

ZENITH MODELS H2226R, H2227E, R, H2250R, H2255E (Ch. 22H20)

ZENITH MODEL H2250R			
TRADE NAME	Zenith, Models H2226R, H2227E, H2227R, H2250R, H2255E (Ch. 22H20)		
MANUFACTURER	Zenith Radio Corp., 6001 Dickens Ave., Chicago, Illinois		
TYPE SET	Television Receiver		
TUBES	Twenty Two		
POWER SUPPLY	110-120 Volts AC-60 Cycle	RATING 1.8 Amp. at 117 Volts AC	
TUNING RANGE	Channels 2 thru 13		
INDEX			
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HOWARD W. SAMS & CO., INC. • Indianapolis 1, Indiana

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PARTS LIST AND DESCRIPTIONS (Continued)

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			NOTES
	FIELD RES.	V. C. IMP.	ZENITH	JENSEN	QUAM	
			PART No.	PART No.	PART No.	
SPIA	PM	4.3Ω	49-649 ③	ST-120 ⑤	10A4A	③ Used in models H2250R, H2255E ④ Used in models H2226R, H2227R, H2227E ⑤ Replace output transformer to match 6-8Ω voice coil.
B	PM		49-679 ④	MOD. P10-S		
SP2A	CONE DIA.	V. C. DIA.				
B	9 1/4"	1"	ZC10161			
B	5"		ZC5093			

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				INSTALLATION NOTES
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (10 CURRENT 1000-)	ZENITH PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
L1	.150ADC	190Ω	4.3 Henries	95-1170	C-2309 ②	C-2994 ②	TR-4200 ②	② Drill one new mounting hole.

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	ZENITH	MEISSNER	
				PART No.	PART No.	
L2	Ant. Coil	0Ω		S-17173		
L3	Mixer Plate	.2Ω		S-17104		
L4	Osc. Coil	0Ω		S-16265		
L5	Trap Coil	0Ω		S-16501		
L6	1st Video IF	.1Ω		S-16274		
L7	2nd Video IF	.1Ω	.1Ω	S-16275		
L8	3rd Video IF	.1Ω	.1Ω	S-16604		
L9	Flt. Choke	.1Ω		S-16984		
L10	4th Video IF	.1Ω	.1Ω	S-16605		
L11	5th Video IF	.1Ω	.1Ω	S-17472		
L12	Peaking	9Ω		S-1704		
L13	Peaking	1.6Ω		S-15128		
L14	RF Choke	5.2Ω		S-17505		
L15	Peaking	18Ω		S-17053		
L16	4.5MC Trap	1.8Ω		S-17116		
L17	Peaking	8Ω		S-17052		
L18	Picture Control Coil	100Ω	.1Ω	S-17132		
L19	1st Sound IF	1.8Ω	1.8Ω	S-16855		
L20	RF Choke	8Ω		S-16011		
L21	2nd Sound IF	6.2Ω		S-16738		
L22	Quadrature Coil	4.7Ω		S-16013		Tap at 60Ω
L23	Horiz. Osc.	145Ω		S-17114		
L24	Horiz. Lin.	10Ω		S-17176		
L25	Width Coil	7.8Ω		S-17112		Tap at 1.2Ω

DIAL LIGHTS

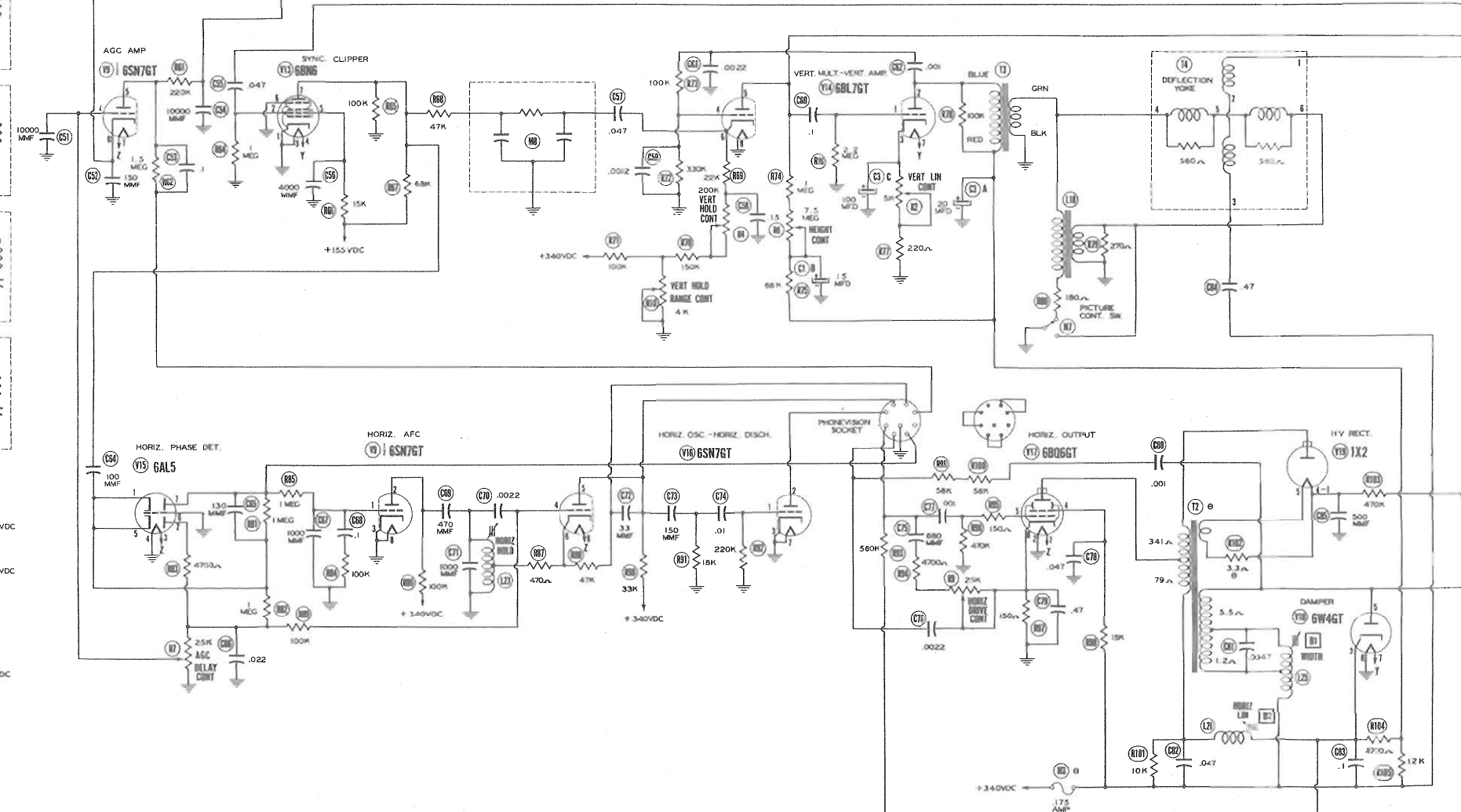
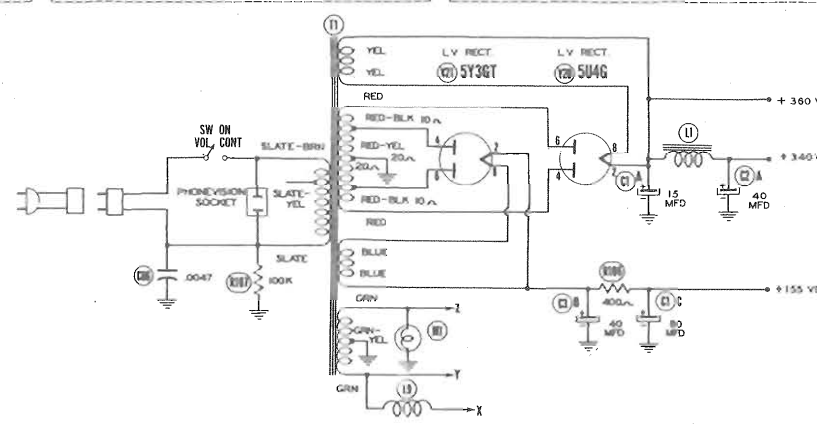
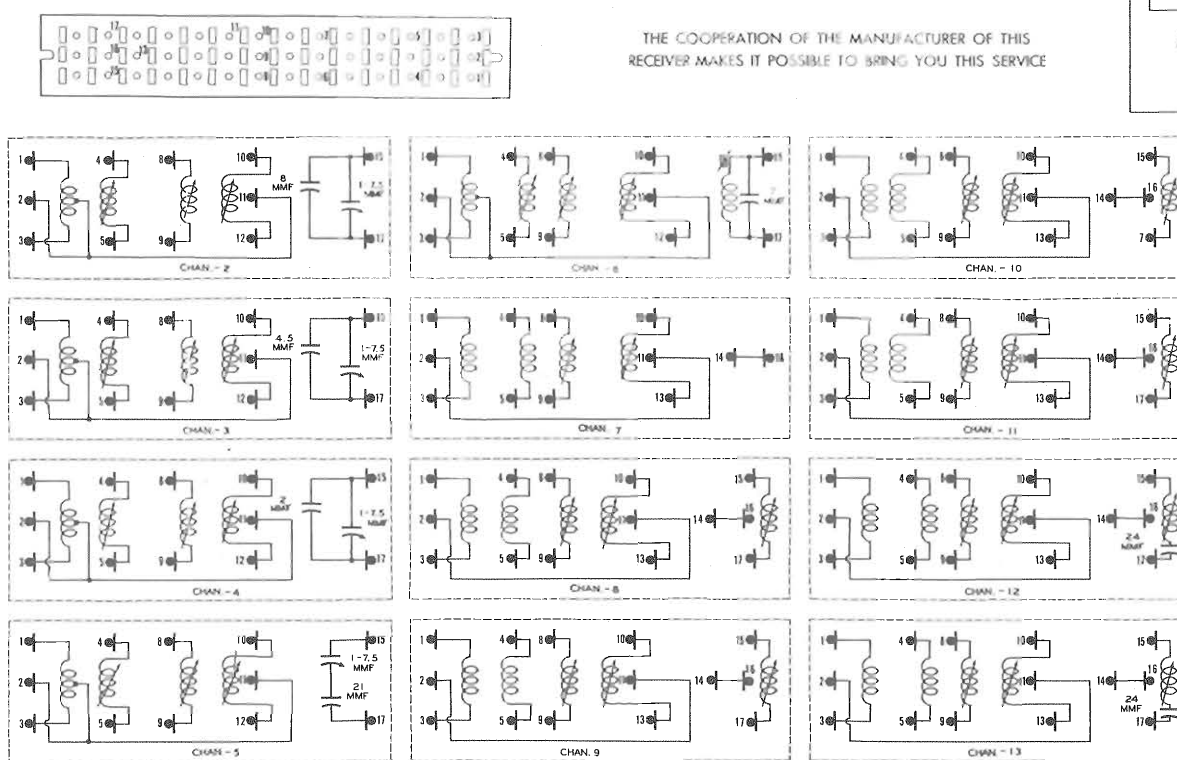
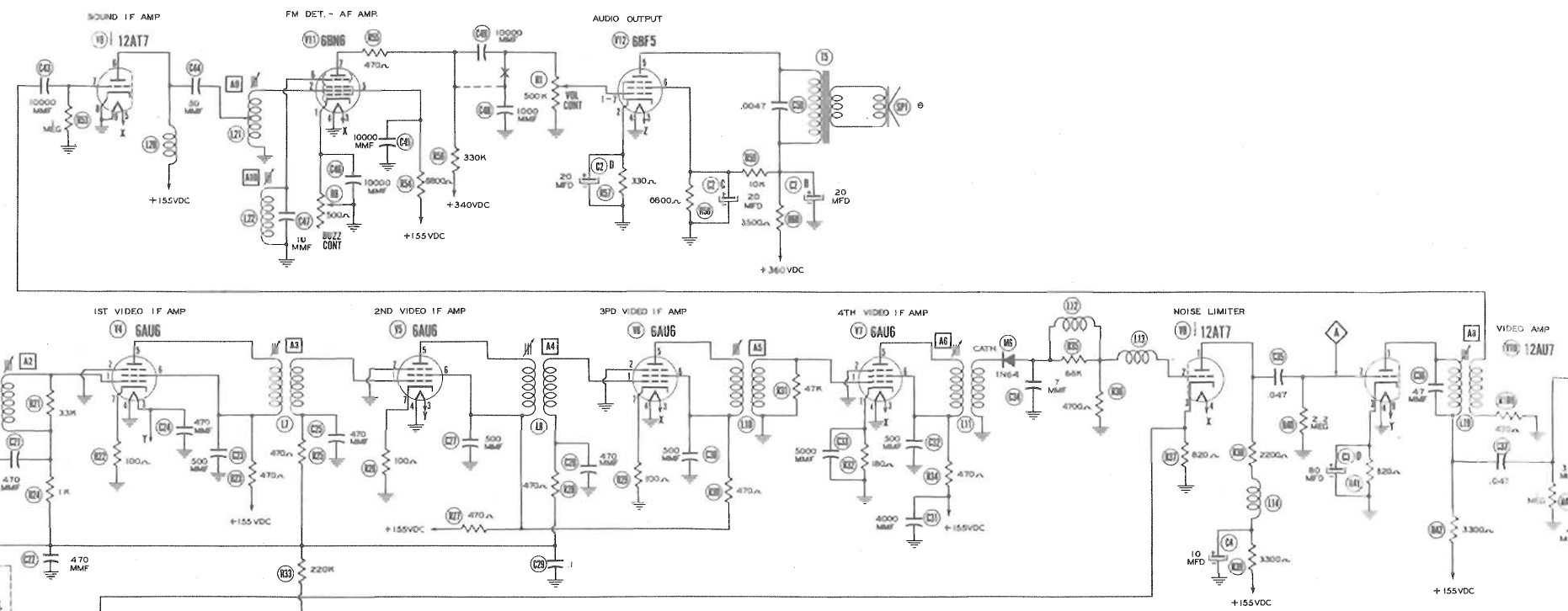
ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					ZENITH PART No.		
M1	Bayonet	6-8	.15	Brown	100-67		Type #47

