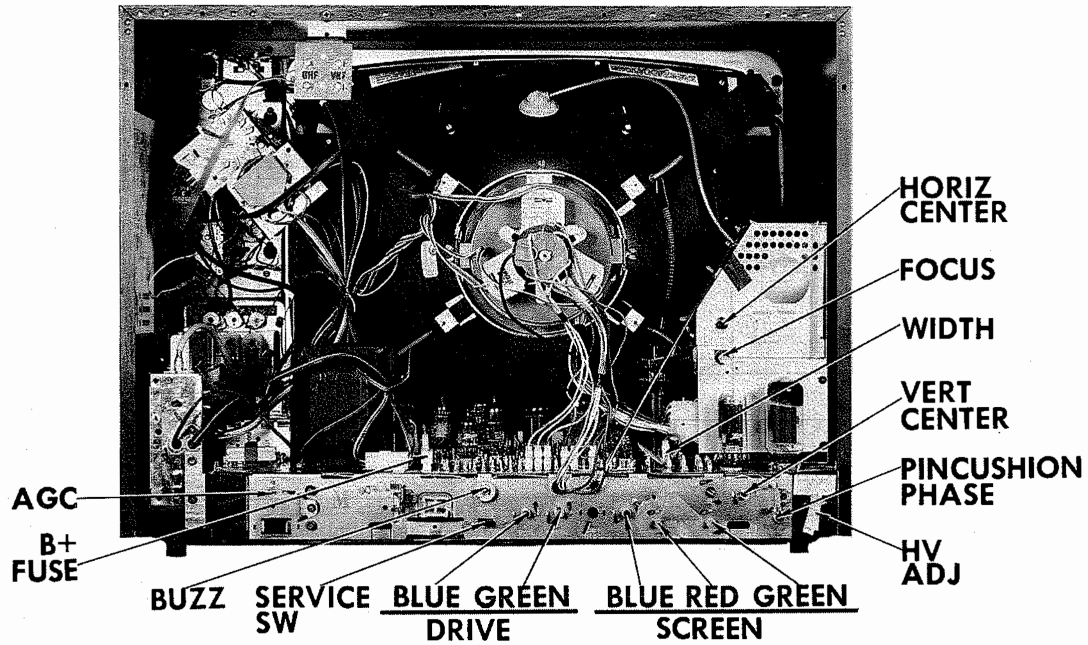


CABINET—REAR VIEW

DISASSEMBLY INSTRUCTIONS

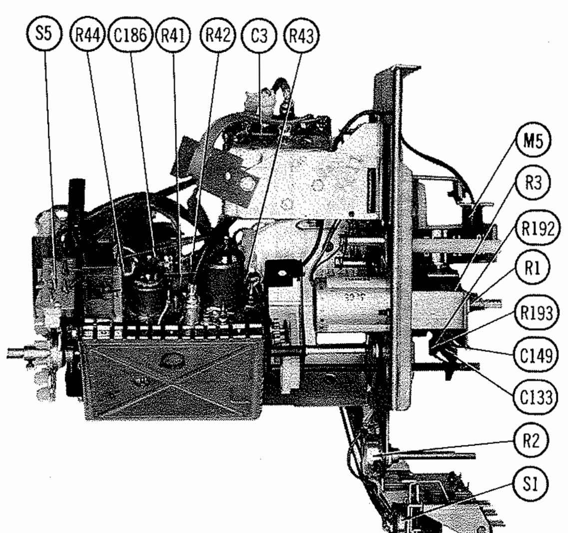
CHASSIS REMOVAL

Note: All components can be serviced by removal of cabinet back and bottom.

1. Remove 8 screws holding back, disconnect antenna leads, and remove cabinet back. Remove 10 screws holding bottom plate to the cabinet.
2. Remove all knobs and remove screw holding control panel to the front of cabinet.
3. Remove picture-tube socket, convergence plug, yoke plug, degaussing plug, tuner plugs, speaker leads, high-voltage anode lead, and remote leads.
4. Remove 6 screws holding chassis to the cabinet. Loosen 4 screws holding tuner assembly to the cabinet front. Remove chassis and tuner assembly from the cabinet.

PICTURE TUBE REMOVAL

1. Follow "Chassis Removal" procedure and lay set face down on a soft protective surface.
2. Remove blue lateral and purity ring from the picture-tube mask. Remove convergence yoke and deflection yoke from the picture-tube neck.
3. Remove springs and screws holding degaussing coils and shield to the cabinet.
4. Remove 8 screws holding picture tube to the cabinet front. Do not lift picture tube by the neck of the tube.



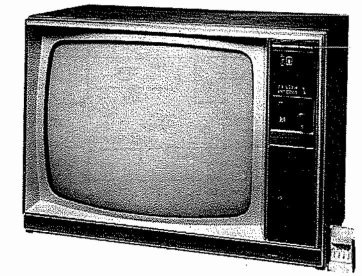
TUNER ASSEMBLY

PHOTOFACT® Folder

For Supplier Address See PHOTOFACT Index

ZENITH CHASSIS 16Z7C50, 16Z7C50Z

COLOR TV



MODEL Z6507W05

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

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.

MODELS	CHASSIS
GA50-36W7, GA50-40W7, GA50-42H7, GA50-44M7	16Z7C50
GA50-56W5, GA50-59W5 ▲, S2950W5/W6	16Z7C50Z
T2941W5/W6, T2952W5/W05, T2958P5/P05/W5/W05	16Z7C50Z
T2958P7/P8/W7/W8	16Z7C50
T2981M5/M05, T2933W5/W05, T2984W5/W05	16Z7C50Z
T2985M5/M05, T2987H5/H05, T2991DE5/P5/P05	16Z7C50Z
Y4519W7	16Z7C50
Z4203C5/C6, Z4205W5/W05/W6/W06	16Z7C50Z
Z4208W	16Z7C50
Z4208W5/W05, Z4216W5/W05/W6/W06	16Z7C50Z
Z4501J5/J6, Z4502W5/W05/W6/W06	16Z7C50Z
Z4507W	16Z7C50
Z4507W5/W05, Z4512W6, Z4513W5/W6	16Z7C50Z
Z4514M5/M6, Z4515H5/H6, Z4516DE5/DE6/P5/P6	16Z7C50Z
Z4518W, Z4519P/W, Z4520M	16Z7C50
Z4518W5, Z4519P5/P05/W5/W05, Z4520M5/M05	16Z7C50Z
Z4524H, Z4526M, Z4528H	16Z7C50
Z4524H5/H05, Z4526M5/M05, Z4528H5/H05	16Z7C50Z
Z4532DE/P, Z4533W, Z4535M	16C7C50
Z4532DE5/DE05/P5/P05, Z4533W5/W05, Z4535M5/M05	16Z7C50Z
Z4538DE/P, Z4541W	16Z7C50
Z4538DE5/DE05/P5/P05, Z4539H5/R5, Z4541W5/W05.	16Z7C50Z
Z4543DE/P, Z4545H, Z4547M	16Z7C50
Z4543DE5/DE05/P5/P05, Z4545H5/H05, Z4547M5/M05	16Z7C50Z

▲ Remote Control Models using Transmitter S-68936 and Receiver S-77536.

REMOTE CONTROL MODELS	CHASSIS
Z6208W/W0, Z6507W	16Z7C50
Z6208W5/W05, Z6507W5/W05	16Z7C50Z
Z6519P5/P05/W5/W05, Z6520M5/M05, Z6524H5/H05/R5	16Z7C50Z
Z6541W, Z6543DE/P, Z6545H/X	16Z7C50
Z6541W5/W05, Z6543DE5/P5/P05, Z6545H5/X5	16Z7C50Z
Z6547M, Z6549H	16Z7C50
Z6547M5, Z6549H5/H05	16Z7C50Z

COMBINATION MODELS	CHASSIS
Z8530W ▲	16Z7C50 /20ZT21
Z8530W5	16Z7C50Z/20ZT21
Z8548H▲, Z8550H▲, Z8558H▲, Z8560H▲	16Z7C50 /25ZT120
Z8548H5, Z8550H5▲, Z8558H5, X8560H5	16Z7C50Z/25ZT120
Z8563M▲, Z8565M▲, Z8568DE▲, Z8570DE▲	16Z7C50 /25ZT120
Z8563M5, Z8565M5▲, Z8568DE5, Z8570DE5	16Z7C50Z/25ZT120

SERVICING IN THE FIELD

SAFETY GLASS

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

FUSE OR FUSE DEVICE

A 1-amp. fuse is used for low-voltage power supply protection. (For location, see photo "Cabinet - Rear View".)

Three $2\frac{1}{2}$" lengths of fuse wire are used for filament protection. (See F2, F3, and F4 in photo "Chassis - Bottom View" for location.)

VHF OSCILLATOR ADJUSTMENT

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

AGC

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

HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

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

WIDTH

A jumper may be moved to alter width. (For location, see photo "Cabinet - Rear View" for location.)

FOCUS

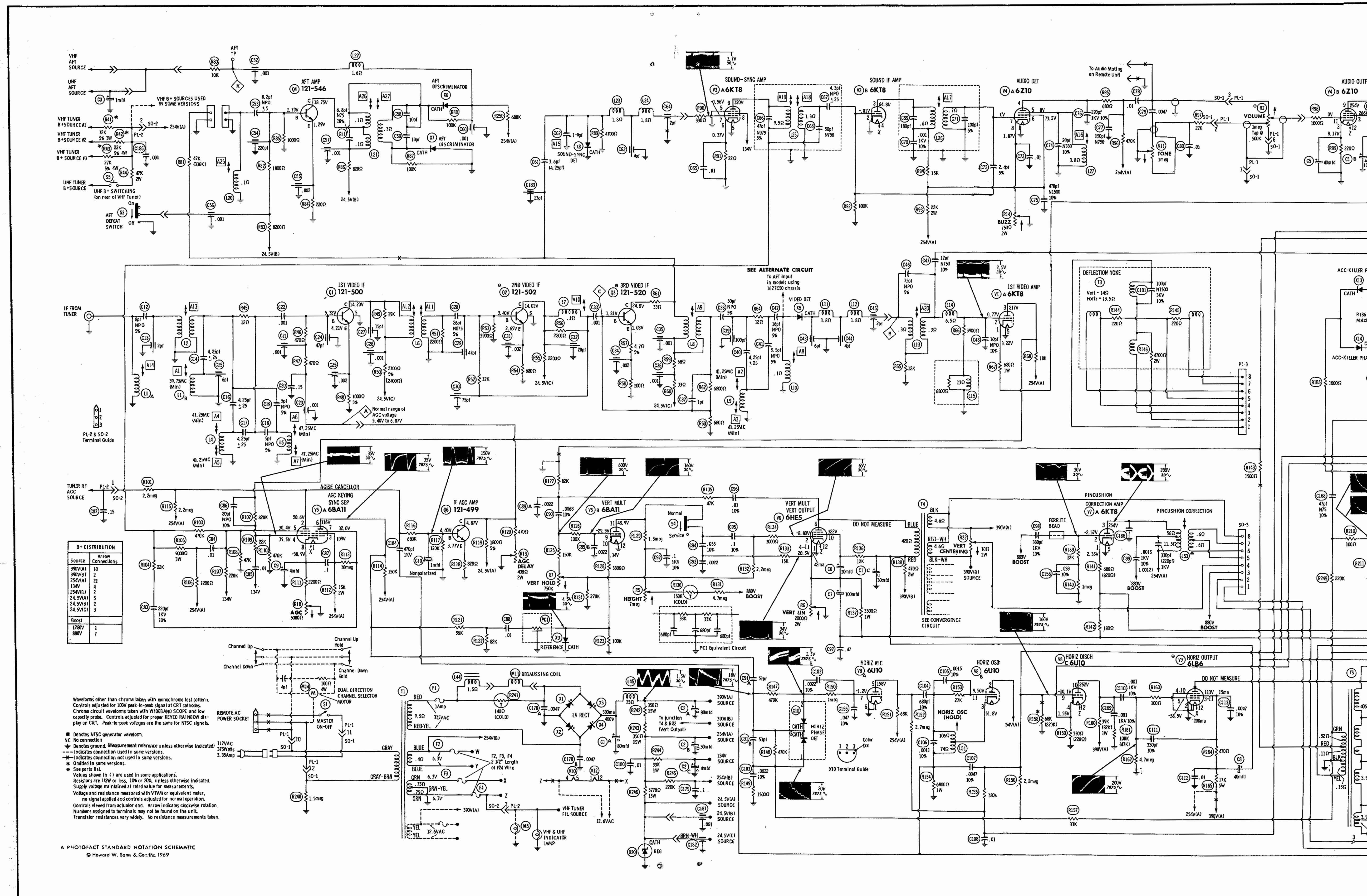
The focus may be varied by means of a Focus control. (See photo "Cabinet - Rear View" for location.)

BUZZ ADJUSTMENT

To eliminate intercarrier buzz, adjust the Buzz control for MINIMUM buzz and maximum sound. (For location, see photo "Cabinet - Rear View".)

REMEMBER TO ASK— "What else needs fixing?"

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

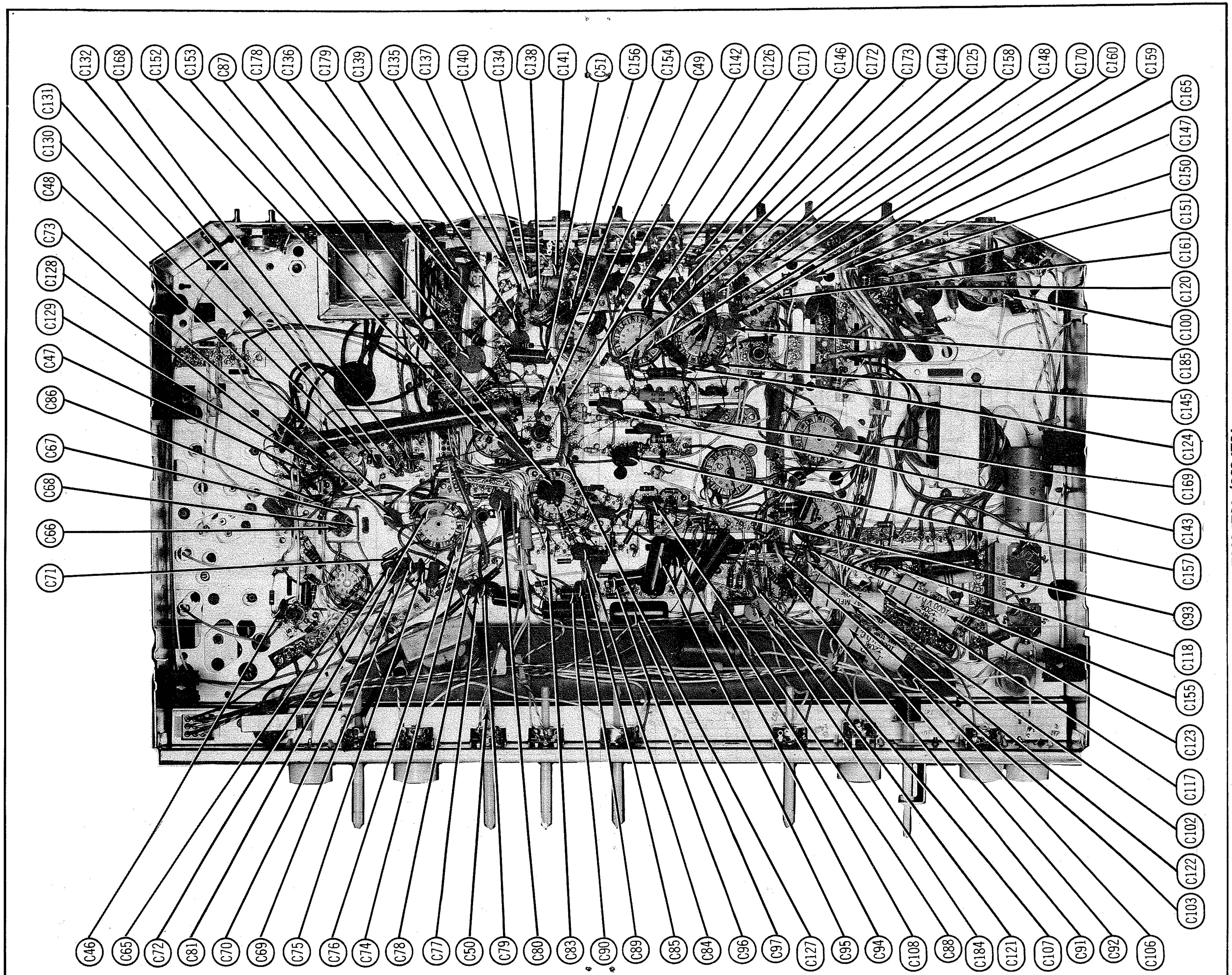


B+ DISTRIBUTION	
Source	Arrow Connections
390V(A)	10
390V(B)	2
254V(A)	21
134V	4
254V(B)	2
24.5V(A)	5
24.5V(B)	2
24.5V(C)	3
Boost	
1280V	1
880V	7

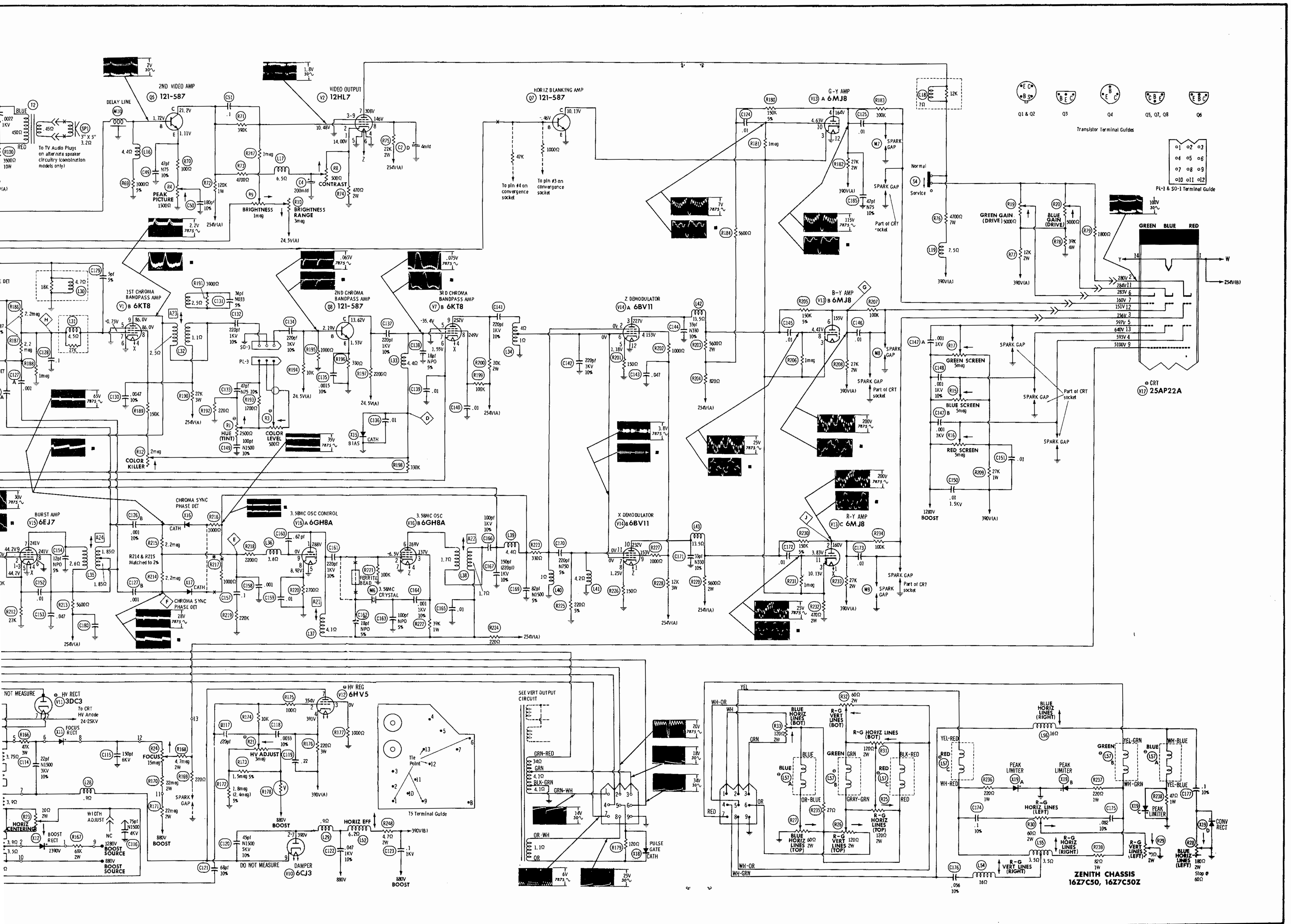
Waveforms other than chroma taken with monochrome test pattern. Controls adjusted for 100V peak-to-peak signal at CRT cathodes. Chroma circuit waveforms taken with WIDEBAND SCOPE and low capacity probe. Controls adjusted for proper KEYED RAINBOW display on CRT. Peak-to-peak voltages are the same for NTSC signals.

■ Denotes NTSC generator waveform.
NC No connection
⏚ Denotes ground. (Measurement reference unless otherwise indicated)
--- Indicates connection used in some versions.
-✕- Indicates connection not used in some versions.
✱ Omitted in some versions.
⊖ See parts list.
Values shown in ( ) are used in some applications.
Resistors are 1/2W or less, 10% or 20%, unless otherwise indicated.
Supply voltage maintained at rated value for measurements.
Voltage and resistance measured with VTVM or equivalent meter, no signal applied and controls adjusted for normal operation.
Controls viewed from actuator end. Arrow indicates clockwise rotation.
Numbers assigned to terminals may not be found on the unit.
Transistor resistances vary widely. No resistance measurements taken.

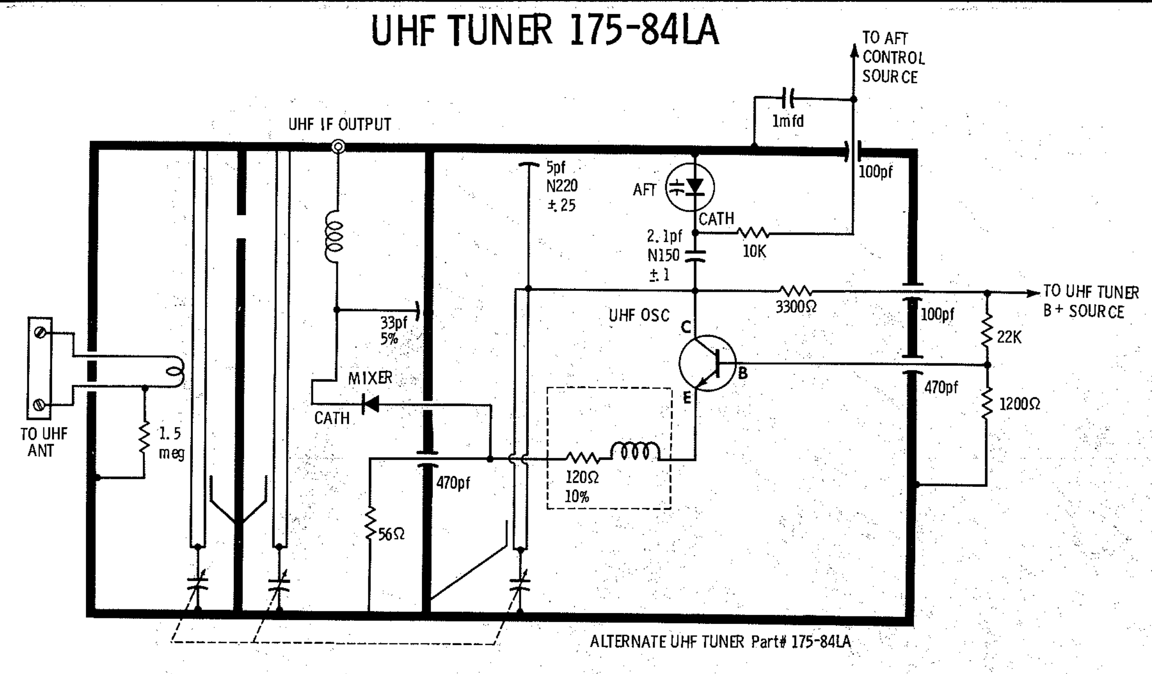
A PHOTOFACT STANDARD NOTATION SCHEMATIC



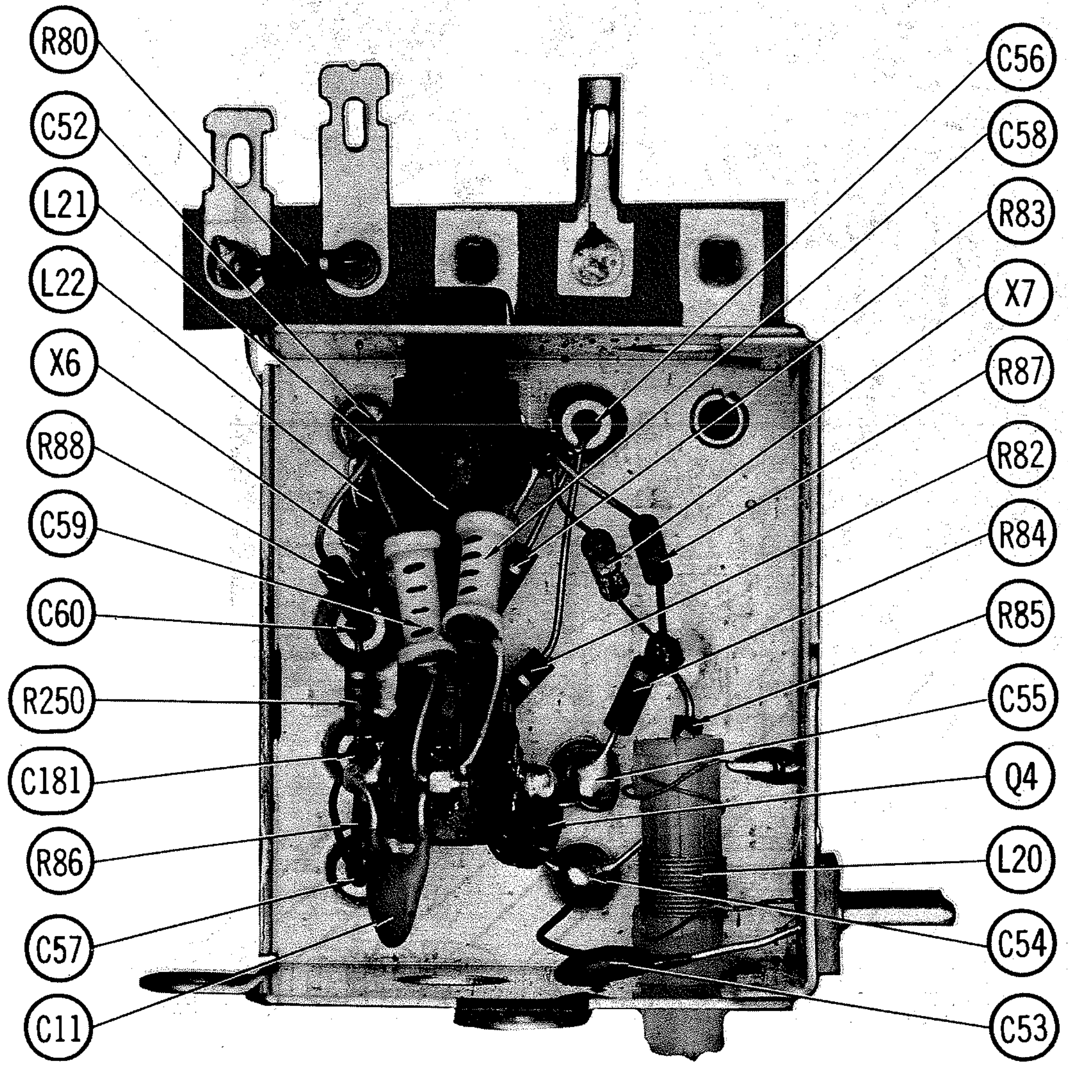
CHASSIS - BOTTOM VIEW


2ND VIDEO AMP
Q6 121-587
VIDEO OUTPUT
V2 12HL7
HORIZ BLANKING AMP
Q7 121-587
G-Y AMP
V13 A 6MJ8
DELAY LINE
To TV Audio Plugs on alternate speaker circuitry (combination models only)
PEAK PICTURE
BRIGHTNESS
BRIGHTNESS RANGE
CONTRAST
To pin #4 on convergence socket
To pin #3 on convergence socket
SPARK GAP
Part of CRT socket
Normal
Service
GREEN GAIN (DRIVE)
BLUE GAIN (DRIVE)
Q1 & Q2
Q3
Q4
Q5, Q7, Q8
Q6
Transistor Terminal Guides
PL-1 & SO-1 Terminal Guide
GREEN BLUE RED
1ST CHROMA BANDPASS AMP
V1 B 6KT8
2ND CHROMA BANDPASS AMP
Q8 121-587
3RD CHROMA BANDPASS AMP
V7 B 6KT8
Z DEMODULATOR
V14 A 6BV11
B-Y AMP
V13 B 6MJ8
HUE (TINT)
COLOR LEVEL
BIAS
COLOR KILLER
GREEN SCREEN
BLUE SCREEN
RED SCREEN
CRT
V17 25AP22A
BURST AMP
V15 6EJ7
CHROMA SYNC PHASE DET
3.58MC OSC CONTROL
V16 A 6GH8A
3.58MC OSC
V16 B 6GH8A
3.58MC CRYSTAL
FERRITE BEAD
R214 & R215 Matched to 2%
X DEMODULATOR
V14 B 6BV11
R-Y AMP
V13 C 6MJ8
1280V BOOST
HV RECT
V11 3DC3
To CRT HV Anode 24-25KV
FOCUS RECT
DO NOT MEASURE
FOCUS
HV REG
V12 6HV5
HV ADJUST
HORIZ CENTERING
BOOST RECT
WIDTH ADJUST
1280V BOOST SOURCE
880V BOOST SOURCE
880V BOOST
DAMPER
V10 6CJ3
HORIZ EFF
T5 Terminal Guide
Tie Point
SEE VERT OUTPUT CIRCUIT
PULSE GATE
CATH
BLUE HORIZ LINES (BOT)
R-G VERT LINES (BOT)
R-G HORIZ LINES (BOT)
BLUE HORIZ LINES (TOP)
R-G VERT LINES (TOP)
R-G HORIZ LINES (TOP)
BLUE HORIZ LINES (RIGHT)
PEAK LIMITER
R-G HORIZ LINES (LEFT)
R-G HORIZ LINES (RIGHT)
R-G VERT LINES (LEFT)
R-G VERT LINES (RIGHT)
BLUE HORIZ LINES (LEFT)
CONV RECT
ZENITH CHASSIS 16Z7C50, 16Z7C50Z

UHF TUNER 175-84LA

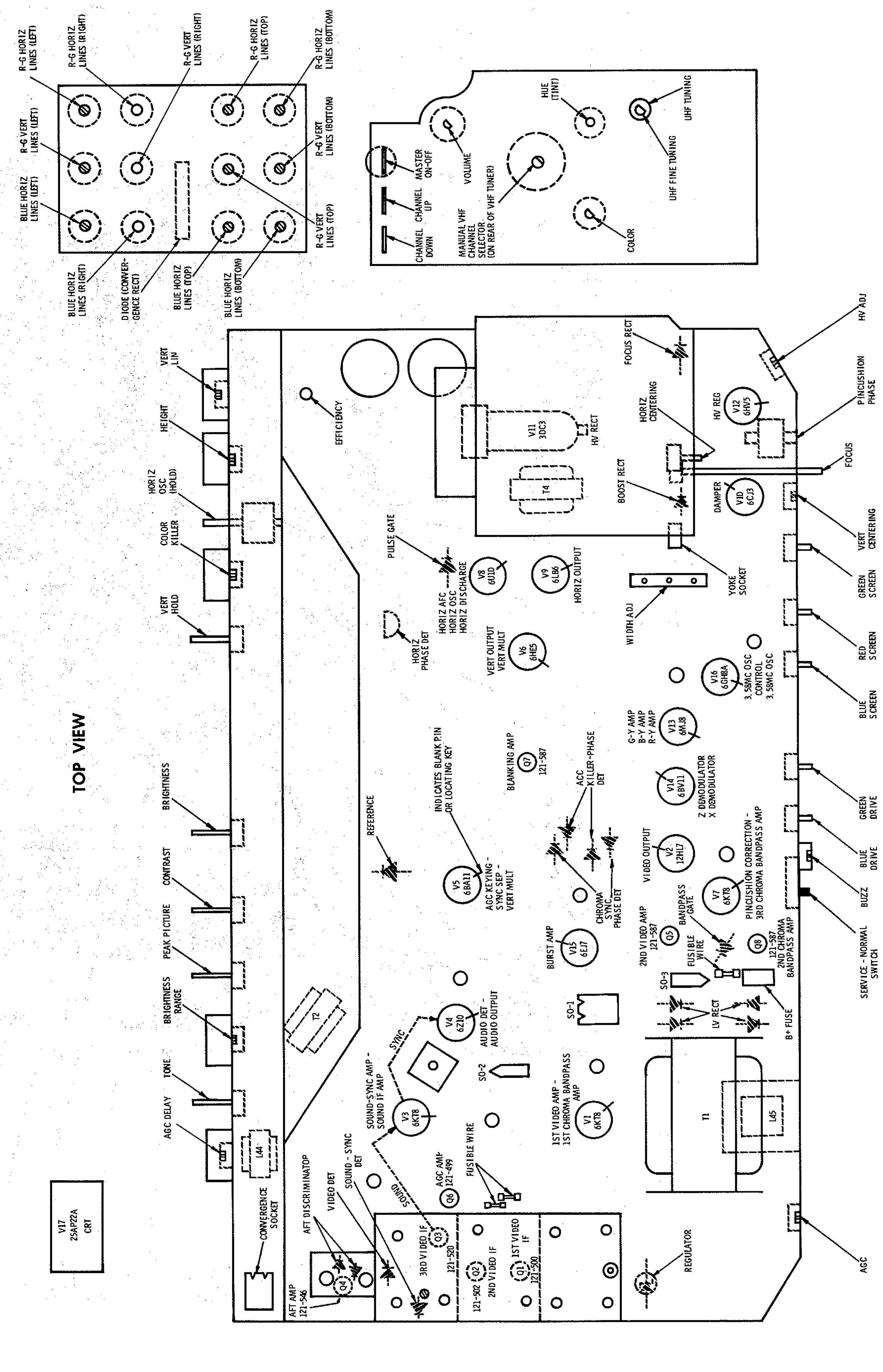


A PHOTOFACT STANDARD NOTATION SCHEMATIC

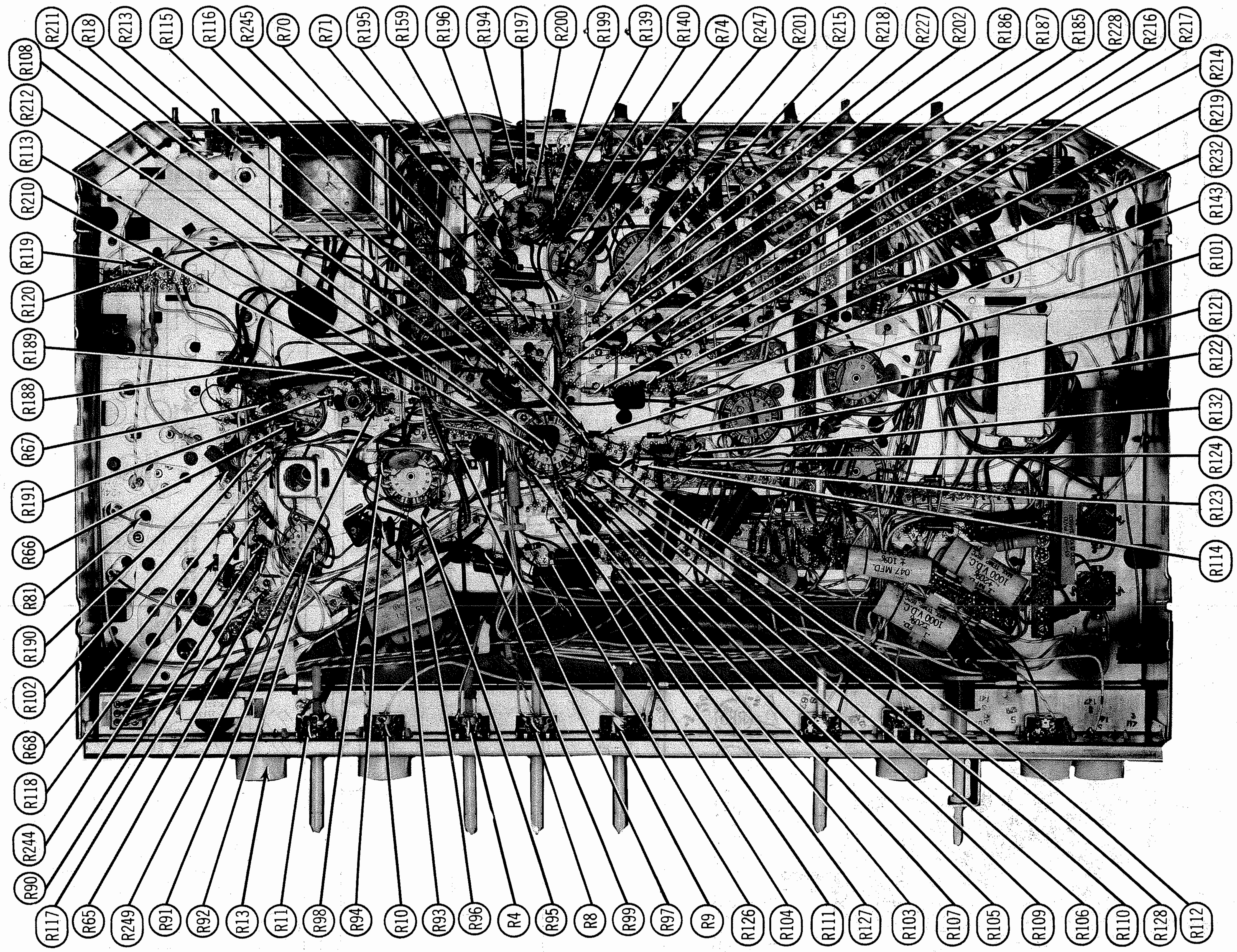


AFT CHASSIS

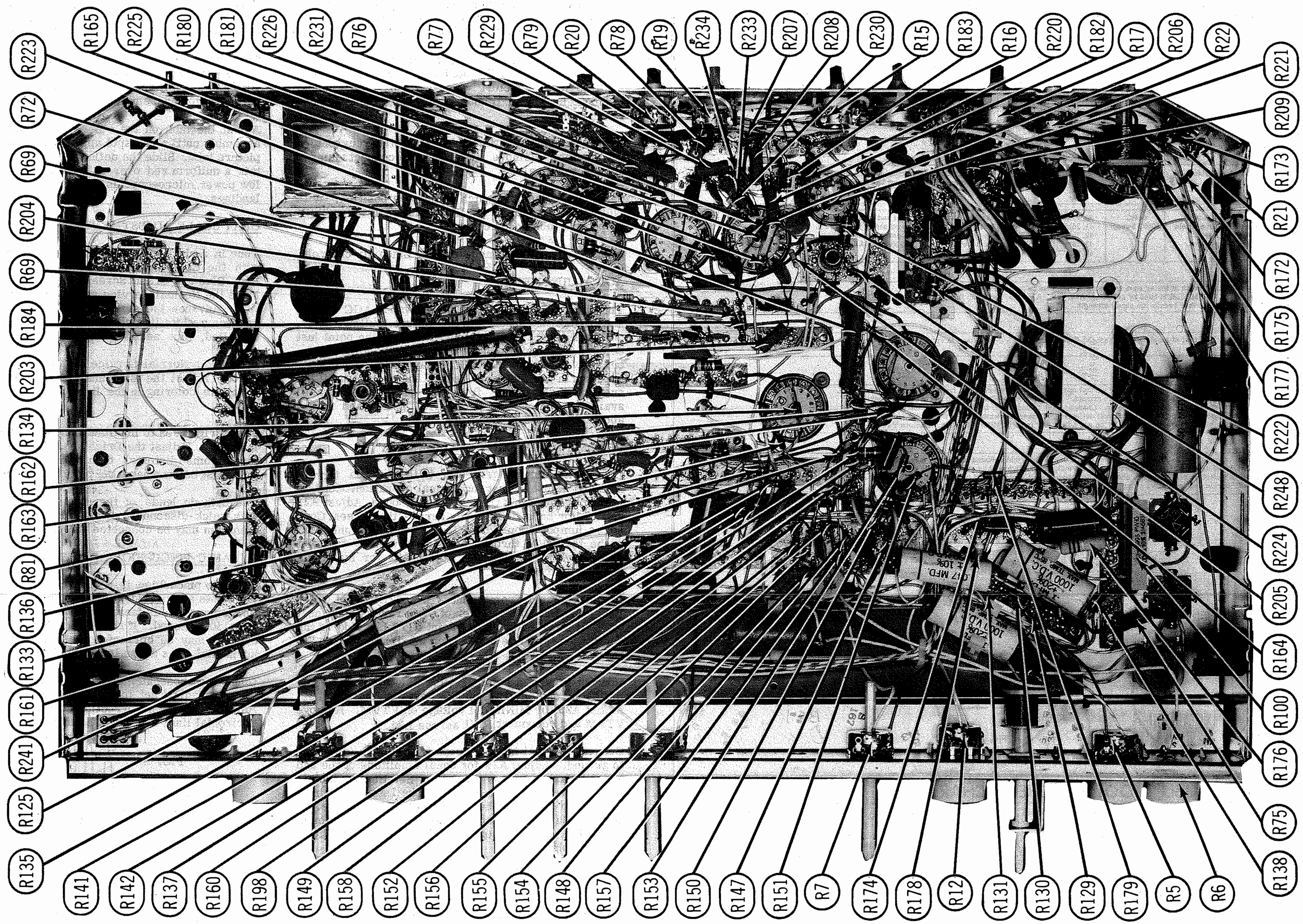
TUBE PLACEMENT CHART



ZENITH CHASSIS 16Z7C50, 16Z7C50Z



CHASSIS - BOTTOM VIEW



CHASSIS - BOTTOM VIEW

ZENITH CHASSIS
16Z7C50, 16Z7C50Z

ALIGNMENT INSTRUCTIONS

Use an isolation transformer and maintain voltage at 117 volts. Allow a 20-minute warm-up period for the receiver and test equipment.
Suggested Alignment Tools: A1 thru A20........GENERAL CEMENT #8606, 8606L, 8869..WALSCO #2543, 2544, 2588
Mixer Plate Coil... GENERAL CEMENT #9296, 9297, 9300...WALSCO #2510, 2546, 2547

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 those shown.
Connect a variable bias supply to the IF AGC line (point Ⓐ) and adjust to obtain a response curve which shows no indication of overload.
Disable Oscillator section of Mixer-Osc. Set the Channel Selector to any non-interfering channel.

