

CABINET-REAR VIEW

DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

1. Remove 2 screws holding back cover and turn 5 wing fasteners to remove back cover. On some models it may be necessary to disconnect antenna leads. Remove all knobs.
2. Disconnect yoke plug, high voltage anode lead, picture tube socket, speaker leads, ground wire, and tuner connector.
3. Remove 4 screws holding chassis and 12 screws holding tuner and controls.

4. Lift out chassis and tuner.

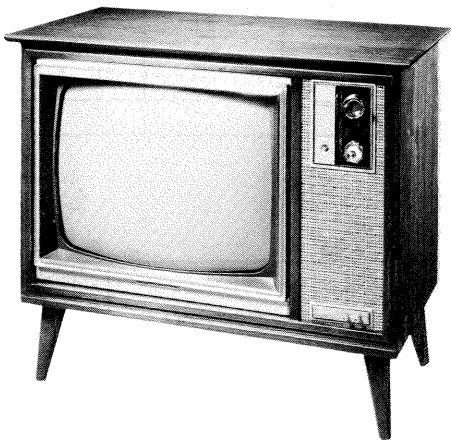
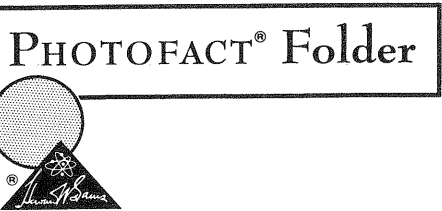
NOTE: Most components may be serviced without removing chassis.

PICTURE TUBE REMOVAL

1. Follow "Chassis Removal" procedure. Lay set face down on a soft protective surface.
2. Loosen 8 screws holding picture tube brackets and lift out picture tube. Do not lift out by the neck of the tube.

SET 805 FOLDER 4

ZENITH CHASSIS 25MC36Z, 25MC36 (Late Production) and 25MC46/Z



MODEL 8322W-1

TRADE NAME	ZENITH	Models	Chassis	Remote Control
		8320R/W, 8322W-1	(Late Production) 25MC36	
		8322W, 8324M, 8326H/R, 8328H/X, 8341W	25MC36 or 25MC36Z	
		8342M, 8345H/X, 8720W, 8730W, 8740H/X	25MC36Z	
		9322W, 9324M, 9326H/R, 9341W	25MC46Z	S-69876
		9342M, 9345H/X, 9351H	25MC46 or 25MC46Z	S-69876
SUPPLIER	For current address, see Annual Index.			
TYPE SET	Color Television Receiver			
TUBES	VHF: Twenty-Five, UHF: One Transistor			
POWER SUPPLY	110-120 Volts AC, 60 Cycles			
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier)			

SERVICING IN THE FIELD

SAFETY GLASS

The safety glass is an integral part of the picture tube.

FUSE OR FUSE DEVICE

Two 2½" lengths of fuse wire are used for filament protection. (See M2 and M3 in photo "Chassis - Bottom View" for location.)

A Circuit Breaker is used for low voltage power supply protection and may be reset by depressing the reset button. (See "Tube Placement Chart" for location.)

VHF OSCILLATOR ADJUSTMENT

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

AGC

The AGC may be varied by means of an AGC Control. (See "Tube Placement Chart" for location.)

HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

The Horizontal Frequency Slug is used for the horizontal hold. (See "Tube Placement Chart" for location.)

WIDTH

A jumper connecting capacitor C128 from Horizontal Centering control to ground increases width. (See "Cabinet - Rear View" photo for location.)

CENTERING

Centering is accomplished by Horizontal and Vertical centering controls located at rear of chassis.

FOCUS

The focus may be varied by means of a Focus Control. (See "Tube Placement Chart" for location.)

BUZZ ADJUSTMENT

To eliminate intercarrier buzz, adjust the Buzz Control for MINIMUM buzz and maximum sound. (See "Tube Placement Chart" for location.)

ZENITH CHASSIS 25MC36Z, 25MC36 (Late Production) and 25MC46/Z

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.

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Chassis S-69876.....SET 805, FOLDER 4-A

ZENITH CHASSIS 25MC36Z, 25MC36 (Late Production) and 25MC46/Z

SET 805 FOLDER 4

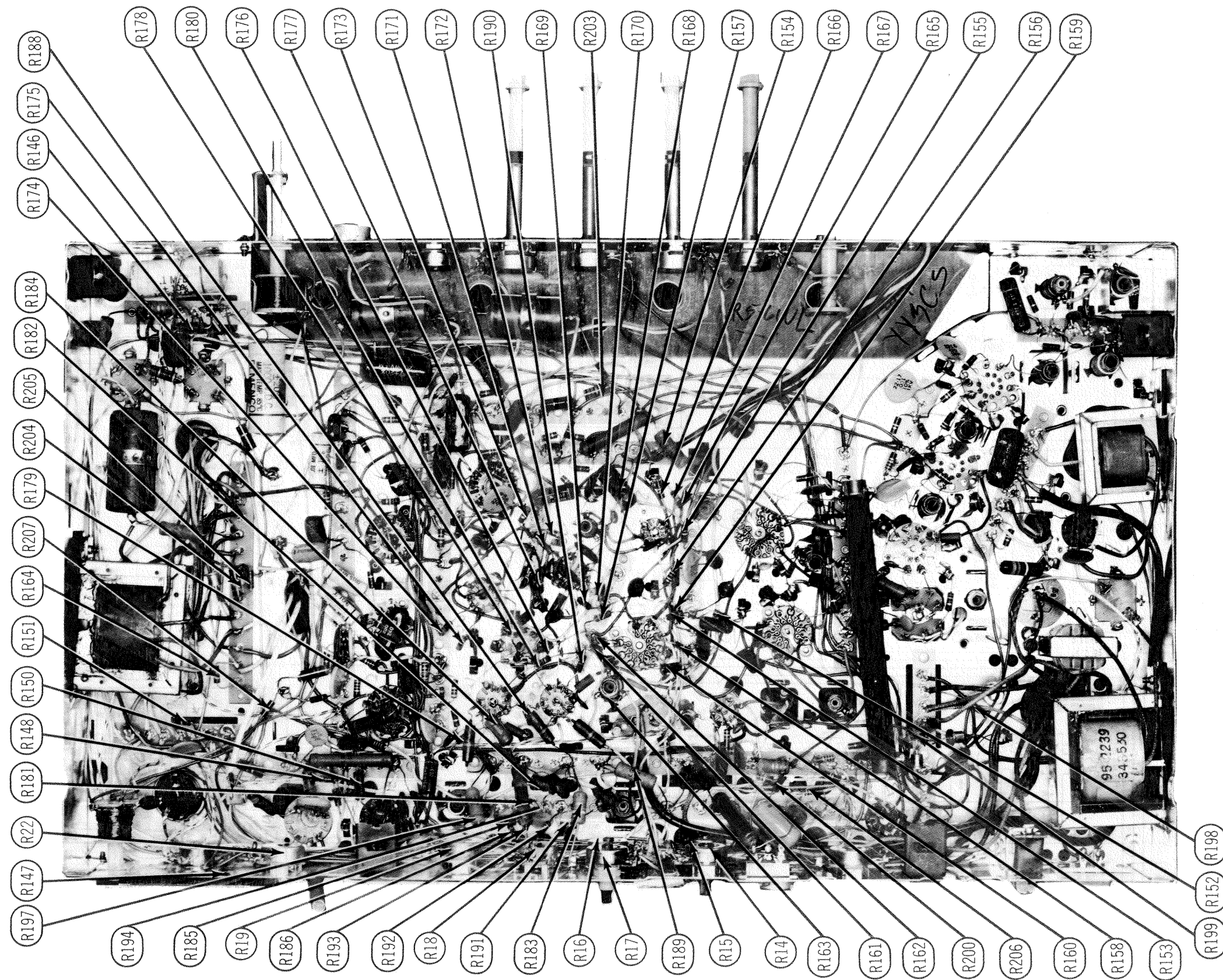
HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206



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DATE 3-66 SET 805 FOLDER 4



CHASSIS-BOTTOM VIEW, RESISTOR IDENT.

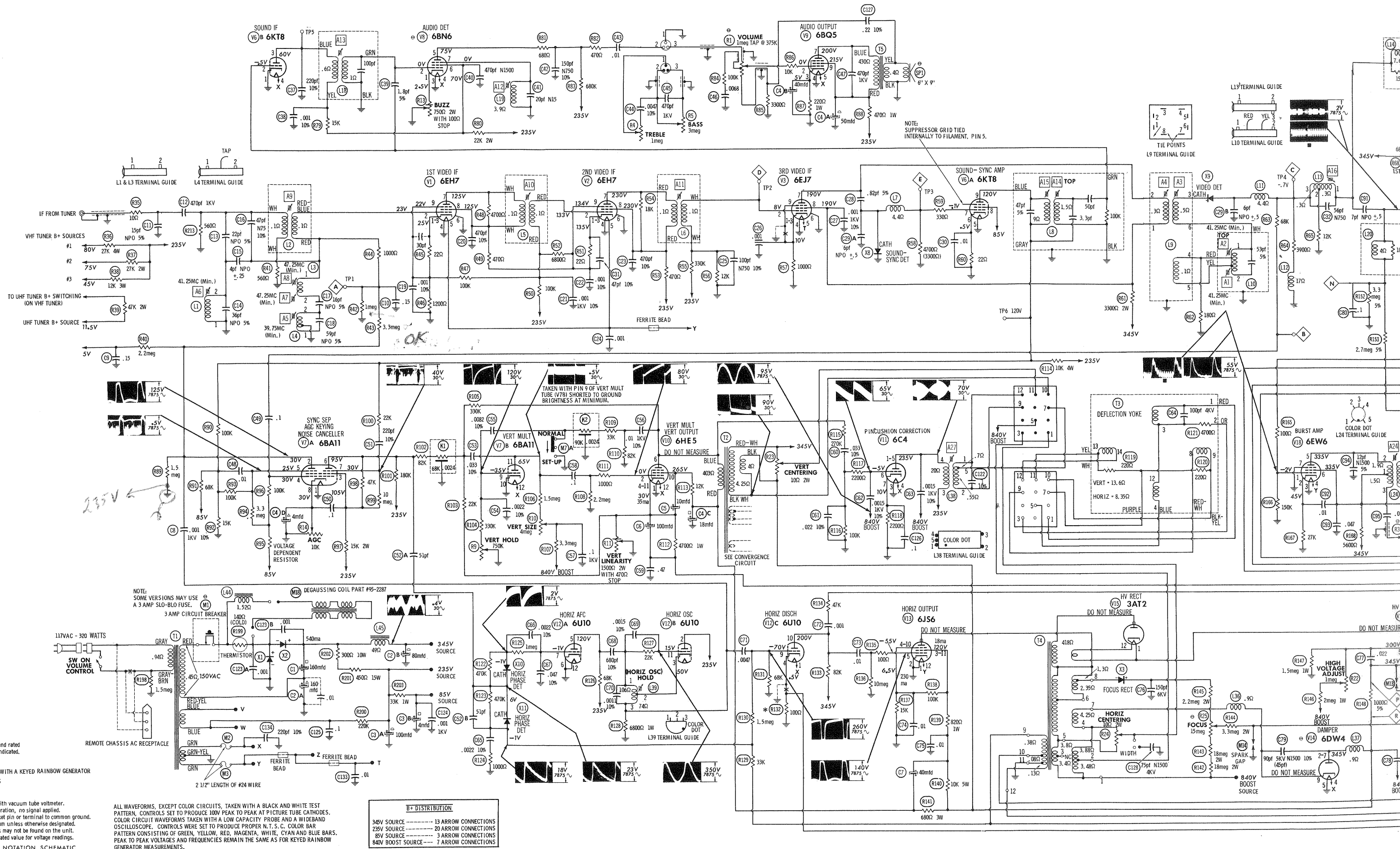
ZENITH CHASSIS 25MC36Z, 25MC36
(late Production) and 25MC46/Z