MISCELLANEOUS

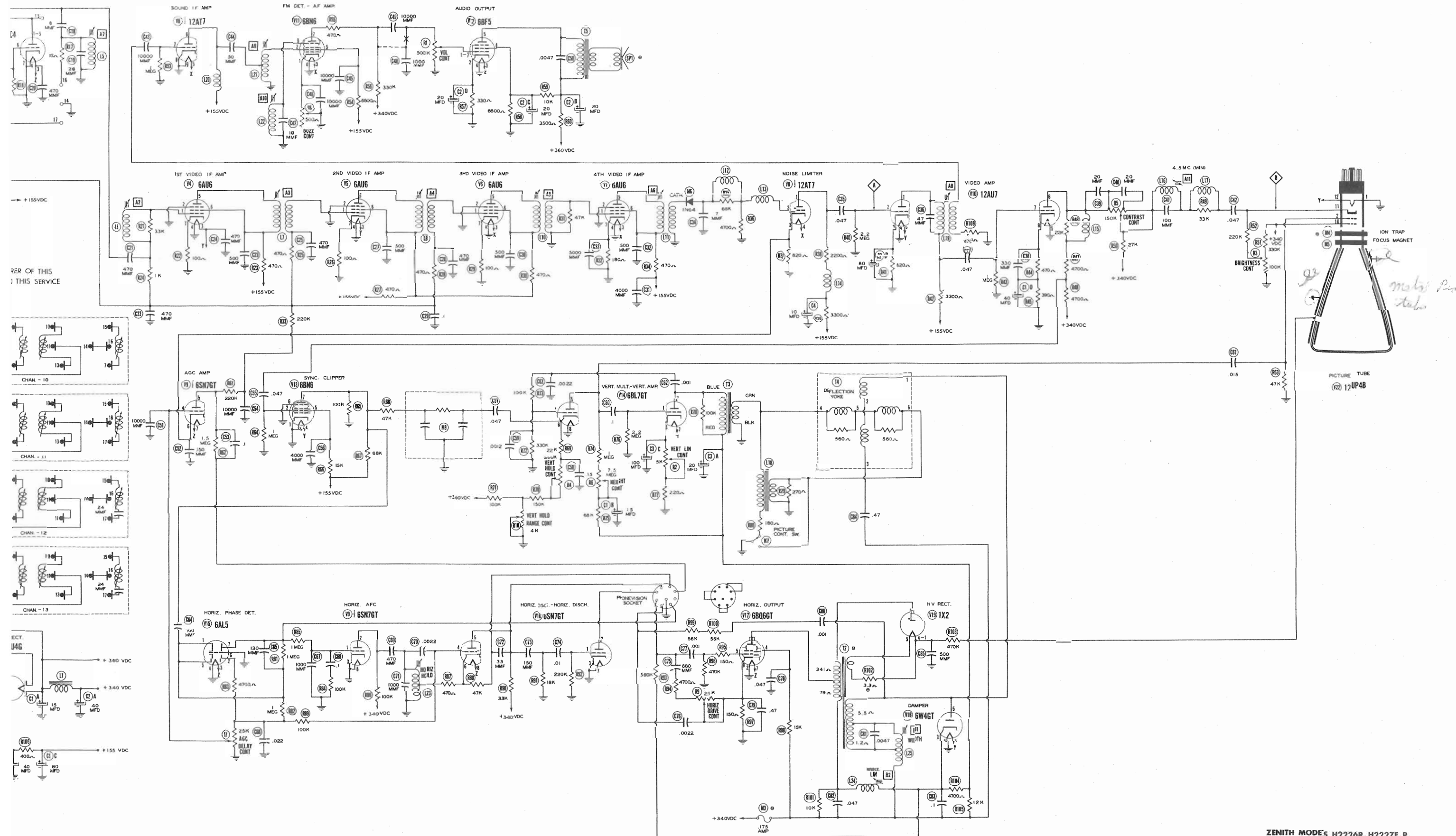
ITEM No.	PART NAME	ZENITH PART No.	NOTES
M2	RF Tuner	S-17100	Includes RF shelf and turret.
M3A	Fuse	136-21	.175A 125V Type 3AG
B	Fuse	S-17164	.25A 250V
M4A	Ion Trap	S-17461	12 and 19 inch picture tube
B	Ion Trap	S-17230	16 inch picture tube
M5	Focus Magnet	103-1	1N64 video det.
M6	Crystal	85-488	Picture control
M7	Switch	87-1	
M8	Integrator	57-1679	Channel selector
	Escutcheon	57-1678	Volume cont.
	Escutcheon	192-136	
	Safety Glass	46-888	Channel selector, Models H2226R, H2227R, H2250R
	Knob	46-895	Fine tuning
	Knob	46-890	Volume cont., Models H2226R, H2227R, H2250R
	Knob	46-895	Contrast
	Knob	46-893	Brightness
	Knob	46-896	Vert. hold
	Knob	46-887	Horiz. hold
	Knob	46-889	Channel selector, Models H2227E, H2255E
	Knob	46-833	Volume contr., Models H2227E, H2255E