	INDICATOR	GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	ADJUST	REMARKS
1.	Connect DC probe of a VTVM thru a 47K resistor to point Ⓑ. Common to ground.	Connect 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, A7	Adjust for MINIMUM.
2.	Connect vertical input of a scope to point Ⓑ. Low side to ground.	Connect high side thru a .001mfd capacitor to Point Ⓒ. Low side to ground.	44MC (10MC Sweep)	42.75MC 45.75MC	A8, A9	Adjust for maximum amplitude and MINIMUM tilt with markers as shown in Figure 1.
3.	Connect vertical input of a scope to point Ⓑ. Low side to ground.	Connect high side to ungrounded tube shield over Mixer-Osc. Low side to ground.	44MC (10MC Sweep)	39.75MC 41.25MC 42.75MC 45.75MC 47.25MC	A10, A11, A12, A13, A14, A15, Mixer Plate Coil	Adjust for maximum gain and symmetry of response with markers as shown in Figure 2. In order to obtain a proper response, it may be necessary to slightly retouch A 8 and A 9.

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 A16, A17, A18, A19, and R13, Buzz control.
If the hiss disappears during alignment, further reduce the signal strength.

4.5 MC 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 A 20 for MINIMUM beat interference.

AUTOMATIC FINE TUNING ALIGNMENT

Tune in a color TV program with AFT off. Adjust all controls for normal operation. Remove white lead from the AFT output terminal. Connect DC probe of VTVM to this terminal, Point Ⓚ, low side to ground. Turn AFT on and fine tune into sound beat for maximum negative DC voltage. Adjust A25 for maximum deflection on meter. Change meter to positive polarity and adjust fine tuning in the opposite direction for maximum deflection. Adjust A26 for maximum deflection. Connect the white lead to the AFT output terminal. Turn AFT off and adjust fine tuning for normal picture. Turn AFT on and adjust A27 for MINIMUM deflection. Remove VTVM.

TROUBLE SHOOTING PROCEDURE FOR AFT IC UNIT

Set the AFT switch in on position. Check all voltages and currents of the IC unit. Abnormal voltages or current may indicate defective IC unit or associated components. If voltage and currents are normal, check alignment as outlined in the AFT Fine Tuning Alignment procedure. If alignment cannot be accomplished, check for defective IC unit or associated components. If alignment is correct and trouble presists, AFT device and associated circuitry in tuners should be checked.

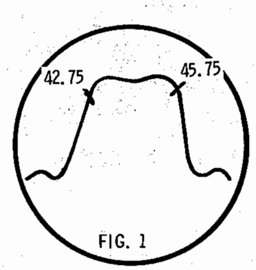


FIG. 1

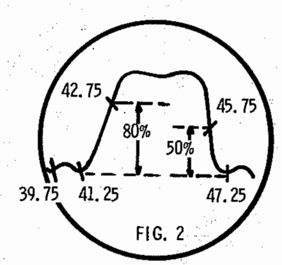


FIG. 2

TROUBLESHOOTING CHECK CHART

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

SWEEP
No raster, has sound V8 thru V12, V17
No vert. deflection V5, V6
Poor vert. lin. or foldover V5, V6
Poor horiz. lin. or foldover V9, V10
Narrow picture X1 thru X4, V8, V9, V10
Vert. off freq. V5, V6
Horiz. off freq. X10, V8

RASTER
Yellow - No blue V13, V17
Cyan - No red V13, V17
Magenta - No green V13, V17

PICTURE OR SOUND
No pic, no sound, no raster X1 thru X4, F1 thru F4
No pic, no sound, has raster Q1, Q2, Q3, V202
No pic, no sound, has snow V201, V202, Q1
No pic, has sound, no raster V2, V17
No pic, has sound, has raster X5, V1, V2, Q5
Has pic, no sound X8, V3, V4
Overloaded picture Q6, V5
Low or excessive brightness Q7, V17
Poor focus X11

COLOR (B/W reception operating normally.)
No color X13 thru X17, V1, Q8, V15, V16
Weak color X13 thru X17, V1, Q8, V15, V16.
No color sync X13 thru X17, V15, V16
No blue V13, V14
No red V13, V14
Incorrect hue (tint) X13 thru X17, V14, V15.

SYNC
No vert. sync V3, V5
No horiz. sync V3, V5, X10
No vert. or horiz. sync V3, V5

MISCELLANEOUS ADJUSTMENTS

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Connect a VTVM through a high voltage probe to picture tube anode connector. Remove Efficiency coil jumper and connect a 0-300ma meter across the terminals.
Tune in a TV station and set all controls for normal operation. Remove the horizontal hold knob. Turn shaft to lock in picture when changing from channel to channel. Reinstall knob with pointer centered between stops.

Adjust the Efficiency coil for MINIMUM current on millimeter. Remove meter and reconnect jumper across terminals.

Set Normal-Service switch in Service position. With 120VAC to set, adjust the HV Adjust control for 25KV on picture tube anode connector.

Adjust Focus, Height and Vertical Linearity controls,

AGC ADJUSTMENTS

Tune in a strong TV station and advance AGC control until instability appears in the picture (pulling, jitter, overload, etc.). Reduce the control to the point just below the instability. Tune in a weak TV station without snow. Advance the AGC Delay control until snow appears in the picture. Reduce the control until the snow just disappears from the picture. Check all available stations for proper AGC action and repeat above procedure if necessary.

CHROMA BANDPASS AFC ALIGNMENT

Connect a color bar generator to the antenna terminals and adjust the set for normal operation. Connect jumper from Points Ⓓ and Ⓔ to ground. Adjust A21 until color bars drift slowly across the screen. Connect a jumper from Point Ⓑ to ground. Connect DC probe to VTVM through a 4.7meg resistor to Point Ⓕ, low side to ground. Adjust A22 for maximum reading on meter.

Remove jumper from Points Ⓑ and Ⓔ. Set Color Level and Hue to the center of their ranges. Connect vertical input of scope to Point Ⓖ, low side to the ground. Adjust Hue control for maximum 6th and 7th bars on scope (Fig. A).

Connect VTVM to Point Ⓗ, low side to ground. Remove one end of R191, 3300Ω Resistor, across L32. Adjust A23 for MINIMUM voltage on VTVM. Remove VTVM and reconnect R191 across L32.

Connect vertical input of scope to Point Ⓙ, low side to ground. Adjust A24 for equal amplitude of the 2nd and 4th bars on scope (Fig. B). Set Hue control to fully counterclockwise position. The 1st and 3rd bars or 7th and 9th bars should be of equal amplitude. If not, readjust A24. Set the Hue control to maximum clockwise. The 3rd or 4th and 5th bars should be of equal amplitude.

PURITY ADJUSTMENTS

Perform Step 1 of "Convergence Adjustments". If the picture tube appears to be magnetized, use a degaussing coil to demagnetize tube and mounting brackets.

Turn Red screen control to maximum and turn Blue and Green controls to MINIMUM. Loosen deflection yoke and move it rearward until it is against the convergence yoke assembly.

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

GRAY SCALE ADJUSTMENTS

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

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

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

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

DYNAMIC PINCUSHION ADJUSTMENTS

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

Connect a crosshatch generator to the antenna terminals and adjust set for a normal corsshatch pattern. Adjust Pincushion Correction coil, L53, for straight horizontal lines at top and bottom of the screen.

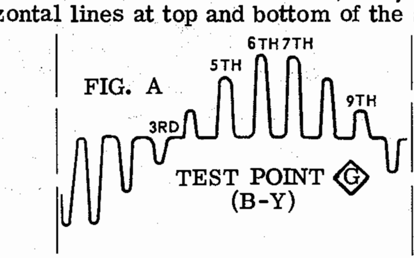
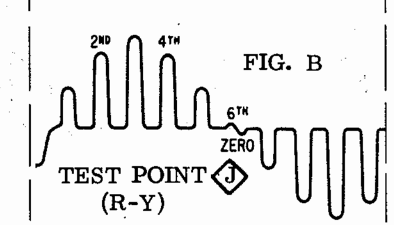
FIG. A


FIG. B


CONVERGENCE ADJUSTMENTS

Step	Control	Use to Converge (or Straighten)	Remarks
1.			Perform Center Dot Convergence using convergence magnets. See Fig. A.
2.	R-G Vertical Lines, Top R26	Red and Green Vertical bars at top of screen.	Touch up both controls for best convergence from top to bottom along vertical center line (Fig. B).
3.	R-G Vertical Lines, Bottom R32	Red and Green Vertical bars at bottom of screen.	
4.	R-G Horizontal Lines, Top R25	Red and Green Horizontal bars at top of screen.	Touch up both controls for best convergence of horizontal bars along vertical center line (Fig. B).
5.	R-G Horizontal Lines, Bottom R31	Red and Green Horizontal bars at bottom of screen.	
6.	Blue Horizontal Lines, Top R27	Blue Horizontal bars at top of screen.	Touch up both controls for best convergence of horizontal bars along vertical center line (Fig. C).
7.	Blue Horizontal Lines, Bottom R33	Blue Horizontal bars at bottom of screen.	
8.			Perform Center Dot Static Convergence (Fig. A).
9.	Blue Horizontal Lines, Right L56	Blue Horizontal bars at right side of screen.	Touch up both controls for best convergence along horizontal center line (Fig. D).
10.	Blue Horizontal Lines, Left R28	Blue Horizontal bars at left side of screen.	
11.	R-G Vertical Lines, Right L54	Red and Green Vertical bars at right side of screen.	(Fig. E)
12.	R-G Horizontal Lines, Right L55	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. E).
13.	R-G Vertical Lines, Left R29	Red and Green Vertical bars at left side of screen.	(Fig. E)
14.	R-G Horizontal Lines, Left R30	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).

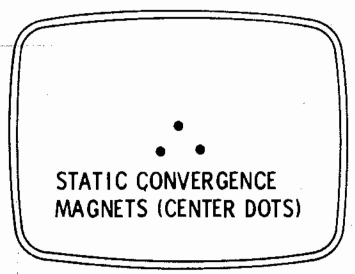


FIG. A

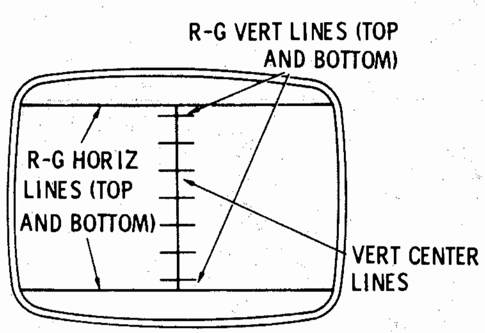


FIG. B
(RED AND GREEN ONLY)

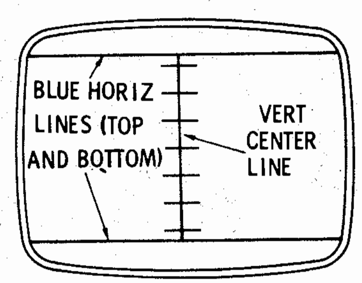


FIG. C
(BLUE BARS)

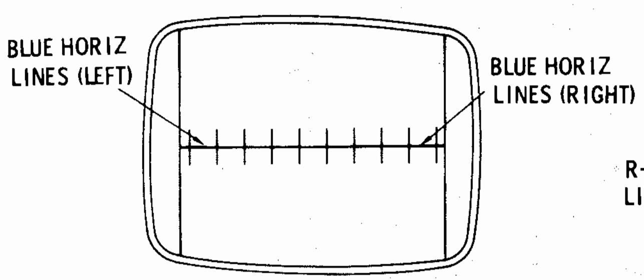


FIG. D
(BLUE BARS

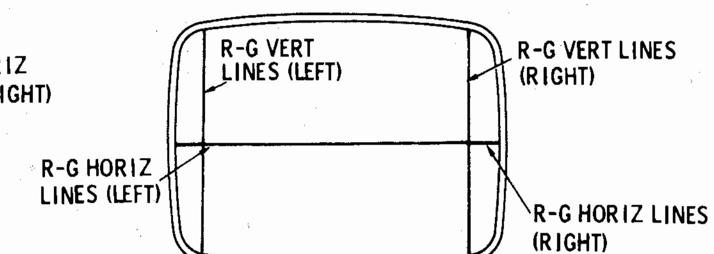
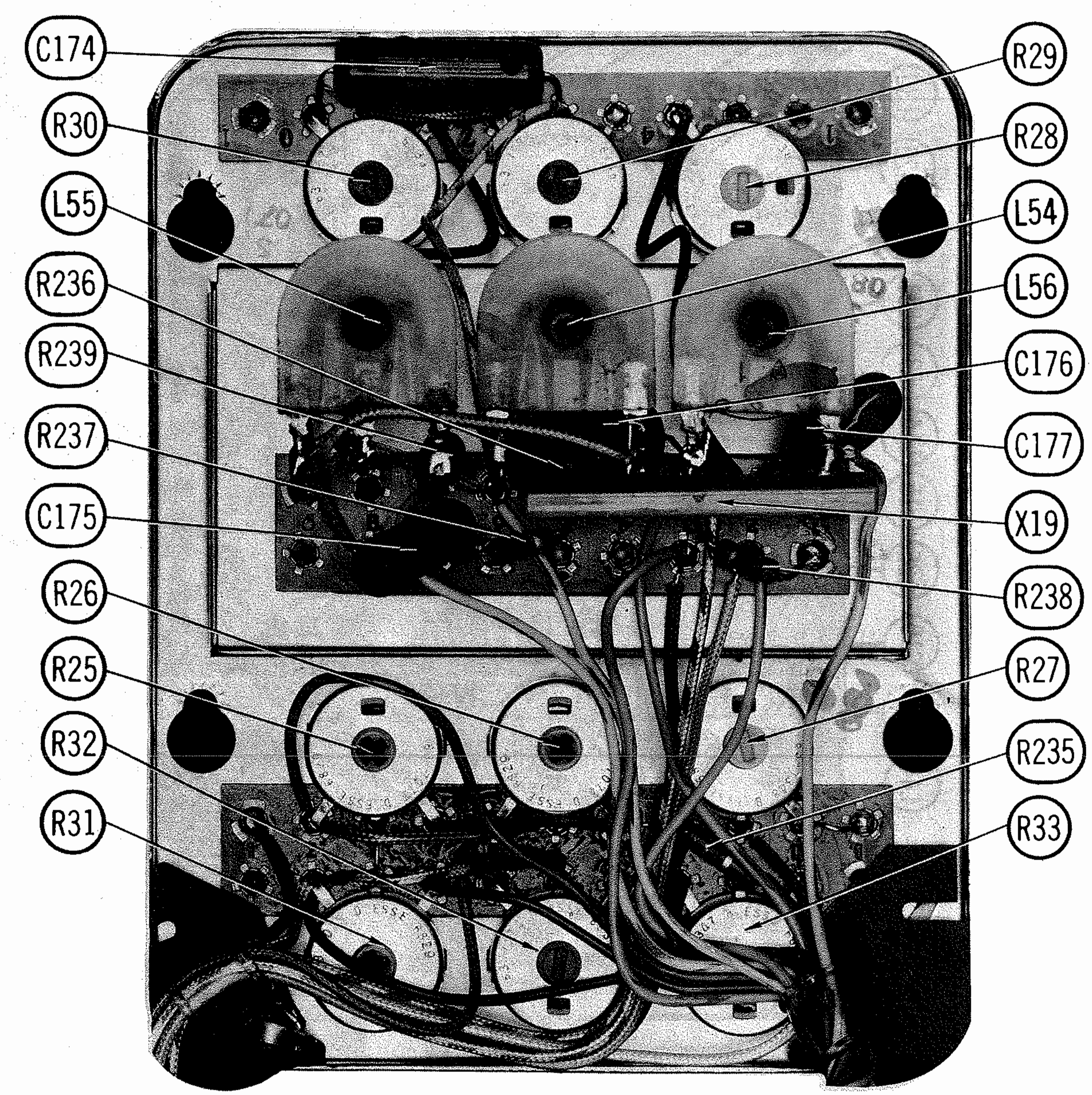
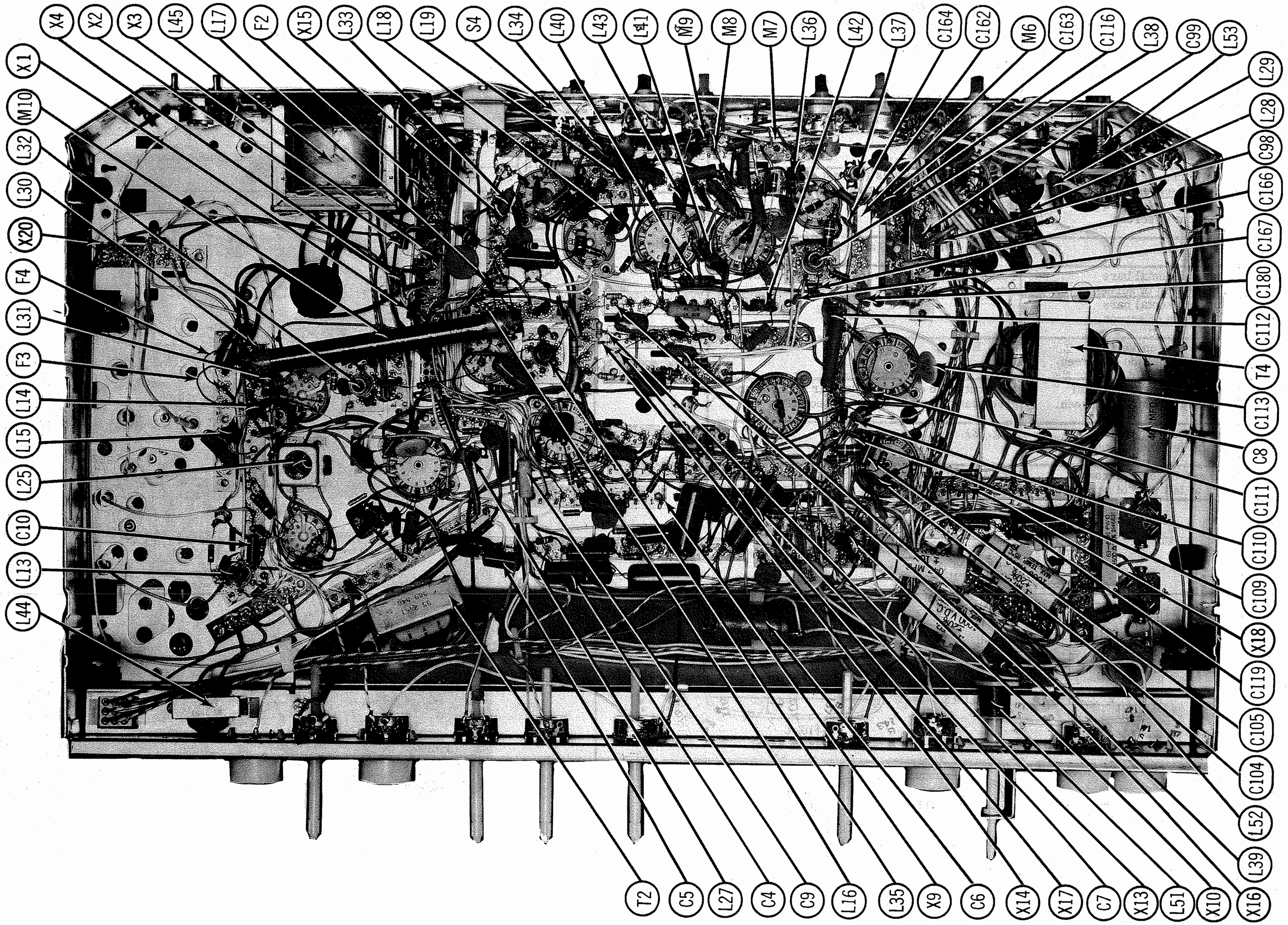


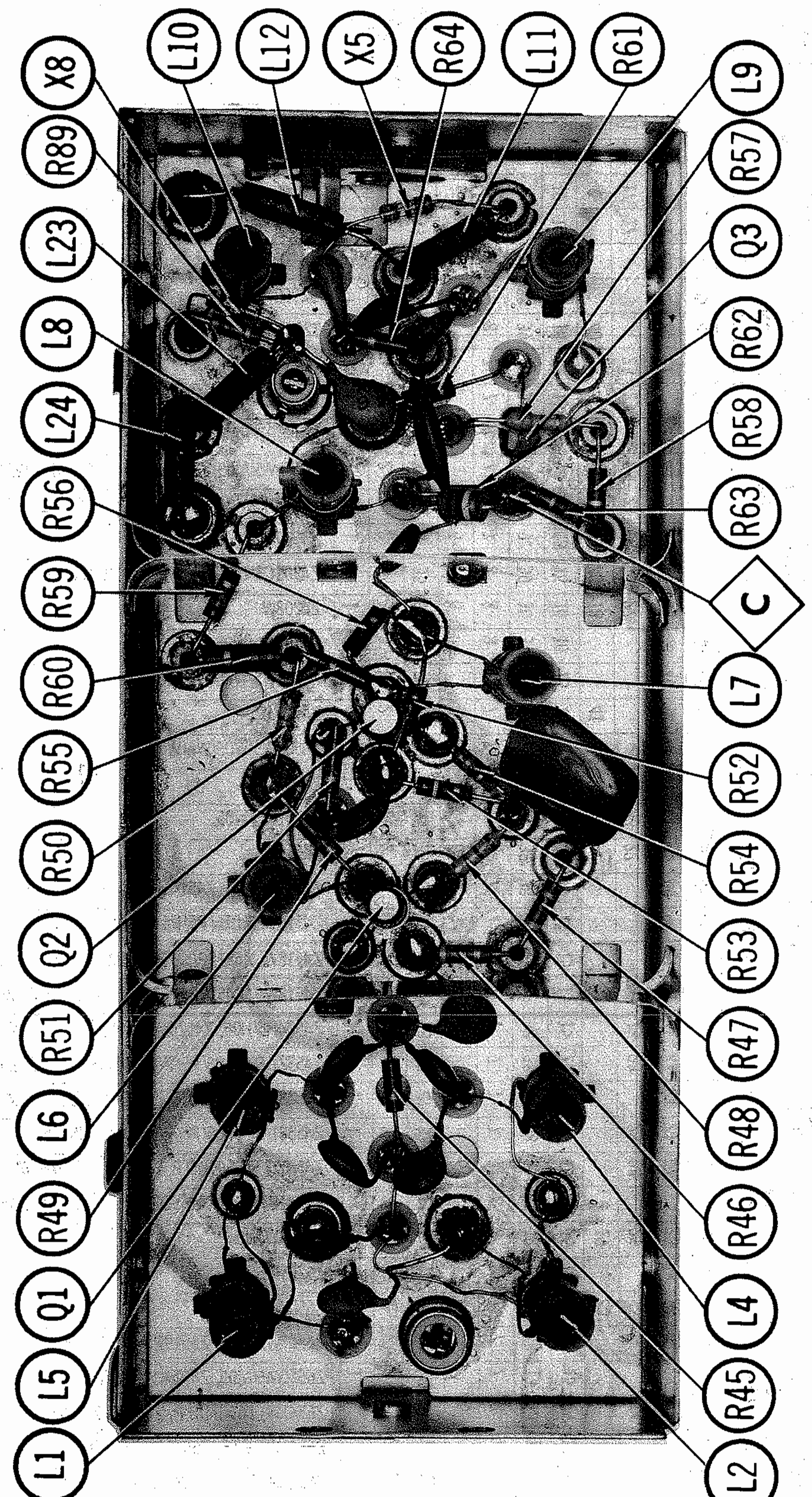
FIG. E



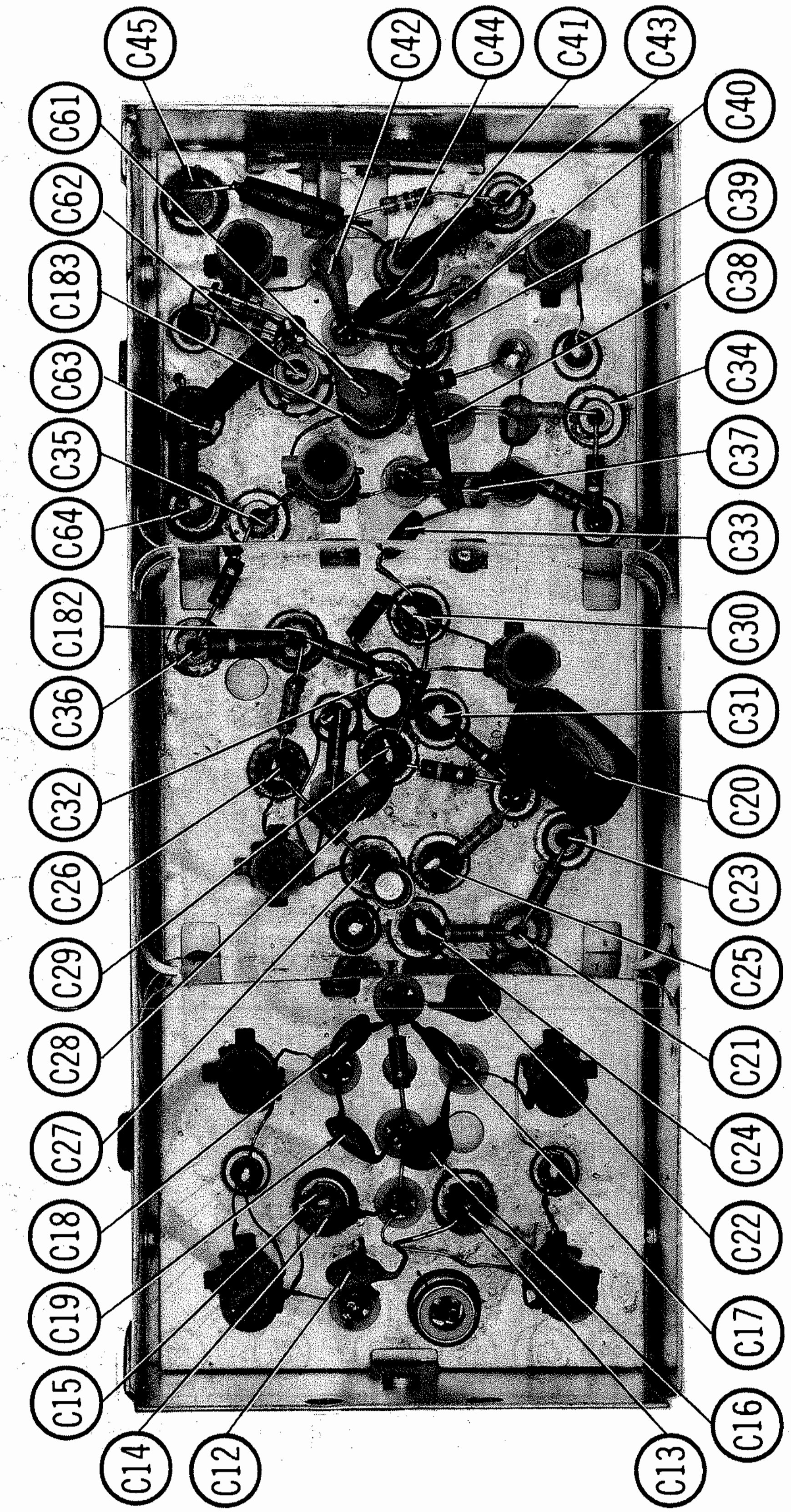
CONVERGENCE CHASSIS



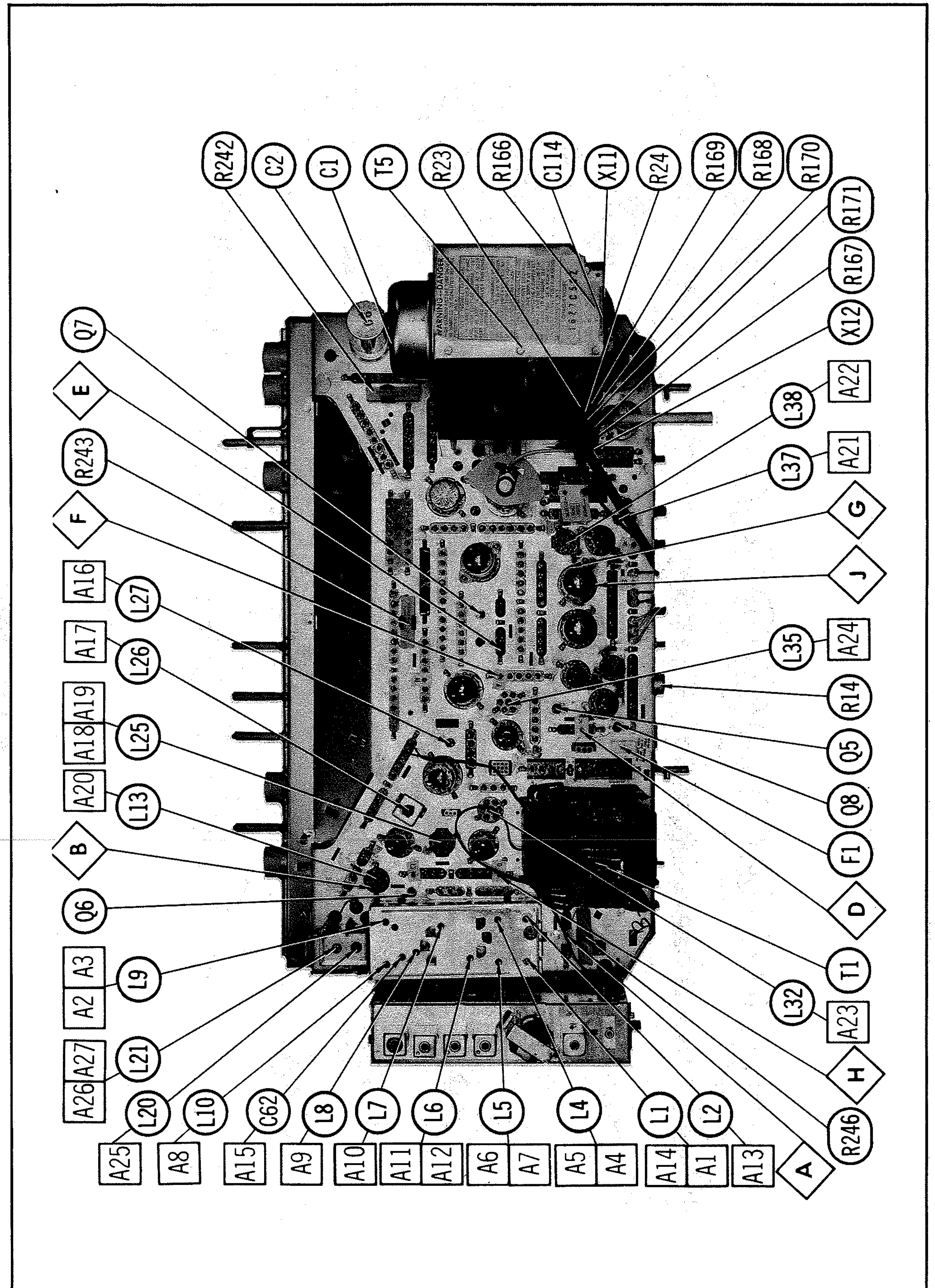
CHASSIS - BOTTOM VIEW



VIDEO IF CHASSIS



VIDEO IF CHASSIS



CHASSIS - TOP VIEW

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

See PART NO. KEY CHART

▲ With Z4547M5 Model Part #46-6677 (Key 11) is used.