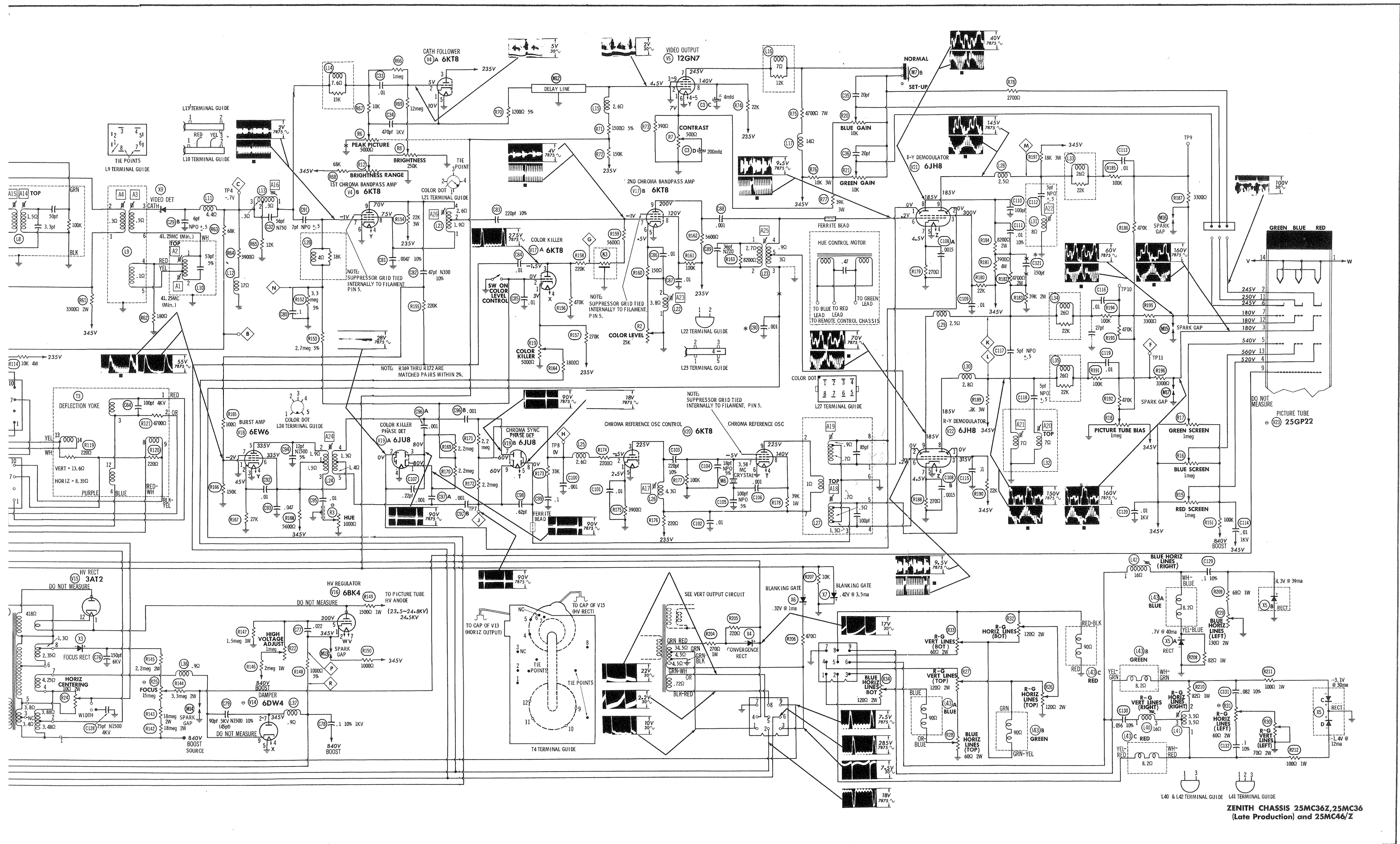
FOLDER 4

C
BLUE
LATERAL
CONVERGENCE
YOKE
CENTERING
STRINGS
VERT LINEARITY
VERT SIZE
QUADRATURE
COIL
BLUE
GAIN
GREEN
GAIN
FUSE
WIRE
(FIL)

CHASSIS REMOVAL

1. Remove 2 screws holding back cover. On so connect antenna leads. Ren
2. Disconnect yoke plug, high speaker leads, ground wire,
3. Remove 4 screws holding c controls.

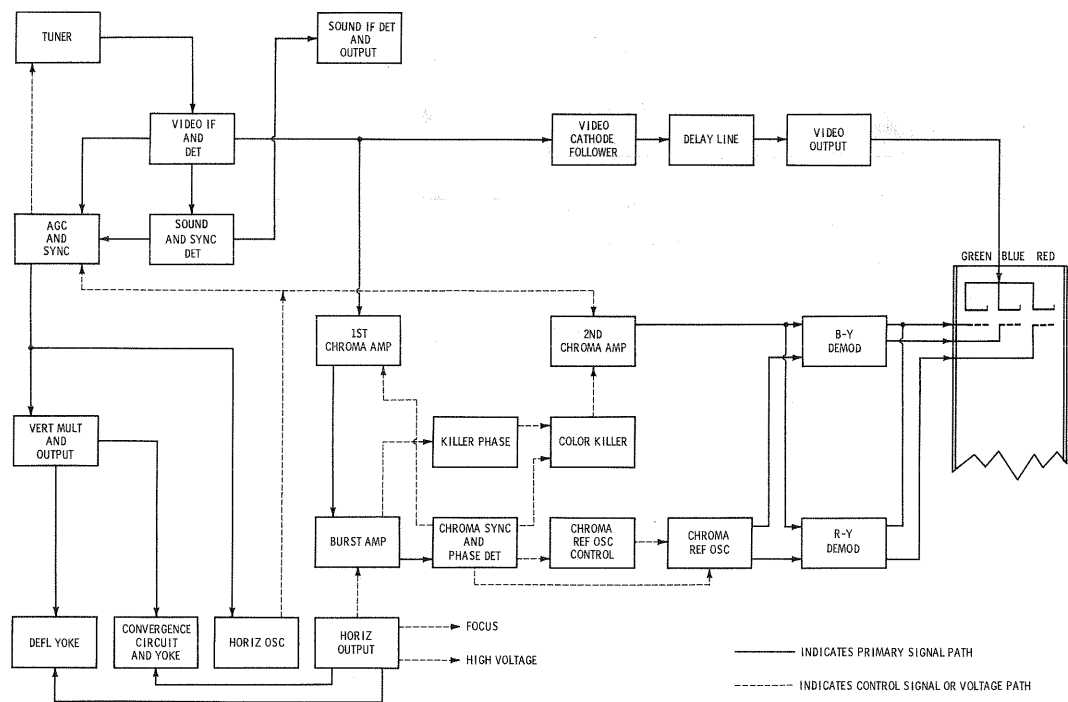
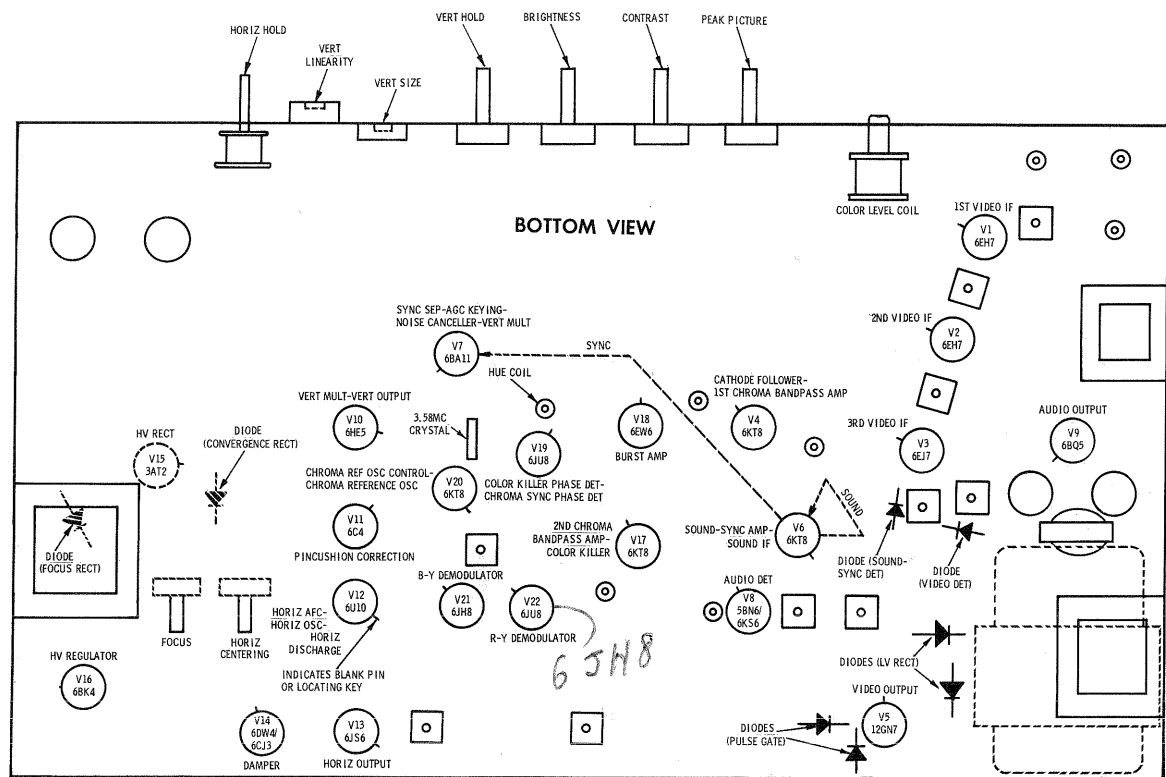




