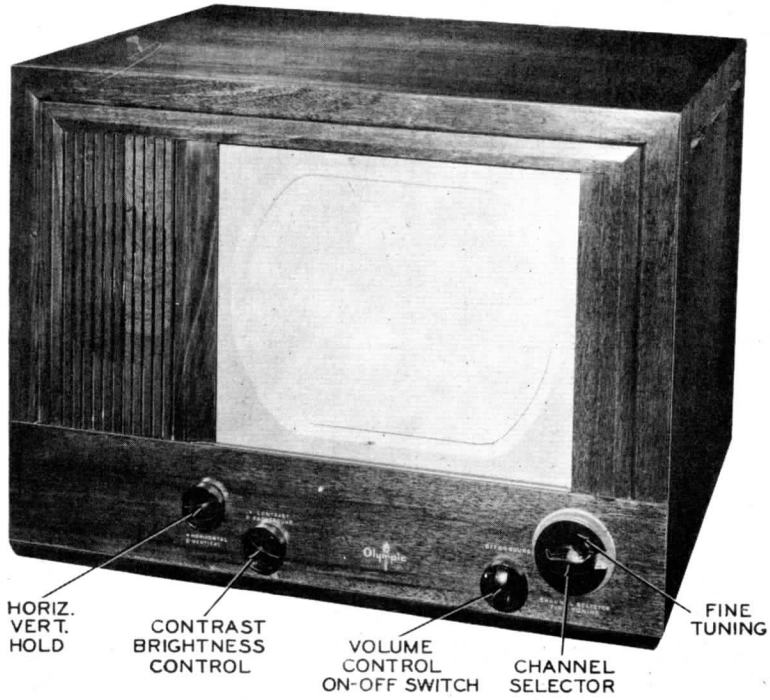
PHOTOFACT* Folder

*TRADE MARK

OLYMPIC MODELS TV-104, 105, 106, 107, 108, 922L, 944, 945, 946

OLYMPIC MODELS TV-104, 105, 106, 107, 108, 922L, 944, 945, 946



OLYMPIC MODEL TV-944

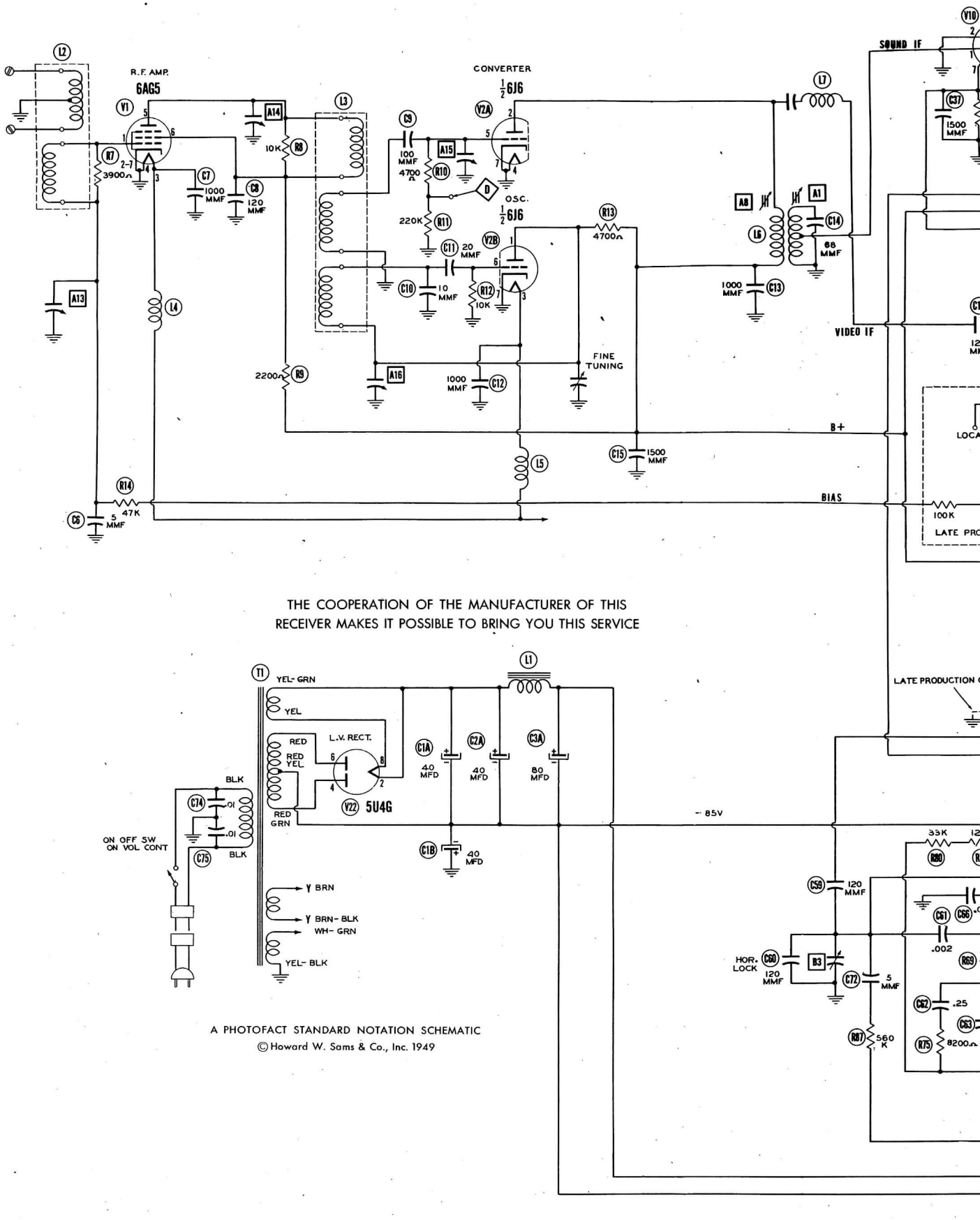
TRADE NAME Olympic Models,TV-104,TV-105,TV-106,TV-107,TV-108,TV-922L (Ser.#E-10,000 to E-16,000 Incl) TV-944,TV-945,TV-946.
MANUFACTURER Olympic Radio and Tel. Corp., 3101-19 38th Ave., Long Island City, New York
TYPE SET Television Receiver
TUBES Twenty-Three

POWER SUPPLY 105-125 Volts, 60 Cycles AC RATING: 1.75 Amps @ 117 Volts
TUNING RANGE—Channels 2 through 13

INDEX

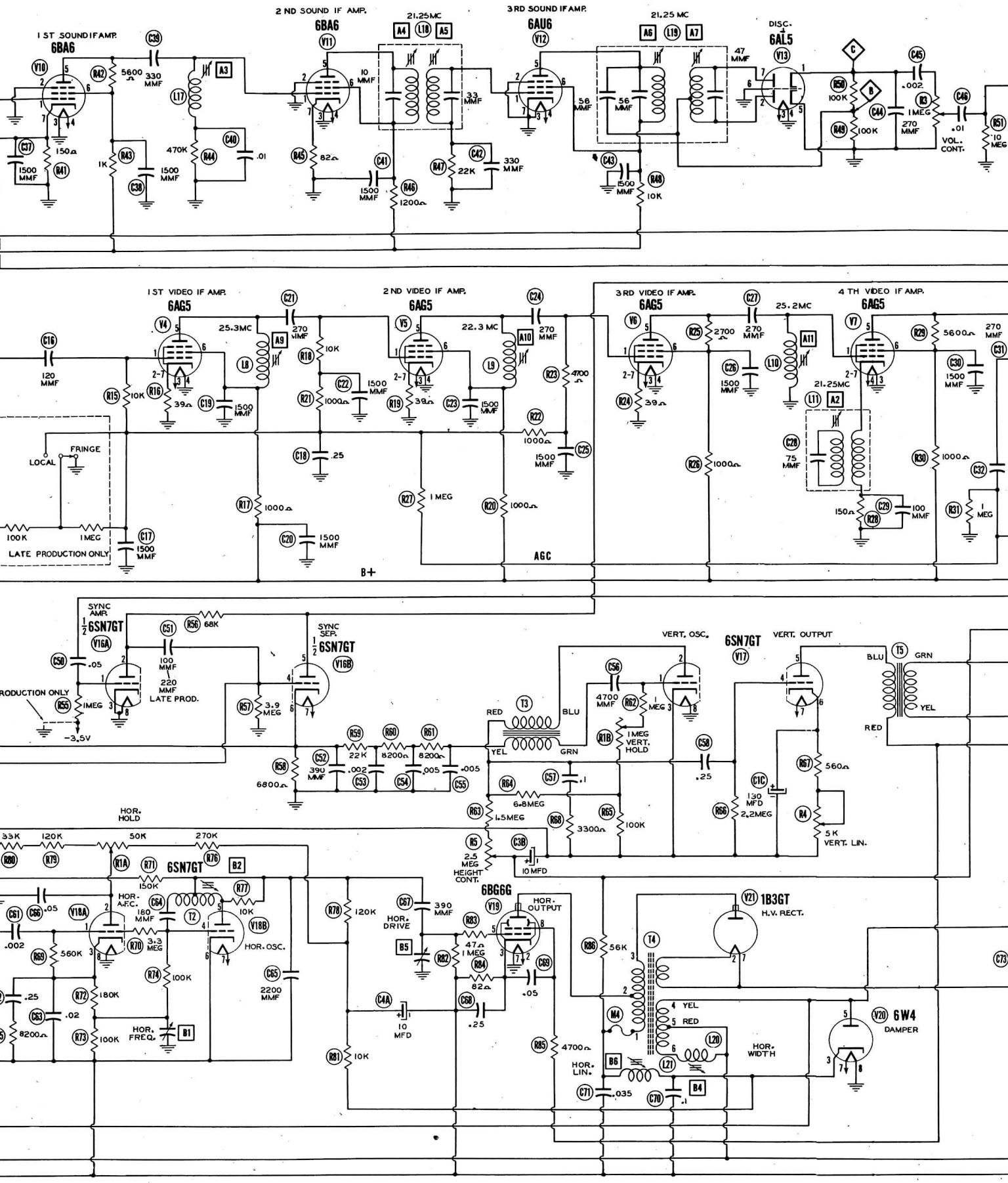
HOWARD W. SAMS & CO., INC. • Indianapolis 7, Indiana

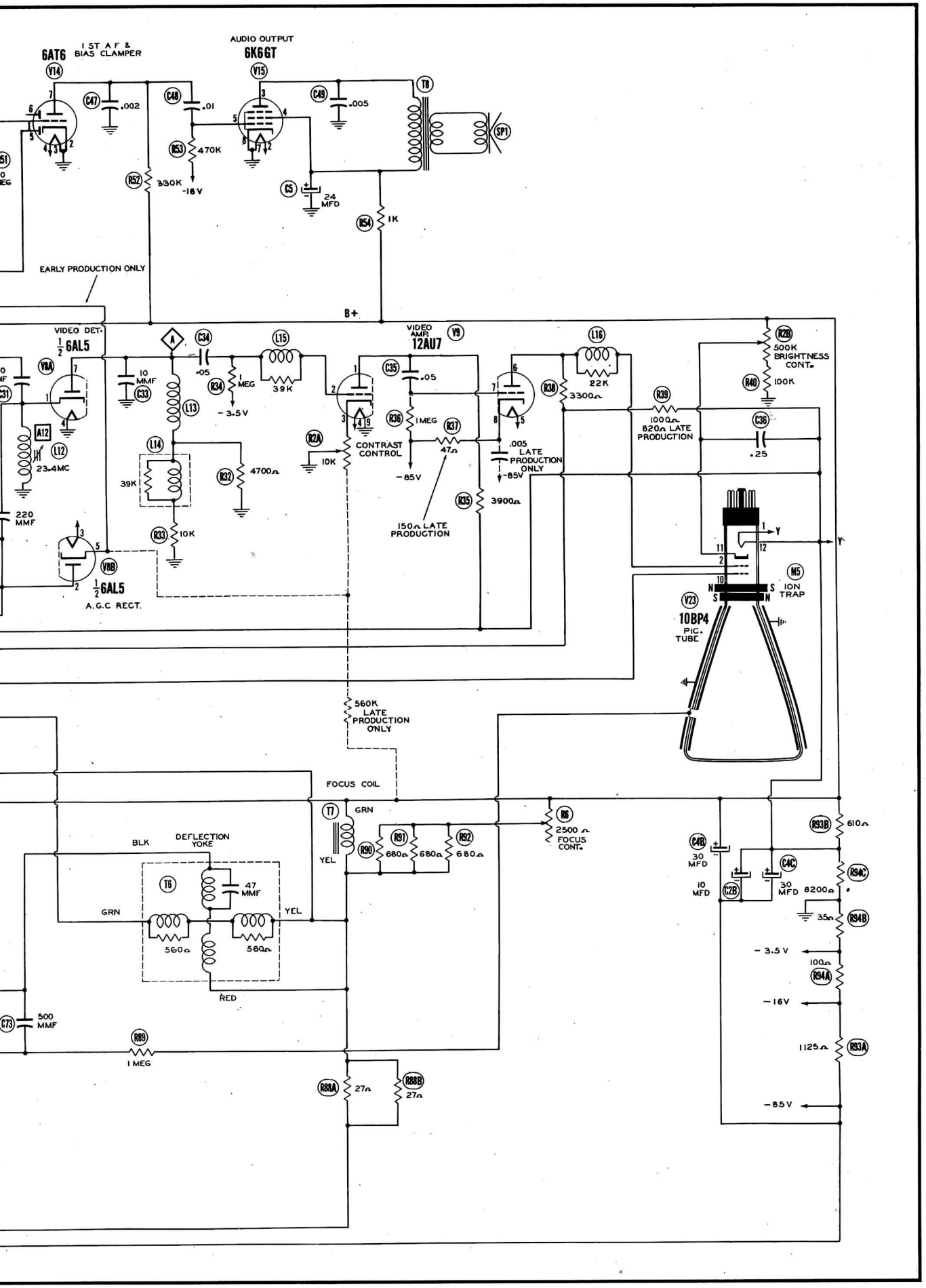
DATE 8/49 4915-15 SET #67 FOLDER 15



THE COOPERATION OF THE MANUFACTURER OF THIS
RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

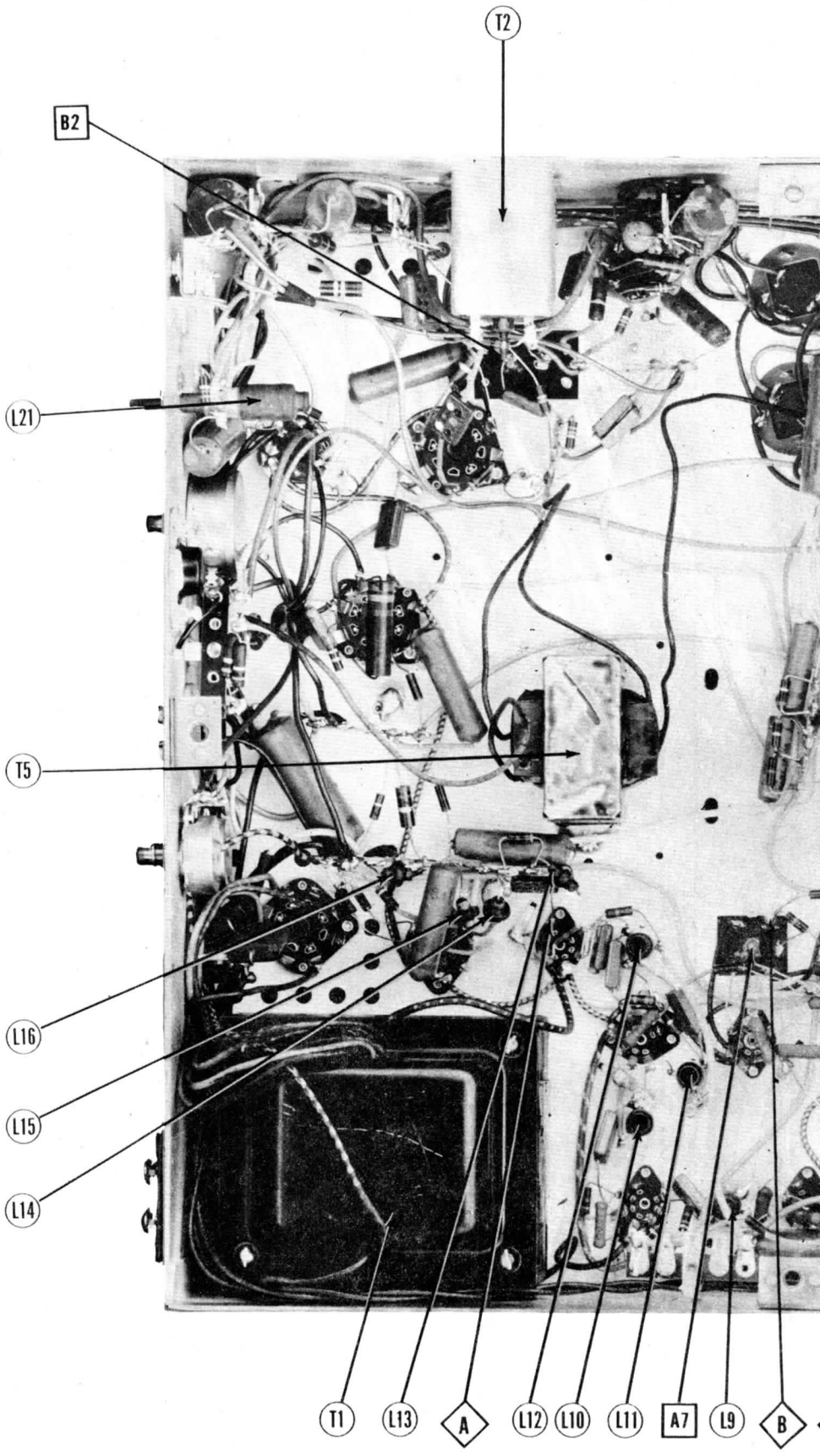
A PHOTOFACT STANDARD NOTATION SCHEMATIC


1 ST SOUND IF AMP.
6BA6
2 ND SOUND IF AMP.
6BA6
21.25MC
3RD SOUND IF AMP.
6AU6
21.25 MC
DISC.
6AL5
1 ST VIDEO IF AMP.
6AG5
25.3MC
2ND VIDEO IF AMP.
6AG5
22.3 MC
3RD VIDEO IF AMP.
6AG5
25.2MC
4 TH VIDEO IF AMP.
6AG5
21.25MC
LOCAL
FRINGE
LATE PRODUCTION ONLY
AGC
B+
SYNC AMP.
1/2 6SN7GT
SYNC SEP.
1/2 6SN7GT
VERT. OSC.
6SN7GT
VERT. OUTPUT
HOR. HOLD
6SN7GT
HOR. A.F.C.
HOR. OSC.
HOR. FREQ.
HOR. DRIVE
6BG6G
HOR. OUTPUT
1B3GT
H.V. RECT.
6W4
DAMPER
HOR. WIDTH
HOR. LIN.
VERT. HOLD
VERT. LIN.
HEIGHT CONT.
VOL. CONT.

