

ZENITH MODEL H3284R

TRADE NAME	Zenith	MODEL	TV CHASSIS	RADIO CHASSIS
		H2229R, H2230E, R,		
		H2241R	22H21	None
		H2242E, R	22H22	None
		H2252R, H2253E	22H21	None
		H2254R	22H22	None
		H3273E, H3274R	22H21	10H20Z
		H3284R	22H22	10H20Z
MANUFACTURER	Zenith Radio Corp., 6001 Dickens Ave., Chicago, Illinois			
TYPE SET	TV-AM-FM-Phono Combination Receiver (Some models TV "Only")			
TUBES	Thirty two (Combination Receivers)			
	Twenty two (TV "Only" Receivers)			
POWER SUPPLY	110-120 Volts AC - 60 Cycles			
RATINGS	(TV) 2.15 Amp. at 117 Volts AC			
	(RADIO) .93 Amp. at 117 Volts AC			
TUNING RANGES	(TV) Channels 2 thru 13			
	(FM) 88-108MC			
	(AM) 540-1620KC			

INDEX

AGC Adjustment.....	6	Photographs (Cont.)	
Alignment Instructions	6, 7	Chassis - Top View (Radio).....	10
Drive Cord Stringing.....	24	RF Tuner.....	8
Disassembly Instructions	23	Resistor and Inductor Identification (TV).....	12, 21
Horizontal Sweep Circuit Adjustments	23	Resistor and Inductor Identification (Radio).....	14
Parts List and Description.....	15 thru 20	Resistance Measurements.....	8
Photographs		Schematic (TV).....	2
Cabinet - Rear View.....	23	Schematic (Radio).....	11, 22
Capacitor and Alignment Identification (TV).....	4, 9	Schematic (Remote Control Unit).....	20
Capacitor and Alignment Identification (Radio).....	13	Tube Placement Charts	5
Chassis - Top View (TV).....	3		

FOR SERVICE INFORMATION ON ZENITH RECORD CHANGER UNIT - SEE PHOTOFACT SET # 145 - FOLDER 13.

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."

"Reproduction or use, without express permission, of editorial or pictorial con-

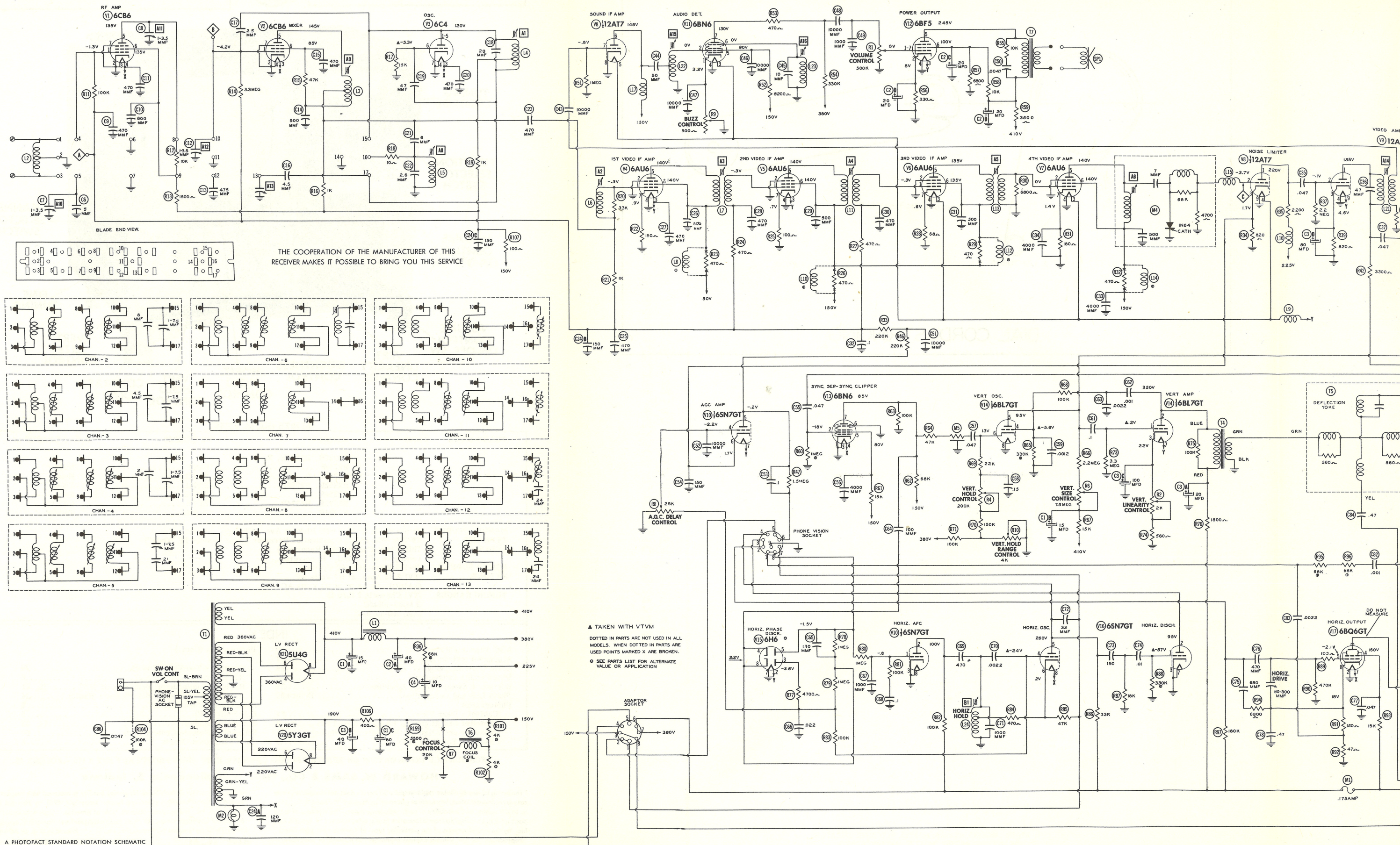
tent, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. Copyright 1951 by Howard W. Sams & Co., Inc., Indianapolis, Indiana, U. S. of America. Copyright under International Copyright Union. All rights reserved under Inter-American Copyright Union (1910) by Howard W. Sams & Co., Inc." Printed in U. S. of America

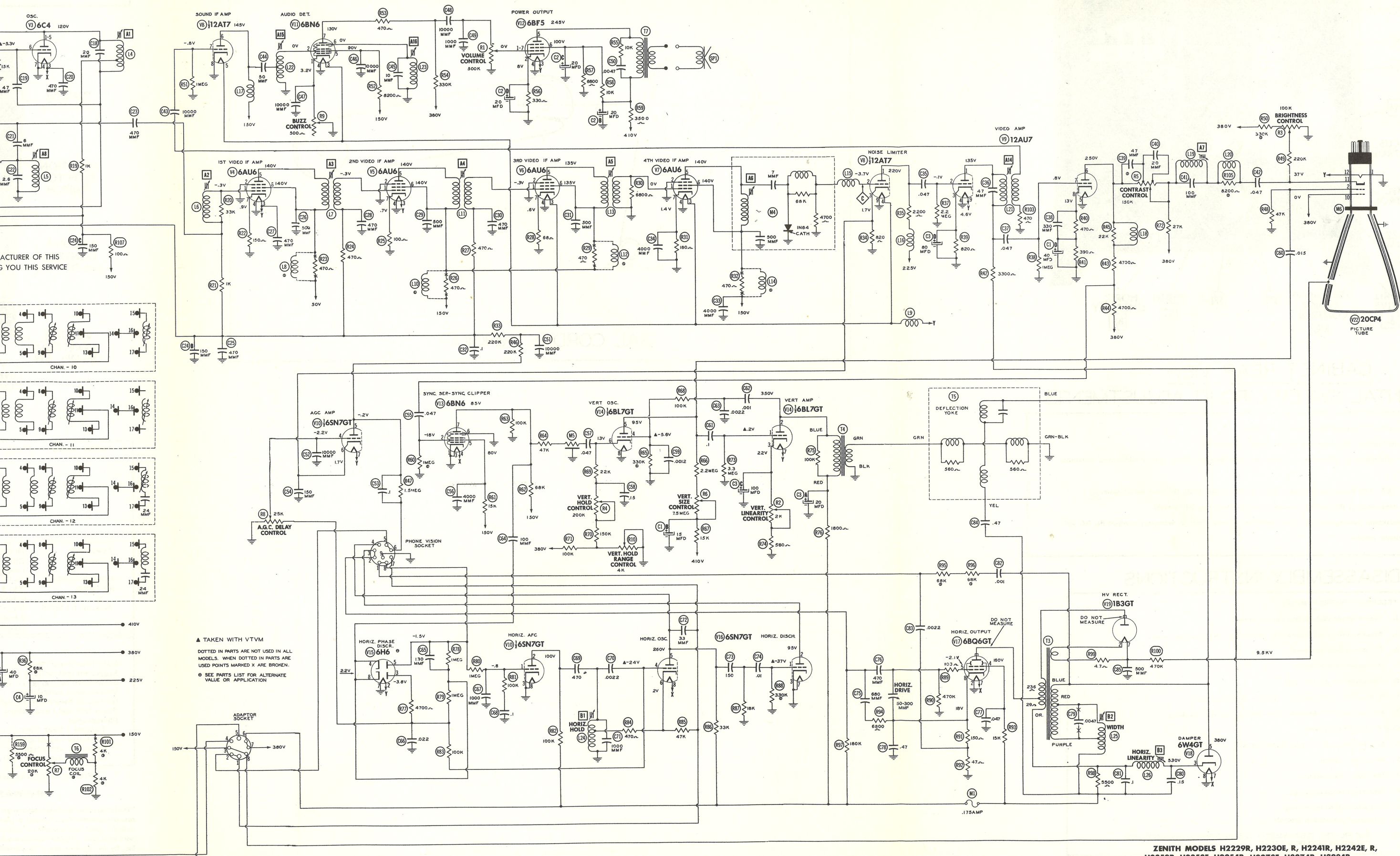
DATE 11-51

SET 151

FOLDER 13

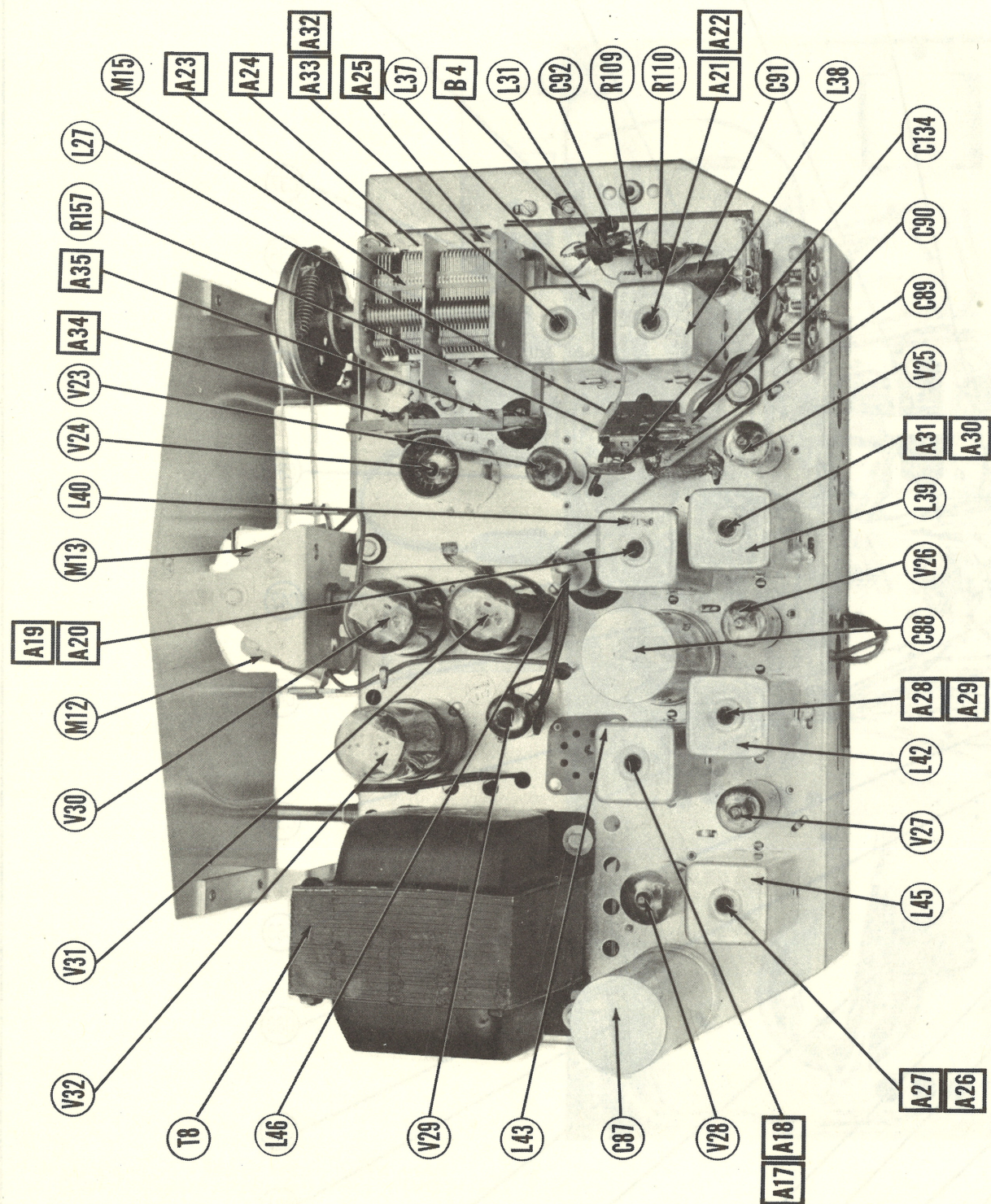
ZENITH MODELS H2229R, H2230E, R, H2241R, H2242E, R, H2252R, H2253E, H2254R, H3273E, H3274R, H3284R