ZENITH CHASSIS 25MC36Z, 25MC36
(Late Production) and 25MC46/Z

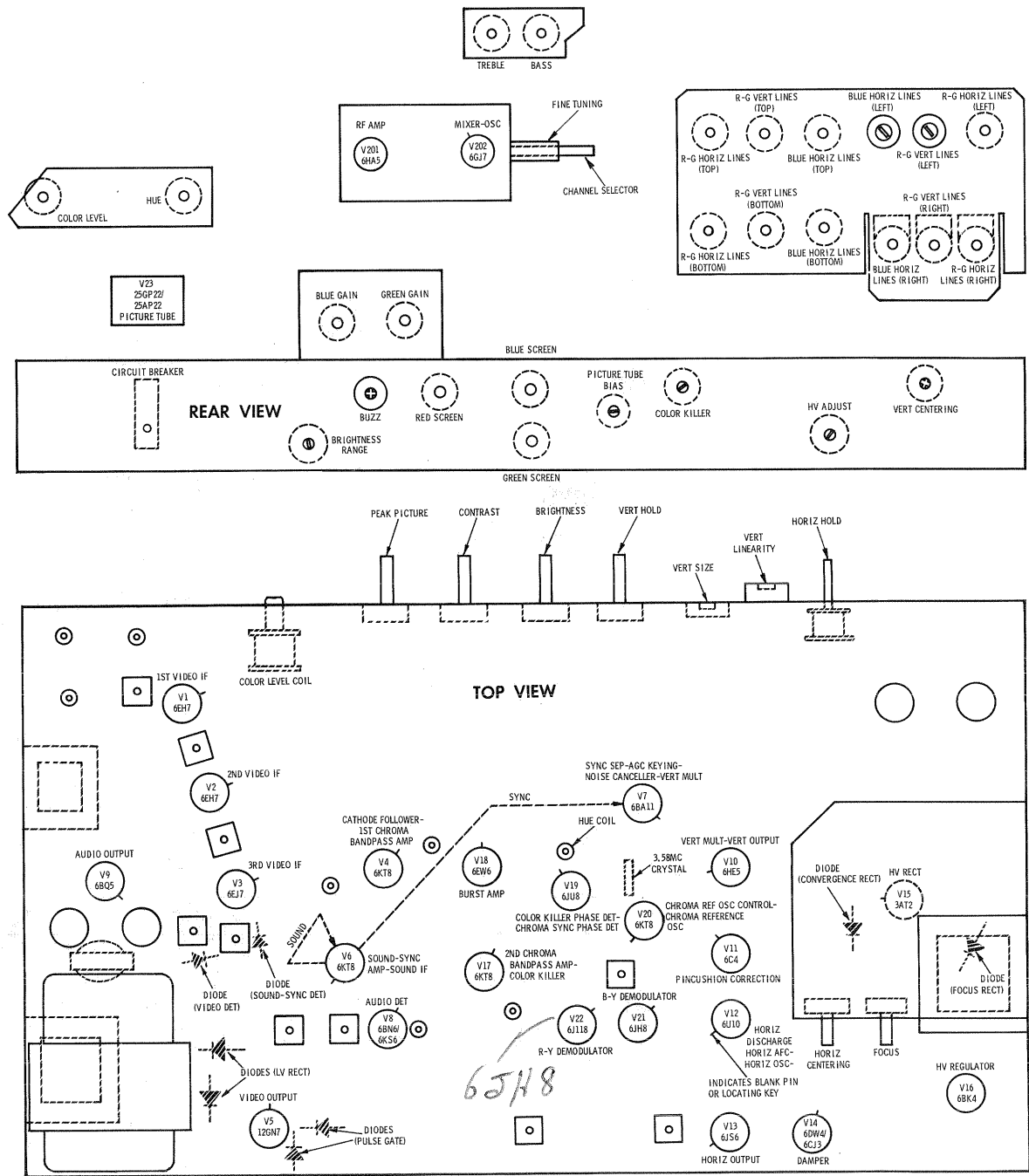
TUBE PLACEMENT CHART

V2
250P22
25AP22
PICTURE TUBE



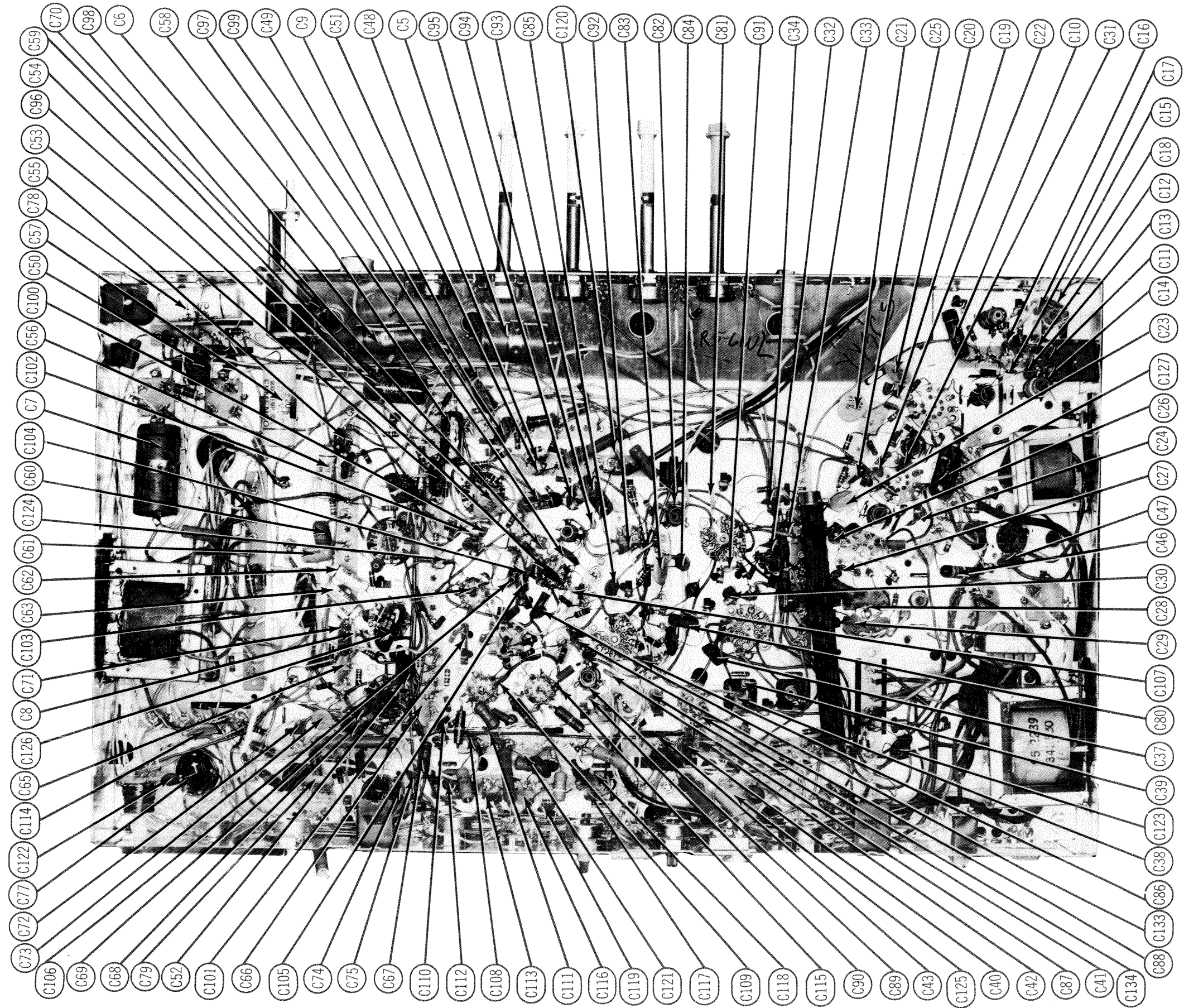
BLOCK DIAGRAM

TUBE PLACEMENT CHART



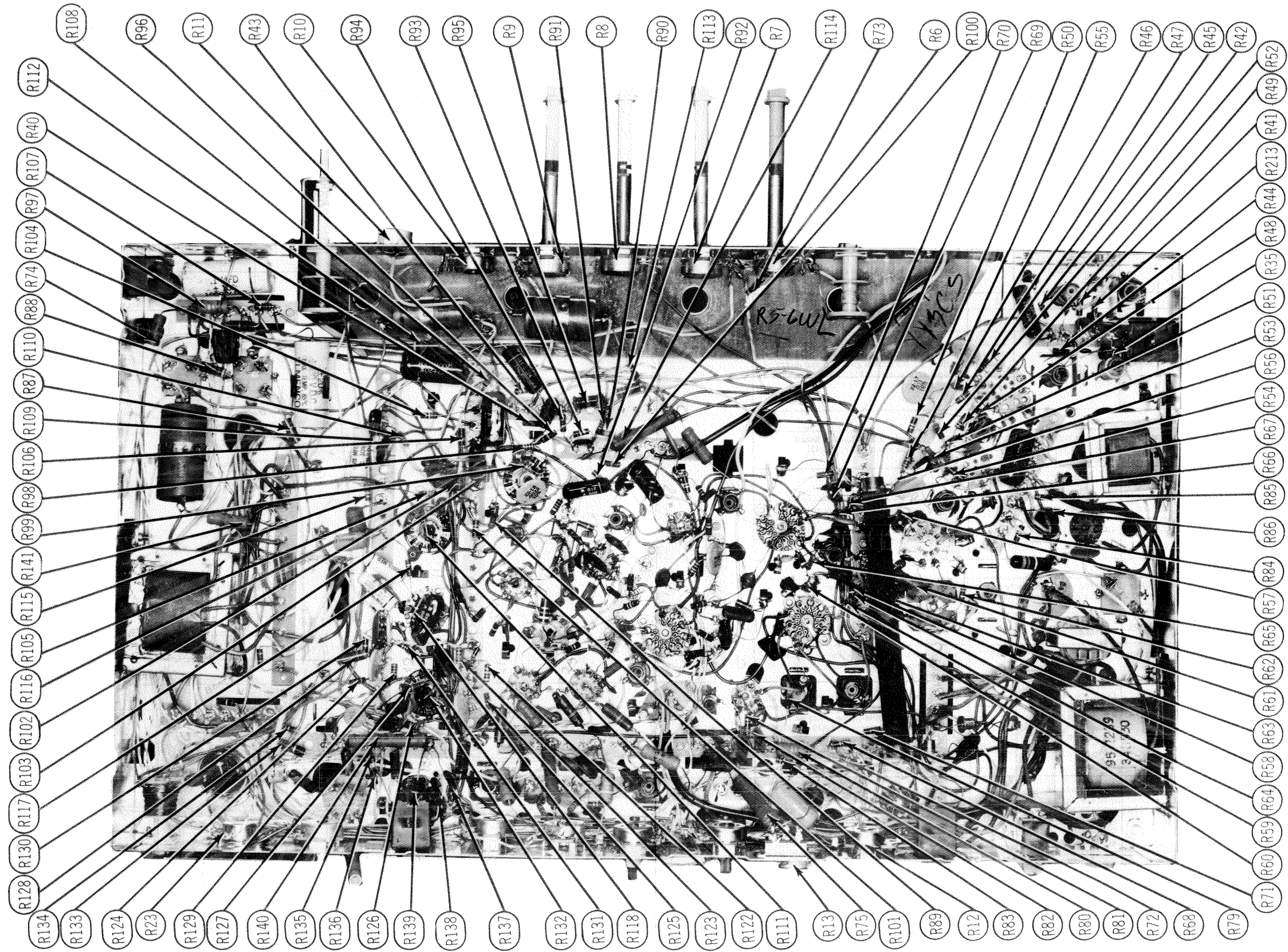
ZENITH CHASSIS 25MC36Z, 25MC36
(Late Production) and 25MC46/Z

FOLDER 4



CHASSIS-BOTTOM VIEW, CAPACITOR IDENT.

**ZENITH CHASSIS 25MC36Z, 25MC36
(late Production) and 25MC46/Z**



CHASSIS-BOTTOM VIEW, RESISTOR IDENT.

ZENITH CHASSIS 25MC36Z, 25MC36
(Late Production) and 25MC46/Z

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools: A1 thru A26 GENERAL CEMENT #8606, 8869, 9302 ... WALSCO #2511, 2543, 2588
Mixer Plate Coil ... GENERAL CEMENT #9286, 9300, 9302 ... WALSCO #2510, 2511, 2547

VIDEO IF ALIGNMENT

Connect a clip lead from point ④, off pin 2 AGC Keying-Noise Canceller & Sync Separator (V7) to ground. Connect a clip lead from points ⑤, off plate side of Video Detector (X9) to ground. Disable Oscillator section of Mixer-Oscillator. Use only enough generator output to provide a usable condition on indicator.

	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT INDICATOR	ADJUST	REMARKS
1.	High side to point ④, pin 2, 3rd Video IF (V3), low side to ground.	Not used	41.25MC	Any non-interfering channel	DC probe of VTVM to point ④, off Video Detector (X9), low side to ground.	A1, A2	Adjust for MINIMUM.
2.	"	44MC (10MC Sweep)	41.25MC 41.75MC 45.75MC	"	Vert. input of scope to point ④, low side to ground.	A3, A4	Adjust for response similar to Fig. 1.
3.	High side to point ④, pin 2, Mixer Grid of Tuner (V202), low side to ground.	Not used	39.75MC	"	DC probe of VTVM to point ④, pin 7, Sound & Sync Amp. (V6), low side to ground.	A5	Adjust for MINIMUM. In order to obtain an usable indication on meter, it may be necessary to remove jumper from point ④ and apply a positive voltage from a variable bias supply.
4.	"	"	41.25MC	"	"	A6	"
5.	"	"	47.25MC	"	"	A7, A8	Adjust for MINIMUM. Repeat steps 3 & 4.
6.	"	44MC (10MC Sweep)	39.75MC 41.25MC 42.17MC 43.0MC 45.0MC 45.75MC 47.25MC	"	Vert. input of scope to point ④, low side to ground.	A9, A10, A11 & Mixer Plate Coil	Remove positive bias supply from point ④ and reconnect to ground with clip lead. Adjust for maximum gain and symmetry of response similar to Fig. 2 with markers as shown.

SOUND IF AND 4.5MC TRAP ALIGNMENT

Tune in a strong TV station and adjust for normal operation. Reduce the signal strength at the antenna terminals until a hiss is heard in the sound. Adjust for MINIMUM undistorted sound with MINIMUM buzz by adjusting A12, A13, A14, A15 and Buzz control, R41. If hiss disappears during alignment, further reduce the signal strength.

	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT INDICATOR	ADJUST	REMARKS
7.	Not used	Not used	Not used	Any non-interfering channel	Vert. input of scope to point ④, off pin 3, Picture Tube (V23), low side to ground.	A16	Place Color Switch in "On" position. Connect a clip lead from point ④, off pin 7, 2nd Chroma Bandpass Amp. (V17) to chassis and adjust A16 for MINIMUM 900KC beat on scope.

COLOR SYNC AND DEMODULATION ALIGNMENT

Place Color switch in the "On" position. Connect a Color Bar Generator (color bar pattern) across antenna terminals. Connect clip leads from point ④, off pin 7, 2nd Chroma Bandpass Amp. (V17) and point ⑤, off pin 2, Chroma Reference Oscillator control (V20) to chassis.

	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT INDICATOR	ADJUST	REMARKS
8.	Not used	Not used	Not used	Generator	Not used	A17	Adjust for zero beat as viewed on picture tube screen, MINIMUM number of floating bars on screen.
9.	"	"	"	"	DC probe of VTVM to point ④, off pin 9, Chroma Sync Phase Detector (V19), low side to ground.	A18, A19	In versions without a 4.7meg resistor @ point ④, use an external 4.7meg resistor in series with VTVM probe. Adjust A18 for maximum indication and A19 for MINIMUM. Slugs should be positioned on outside end of coils. Remove clip leads from points ④ & ⑤. Adjust the Hue control for maximum indication on VTVM.
10.	"	"	"	"	Vert. input of scope thru low capacity probe to point ④, off pin 8, R-Y/G-Y Demodulator (V22), low side to ground.	A20	Adjust for MINIMUM 3.58MC response.
11.	"	"	"	"	Vert. input of scope thru low capacity probe to point ④, off pin 9, R-Y Demodulator (V22), low side to ground.	A21	Adjust for MINIMUM 3.58MC response. Some interaction may exist. Repeat steps 10 and 11 if necessary.
12.	"	"	"	"	Vert. input of scope thru low capacity probe to point ④, off pin 9, B-Y Demodulator (V21), low side to ground.	A22	Adjust for MINIMUM 3.58MC response.

ALIGNMENT INSTRUCTIONS (cont)

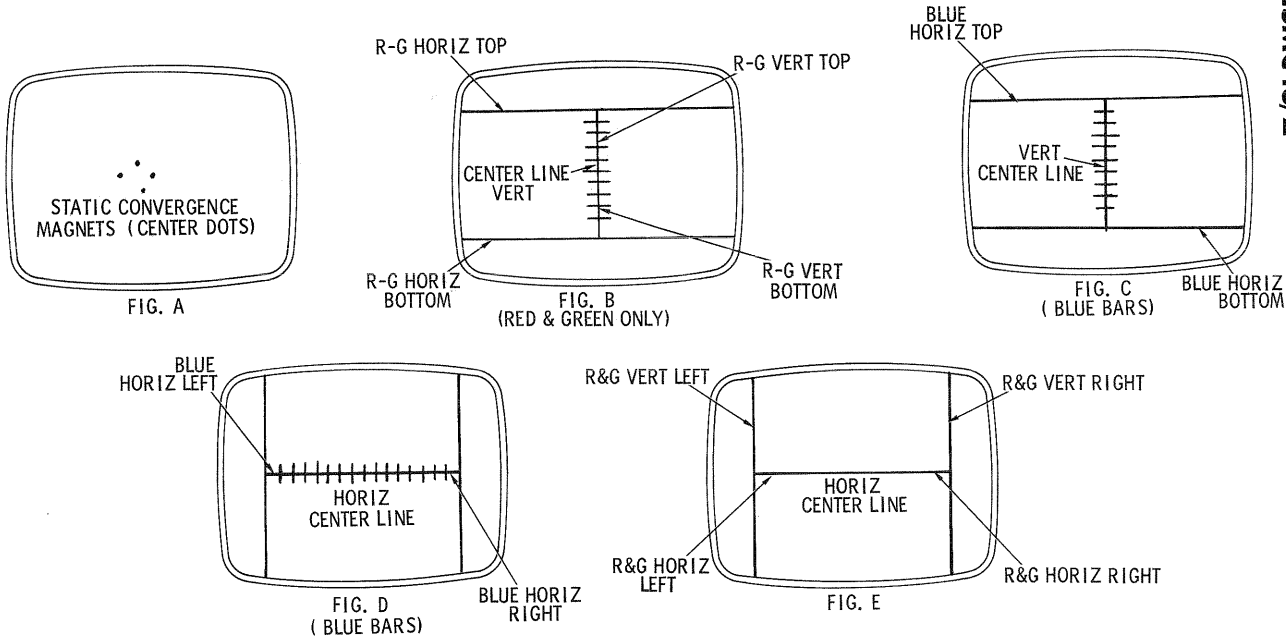
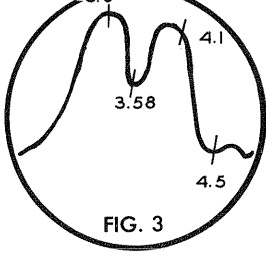
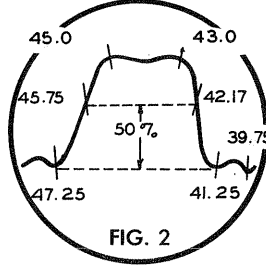
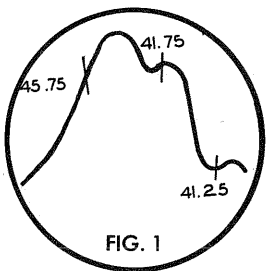
13.	"	"	"	"	Vert. input of scope to point ④, off pin 3, Picture Tube (V23), low side to ground.	A23	Tune in a Color Pattern, and set Level control, R2, to MINIMUM. Adjust for MINIMUM R-Y output.
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Set Color Level and Hue controls to the center of their ranges. Connect the Vertical Input of Scope to Point ④. Check for proper waveform with the Color Bar Generator being used. See waveform on schematic for pattern obtained from a standard N.T.S.C. signal. If necessary, adjust A24 for proper range of control. Remove Color Bar Generator.