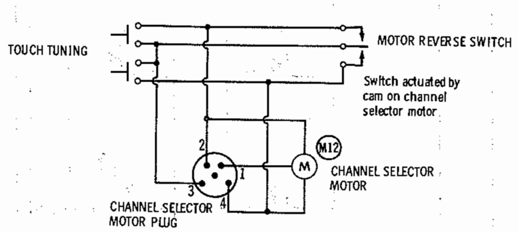
MODELS / KNOBS	AFT (AFC)	Brightness, Tone Vert. Hold, Contrast	Color, Volume	Focus	Horiz. Hold	Hue	Peak Picture	UHF Dial	UHF Tuning	VHF Chan.	VHF Fine Tuning
GA50-36W7	1	2	4	6	7	9	15	17	21		
GA50-40W7/-44M7	1	2	4	6	7	9	15			21	
GA50-42H7	1	2	4		7	9	15		17	21	
GA50-56W5	1	2	33		7	38	15		17	21	31
GA50-59W5	1	2	34		7	13	15			28	45
S2950W5/W6		2	33		7	38	15			42	45
T2941W6/W6		3	35		8	39	16	40		26	46
T2952W5/W05	1	2	33		7	38	15		23	21	2
T2958P5/P05/W5/W05	1	2	33		7	38	15		23		2
T2958P7/P8/W7/W8	1	2	4	6	7	9	15			21	
T2981M5/M05, T2983W5/W05, T2984W5/W05	1	2	33		7	38	15		23	21	
T2985M5/M05, T2987H5/H05, T2991DE5/P5/P05	1	2	33		7	38	15		23	21	
Y4519W7	1	2	4	6	7	9	15			21	
Z4203C5/C6, Z4205W5/W05/W6/W06		3	35		8	39	16	40		43	46
Z4208W	1	3	5	6	8	10	16	18	22	26	
Z4208W5/W05	31	3	35		8	39	16			26	46
Z4216W5/W05/W6/W06		3	5		8	39	16			26	46
Z4501J5/J6		2	33		7	38	15	41		42	45
Z4502W5/W05/W6/W06		2	33		7	38	15			44	45
Z4507W	1	2	4	6	7	9	15		23	21	
Z4507W5/W05	1	2	33		7	38	15		23	21	
Z4512W6		2	33	6	7	38	15		22	46	45
Z4513W5/W6, Z4514M5/M6, Z4515H5/H6		2	33		7	38	15			44	45
Z4516DE5/DE6/P5/P6		2	33		7	38	15			44	45
Z4518W, Z4519P/W, Z4520M, Z4524H, Z4526M	1	2	4	6	7	9	15			21	
Z4518W5, Z4519P5/P05/W5/W05, Z4520M5/M05	1	2	33		7	38	15		23	21	
Z4524H5/H05, Z4526M5/M05, Z4528H5/H05	1	2	33		7	38	15		23	21	
Z4532DE5/DE05/P5/P05, Z4533W5/W05, Z4535M/M05	1	2	33		7	38	15		23	21	
Z4528H, Z4532DE/P, Z4533W, Z4535M, Z4538DE/P	1	2	4	6	7	9	15			21	
Z4538DE5/DE05/P5/P05, Z4539H5/R5	1	2	33		7	38	15		23	21	
Z4541W, Z4543DE/P, Z4545H, Z4547M/M5/M05		2	4▲	6	7	11	15		24	27	29
Z4541W/W05, Z4543DE5/DE05/P5/P05, Z4545H5/H05		2	11		7	11	15				29
Z6208W/W0	1	3	5	6	8	12	16	19	25	28	30
Z6208W5/W05	1	2	12		8	12	16			28	30
Z6507W	1	2	4	6	7	13	15	20		28	31
Z6507W5/W05, Z6519P5/P05/W5/W05	1	2	34		7	13	15			28	31
Z6520M5/M05, Z6524H5/H05/R5	1	2	34		7	13	15			28	31
Z6541W, Z6543DE/P, Z6545H/X, Z6547M, Z6549H		2	4	6	7	14	15		24	28	29
Z6541W5/W05, Z6543DE5/P5/P05		2	11		7	14	15				29
Z6545H5/X5, Z6547M5, Z6549H/H05		2	11		7	14	15				29
Z8530W, Z8548H	1	2	4	6	7	9	15			21	
Z8530W5, Z8548H5	1	2	33	6	7	38	15	21			
Z8550H, Z8560H, Z8565M, Z8570DE	1	2	4	6	7	13	15			28	31
Z8550H5, Z8560H5, Z8563M5, Z8565M5, Z8570DE5	1	2	33	6	7	13	15	20		28	31
Z8558H, , Z8563M, Z8568DE	1	2	4	6	7	9	15			21	
Z8558H5, Z8563M5, Z8568DE5	1	2	33	6	7	38	15			21	

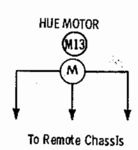
KEY NO.	PART NO.	KEY NO.	PART NO.	KEY NO.	PART NO.	KEY NO.	PART NO.	KEY NO.	PART NO.	KEY NO.	PART NO	KEY NO.	PART NO	KEY NO.	PART NO.	KEY NO.	PART NO.
1	46-5326	6	S-76936	11	46-6677	16	46-6028	21	46-6352	26	46-6217	31	S-58105	36	46-5416	41	46-6564
2	46-6023	7	46-6024	12	46-6097	17	46-6563	22	46-5322	27	46-6444	32	46-5325	37	46-6586	42	46-6229
3	46-6026	8	46-6027	13	46-6037	18	46-6019	23	46-6695	28	S-53116	33	46-6821	38	46-6820	43	46-6218
4	46-6016	9	46-6018	14	46-6678	19	46-6741	24	46-6652	29	46-6654	34	46-6036	39	46-6822	44	46-6230
5	46-5368	10	46-5995	15	46-6025	20	46-6035	25	46-6742	30	S-66511	35	46-6823	40	46-5830	45	S-69715
																46	S-69741

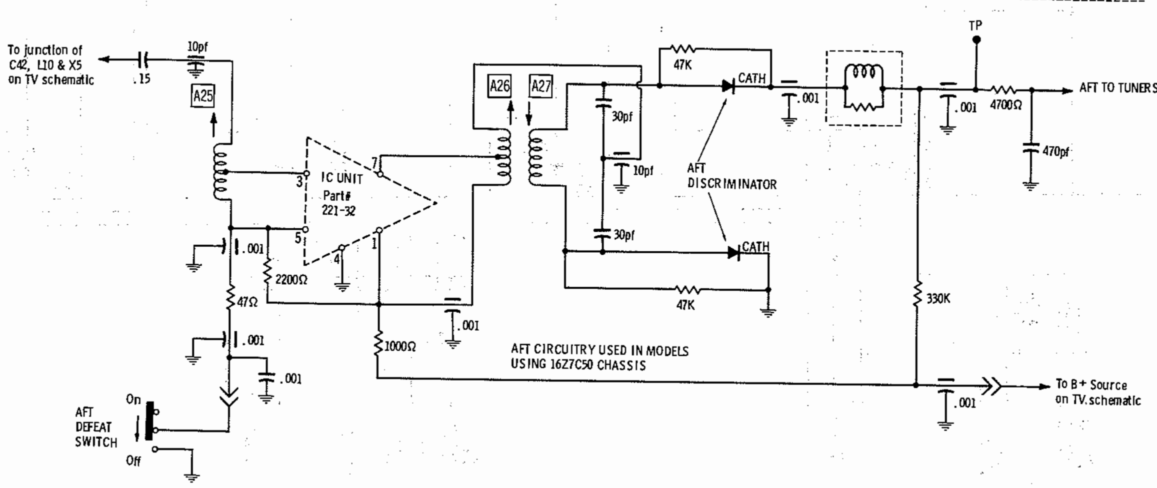
RESISTANCE MEASUREMENTS

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	1760Ω	1530Ω *	18.3K †	FIL	FIL	0Ω	839K	22.8K †	22.8K †				
V2	12HL7	470Ω	338K †	0Ω	FIL	FIL	FIL	3460Ω †	23.3K †	0Ω				
V3	6KT8	0Ω	100K	36.8K †	FIL	FIL	22Ω	4620Ω *	30.4K †	10.5K †				
V4	6Z10	FIL	3500Ω †	220Ω	470K †	3.9Ω	23.1K †	1.0Ω	245Ω	3920Ω †	TP	250K	FIL	
V5	6BA11	FIL	600K	15K †	309K	37K	75K †	10meg †	4010Ω	788K	106K	441meg ††	FIL	
V6	6HE5	FIL	2.7meg	NC	NC	NC	922Ω †	NC	TP	NC	13.4K †	430Ω	FIL	
V7	6KT8	741Ω	1meg	767Ω †	FIL	FIL	330Ω	279K	111K †	10.3K †				
V8	6U10	FIL	700Ω †	6320Ω	330Ω	68.5K †	0Ω	2.03meg	TP	62.4K	38.2K †	35.2K	FIL	
V9	6LB6	FIL	0Ω	17.5K †	0Ω	4.7meg	NC	NC	0Ω	NC	NC	17.5K †	FIL	18.6Ω ‡
V10	6CJ3	NC	30.4Ω †	NC	FIL	FIL	NC	30.4Ω †	NC	101meg *				
V11	3DC3	PINS 1 THRU 9 HAVE INFINITE RESISTANCE												448Ω †
V12	6HV5	FIL	4meg ††	1000Ω	227Ω †	NC	NC	0Ω ‡	NC	NC	NC	NC	FIL	
V13	6MJ8	FIL	23K †	470Ω	23.4K †	NC	24.2K †	NC	1meg	NC	1meg	1meg	FIL	
V14	6BV11	FIL	1.2Ω	6750Ω †	13.5K †	150Ω	1.5Ω	1.5Ω	150Ω	13.6K †	5920Ω †	1.1Ω	FIL	
V15	6EJ7	27K	92.6K	27K	FIL	FIL	0Ω	6280Ω †	6300Ω †	27K				
V16	6GH8A	951Ω †	100K	42.1Ω †	FIL	FIL	951Ω †	0Ω	2700Ω	2.6meg *				
V17	25GP22A	FIL	5340Ω †	129K †	1.8meg ††	1.9meg ††	3490Ω †	129K †	NC	64.3meg ‡	NC	3450Ω †	129K †	
												PIN 13 1.6meg ††	PIN 14 FIL	
V201	6HA5	3.18meg	0Ω	FIL	FIL	13K †	0Ω	0Ω						
V202	6GJ7/ ECF801	0Ω	680K	0Ω	FIL	FIL	27.7K †	27.7K †	23.0K †	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	TOP CAP

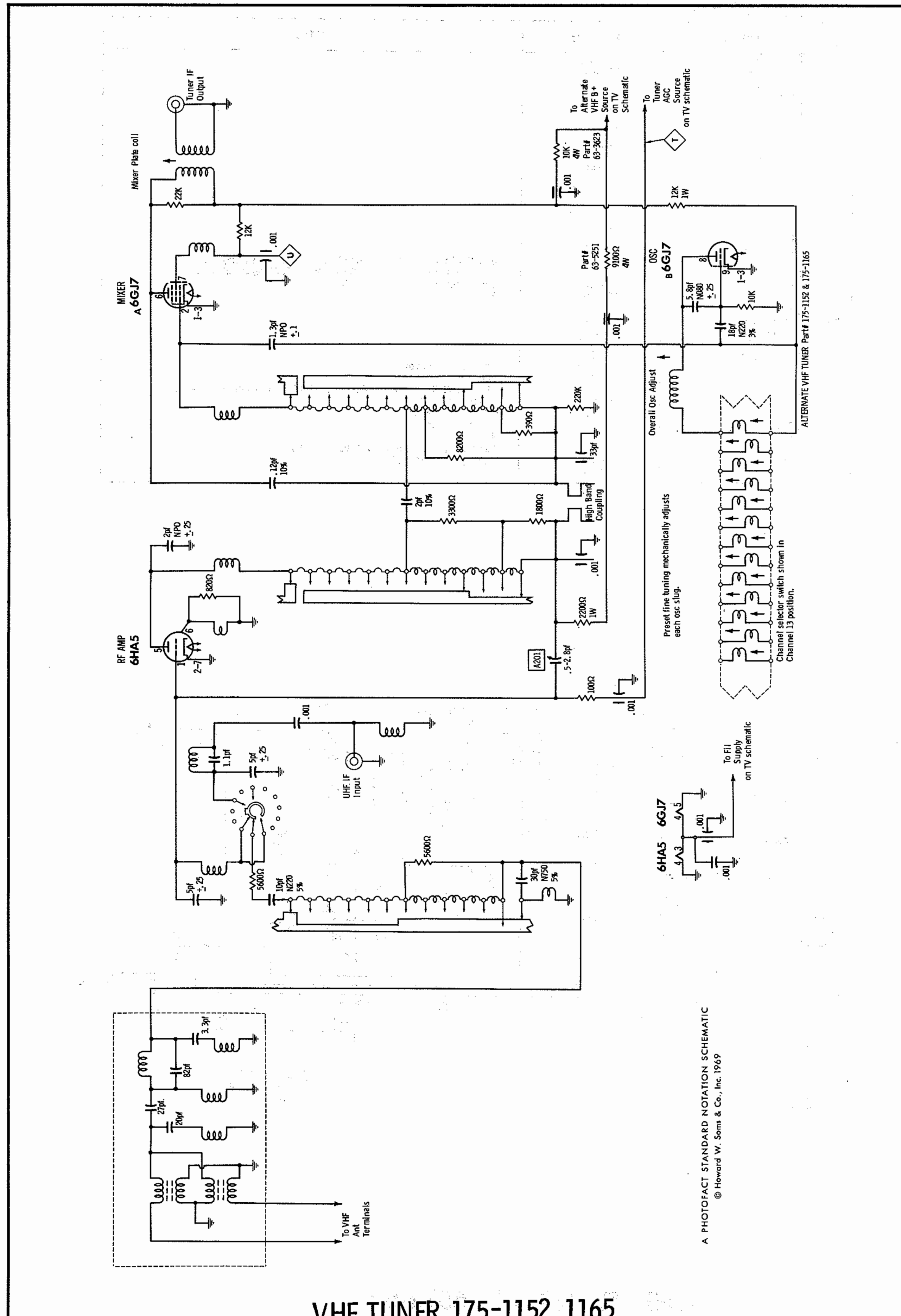
* READING DEPENDS ON POLARITY OF METER CONNECTIONS.
‡ MEASURED FROM PIN 9 OF V10.
NC NO CONNECTION
† MEASURED FROM THE CATHODE OF X3 AND X4.
†† MEASURED FROM THE CATHODE OF X12.
TP TIE POINT







AFT CIRCUIT

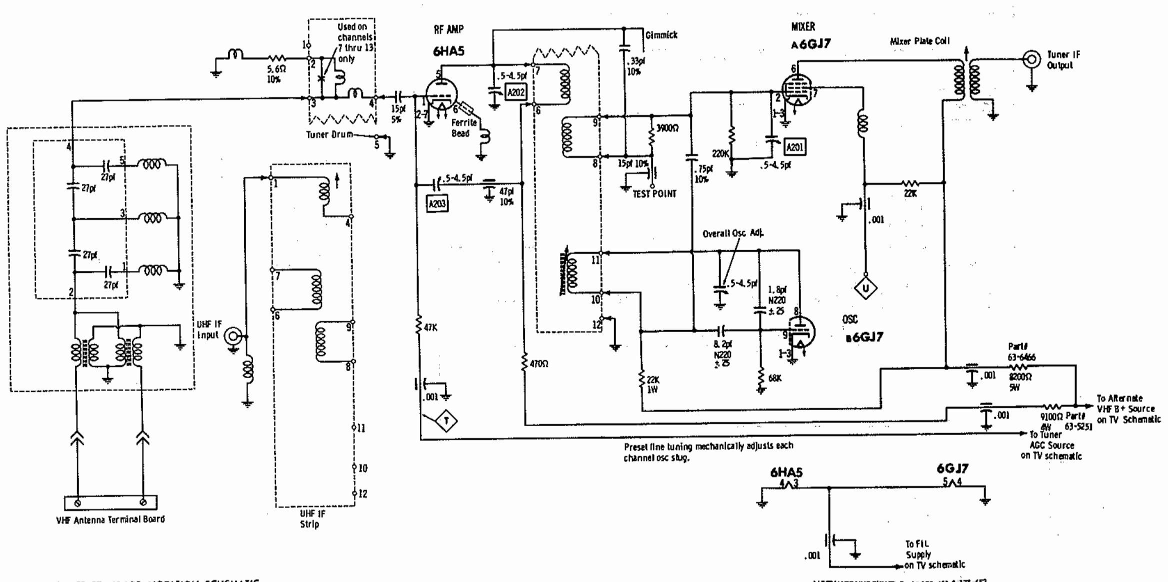


ZENITH CHASSIS 16Z7C50, 16Z7C50Z

FOLDER 2

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M1	VHF Tuner	175-592	
	VHF Tuner	175-594	
	VHF Tuner	175-595	
	VHF Tuner	175-569	
	VHF Tuner	175-1225	
	VHF Tuner	175-1226	
	VHF Tuner	175-590	
	VHF Tuner	175-593	
	VHF Tuner	175-651	
	VHF Tuner	175-652	
	VHF Tuner	175-1152	
	VHF Tuner	175-1165	
M2	UHF Tuner	175-64K	
	UHF Tuner	175-54G/K	
	UHF Tuner	175-60K	
	UHF Tuner	175-65H/K	
	UHF Tuner	175-84/85	
M3	VHF Antenna	1-208	JFD Replacement TA511, Used in Models: T2941W5/W6, Z4205W5/W05/W6/W06, Z4208W/W5/W05, Z6208W/WD/W5/W05.
M5	Lamp	100-422	Some models use 2 lamps, Part #100-368
M6	Crystal	103-89	3.58MC
M7	Spark Gap	52-957	
M8	Spark Gap	52-957	
M9	Spark Gap	52-957	
M10	Delay Line	S-80475	
M11	Degaussing Coil	95-2553	
M12	Motor	141-178	Channel Selector
M13	Motor	63-7412	Hue
PC1	Vertical Integrator	87-4	CENTRALAB Replacement PC-408, SPRAGUE Replacement V-14.
S1	Switch	85-902	Master On-Off
	Switch	85-718	On-Off Alternate
S2	Switch		Touch Tuning
S3	Switch		AFT
S4	Switch	85-994	Service (Black-White Set-up switch)
	Magnet	S-76297 or S-79294	Purity and Lateral



A PHOTOFACT STANDARD NOTATION SCHEMATIC
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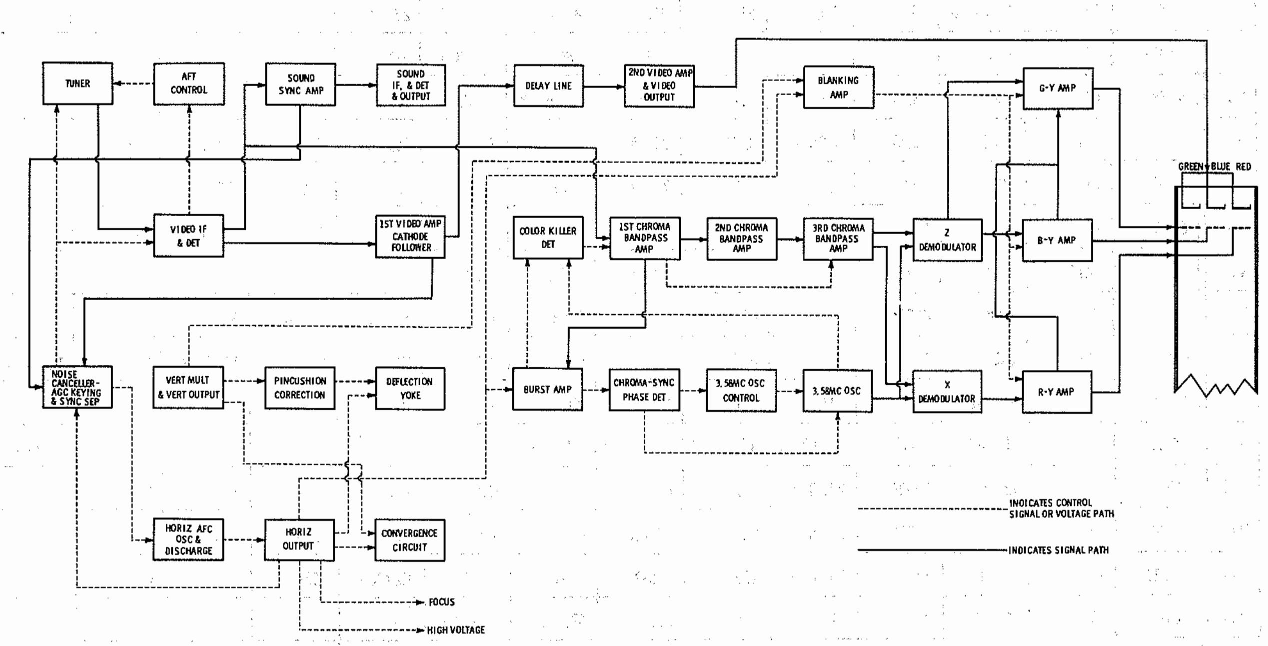
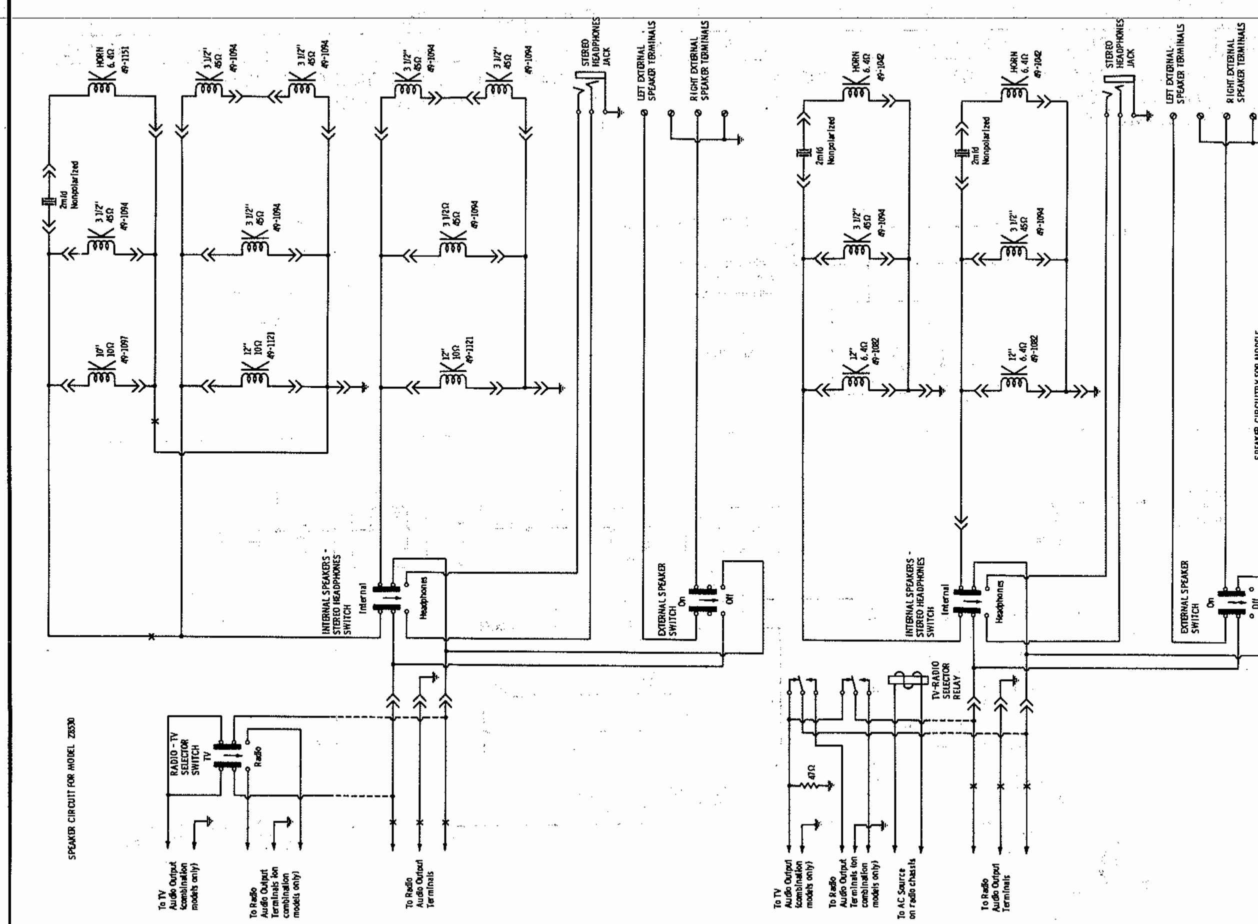
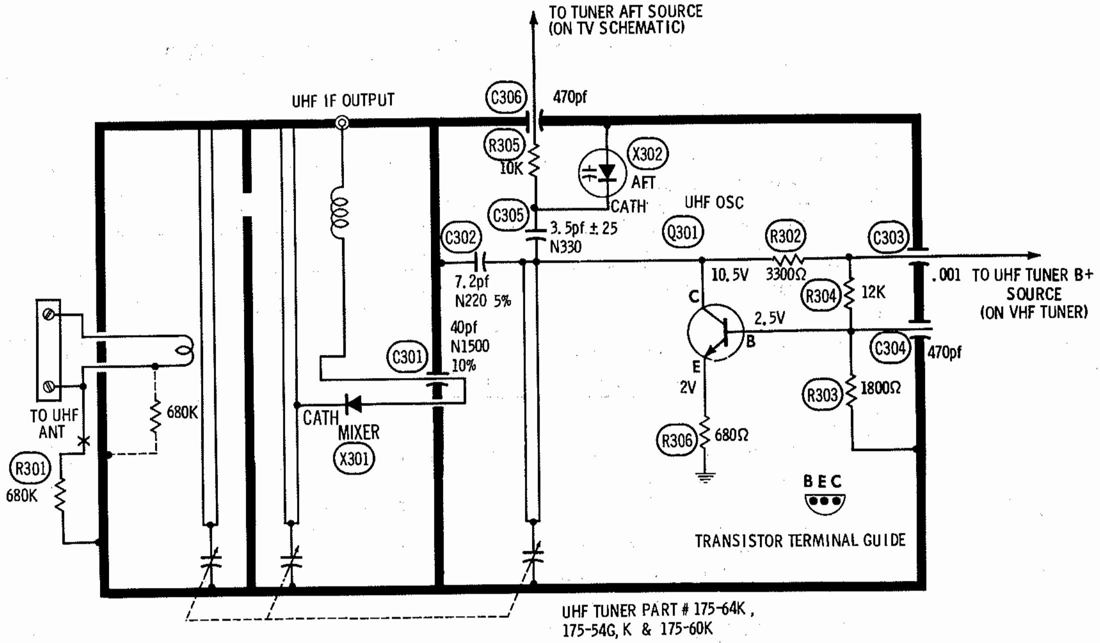
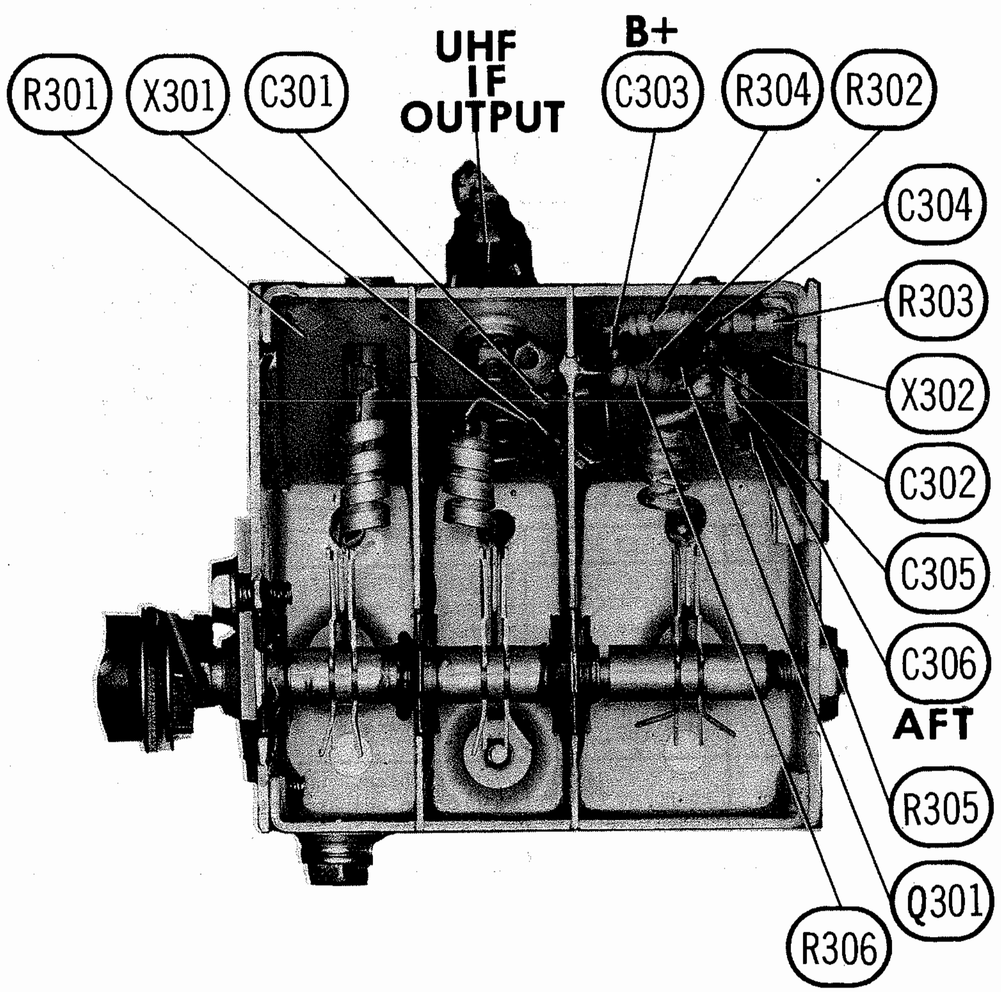
VHF TUNER 175-651,652

BLOCK DIAGRAM



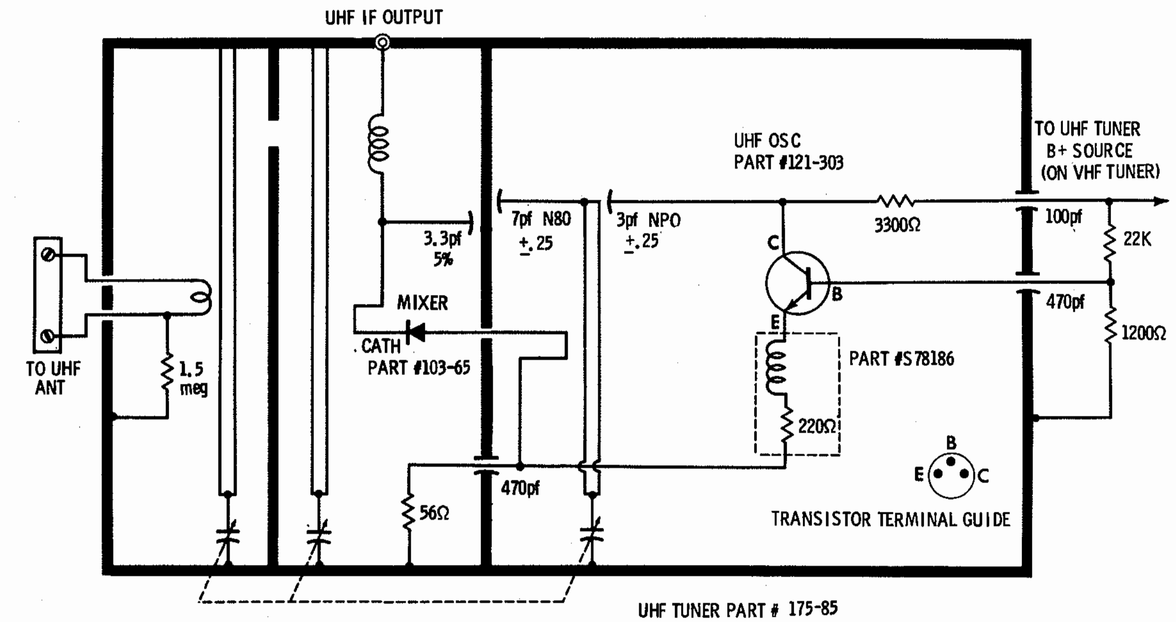


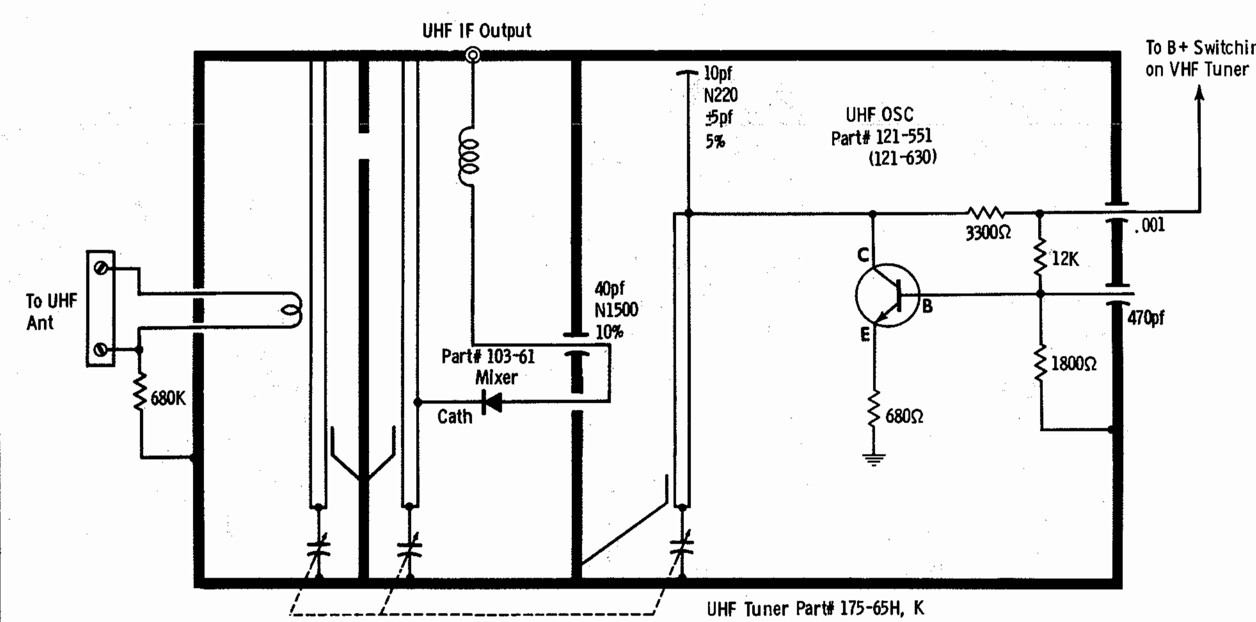




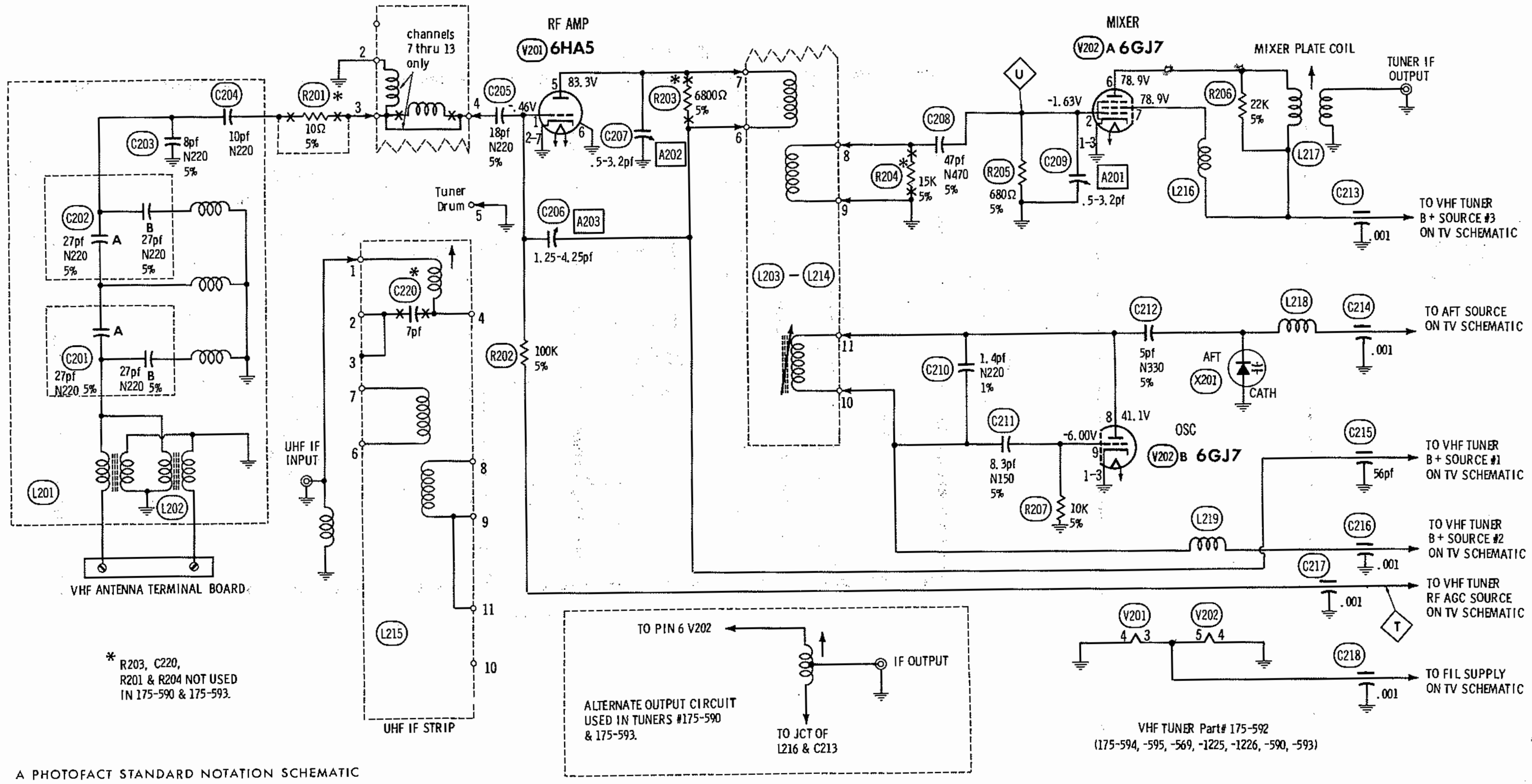
UHF TUNER 175-54G, K, 175-60K, 175-64K

UHF TUNER 175-85

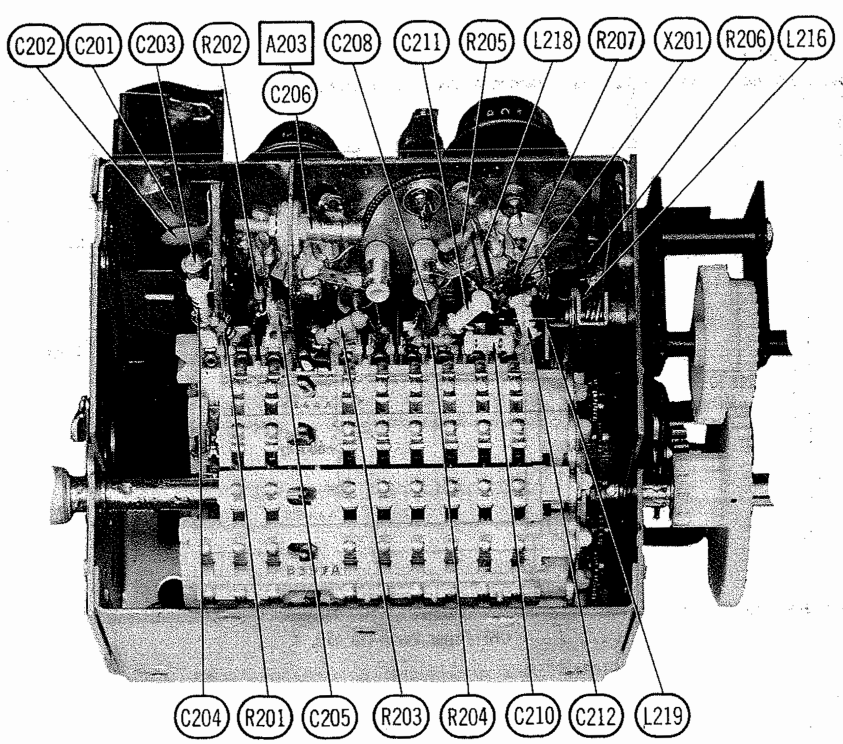


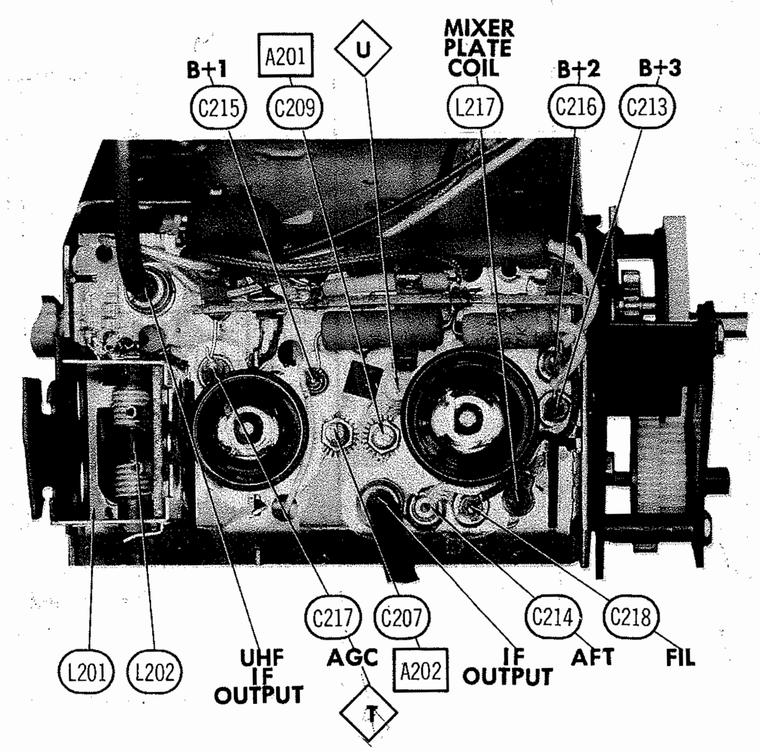


UHF TUNER 175-65H, K



A PHOTOFACT STANDARD NOTATION SCHEMATIC





VHF TUNER 175-569, 590, 592, 593, 594, 595, 1225, 1226

VHF TUNER ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:	GENERAL CEMENT	WALSCO
A201, A202, A203 ..	8868, 8987, 9089	2531X, 2541, 2587

OSCILLATOR ADJUSTMENTS TUNERS 175-500 Series, 175-1225, 175-1226

The oscillator slug for each channel is preset with the fine tuning control. Adjust the fine tuning for best picture and sound.