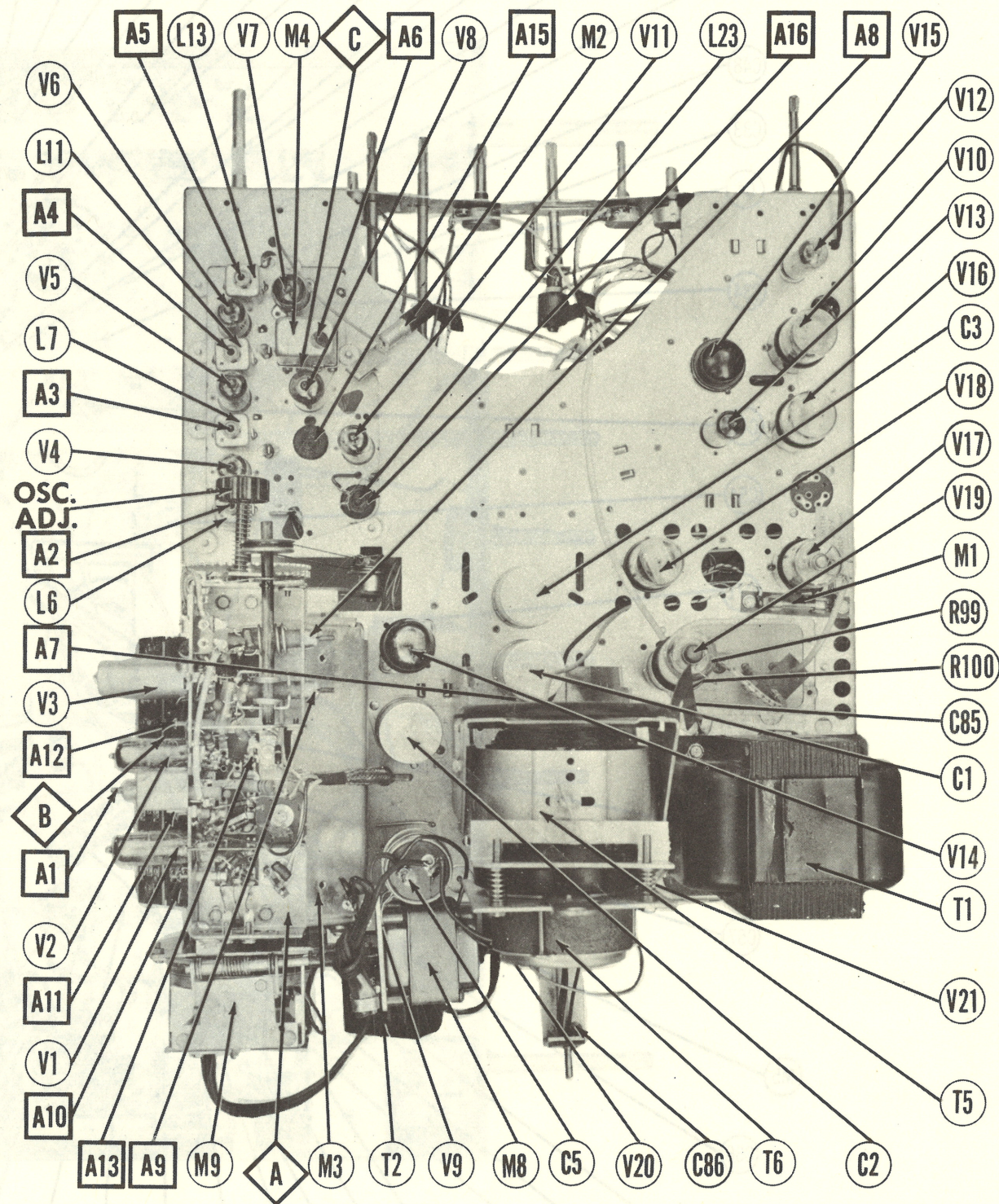


ZENITH MODELS H2229R, H2230E, R, H2241R, H2242E, R,
H2252R, H2253E, H2254R, H3273E, H3274R, H3284R

ZENITH MODELS H2229R, H2230E, R, H2241R, H2242E, R,
H2252R, H2253E, H2254R, H3273E, H3274R, H3284R

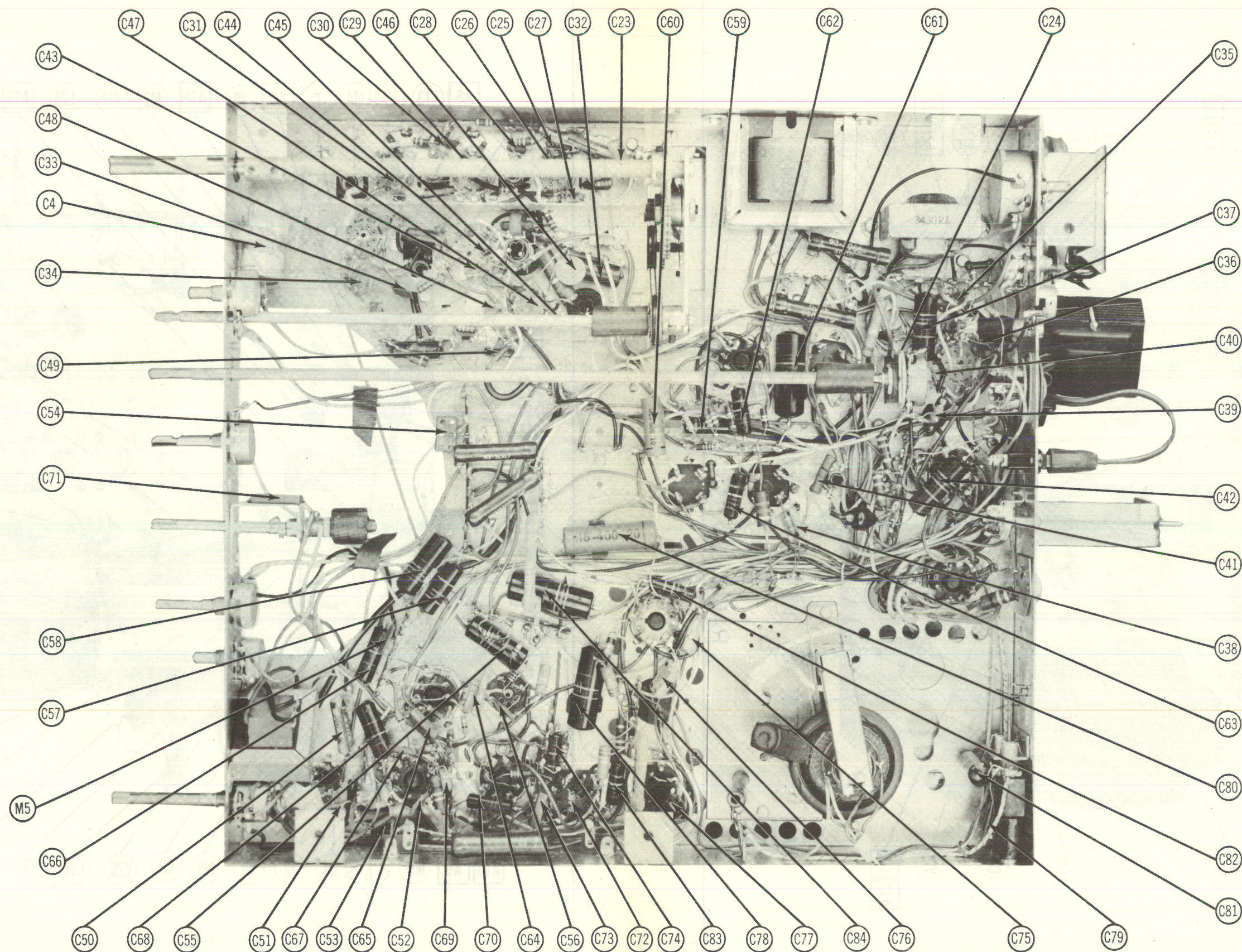


RADIO CHASSIS-TOP VIEW



CHASSIS TOP VIEW

ZENITH MODELS H2229R, H2230E, R, H2241R, H2242E, R,
H2252R, H2253E, H2254R, H3273E, H3274R, H3284R

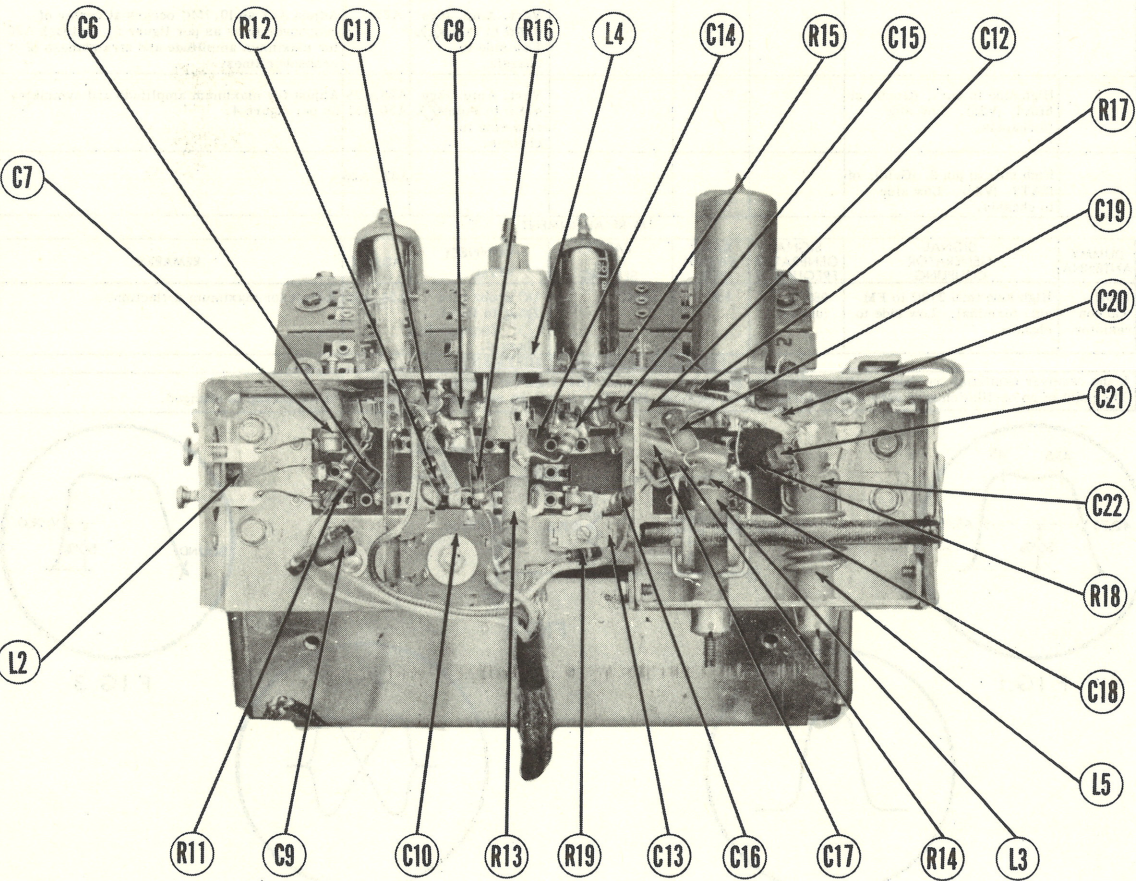


CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION

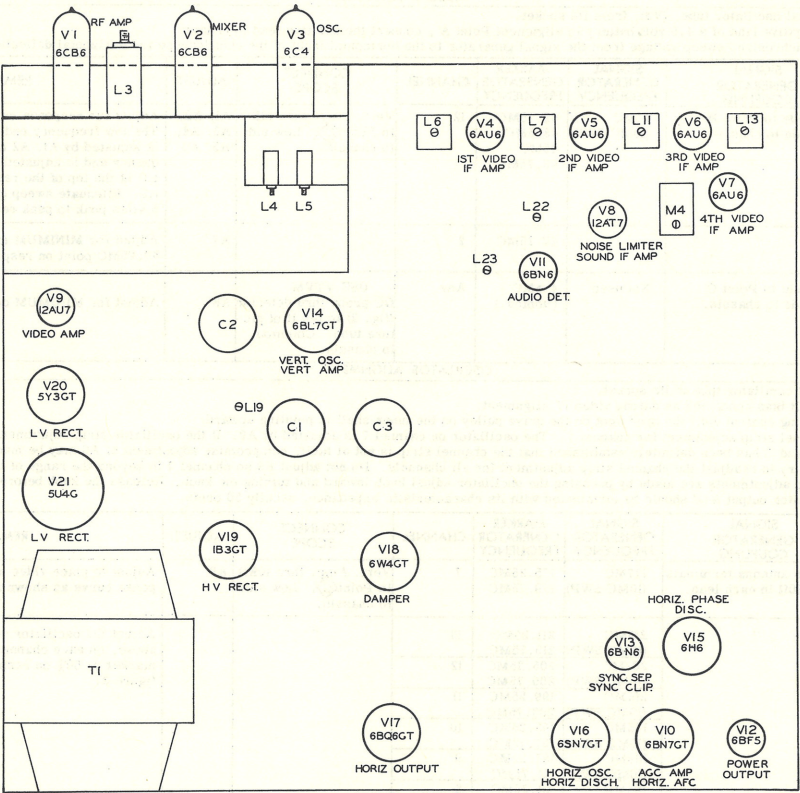
RESISTANCE MEASUREMENTS

RESISTANCE READINGS										
Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6CB6	1.7Meg	0Ω	0Ω *	.1Ω	†2KΩ	†2KΩ	0Ω		
V 2	6CB6	5Meg	0Ω	.1Ω	0Ω	†1.5KΩ	†48KΩ	0Ω		
V 3	6C4	†1.5KΩ	Inf.	.1Ω	0Ω	†1.5KΩ	15KΩ	0Ω		
V 4	6AU6	1.7Meg	0Ω	.1Ω	0Ω	†870Ω	†870Ω	150Ω		
V 5	6AU6	1.7Meg	0Ω	.1Ω	0Ω	†870Ω	†870Ω	100Ω		
V 6	6AU6	1.7Meg	0Ω	.1Ω	0Ω	†1.3KΩ	†1.3KΩ	68Ω		
V 7	6AU6	.1Ω	0Ω	.1Ω	0Ω	†870Ω	†870Ω	180Ω		
V 8	12AT7	▲70KΩ	4.7KΩ	820Ω	.1Ω	.1Ω	†400Ω	1Meg	0Ω	0Ω
V 9	12AU7	†3.7KΩ	2.2Meg	820Ω	0Ω	0Ω	▲9.4KΩ	1Meg	860Ω	.1Ω
V 10	6SN7GT	3Meg	▲100KΩ	0Ω	11KΩ	1.5Meg	820Ω	.1Ω	0Ω	
V 11	6BN6	380Ω	5.5Ω	.1Ω	0Ω	†8.6KΩ	4.5Ω	▲330KΩ		
V 12	6BF5	17Ω	330Ω	.1Ω	0Ω	▲3.5KΩ	▲13KΩ	17Ω		
V 13	6BN6	0Ω	1Meg	0Ω	.1Ω	†15KΩ	0Ω	†68KΩ		
V 14	6BL7GT	3.3Meg	▲2.4KΩ	1.4KΩ	330KΩ	▲7Meg	240KΩ	.1Ω	0Ω	
V 15	6H6	0Ω	0Ω	29KΩ	1Meg	2Meg	Inf.	.1Ω	1Meg	
V 16	6SN7GT	330KΩ	▲180KΩ	0Ω	125KΩ	▲33KΩ	470Ω	0Ω	.1Ω	Top Cap #40Ω
V 17	6BQ6GT	Inf.	0Ω	470Ω	▲15KΩ	470KΩ	▲15KΩ	.1Ω	195Ω	
V 18	6W4GT	2Meg	▲200Ω	▲5.6KΩ	6.8KΩ	▲200Ω	250KΩ	.1Ω	0Ω	Top Cap #275Ω
V 19	1B3GT	PINS 1-8 HAVE INF. RESISTANCE								
V 20	5Y3GT	.1Ω	5.5KΩ	.1Ω	14Ω	Inf.	13Ω	Inf.	5.5KΩ	
V 21	5U4G	Inf.	15KΩ	.1Ω	23Ω	160KΩ	24Ω	▲170Ω	15KΩ	
V 22	20CP4	0Ω	47KΩ	PIN 10 ▲180Ω	PIN 11 ▲280KΩ	PIN 12 .1Ω				

† MEASURED FROM PIN 2 OF V20
▲ MEASURED FROM PIN 2 OF V21
MEASURED FROM PIN 3 OF V18



RF TUNER



TV 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 to disable the high voltage.								
VIDEO IF ALIGNMENT								
Remove the local oscillator tube, (V3), from its socket. Connect the negative lead of a 4.5 volt battery to alignment Point A, connect the positive lead to chassis. Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.								
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS	
470MMF.	High side to Point B . Low side to chassis .	44MC (10MC SWP)	42.75MC 43.5MC 45MC 45.75MC	12	Vert. Amp. thru 10KΩ to Point C. Low side to chassis .	A1, A2, A3, A4, A5, A6	Adjust for response curve similar to figure 1. The low frequency end of the response curve is adjusted by A1, A2 and A4. The high frequency end is adjusted by A3 and A5. The tilt of the top of the response is adjusted by A6. Attenuate sweep generator to maintain 3 volts peak to peak response on scope.	
"	"	"	47.25MC	2	"	A7	Adjust for MINIMUM marker indication at the 47.25MC point on response curve.	
.01MFD.	High side to Point C . Low side to chassis .	Not used	4.5MC (unmod.)	Any	USE VTVM DC probe thru detector (fig. 2) to pin 11 of picture tube. Common to chassis .	A8	Adjust for MINIMUM deflection.	
OSCILLATOR ALIGNMENT								
Replace the local oscillator tube in its socket. Leave the 4.5 volt bias connected as during video IF alignment. Turn the fine tuning control until the open spot on the drive pulley on the tuner shelf is pointing upward. There is no channel strip adjustment for channel 7. The oscillator on channel 7 is adjusted by A9. If the oscillator strip adjustment proves inadequate on any channel, and it has been definitely established that the channel strip is not at fault, compromise adjustment of A9 may be made. If A9 is changed it will be necessary to readjust the channel strip adjustment for all channels. Do not adjust A9 so channel 7 is beyond the range of the fine tuning control. The channel strip adjustments are made by pressing the oscillator adjust knob inward and turning the knob. Release the knob before switching channels. The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.								
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS	
Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	177MC (10MC SWP)	175.25MC 179.75MC	7	Vert. Amp. thru 10KΩ to Point C. Low side to chassis .	A9	Adjust to place video marker at 50% on response curve as shown in figure 3.	
"	"	213MC (10MC SWP)	211.25MC 215.75MC	13	"	"	Adjust the oscillator adjust knob, as explained above, on each channel to place the video marker at 50% on response curve as per figure 3.	
		207MC (10MC SWP)	205.25MC 209.75MC	12				
		201MC (10MC SWP)	199.25MC 203.75MC	11				
		195MC (10MC SWP)	193.25MC 197.75MC	10				
		189MC (10MC SWP)	187.25MC 191.75MC	9				
		183MC (10MC SWP)	181.25MC 185.75MC	8				
		85MC (10MC SWP)	83.25MC 87.75MC	6				
		79MC (10MC SWP)	77.25MC 81.75MC	5				
		69MC (10MC SWP)	67.25MC 71.75MC	4				
		63MC (10MC SWP)	61.25MC 65.75MC	3				
		57MC (10MC SWP)	55.25MC 59.75MC	2				
RF ALIGNMENT								
Leave the bias connected. The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms. Remove the bias battery after completing RF alignment.								
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST		REMARKS
Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	213MC (10MC SWP)	211.25MC 215.75MC	13	Vert. Amp. thru 10KΩ to Point C. Low side to chassis .	A10, A11, A12, A13	Adjust for maximum amplitude with proper band width as shown in figure 3.	
"	"	207MC (10MC SWP)	205.25MC 209.75MC	12	"	"	Check all channels for response similar to figure 3. If the response is tilted a similar amount on all channels recheck video IF alignment. If the sensitivity seems to be low on the high band channels adjust A13 for best response over the high band channels.	
		201MC (10MC SWP)	199.25MC 203.75MC	11				
		195MC (10MC SWP)	193.25MC 197.75MC	10				
		189MC (10MC SWP)	187.25MC 191.75MC	9				
		183MC (10MC SWP)	181.25MC 185.75MC	8				
		177MC (10MC SWP)	175.25MC 179.75MC	7				
		85MC (10MC SWP)	83.25MC 87.75MC	6				
		79MC (10MC SWP)	77.25MC 81.75MC	5				
		69MC (10MC SWP)	67.25MC 71.75MC	4				
		63MC (10MC SWP)	61.25MC 65.75MC	3				
		57MC (10MC SWP)	55.25MC 59.75MC	2				
AGC FIELD ADJUSTMENT								
Tune in a TV station and turn the contrast control to maximum clockwise. Adjust the AGC control until the picture is below the point of overloading and the contrast is slightly above normal.								
AGC SHOP ADJUSTMENT								
Connect a 10KΩ resistor in series with the oscilloscope vertical input. Connect an antenna and tune in a local TV station. Connect the oscilloscope to Point C, low side to chassis, and adjust the AGC control for 2 volt peak to peak signal on the scope.								
SOUND IF ALIGNMENT								
The sound IF portion of this receiver can best be aligned by using a TV station signal and attenuator (Zenith Part # S17203 or equivalent). The attenuator should be connected between the antenna and the receiver and adjusted so the signal strength is reduced below the limiting level of the sound limiter-detector. This point will be indicated by a hiss similar to super-regeneration. Adjust A14, A15, and A16 for maximum audio of best quality. Adjust the "buzz" control (R9) for minimum buzz in the audio. If the hiss disappears during any of the above adjustments, reduce the signal with the attenuator until the hiss returns. If the buzz cannot be completely eliminated, recheck the AGC adjustment.								

RADIO ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT							
To set dial pointer turn tuning gang fully closed and set pointer to the dot at the low frequency end of the AM dial scale.							
AM ALIGNMENT							
Loop should be maintained in same relative position to chassis as when receiver is in cabinet. Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.							
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
8. .05MFD.	High side to pin 2, (Grid), of 12AT7 (V24). Low side to chassis.	455KC (400V Mod.)	AM (Center)	600KC	Across voice coil.	A17, A18, A19, A20, A21, A22	Adjust for maximum output.
9. "	Loop	1600KC	"	1600KC	"	A23	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
10. "	Loop	1400KC	"	Tune for max. output.	"	A24, A25	"
FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM							
Connect a 2 megohm decoupling resistor in series with the VTVM DC probe.							
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
11. .05MFD.	High side to pin 1, (Grid), of 6AU6, (V27). Low side to chassis.	10.7MC	FM (CW)	Tuning gang fully closed.	DC probe thru 2Meg. to Point C. Common to chassis.	A26	Adjust for maximum deflection.
12. "	"	"	"	"	DC probe thru 2Meg. to Point C. Common to chassis.	A27	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
13. "	High side to pin 1, (Grid), of 6BA6, (V25). Low side to chassis.	"	"	"	DC probe thru 2Meg. to Point C. Common to chassis.	A28, A29, A30, A31	Adjust for maximum deflection.
14. "	High side to pin 2, (Grid), of 12AT7, (V24). Low side to chassis.	"	"	"	"	A32, A33	"
FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE							
Use frequency modulated signal with 60% modulation and 450KC sweep. Use 120V sawtooth voltage in scope for horizontal deflection.							
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
11. .05MFD.	High side to pin 1, (Grid), of 6AU6, (V27). Low side to chassis.	10.7MC (450KC SWP)	FM (CW)	Point of non-interference.	Vert. Amp. thru 47KΩ to Point C. Low side to chassis.	A26	Adjust for maximum amplitude and symmetry as per figure 4.
12. "	"	"	"	"	Vert. Amp. thru 47KΩ to Point C. Low side to chassis.	A27	Adjust A27 so 10.7MC occurs at center of crossover lines as per figure 5. Retouch A26 for maximum amplitude and straightness of crossover lines.
13. "	High side to pin 1, (Grid), of 6BA6, (V25). Low side to chassis.	"	"	"	Vert. Amp. thru 47KΩ to Point C. Low side to chassis.	A28, A29, A30, A31	Adjust for maximum amplitude and symmetry as per figure 4.
14. "	High side to pin 2, (Grid), of 12AT7, (V24). Low side to chassis.	"	"	"	"	A32, A33	"
FM RF ALIGNMENT							
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
15. 270Ω carbon resistor	High side thru 270Ω to FM ant. terminal. Low side to chassis.	98MC (unmod.)	FM	98MC	DC probe thru 2Meg to Point C. Common to chassis.	A34, A35	Adjust for maximum deflection.
PHONO OSCILLATOR ADJUSTMENT							
If the receiver oscillates on phono position adjust the phono osc. trimmer (B4) until the oscillation ceases. The point of no oscillation may vary with different phono pickups, therefore it may be necessary to adjust B4 if the pickup is changed.							

