

CABINET-REAR VIEW DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

Remove two spring clips and two screws. Turn five plastic retainers to remove cabinet back. Disconnect antenna leads and remove all knobs.

Note: Bottom of chassis may be serviced when metal cover is removed from bottom of cabinet.

Remove picture-tube socket, HV anode lead, degaussing leads, speaker leads, deflection-yoke plug, convergence plug, and control assembly plug.

Loosen four screws holding tuner assembly and remove tuner assembly. Remove four screws holding chassis. Remove chassis from cabinet.

Loosen three screws holding control assembly and remove assembly.

PICTURE TUBE REMOVAL

See "Chassis Removal" instructions. Lay set face down on a soft protective surface.

Remove purity ring and blue lateral assembly, convergence assembly, and deflection yoke from the picture-tube neck.

Remove eight screws securing degaussing shield and picture-tube mounting brackets. Remove picture tube from the cabinet. Do not lift picture tube by the neck.

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 OR FUSE DEVICE

A 1.2-amp and a .35-amp fuse are used for low-voltage power supply protection. (See "Cabinet - Rear View" photo for location.)

Four 2 1/2" #24 AWG wires are used for filament protection. (See "Chassis-Bottom View" photo for location.)

A .5-amp fuse is used for horizontal output tube protection. (See "Tube Placement Chart" for location.)

accomplished by the proper setting of the horizontal hold coil. (See "Tube

Placement Chart" for location.)

VHF TUNER

The fine tuning mechanically engages oscillator slug for adjustment (one slug for each channel).

HORIZONTAL OSCILLATOR

Adjustment of the horizontal hold is

WIDTH

The width may be varied by connecting the lead from C145 to a different point. (See "Cabinet-Rear View" for location.)

FOCUS

The focus may be varied by means of a focus control. (See "Cabinet - Rear View" photo for location.)

PHOTOFACT® Folder

with CIRCUITRACE™

For Supplier Address See PHOTOFACT Index



MODEL B4732W

ZENITH CHASSIS 12A13C52,
12B13C52, 12B14C50, 12B14C52

COLOR TV

IMPORTANT FILING NOTICE

Some models covered by this PHOTOFACT Folder employ chassis in addition to the TV chassis. PHOTOFACT Folders covering these additional chassis are packaged immediately behind this Folder and should be filed with this Folder in the yellow filing jacket provided. For specific coverage see index below.

INDEX

Remote Receiver S-77536, S-87286,
Transmitter S-83596-SET 1157, FOLDER 2-A

SERVICING IN THE FIELD PAGE 37

MODELS	CHASSIS	MODELS	CHASSIS
A4519P5,W5	12A13C52 (LP)	B2999W	12B14C50
A4520M5	12A13C52 (LP)	B4519W	12B14C52
A4524H5	12A13C52 (LP)	B4519W1	12B13C52
A4525P5,W5	12A13C52 (LP)	B4521M	12B14C52
A4526H5	12A13C52 (LP)	B4521M1	12B13C52
A4528DE5,P5	12A13C52 (LP)	B4522H,P	12B14C52
A4530M5	12A13C52 (LP)	B4522H1,P1	12B13C52
A4533W5	12A13C52 (LP)	B4523DE,P	12B14C52
A4538DE5,P5	12A13C52 (LP)	B4523DE1,P1	12B13C52
A4539M5	12A13C52 (LP)	B4529W	12B14C52
A4542P5	12A13C52 (LP)	B4529W1	12B13C52
A6519P5 (1)	12A13C52 (LP)	B4707W	12B14C50
A6546P5 (1)	12A13C52 (LP)	B4732W	12B14C50
A6548DE5 (1)	12A13C52 (LP)	B4736M,M1	12B14C50
		B4738DE,P	12B14C50
		B4744W	12B14C50
T2977W (1)	12B14C52	B4746DE	12B14C50
T2986W	12B14C52	B4749P	12B14C50
T2989M	12B14C52	B6519W (2)	12B14C52
T2990DE,P	12B14C52	B6523DE,P (2)	12B14C52
T2994W5	12A13C52 (LP)	B6707W (2)	12B14C50
T2995M5	12A13C52 (LP)	B6744W (2)	12B14C50
T2996W	12B14C50		
T2997DE5,P5	12A13C52 (LP)		
T2998DE,P	12B14C50		
		Combination Models	
		B8720W	12B14C50
(1) Remote S-77536		B8732M	12B14C50
(2) Remote S-87286		B8734DE	12B14C50
		B8770P (2)	12B14C50
(LP) Late Production			

SAFETY PRECAUTIONS

Make sure line voltage does not exceed rating of set. Check high-voltage regulation and adjust to correct value.

Be sure shields and rear cover are in place and secure.

Beware of shock from high voltage or AC line. Discharge high voltage to HV cage only.

Use extreme care when handling picture tube. Do not bump, scratch, or exert undue strain.

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. UB977

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DATE 2-71

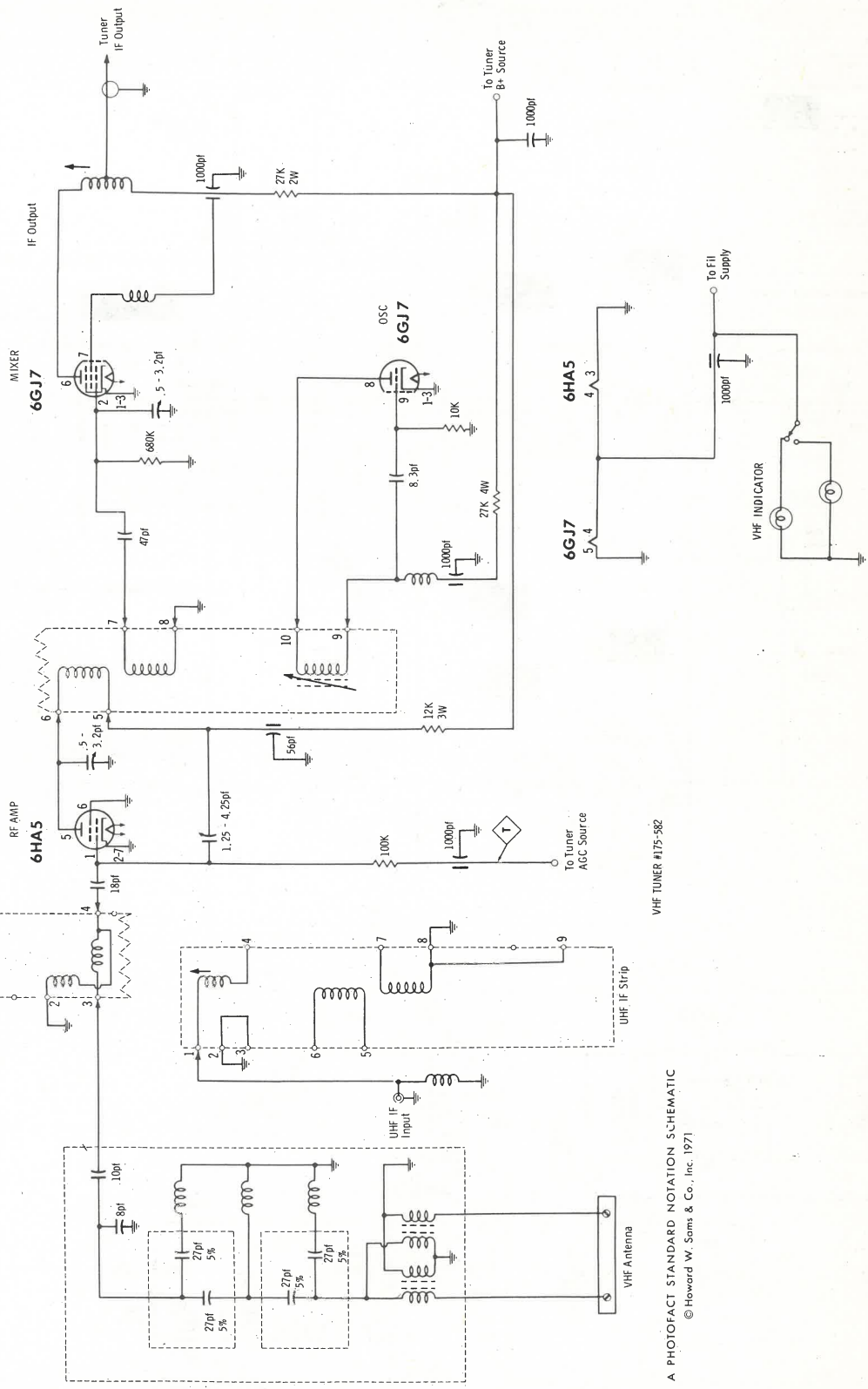
SET 1157 FOLDER 2



ZENITH CHASSIS 12A13C52,
12B13C52, 12B14C50, 12B14C52

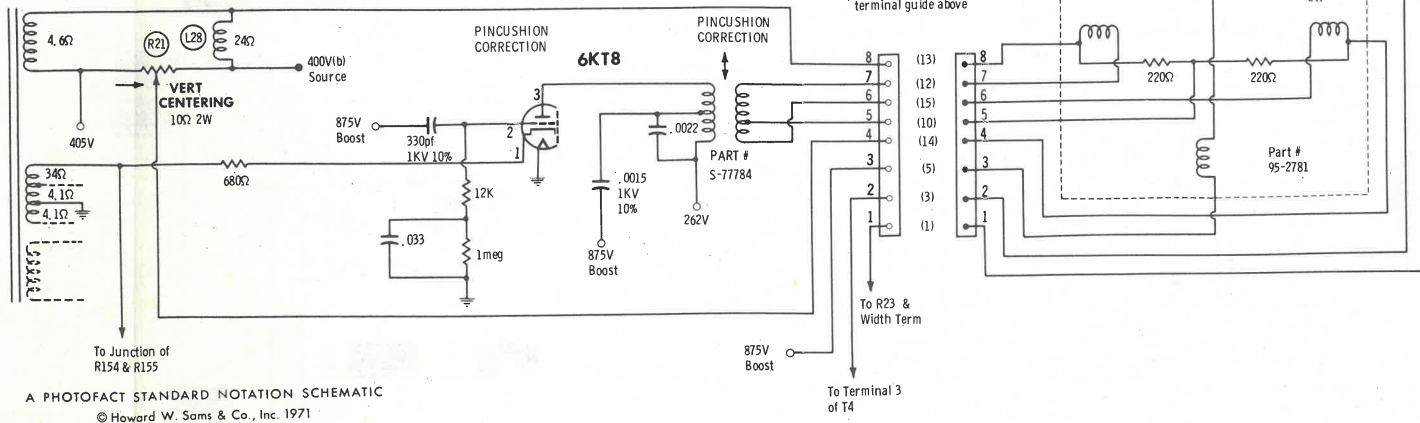
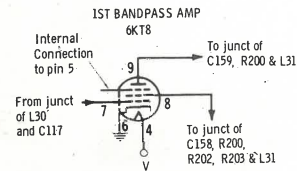
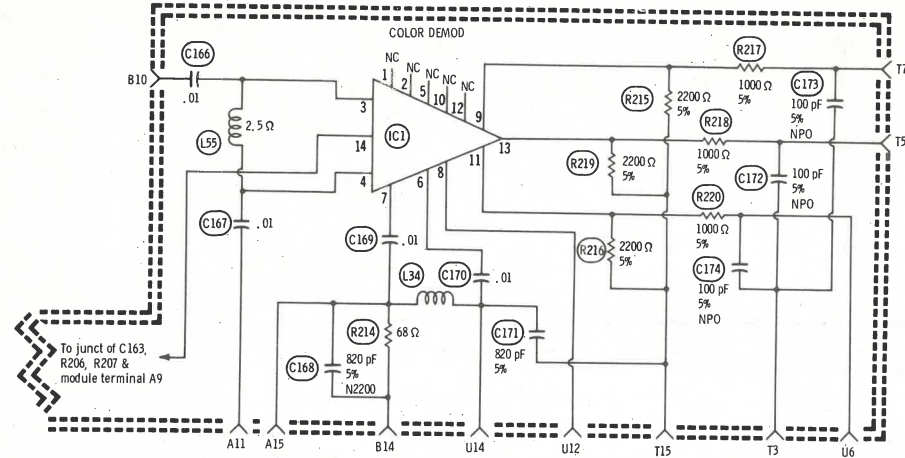
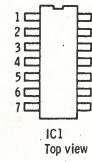
SET 1157 FOLDER 2

FOLDER 2



VHF TUNER 175-582

A PHOTOFACT STANDARD NOTATION SCHEMATIC
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A PHOTOFACT STANDARD NOTATION SCHEMATIC
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1st BANDPASS AMP, COLOR DEMOD, PINCUSHION CORRECTION CIRCUITS
USED IN SOME VERSIONS

CHASSIS REMOVAL

Remove two spring clips and two five plastic retainers to remove. Disconnect antenna leads and re

Note: Bottom of chassis may be removed if metal cover is removed from bot

Remove picture-tube socket, HV gaussing leads, speaker leads, plug, convergence plug, and con plug.

Loosen four screws holding tuner remove tuner assembly. Remove holding chassis. Remove chassis

CRT IMPLOSION PROTECTION

Implosion protection is a part of the picture tube, accomplished without CRT

FUSE OR FUSE DEVICE

A 1.2-amp and a .35-amp f for low-voltage power sup section. (See "Cabinet - photo for location.)

Four 2 1/2" #24 AWG wires for filament protection. Bottom View" photo for lo

A .5-amp fuse is used for output tube protection. Placement Chart" for loca

accomplished by the proper the horizontal hold coil.

B+ FUSE .5A

B+ FUSE 1.2A

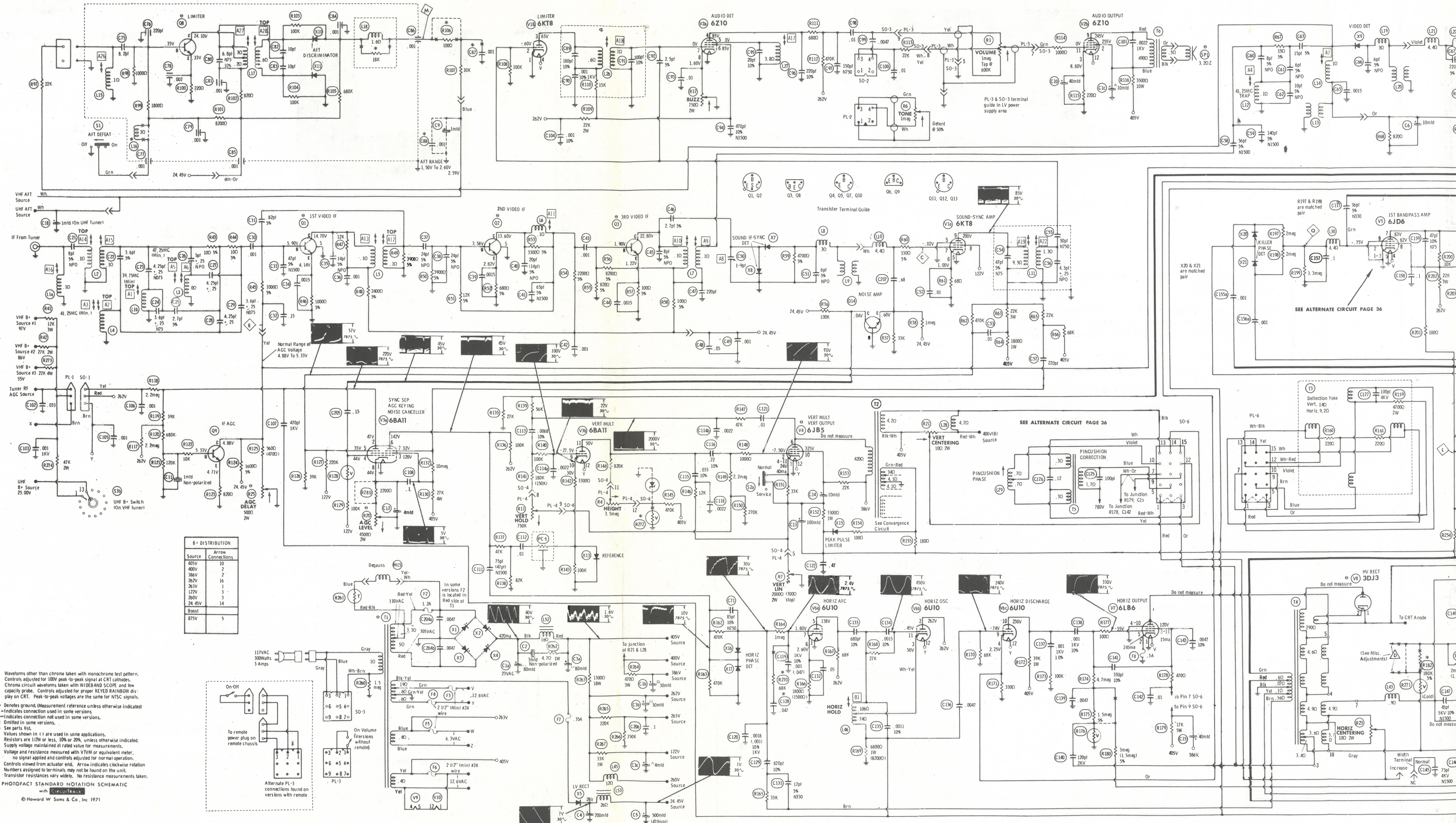
B+ FUSE .35A

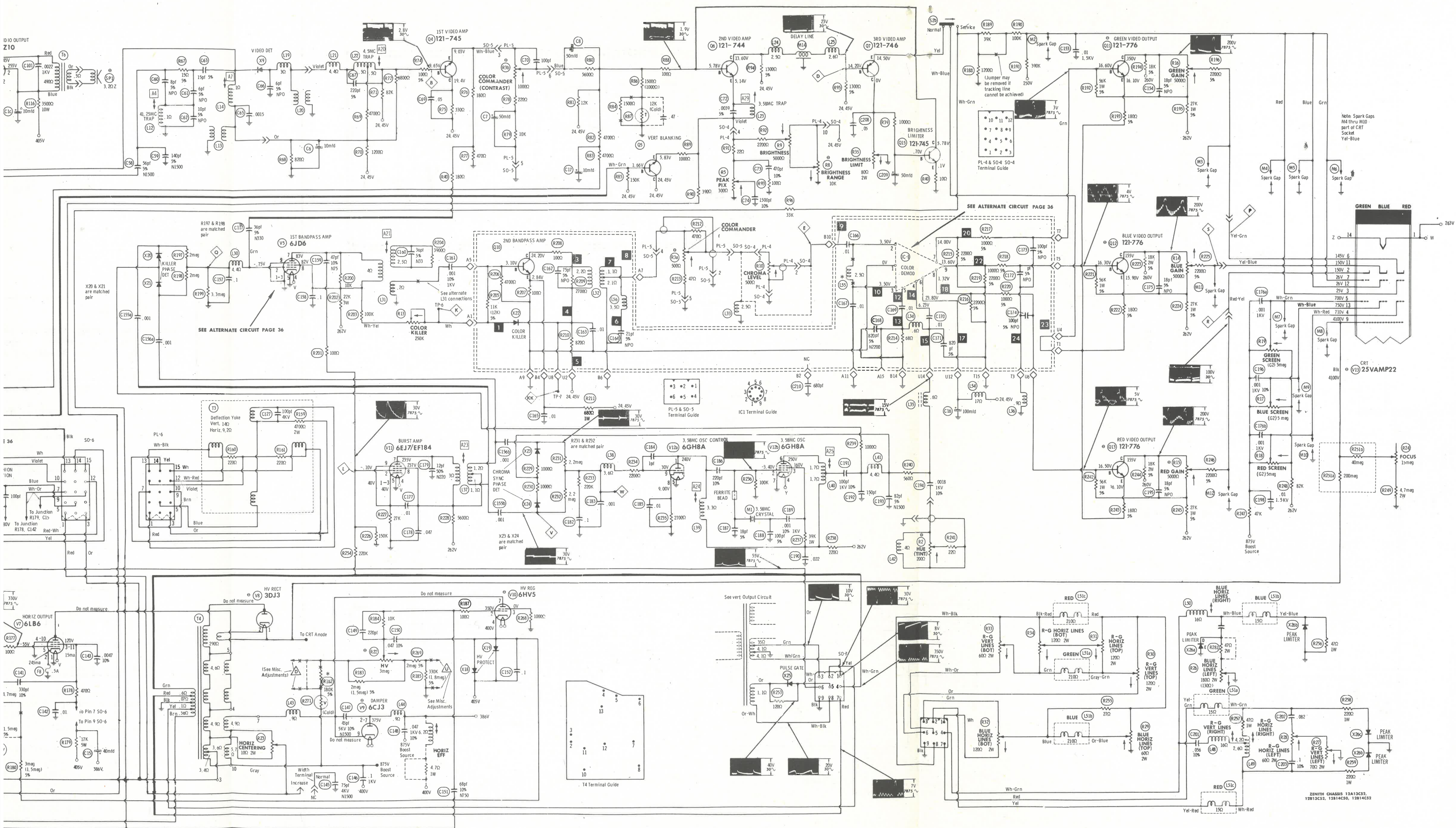
BUZZ

COLOR

KILLER

B1





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	0Ω	100K	38K†	FIL	FIL	68Ω	5000Ω *	34K†	16K†				
V2	6Z10	FIL	3516Ω†	220Ω	472K†	3.8Ω	23K†	1Ω	270Ω	4000Ω†	TP	25K	FIL	
V3	6BA11	FIL	630K	27K†	39meg†	39K	550K	10meg†	4100Ω	740K	8100Ω *	1.5meg†	FIL	
V4	6JB5	FIL	2.5meg	NC	NC	NC	906Ω†	NC	TP	NC	22.5K†	630Ω	FIL	
V5	6JD6	0Ω	2meg	0Ω	FIL	FIL	0Ω	22K†	22K†	0Ω				
V6	6U10	FIL	1300Ω†	6900Ω	330Ω	69K†	1800Ω	1.6meg	TP	68K	40K†	27K	FIL	
V7	6LB6	FIL	0Ω	17.5K†	0Ω	10meg*	NC	NC	TP	NC	NC	17.5K†	FIL	15Ω†
V8	3DJ3	PINS 1 THRU 8 HAVE INFINITE RESISTANCE												317Ω†
V9	6CJ3	NC	32Ω†	NC	FIL	FIL	NC	32Ω†	NC	1.7meg				
V10	6HV5	FIL	5.1meg†	1000Ω	30K† *	NC	NC	0Ω†	NC	NC	NC	NC	FIL	
V11	6EJ7 EF184	27K	950K	27K	FIL	FIL	TP	6900Ω†	6900Ω†	27K				
V12	6GH8A	1600Ω†	100K	40K†	FIL	FIL	1600Ω†	0Ω	2700Ω	2.6meg				
V13	25VAMP22	FIL	14K†	100K†	1.8meg†	1.9meg†	14K†	100K†	NC	50meg†	NC	14K†	100K†	
											PIN 13 1.9meg†	PIN 14 FIL		
V201	6HA5/ EC900	3meg	9Ω	FIL	FIL	13K†	0Ω	0Ω						
V202	6GJ7/ ECF801	0Ω	680Ω	0Ω	FIL	FIL	28K†	28K†	23K†					
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