OSCILLATOR ADJUSTMENTS TUNERS 175-651, 175-652, 175-1152, 175-1165

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

RF AND MIXER ADJUSTMENTS

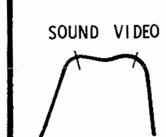
Connect the sweep generator across antenna terminals with 120-ohm carbon resistor in each lead. Refer to chart below for generator frequencies. Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the scope for horizontal deflection. Connect a variable bias to the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

CHANNEL	CONNECT SCOPE	REMARKS
13	Vertical input to Point (U), low side to ground.	TUNERS: 175-500 Series, 175-651/652, 175-1225/26 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 for MINIMUM amplitude of response (A203).
12 thru 2	Vertical input to Point (U), low side to ground.	Decrease bias. Check response on 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 59.75MC	(6) 85MC	83.25MC 87.75MC	(10) 195MC	193.25MC 197.75MC
(3) 63MC	61.25MC 65.75MC	(7) 177MC	175.25MC 179.75MC	(11) 201MC	199.25MC 203.75MC
(4) 69MC	67.25MC 71.75MC	(8) 183MC	181.25MC 185.75MC	(12) 207MC	205.25MC 209.75MC
(5) 79MC	77.25MC 81.75MC	(9) 189MC	187.25MC 191.75MC	(13) 213MC	211.25MC 215.75MC

FIG. 201



CHANNEL	CONNECT SCOPE	REMARKS
13	Vertical input to Point (U), low side to ground.	TUNERS: 175-1152, 175-1165 Expand or compress appropriate coils for maximum gain and symmetry of response similar to Fig. 201 with markers as shown.
10	Across video detector load resistor.	Increase bias to -20 volts and adjust for MINIMUM amplitude of response (A201).
12 thru 2	Vertical input to Point (U), low side to ground.	Decrease bias. Check all channels and make compromise adjustments by expanding or compressing appropriate coils.

VHF TUNER PARTS LIST

TUBES

ITEM No.	USE	TYPE
V201	RF Amp.	6HA5
V202	Mixer - Oscillator	6GJ7

(Columns: AMPEREX, GENERAL ELECTRIC, RCA, SYLVANIA)

COILS (RF-IF)

ITEM No.	USE	MFGR. PART No.	NOTES
L201	Ant. Filter Ass'y	S-77781	
L202	Balun	S-49189	Part of L201
L203	Ant.,RF,Mixer,Osc.	174-342	Channel 2 Strip
L204	Ant.,RF,Mixer,Osc.	174-343	Channel 3 Strip
L205	Ant.,RF,Mixer,Osc.	174-344	Channel 4 Strip
L206	Ant.,RF,Mixer,Osc.	174-345	Channel 5 Strip
L207	Ant.,RF,Mixer,Osc.	174-346	Channel 6 Strip
L208	Ant.,RF,Mixer,Osc.	174-357	Channel 7 Strip
L209	Ant.,RF,Mixer,Osc.	174-358	Channel 8 Strip
L210	Ant.,RF,Mixer,Osc.	174-359	Channel 9 Strip
L211	Ant.,RF,Mixer,Osc.	174-360	Channel 10 Strip
L212	Ant.,RF,Mixer,Osc.	174-361	Channel 11 Strip
L213	Ant.,RF,Mixer,Osc.	174-362	Channel 12 Strip
L214	Ant.,RF,Mixer,Osc.	174-363	Channel 13 Strip
L215	IF UHF	174-350	Channel 1 Strip
L216	RF Choke	20-1030	
L217	Mixer Plate	S-77030	
L218	RF Choke	S-49738	
L219	RF Choke	S-49738	
L220	UHF IF Input	20-1056	Crystal DC Return

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	27 N220 5%	#22-3553				*	*	10TCR-Q27
B	27					*	*	10TCR-Q27
C202A	27 N220 5%	#22-3553				*	*	10TCR-Q27
B	27					*	*	10TCR-Q27
C203	8 N220 ±.5					*	*	10TCR-V82
C204	10 N220 ±.25					*	*	10TCR-Q10
C205	18 N220 ±5%					*	*	10TCR-Q18
C206	1.25-4.25	#22-5348						
C207	.5-3.2	#22-4510						
C208	47 N470 5%					*	*	10TCT-Q47
C209	.5-3.2	#22-4510						
C210	1.4 N220 ±.1	#22-5668				*	*	
C211	8.3 N150 ±.25					*	*	10TCP-V82
C212	5 N330 ±.25					*	*	10TCS-V50
C213	.001	#22-4613						
C214	.001	#22-4718						
C215	56 ±7.5%	#22-3488						
C216	.001	#22-4613						
C217	.001	#22-4613						
C218	.001	#22-4613						

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

UHF TUNER PARTS LIST

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA: MFGR. PART No.	DELCO PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q301		UHF Oscillator	121-551		GE-11	TR-24	HEP56	SK3019	ECG 109

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES: GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	REPLACEMENT RECTIFIERS: RCA PART No.	NOTES
X301	103-61	1N82A	1N82AG	ECG 112		(1) Variable Capacitor
X302	103-104 (1)					Diode

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA: AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C301	40 N1500 10%	#22-5060						
C302	7.2 N220 5%	#22-5365				*	*	
C303	.001	#22-4651						
C304	470	#22-5062						
C305	3.5	#22-5367				*	*	
C306	470	#22-5062						

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

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.

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 BELOEN No. 8464 (Flat) or 8484 (Round) - 4 Conductor
8485 (Round) - 5 Conductor
8488 (Round) - 8 Conductor

TUBES

(Columns: AMPEREX, GENERAL ELECTRIC, RCA, SYLVANIA)

ITEM No.	USE	TYPE
V1	1st Video Amp.- 1st Chroma Bandpass Amp.	6KT8
V2	Video Output	12HL7
V3	Sound-Sync Amp.-Sound IF Amp.	6KT8
V4	Audio Detector-Audio Output	6Z10
V5	AGC Keying-Noise Canceller- Sync Separator-Vert.Mult.	6BA11
V6	Vert. Mult.-Vert. Output	6HE5
V7	Pincushion Correction Amp.- 3rd Chroma Bandpass Amp.	6KT8
V8	Horiz. AFC - Horiz.Oscillator Horiz. Discharge	6U10
V9	Horiz. Output	6LB6 (6LF6) *
V10	Oamper	6CJ3
V11	HV Rectifier	3DC3 (3DB3/3A3A)*
V12	HV Regulator	6HV5
V13	G-Y Amp.- B-Y Amp.- R-Y Amp.	6MJ8
V14	Z Demodulator-X Demodulator	6BV11
V15	Burst Amp.	6EJ7
V16	3.58MC Osc.Control-3.58MC Osc.	6GH8A

* Alternate

PICTURE TUBE

ITEM No.	REPLACEMENT DATA: MFGR. PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SYLVANIA PART No.	NOTES
V17	25AP22A or	25AP22A (1)	H25XP22 (2)	RE25AP22A (3)	(1) Aluminized
	25GP22A or	25AP22A (1)	H25XP22 (2)	RE25AP22A (3)	(2) Hi-Lite
	25XP22	25AP22A (1)	H25XP22 (2)	RE25AP22A (3)	(3) Color Bright "85"
	22JP22 * or	22JP22 (1)	H22JP22 (2)	RE22JP22 (3)	
	220P22 *				

* Used in Models: Z4203C5/C6, Z4205W5/W05/W6/W06, Z4208W/W5/W05, Z4216W5/W05/W6/W06, Z6208W/W0/W5/W05.

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA: MFGR. PART No.	DELCO PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q1		1st Video IF	121-500						
Q2		2nd Video IF	121-502 (1)						
Q3		3rd Video IF	121-520 (2)						
Q4		AFT Amp.	121-546	DS-74	GE-20	TR-21	HEP738	SK3018	ECG 108
Q5		Video Amp.	121-587	DS-74	GE-17	TR-25	HEP728	SK3018	ECG 128
Q6		IF AGC Amp.	121-499	DS-66	GE-1D	TR-21	HEP738	SK3020	ECG 123
Q7		Blanking Amp.	121-587		GE-17	TR-25	HEP728		ECG 128
Q8		2nd Chroma Banpdass	121-587	DS-74	GE-17	TR-25	HEP728		ECG 128

(1) Alternate Part #121-470.
(2) Alternate Part #121-521.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES: GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	REPLACEMENT RECTIFIERS: RCA PART No.	NOTES
X1	212-76 (212-37)	GE-504A	8D6 or 18DB8A(2)	ECG 116 or ECG 117	SK3017A or SK3032	(2) A single unit replacement for all four bridge circuit rectifiers.
X2	212-76 (212-37)	GE-504A	8D6 or 18DB8A(2)	ECG 116 or ECG 117	SK3017A or SK3032	
X3	212-76 (212-37)	GE-504A	8D6 or 18D88A(2)	ECG 116 or ECG 117	SK3017A or SK3032	
X4	212-76 (212-37)	GE-504A	8D6 or 18DB8A(2)	ECG 116 or ECG 117	SK3017A or SK3032	
X5	103-23	1N60	1N60	ECG 109		
X6	103-90 (1)		1N542 (1)	ECG 110(1)		(1) Matched pair.
X7	103-90 (1)					
X8	103-23	1N60	1N60	ECG 109		
X9	103-51	GE-504A	8D4	ECG 116		
X10	103-101	6GC1	DD04	ECG 113		
X11	212-85	GECR-1	61-8969	ECG 118		
X12	212-68	GECR-2	61-8968	ECG 119		
X13	103-131	1N34AS	1N34A	ECG 110 (3)		(3) Matched pair.
X14	103-131	1N34AS	1N34A			
X15	103-142	GE-504A	8D4	ECG 116		
X16	103-131	1N34AS	1N34A	ECG 110 (3)		
X17	103-131	1N34AS	1N34A			
X18	103-114	1N34AS	1N34A	ECG 109		
X19	212-72 (212-71)	GE-504A (5)	8D4 (5)	ECG 116 (5)	SK3017A (5)	(5) Four required.
X20	103-105 (4)					(4) Zener Diode.

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA: ZENITH PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	80 475V	22-5513	AFH3-50-20		CC0370A	XC4-34	FP450.08	TVL-3877
B	10 475V							
C	30 475V							
C2A	80 475V	22-5360	AFH4-19-75		000187A & WBR30-500	XC4-6.2		
B	30 475V							
C	4 475V							
D	4 475V							
C3	1 10V		CRE750A	EA15-2	AL1-50	MT1-1	MTA1D50	TL-1120
C4	200 25V	22-5175	PRS1280	EA30-250	WBR250-50	QT1-27	MTA200F25	TL-1213
C5	40 25V	22-4870	PTT84	EA30-50	WBR35-50	MT1-17	MTA40F50	TL-1208
C6	10 475V	22-4818	PRS1810		WBR10-500	QT1-6.1	TC81A	TVA-1802
C7	100 50V	22-5262	PRS1360	EA50-100	WBR125-50	QT1-23	TC3501A	TL-1309
C8	40 400V	22-5407	PRS1750		WBR40-500	QT1-14.1	TC78A	TVA1712
C9	4 150V	22-5425	CRE953A		WBR5-150	MT1-4	TT150X4	TE-1503
C10	1 NP 25V	22-4909	PRS7525				TCN501	TVAN1200

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.
C11	6.8 N75 10%							
C12	8 NPO 5%		NPO-OI 8.2					10TCC-V82
C13	2	#22-4731						
C14	4.25 ±.25	#22-3703						
C15	6	#22-5525						
C16	4.25 ±.25	#22-3703						
C17	4.25 ±.25	#22-3703						
C18	5 NPO 5%		NPO-DI 5.0		CZ601CH5R0D			10TCC-V50
C19	5 NPO 5%		NPO-DI 5.0		CZ601CH5R0D			10TCC-V50
C20	.15 50V		V1612P15		DMF1P15	1DP-3-154	PVC1015	225P1549R75
C21	.001	#22-4728						
C22	.001 25V		GPD X5F102K	DM-102	JBS601YP102K	CCD-102	SM210	2SS-D10
C23	.001	#22-4728						
C24	47	#22-4738						
C25	.002	#22-4729						
C26	.001	#22-4728						
C27	15	#22-4735						
C28	26 N075 5%	#22-3939					*	
C29	47	#22-4738						
C30	75	#22-4739						
C31	.002	#22-4729						
C32	20	#22-4737						
C33	.001 25V		GPD X5F102K	DM-102	JBS601YP102K	CCD-102	SM210	2SS-D10
C34	.002	#22-4729						
C35	.001	#22-4728						
C36	.001	#22-4728						
C37	1		NPO-DI 1.0	TCZ-1			CN0510	10TCC-V10
C38	50 NPO 5%			DTZ-50			CN0450	10TCC-Q50
C39	100	#22-4740						
C40	4.25 ±.25	#22-3703						
C41	5.5 NPO 5%	#22-3053						
C42	16 NPO 5%	#22-3558						10TCC-V56
C43	6	#22-5525						
C44	4	#22-4732						
C45	2	#22-4731						
C46	75 NPO 5%			DTZ-75				10TCC-Q75
C47	12 N750 10%			TCN-12	CZ601UJ120J		CN7412	10TCU-Q12
C48	10 NPO 10%		NPO-DI 10	DTZ-10	CZ601CG100J	CCT0-100	CN0410	10TCC-Q10
C49	47 N75 10%							
C50	180 10%		GPD X5F181K	DD-181	JBZ601YP181K	CCD-181	GP318	10TS-T18
C51	.1 200V		DBE2P1		DMF2P1	2DP-3-104	PVC201	2PS-P10
C52	.001	#22-4728						
C53	8.2 NPO ±.5		NPO-DI 8.2					10TCC-V82
C54	220							
C55	.002	#22-4729						
C56	.001	#22-4728						
C57	.001	#22-4728						
C58	10		GPD C0H100K	DD-100	CZ601CG100K	CCD-100	GP410	10TS-Q10
C59	10		GPD C0H100K	DD-100	CZ601CG100K	CCD-10D	GP410	10TS-Q10
C60	.001	#22-4728						
C61	3.6 ±.25		GPD C0J3R3K	DD-3R3		CCT0-3R3	GP533	10TS-V33
C62	1-9							
C63	4	#22-4732						
C64	2	#22-4731						
C65	.01		GPD X5S103K	DD-103	BYX6D1ZU103P	CCD-103	JF110	10TS-S10
C66	47 N075 5%						*	
C67	4.3 NPO ±.25	#22-3703						
C68	50 N750		N750-DI 47	TCN-50	CY601UJ470K	CCTN-470	CN7447	10TCU-Q47
C69	180		ADM-15-181	CPR-180J	CD15F181J500	DM-15-181K	SX318	424ME1800J501
C70	.001 1KV 10%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C71	100 5%			DTZ-100			CN0310	10TCC-T10
C72	2.4 5%	#22-2596						
C73	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C74	20 N330 10%			TCA-22		*	*	10TCS-Q22
C75	470 N1500 10%					*	*	10TCW-T47
C76	220 1KV 10%		GPD X5F221K	DD-221	J8Z601YP221K	CCD-221	GP322	10TS-T22
C77	150 N750		N750-DI 150	DTN-150		CCTN-151	CN7315	10TCU-T15
C78	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C79	.0047		GPD X5R472K	DD-472G	JBT601YP472K	CCD-472	JF247	10TS-D47
C80	.01		GPD X5S103K	DD-103	8YX601ZU103P	CCD-103	JF110	10TS-S10
C81	.0022 1KV		GPD X5F222K	DD-222	JBX6D1YP222K	CCD-222	GP222	10TS-D22
C82	.15 100V		V1612P15		DMF1P15	1DP-3-154	PVC1015	2PS-p15
C83	220 1KV 10%		GPD X5F221K	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22
C84	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C85	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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COILS (Sweep Circuits)

ITEM No.	FUNCTION	REPLACEMENT DATA: MFGR. PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	THORDARSON MEISSNER PART No.	TRIAD PART No.	WORKMAN PART No.
L51	Horiz. Osc. (Hold)	S-56877		H-161		HS-24		
L52	Horiz. Efficiency	S-77975	MWC-6	6322	WC-8A	WC-28 (1)	WLC-5	T107
L53	Pincushion	S-76901 (2)						
	Pincushion	S-80629 (3)						
	Pincushion	S-81429 (3)						
L54	Right R/G Vert.lines	S-58038	MWC-6	H-184	WC-8A	WC-52	WLC-5	T107
L55	Right R/G Horiz. "	S-58041		H-162		WC-51		
L56	Right Blue Horiz."	S-73854	MWC-6	6322	WC-8A	WC-28 (1)	WLC-5	T107
	Convergence Yoke Assembly	S-79029						
L57A	Blue Coil	S-79393						
B	Green Coil	S-79392						
C	Red Coil	S-79394						
	Blue - Alternate	S-76725						
	Green- Alternate	S-76726						
	Red - Alternate	S-76724						

(1) Oisregard Tap. (2) Used in Chassis 16Z7C50Z. (3) Used in Chassis 16Z7C50.

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA: MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	NOTES
	PRI.	SEC. 1						
T1	117VAC @ 3.2A AC	315VAC @ .5A DC	95-2550					
	SEC. 2	SEC. 3						
	6.3VAC @ .82A AC	12.6VAC,CT @ 12A AC						

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	REPLACEMENT DATA: MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	NOTES
T2	7100	3.2	95-2561	A-2931 (1)	A-8114 (1)	26S48 (1)	S-7X (1)	(1) Fabricate mounting.

TRANSFORMERS (Sweep Circuits)

ITEM No.	USE	REPLACEMENT DATA: MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	NOTES
T3	Yoke (Horiz. 13mh) 90° (Vert. 20mh)	95-2532	MDF-145C (1) (2)	DY-91AC (1)	Y108 (1)	YC-310-2 (1)	(1) Use original yoke plug and leads.
T4	Vert. Output	95-2551-C (95-2551)			26S60		(2) Install original 220 ohm resistors in series between yoke terminal #6 and yoke terminal #4. Connect original violet lead to junction of 220 resistors.
T5	Horiz. Output	S-79154					
	Horiz. Output, Alternate	S-79640					

SWEEP COMPONENT CONNECTION DATA

ORIGINAL → / REPLACEMENT ↓	YOKE: Original Connections									YOKE PLUG							
	1	3	4	6	8	9	11	12		1	2	3	4	5	6	7	8
										TO YOKE TERMINALS							
MERIT	10	7	6	11	(1)	4	5	9	(3)	10	9	7	6	(2)	11	5	4
STANCOR	Red	Blue	Yel/Blk	Yel	Vio	Whi/Red	Whi	Org.	(3)	1	3	5	10	7	9	12	11
THORDARSON	Red	Blue	Yel	Yel/Blk	Purp	Whi	Red/Whi.	Org.	(3)	1	3	5	11	7	12	9	10
TRIAD	1	3	4	6	8	9	11	12	(3)	1	12	3	4	5	9	11	6

(1) Install original 220 ohm ressstors in series between yoke terminal #6 and yoke terminal #4.
(2) Connect original violet lead to junction of 220 ohm resistors. (3) Use original yoke plug and leads.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA: MFGR. PART No.	QUAM PART No.	NOTES
SP1	3" x 5" PM 3.2 ohms	49-1131	35A05	
		49-1132		2 used
		49-1134		2 used
		49-1092		2 used
	6" x 9" PM 3.2 ohms	49-1059	69A1	
		49-1133		
	6" x 9" PM 6.4 ohms	49-106D	69A3Z8	2 used
	Horn 6.4 ohms	49-1155		
	3 1/2" PM 45 ohms	49-1094	3A15TZ40	
	12" PM 10 ohms	49-1121		2 used
	Horn 6.4 ohms	49-1042		2 used
	12" PM 6.4 ohms	49-1082		2 used
	Horn 6.4 ohms	49-1151		2 used
	10" PM 10 ohms	49-1097		
	12" PM 6.4 ohms	49-1045		

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA: IRC PART No.	WORKMAN PART No.	MFGR. PART No.
R41	12K 3W		3G-12K	63-7262
R42	22K 4W		4G-22K	
R43	27K 4W		4G-27K	
R76	4700 7W	1A-4500	7G-4.7K	63-4686
R78	39K 4W		4G-39K	63-7635
R100	3500 10W	1 3/4A-4000	10G-3.3K	63-6995
R105	9000 3W		3G-9.6K	63-5005
R130	Thermistor (150K Cold)			63-6824
R165	17K 5W	1A-17.5K		63-7407
R166	47K 3W			63-7312

ITEM No.	RATING	REPLACEMENT DATA: IRC PART No.	WORKMAN PART No.	MFGR. PART No.
R176	220 3W			63-7656
R178	V.D.R. *			63-6485
R190	22K 3W		3G-22K	63-5025
R228	12K 3W		3G-12K	63-7262
R241	Thermistor (140 Cold)			63-7346
R242	350 15W	2C-350	20W-SQ-350	63-7532
R243	350 15W	2C-350	20W-SQ-350	63-7532
R246	3770 15W	2C-3500	20W-SQ-3.9K	63-7533
R248	4.7 2W			

* Voltage Dependent Resistor

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA: PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1A	IF Input Coil	20-1627			
B	39.75MC Trap				
L2	1st Video IF	20-1521			
L4	41.25MC Trap	20-1516			
L5	47.25MC Trap	20-1516			
L6	2nd Video IF	20-1597			
L7	3rd Video IF	20-1458			
L8	4th Video IF	20-1534			
L9	41.25MC Trap	20-1474			
L10	Video Output IF	20-1458			
L11	RF Choke (27uh)	20-2707	19-6033	72F275AP	T360
	RF Choke (27uh)	20-2712, Alternate			
L12	RF Choke (27uh)	20-2707	19-6033	72F275AP	T360
	RF Choke (27uh)	20-2712, Alternate			
L13	4.5MC Trap	S-77669			
L14	Peaking (170uh)	20-2014	19-3180	72F184AP	T368
L15	Peaking (320uh)	20-2520 (1)	19-3375 (5)	6134 (5)	T321 (5)
L16	RF Choke (27uh)	20-2007	19-6033	72F275AP	T316
L17	Peaking (170uh)	20-2014	19-3180	72F184AP	T368
L18	Peaking (220uh)	20-2517 (2)	19-2027 (6)	72F224AP (6)	T399 (6)
L19	Peaking (250uh)	20-2012	19-3250	6181	T315
L20	AFT Input IF	20-1599			
L21	AFT Discriminator	20-1598			
L22	RF Choke (10uh)	20-2534	19-2016	72F105AP	T823
L23	RF Choke (27uh)	20-2707	19-6033	72F275AP	T360
	RF Choke (27uh)	20-2712, Alternate			
L24	RF Choke (27uh)	20-2707	19-6033	72F275AP	T360
	RF Choke (27uh)	20-2712, Alternate			
L25	Sound Take-off	S-77414			
L26	Sound Interstage IF	S-76920		6270	
L27	Quadrature	S-77358	20-1005	1480	TG268
	Quadrature	S-80480, Alternate			
	Quadrature	S-80411, Alternate			
L28	RF Choke (10uh)	20-2005	19-1005	72F105AP	T860
L29	RF Choke (10uh)	20-2005	19-1005	72F105AP	T860
L30	RF Choke (29uh)	20-2502 (3)		72F275AP (7)	T972 (7)
L31	Peaking (71uh)	20-2533 (4)		6172 (8)	T303 (8)
L32	1st Chroma Bandpass	S-77408			
L33	RF Choke (27uh)	20-2007	19-6033	72F275AP	T316
L34	2nd Chroma Bandpass	20-1614			
L35	Burst	S-80590			
L36	Peaking (86uh)	20-2002		72F825AP	
L37	3.58MC Adjust	S-66627	19-6821	4207	
L38	3.58MC Output	S-77411			
L39	RF Choke (27uh)	20-2007	19-6033	72F275AP	T316
L40	RF Choke (6uh)	20-2004	19-2014	4610	T922
L41	RF Choke (10uh)	20-2040	19-2016	72F105AP	T823
L42	Peaking (663uh)	20-2017	19-3660	72F684AP	T327
L43	Peaking (663uh)	20-2017	19-3660	72F684AP	T327

(1) Includes 6800 ohm resistor.
(2) Includes 12K resistor.
(3) Includes 18K resistor.
(4) Includes 27K resistor.
(5) Shunt with 6800 ohm resistor.
(6) Shunt with 12K resistor.
(7) Shunt with 18K resistor.
(8) Shunt with 27K resistor.

FILTER CHOKE

ITEM No.	RATINGS: CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	REPLACEMENT DATA: MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	NOTES
L44	3.1A DC	1.5	.035 H	95-2553					
L45	.5A DC	15	.6 H	95-2552					

FUSE DEVICES

ITEM No.	DESCRIPTION	PART No. DEVICE	PART No. HOLDER	BUSS PART No. DEVICE	BUSS PART No. HOLDER	LITTELFUSE PART No. DEVICE	LITTELFUSE PART No. HOLDER	WORKMAN PART No. DEVICE
F1	Fuse, Bel-fuse, 1 Amp.	136-71						W-1000-1
F2	Wire, 2 1/2" length #24							
F3	Wire, 2 1/2" length #24							
F4	Wire, 2 1/2" length #24							

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.

CAPACITORS (cont)

ITEM No.	RATING	REMARKS	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C86	20 NPO 10%		NPO-DI 20	DTZ-20		CCTO-200	CN0420	10TCC-Q20
C87	.1 400V		DBE4P1		DMF4P1	4DP-3-104	PVC401	4PS-P10
C88	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C89A	.0022		GPD X5F222K	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
B	.0022		GPD X5F222K	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C90	.0068 600V 10%		DBE6D68		DMF6D68	6DP-1-682	PVC6268	6PS-D68
C91A	51		GPD X5F500K	DD-510	JBZ601YP50DK	CCTO-510	GP450	10TS-Q50
B	51		GPD X5F500K	DD-510	JBZ601YP500K	CCTO-510	GP450	10TS-Q50
C92	.1 1KV 10%		BE-10P1					10TM-P10
C93	.0022		GPD X5F222K	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C94	.033 200V 10%		V1612S33		DMF2S33	4DP-2-333	PVC2133	4PS-S33
C95	.1 600V 10%		DBE6P1		DMF6P1	6DP-4-104	PVC601	6PS-P10
C96	.01 600V 10%		DBE6S1		DMF6S1	6DP-2-103	PVC611	6PS-S10
C97	.47 200V		DBE2P47		DMF2P47	2DP-5-474	PVC2047	2PS-P47
C98	330 1KV 10%		GPD X5F331K	DD-331	JBZ601YP331K	CCD-331	GP333	10TS-T33
C99	.0015 1KV 10%		GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C100	.0022 10%		GPD X5F222K	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C101	100 N1500/3KV/10%						3DY310	
C102	.0022 10%		GPD X5F222K	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C103	.0022 10%		GPD X5F222K	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C104	680 10%		ADM-20-681	CPR-680J	CD19F681J500	DM-16-681J	SX368	424ME6800J501
C105	.0015 400V 10%		V1614D15	CPR-1500J	WMF4D15	6DP-1-152	PVC6215	6PS-D15
C106	.0011 400V 10%		DBE6D1	CPR-1000J	WMF4D1	6DP-1-102	PVC621	6PS-D10
C107	.0047 10%		GPD X5R472K	DD-472G	JBT601YP472K	CCD-472	JF247	10TS-D47
C108	.01		GPD X5S103K	DD-1D3	BYX601ZU103P	CCD-103	JF110	10TS-S10
C109	.001 1KV 10%		GPD X5F102K	OD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C110	.001 1KV 10%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C111	330 10%		GPD X5F331K	DD-331	JBZ601YP331K	CCD-331	GP333	10TS-T33
C112	.01		GPD X5S103K	DO-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C113	.0047 10%		GPD X5R472K	DD-472G	JBT601YP472K	CCD-472	JF247	10TS-D47
C114	22 N1500/3KV/10%							
C115	150 6KV		HVD-60150	DD60-151		6CCD-151	6HV315	60GA-T15
C116	75 N1500/4KV							
C117	220		GPD X5F221K	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22
C118	.0033 400V 10%		V1614D33	CPR-3300J	WMF4D33	6DP-1-332	PVC6233	6PS-D33
C119	.22 200V		V1612P22		DMF2P22	2DP-4-224	PVC2022	2PS-P22
C120	45 N1500/5KV/10%							
C121	68 10%		GPD X5F680K	0D-680	JBZ601YP680K	CCD-680	GP468	10TS-Q68
C122	.047 1KV 10%		BE10S47		DPMS16S47	16DP-5-473		10TM-S47
C123	.1 1KV		BE10P1					10TM-P10
C124	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C125	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C126A	.001 10%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
B	.001 10%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C127A	.001		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
B	.001		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C128	.1 200V		DBE2P1		DMF2P1	2DP-3-104	PVC201	2PS-P10
C129	5 5%		NPO-DI 5.0		CZ601CH5R0D			10TCC-V50
C130	.D047 10%		GPD X5R472K	DD-472G	JBT601YP472K	CCD-472	JF247	10TS-D47
C131	36 N033 5%						*	
C132	220 1KV 10%		GPD X5F221K	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22
C133	47 N75 10%							
C134	220 1KV 10%		GPD X5F221K	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22
C135	.0D15 10%		GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C136	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C137	220 1KV 10%		GPD X5F221K	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22
C138	18 NPO 5%			TCZ-18	CY601CG180J		CN0418	10TCC-Q18
C139	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C140	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C141	220 1KV 10%		GPD X5F221K	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22
C142	220 1KV 10%		GPD X5F221K	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22
C143	.047 400V		DBE6S47		DMF4S47	4DP-3-473	PVC4147	4PS-S47
C144	33 N330 10%			TCA-33		*	*	10TCS-Q33
C145	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C146	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C147A	.001 1KV		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
B	.001 1KV		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C148	.DD1 1KV 10%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C149	10D N1500 10%			TCL-100		*		10TCW-T10
C150	.01 1.5KV				HVT162ZV103P		2HV110	30GA-S10
C151	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C152	.01		GPD X5S1D3K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C153	.047 6D0V		DBE6S47		DMF6S47	6DP-3-473	PVC6147	6PS-S47
C154	12 NPO 5%			TCZ-12	CZ601CG120J		CN0412	10TCC-Q12
C155	.047 100V 10%		V1612S47		DMF1S47	1DP-2-473	PVC1147	225P47391WD3
C156	.033 200V 10%		V1612S33		DMF2S33	4DP-2-333	PVC2133	4PS-S33
C157	.1 400V		DBE4P1		DMF4P1	4DP-3-104	PVC401	4PS-P10
C158	.001		GPD X5F1D2K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C159	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C160	.62pf	#22-3786						
C161	220 1KV 10%		GPD X5F221K	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22
C162	18 NPO 5%			TCZ-1B	CY601CG180J		CN0418	10TCC-Q18
C163	100 NPO 5%			DTZ-10D			CN0310	10TCC-T10
C164	.001 1KV 1D%		GPD X5F1D2K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C165	.01		GPD X5S1D3K	DD-1D3	BYX601ZU103P	CCD-103	JF110	10TS-S10
C166	100 1KV 1D%		GPD X5F1D1K	DD-1D1	JBZ601YP101K	CCD-101	GP310	10TS-T10
C167	150 1KV 1D%		GPD X5F151K	DD-151		CCD-151	GP315	10TS-T15
C168	47 N75 10%						*	
C169	82 N15DD 5%					*		10TCW-Q82
C170	22D N750 5%			DTN-220			CN7322	10TCU-T22
C171	33 N330 10%			TCA-33		*	*	10TCS-Q33
C172	.D1		GPD X5S103K	DD-103	BYX601ZU1D3P	CCD-1D3	JF110	10TS-S10
C173	.D1		GPD X5S103K	DD-1D3	BYX601ZU103P	CCD-1D3	JF110	10TS-S1D
C174	.1 100V 10%		DBE2P1		DMF1P1	1DP-2-104	PVC101	225P10491WD3
C175	.D82 200V 10%		DBE6S82		DPMS6S82	6DP-4-823		6PS-S82
C176	.056 200V 10%		DBE6S56		PKM4S56	4DP-3-563	PVC6156	4PS-S56
C177	.1 200V 10%		DBE2P1		DMF2P1	2DP-3-104	PVC201	2PS-P10
C178A	.D047		GPD X5R472K	DD-472G	JBT601YP472K	CCD-472	JF247	10TS-D47
B	.D047		GPD X5R472K	DD-472G	JBT601YP472K	CCD-472	JF247	10TS-D47

ZENITH CHASSIS 16Z7C50, 16Z7C50Z

FOLDER 2

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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CAPACITORS (cont)

ITEM No.	RATING	REMARKS	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
			REPLACEMENT DATA					
C179	.1 600V		DBE6P1		DMF6P1	6DP-4-104	PVC601	6PS-P10
C180	.01		GPD X5S103K	DD-103	BYX601ZU103P	CCD-103	JF110	10TS-S10
C181	.001	#22-4728						
C182								
C183	13	#22-4741						
C184	470 1KV		GPD X5F471K	DD-471	JBZ601YP471K	CCD-471	GP347	10TS-T47
C185	47 N75 10%							
C186	.001		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10

* 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	RESISTANCE	MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS—IRC PART No.	MALLORY PART No.
			REPLACEMENT DATA				
R1	Hue (Tint) Motor Driven	2500	63-6400				
	Hue	2500	63-6401 (6)				
	Hue	2500	63-6882 (6)				
	Hue	2500	63-7141 (6)				
	Hue	2500	63-7413 (6)				
	Hue	2500	63-7412 (6)				
	Hue	2500	63-7549 (6)				
R2	Volume	1meg, 500K Tap	63-7352	F16-1meg, SFS212	A47F5-1meg, RS-3/16 or [NPF-1meg, SE-F-400]	B19-137X,SK9 or [BU2,CF47T, SS4,DC1]*	RU16T55,SL35, IS2187 or [UA16T454, SD2250] or [P16T55,3038, SF3062]
	Volume	1meg	63-7327 (6)				
	Volume	1meg	63-7333 (6)				
	Volume/Switch	1meg, 600K Tap	63-7355 (6)	F16-1meg, SP212,KR-8	C47SF-1meg, RS-3/16 or [NPF1-1meg, UPP-H-400, PPAP,NWG-18]	B19-137X,SK8 or [PPQ19-137X,SK8] or [BU1,CF47T, SS11A,K]*	RUP16T35,SL35 or [PP16T55,DS37] or (P16T55, 3014,FPP-1]
	Volume	1meg	63-7356 (6)	F1-1meg, SNK200	A47-1meg-S, RN-3,TT-2 or [NP-1meg-S, NML-A-300,TT-2]	B11-137,TM5 or [BU11,CF17, SS1,DC1]*	RU16L,SL37, SN1625 or [UA16L,SN1625] or TA16L
	Volume	1meg	63-7379 (6)				
	Volume	1meg	63-7583 (6)				
R3	Color Level	500	63-7550	F4-500, SNF100		[BU11,CF77, SS4,DC1]*	UA751A,SD750
	Color Level	500	63-7142 (6)				
R4	Peak Picture	1500	63-7613				
R5	Height	7meg	63-5415	TT-90 or [F1-7.5meg, SNK010]	847-7.5meg-S or [NP-7.5meg-S, NML-A-300,TT-2]	HLC6	PTA755L or [UA755L,SN281] or SU69
R6	Vert. Linearity	2000, 2W	63-6951,D	V-2000 (1)	U39-2000 (1)	110-3000-350	MR1500P (1)
R7	Vert. Hold	750K	63-6979				
R8	Contrast	500	63-6980				
R9	Brightness	1meg	63-7092				
R10	Brightness Range	3meg	63-7101	TT-84 or [F1-3meg, SNK010]	B47-3meg-S or [NP-3meg-S NML-A-300,TT-2]	B11-140,TM4 or [BU11,CF21,SS6]*	RU36L,SL37, SN281 or [UA36L, SN281] or SU59
R11	Tone, Detent at 50%	1meg	63-7351				
R12	Color Killer	2meg	63-5463	TT-75 or [F1-2meg, SNK010]	B47-2meg-S or [NP-2meg-S, NML-A-300,TT-2]	B11-139,TM4 or [BU11,CF19,SS6]*	PTA26L or [RU26L,SL37, SN281] or [UA26L,SN281]
R13	AGC Delay	4000, 2W	63-7636	V-500	U39-500 or [NPW-400, NML-A-300,TT-2]	P115R501A or [BU1,WF20,SS6]*	MR500T or MR500B or VW400
R14	Buzz	750, 2W	63-6950,A	V-800	U39-800 or [NPW-750, NML-A-300,TT-2]	110-1000 or P115R102A or [BU1,WF2,SS6]*	MR850T or MR1000P or VW750
R15	Blue Screen (G2)	5meg	63-6977	F1-5meg (2), SNK012		HLC5 (2)	PTA56L (2) or [UA56L (2), SN1000] or [RU56L (2), SN1000]
R16	Red Screen (G2)	5meg	63-6978	F1-5meg (2), SNK012		HLC5 (2)	PTA56L (2) or [UA56L (2), SN1000] or [RU56L (2), SN1000]
R17	Green Screen (G2)	5meg	63-6976	F1-5meg (2), SNK012		HLC5 (2)	PTA56L (2) or [UA56L (2), SN1000] or [RU56L (2), SN1000]
R18	AGC	5000	63-7389	TT-10 or [F1-5000, SNK010]	B47-5000-S or [NP-5000-S, NML-A-300,TT-2]	B11-114,TM4 or [BU11,CF8,SS6]*	PTA53L or [RU53L,SL37, SN281] or [UA53L,SN281]
R19	Green Gain (Drive)	5000	63-6334	F1-5000 (2), SNK012	B47-5000-S (2) or [NP-5000-S (2), NML-A-300]	B11-114,TM4 (2)or [BU11,CF8,SS6]*	PTA53L (2) or [RU53L (2), SN1000] or [UA53L (2), SN1000]
R20	Blue Gain (Drive)	5000	63-6333	F1-5000 (2), SNK012	B47-5000-S (2), [NP-5000-S (2), NML-A-300]	B11-114,TM4 (2)or [BU11,CF8,SS6]*	PTA53L (2) or [RU53L (2), SN1000] or [UA53L (2), SN1000]