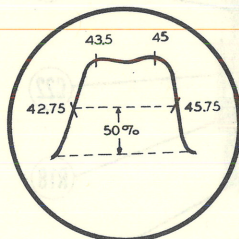


FIG. 1

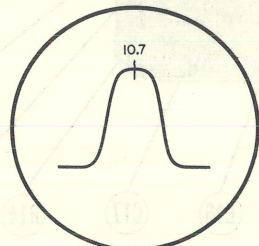


FIG. 4

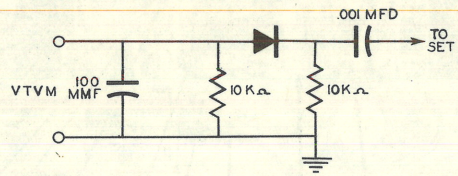


FIG. 2

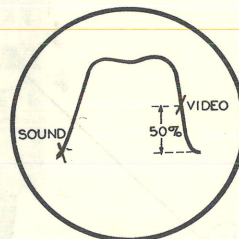


FIG. 3

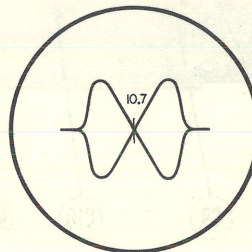
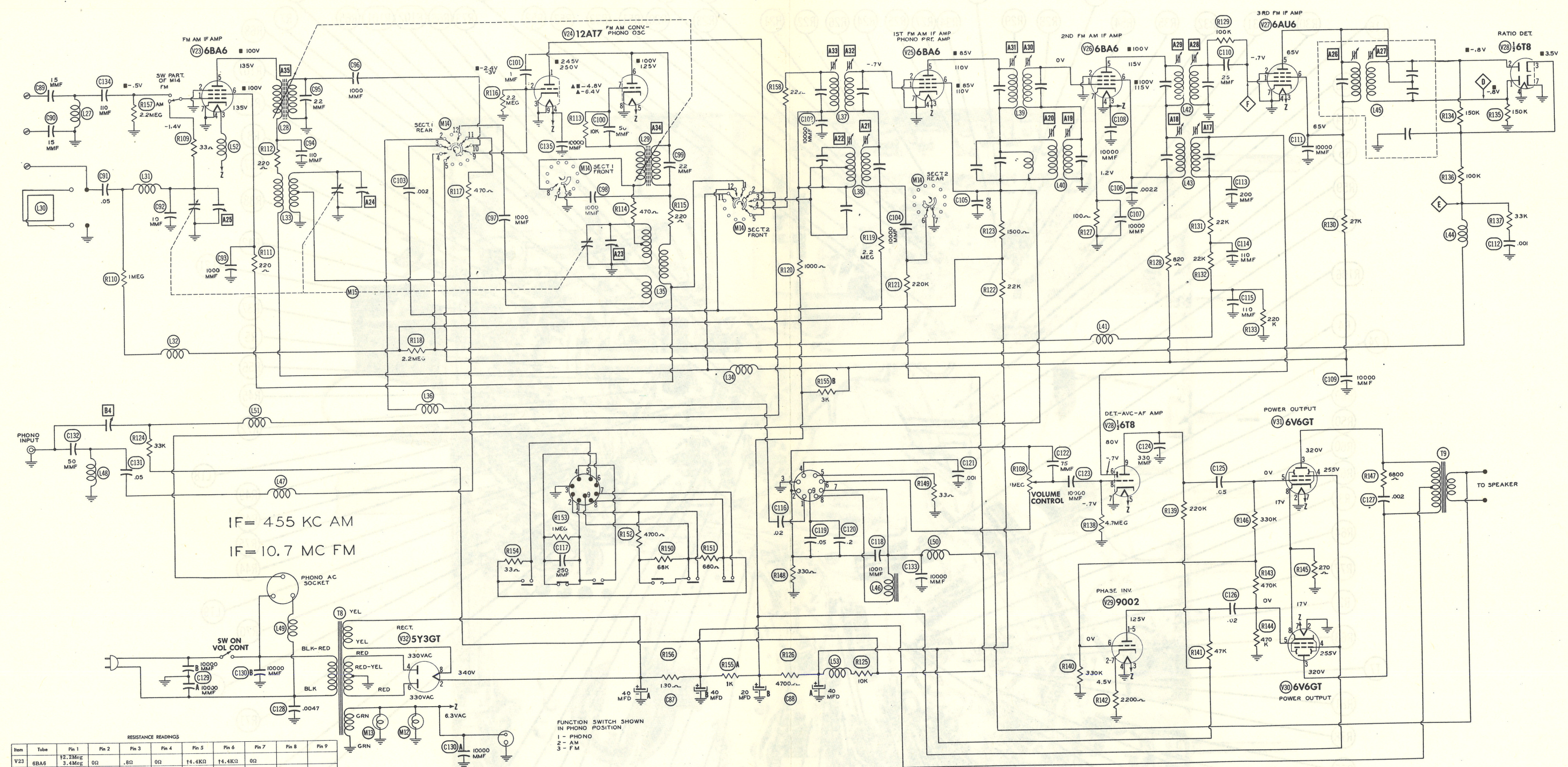


FIG. 5

ZENITH MODELS H2229R, H2230E, R, H2241R, H2242E, R, H2252R, H2253E, H2254R, H3273E, H3274R, H3284R

ZENITH MODELS H2229R, H2230E, R, H2241R, H2242E, R,
H2252R, H2253E, H2254R, H3273E, H3274R, H3284R



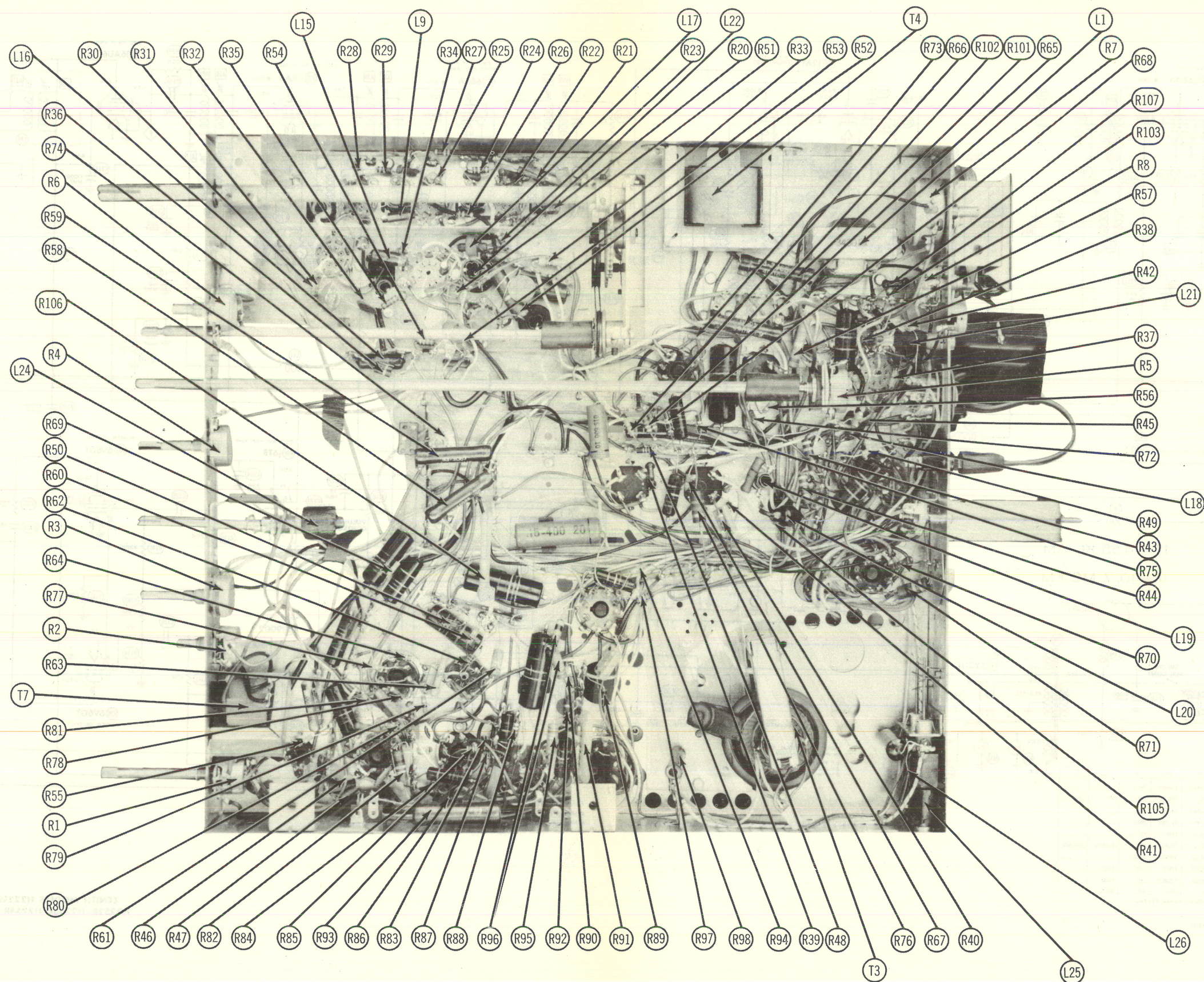
Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V23	6BA6	12.2Meg	3.4Meg	0Ω	.0Ω	0Ω	14.4KΩ	14.4KΩ	0Ω	
V24	12AT7	12.1KΩ	2.2Meg	0Ω	.1Ω	.1Ω	114.4KΩ	10KΩ	0Ω	0Ω
V25	6BA6	4.6Meg	0Ω	.1Ω	0Ω	0Ω	15.6KΩ	15.6KΩ	0Ω	
V26	6BA6	18Ω	0Ω	.1Ω	0Ω	0Ω	14.9KΩ	14.9KΩ	100Ω	
V27	6AU6	100KΩ	0Ω	.1Ω	0Ω	0Ω	131KΩ	131KΩ	0Ω	
V28	6T8	150KΩ	150KΩ	300KΩ	0Ω	.1Ω	285KΩ	0Ω	4.7Meg	1225KΩ
V29	9002	153KΩ	2.2KΩ	.1Ω	0Ω	0Ω	153KΩ	260KΩ	2.2KΩ	
V30	6V6GT	0Ω	0Ω	143Ω	11.1KΩ	470KΩ	17KΩ	.1Ω	270Ω	
V31	6V6GT	0Ω	0Ω	143Ω	11.1KΩ	660KΩ	1220KΩ	.1Ω	270Ω	
V32	5Y3GT	Inf.	35KΩ	Inf.	105Ω	Inf.	100Ω	Inf.	35KΩ	