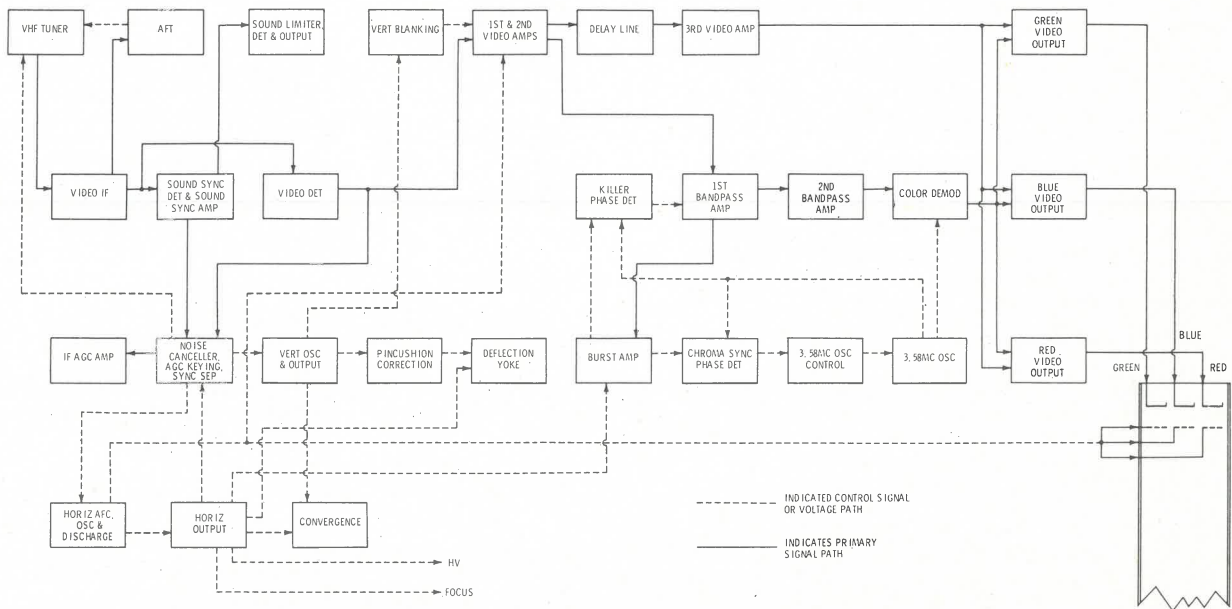
† MEASURED FROM THE CATHODE OF X2 and X4.
* MEASURED FROM PIN 9 OF V9.
READING DEPENDS ON POLARITY OF METER CONNECTIONS.

THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
TP TIE POINT. NC NO CONNECTION

TROUBLESHOOTING CHECK CHART

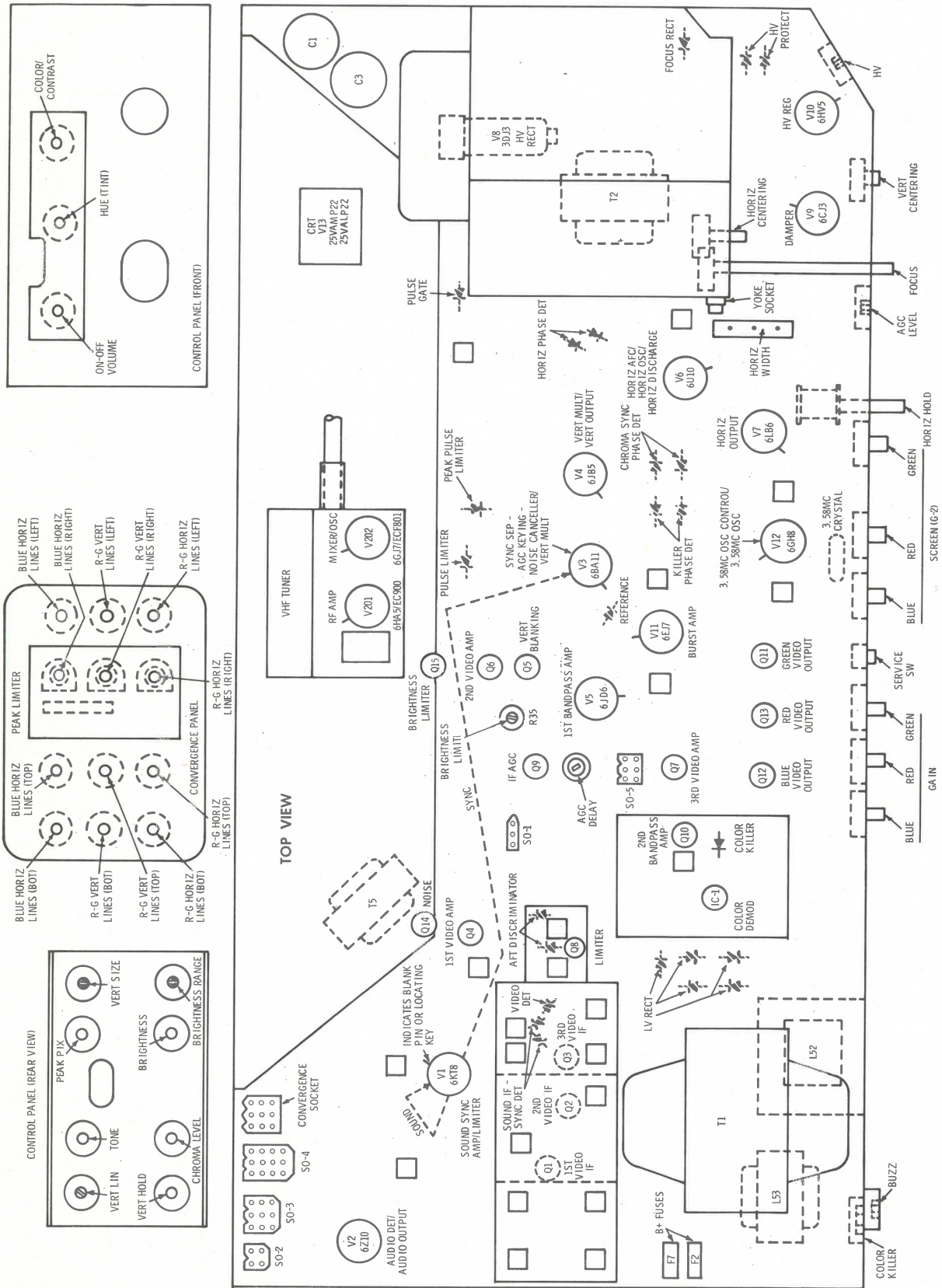
The following chart lists component failures most likely to produce the indicated symptoms.

SWEEP	PICTURE or SOUND	COLOR (B/W operating normally)
No raster, has sound V6 thru V10, V13	No pic, no sound, no raster F2 thru F7, X1 thru X5	No color Q10, V5, V11, X20 thru X24
No vert. deflection V3, V4	No pic, no sound, has raster Q1, Q2, Q3, V202 (tuner)	Weak color V11, X20 thru X24
Poor vert. lin. or foldover V3, V4	No pic, no sound, has snow V201, V202 (tuner)	No color sync V11, V12, X22, X23, X24
Poor horiz. lin. or foldover V7, V9	No pic, has sound, no raster Q11, Q12, Q13, V13	No blue IC1, Q12
Narrow picture X1 thru X5, X6, V7, V9	No pic, has sound, has raster Q4, Q6, Q7, Q11, Q12, Q13, V13	No red IC1, Q13
Vert. off freq. V3, V4	Has pic, no sound Q8, V1, V2, X7, X8, X10, X11	X9. Incorrect hue (tint) V11, X22, X24, IC1
Horiz. off freq. V6, X16, X17	Overloaded picture V3, X12	
	Low or excessive brightness Q5	
	Poor focus X6	
RASTER	SYNC	
Yellow - no blue Q12, V13	No vert. sync V3, V4	
Cyan - no red Q13, V13	No horiz. sync V6	
Magenta - no green Q11, V13	No vert. or horiz. sync V3	



BLOCK DIAGRAM

TUBE PLACEMENT CHART



ZENITH CHASSIS 12A13C52,
12B13C52, 12B14C50, 12B14C52

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 A1 thru A16, A21 8606, 8606L, 8869 A17 thru A20, A22, A26, A27, A28 .. 9296, 9297, 9300

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 -2 volt bias to Point T positive lead of bias supply to ground. Unplug AGC White/Yellow lead Point E and connect 7-volt bias supply to Point E, negative lead of bias supply to ground. Adjust bias to obtain response curve which shows no overload. Set 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 B, low side to ground.	High side thru .001mfd cap. to Point U, low side to ground.	44MC (10MC Sweep)	39.75MC 41.25MC 42.17MC 44.00MC 47.75MC 47.25MC	A7,A9, A10,A11, A12,A13, A14,A15, A16 and Tuner IF OutputCoil	Adjust for maximum amplitude and MINIMUM tilt with markers as shown in Figure 1. Response curve amplitude is used as 100% reference in next step. (Do not adjust scope.)
Vertical input of scope to Point B, low side to ground.	High side to ungrounded tube shield over Mixer-Osc., low side to ground.	44MC (10MC Sweep)	39.75MC 41.25MC 44.00MC 45.75MC 47.25MC	A8	Adjust for exactly 50% amplitude of Fig. 1 as shown in Fig. 2.

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, A18, A19 and A22. If 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 A20 for MINIMUM beat interference.

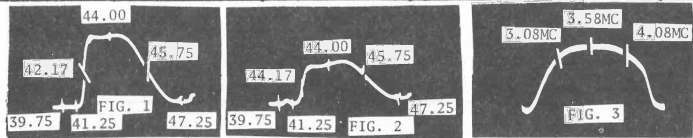
CHROMA BANDPASS ALIGNMENT

Connect a keyed rainbow generator to the antenna terminals and adjust the set for normal color pattern. Connect a 25mfd capacitor at 25W VDC from Point D to ground. Set Color Commander, Chroma Level and Hue controls to center range. Connect a VTVM from Point Q to ground. Disconnect R204, Damping Resistor (3900-ohms) from across L31. Adjust A21 for MINIMUM. Reconnect R204.

CHROMA BANDPASS ALIGNMENT (SCOPE CHECK)

Unplug Yellow lead from Point E. Connect 7-volt bias supply to Point E, negative lead of bias supply to ground. Adjust bias to obtain a response curve showing no indication of overload. Use 3-5MC sweep. Connect Point L to ground. Killer control should be maximum clockwise position

SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CONNECT SCOPE	REMARKS
High side thru .001mfd capacitor to Point U, low side to ground.	42.17MC (3-5MC Sweep)	3.08MC (42.67MC) 3.58MC (42.17MC) 4.08MC (41.67MC)	Thru demodulator probe to Point E low side to ground	This is used as a check should be similar to Fig. 3. If necessary, adjust A21.



MISCELLANEOUS ADJUSTMENTS

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Tune in a TV station and set all controls for normal operation. Remove the horizontal hold knob. Turn shaft to lock in position when changing from channel to channel. Reinstall knob with pointer centered between stops.

Connect a VTVM through a high-voltage probe to picture-tube anode connector. Set normal set-up switch in Set-up position. With 117VAC to set, adjust the HV adjust control for 25KV on picture tube anode connector. Adjust focus, height, and vertical linearity controls. A width jumper is provided and is clearly marked on chassis. Connect for proper width.

If the HV anode voltage measures more than 1.5KV higher than 25KV, place a jumper across the two Terminals marked A. If the HV anode voltage measures more than 1.5KV lower than 25KV, place a jumper across Terminals U.

AGC ADJUSTMENT

Tune in a strong TV station and advance the AGC Level control, R20, until instability appears in the picture (pulling, jitter, overload, etc.). Reduce the control to the point just below the instability and check all available stations for proper AGC action. If AGC Delay control is mis-adjusted, AGC Level control cannot be properly adjusted. AGC Delay control is set at factory and normally will not need readjustment. If adjustment is needed, tune in a weak TV station (without snow) or use a strong station attenuated just free of snow. Turn the AGC Delay, R25, clockwise until snow appears; then back off just out of snow. Check available weak stations for proper AGC action.

COLOR AUTOMATIC FREQUENCY-PHASE CONTROL ALIGNMENT

Suggested Alignment Tools for A23, A24, and A25: GENERAL CEMENT 8606, 8606L, 8869

Connect a color bar generator to the antenna terminals and set controls for normal operation. Ground Point L. Connect a jumper between Points K and KK. Adjust A24 until color bars stand still or drift slowly. Connect a VTVM to Point V in series with 4.7meg resistor. Adjust A25 for maximum. Remove ground from Point L. Remove jumper from Point K to Point KK.

Connect 25mfd @ 25W VDC from Point D to ground. Turn color commander, chroma level and hue controls to midrange. Connect the vertical plates of the oscilloscope to Point S. Adjust A23 for maximum amplitude of 6th bar negative-going and/or crossover at 3rd and 9th bars. See waveform on schematic for pattern obtained from standard keyed rainbow generator.

Check the range of tint control. The bars should move 30° either side of proper signal. If necessary, retouch A23 for proper range of control. Check for proper waveform at G-Y and B-Y outputs.

KILLER ADJUSTMENT

Tune in a weak signal or reduce the signal at the antenna terminals to obtain a snowy picture. Adjust the killer control to eliminate the color in the snow. Check with a color signal to make sure the killer is not 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. Proper positioning of components on picture-tube neck is essential.

Connect the blue and green grids of the picture tube through individual 100K resistors to ground. 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 level control set to MINIMUM. Turn the red, blue and green screen controls fully counterclockwise. Move the Normal-Setup switch to Setup. Turn the red, blue and green drive (cathode) controls fully clockwise. Advance the screen controls, one at a time, until each produces a barely visible line on the screen. Red, green and blue lines may not completely overlap (adjust for equal intensity). Return the Normal-Setup switch to Normal. Adjust the blue, green and red drive (cathode) controls to eliminate coloring in the dark and bright areas of the picture. Check overall black and white tracking through normal brightness and color commander (contrast) range.

AFT ALIGNMENT (TOUCH-UP PROCEDURE)

Tune in a color TV program and set all controls for normal operation. Switch AFT to Off position and correctly fine tune. While switching the AFT switch on and off, adjust A28 until MINIMUM pulling effect is accomplished. The same effect can be monitored with a VTVM connected to Point M. Adjust A28 for MINIMUM voltage change while switching AFT on and off.

TROUBLESHOOTING THE IC

Before suspecting the integrated circuit (IC), eliminate the possibility of trouble in the associated input circuits. Check for presence of a color signal at the IC output terminals. If no signal is present, check for possible shorted components in the associated output circuit. Check voltages at the IC terminals, paying particular attention to the supply voltage and current.

3.58MC TRAP ADJUSTMENT

Connect keyed rainbow generator to VHF antenna terminals. Tune in color-bar pattern and turn peak picture control fully clockwise. Connect scope high side to point D, low side to ground. Adjust A29, 3.58MC Trap for MINIMUM amplitude of signal.

BRIGHTNESS LIMITER

Tune in a black and white picture or a color picture with the color control set to MINIMUM. Set color commander and brightness to midrange and turn brightness limiter to fully clockwise position. Adjust brightness range control so blacks become grey. Turn color commander and brightness controls fully clockwise. Turn brightness limiter control to reduce "bloom" to approximately 1/4" overscan.

CONVERGENCE ADJUSTMENTS

Step	Control	Use to Converge (or Straighten)	Remarks
1.			Perform Center Dot Convergence using convergence magnets. If more range is needed, reverse magnet holder in clip. See Fig. A.
2.	Vertical Dynamic L29 Pincushion Adjust		Adjust for straight horizontal line at top and bottom of screen.
3.	R-G Vertical Lines, Top R30	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).
4.	R-G Vertical Lines, Bottom R33	Red and Green Vertical bars at bottom of screen.	
5.	R-G Horizontal Lines, Top R31	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).
6.	R-G Horizontal Lines, Bottom R34	Red and Green Horizontal bars at bottom of screen.	
7.	Blue Horizontal Lines, Top R29	Blue Horizontal bars at top of screen.	Touch up both controls for best convergence of horizontal bars along vertical center line (Fig. C).
8.	Blue Horizontal Lines, Bottom R32	Blue Horizontal bars at bottom of screen.	
9.			Perform Center Dot Static Convergence(Fig.A).
10.	Blue Horizontal Lines, Right L50	Blue Horizontal bars at right side of screen.	Touch up both controls for best convergence along horizontal center line (Fig. D).
11.	Blue Horizontal Lines, Left R26	Blue Horizontal bars at left side of screen.	
12.	R-G Vertical Lines, Right L48	Red and Green Vertical bars at right side of screen.	(Fig. E)
13.	R-G Horizontal Lines, Right L49	Red and Green Horizontal bars at right side of screen.	Use control to converge blue bar with red and green bars on right side of screen (Fig. B).
14.	R-G Vertical Lines, Left R27	Red and Green Vertical bars at left side of screen.	
15.	R-G Horizontal Lines, Left R28	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).

