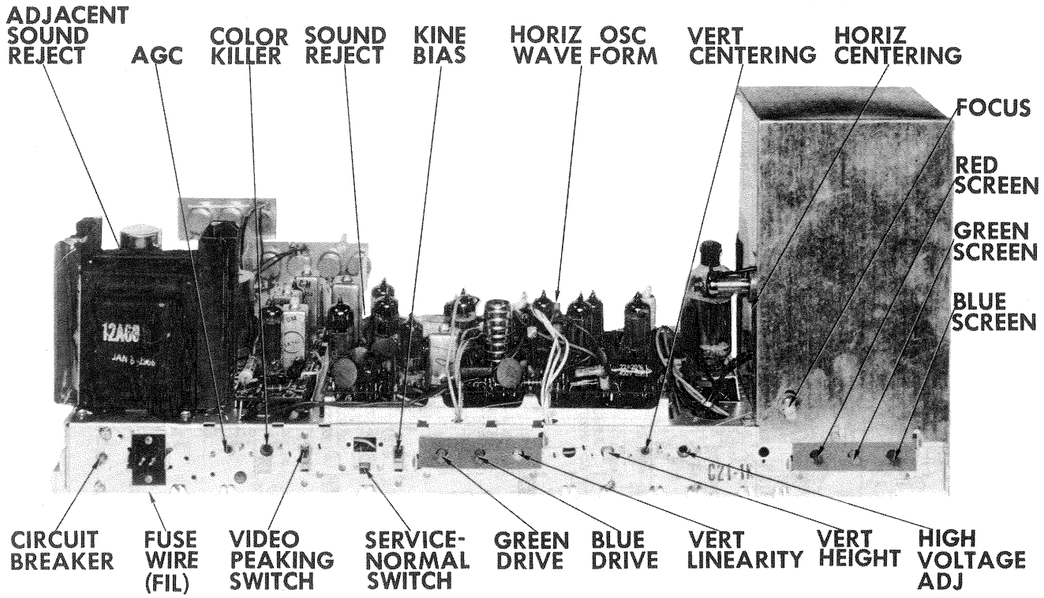
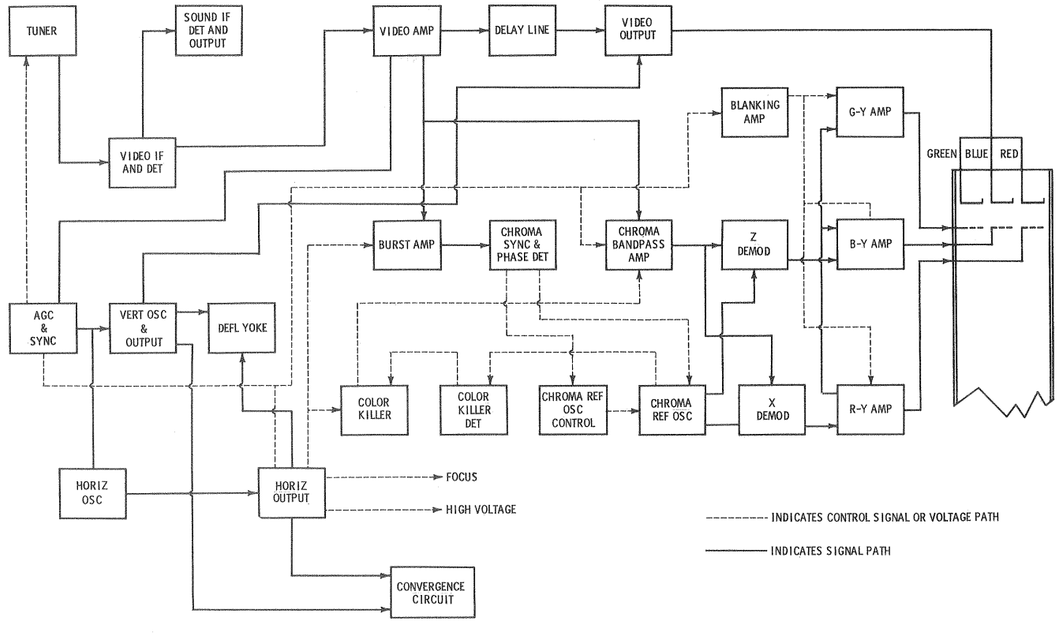
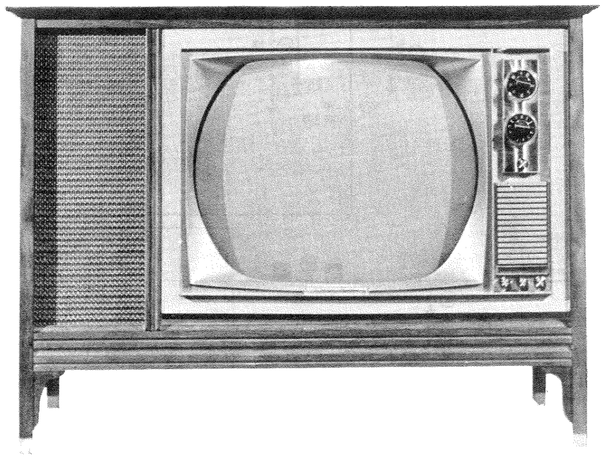