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	MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS—IRC PART No.	MALLORY PART No.
			REPLACEMENT DATA				
R21	High Voltage Adjust	3meg	63-7628	TT-84 or [F1-3meg, SNK010]	B47-3meg-S or [NP-3meg-S, NML-A-300,TT-2]	B11-140,TM4 or [BU11,CF21,SS6]*	RU36L,SL37, SN281 or [UA36L, SN281] or SU59
	High Voltage Adjust	3meg	63-7594 (6)	TT-84 or [F1-3meg, SNK010]	B47-3meg-S or [NP-3meg-S, NML-A-300,TT-2]	B11-140,TM4 or [BU11,CF21,SS6]*	RU36L,SL37, SN281 or [UA36L, SN281] or SU59
R22	Vert. Centering	10, 2W	63-7009	V-10 (5) or (WN100]	U39-15 (5) or [NPW-10, NML-A-300,TT-2]	110-15 (5) or P115R100A or [BU1,WF16,SS6]*	MR15P (2) or MR10T or VW10
R23	Horiz. Centering	10, 2W	63-7211			P115R100A (2), P115-117-1	MR15P (2), MRS1250
R24	Focus	15meg	63-7210				FCR156L
R25	R-G Horiz. Lines (Top)	120, 2W	63-7073	V-120 (3)	U39-125 (3) or [NPW-150, NML-A-300,TT-2]	P115R101A, P115-117-1 or [BU11,WF19,SS6]*	MR100T, MRS1250
R26	R-G Vert. Lines (Top)	120, 2W	63-7073	V-120 (3)	U39-125 (3) or [NPW-150, NML-A-300,TT-2]	P115R101A, P115-117-1 or [BU11,WF19,SS6]*	MR100T, MRS1250
R27	Blue Horiz.,Lines (Top)	60, 2W	63-7348	V-60 (3)	U39-75 (3) or [NPW-75, NML-A-300,TT-2]	P115R500A, P115-117-1 or [BU11,WF18,SS6]*	MR50T, MRS1250
R28	Blue Horiz. Lines (Left)	180, 2W 60 Stop	63-7076	V150 (4)	U39-150 (4)	P115R101A (4), P115-117-1 or 110D175-60 or [BU11,WF1 (4), SS6]*	MR175SP, MRS1250
R29	R-G Vert. Lines (Left)	70, 2W	63-7075	V-100	U39-75	P115R101A, P115-117-1 or [BU11,WF19,SS6]*	MR100T, MRS1250
R30	R-G Vert. Lines (Left)	60, 2W	63-7074	V-60 (3)	U39-75 (3) or [NPW-75, NML-A-300,TT-2]	P115R500A, P115-117-1 or [BU11,WF18,SS6]*	MR50T, MRS1250
R31	R-G Horiz. Lines (Bottom)	120, 2W	63-7073	V-120 (3)	U39-125 (3) or [NPW-150, NML-A-300,TT-2]	P115R101A, P115-117-1 or [BU11,WF19,SS6]*	MR100T, MRS1250
R32	R-G Vert. Lines (Bottom)	60, 2W	63-7074	V-60 (3)	U39-75 (3) or [NPW-75, NML-A-300,TT-2]	P115R500A, P115-117-1 or [BU11,WF18,SS6]*	MR50T, MRS1250
R33	Blue Horiz. Lines (Bottom)	120, 2W	63-7347	V-120 (3)	U39-125 (3) or [NPW-150, NML-A-300,TT-2]	P115R101A, P115-117-1 or [BU11,WF19,SS6]*	MR100T, MRS1250

(1) Connect a 270 ohm, 2 watt resistor in series with terminal.
(2) Use original nylon tab mount.
(3) Insulate control from chassis and solder original center terminal lead to metal case of control.
(4) Connect a 56 ohm, 2 watt resistor in series with terminal.
(5) Use original nylon tab mount and solder original center terminal lead to metal case of control.
(6) See Alternate List. * "SNAPTROL"

(6) ALTERNATE CONTROL PARTS LIST

PART FUNCTION	PART NUMBER	MODELS
Hue	63-6401 or 63-6882	Z6208W5/W05
Hue	63-7141	T2941W5/W6, Z4203C5/C6, Z4205W5/W05/W6/W06, Z4208W/W5/W05, Z4216W5/W05/W6/W06
Hue	63-7412	Z6507W
Hue	63-6881	May be used in place of 63-6400, but not interchangeable
Hue	63-7413	Z6208W/W0
Hue	63-7549	GA50-36W7/-40W7/-42H7/-44M7/-56W5/-59W5, T2952W5/W05, T2958P5/P05/W5/W05, T2958P7/P8/W7/W8, T2981M5/M05, T2983W5/W05, T2984W5/W05, T2985M5/M05, T2987H5/H05, T2991DE5/P5/P05, Y4919W7, Z4501J5/J6, Z4502W5/W05/W6/W06, Z4507W/W5/W05, Z4512W6, Z4513W5/W6, Z4514M5/M6, Z4515H5/H6, Z4516DE5/DE6/P5/P6, Z4518W/W5, Z4519P/P5/P05/W/W5/W05, Z4520M/M5/M05, Z4524H/H5/H05. Z4526M/M5/M05, Z4528H/H5/H05, Z4532DE/DE5/DE05/P/P5/P05, Z4533W/W5/W05, Z4535M/M5/M05, Z4538DE/DE5/DE05/P/P5/P05, Z4539H5/R5, Z4541W/W5/W05, Z4543DE/DE5/DE05 / P/P5/P05, Z4545H/H5/H05, Z4547M/M5/M05, Z8530W/W5, Z8548H/H5, Z8558H, Z8560H5, Z8563M/M5, Z8568DE/DE5.
Color Level	63-7142	GA-50-42H7, Z4203C5/C6, Z4205W5/W05/W6/W06, Z4208W/W5/W05, Z4216W5/W05/W6/W06
Volume	63-7327	T2941W5/W6, Z4203C5/C6, Z4205W5/W05/W6/W06, Z4208W/W5/W05, Z4216W5/W05/W6/W06
Volume	63-7333	Z6208W/W0, Z6208W5/W05
Volume	63-7355	GA-50-36W7/-40W7/-42H7/-44M7/-56W5, S2950W5/W6, T2952W5/W05, T2958P5/P05/W5/W05/P7/P8/W7/W8, T2981M5/M05, T2983W5/W05, T2984W5/W05, T2985M5/M05, T2987H5/H05, T2991DE5/P5/P05, Y4519W7, Z4501J5/J6, Z4502W5/W05/W6/W06, Z4507W/W5/W05, Z4512W6, Z4513W5/W6, Z4514M5/M6, Z4515H5/H6, Z4516DE5/DE6/P5/P6, Z4518W/W5, Z4519P/W/P5/P05/W5/W05, Z4520M/M5/M05, Z4524H/H5/H05, Z4526M5/M05, Z4528H/H5/H05, Z4532DE/DE5/DE05/P/P5/P05, Z4533W/W5/W05, Z4535M/M5/M05.
Volume	63-7356	Z4526M
Volume	63-7379	Z8530W/W5, Z8548H/H5, Z8558H, Z8560H5, Z8563M/M5, Z8568DE/DE5
Volume	63-7583	Z4541W/W5/W05, Z4543DE/DE5/DE05/P/P5/P05, Z4545H/H5/H05, Z4547M/M5/M05, Z6541W/W5/W05, Z6543DE/DE5/P/P5/P05, Z6545H/X, Z6545H5/X5, Z6547M/M5, Z6549H/H5/H05.
High Voltage Adjust	63-7594	GA-50-42H7, Z4208W, Z4507W, Z6208W/W0, Z6507W

PARTS LIST AND DESCRIPTION

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

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA: MFGR. PART No.	DELCO PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.
Q1		1st Amp.	121-494	DS-26	GE-2	TR-14	SK-3004	ECG 102
Q2		2nd Amp.	121-491	DS-26	GE-2	TR-14	SK-3004	ECG 102
Q3		3rd Amp.	121-492	DS-26	GE-2	TR-14	SK-3004	ECG 102
Q4		Limiter	121-493	DS-26	GE-2	TR-14	SK-3004	ECG 102
Q5	Tint Up	Relay Control	121-490	DS-26		TR-05		ECG 102
Q6	Tint Down	Relay Control	121-490	DS-26		TR-05		ECG 102
Q7		Pilot Relay Control	121-490	DS-26		TR-05		ECG 102
Q8	Pilot -	Stepper Relay Control	121-490	DS-26		TR-05		ECG 102

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES: GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	REPLACEMENT RECTIFIERS: RCA PART No.	SARKES TARZIAN PART No.	NOTES
X1	212-79	GE-504A	8D4 or 5A4-D	ECG 116 or ECG 117	SK-3031 or SK-3017A	40C or F-4	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA: ZENITH PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	200 35V	22-3721	PRS1530		BR200-150	QT1-27	TC496A	TL-1312
C2	10 3V	22-3705	CRE207A	EA6-10	NLW10-3	MT1-5	TT3X10	TL-1053
C3A	25 30V	22-3642	PRS2175		BBRD3315	QTZ-9	TCD47	TVA-2434
B	25 30V							
C4A	40 30V	22-3643	PRS2195		BBRD4415	QT2-9	TCD48	TVA-2445
B	40 30V							
C5	4,200VNP	22-2893	NP-PRS7750		BRNP5-400	NPQT-2	TCN2550	TVAN-1436

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.
C11	.05 25V		TTP-05	CK-503	HOV101ZV503Z	CCD-503	TA150	TGL-S50
C12	.005 25V		TTP-005	CK-502	HOY101ZV502P	CCD-502	TA250	TG-D50
C13	.05 25V		TTP-05	CK-503	HOV101ZV503Z	CCD-503	TA150	TGL-S50
C14	.05 25V		TTP-05	CK-503	HOV101ZV503Z	CCD-503	TA150	TGL-S50
C15	.05 25V		TTP-05	CK-503	HOV101ZV503Z	CCD-503	TA150	TGL-S50
C16	.01 25V		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C17	.05 100V		GPD Z5V503P	DD-503			GP150	
C18	820 100V 5%		ADM-20-821	CPR-820J	CD19F821J500	DM-19-821J	SX382	MS-382
C19	820 100V 5%		ADM-20-821	CPR-820J	CD19F821J500	DM-19-821J	SX382	MS-382
C20	820 100V 5%		ADM-20-821	CPR-820J	CD19F821J500	DM-19-821J	SX382	MS-382
C21	820 100V 5%		ADM-20-821	CPR-820J	CD19F821J500	DM-19-821J	SX382	MS-382
C22	.47 400V		V1614P47		DPMS4P47	4DP-6-474	PVC4047	
C23	.0047		GPD X5R472K	DD-472G	JBT601YP472K	CCD-472	JF247	10TS-D47
C24	.001 1KV		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA: MFGR. PART No.	CENTRALAB PART. No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Sensitivity	18K	63-7534	F2-25K, SNK010	NP-25K-Z, NML-A-300, TT-2	B13-120, TM4	RU24A, SL37, SN1000 or (UA24A, SN1000) or (U24)

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA: IRC PART No.	WORKMAN PART No.	MFGR. PART No.	ITEM No.	RATING	REPLACEMENT DATA: IRC PART No.	WORKMAN PART No.	MFGR. PART No.
R21	100Ω 5W (100Ω 4W)	PW5-100 PW5-100	5W-SQ-100 5W-SQ-100	63-3210					

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA: PART No.	MEISSNER PART No.	MILLER 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: PRI.	SEC. 1	REPLACEMENT DATA: MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	NOTES
T1	117VAC @ .065A AC	22.5VAC A .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	195-44	Pilot
K4	Relay	195-39	Pilot Stepper
K5	Relay	195-43	Mute Function
K6	Relay	195-35	Volume Step
S1	Switch	85-932	Auto-Manual

TRANSMITTER PARTS LIST

PART NAME	PART No.	NOTES
Transmitter Case	43-797	
Transmitter Mechanism Ass'y	S-69441	
Top Housing and Overlay Ass'y	S-69446	
Rod Bracket & Spring Ass'y	S-79513	
Hammer Housing	43-798	Part of S-69441
Pushbutton (4 used on 12-4184)	46-4384	
Pushbutton Mounting Bracket Assembly (4 required)	12-4184	
Rod "A" Plain	76-1002	
Rod "B" - 3 Ring	76-1003	
Rod "C" - 1 Ring	76-1004	
Rod "D" - 2 Ring	76-1005	
Hammer - 9/32 lg. Plain	97-1673	
Hammer - 9/32 lg. Plain	97-623	
Hammer - 5/16 lg. 3 Ring	97-624	
Hammer - 3/8 lg. 1 Ring	97-625	
Hammer - 13/32 lg. 2 Ring	97-626	
Grille	138-398	
Transmitter Overlay	57-5250	Part of S-69446

PHOTOFACT® Folder

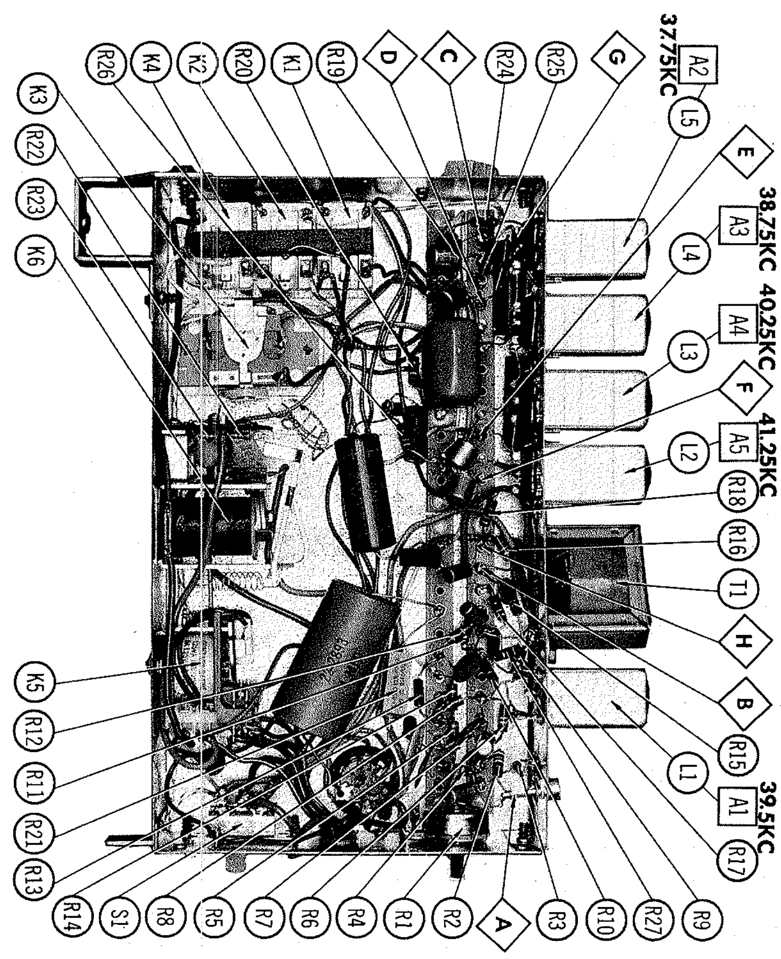
ZENITH REMOTE CONTROL RECEIVER S-77536, TRANSMITTER S-68936

For Supplier Address See PHOTOFACT Index

IMPORTANT FILING NOTICE

This PHOTOFACT Folder covers equipment used with the TV chassis covered in PHOTOFACT SET 1055 FOLDER 2 . File this Folder with the TV Folder in the yellow filing jacket provided.

ZENITH REMOTE CONTROL RECEIVER S-77536, TRANSMITTER S-68936



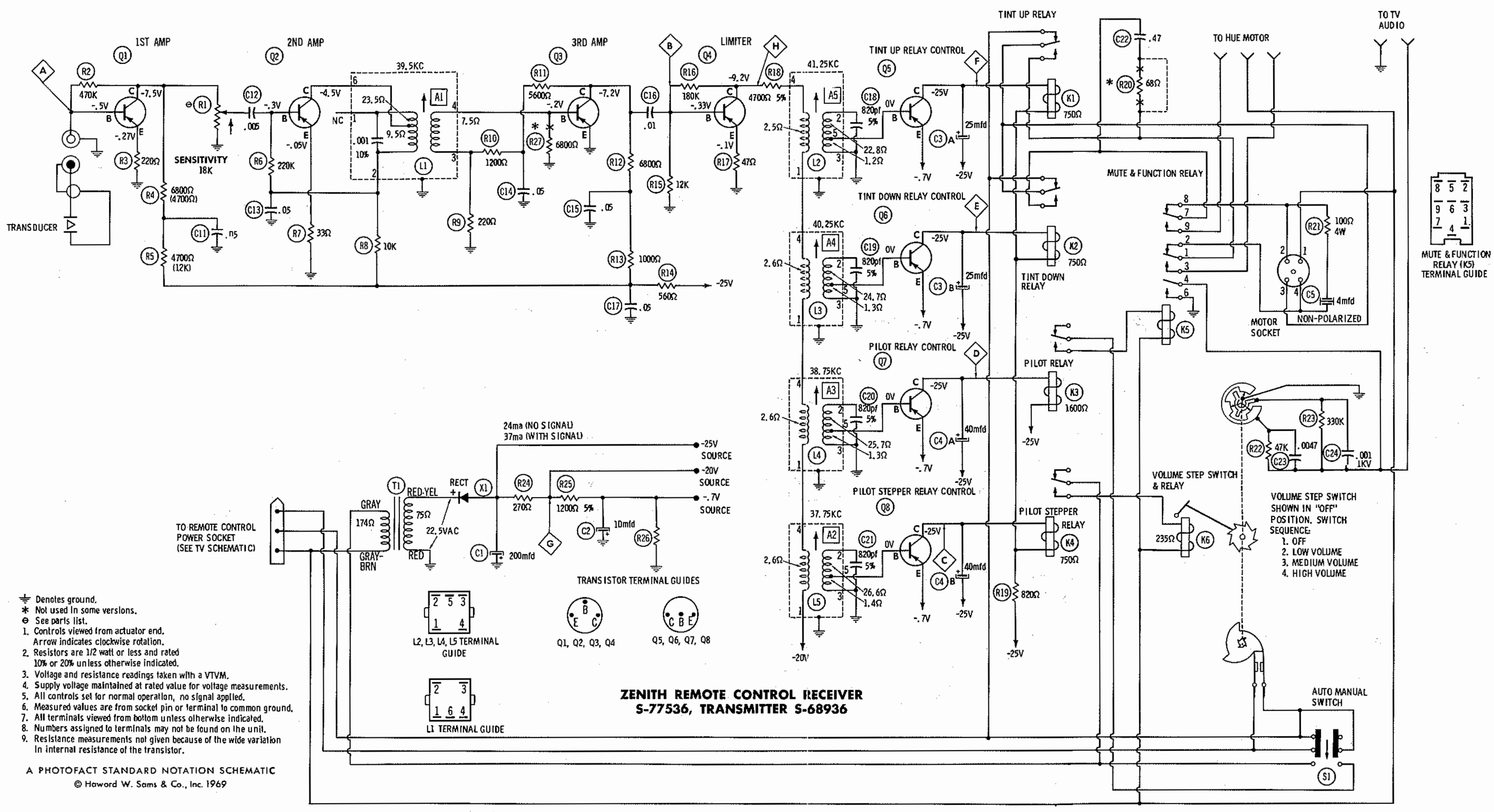
REMOTE RECEIVER ALIGNMENT

When adjusting A2 thru A5, correct setting is achieved with dip nearest top of coil.

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
1.	Connect high side thru a .002 capacitor to Point ⟨E⟩. Low side to ground.	39.5KC		RF probe to Point ⟨G⟩. Low side to ground.	A1	Connect jumper from Point ⟨C⟩ to Point ⟨D⟩. Adjust for maximum. Remove jumper.
2.	"	37.75KC		DC probe to Point ⟨A⟩. Low side to ground.	A2	Adjust for MINIMUM.
3.	"	38.75KC		DC probe to Point ⟨B⟩. Low side to ground.	A3	Adjust for MINIMUM.
4.	"	40.25KC		DC probe to Point ⟨F⟩. Low side to ground.	A4	Adjust for MINIMUM.
5.	"	41.25KC		DC probe to Point ⟨H⟩. Low side to ground.	A5	Adjust for MINIMUM.

REMEMBER TO ASK— "What else needs fixing?"

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

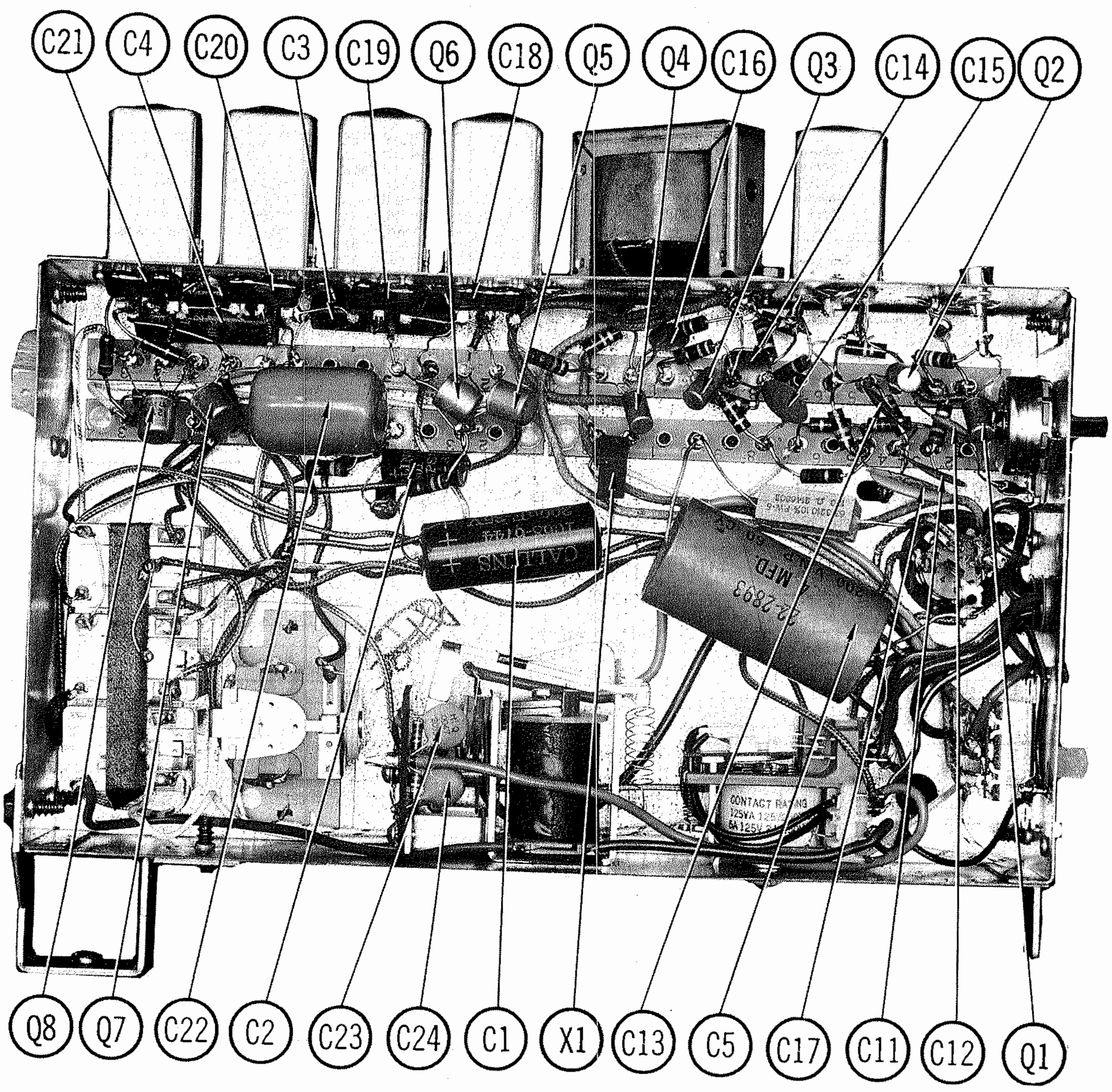


ZENITH REMOTE CONTROL RECEIVER
S-77536, TRANSMITTER S-68936

⏚ Denotes ground.
✱ Not used in some versions.
⊖ See parts list.

1. Controls viewed from actuator end. Arrow indicates clockwise rotation.
2. Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.
3. Voltage and resistance readings taken with a VTVM.
4. Supply voltage maintained at rated value for voltage measurements.
5. All controls set for normal operation, no signal applied.
6. Measured values are from socket pin or terminal to common ground.
7. All terminals viewed from bottom unless otherwise indicated.
8. Numbers assigned to terminals may not be found on the unit.
9. Resistance measurements not given because of the wide variation in internal resistance of the transistor.

A PHOTOFACT STANDARD NOTATION SCHEMATIC



ND DESCRIPTION

Model, Part Number, and Description.)

...ALAB No.	REPLACEMENT DATA CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
				10TCC-V82
4	HOV101ZV104Z		TA010	TG-P10
		*	*	
3	HOV101ZV503Z	CCD-503	TA150	TGL-S50
3	HOV101ZV503Z	CCD-503	TA150	TGL-S50
3	HOY101ZV103P	CCD-103	TA110	TG-S10
390J	CD15F391J500	DM-15-391J	SX339	MS-339
				10TCC-V27
1	JBY601YP561K	CCD-561	GP356	10TS-T56
3	HOV101ZV503Z	CCD-503	TA150	TGL-S50
		*	*	
1	JBY601YP681K	CCD-681	GP368	10TS-T68
3	HOV101ZV503Z	CCD-503	TA150	TGL-S50
2R2	CZ601CJ2R2D	CCTO-2R2	CNO522	10TCC-V22
100	CX601UJ101R	CCTN-101	CN7310	10TCU-T10
				10TCC-V39
61	JBY601YP561K	CCD-561	GP356	10TS-T56
03	HOV101ZV503Z	CCD-503	TA150	TGL-S50
31	JBY601YP681K	CCD-681	GP368	10TS-T68
03	HOY101ZV103P	CCD-103	TA110	TG-S10
03	HOV101ZV503Z	CCD-503	TA150	TGL-S50
22	JBX601YP222K	CCD-222	GP222	10TS-D22
22	JBX601YP222K	CCD-222	GP222	10TS-D22
22	JBX601YP222K	CCD-222	GP222	10TS-D22
03	HOR101ZV203P	CCD-203	TA120	TG-S20
02	HOY101ZV502P	CCD-502	TA250	TG-D50
91		CCD-391	GP339	10TS-T39
91		CCD-391	GP339	10TS-T39
02	JBS601YP102K	CCD-102	SM210	2SS-D10
270J	CD15F271J500	DM-15-271J	SX327	MS-327
1000J	CD19F102J500	DM-19-102J	SX210	MS-21
	DMF1P47	1DP-4-474	PVC1047	225P4749R75
2200J	CD19F222J500	DM-19-222J	SX222	MS-222
03	HOY101ZV103P	CCD-103	TA110	TG-S10
2200J	CD19F222J500	DM-19-222J	SX222	MS-222
32	JBV601YP332K	CCD-332	JF233	10TS-D33
1000J	CD19F102J500	DM-19-102J	SX210	MS-21
1000J	CD19F102J500	DM-19-102J	SX210	MS-21
03	HOV101ZV503Z	CCD-503	TA150	TGL-S50
	DMF1P47	1DP-4-474	PVC1047	225P4749R75
	DMF2P15	2DP-3-154	PVC2015	2PS-P15
31	JBZ601YP331K	CCD-331	GP333	10TS-T33
6800J	PM2D68	6DP-1-682	PVC6268	6PS-D68
	DMF2P1	2DP-3-104	PVC201	2PS-P10
03	HOR101ZV203P	CCD-203	TA120	TG-S20
	DMF2P15	2DP-3-154	PVC2015	2PS-P15
70	JBZ601YP470K	CCD-470	GP447	10TS-Q47
03	HOV101ZV503Z	CCD-503	TA150	TGL-S50
03	HOV101ZV503Z	CCD-503	TA150	TGL-S50
	DMF1P47	1DP-4-474	PVC1047	225P4749R75
31	JBZ601YP331K	CCD-331	GP333	10TS-T33
	DMF2P15	2DP-3-154	PVC2015	2PS-P15
-6800J	PM2D68	6DP-1-682	PVC6268	6PS-D68
	DMF2P1	2DP-3-104	PVC201	2PS-P10
203	HOR101ZV203P	CCD-203	TA120	TG-S20
	DMF2P15	2DP-3-154	PVC2015	2PS-P15
470	JBZ601YP470K	CCD-470	GP447	10TS-Q47
503	HOV101ZV503Z	CCD-503	TA150	TGL-S50
103	BYX601ZU103M	CCD-103	JF110	10TS-S10
103	BYX601ZU103M	CCD-103	JF110	10TS-S10
503	HOV101ZV503Z	CCD-503	TA150	TGL-S50
103	BYX601ZU103M	CCD-103	JF110	10TS-S10
103	BYX601ZU103M	CCD-103	JF110	10TS-S10
152		CCD-152	GP215	10TS-D15
				10TCC-V18

...butor on order to manufacturer.

...nless listed)

...NTRALAB PART No.	REPLACEMENT DATA CLAROSTAT PART No.	CTS—IRC PART No.	MALLORY PART No.
...250K, ...250K, SF206, ...-2	NP-250K-Z, NR-250K-Z, UP-B-400, DC-2	B13-130, B13-130, SK1, QCM or (BU1, CF23, CR18, SS1, SS7)*	FA254A (P254A, 3014), ① RU254A, CS3500
...250K, ...250K, ...06, CPL-2	NP-250K-Z, NR-250K-Z, UP-B-400, DC-2	B13-130, B13-130, SK1, QCM or (BU1, CF23, CR18, SS1, SS7)*	FA254A (P254A, 3014) ① RU254A, CS3500
...00K②		U201R104B	MTC15L4
...00K②		U201R104B	MTC15L4

...be substituted for the panel unit.
...fit "PC" board. Use jumper wire to connect

ITEM No.	RATING	REPLACEMENT DATA IRC PART No.	WORKMAN PART No.	MFGR. PART No.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	FM Antenna Coil				
L2	FM RF Coil	①			
L3	10.7MC Trap				
L4	FM Oscillator Coil				
L5	FM Input IF				
L6	Loopstick	S-77014			
L7	AM Oscillator Coil	95-2544			
L8	AM Input IF	95-2541			
L9	FM Interstage IF	95-2547			
L10	AM Interstage IF	95-2542			
L11	FM Interstage IF	95-2548			
L12	AM Output IF	95-2543			
L13	Ratio Detector	95-2545			
L14	67KC Trap	S-79435			
L15	19KC Input Coil	S-79438			
L16	19KC	S-79436			
L17	38KC Output	S-79437			

① Part of FM Tuner.

TRANSFORMER (Power)

ITEM No.	RATING PRI.	RATING SEC. 1	REPLACEMENT DATA MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	NOTES
T1	117VAC @ .170A	56VAC CT @ .7A DC	95-2655					
	SEC. 2	SEC. 3						
	6.3VAC @ .9A							

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO PRI.	SEC. 1	SEC. 2	REPLACEMENT DATA MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	NOTES
T2	3.8	1	1	95-2637					
T3	3.8	1	1						

PHONO CARTRIDGE & NEEDLES

ITEM No.	REPLACEMENT DATA MFGR. PART No. CARTRIDGE	NEEDLE	ASTATIC PART No. CARTRIDGE	NEEDLE	ELECTRO-VOICE PART No. CARTRIDGE	NEEDLE	SONOTONE PART No. CARTRIDGE	NEEDLE	NOTES
M1	142-163		605d	†N81sd	5 371D	†3454DS			
M2		*S-68567		*N882sd		*3454DS			

† Needle replacement for respective cart only.
* Needle replacement for original cart only.

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M3	Dial & Function Indicator Lamp	100-249	(6 Required) CHICAGO MINIATURE Replacement CM-1847
M4	Stereo Indicator Lamp	100-384	CHICAGO MINIATURE Replacement CM-1819
M5	FM Tuner	S-79987	
M6	Motor		Phono (42150)
PC1	MPX Detector	105-78	
S1	Switch		On-Off Located on Changer
S2	Switch	85-1029	Function (Phono, Off, Tape, AM, FM AFC and FM)
S3	Switch	85-1032	Mono, Stereo

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

PHOTOFACT® Folder with CIRCUITRACE®

ZENITH CHASSIS 20ZT21

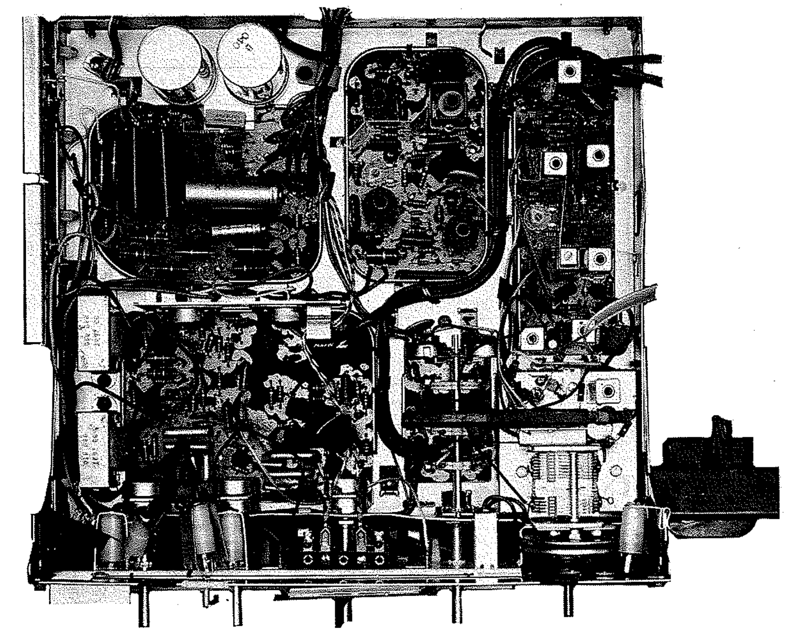
For Supplier Address See PHOTOFACT Index

FOR SERVICE INFORMATION ON RECORD CHANGER - SEE SIMILAR CHANGER - PHOTOFACT SET 797, FOLDER 7

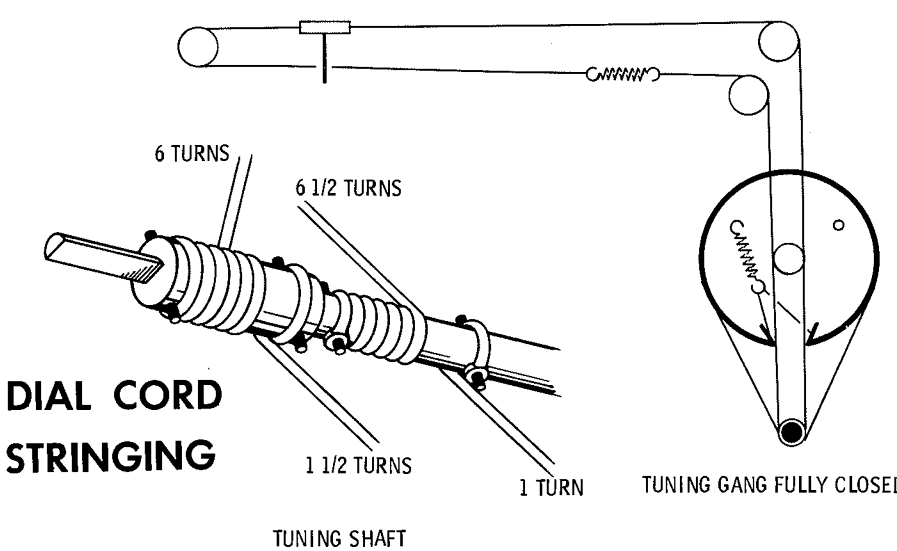
IMPORTANT FILING NOTICE

This PHOTOFACT Folder covers equipment used with the TV chassis covered in PHOTOFACT SET 1055 FOLDER 2 . File this Folder with the TV Folder in the yellow filing jacket provided.

ZENITH CHASSIS 20ZT21



ZENITH CHASSIS 20ZT21

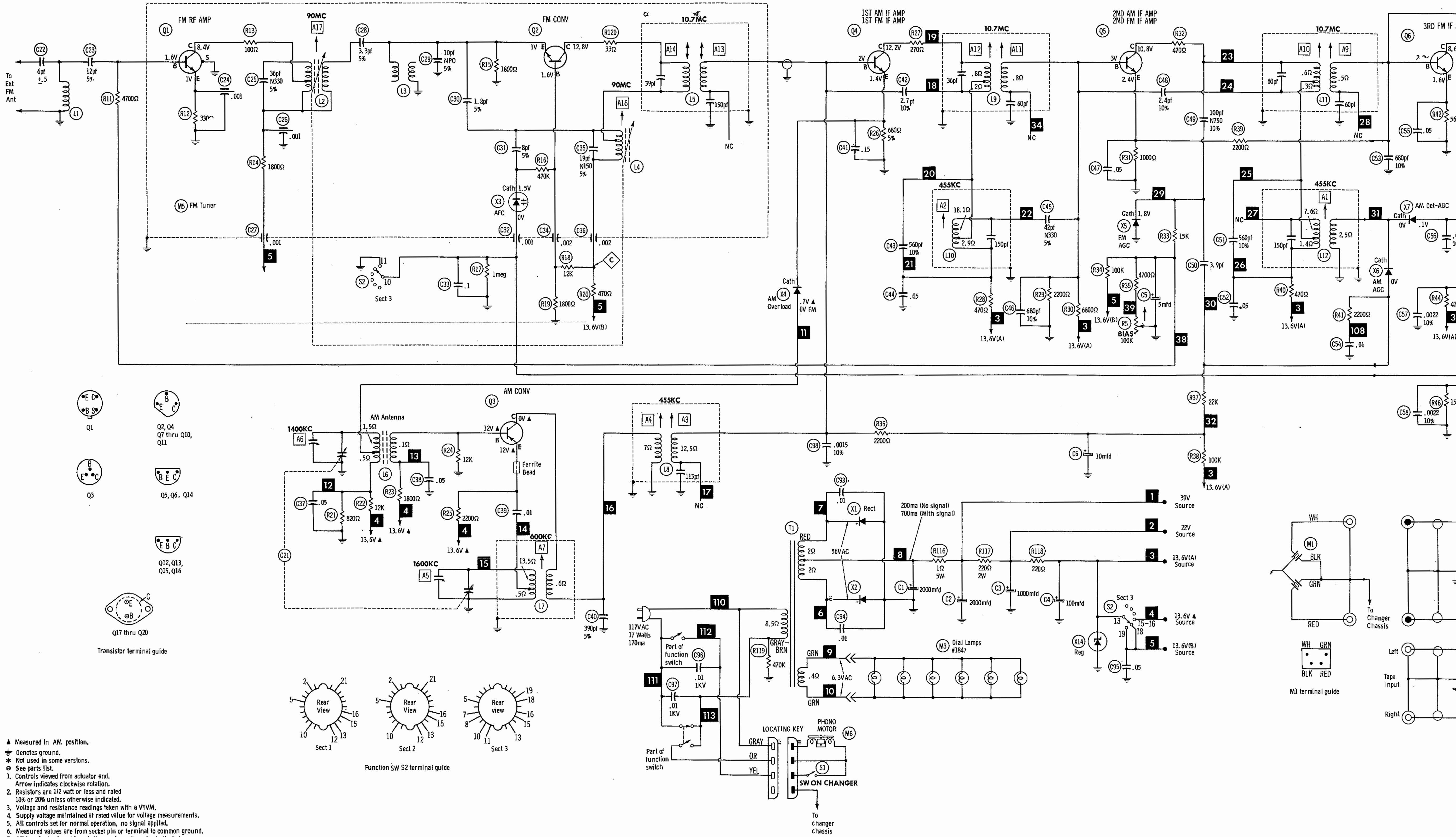


DIAL CORD STRINGING

SET 1055 FOLDER 2-B

REMEMBER TO ASK— "What else needs fixing?"

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



▲ Measured in AM position.
⏚ Denotes ground.
✱ Not used in some versions.
⊖ See parts list.
1. Controls viewed from actuator end. Arrow indicates clockwise rotation.
2. Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.
3. Voltage and resistance readings taken with a VTVM.
4. Supply voltage maintained at rated value for voltage measurements.
5. All controls set for normal operation, no signal applied.
6. Measured values are from socket pin or terminal to common ground.
7. All terminals viewed from bottom unless otherwise indicated.
8. Numbers assigned to terminals may not be found on the unit.
9. Resistance measurements not given because of the wide variation in internal resistance of the transistor.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
with CIRCUITRACE™

ALIGNMENT INSTRUCTIONS

Maintain line voltage at 117 volts. Use only enough generator output to obtain a suitable indication.
Allow a 15 minute warmup for receiver and equipment.
CAUTION: Use isolation transformer, if available. If not, observe polarity when connecting test equipment.
Suggested Alignment Tools:

A1, A3, A4, A7 thru A15.	GENERAL CEMENT: 9296, 9297, 9300	WALSCO: 2510, 2546, 2547
A2, A5, A6.	GENERAL CEMENT: 8868, 8987, 9089	WALSCO: 2531-X, 2541, 2587
A18 thru A20.	GENERAL CEMENT: 8606, 8606L, 8869	WALSCO: 2543, 2544, 2588

AM ALIGNMENT - SELECTOR IN AM POSITION

Fashion loop of several turns of wire and connect generator across loop. Set volume control at maximum.

	GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	455KC (400∿ Mod.)	Tuning gang fully open.	Output meter across voice coil.	A1, A2, A3, A4	Adjust for maximum. Repeat until no further improvement can be made.
2.	1600KC	"	"	A5	Adjust for maximum.
3.	1400KC	Tune to signal.	"	A6	"
4.	600KC	"	"	A7	Rock tuning gang and adjust for maximum. Repeat steps 2 thru 4 until no further improvement can be made.

FM IF ALIGNMENT USING AM SIGNAL GENERATOR - SELECTOR IN FM POSITION

High side of generator thru .001mfd to point (C), low side to ground.

	GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
5.	10.7MC (Unmod.)	Point of non-interference.	DC probe of VTVM to point (A), common to ground.	A8, A9, A10, A11, A12, A13, A14	Adjust for maximum.
6.	"	"	DC probe to point (B), common to ground.	A15	Adjust for zero reading. A positive or negative reading will be obtained on either side of the correct setting.

10.7MC

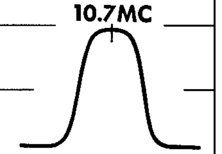


FIG. 1

FM IF ALIGNMENT USING FM SIGNAL GENERATOR - SELECTOR IN FM POSITION

High side of generator thru .001mfd to point (C), low side to ground. Use only enough marker signal for indication. Use 60∿ frequency modulated signal with 450KC sweep. Use 60∿ sawtooth voltage in scope for horizontal deflection.

	GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
5.	10.7MC (450KC Swp.)	Point of non-interference	Vert. amp. of scope to point (A), low side to ground.	A8, A9, A10, A11, A12, A13, A14	Disconnect stabilizing capacitor C7. Adjust for maximum gain and symmetry of response similar to Fig. 1 with marker as shown. Reconnect C7.
6.	"	"	Vert. amp. to point (B), low side to ground.	A15	Adjust A15 (secondary) to place marker at center of "S" curve similar to Fig. 2. Adjust A8 (primary) for maximum amplitude and straightness of line.

FM RF ALIGNMENT - SELECTOR IN FM POSITION

Connect generator across antenna terminals with 120Ω carbon resistors in series with each lead.

	GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
7.	90MC	Tune to signal.	DC probe of VTVM to point (A), common to ground.	A16, A17	Rock tuning and adjust for maximum.

10.7MC

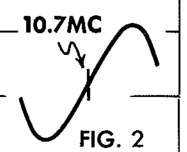


FIG. 2

FM STEREO MULTIPLEX ALIGNMENT USING FM STEREO SIGNAL GENERATOR (±.0001% ACCURACY)

High side of generator thru 47K to point (B), low side to ground.

	GENERATOR FREQUENCY	INDICATOR	ADJUST	REMARKS
8.	19KC	Vert. amp. thru 47K to point (D), low side to ground.	A18, A19	Adjust for maximum.
9.	"	Vert. amp. thru 47K to point (E), low side to ground.	A20	Adjust for maximum 38KC response.
10.	Modulated Left Channel	Vert. amp. to point (F) low side to ground.	A18, A19 A20	Adjust for MINIMUM. This step should require only slight adjustment.
11.	Modulated Right Channel	Vert. amp. to point (G), low side to ground.		Check for MINIMUM. If necessary make compromise adjustments of A18, A19, & A20

FM STEREO THRESHOLD ADJUSTMENT (R6).

Tune across dial (with AFC off) noting operation of stereo indicator lamp. Adjust R6 until lamp glows on weak stereo stations but does not glow on noise pulses.

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Power Cord	Use BELDEN No. 17106 (Plastic) or 17126 (Rubber) - 6 Ft. 17109 (Plastic) or 17129 (Rubber) - 9 Ft.
Low-Loss Shielded Lead (Interconnecting)	Use BELDEN No. 8401 or 8421
Phono Pick-up Arm Cable	Use BELDEN No. 8430 (Two Conductor-Unshielded) 8429 (Two Conductor-Shielded) 8419 (Three Conductor-Shielded)

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA: MFGR. PART No.	DELCO PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q1		FM RF Amp		DS-81	GE-17	TR-22	HEP50	SK-3018	ECG 108
Q2		FM Converter		DS-81	GE-17	TR-22	HEP50	SK-3018	ECG 108
Q3		AM Converter	121-257	DS-25	GE-9A	TR-11	HEP1	SK-3008	ECG 100
Q4		1st AM-FM IF	121-614	DS-74	GE-20	TR-21	HEP55	SK-3018	ECG 108
Q5		2nd AM-FM IF	121-546	DS-74	GE-20	TR-21	HEP55	SK-3018	ECG 108
Q6		3rd FM IF	121-546	DS-74	GE-20	TR-21	HEP55	SK-3018	ECG 108
Q7		MPX Input	121-639	DS-66	GE-10	TR-21	HEP53	SK-3020	ECG 123
Q8		19KC	121-639		GE-10	TR-21	HEP53	SK-3020	ECG 123
Q9		38KC	121-639		GE-10	TR-21	HEP53	SK-3020	ECG 123
Q10		Stereo Indicator Control	121-639		GE-18	TR-25	HEP53	SK-3024	ECG 128
Q11		AF Amp	121-433	DS-66	GE-10	TR-21	HEP53	SK-3020	ECG 123
Q12		AF Amp	121-430	DS-66	GE-10	TR-21	HEP53	SK-3020	ECG 123
Q13		Driver	121-706		GE-10	TR-21	HEP53	SK-3020	ECG 123
Q14		AF Amp	121-433	DS-66	GE-10	TR-21	HEP53	SK-3020	ECG 123
Q15		AF Amp	121-430	DS-66	GE-10	TR-21	HEP53	SK-3020	ECG 123
Q16		Driver	121-706		GE-10	TR-21	HEP53	SK-3020	ECG 123
Q17		Output	121-418 ②		GE-13MP ①			SK-3013 ①	ECG 121 MP①
Q18		Output	121-418						
Q19		Output	121-418 ②		GE-13MP ①			SK-3013 ①	ECG 121 MP①
Q20		Output	121-418						

① Matched pair.
② Matched pair Part Number 800-253 (2 required).

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES: GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	REPLACEMENT RECTIFIERS: RCA PART No.	SARKES TARZIAN PART No.	NOTES
X1	212-71	GE-504A	8D4 or 18DJ2A①	ECG 116 or ECG 117	SK-3030 or SK-3031	40C or S-5981-N①	
X2	212-71	GE-504A	8D4 or 18DJ2A①	ECG 116 or ECG 117	SK-3030 or SK-3031	40C or S-5981-N①	
X3	②						
X4	103-74	1N60	1N60	ECG 109			
X5	103-23	1N60	1N60	ECG 109			
X6	103-23	1N60	1N60	ECG 109			
X7	103-23	1N60	1N60	ECG 109			
X8	103-90 ③		1N542	ECG 110			
X9	103-90						
X10	103-23	1N60	1N60	ECG 110④			
X11	103-23	1N60	1N60				
X12	103-23	1N60	1N60	ECG 110④			
X13	103-23	1N60	1N60				
X14	103-96⑤		1ZM12T10 or Z-1112			VR12 or 1TA12A	

① A single unit replacement for both rectifiers.
② Variable capacitor diode.
③&④ Matched pair.
⑤ Zener Diode

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.
C1	2000 50V	22-5650	AFH1-14-55 PRS1390		DD0007A		FP070A	TVL-1342
C2	2000 50V	22-5650	AFH1-14-55 PRS1390		DD0007A		FP070A	TVL-1342
C3	1000 30V	22-5167	PRS1395	EA30-1000	BR1000-50		TC501000A	TL-1317
C4	100 25V	22-3973	PTT86	EA30-100	NLW100-25	MT1-20	MTA100F35	TL-1211
C5	5 12V	22-5659	BCD12005	EP15-5	NLW5-15	MT1-3	MTV5CB50	TL-1127
C6	10 3V	22-5486	BCD3010	EP6-10	NLW10-3	MT1-5	MTV10CB50	TL-1053
C7	5 25V	22-3896	PTT77	EA30-5	NLW5-50	MT1-3	MTA5D50	TL-1202
C8	5 25V	22-3896	PTT77	EA30-5	NLW5-50	MT1-3	MTA5D50	TL-1202
C9	5 25V	22-3896	PTT77	EA30-5	NLW5-50	MT1-3	MTA5D50	TL-1202
C10	1 50V	22-3687	PTT87	EA50-2	NLW1-50	MT1-1	MTA1D50	TL-1300
C11	1 50V	22-3687	PTT87	EA50-2	NLW1-50	MT1-1	MTA1D50	TL-1300
C12	300 35	22-5315	PRS1540		WBR300-35	QT1-29	TC499A	TL-1314
C13	1 50V	22-3687	PTT87	EA50-2	NLW1-50	MT1-1	MTA1D50	TL-1300
C14	1 50V	22-3687	PTT87	EA50-2	NLW1-50	MT1-1	MTA1D50	TL-1300
C15	300 35V	22-5315	PRS1540		WBR300-35	QT1-29	TC499A	TL-1314
C16	5NP 30V	22-4606	PRS7550			NPQT-1	TCN505	TVAN-1303.1
C17	5NP 30V	22-4606	PRS7550			NPQT-1	TCN505	TVAN-1303.1

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.
C21		#22-5649						
C22	6 ±.5							
C23	12 5%							
C24	.001							
C25	36 N330 5%					*	*	
C26	.001							
C27	.001							
C28	3.3 5%		NPO-DI 3.3	DTZ-3R3			CNO533	10TCC-V33
C29	10 NPO 5%			DTZ-10	CZ601CG100J		CNO410	10TCC-Q10
C30	1.8 5%							10TCC-V18

PARTS LIST A

(When ordering parts, stat

CAPACITORS (cont)

ITEM No.	RATING	REMARKS	AEROVOX PART No.	CENT PAR
C31	8 5%		NPO-DI 8.2	
C32	.001			
C33	.1 10V		TTP-.1	CK-1
C34	.002			
C35	19 N150 5%			
C36	.002			
C37	.05 25V		TTP-.05	CK-5
C38	.05 25V		TTP-.05	CK-5
C39	.01 25V		TTP-01	CK-1
C40	390 100V 5%		ADM-15-391	CPR
C41	.15 12V	#22-5251		
C42	2.7 10%	#22-3310		
C43	560 500V 10%		GPD X5F561K	DD-5
C44	.05 25V		TTP-.05	CK-5
C45	42 N330 5%	#22-3791		
C46	680 500V 10%		GPD X5F681K	DD-6
C47	.05 25V		TTP-.05	CK-5
C48	2.4 10%			DTZ
C49	100 N750 10%		N750-DI 100	DTN
C50	3.9	#22-3400		
C51	560 500V 10%		GPD X5F561K	DD-
C52	.05 25V		TTP-.05	CK-
C53	680 500V 10%		GPD X5F681K	DD-
C54	.01 25V		TTP-01	CK-
C55	.05 25V		TTP-.05	CK-
C56	.0022 500V 10%		GPD X5F222K	DD-
C57	.0022 500V 10%		GPD X5F222K	DD-
C58	.0022 500V 10%		GPD X5F222K	DD-
C59	.02 25V		TTP-02	CK-
C60	.005 25V		TTP-.005	CK-
C61	390 500V 10%		GPD X5F391K	DD-
C62	390 500V 10%		GPD X5F391K	DD-
C63	.001 25V		GPD X5F102K	DM-
C64	270 100V 5%		ADM-15-271	CPR
C65	.001 100V 10%		ADM-20-102	CPR
C66	.47 50V 10%		DBE2P47	
C67	.0022 300V 5%		ADM-20-222	CPR
C68	.01 25V		TTP-01	CK-
C69	.0022 300V 5%		ADM-20-222	CPR
C70	.0033 500V 10%		GPD X5R332K	DD-
C71	.001 100V 5%		ADM-20-102	CPR
C72	.001 100V 10%		ADM-20-102	CPR
C73	.05 25V		TTP-.05	CK-
C74	.47 50V 10%		DBE2P47	
C75	.15 200V 10%		V1612P15	
C76	330 500V 10%		GPD X5F331K	DD-
C77	.0068 200V 10%		V1612D68	CPR
C78	.1 200V 10%		DBE2P1	
C79	.02 25V		TTP-02	CK-
C80	.15 200V 10%		V1612P15	
C81	47 500V 10%		GPD X5F470K	DD-
C82	.05 25V		TTP-.05	CK-
C83	.05 25V		TTP-.05	CK-
C84	.47 50V 10%		DBE2P47	
C85	330 500V 10%		GPD X5F331K	DD-
C86	.15 200V 10%		V1612P15	
C87	.0068 200V 10%		V1612D68	CPR
C88	.1 200V 10%		DBE2P1	
C89	.02 25V		TTP-02	CK-
C90	.15 200V 10%		V1612P15	
C91	47 500V 10%		GPD X5F470K	DD-
C92	.05 25V		TTP-.05	CK-
C93	.01 500V		GPD X5S103K	DD-
C94	.01 500V		GPD X5S103K	DD-
C95	.05 25V		TTP-.05	CK-
C96	.01 1KV		GPD X5S103K	DD-
C97	.01 1KV		GPD X5S103K	DD-
C98	.0015 500V 10%		GPD X5F152K	DD-
C99	1.8 10%	#22-2428		

Zenith Part Number.
* Not normally in distributor's stock. Available thru distr

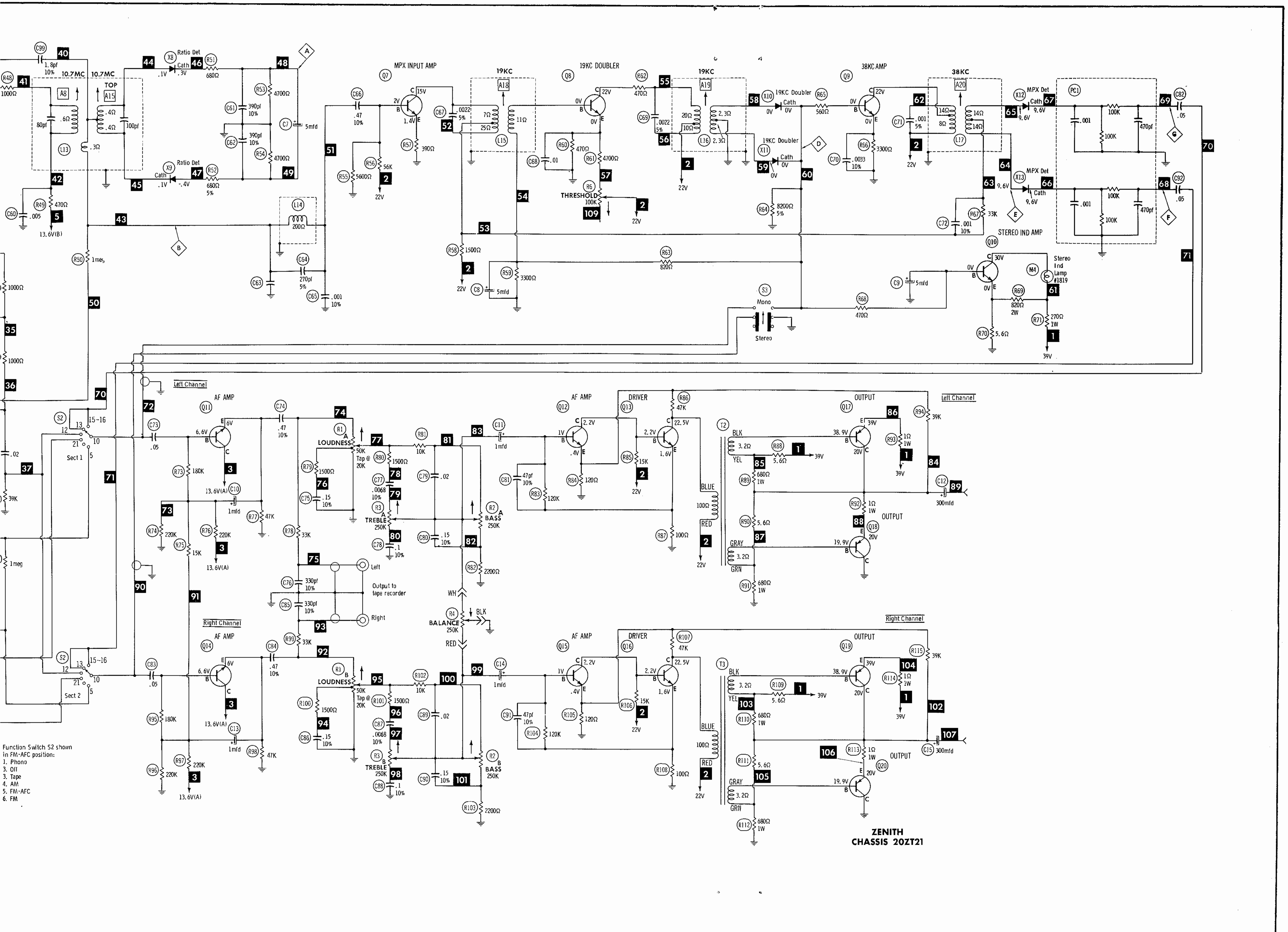
CONTROLS (All wattages 1/2 watt, or less, u

ITEM No.	FUNCTION	RESISTANCE	MFGR. PART No.	C
R1A	Loudness/Left	50K Tap @ 20K	63-7563	
B	Loudness/Right	50K Tap @ 20K		
R2A	Bass/Left	250K	63-7564	F2-
B	Bass/Right	250K		R2- CPI
R3A	Treble/Left	250K	63-7584	F2-
B	Treble/Right	250K		R2- SF2
R4	Balance	250K	63-7562	
R5	Bias	100K	63-6495	T-1
R6	Threshold	100K	63-6495	T-1

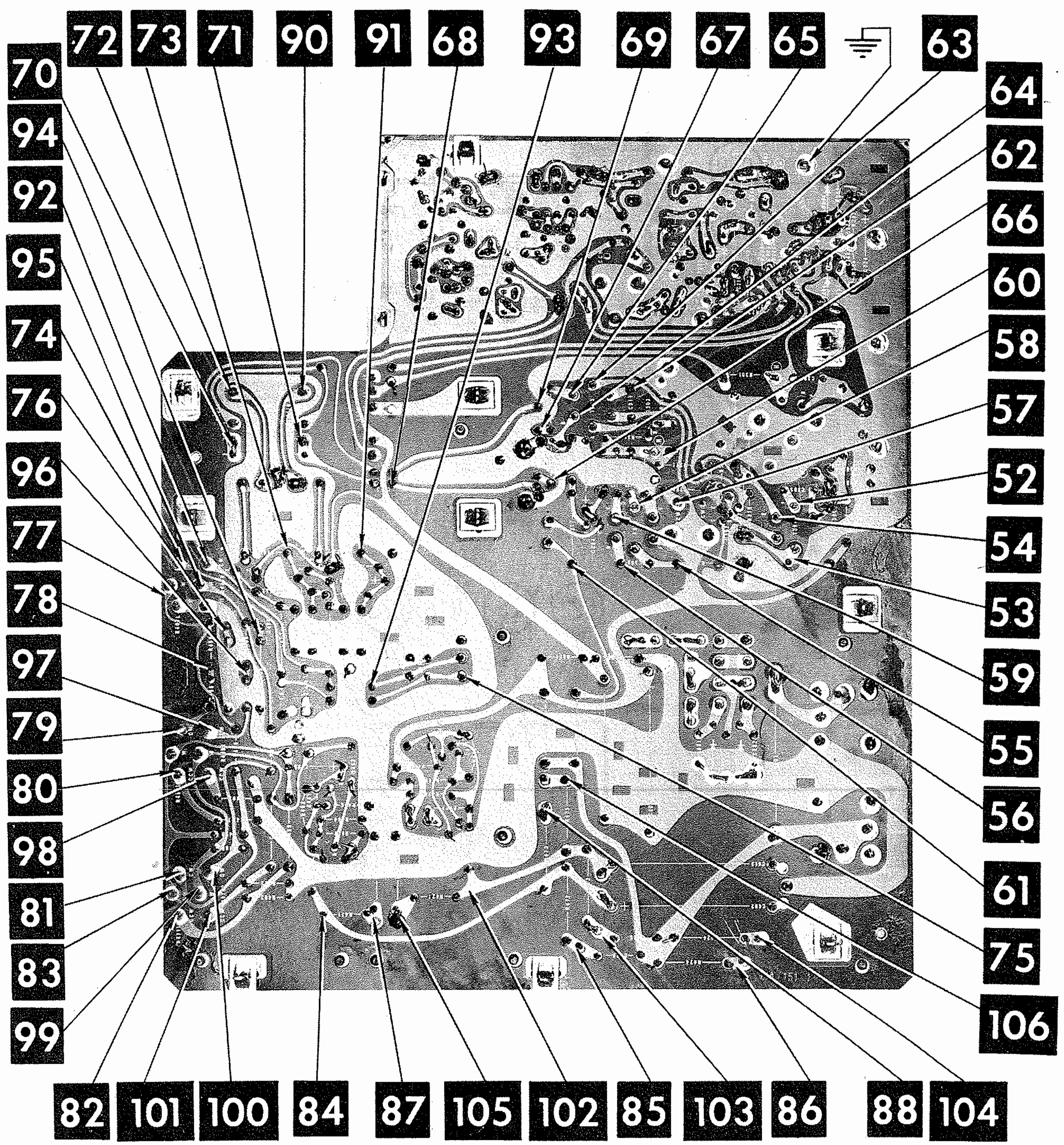
* "SNAPTROL"
① Panel and Bushing components listed in parentheses ma
② For horizontal mount, bend the two outside terminals to center terminal to "PC" board.

RESISTORS (Power and Special)

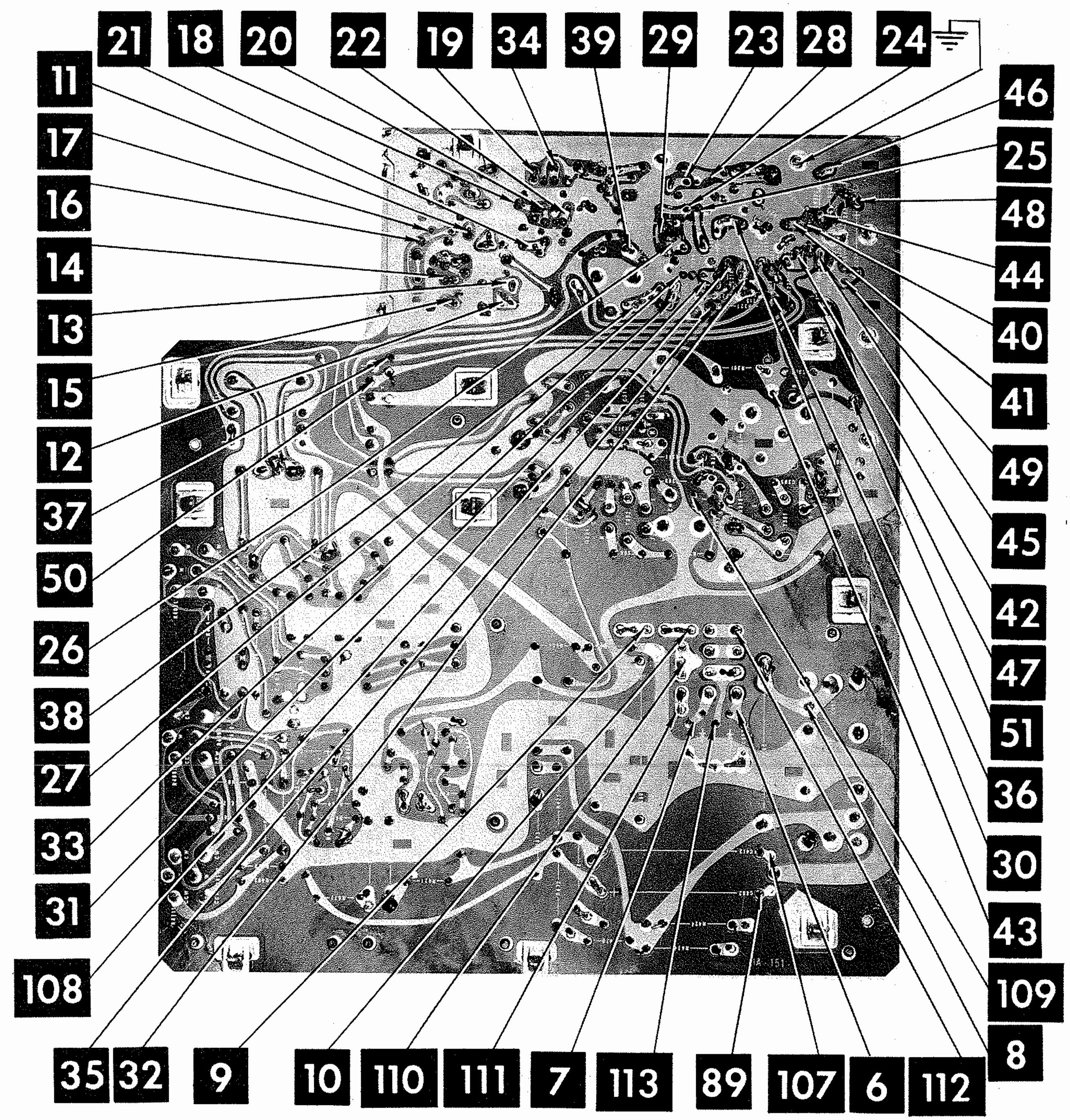
ITEM No.	RATING	REPLACEMENT DATA: IRC PART No.	WORKMAN PART No.	MFGR. PART No.
R116	1Ω 5W	PW5-1	5W-SQ 1	63-6424



10.7MC
TOP
Ratio Det
Cath
MPX INPUT AMP
19KC
19KC DOUBLER
THRESHOLD
19KC Doubler
38KC AMP
38KC
MPX Det
STEREO IND AMP
Stereo Ind Lamp #1819
Mono
Stereo
Left Channel
AF AMP
DRIVER
OUTPUT
LOUDNESS
TREBLE
BASS
BALANCE
Output to tape recorder
Left
Right
Right Channel
Sect 1
Sect 2
BLK
YEL
BLUE
RED
GRAY
GRN
Function Switch S2 shown
in FM-AFC position:
1. Phono
3. Off
3. Tape
4. AM
5. FM-AFC
6. FM
ZENITH
CHASSIS 20ZT21



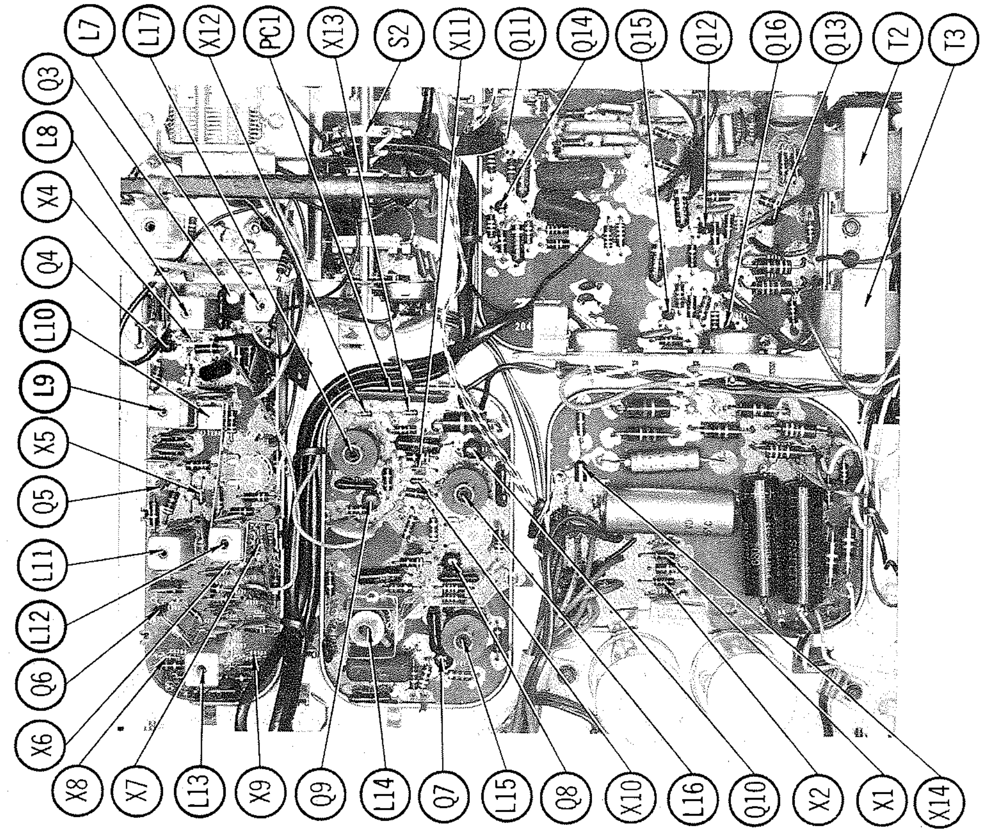
A Howard W. Sams CIRCUITRACE® Photo

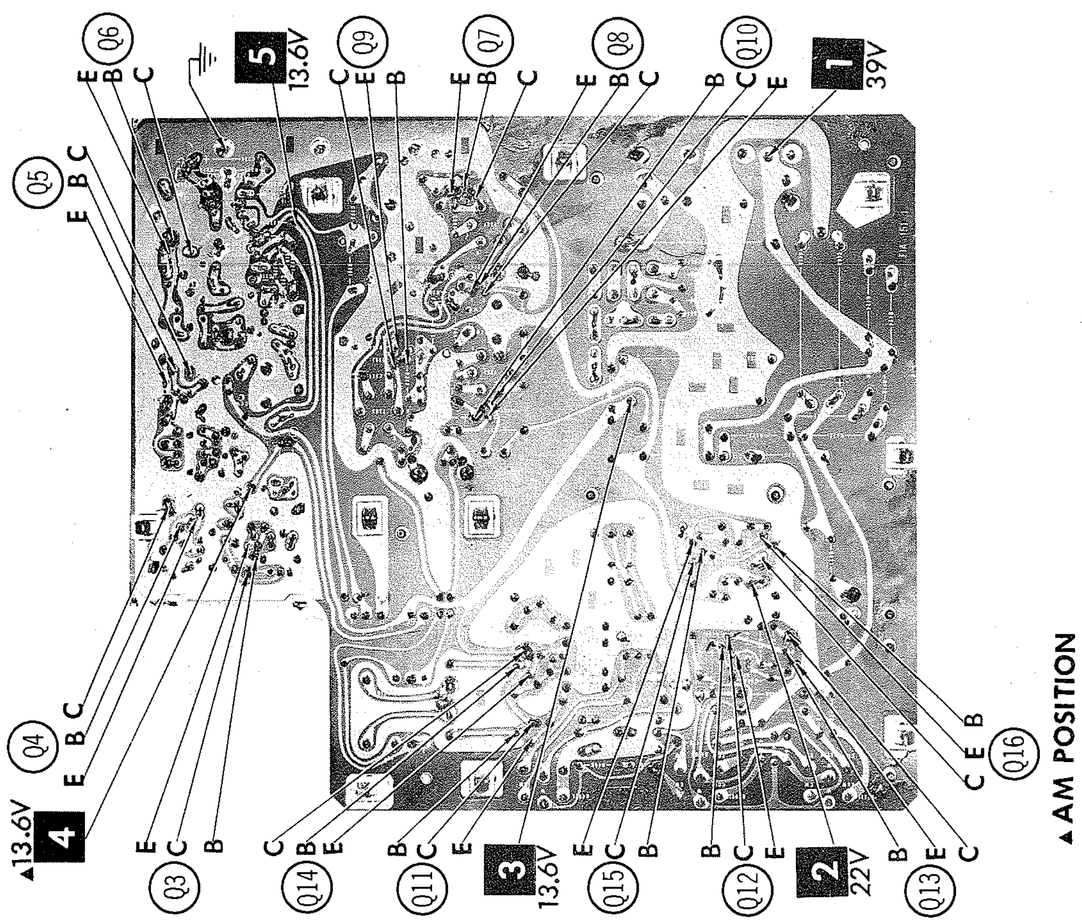


A Howard W. Sams CIRCUITRACE® Photo

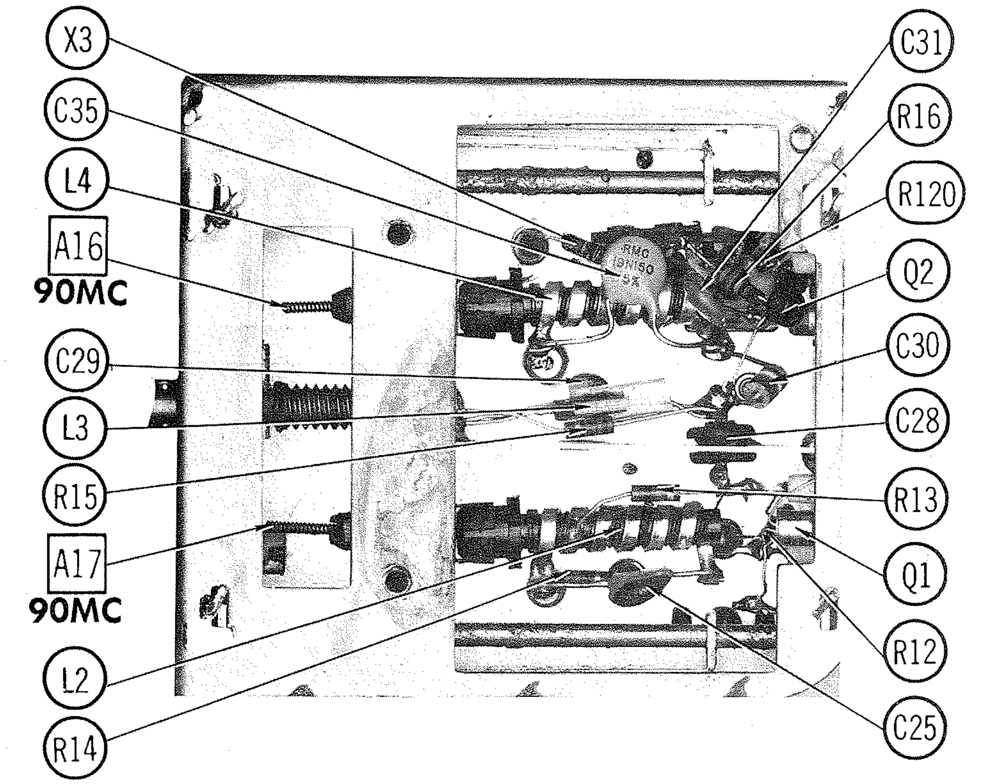
ZENITH
CHASSIS 20Z21

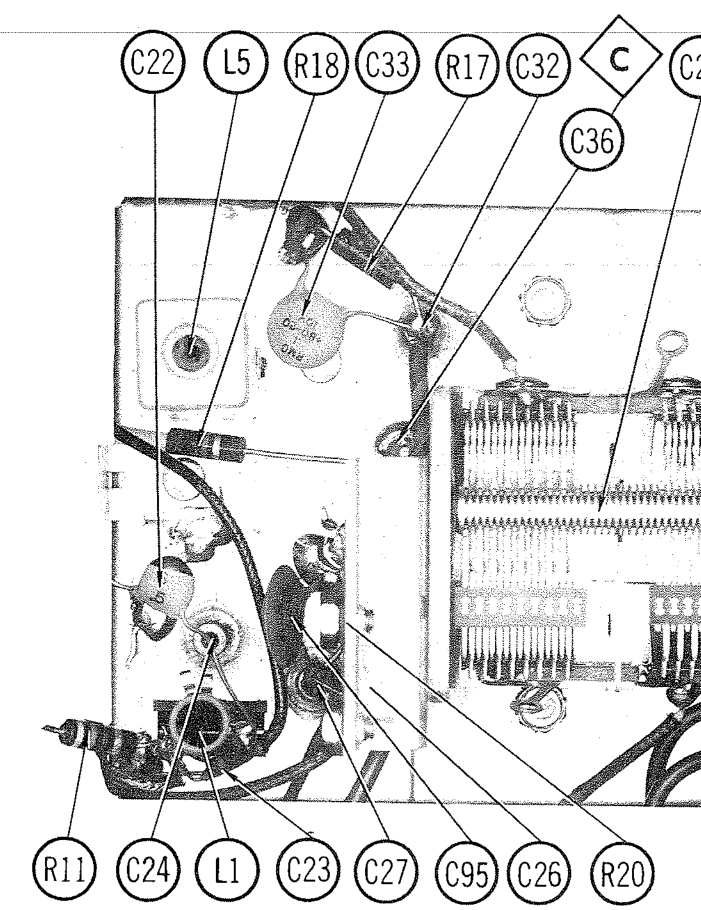
FOLDER 2-B





A Howard W. Sams CIRCUITRACE® Photo





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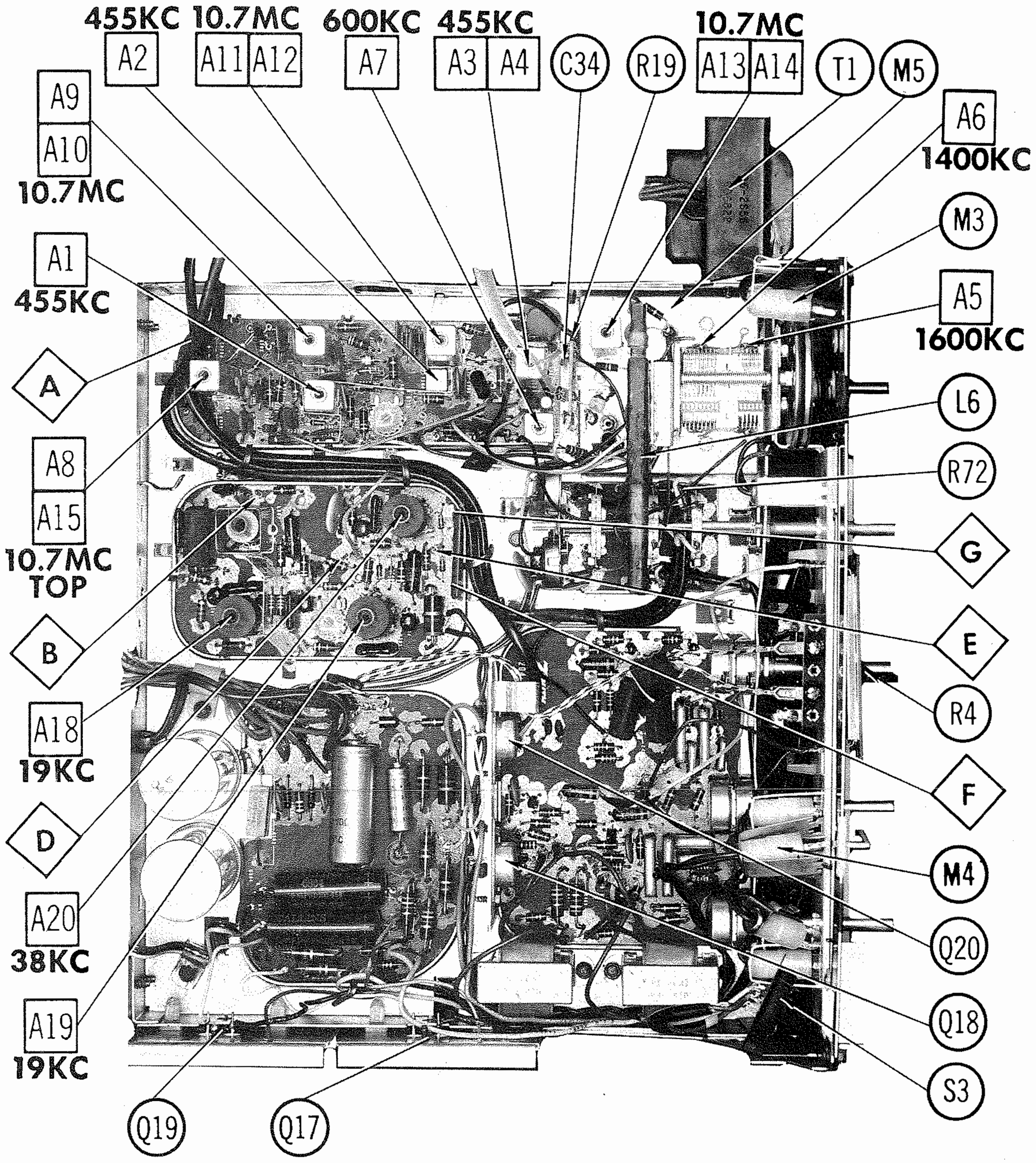
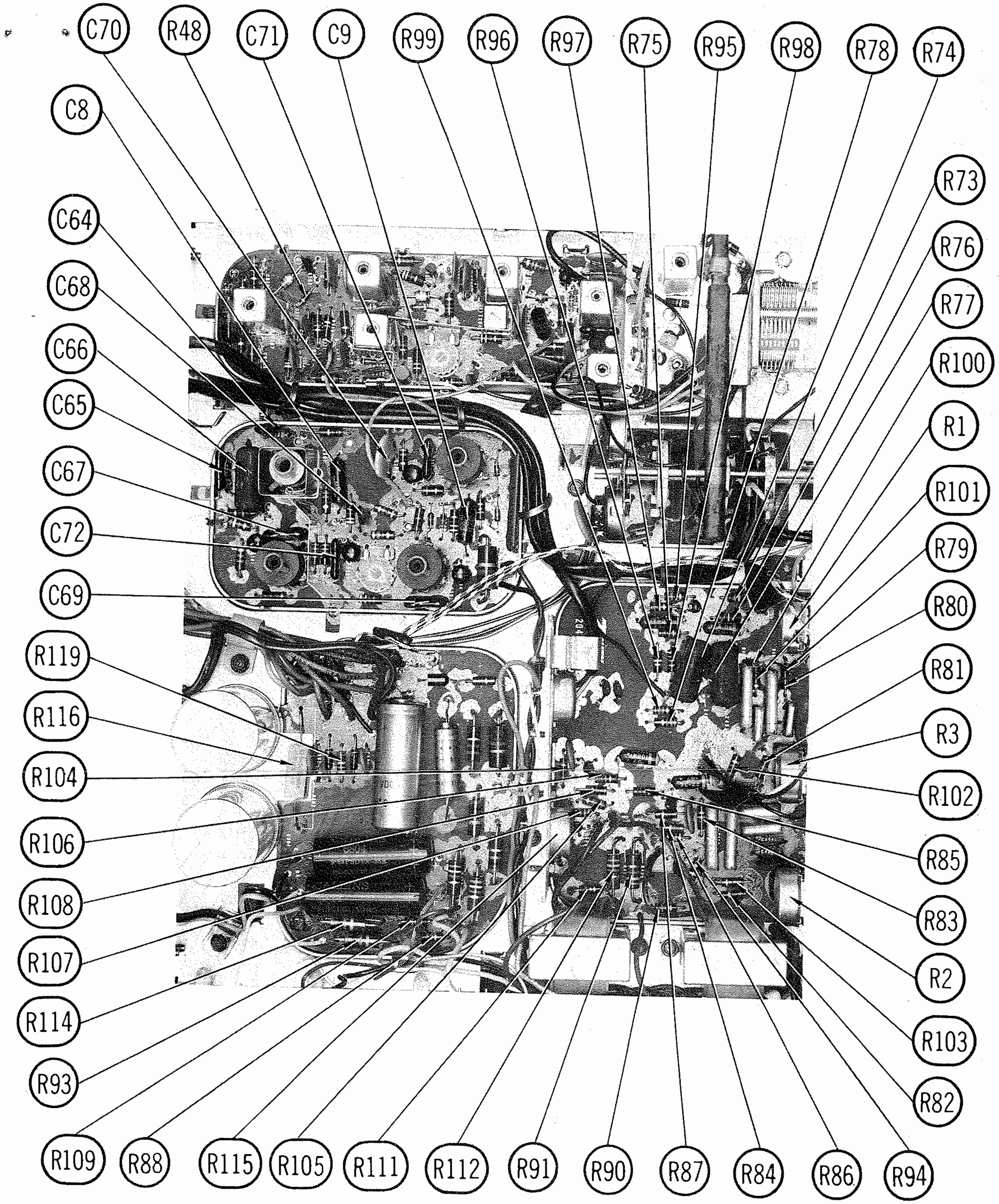
FOLDER 2-B