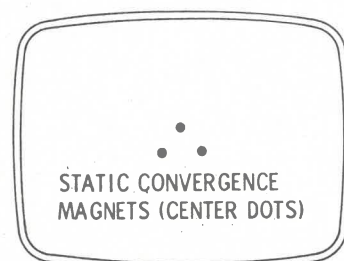


FIG. A

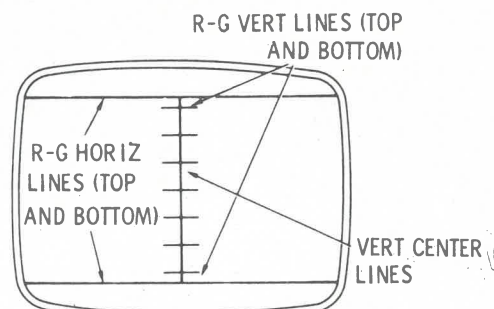


FIG. B
(RED AND GREEN ONLY)

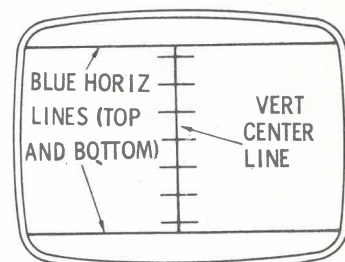


FIG. C
(BLUE BARS)

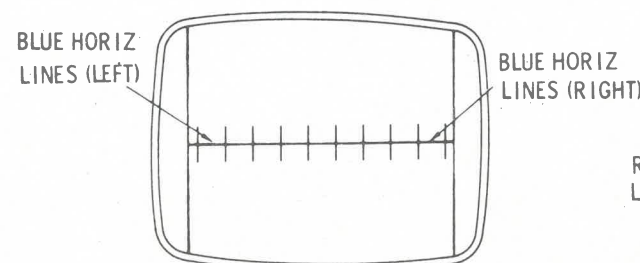


FIG. D
(BLUE BARS)

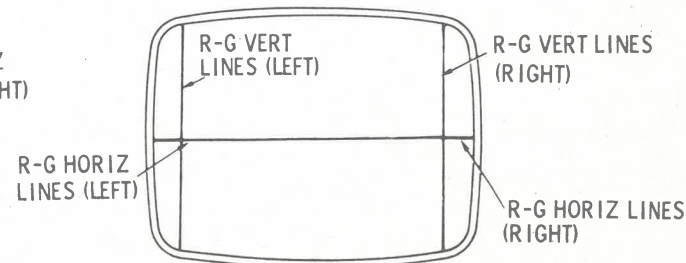


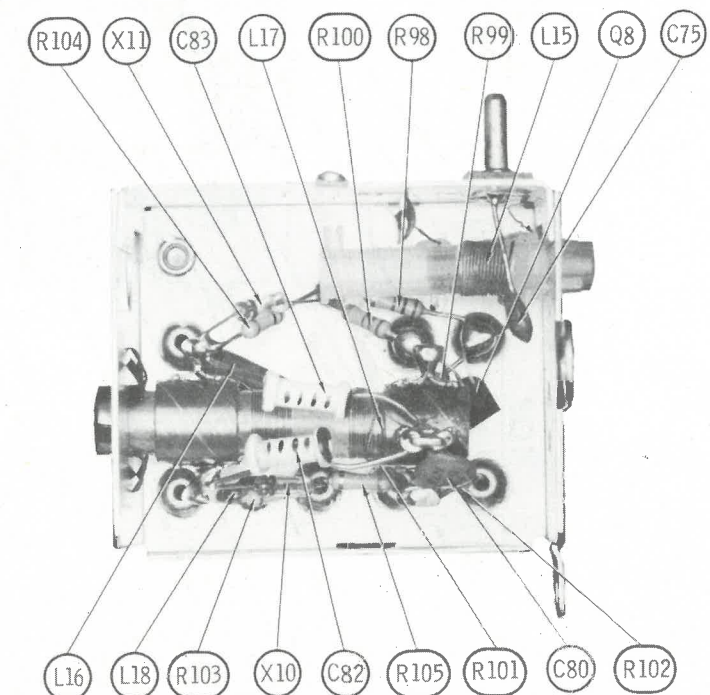
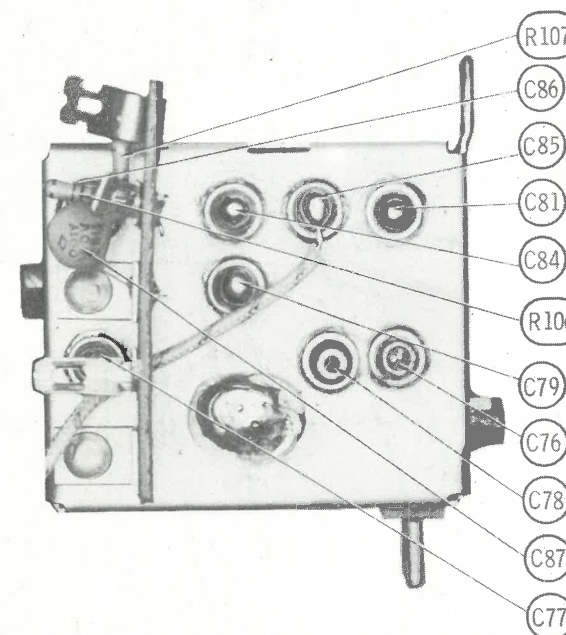
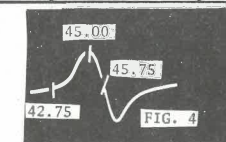
FIG. E

TV ALIGNMENT INSTRUCTIONS (Continued)

AFT ALIGNMENT

See "Miscellaneous Adjustments" for "AFT (Touch-up Procedure)". Set channel selector to any non-interfering channel. Disconnect AFT output lead on VHF tuner (white lead). Use only enough signal to give usable indication.

SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CONNECT SCOPE	REMARKS
High side thru .002mfd capacitor to Point \diamond , low side to ground.	45.00MC	44MC (10MC Sweep)	Vert. input to Point \diamond on AFT chassis, low side to ground.	Adjust A27 for maximum response at 45.00MC (bottom slug).
"	45.75MC	"	"	Adjust A28 to place marker on base line (top slug).
"	46.50MC	"	"	Adjust A26 for maximum gain and symmetry of response as shown in Fig. 4.
"	45.75MC	"	"	Reconnect AFT output lead to VHF tuner. Readjust A28 to place marker on base line (top slug).

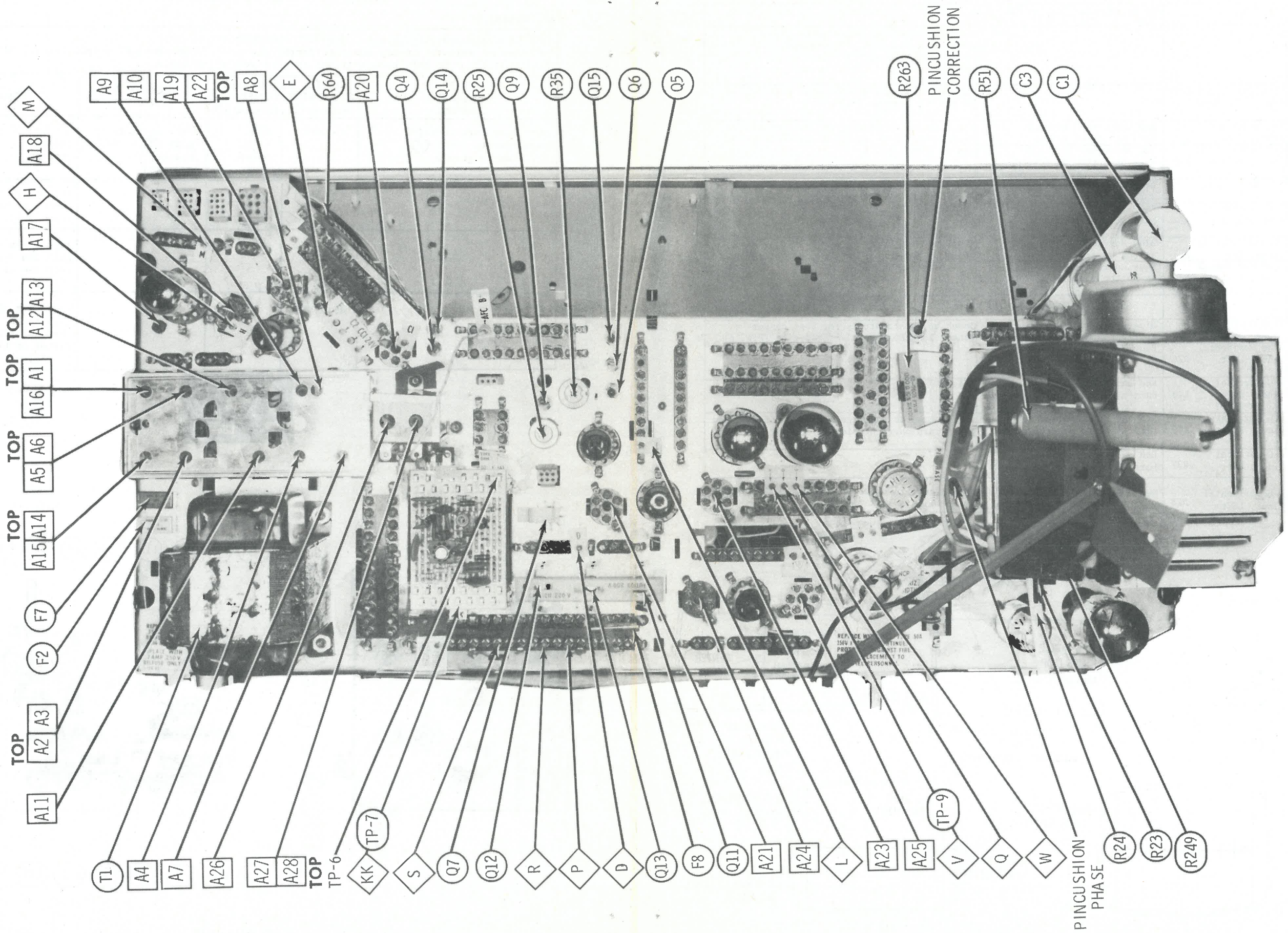


AFT CHASSIS

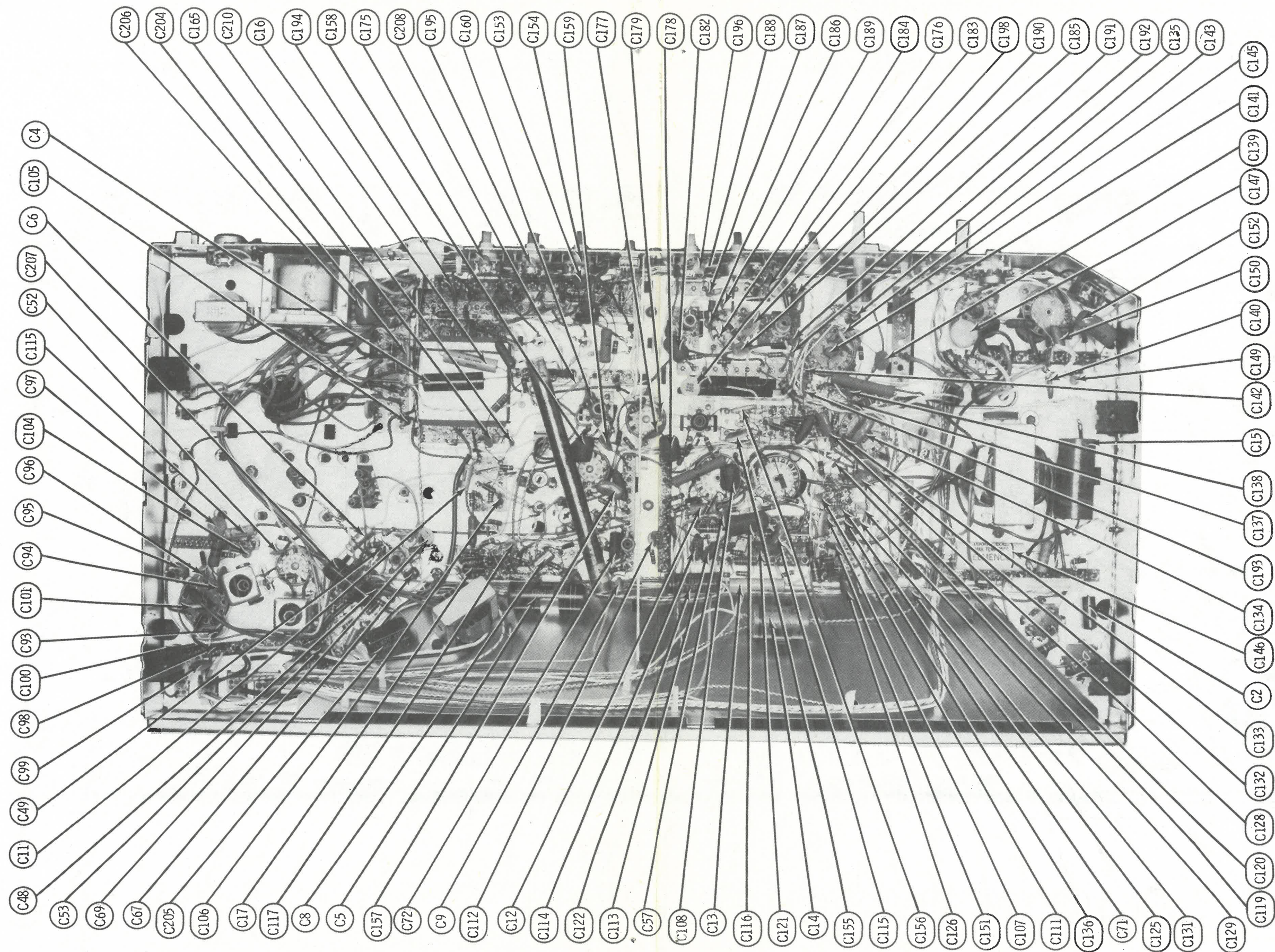
SET 1157 FOLDER 2

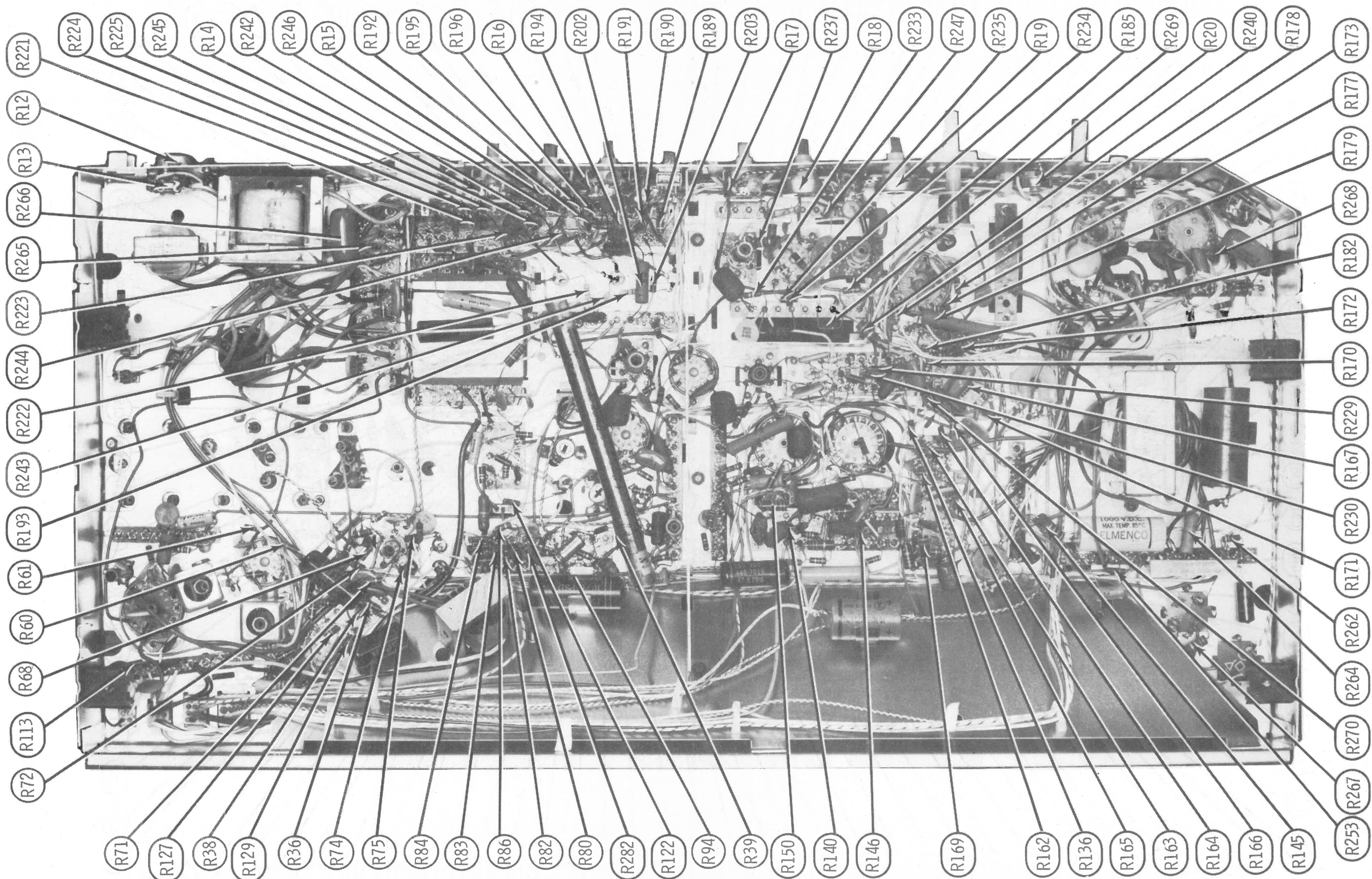
ZENITH CHASSIS 12A13CS2,
12B13CS2, 12B14CS0, 12B14CS2

