

* FOCUS POINTS

CABINET-REAR VIEW

DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

1. Remove seven screws holding cabinet back. Remove all knobs from front and side of cabinet.
2. Remove picture-tube socket. Disconnect deflection and convergence yoke plugs, volume control plug, tuner lead, antenna leads, HV anode lead, degaussing coil leads, speaker leads, and grounding spring.
3. Remove shielded cable plug from IF strip. Remove convergence board.
4. Remove five screws holding chassis and two screws holding control panel.
5. Remove four screws holding tuner assembly. Remove purity ring, convergence magnets, and yoke. Remove chassis from the cabinet.

PICTURE TUBE REMOVAL

1. Follow "Chassis Removal" instructions. Remove degaussing coil and picture-tube shield.
2. Remove four screws holding picture-tube mounting bracket and remove picture tube.

TROUBLESHOOTING CHECK CHART

The following chart lists component failures most likely to produce the indicated symptoms.

SWEEP

No raster, has sound V7, V8, V9, V10, V13
No vert. deflection V6
Poor vert. lin. or foldover V6
Poor horiz. lin. or foldover V8, V9
Narrow picture X1, X2, V8, V9, V10
Vert. off freq. V6
Horiz. off freq. X9, X10, V7

PICTURE or SOUND

No pic, no sound, no raster F1, X1, X2
No pic, no sound, has raster Q1, Q2, Q3, V202
No pic, no sound, has snow V201, V202
No pic, has sound, no raster V1, Q4, V2, X5
No pic, has sound, has raster V2, V13
Has pic, no sound V3, V4
Overloaded picture V5
Low or excessive brightness Q7
Poor focus V13

COLOR (B/W operating normally)

No color X12, X13, X14, Q8, V12, V1, Q9.
Weak color X12, X13, X14, Q8, V12
No color sync V12, X14, Q8, X12, X13
No blue ICI, V11
No red ICI, V11
Incorrect hue (tint) X14, ICI

SYNC

No vert. sync V6
No horiz. sync X9, X10, V7
No vert. or horiz. sync V5

RASTER

Yellow - no blue V11, V13
Cyan - no red V11, V13
Magenta - no green V11, V13

SET 1067 FOLDER 2

ZENITH
CHASSIS 12A10C15

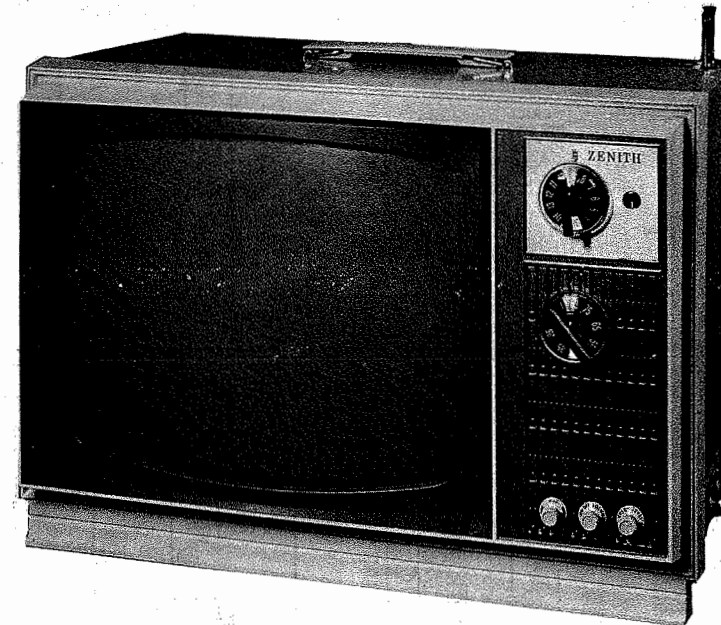
PHOTOFACT® Folder



For Supplier Address See PHOTOFACT Index

ZENITH
CHASSIS 12A10C15

COLOR TV



MODEL A3510L1

MODEL	CHASSIS
A3510C/C1/L/L1	12A10C15
A3520P/P1/W/W1	12A10C15
A3710J/J1/L/L1	12A10C15
A3720P/P1/W/W1	12A10C15
T2922W/W1	12A10C15
T2926W/W1	12A10C15

SAFETY PRECAUTIONS

- Make sure line voltage does not exceed rating of set.
- Beware of shock from high voltage or AC line. Discharge high voltage to HV cage only.
- Check high-voltage regulation and adjust to correct value.
- Use extreme care when handling picture tube. Do not bump, scratch, or exert undue strain.
- Be sure shields and rear cover are in place and secure.

Caution: One side of AC line connected to chassis. Use isolation transformer for servicing. Make certain isolation networks are in place and exposed metal is safe to touch before returning set to customer.

SERVICING IN THE FIELD

CRT - IMPLOSION PROTECTION AND CLEANING

Implosion protection is an integral part of the picture tube, cleaning accomplished without CRT removal.

FUSE/FUSE DEVICE

Two fuses, 340ma and 2A, are used for low-voltage power supply protection. (See photo "Cabinet - Rear View" for location.)

Three 2 1/2" fuse wires are used for filament protection. (See "Chassis - Bottom View" photo for location.)

VHF TUNER

The fine tuning mechanically engages oscillator slug for adjustment (one slug for each channel). It may be necessary to adjust overall oscillator trimmer for best results.

HORIZONTAL OSCILLATOR

Adjustment of the horizontal hold is accomplished by the proper setting of the horizontal oscillator coil (hold). (See photo "Cabinet - Rear View" for location.)

HORIZONTAL OUTPUT CURRENT/HIGH VOLTAGE

For adjustment of the horizontal output cathode current and the high voltage, refer to "Miscellaneous Adjustments".

FOCUS

The focus may be varied by connecting the lead from pin 9 of the CRT to various voltage points. (See photo "Cabinet - Rear View" for location.)

AGC

The AGC may be varied by means of two AGC controls. (See photo "Cabinet - Rear View" for location.)

BUZZ

To eliminate intercarrier buzz, adjust the buzz control. (See photo "Cabinet - Rear View" for location.)

PINCUSHION CORRECTION

Refer to "Miscellaneous Adjustments".

REMEMBER TO ASK— "What else needs fixing?"

HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206



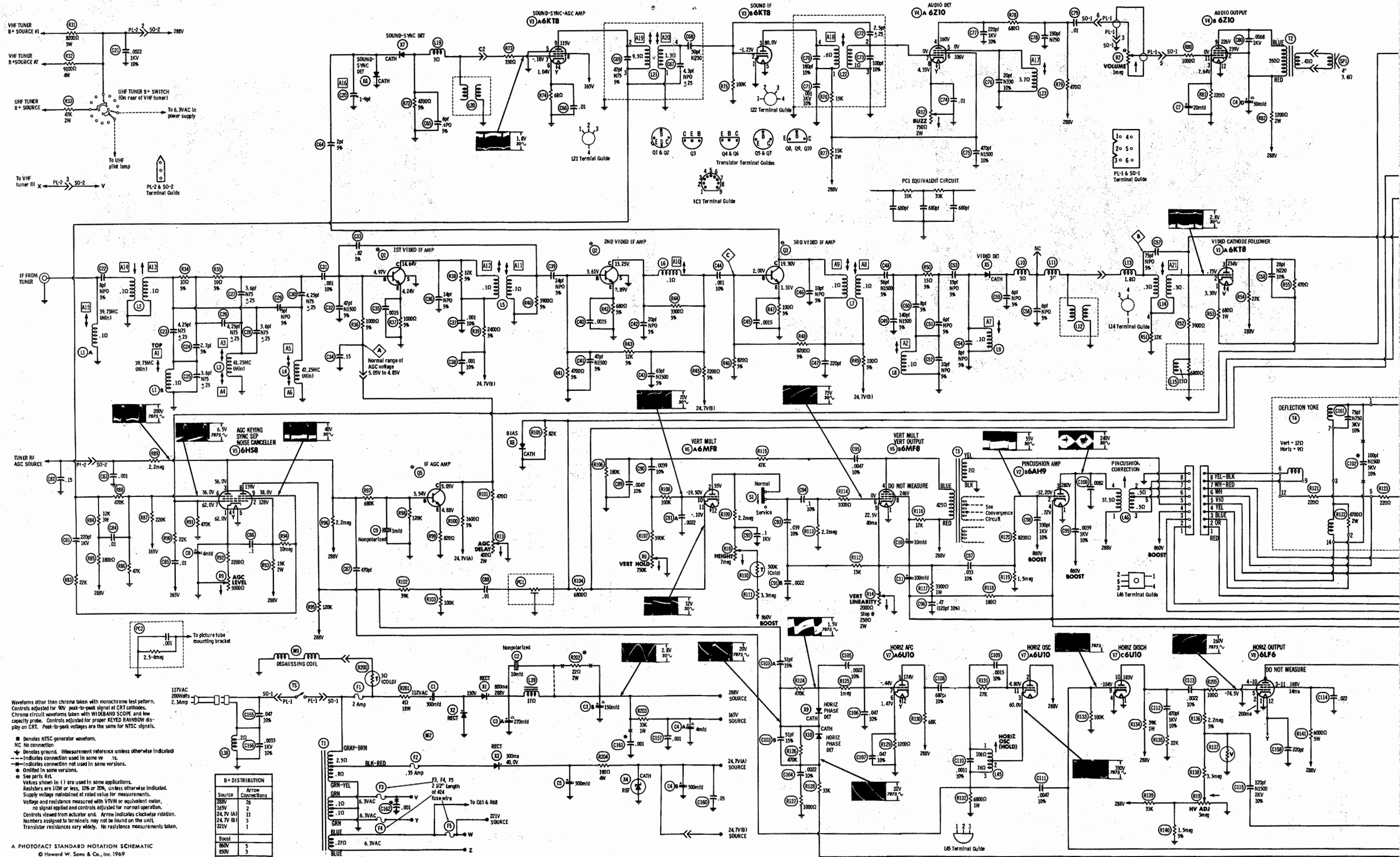
The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed. UB405

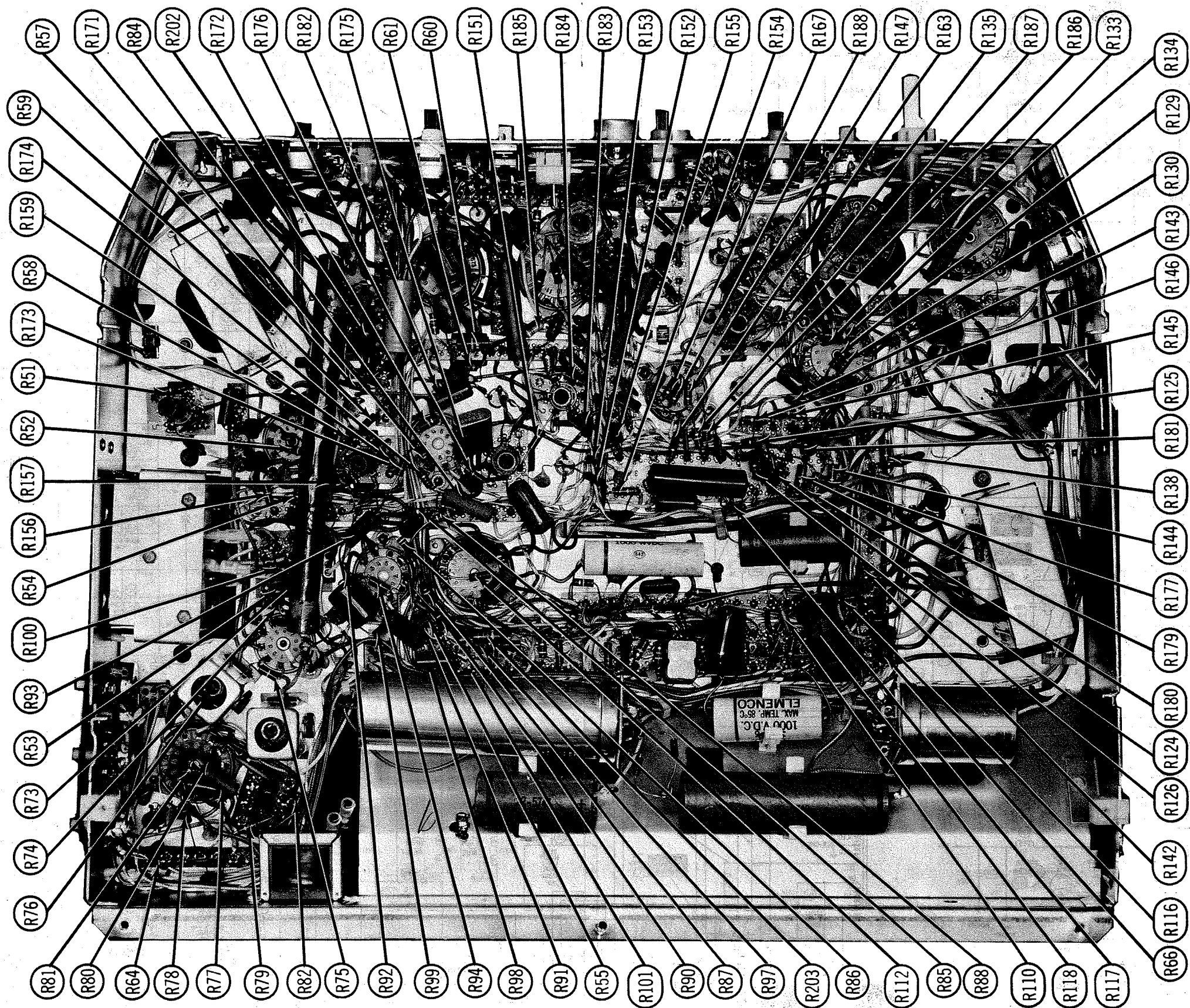
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DATE 11-69 SET 1067 FOLDER 2