MEASUREMENTS TAKEN IN AM POSITION UNLESS OTHERWISE STATED
■ MEASURED FROM PIN 2 OF V23
† MEASURED IN FM POSITION

A PHOTOFACT STANDARD NOTATION SCHEMATIC
© Howard W. Sams & Co., Inc. 1951

ZENITH MODELS H2229R, H2230E, R, H2241R, H2242E, R,
H2252R, H2253E, H2254R, H3273E, H3274R, H3284R

RADIO SCHEMATIC - CH. 10H20Z



CHASSIS BOTTOM VIEW-RESISTOR AND INDUCTOR IDENTIFICATION

RADIO PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

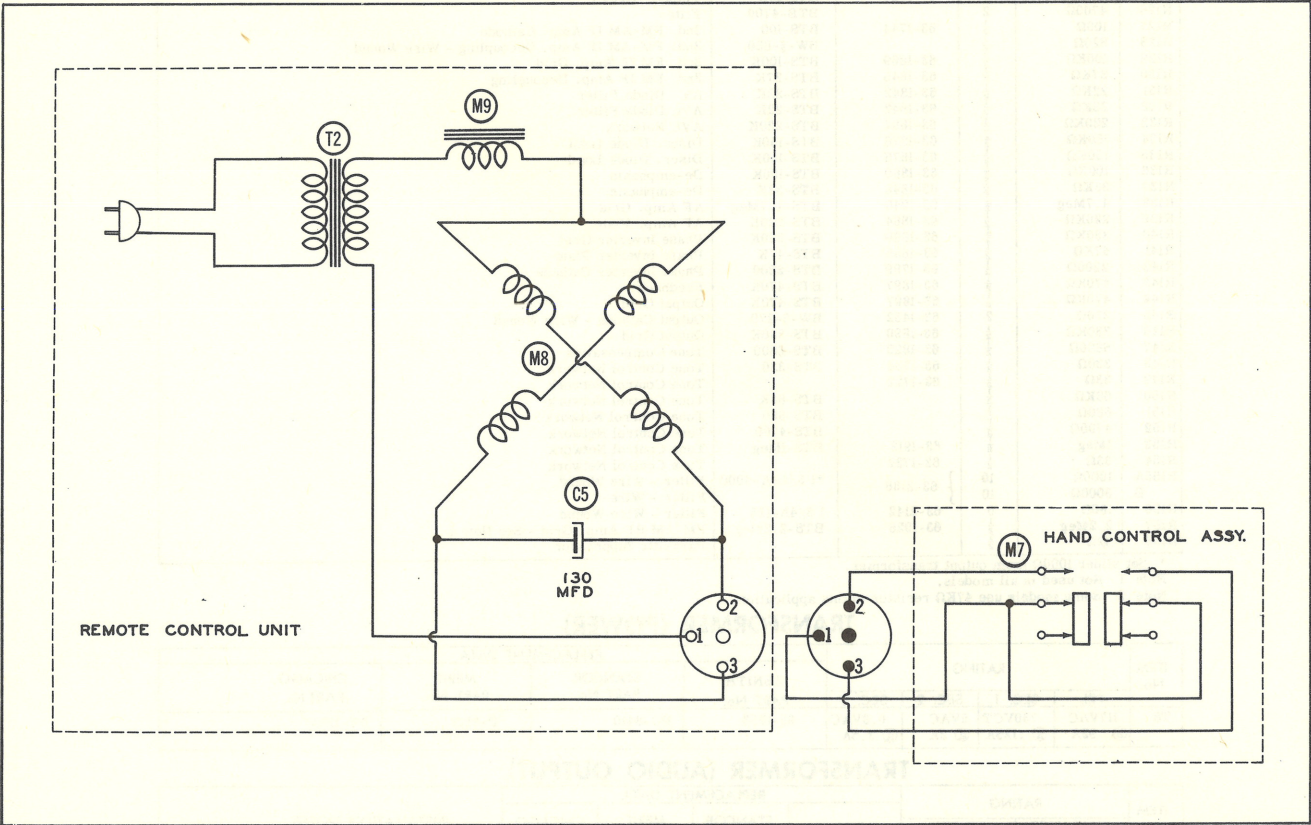
ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	ZENITH PART No.		
L27	FM Ant. Coil	0Ω		S-16408		
L28	FM RF Coil	0Ω	0Ω	S-15743		
L29	FM Osc. Coil	0Ω	0Ω	S-15691		
L30	AM Loop Ant.	1Ω		S-15528		
L31	AM Ant. Loading Coil	3.2Ω		S-17328		
L32	RF Choke	0Ω				Tap 3.6Ω
L33	AM RF Coil	2.8Ω	12Ω	S-16344		
L34	RF Choke	0Ω				Tap 3.7Ω (1.3Ω SEC.)
L35	AM Osc. Coil	13Ω	5Ω	S-16345		
L36	RF Choke	0Ω				
L37	1st. FM IF	.4Ω	.4Ω	95-1201		
L38	1st. AM IF	13Ω	16Ω	95-1248		Primary Tap at 5Ω
L39	2nd. FM IF	.4Ω	.4Ω	95-1150		
L40	2nd. AM IF	18Ω	18Ω	95-1249		Primary Tap at .4Ω
L41	RF Choke	0Ω				
L42	3rd. FM IF	.4Ω	.4Ω	95-1150		
L43	3rd. AM IF	17Ω	11Ω	95-1254		
L44	RF Choke	0Ω				
L45	Discr. Trans.	.4Ω	.4Ω	95-1153		
L46	Tone Choke	2.5Ω		S-13800		
L47	RF Choke	0Ω				
L48	Phono Osc. Coil	2.1Ω		S-12603		
L49	Line Choke	0Ω				
L50	Tone Choke	0Ω				
L51	RF Choke	0Ω				
L52	Fl. Choke	.9Ω				
L53	RF Choke	0Ω				

DIAL LIGHTS

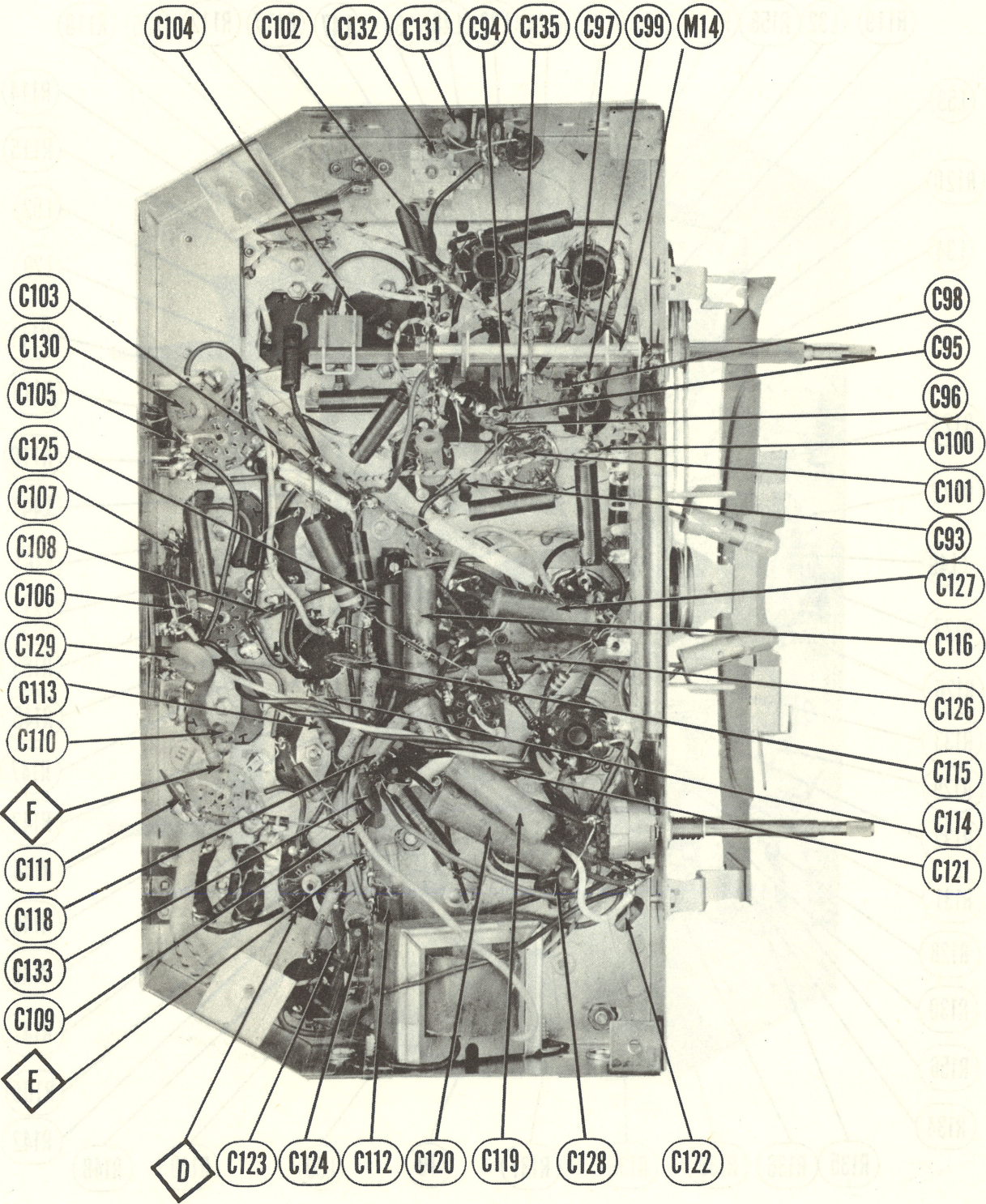
ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					ZENITH PART No.		
M12	Bayonet	6-8	.15	Brown	100-36		Type # 47
M13	Bayonet	6-8	.15	Brown	100-36		Type # 47

MISCELLANEOUS

ITEM No.	PART NAME	ZENITH PART No.	NOTES
M14	Switch		Function (Phono-AM-FM)
M15	Tuning Cap	22-2104	21-488MMF., 40-222MMF., 12-164MMF.

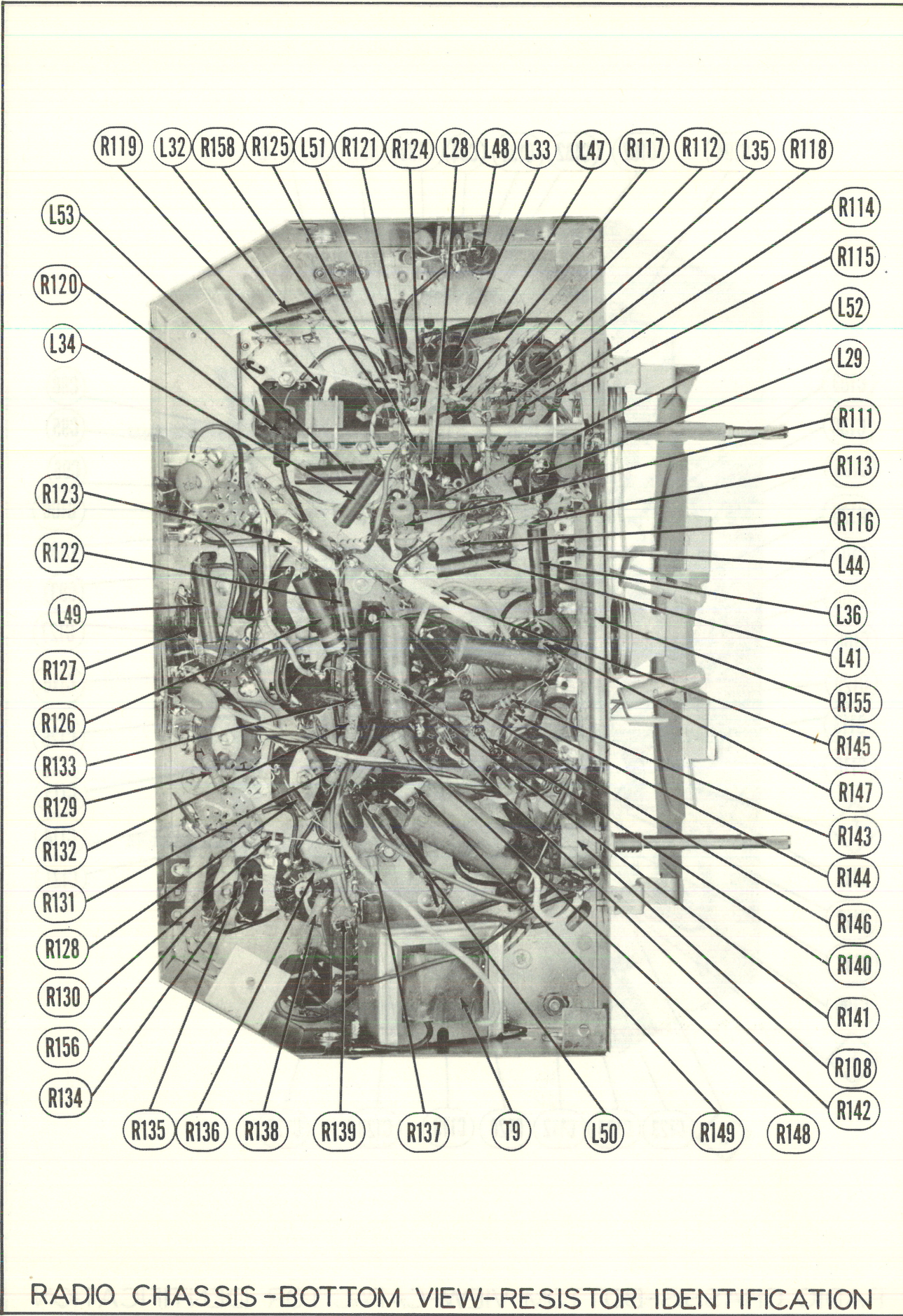


REMOTE CONTROL UNIT



RADIO CHASSIS-BOTTOM VIEW-CAPACITOR IDENTIFICATION

ZENITH MODELS H2229R, H2230E, R, H2241R, H2242E, R, H2252R, H2253E, H2254R, H3273E, H3274R, H3284R



RADIO CHASSIS - BOTTOM VIEW - RESISTOR IDENTIFICATION

RADIO PARTS LIST AND DESCRIPTIONS (Continued)
CAPACITORS (CONT.)