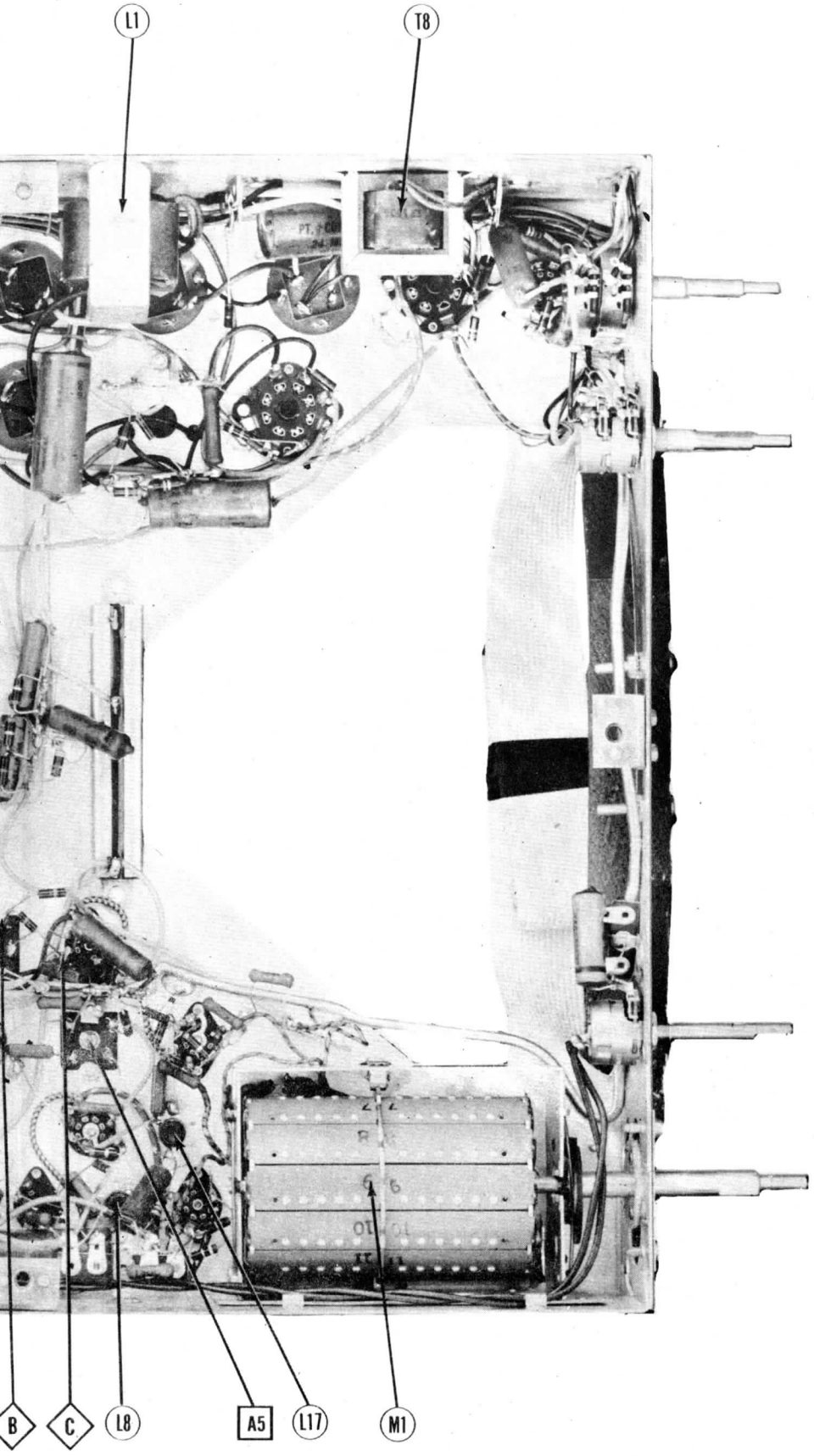


OLYMPIC MODELS TV-104, 105, 106, 107, 108, 922L, 944, 945, 946

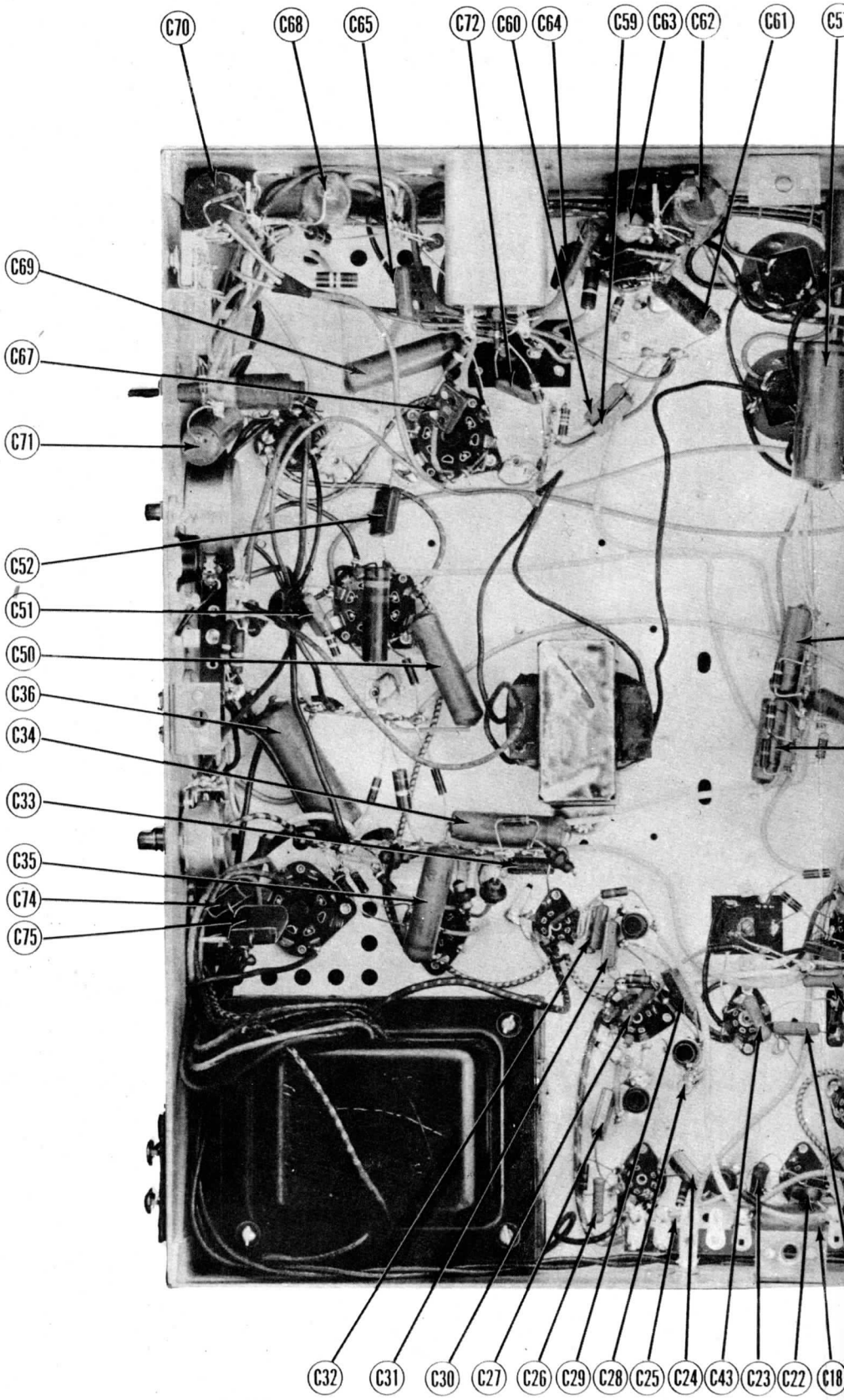
CHASSIS TOP VIEW



CHASSIS BOTTOM VIEW-TRANS., INDUCT



UCTOR AND ALIGNMENT IDENTIFICATION



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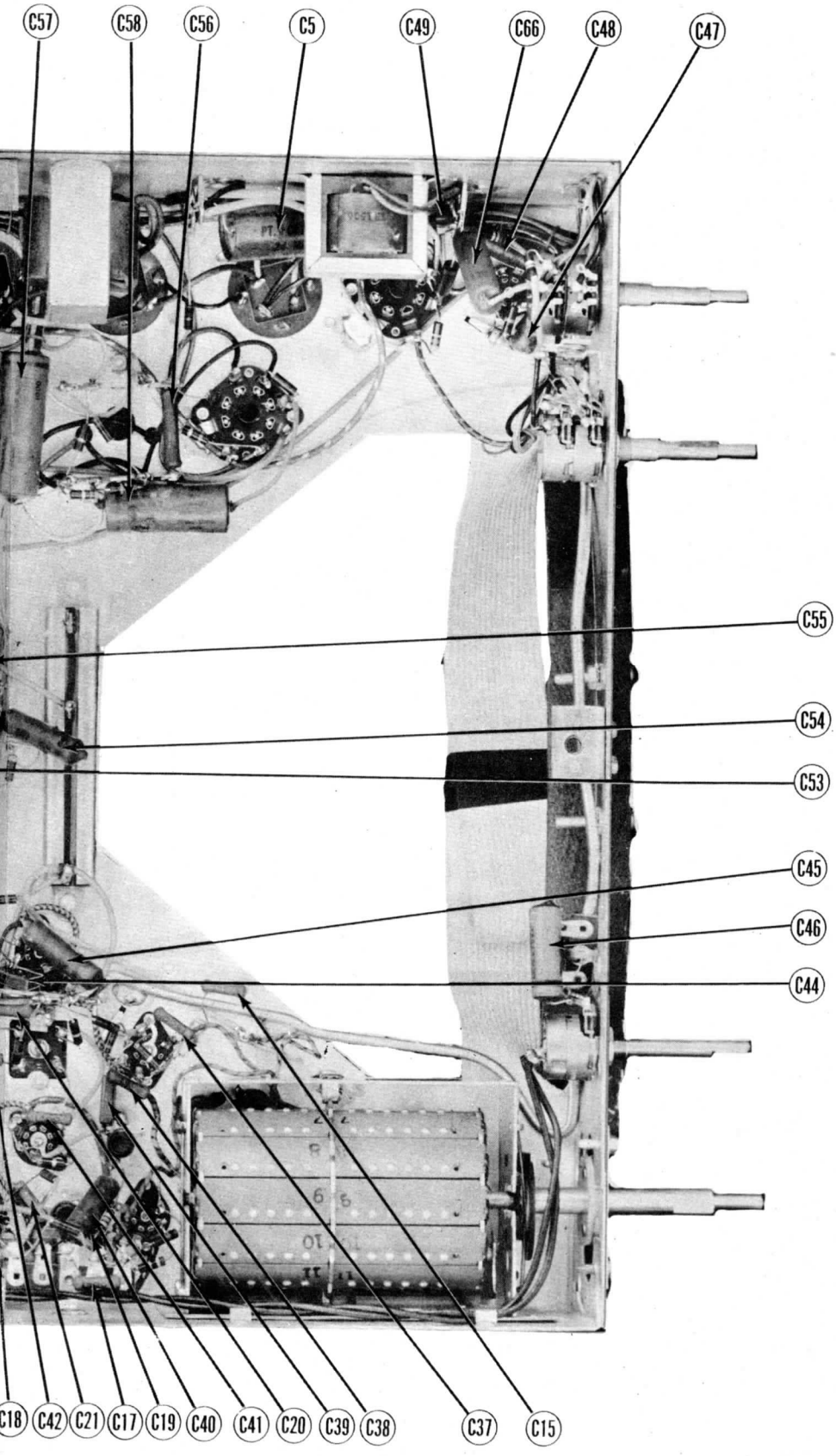
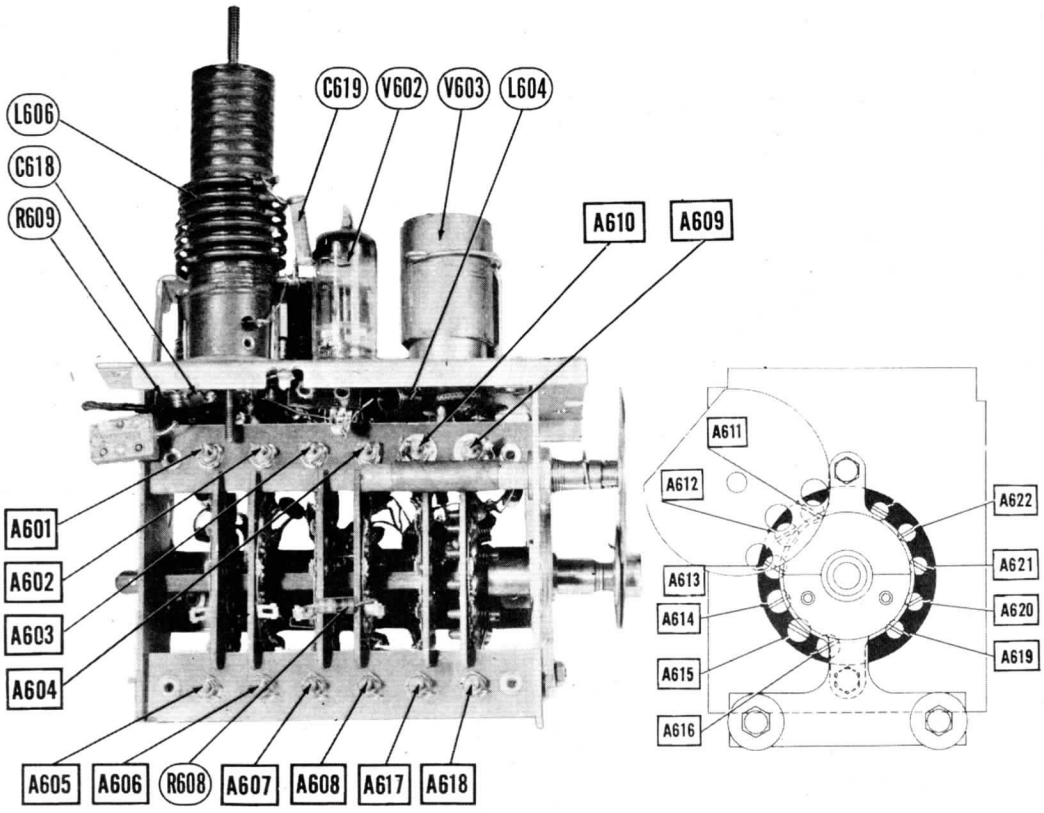
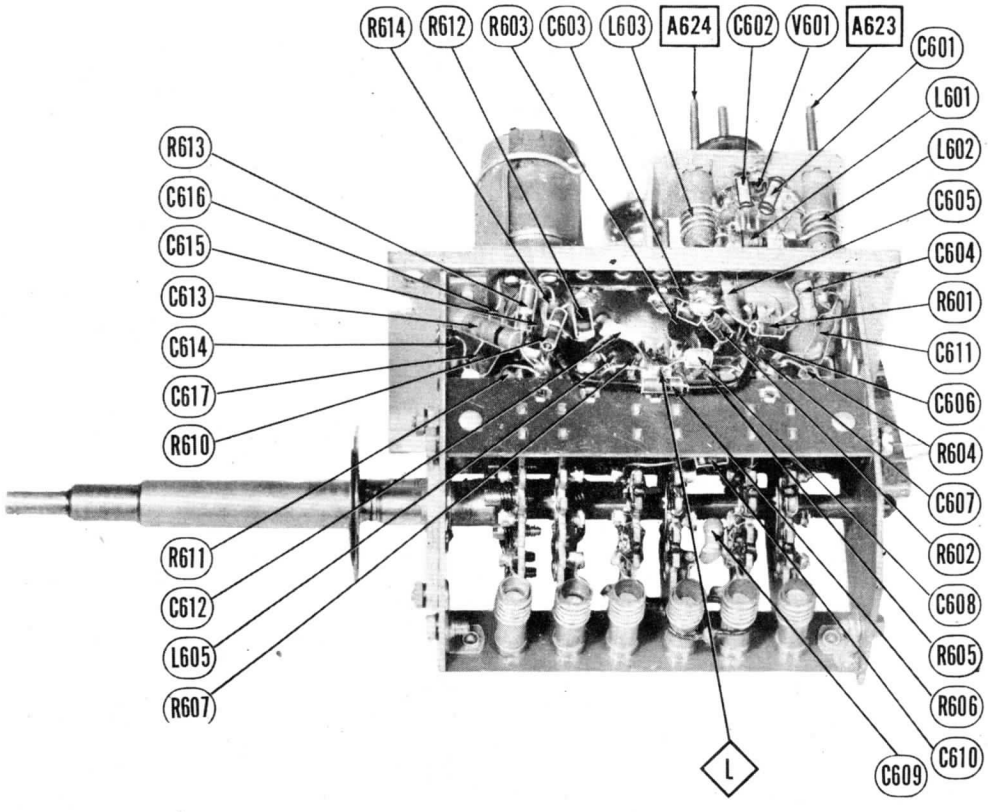