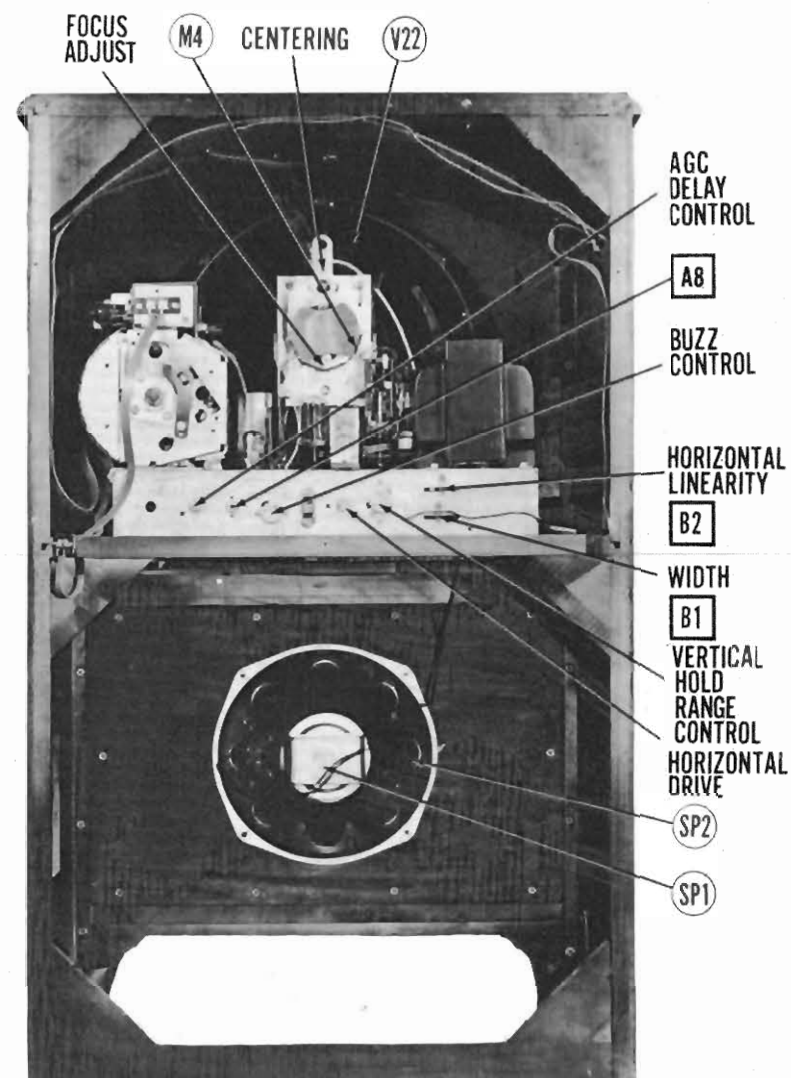
TRADE NAME	Zenit
MANUFACTURER	Zenit
TYPE SET	Telev
TUBES	Twen
POWER SUPPLY	110-12
TUNING RANGE—Chan	
Alignment Instructions	
Disassembly Instruction	
Fine Tuning Drive Cord	
Horiz. Sweep Circuit A	
Parts List and Descript	
Photographs	
Cabinet-Rear View	
Capacitor and Alignm	

HC
"The listing of any available rap
case a recommendation, warrant
as to the quality and suitability o
parts have been compiled from ic
Inc., by the manufacturers of the
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① SEE PARTS LIST FOR ALTERNATE
VALUE OR APPLICATION





CABINET-REAR VIEW

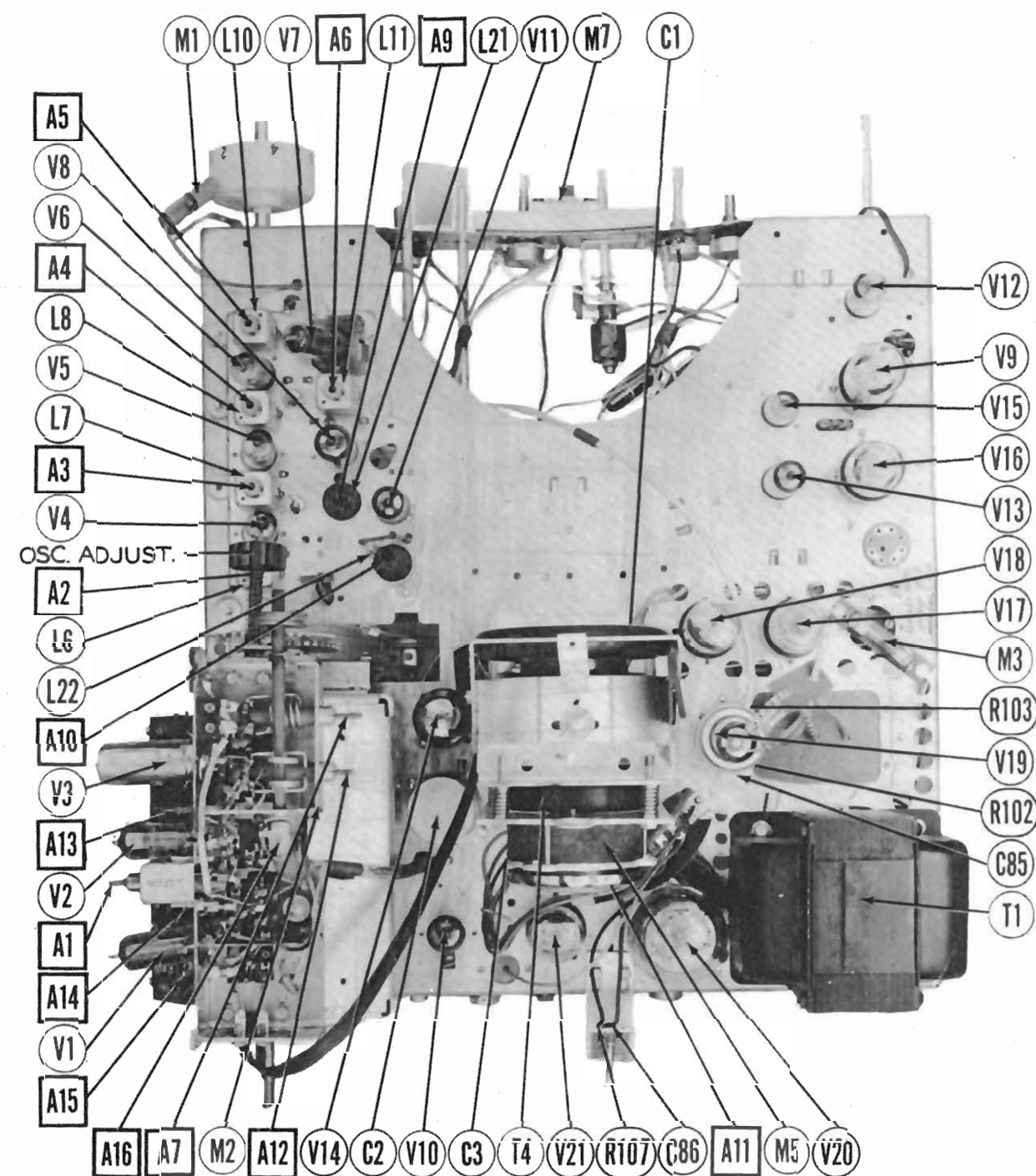
HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

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

Turn the horizontal hold until the picture synchronizes horizontally.