FOLDER 2

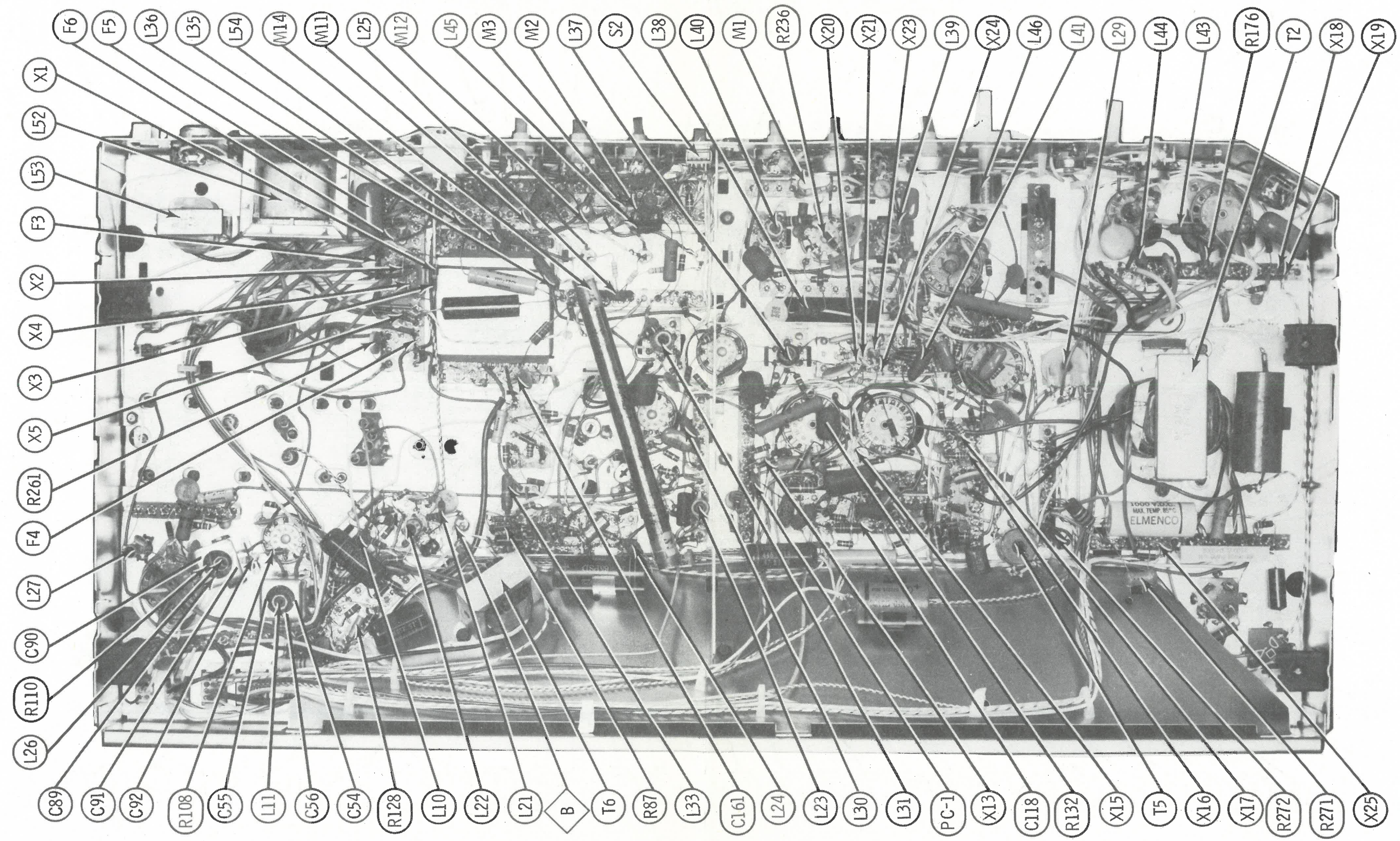


CHASSIS-TOP VIEW





CHASSIS-BOTTOM VIEW

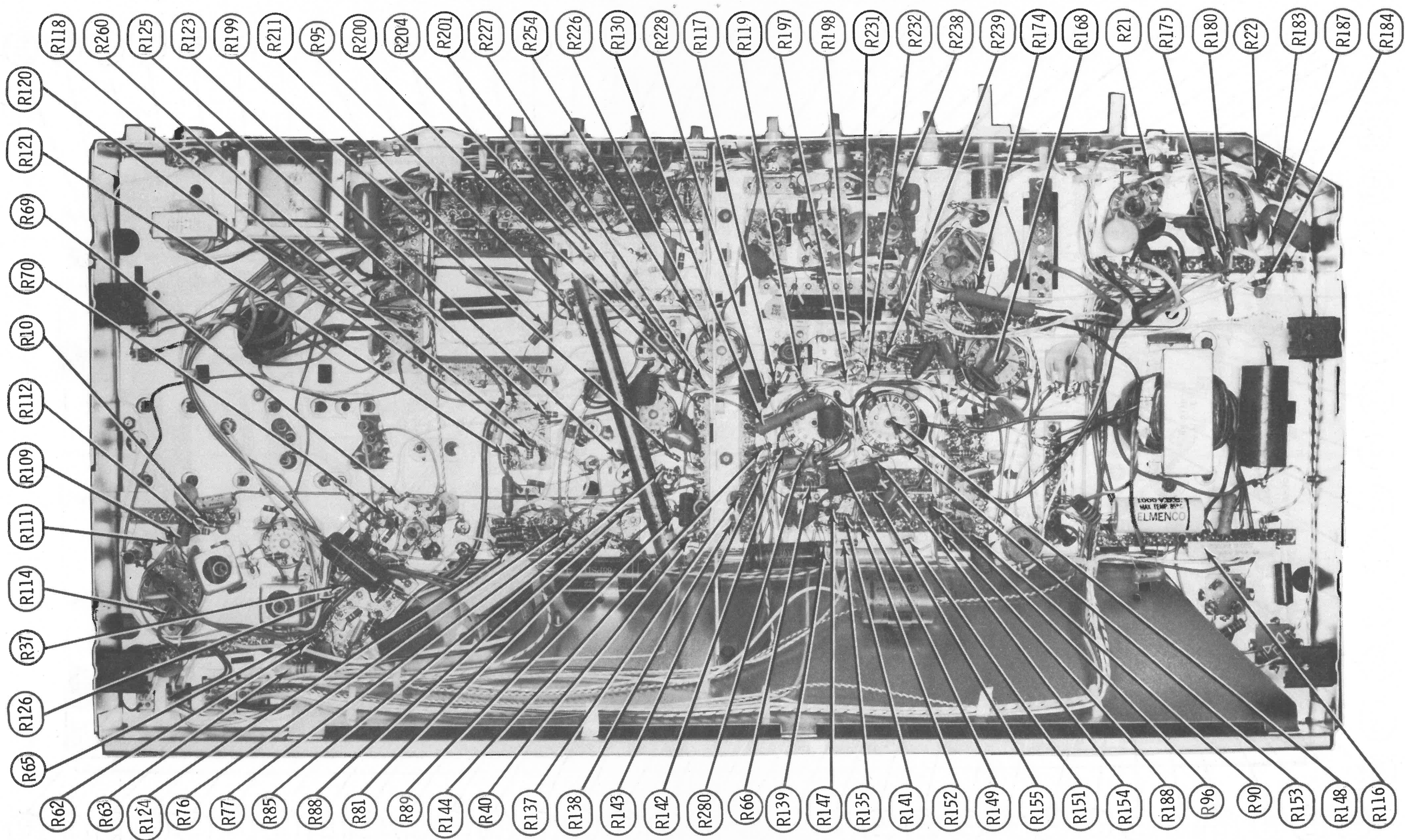


F6 F5 L36 L35 L54 M14 M11 L25 M12 L45 M3 M2 L37 S2 L38 L40 M1 R236 X20 X21 X23 L39 X24 L46 L41 L29 L44 L43 R176 T2 X18 X19
 X1 L52 L53 F3 X2 X4 X3 X5 R261 F4 L27 C90 R110 L26 C89 C91 C92 R108 C55 L11 C56 C54 R128 L10 L22 L21 B T6 R87 L33 C161 L24 L23 L30 L31 PC-1 X13 C118 R132 X15 T5 X16 X17 R272 R271 X25
 L27 C90 R110 L26 C89 C91 C92 R108 C55 L11 C56 C54 R128 L10 L22 L21 B T6 R87 L33 C161 L24 L23 L30 L31 PC-1 X13 C118 R132 X15 T5 X16 X17 R272 R271 X25

CHASSIS-BOTTOM VIEW

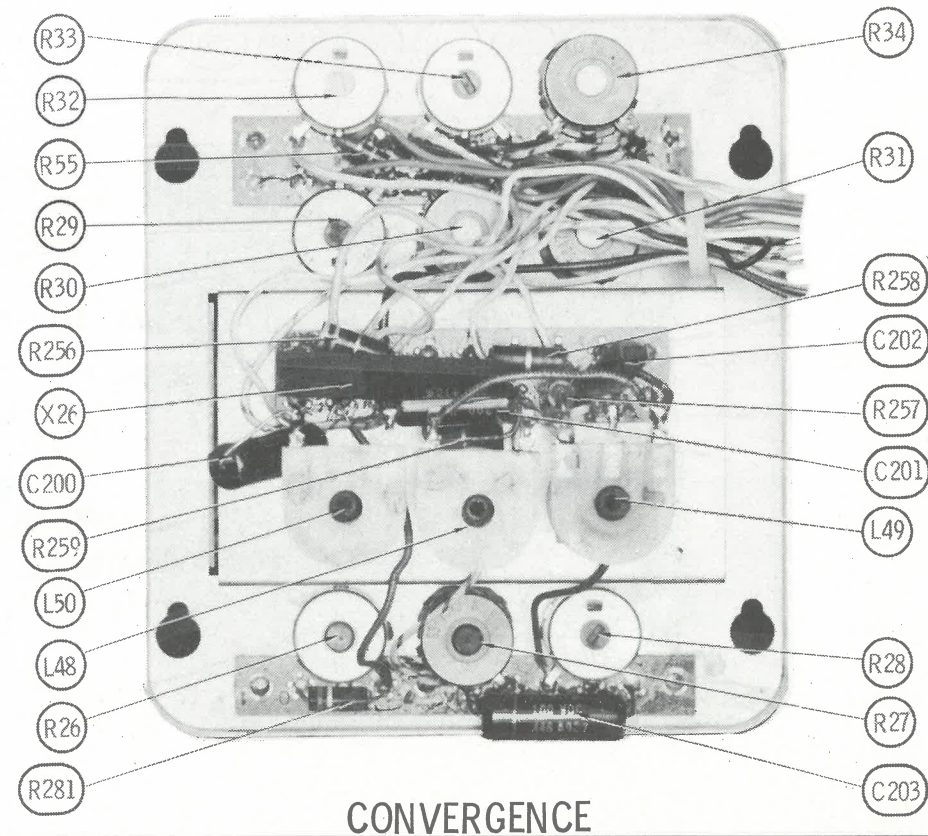
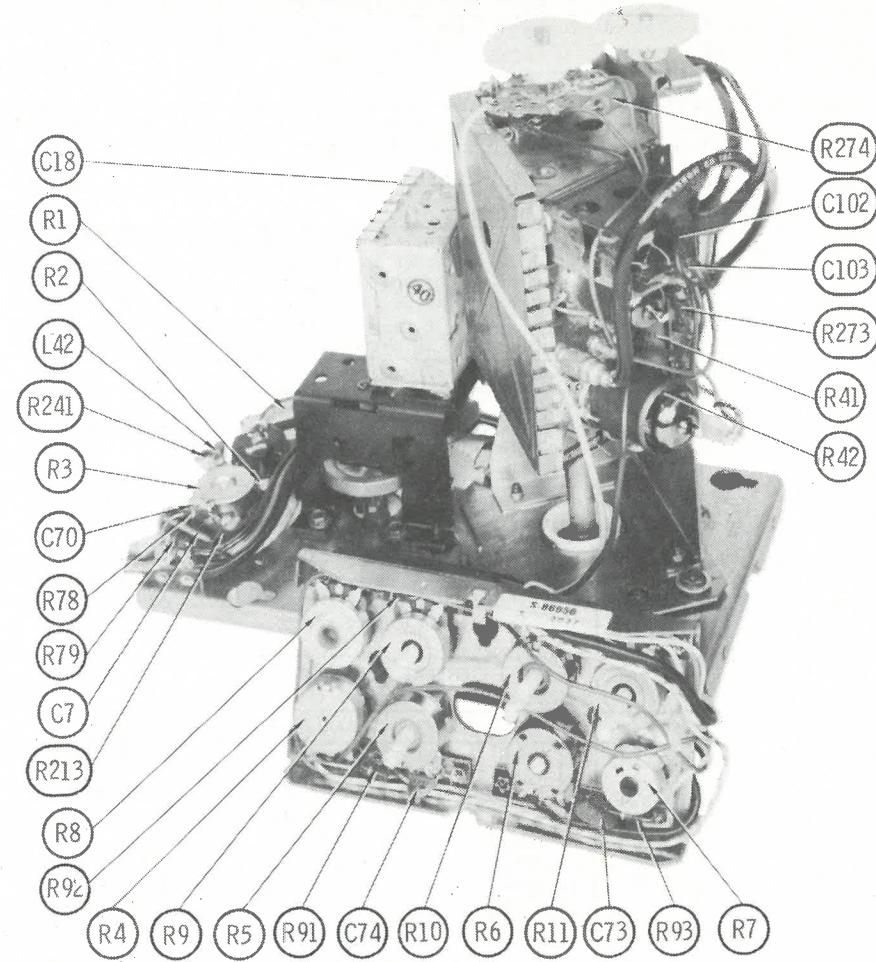
ZENITH CHASSIS 12A13C52,
12B13C52, 12B14C50, 12B14C52

FOLDER 2

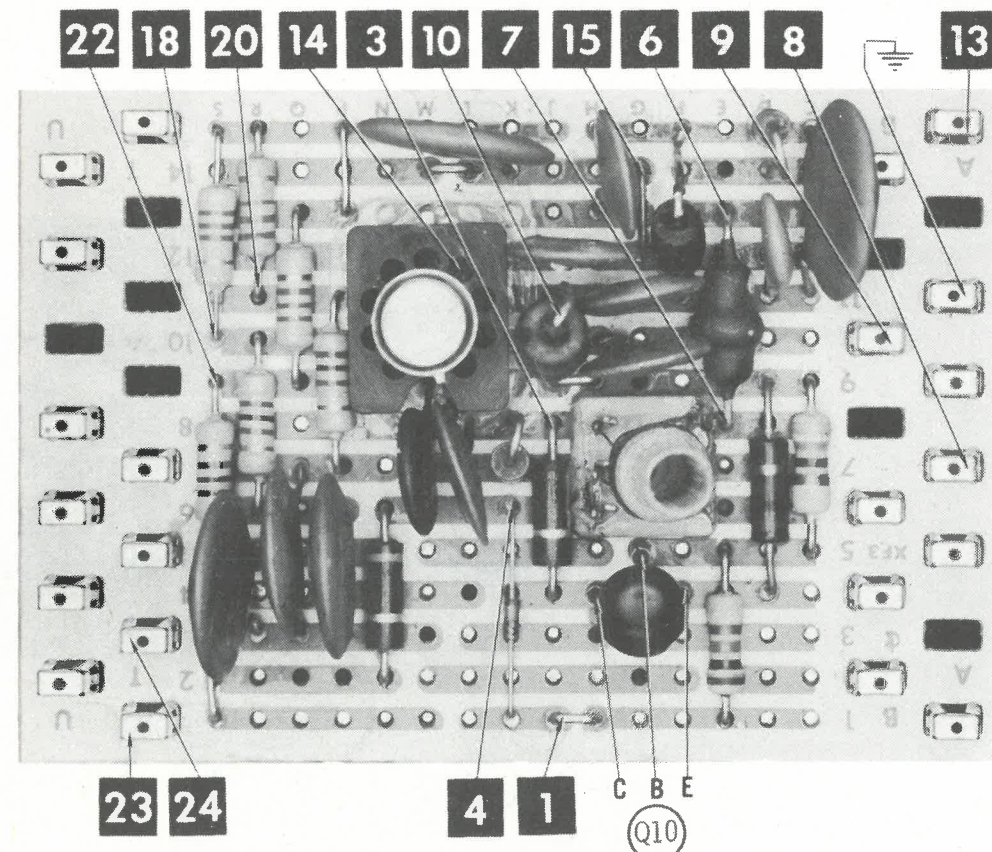
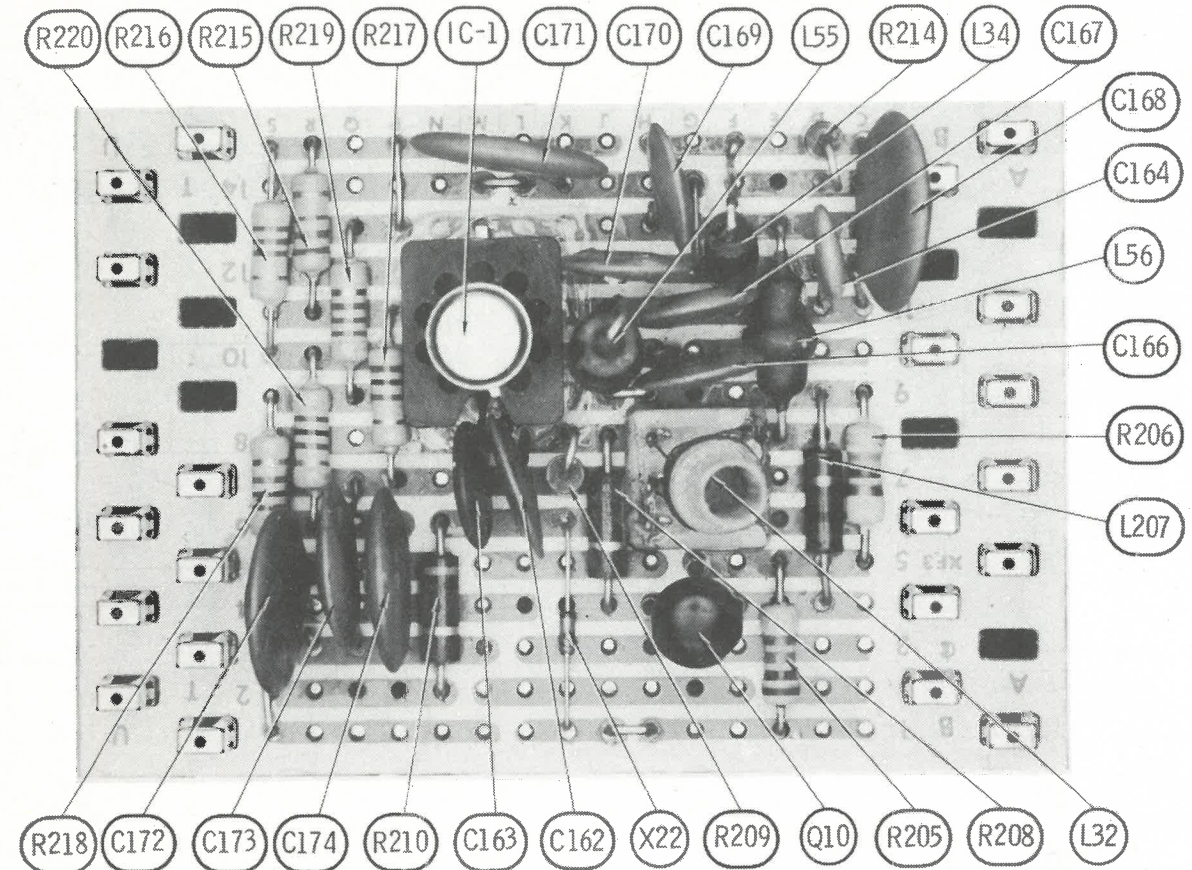


CHASSIS-BOTTOM VIEW

TUNER ASSEMBLY



CONVERGENCE

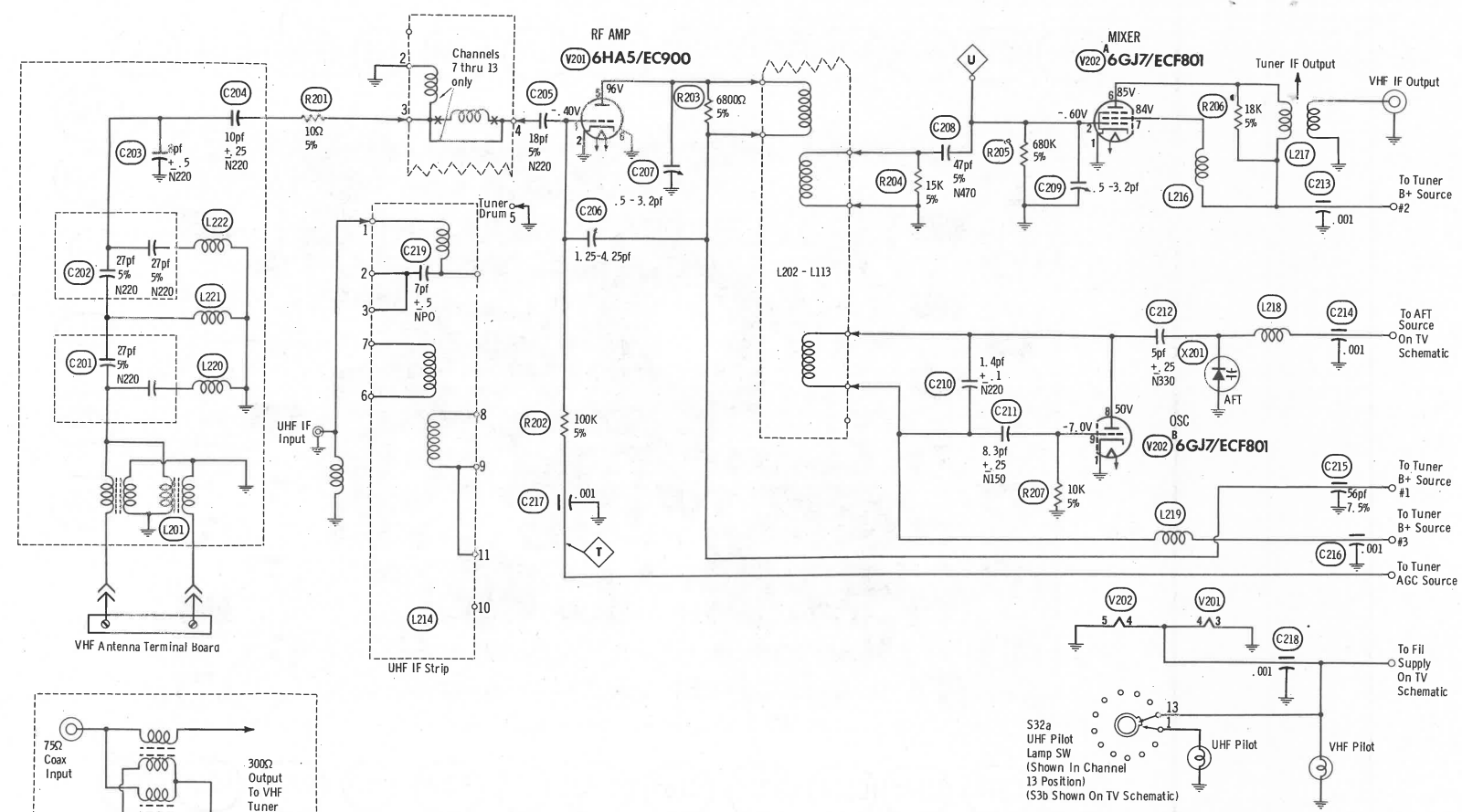


CHROMA BOARD

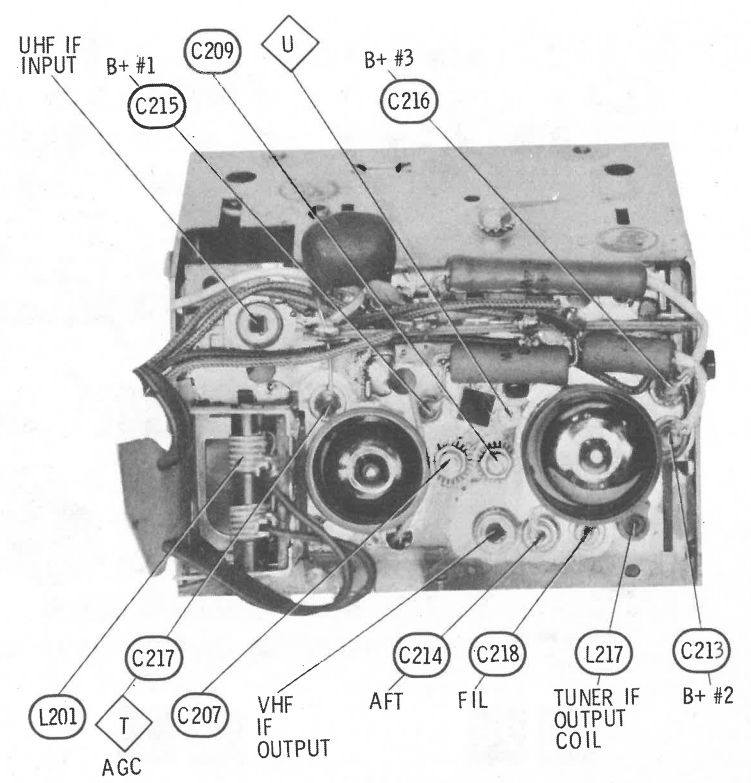
A Howard W. Sams CIRCUITRACE™ Photo

ZENITH CHASSIS 12A13C52,
12B13C52, 12B14C50, 12B14C52

FOLDER 2



A PHOTOFACT STANDARD NOTATION SCHEMATIC
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VHF TUNER ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools: GENERAL CEMENT
A201, A202, A203 8868, 8987, 9089