ZENITH
CHASSIS 12A10C15

SET 1067 FOLDER 2

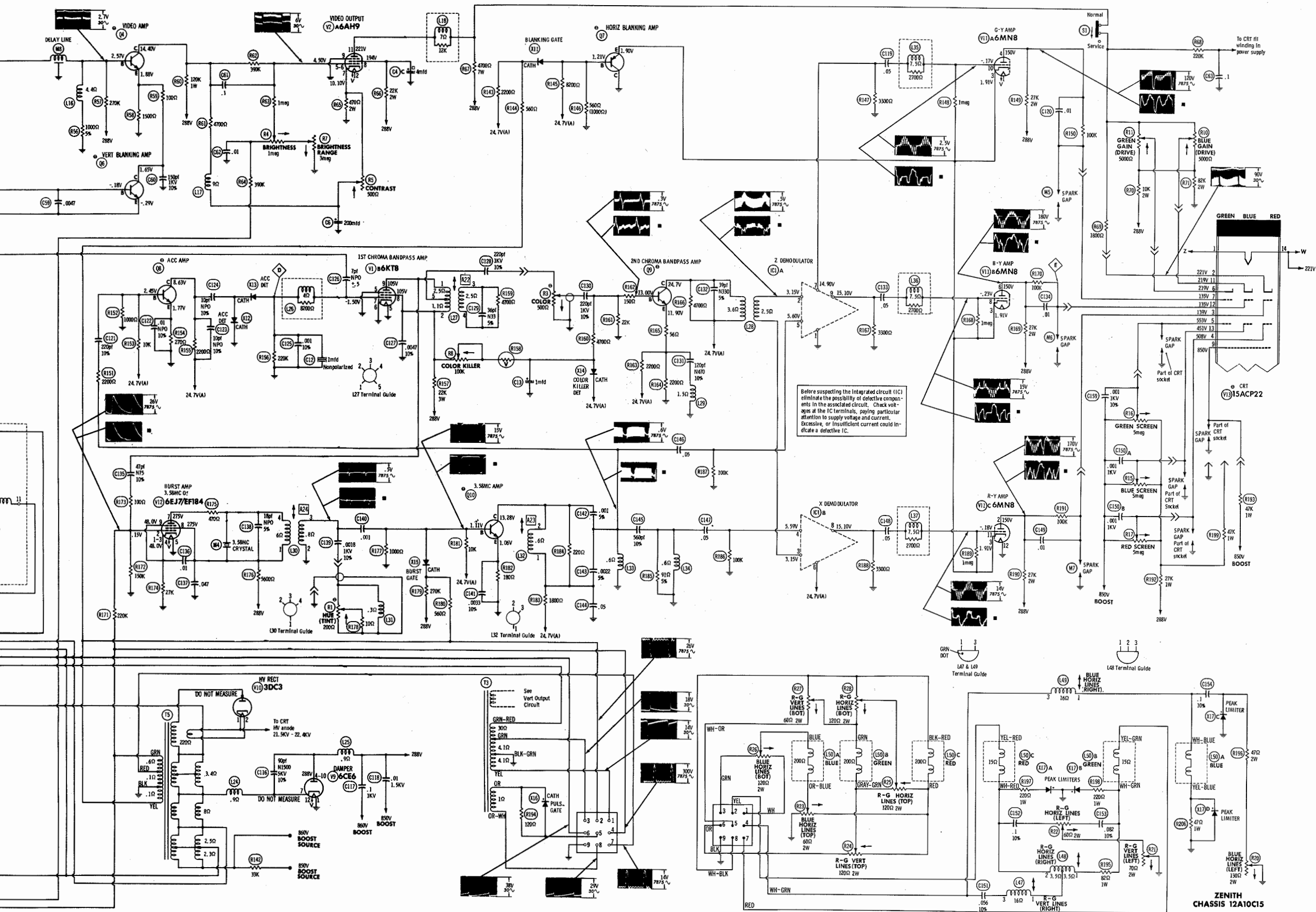




CHASSIS - BOTTOM VIEW

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CHASSIS 12A10C15

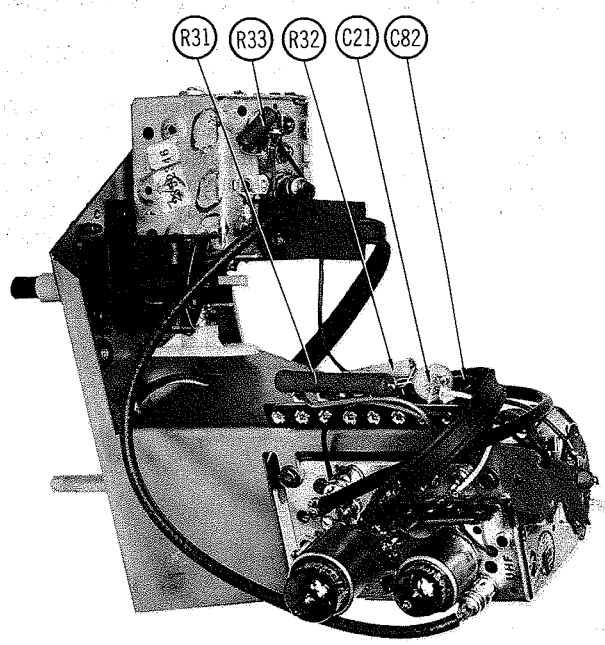
FOLDER 2



RESISTANCE MEASUREMENTS

ITEM	TUBE	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8	PIN 9	PIN 10	PIN 11	PIN 12	TOP CAP
V1	6KT8	174Ω	1194Ω *	27K †	FIL	FIL	0Ω	217K *	22K †	22K †				
V2	6AH9	FIL	1.6meg	54Ω †	35.3Ω	337K	337K	470Ω	21K †	0Ω	TP	3500Ω †	FIL	
V3	6KT8	0Ω	112K	30K †	FIL	FIL	68Ω	4700Ω	33K †	13K †				
V4	6Z10	FIL	1220Ω †	220Ω	470K †	4.44Ω	15K †	1.26Ω	427Ω	1600Ω †	TP	250K	FIL	
V5	6HS8	6000Ω	15.6K †	593K	FIL	FIL	36K	209K	66.7K	10meg †				
V6	6MF8	FIL	12.3meg †	TP	417Ω †	TP	2.2meg	NC	12K †	533Ω	789K	90K *	FIL	
V7	6U10	FIL	15.8Ω †	6980Ω	0Ω	68K †	1200Ω	1.89meg	NC	94K	39K †	34K	FIL	
V8	6LF6	FIL	0Ω	6000Ω †	0Ω	6.4meg	NP	TP	0Ω	NC	NC	6000Ω †	FIL	4.2Ω †
V9	6CG3	FIL	NC	NC	NC	NC	NC	1.6meg	NC	NC	16.9Ω †	NC	FIL	
V10	3DC3	PINS 1 THRU 8 HAVE INFINITE RESISTANCE												231Ω †
V11	6MN8	FIL	27K †	100Ω *	27K †	NC	27K †	NC	1.8meg *	NC	1.8meg *	1.8meg *	FIL	
V12	6EJ7	27K	92K	NC	FIL	FIL	0Ω	5800Ω †	5600Ω †	27K				
V13	15ACP22	FIL	5320Ω †	123K †	1.75meg †	1.36meg †	3510Ω †	123K †	NC	82K †	NC	3510Ω †	125K †	
												PIN 13 *	PIN 14	
												1.93meg †	FIL	
V201	6HA5	1.9meg	0Ω	FIL	FIL	10K †	0Ω	0Ω						
V202	6GJ7	0Ω	193K	0Ω	FIL	FIL	8200Ω †	33K †	27K †	68K †				

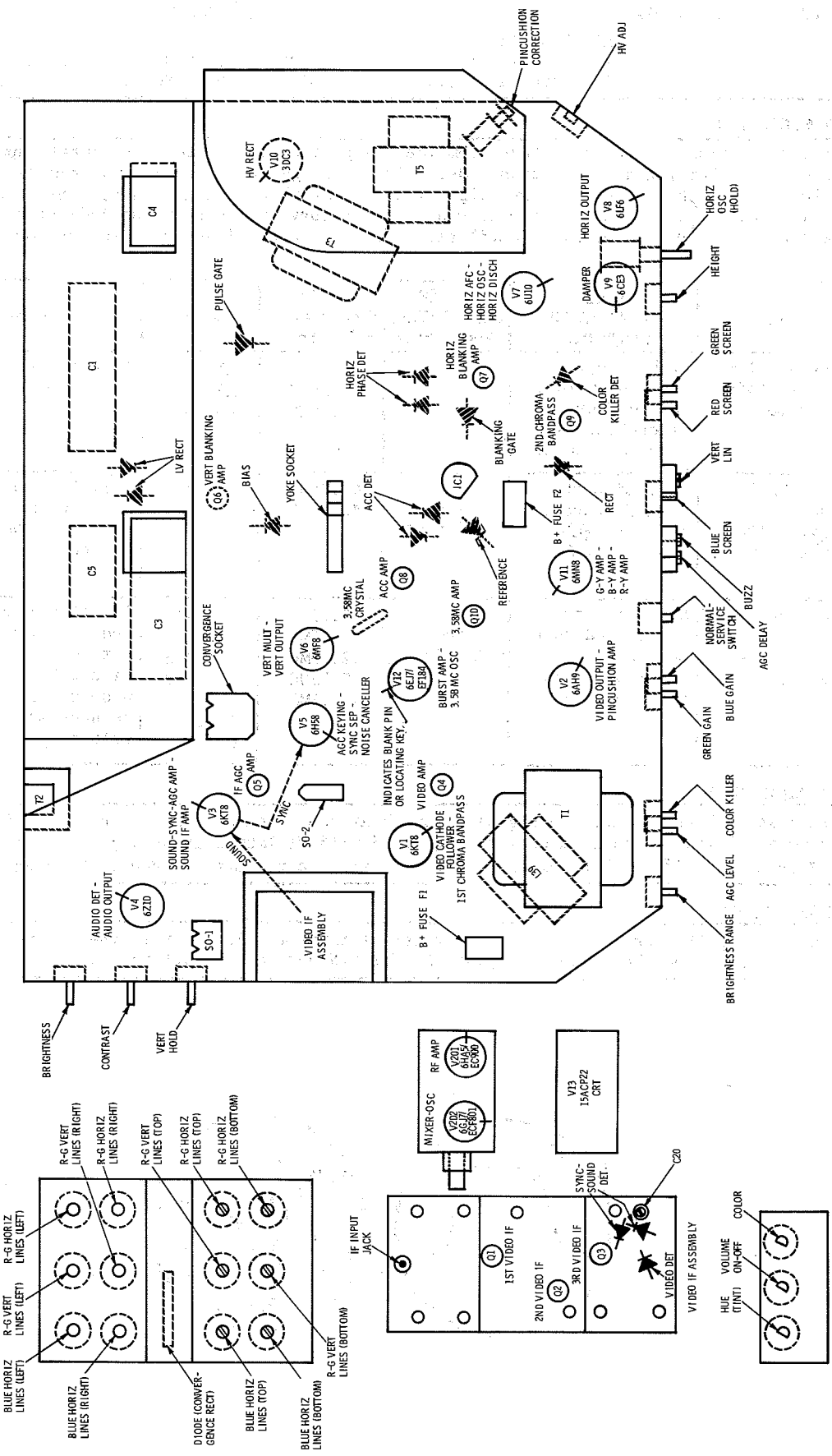
* READING DEPENDS ON POLARITY OF METER CONNECTIONS.
NC NO CONNECTION TP TIE POINT † MEASURED FROM CATHODE OF X1.
‡ MEASURED FROM PIN 7 OF V9.



TUNER ASSY.

TUBE PLACEMENT CHART

TOP VIEW



ZENITH CHASSIS 12A10C15

FOLDER 2

TV ALIGNMENT INSTRUCTIONS

Use an isolation transformer, or observe polarity, and maintain line voltage at 117VAC. Allow a 20-minute warm-up period for the receiver and test equipment.

Suggested Alignment Tools:

	GENERAL CEMENT	WALSCO
A1 thru A16 and Mixer Plate Coil	9296, 9297, 9300	2510, 2546, 2547
A17 thru A21	8606, 8606L, 8869	2543, 2544, 2588

VIDEO IF ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection. Use only enough generator output to provide a usable indication. Note: Response may vary slightly from that shown. Connect a variable bias supply to IF AGC line Point A and adjust to obtain a response curve which shows no indication of overload. Disable oscillator section of mixer-oscillator. Set the channel selector to any non-interfering channel.

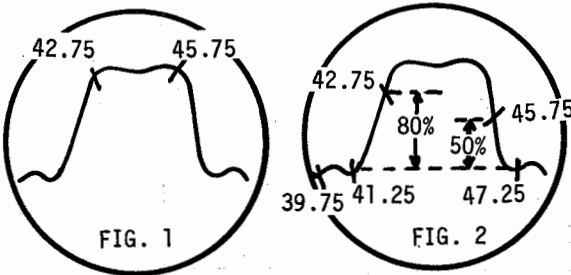
INDICATOR	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	ADJUST	REMARKS
DC probe of VTVM thru 47K to Point B, common to ground.	High side to ungrounded tube shield over Mixer-Osc., low side to ground.		39.75MC 41.25MC 47.25MC	A1 A2,A3,A4 A5,A6	Adjust for MINIMUM.
Vertical input of scope to Point C, low side to ground.	High side thru .001mfd capacitor to Point C, low side to ground.	44MC (10MC Sweep)	42.75MC 45.75MC	A7,A8 A9	Adjust for maximum amplitude and MINIMUM tilt with markers as shown in Figure 1.
Vertical input of scope to Point D, low side to ground.	High side to ungrounded tube shield over Mixer-Osc., low side to ground.	44MC (10MC Sweep)	39.75MC 41.25MC 42.75MC 45.75MC 47.25MC	A10,A11, A12,A13, A14,A15, A16 and Mixer Plate Coil	Adjust for maximum gain and symmetry of response with markers as shown in Figure 2. To obtain a proper response, it may be necessary to slightly retouch A7, A8 and A9.

SOUND IF ALIGNMENT

Tune in a station and reduce the signal strength at the antenna terminals until a hiss is heard in the sound. Align for maximum undistorted sound with MINIMUM buzz by adjusting the buzz control and A17 thru A20. If the hiss disappears during alignment, further reduce the signal strength.

4.5MC TRAP ALIGNMENT

Tune in a strong TV signal and set the contrast at maximum. Adjust the fine tuning until a beat pattern is visible on the screen. Adjust A21 for MINIMUM beat interference.



MISCELLANEOUS ADJUSTMENTS

HORIZONTAL SWEEP ADJUSTMENTS

Connect a VTVM through a high-voltage probe to picture tube anode connector. Tune in a TV station and set all controls for normal operation. Remove the horizontal hold knob. Turn shaft to lock in picture when changing from channel to channel. Reinstall knob with pointer centered between stops.

Set Normal-Service switch to Service. With 117VAC input, adjust the HV Adjust control for 21.5KV at picture tube anode. Adjust Focus, Height, and Vertical Linearity controls.

AGC ADJUSTMENTS

Tune in a strong TV station and advance AGC Level control until instability appears in the picture (pulling, jitter, overload, etc.). Reduce control to the point just below the instability. Tune in a weak TV station without snow. Advance the AGC Delay control until snow appears in the picture. Reduce the control until the snow just disappears from the picture.

COLOR AMPLIFIER AND SYNC ALIGNMENT

Suggested Alignment Tools: A22, A23, A24
GENERAL CEMENT #8686, 8606L, 8869
WALSCO #2543, 2544, 2588

Connect a color bar generator to the antenna terminals and adjust the set for normal operation. Disconnect R159 (4.7K) across L27 secondary. Connect DC probe to VTVM to Point E, low side to ground. Adjust A22 for MINIMUM negative reading. Reconnect R159. Adjust A23 for maximum negative reading.

Set Color Level and Hue controls to mid-range. Connect vertical input of scope to Point E, low side to ground. Adjust A24 for maximum amplitude of the 6th color bar. See Figure A.

COLOR KILLER ADJUSTMENT

Tune in a weak station or reduce the signal at the antenna terminals to obtain a snowy picture. Adjust the color killer control to eliminate the color in the snow. Check with a color signal to make sure the killer is eliminating picture coloring.

PURITY ADJUSTMENTS

Perform Step 1 of "Convergence Adjustments". If the picture tube appears to be magnetized, use a degaussing coil to demagnetize tube and mounting brackets. Turn Blue and Green screens to MINIMUM. Turn Red screen to maximum. Loosen the deflection yoke and move it rearward until it is against the convergence yoke assembly.

Adjust the tabs on the purity magnet and rotate the assembly until a red spot appears at the center of the picture tube. Slide the deflection yoke forward to obtain a uniform red over entire picture-tube face. A low-power microscope is useful to observe the beam landings.