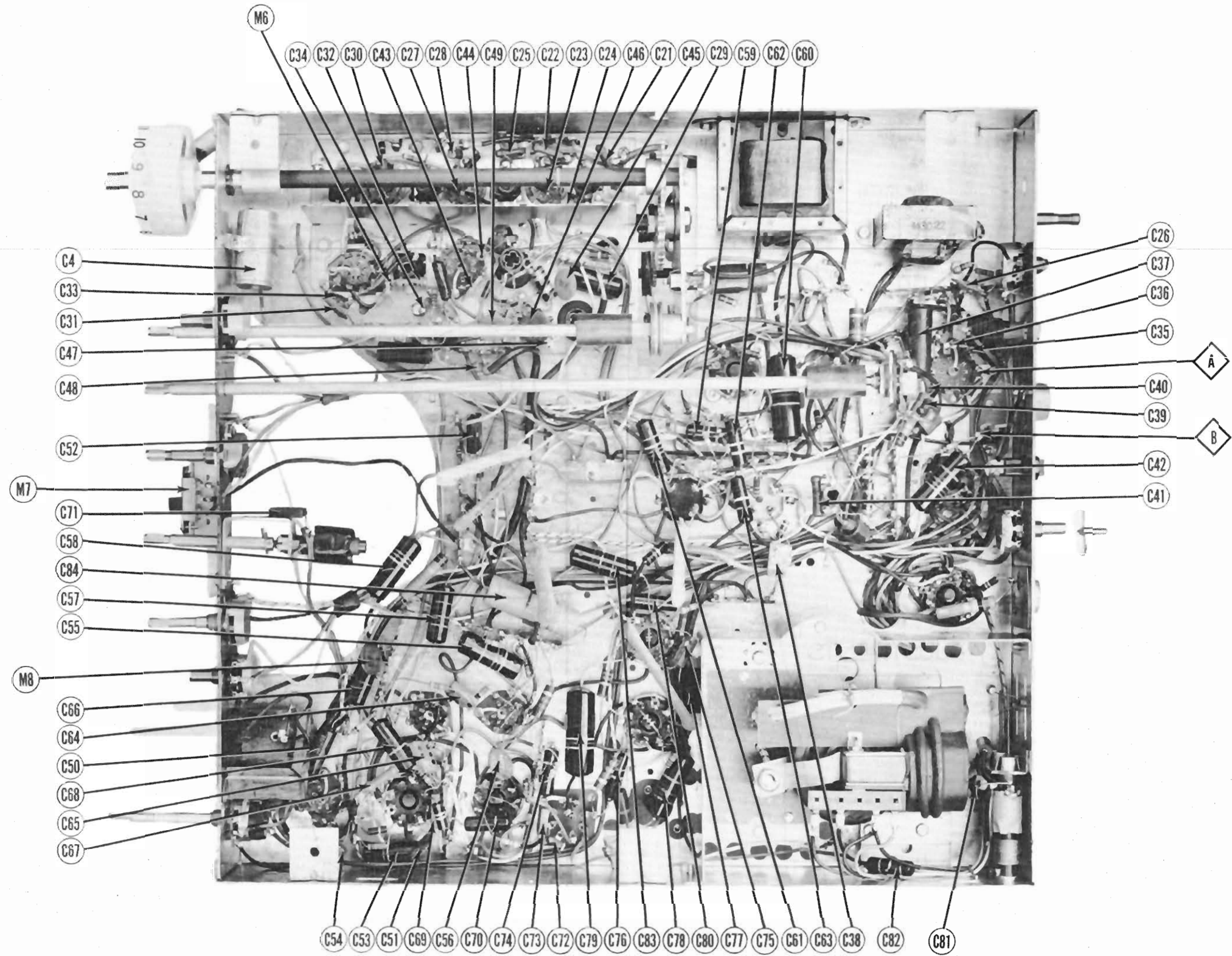
Turn the horizontal drive control clockwise as far as possible without crowding the right side of the picture.

Adjust the width slug (B1) until the picture fills the mask horizontally. Adjust the horizontal linearity slug (B2) until picture is symmetrical from left to right. A slight readjustment of the horizontal drive control may be necessary for optimum results.



CHASSIS TOP VIEW

ZENITH MODELS H2226R, H2227E, R,
H2250R (Ch. 22H20)



CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION

ZENITH MODELS H2226R, H2227E, R,
H2250R (Ch. 22H20)

VOLTAGE AND RESISTANCE MEASUREMENTS

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6CB6	-2.4VDC	0V	0V	6.3VAC	150VDC	140VDC	0V		
V 2	6CB6	-4.4VDC	0V	6.3VAC	0V	150VDC	110VDC	0V		
V 3	6C4	130VDC	0V	6.3VAC	0V	130VDC	8-5.5VDC	0V		
V 4	6AU6	-1.4VDC	0V	6.3VAC	0V	130VDC	150VDC	-4VDC		
V 5	6AU6	-1.4VDC	0V	6.3VAC	0V	130VDC	150VDC	-4VDC		
V 6	6AU6	-1.4VDC	0V	6.3VAC	0V	130VDC	150VDC	-4VDC		
V 7	6AU6	0V	0V	6.3VAC	0V	130VDC	145VDC	1.8VDC		
V 8	12AT7	150VDC	-1.6VDC	6.3VAC	6.3VAC	135VDC	135VDC	-8VDC	0V	0V
V 9	6SN7GT	-1VDC	130VDC	0V	4.7VDC	0V	245VDC	-3VDC	10VDC	6.3VAC
V 10	12AU7	130VDC	0V	6.3VAC	0V	90VDC	0V	105VDC		
V 11	6BN6	5VDC	0V	6.3VAC	0V	205VDC	90VDC	0V		
V 12	6BF5	0V	9VDC	6.3VAC	0V	75VDC	0V	70VDC		
V 13	6BN6	0V	-1.4VDC	0V	6.3VAC	0V	1.9VDC	0V		
V 14	6BL7GT	-1.1VDC	400VDC	30VDC	-8VDC	90VDC	15VDC	6.3VAC	0V	
V 15	6AL5	1.8VDC	-4.4VDC	6.3VAC	0V	1.9VDC	0V	-2VDC		
V 16	6SN7GT	-25VDC	60VDC	0V	-20VDC	250VDC	1.6VDC	0V	6.3VAC	TOP CAP
V 17	6BQ6GT	-1.9VDC	0V	0V	180VDC	-7.4VDC	-7.4VDC	6.3VAC	10VDC	
V 18	6W4GT	-1.3VDC	340VDC	440VDC	9VDC	335VDC	75VDC	6.3VAC	0V	
V 19	IX2	* DO NOT MEASURE								
V 20	5U4G	0V	360VDC	0V	340VAC	7VDC	340VAC	340VDC	360VDC	
V 21	5Y3GT	6.3VAC	180VDC	6.3VAC	0V	190VAC	0V	180VDC		
V 22	12UP4B	0V	0V	340VDC	75VDC	6.3VAC				