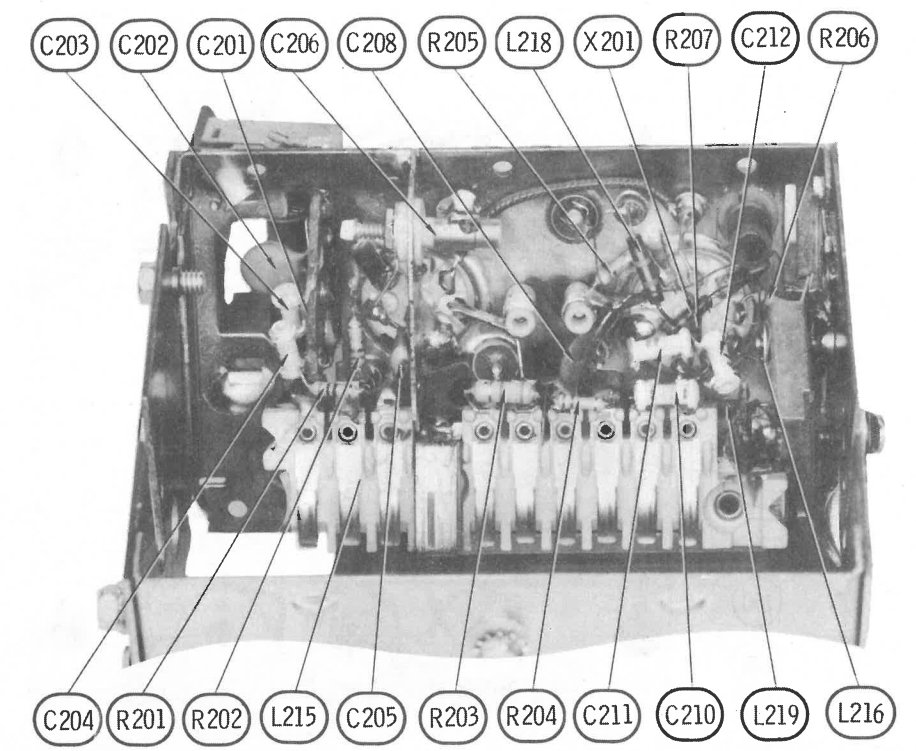
OSCILLATOR ADJUSTMENTS
The oscillator slug for each channel is preset with the fine tuning control. Place AFT (AFC) switch to Off position and adjust the fine tuning for best picture and sound.

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 the RF AGC line at Point 1. Adjust bias to obtain response curve showing no overload.

CHANNEL	CONNECT SCOPE	REMARKS
13	Vertical input to Point 1, 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 1, low side to ground.	Decrease bias. Check all channels and make compromise adjustments of A201 and A202 if necessary.

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
	59.75MC		87.75MC		197.75MC
(3) 63MC	61.25MC	(7) 177MC	175.25MC	(11) 201MC	199.25MC
	65.75MC		179.75MC		203.75MC
(4) 69MC	67.25MC	(8) 183MC	181.25MC	(12) 207MC	205.25MC
	71.75MC		185.75MC		209.75MC
(5) 79MC	77.25MC	(9) 189MC	187.25MC	(13) 213MC	211.25MC
	81.75MC		191.75MC		215.75MC

FIG. 201



VHF TUNER 175-583/585/597/598/1229/1230/1231

VHF TUNER PARTS LIST AND DESCRIPTION

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

VHF TUNER 175-583/585/597/598/1229/1230/1231

TUBES

AMPEREX		GENERAL ELECTRIC		RCA		SYLVANIA	
ITEM No.	USE	TYPE		ITEM No.	USE	TYPE	
V201	RF Amp	6HA5/EC900		V202	Mixer - Oscillator	6GJ7/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.
C201A	27pf N220 5%	#22-3553						
B	27pf N220 5%							
C202A	27pf N220 5%	#22-3553						
B	27pf N220 5%							
C203	8pf N220 +.5	#22-3816				*	*	
C204	10pf N220 +.25	#22-3817				*	*	10TCP-Q10
C205	18pf N220 5%	#22-4786				*	*	10TCP-Q18
C206	1.25-4.25pf	#22-5348						
C207	.5-3.2pf	#22-4510						
C208	47pf N470 5%	#22-3822				*	*	10TCT-Q47
C209	.5-3.2pf	#22-4510						
C210	1.4pf N220 +.1	#22-5668				*	*	
C211	8.3pf N150 +.25	#22-3823				*	*	
C212	5pf N330 +.25	#22-5667				*	*	10TCS-V50
C213	.001	#22-4718						
C214	.001	#22-4613						
C215	56pf 2.5%	#22-3488						
C216	.001	#22-4613						
C217	.001	#22-4613						
C218	.001	#22-4613						
C219	7pf NPO +.5	#22-4878			NP07			

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

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.			WORKMAN PART No.	MFGR. PART No.
R201	10 1/4W 5%	CD-21-10	63-7491				

COILS (RF-IF)

ITEM No.	USE	MFGR. PART No.	NOTES	ITEM No.	USE	MFGR. PART No.	NOTES
L201	Balun	S-49189		L212	Ant, RF, Osc, Mixer	174-362	Channel 12 Strip
L202	Ant, RF, Osc, Mixer	174-342	Channel 2 Strip	L213	Ant, RF, Osc, Mixer	174-363	Channel 13 Strip
L203	Ant, RF, Osc, Mixer	174-343	Channel 3 Strip	L214	UHF Strip	174-350	Channel 1
L204	Ant, RF, Osc, Mixer	174-344	Channel 4 Strip	L215	UHF IF Input	20-1056	
L205	Ant, RF, Osc, Mixer	174-345	Channel 5 Strip	L216	RF Choke	20-1030	
L206	Ant, RF, Osc, Mixer	174-346	Channel 6 Strip	L217	IF Output	S-77030	
L207	Ant, RF, Osc, Mixer	174-357	Channel 7 Strip	L218	Peaking	S-49738	
L208	Ant, RF, Osc, Mixer	174-358	Channel 8 Strip	L219	Peaking	S-49738	
L209	Ant, RF, Osc, Mixer	174-359	Channel 9 Strip	L220	Series Resonant	20-3017	
L210	Ant, RF, Osc, Mixer	174-360	Channel 10 Strip	L221	Shunt Resonant	20-3018	
L211	Ant, RF, Osc, Mixer	174-361	Channel 11 Strip	L222	Series Resonant	20-3016	

UHF TUNER PARTS LIST AND DESCRIPTION

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

UHF TUNER 175-60K/69K

TRANSISTORS

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

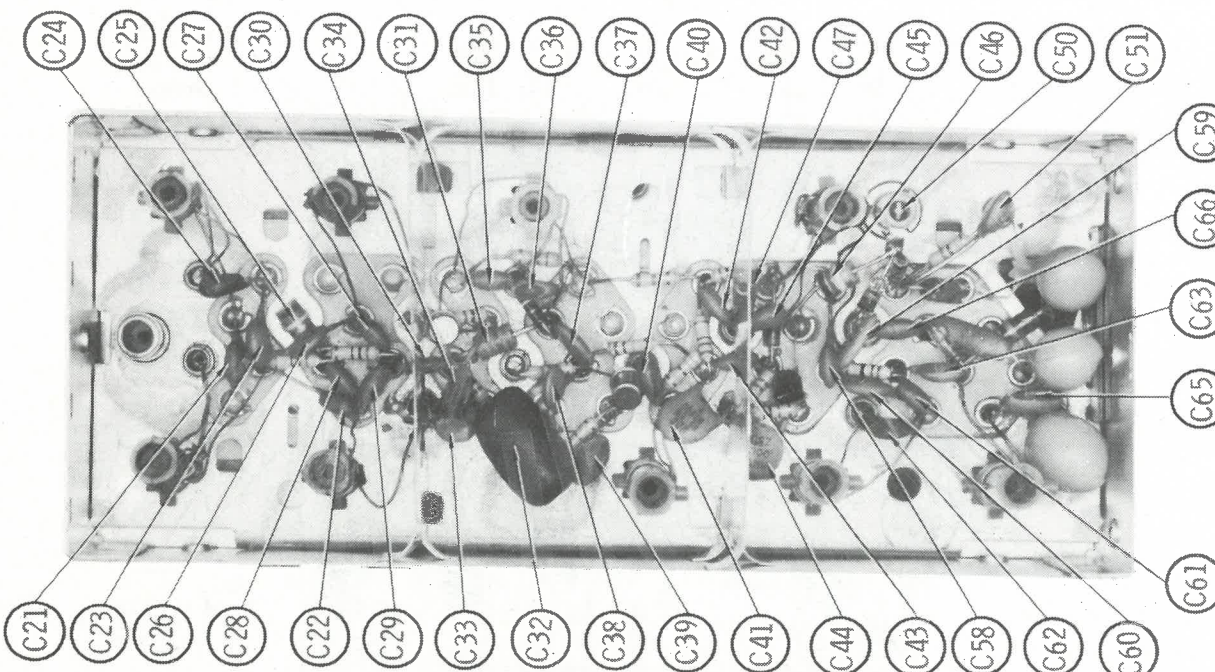
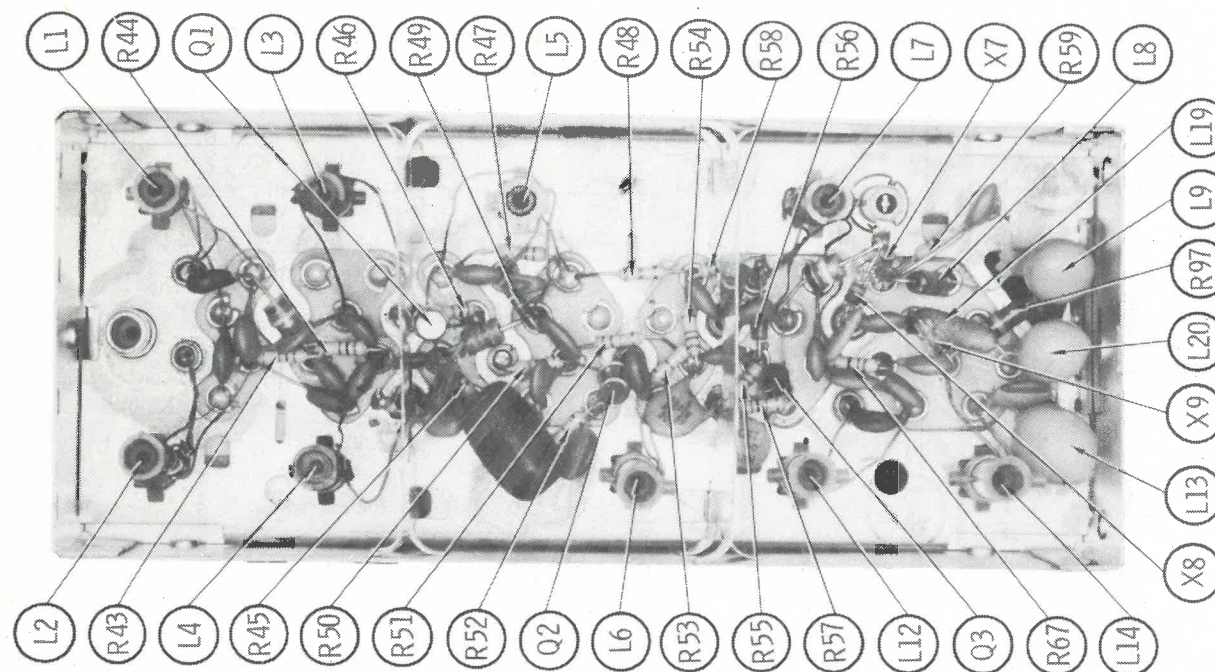
POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT DATA				NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.	
X301		1N82A	1N82AG	1N82A	ECG 112	
X302						Varactor

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	40pf N1500 10%							
C302	7.2pf N220 5%					*	*	
C303	3.5pf N330 +.25					*	*	
C304	470pf							
C305	.001							
C306	470pf							

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.



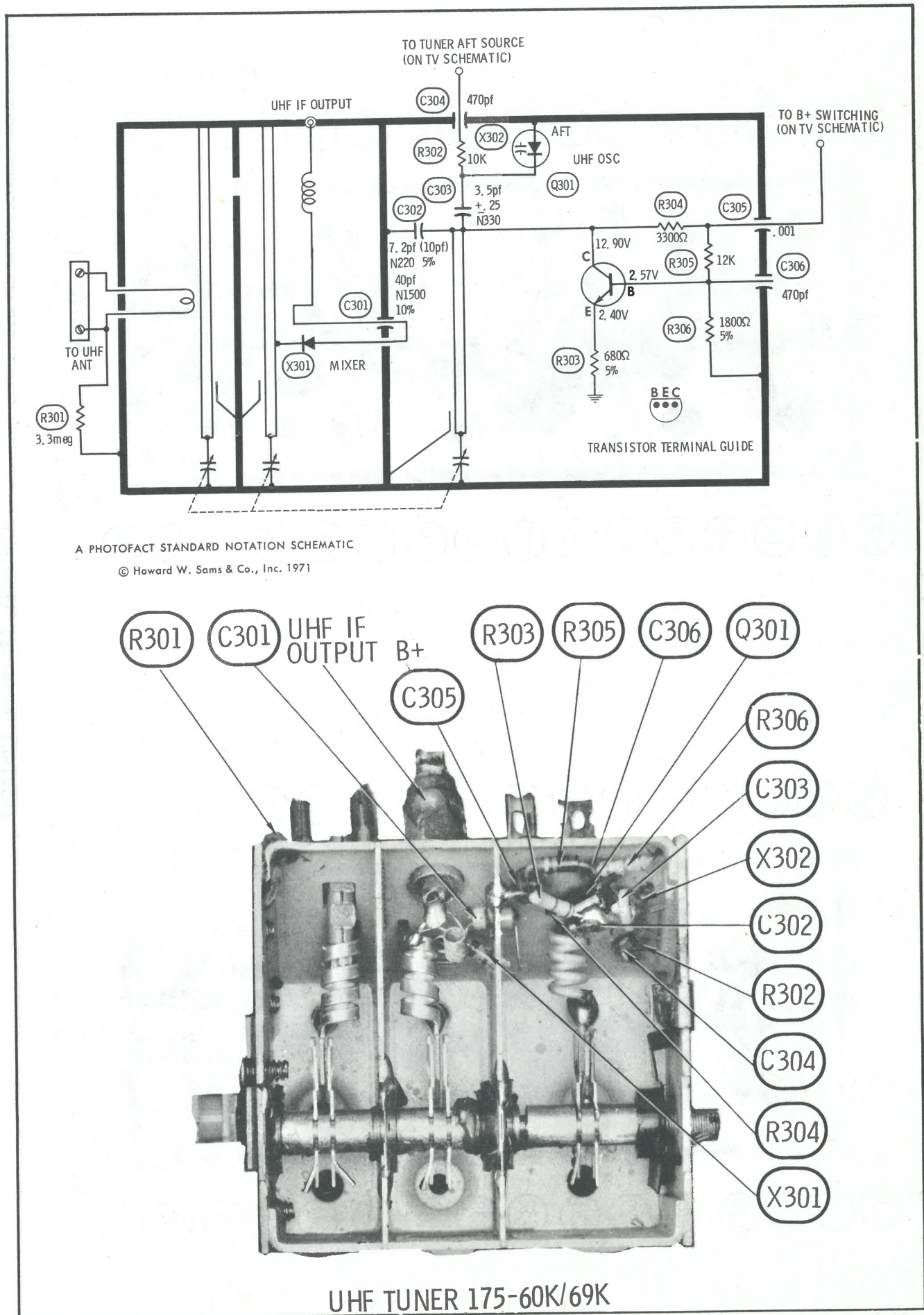
VIDEO IF CHASSIS

ZENITH CHASSIS 12A13C52,
12B13C52, 12B14C50, 12B14C52

FOLDER 2

SET 1157 FOLDER 2

13



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.

MISCELLANEOUS (cont)

ITEM No.	PART NAME	PART No.	NOTES
	Magnet	S-79297 or S-79294	Purity & Blue Lateral Assembly
	Magnet	S-72221	Purity Ring Assembly, used in some versions.
	Magnet	S-71500	Blue Lateral Assembly, used in some versions.
	Module Strip	9-47	2nd Color Amp and Demodulator

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

KNOB	ITEM	PART No.	KNOB	ITEM	PART No.
MODELS: A4519P5,W5; A4520M5; A4524H5; A4525P5,W5; A4526H5; A4528DE5,P5; A4530M5; T2994W5; T2995M5; T2997DE5			MODELS: B4519W,M1; B4521M,M1; B4522H1,P1; B4523DE1,P1; B4529W,M1; B4522H,P; B4523DE,P.		
AFT (AFC)	46-5326		AFC (AFT)	46-5326	
Brightness	46-8384		Brightness	46-8384	
Color Commander	46-7661		Color Commander, Hue	46-7661	
Color Level (Chroma)	46-8381		Color Level (Chroma)	46-8381	
Focus	S-80389		Focus	S-80389	
Horizontal Hold	46-3289		Horizontal Hold	46-3289	
Hue, Volume	46-7661		Peak Picture, Tone or Dual, Vertical Hold	46-7500	
Peak Picture, Tone or Dual, Vertical Hold	46-7500		UHF Tuning	46-8444	
UHF Dial	46-7498		VHF Channel Selector	46-7523	
VHF Channel Selector	46-7498		VHF Fine Tuning	46-7692	
VHF Fine Tuning	46-7692		UHF Dial (Not used in B4519W and B4521M)	46-8340	
MODELS: A4533W5; A4538DE5,P5; A4539M5; A4542P5; B4744W; B4746DE; B4749P			MODELS: B4707W; B4732W; B4736M,M1; B4738DE,P.		
Brightness	46-8384		Brightness	46-8384	
Color Commander	46-7662		Color Commander, Hue, Volume (B4707W only)	46-7621	
Color Level (Chroma)	46-8381		Color Commander, Hue	46-8259	
Focus	S-80389		Color Level	46-8381	
Horizontal Hold	46-3289		Color Level	S-80389	
Hue, Volume	46-7662		Focus	46-3289	
Peak Picture, Tone or Dual, Vertical Hold	46-7500		Horizontal Hold	46-7500	
UHF Tuning	46-7538		Peak Picture, Tone or Dual, Vertical Hold	46-8425	
VHF Channel Selector	46-7539		UHF Tuning	46-8425	
VHF Fine Tuning			VHF Fine Tuning	46-8424	
VHF Channel Selector			VHF Channel Selector	46-8423	
MODEL: A6519P5			MODEL: B6519W		
Brightness	46-8401		Brightness	46-8384	
Color Commander	46-6678		Color Commander, Hue, VHF Fine Tuning	46-6678	
Color Level (Chroma)	46-8400		Color Commander, Hue	46-8381	
Horizontal Hold	46-3289		Color Level	S-80389	
Hue, VHF Fine Tuning	46-6678		Focus	46-3289	
Peak Picture, Tone or Dual, Vertical Hold	46-8399		Horizontal Hold	46-7500	
UHF Tuning	46-8017		Peak Picture, Tone or Dual, Vertical Hold	46-8017	
VHF Channel Selector (Higher-Lower)	46-8012		UHF Tuning	46-6417	
Volume	46-6417		VHF Channel Selector (Higher & Lower)	46-6417	
Volume			Volume	46-6417	
MODELS: A6546P5; A6548DE5; T2977W			MODELS: B6523DE,P; B6707W		
Brightness	46-8384		Brightness	46-8384	
Color Commander	46-8057		Color Commander, Hue	46-8432	
Color Level (Chroma)	46-8381		Color Level	46-8381	
Focus	S-80389		Color Level (Chroma)	S-76936	
Horizontal Hold	46-3289		Focus (Model B6707W only)	S-80389	
Hue, VHF Fine Tuning, Volume	46-8057		Focus	S-80389	
Peak Picture, Tone or Dual, Vertical Hold	46-7500		Horizontal Hold	46-3289	
UHF Tuning	46-8058		On-Off	S-87609	
VHF Channel Selector (Higher & Lower)	S-87779		Peak Picture, Tone or Dual, Vertical Hold	46-7500	
VHF & UHF Channel Selector	46-8059		UHF Tuning	46-7977	
VHF & UHF Channel Selector (T2997W only)	S-85529		VHF Channel Selector (Higher & Lower)	S-87724	
On-Off (Model T2997W only)	S-85529		VHF Fine Tuning	46-8432	
On-Off			Volume	46-8431	
MODELS: B6744W; B8770P			MODELS: B8720W; B8723M; B8734DE,P; B2999W; T2996W; T2998DE,P.		
Brightness	46-8384		Brightness	46-8384	
Color Commander, Hue, Volume	46-8057		Color Commander, Hue, Volume	46-8259	
Color Level	46-8381		Color Level (Chroma)	46-8381	
Focus	S-80389		Focus	S-80389	
Horizontal Hold	46-3289		Horizontal Hold	46-3289	
On-Off	S-87349		Peak Picture, Tone or Dual, Vertical Hold	46-7500	
Peak Picture, Tone of Dual, Vertical Hold	46-7500		UHF Tuning	46-8425	
UHF Tuning	46-8058		VHF Channel Selector	46-8423	
VHF Channel Selector (Higher & Lower)	46-8012		VHF Fine Tuning	46-8424	
VHF Fine Tuning	46-8057				
VHF & UHF Channel Selector	46-8059		MODELS: T2986W; T2989M; T2990DE,P.		
			Brightness	46-8384	
Horizontal Hold (Model T2990DE only)	46-8259		Color Commander, Hue, Volume	46-8260	
Horizontal Hold	46-3289		Color Level	46-8381	
UHF Tuning	46-8425		Focus	S-80389	
VHF Channel Selector	46-8423		Peak Picture, Tone or Dual, Vertical Hold	46-7500	
Fine Tuning	46-8424				

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
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

ZENITH CHASSIS 12A13CS2,
12B13CS2, 12B14CS0, 12B14CS2

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.