ITEM No.	RATING		REPLACEMENT DATA						IDENTIFICATION CODES AND INSTALLATION NOTES
	CAP.	VOLT	ZENITH PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C120	.2	200	22-1531	P488-22	D6-102	GT4P2		2TM-P22	Tone Comp.
C121	.001	600	22-1203	P688-001	D6-750	PTE6D1	GP2L-102	6TM-D1	Tone Comp.
C122	75	500	22-1256	1468-000075	DD-103	ID3S1	GP1K-750	1FM-475	Tone Comp.
C123	10000		22-3	BPD-01	DD-103	ID3S1	821-01	5HK-S1	Audio Coupling
C124	330	500	22-1645	1468-00035	D6-331		GP2K-331	1FM-335	AF Amp. Plate
C125	.05	600	22-171	P688-05	DF-503	PTE6S5		6TM-S5	Audio Coupling
C126	.02	600	22-830	P688-02	DF-203	PTE6S2		6TM-S2	Audio Coupling
C127	.002	1600	22-1802	P1688-002		PTE16D2		MB-D2	Power Output Plate
C128	.0047	600	22-1782	P688-0047	D64472	PTE6D5	GP2-333-472	6TM-D47	Line Filter
C129A	10000			BPD-01	DD-3-103	ID3S1	821-01	5HK-S1	Line Filter
C129B	10000			BPD-01	DD-3-103	ID3S1	821-01	5HK-S1	Line Filter
C130A	10000			BPD-01	DD-3-103	ID3S1	821-01	5HK-S1	Line Filter
C130B	10000			BPD-01	DD-3-103	ID3S1	821-01	5HK-S1	Line Filter
C131	.05	200		P488-02	DF-203	PTE4S2		2TM-S2	Phono Audio Coupling
C132	50		22-1761	SI50	D6-500	5W5Q5	GP1K-500	5GA-Q5	Fixed Trimmer
C133	10000		22-3	BPD-01	DD-103	ID3S1	821-01	5HK-S1	Tone Comp.
C134	110		22-5	SI110					FM RF Coupling
C135	10000		22-3	BPD-01	DD-103	ID3S1	821-01	5HK-S1	Conv. Fil. *

* Not used in all models.

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES
	RESIST-ANCE	WATTS	ZENITH PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	
R108A	1Meg		63-2139	Q13-137	AG-63-Z	AN-70	Volume Control
B	Shaft		Not req.	Not req.	KSS-3	AK-4	Attach to R108A per instructions
C	Switch		Not req.	76-1	SWB	K-155	Attach to R108A per instructions

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	ZENITH PART No.	IRC PART No.	
R109	33Ω		63-1722		Parasitic Suppressor
R110	1Meg		63-1912	BTS-1Meg	AVC Network
R111	220Ω		63-1758	BTS-220Ω	FM-AM RF amp. Screen
R112	220Ω		63-1758	BTS-220	FM-AM RF Amp. Plate Decoupling
R113	10KΩ		63-1827	BTS-10K	Osc. Grid
R114	470Ω		63-1771		Parasitic Suppressor
R115	220Ω		63-1758	BTS-220	Osc. Plate Decoupling
R116	2.2Meg		63-1926	BTS-2.2Meg	Converter Grid
R117	470Ω		63-1771		Parasitic Suppressor
R118	2.2Meg		63-1926	BTS-2.2Meg	AVC Network
R119	2.2Meg		63-1926	BTS-2.2Meg	AVC Network
R120	1000Ω		63-1926	BTS-2.2Meg	Converter Plate Decoupling
R121	220KΩ		63-1884	BTA-1000	Voltage Divider
R122	22KΩ		63-2141	BTS-22K	Voltage Divider
R123	1500Ω		63-1793	BTS-1500	1st. FM-AM IF Amp. Decoupling
R124	33KΩ			BTS-33K	Voltage Divider - See Note 2
R125	10KΩ		63-1827	BTS-10K	Voltage Divider
R126	4700Ω			BTB-4700	Filter
R127	100Ω		63-1744	BTS-100	2nd. FM-AM IF Amp. Cathode
R128	820Ω			BW-1/2-820	2nd. FM-AM IF Amp. Decoupling - Wire Wound
R129	100KΩ		63-1869	BTS-100K	3rd. FM IF Amp. Grid
R130	27KΩ		63-1845	BTS-27K	3rd. FM IF Amp. Decoupling
R131	22KΩ		63-1842	BTS-22K	Av Diode Filter
R132	22KΩ		63-1842	BTS-22K	AVC Diode Filter
R133	220KΩ		63-1884	BTS-220K	AVC Network
R134	150KΩ		63-1876	BTS-150K	Discr. Diode Load
R135	150KΩ		63-1876	BTS-150K	Discr. Diode Load
R136	100KΩ		63-1869	BTS-100K	De-emphasis
R137	33KΩ		63-1848	BTS-33K	De-emphasis
R138	4.7Meg		63-1940	BTS-4.7Meg	AF Amp. Grid
R139	220KΩ		63-1884	BTS-220K	AF Amp. Plate
R140	330KΩ		63-1890	BTS-330K	Phase Inverter Grid
R141	47KΩ		63-1855	BTS-47K	Phase Inverter Plate
R142	2200Ω		63-1799	BTS-2200	Phase Inverter Cathode
R143	470KΩ		63-1897	BTS-470K	Feedback
R144	470KΩ		63-1897	BTS-470K	Output Grid
R145	270Ω		63-1452	BW-2-270	Output Cathode - Wire Wound
R146	330KΩ		63-1890	BTS-330K	Output Grid
R147	6800Ω		63-1820	BTS-6800	Tone Compensation
R148	330Ω		63-1764	BTS-330	Tone Control Network
R149	33Ω		63-1722		Tone Control Network
R150	68KΩ			BTS-68K	Tone Control Network
R151	680Ω			BTS-680	Tone Control Network
R152	4700Ω			BTS-4700	Tone Control Network
R153	1Meg		63-1912	BTS-1Meg	Tone Control Network
R154	33Ω		63-1722		Tone Control Network
R155A	1000Ω	10	63-2138	*1 3/4AA-4000	Filter - Wire Wound
B	3000Ω	10			Filter - Wire
R156	130Ω		63-2142	1 3/4A-125	Filter - Wire Wound
R157	2.2Meg		63-1926	BTS-2.2Meg	FM-AM RF Amp. Grid - See Note 1
R158	22Ω				Parasitic Suppressor

* Set slider 1000Ω from output transformer.

Note 1 Not used in all models.

Note 2 Some models use 47KΩ resistor in this application.

TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	SEC. 3	ZENITH PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.
T8	117VAC @ .93A	730VCT @ .125A	5VAC @ 2A	6.3VAC @ 3.5A	95-1253	PC-8410	P-3173	PV-120A

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		ZENITH PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.	PRI.	SEC.					
T9	9KΩ	4.5Ω	600Ω	.3Ω	95-1252	A-3870	A-3027	RO-110 ①	① Drill one new mounting hole.

ZENITH MODELS H22229R, H2230E, R, H2241R, H2242E, R, H2252R, H2253E, H2254R, H3273E, H3274R, H3284R

TV PARTS LIST AND DESCRIPTIONS (Continued)

MISCELLANEOUS

ITEM No.	PART NAME	ZENITH PART No.	NOTES
M3	RF Tuner	S-17472	(.1Ω) 7MMF. 500MMF. (1N64) 68KΩ } Video Det. Assembly
M4	5th. Video IF Capacitor	22-1874	
	Capacitor	22-2216	
	Crystal	103-1	
M5	Resistor	63-1862	
	Resistor	S-17504	4.7KΩ
M6	Integrator	87-1	
M7	Ion Trap	S-17164	
M8	Hand Control & Cable	S-17267	Complete Drive
M9	Motor	141-130	Remote Control Assy. Part # S-17266
M16	Magnet Coil	20-332	
B1	Focus Magnet	S-18012	Alternate (Not used in all models)
	Trimmer		Horiz. Drive (50-300MMF.)
	Control Cap	15-97	Used on S-17267
	Knob	46-897	Push (White)
	Knob	46-898	Push (Black)
	Remote and Hand Control & Cable Assy	S-17268	Complete Assembly
	Planetary Gear and Yoke	S-17211	Assembly
	Drive Gear Assy.	S-17317	
	Cable, Socket and Bracket	S-17324	
	Output Gear Assy.	S-17378	Includes Set Screw
	Channel Strip	S-16862	Channel #2
	Channel Strip	S-16863	Channel #3
	Channel Strip	S-16864	Channel #4
	Channel Strip	S-16865	Channel #5
	Channel Strip	S-16866	Channel #6
	Channel Strip	S-16867	Channel #7
	Channel Strip	S-16868	Channel #8
	Channel Strip	S-16869	Channel #9
	Channel Strip	S-16870	Channel #10
	Channel Strip	S-16871	Channel #11
	Channel Strip	S-16872	Channel #12
	Channel Strip	S-16873	Channel #13

RADIO PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	NOTES
		ZENITH PART No.	STANDARD REPLACEMENT		
V23	FM-AM RF Amp.	6BA6	6BA6	7BK	
V24	FM-AM RF Amp. - Phono Pre-Amp.	12AT7	12AT7	9A	
V25	1st. FM-AM IF Amp. - Phono Osc.	6BA6	6BA6	7BK	
V26	2nd. FM-AM IF Amp.	6BA6	6BA6	7BK	
V27	3rd. FM IF Amp.	6AU6	6AU6	7BK	
V28	Discriminator-AM Detector-AVC-AF Amplifier	6T8	6T8	9E	
V29	Phase Inverter	9002	9002	7BS	
V30	Power Output	6V6GT	6V6GT	7AC	
V31	Power Output	6V6GT	6V6GT	7AC	
V32	Rectifier	5Y3GT	5Y3GT	5T	

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	ZENITH PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	
C87A	40	450	22-1612	AFH2-57		UPT4445	▲ Filter
B	40	450					▲ Filter
C88A	40	450	22-2243	AFH2-56		UP4245	▲ Decoupling
B	20	350					▲ Decoupling
C89	15		22-2140	SI15	D6-150	GPIK-500	FM RF Coupling
C90	15		22-2140	SI15	D6-150	GPIK-500	FM Ant. Isolation
C91	.05	200	22-178	P288-05	DF-503	PTE4S5	AMRF Coupling
C92	10			SI10NP0	TCZ-10	NP0K-100	Fixed Trimmer
C93	1000		22-1676	SI1000	D6-102	1W5D1	RF Amp. Screen
C94	110		22-5	SI110			RF Amp. Plate
C95	22		22-1506	SI22N080		N080-331-220	Fixed Trimmer
C96	1000		22-1676	SI1000	D6-102	1W5D1	FM RF Coupling
C97	1000		22-1676	SI1000	D6-102	1W5D1	AM RF Coupling
C98	1000		22-1676	SI1000	D6-102	1W5D1	Osc. Plate Dec.
C99	22		22-1506	SI22N080		N080-331-220	Fixed Trimmer
C100	50		22-1761			N330L-500	Osc. Grid Cap.
C101	1		22-1762			NP0K-010	Osc. Coupling
C102	10000		22-3	BPD-01	DD-103	ID3S1	Conv. Plate Decoupling
C103	.002	600	22-1220	P688-002	D6-202	PT68D2	Phono Audio Coupling
C104	10000		22-3	BPD-01	DD-103	ID3S1	AVC Filter -Phono Audio Coup.
C105	.002	600	22-1220	P688-002	D6-202	PT68D2	1st. IF Amp. Dec.
C106	.0022	600	22-492	P688-0022	D6-222	PT68D2	2nd. IF Amp. Dec.
C107	10000		22-3	BPD-01	DD-103	ID3S1	2nd. IF Amp. Cathode
C108	10000		22-3	BPD-01	DD-103	ID3S1	2nd. IF Amp. Fil.
C109	10000		22-3	BPD-01	DD-103	ID3S1	RF Bypass
C110	25		22-1887	SI25	D6-250	5W5Q25	FM IF Coupling
C111	10000		22-3	BPD-01	DD-103	ID3S1	3rd. FM IF Amp. Dec.
C112	.001	600	22-1203	P688-001	D6-102	PT68D1	De-emphasis
C113	200		22-1668	SI200	D6-201	5W5T2	Diode RF Filter
C114	110		22-5	SI110			Diode RF Filter
C115	110		22-5	SI110			Diode RF Filter
C116	.02	600	22-830	P688-02	DF-203	PT6S2	Audio Coupling
C117	250			SI250	D6-251	5W5T25	Tone Comp.
C118	1000	500	22-348	1468-001	D6-102	1W5D1	Tone Comp.
C119	.05	200	22-178	P288-05	DF-503	PTE4S5	Tone Comp.