‡ TAKEN WITH VACUUM TUBE VOLTMETER
* DO NOT MEASURE

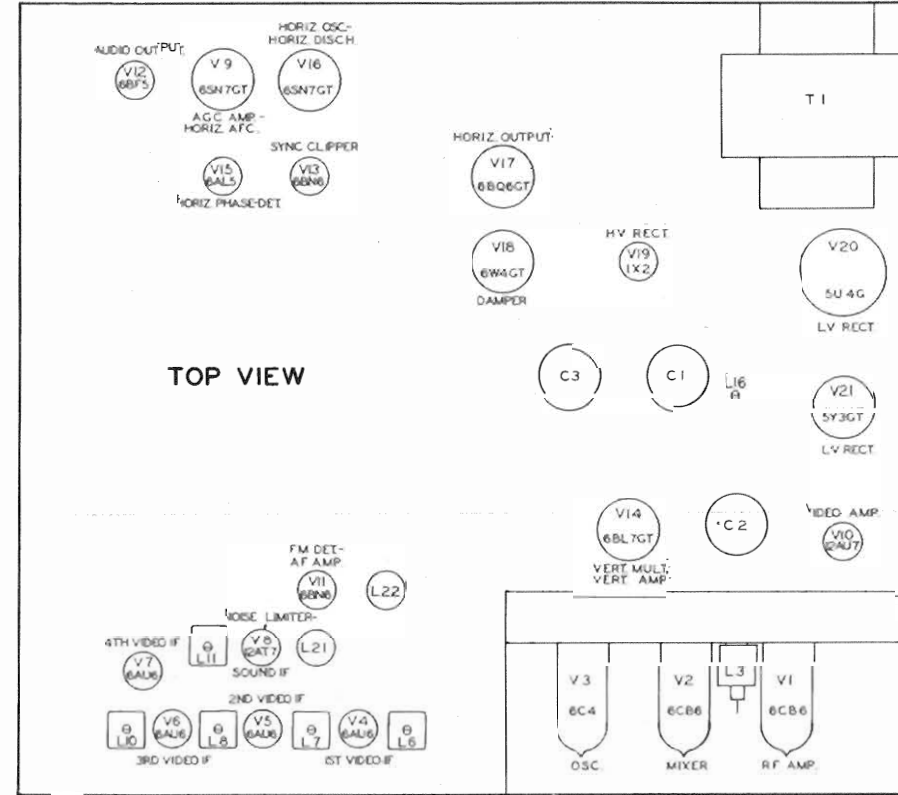
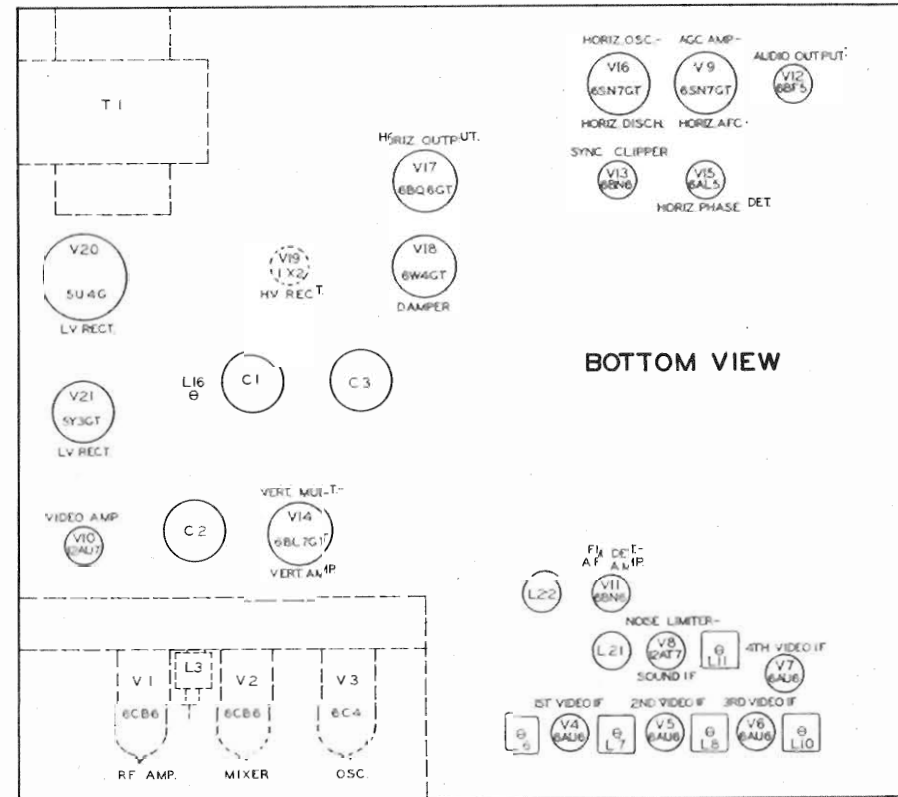
RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6CB6	2 Meg.	0Ω	0Ω	.1Ω	#2KΩ	#2KΩ	0Ω		
V 2	6CB6	5.2 Meg.	0Ω	.1Ω	0Ω	#1.5KΩ	#48KΩ	0Ω		
V 3	6C4	#1.5KΩ	Inf.	.1Ω	0Ω	#1.5KΩ	18KΩ	0Ω		
V 4	6AU6	2 Meg.	0Ω	.1Ω	0Ω	#870Ω	#870Ω	100Ω		
V 5	6AU6	2 Meg.	0Ω	.1Ω	0Ω	#870Ω	#870Ω	100Ω		
V 6	6AU6	2 Meg.	0Ω	.2Ω	0Ω	#1.3KΩ	#1.3KΩ	100Ω		
V 7	6AU6	.1Ω	0Ω	.2Ω	0Ω	#870Ω	#870Ω	180Ω		
V 8	12AT7	#5.9KΩ	4.7KΩ	820Ω	.2Ω	#400Ω	1 Meg.	0Ω	0Ω	
V 9	6SN7GT	3 Meg.	110KΩ	0Ω	25KΩ	1.5 Meg.	820Ω	.1Ω	0Ω	
V 10	12AU7	#3.7KΩ	2.2 Meg.	820Ω	0Ω	19.5KΩ	1 Meg.	800Ω	.1Ω	
V 11	6BN6	500Ω	6.2Ω	.2Ω	0Ω	#7.2KΩ	4.7Ω	1330KΩ		
V 12	6BF5	70Ω	330Ω	.1Ω	0Ω	14.3KΩ	70Ω			
V 13	6BN6	0Ω	1 Meg.	0Ω	.1Ω	#15KΩ	0Ω	#50KΩ		
V 14	6BL7GT	2.2 Meg.	17KΩ	5.2KΩ	330KΩ	18 Meg.	375KΩ	.1Ω	0Ω	
V 15	6AL5	1 Meg.	30KΩ	.1Ω	0Ω	1 Meg.	0Ω	2 Meg.		
V 16	6SN7GT	220KΩ	1570KΩ	0Ω	122KΩ	133KΩ	470Ω	0Ω	.1Ω	
V 17	6BQ6GT	2 Meg.	0Ω	Inf.	115KΩ	470KΩ	470KΩ	.1Ω	150Ω	TOP CAP 10KΩ
V 18	6W4GT	2 Meg.	1200Ω	16KΩ	22KΩ	1570KΩ	1570KΩ	.1Ω	0Ω	TOP CAP 10.2KΩ
V 19	IX2	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	Inf.	
V 20	5U4G	Inf.	50KΩ	0Ω	30Ω	160KΩ	30Ω	50KΩ	60KΩ	
V 21	5Y3GT	.1Ω	60KΩ	.1Ω	20Ω	Inf.	20Ω	Inf.		
V 22	12UP4A	0Ω	47KΩ	110Ω	320KΩ	10Ω				

‡ MEASURED FROM PIN 2 OF V20
* MEASURED FROM PIN 2 OF V21

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.

ZENITH MODELS H2226R, H2227E, R.
H2250R (Ch. 22H20)



TUBE PLACEMENT CHART

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

If the receiver is to be aligned with the picture tube removed, the high voltage lead should be securely taped and dressed away from the chassis.

VIDEO IF ALIGNMENT

Remove the local oscillator tube V3 from its socket to prevent erroneous indications.
Connect the negative terminal of a 4.5 volt battery to the junction of R11 and C7 and positive terminal to chassis.
Connect the synchronized sweep voltage from the signal generator to the horizontal input of the oscilloscope for horizontal deflection.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1. Direct	High side to ungrounded tube shield floating over mixer tube (V2). Low side to chassis.	44MC (10MC SWP)	42.75MC 43.5MC 45MC 45.75MC	Any	Vert. Amp. thru 10KΩ to Point A. Low side to chassis.	A1, A2, A3, A4, A5, A6	Adjust for overall response of maximum amplitude and linearity similar to figure 1. The adjustment of A1, A2, and A4 effect the low frequency portion of the curve, A3 and A5 effect the high frequency portion, and A6 effects the top and should be adjusted for best symmetry.
2. Direct	"	"	47.25MC	2	"	A7	Adjust for minimum marker indication at the 47.75MC point on response curve.

SOUND IF ALIGNMENT

Proper alignment of the sound IF can be obtained only if the signal input is below the limiting level of the Gated beam detector tube. This level can be easily identified by a background "hiss" similar to superregeneration. The sound IF system is aligned using a TV station signal as follows:
(a) Connect a variable attenuator pad between antenna and the receiver and adjust it until the signal falls below the detector limiting level as outlined above. Adjust the sound take-off coil A8, the detector input coil A9, the quadrature coil A10 and the buzz control R8 for maximum sound and minimum buzz. It should be noted that any of these adjustments may cause the "hiss" to disappear and it will be necessary to reduce further the signal so that the "hiss" will never disappear during alignment.

4.5MC TRAP ADJUSTMENT

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
3. .005MFD	High side to pin 2 (Grid) of 12AU7 (V10). Low side to chassis.	4.5MC (Unmod.)	Any	DC Probe thru detector probe as shown in figure 2 to point A. Common to chassis.	All	Adjust for MINIMUM deflection.