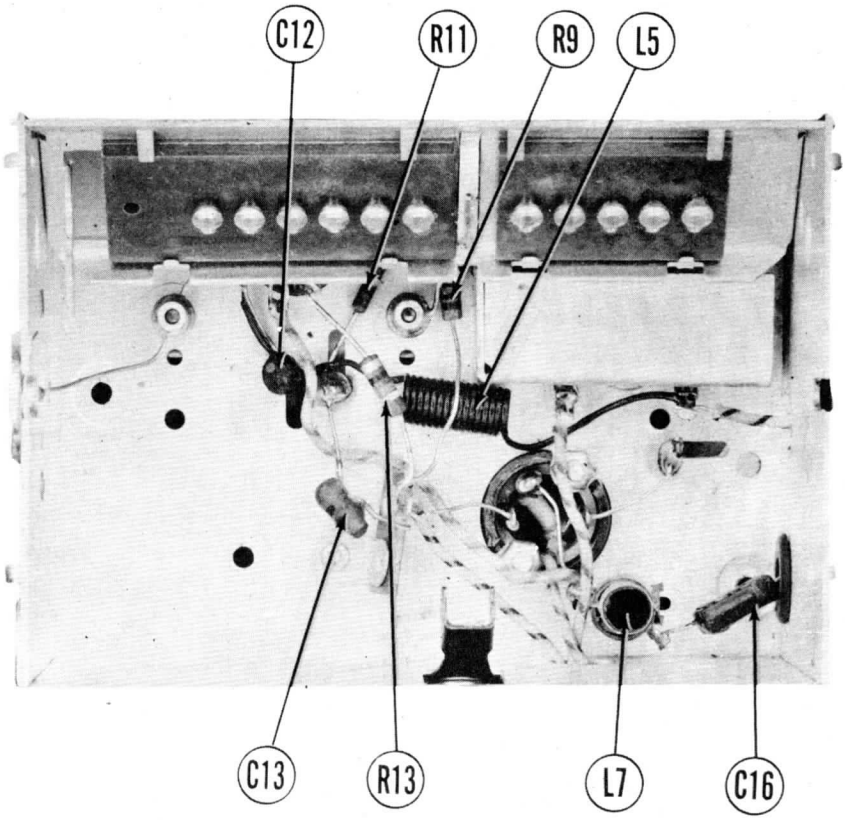
APACITOR IDENTIFICATION



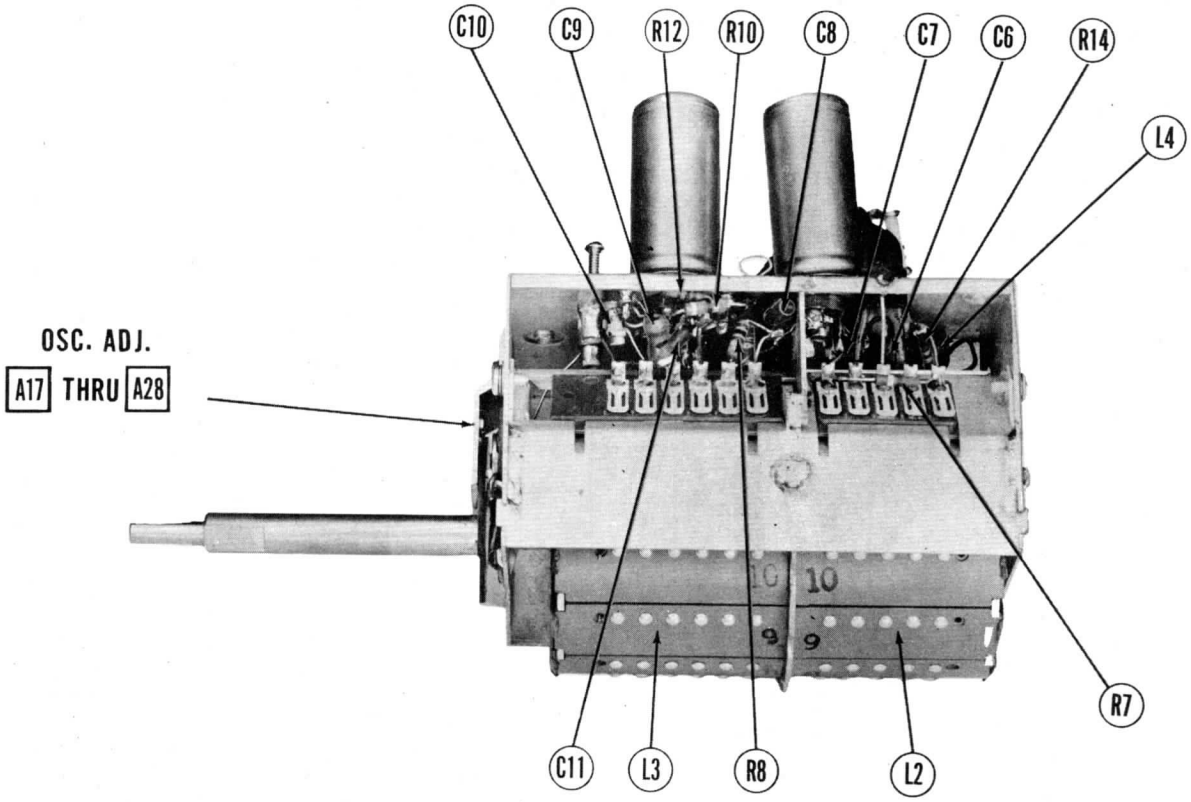
RF TUNER-LEFT SIDE



RF TUNER-RIGHT SIDE



RF TUNER-BOTTOM VIEW



RF TUNER-RIGHT SIDE

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

If receiver is aligned with the picture tube removed, remove the horizontal oscillator tube V18 (6SN7GT) to eliminate the high voltage shock hazard.

The alignment procedure which follows is given in order which should be followed when complete alignment is performed.

VIDEO IF TRAP ADJUSTMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
1.		High side to ungrounded tube shield floating over mixer tube (V2). Low side to chassis.	21.25MC (Very Accurately)	9 (If unused locally)	DC Probe to Point (A) Common to chassis.	A1, A2	Adjust for minimum deflection.

SOUND IF ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
2.		High side to ungrounded tube shield floating over mixer tube (V2). Low side to chassis.	21.25MC (Very accurately)	9 (If unused locally)	DC Probe to Point (B) Common to chassis.	A3,A4, A5,A6	Adjust for maximum deflection. Attenuate signal generator to maintain a 2 volt VTVM reading.
3.		"	"	"	DC Probe to Point (C) Common to chassis.	A7	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting. Repeat the adjustments of A6 and A7.

VIDEO IF ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
4.		High side to ungrounded tube shield floating over mixer tube (V2). Low side to chassis.	21.8MC	9 (If unused locally)	DC Probe to Point (A) Common to chassis.	A8	Adjust for maximum deflection.
5.		"	25.3MC	"	"	A9	"
6.		"	22.3MC	"	"	A10	"
7.		"	25.2MC	"	"	A11	"
8.		"	23.4MC	"	"	A12	"

VIDEO IF RESPONSE CHECK

Connect a 1 1/2 volt bias battery-negative to pin 2 of V8, positive to chassis.

Connnect 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
9.		High side to ungrounded tube shield floating over mixer tube (V2). Low side to chassis.	25MC (10MC Sweep)	21.25MC 22.25MC 25.75MC	9	Vert.Amp. to Point (A) Low side to chassis.		Check response curve to see that it is similar to Fig 1. If slight retouching is necessary to reposition markers, adjust A1 and A2 until 21.25MC marker disappears. Adjust A9 and A11 to position the 25.75MC marker. Adjust A8 and A10 to position the 22.25MC marker. A12 will give the curve a flat top. Recheck the position of the 25.75MC marker. Remove bias battery.

RF TUNERS

This model receiver is made using one of three tuners. Determine which tuner is being used and follow the alignment procedure for that particular tuner.

RF AMP.ALIGNMENT (TUNER CL-1766)

Connect 1 1/2 volt bias battery as used in video IF alignment. Negative to pin 2 of V8, positive to chassis.

Set the fine tuning control to its midposition. This particular tuner incorporates one of two types of fine tuning control. Those tuners having the fine tuning bakelite disc located in back of the oscillator slug and adjustment hole, the midpoint of its range is when the fine tuning shaft is turned completely counter-clockwise.

Those models having the fine tuning bakelite disc located in front of the oscillator slug adjustment hole, the midpoint of the fine tuning range is attained when the bakelite disc faces directly downward.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
10.	Two 125Ω carbon res.	Across antenna terminals with 125Ω resistor in each generator lead.	207MC (10MC Sweep)	205.25MC 209.75MC	12	Vert.Amp. thru 10KΩ to Point (D) Low side to chassis.	A13,A14 A15	Adjust for flat topped response curve as per Fig 2. with markers appearing not less than 70% of max. amplitude of the curve.
11.	"	"	213MC (10MC Sweep)	211.25MC 215.75MC	13	"		Check response on all channels. A13 and A14 and A15 may be adjusted slightly to obtain optimum response on all channels.
			201MC (10MC Sweep)	199.25MC 203.75MC	11			
			195MC (10MC Sweep)	193.25MC 197.75MC	10			
			189MC (10MC Sweep)	187.25MC 191.75MC	9			
			183MC (10MC Sweep)	181.25MC 185.75MC	8			
			177MC (10MC Sweep)	175.25MC 179.75MC	7			
			85MC (10MC Sweep)	83.25MC 87.75MC	6			
			79MC (10MC Sweep)	77.25MC 81.75MC	5			
			69MC (10MC Sweep)	67.25MC 71.75MC	4			

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
		63MC (10MC Sweep)	61.25MC 65.75MC	3			
		57MC (10MC Sweep)	55.25MC 59.75MC	2			

OSCILLATOR ALIGNMENT (TUNER CL-1677)

Complete alignment of the oscillator circuit may not be necessary. This is determined by checking to see that a zero reading is obtained for each channel when the fine tuning control is tuned through the midpoint of its range. (Connect signal generator and VTVM as in steps 12 and 13. Sound carrier frequencies are listed in step 13.) If the majority of the channels seem to need oscillator alignment, this sometimes may be done in one operation-step 12-by adjusting A16. It should be noted that this is an all-channel adjustment and should not be adjusted for individual channels. If step 12 fails to align the oscillator circuits sufficiently, it will be necessary to adjust the oscillator coil slugs. These are accessible one channel at a time. Set the fine tuning control to the midposition of its range.(See RF Amp. Alignment Tuner CL-1677 for this setting.)

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
12.	Direct	High side to one antenna terminal. Low side to chassis.	209.75MC	12	DC Probe to Point C Common to chassis.	A16	Adjust for zero reading between positive and negative peaks with fine tuning control at its midpoint. Rotate channel selector switch and adjust individual channels outlined in step 13. Then repeat step 12.
13.	Direct	"	215.75MC	13	"	A17	
			209.75MC	12	"	A18	
			203.75MC	11	"	A19	
			197.75MC	10	"	A20	
			191.75MC	9	"	A21	
			185.75MC	8	"	A22	
			179.75MC	7	"	A23	
			87.75MC	6	"	A24	
			81.75MC	5	"	A25	
			71.75MC	4	"	A26	
			65.75MC	3	"	A27	
			59.75MC	2	"	A28	

RF AMP. ALIGNMENT (TUNER CL-1428)

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
10.	Two125Ω carbon res.	Across antenna terminals with 125Ω resistor in each generator lead.	213MC (10MC Sweep)	211.25MC 215.75MC	13	Vert.Amp. thru 10KΩ to Point 1 Low side to chassis.	A601, A602, A603, A604	Adjust for approx. response pattern as per Fig 2 with markers appearing more than 70% of peak amplitude. Keep RF and Mixer slug pairs in approx. same relative position.
11.	"	"	207MC (10MC Sweep)	205.25MC 209.75MC	12	"		Check response pattern for all high band channels. Slight adjustments of A601 thru A604 may be required to obtain optimum response on all these channels.
			201MC (10MC Sweep)	199.25MC 203.75MC	11			
			195MC (10MC Sweep)	193.25MC 197.75MC	10			
			189MC (10MC Sweep)	187.25MC 191.75MC	9			
			183MC (10MC Sweep)	181.25MC 185.75MC	8			
			177MC (10MC Sweep)	175.25MC 179.75MC	7			
12.	"	"	85MC (10MC Sweep)	83.25MC 87.75MC	6	"	A605, A606, A607, A608	Adjust for approximate response as per Fig 2. Keep slug pairs in approx. the same relative position.
13.	"	"	79MC (10MC Sweep)	77.25MC 81.75MC	5	"		Check response on all low band channels. Slight adjustments of A605 thru A608 may be required to give optimum response on all these channels.
			69MC (10MC Sweep)	67.25MC 71.75MC	4			
			63MC (10MC Sweep)	61.25MC 65.75MC	3			
			57MC (10MC Sweep)	55.25MC 59.75MC	2			

ALIGNMENT INSTRUCTIONS
CONTINUED ON NEXT PAGE

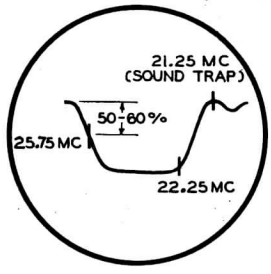


FIG. 1

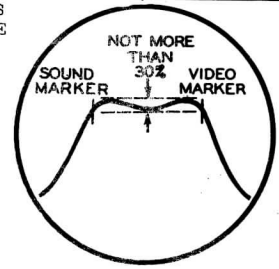


FIG. 2

ALIGNMENT INSTRUCTIONS (CONT.)

OSCILLATOR ALIGNMENT (TUNER CL-1428)

Set the fine tuning control approximately 140° from its full counter-clockwise position. This aligns the holes in the drive disc with the adjustment screws on the oscillator switch wafer. Do not change this position during the entire oscillator alignment.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
14.	Two 125Ω carbon res.	Across antenna terminals.	215.75MC	13	DC Probe to Point ◇C Common to chassis.	A609 or A610	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
15.	"	"	209.75MC	12	"	A611	"
			203.75MC	11		A612	"
			197.75MC	10		A613	"
			191.75MC	9		A614	"
			185.75MC	8		A615	"
			179.75MC	7		A616	"
			87.75MC	6		A617 or A618	"
			81.75MC	5		A619	"
			71.75MC	4		A620	"
			65.75MC	3		A621	"
			59.75MC	2		A622	"

WAVE TRAP ADJUSTMENTS (TUNER CL-1428)

Wave traps A623 and A624 are used for specific types of interference and their alignment will depend upon the type encountered. With the receiver tuned to the channel having the interference set fine tuning control until interference is at maximum. Adjust A623 and A624 for minimum interference in the picture and sound, keeping the cores at approximately the same relative position. Turn one core 1/2 turn, adjust the other for minimum interference.