SWEEP COMPONENT CONNECTION DATA

ORIGINAL →	VERTICAL OUTPUT								YOKE								YOKE PLUG														
REPLACEMENT ↓	Original Connections								Original Connections								1	3	5	7	9	10	12	13	14	15					
									Red	Orange	Blue	Yellow	White	Violet	Red/Whi	Whi/Blk				TO YOKE TERMINAL											
STANCOR									Red	Orange	Blue	Yellow	White	Violet	Red/Whi	Yel/Blk			(1)	Red	Orange	Blue	(2)	(2)	Violet	Red/Whi	Yel/Blk	Yellow	White		
THORDARSON									Red	Orange	Blue	Yellow	White	Violet	Red/Whi	Yel/Blk			(1)	Red	Orange	Blue	(2)	(2)	Violet	Red/Whi	Yel/Blk	Yellow	White		
TRIAD									1	12	3	4	9	5	11	6			(1)	1	12	3	(2)	(2)	5	11	6	4	9		

(1) Use original yoke ylug and mounting bracket and rotate yoke 180° (Leads at top). (2) Jumper Yoke Plug Pins 7 and 9.

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
	PRI.	SEC.	MFRG. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T6	6500	3.2	95-2797	A-3850	22S36 (1)	S-18X	(1) Drill new mounting hole(s).

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFRG. PART No.	QUAM PART No.	
SP1	5" PM 3.2 ohms	49-1193	3A05	Models: B4519W/W1; B4521M/M1; B4522H1/P1, B4523DE1/P1; B4707W; B4732W; B4736M; B4738DE/P; B6519W; B6523DE/P; B6707W; T2986W; T2989M; T2990DE/P; T2994W5. Models: A6519P5; A6546P5; A6548DE5; A4519P5/W5; A4520M5; A4524H5; A4525P5/W5; A4526H5; A4528DE5/P5; A4530M5. Models: A4533W5; A4538DE5/P5; A4539M5; A4542P5. Models: B4529W/W1; T2996W; T2998DE/P. Models: B4744W; B4746DE; B4749P; B6744W. Models: T2995M5. Models: T2997DE5/P5. Models: B8720W; B8732M; B8734DE -- 2 used Models: B8770P -- 2 used Models: B8770P -- 2 used
		49-1172		Models: B4519W/W1; B4521M/M1; B4522H1/P1, B4523DE1/P1; B4707W; B4732W; B4736M; B4738DE/P; B6519W; B6523DE/P; B6707W; T2986W; T2989M; T2990DE/P; T2994W5. Models: A6519P5; A6546P5; A6548DE5; A4519P5/W5; A4520M5; A4524H5; A4525P5/W5; A4526H5; A4528DE5/P5; A4530M5. Models: A4533W5; A4538DE5/P5; A4539M5; A4542P5. Models: B4529W/W1; T2996W; T2998DE/P. Models: B4744W; B4746DE; B4749P; B6744W. Models: T2995M5. Models: T2997DE5/P5. Models: B8720W; B8732M; B8734DE -- 2 used Models: B8770P -- 2 used Models: B8770P -- 2 used
		49-1060 & 49-1173 49-1194 & 49-1207 49-1194 & 49-1196 49-1134 & 49-1173 49-1194 & 49-1173 49-1162 & 49-1204 49-1094 & 49-1162 & 49-1177		

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F2	1.2A, 250V, Chemical fuse	136-63						
F3	2 1/2" length #24 wire	91-2061	62-39					W1200-1
F4	2 1/2" length #24 wire	91-2061						
F5	2 1/2" length #24 wire	91-2061						
F6	2 1/2" length #24 wire	91-2061						
F7	.35A, 125V, Chemical fuse	136-75	62-64					
F8	.5A 250V, S10-B10	136-83		MDV 1/2				W350-1

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M1	VHF Tuner	175-1231	
M2	VHF Tuner	175-582, 583, 585	
M3	VHF Tuner	175-597, 598	
M4	VHF Tuner	175-1229, -1230	
M5	UHF Tuner	175-69K	
M6	UHF Tuner	175-60K	
M7	UHF Tuner	175-70K	
M8	UHF Tuner	175-79K	
M9	Crystal	103-99	3.58MC
M10	Spark Gap	52-957	
M11	Spark Gap	52-957	
M12	Spark Gap	52-957	
M13	Spark Gap	52-957	
M14	Delay Line	S-84882	
M15	Degaussing Coil		
PC1	Vertical Integrator	87-4	CENTRALAB Replacement PC-408, SPRAGUE Replacement U14
S1	Switch	85-1063	AFT Defeat
S2	Switch	85-994	Normal Set-up
Se	Switch		UHF B+

PARTS LIST AND DESCRIPTION

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

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TUBES

AMPEREX			GENERAL ELECTRIC		RCA		SYLVANIA	
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	Sound-Sync Amp - Sound Limiter	6KT8 6Z10	V7	Horiz Output	6LB6	V8	HV Rectifier	3DJ3 (3DB3) (3DC3) *
V2	Audio Detector - Audio Output		V9	Damper	6CJ3 (6DN3) *	V10	HV Regulator	6HV5 (6JD5) *
V3	Sync Separator - AGC Keying - Noise Canceller - Vert Mult	6BA11	V11	Burst Amp	6EJ7/EF184	V12	3.58MC Oscillator Control - 3.58MC Oscillator	6GH8A
V4	Vert Mult - Vert Output	6JB5 (6HE5)(6JC5) *						
V5	1st Bandpass Amp	6JD6						
V6	Horiz AFC - Horiz Oscillator-Horiz Discharge	6U10						

* Alternate

PICTURE TUBE

ITEM No.	REPLACEMENT DATA				NOTES
	MFRG. PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SYLVANIA PART No.	
V13	25VAMP22 or 25VALP22 25BAP22 or 23VAXP22 or 23VAYP22		H-25VABP22 (1) H-25BCP22 (1) C-25BCP22 (3)	XR25VAEP22 (2) SRE25BGP22 (2)	(1) Hi-Lite (2) Color Bright "85" (3) Colorama

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFRG. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q1	F501	1st Video IF	121-501 (121-505) (121-500)			HEP709		
Q2	F502	2nd Video IF	121-502 (121-506) (121-470)			HEP718		
Q3	522	3rd Video IF	121-522 (121-521) (121-524)			HEP718		
Q4	CDC745	1st Video Amp	121-745	GE-17	TR-25	HEP718	SK3040	ECG 128
Q5	CDC587	Vert Blanking	121-587	GE-17	TR-25	HEP55	SK3018	ECG 128
Q6	744	2nd Video Amp	121-744	GE-17	TR-25	HEP718		ECG 128
Q7	CDC746	3rd Video Amp	121-746	GE-21	TR-19	HEP51		ECG 159
Q8	3524	AFT Limiter	121-827	GE-20	TR-21	HEP738	SK3018	ECG 108
Q9	499	IF AGC	121-499	GE-20	TR-21	HEP737	SK3020	ECG 123A
Q10	748	2nd Bandpass Amp	121-748	GE-17	TR-25	HEP728	SK3040	ECG 128
Q11	743	Green Video Output	121-743 (121-776) (121-777)	GE-27		HEP712	SK3044	ECG 154
Q12	743	Blue Video Output	121-743 (121-776) (121-777)	GE-27		HEP712	SK3044	ECG 154
Q13	743	Red Video Output	121-743 (121-776) (121-777)	GE-27		HEP712	SK3044	ECG 154
Q14	447	Noise Amp	121-447	GE-20	TR-21		SK3020	ECG 123A
Q15	CDC745	Brightness Limiter	121-745	GE-20	TR-21		SK3020	ECG 123A

INTEGRATED CIRCUITS

ITEM No.	FUNCTION	MFRG. PART No.	REMARKS
IC1	Color Demodulator	221-40 (221-46) *	SYLVANIA ECG 707 * Alternate

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFRG. PART OR TYPE No.	REPLACEMENT DATA				NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.	
X1	212-76	GEBR-600 (1) or GE-504A	18DB6A (1) or 8D6	SK3017A or SK3032	ECG 169 (1) or ECG 116	(1) A single unit replacement for all four bridge-circuit rectifiers.
X2	212-76	GEBR-600 (1) or GE-504A	18DB6A (1) or 8D6	SK3017A or SK3032	ECG 169 (1) or ECG 116	
X3	212-76	GEBR-600 (1) or GE-504A	18DB6A (1) or 8D6	SK3017A or SK3032	ECG 169 (1) or ECG 116	
X4	212-76	GEBR-600 (1) or GE-504A	18DB6A (1) or 8D6	SK3017A or SK3032	ECG 169 (1) or ECG 116	
X5	212-71 (122-80)	GE-504A	8D4 or 5A4D	SK3030 or SK3031	ECG 116 or ECG 117	
X7	103-23	1N60	1N60	1N60	ECG 109	(6) Matched pair.
X8	103-23	1N60	1N60	1N60	ECG 109	
X9	103-23	1N60	1N60	1N60	ECG 109	
X10	103-90 (1N542)	1N34AS	1N34A	1N34A	ECG 110 (6)	
X11	103-90 (1N542)	1N34AS	1N34A	1N34A	ECG 110 (6)	
X13	103-51	GE-504A	8D4 or 5A4D		ECG 116 or ECG 117	

ZENITH CHASSIS 12A13C52, 12B13C52, 12B14C50, 12B14C52

FOLDER 2

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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POWER RECTIFIERS & SIGNAL DIODES (cont)

ITEM No.	MFR. PART OR TYPE No.	REPLACEMENT DATA				NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.	
X15	103-142	GE-504A	8D4 or 5A4D	SK3031	ECG 116 or ECG 117	(7) Single unit replacement for X16 and X17.
X16	103-142	6GC1 (7)	DD04 (7)		ECG 113 (7)	
X17	103-142	6GC1 (7)	DD04 (7)		ECG 113 (7)	
X18	212-71	GE-504A	8D4 or 5A4D	SK3030 or SK3031	ECG 116 or ECG 117	
X19	212-71	GE-504A	8D4 or 5A4D	SK3030 or SK3031	ECG 116 or ECG 117	
X20	103-131				ECG 178MP (6)	
X21	103-131				ECG 178MP (6)	
X22	103-142				ECG 117	
X23	103-131				ECG 178MP (6)	
X24	103-131				ECG 178MP (6)	
X25	103-159	GE-504A	8D4 or 5A4D		ECG 116 or ECG 117	
X26	212-72	GE-504A (4)	8D4 (4) or 5A4D (4)	SK3031	ECG 116 (4) or ECR 114 (4)	(4) Four required.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1a	80 475V	22-5513	AFH3-50-20			XC4-34	FP397.1	TVL-3877
b	30 475V							
c	10 475V							
C2	3 NP 75V	22-6009	PRS7550		DD0187A & WBR30-500	NPQT-2	TCN510	TVAN-1402.1
C3a	80 475V	22-5360 (1)	AFH4-19-75			XC4-6.2	FP472.5	TVL-4845
b	30 475V							
c	4 475V							
d	4 475V	(3)						
C4	200 35V	22-5677	PRS1380	EA50-250	WBR250-50	QTI-29	TC50025A	TL-1312
C5	500 35V	22-3767 (2)	PRS1390	EA50-500	WBR500-35	QTI-31	TC50050A	TL-1316
C6	10 NP 30V	22-5725	PTS7555			NPQT-3	TCN5010	TVAN-1230
C7	50 15V	22-4567	PTT72	EA15-50	AL50-16	MTI-16	MTA50E15	TL-1160
C8	50 15V	22-4567	PTT72	EA15-50	AL50-16	MTI-16	MTA50E15	TL-1160
C9	50 25V	22-4577	PTT120	EA30-50	BR50-25	MTI-17	MTA50E25	TE-1029
C10	40 25V	22-4870	PTT84	EA30-50	WBR40-250	MTI-16.5	MTA40F50	TL-1208
C11	1 NP 25V	22-4909	PRS7525		BRNP1-50	NPQT1-1	TCN501	TVAN-1200
C12	4 150V	22-5425	CRE953A		AL3-150	MTI-4	TC40A	TE-1503
C13	100 50V	22-5262	PRS1360	EA50-100	WBR125-50	QTI-23	TC3501A	TL-1309
C14	10 475V	22-4818	PRS1810		WBR10-500	QTI-6.1	TC81A	TVA-1802
C15	40 400V	22-5407	PRS1750		WBR40-500	QTI-14.1	TC78A	TVA-1712
C16	100 50V	22-5262	PRS1360	EA50-100	WBR125-50	QTI-23	TC3501A	TL-1309
C17	10 15V	22-3448	PTT114	EA15-10	AL10-25	MTI-5	MTA10D35	TE-1155
C18	1 10V		CRE750A	EA15-2	AL1-50	MTI-1	MTA1D50	TE-1120

(1) Some versions may use 4mfd @ 475V, 80mfd @ 475V, 30mfd @ 475V, Part #22-6341 in this application.
(2) Some versions may use 470mfd @ 35V, Part #22-6096 in this application. (3) C3d 4mfd section is not used.

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA				
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.
C21	8 NPO 5%	#22-5805			NP08		
C22	3.6 N075 5%	#22-5784					
C23	4.25 N075 +.25	#22-5389					
C24	3.6 N075 +.25	#22-5784					
C25	2.7 5%	#22-3405					
C26	5 NPO +.25		NP0-DI 5.0		NP05		10TCC-V27 10TCC-V50
C27	4.25 N075 +.25	#22-5389					
C28	4.25 N075 +.25	#22-5389					
C29	3.6 NO +.25	#22-5784					
C30	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210
C31	.02pf	#22-3724					
C32	.15 50V		DBE6P15		DPMS4P15	4DP-4-154	PVC6015
C33	47 N1500 5%			TCL-47		*	CN15-447
C34	.0015		GPD X5F152K	DD-152		CCD-152	GP215
C35	14 NPO 5%	#22-5821					
C36	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210
C37	24 NPO 5%	#22-2515		TCZ-24		*	CN15-447
C38	47 N1500 5%			TCL-47		CCD-152	GP215
C39	.0015		GPD X5F152K	DD-152			CN0420
C40	20 NPO 5%			DTZ-20	NP020	*	
C41	65 N1500 5%	#22-5825					
C42	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210
C43	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210
C44	.0015		GPD X5F152K	DD-152		CCD-152	GP215
C45	8 NPO 5%	#22-5805			NP08		
C46	2.7 5%	#22-3405					
C47	220		GPD X5F221K	DD-221	GP220	CCD-221	GP322
C48	.05		GPD Z5V503P	DD-503		CCD-102	GP150
C49	.001		GPD X5F102K	DD-102	GP1000		GP210
C50	1-8	#22-5476					
C51	6 NPO 5%	#22-5819					
C52	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110
C53	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110
C54	47 N75 5%	#22-5824				*	
C55	4.3 NPO +.25	#22-3703					
C56	220 1KV 10%						
C57	220 1KV 10%		GPD X5F221K	DD-221	GP220	CCD-221	GP322
C58	5.6 N1500 5%	#22-5908				*	*

PARTS LIST AND DESCRIPTION (CONTINUED)

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COILS (RF-IF)(cont)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L20	Channel 8 Trap	20-1726			
L21	RF Choke (27uh)	20-2707	19-6033	72F275AP	T360
L22	4.5MC Trap	S-83086			
L23	3.58MC Trap	20-1838			
L24	Peaking (58uh)	20-2062	19-3060	6110	T302
L25	Peaking (42uh)	20-2008	19-7047	72F395AP	TA323
L26	Sound IF	S-74445			
L27	Quadrature	S-80480	20-1005	1480	TG268
L30	Peaking (27.2uh)	20-2007	19-6033	72F275AP	T316
L31	1st Chroma Bandpass	S-85670			
L32	2nd Chroma Bandpass	S-84076			
L33	RF Choke (18uh)	20-2006 (5)	19-6022	72F185AP	T300
L34	RF Choke (3uh)	20-2056		74F336AP	T816
L35	RF Choke (3uh)	20-2056		74F336AP	T816
L36	RF Choke (10uh)	20-2005	19-1005	72F105AP	T860
L37	Burst	S-83282			
L38	Peaking (86uh)	20-2002		72F825AP	
L39	3.58MC Oscillator Adjust	S-83168			
L40	3.58MC Output	S-77411			
L41	RF Choke (27.2uh)	20-2007	19-6033	72F275AP	T316
L42	RF Choke (1.8uh)			74F226AP	T811
L43	RF Choke (10uh)	20-2005	19-1005	72F105AP	T860
L44	RF Choke (10uh)	20-2005	19-1005	72F105AP	T860
L45	RF Choke (550uh)	20-2024	19-2029	6144	T325
L54	Peaking (663uh)	20-2061	19-3660	72F684AP	TA330
L55	RF Choke (18.5uh)			72F185AP	
L56	Peaking (47uh)	20-2071	19-7047	72F475AP	

(1) Enlarge mounting hole. (4) Alternate Part, #S-86212 used in some versions.
(2) Includes an 18K Resistor. (5) Alternate Part, #20-2053 (11.3uh) used in some versions.
(3) Shunt with an 18K Resistor.