OSCILLATOR ALIGNMENT

Replace the local oscillator tube (V3) in its socket.
Connect a 4.5 volt battery as in Video IF Alignment.
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Turn the fine tuning control until the open end of the RF shelf pully faces upward.
The overall oscillator circuit adjustment A12 should not be adjusted unless the oscillator can be adjusted to the proper frequency with the strip oscillator for each channel except channel 7. Channel 7 has no strip oscillator adjustment.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
4. Two 120Ω carbon res.	Across antenna terminals with 120Ω in each lead.	177MC (10MC SWP)	175.25MC 179.75MC	7	Vert. Amp. thru 10KΩ to Point A. Low side to chassis.	A12	Adjust to place sound marker as shown in figure 3. The video marker should be at 50%.
5. "	"	213MC (10MC SWP) 207MC (10MC SWP) 201MC (10MC SWP) 195MC (10MC SWP) 189MC (10MC SWP) 183MC (10MC SWP) 85MC (10MC SWP) 79MC (10MC SWP) 69MC (10MC SWP) 63MC (10MC SWP) 57MC (10MC SWP)	211.25MC 215.75MC 205.25MC 209.75MC 199.25MC 203.75MC 193.25MC 197.75MC 187.25MC 191.75MC 181.25MC 185.75MC 83.25MC 87.75MC 77.25MC 81.75MC 67.25MC 71.75MC 61.25MC 65.75MC 55.25MC 59.75MC	13 12 11 10 9 8 6 5 4 3 2	"	"	Check to see that the sound marker can be properly placed with the strip oscillator adjustment.

RF ALIGNMENT

Connect a 4.5 volt battery as in Video IF Alignment.
If the response curve seems to be tilted approximately the same amount on all channels, check the Video IF Alignment before attempting RF Alignment.
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.

DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
6. Two 120Ω carbon res.	Across antenna terminals with 120Ω in each lead.	69MC (10MC SWP)	67.25MC 71.75MC	4	Vert. Amp. thru 10KΩ to Point A. Low side to chassis.	A13, A14, A15	Adjust for maximum amplitude and symmetry as per figure 3.
7. "	"	177MC (10MC SWP)	175.25MC 179.75MC	7	"	A16	Adjust for maximum amplitude with proper bandpass as per figure 3. The converter plate coil (A1) will have to be adjusted after the cover is removed and again retuned after the cover is replaced.

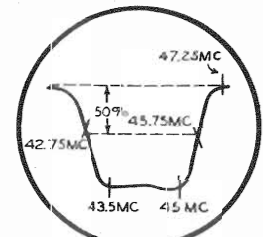


FIG.1

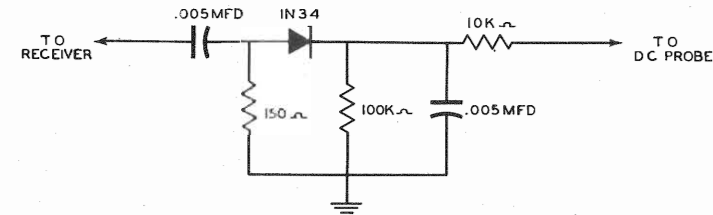


FIG.2

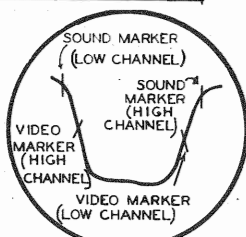
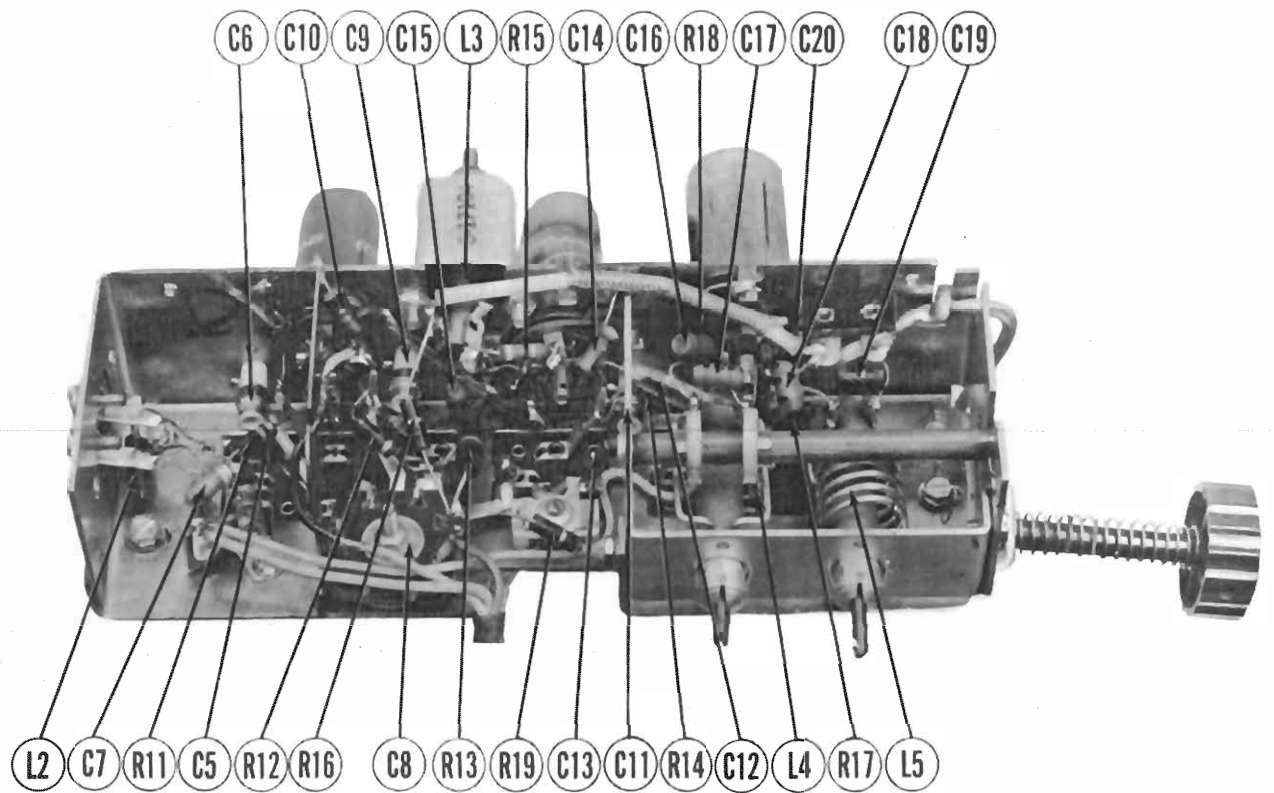
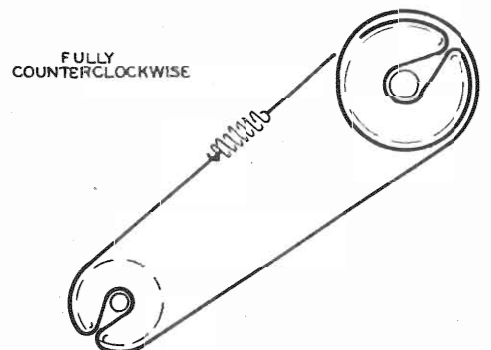