GRAY SCALE ADJUSTMENTS

Tune in a black and white picture or a color picture with the Color control set at MINIMUM. Turn the Red, Blue and Green Screen controls to MINIMUM. Move the Normal-Service switch to the Service position. Advance the screen controls, one at a time, to produce a white line of medium brightness, or to produce Red, Blue and Green lines of equal brightness.

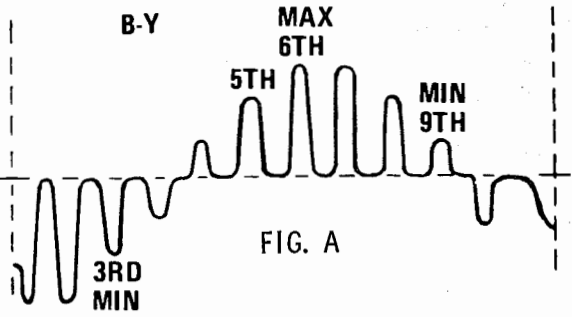
Return the Normal-Service switch to the Normal position. Adjust the Blue and Green Gain controls to eliminate coloring in the light and dark areas of the picture.

Turn Brightness to maximum and Contrast control to midrange. Adjust the Brightness range until the picture blooms (distorts), then reduce the control to the point just below where the picture returns to normal.

The cathode leads of the picture tube are provided with quick-disconnect connectors so that least efficient gun may be connected direct.

DYNAMIC PINCUSHION ADJUSTMENTS

The side pincushion is a fixed correction and no adjustments are provided on this chassis. Top and bottom pincushion is factory adjusted and readjustment is seldom needed. If necessary, top and bottom pincushion may be corrected by adjusting for straight horizontal lines at top and bottom of the screen.

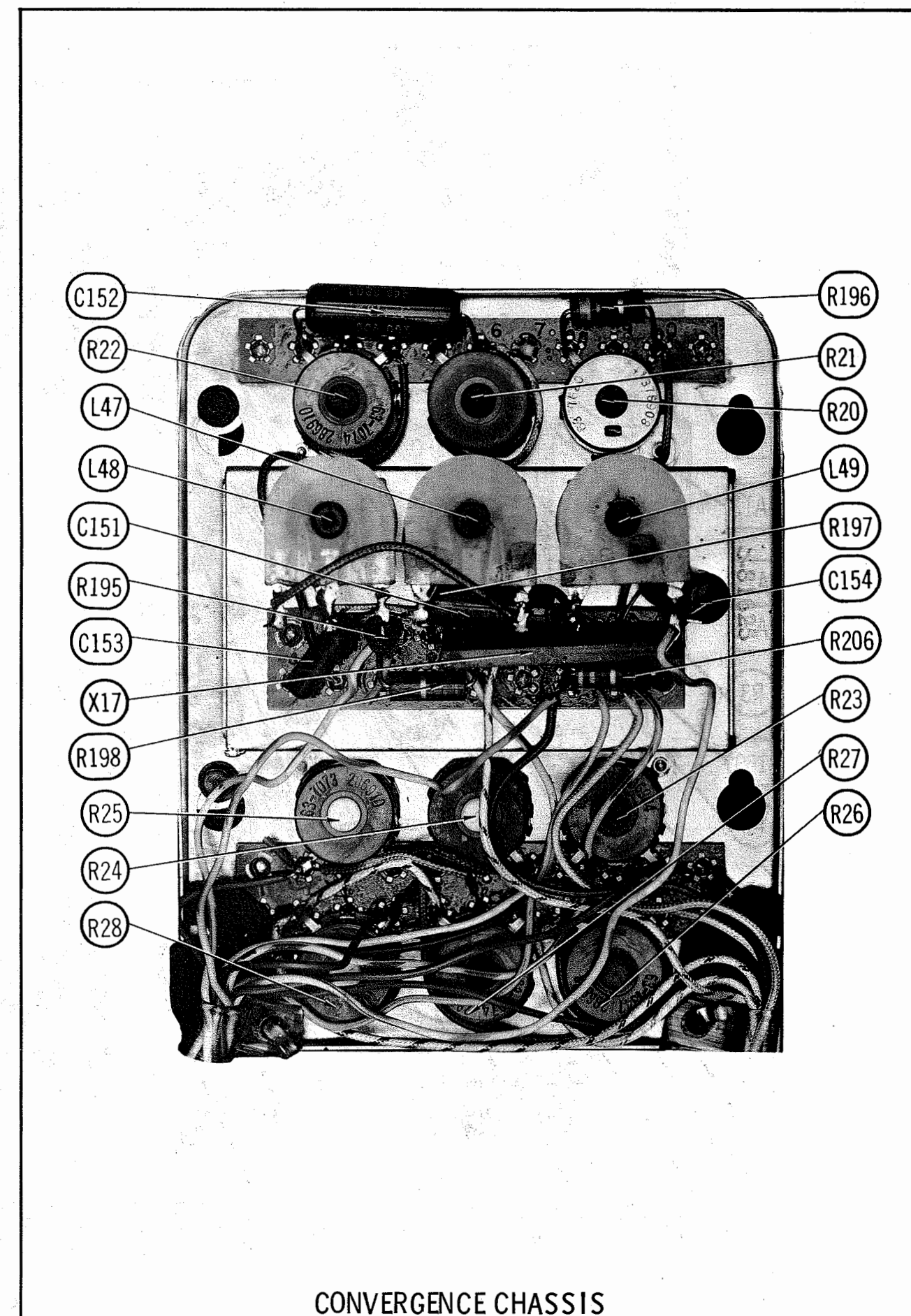
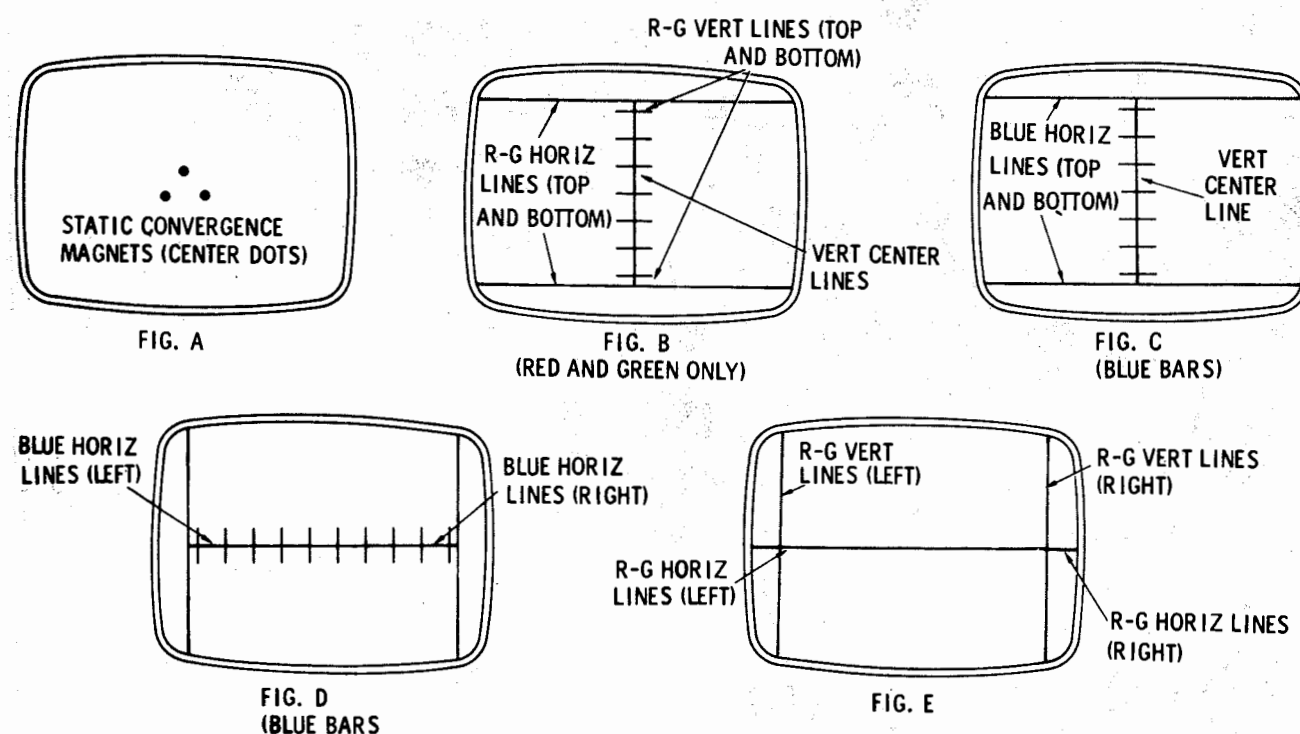


ZENITH CHASSIS 12A10C15

FOLDER 2

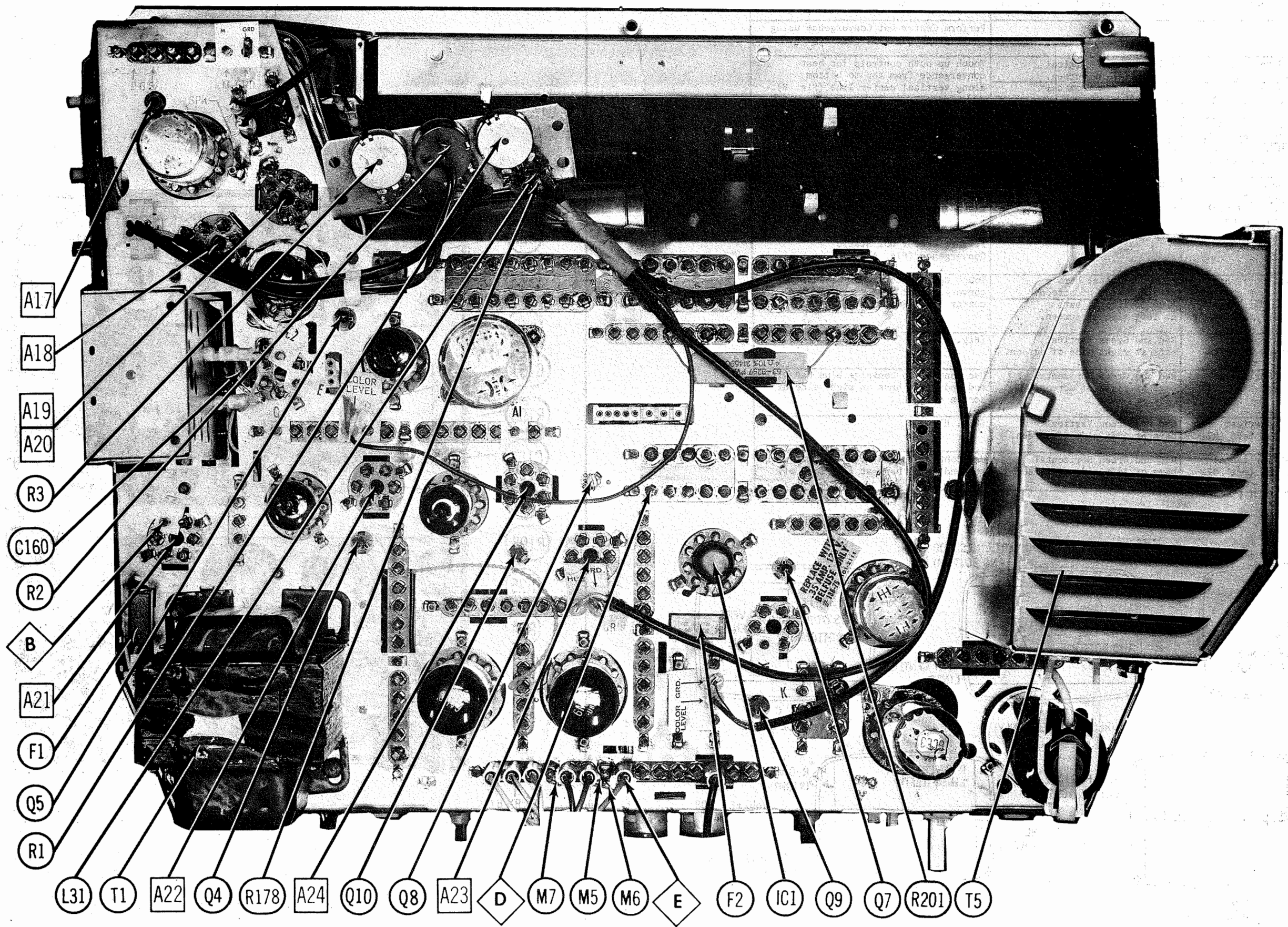
CONVERGENCE ADJUSTMENTS

Step	Control	Use to Converge (or Straighten)	Remarks
1.			Perform Center Dot Convergence using convergence magnets. See Fig. A.
2.	R-G Vertical Lines, Top R24	Red and Green Vertical bars at top of screen.	Touch up both controls for best convergence from top to bottom along vertical center line (Fig. B).
3.	R-G Vertical Lines, Bottom R27	Red and Green Vertical bars at bottom of screen.	
4.	R-G Horizontal Lines, Top R25	Red and Green Horizontal bars at top of screen.	Touch up both controls for best convergence of horizontal bars along vertical center line (Fig. B).
5.	R-G Horizontal Lines, Bottom R28	Red and Green Horizontal bars at bottom of screen.	
6.	Blue Horizontal Lines, Top R23	Blue Horizontal bars at top of screen.	Touch up both controls for best convergence of horizontal bars along vertical center line (Fig. C).
7.	Blue Horizontal Lines, Bottom R26	Blue Horizontal bars at bottom of screen.	
8.			Perform Center Dot Static Convergence (Fig. A).
9.	Blue Horizontal Lines, Right L49	Blue Horizontal bars at right side of screen.	Touch up both controls for best convergence along horizontal center line (Fig. D).
10.	Blue Horizontal Lines, Left R20	Blue Horizontal bars at left side of screen.	
11.	R-G Vertical Lines, Right L47	Red and Green Vertical bars at right side of screen.	(Fig. E)
12.	R-G Horizontal Lines, Right L48	Red and Green Horizontal bars at right of screen.	Use control to converge blue bar with red and green bars on right side of screen (Fig. E).
13.	R-G Vertical Lines, Left R21	Red and Green Vertical bars at left side of screen.	(Fig. E)
14.	R-G Horizontal Lines, Left R22	Red and Green Horizontal bars at left side of screen.	Use control to converge blue bar with red and green bars at left side of screen (Fig. E).