RF AMP. ALIGNMENT (TUNER CL-1633)

The RF Amp. and Mixer cuicuits of this tuner are pre-aligned at the factory and normally do not require adjustment. However, if tuner is definitely known to be out of alignment, it will be necessary to remove the tuner and use extended leads for B+ and the filament supply. Remove the oscillator tube V301 and set the fine tuning control to the center of its range.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
10.	Two 125Ω carbon res.	Across antenna terminals with 125Ω resistor in each generator lead.	213MC (10MC Sweep)	211.25MC 215.75MC	13	Vert.Amp. thru 10KΩ to Point ◇A Low side to chassis.	A301, A302, A303, A304	Adjust for approx. response curve shown in Fig 2. with markers appearing more than 70% of peak amplitude. Keep RF and mixer trimmer pairs in approximately the same relative position.
11.	"	"	177MC (10MC Sweep)	175.25MC 179.75MC	7	"	A305, A306	Adjust rings for wave form per Fig. 2.
12.	"	"	183MC (10MC Sweep)	181.25MC 185.75MC	8	"		Check response on all high-band channels. Slight adjustments of A301 thru A306 may be required to obtain optimum response for all high-band channels.
			189MC (10MC Sweep)	187.25MC 191.75MC	9			
			195MC (10MC Sweep)	193.25MC 197.75MC	10			
			201MC (10MC Sweep)	199.25MC 203.75MC	11			
			207MC (10MC Sweep)	205.25MC 209.75MC	12			
13.	"	"	85MC (10MC Sweep)	83.25MC 87.75MC	6	"	A307, A308, A309, A310	Adjust for approximate response as per Fig 2.
14.	"	"	79MC (10MC Sweep)	77.25MC 81.75MC	5	"		Check response on all low-band channels. Slight adjustments on A307 thru A310 may be required to obtain optimum response on all low band channels.
			69MC (10MC Sweep)	67.25MC 71.25MC	4			
			63MC (10MC Sweep)	61.25MC 65.75MC	3			
			57MC (10MC Sweep)	55.25MC 59.75MC	2			

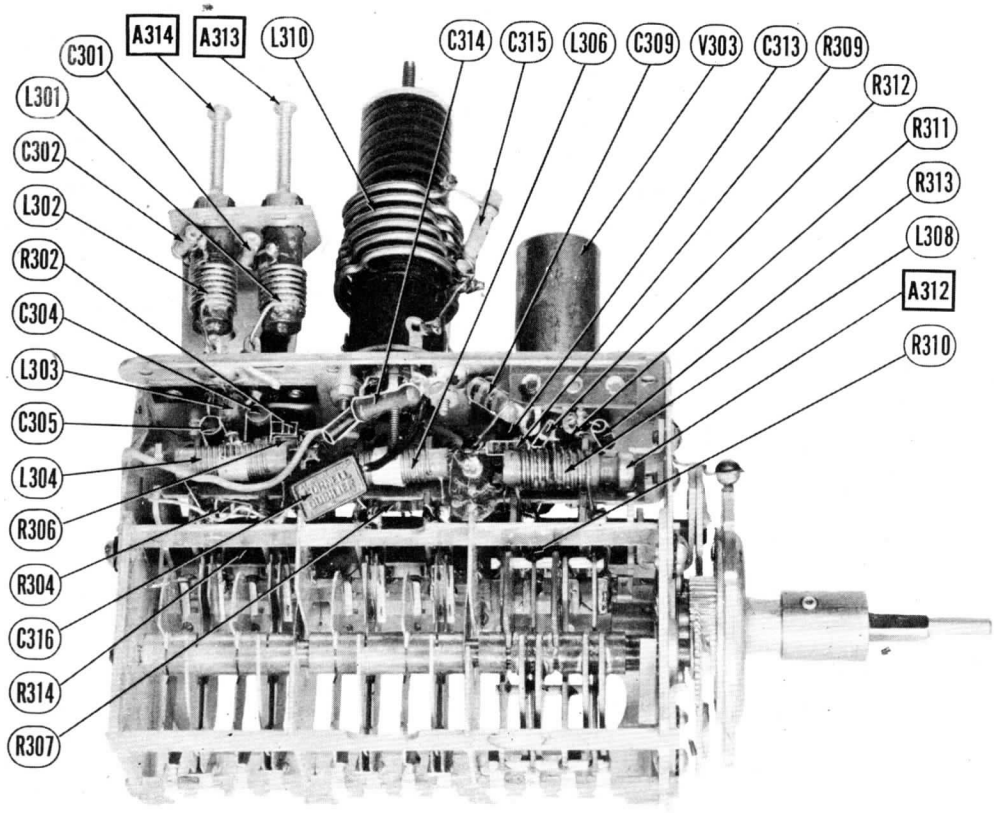
OSCILLATOR ALIGNMENT (TUNER CL-1633)

Replace oscillator tube V301 and recheck the fine tuning control to see that it is at the midpoint of its range.

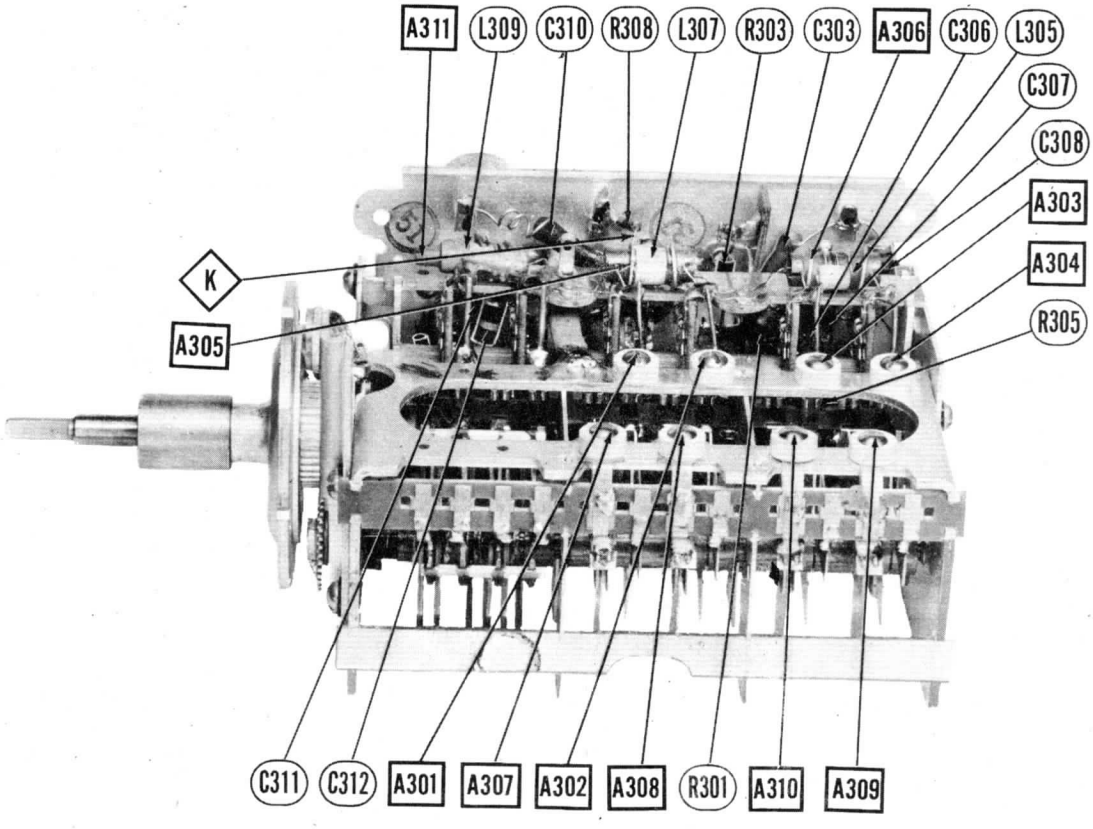
	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
15.	Two 125Ω carbon res.	Across antenna terminals.	215.75MC	13	DC Probe to Point ◇C Common to chassis.	A311	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
16.	"	"	87.75MC	6	"	A312	"
17.	"	"			"		Check to see that all other channels are received well within the limits of the fine tuning control. If not, compromise may be made using A311 for channels 7 thru 13 and A312 for channels 2 thru 6.

WAVE TRAP ADJUSTMENT (TUNER CL-1633)

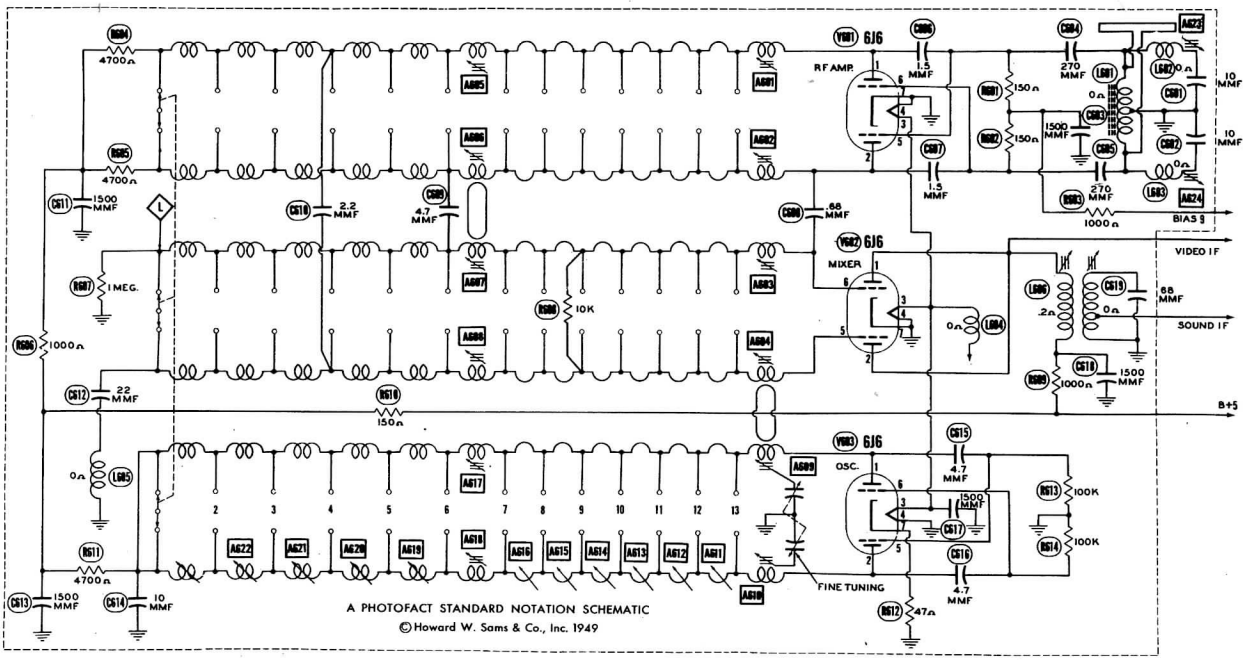
Wave traps A313 and A314 are used for specific types of interference and their alignment will depend upon the type encountered. With the receiver tuned to the channel having the interference set fine tuning control until interference is at maximum. Adjust A313 and A314 for minimum interference in the picture and sound, keeping the cores at approximately the same relative position. Turn one core 1/2 turn, adjust the other for minimum interference.



RF TUNER-LEFT SIDE



RF TUNER-RIGHT SIDE



RF TUNER

PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	USE	REPLACEMENT DATA: STANDARD REPLACEMENT	RMA BASE TYPE	
V601	R. F. Amp.	6J6	7BF	
V602	Mixer	6J6	7BF	
V603	Oscillator	6J6	7BF	

CAPACITORS

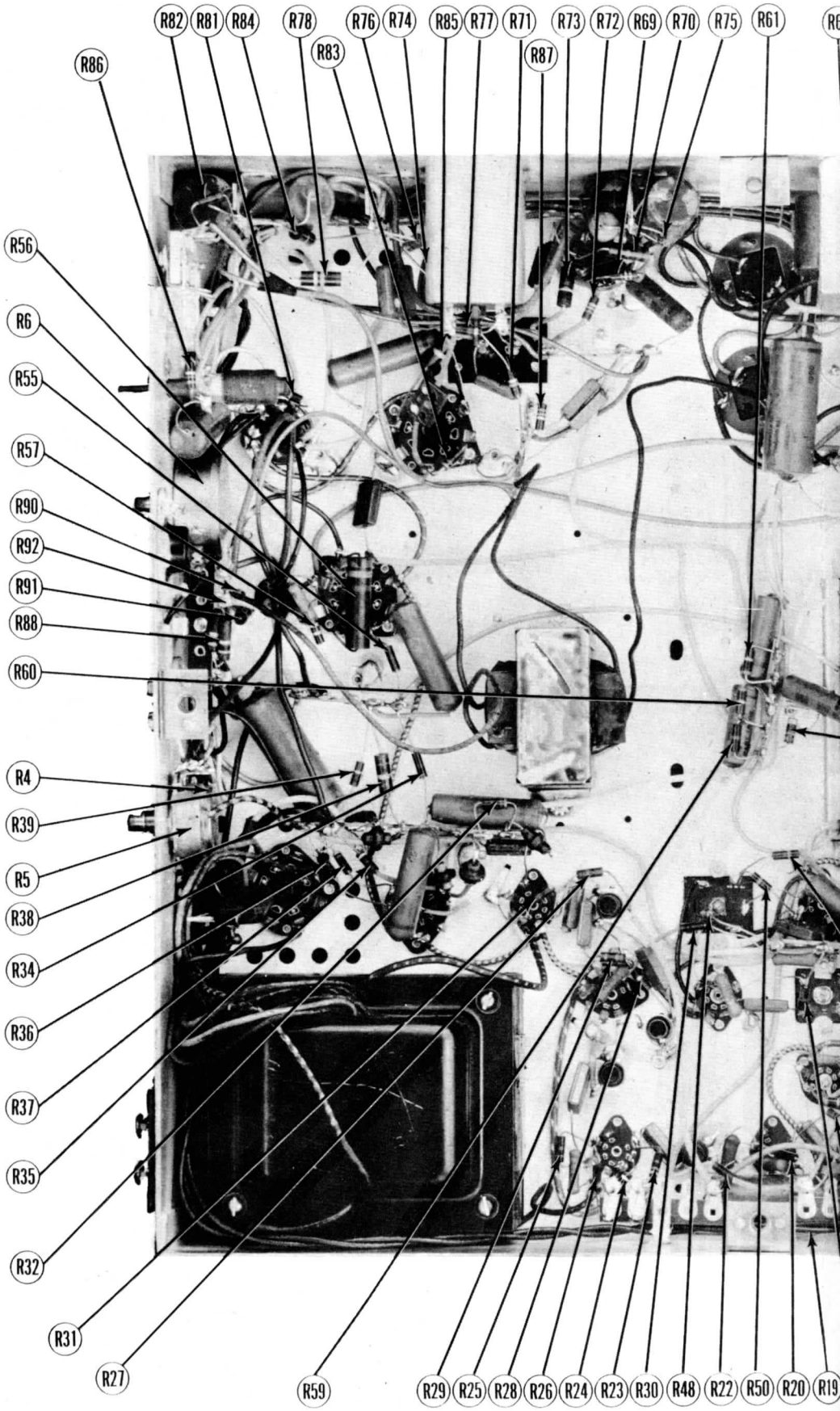
ITEM No.	RATING: CAP.	RATING: VOLT	IDENTIFICATION
C601	10		Fixed Trimmer
C602	10		Fixed Trimmer
C603	1500		RF Bypass
C604	270		RF Coupling
C605	270		RF Coupling
C606	1.5		Neutralizing
C607	1.5		Neutralizing
C608	.68		RF Coupling
C609	4.7		RF Coupling
C610	2.2		RF Coupling
C611	1500		RF Decoupling
C612	22		Fixed Trimmer
C613	1500		Osc. Decoupling
C614	10		Fixed Trimmer
C615	4.7		Osc. Feedback
C616	4.7		Osc. Feedback
C617	1500		Filament Bypass
C618	1500		Mixer Decoupling
C619	68		Fixed Trimmer