TV PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	NOTES
		ZENITH PART No.	STANDARD REPLACEMENT		
V1	RF Amplifier	6CB6	6CB6	7CM	
V2	Mixer	6CB6	6CB6	7CM	
V3	Oscillator	6C4	6C4	6BG	
V4	1st. Video IF Amp.	6AU6	6AU6	7BK	
V5	2nd. Video IF Amp.	6AU6	6AU6	7BK	
V6	3rd. Video IF Amp.	6AU6	6AU6	7BK	
V7	4th. Video IF Amp.	6AU6	6AU6	7BK	
V8	Noise Limiter-Sound IF Amp.	12AT7	12AT7	9A	
V9	Video Amplifier	12AU7	12AU7	9A	
V10	AGC Amplifier-Horiz. AFC	6SN7GT	6SN7GT	8BD	
V11	Audio Detector	6BN6	6BN6	7DF	
V12	Power Output	6BF5	6BF5	7BZ	
V13	Sync. Separator-Sync. Clipper	6BN6	6BN6	7DF	
V14	Vert. Oscillator-Vert. Amplifier	6BL7GT	6BL7GT	8BD	
V15A	Horizontal Phase Discriminator	6AL5	6AL5	6BT	
B	Horiz. Phase Discriminator	6H6	6H6	7Q	
V16	Horiz. Oscillator	6SN7GT	6SN7GT	8BD	
	Horiz. Discharge	6BQ6GT	6BQ6GT	6AM	
	Horiz. Output	6W4GT	6W4GT	4CG	
V17	Damper	1B3GT	1B3GT	3C	
V18	HV Rectifier	5Y3GT	5Y3GT	5T	
V19	LV Rectifier	5U4G	5U4G	5T	
V21	LV Rectifier	5U4G	5U4G	5T	

CATHODE-RAY TUBE

ITEM No.	REPLACEMENT DATA				NOTES
	ZENITH PART No.	SYLVANIA PART No.	THOMAS PART No.	RTMA BASE TYPE	
V22A	20CP4	20CP4	20CP4	12D	Ch. 22H22 Ch. 22H21
B	20DP4	20DP4		12D	
C	17BP4	17BP4	17BP4	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	ZENITH PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C1A	15	475	22-2122	AFH4-113		UPT417		TVL-4815	▲ Filter
B	15	475							■ Vert. Osc. Dec.
C	80	300							▲ Filter
D	40	50							Video Amp. Cathode
C2A	40	450	22-2224	AFH4-76		UPT42245C		TVL-4732	▲ Filter
B	20	450							■ Filter
C	20	200							▲ Audio Output Screen
D	20	25							Audio Output Cathode
C3A	20	475	22-2223	AFH4-119		UPT422		TVL-4800	▲ Vert. Amp. Dec.
B	40	300							■ Filter
C	100	50							▲ Vert. Amp. Cathode
D	80	25							Video Amp. Cathode
C4	10	250	22-2154	PRS250/12		BR1225A		TVA-1504	Noise Limiter Plate
C5	130	40	22-2252	E47A225		ETB175-5			Remote Control Motor Filter
C6	5		22-2050	SI5NP0	TCZ-4.7		NP0K-050		Fixed Padder
C7	1-3.5		22-2093		829-4				Variable Trimmer
C8	1-3.5		22-2093		829-4				Variable Trimmer
C9	470		22-2219	SI470	D6-471		GP2K-471	5GA-T47	AGC Filter
C10	600		27-82		D6-601				RF Amp. Screen
C11	470		22-2219	SI470	D6-471		GP2K-471	5GA-T47	RF Amp. Fil.
C12	1-3.5		22-2093		829-4				Variable Trimmer
C13	475		27-69						Fixed Padder
C14	500		22-2216	SI500	D6-501		GP2K-501	5GA-T5	Mixer Plate Dec.
C15	470		22-2219	SI470	D6-471		GP2K-471	5GA-T47	Mixer Screen
C16	4.5		22-2207				N750K-4R5		Osc. Feedback
C17	2.5		22-1891				N030K-2R5		Osc. Coupling
C18	20		22-2204				N080-331-200		Fixed Trimmer
C19	47		22-1876	SI47N080			N080-338-470		Osc. Grid Cap.
C20	470		22-2219	SI470	D6-471		GP2K-471	5GA-T47	Osc. Fil.
C21	6		22-2051				NP0K-060		IF Coupling
C22	26		22-2155				N080-331-260		Fixed Trimmer
C23	470	500	22-1138	1468-0005	D6-471	5W5T5	GP2K-471	5GA-T47	IF Coupling
C24A	120		27-160	SI120	D6-121		GP2K-121	5GA-T12	Fil. Bypass
B	150			SI150	D6-151	5W5T15	GP2K-151	5GA-T15	AGC Filter
C	150			SI150	D6-151	5W5T15	GP2K-151	5GA-T15	RF Bypass
				SI470	D6-471	5W5T5	GP2K-471	5GA-T47	AGC Filter
C25	470		22-2143	SI470	D6-471	5W5T5	GP2K-501	5GA-T5	1st. Video IF Dec.
C26	500		22-2216	SI500	D6-501	5W5T5	GP2K-471	5GA-T47	1st. Video IF Fil.
C27	470		22-2143	SI470	D6-471	5W5T5	GP2K-471	5GA-T47	AGC Filter
C28	470		22-2143	SI470	D6-471	5W5T5	GP2K-471	5GA-T47	AGC Filter
C29	500		22-2216	SI500	D6-501	5W5T5	GP2K-501	5GA-T5	2nd. Video IF Dec.
C30	470		22-2143	SI470	D6-471	5W5T5	GP2K-471	5GA-T47	AGC Filter
C31	500		22-2216	SI500	D6-501	5W5T5	GP2K-501	5GA-T5	3rd. Video IF Dec.
C32	.1	200	22-1777	P288-1	DF-104	PTE4P1		2TM-P1	AGC Filter
C33	4000		22-4	BPD-004	D6-402	ID5D4	GP2-333-402		RF Bypass
C34	4000		22-4	BPD-004	D6-402	ID5D4	GP2-333-402		4th. Video IF Cathode
C35	.047	600	22-2078	P688-047	DF-503	PTE6S5		6TM-S47	Video Coupling
C36	47		22-1876		TCZ-47		NP0L-470	5TCC-Q47	Fixed Trimmer
C37	.047	600	22-2078	P688-047	DF-503	PTE6S5		6TM-S47	Video Coupling
C38	330	500	22-1645	1469-00035	D6-331		GP2K-331	5GA-T33	Video Amp. Cathode
C39	47			SI47	D6-470	5W5Q5	GPIK-470	5GA-Q47	Video Coupling †
C40	20		22-2233	SI20		5W5Q2	GPIK-200		Contrast Cont. Shunt
C41	100		22-2234				N330K-101		Fixed Trimmer
C42	.047	600	22-2078	P688-047	DF-503	PTE6S5		6TM-S47	Video Coupling
C43	10000		22-3	BPD-01	DD-103	ID3S1	821-01	5HK-S1	Sound IF Coupling
C44	50		22-1761	SI50	D6-500	5W5Q5	GPIK-500	5GA-Q5	Sound IF Coupling
C45	10		22-2106				N330K-100		Fixed Trimmer

ZENITH MODELS H2229R, H2230E, R, H2241R, H2242E, R, H2252R, H2253E, H2254R, H3273E, H3274R, H3284R

TV PARTS LIST AND DESCRIPTIONS (Continued)

CAPACITORS (CONT.)

ITEM No.	RATING CAP. VOLT	REPLACEMENT DATA					IDENTIFICATION CODES AND INSTALLATION NOTES
		ZENITH PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL- DUBILIER PART No.	ERIE PART No.	
C46	10000	22-3	BPD-01	DD-103	ID3S1	821-01	Audio Det. Grid
C47	10000	22-3	BPD-01	DD-103	ID3S1	821-01	Audio Det. Cathode
C48	10000	22-3	BPD-01	DD-103	ID3S1	821-01	Audio Coupling
C49	1000	22-2218	SI1000	D6-102	1W5D1	GP2L-102	Tone Comp.
C50	.0047	22-1849	P488-0047	D6-472	PTE6D5	GP2-333-472	Audio Output Plate
C51	10000	22-3	BPD-01	DD-103	ID3S1	821-01	AGC Filter
C52	10000	22-3	BPD-01	DD-103	ID3S1	821-01	RF Bypass
C53	.1	200	P288-1	DF-104	PTE4P1	2TM-P1	Horiz. Feedback
C54	150	500	1468-00015	D6-151	5W5T15	IFM-315	AGC Amp. Cathode
C55	.047	600	P688-047	DF-503	PTE6S5	Sync. Coupling	Sync. Coupling
C56	4000	22-4	BPD-004	D6-402	1D5D4	GP2-333-402	Sync. Clipper Screen
C57	.047	400	P488-047	DF-503	PTE4S5	4TM-S47	Vdrt. Sync. Coupling
C58	.15	200	22-2261	P288-15		2TM-P15	Vert. Osc. Cathode
C59	.0012	600	22-1880		D6-122	GP2L-122	Vert. Osc. Grid
C60	.015	600	22-2264	P688-015	PTE6S15	6TM-S15	Vert. Feedback
C61	.1	600	22-1841	P688-1	PTE4P1	6TM-P1	Vert. Sweep Coupling
C62	.001	600	22-2128	P688-001	D6-102	GP2L-102	Vert. Feedback
C63	.0022	600	22-1845	P688-0022	D6-222	GP2-333-222	6TM-D22
C64	100	500	22-365	1468-0001	D6-101	GP1K-101	6TM-D22
C65	130	500	22-2162	1468-00015	5W5T15	IFM-315	Horiz. Sync. Coupling
C66	.022	200	22-2071	P488-022	PTE4S2	AFC Filter	AFC Filter
C67	1000	22-2112	SI1000	D6-102	1W5D1	GP2L-102	AFC Filter
C68	.1	200	22-1777	P288-1	PTE4P1	2TM-P1	AFC Filter
C69	470	500	22-1138	1468-0005	D6-471	5W5T5	Horiz. Sync. Coupling
C70	.0022	600	22-1845	P688-0022	D6-222	GP2-333-222	Horiz. Osc. Grid
C71	1000	500	22-2163	1464-001	IR5D1	MS-21	Fixed Trimmer
C72	33	22-2168	SI33	D6-330	5W5T15	5GA-Q33	Horiz. Sweep Coupling
C73	150	500	22-470	1468-00015	D6-151	5W5T15	5GA-Q33
C74	.01	400	22-1846	P488-01	D6-103	PTE4S1	IFM-315
C75	680	500	22-2034	1479-0007	2R5T7	GP2K-151	IFM-315
C76	470	500	22-1138	1468-0005	D6-471	5W5T5	IFM-315
C77	.047	600	22-2078	P688-047	DF-503	PTE6S5	6TM-S47
C78	.47	200	22-2146	P288-47	GT2P5	2TM-P47	Horiz. Output Screen
C79	.0047	600	22-1849	P488-0047	D6-472	GP2-333-472	Fixed Trimmer
C80	.15	400	22-2261	P488-15	DF-104	PTE4P1	4TM-P15
C81	.1	400	22-2061	P488-1	DF-104	PTE4P1	4TM-P15
C82	.001	600	22-2128	P688-001	D6-102	PTE6D1	6TM-D1
C83	.0022	600	22-1845	P488-0022	D6-222	GP2-333-222	6TM-D22
C84	.47	200	22-2146	P288-47	GT2P5	2TM-P47	Horiz. Sweep Coupling
C85	500	20000	22-1832	HV20-C	TV3-502		HV Filter
C86	.0047	600	22-1849	P688-0047	D6-472	GP2-333-472	Line Filter

† Some models use 20MMF. in this application. (Part # 22-2233)

CONTROLS

ITEM No.	RATING RESISTANCE WATTS	REPLACEMENT DATA				INSTALLATION NOTES
		ZENITH PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	
R1A	500KΩ	63-2125	Q13-133	AG-80-Z	AN-60	Volume Control
B	Shaft	Not req.	KSS-3	AK-4	AK-4	Attach to R1A per instructions
C	Switch	Not req.	76-1	SWB	K-155	Attach to R1A per instructions
R2A	2000Ω	63-1674	Q11-110	AG-11-S	AN-6	Vertical Linearity Control
B	Shaft	Not req.	SQ	FKS-1/4	AK-1	Attach to R2A per instructions
R3A	100KΩ	63-2126	Q11-128	AG-49-S	SB-220	Brightness Control
B	Shaft	Not req.	Not req.	KSS-3	Not req.	Attach to R3A per instructions
R4A	200KΩ	63-2140	Q11-130	AG-52-S	SB-221	Vertical Hold Control
B	Shaft	Not req.	Not req.	KSS-3	Not req.	Attach to R4A per instructions
R5	150KΩ	63-2123			SBT-217	Contrast Control
R6	7.5Meg	63-2110			SB-204	Vertical Size Control
R7	20KΩ	63-2099			AG-40-S	Focus Control - Wire Wound *
R8A	25KΩ	63-2153	Q11-120	RTV-185	AN-26	AGC Delay Control
B	Shaft	Not req.	RQ	FKS-1/4	AK-1	Attach to R8A per instructions
R9	500Ω	63-2050				Buzz Control - Wire Wound
R10	4000Ω	63-2159				Vertical Hold Range Control - Wire Wound

* Not used in all models.