CHROMA BANDPASS ALIGNMENT

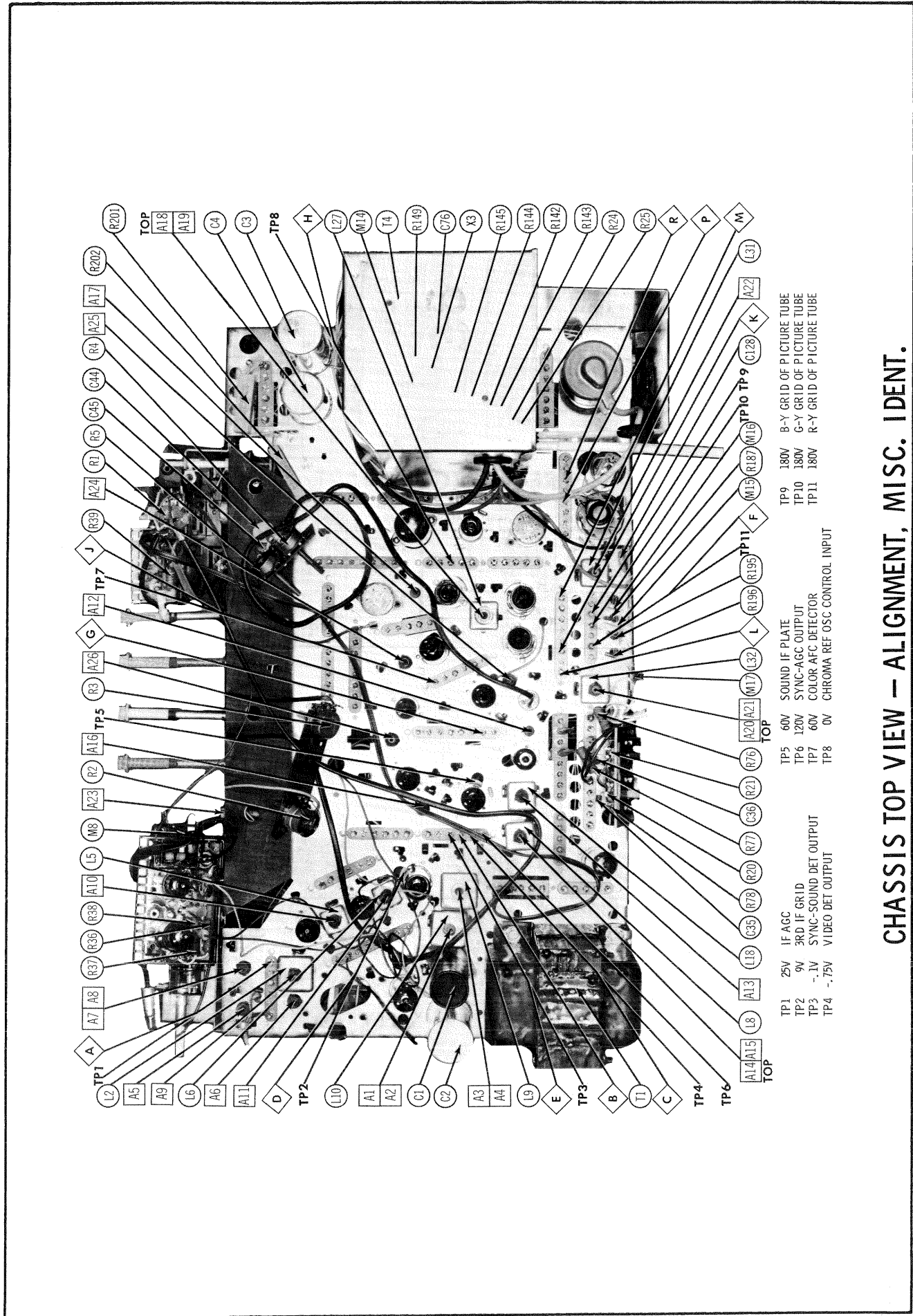
Disable the Oscillator of the Mixer-Oscillator in Tuner. Set the Color Level control to mid-position. Connect a -6 volt bias to point ④, off pin 7, 1st Chroma Bandpass Amp. (V4). Connect a clip lead from point ④, off pin 7, 2nd Chroma Bandpass Amp. (V17) to ground. Place the Color switch in the "On" position.

	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
14.	High side to point ④, off Video Detector (X9), low side to ground.	3.58MC	3.0MC 3.58MC 4.1MC	Any non-interfering channel	Vert. input thru a detector probe to point ④, off pin 3, Picture Tube (V23), low side to ground.	A25	Adjust for MINIMUM 3.58MC response. Correct dip in response occurs with slug nearest chassis.
15.	"	"	3.0MC 3.58MC 4.1MC	"	"	A26	Adjust for symmetry of response curve similar to Fig. 3 with markers as shown.



ZENITH CHASSIS 25MC36Z, 25MC36 (Late Production) and 25MC46/Z

FOLDER 4



CHASSIS TOP VIEW — ALIGNMENT, MISC. IDENT.

MISCELLANEOUS ADJUSTMENTS

WITH SET TURNED OFF

Connect a 0-3 MA meter across point \diamond , pin 1, HV Regulator (V16) and point \diamond , off pin 2, Damper (V14). Connect positive to point \diamond . Connect a VTVM through 30KV or higher voltage probe to picture tube anode lead.

WITH SET TURNED ON

Tune in a TV station and set all controls for normal operation. Turn the Brightness and Contrast controls to extinguish the raster. Set the High Voltage Adjust control for 25KV on meter connected to anode lead. Observe the reading on current meter across points \diamond and \diamond . It should read between .85 MA and 1.4 MA. If less than .85 MA, adjust High Voltage Adjust for .85 MA.

AGC ADJUSTMENT

Tune in the strongest TV station available and slowly turn AGC control to the right until the picture distorts and a buzz is heard in the sound. Turn control back to the left until picture distortion and buzz in the sound has cleared up.

COLOR KILLER

Set Color Killer control fully counterclockwise. Tune in a Color signal and adjust Color Killer control until color just appears on the screen and is normal. Switch to a black and white program and adjust for colorless noise (snow). Recheck for normal color reception.

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

The Horizontal Hold is equipped with a stop which limits rotation to 270° with the knob on the shaft. To adjust, remove the knob and adjust by turning the shaft until the picture is synchronized to the point where it is virtually impossible to disrupt horizontal synchronization when switching from channel to channel. Install knob with the pointer centered between the stops.

PINCUSHION CORRECTION ADJUSTMENT

Connect a cross-hatch generator to the antenna terminals and tune in a cross-hatch pattern on the screen. Adjust A27 until the top and bottom of the pattern are straight with the picture tube mask. Correction at the sides is fixed and no adjustment is necessary.

BRIGHTNESS RANGE CONTROL ADJUSTMENT

Set the Channel Selector for a station signal and set the Brightness and Contrast controls for maximum. Adjust the Brightness Range control, located on rear apron of chassis, just below the point at which the raster tends to "bloom".

PURITY ADJUSTMENTS

Perform step 1 of "Convergence Adjustments". If the picture appears to be magnetized, use a degaussing coil to demagnetize tube and mounting brackets. Turn Blue and Green screen controls to MINIMUM. Loosen deflection yoke and move it backward until it is against the convergence yoke assembly. Be careful not to disturb the position of the convergence yoke assembly.

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

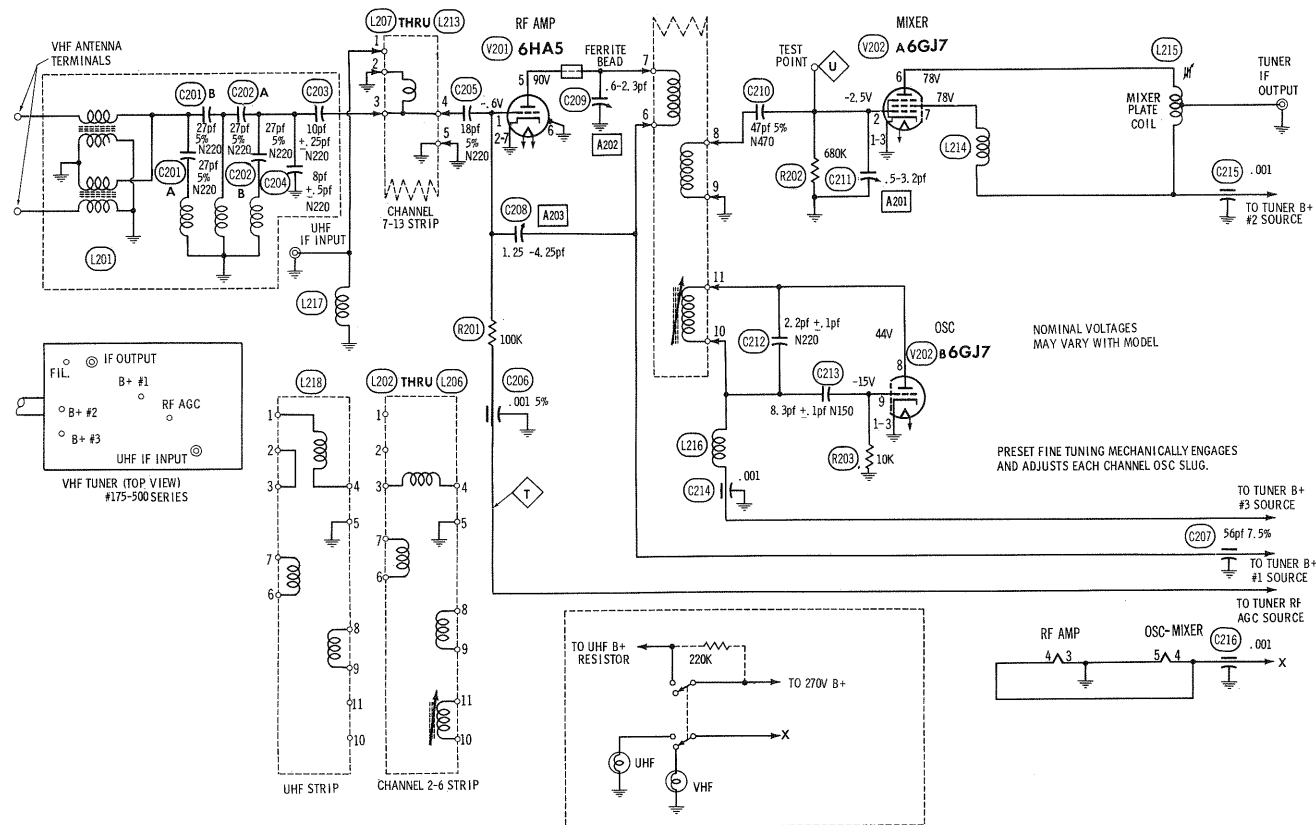
GRAY SCALE ADJUSTMENTS

Tune in a black and white picture or a color picture with the Color control set to MINIMUM. Turn the CRT Bias control fully counterclockwise. Turn the Red, Green, and Blue screen controls fully counterclockwise. Move the BW switch to "Setup" position. Advance the screen controls, one at a time, until each produces a barely visible line on the screen. If any control fails to produce a line, leave that control at maximum and turn the other two controls back to MINIMUM. Advance the CRT Bias control until a barely visible line appears. Advance the remaining two controls, one at a time, until a barely visible line appears. Return the BW switch to "Normal" position. Adjust the Blue and Green Gain controls to eliminate coloring in the dark and bright areas of the picture.