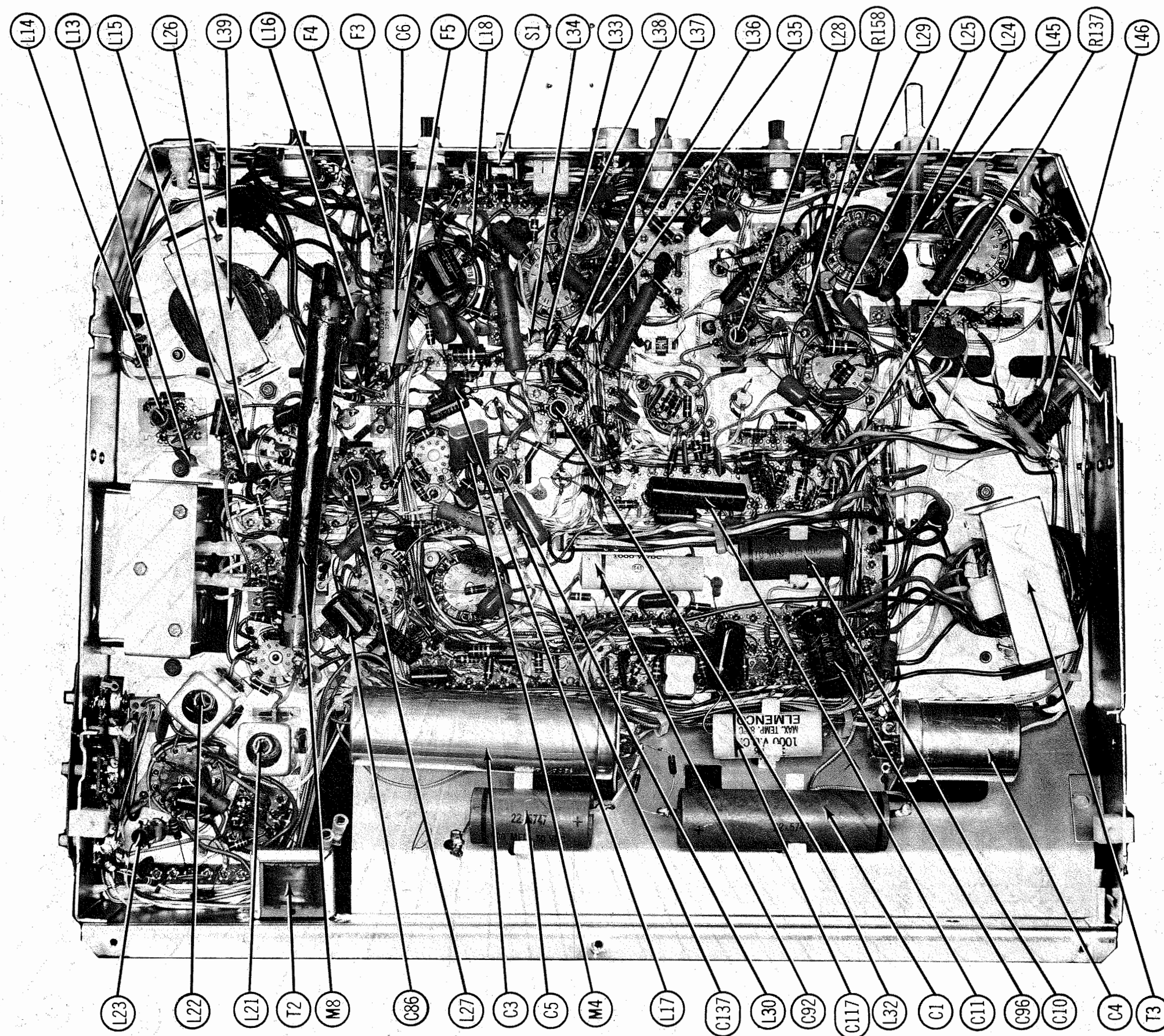


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FOLDER 2



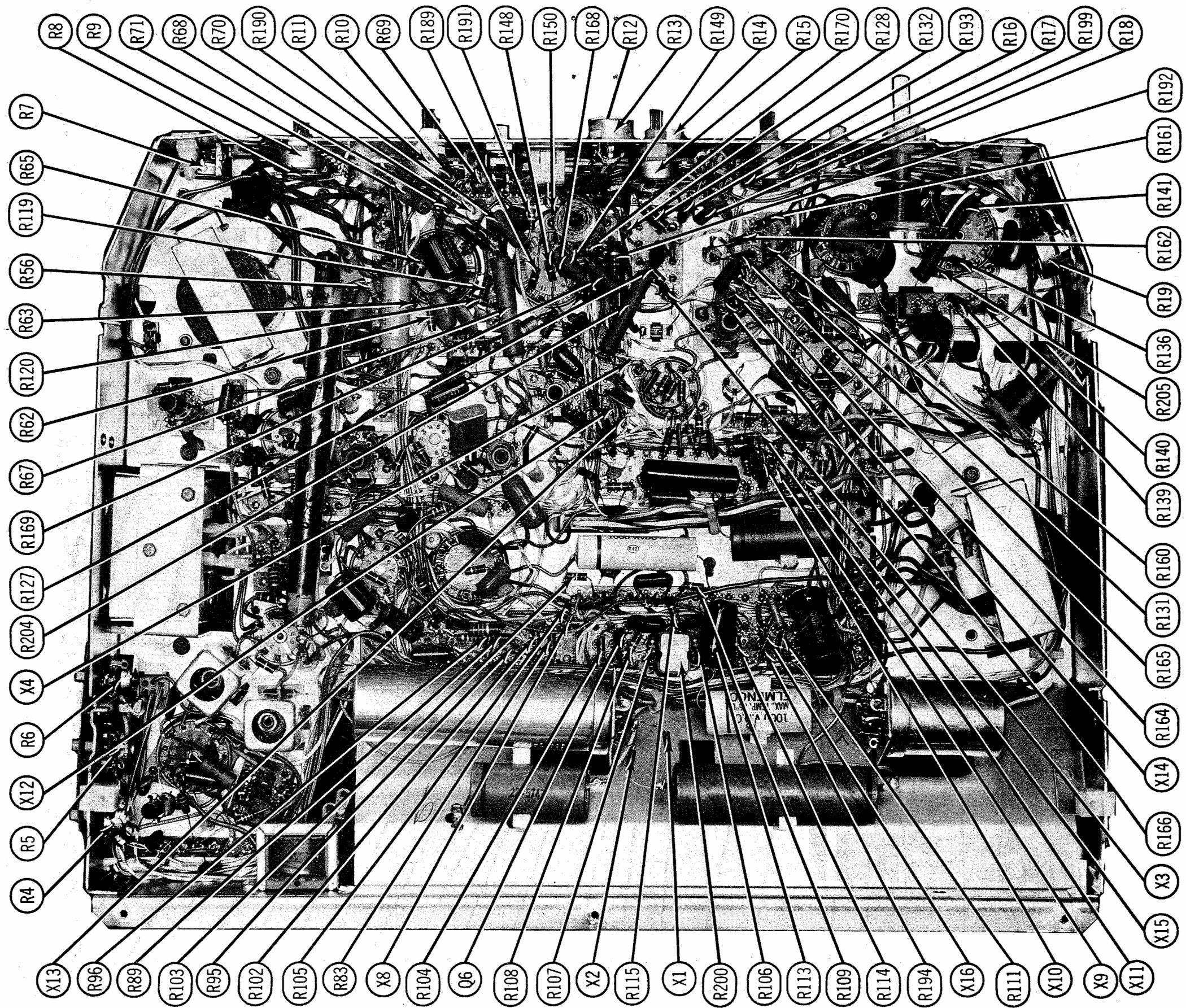
CHASSIS - TOP VIEW



CHASSIS - BOTTOM VIEW

ZENITH
CHASSIS 12A10C15

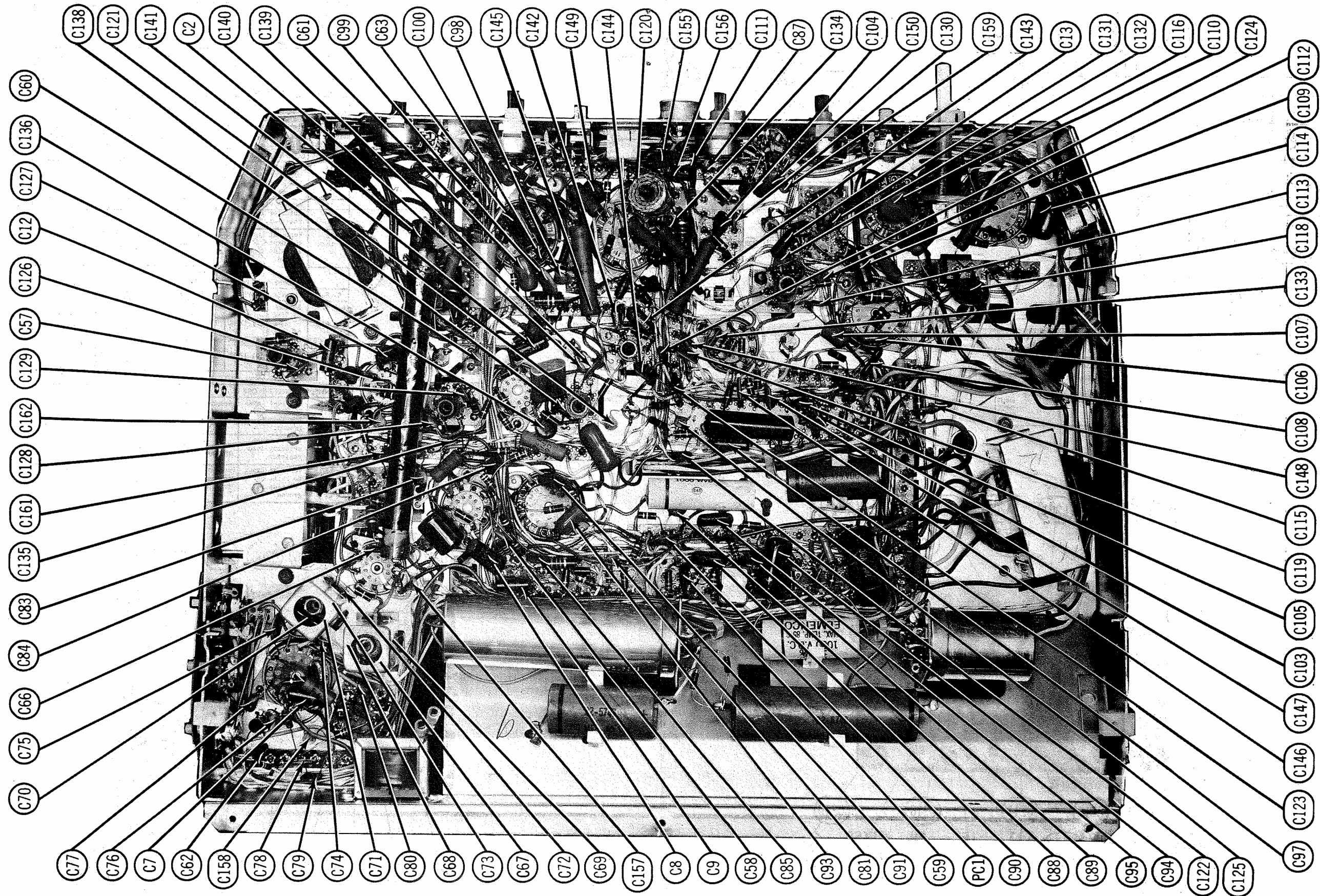
FOLDER 2



CHASSIS - BOTTOM VIEW

ZENITH
CHASSIS 12A10C15

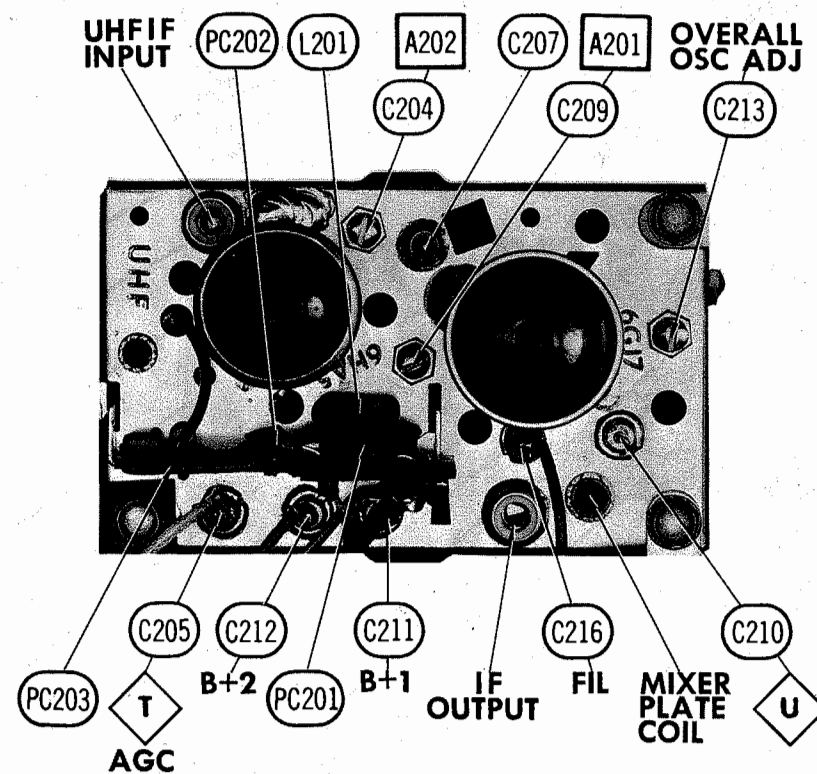
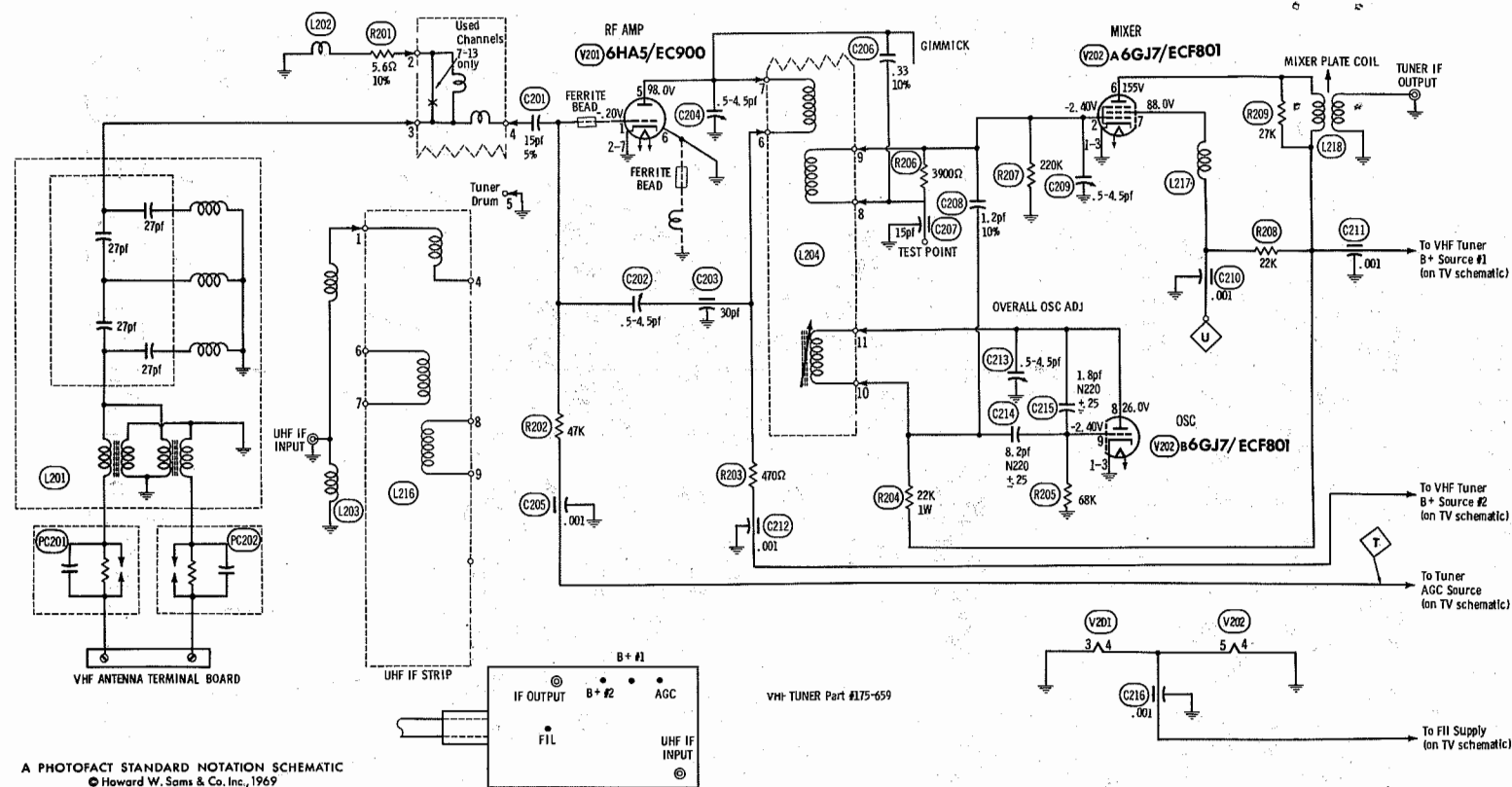
FOLDER 2



CHASSIS - BOTTOM VIEW

ZENITH
CHASSIS 12A10C15

FOLDER 2



VHF TUNER 175-659

VHF TUNER ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools: GENERAL CEMENT WALSCO
A201, A202, A203, Overall Osc. Adjust 8868, 8987, 9089 2531X, 2541, 2587
Mixer Plate Coil 9296, 9297, 9300 2510, 2546, 2547

OSCILLATOR ADJUSTMENTS

The oscillator slug for each channel is preset with the fine tuning control. Adjust the fine tuning for best picture and sound. If necessary, adjust the overall oscillator adjustment. Recheck.