COILS (Sweep Circuits)

ITEM No.	FUNCTION	REPLACEMENT DATA					
		MFR. PART No.	MILLER PART No.	STANCOR PART No.	THORDARSON MEISSNER PART No.	TRIAD PART No.	WORKMAN PART No.
L29	Pincushion Phase	S-85505					
L46	Pincushion Phase, Alt	S-80629					
L48	Horiz. Osc. (Hold)	S-56877	H-161		HS-24		
L49	Right R/G Vert. Lines	S-73854	6322	WC-8A	WC-52	WLC-5	T107
L50	Right R/G Horiz. Lines	S-84384	H-162		WC-51		
L51	Right Blue Horiz. Lines	S-73854	6322	WC-8A	WC-52	WLC-5	T107
a	Convergence Yoke Assembly	S-85873					
b	Green Section	S-85870					
c	Blue Section	S-85871					
d	Red Section	S-85872					
a	Green Section, Alternate	S-85918					
b	Blue Section	S-85919					
c	Red Section	S-85917					
a	Green Section	S-79392					
b	Blue Section	S-79393					
c	Red Section	S-79394					

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L52	.465A DC	16	.44 H	95-2702	C-2708	26C81	C-40X	
L53	130ma DC	26	470 mh	95-2733				

TRANSFORMER (Power)

ITEM No.	RATING			REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	SEC. 2	MFR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC @ 2.9A AC	310VAC @ .76A AC (1)	6.3VAC @ .82A AC	95-2847 95-2921 (2)				(1) Tap @ 115VAC. (2) Alternate used in Chassis 12B14C52 (Late production).
	SEC. 3	SEC. 4						
	12.6VAC @ 1.9A AC	24VAC @ .135A DC Tap @ 12.6VAC, CT @ 7.2A AC						

TRANSFORMERS (Sweep Circuits)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		MFR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	Vert. Output	95-2730 (-B)	V0-714C	26S60	YC-310-2	
T3	Yoke (Horiz. 12.8mh) 90° (Vert. 24mh)	95-2887	DY-91AC	Y-108	YC-310-2	
T4	Alternate Yoke Horiz. Output	95-2780				
T5	Alternate Horiz. Output Pincushion Correction	S-86950 S-86348 95-2907	DY-91AC			

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.	
R35	Brightness Limiter	80 2W	63-8707	V-100 (9) or WT-100 (8) (9) or WB-100 (8)	U39-100 (9) or P115R101A (8) (9) or [NFW-100 (8), NML-A-300]	110-100 (9) or P115R101A (8) (9) or [BUT, WF19 (8), SS61 *	MR100P (9) or MR100T (8) (9) or MR100B (8)	

(1) Switch must be CTS Type 080.

(2) Connect a 270-ohm, 2-watt Resistor, in series.

(3) Use original nylon tab mount.

(4) Use original nylon tab mount and solder original center terminal lead to metal case of control.

(5) For horizontal mounting, bend two outside terminals to fit PC board. Use jumper to connect center terminal to PC board.

(6) Do not use 250K Tap.

(7) See Alternate Part's List.

* "SNAPTROL"

(8) Solder center terminal to chassis.

(9) Cut off one of the outside terminals.

(7) ALTERNATE PARTS LIST																					
PART FUNCTION	PART NUMBER	A4519P5/W5, 20M5	A4524H5, 25P5/W5	A4526H5, 28DE5/P5	A4530M5	A4533W5, 38DE5/P5	A4539W5, A4542P5	A6519P5	A6546P5, A6548DE5	B4519W, B4519W1	B4521M	B4521M1, 22H1/P1	B4523DE1/P1	B4529W, B4529W1	B4744W, 46DE, 49P	B6519W, 6523DE/P	B6707W	B6744W	B8770P	T2994W5, T2995M5	T2997DE5/P5
Volume/Switch	63-7355	X	X	X	X					X	X	X	X	X						X	X
Volume	63-8236								X										X		
Volume/Switch	63-8241					X	X								X						
Volume	63-8245							X								X	X				
Hue (Tint)	63-7617	X	X	X	X	X	X		X			X	X	X						X	X
Hue (Tint)	63-7157 or 63-7426 or 63-8283															X	X		X		
Hue (Tint)	63-6402 or 63-7426 or 63-8283							X										X	X		
Hue (Tint) & Motor Assembly Complete	63-7417							X	X							X	X	X			
Tone - Not used in:		X	X	X	X	X	X	X												X	X
Hue (Tint)	63-8916										X				X						
Color Commander	63-8247	X	X	X	X	X	X			X	X	X	X	X	X					X	X
Color Commander	63-8248							X											X		
Color Commander	63-8251							X								X	X	X			

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.			WORKMAN PART No.	MFGR. PART No.
R40	10	CA 10		R181	47K 3W	36-22K	63-8336
R41	12K 3W 10%	36-12K	63-7491	R202	22K 3W 10%		63-5025
R43	10 5%	CD-2-10	63-7491	R261	Posistor		63-7156
R44	10 5%	CD-2-10	63-6848	R262	4.7		63-8156
R87	Thermistor (12K Cold)			R263	1300 18W 10%	36-470	63-7605
R116	3500 10W		63-6995	R264	470 3W 10%		63-8674
R128	VDR *		63-5327	R271	VDR *		63-8214
R130	27K 4W 10%	4G-2.7K	63-5200	R272	VDR *		63-5314
R176	VDR *		63-7658	R273	22K 4W 10%	4G-22K	
R179	17K 5W		63-7407		22K 3W 10%	36-22K	63-5025

* Voltage Dependent Resistor

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1a,b	Linking/39.75MC Trap	20-1658		6227 (1)	
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	RF Choke (27uh)	20-2712	19-6033	72F275AP	T360
L9	Channel 8 Trap	20-1726			
L10	RF Choke (27uh)	20-2707	19-6033	72F275AP	T360
L11	Sound Takeoff	5-77414			
L12	41.25MC Trap	20-1657		4202 (1)	T218 (1)
L13	Channel 8 Trap	20-1726			
L14	4th Video IF, Secondary	20-3238	17-4534 (1)	4202 (1)	T218 (1)
L15	AFT Input	20-3219		4202 (1)	
L16	RF Choke (27uh)	20-2712	19-6033	72F275AP	T360
L17	AFT Discriminator	S-84160			
L18	RF Choke	20-2534 (2)	19-1001 (3)	74F156AP (3)	T856 (3)
L19	RF Choke (27uh)	20-2712	19-6033	72F275AP	T360

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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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.
C59	140	N1500	5%	#22-5823			NP08	*	*	
C60	8	NPO	5%	#22-5805						
C61	6	NPO	5%	#22-5819						
C62	10	NPO	5%			DTZ-10	NP010		CNO410	10TCC-Q10
C63	15		5%			DTZ-15	NP015		CNO415	10TCC-Q15
C64	2		5%	#22-2461						
C65	.0015				GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C66	6	NPO	5%	#22-5819						
C67	220		5%	#22-3422						
C68	.01				GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C69	.01				GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C70	100				GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C71	85	N750	10%	#22-6009						
C72	.0039		5%	#22-4517						
C73	470		10%		GPD X5F471K	DD-471	GP470	CCD-471	GP347	10TS-T47
C74	.0015		10%		GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C75	8.2				NP0-DI 8.2		NP08P2			10TCC-V82
C76	220			#22-4744						
C77	.001			#22-4728						
C78	.002			#22-4729						
C79	.001			#22-4728						
C80	6.8	N75	10%		NP0-DI 6.8	DTZ-6R8	NP06P8		CNO568	10TCC-V68
C81	.001			#22-4728						
C82	10				NP0-DI 10	DTZ-10	NP010	CCTO-100	CNO410	10TCC-Q10
C83	10				NP0-DI 10	DTZ-10	NP010	CCTO-100	CNO410	10TCC-Q10
C84	.001			#22-4728						
C85	.001			#22-4728						
C86	.001			#22-4728						
C87	.001				GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C89	180		10%	#22-5216						
C90	.001	1KV	10%		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C91	100		10%	#22-5855						
C92	2.5		5%	#22-4522						
C93	.01				GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C94	470	N1500	10%							
C95	20		10%		DD-200	NP020	CCD-200	GP420	10TS-Q20	
C96	220		10%		GPD X5F221K	DD-221	GP220	CCD-221	GP322	10TS-T22
C97	150	N750	10%		N750-DI 150	DTN-150	N150	CCTN-151	CN7315	10TCU-T15
C98	.01				GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C99	.0047				GPD X5R472K	DD-472G	GP4700	CCD-472	JF247	10TS-F47
C100	.01				GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C101	.0022	1KV			GPD X5F222K	DD-222	GP2200	CCD-222	GP222	10TS-D22
C102	.033	100V			DBE6S33		DPMS6S33	4DP-2-333	PVC6133	4PS-S33
C103	.001	1KV			GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C104	.001		10%		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C105	.001				GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C106	.001				GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C107	470	1KV			GPD X5F471K	DD-471	GP470	CCD-471	GP347	10TS-T47
C108	.1	400V			DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10
C111	75	N150		#22-5557				*	*	10TCP-Q75
C112	.01				GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C113	.0068		10%		V1612D68	CPR-6800J	DPMS6D68	6DP-1-682	PVC1626	16PS-D60
C114a	.0022			#22-28						
C114b	.0022									
C115	.033	200V	10%		DBE6S33		DPMS6S33	4DP-2-333	PVC6133	4PS-S33
C116	.1	600V	10%		DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10
C118	.0022				GPD X5F222K	DD-222	GP2200	CCD-222	GP222	10TS-D22
C119	.001	1KV	10%		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C120	.0018	1KV	10%		GPD X5F182K	DD-182	GP1800	CCS-182	GP218	10TS-D18
C121	.01	600V	10%		V1614S1	CPR-10000J	DPMS6S1	4DP-1-103	PVC411	4PS-S10
C122	.47	200V			DBE2P47		DPMS2P47	2DP-5-474	PVC2047	2PS-P47
C125	100	1KV	10%		GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C126	.12		10%		DBE6P15		DPMS4P15	4DP-4-154	PVC6015	4PS-P15
C127	100	4KV/N750/5%								
C128	.047	100V	10%		DBE6S47		DPMS6S47	4DP-3-473	PVC4147	4PS-S47
C129	820		10%		GPD X5F821K	DD-821	GP820	CCD-821	GP382	10TS-T82
C131	12				NP0-DI 15	DTZ-15	NP015	CCTO-150	CNO415	10TCC-Q15
C132	.05	25V			GPD Z5V503P	DD-503			GP150	
C133	680		10%		ADM-20-681	CPR-680J	CD19F681J500	DM-16-681	SX368	MS-368
C134	.0015	400V	10%		V1614D15	CPR-1500J	DPMS6D15	6DP-1-152	PVC6215	6PS-D15
C135	.0011		10%	#22-4842						
C136	.0047				GPD X5R472K	DD-472G	GP4700	CCD-472	JF247	10TS-D47
C137	.001	1KV	10%		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C138	.001	1KV	10%		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C139	.0047		10%		GPD X5R472K	DD-472G	GP4700	CCD-472	JF247	10TS-D47
C140	120	2KV	10%	#22-5710						
C141	330		10%							
C142	.01				GPD X5F331K	DD-331	GP330	CCD-331	GP333	10TS-T33
C143	.0047		10%		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C144	22	3KV			GPD X5R472K	DD-472G	GP4700	CCD-472	JF247	10TS-D47
C145	75	4KV/N1500			HVD-3022	DD30-220	HV3-22	3CCD-220		30GA-Q22
C146	.1	1KV		#22-5597						
C147	45				BE10P1					
C148	.047	1KV	10%		NP0-DI 50	DTZ-50	NP050	CCTO-510	CNO450	10TCC-Q50
C149	220				DBE6S47		DPMS6S47	4DP-3-473	PVC4147	4PS-S47
C150	.047		10%		GPD X5F221K	DD-221	GP220	CCD-221	GP322	10TS-T22
C151	68	N750	10%		DBE6S47		DPMS6S47	4DP-3-473	PVC4147	4PS-S47
C152	.1	600V			N750-DI 68	DTN-68	N68	CCTN-680	CN7468	10TCU-Q68
C153	.01	1.5KV			DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10
C154	18	NPO	5%							
C155a	.001				GPD X5F102K	TCZ-18	NP018		2HV110	30GA-S10
C155b	.001				GPD X5F102K	DD-102	GP1000	CCD-102	CNO418	10TCC-Q18
C156a	.001				GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C156b	.001				GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C157	.1	200V			GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C158	.1	400V			DBE2P1		DPMS2P1	2DP-3-104	PVC201	2PS-P10
					DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCOPART No.	MALLORY PART No.	SPRAGUE PART No.
C159	47 N75 10%	#22-2376	GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C160	36 N33 5%		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C161	.001 1KV 10%			DTZ-75			CN0475	10TCC-Q75
C162	75 NPO 5%		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C163	.01			DTZ-75			CN0475	10TCC-Q75
C164	75 NPO 5%							
C165	.01	#22-5681	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C166	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C167	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C168	820 N2200 5%						*	10TCY-T82
C169	.01	#22-5681	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C170	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C171	820						*	10TCY-T82
C172	100 NPO 5%			TCZ-100			CN0310	10TCC-T10
C173	100 NPO 5%			TCZ-100			CN0310	10TCC-T10
C174	100 NPO 5%			TCZ-100			CN0310	10TCC-T10
C175	18 NPO 5%			TCZ-18	NP018		CN0418	10TCC-Q18
C176a	.001 1KV	#22-4524	GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C176b	.001 1KV		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C177	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C178	.047 600V		DBE6S47		DPMS6S47	4DP-3-473	PVC4147	4PS-S47
C179	12 N220 5%	#22-4524				*	*	10TCR-Q12
C182	.1 400V		DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10
C183	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C184	10f		NPO-DI 1.0	TCZ-1			CN0510	10TCC-V10
C185	.01	#22-3729	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C186	220		GPD X5F221K	TCZ-18	NP018	CCD-221	GP322	10TS-T22
C187	18 NPO 5%			TCZ-100			CN0418	10TCC-Q18
C188	100 NPO 5%						CN0310	10TCC-T10
C189	.001 1KV 10%	#22-4671	GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C190	.022 600V		DBE6S22		DPMS6S22	4DP-2-223	PVC6122	4PS-S22
C191	100 1KV 10%		GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C192	150		GPD X5F151K	DD-151	GP150	CCD-151	GP315	10TS-T15
C193	82 N1500 5%	#22-3729					GP218	10TS-D18
C194	.0018 1KV 10%		GPD X5F182K	DD-182	GP1800	CCS-182	CN0418	10TCC-Q18
C195	18 NPO 5%			TCZ-18	NP018	CCD-102	GP210	10TS-D10
C196	.001 1KV 10%		GPD X5F102K	DD-102	GP1000		2HV110	30GA-S10
C198	.01 1.5KV	#22-4671	DBE2P1		DPMS2P1	2DP-3-104	PVC201	2PS-P10
C200	.1 200V 10%		DBE6S56		DPMS6S56	4DP-3-563	PVC6156	4PS-S56
C201	.056 200V 10%		DBE6S82		DPMS6S82	6DP-4-823		6PS-S82
C202	.082 200V							
C203	.1 100V 10%	#22-5711	DBE2P1		DPMS2P1	1DP-2-104	PVC101	225P10491WD3
C204a	.0047							
C204b	.0047							
C205	.15 600V		DBE6P15		DPMS6P15	6DP-5-154	PVC6015	6PS-P15
C206	.1		DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10
C207	.68		NPO-DI 1.0	TCZ-1			CN0510	10TCC-V10
C208	.05			DD-403			GP140	
C210	680		GPD X5F681K	DD-681	GP680	CCD-681	GP568	10TS-T68

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

Zenith Part Number

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA				
			MFG. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume	1meg, 600K Tap	63-8789	F16-1meg,SNF108	A47F5-1meg, RS-3/16,TT-2 or [NPF-1meg, SE-F-400]	B19-137X, TM8 or [BU11,CF47T, SS4,DC1] *	RU16T65,SL37, SD1250 or [UA16,DT55 (6), SD1250] or [P16T55,SLF37, SF3062]
	Volume/Switch	1meg, 600K Tap	63-7355 (7)	F16-1meg,SP212, KR-8FR	C47SF-1meg, RS-3/16 or [NPF-1meg, UPP-H-400, PPAP,NWG-18]	B19-137X,SK8 (1) or [PPQ19-137X, SK8 (1)] or [BU1,CF47T, SS11A,K (1)] *	RUP16T35,SL35 or [PP16T55,DS37] or [P16T55, 3014,FPP-1]
	Volume	1meg	63-8236 (7)				
	Volume/Switch	1meg	63-8241 (7)				
	Volume	1meg	63-8245 (7)				
R2	Hue (Tint)	200	63-8915			BU1,CF75, SS11A,K (1) *	
	Automatic Tint Sw.						
	Hue (Tint)	200	63-6402 or 63-7426 (7)				
	Motor Driven		or 63-8283				
	Hue (Tint)	200	63-7157 or 63-7426 (7)				
	Motor Driven		or 63-8283				
	Hue (Tint)	200	63-7617 (7)			BU11,CF75, SS15,DC1 *	
	Hue (Tint) Control & Motor Ass'y Complete	200	63-7417 (7)				
	Hue (Tint)	200	63-8916 (7)				
R3a	Color Commander (Color Sect. Front)	500	63-8252	F1-500,R1-1000, SFS212,CPL-2	NP-500-S, NR-1000-S, SE-F-400,DC-2	B11-103,B11-108, TM8,QCM or [BU11,CF4,CR2, SS4,SS7A,DC1] *	P52L,3014, RU13L,SL45
b	Color Commander (Contrast Sect. Rear)	1000					
	Color Commander (Color Sect. Front)	500	63-8247 (7)	F1-500,R1-100, SFS212,CPL-2	NP-500-S, NR-1000-S, SE-F-400,DC-2	B11-103,B11-108, TM8,QCM or [BU11,CF4,CR2, SS15,SS7A,DC1] *	P52L,3014, RU13L,SL45
	Color Commander (Contrast Sect. Rear)	1000					