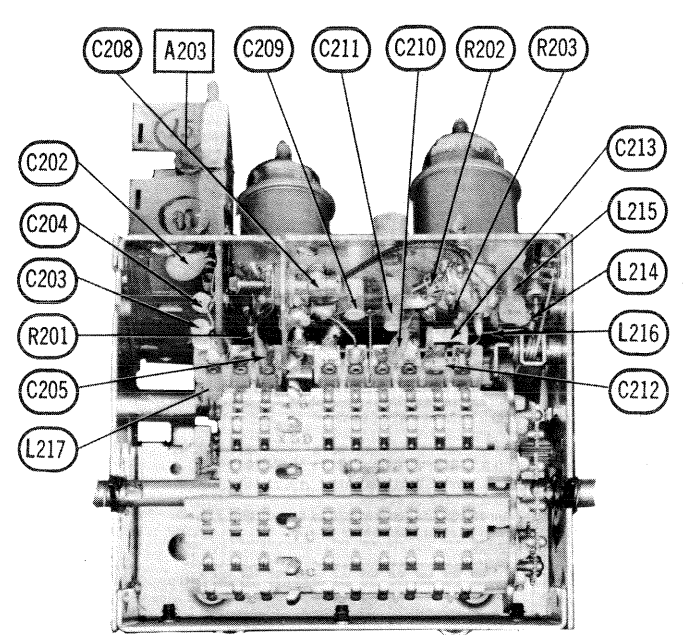
CONVERGENCE ADJUSTMENTS			
Step	Control	Use to Converge (or Straighten)	Remarks
1.			Perform center dot convergence using convergence magnets. If more range is needed, reverse magnet holder in clip. See Fig. A.
2.	R-G Horizontal Lines (Bottom)	Red & Green Horizontal bars at bottom center of screen.	See Fig. B
3.	R-G Vertical Lines (Bottom)	Red & Green Vertical bars at bottom center of screen.	See Fig. B.
4.	R-G Horizontal Lines (Top)	Red & Green Horizontal bars at top center of screen.	See Fig. B.
5.	R-G Vertical Lines (Top)	Red & Green Vertical bars at top center of screen.	See Fig. B.
6.			Repeat steps 1 thru 5 to achieve best vertical red and green convergence from top center to bottom center.
7.	Blue Horizontal Lines (Bottom)	Blue Horizontal bar with Red & Green bar at bottom center of screen.	See Fig. C.
8.	Blue Horizontal Lines (Top)	Blue Horizontal bar with Red & Green bar at top center of screen.	See Fig. C.
9.			Repeat steps 7 and 8 to achieve best convergence of blue line with red and green lines from top center to bottom center of screen.
10.	R-G Horizontal Lines (Right side)	Red & Green Horizontal bars at right center of screen.	See Fig. E.
11.	R-G Vertical Lines (Right side)	Red & Green Vertical bars at right center of screen.	See Fig. E.
12.	Blue Horizontal Lines (Right side)	Blue Horizontal bar with Red & Green bars at right center of screen.	See Fig. D.
13.	R-G Horizontal Lines (Left side)	Red & Green Horizontal bars at left center of screen.	See Fig. E.
14.	R-G Vertical Lines (Left side)	Red & Green Vertical bars at left center of screen.	See Fig. E.
15.	Blue Horizontal Lines (Left side)	Blue Horizontal bar with Red & Green bars at left center of screen.	See Fig. D.
16.			Repeat steps 10 thru 15 to achieve best horizontal convergence from left side center to right side center.

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ZENITH CHASSIS 25MC36Z/25MC36
(Late Production) and 25MC46Z



A PHOTOFAC STANDARD NOTATION SCHEMATIC
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VHF TUNER ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools: A201, A202, A203 ... GENERAL CEMENT #8271, 8279, 9050L ... WALSCO #2521, 2524, 2527

OSCILLATOR ADJUSTMENTS

The oscillator for each channel is preset by means of the fine tuning control. Adjust fine tuning for best picture and sound on each channel.

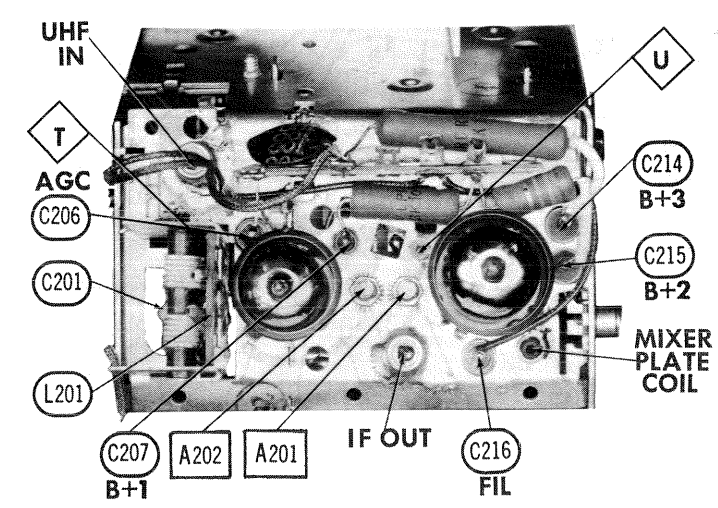
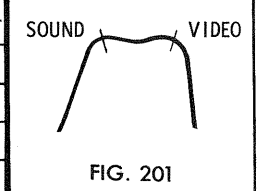
RF AND MIXER ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection. Use 10MC sweep unless otherwise noted. Connect a variable bias to the RF AGC line at point ∇ . Adjust bias to obtain response curve which shows no indication of overloading.

	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	Across antenna terminals with 120 Ω in each lead.	213MC	211.25MC 215.75MC	13	Vert. Input to Point ∇ , low side to ground.	A201, A202	Adjust for maximum gain and symmetry of response similar to Fig. 201 with markers as shown.
2.	"	195MC	193.25MC 197.75MC	10	Across Video Det. load resistor.	A203	Increase bias to -15 volts and adjust for MINIMUM amplitude of response.
3.	"	See Chart	See Chart	12 thru 2	Vert. Input to Point ∇ , low side to ground.		Decrease bias. Check response on all channels and make compromise adjustments of A201 and A202 if required.

CHANNEL & FREQUENCY CHART

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



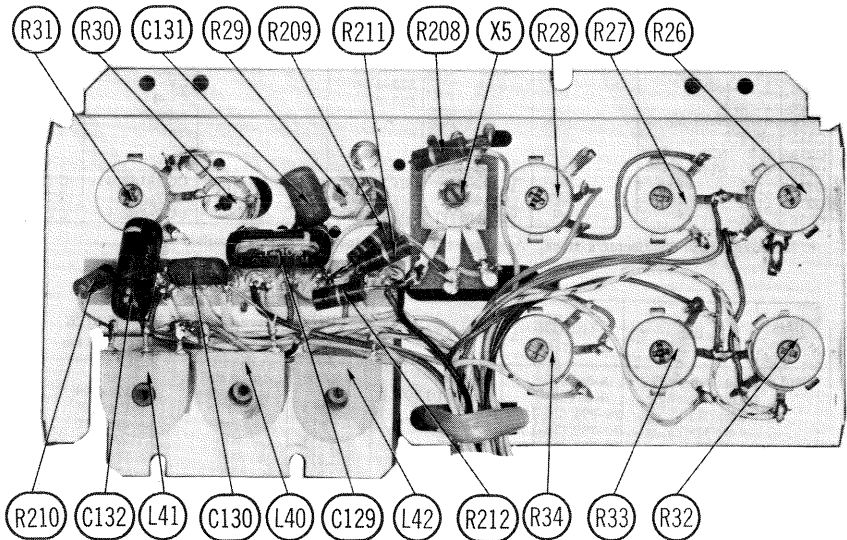
13 POSITION TURRET-TYPE VHF TUNER 175-503

RESISTANCE MEASUREMENTS

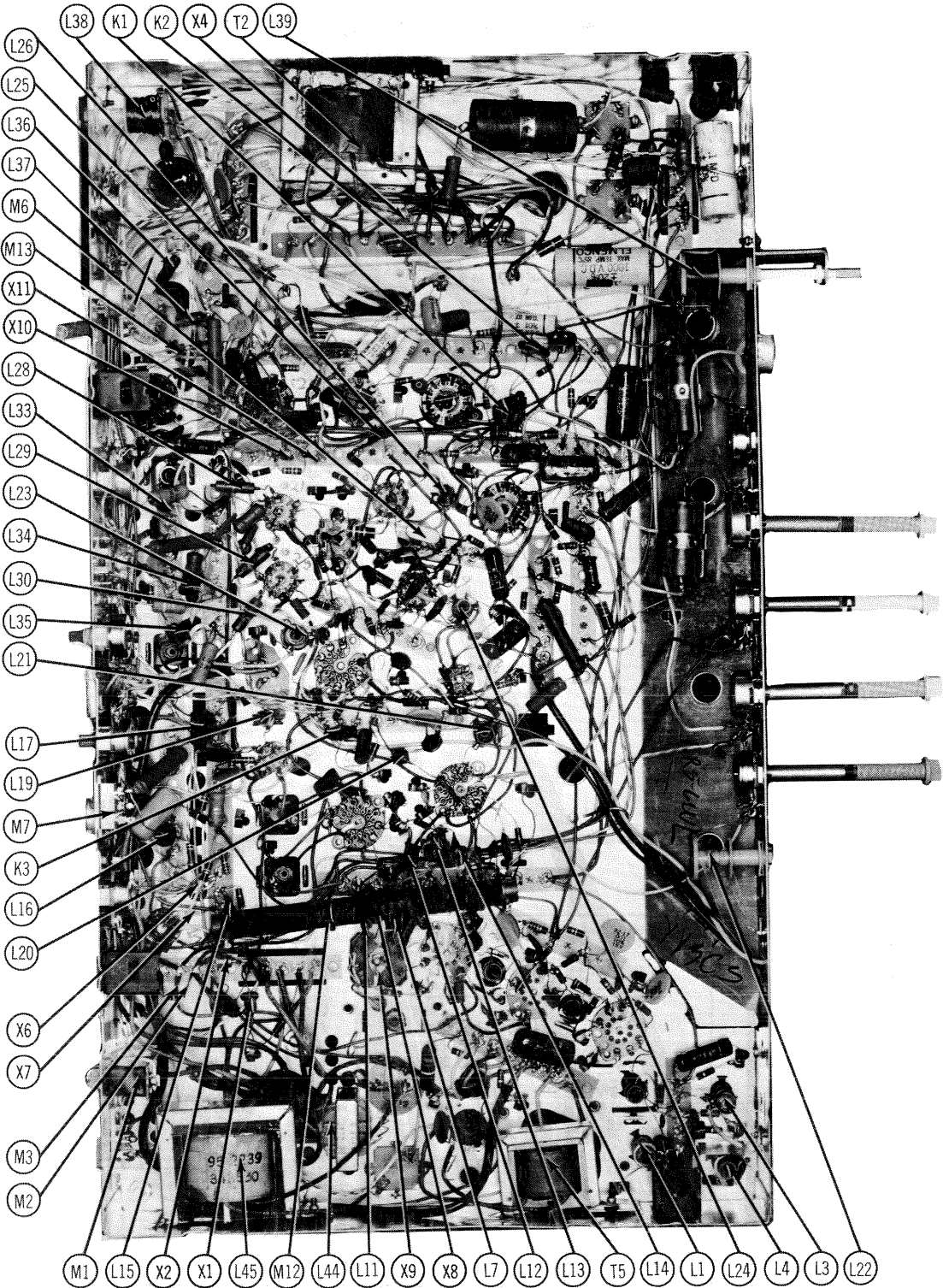
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12
V1	6EH7	1200Ω	900K	NC	FIL	0Ω	0Ω	490Ω ▲	490Ω ▲	1200Ω			
V2	6EH7	60K	53K	NC	FIL	0Ω	0Ω	1200Ω †	1200Ω †	22Ω ▲			
V3	6EJ7	1000Ω	12K	1000Ω	FIL	0Ω	0Ω	4000Ω †	4000Ω †	0Ω			
V4	6KT8	4000Ω ●	1meg	750Ω †	FIL	0Ω	0Ω	1.5meg	23K †	23K †			
V5	12GN7	220Ω	2000Ω ●	0Ω	0Ω	0Ω	FIL	4000Ω †	23K †	0Ω			
V6	6KT8	0Ω	100K	37K †	FIL	0Ω	22Ω	800Ω ●	27K †	10K †			
V7	6BA11	FIL	1.1meg	15K †	2.5meg †	115K	40K †	10meg †	3800Ω	550K	0Ω	6meg †	0Ω
V8	6BN6	300Ω	1Ω	FIL	0Ω	23K †	3.9Ω	680K †					
V9	6BQ5	NC	300K	220Ω	FIL	0Ω	NC	1700Ω †	NC	1200Ω †			
V10	6HE5	FIL	2.2meg	NC	750Ω	NC	1100Ω †	NC	TP	NC	13K †	750Ω	0Ω
V11	6C4	NC	NC	FIL	0Ω	750Ω †	100K	2200Ω					
V12	6U10	0Ω	750Ω †	7000Ω	100Ω	70K †	0Ω	1.8meg	NC	68K	82K †	29K	FIL
V13	6JS6	0Ω	0Ω	10K †	15K	10meg	NC	NC	TP	NC	15K	10K †	FIL
V14	6DW4	NC	35Ω †	NC	FIL	0Ω	NC	NC	NC	340K			
V15	3AT2			PINS 1 THRU 12 HAVE INFINITE RESISTANCE									
V16	6BK4	1000Ω †	FIL	NC	NC	1.1meg †	NC	FIL	NC				TOP CAP 13Ω †
V17	6KT8	3800Ω	0Ω	470K	FIL	0Ω	150Ω	900K	100K †	5600Ω †			TOP CAP 460Ω †
V18	6EW6	85K	27K	FIL	0Ω	5600Ω †	5600Ω †	0Ω					TOP CAP INF
V19	6JU8	2.2meg	.9Ω	2.2meg	FIL	0Ω	0Ω	2.2meg ■	.5Ω	2.2meg ■			
V20	6KT8	3900Ω	INF	1000Ω †	FIL	0Ω	0Ω	100K	40K †	1000Ω †			
V21	6JH8	.7Ω	.9Ω	22K †	FIL	0Ω	110Ω	270Ω	12K †	18K †			
V22	6JH8	.7Ω	1.3Ω	22K †	FIL	0Ω	110Ω	270Ω	18K †	8000Ω †			
V23	25GP22	FIL	6500Ω †	100K †	360K †	340K †	4000Ω †	100K †	NC	55meg †	NC	6000Ω †	100K †
						Pin 13 380K †	Pin 14 FIL						
V201	6HA5	3.4meg	0Ω	0Ω	FIL	13K †	0Ω	0Ω					
V202	6GJ7	0Ω	680K	0Ω	FIL	0Ω	28K †	28K †	28K †	10K			
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

● READING DEPENDS ON POLARITY OF METER CONNECTIONS.
† MEASURED FROM OUTPUT OF X2.
NC NO CONNECTION TP TIE POINT

▲ MEASURED FROM PIN 1 OF V2.
‡ MEASURED FROM PIN 9 OF V14.
■ MEASURED FROM PIN 2 OF V20.