RF AND MIXER ADJUSTMENTS

Connect the sweep generator across antenna terminals with 120-ohm carbon resistor in each lead. Refer to chart below for generator frequencies. Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the scope for horizontal deflection. Use 10MC sweep unless otherwise noted. Connect a variable bias to RF AGC line at Point T. Adjust bias to obtain response curve which shows no overloading.

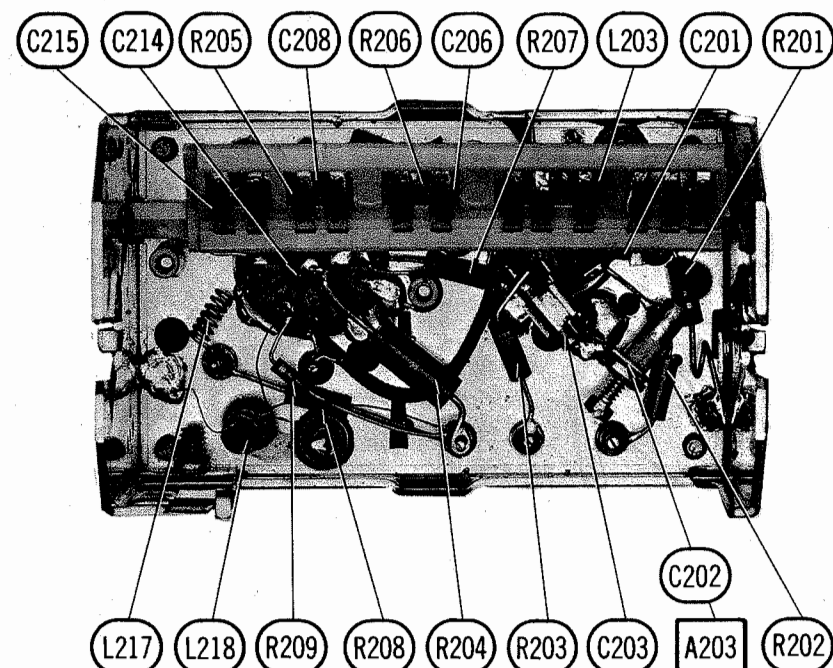
CHANNEL	CONNECT SCOPE	REMARKS
13	Vertical input to Point U, low side to ground.	Adjust A201 and A202 for maximum gain and symmetry of response similar to Fig. 201 with markers as shown.
10	Across video detector load resistor.	Increase bias to -20 volts and adjust A203 for MINIMUM amplitude of response.
12 thru 2	Vertical input to Point U, low side to ground.	Decrease bias. Check all channels and make compromise adjustments by expanding or compressing appropriate coils.

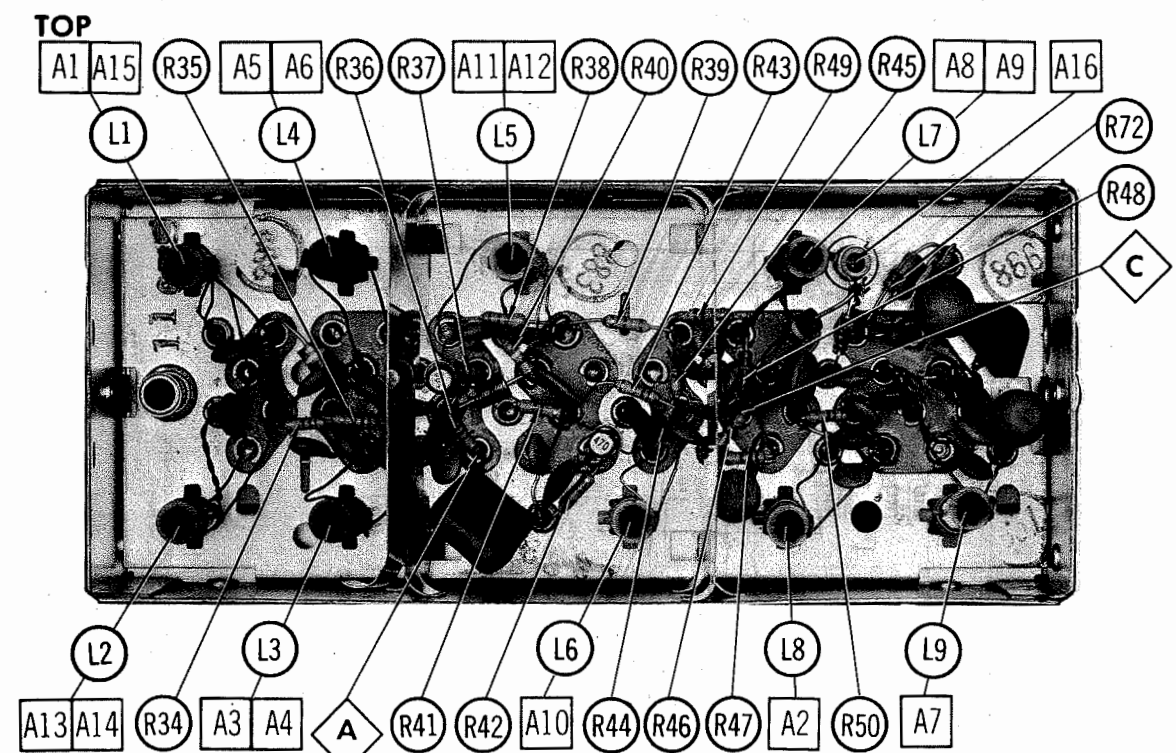
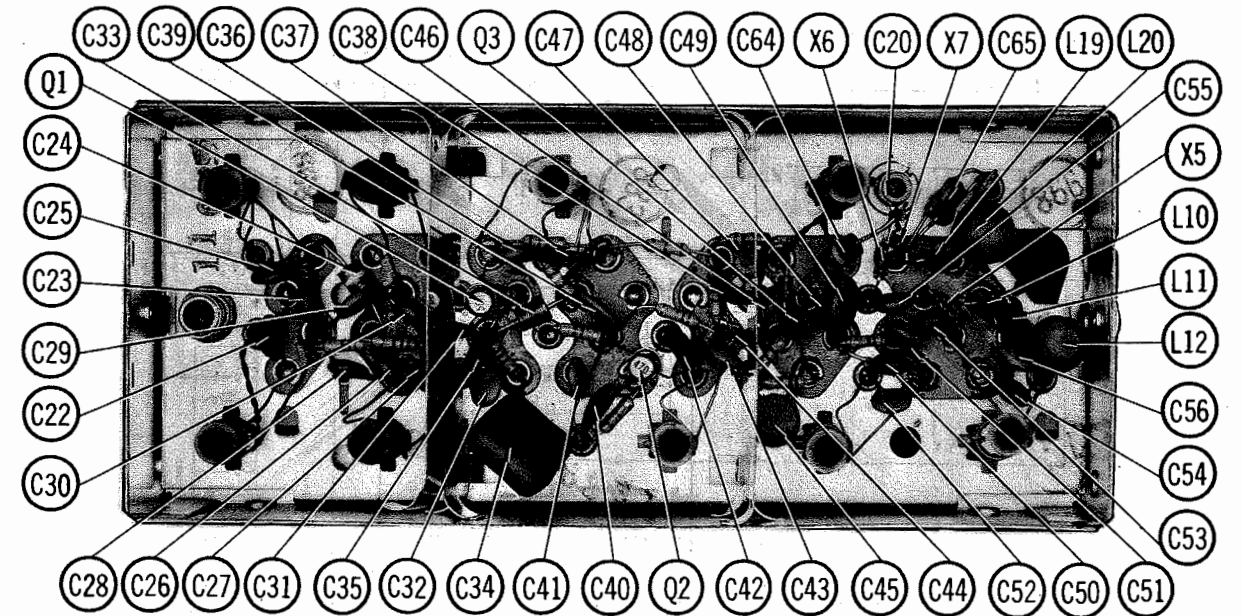
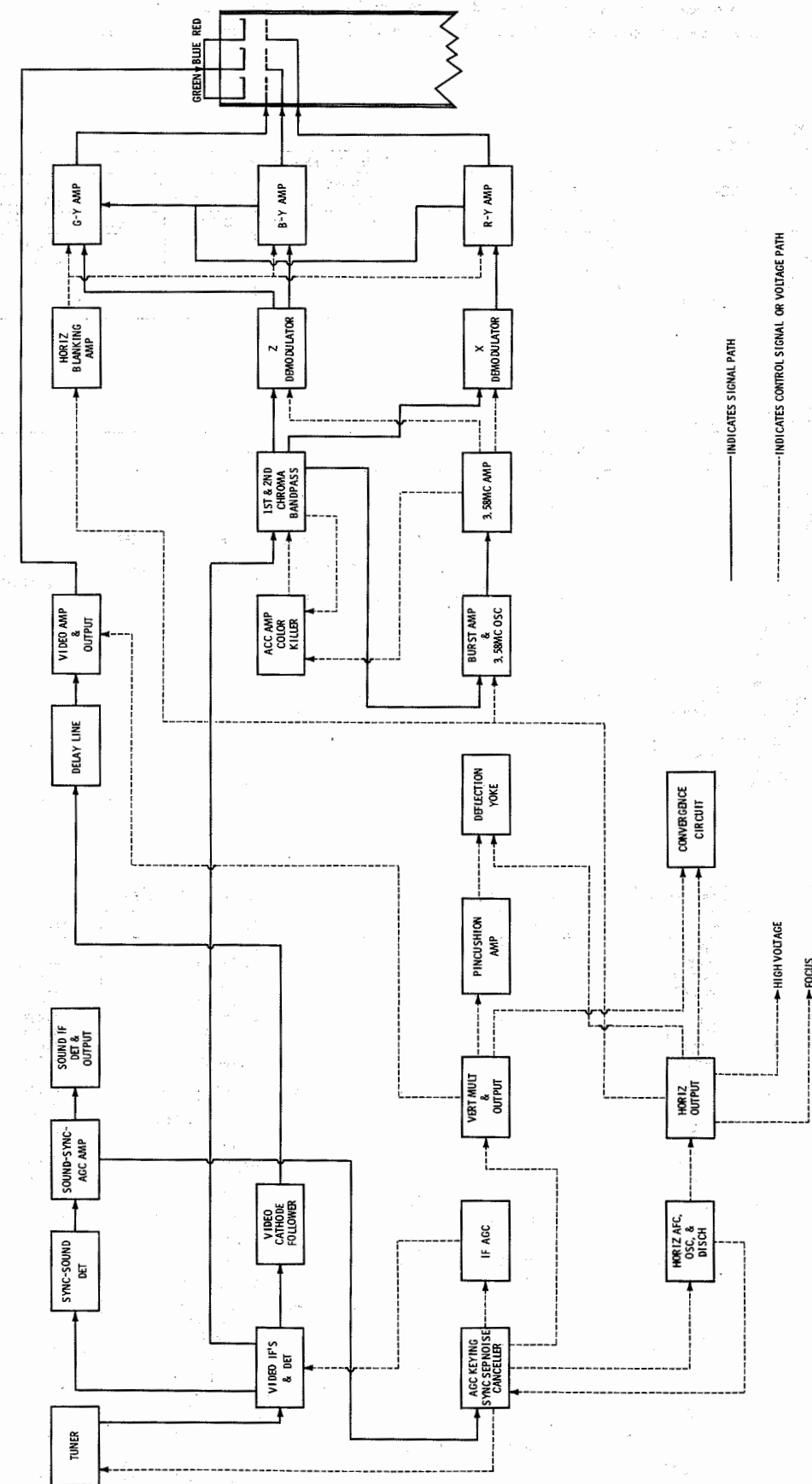
GENERATOR FREQUENCY Numbers in () indicate channel number					
SWEEP	MARKER	SWEEP	MARKER	SWEEP	MARKER
(2) 57MC	55.25MC	(6) 85MC	83.25MC	(10) 195MC	193.25MC
(3) 63MC	59.75MC	(7) 177MC	87.75MC	(11) 201MC	197.75MC
(4) 69MC	61.25MC	(8) 183MC	175.25MC	(12) 207MC	199.25MC
(5) 79MC	65.75MC	(9) 189MC	179.75MC	(13) 213MC	203.75MC
	67.25MC		181.25MC		205.25MC
	71.75MC		185.75MC		209.75MC
	77.25MC		187.25MC		211.25MC
	81.75MC		191.75MC		215.75MC