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	RESIST-ANCE	MFG. PART No.	REPLACEMENT DATA			
				CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R4	Color Commander Color Commander Color Commander Color Commander Height	500 1000 500 1000 3.5meg	63-8248 (7) 63-8251 (7) 63-8444	TT-86 or [F1-4meg,SNK010]	A47-4meg-S, RN-3,TT-2 or [NP-4meg-S, NML-A-300,TT-2]	B11-240,TM4 or [BU11,CF21,SS6] *	PTA355L or [RU46L,SL37, SN281] or [UA36L,SN281]
R5	Peak Picture	300	63-8204				
R6	Tone (Detent @ 50%)	1meg	63-8203 (7)				
R7	Vert. Linearity	2000, 2W 300 Stop	63-8208	WP-1.5K (2) or V-2000 (2)	U39-2000 (2)	110-3000-350	MR1500P (2)
R8	Brightness Range	10K	63-8335	TT-14 or [F1-10K,SNK010]	B47-10K-S or [NP-10K-S, NML-A-300,TT-2]	B11-116,TM4 or [BU11,CF9,SS6] *	RU14L,SL37, SN281 or [UA14L,SN281] or TA14L
R9	Brightness	5000	63-8201				
R10	Chroma Level	500	63-8205				
R11	Vert. Hold	750K	63-8202				
R12	Buzz	750 2W	63-6950	WT-850 or WP-1K or V-800	U39-800 or [NPW-750, NML-A-300,TT-2]	110-1000 or [P115R102A or [BU1,WF2,SS6] *	MR850T or MR1000P or VV750
R13	Color Killer	250K	63-8449	TT-50 or [F1-250K,SNK010]	B47-250K-S or [NP-250K-S, NML-A-300,TT-2]	B11-130,TM4 or [BU11,CF15,SS6] *	RU254L,SL37, SN281 or [UA254L,SN281]
R14	Blue Gain	5000	63-6333	F1-5000,SNK104, AK-45 or [F1-5000 (3), SNK012]	B47-5000-S (3) or [NP-5000-S (3), NML-A-300]	B11-114,TM4 (3) or [BU11,CF8, SS6] *	PTA53L (3) or [RU53L (3), SN1000] or [UA53L (3), SN1000]
R15	Red Gain	5000	63-8215	F1-5000,SNK104, AK-45 or [F1-5000 (3), SNK012]	B47-5000-S (3) or [NP-5000-S (3), NML-A-300]	B11-114,TM4 (3) or [BU11,CF8, SS6] *	PTA53L (3) or [RU53L (3), SN1000] or [UA53L (3), SN1000]
R16	Green Gain	5000	63-6334	F1-5000,SNK104, AK-45 or [F1-5000 (3), SNK012]	B47-5000-S (3) or [NP-5000-S (3), NML-A-300]	B11-114,TM4 (3) or [BU11,CF8, SS6] *	PTA53L (3) or [RU53L (3), SN1000] or [UA53L (3), SN1000]
R17	Blue Screen (G2)	5meg	63-6977	F1-5meg,SNK104, AK-45 or [F1-5meg (3), SNK012]		HLC5 (3)	PTA56L (3) or [UA56L (3), SN1000] or [RU56L (3), SN1000]
R18	Red Screen (G2)	5meg	63-6978	F1-5meg,SNK104, AK-45 or [F1-5meg (3), SNK012]		HLC5 (3)	PTA56L (3) or [UA56L (3), SN1000] or [RU56L (3), SN1000]
R19	Green Screen (G2)	5meg	63-6976	F1-5meg,SNK104, AK-45 or [F1-5meg (3), SNK012]		HLC5 (3)	PTA56L (3) or [UA56L (3), SN1000] or [RU56L (3), SN1000]
R20	AGC Level	4500	63-8682	WP-5K or WT-5K or WB-5K	NPW-5000, NML-A-300	P115R502A or [BU1,WF8,SS6] *	MR5000P or MR5000T or MR5000B
R21	Vert. Centering	10 2W	63-7009	WP-15 (3) or WT-10 or V-10 (4)	U39-15 (4) or [NPW-10, NML-A-300,TT-2]	110-15 (4) or [BU1,WF16,SS6] *	MR15P (3) or MR10T or VM10
R22	High Voltage Adjust	3meg	63-8460				
R23	Horiz. Centering	10 2W	63-7211	WP-15 (3), WSK104		P115R100A (3), P115-117-1	MR15P (3), MRS1250
R24	Focus	15meg	63-7210	RTT-15meg			FCR156L
R25	AGC Delay	500	63-8308	V-500 (9) or WT-500 (8)(9) or WB-500 (8)	U39-500 (9) or [NPW-500 (8), NML-A-300]	110-600 (9) or P115R501A (8)(9) or [BU1,WF20 (8), SS6] *	MR500B (8) or MR500T (8)(9) or VV500 (8)
R26	Blue Horiz. Lines (Left)	130 2W	63-7620	WT-100,WSK104 or V-150	U39-150 or [NPW-150, NML-A-300,TT-2]	P115R101A, P115-117-1 or [BU11,WF19,SS6] *	MR100T,MRS1250
R27	R/G Vert. Lines (Left)	70 2W	63-7075	WT-100,WSK104 or V-100	U39-75	P115R101A, P115-117-1 or [BU1,WF19,SS6] *	MR100T,MRS1250
R28	R/G Horiz. Lines (Left)	60 2W	63-7074	WT-50,WSK104 or V-60 (5)	U39-75 (5) or [NPW-75, NML-A-300,TT-2]	P115-117-1 or [BU11,WF18,SS6] *	MR50T,MRS1250
R29	Blue Horiz. Lines (Top)	60 2W	63-7348,C	WT-50,WSK104 or V-60 (5)	U39-75 (5) or [NPW-75, NML-A-300,TT-2]	P115R500A, P115-117-1 or [BU11,WF18,SS6] *	MR50T,MRS1250
R30	R/G Vert. Lines (Top)	120 2W	63-7073	WT-100,WSK104 or V-120 (5)	U39-125 (5) or [NPW-150, NML-A-300,TT-2]	P115R101A, P115-117-1 or [BU11,WF19,SS6] *	MR100T,MRS1250
R31	R/G Horiz. Lines (Top)	120 2W	63-7073	WT-100,WSK104 or V-120 (5)	U39-125 (5) or [NPW-150, NML-A-300,TT-2]	P115R101A, P115-117-1 or [BU11,WF19,SS6] *	MR100T,MRS1250
R32	Blue Horiz. Lines (Bottom)	120 2W	63-7347,C	WT-100,WSK104 or V-120 (5)	U39-125 (5) or [NPW-150, NML-A-300,TT-2]	P115R101A, P115-117-1 or [BU11,WF19,SS6] *	MR100T,MRS1250
R33	R/G Vert. Lines (Bottom)	60 2W	63-7074	WT-50,WSK104 or V-60 (5)	U39-75 (5) or [NPW-75, NML-A-300,TT-2]	P115R500A, P115-117-1 or [BU11,WF18,SS6] *	MR50T,MRS1250
R34	R/G Horiz. Lines (Bottom)	120 2W	63-7073	WT-100,WSK104 or V-120 (5)	U39-125 (5) or [NPW-150, NML-A-300,TT-2]	P115R101A, P115-117-1 or [BU11,WF19,SS6] *	MR100T,MRS1250

REMOTE PARTS LIST AND DESCRIPTION

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

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 Amp	121-494	53	GE-2	TR-14	HEP254	SK3004	EGG 102A
Q2		2nd Amp	121-491	53	GE-2	TR-14	HEP254	SK3004	EGG 102A
Q3		3rd Amp	121-492	53	GE-2	TR-14	HEP254	SK3004	EGG 102A
Q4		Limit	121-493	53	GE-2	TR-14	HEP254	SK3004	EGG 102A
Q5	Tint Up	Relay Control	121-490	54	GE-2	TR-05	HEP254	SK3004	EGG 102A
Q6	Tint Down	Relay Control	121-490	54	GE-2	TR-05	HEP254	SK3004	EGG 102A
Q7		Pilot Relay Control	121-490	54	GE-2	TR-05	HEP254	SK3004	EGG 102A
Q8	Pilot	Stepper Relay Control	121-490	54	GE-2	TR-05	HEP254	SK3004	EGG 102A

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. TYPE OR PART No.	REPLACEMENT DATA		NOTES
		GENERAL ELECTRIC PART No.	SYLVANIA PART No.	
X1	212-79	GE-504A	EGG 116 or EGG 117	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA			
		AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.
C1	200 35V	PR1530	EAG-10	BR200-150	QT1-27
C2	25 30V	PR2271		BR200-150	QT1-27
C3	25 30V	PR2271		BR200-150	QT1-27
C4	40 30V	PR2271		BR200-150	QT1-27
C5	4 NP 200V	PR2271		BR200-150	QT1-27

CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA			
		AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.
C1	.05 25V	TTP-05	CK-503	MP205	CCD-503
C2	.05 25V	TTP-05	CK-503	MP205	CCD-503
C3	.05 25V	TTP-05	CK-503	MP205	CCD-503
C4	.05 25V	TTP-05	CK-503	MP205	CCD-503
C5	.05 25V	TTP-05	CK-503	MP205	CCD-503
C6	.01 25V	TTP-01	CK-103	MP205	CCD-103
C7	.05 100V	GPD 25V503P	CPR-820J	CD19F821J500	DM-19-821J
C8	.05 100V	GPD 25V503P	CPR-820J	CD19F821J500	DM-19-821J
C9	.05 100V	GPD 25V503P	CPR-820J	CD19F821J500	DM-19-821J
C10	.05 100V	GPD 25V503P	CPR-820J	CD19F821J500	DM-19-821J
C11	.05 100V	GPD 25V503P	CPR-820J	CD19F821J500	DM-19-821J
C12	.05 100V	GPD 25V503P	CPR-820J	CD19F821J500	DM-19-821J
C13	.05 100V	GPD 25V503P	CPR-820J	CD19F821J500	DM-19-821J
C14	.05 100V	GPD 25V503P	CPR-820J	CD19F821J500	DM-19-821J
C15	.05 100V	GPD 25V503P	CPR-820J	CD19F821J500	DM-19-821J
C16	.05 100V	GPD 25V503P	CPR-820J	CD19F821J500	DM-19-821J
C17	.05 100V	GPD 25V503P	CPR-820J	CD19F821J500	DM-19-821J
C18	.05 100V	GPD 25V503P	CPR-820J	CD19F821J500	DM-19-821J
C19	.05 100V	GPD 25V503P	CPR-820J	CD19F821J500	DM-19-821J
C20	.05 100V	GPD 25V503P	CPR-820J	CD19F821J500	DM-19-821J
C21	.05 100V	GPD 25V503P	CPR-820J	CD19F821J500	DM-19-821J
C22	.05 100V	GPD 25V503P	CPR-820J	CD19F821J500	DM-19-821J
C23	.05 100V	GPD 25V503P	CPR-820J	CD19F821J500	DM-19-821J
C24	.05 100V	GPD 25V503P	CPR-820J	CD19F821J500	DM-19-821J

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

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA			
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.
R1	Sensitivity	18K	63-7534	F2-25K, SW010	NP-25K-Z, TT-2	R13-120, TM4 or [BU1] CF50, S56

* "SNAPTROL"

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R21	100 5W (100 4W)	5W-SQ-100	63-3210

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA	
		PART No.	WORKMAN PART No.
L1	39-50KC Input	95-2411	
L2	41-25KC	95-2044	
L3	40-25KC	95-2045	
L4	38-75KC	95-2046	
L5	37-75KC	95-2047	

TRANSFORMER (Power)

ITEM No.	RATING	REPLACEMENT DATA			NOTES
		PRI.	SEC. 1	STANCOR PART No.	THORNDARSON PART No.
T1	117VAC @ .005A AC	22-5VAC @ .039A DC		95-2459 (95-2216)	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
K1	Relay	195-45	Tint Up
K2	Relay	195-45	Tint Down
K3	Relay	195-45	Pilot
K4	Relay	195-45	Pilot Stepper
K5	Relay	195-45	Mute & Function
K6	Relay	195-36	Volume Step
S1	Switch	85-932	Auto-Manual



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.

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DATE 2 -71

SET 1157 FOLDER 2-A

PHOTOFACT® Folder

with CIRCUITRACE®

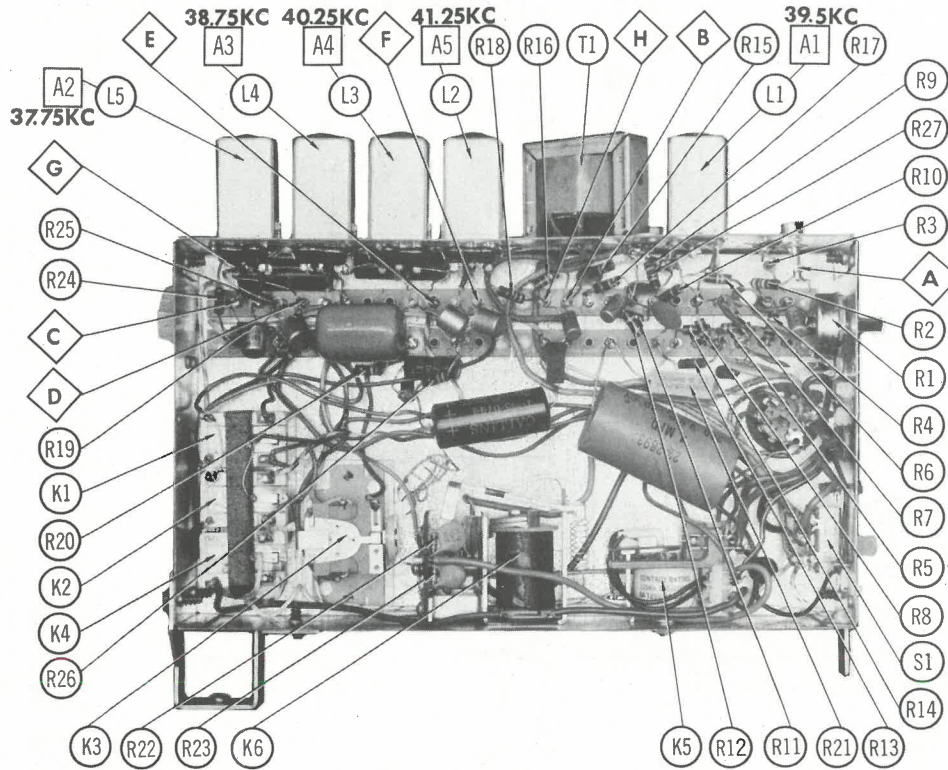


IMPORTANT FILING NOTICE

This PHOTOFACT Folder covers equipment used with the TV chassis covered in PHOTOFACT SET 1157 FOLDER 2. File this Folder with the TV Folder in the yellow filing jacket provided.

ZENITH REMOTE RECEIVER S-77536, S-87286, TRANSMITTER S-83596

SET 1157 FOLDER 2-A
ZENITH REMOTE RECEIVER S-77536, S-87286, TRANSMITTER S-83596



REMOTE CONTROL RECEIVER ALIGNMENT

When adjusting A2 thru A5, correct setting is achieved with dip nearest top of coil. The following will require the use of an accurate generator (crystal controlled is preferred). Use only enough generator output to give a usable indication. Sensitivity control should be set to approximately midrange during alignment.

GENERATOR COUPLING	GENERATOR FREQUENCY	CONNECT VTVM	ADJUST	REMARKS
High side thru a .002 mfd capacitor to Point A, low side to ground.	39.5KC	RF detector probe to Point B, low side to ground.	A1	A jumper from Point H to Point G. Adjust for maximum. Remove jumper
"	37.75KC	DC probe to Point C.	A2	Adjust for MINIMUM.
"	38.75KC	DC probe to Point D.	A3	Adjust for MINIMUM.
"	40.25KC	DC probe to Point E.	A4	Adjust for MINIMUM.
"	41.25KC	DC probe to Point F.	A5	Adjust for MINIMUM.

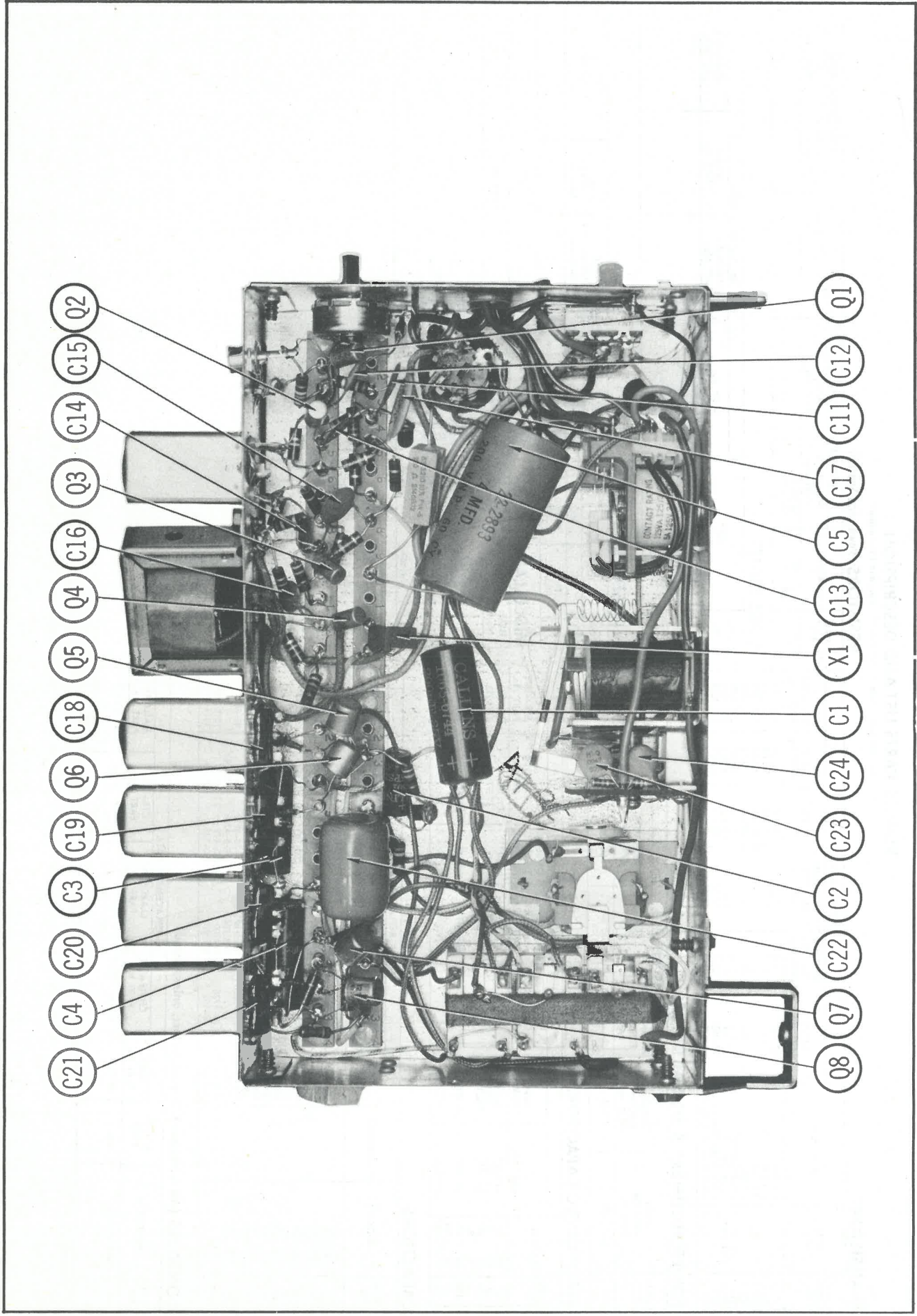
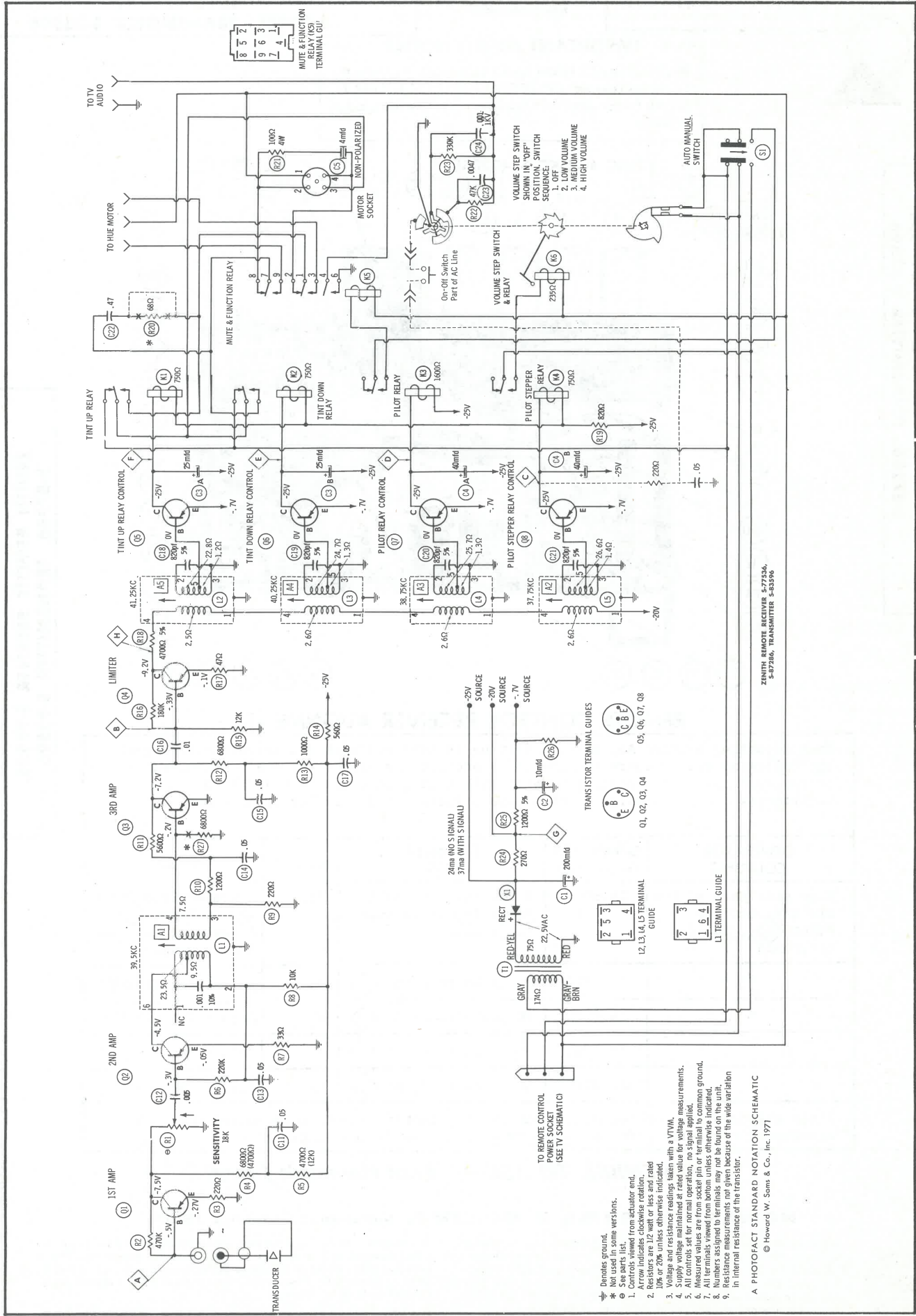
After alignment is completed, the sensitivity control should be adjusted while using associated transmitter for an approximate range of 35 feet maximum.

REMEMBER TO ASK— "What else needs fixing?"

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

ZENITH REMOTE RECEIVER S-77536, S-87286, TRANSMITTER S-83596

SET 1157 FOLDER 2-A



ZENITH REMOTE RECEIVER S-77536,
S-87286, TRANSMITTER S-83596