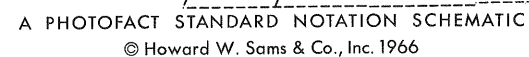
CONVERGENCE PANEL



CHASSIS BOTTOM VIEW – INDUCTOR, MISC. IDENT.

ZENITH CHASSIS 25MC36 Z, 25MC36
(Late Production) and 25MC46/Z

FOLDER 4



UHF TUNER 175-34B

175-34B

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X301	121-304	UHF Oscillator				PNP

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X302		103-61 (103-60) Alternate					1N82A

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		NPO-DI 10	DTZ-10	CZ601CG100K	CCTO-100	CNO410	10TCC-Q
C302	10							
C303	470							
C304	.001		EF-001	MFT-1000		CCF-102	CT280A	

♦ AMPEREX ♦		GENERAL ELECTRIC		♦ RCA ♦		♦ SYLVANIA ♦	
ITEM No.	USE	TYPE		ITEM No.	USE	TYPE	
V201	RF Amp.	6HA5		V202	Mixer - Osc.	6GJ7	

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	27 N220 5%					*		10TCR-Q2
B	27 N220 5%					*		10TCR-Q2
C202A	27 N220 5%					*		10TCR-Q2
B	27 N220 5%					*		10TCR-Q2
C203	10 N220 \pm .25					*		
C204	8 N220 \pm .25					*		10TCR-V8
C205	18 N220 5%					*		10TCR-Q1
C206	.001 5%							
C207	56							
C208	1.25-4.25			829-6				
C209	.6-2.3			829-3		CV-3	CT552	
C210	47 N470 5%					CV-1	CT565	
C211	.5-3.2					*		10TCT-Q
C212	2.2 N220 \pm .1					*		
C213	6.3 N150 \pm .1							
C214	.001		EF-001	MFT-1000		CCF-102	CT280A	
C215	.001		EF-001	MFT-1000		CCF-102	CT280A	
C216	.001		EF-001	MFT-1000		CCF-102	CT280A	

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

ITEM No.	USE	ZENITH PART No.	NOTES
L201	Ant. Filter Ass'y	S-59297	Part of L201
A	Ant. Matching	S-49189	
B	Ant. Matching	20-874 (20-1009)	
C	Ant. Matching	20-799 (20-1007)	
D	Ant. Matching	20-798 (20-1006)	
L202	Ant., RF, Mixer, Osc.	174-402	Chan. 2, IF Strip
L203	"	174-403	
L204	"	174-404	
L205	"	174-405	
L206	"	174-406	
L207	"	174-407	" 6 "

ITEM No.	USE	ZENITH PART No.	NOTES
L208	Ant., RF, Mixer, Osc.	174-408	Chan. 8, IF Strip
L209	"	174-409	" 9 "
L210	"	174-410	" 10 "
L211	"	174-411	" 11 "
L212	"	174-412	" 12 "
L213	"	174-413	" 13 "
L214	Screen	20-1030	
L215	Mixer Plate	S-59280	
L216	Plate Choke	S-49738	
L217	UHF Input	20-1056	
L218	Ant., RF, Mixer	174-401	Chan. 1, UHF Strip

**ZENITH CHASSIS 25MC36Z, 25MC36Z
(Late Production) and 25MC46/Z**

FOLDER 4

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.	USE	REPLACEMENT DATA						
		ZENITH PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	THORDARSON MEISSNER PART No.	TRIAD PART No.	WORKMAN PART No.
L38	Pincushion	S-59518						
L39	Horiz. Osc. (Hold)	S-56877						
	Horiz. Hold	12-4012						
	Shaft Bracket	76-1490						
L40	Horiz. Hold	S-68084						
	Control Shaft			6322				
	Dynamic Convergence Right Side R/G Vert. lines (2.4mh-6mh)							
L41	Dynamic Convergence Right Side R/G Horiz. lines (1.3mh-5.2mh)	S-58041						
L42	Dynamic Convergence Right Side Blue Horiz. lines (2.4mh-6mh)	S-58038						
L43	Convergence Yoke	S-69659 (S-71762)						
		S-69658 (S-72424)						
A	Blue Section	S-69657 (S-72423)						
B	Green Section	S-69656 (S-72422)						
C	Red Section							

FILTER CHOKE

ITEM No.	RATINGS		REPLACEMENT DATA						NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	ZENITH PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L44	3A AC	1.52Ω	.04 H	95-2287					
L45	.360A DC	49Ω	1.9 H	95-2239			20C21	C-29X	

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	ZENITH PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC @ 3A AC	150VAC @ .54A DC	6VAC @ 1.4A AC	95-2264					
	SEC. 3	SEC. 4	SEC. 5						
	12.6VAC CT @ 11.1AAC								

TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		ZENITH PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	Vert. Output	95-2222					
T3	Yoke (Horiz. 11.5mh)	95-2286					
	90° (Vert. 24mh)	(95-2223) †					† Alternate Yoke
T4	Horiz. Output	S-67915					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	ZENITH PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T5	7400Ω	3-4Ω	95-2224 (-AF)	A-3020	A-3878	26S48	S-9Z	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		ZENITH PART No.	QUAM PART No.	
SP1	6" x 9" PM	49-1059	69A1	Used in Models: 8322W/W-1, 8324M, 8326H/R, 8328H, 9322W, 9324M, 9326R, 9341W, 9342M, 9345H/X, 9351H. Used in Models: 8320R/W, 8720W.
SP2		49-1065		Used in Models: 8341W, 8345H/X, 9342M, 9345H — Two used.
SP3		49-782, 49-1060, 49-1092		

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	ZENITH PART NO.	REPLACEMENT DATA
K1	Vertical Integrator	68K, .0024mfd	87-4	Aerovox PA-765 Centralab PC-408
K2	Vertical Feedback	90K, .0024mfd	87-5	Aerovox PA-764 Centralab PC-407
K3	Pulse Filter			

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	Circuit Breaker	3 Amp.	85-762 †		815-003			
M2	Fuse		136-66 ‡	62-41				
M3	2½" length of #24 copper wire							
	2½" length of #24 copper wire							

† Used in Chassis 25MC36/46/46Z.

MISCELLANEOUS

‡ Used in Chassis 25MC36Z.

ITEM No.	PART NAME	ZENITH PART No.	NOTES
M4	VHF Tuner	175-503	
M5	VHF Tuner	175-535	
M6	VHF Tuner	175-34A	
M7	Crystal	103-89 or 103-71	3.53MC
M8	Switch	85-754	Normal Setup
	Switch	85-771	VHF-UHF Changeover, used in Tuners 175-501 thru 175-519.
	Switch	85-790	VHF-UHF Changeover, used in Tuners 175-521 thru 175-599.
M9	Magnet Assembly	S-67856	Blue Lateral
M10	Magnet Assembly	S-6400 or S-71500	Purity Rings
M11	Magnet		Convergence - 3 required
M12	Delay	S-65296 (H)	
M13	Spark Gap	52-957	Regulator Cathode
M14	Spark Gap		Part of Horiz. Output Transformer
M15	Spark Gap	52-957	Green Grid
M16	Spark Gap	52-957	Blue Grid
M17	Spark Gap	52-957	Red Grid
M18	Degaussing Ass'y		Includes Coils: Part #S-67772, S-67773, S-67810, S-67811, #95-2287 and Thermistor Part #63-5444.

CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ZENITH ITEM	PART NO.	MODELS
Knob-VHF Channel Selector	46-4387	8320R, W 8322W 8322W-1 8324M 8326H, R 8328H, X 8341W 8342M 8345H, X 8720W 8730W 8740H, X 9322W 9324M 9326H, R 9341W 9342M 9345H, X 9351H
Knobs "	S-53116, 46-4084	
Knobs "	S-53116, 46-4082	
Knob-VHF Fine Tuning	S-56267	X X X X X X X
Knob "	S-66511	X X X X X X X
Knob-UHF Dial	S-69126	X X X X X X X X X X X X X
Knob-UHF Tuning	S-69125	X X X X X X X X X X X X
Knob "	S-67376	
Knob-Volume	S-63784	X X X X X X X
Knob "	S-63995	X X X
Knob "	S-67090	
Knob-Horiz. Hold	46-4128	X X X X X X X X X X X X X X X X X X
Knob-Brightness, Contrast	S-66521	X X X X X X X X X X X X X X X X X X X
Knob-Tone (Two (2) used)	S-62244	X X X X X X X X X X X X X X X X X X X
Knob-Picture Tuning	S-66520	X X X X X X X X X X X X X X X X X X X
Knob-Hue	S-63562	X X X X X X X X X X X X
Knob "	S-69110	
Knob-Color Level	S-55328	X X X X X X X X X X X X X X X X X X X
Knob-Focus	S-68222	X X X X X X X X X X X X X X X X X X X

WIRING DATA

High Voltage Lead	Use BELDEN No. 8869 (17KV) or 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 8874 (Rubber) or 8895 (Plastic)
Power Cord (Interlock Type)	Use BELDEN No. 8225
300Ω Tuner Input Lead	Use BELDEN No. 8464 (Flat) or 8464 (Round) - 5 Conductor
300Ω Antenna Lead-in	Use BELDEN No. 8485 (Round) - 5 Conductor
Antenna Rotor Cable	Use BELDEN No. 8488 (Round) - 8 Conductor

PARTS LIST AND DESCRIPTION

(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.

TUBES

• AMPEREX		• GENERAL ELECTRIC		• RCA		• SYLVANIA	
ITEM No.	USE	TYPE		ITEM No.	USE	TYPE	
X301	UHF Osc. (Transistor)			V12	Horiz. AFC - Horiz. Osc. -		
V201	RF Amp.	6HA5		V13	Horiz. Discharge	6U10	
V202	Mixer - Osc.	6GJ7		V14	Horiz. Output	6J56	
V1	1st Video IF	6EH7		V15	Damper	6DW4/6CJ3	
V2	2nd Video IF	6EH7		V16	HV Rectifier	3AT2	
V3	3rd Video IF	6EJ7		V17	HV Regulator	6BK4	
V4	Cathode Follower -			V18	2nd Chroma Bandpass Amp. -		
	1st Chroma Bandpass Amp.	6KT8			Color Killer	6KT8	
V5	Video Output	12GN7		V19	Burst Amp.	6EW6	
V6	Sound-Sync Amp. - Sound IF	6KT8			Color Killer Phase Det. -		
V7	Noise Canceller - Sync Sep. -				Chroma Sync Phase Det.		
	AGC Keying - Vert. Mult.	6BA11			Chroma Ref. Osc. Control -		
V8	Audio Detector	6HN6/6KS6		V20	Chroma Reference Osc.	6KT8	
V9	Audio Output	6HQ5		V21	B-Y Demodulator	6JH8	
V10	Vert. Mult. - Vert. Output	6HE5		V22	R-Y Demodulator	6JH8	
V11	Pincushion Correction	6C4					

PICTURE TUBE

ITEM No.	REPLACEMENT DATA				NOTES
	ZENITH PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SYLVANIA PART No.	
V23	25GP22, 25AP22	25AP22 ①	25AP22A ①	RE25AP22A ② RE25BP22 ②	① Aluminized ② Silver Screen "85"

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS & DIODES		RECTIFIERS		
			GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.
X1	.500	212-37	GE-504A	SD600 or 5A6-D	1N1492 or 1N2071	SK-3016 or SK-3017	60C or F-6
X2	.500	212-37	GE-504A	SD600 or 5A6-D	1N1492 or 1N2071	SK-3016 or SK-3017	60C or F-6
X3		212-48	GEOR-1	61-8969			PG33-140H-Q
X4		212-50	GE-504A or GE-505	SD500 or 5A4-D	1N1487 or A100	SK03016 or SK-3017	20C or F-2
X5		212-63	GEOR-3	5A4-D or SD500 ①	A50 or 1N2090 ①	SK-3016 or SK-3017 ①	20C or F-2 ①
X6		103-79	1N34AS	1N34A			
X7		103-79	1N34AS	1N34A			
X8		103-23	1N60	1N60			
X9		103-23	1N60	1N60			
X10		103-51	6CG1 ②	DD04 ②			
X11		103-51					

① Four (4) required.

② A single unit replaces X10 and X11.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA					
	CAP.	VOLT.	ZENITH PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	■160	250	22-3901	AFH5-31-80 ①	BR150-250 ①	XC1-11 QT1-18	WP125.9A ①	TVLS-1541.1 * ①
C2A	▲160	250	22-3895	AFH2-99-95	AA0560	XC1-9 QT1-26	FP253	TVLS-2808 *
C3A	▲100	475	22-4500	AFH4-94-25	BR150-250		FP472	TVLS-4818.5 *
C4	■4	475						
C	▲4	475						
D	200	25						
C4A	▲50	475	22-3831	AFH4-94-92			FP460.5	TVL-4814.7
B	40	25						
C	■18	475						
D	▲4	150						
C5	10	475	22-3974	PRS1810	BR12-500	QT1-7	TC81	TVA-1903
C6	100	50	22-3171	PRS1360	BR100-50	QT1-23	TC3501	TVA-1310
C7	40	400	22-3975	PRS1750	BR40-450	QT1-14	TC78	TVA-1712

* Not normally in distributor's stock. Available thru distributor on order to manufacturer. ① Use insulating sleeve and mounting washer.