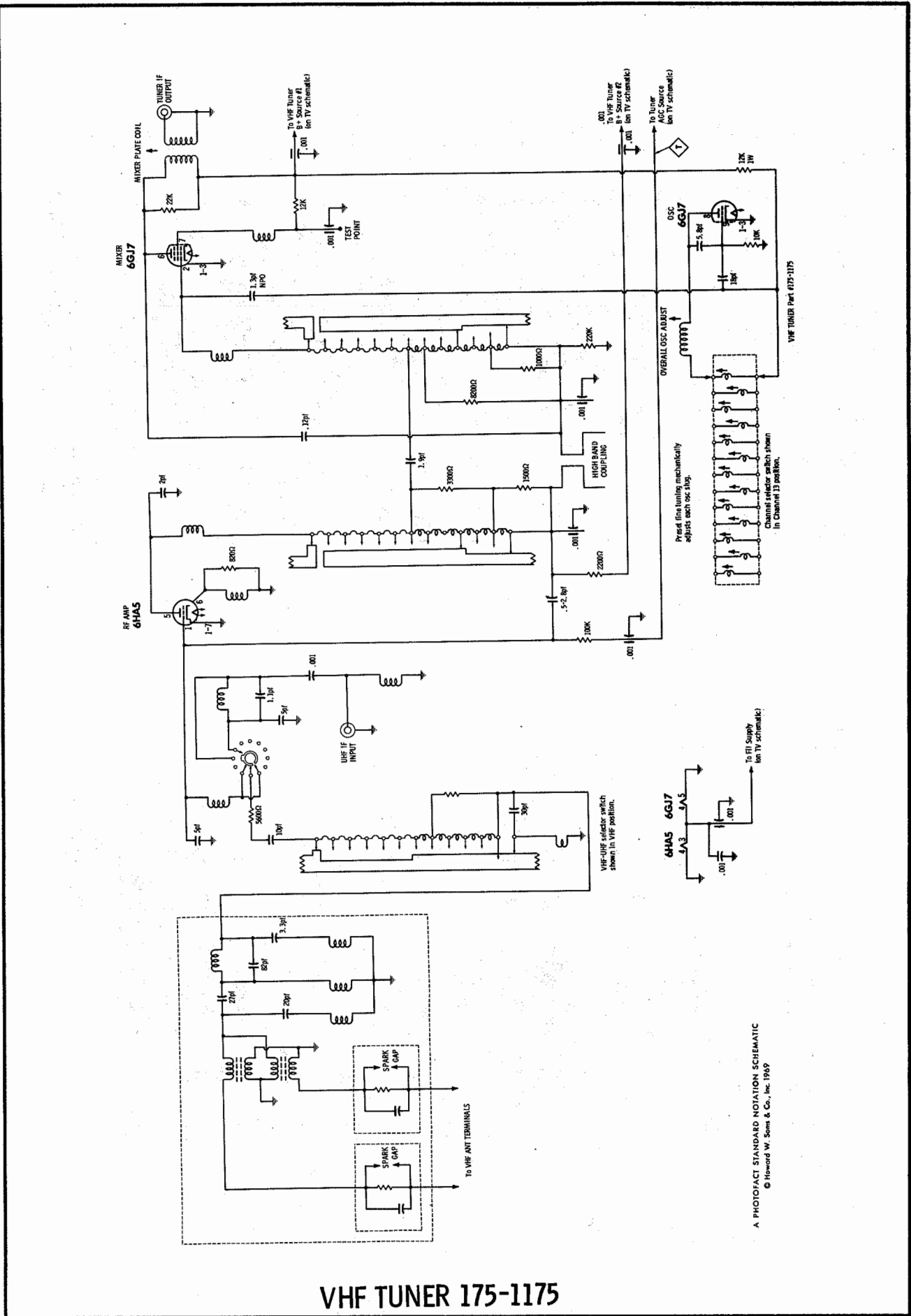
FIG. 201



CHANNEL	CONNECT SCOPE	REMARKS
13	Vertical input to Point U, low side to ground.	Expand or compress appropriate coils for maximum gain and symmetry of response similar to Fig. 201 with markers as shown.
10	Across video detector load resistor.	Increase bias to -20 volts and adjust A201 for MINIMUM amplitude of response.
12 thru 2	Vertical input to Point U, low side to ground.	Decrease bias. Check all channels and make compromise adjustments by expanding or compressing appropriate coils.







PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS* for the most up-to-date replacement.

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA					
		PART No.		BUSS PART No.		LITTELFUSE PART No.	
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER
F1	Fuse - 2 Amp	136-66					
F2	Fuse - .35 Amp	136-75					
F3	Fuse Wire, 2 1/2" #24	91-2061					
F4	Fuse Wire, 2 1/2" #24	91-2061					
F5	Fuse Wire, 2 1/2" #24	91-2061					

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M1	VHF Tuner	175-659	
M2	VHF Tuner	175-1175	
M3	UHF Tuner	175-65K1	
M3	VHF Antenna	1-211	JFD Replacement TA511, Models A3510C/C1/L/L1, A3520P/P1/W/W1, T2922W/W1.
M3	VHF Antenna	1-116	JFD Replacement TA510, Models A3710J/J1/L/L1, A3720P/P1/W/W1, T2926W/W1.
M4	UHF Antenna	S-59774	JFD Replacement TA544, Model A3510L1.
M5	Crystal	103-152	3.58MC
M6	Spark Gap		
M7	Spark Gap		
M8	Delay Line	S-80475	
M9	Degaussing Coil		
PC1	Component Combination	87-7	Vert. Integrator
PC2	Component Combination		Picture Tube Bracket Isolation
S1	Switch	85-994	Service-Normal (Slide) Assembly
	Blue Lateral Magnet	S-71500	
	Purity Ring Assembly	S-72221	
	Purity and Lateral Magnet Assembly	S-76297 or S-79294	

CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

ITEM	PART No.	ITEM	PART No.
CABINETS	Models A3510C/C1 A3510L/L1 A3520P/P1 A3520W/W1 A3710J/J1 A3710L/L1 A3720 Series T2922W/W1 T2926W/W1	CABINET BACKS	Models A3510C/C1 A3510L/L1 A3520P/P1 A3520W/W1, T2922W/W1 A3710J/J1 A3710L/L1 A3720P/P1 A3720W/W1 T2926W/W1
KNOBBS	Models A3510C/C1 A3510L/L1 A3520 Series, T2922W/W1 A3710J/J1 A3710L/L1 A3720P/P1 A3720W/W1 T2926W/W1	KNOBBS	Models A3510C/C1 A3510L/L1 A3520 Series, T2922W/W1 A3710J/J1 A3710L/L1 A3720P/P1 A3720W/W1 T2926W/W1
Brightness	Models A3510C/C1 A3510L/L1 A3520 Series, T2922W/W1 A3710J/J1 A3710L/L1 A3720P/P1 A3720W/W1 T2926W/W1	Vertical Hold	Models A3510C/C1 A3510L/L1 A3520 Series, T2922W/W1 A3710J/J1 A3710L/L1 A3720P/P1 A3720W/W1 T2926W/W1
Color Level or Hue	Models A3510C/C1 A3510L/L1 A3520 Series A3710 Series A3720 Series T2922W/W1 T2926W/W1	Horizontal Hold	Models A3510C/C1 A3510L/L1 A3520 Series, T2922W/W1 A3710J/J1 A3710L/L1 A3720P/P1 A3720W/W1 T2926W/W1
Volume	Models A3510C/C1 A3510L/L1 A3520 Series A3710 Series A3720 Series T2922W/W1 T2926W/W1	UHF Dial	Models A3510C/C1 A3510L/L1 A3520 Series, T2922W/W1 A3710J/J1 A3710L/L1 A3720P/P1 A3720W/W1 T2926W/W1
Contrast	Models A3510C/C1 A3510L/L1 A3520 Series, T2922W/W1 A3710J/J1 A3710L/L1 A3720P/P1 A3720W/W1 T2926W/W1	VHF Channel Selector	Models A3510C/C1 A3510L/L1 A3520 Series, T2922W/W1 A3710J/J1 A3710L/L1 A3720P/P1 A3720W/W1 T2926W/W1
		VHF Fine Tuning	Models A3510C/C1 A3510L/L1 A3520 Series, T2922W/W1 A3710J/J1 A3710L/L1 A3720P/P1 A3720W/W1 T2926W/W1
		UHF Tuning	Models A3510C/C1 A3510L/L1 A3520 Series, T2922W/W1 A3710J/J1 A3710L/L1 A3720P/P1 A3720W/W1 T2926W/W1

ZENITH
CHASSIS 12A10C15

FOLDER 2

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

COILS (Sweep Circuits)

ITEM No.	FUNCTION	REPLACEMENT DATA						
		MFGR. PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	THORDARSON MEISSNER PART No.	TRIAD PART No.	WORKMAN PART No.
L45	Horiz. Osc. (Hold)	S-56877		H-161		HS-24		
L46	Pincushion Correction	S-77784						
L47	Right R/G Vert. lines	S-73854	MWC-6	6322	WC-8A	WC-28 (1)	WLC-5	
L48	Right R/G Horiz. lines	S-58041		H-162		WC-51		
L49	Right Blue Horiz. lines	S-73854	MWC-6	6322	WC-8A	WC-28 (1)	WLC-5	
L50	Convergence Yoke Assembly	S-81865 (2)						
A	Blue	(S-81625)						
B	Green	S-82439						
C	Red	S-79393 (3)						
		S-82440						
		S-79392 (3)						
		S-82438						
		S-79394 (3)						

(1) Disregard Tap.

(2) Late production use Part #S-76430.

(3) May be used in late production yokes.

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC @ .760A AC, CT @ 29.4V @ .300A AC	6.3VAC @ .840A AC SEC. 2 6.3VAC, CT @ 5A AC	95-2691					

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	5645 ohm	3.2 ohm	95-2688 (95-2688AJ)	A-3026	A-3309	24548	S-6X	

TRANSFORMERS (Sweep Circuits)

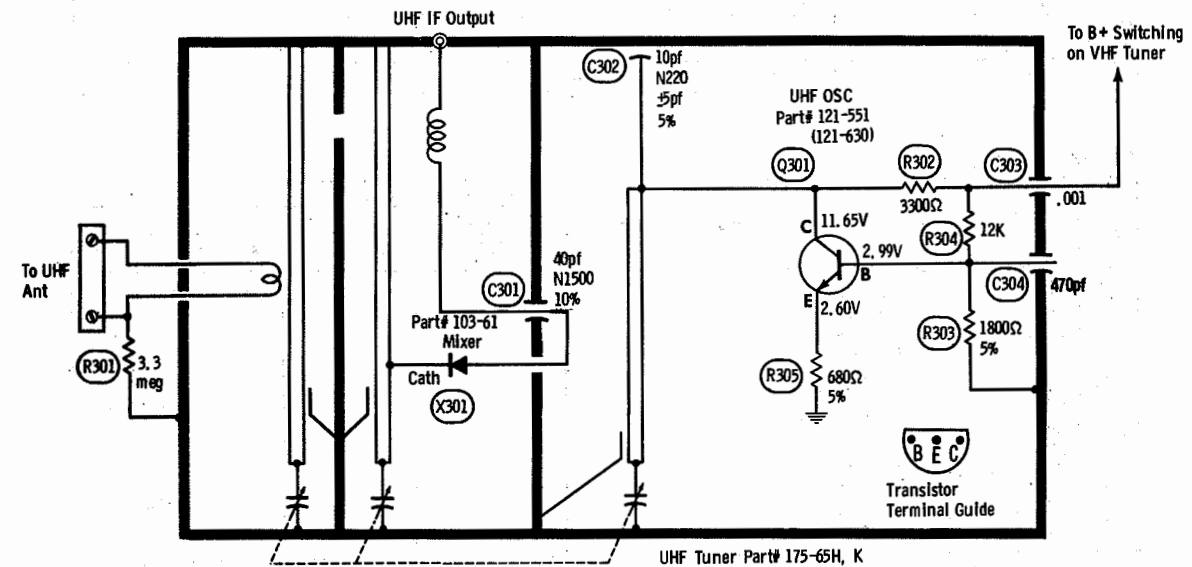
ITEM No.	USE	REPLACEMENT DATA					NOTES
		MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T3	Vertical Output	95-2687 (95-2687A)		V0-703C (1)	26588 (1)		(1) See Hookup Data sheet.
T4	Yoke (Horiz. 12mh) 90° (Vert. 19mh)	95-2479					(2) Models A3710J/J1/L/L1 A3720P/P1/W/W1, T2926W/W1
T5	Horizontal Output	95-2696 (2) S-81812					

*COMPONENT CONNECTION DATA

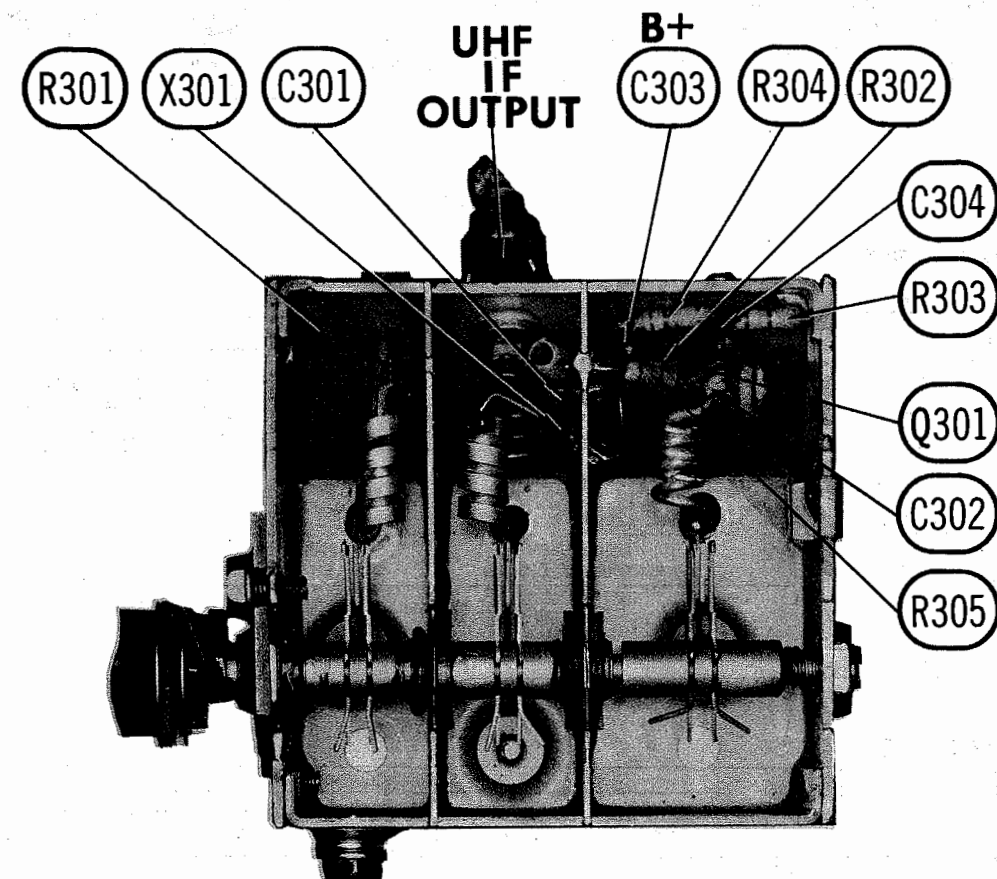
ORIGINAL →	HV TRANSFORMER				VERTICAL OUTPUT								YOKE			
	Original Connections				Original Connections								Original Connections			
REPLACEMENT ↓					Green/White	Black/Green	Green/Red	Orange/White	Orange/Black	Yellow/Blue	Blue/Red					
MERIT																
STANCOR					D	C	B	A	K	J	G	H				
THORDARSON					D	C	B	A	K	J	G	H				
TRIAD																

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	4" PM 3.4 ohm	49-1158 49-1126		Models A3510C/C1/L/L1, A3520P/P1/W/W1, T2922W/W1. Models A3701J/J1/L/L1, A3720P/P1/W/W1, T2926W/W1.