RESISTORS

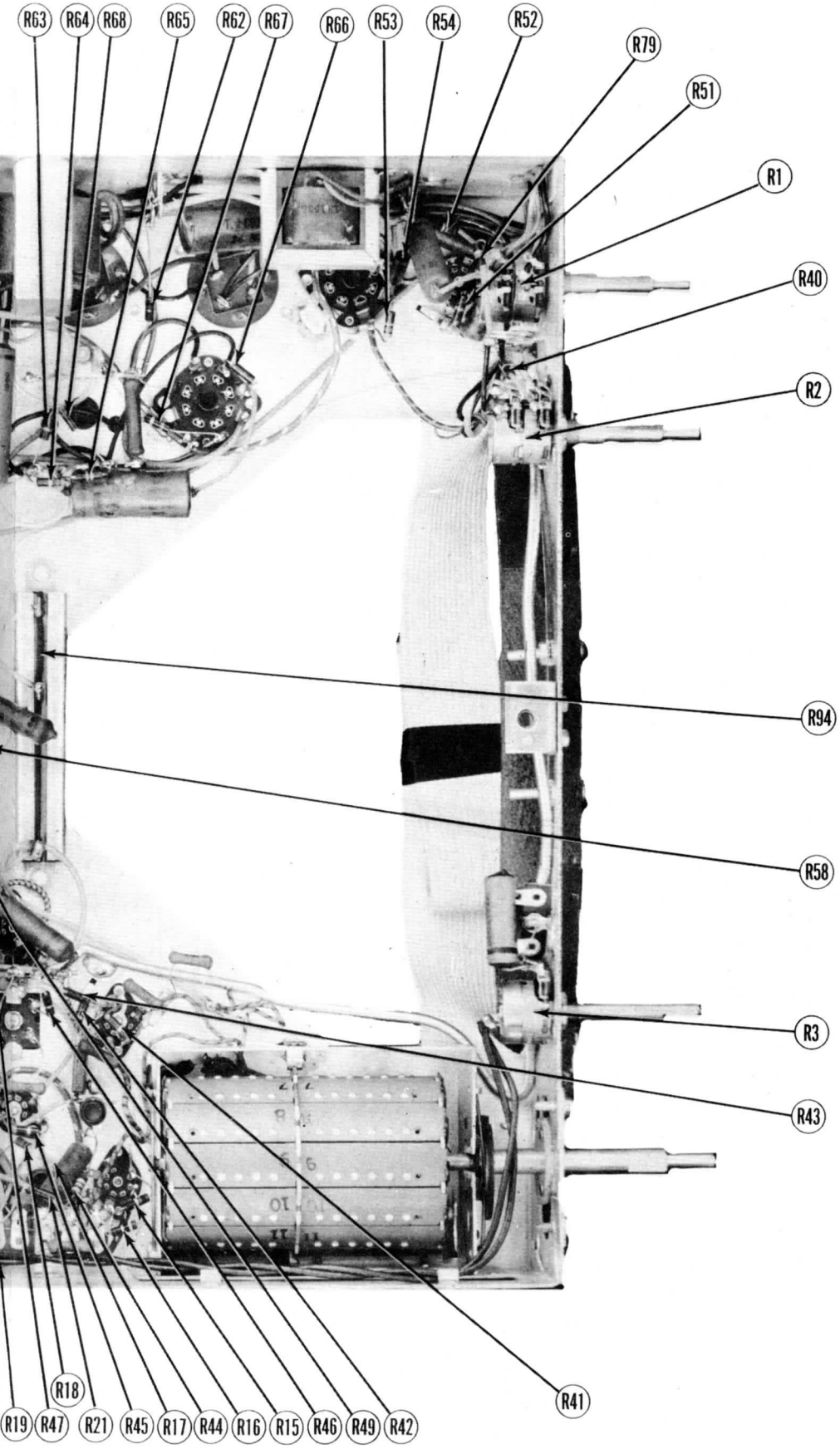
ITEM No.	RATING: RESISTANCE	RATING: WATTS	IDENTIFICATION
R601	150Ω	½	RF Grid
R602	150Ω	½	RF Grid
R603	1000Ω	½	Bias Filter
R604	4700Ω	½	RF Plate
R605	4700Ω	½	RF Plate
R606	1000Ω	½	RF Decoupling
R607	1 Meg.	½	Mixer Grid
R608	10KΩ	½	Mixer Grid Shunt
R609	1000Ω	½	Mixer Decpupling
R610	150Ω	½	Decoupling
R611	4700Ω	½	Osc. Plate
R612	47Ω	½	Osc. Cathode
R613	100KΩ	½	Osc. Grid
R614	100KΩ	½	Osc. Grid

COILS

ITEM No.	USE	DC RES.: PRI.	DC RES.: SEC.	
L601	Ant. Input	0Ω		
L602	Interference Trap	0Ω		
L603	Interference Trap	0Ω		
L604	Filament Choke	0Ω		
L605	Mixer Grid Trap	0Ω		
L606	lst. Video IF and Sound Trap	.2Ω	0Ω	



CHASSIS BOTTOM VIEW-RE



RESISTOR IDENTIFICATION

VOLTAGE AND RESISTANCE MEASUREMENTS

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6AG5	-.3VDC	0V	6.3VAC	0V	150VDC	150VDC	0V		
V 2	6J6	70VDC	160VDC	6.3VAC	0V	-1.5VDC	§-4VDC	0V		
V 3										
V 4	6AG5	-1.3VDC	.1VDC	6.3VAC	0V	110VDC	115VDC	.1VDC		
V 5	6AG5	-.4VDC	.1VDC	6.3VAC	0V	110VDC	115VDC	.1VDC		
V 6	6AG5	0V	.3VDC	6.3VAC	0V	85VDC	115VDC	.3VDC		
V 7	6AG5	0V	1.2VDC	0V	6.3VAC	80VDC	115VDC	1.2VDC		
V 8	6AL5	0V	-1.8VDC	6.3VAC	0V	0V	0V	-1VDC		
V 9	12AU7	120VDC	-.7VDC	4.3VDC	6.3VAC	6.3VAC	♦145VDC	♦-.1VDC	♦.8VDC	0V
V 10	6BA6	0V	0V	0V	6.3VAC	120VDC	120VDC	0V		
V 11	6BA6	0V	0V	0V	6.3VAC	110VDC	110VDC	1VDC		
V 12	6AU6	-.3VDC	0V	0V	6.3VAC	65VDC	65VDC	0V		
V 13	6AL5	0V	-.3VDC	6.3VAC	0V	0V	0V	-.3VDC		
V 14	6AT6	-.5VDC	0V	0V	6.3VAC	-.7VDC	0V	85VDC		
V 15	6K6GT	0V	6.3VAC	195VDC	200VDC	-5.2VDC	-15VDC	0V	0V	
V 16	6SN7GT	-.1VDC	105VDC	0V	-.1VDC	225VDC	8VDC	6.3VAC	0V	
V 17	6SN7GT	♦-10VDC	♦75VDC ♦145VDC	♦0V	♦0V	♦325VDC	♦9VDC ♦16.5VDC	6.3VAC	0V	
V 18	6SN7GT	♦-7VDC	♦85VDC	♦-1.8VDC	♦-49VDC	162VDC	♦0V	6.3VAC	0V	
V 19	6BG6G	0V	6.3VAC	♦7.2VDC	0V	♦-.2VDC	♦-.3VDC	0V	♦240VDC	*
V 20	6W4GT	-75VDC	315VDC	340VDC	0V	265VDC	0V	6.3VAC	0V	
V 21	1B3GT	* DO NOT MEASURE								
V 22	5U4G	0V	280VDC	0V	365VAC	0V	365VAC	0V	280VDC	
V 23	12LP4	#125VDC	65VDC	PIN 10 330VDC	PIN 11 230VDC	PIN 12 #125VDC				

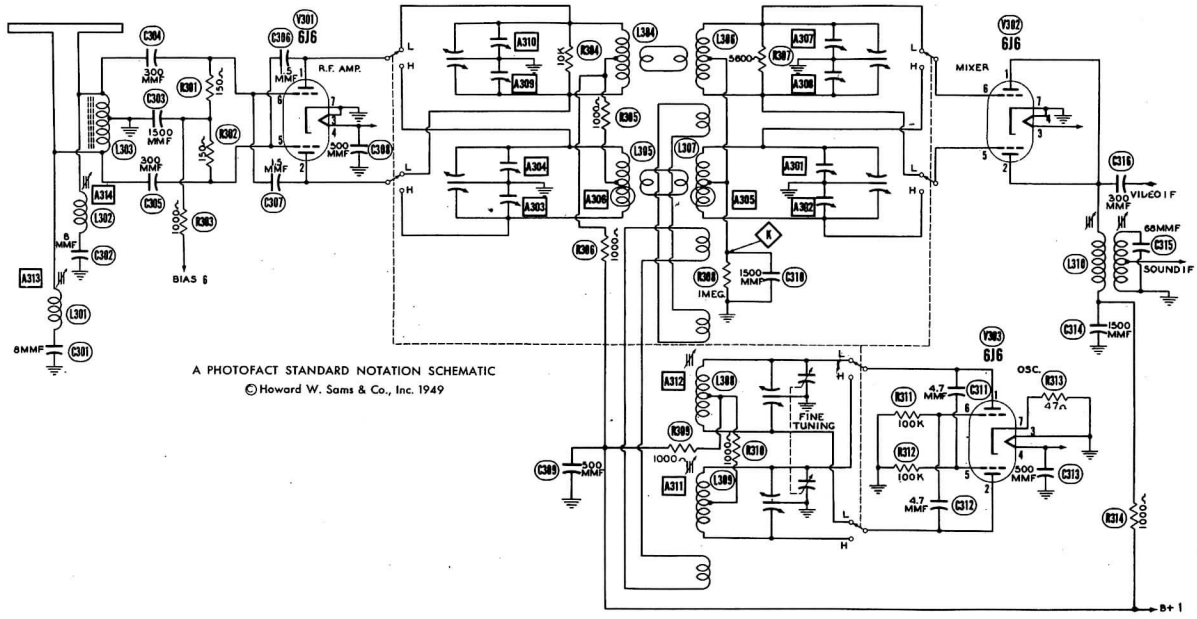
* Do not measure
§ Taken with vacuum tube voltmeter
♦ Measured from pin 3 of V17
6.3VAC measured across filament.

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6AG5	2 Meg.	0Ω	.1Ω	0Ω	†3.5KΩ	†3.5KΩ	0Ω		
V 2	6J6	†6KΩ	†1000Ω	.1Ω	0Ω	220KΩ	10KΩ	0Ω		
V 3										
V 4	6AG5	2 Meg.	40Ω	.1Ω	0Ω	†2.2KΩ	†2.2KΩ	40Ω		
V 5	6AG5	2 Meg.	40Ω	.1Ω	0Ω	†2.2KΩ	†2.2KΩ	40Ω		
V 6	6AG5	2 Meg.	40Ω	.1Ω	0Ω	†5KΩ	†2.2KΩ	40Ω		
V 7	6AG5	.1Ω	150Ω	0Ω	.1Ω	†8KΩ	†2.2KΩ	150Ω		
V 8	6AL5	0Ω	1 Meg.	.1Ω	0Ω	150Ω	0Ω	5KΩ		
V 9	12AU7	†5KΩ	1 Meg.	10KΩ	.1Ω	.1Ω	†5.5KΩ	1 Meg.	800Ω	0Ω
V 10	6BA6	0Ω	0Ω	0Ω	.1Ω	†8KΩ	†2.2KΩ	150Ω		
V 11	6BA6	470KΩ	0Ω	0Ω	.1Ω	†2.5KΩ	†2.5KΩ	82Ω		
V 12	6AU6	22KΩ	0Ω	0Ω	.1Ω	†11.5KΩ	†11.5KΩ	0Ω		
V 13	6AL5	200KΩ	100KΩ	.1Ω	0Ω	0Ω	0Ω	100KΩ		
V 14	6AT6	10 Meg.	0Ω	0Ω	.1Ω	4 Meg.	Inf.	†330KΩ		
V 15	6K6GT	Inf.	.1Ω	†1.5KΩ	†1.2KΩ	470KΩ	135Ω	0Ω	0Ω	
V 16	6SN7GT	1 Meg.	†68KΩ	0Ω	4 Meg.	†390Ω	6.8KΩ	.1Ω	0Ω	
V 17	6SN7GT	2.5 Meg.	♦4 Meg. ♦1.5Meg.	750Ω	2.2 Meg.	†800Ω	6KΩ 1.8KΩ	.1Ω	0Ω	
V 18	6SN7GT	850KΩ	♦250KΩ	280KΩ	200KΩ	♦140KΩ	750Ω	.1Ω	0Ω	
V 19	6BG6G	Inf.	.1Ω	800Ω	Inf.	1 Meg.	1 Meg.	0Ω	†5KΩ	♦200Ω
V 20	6W4GT	750Ω	140KΩ	140KΩ	Inf.	9KΩ	Inf.	0Ω	.1Ω	
V 21	1B3GT	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	♦350Ω
V 22	5U4G	Inf.	10KΩ	Inf.	750Ω	Inf.	780Ω	Inf.	10KΩ	
V 23	12LP4	†1.2KΩ	†5KΩ	PIN 10 ♦56KΩ	PIN 11 †400Ω	PIN 12 †1.2KΩ				

† Measured from pin 8 of V22
♦ Measured from pin 3 of V20

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



RF TUNER

PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	USE	REPLACEMENT DATA: STANDARD REPLACEMENT	RMA BASE TYPE	
V301	RF Amp.	6J6	7BF	
V302	Mixer	6J6	7BF	
V303	Oscillator	6J6	7BF	

RESISTORS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	IDENTIFICATION
R301	150Ω	½	RF Grid
R302	150Ω	½	RF Grid
R303	1000Ω	½	Bias Filter
R304	10KΩ	½	RF Coil Shunt
R305	1000Ω	½	RF Plate
R306	1000Ω	½	RF Plate
R307	5600Ω	½	Mixer Coil Shunt
R308	1 Meg	½	Mixer Grid
R309	1000Ω	½	Osc. Plate
R310	1000Ω	½	Osc. Plate
R311	100KΩ	½	Osc. Grid
R312	100KΩ	½	Osc. Grid
R313	47Ω	½	Osc. Cathode
R314	1000Ω	½	Mixer Decoup.

CAPACITORS

ITEM No.	RATING: CAP.	RATING: VOLT	IDENTIFICATION
C301	8		Fixed Trimmer
C302	8		Fixed Trimmer
C303	1500		Bias Filter
C304	300		RF Coupling
C305	300		RF Coupling
C306	1.5		Neutralizing
C307	1.5		Neutralizing
C308	500		Filament Bypass
C309	500		RF Bypass
C310	1500		Mixer Grid Filter
C311	4.7		Osc. Feedback
C312	4.7		Osc. Feedback
C313	500		Filament Bypass
C314	1500		Mixer Decoupling
C315	68		Fixed Trimmer
C316	300		IF Coupling

COILS

ITEM No.	USE	DC RES.: PRI.	DC RES.: SEC.	
L301	Interference Trap	0Ω		
L302	Interference Trap	0Ω		
L303	Ant. Input	0Ω		
L304	RF Low Band	0Ω		
L305	RF High Band	0Ω		
L306	Mixer Low Band	0Ω		
L307	Mixer High Band	0Ω		
L308	Osc. Low Band	0Ω		
L309	Osc. High Band	0Ω		
L310	IF Trans.	.2Ω	0Ω	

PARTS LIST A

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA: OLYMPIC PART No.	REPLACEMENT DATA: STANDARD REPLACEMENT	RMA BASE TYPE	NOTES
V1	RF Amp.	6AG5	6AG5	7BD	
V2	Converter	6J6	6J6	7BF	
V4	1st Video IF Amp	6AG5	6AG5	7BD	6AU6's used in model TV-107 and in some TV-106 models.
V5	2nd Video IF Amp	6AG5	6AG5	7BD	
V6	3rd Video IF Amp	6AG5	6AG5	7BD	
V7	4th Video IF Amp	6AG5	6AG5	7BD	
V8	Video DET-AGC	6AL5	6AL5	6BT	
V9	Video Amp.	12AU7	12AU7	9A	
V10	1st Sound IF Amp	6BA6	6BA6	7BK	
V11	2nd Sound IF Amp	6BA6	6BA6	7BK	
V12	3rd Sound IF Amp	6AU6	6AU6	7BK	
V13	Sound Disc.	6AL5	6AL5	6BT	
V14	AF Amp.-Sync Clamper	6AT6	6AT6	7BT	
V15	Audio Output	6K6GT	6K6GT	7S	
V16	Sync. Amp.-Sep.	6SN7GT	6SN7GT	8BD	
V17	Vert. Osc.-Output	6SN7GT	6SN7GT	8BD	
V18	Hor. AFC-Hor. Osc.	6SN7GT	6SN7GT	8BD	
V19	Hor. Output	6BG6G	6BG6G	5BT	
V20	Damper	6W4GT	6W4GT	4CG	
V21	HV Rectifier	1B3GT	1B3GT	3C	
V22	LV Rectifier	5U4G	5U4G	5T	
V23A	Picture Tube	12LP4	12LP4	12D	Used in models TV-944,945, 946.
B	Picture Tube	10BP4	10BP4	12D	Used in models TV-922L,104,105,106,107, 108.