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.
C8	.001	1KV	BDP-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C9	.15	100V	P288N-15		WMF1P1	1DP-2-104	PVC101	2PS-P10
C10	.15	100V	P288N-15		WMF1P1	1DP-2-104	PVC101	2PS-P10
C11	15	NPO 5%	NPO-DI 15	DTZ-15	CZ601CG150K	CCTO-150	CNO415	10TCC-Q15
C12	470	1KV	BPF-00047	DD-471	BYZ601ZU471P	CCD-471	B347	5GA-T47
C13	22	NPO 5%	NPO-DI 22	DTZ-22	CY601CG220K	CCTO-220	CNO422	10TCC-Q22
C14	36	NPO 5%		TCZ-36		CCTO-360		
C15	4	NPO ±.25	NPO-DI 4, 7	DTZ-4R7		CCTO-4R7	CNO547	10TCC-V47
C16	47	N75 10%	NPO-DI 47	DTZ-47	CX601CG470K	CCTO-470	CNO447	10TCC-Q47
C17	16	NPO 5%	NPO-DI 15	DTZ-15	CZ601CG150J	CCTO-150	CNO415	10TCC-Q15
C18	59	NPO 5%		TCZ-62		CCTO-560	CNO456	10TCC-Q56
C19	.001	10%	BDP-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C20	470	10%	BPD-00047	DD-471	BYZ601ZU471P	CCD-471	B347	5GA-T47
C21	.001	1KV 10%	BDP-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C22	.001	10%	BDP-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C23	470	10%	BPD-00047	DD-471	BYZ601ZU471P	CCD-471	B347	5GA-T47
C24	.001	10%	BDP-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C25	100	N750 10%	N750-DI 100	DTM-100	CV601UJ010K	CCTN-101	CN7310	10TCU-T10
C26	.001		EF-001	MFT-1000		CF-102	CT280A	
C27	.001	1KV 10%	BDP-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C28	.82pf	5%	NPO-DI 1.0	TCZ-1			CNO610	10TCC-V10
C29A	6	NPO ±.5	NPO-DI 5.8	DTZ-6R8	CZ601CH6R8D	CCTO-6R8	CNO668	10TCC-V68
B	6	NPO ±.5	NPO-DI 6.8	DTZ-6R8	CZ601CH6R8D	CCTO-6R8	CNO668	10TCC-V68

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.
C30	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C31	47	10%	NPO-DI 47	DTZ-47	CX601CG470K	CCTO-470	CNO447	10TCC-Q47
C32	56	N750		TCN-56		CCTN-560	CN7456	10TCU-Q56
C33	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C34	470	1KV	BPD-00047	DD-471	BYZ601ZU471P	CCD-471	B347	5GA-T47
C35	20		NPO-DI 20	DTZ-20		CCTO-200	CNO420	10TCC-Q20
C36	220		NPO-DI 20	DTZ-20		CCTO-200	CNO420	10TCC-Q20
C37	.001	10%	BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C38	1.8	5%	NPO-DI 1.5	DTZ-1R5		CCD-102	B210	5HK-D10
C39	470	N1500	BPD-00047	DD-471	BYZ601ZU471P	CCD-471	CNO515	10TCC-V12
C40	20	N15					B347	5GA-T47
C41	150	N750 10%						
C42	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C43	.0047	10%	BPD-00047	DD-471	BYZ601ZU471P	CCD-471	B347	5GA-T47
C44	470	1KV	BPD-00047	DD-471	BYZ601ZU471P	CCD-471	B347	5GA-T47
C45	.0068	200V	P288N-0068	DD-471	WVX162XP102M	CCD-102	B210	5HK-D10
C46	470	1KV	BPD-00047	DD-471	BYZ601ZU471P	CCD-471	B347	5GA-T47
C47	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C48	.1	200V	P288N-1	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C49	.1	200V	P288N-1	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C50	.1	200V	P288N-1	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C51	220	400V 10%						
C52A	51		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C53	.033	200V 10%						
C54	.0022	10%						
C55	.0062	200V 10%						
C56	.01	1KV 10%						
C57	.1	1KV						
C58	.1	600V						
C59	.47	200V						
C60	.033	400V 10%						
C61	.022	200V 10%						
C62	.0015	1KV 10%						
C63	.0015	1KV 10%						
C64	100	4KV						
C65	.0022	10%						
C66	.0022	10%						
C67	.047	100V 10%						
C68	680	10%						
C69	.0015	400V 10%						
C70	.0011	400V 10%						
C71	.0047							
C72	.001							
C73	.01							
C74	.01							
C75	.01							
C76	150	6KV						
C77	.022	600V						
C78	.1	1KV 10%						
C79	90	N1500 5KV 10%						
C80	.1	200V						
C81	.0047	10%						
C82	47	N330 10%						
C83	220	10%						
C84	.01							
C85	.01							
C86	.01							
C87	.01							
C88	.001							
C89	36	N220						
C90	.001							
C91	7	NPO ±.5						
C92	.01							
C93	.047	600V						
C94	12	N1500 5%						
C95	.01							
C96A	.001							
B .001								
C97A	.001							
B .001								
C98	.022pf							
C99	.1	200V						
C100	.001							
C101	.01							
C102	.01							
C103	220	10%						
C104	18	NPO 5%						
C105	100	NPO 5%						
C106	.001							
C107	.22pf							
C108A	.0015							
B .0015								
C109	.01							
C110	100							
C111	.01	10%						
C112	5	NPO ±.5						
C113	.01							
C114	.01	1KV						
C115	.01							
C116	.01							
C117	5	NPO ±.5						
C118	5	NPO ±.5						
C119	.01							
C120	.01	1KV						
C121	150							
C122	.1	200V 10%						
C123A	.001							
B .001								
C124	.001	1KV						
C125	.1	600V						
C126	.1	200V						
C127	.22	200V 10%						
C128	75	N1500 4KV						
C129	.1	200V 10%						
C130	.056	200V 10%						
C131	.082	200V 10%						
C132	.1	200V 10%						
C133	.01							

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

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.

CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA				
			ZENITH PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume/Switch	1meg, 375K Tap	63-5334	F12-1meg, SP212, KR-8	C47SF1-1meg, RS-3/16	B13-137X, SK8 or (PPQ13-137X, SK8) or (BU2, CF44T, SS11, K) B13-137X, SK9 or (BU2, CF44T, SS16, DC1) * B17-120, SK7	PP16T25, DS37 or (RUP16T254, SL35)
	Volume	1meg, 200K Tap	63-5336 ⑤	F12-1meg, SNF108	A47F4-1meg, RS-3/16	B13-137X, SK9 or (BU2, CF44T, SS16, DC1) * B17-120, SK7	UA16T25, SD3500 or (RU16T25, SL35, IS1250) or (UT440, DS37) * UA751A, SN1000 TA16A, DS37 or (RU16A, SL37, IS1312) or (UA16A, SD3500) TA36L, DS37 or (RU36L, SL37, IS1312) or (UA36L, SD3500) RU53A, SL37, SL3500 or (TA254L) or (UA254L, SL3500) RU754L, SL37, SL3500 or (TA16L) or (UA16L, SL3500) PTA56L or (RU45L, SL37, SN1000) or (UA56L, SN1000)
R2	Color Level/Switch	25K	63-5236				
R3	Hue	1000Ω	63-5393 ⑥	F2-1meg, SFS212	A47-1meg-Z, RS-3/16	B11-140, TM8 or (BU11, CF21, SS4, DC1) *	
R4	Treble	1meg	63-4741				
R5	Bass	3meg	63-4742	F1-3meg, SFS212	A47-3meg-S, RS-3/16	B11-140, TM8 or (BU11, CF21, SS4, DC1) *	
R6	Peak Picture	5000Ω	63-5401	F2-5000, SF204			
R7	Contrast	500Ω	63-5400	F5-500, SF204			
R8	Brightness	250K	63-6370	F1-250K, SF204	A47-250K-S, FS-3	Q11-130 or (BU11, CF15, SS1, DC1) *	
R9	Vert. Hold	750K	63-5399	F1-750K, SF204	A47-750K-S, FS-3	Q11-136 or (BU11, CF64, SS1, DC1) *	
R10	Vert. Size	4meg	63-5389	TT-86 or (F1-4meg, SNK010)	B47-5meg-S	HLC4	
R11	Vert. Linearity	1500Ω 2W, 470Ω Stop	63-5051	V-1000 ① or (WN-102 ①)	U39-1000 ①	112-1000 ① or (WPK100) or (BU1, WF3 ①, SS8) *	MR1000F ① or (WPK100) or (RU1000L ①)
R12	Brightness Range	250K	63-6411	TT-50K or (F1-250K, SNK010)	B47-250K-S	B11-130, TM4 or (BU11, CF15, SS8) *	RU254L, SL37, SN1000 or (UA254L, SN1000) or (PTA35L) MR800SF or (VW750 ②) or (R750L ②)
R13	Buzz	750Ω 2W, 100Ω Stop	63-3284	V-600 ② or (WN-751 ②)	U39-650 ②	112-650 ② or (W11-105 ②, SK5) or (BU1, WF2 ②, SS8) *	TA14L or (RU14L, SL37, SN1000) or (UA14L, SN1000)
R14	AGC	10K	63-5192	TT-14 or (F1-10K, SNK010)	B47-10K-S	B11-116, TM4 or (BU11, CF9, SS8) *	PTA1254L ③ or (UA16L ③, SN1000) or (PTA1254L ③ or (UA16L ③, SN1000)
R15	Red Screen (G2)	1meg	63-5387	F1-1meg ③, SNK012	B47-1meg-S ③	B11-137, TM4 ③ or (BU11 ③, CF17, SS8) *	PTA1254L ③ or (UA16L ③, SN1000) or (PTA1254L ③ or (UA16L ③, SN1000)
R16	Blue Screen (G2)	1meg	63-5386	F1-1meg ③, SNK012	B47-1meg-S ③	B11-137, TM4 ③ or (BU11 ③, CF17, SS8) *	PTA1254L ③ or (UA16L ③, SN1000) or (PTA1254L ③ or (UA16L ③, SN1000)
R17	Green Screen (G2)	1meg	63-5385	F1-1meg ③, SNK012	B47-1meg-S ③	B11-137, TM4 ③ or (BU11 ③, CF17, SS8) *	PTA1254L ③ or (UA16L ③, SN1000) or (PTA1254L ③ or (UA16L ③, SN1000)
R18	Picture Tube Bias	1meg	63-3249	TT-69 or (F1-1meg, SNK010)	B47-1meg-S	B11-137, TM4 or (BU11, CF17, SS8) *	TA16L or (RU16L, SL37, SN1000) or (UA16L, SN1000)
R19	Color Killer	5000Ω	63-5165	TT-10 or (F1-5000, SNK010)	B47-5000-S	B11-114, TM4 or (BU11, CF8, SS8) *	PTA53L or (RU53L, SL37, SN1000) or (UA53L, SN1000)
R20	Blue Gain	10K	63-5096	TT-14 or (F1-10K, SNK010)	B47-10K-S	B11-116, TM4 or (BU11, CF9, SS8) *	TA14L or (RU14L, SL37, SN1000) or (UA14L, SN1000)
R21	Green Gain	10K	63-5097	TT-14 or (F1-10K, SNK010)	B47-10K-S	B11-116, TM4 or (BU11, CF9, SS8) *	TA14L or (RU14L, SL37, SN1000) or (UA14L, SN1000)
R22	High Voltage Adjust	1meg	63-3249	TT-69 or (F1-1meg, SNK010)	B47-1meg-S	B11-137, TM4 or (BU11, CF17, SS8) *	TA16L or (RU16L, SL37, SN1000) or (UA16L, SN1000)
R23	Vert. Centering	10Ω 2W	63-5247	V-10 or (WN-100)	U39-15	P115R100A or (W11-010, SK5) or (BU1, WF16, SS8) *	MR10T, MRS1250 or (VW100)
R24	Horiz. Centering	10Ω 2W	63-5086	F1-10meg, SNK012, AK-40	U39-125 ④	B11-143, TM9 or (BU11, CF70, SS8, DC2) *	MR100T, MRS1250 or (VW100)
R25	Focus	15meg	63-6444	F1-10meg, SNK012, AK-40	U39-125 ④	B11-143, TM9 or (BU11, CF70, SS8, DC2) *	MR100T, MRS1250 or (VW100)
	Focus	10meg	63-5431 ⑦	F1-10meg, SNK012, AK-40	U39-125 ④	B11-143, TM9 or (BU11, CF70, SS8, DC2) *	MR100T, MRS1250 or (VW100)
R26	R/G Horiz. Lines (Top)	120Ω 2W	63-5175	V-120 ④	U39-125 ④	B11-143, TM9 or (BU11, CF70, SS8, DC2) *	MR100T, MRS1250 or (VW100)
R27	R/G Vert. Lines (Top)	120Ω 2W	63-5175	V-120 ④	U39-125 ④	B11-143, TM9 or (BU11, CF70, SS8, DC2) *	MR100T, MRS1250 or (VW100)
R28	Blue Horiz. Lines (Top)	60Ω 2W	63-5176	V-60 ④	U39-75 ④	B11-143, TM9 or (BU11, CF70, SS8, DC2) *	MR100T, MRS1250 or (VW100)
R29	Blue Horiz. Lines (Left Side)	130Ω 2W	63-6431	V-150	U39-150	B11-143, TM9 or (BU11, CF70, SS8, DC2) *	MR100T, MRS1250 or (VW100)
R30	R/G Vert. Lines (Left Side)	70Ω 2W	63-6430	V-100	U39-75	B11-143, TM9 or (BU11, CF70, SS8, DC2) *	MR100T, MRS1250 or (VW100)