FIG.3



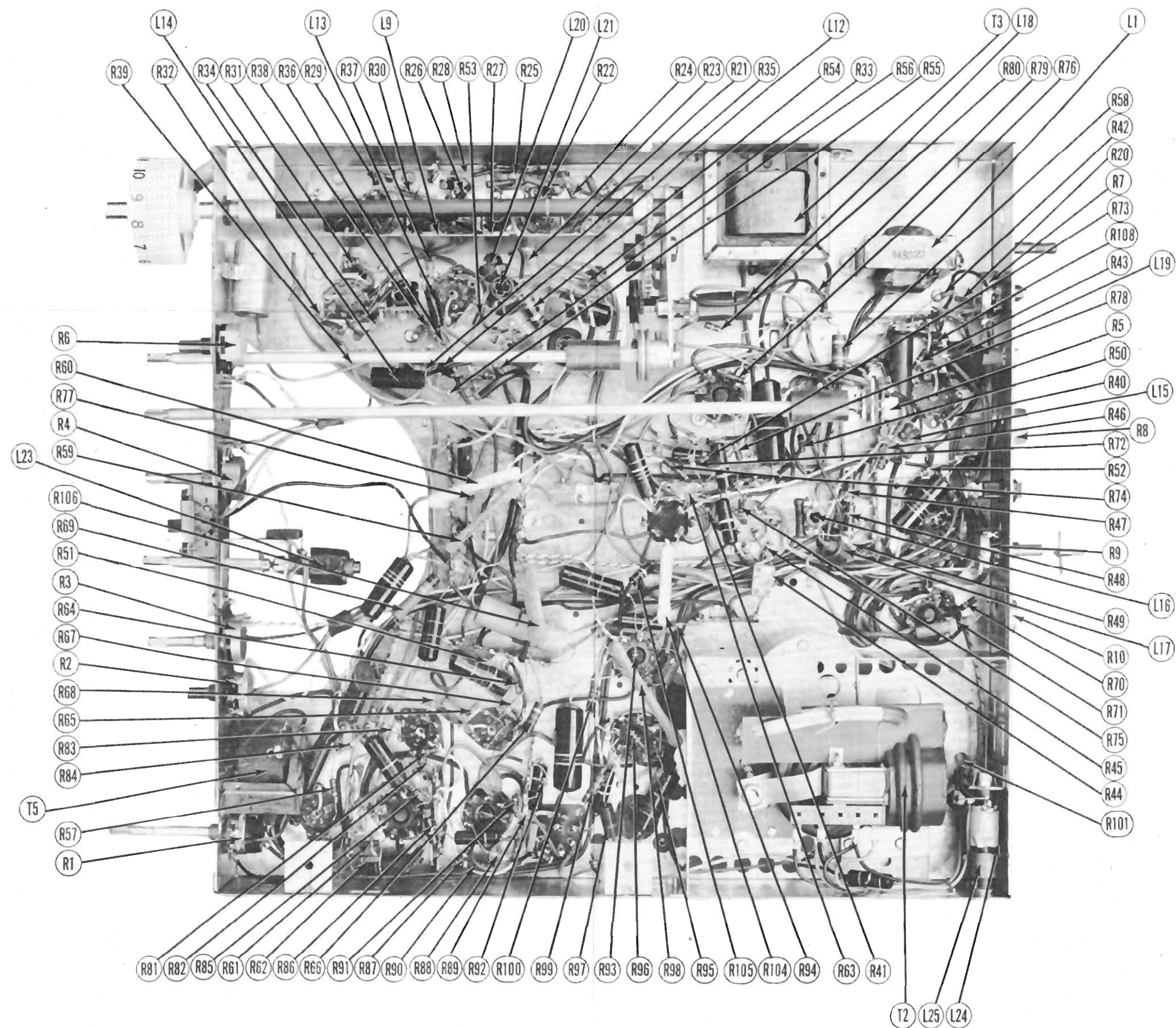
RF TUNER
DISASSEMBLY INSTRUCTIONS

1. Remove seven push-on type control knobs.
 2. Remove five wood screws holding rear cover in place. Remove rear cover.
 3. Disconnect built-in antenna.
 4. Remove antenna terminal strip.
 5. Disconnect speaker leads.
 6. Disconnect ground lead.
 7. Remove four 3/8" hex head bolts from chassis. Remove chassis.
 8. Remove four 3/8" hex nut from speaker. Remove speaker.
- FOR PICTURE TUBE REMOVAL FOLLOW INSTRUCTIONS ABOVE.



FINE TUNING DIAL CORD STRINGING

ZENITH MODELS H2226R, H2227E, R,
H2250R, H2255E(Ch. 22H20)



CHASSIS BOTTOM VIEW-RESISTOR AND INDUCTOR IDENTIFICATION

ZENITH MODELS H2226R, H2227E, R,
H2250R (Ch. 22H20)

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA			NOTES
		ZENITH PART No.	STANDARD REPLACEMENT	RMA BASE TYPE	
V1	RF Amp.	6CB6	6CB6	6CK	
V2	Mixer	6CB6	6CB6	6CK	
V3	Oscillator	6C4	6C4	6BG	
V4	1st Video IF	6AU6	6AU6	7BK	
V5	2nd Video IF	6AU6	6AU6	7BK	
V6	3rd Video IF	6AU6	6AU6	7BK	
V7	4th Video IF	6AU6	6AU6	7BK	
V8	Noise Limiter-Sound IF Amp.	12AT7	12AT7	9A	
V9	AGC Amp.-Hor. AFC	6SN7GT	6SN7GT	8BD	
V10	Video Amp.	12AU7	12AU7	9A	
V11	FM Det.-AF Amp.	6BN6	6BN6	7DF	
V12	Audio Output	6BF5	6BF5	7BT	
V13	Synch. Clipper	6BN6	6BN6	7DF	
V14	Vert. Mult.-Vert. Amp.	6BL7GT	6BL7GT	6BT	
V15	Hor. Phase Det.	6AL5	6AL5	6BT	
V16	Hor. Osc.-Hor. Disch.	6SN7GT	6SN7GT	8BD	
V17	Hor. Output	6BQ6GT	6BQ6GT	5BT	
V18	Damper	6W4GT	6W4GT	4CG	
V19	HV Rect.	1X2	1X2	7CB	
V20	LV Rect.	5U4G	5U4G	5T	
V21	LV Rect.	5Y3GT	5Y3GT	5T	
V22	Picture Tube	12UP4B	12UP4B	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
		ZENITH PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	
C1A	15 475	22-2122	AF33X16GB8		UPT417	▲ Filter ▲ Vert. MV Dec.
B	15 475					▲ Filter
C	80 300					V. Amp. Cath.
D	40 50	22-2224	AFH84J4E4A		UPT42245	▲ Filter
C2A	40 450					▲ Filter
B	20 450					▲ Filter
C	20 200					▲ Filter
D	20 25					Output Cathode
C3A	20 475	22-2223	AF4X8G20B		UPT422	▲ Vert. Output Dec.
B	40 300					▲ Filter
C	100 50					V. Amp. Cath.
D	80 25					Noise Limiter Dec.
C4	10 250	22-2154	PR250/12	TCZ-4.7	BR1025	Fixed Padder
C5	5	22-2050	SINPO			Variable Padder
C6	1-3.5	22-2093				AGC Filter
C7	470	22-2219	SI470	D6-471		RF Decoupling
C8A	600	22-82				RF Bypass
B	475	22-69				Variable Trimmer
C9	1-3.5	22-2093				RF Fil. Bypass
C10	470	22-2219				Variable Trimmer
C11	1-3.5	22-2093				Osc. Coupling
C12	2.5	22-1891				Osc. Coupling
C13	4.5	22-2207				Osc. Coupling
C14	500	22-2216	SI500	D6-501		Mixer Screen Dec.
C15	470	22-2219	SI470	D6-471		Mixer Screen Byp.
C16	47	22-1876	SI47	D6-470		Osc. Grid Cap.
C17	20	22-2204				Fixed Trimmer
C18	6	22-2051				RF Coupling
C19	26	22-2155				Fixed Trimmer
C20	470	22-2219	SI470	D6-471		Osc. Fil. Bypass
C21	470	22-2217	SI470	D6-471		IF Coupling
C22	470	22-2143	SI470	D6-471		AGC Filter
C23	500	22-2216	SI500	D6-501		1st V. IF Decoup.
C24	470	22-2143	SI470	D6-471		1st V. IF Fil.
C25	470	22-2143	SI470	D6-471		AGC Filter
C26	4000	22-4	BPD-004	DD-502		RF Bypass
C27	500	22-2216	SI500	D6-501		2nd V. IF Decoup.
C28	470	22-2143	SI470	D6-471		AGC Filter
C29	1	22-1777	P288-1	DF-104		AGC Filter
C30	500	22-2216	SI500	D6-501		3rd V. IF Decoup.
C31	4000	22-4	BPD-004	DD-502		RF Bypass
C32	500	22-2216	SI500	D6-501		4th V. IF Dec.
C33	5000	22-4	BPD-005	DD-502		4th V. IF Cath.
C34	7	22-1874	SI6.8NPO	TCZ-6.8		V. Diode Filter
C35	.047	22-1844	P688-047	DF-503		Video Coupling
C36	47	22-1876	SI50NPO	TCZ-47		Fixed Trimmer
C37	.047	22-1844	P688-047	DF-503		Video Coupling
C38	330	22-1645	1468-00035	DF-331		V. Amp. Cathode
C39	20	22-2233	SI20	TCZ-20		Peaking
C40	20	22-2233	SI20	TCZ-20		Peaking
C41	100	22-2234	SI100NPO	TCZ-100		Fixed Trimmer
C42	.047	22-1844	P688-047	DF-503		Video Coupling
C43	10000	22-3	BPD-01	DD-103		S. IF Coupling
C44	50	22-1761	SI50	DF-500		S. IF Coupling
C45	10000	22-3	BPD-01	DD-103		FM Det. Screen
C46	10000	22-3	BPD-01	DD-103		FM Det. Cath.
C47	10	22-2106				Fixed Trimmer
C48	1000	22-2218	SI1000	D6-102		De-emphasis
C49	10000	22-3	BPD-01	DD-103		Audio Coupling
C50	.0047	22-1782	P688-0047	D6-472		Output Plate Bypass
C51	10000	22-3	BPD-01	DD-103		AGC Amp. Grid
C52	150	22-1137	1468-00015	D6-151		Cathode Bypass
C53	.1	22-1810	P288-1	DF-104		Hor. Sweep Coupling
C54	10000	22-3	BPD-01	DD-103		AGC Filter
C55	.047	22-1844	P688-047	DF-503		Synch. Coupling
C56	4000	22-4	BPD-004	DD-402		Synch. Clipper Screen
C57	.047	22-1775	P4888-047	DF-503		Vert. Sync. Coupling
C58	15	22-2166	P288-15	DF-503		Vert. MV Cath.