CAPACITORS

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

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: OLYMPIC PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SOLAR PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C1A	40	450	CO-1494	AFH8J8D26B	UP9CJ			TVL-57	◓ Filter.
B	40	150			887				■ Filter
C	130	50							Vert. Output Cath. Byp.
C2A	40	450	CO-1497	AFH8J2H	UP7BJ			TVL-69	◓ Filter
B	10	350			920				▲ Filter
C3A	80	450	CO-1495	AFH162J	UP9BJ			TVL-47	◓ Filter
B	10	450			857				▲ Decoupling
C4A	10	450	CO-1496	AFH2J6I66	UP8CJ				◓ Decoupling
B	30	400			898				◘ Filter
C	30	300							▲ Filter
C5	24	300	CO-1493	PRS350/24	BR2035			TVA-23	Output Decoupling
C6	5					NPOK-5			Fixed Trimmer
C7	1000					GP2L-001			RF Fil. Bypass
C8	120					GP2K-150			RF Decoupling
C9	100					GP1K-100			RF Coupling
C10	10					NPOK-10			Osc. Feedback
C11	20					NPOK-20			Osc. Grid Cap.
C12	1000					GP2L-001			Conv. Fil. Bypass
C13	1000					GP2L-001			RF Bypass
C14	68								Fixed Trimmer
C15	1500		CCR152M	1467-0015	1W5D15	GP2L-0015	MW.5-215	1FM-215	RF Bypass
C16	120	500		1468-00015	5W5T15	GP2K-150	MO.5-315	1FM-315	IF Coupling *
C17	1500		CCR152M	1467-0015	1W5D15	GP2L-0015	MW.5-215	1FM-215	AGC Filter
C18	.25	400	CO-H-4254	P488-25	GT4P25		ST-4-25	TC-2	" "
C19	1500		CCR152M	1467-0015	1W5D15	GP2L-0015	MW.5-215	1FM-215	1st V. IF Decoupling
C20	1500		CCR152M	1467-0015	1W5D15	GP2L-0015	MW.5-215	1FM-215	RF Bypass
C21	270	500	SCM40A271K	1468-00025	5W5T25	GP2K-250	MO.5-325	1FM-325	IF Coupling
C22	1500		CCR152M	1467-0015	1W5D15	GP2L-0015	MW.5-215	1FM-215	AGC Filter
C23	1500		CCR152M	1467-0015	1W5D15	GP2L-0015	MW.5-215	1FM-215	2nd V. IF Decoupling
C24	270	500	SCM40A271K	1468-00025	5W5T25	GP2K-250	MO.5-325	1FM-325	IF Coupling
C25	1500		CCR152M	1467-0015	1W5D15	GP2L-0015	MW.5-215	1FM-215	AGC Filter
C26	1500		CCR152M	1467-0015	1W5D15	GP2L-0015	MW.5-215	1FM-215	3rd V. IF Decoupling
C27	270	500	SCM40A271K	1468-00025	5W5T25	GP2K-250	MO.5-325	1FM-325	IF Coupling
C28	75			1469-00075		NP0M-75			Fixed Trimmer
C29	100	500	RCM20A101M	1468-0001	5W5T1	GP1K-100	MO.5-31	1FM-31	4th V. IF Cath. Bypass
C30	1500		CCR152M	1467-0015	1W5D15	GP2L-0015	MW.5-215	1FM-215	4th V. IF Decoupling
C31	270	500	SCM40A271K	1468-00025	5W5T25	GP2K-250	MO.5-325	1FM-325	IF Coupling
C32	220	500	RCM20A221M	1468-0002	5W5T2	GP2K-200	MO.5-32	1FM-32	IF Coupling
C33	10	500		1468-00001	5W5Q1	GP1K-10	MO.5-41	MS-41	V. Diode Filter
C34	.05	400	CO-H-4503	P488-05	GT4S5		ST-4-05	TM-15	Video Coupling
C35	.05	400	CO-H-4503	P488-05	GT4S5		ST-4-05	TM-15	" "
C36	.25	400	CO-H-4254	P488-25	GT4P25		ST-4-25	TC-2	Picture Cath. Decoup.
C37	1500		CCR152M	1467-0015	1W5D15	GP2L-0015	MW.5-215	1FM-215	1st S. IF Cath. Bypass
C38	1500		CCR152M	1467-0015	1W5D15	GP2L-0015	MW.5-215	1FM-215	1st S. IF Decoupling
C39	330	500	RCM20A331M	1468-00035	5W5T3	GP2K-300	MO.5-33	1FM-335	S. IF Coupling
C40	.01	600	CO-H-6103	P688-01	GT6S1	GP2-335-01	ST-6-01	TM-11	2nd S. IF Grid Filter
C41	1500		CCR152M	1467-0015	1W5D15	GP2L-0015	MW.5-215	1FM-215	2nd S. IF Decoupling
C42	330	500	RCM20A331M	1468-00035	5W5T3	GP2K-300	MO.5-33	1FM-335	Limiter Grid Filter
C43	1500		CCR152M	1467-0015	1W5D15	GP2L-0015	MW.5-215	1FM-215	Limiter Decoupling
C44	270	500	SCM40A271K	1468-00025	5W5T25	GP2K-250	MO.5-325	1FM-325	RF Bypass
C45	.002	600	CO-H-6202	P688-002	GT6D2	GP2M-002	ST-6-002	TM-22	Audio Coupling
C46	.01	600	CO-H-6103	P688-01	GT6S1	GP2-335-01	ST-6-01	TM-11	" "
C47	.002	600	CO-H-6202	P688-002	GT6D2	GP2M-002	ST-6-002	TM-22	AF Plate Bypass
C48	.01	600	CO-H-6103	P688-01	GT6S1	GP2-335-01	ST-6-01	TM-11	Audio Coupling
C49	.005	600	CO-H-6502	P688-005	GT6D5	GP2M-005	ST-6-005	TM-25	Output Plate Bypass
C50	.05	400	CO-H-4503	P488-05	GT4S5		ST-4-05	TM-15	Video Coupling
C51	100	500	RCM20A101M	1468-0001	5W5T1	GP1K-100	MO.5-31	1FM-31	Sync. Coupling
C52	390	1000	SCM40A391K	1468-0004	5W5T4		MO.5-34	1FM-34	Sync. Sep. Cath. Bypass
C53	.002	600	CO-H-6202	P688-002	GT6D2	GP2M-002	ST-6-002	TM-22	Integrator Net.
C54	.005	600	CO-H-6502	P688-005	GT6D5	GP2M-005	ST-6-005	TM-25	" "
C55	.005	600	CO-H-6502	P688-005	GT6D5	GP2M-005	ST-6-005	TM-25	" "
C56	4700		CCR472K	1467-005	1D5D5	GP2M-005	MW.5-25	1FM-25	Vert. Osc. Grid Cap.
C57	.1	1000	CO-O-X104	1089-1	TVC10P1		STM-10-1	PX-11	Vert. Discharge
C58	.25	400	CO-H-4254	P488-25	GT4P25		ST-4-25	TC-2	Vert. Sweep Coupling
C59	120	1000	SCM40A121K						Hor. Sync. Coupling
C60	120	1000	SCM40A121K						Fixed Trimmer
C61	.002	600	CO-H-6202	P688-002	GT6D2	GP2M-002	ST-6-002	TM-22	Differentiator Net.
C62	.25	400	CO-H-4254	P488-25	GT4P25		ST-4-25	TC-2	AFC Filter
C63	.02	400	CO-H-4203	P488-02	GT4S2		ST-4-02	TM-12	" "

CAPAC

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEME: OLYMPIC PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.
C64	180	1000	SCM40C181J		
C65	2200	1000	SCM40A222J		
C66	.05	400	CO-H-4503	P488-05	GT4S5
C67	390	1000	SCM40A391K	1469-0004	5R5T4
C68	.25	400	CO-H-4254	P488-25	GT4P25
C69	.05	400	CO-H-4503	P488-05	GT4S5
C70	.1	1000	CO-O-X104	1089-1	TVC10P1
C71	.035	1000	CO-O-X353		
C72	5	1500	CO-1542		
C73	500	15000	CT-1486		
C74	.01	600	CO-H-6103	P688-01	GT6S1
C75	.01	600	CO-H-6103	P688-01	GT6S1

* Not used in all models.

CO

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: OLYMPIC PART No.	IRC PART No.	CLA PAR
R1A	50KΩ	½	PT-1479		
B	1 Meg.	½			
R2A	10KΩ	½	PT-1478		
B	500KΩ	½			
R3A	1 Meg.	½	PT-1477	Q13-137	M-63-
B	Switch			76-1	SW-A
R4	5000Ω	½	PT-1480	Q11-114	M-19-
R5	2.5 Meg.	½	PT-1481	Q11-239	
R6	2500Ω	4	PT-1484		58-25

RE

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: OLYMPIC PART No.	IRC PART No.
R7	3900Ω	½		
R8	10KΩ	½		
R9	2200Ω	½		
R10	4700Ω	½		
R11	220KΩ	½		
R12	10KΩ	½		
R13	4700Ω	½		
R14	47KΩ	½		
R15	10KΩ	½	REB103K	
R16	39Ω	½	REB390K	
R17	1000Ω	½	REB102K	
R18	10KΩ	½	REB103J	
R19	39Ω	½	REB390K	
R20	1000Ω	½	REB102K	
R21	1000Ω	½	REB102K	BTS-1000
R22	1000Ω	½	REB102K	BTS-1000
R23	4700Ω	½	REB472J	
R24	39Ω	½	REB390K	
R25	2700Ω	½	REB272J	
R26	1000Ω	½	REB102K	
R27	1 Meg.	½	REB105M	BTS-1 Meg.
R28	150Ω	½	REB151K	
R29	5600Ω	½	REB562J	
R30	1000Ω	½	REB102K	
R31	1 Meg.	½	REB105M	BTS-1 Meg.
R32	4700Ω	½	REB472J	BTS-4700-5
R33	10KΩ	½	REB103K	BTS-10K
R34	1 Meg.	½	REB105M	BTS-1 Meg.
R35	3900Ω	½	REB392J	BTS-3900-5
R36	1 Meg.	½	REB105M	BTS-1 Meg.
R37	47Ω	½	REB470M	BW-½-47
R38	3300Ω	½	REB332K	BTS-3300
R39	1000Ω	½	REB102K	BTS-1000
R40	100KΩ	½	REB104M	BTS-100K
R41	150Ω	½	REB151K	
R42	5600Ω	½	REB562J	
R43	1000Ω	½	REB102K	
R44	470KΩ	½	REB474M	
R45	82Ω	½	REB820K	
R46	1200Ω	½	REB122K	
R47	22KΩ	½	REB223K	
R48	10KΩ	½	REB103K	
R49	100KΩ	½	REB104J	BTS-100K-5
R50	100KΩ	½	REB104J	BTS-100K-5
R51	10Meg.	½	REB106M	BTS-10 Meg
R52	330KΩ	½	REB334K	BTS-330K
R53	470KΩ	½	REB474M	BTS-470K
R54	1000Ω	1	REC102M	BW-1-1000
R55	1 Meg.	½	REB105M	BTS-1 Meg.
R56	68KΩ	2	RED683M	BT-2-68K
R57	3.9 Meg.	½	REB395K	BTS-3.9 Meg
R58	6800Ω	½	REB682K	BTS-6800
R59	22KΩ	½	REB223M	BTS-22K
R60	8200Ω	½	REB822K	BTS-8200
R61	8200Ω	½	REB822K	BTS-8200
R62	1 Meg.	½	REB105J	BTS-1 Meg.
R63	1.5 Meg.	½	REB155K	BTS-1.5 Meg
R64	6.8 Meg.	½	REB685K	BTS-6.8 Meg
R65	100KΩ	½	REB104K	BTS-100K
R66	2.2 Meg.	½	REB225M	BTS-2.2 Meg
R67	560Ω	½	REB561K	BTS-560
R68	3300Ω	½	REB332M	BTS-3300
R69	560KΩ	½	REB564K	BTS-560K
R70	3.3 Meg.	1	REC335J	BTA-3.3Meg-
R71	150KΩ	½	REB154K	BTS-150K
R72	180KΩ	½	REB184K	BTS-180K
R73	100KΩ	1	REC104J	BTA-100K-5
R74	100KΩ	1	REC104J	BTA-100K-5
R75	8200Ω	½	REB822K	BTS-8200

PARTS LIST AND DESCRIPTIONS

CAPACITORS (CONT.)

ITEM No.	RATING CAP.	RATING VOLT	OLYMPIC PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SOLAR PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C64	180	1000	SCM40C181J						Hor. Osc. Grid Cap.
C65	2200	1000	SCM40A222J						Hor. Discharge
C66	.05	400	CO-H-4503	P488-05	GT4S5		ST-4-05	TM-11	AFC Plate Bypass
C67	390	1000	SCM40A391K	1469-0004	5R5T4		MOS.5-34	MS-34	Hor. Sweep Coupling
C68	.25	400	CO-H-4254	P488-25	GT4P25		ST-4-25	TC-2	Hor. Output Cath. Byp.
C69	.05	400	CO-H-4503	P488-05	GT4S5		ST-4-05	TM-15	Hor. Output Screen Byp.
C70	.1	1000	CO-O-X104	1089-1	TVC10P1		STM-10-1	PX-11	Damper Filter
C71	.035	1000	CO-O-X353						" "
C72	5	1500	CO-1542						AFC Feedback
C73	500	15000	CT-1486			410-500			HV Filter
C74	.01	600	CO-H-6103	P688-01	GT6S1		ST-6-01	TM-11	Line Filter
C75	.01	600	CO-H-6103	P688-01	GT6S1		ST-6-01	TM-11	" "

* Not used in all models.

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	OLYMPIC PART No.	IRC PART No.	CLAROSTAT PART No.	INSTALLATION NOTES
R1A	50KΩ	½	PT-1479			Horiz. Hold Control } Dual Concentric
B	1 Meg.	½				Vert. Hold Control }
R2A	10KΩ	½	PT-1478			Contrast Control } Dual Concentric
B	500KΩ	½				Brightness Control }
R3A	1 Meg.	½	PT-1477	Q13-137	M-63-Z	Volume Control
B	Switch			76-1	SW-A	Attach to R3A Per Instructions
R4	5000Ω	½	PT-1480	Q11-114	M-19-S	Vert. Linearity Control
R5	2.5 Meg.	½	PT-1481	Q11-239		Height Control
R6	2500Ω	4	PT-1484		58-2500	Focus Control (Wire Wound)

RESISTORS

ITEM No.	RATING RESISTANCE	RATING WATTS	OLYMPIC PART No.	IRC PART No.	IDENTIFICATION CODES ALL RESISTORS ARE ± 10% UNLESS OTHERWISE STATED.	
R7	3900Ω	½			Ant. Coil Shunt	
R8	10KΩ	½			RF Coil Shunt	
R9	2200Ω	½			RF Decoupling	
R10	4700Ω	½			Conv. Grid	
R11	220KΩ	½			Conv. Grid	
R12	10KΩ	½			Osc. Grid	
R13	4700Ω	½			Osc. Plate	
R14	47KΩ	½			RF Grid	
R15	10KΩ	½	REB103K		1st Video IF Grid	
R16	39Ω	½	REB390K		1st Video IF Cathode	
R17	1000Ω	½	REB102K		1st Video IF Decoupling	
R18	10KΩ	½	REB103J		2nd Video IF Grid	5%
R19	39Ω	½	REB390K		2nd Video IF Cathode	
R20	1000Ω	½	REB102K		2nd Video IF Decoupling	
R21	1000Ω	½	REB102K	BTS-1000	AGC Network	
R22	1000Ω	½	REB102K	BTS-1000	" "	
R23	4700Ω	½	REB472J		3rd Video IF Grid	5%
R24	39Ω	½	REB390K		3rd Video IF Cathode	
R25	2700Ω	½	REB272J		3rd Video IF Plate	5%
R26	1000Ω	½	REB102K		3rd Video IF Decoupling	
R27	1 Meg.	½	REB105M	BTS-1 Meg.	AGC Network	20%
R28	150Ω	½	REB151K		4th Video IF Cathode	
R29	5600Ω	½	REB562J		4th Video IF Plate	5%
R30	1000Ω	½	REB102K		4th Video IF Decoupling	
R31	1 Meg.	½	REB105M	BTS-1 Meg.	AGC Diode Load	20%
R32	4700Ω	½	REB472J	BTS-4700-5%	Video Det. Diode Load	5%
R33	10KΩ	½	REB103K	BTS-10K	" " " "	
R34	1 Meg.	½	REB105M	BTS-1 Meg.	1st Video Amp. Grid	20%
R35	3900Ω	½	REB392J	BTS-3900-5%	1st Video Amp. Plate	5%
R36	1 Meg.	½	REB105M	BTS-1 Meg.	2nd Video Amp. Grid	20%
R37	47Ω	½	REB470M	BW-½-47	2nd Video Amp. Cathode	20%
R38	3300Ω	½	REB332K	BTS-3300	2nd Video Amp. Plate	
R39	1000Ω	½	REB102K	BTS-1000	" "	
R40	100KΩ	½	REB104M	BTS-100K	Voltage Divider	20%
R41	150Ω	½	REB151K		1st Sound IF Cathode	
R42	5600Ω	½	REB562J		1st Sound IF Plate	5%
R43	1000Ω	½	REB102K		1st Sound IF Decoupling	
R44	470KΩ	½	REB474M		2nd Sound IF Grid	20%
R45	82Ω	½	REB820K		2nd Sound IF Cathode	
R46	1200Ω	½	REB122K		2nd Sound IF Decoupling	
R47	22KΩ	½	REB223K		3rd Sound IF Grid	
R48	10KΩ	½	REB103K		3rd Sound IF Decoupling	
R49	100KΩ	½	REB104J	BTS-100K-5%	Disc. Load	5%
R50	100KΩ	½	REB104J	BTS-100K-5%	" "	5%
R51	10Meg.	½	REB106M	BTS-10 Meg.	1st AF Grid	20%
R52	330KΩ	½	REB334K	BTS-330K	1st AF Plate	
R53	470KΩ	½	REB474M	BTS-470K	Output Grid	20%
R54	1000Ω	1	REC102M	BW-1-1000	Filter	20%
R55	1 Meg.	½	REB105M	BTS-1 Meg.	Sync. Amp. Grid	20%
R56	68KΩ	2	RED683M	BT-2-68K	Sync. Amp. Plate	20%
R57	3.9 Meg.	½	REB395K	BTS-3.9 Meg.	Sync. Sep. Grid	
R58	6800Ω	½	REB682K	BTS-6800	Sync. Sep. Cathode	
R59	22KΩ	½	REB223M	BTS-22K	Integrator	20%
R60	8200Ω	½	REB822K	BTS-8200	"	
R61	8200Ω	½	REB822K	BTS-8200	"	
R62	1 Meg.	½	REB105J	BTS-1 Meg.-5%	Vert. Osc. Grid	5%
R63	1.5 Meg.	½	REB155K	BTS-1.5 Meg.	Vert. Osc. Plate	
R64	6.8 Meg.	½	REB685K	BTS-6.8 Meg.	Voltage Divider	
R65	100KΩ	½	REB104K	BTS-100K	" "	
R66	2.2 Meg.	½	REB225M	BTS-2.2 Meg.	Vert. Output Grid	20%
R67	560Ω	½	REB561K	BTS-560	Vert. Output Cathode	
R68	3300Ω	½	REB332M	BTS-3300	Vert. Peaking	20%
R69	560KΩ	½	REB564K	BTS-560K	Horiz. AFC Grid	
R70	3.3 Meg.	1	REC335J	BTA-3.3Meg-5%	Voltage Divider	5%
R71	150KΩ	½	REB154K	BTS-150K	Feedback	
R72	180KΩ	½	REB184K	BTS-180K	Horiz. AFC Cathode	
R73	100KΩ	1	REC104J	BTA-100K-5%	Horiz. AFC Cathode	5%
R74	100KΩ	1	REC104J	BTA-100K-5%	Horiz. Osc. Grid	5%
R75	8200Ω	½	REB822K	BTS-8200	Horiz. AFC Filter	