CONTROLS (cont)

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA				
			ZENITH PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R31	R/G Horiz. Lines (Left Side)	60Ω 2W	63-5176	V-60 ④	U39-75 ④	P115R500A or (W11-060, SK4) or (BU1, WF18, SS8) *	MR50T, MRS1250 or (VW60)
	R/G Horiz. Lines (Left Side)	70Ω 2W	63-5178 ⑧	V-100	U39-75	112-100 or (W11-060, SK5) or (BU1, WF19, SS8) *	MR75F or (VW100)
R32	R/G Horiz. Lines (Bottom)	120Ω 2W	63-5175	V-120 ④	U39-125 ④	P115R101A or (WPK100) or (BU1, WF19, SS8) *	MR100T, MRS1250 or (VW100)
R33	R/G Vert. Lines (Bottom)	60Ω 2W	63-5176	V-60 ④	U39-75 ④	P115R500A or (W11-060, SK4) or (BU1, WF18, SS8) *	MR50T, MRS1250 or (VW60)
R34	Blue Horiz. Lines (Bottom)	120Ω 2W	63-5175	V-120 ④	U39-125 ④	P115R101A or (WPK100) or (BU1, WF19, SS8) *	MR100T, MRS1250 or (VW100)

- ① Connect a 470Ω, 2W resistor in series with terminal.
② Connect a 100Ω, 2W resistor in series with terminal.
③ Use the original nylon mounting bracket.
④ Insulate control from chassis and solder original center terminal lead to metal case of control.
* "SNAPTROL"

- ⑤ Alternate Part - may be used in some versions.
⑥ Part #63-6394 (1000Ω) used in Chassis 25MC46 with #63-6392, Motorized Hue Control Assembly.
⑦ Alternate Part - may be used in some versions.<

PARTS LIST AND DESCRIPTION
 (When ordering parts, state Model, Part Number, and Description.)

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA		NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	
X1	121-186	1st AF Amp.	DS-26	GE-2	PNP
X2	121-240	2nd AF Amp.	DS-26	GE-2	PNP
X3	121-241	3rd AF Amp.	DS-26	GE-2	PNP
X4	121-189	Limiter	DS-26	GE-2	PNP
X5	121-180	Relay Control			PNP
X6	121-180	Relay Control			PNP
X7	121-180	Relay Control			PNP
X8	121-190	Relay Control			PNP

CHASSIS S-69876

TRANSISTORS

CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA			
			ZENITH PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALORY PART No.
R1	Sensitivity	1400, 2W 400 Stop	63-5171	V-100 ①	U39-100 ①	MR100F ①

① Connect a 39Ω, 2 watt resistor in series.

RESISTORS (Power and Special)

ITEM No.	RATING	IRC PART No.	REPLACEMENT DATA		ITEM No.	RATING	IRC PART No.	REPLACEMENT DATA	
			WORKMAN PART No.	ZENITH PART No.				WORKMAN PART No.	ZENITH PART No.
R19	100Ω 4W	PW5-100	5W-SQ-100	63-3210					

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS			DIODES GENERAL ELECTRIC PART No.
			GENERAL ELECTRIC PART No.	MALORY PART No.	RCA PART No.	
X9	.025A	212-35	GE-504A or GE-505	A100 or 1N1487	SK-3018 or SK-3017	20C or F-2

When replacing selenium rectifier with silicon type, add series resistance to obtain original output voltage.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	CAP.	VOLT.	ZENITH PART No.	REPLACEMENT DATA		
					AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.
C1	200	35	35	22-3721	PRS1830	BR250-50	QT1-31
C2	10	3	3	22-3145	PTW8	N1W10-3	MT1-5
C3A	25	30	30	22-3642	PRS2175	BBRD3315	QT2-9
C4A	25	30	30		PRS2195	BBRD4415	QT2-9
C5	40	30	30	22-3643			
C6	4	200NF	22-2893		NP-PRS7750	BBRT5-100	NPQT-2

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

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA			
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.
C6	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-103
C7	.05	25V	TTD-05		HOV101ZV503Z	TA150
C8	.05	100V	TTD-05		HOV101ZV503Z	TA150
C9	.05	25V	TTD-05		HOV101ZV503Z	TA150
C10	.01	25V	BPD-01	DD-103	BYV102ZU103M	B110
C11	.01	25V	ADM-19-821		HOV102ZV503Z	TA150
C12	.05	100V 5%	ADM-19-821		HOV102ZV503Z	TA150
C13	820	100V 5%	CPR-820J		CD19F821J500	DM-15-821
C14	820	100V 5%	ADM-19-821		CPR-820J	DM-15-821
C15	820	100V 5%	ADM-19-821		CD19F821J500	DM-15-821
C16	820	100V 5%	ADM-19-821		CPR-820J	DM-15-821
C17	.0047		BPD-0047	DD-472	BYX102ZU472P	CCD-472
C18	.001		BPD-401	DD-102	HVX102ZXP102M	CCD-102

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA			
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.
C6	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-103
C7	.05	25V	TTD-05		HOV101ZV503Z	TA150
C8	.05	100V	TTD-05		HOV101ZV503Z	TA150
C9	.05	25V	TTD-05		HOV101ZV503Z	TA150
C10	.01	25V	BPD-01	DD-103	BYV102ZU103M	B110
C11	.01	25V	ADM-19-821		HOV102ZV503Z	TA150
C12	.05	100V 5%	ADM-19-821		HOV102ZV503Z	TA150
C13	820	100V 5%	CPR-820J		CD19F821J500	DM-15-821
C14	820	100V 5%	ADM-19-821		CPR-820J	DM-15-821
C15	820	100V 5%	ADM-19-821		CD19F821J500	DM-15-821
C16	820	100V 5%	ADM-19-821		CPR-820J	DM-15-821
C17	.0047		BPD-0047	DD-472	BYX102ZU472P	CCD-472
C18	.001		BPD-401	DD-102	HVX102ZXP102M	CCD-102

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA			
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.
C6	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-103
C7	.05	25V	TTD-05		HOV101ZV503Z	TA150
C8	.05	100V	TTD-05		HOV101ZV503Z	TA150
C9	.05	25V	TTD-05		HOV101ZV503Z	TA150
C10	.01	25V	BPD-01	DD-103	BYV102ZU103M	B110
C11	.01	25V	ADM-19-821		HOV102ZV503Z	TA150
C12	.05	100V 5%	ADM-19-821		HOV102ZV503Z	TA150
C13	820	100V 5%	CPR-820J		CD19F821J500	DM-15-821
C14	820	100V 5%	ADM-19-821		CPR-820J	DM-15-821
C15	820	100V 5%	ADM-19-821		CD19F821J500	DM-15-821
C16	820	100V 5%	ADM-19-821		CPR-820J	DM-15-821
C17	.0047		BPD-0047	DD-472	BYX102ZU472P	CCD-472
C18	.001		BPD-401	DD-102	HVX102ZXP102M	CCD-102

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA			
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.
C6	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-103
C7	.05	25V	TTD-05		HOV101ZV503Z	TA150
C8	.05	100V	TTD-05		HOV101ZV503Z	TA150
C9	.05	25V	TTD-05		HOV101ZV503Z	TA150
C10	.01	25V	BPD-01	DD-103	BYV102ZU103M	B110
C11	.01	25V	ADM-19-821		HOV102ZV503Z	TA150
C12	.05	100V 5%	ADM-19-821		HOV102ZV503Z	TA150
C13	820	100V 5%	CPR-820J		CD19F821J500	DM-15-821
C14	820	100V 5%	ADM-19-821		CPR-820J	DM-15-821
C15	820	100V 5%	ADM-19-821		CD19F821J500	DM-15-821
C16	820	100V 5%	ADM-19-821		CPR-820J	DM-15-821
C17	.0047		BPD-0047	DD-472	BYX102ZU472P	CCD-472
C18	.001		BPD-401	DD-102	HVX102ZXP102M	CCD-102

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA			
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.
C6	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-103
C7	.05	25V	TTD-05		HOV101ZV503Z	TA150
C8	.05	100V	TTD-05		HOV101ZV503Z	TA150
C9	.05	25V	TTD-05		HOV101ZV503Z	TA150
C10	.01	25V	BPD-01	DD-103	BYV102ZU103M	B110
C11	.01	25V	ADM-19-821		HOV102ZV503Z	TA150
C12	.05	100V 5%	ADM-19-821		HOV102ZV503Z	TA150
C13	820	100V 5%	CPR-820J		CD19F821J500	DM-15-821
C14	820	100V 5%	ADM-19-821		CPR-820J	DM-15-821
C15	820	100V 5%	ADM-19-821		CD19F821J500	DM-15-821
C16	820	100V 5%	ADM-19-821		CPR-820J	DM-15-821
C17	.0047		BPD-0047	DD-472	BYX102ZU472P	CCD-472
C18	.001		BPD-401	DD-102	HVX102ZXP102M	CCD-102

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA			
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.
C6	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-103
C7	.05	25V	TTD-05		HOV101ZV503Z	TA150
C8	.05	100V	TTD-05		HOV101ZV503Z	TA150
C9	.05	25V	TTD-05		HOV101ZV503Z	TA150
C10	.01	25V	BPD-01	DD-103	BYV102ZU103M	B110
C11	.01	25V	ADM-19-821		HOV102ZV503Z	TA150
C12	.05	100V 5%	ADM-19-821		HOV102ZV503Z	TA150
C13	820	100V 5%	CPR-820J		CD19F821J500	DM-15-821
C14	820	100V 5%	ADM-19-821		CPR-820J	DM-15-821
C15	820	100V 5%	ADM-19-821		CD19F821J500	DM-15-821
C16	820	100V 5%	ADM-19-821		CPR-820J	DM-15-821
C17	.0047		BPD-0047	DD-472	BYX102ZU472P	CCD-472
C18	.001		BPD-401	DD-102	HVX102ZXP102M	CCD-102

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA			
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.
C6	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-103
C7	.05	25V	TTD-05		HOV101ZV503Z	TA150
C8	.05	100V	TTD-05		HOV101ZV503Z	TA150
C9	.05	25V	TTD-05		HOV101ZV503Z	TA150
C10	.01	25V	BPD-01	DD-103	BYV102ZU103M	B110
C11	.01	25V	ADM-19-821		HOV102ZV503Z	TA150
C12	.05	100V 5%	ADM-19-821		HOV102ZV503Z	TA150
C13	820	100V 5%	CPR-820J		CD19F821J500	DM-15-821
C14	820	100V 5%	ADM-19-821		CPR-820J	DM-15-821
C15	820	100V 5%	ADM-19-821		CD19F821J500	DM-15-821
C16	820	100V 5%	ADM-19-821		CPR-820J	DM-15-821
C17	.0047		BPD-0047	DD-472	BYX102ZU472P	CCD-472
C18	.001		BPD-401	DD-102	HVX102ZXP102M	CCD-102

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA			
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.
C6	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-103
C7	.05	25V	TTD-05		HOV101ZV503Z	TA150
C8	.05	100V	TTD-05		HOV101ZV503Z	TA150
C9	.05	25V	TTD-05		HOV101ZV503Z	TA150
C10	.01	25V	BPD-01	DD-103	BYV102ZU103M	B110
C11	.01	25V	ADM-19-821		HOV102ZV503Z	TA150
C12	.05	100V 5%	ADM-19-821		HOV102ZV503Z	TA150
C13	820	100V 5%	CPR-820J		CD19F821J500	DM-15-821
C14	820	100V 5%	ADM-19-821		CPR-820J	DM-15-821
C15	820	100V 5%	ADM-19-821		CD19F821J500	DM-15-821
C16	820	100V 5%	ADM-19-821		CPR-820J	DM-15-821
C17	.0047		BPD-0047	DD-472	BYX102ZU472P	CCD-472
C18	.001		BPD-401	DD-102	HVX102ZXP102M	CCD-102

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELWENCO PART No.	MALLOY PART No.	SPRAGUE PART No.
C6	.0047		BPD-0047	DD-472	BYX601ZU472P	CCD-103	E247	5HK-D47
C7	.05	25V	TTD-05		HOV101ZV503Z		TA150	TH-580
C8	.05	100V	TTD-05		HOV101ZV503Z		TA150	TH-580
C9	.05	25V	TTD-05		HOV101ZV503Z		TA150	TH-580
C10	.05	25V	TTD-05		HOV101ZV503Z		B110	5HK-S10
C11	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C12	.05	25V	TTD-05		HOV101ZV503Z		TA150	TH-580
C13	820	100V 5%	ADM-19-821	CPR-820J	CD19F321J500	DM-15-421	MS-382	MS-382
C14	820	100V 5%	ADM-19-821	CPR-820J	CD19F321J500	DM-15-421	MS-382	MS-382
C15	820	100V 5%	ADM-19-821	CPR-820J	CD19F321J500	DM-15-421	MS-382	MS-382
C16	820	100V 5%	ADM-19-821	CPR-820J	CD19F321J500	DM-15-421	MS-382	MS-382
C17	.0047		BPD-0047	DD-472	BYX801ZU472P	CCD-472	E247	5HK-D47
C18	.001		EPD-0041	DD-102	HYX162XP102M	CCD-102	B210	5HK-D10