PARTS LIST AND DESCRIPTIONS

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.		
C59	.0012	600	22-1880	P688-0015	D6-122	PTE6D1	GP2L-0012	6TM-D15	Vert. MV Grid	
C60	.1	600	22-1841	P688-1	DF-104	PTE6P1		6TM-P1	Vert. Sweep Coupling	
C61	.015	600	22-2264	P688-015		PTE6S15		6TM-S15	Vert. Sweep Coupling	
C62	.001	600	22-2128	P688-001	D6-102	PTE6D1	GP2L-001	6TM-D1	Vert. Feedback	
C63	.0022	600	22-1814	P688-0022	D6-222	PTE6D2	GP2M-0022	6TM-D22	Voltage Divider	
C64	100	500	22-365	1468-0001	D6-101	5W5T1	GP1K-100	1FM-31	Hor. Sync. Coupling	
C65	130	500	22-2162		TCZ-130		NPO-334-130		AFC Filter	
C66	.022	200	22-2071	1468-022	DF-203	PTE4S2		4TM-S22	AFC Filter	
C67	1000		22-2112	SI1000	D6-102	1W5D1	GP2L-001	29C21	AFC Filter	
C68	.1	200	22-1777	P288-1	DF-104	PTE4P1		2TM-P1	AFC Filter	
C69	470	500	22-1138	1468-0005	D6-471	5W5T5	GP2K-470	1FM-35	AFC Coupling	
C70	.0022	600	22-1845	P688-0022	D6-222	PTE6D2	GP2M-0022	6TM-D22	Hor. Osc. Grid Cap.	
C71	1000	500	22-2163	1464-001		IR5D1		MS-21	Fixed Trimmer	
C72	33		22-2168	SI33	D6-330	5W5Q3	GP1K-33	19C24	Hor. Sweep Coupling	
C73	150	500	22-470	1468-00015	D6-151	5W5T15	GP2K-150	1FM-315	Differentiator Net.	
C74	.01	400	22-1846	P488-01	D6-103	PTE4S1	811-01	4TM-S1	Hor. Sweep Coupling	
C75	680	500	22-2034	SI680	D6-681	1W5T7	GP2K-680	MS-37	Hor. Discharge	
C76	.0022	600	22-1814	P688-0022	D6-222	PTE6D2	GP2M-0022	6TM-D22	Voltage Divider	
C77	.001	1000	22-1851	P1088-001		PTE16D1		MB-D1	Hor. Sweep Coupling	
C78	.047	600	22-1834	P688-047	DF-503	PTE6S5		6TM-S47	Hor. Output Screen	
C79	.47	200	22-2146	P288-47		GTE2P5		2TM-P47	Hor. Output Cath.	
C80	.001	600	22-2128	P688-001	D6-102	PTE6D1	GP2L-001	6TM-D1	Hor. Output Screen	
C81	.0047	600	22-1782	P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	Fixed Trimmer	
C82	.047	400	22-1775	P488-047		PTE4S5		4TM-S47	Damper Filter	
C83	.1	400	22-2061	P488-1		PTE4P1		4TM-P1	Damper Filter	
C84	.47	200	22-2098	P288-47		GTE2P5		2TM-P47	Hor. Sweep Coupling	
C85	500	20000	22-2120	HV20C	TV3-502				HV Filter	
C86	.0047	600	22-1782	P688-0047	D6-472	PTE6D5	GP2M-0047	6TM-D47	Line Filter	

CONTROLS

ITEM No.	RATING	REPLACEMENT DATA				INSTALLATION NOTES
		ZENITH PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	
RIA	500KΩ	63-2125	Q13-133	AG-60-Z	BSK-60-S	Volume control
B	Shaft	Not Req.	Not Req.	KSS-3	Not Req.	Attach to RIA per instructions
C	Switch	Not Req.	Not Req.	SWB	Not Req.	Attach to RIA per instructions
R2A	5000Ω	63-1674	Q11-114	AG-19-S	AN-10	Vert. linearity control
B	Shaft	Not Req.	RQ	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		Attach to R3A per instructions
R4A	200KΩ	63-2127		AG-52-S	SB-221	Vert. hold control
B	Shaft	Not Req.		KSS-3		Attach to R4A per instructions
R5	150KΩ	63-2133			SBT-217	Contrast control-tapped at 100KΩ and 125KΩ
R6	7.5 Meg.	63-2110			SB-219	Vert. size control
R7A	25KΩ	63-2153	Q11-120	AG-40-S	AN-26	AGC Delay control
B	Shaft	Not Req.	RQ	FKS-1/4	AK-1	Attach to R7A per instructions
R8	500Ω	63-2050	Q11-120	AG-49-S	AN-26	Buzz control-min. resistance of 100Ω
R9A	25KΩ	63-1675		FKS-1/4	AK-1	Horiz. drive control
B	Shaft	Not Req.				Attach to R9A per instructions
R10	4000Ω	63-1690				Vert. hold range control-min. resistance on 350Ω

RESISTORS

ITEM No.	RATING	REPLACEMENT DATA		IDENTIFICATION CODES
		ZENITH PART No.	IRC PART No.	
ALL RESISTORS ARE ± 10% UNLESS OTHERWISE STATED.				
R11	100KΩ	63-1869		RF Amp. Grid
R12	10KΩ	63-1827		RF Amp. Plate
R13	1500Ω	63-1967	BTA-1500	RF Amp. Decoupling
R14	3.3 Meg. 20%	63-1933		Mixer Grid
R15	47KΩ	63-1855		Mixer Screen
R16	1000Ω	63-1785	BTS-1000	Mixer Decoupling
R17	100 20%	63-1702		Parasitic Suppressor
R18	15KΩ	63-1835		Osc. Grid
R19	1000Ω	63-1785	BTS-1000	Osc. Plate Decoupling
R20	100Ω 20%	63-1744	BTS-100	Decoupling
R21	33KΩ	63-1849		1st Video IF Transformer Shunt
R22	100Ω	63-1743	BTS-100	1st Video IF Amp. Cathode
R23	470Ω 20%	63-1772	BTS-470	1st Video IF Amp. Decoupling
R24	1000Ω	63-1785	BTS-1000	AGC Network
R25	470Ω 20%	63-1772	BTS-470	AGC Network
R26	100Ω	63-1743	BTS-100	2nd Video IF Amp. Cathode
R27	470Ω 20%	63-1772	BTS-470	2nd Video IF Amp. Decoupling
R28	470Ω 20%	63-1772	BTS-470	AGC Network
R29	100Ω	63-1743	BTS-100	3rd Video IF Amp. Cathode
R30	470Ω 20%	63-1772	BTS-470	3rd Video IF Amp. Decoupling
R31	47KΩ	63-1855		4th Video IF Transformer Shunt
R32	180Ω	63-1754	BTS-180	4th Video IF Amp. Cathode
R33	220KΩ 20%	63-1884		AGC Network
R34	470Ω 20%	63-1772	BTS-470	4th Video IF Amp. Decoupling
R35	68KΩ	63-1862	BTS-68K	Video Peaking Coil Shunt
R36	4700Ω	63-1813	BTS-4700	Noise Limiter Grid
R37	820Ω	63-1782	BTS-820	Noise Limiter Cathode
R38	2200Ω	63-1799	BTS-2200	Noise Limiter Plate
R39	3300Ω	63-1806	BTS-3300	Noise Limiter Plate Decoupling
R40	2.2 Meg. 20%	63-1926	BTS-2.2 Meg.	Video Amp. Grid
R41	820Ω	63-1782	BTS-820	Video Amp. Cathode
R42	3300Ω	63-1806	BTS-3300	Video Amp. Plate
R43	1 Meg.	63-1912	BTS-1 Meg.	Video Amp. Grid
R44	470Ω	63-1771	BTS-470	Video Amp. Cathode
R45	390Ω	63-1768	BTS-390	Video Amp. Cathode
R46	22KΩ	63-1841	BTS-22K	Video Peaking Coil Shunt
R47	4700Ω	63-1943	BTA-4700	Video Amp. Plate
R48	4700Ω	63-1943	BTA-4700	Video Amp. Plate
R49	33KΩ	63-1848	BTS-33K	Video Peaking Coil Shunt
R50	27KΩ	63-1843	BTS-27K	Voltage Divider
R51	330KΩ	63-1890	BTS-330K	Voltage Divider
R52	220KΩ	63-1883	BTS-220K	Voltage Divider
R53	1 Meg. 20%	63-1912		Sound IF Amp. Grid
R54	6800Ω	63-1571	BTB-6800	FM Det. Screen