ITEM No.	RATING RESISTANCE	RATING WATTS	OLYMPIC PART No.
R76	270KΩ	1	REC274
R77	10KΩ	½	REB103
R78	120KΩ	1	REC124
R79	120KΩ	½	REB124
R80	33KΩ	½	REB333
R81	10KΩ	½	REB103
R82	1 Meg.	½	REB105
R83	47Ω	½	REB470
R84	82Ω	1	REC820
R85	4700Ω	1	REC472
R86	56KΩ	½	REB563
R87	560KΩ	½	REB564
R88A	27Ω	½	
B	27Ω	½	
R89	1 Meg.	1	REC105
R90	680Ω	1	REC681
R91	680Ω	1	REC681
R92	680Ω	1	REC681
R93A	1125Ω	20	RE-150
B	610Ω	20	
R94A	100Ω	2	RE-150
B	35Ω	1	
C	8200Ω	5	

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2
T1	117VAC @ 1.75A	710VCT @ .23A SEC. 4 6.3VAC @ .6A	5VAC @ 3A

†† Drill new mounting ho

TR

ITEM No.	RATING DC RESISTANCE PRI.	RATING DC RESISTANCE SEC.	OLYMP PART
T2	110Ω Tap @ 30Ω		TR-1475
T3	160Ω	850Ω SEC. 1	TR-1473
T4	300Ω Tap @ 130Ω	10Ω Tap @ .5Ω SEC. 2 0Ω	TR-1492
T5	730Ω	8.5Ω	TR-1343
T6A	12Ω		CL-1356
B	55Ω		
T7	390Ω		CL-1687

†† Drill new mounting h

TR

ITEM No.	RATING IMPEDANCE PRI.	RATING IMPEDANCE SEC.	RATING DC RES. PRI.	RATING DC RES. SEC.
T8	6200Ω	3.5Ω	275Ω	.4Ω

ITEM No.	RATINGS		
	FIELD	V. C.	IMP.
SP1A	PM	3.5Ω	SK-
B			SK-
C			SK-
	CONE DIA.	V. C.	DIA.
SP2A	6"	3/4"	
B	4" x 6"		
C	8"		

ITEM No.	RATINGS TOTAL DIRECT CURRENT	RATINGS D. C. RESISTANCE	INDU (0 C 10
L1	.230A	62Ω	2.6H

ITEM No.	USE	DC RES. PRI.	DC RES. SEC.
L2	Ant. Strip	0Ω	
L3	RF Mixer & Osc. Strip	0Ω	
L4	Fil. Choke	.1Ω	
L5	Fil. Choke	.1Ω	
L6	Conv. Trans.	0Ω	0Ω
L7	1st Video IF	.5Ω	

nt)

NOTES

d in model TV-107 and in some
els.

dels TV-944,945, 946.
dels TV-922L,104,105,106,107,

. for Electrolytic
mic Capacitors.

SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
TVL-57	◓ Filter.
	◙ Filter
	Vert. Output Cath. Byp.
TVL-69	◓ Filter
	▲ Filter
TVL-47	◓ Filter
	▲ Decoupling
	◓ Decoupling
	◙ Filter
	▲ Filter
TVA-23	Output Decoupling
	Fixed Trimmer
	RF Fil. Bypass
	RF Decoupling
	RF Coupling
	Osc. Feedback
	Osc. Grid Cap.
	Conv. Fil. Bypass
	RF Bypass
	Fixed Trimmer
1FM-215	RF Bypass
1FM-315	IF Coupling *
1FM-215	AGC Filter
TC-2	" "
1FM-215	1st V. IF Decoupling
1FM-215	RF Bypass
1FM-325	IF Coupling
1FM-215	AGC Filter
1FM-215	2nd V. IF Decoupling
1FM-325	IF Coupling
1FM-215	AGC Filter
1FM-215	3rd V. IF Decoupling
1FM-325	IF Coupling
	Fixed Trimmer
1FM-31	4th V. IF Cath. Bypass
1FM-215	4th V. IF Decoupling
1FM-325	IF Coupling
1FM-32	IF Coupling
MS-41	V. Diode Filter
TM-15	Video Coupling
TM-15	" "
TC-2	Picture Cath. Decoup.
1FM-215	1st S. IF Cath. Bypass
1FM-215	1st S. IF Decoupling
1FM-335	S. IF Coupling
TM-11	2nd S. IF Grid Filter
1FM-215	2nd S. IF Decoupling
1FM-335	Limiter Grid Filter
1FM-215	Limiter Decoupling
1FM-325	RF Bypass
TM-22	Audio Coupling
TM-11	" "
TM-22	AF Plate Bypass
TM-11	Audio Coupling
TM-25	Output Plate Bypass
TM-15	Video Coupling
1FM-31	Sync. Coupling
1FM-34	Sync. Sep. Cath. Bypass
TM-22	Integrator Net.
TM-25	" "
TM-25	" "
1FM-25	Vert. Osc. Grid Cap.
PX-11	Vert. Discharge
TC-2	Vert. Sweep Coupling
	Hor. Sync. Coupling
	Fixed Trimmer
TM-22	Differentiator Net.
TC-2	AFC Filter
TM-12	" "

DESCRIPTIONS

(CONT.)

No.	SOLAR PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
			Hor. Osc. Grid Cap.
			Hor. Discharge
	ST-4-05	TM-1[illegible]	AFC Plate Bypass
	MOS.5-34	MS-34	Hor. Sweep Coupling
	ST-4-25	TC-2	Hor. Output Cath. Byp.
	ST-4-05	TM-15	Hor. Output Screen Byp.
	STM-10-1	PX-11	Damper Filter
			" "
			AFC Feedback
			HV Filter
	ST-6-01	TM-11	Line Filter
	ST-6-01	TM-11	" "

S

INSTALLATION NOTES	
oriz. Hold Control	} Dual Concentric
ert. Hold Control	
ontrast Control	} Dual Concentric
rightness Control	
olume Control	
ttach to R3A Per Instructions	
ert. Linearity Control	
eight Control	
ocus Control (Wire Wound)	

RS

IDENTIFICATION CODES	
ESISTORS ARE ± 10% UNLESS OTHERWISE STATED.	
Coil Shunt	
ll Shunt	
coupling	
Grid	
Grid	
Grid	
Plate	
d	
deo IF Grid	
deo IF Cathode	
deo IF Decoupling	
deo IF Grid	5%
deo IF Cathode	
deo IF Decoupling	
twork	
"	
deo IF Grid	5%
deo IF Cathode	
deo IF Plate	5%
deo IF Decoupling	
twork	20%
deo IF Cathode	
deo IF Plate	5%
deo IF Decoupling	
ode Load	20%
Det. Diode Load	5%
" " "	
deo Amp. Grid	20%
deo Amp. Plate	5%
deo Amp. Grid	20%
deo Amp. Cathode	20%
deo Amp. Plate	
" " "	
e Divider	20%
und IF Cathode	
und IF Plate	5%
und IF Decoupling	
und IF Grid	20%
und IF Cathode	
und IF Decoupling	
und IF Grid	
und IF Decoupling	
Load	5%
"	5%
Grid	20%
Plate	
Grid	20 %
	20%
Amp. Grid	20%
Amp. Plate	20%
Sep. Grid	
Sep. Cathode	
itor	20%
"	
"	
Osc. Grid	5%
Osc. Plate	
e Divider	
"	
Output Grid	20%
Output Cathode	
Peaking	20%
AFC Grid	
e Divider	5%
k	
AFC Cathode	
AFC Cathode	5%
Osc. Grid	5%
AFC Filter	

RESISTORS (CONT.)

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA OLYMPIC PART No.	REPLACEMENT DATA IRC PART No.	IDENTIFICATION CODES
R76	270KΩ	1	REC274K	BTA-270K	Voltage Divider
R77	10KΩ	½	REB103K	BTS-10K	Horiz. Osc. Transformer Shunt
R78	120KΩ	1	REC124K	BTA-120K	Horiz. Osc. Plate
R79	120KΩ	½	REB124K	BTS-120K	Voltage Divider
R80	33KΩ	½	REB333K	BTS-33K	" "
R81	10KΩ	½	REB103K	BTS-10K	Filter
R82	1 Meg.	½	REB105M	BTS-1 Meg.	Horiz. Output Grid 20%
R83	47Ω	½	REB470M		Parasitic Supp. 20%
R84	82Ω	1	REC820K	BW-1-82	Horiz. Output Cathode
R85	4700Ω	1	REC472K	BTA-4700	Horiz. Output Screen
R86	56KΩ	½	REB563K	BTS-56K	Filter
R87	560KΩ	½	REB564K	BTS-560K	Feedback
R88A	27Ω	½		BW-½-27	Horiz. Centering Wire wound
B	27Ω	½		BW-½-27	Horiz. Centering Wire wound
R89	1 Meg.	1	REC105M		HV Filter 20%
R90	680Ω	1	REC681K	BTA-680	Focus Coil Shunt
R91	680Ω	1	REC681K	BTA-680	" " "
R92	680Ω	1	REC681K	BTA-680	" " "
R93A	1125Ω	20	RE-1505		Filter Wire wound
B	610Ω	20			Voltage Divider Wire wound
R94A	100Ω	2	RE-1504	BW-2-100	Voltage Divider Wire wound
B	35Ω	1		BW-1-35	Voltage Divider Wire wound
C	8200Ω	5		AB-8000	Bleeder Wire wound

TRANSFORMER (POWER)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	RATING SEC. 3	REPLACEMENT DATA OLYMPIC PART No.	REPLACEMENT DATA STANCOR PART No.	REPLACEMENT DATA CHICAGO PART No.	REPLACEMENT DATA MERIT PART No.
T1	117VAC @ 1.75A	710VCT @ .23A SEC. 4 6.3VAC @ .6A	5VAC @ 3A	6.3VAC @ 9.2A	TR-1688	P-8153 †† P-5014		P-3059

†† Drill new mounting holes.

TRANSFORMER (SWEEP CIRCUITS)

ITEM No.	RATING DC RESISTANCE PRI.	RATING DC RESISTANCE SEC.	REPLACEMENT DATA OLYMPIC PART No.	REPLACEMENT DATA STANCOR PART No.	REPLACEMENT DATA CHICAGO PART No.	REPLACEMENT DATA MERIT PART No.	NOTES
T2	110Ω Tap @ 30Ω		TR-1475				Hor. Osc. Trans.
T3	160Ω	850Ω SEC. 1	TR-1473	A-8111	TBO-1	A-3000	Vert.Block.Osc.Trans.
T4	300Ω Tap @ 130Ω	10ΩTap @ .5Ω SEC.2	TR-1492	A-8117	TFB-1		Hor. Output Trans.
T5	730Ω	0Ω 8.5Ω	TR-1343	A-8115	TSO-2	A-3035 ††	Vert.Output Trans.
T6A	12Ω		CL-1356	DY-1			Hor. Deflection Yoke
B	55Ω						Vert. Deflection Yoke
T7	390Ω		CL-1687				Focus Coil

†† Drill new mounting holes.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING IMPEDANCE PRI.	RATING IMPEDANCE SEC.	RATING DC RES. PRI.	RATING DC RES. SEC.	REPLACEMENT DATA OLYMPIC PART No.	REPLACEMENT DATA STANCOR PART No.	REPLACEMENT DATA CHICAGO PART No.	REPLACEMENT DATA MERIT PART No.	INSTALLATION NOTES
T8	6200Ω	3.5Ω	275Ω	.4Ω	TR-1506	A-8114	RO-16 ††	A-2931	†† Drill new mounting holes

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA OLYMPIC PART No.	REPLACEMENT DATA JENSEN PART No.	REPLACEMENT DATA QUAM PART No.	INSTALLATION NOTES
	FIELD	V. C. IMP.				
SP1A	PM	3.5Ω	SK-792	ST-109	6A21	Used in model TV-944
B			SK-1521	MOD.P6-W		Used in model TV-922L & TV-104.
C			SK-1634-1			Used in model TV-945 & TV-105.
	CONE DIA.	V. C. DIA.				
SP2A	6"	3/4"				
B	4" x 6"					
C	8"					

FILTER CHOKE

ITEM No.	RATINGS TOTAL DIRECT CURRENT	RATINGS D. C. RESISTANCE	RATINGS INDUCTANCE (0 CURRENT 1000 ∿)	REPLACEMENT DATA OLYMPIC PART No.	REPLACEMENT DATA STANCOR PART No.	REPLACEMENT DATA CHICAGO PART No.	REPLACEMENT DATA MERIT PART No.	INSTALLATION NOTES
L1	.230A	62Ω	2.6Henries	CK-1346	C-2325††	TR-4225	C-2891††	†† Drill one new mounting hole.

COILS (RF-IF)

ITEM No.	USE	DC RES. PRI.	DC RES. SEC.	REPLACEMENT DATA OLYMPIC PART No.	REPLACEMENT DATA MEISSNER PART No.	NOTES
L2	Ant. Strip	0Ω				Part of Tuner
L3	RF Mixer & Osc. Strip	0Ω				" " "
L4	Fil. Choke	.1Ω				" " "
L5	Fil. Choke	.1Ω				" " "
L6	Conv. Trans.	0Ω	0Ω			" " "
L7	1st Video IF	.5Ω				" " "

OLYMPIC MODELS TV-104, 105, 106, 107, 108, 922L, 944, 945, 946

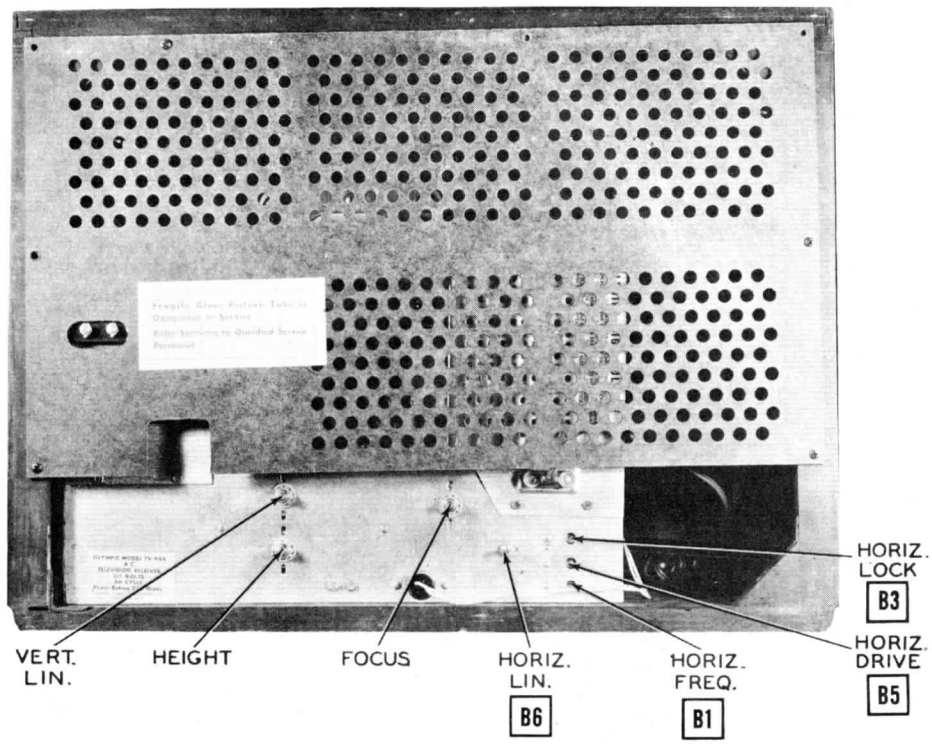
PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF) CONT.