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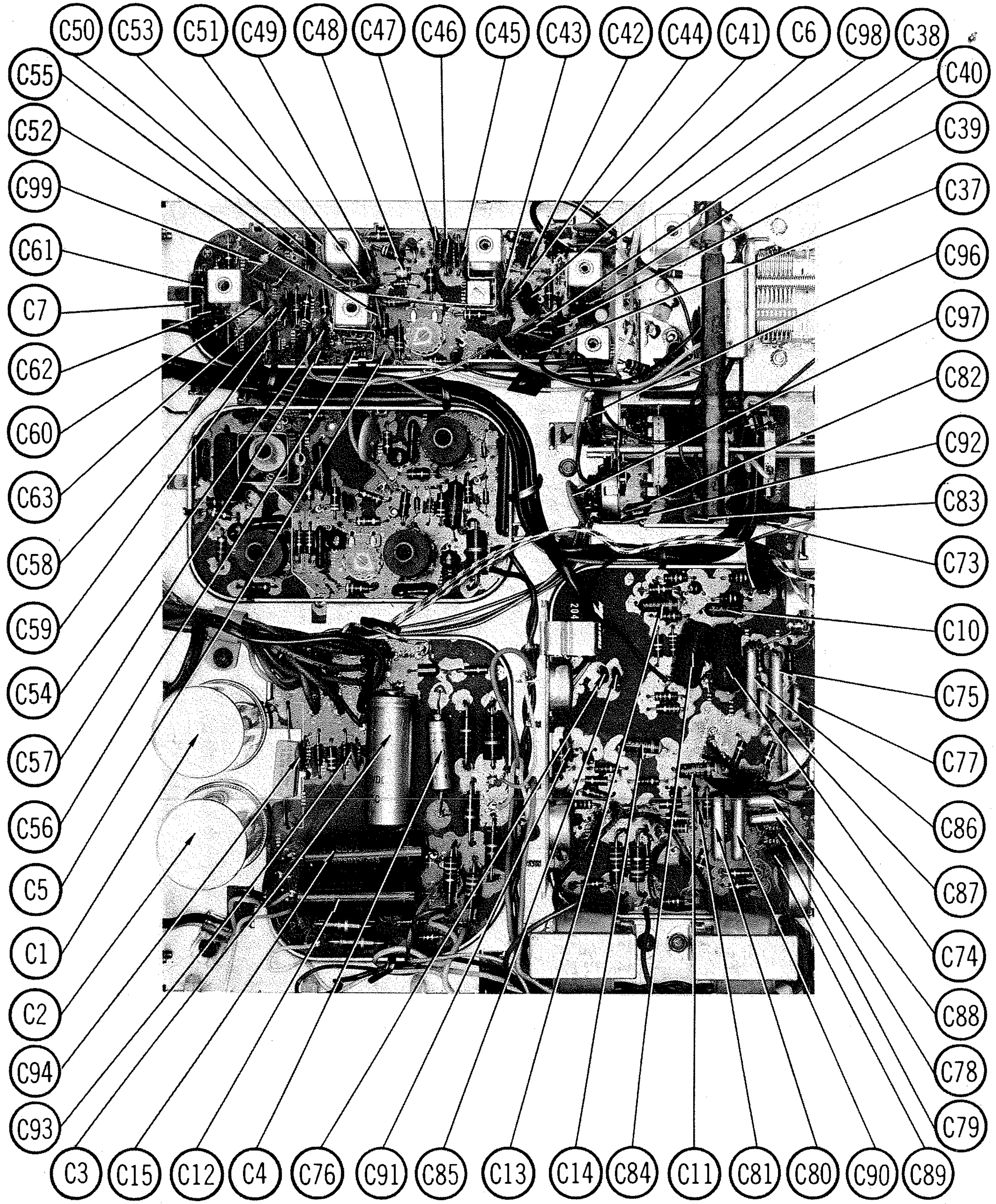
CHASSIS 20Z21

FOLDER 2-B


C50
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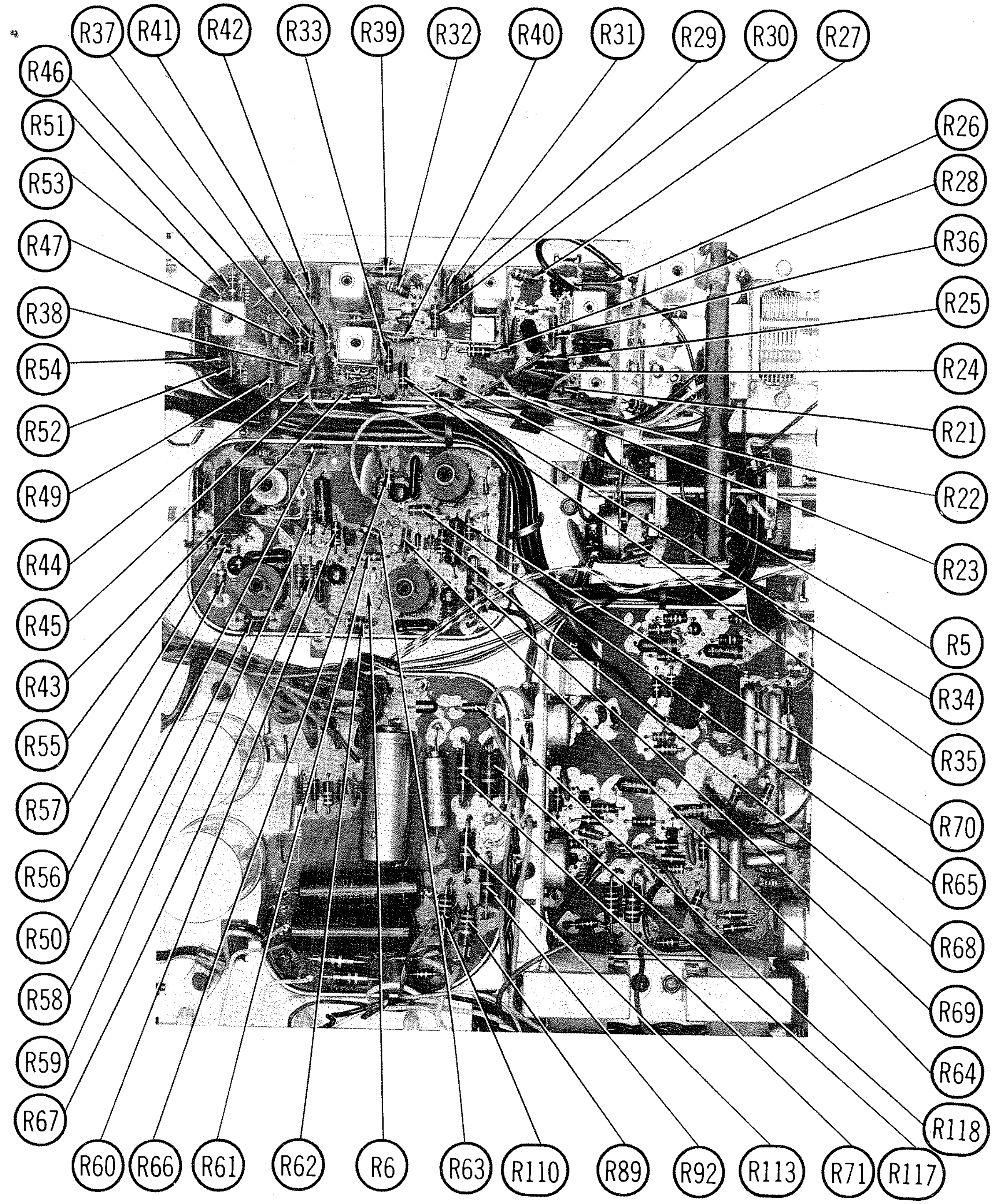
R37
R41
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R118
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R66
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R63
R110
R89
R92
R113
R71
R117

SCRIPTIONS (Continued)

Part Number, and Description.)

LS

unless otherwise listed.

B	REPLACEMENT DATA CLAROSTAT PART No.	CTS–IRC PART No.	MALLORY PART No.
-50K -2		B13-123, B13-123, SK1, QCM or (BU2, CF12, CR7, SS1, SS7A, DC1) *	FB54A (P54A, 3038) ① RU54A, CS3500
-2	NP-250K-Z, NR-250K-Z, UP-B-400, DC-2	B13-130, B13-130, SK1, QCM or (BU2, CF23, CR18, SS1, SS7A, DC1) *	FA254A (P254A, 3038) ① RU254A, CS3500
	U39-300 or (NPW-300, NML-A-300, TT-2	110-300 or (P115R251A)	MR250T or (VW300) or (R250L
	B47-50K-S or (NP-50K-S, NML-A-300, TT-2)	B11-123, TM4, or (BU11, CF12, SS6)*	PTA54L or (RU54L, SL37, SN281) or (UA54L, SN281)

substituted for the Panel unit.

er and Special)

ITEM No.	RATING	REPLACEMENT DATA IRC PART No.	WORKMAN PART No.	ZENITH PART No.
R136	.51Ω 5W	MR1	VR1	63-5305
R139	50Ω 3W	PW5-50	5W-SQ-50	63-6377

RF-IF)

REPLACEMENT DATA MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
	70-A	
	70-OSC	T502
	1601-PC*	
	1602-PC*	
	1603-PC*	
19-2016	74F105AP	T971

Includes X6 & X7.
Part of Assembly S-76085; S-65962 used in some versions.
Solder to chassis.

(POWER)

MENT DATA STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	NOTES

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO PRI.	SEC.	REPLACEMENT DATA ZENITH PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	NOTES
T2	4.3	1	95-2330					
T3	4.3	1	95-2330					

FUSE DEVICES

ITEM No.	DESCRIPTION	PART No. DEVICE	PART No. HOLDER	BUSS PART No. DEVICE	BUSS PART No. HOLDER	LITTELFUSE PART No. DEVICE	LITTELFUSE PART No. HOLDER	WORKMAN PART No. DEVICE
F1	N Type 2Amp. 125V	136-40	62-28	N2	HN 1 3/4 to 2 1/2	333002	346017	

PHONO CARTRIDGE & NEEDLES

ITEM No.	MFGR. PART No. CARTRIDGE	MFGR. PART No. NEEDLE	ASTATIC PART No. CARTRIDGE	ASTATIC PART No. NEEDLE	ELECTRO-VOICE PART No. CARTRIDGE	ELECTRO-VOICE PART No. NEEDLE	SONOTONE PART No. CARTRIDGE	SONOTONE PART No. NEEDLE	NOTES
M1	142-163		605d	†N81sd	5371D	†3454DS			
M2		*S-68567		*N822sd		*3454DS			

* Needle Replacement for Original Cartridge
† Needle Replacement for Respective Cartridge

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M3	Tuner	S-79898	FM (Complete)
M4	Motor	35447	Phono
M5	Lamp	100-249 (#1847)	Pilot CHICAGO MINIATURE Replacement CM-1847
M6	Lamp	100-249 (#1847)	Dial (3 used) CHICAGO MINIATURE Replacement CM-1 847
M7	Lamp	100-249 (#1847)	Stereo Indicator CHICAGO MINIATURE Replacement CM-1847
PC1	38KC Filter Network	105-93	
PC2	38KC Filter Network	105-93	
S1	Switch	85-891	On-Off
S2	Switch	85-923	Function
S3	Switch	85-891	Stereo-Mono
S4	Switch Assembly	S-73227	Includes "Internal Speakers-Stereo Phones" Switch, and "External Speakers" Switch.

CABINETS & CABINET PARTS

(When ordering specify model, chassis & color)

WIRING DATA

General-use Unshielded Hook-up Wire .... Use BELDEN No. 8530 (Solid) Available in 12 Colors
8524 (Stranded) Available in 12 Colors
Power Cord .... Use BELDEN No. 17106 (Plastic) or 17126 (Rubber) - 6 Ft.
17109 (Plastic) or 17129 (Rubber) - 9 Ft.
Low-Loss Shielded Lead (Interconnecting) .... Use BELDEN No. 8401 or 8421
Phono Pick-up Arm Cable .... Use BELDEN No. 8430 (Two Conductor-Unshielded)
8429 (Two Conductor-Shielded)
8419 (Three Conductor-Shielded)

PHOTOFACT® Folder

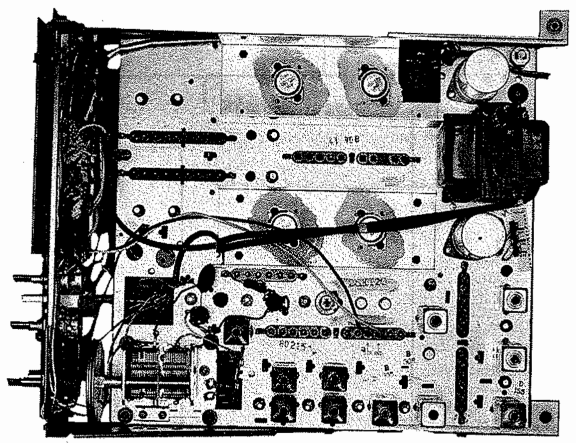
ZENITH
CHASSIS 25ZT120

For Supplier Address See PHOTOFACT Index

FOR SERVICE INFORMATION ON RECORD CHANGER - SEE SIMILAR CHANGER - PHOTOFACT SET: 797, FOLDER 7

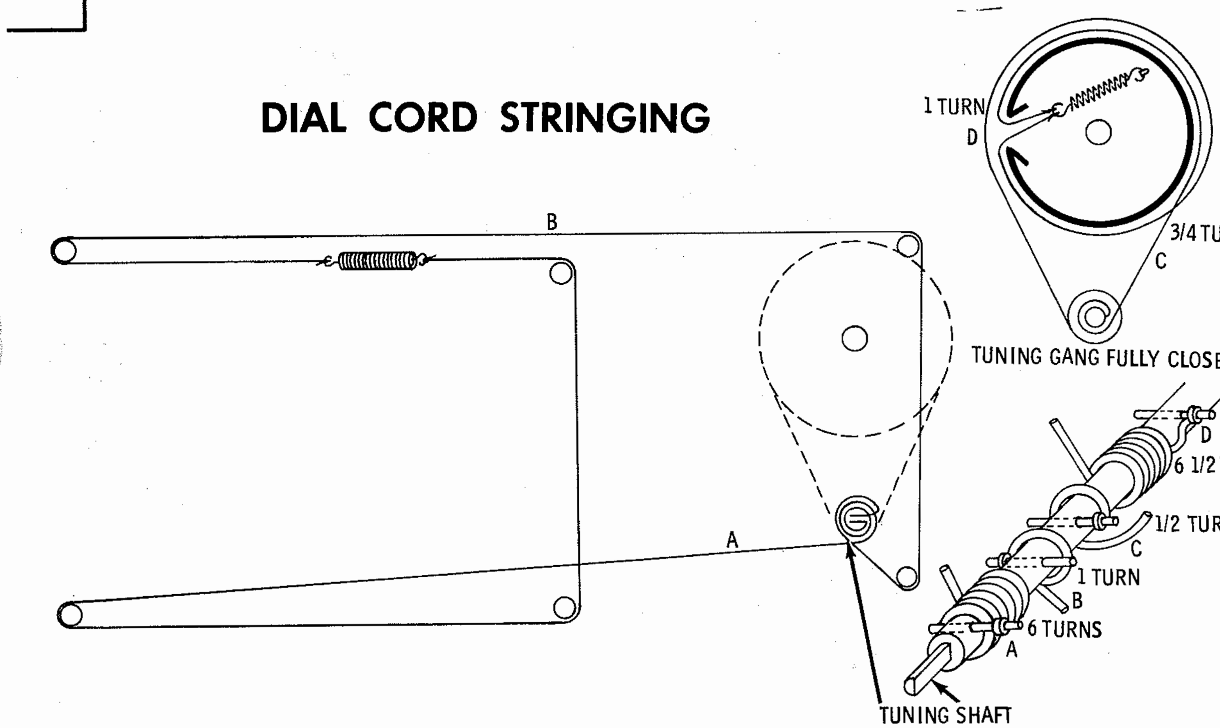
IMPORTANT FILING NOTICE

This PHOTOFACT Folder covers equipment used with the TV chassis covered in PHOTOFACT SET 1055 FOLDER 2 . File this Folder with the TV Folder in the yellow filing jacket provided.



ZENITH CHASSIS 25ZT120

DIAL CORD STRINGING

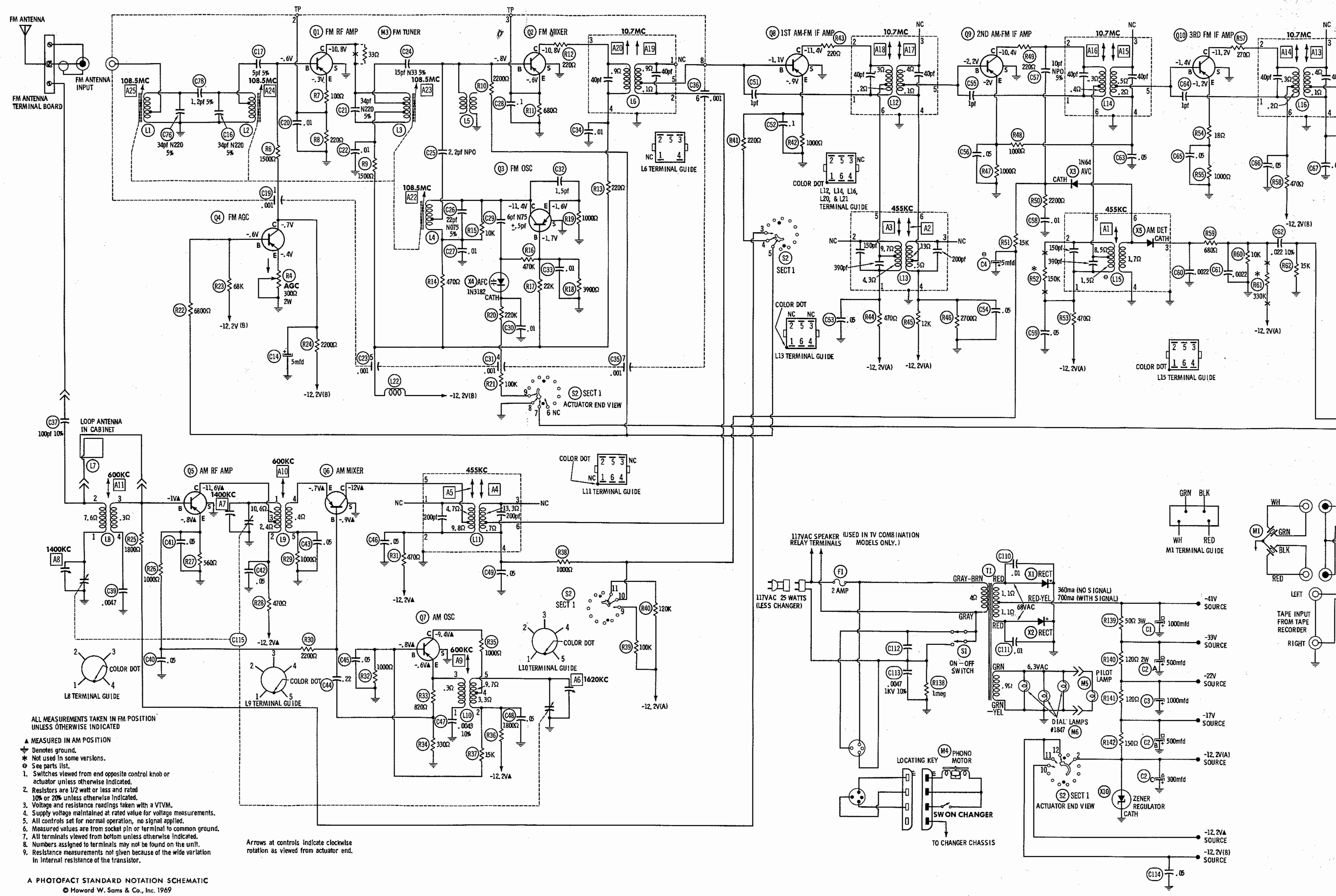


REMEMBER TO ASK— "What else needs fixing?"

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. UN076 R

SET 1055 FOLDER 2-C



ALL MEASUREMENTS TAKEN IN FM POSITION UNLESS OTHERWISE INDICATED

▲ MEASURED IN AM POSITION
⏚ Denotes ground.
✱ Not used in some versions.
⊖ See parts list.
1. Switches viewed from end opposite control knob or actuator unless otherwise indicated.
2. Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.
3. Voltage and resistance readings taken with a VTVM.
4. Supply voltage maintained at rated value for voltage measurements.
5. All controls set for normal operation, no signal applied.
6. Measured values are from socket pin or terminal to common ground.
7. All terminals viewed from bottom unless otherwise indicated.
8. Numbers assigned to terminals may not be found on the unit.
9. Resistance measurements not given because of the wide variation in internal resistance of the transistor.

Arrows at controls indicate clockwise rotation as viewed from actuator end.

A PHOTOFACT STANDARD NOTATION SCHEMATIC

PARTS LIST AND DESCRIPTION

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

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA MFGR. PART No.	DELCO PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q1		FM RF Amp.	121-697	DS-41	GE-9A	TR-17	HEP3	SK-3006	ECG 126
Q2		FM Mixer	121-428	DS-41	GE-9A	TR-17	HEP3	SK-3006	ECG 126
Q3		FM Oscillator	121-432	DS-41	GE-9A	TR-17	HEP3	SK-3006	ECG 126
Q4		FM AGC	121-497	DS-83	GE-22	TR-19	HEP51	SK-3025	ECG 129
Q5		AM RF Amp.	121-333	DS-25	GE-1	TR-11	HEP1	SK-3008	ECG 100
Q6		AM Mixer	121-333	DS-25	GE-1	TR-11	HEP1	SK-3008	ECG 100
Q7		AM Oscillator	121-335	DS-25	GE-1	TR-11	HEP1	SK-3008	ECG 100
Q8	2N3588	1st AM-FM IF	121-414	DS-56	GE-9A	TR-17	HEP1	SK-3006	ECG 126
Q9	2N3588	2nd AM-FM IF	121-415	DS-56	GE-9A	TR-17	HEP1	SK-3006	ECG 126
Q10	2N3588	3rd FM IF	121-714	DS-56	GE-9A	TR-17	HEP1	SK-3006	ECG 126
Q12		MPX Input Amp.	121-496	DS-83	GE-22	TR-19	HEP51	SK-3025	ECG 129
Q13		19KC Amp.	121-496	DS-83	GE-22	TR-19	HEP51	SK-3025	ECG 129
Q14		38KC Amp.	121-496	DS-83	GE-22	TR-19	HEP51	SK-3025	ECG 129
Q15		MPX Det.	121-347①						
Q16		Indicator Control	121-496	DS-83	GE-22	TR-19	HEP51	SK-3025	ECG 129
Q17		AF Amp.	121-603	DS-26	GE-2	TR-14	HEP254	SK-3004	ECG 102
Q18		AF Amp.	121-305	DS-26	GE-2	TR-14	HEP254	SK-3004	ECG 102
Q19	2N2428	Driver	121-399		GE-2	TR-14	HEP254	SK-3004	ECG 102
Q20		Output	121-398②	DS-520	GE-3	TR-01	HEP232	SK-3009	ECG 1 21MP③
Q21		Output	121-398②	DS-520	GE-3	TR-01	HEP232	SK-3009	
Q22		AF Amp.	121-503	DS-26	GE-2	TR-14	HEP254	SK-3004	ECG 102
Q23		AF Amp.	121-305	DS-26	GE-2	TR-14	HEP254	SK-3004	ECG 102
Q24	2N2428	Driver	121-399		GE-2	TR-14	HEP254	SK-3004	ECG 102
Q25		Output	121-398②	DS-520	GE-3	TR-01	HEP232	SK-3009	ECG 1 21MP③
Q26		Output	121-398②	DS-520	GE-3	TR-01	HEP232	SK-3009	

① Bi-directional Transistor
② When replacing, apply silicone grease to both sides of insulator. Tighten Mounting screws securely.
③ Matched Pair

INTEGRATED CIRCUITS

ITEM No.	FUNCTION	MFGR. PART No.	REMARKS
IC1	4TH FM IF AMP	221-32	

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES: GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	REPLACEMENT RECTIFIERS: RCA PART No.	SARKES TARZIAN PART No.	NOTES
X1	212-61	GE-504A	8D4 or 18CD2A①	ECG 116 or ECG 117	SK-3030 or SK-3031	40C or S-5981①	
X2	212-61	GE-504A	8D4 or 18DC2A①	ECG 116 or ECG 117	SK-3030 or SK-3031	40C or S-5981 ①	
X3	103-23 (1N64)	1N60	1N64	ECG 109			
X4	103-39② (1N3182)						
X5		1N60	1N60	ECG 109			
X6		1N60	1N60	ECG 110④			
X7		1N60	1N60				
X8	103-23 (1N64)	1N60	1N64	ECG 110④			
X9	103-23 (1N64)	1N60	1N64				
X10	103-96 ③		1ZM12T10 or Z-1112			.4T12A or VR12	

① A single unit replacement for X1 and X2 ② Variable Capacitor Diode ③ 12-Volt Zener Diode ④ Matched Pair.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA ZENITH PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	1000■ 50V	322-113 (22-3879)	PRS1395	EA50-1000	BR1000-50		TC50100	TL-1317
C2A	500▲ 50V	22-5162			DD0007A			TVLP-3342 ② &TVA-1208
B	500■ 50V							
C	300▲ 25V							
C3	1000 50V	22-5167	AFH-1-14②	EA50-1000	BR1000-50	XC1-26.1②	FP066.5②	TVLP-1338.1②
C4	5 12V	22-2884	PTT51	EA15-5	NLW5-15	MT1-3	MTA5D50	TE-1127
C5	10 15V	22-3448	PTT66	EA15-10	NLW10-15	MT1-5	MTA10D35	TE-1155
C6	5 12V	22-2884	PTT51	EA15-5	NLW5-15	MT1-3	MTA5D50	TE-1127
C7	5 12V	22-2884	PTT51	EA15-5	NLW5-15	MT1-3	MTA5D50	TE-1127
C8A	100 15V	22-4628	PRS2215	EA15-100	BBRD101015	QT2-11	TCD-2155	TVA-2464
B	100 15V				BBRD101015	QT2-11	TCD-2155	TVA-2464
C9	500 50V	22-5011	PRS1390	EA50-500	BR500-50	QT1-31	TC50050	TVA-1316
C10	3 30VNP	22-2945①	NP-PRS7405		BRNP4-50	NPQT-1	TCN503	TVAN-1302.1
C11	5 12V	22-2884	PTT51	EA15-5	NLW5-15	MT1-3	MTA5D50	TE-1127
C12	500 50V	22-5011	PRS1390	EA50-500	BR500-50	QT1-31	TC50V50	TVA-1316
C13	3 30VNP	22-2945①	NP-PRS7405		BRNP4-50	NPQT-1	TCN503	TVAN-1302.1
C14	5 12V	22-2884	PTT51	EA15-5	NLW5-15	MT1-3	MTA5D50	TE-127
C15	5 12V	22-2884	PTT51	EA15-5	NLW5-15	MT1-3	MTA5D50	TE-127

① Part of Assy. S-76085, (one Assy. per channel.)
② Use Mounting Wafer

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.
C16	34 N220 5%	#22-5318				*	*	10TCR-Q33
C17	5 5%		NPO-DI 5.0	DTZ-4R7	CZ601CH5R0D	CCTO-050	CNO547	10TCC-V50
C18	220PF 10%		ADM-15-221	CPR-220J	CD15F221J500	DM-15-221J	SX322	MS-322
C19	.001		EF-001	MFT-1000		CCF-102	CT280A	
C20	.01 50V		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C21	34 N220 5%	#22-5318				*	*	10TCR-Q33
C22	.01 50V		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C23	.001		EF-001	MFT-1000		CCF-102	CT280A	
C24	15 N33 5%	#22-2642					*	
C25	2.2 NPO		NPO-DI 2.2	DTZ-2R2	CZ601CJ2R2D		CN0522	10TCC-V22
C26	22 NO75 5%	#22-3621					*	
C27	.01 25V		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C28	.1 12V		TTP-1	CK-104	HOV101ZV104Z		TA010	TG-P10
C29	6 N75 ±.5	#22-2374					*	
C30	.01 50V		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C31	.001		EF-001	MFT-1000		CCF-102	CT280A	
C32	1.5			DTZ-1R5			CNO515	10TCC-V15
C33	.01 50V		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C34	.01 50V		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C35	.001		EF-001	MFT-1000		CCF-102	CT280A	
C36	.001		EF-001	MFT-1000		CCF-102	CT280A	
C37	100 10%		GPD X5F101K	DD-101	JBZ601YP101K	CCD-101	GP310	10TS-T10
			DI-12	DD-120		CCD-120	GP412	10TS-Q12
C39	.0047 10%							
C40	.05 25V		TTP-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C41	.05 25V		TTP-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C42	.05 25V		TTP-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C43	.05 25V		TTP-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C44	.22 12V	#22-3527					MAG12022	HY325
C45	.05 25V		TTP-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C46	.05 25V		TTP-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C47	.0043 100V 10%		ADM-20-433	CPR-4300J	CD19F432J500	DM-19-432J	SX243	MS-243
C48	.05 25V		TTP-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C49	.05 25V		TTP-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C51	1			TCZ-1			CNO510	10TCC-V10
C52	.1 12V		TTP-1	CK-104	HOV101ZV104Z		TA010	TG-P10
C53	.05 25V		TTP-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C54	.05 25V		TTP-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C55	1			TCZ-1			CNO510	10TCC-V10
C56	.05 25V		TTP-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C57	10 NPO 5%		NPO-DI 10	DTZ-10	CZ601CG100J	CCTO-100	CNO410	10TCC-Q10
C58	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C59	.05 25V		TTP-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C60	.0022		GPD X5F222K	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C61	.0022		GPD X5F222K	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C62	.022 100V 10%				DMF1S22	1DP-1-223	PVC1122	
C63	.05 25V		TTP-05	CK-503	HOV101ZV222K	CCD-222	TA150	TG-S50
C64	1			TCZ-1			CNO510	10TCC-V10
C65	.05 25V		TTP-05	CK-503	HOV101ZV222K	CCD-222	TA150	TG-S50
C66	.05 25V		TTP-05	CK-503	HOV101ZV222K	CCD-222	TA150	TG-S50
C67	.05 25V		TTP-05	CK-503	HOV101ZV222K	CCD-222	TA150	TG-S50
C68	2			DTZ-2R2	CZ601CJ2R2D	CCTO-2R2	CNO522	10TCC-V22
C71	.001 25V		GPD X5F102K	DM-102	JBS601YP102K	CCD-102	SM210	5GAB-D10
C72	.05 25V		TTP-05	CK-503	HOV101ZV222K	CCD-222	TA150	TG-S50
C73	390		GPD X5F391K	DD-391		CCD-391	GP339	10TS-T39
C74	390		GPD X5F391K	DD-391		CCD-391	GP339	10TS-T39
C75	.47 50V 10%				DMF1P47	1MD-4-474	PVC1047	225P4749R75
						*	*	
C77	.01 50V		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
	.47 10%							
C79	.022 100V 10%				DMF1P47	1DP-1-223	PVC1122	
C80	.001 1KV 10%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C81	.001 1KV 10%		GPD X5F102K	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C82	.05 25V		TTP-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C83	.47 10V			UK10-474			MAG12047	HY330
C84	.15 50V 10%				DMF1P15	1DP-3-154	PVC1015	225P1549R75
C85	.330 10%		GPD X5F331K	DD-331	JBZ601YP331K	CCD-331	GP331	10TS-T33
C86	.0033		GPD X5R332K	DD-332	JBV601YP332K	CCD-332	GP233	10TS-D33
C87	.22 50V 10%				DMF1P22	1DP-3-224	PVC1022	225P2249R75
C88	.33 50V 10%				DMF1P33	1DP-4-334	PVC1033	225P3949R75
C89	.033 200V 10%				DMF2S33		PVC2133	2WF-S33
C90	.33 50V 10%				DMF1P33	1DP-4-334	PVC1033	225P3349R75
C91	.068 50V 10%				DMF1S68	1DP-2-683	PVC1168	225P68391
C92	.47 50V 10%				DMF1P47	1DP-4-474	PVC1047	225P4749R75
C93	330 10%		GPD X5F331K	DD-331	JBZ601YP331K	CCD-331	GP331	10TS-T33
C94	.047 100V 10%				DMF1S47	1DP-2-473	PVC1147	225P47391
C95	.033 200V 10%				DMF2S33		PVC2133	2WF-S33
C96	.05 25V		TTP-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C97	.47 12V			UK1U-474			MAG12047	HY330
C98	.15 50V 10%				DMF1P15	1DP-3-154	PVC1015	225P1549R75
C99	330 10%		GPD X5F331K	DD-331	JBZ601YP331K	CCD-331	GP331	10TS-T33
C100	.0033		GPD X5R332K	DD-332	JBV601YP332K	CCD-332	GP233	10TS-D33
C101	.22 50V 10%				DMF1P22	1DP-3-224	PVC1022	225P2249R75
C102	.33 50V 10%				DMF1P33	1DP-4-334	PVC1033	225P3349R75
C103	.033 200V 10%				DMF2S331		PVC2133	2WF-S33
C104	.33 50V 10%				DMF1P33	1DP-4-334	PVC1033	225P3349R75
C105	.068 50V 10%				DMF1S68	1DP-2-683	PVC1168	225P68391
C106	.47 50V 10%				DMF1P47	1DP-4-474	PVC1047	225P4749R75
C107	330 10%		GPD X5F331K	DD-331	JBZ601YP331K	CCD-331	GP331	10TS-T33
C108	.047 100V 10%				DMF1S47	1DP-2-473	PVC1147	225P47391
C109	.033 200V 10%				DMF2S33		PVC2133	2WF-S33
C110	.01		GPD X5S103K	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C111	.01		GPD X5S103K	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C112	.01		GPD X5S103K	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C113	.0047 1KV 10%		GPD X5R472K	DD-472	JBT601YP472K	CCD-472	GP247	10TS-D47
C114	.05 25V		TTP-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C115								