RESISTORS

ITEM No.	RATING RESISTANCE WATTS	REPLACEMENT DATA		IDENTIFICATION CODES ALL RESISTORS ARE ± 10% UNLESS OTHERWISE SPECIFIED
		ZENITH PART No.	IRC PART No.	
R11	100KΩ	63-1869		RF Amp. Grid
R12	10KΩ	63-1827		RF Amp. Plate
R13	1500Ω	63-1967	BTA-1500	RF Amp. Decoupling
R14	3.3Meg 20%	63-1933		Mixer Grid
R15	47KΩ	63-1855	BTS-47K	Mixer Screen
R16	1000Ω	63-1785	BTS-1000	Voltage Divider
R17	15KΩ 20%	63-1835		Osc. Grid
R18	10Ω	63-1702		RF Trap Coil Shunt
R19	1000Ω	63-1785	BTS-1000	Osc. Plate
R20	33KΩ	63-957	BTS-33K	1st. Video IF Transformer Shunt
R21	1000Ω	63-1785	BTS-1000	AGC Network
R22	150Ω	63-1751	BTS-150	1st. Video IF Amp. Cathode
R23	470Ω	63-1771	BTS-470	1st. Video IF Amp. Decoupling
R24	470Ω	63-1771	BTS-470	AGC Network
R25	100Ω	63-1744	BTS-100	2nd. Video IF Amp. Cathode
R26	470Ω	63-1771	BTS-470	Decoupling
R27	470Ω	63-1771	BTS-470	AGC Network
R28	68Ω	63-1771	BTS-470	3rd. Video IF Amp. Cathode
R29	470Ω	63-1771	BTS-470	3rd. Video IF Amp. Decoupling
R30	6800Ω	63-1571	BTS-6800	4th. Video IF Transformer Shunt
R31	180Ω	63-1754	BTS-180	4th. Video IF Amp. Cathode
R32	470Ω	63-1771	BTS-470	4th. Video IF Amp. Decoupling
R33	220KΩ	63-1884	BTS-220K	AGC Network
R34	820Ω	63-1782	BTS-820	Noise Limiter Cathode
R35	2200Ω	63-1799	BTS-2200	Noise Limiter Plate
R36	68KΩ	63-1862	BTS-68K	Noise Limiter Plate - See Note 2
R37	2.2Meg 20%	63-1926	BTS-2.2Meg	Video Amp. Grid
R38	1Meg 20%	63-1912	BTS-1Meg	Video Amp. Grid
R39	820Ω	63-1782	BTS-820	Video Amp. Cathode
R40	470Ω	63-1771	BTS-470	Video Amp. Cathode
R41	390Ω	63-1768	BTS-390	Video Amp. Cathode
R42	3300Ω	63-1806	BTS-3300	Video Amp. Plate
R43	4700Ω	63-943	BTA-4700	Video Amp. Plate

RESISTORS (CONT.)

ITEM No.	RATING RESISTANCE WATTS	REPLACEMENT DATA		IDENTIFICATION CODES
		ZENITH PART No.	IRC PART No.	
R44	4700Ω	63-943	BTA-4700	Video Amp. Plate
R45	22KΩ	63-1841	BTS-22K	Peaking Coil Shunt
R46	220KΩ	63-1883	BTS-220K	AGC Network
R47	1.5Meg	63-1919	BTS-1.5Meg	AGC Network
R48	47KΩ	63-1855	BTS-47K	Picture Tube Grid
R49	220KΩ	63-1883	BTS-220K	Picture Tube Cathode
R50	330KΩ	63-1890	BTS-330K	Voltage Divider - See Note 2
R51	1Meg	63-1911		Sound IF Amp. Grid
R52	8200Ω	63-1101	BTB-8200	Audio Detector Screen
R53	470Ω	63-1771		Parasitic Suppressor
R54	330KΩ	63-1890	BTS-330K	Audio Detector Plate
R55	10KΩ 20%		BTS-10K	Tone Compensation
R56	330Ω	63-1764	BTS-330	Output Cathode
R57	6800Ω	63-1571	BTS-6800	Voltage Divider
R58	10KΩ	63-2022	1 3/4A-10K	Filter - Wire Wound
R59	3500Ω	63-1911	1 3/4A-3500	Filter - Wire Wound
R60	1MegΩ	63-1911	BTS-1Meg	Sync. Clipper Grid - See Note 3
R61	15KΩ	63-1065	BTA-15K	Sync. Clipper Screen
R62	68KΩ	63-1862	BTS-68K	Sync. Clipper Plate
R63	100KΩ	63-1869	BTS-100K	Voltage Divider
R64	47KΩ	63-1855	BTS-47K	Integrator Network
R65	330KΩ	63-1890	BTS-330K	Vertical Osc. Grid - See Note 2
R66	2.2Meg	63-1926	BTS-2.2Meg	Vertical Osc. Plate
R67	15KΩ	63-1835	BTS-15K	Voltage Divider
R68	100KΩ	63-1869	BTS-100K	Vertical Peaking
R69	22KΩ	63-1841	BTS-22K	Vertical Osc. Cathode
R70	150KΩ	63-1876	BTS-150K	Voltage Divider
R71	100KΩ	63-1882	BTB-100K	Voltage Divider
R72	27KΩ	63-1845	BTS-27K	Voltage Divider
R73	3.3Meg 20%	63-1933	BTS-3.3Meg	Vertical Amp. Grid
R74	560Ω	63-1775	BTS-560	Vertical Amp. Cathode
R75	100KΩ	63-1869	BTS-100K	Vertical Output Transformer Shunt
R76	1800Ω	63-1620	BTB-1800	Vertical Amp. Plate
R77	4700Ω	63-1813	BTS-4700	Horiz. Phase Disc. Diode Load
R78	1Meg	63-1911	BTS-1Meg	Horiz. Phase Disc. Diode Load
R79	1Meg	63-1911	BTS-1Meg	Horiz. Phase Disc. Diode Load
R80	1Meg	63-1911	BTS-1Meg	AFC Filter
R81	100KΩ	63-1869	BTS-100K	AFC Filter
R82	100KΩ	63-2137	BTA-100K	Horiz. AFC Plate
R83	100KΩ	63-1869	BTS-100K	Horiz. Osc. Grid
R84	470Ω	63-1771	BTS-470	Horiz. Osc. Cathode
R85	47KΩ	63-1855	BTS-47K	Voltage Divider
R86	33KΩ	63-957	BTA-33K	Horiz. Osc. Plate
R87	18KΩ	63-1838	BTS-18K	Horiz. Discharge Network
R88	330KΩ	63-1890	BTS-330K	Horiz. Discharge Grid - See Note 2
R89	100Ω	63-1744		Parasitic Suppressor
R90	470KΩ 20%	63-1898	BTS-470K	Horiz. Output Grid
R91	150Ω	63-2134	1 3/4A-150	Horiz. Output Cathode - Wire Wound
R92	47Ω	63-970		Horiz. Output Cathode
R93	15KΩ	63-2425	1 3/4A-15K	Horiz. Output Screen
R94	6800Ω	63-1820	BTS-6800	Horiz. Peaking
R95	68KΩ	63-1979	BTA-68K	Horiz. Feedback Network - See Note 5
R96	68KΩ	63-1979	BTA-68K	Horiz. Feedback Network - See Note 5
R97	180KΩ		BTS-180K	Voltage Divider
R98	5500Ω	63-3136		Voltage Divider
R99	4.7Ω	63-1581		Series HV Filament
R100	470KΩ	63-1898		HV Filter
R101	4000Ω	63-2017	1 3/4A-4000	Focus Coil Shunt - Wire Wound - See Note 1
R102	4000Ω	63-2017	1 3/4A-4000	Focus Coil Shunt - Wire Wound - See Note 1
R103	470Ω	63-1771	BTS-470	Isolation
R104	100KΩ	63-1869	BTS-100K	Line Isolation - See Note 1
R105	8200Ω	63-2077	BTS-8200	Peaking Coil Shunt - See Note 4
R106	400Ω	63-1744	1 3/4A-400	Filter
R107	100Ω	63-1744	BTS-100	Decoupling
R108	5500Ω	63-3136		Bleeder - See Note 1 - Wire Wound

Note 1 Not used in all models.

Note 2 Some models use resistors in parallel to obtain desired value.

Note 3 Some models use 750KΩ resistor in this application.

Note 4 Some models use 33KΩ resistor in this application.

Note 5 Some models use resistors in series to obtain desired value.

TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	SEC. 3	ZENITH PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.
T1	117VAC ② 2.15A	730VCT .190ADC	430VCT .100ADC	5VAC ③ 3A SEC. 4 5VAC ④ 2A SEC. 5 12.6VCT ⑤ 6A	95-1260			TP-358

TRANSFORMER (REMOTE)

ITEM No.	RATING				REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	SEC. 3	ZENITH PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.
T2	117VAC ① .67A	24VAC ② 2A			95-1255			

TRANSFORMER (SWEEP CIRCUITS)

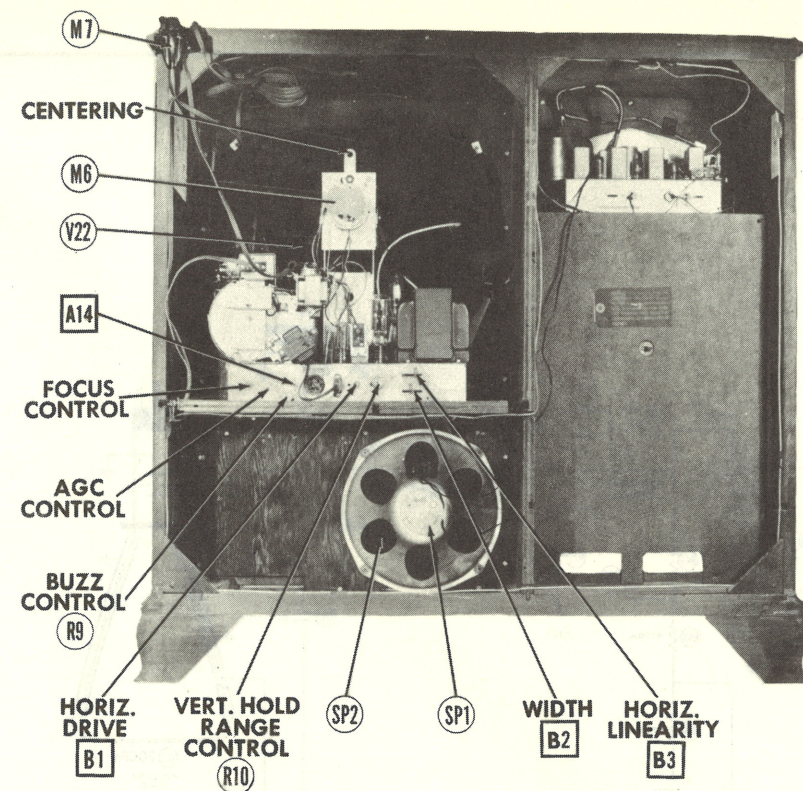
ITEM No.	RATING DC RESISTANCE PRI. SEC.	REPLACEMENT DATA				NOTES
		ZENITH PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
T3	265Ω Tap 29Ω	4.5Ω Tap 1.1Ω	S-17927		HVO-7	Horiz. Output Trans.
T4	610Ω 16Ω	13Ω	95-1239 95-1263	A-8112 ① DY-7	A-3038 MDF-70	Vert. Output Trans. Horiz. Deflection Coils Vert. Deflection Coils Focus Coil
T5	52Ω					
T6	3300Ω		S-17290 ②			

① Drill one new mounting hole.

② Not used in all models.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		ZENITH PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.	PRI.	SEC.					
T7	9KΩ	4.5K	700Ω	.7Ω	95-1238	A-3879 ①	A-2932 ①	RO-16 ①	① Drill one new mounting hole.



CABINET-REAR VIEW HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

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

Adjust the horizontal hold control until the picture synchronizes horizontally.

Adjust the horizontal drive trimmer, (B1) counter-clockwise as far as possible without causing fold-over or instability in the picture.

Adjust the width slug, (B2), until the picture is slightly wider than necessary to fill the mask horizontally.

Adjust the horizontal linearity slug, (B3) until the picture is symmetrical from left to right.

Since both width and horizontal linearity are effected by the drive trimmer it may be necessary to adjust B1, B2, and B3 alternately for optimum results.

DISASSEMBLY INSTRUCTIONS

TELEVISION CHASSIS REMOVAL:

1. Remove seven push-on type control knobs.
2. Remove seven wood screws from rear cover. Remove rear cover.
3. Disconnect built-in antenna.
4. Disconnect speaker leads.
5. Disconnect radio power plug.
6. Remove four 3/8" bolts from chassis. Remove chassis.
7. Remove four 5/16" hex nuts from speaker. Remove speaker.

RADIO CHASSIS REMOVAL:

1. Remove three push-on type control knobs.
2. Disconnect speaker.
3. Disconnect FM antenna.
4. Disconnect phono audio jack.
5. Disconnect phono power plug.
6. Disconnect push-button controls.

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