ITEM No.	USE	DC RES. PRI.	DC RES. SEC.	REPLACEMENT DATA OLYMPIC PART No.	REPLACEMENT DATA MEISSNER PART No.	NOTES
L8	2nd Video IF	.1Ω		CL-1471		
L9	3rd Video IF	.1Ω		CL-1471		
L10	4th Video IF	.1Ω		CL-1471		
L11	Sound Trap	0Ω		CL-1472		
L12	5th Video IF	.1Ω		CL-1471		
L13	Peaking	3Ω		CL-1535		
L14	Peaking	8Ω		CL-1537		Wound on 36KΩ resistor . Some models have this coil in plate circuit of 1st Video Amp.
L15	Peaking	8Ω		CL-1536		Wound on 39KΩ resistor.
L16	Peaking	6Ω		CL-1537		Wound on 22KΩ resistor.
L17	1st Sound IF	.1Ω		CL-1471		
L18	2nd Sound IF	.1Ω	.1Ω	TR-1470		
L19	Disc. Trans.	.1Ω	.1Ω	TR-1469		
L20	Width Cont.			CL-1502		Not used on all models.
L21	Hor. Linearity	36Ω	.	CL-1503		

MISCELLANEOUS

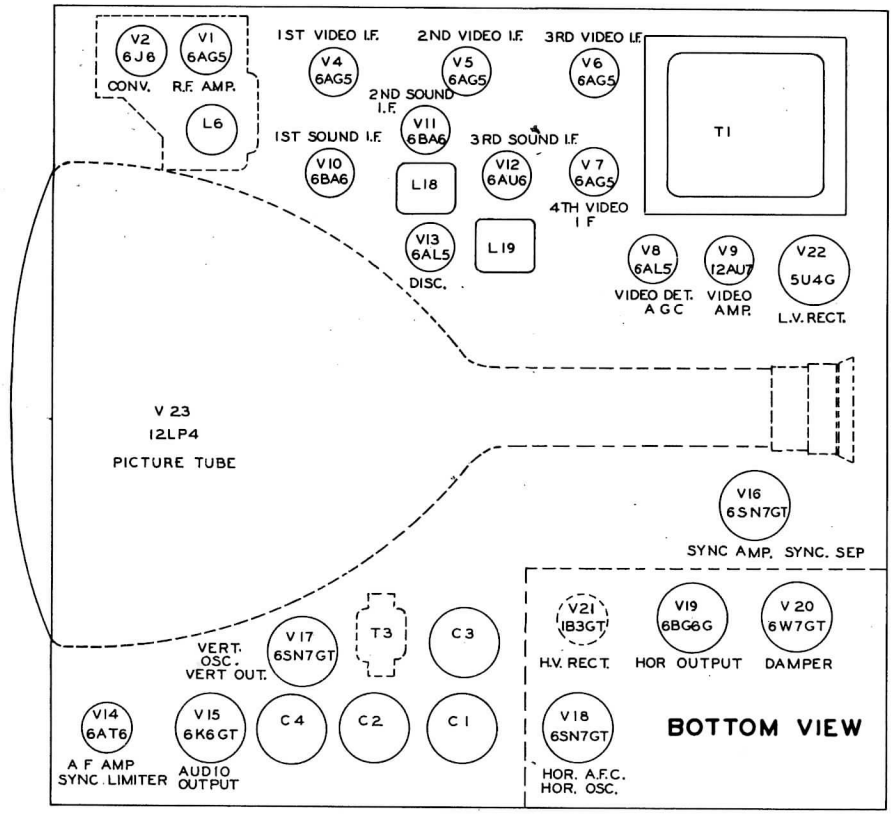
ITEM No.	PART NAME	OLYMPIC PART No.	NOTES
M1A	Tuner	CL-1677	12 Channel-2 Tubes
B	Tuner	CL-1633	12 Channel-3 Tubes
C	Tuner	CL-1428	13 Channel-3 Tubes (Alternate)
M2	Fuse	FU-1683	Type AGC .25A
M3	Ion Trap	PP-1347	PM
	Cabinet	CA-1702	For Model TV-104
	Cabinet	CA-1727	For Model TV-105
	Cabinet	CA-1467	For Model TV-922L
	Cabinet	CA-1709	For Model TV-944
	Cabinet	CA-1698	For Model TV-945
	Safety Glass	PP-1527	For Model TV-922L and TV-105
	Safety Glass	PP-1712	For Model TV-944 and TV-945
	Safety Glass	PP-1703	For Model TV-104
	Back	ST-1545-1	Masonite For Model TV-922L and TV-104
	Back	ST-1713	Masonite For Model TV-944, TV-945 and TV-105
	Knob	KN-1516	Mahogany Outer Knob
	Knob	KN-1517	Mahogany Inner Knob
	Knob	KN-1518	Mahogany Volume Control Knob
	Knob	KN-1586	Tan Outer Knob
	Knob	KN-1587	Tan Inner Knob
	Knob	KN-1588	Tan Volume Control Knob
	Knob	KN-1514	Mahogany Channel Selector (Used with M1A and M1C)
	Knob	KN-1515	Mahogany Fine Tuning (Used with M1A and M1C)
	Knob	KN-1584	Tan Channel Selector (Used with M1A and M1C)
	Knob	KN-1585	Tan Fine Tuning (Used with M1A and M1C)

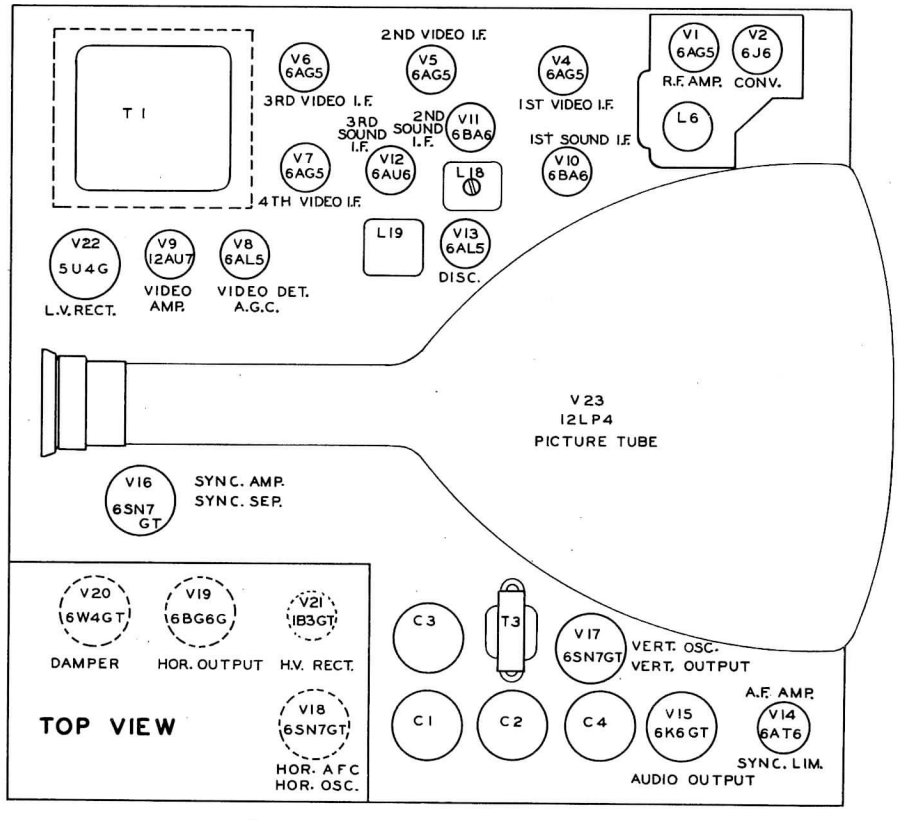


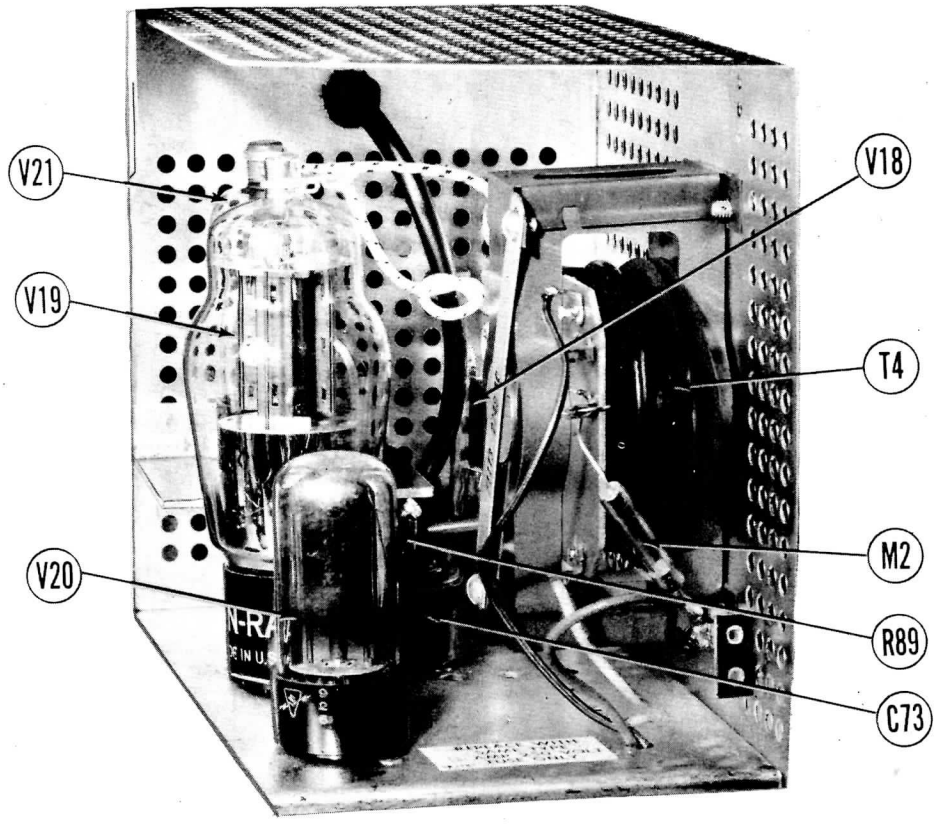
CABINET-REAR VIEW

TUBE PLACEMENT CHART

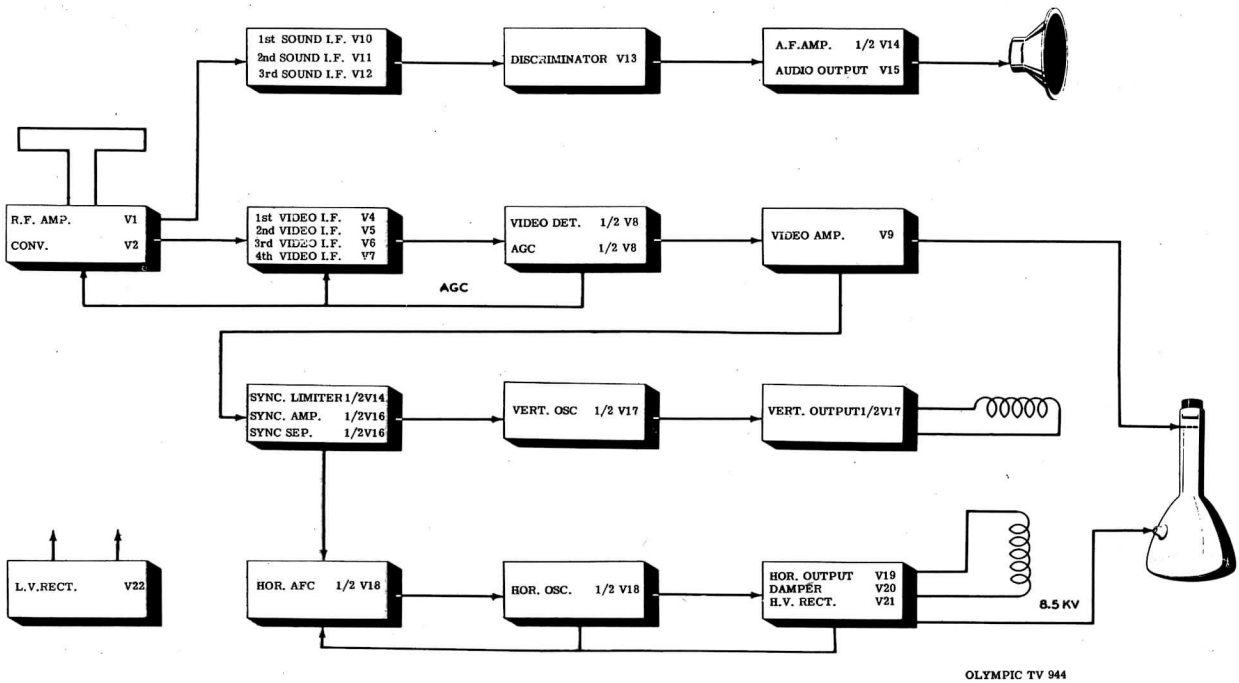
OLYMPIC MODELS TV-104, 105, 106, 107, 108, 922L, 944, 945, 946







HIGH VOLTAGE COMPARTMENT



BLOCK DIAGRAM

HORIZONTAL OSC. AND LINEARITY ADJUSTMENTS

HORIZONTAL OSCILLATOR ALIGNMENT CHECK:

Tune in test pattern and turn horizontal hold control to extreme counter-clockwise position. Picture should remain in synchronization. Turn channel switch to another channel and then back to the original channel. Normally, the picture should be out of synchronization. Turn the control clockwise and the picture should slowly begin to synchronize and finally lock-in. This should occur when the control is approximately 90° from the extreme counter-clockwise position. The picture should remain in synchronization for another 90° in the clockwise direction of the control. At the extreme clockwise position the picture should again drop out of synchronization and 3½ to 4½ bars should be seen sloping downward to the right. If the receiver fails to hold synchronization during this check with the hold control at the extreme counter-clockwise position or fails to hold synchronization for at least 60° in the clockwise direction from the point when it drops into "sync." it will be necessary to align the horizontal oscillator circuit as follows:

(A) HORIZONTAL OSCILLATOR ALIGNMENT:

Turn horizontal hold control to extreme clockwise position. Tune in test pattern and adjust trimmer B1 until picture is out of sync. and shows 3½ to 4½ bars sloping downward to the right. If the trimmer has insufficient range, set it to its mid-position (one turn from tight) and adjust slug B2 until bars appear.

(B) HORIZONTAL LOCKING ALIGNMENT:

Turn the horizontal hold control to full counter-clockwise position. Switch to another channel and back to the original again.

Slowly turn horizontal hold control clockwise and note the least number of diagonal bars present just before picture syncs. If more than 4½ bars are present just before picture syncs. adjust "horizontal lock" trimmer B3 slightly clockwise. If less than 3½ bars are present adjust B3 slightly counter-clockwise and switch channel selector to another channel and back again. Recount bars present at the "lock-in" point. Repeat this procedure until 3½ to 4½ bars are present.

Repeat Steps (A) & (B) until conditions exist as outlined under "Horizontal Oscillator Alignment Check".

WIDTH, DRIVE & HORIZONTAL LINEARITY ADJUSTMENTS:

Turn width control B4 to maximum clockwise position. Adjust "horizontal drive" trimmer B5 for maximum brightness and linearity. Adjust horizontal linearity B6 for best linearity in the right half of the picture. Readjust width control until picture fills the mask.

HEIGHT & VERTICAL LINEARITY ADJUSTMENTS:

Adjust the height control until picture fills mask vertically. Adjust the vertical linearity control until the test pattern is symmetrical from top to bottom.

Due to intraction between these two controls it is necessary to repeat the adjustments. Adjust the vertical centering control to align the picture with the mask.

DISASSEMBLY INSTRUCTIONS

1. Remove eight push-on type control knobs.
2. Remove eight Phillips head screws holding back cover. Remove cover. Remove speaker plug from rear of chassis.
3. Remove four 7/16" hex head machine bolts holding chassis. Remove chassis.
4. Remove four 11/32" hex nuts holding speaker. Remove speaker.