\# Zenith Part No.
* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

PARTS LIST AND D

(When ordering parts, state Moc

CONTR

All wattages 1/2 watt, or les

ITEM No.	USE	RESISTANCE	ZENITH PART No.	CENTRA PART
R1A	Loudness/Balance (Left)	20K 5000Ω Tap 10K Tap	63-6361	
B	Loudness/Balance (Right)	20K 5000Ω Tap 10K Tap		
R2A	Treble/Left	50K	63-6363	F2-50K, F SF104, CI
B	Treble/Right	50K		
R3A	Bass/Left	250K	63-6362	F2-250K, R2-250K, SF104, CI
B	Bass/Right	250K		
R4	AGC	300Ω 2W	63-6376	V-300 or (WN-301)
R5	Muting	50K	63-3236	TT-31 or (F1-50K, SNK010)

* "SNAPTROL"
① Panel and Bushing components listed in parentheses may

RESISTORS (Po

ITEM No.	RATING	REPLACEMENT DATA IRC PART No.	WORKMAN PART No.	ZENITH PART No.
R112	.51Ω 5W	MR1		63-5305
R113	.51Ω 5W	MR1	VR1	63-5305
R135	.51Ω 5W	MR1	VR1	63-5305

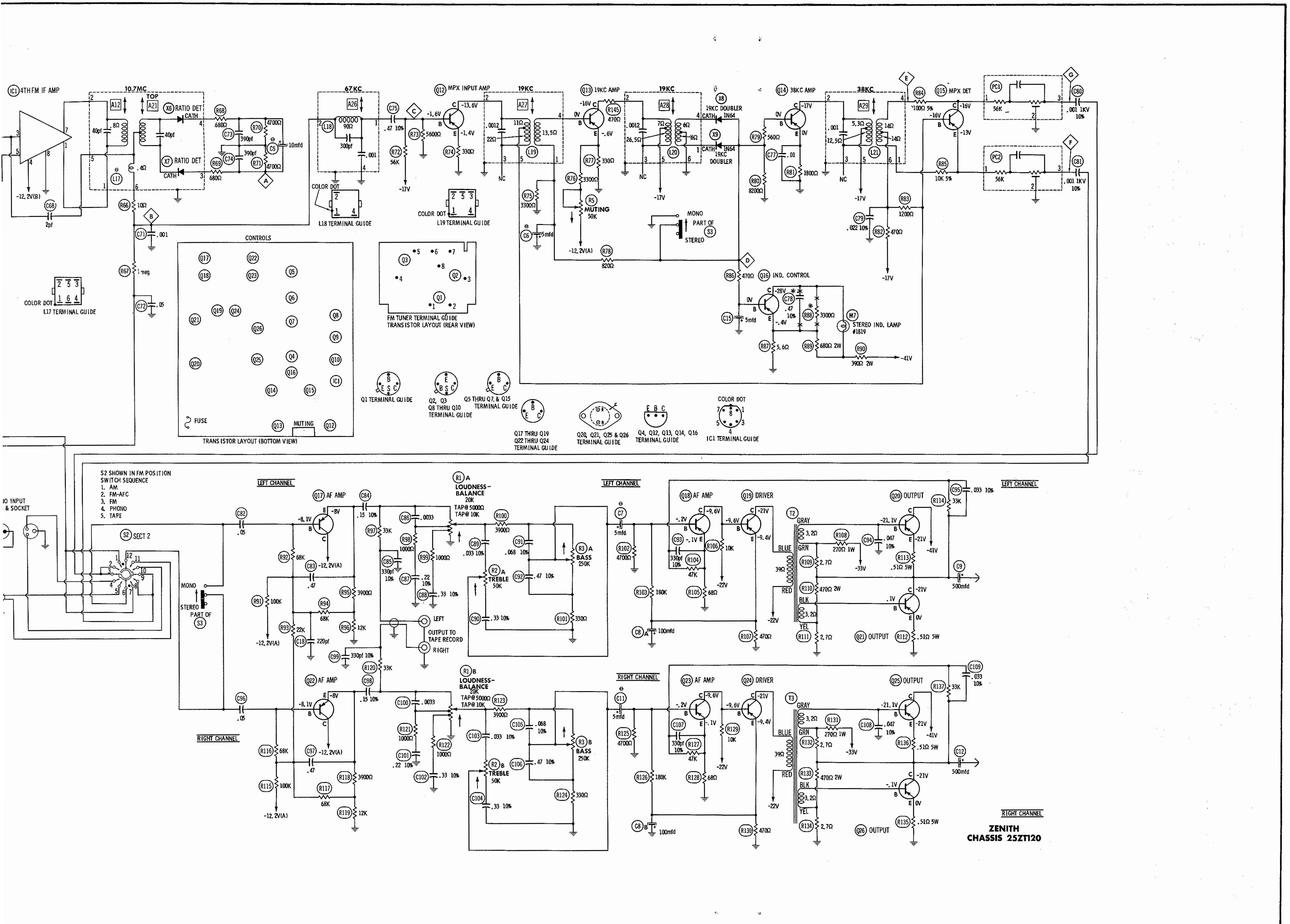
COILS

ITEM No.	USE	PART No.
L1	FM Antenna	S-62887
L2	FM RF	S-62887
L3	FM RF	S-62887
L4	FM Oscillator	S-62887
L5	10.7MC Trap	20-1256
L6	1st FM IF	95-2322
L7	AM Loop Antenna	S-64803
L8	AM Antenna	S-74470
L9	AM RF	S-69165
L10	AM Oscillator	S-72828
L11	1st AM IF	95-2325
L12	2nd FM IF	95-2328
L13	2nd AM IF	95-2326
L14	3rd FM IF	95-2387
L15	3rd AM IF	95-2327① ②
L16	4th FM IF	95-2328
L17	Ratio Detector	95-2324 ③
L18	67KC Trap	95-2316
L19	19KC Input	95-2315
L20	19KC Doubler	95-2313
L21	38KC Output	95-2314
L22	RF Choke (10uh)	20-2033
L23	Crossover Choke (500uh	S-76085 ④
L24	Crossover Choke (500uh	S-76085④

① Some versions may use Part #95-2452 in this application.
② Includes X5.

TRANSFORME

ITEM No.	RATING PRI.	SEC. 1	SEC. 2	REPLAC ZENITH PART No.	MERIT PART No.
T1	117VAC @.28 AAC	68VAC @.36 ADCCT	6.3VAC @.6AAC	95-2335	



(IC1) 4TH FM IF AMP
10.7MC
67KC
19KC
38KC
(Q12) MPX INPUT AMP
(Q13) 19KC AMP
(Q14) 38KC AMP
(Q15) MPX DET
(X6) RATIO DET
(X7) RATIO DET
(X8) 19KC DOUBLER 1N64
(X9) 19KC DOUBLER 1N64
MUTING
CONTROLS
TRANSISTOR LAYOUT (BOTTOM VIEW)
FUSE
L17 TERMINAL GUIDE
L18 TERMINAL GUIDE
L19 TERMINAL GUIDE
COLOR DOT
FM TUNER TERMINAL GUIDE
TRANSISTOR LAYOUT (REAR VIEW)
Q1 TERMINAL GUIDE
Q2, Q3 Q8 THRU Q10 TERMINAL GUIDE
Q5 THRU Q7, & Q15 TERMINAL GUIDE
Q17 THRU Q19 Q22 THRU Q24 TERMINAL GUIDE
Q20, Q21, Q25 & Q26 TERMINAL GUIDE
Q4, Q12, Q13, Q14, Q16 TERMINAL GUIDE
IC1 TERMINAL GUIDE
(Q16) IND. CONTROL
(M7) STEREO IND. LAMP #1819
MONO PART OF (S3) STEREO
S2 SHOWN IN FM POSITION
SWITCH SEQUENCE
1. AM
2. FM-AFC
3. FM
4. PHONO
5. TAPE
(S2) SECT 2
LEFT CHANNEL
RIGHT CHANNEL
(Q17) AF AMP
(Q18) AF AMP
(Q19) DRIVER
(Q20) OUTPUT
(Q21) OUTPUT
(Q22) AF AMP
(Q23) AF AMP
(Q24) DRIVER
(Q25) OUTPUT
(Q26) OUTPUT
(R1) A LOUDNESS-BALANCE 20K TAP@5000Ω TAP@10K
(R1) B LOUDNESS-BALANCE 20K TAP@5000Ω TAP@10K
(R2) A TREBLE 50K
(R2) B TREBLE 50K
(R3) A BASS 250K
(R3) B BASS 250K
(R5) MUTING 50K
LEFT OUTPUT TO TAPE RECORD RIGHT
GRAY GRN BLUE RED BLK YEL
ZENITH
CHASSIS 25ZT120

ALIGNMENT INSTRUCTIONS

Maintain line voltage at 117 volts. Use only enough generator output to obtain a suitable indication.
Allow a 15 minute warmup for receiver and equipment.
CAUTION: Use isolation transformer, if available. If not, observe polarity when connecting test equipment.
Suggested Alignment Tools:
A1 THRU A5, A9 THRU A21, A26 THRU A29: GENERAL CEMENT: 8606, 8606L, 8869 WALSCO: 2543, 2544, 2588
A6, A7, A8: GENERAL CEMENT: 8868, 8987, 9089 WALSCO: 2531-X, 2541, 2587

AM ALIGNMENT – SELECTOR IN AM POSITION

Fashion loop of several turns of wire and connect generator across loop. Set volume control at maximum.

	GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	455KC (400∿ Mod.)	Tuning gang fully open.	Output Meter across Voice coil.	A1, A2, A3 A4, A5	Adjust for maximum. Repeat until no further improvement can be made.
2.	1620 KC	"	"	A6	Adjust for maximum.
3.	1400KC	Tune to signal.	"	A7, A8	"
4.	600KC	"	"	A9, A10, A11	Rock tuning gang and adjust for maximum. Repeat steps 2 thru 4 until no further improvement can be made.

FM ALIGNMENT USING AM SIGNAL GENERATOR – SELECTOR IN FM POSITION

Connect Generator thru .001 mfd capacitor to junction of Q4 and C19, low side to ground.

10.7MC

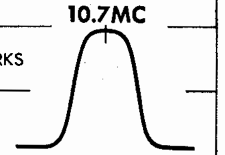


FIG. 1

	GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
5.	10.7MC (Unmod.)	Point of non-interference.	DC probe of VTVM to point Ⓐ; common to ground.	A12, A13, A14, A15, A16, A17, A18, A19, A20	Adjust for maximum.
6.	"	"	DC probe to point Ⓑ; common to ground	A21	Adjust for zero reading. A positive or negative reading will be obtained on either side of the correct setting.

FM IF ALIGNMENT USING FM SIGNAL GENERATOR – SELECTOR IN FM POSITION

Connect generator thru .001mfd to junction of Q4 and C19, low side to ground. Use only enough marker signal to obtain indication. Use frequency modulated signal with 450KC sweep. Use 120∿ sawtooth voltage in scope for horiz deflection.

	GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
5.	10.7MC (450KC Swp.)	Point of non-interference	Vert. amp. of Scope to point Ⓐ; low side to ground.	A12, A13, A14, A15, A16, A17, A18, A19, A20	Disconnect stabilizing capacitor C5. Adjust for maximum gain and symmetry of response similar to Fig. 1 with marker as shown. Reconnect C5.
6.	"	"	Vert. amp. to point Ⓑ; low side to ground	A21	Adjust A21 (Secondary) to place marker at center of crossover lines similar to Fig. 2. Adjust A12 (Primary) for maximum amplitude and straightness of crossover lines.

FM RF ALIGNMENT

Connect generator across antenna terminals with 120Ω carbon resistors in series with each lead.

10.7MC

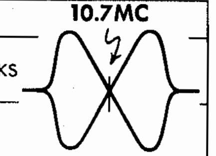


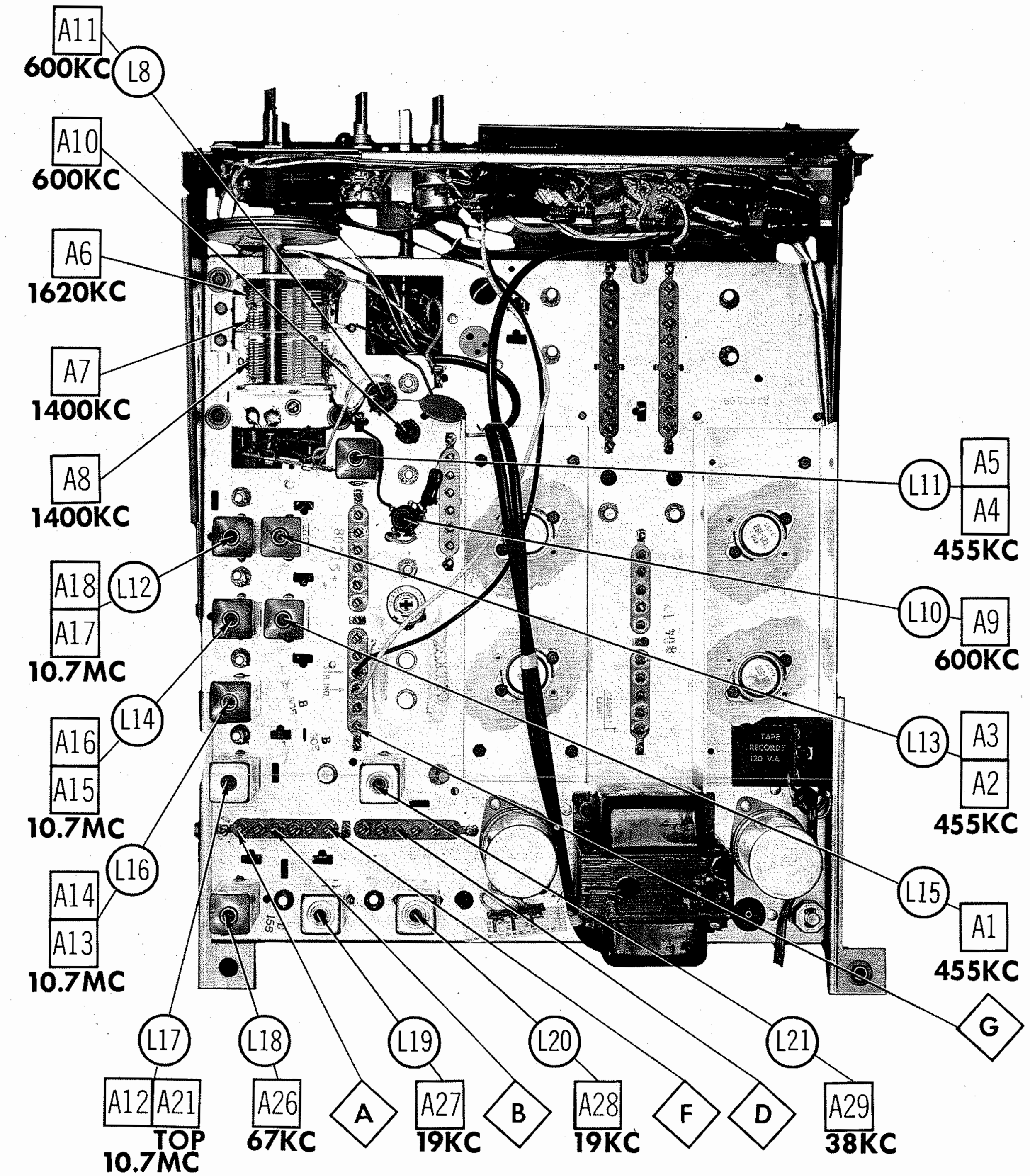
FIG. 2

	GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
7.	90MC	Tune to signal.	DC probe of VTVM to point Ⓐ, common to ground.	A22, A23, A24, A25	Adjust for maximum.

FM STEREO MULTIPLEX ALIGNMENT USING FM STEREO SIGNAL GENERATOR (± .0001%) ACCURACY)

Connect high side of generator to point Ⓑ. Low side to ground

	GENERATOR FREQUENCY	INDICATOR	ADJUST	REMARKS
8.	67KC	Vert. amp. of Scope thru a 1 meg to point Ⓒ; low side to ground.	A26	Adjust for MINIMUM.
9.	19KC	Vert. amp. thru 47K to point Ⓓ; low side to ground.	A27, A28	Adjust for maximum.
10.	"	Vert. amp. thru 47K to point Ⓔ; low side to ground.	A29	Adjust maximum for 38KC response.
11.	Modulated Left Channel	Vert. amp. to point Ⓕ; low side to ground.	A27, A28 A29	Adjust for MINIMUM. This should require only a slight adjustment.
12.	Modulated Right Channel	Vert. amp. to point Ⓖ; low side to ground.		Check for MINIMUM. Make compromise adjustment of A27, A28, A29 if necessary.



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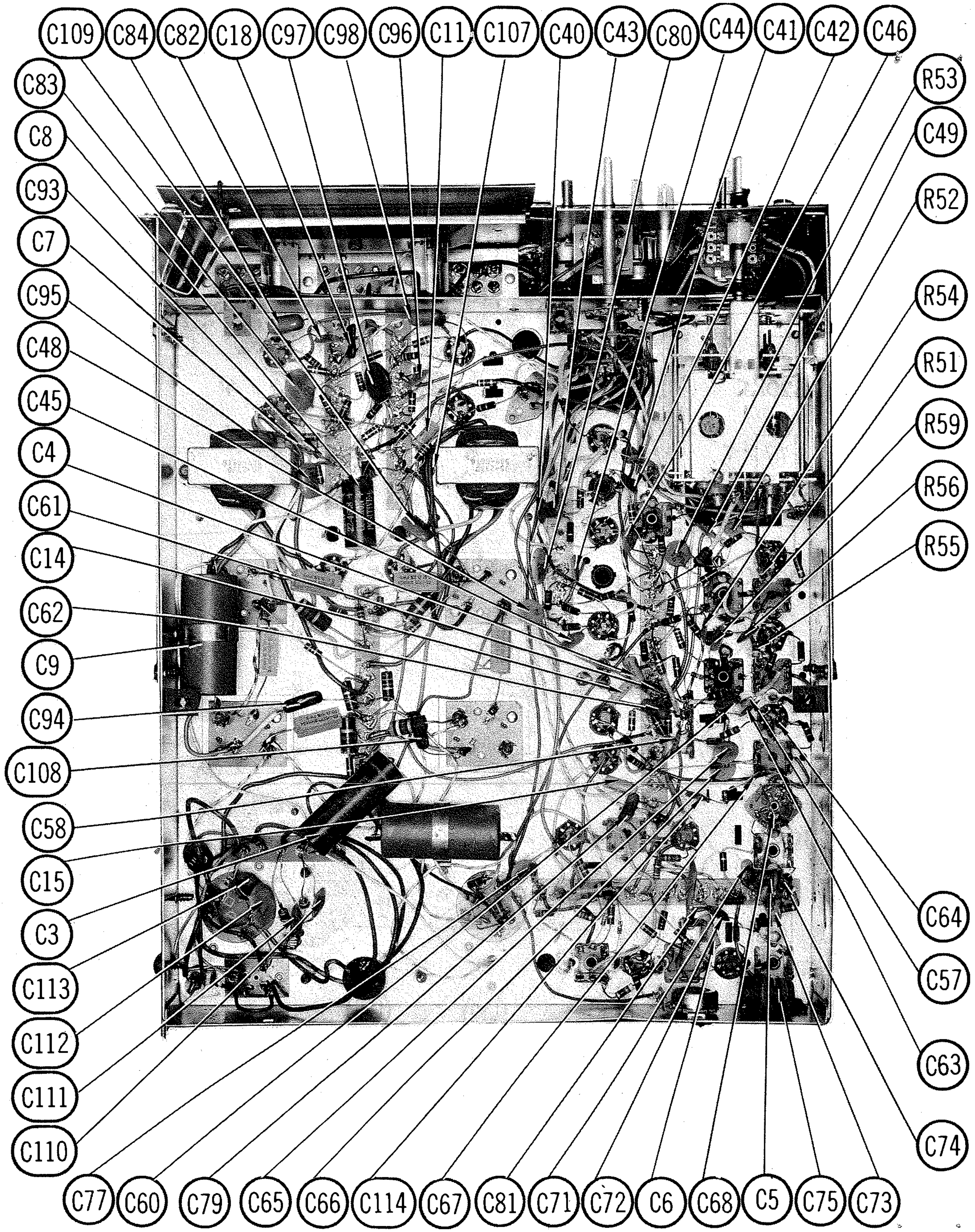
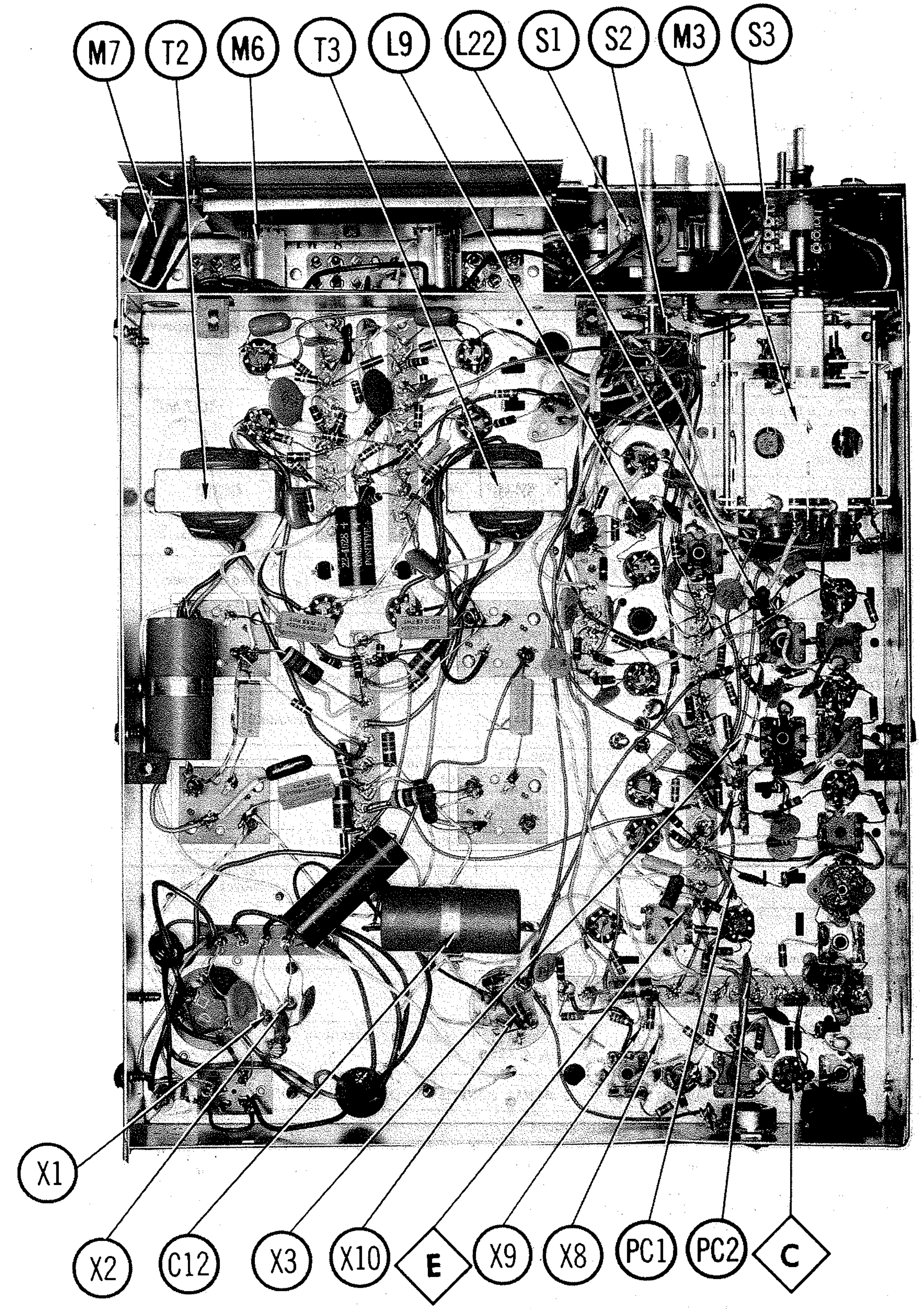
FOLDER 2-C





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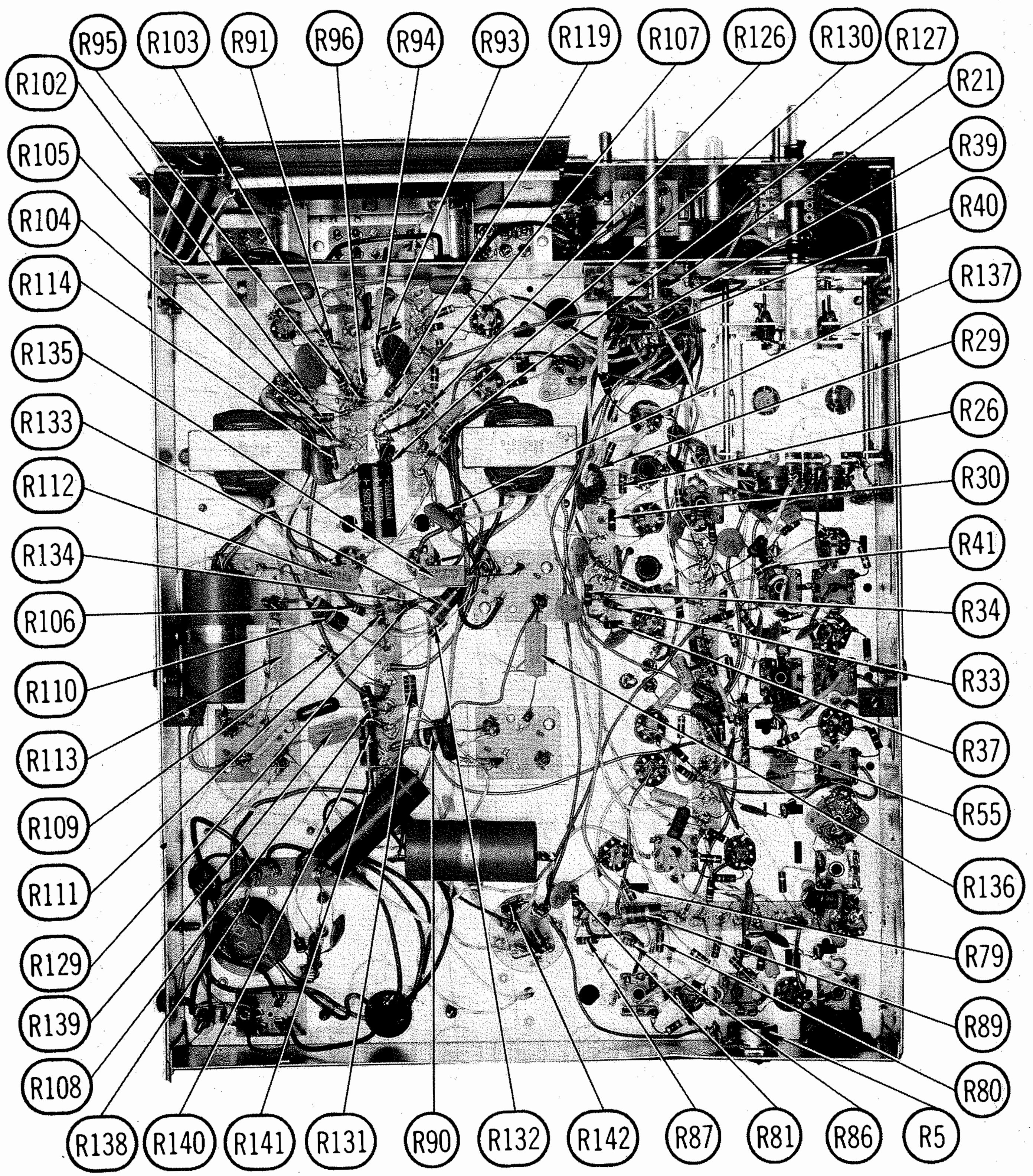
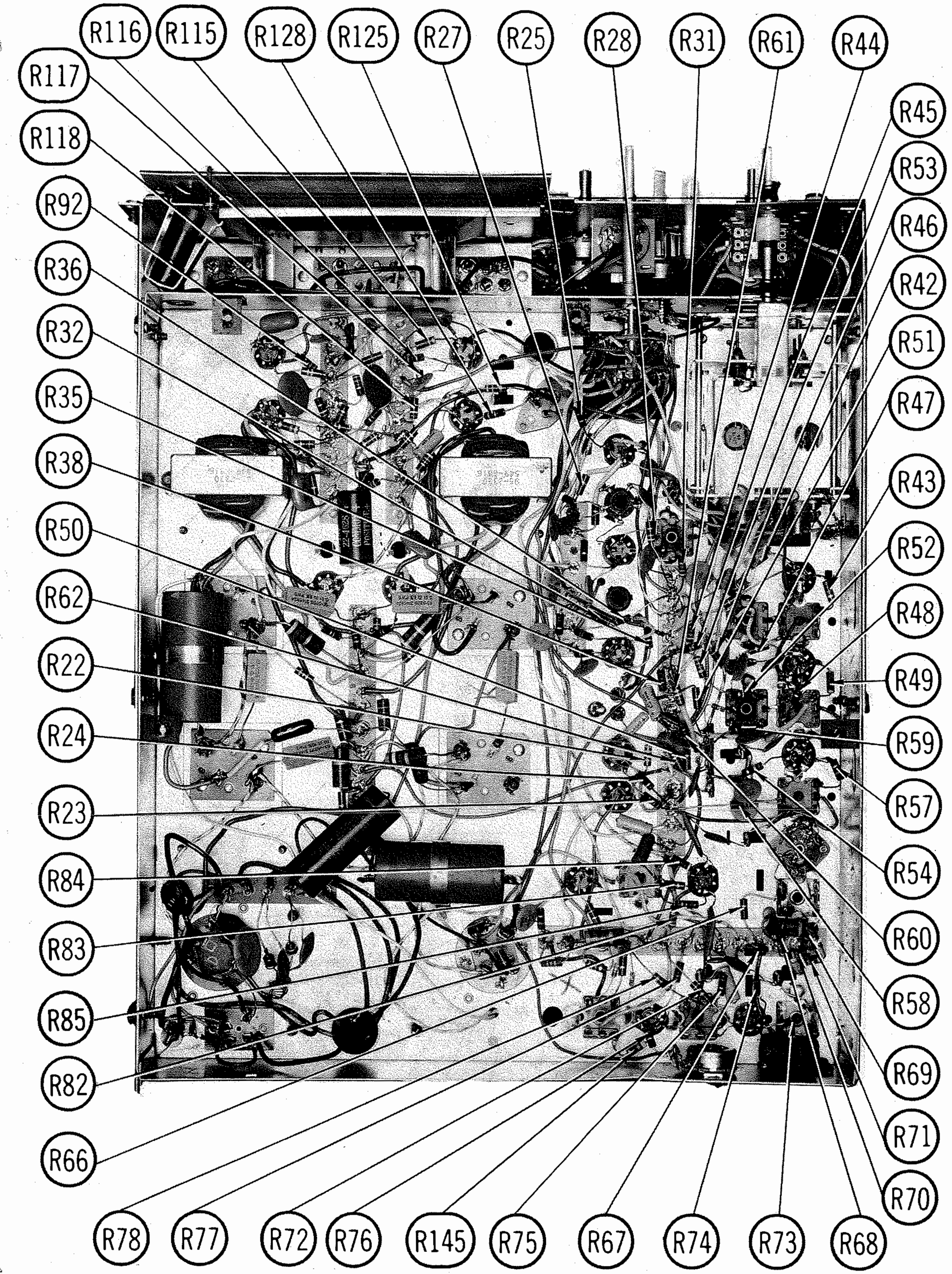
FOLDER 2-C





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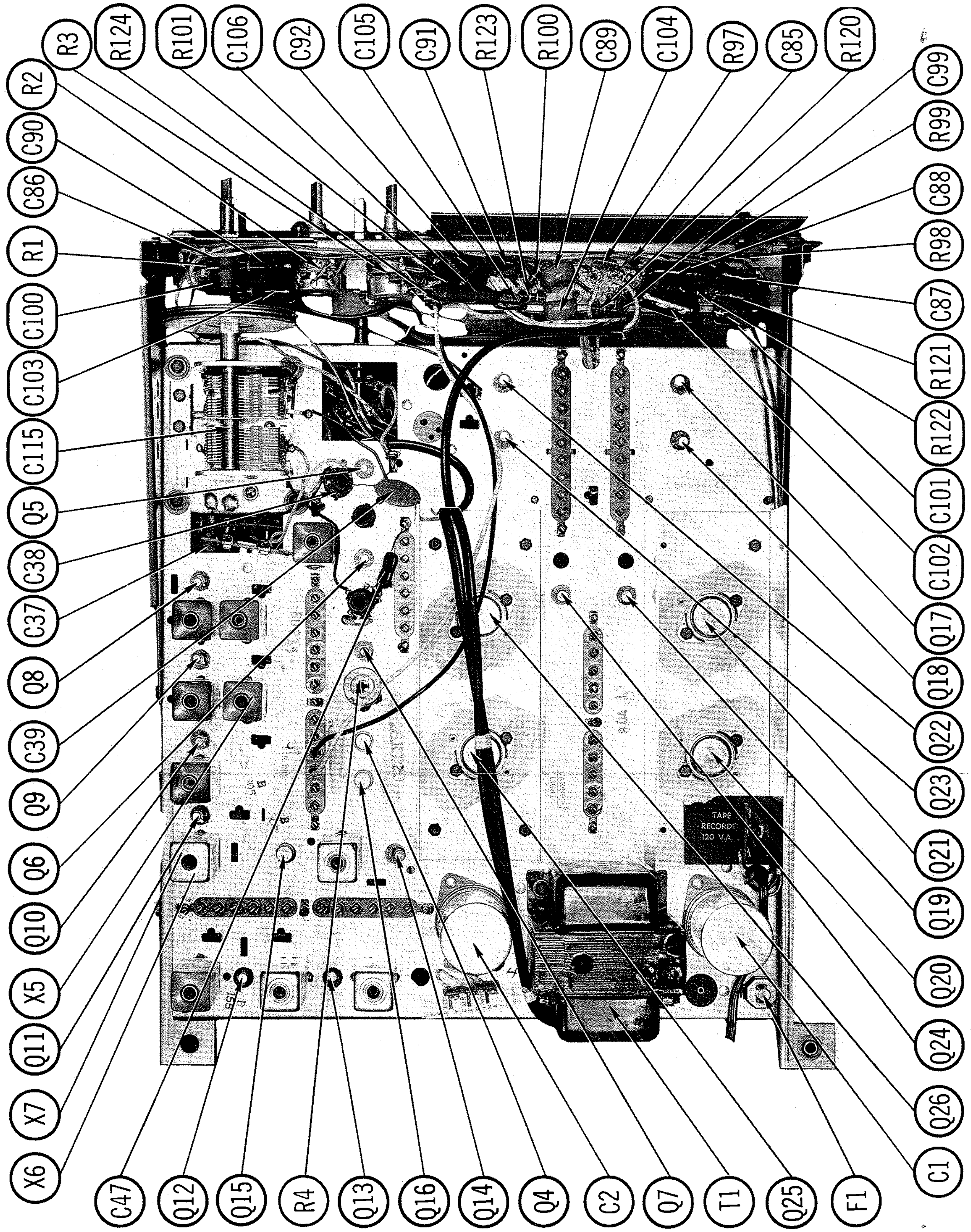
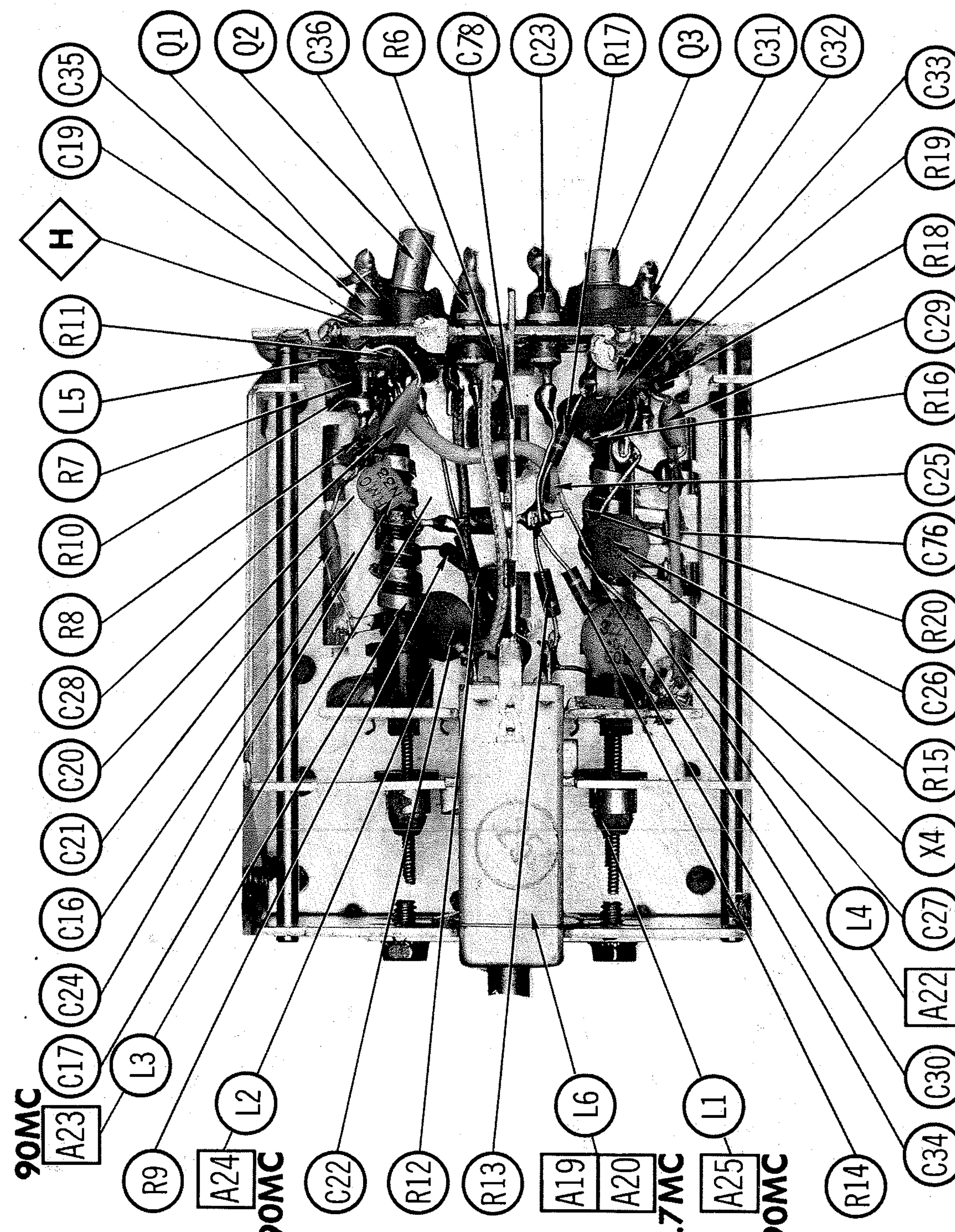
CHASSIS 25Z1120

FOLDER 2-C





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FOLDER 2-C