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UHF TUNER 175-65H, K

ZENITH
CHASSIS 12A10C15

FOLDER 2

VHF TUNER

VHF TUNER 175-659

TUBES

AMPEREX			GENERAL ELECTRIC			RCA			SYLVANIA		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V201	RF Amp.	6HA5/EC900	V202	Mixer - Oscillator	66J7/ECF801						

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C201	15 5%	#22-5239		DTZ-15	CZ601C6150J		CN0415	10TCC-Q15
C202	.5-4.5	#22-5241						
C203	30	#22-5239						
C204	.5-4.5	#22-5239						
C205	.001	#22-3561						
C206	.33 10%	#22-4903						
C207	15	#22-4679						
C208	1.2 10%	#22-2715						10TCC-V12
C209	.5-4.5	#22-5239						
C210	.001	#22-3561						
C211	.001	#22-3561						
C212	.001	#22-3561						
C213	.5-4.5	#22-5239						
C214	8.2 N220 +.25	#22-3300				*	*	10TCR-V82
C215	1.8 N220 +.25	#22-5560				*	*	
C216	.001	#22-3561						

* Not normally in distributor's stock. Available thru distributor on order to manufacture
Zenith Part Number

COILS (RF-IF)

ITEM No.	USE	MFGR. PART No.	NOTES	ITEM No.	USE	MFGR. PART No.	NOTES
L201	Balun	S-71000		L210	Ant., RF, Mixer, Osc.	174-878	Channel 8 Strip
L202	Antenna			L211	Ant., RF, Mixer, Osc.	174-879	Channel 9 Strip
L203	RF Choke	20-1548		L212	Ant., RF, Mixer, Osc.	174-880	Channel 10 Strip
L204	Ant., RF, Mixer, Osc.	174-872	Channel 2 Strip	L213	Ant., RF, Mixer, Osc.	174-881	Channel 11 Strip
L205	Ant., RF, Mixer, Osc.	174-873	Channel 3 Strip	L214	Ant., RF, Mixer, Osc.	174-882	Channel 12 Strip
L206	Ant., RF, Mixer, Osc.	174-874	Channel 4 Strip	L215	Ant., RF, Mixer, Osc.	174-883	Channel 13 Strip
L207	Ant., RF, Mixer, Osc.	174-875	Channel 5 Strip	L216	Ant., RF, Mixer, Osc.	174-841	Channel 14 Strip
L208	Ant., RF, Mixer, Osc.	174-876	Channel 6 Strip	L217	RF Choke	20-1610	UHF Strip
L209	Ant., RF, Mixer, Osc.	174-877	Channel 7 Strip	L218	Mixer Plate	S-80628	

UHF TUNER

UHF TUNER 175-65H, K

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFGR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q301		UHF Oscillator	121-551	GE-11	TR-22	HEP56	SK3019	ECG 108

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS	NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.		
X301	103-61	1N82A	1N82AG	ECG 112		

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C301	40	#22-5060						
C302	10 N220	#22-5005						
C303	.001	#22-4651						
C304	470	#22-5062						

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

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CONTROLS (All wattages 1/2 watt, or less, unless listed) (cont)

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R27	R/G Vert. Lines (Bottom)	60 2W	63-7074	V-60 (3)	U39-75 (3) or [NPW-75, NML-A-300, TT-2]	P115R500A, P115-117-1 or [BUT1, WF18, SS6]	MR50T, MRS1250
R28	R/G Horiz. Lines (Bottom)	120 2W	63-7073	V-120 (3)	U39-125 (3) or [NPW-150, NML-A-300, TT-2]	P115R101A, P115-117-1 or [8U11, WF19, SS6]	MR100T, MRS1250

- (1) Use original nylon tab mount. * "SNAPTROL"
(2) Ground center terminal to chassis.
(3) Insulate control from chassis and solder original center terminal lead to metal case of control.
(4) Connect a 56-ohm, 2W Resistor in series with terminal.
(5) Models A3710J/J1/L/L1, A3720P/P1/W/W1, and T2926W/W1.
(6) Models A3720P/P1.
(7) Models A3710J/J1/L/L1, A3720W/W1, and T2926W/W1.
(8) Used with later production convergence yoke, Part #S-76430.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	MFGR. PART No.			IRC PART No.	WORKMAN PART No.	MFGR. PART No.
R31	8200 5W		5G-8.2K		R141	6000 5W		3G-22K	63-5011
R32	9100 4W				R157	22K 3W			63-5025
R67	4700 7W		7G-4.7K	63-7455	R158	V.O.R. *			63-7143
R84	12K 3W		3G-12K		R200	Thermistor (3-ohm Cold)			63-7156
R110	Thermistor (500K Cold)			63-6824	R201	4 18W	2C-4	20W-SQ-4	63-8257
R137	V.O.R. *			63-7143	R204	180 4W		5W-SQ-175	63-7630

COILS (RF-IF)

ITEM No.	USE	PART No.	REPLACEMENT DATA		
			MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1A	39.75MC Trap	20-1658			
L1B	39.75MC Trap				
L2	1st Video IF	20-1660		7519 (1)	T279 (1)
L3	47.25MC Trap	20-1659			
L4	41.25MC Trap	20-1659			
L5	2nd Video IF	20-1661		7519 (1)	T279 (1)
L6	3rd Video IF	20-1657		4202 (1)	T218 (1)
L7	4th Video IF	20-1662		7519 (1)	T279 (1)
L8	41.25MC Trap	20-1657			
L9	Video Output IF	20-1657			
L10	RF Choke (27uh)	20-2712	19-6033	72F275AP	T360
L11	RF Choke (27uh)	20-2712	19-6033	72F275AP	T360
L12	Channel 8 Trap	20-1726			
L13	RF Choke (27uh)	20-2707	19-6033	72F275AP	T360
L14	4.5MC Trap	S-77669			
L15	Peaking (320uh)	20-2520	19-3375 (2)	6134 (2)	T321 (2)
L16	RF Choke (27uh)	20-2007	19-6033	72F275AP	T316
L17	Peaking (320uh)	20-2028		72F334AP	T319
L18	Peaking (220uh)	20-2517	19-2027 (3)	72F225AP (3)	T321 (3)
L19	RF Choke (27uh)	20-2712	19-6033	72F275AP	T360
L20	Channel 8 Trap	20-1726			
L21	Sound Take-off	S-77414			
L22	Sound Interstage	S-74445			
L23	Quadrature	S-80411			
L24	RF Choke (10uh)	20-2005	20-1005	72F105AP	T860
L25	RF Choke (10uh)	20-2005	19-1005	72F105AP	T860
L26	Peaking (85uh)	20-2528	19-2023 (4)	72F825AP (4)	T301 (4)
L27	1st Chroma Bandpass	S-77408			
L28	2nd Chroma Bandpass	S-83210			
L29	RF Choke (11.3uh)	20-2053		72F125AP	
L30	3.58MC Oscillator	S-80791			
L31	RF Choke (1.8uh)	20-2052		74F186AP	T811
L32	3.58MC Output	S-81327			
L33	RF Choke (3uh)	20-2056		74F336AP	T816
L34	RF Choke (3uh)	20-2056		74F336AP	T816
L35	Peaking (155uh)	20-2536		6120 (5)	T308 (5)
L36	Peaking (155uh)	20-2536		6120 (5)	T308 (5)
L37	Peaking (155uh)	20-2536		6120 (5)	T308 (5)
L38	Line Choke	20-1725			

- (1) Enlarge mounting hole.
(2) Shunt with 6800-ohm Resistor.
(3) Shunt with 12K Resistor.
(4) Shunt with 8200-ohm Resistor.
(5) Shunt with 2700-ohm Resistor.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L39	.800A	17	350 mh	95-2690					

ZENITH
CHASSIS 12A10C15

FOLDER 2

PARTS LIST AND DESCRIPTION (CONTINUED)

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CONTROLS (All wattages 1/2 watt, or less, unless listed)

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLODY PART No.
R1	Hue (Tint)	200	63-7980			BU11,CF75, SS16,DC1 *	
R2	Hue (Tint) Volume/Switch	200 1meg	63-7990 (5) 63-7979	F2-1meg, SNF108,KR-1	NP-1meg-Z, NMS-A-300, TT-2,NWE-12	B13-137,TM10, 76-1 or [BU11, CF26,SS16,GC] *	RU16A,SL37, SD1375,US41 or [UA16A,SD1375, US41]
R3	Volume Volume Color Level	1meg 1meg 500	63-7989 (6) 64-7993 (7) 63-7981	F4-500, SNF108		BU11,CF77, SS16,DC1 *	UA751A,SD1375
R4	Color Level Brightness	500 1meg	63-7991 (5) 63-7974	F1-1meg, SNF100	NP-1meg-S, NML-A-300,TT-2	B11-137,TM10 or [BU11,CF17, SS16,DC1] *	RU16L,SL37, SD750 or [UA16L,SD750]
R5	Contrast	500	63-7975	F5-500, SNF100	NP-500-V, NML-A-300,TT-2	B17-103,TM10 or [BU11,CF50, SS16,DC1] *	RU52R,SL37, SD750 or [UA52R,SD750]
R6	Vert. Hold	750K	63-7973	F1-750K, SNF100	NP-750K-S, NMS-A-300,TT-2	B11-136,TM10 or [BU11,CF64, SS16,DC1] *	RU754L,SL37, SD750 or [UA16L,SD750]
R7	Brightness Range	3meg	63-7977	TT-84 or [F1-3meg, SNK010]	B47-3meg-S or [NP-3meg-S, NML-A-300,TT-2]	B11-140,TM4 or [BU11,CF21,SS6] *	RU36L,SL37, SN1000 or [UA36L,SN1000] or SU59
R8	Color Killer	100K	63-7978	TT-40 or [F1-100K, SNK010]	B47-100K-S or [NP-100K-S, NML-A-300,TT-2]	B11-128,TM4 or [BU11,CF13,SS6] *	PTA15L or [RU15L,SL37, SN1000] or [UA15L,SN1000]
R9	AGC Level	5000	63-7976	TT-10 or [F1-5000, SNK010]	B47-5000-S or [NP-5000-S, NML-A-300,TT-2]	B11-114,TM4 or [BU11,CF8,SS6] *	PTA53L or [RU53L,SL37, SN1000] or [UA53L,SN1000]
R10	Blue Gain (Drive)	5000	63-6333	F1-5000 (1), SNK012	B47-5000-S (1) or [NP-5000-S (1), NML-A-300]	B11-114,TM4 (1) or [BU11,CF8,SS6] *	PTA53L (1) or [RU53L (1), SN1000] or [UA53L (1), SN1000]
R11	Green Gain (Drive)	5000	63-6334	F1-5000 (1), SNK012	B47-5000-S (1) or [NP-5000-S (1), NML-A-300]	B11-114,TM4 (1) or [BU11,CF8,SS6] *	PTA53L (1) or [RU53L (1), SN1000] or [UA53L (1), SN1000]
R12	Buzz	750 2W	63-6487			P115R102A (2)	MR850T (2)
R13	AGC Delay	400 2W	63-7982			P115R501A (2)	MR500T (2) or MR600P
R14	Vert. Linearity	2000 2W 250 Stop 5meg	63-7983				
R15	Blue Screen (G2)	5meg	63-6977	F1-5meg (1), SNK012		HLC5 (1)	PTA56L (1) or [UA56L (1), SN1000] or [RU56L (1), SN1000]
R16	Green Screen (G2)	5meg	63-6976	F1-5meg (1), SNK012		HLC5 (1)	PTA56L (1) or [UA56L (1), SN1000] or [RU56L (1), SN1000]
R17	Red Screen (G2)	5meg	63-6978	F1-5meg (1), SNK012		HLC5 (1)	PTA56L (1) or [UA56L (1), SN1000] or [RU56L (1), SN1000]
R18	Height	7meg	63-6433	TT-90 or [F1-7.5meg, SNK010]	B47-7.5meg-S or [NP-7.5meg-S, NML-A-300,TT-2]	HLC6	PTA755L or [UA755L,SN1000] or SU69
R19	High Voltage Adjust	3meg	63-7628	TT-84 or [F1-3meg, SNK010]	B47-3meg-S or [NP-3meg-S, NML-A-300,TT-2]	B11-140,TM4 or [BU11,CF21,SS6] *	RU36L,SL37, SN281 or [UA36L,SN281] or SU59
R20	Blue Horiz. Lines (Left)	130 2W	63-7620	V-150	U39-150 or [NPW-150, NML-A-300,TT-2]	P115R101A, P115-117-1 or [BU11,WF19,SS6] *	MR100T, MRS1250
	Blue Horiz. Lines (Left)	180 2W	63-7076 (8)	V-150 (4)	U39-150 (4)	P115R101A (4), P115-117-1 or [BU11,WF1 (4), SS6] *	MR175SP, MRS1250
R21	R/G Vert. Lines (Left)	70 2W	63-7075	V-100	U39-75	P115R101A, P115-117-1 or [BU11,WF19,SS6] *	MR100T, MRS1250
R22	R/G Horiz. Lines (Left)	60 2W	63-7074	V-60 (3)	U39-75 (3) or [NPW-75, NML-A-300,TT-2]	P115R500A, P115-117-1 or [BU11,WF18,SS6] *	MR50T, MRS1250
R23	Blue Horiz. Lines (Top)	60 2W	63-7348	V-60 (3)	U39-75 (3) or [NPW-75, NML-A-300,TT-2]	P115R500A, P115-117-1 or [BU11,WF18,SS6] *	MR50T, MRS1250
R24	R/G Vert. Lines (Top)	120 2W	63-7073	V-120 (3)	U39-125 (3) or [NPW-150, NML-A-300,TT-2]	P115R101A, P115-117-1 or [BU11,WF19,SS6] *	MR100T, MRS1250
R25	R/G Horiz. Lines (Top)	120 2W	63-7073	V-120 (3)	U39-125 (3) or [NPW-150, NML-A-300,TT-2]	P115R101A, P115-117-1 or [BU11,WF19,SS6] *	MR100T, MRS1250
R26	Blue Horiz. Lines (Bottom)	120 2W	63-7347	V-120 (3)	U39-125 (3) or [NPW-150, NML-A-300,TT-2]	P115R101A, P115-117-1 or [BU11,WF19,SS6] *	MR100T, MRS1250

PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)

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WIRING DATA

High Voltage Lead	Use BELDEN No. 8868 (25KV)
Shielded Hook-up Wire	Use BELDEN No. 8885 (Single Conductor)
	8738 (Two Conductor)
General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
	8524 (Stranded) Available in 12 Colors
Power Cord (Interlock Type)	Use BELDEN No. 8874 (Rubber)
300-Ohm Tuner Input Lead	Use BELDEN No. 8225
300-Ohm Antenna Lead-in	Use BELDEN No. 8275 (Foam Core) or 8285 (Foam Jacketed)
Antenna Rotor Cable	Use BELDEN No. 8464 (Flat) or 8484 (Round) - 4 Conductor
	8485 (Round) - 5 Conductor
	8488 (Round) - 8 Conductor

TUBES

AMPEREX			GENERAL ELECTRIC			RCA			SYLVANIA		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	Video Cathode Follower - 1st Chroma Bandpass	6KT8	V7	Horiz. AFC - Horiz. Osc.-		V8	Horiz. Discharge	6U10			
V2	Video Output - Pincushion Amp	6AH9	V8	Horiz. Output		V9	Damper	6LF6			
V3	Sound/Sync/AGC Amp - Sound IF	6KT8	V9	HV Rectifier		V10	6-Y Amp - B-Y Amp - R-Y Amp	6CE3			
V4	Audio Detector - Audio Output	6Z10	V11	Burst Amp - 3.58MC		V12	3.58MC Oscillator	3DC3			
V5	AGC Keying - Sync Separator - Noise Canceller	6HS8						6MNB			
V6	Vert. Mult.- Vert. Output	6MF8						6EJ7/EF184			

PICTURE TUBE

ITEM No.	REPLACEMENT DATA				NOTES
	MFGR. PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SYLVANIA PART No.	
V13	15ACP22 17EVP22 (1)				

(1) Used in Models A3710J/J1/L/L1, A3720P/P1/W/W1, T2926W/W1.

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFGR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q1		1st Video IF	121-500 (1)					
Q2		2nd Video IF	121-470 (2)					
Q3		3rd Video IF	121-521 (3)					
Q4		Video Amp	121-587					
Q5		IF AGC Amp	121-499	GE-10	TR-25	HEP728		ECG 128
Q6		Vert. Blanking	121-587	GE-17	TR-21	HEP737	SK3020	ECG 123
Q7		Horiz. Blanking	121-699	GE-21	TR-25	HEP728		ECG 128
Q8		AGC Amp	121-748	GE-20	TR-19	HEP51	SK3025	ECG 129
Q9		2nd Chroma Bandpass	121-748	GE-20	TR-21	HEP54		ECG 123
Q10		3.58MC Amp	121-748	GE-20	TR-21	HEP54		ECG 123

(1) Some versions may use 121-501 or 121-505. (2) Some versions may use 121-502 or 121-506. (3) Some versions may use 121-522.

INTEGRATED CIRCUITS

ITEM No.	FUNCTION	MFGR. PART No.	REMARKS
IC1	X-/Z-Demodulator	221-39	

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS	NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.		
X1	212-76	GE-504A	806 or 5A6-D	ECG 116 or ECG 117	SK3017A or SK3032	
X2	212-76	GE-504A	806 or 5A6-D	ECG 116 or ECG 117	SK3017A or SK3032	
X3	212-80	GE-504A	804 or 5A4-D	ECG 116 or ECG 117	SK3031 or SK3017A	
X4	103-150					
X5	103-23	1N60	1N60	ECG 109		
X6	103-23	1N60	1N60	ECG 109		
X7	103-23	1N60	1N60	ECG 109		
X8	103-51	1N34AS	1N34A	ECG 109		
X9	103-142	1N34AS	1N34A	ECG 110: (1)		(1) Matched Pair
X10	103-142	1N34AS	1N34A	ECG 109		
X11	103-142	1N34AS	1N34A	ECG 109		
X12	103-142	1N34AS	1N34A	ECG 109		
X13	103-142	1N34AS	1N34A	ECG 109		
X14	103-142	1N34AS	1N34A	ECG 109		
X15	103-142	1N34AS	1N34A	ECG 109		
X16	103-159	1N34AS	1N34A	ECG 109		
X17	212-72	GE-504A (2)	804	ECG 116 (2)	SK3017A (2)	(2) Four required.

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

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ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		ZENITH PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	300 200V	22-5748	PR1-085		WBR300-250		TC499A	TVA-1628
C2	10 30VNP	22-5725	PRS7555			NPQT-3	TCN5010	TVAN-1230
C3A	270 350V	22-5746			WBR160-350 & WBR250-350		FP227.9 & TC692A	TVL-2642.4 & TVA-1620
C4A	150 350V							TVL-4622.15
C4B	4 350V	22-5714						
C4C	500 35V							
C4D	4 350V							
C5	50 350V							
C6	500 50V	22-5747	PRS1390	EA50-500	WBR500-50	QT1-31	TC50050A	TE-1316
C7	200 25V	22-5175	PRS1530	EA30-250	WBR150-35	MT1-23.5	TC496A	TE-1213
C8	20 25V	22-4509	CRE761A	EA30-25	WBR20-500	MT1-11	MTA20E50	TE-1305
C9	4 150V	22-5425	CRE953A		AL3-150	MT1-4	TC40A	TE-1503
C10	1 25VNP	22-4909	PRS7525		BRNP1-50	NPQT-1	TCN501	TVAN-1301.1
C11	10 475V	22-5406	PRS1810		WBR10-500	QT2-3	TCB1A	TVA-1705
C12	100 50V	22-5262	PRS1360	EA50-100	WBR125-50	QT1-23	TC3501A	TL-1309
C13	1 25VNP	22-4909	PRS7525		BRNP1-50	NPQT-1	TCN501	TVAN-1301.1
C13	1 50V	22-3616	CRE950A	EA50-2	AL1-50	MT1-1	MTA1050	TE-1300

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C20	1-9 500V	#22-5476	GPD X5F222K	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C21	.0022 1KV 10%		NPQ-DI 8.2					10TCC-V82
C22	8 NPO 5%	#22-5805						
C23	4.25 N75 +.25	#22-5389						
C24	2.7 5%	#22-3405						10TCC-V27
C25	3.6 N75 +.25	#22-5784						
C26	4.25 N75 +.25	#22-5389						
C27	3.6 N75 +.25	#22-5784						
C28	3.6 N75 +.25	#22-5784						
C29	5 NPO 5%	#22-5818	NPQ-DI 5.0		CZ601CH5R0D			10TCC-V50
C30	4.25 N75 +.25	#22-5389						
C31	.001 10%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C32	47 N1500 5%	#22-5824		TCL-47				10TCW-Q47
C33	.82pf 5%	#22-3724						
C34	.15 50V		VI612P15		DMF1P15	10P-3-154	PVC1015	225P1549R75
C35	.0015 5%		GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C36	14 NPO 5%	#22-5821						
C37	.001 10%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C38	.001 10%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C39	24 NPO 5%	#22-2515	TCZ-24					
C40	.0015 5%		GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C41	47 N1500 5%	#22-5824		TCL-47				10TCW-Q47
C42	20 NPO 5%		DTZ-20				CN0420	10TCC-Q20
C43	65 N1500 5%	#22-5825		TCL-68	JBS601YP102K	CCD-102	GP210	10TS-D10
C44	.001 10%		GPD X5F102K	DD-102		CCD-152	GP215	10TCC-Q10
C45	.0015 5%		GPD X5F152K	DD-152			CN0410	10TS-T10
C46	10 NPO 5%		GPD X5F101K	DD-101	CZ601CG100J	CCD-101	GP310	10TCW-Q56
C47	220 5%				JBZ601YP101K			
C48	56 N1500 5%	#22-5908						
C49	140 N1500 5%	#22-5823						
C50	8 5%	#22-5805	NPQ-DI 8.2					10TCC-V82
C51	6 NPO 5%	#22-5819						
C52	10 NPO 5%			DTZ-10	CZ601CG100J		CN0410	10TCC-Q10
C53	15 NPO 5%			DTZ-15	CZ601CG150J		CN0415	10TCC-Q15
C54	8 NPO 5%	#22-5805		DD-080			GP580	
C55	6 NPO 5%	#22-5819						
C56	6 NPO 5%	#22-5819						
C57	75 NPO 5%			DTZ-75			CN0475	10TCC-Q75
C58	20 N220 10%	#22-5393						10TCR-Q20
C59	.0047 10%		GPD X5R472K	DD-472G	JBT601YP472K	CCD-472	JF247	10TS-D47
C60	150 1KV 10%		GPD X5F151K	DD-151		CCD-151	GP315	10TS-T15
C61	.1 200V		DBE2P1		DMF2P1	20P-3-104	PVC201	2PS-P10
C62	.01 400V		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C63	.1 400V		DBE4P1		DMF4P1	40P-3-104	PVC401	4PS-P10
C64	2 5%	#22-2461						
C65	6 NPO 5%	#22-5819						
C66	.01 5%			CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C67	4.3 NPO +.25	#22-3703						
C68	50 N750 5%	#22-3515		TCN-50				10TCU-Q50
C69	47 N75 5%	#22-2467						
C70	180 10%		GPD X5F181K	DD-181	JBZ601YP181K	CCD-181	GP318	10TS-T18
C71	.001 1KV 10%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C72	2.5 +.25	#22-4522						10TCC-V27
C73	100 10%		GPD X5F101K	DD-101	JBZ601YP101K	CCD-101	GP310	10TS-T10
C74	.01 10%		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C75	470 N1500 10%	#22-3363						10TCW-T47
C76	20 N330 10%	#22-5438						10TCS-Q20
C77	220 1KV 10%		GPD X5F221K	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22
C78	150 N750 10%		N750-DI 150	DTN-150			TA110	TG-S10
C79	.01 10%		TTP-01	CK-103	HOY101ZV103P	CCD-103	JF268	10TS-D68
C80	.0068 1KV		GPD X5R682K	DD-682	BYX601ZU682P	CCD-682	GP322	10TS-T22
C81	220 1KV		GPD X5F221K	DD-221	JBZ601YP221K	CCD-221	PVC1015	2PS-P15
C82	.15 100V		VI612P15		DMF1P15	10P-3-154	GP210	10TS-D10
C83	.001 10%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	TA110	TG-S10
C84	.01 10%		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C85	.01 10%			CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10

PARTS LIST AND DESCRIPTION (CONTINUED)

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CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C86	.1 400V		DBE4P1		DMF4P1	40P-3-104	PVC401	4PS-P10
C87	470		GPD X5F471K	DD-471	JBZ601YP471K	CCD-471	GP347	10TS-T47
C88	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C89	.0047 10%		GPD X5R472K	DD-472G	JBT601YP472K	CCD-472	JF247	10TS-D47
C90	.0039 600V 10%		DBE6S39		OPMS6S39	60P-3-393	PVC6139	6PS-S39
C91A	.0022	#22-28						
C91B	.0022	#22-5597						
C92	.1 1KV		BE10P1					10TM-P10
C93	.039 400V 10%		DBE6S39		PKM4S39	60P-3-393	PVC6139	6PS-S39
C94	.1 600V 10%		DBE6P1		DMF6P1	60P-4-104	PVC601	6PS-P10
C95	.0047 600V 10%		DBE6047		DMF6D47	60P-1-472	PVC6247	6PS-D47
C96	.47 200V 10%		DBE2P47		DMF2P47	20P-5-474	PVC2047	2PS-P47
C97	.033 200V 10%		V1612S33		DMF2S33	40P-2-333	PVC2133	4PS-S33
C98	330 1KV 10%		GPD X5F331K	DD-331	JBZ601YP331K	CCD-331	GP333	10TS-T33
C99	.0039 1KV 10%		GPD X5R392K	DD-392		CCD-392	JF239	10TS-D39
C100	.0082		GPD X5R822K	DD-822		CCD-822		10TS-D82
C101	75 N750,3KV,10%							
C102	100,N1500,5KV,10%					*	*	
C103A	51 15%	#22-25						
C103B	51 15%							
C104	.0022 10%		GPD X5F222K	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C105	.0022 10%		GPD X5F222K	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C106	.047 100V 10%		V1612S47		DMF1S47	10P-2-473	PVC1147	225P47391WD3
C107	.047 200V 10%		V1612S47		DMF2S47	40P-3-473	PVC2147	2PS-S47
C108	680 10%		GPD X5F681K	DD-681	JBX601YP681K	CCD-681	GP368	10TS-T68
C109	.0015 400V 10%		V1614015	CPR-1500J	WMF4D15	60P-1-152	PVC6215	6PS-D15
C110	.0011 400V 10%		DBE6D1	DD-102	DMF6D1	60P-1-102	PVC621	6PS-D10
C111	.0047 10%		GPD X5R472K	DD-472G	JBX601YP472K	CCD-472	JF247	10TS-D47
C112	470 1KV 10%		GPD X5F471K	DD-471	JBZ601YP471K	CCD-471	GP347	10TS-T47
C113	.0022 10%		GPD X5F222K	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C114	.022 600V		DBE6S22		DMF6S22	60P-2-223	PVC6122	6PS-S22
C115	120,N1500,2KV,10%	#22-5710				*	*	
C116	90 N1500,5KV,10%	#22-4631				*	*	
C117	.1 1KV	#22-5028						
C118	.01 1.5KV		BE10P1		HVT162Z103P		ZHV110	10TM-P10
C119	.05 25V		TTP-05	CK-503	HOY101ZV503Z	CCD-503	TA150	306A-S10
C120	.01 10%		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TGL-S50
C121	220 10%		GPD X5F221K	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22
C122	.01 NPO 10%	#22-4905						
C123	10 NPO 10%		NPQ-DI 10	DTZ-10	CZ601CG100J	CCD-100	CN0410	10TCC-Q10
C124	10 NPO 10%		NPQ-DI 10	DTZ-10	CZ601CG100J	CCD-100	CN0410	10TCC-Q10
C125	.001 10%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C126	7 NPO +.5		NPQ-DI 6.8	DTZ-688	CZ601CH688D	CCD-102	CN0568	10TCC-V68
C127	.0047 400V 10%		V1614047	CPR-4700J	DMF4D47	60P-1-472	PVC6247	6PS-D47
C128	220 1KV 10%		GPD X5F221K	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22
C129	36 N33 5%	#22-5443						
C130	220 1KV 10%		GPD X5F221K	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22
C131	120 N470 10%	#22-5661				*	*	10TCT-T12
C132	39 N330 5%	#22-3381				*	*	10TCS-Q39
C133	.05 25V		TTP-05	CK-503	HOY101ZV503Z	CCD-503	TA150	TGL-S50
C134	.01 10%		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C135	47 N750 10%	#22-2376						
C136	.01 10%		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C137	.047 600V		DBE6S47		DMF6S47	60P-3-473	PVC6147	6PS-S47
C138	18 NPO 5%		TCZ-18		CY601CG180J	CCD-103	CN0418	10TCC-Q18
C139	.0018 1KV 10%		GPD X5F182K	DD-182	JBX601YP182K	CCS-182	GP218	10TS-D18
C140	.001 10%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C141	.0033 400V 10%		V1614033	CPR-3300J	WMF4D33	60P-1-332	PVC6233	6PS-D33
C142	.001 125V 5%			CPR-1000J	CD19F102J500	DM-19-102J	SK210	424ME1001
C143	.0022 500V 5%			CPR-2200J	CD19F222J500	DM-19-222J	SK222	424ME2201
C144	.05 25V		TTP-05	CK-503	HOY101ZV503Z	CCD-503	TA150	TGL-S50
C145	.560 1 10%		GPD X5F561K	DD-561	JBY6D1YP561K	CCD-561	GP356	10TS-T56
C146	.05 25V		TTP-05	CK-503	HOY101ZV503Z	CCD-503	TA150	TGL-S50
C147	.05 25V		TTP-05	CK-503	HOY101ZV503Z	CCD-503	TA150	TGL-S50
C148	.05 25V		TTP-05	CK-503	HOY101ZV503Z	CCD-503	TA150	TGL-S50
C149	.01 1KV	#22-5716	TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C150A	.001 1KV							
C151	.056 200 10%		DBE6S56		PKM4S56	40P-3-563	PVC6156	4PS-S56
C152	.1 200V 10%		DBE2P1		DMF2P1	20P-3-104	PVC201	2PS-P10
C153	.082 200V 10%		DBE6S82		PKM4S82	60P-4-823		6PS-S82
C154	.1 100V 10%		DBE2P1		DMF2P1	20P-3-104	PVC201	2PS-P10
C155	.047 150VAC 10%	#22-4928						
C156	.0033 1KV 10%		GPD X5R332K	DD-332	JBV601YP332K	CCD-332	JF233	10TS-D33
C157	.001 10%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C158	220 1KV 10%		GPD X5F221K	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22
C159	.001 1KV 10%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C160	.05 100V		GPD Z5V303P	DD-503			GP150	
C161	.001 10%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C162	.001 10%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10