CHASSIS - REAR VIEW



BLOCK DIAGRAM



REPRESENTATIVE MODEL 50M011
USING CHASSIS CMC21

TRADE NAME	Curtis Mathes Chassis CMC20, CMC21 Series
SUPPLIER	For current address, see Annual Index.
TYPE SET	Color Television Receiver
TUBES	VHF: Twenty-Seven, UHF: One Transistor
POWER SUPPLY	110-120 Volts AC, 60 Cycles
RATING	310 Watts @ 117 Volts AC (44 Watts in "Instant Operation" position)
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier)

SERVICING IN THE FIELD

SAFETY GLASS

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

FUSE OR FUSE DEVICE

A 3½" length of fuse wire is used for filament protection. (For location, see F2 in photo "Chassis - Bottom View".)

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

VHF OSCILLATOR ADJUSTMENT

The Fine Tuning mechanically engages oscillator slug for adjustment (one slug for each channel).

AGC

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

HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

Coarse adjustment of the horizontal hold is accomplished by the proper setting of the Horiz. Waveform (Sine Wave), L38B. (See "Tube Placement Chart" for location.)

FOCUS

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

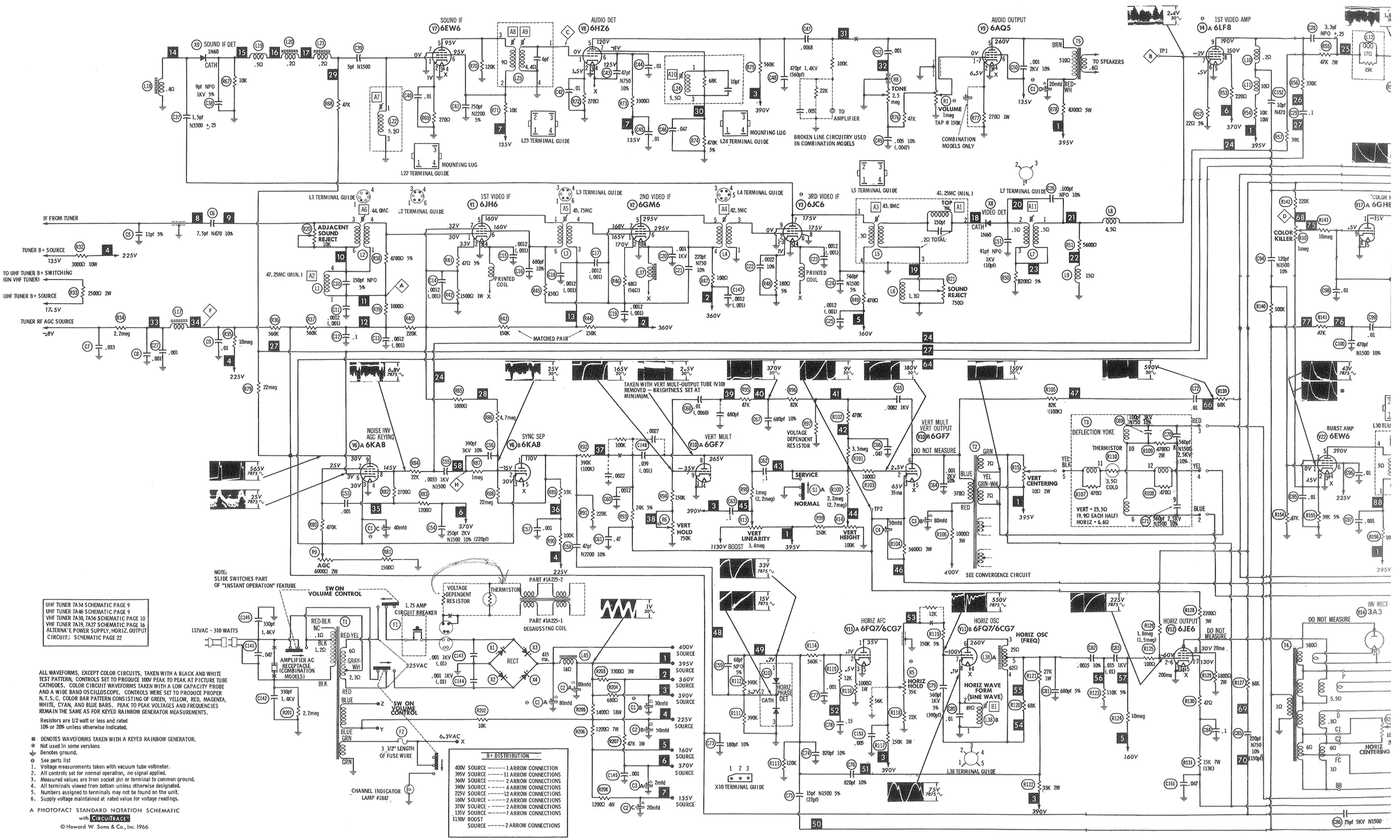
CENTERING

Centering is accomplished by adjustment of the two electrical centering controls. (See "Tube Placement Chart".)

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

CURTIS MATHES CHASSIS
CMC20 Series, CMC21 Series
SET 831 FOLDER 2

CHASSIS - BOTTOM VIEW


SOUND IF V7 6EW6
AUDIO DET V8 6HZ6
AUDIO OUTPUT V9 6AQ5
1ST VIDEO AMP V4A 6LF8
SOUND IF DET X9 1N60
1ST VIDEO IF V1 6JH6
2ND VIDEO IF V2 6GM6
3RD VIDEO IF V3 6JC6
VIDEO DET X8 1N60
SYNC SEP V6B 6KA8
NOISE INV AGC KEYING V6A 6KA8
VERT MULT V10A 6GF7
VERT MULT VERT OUTPUT V10B 6GF7
HORIZ AFC V11A 6FQ7/6CG7
HORIZ OSC V11B 6FQ7/6CG7
HORIZ OUTPUT V12 6JE6
HV RECT V14 3A3
COLOR KILLER V17A 6GH8
BURST AMP V22 6EW6
IF FROM TUNER
TUNER B+ SOURCE
TO UHF TUNER B+ SWITCHING (ON VHF TUNER)
UHF TUNER B+ SOURCE
TUNER RF AGC SOURCE
ADJACENT SOUND REJECT
PRINTED COIL
MATCHED PAIR
MOUNTING LUG
L22 TERMINAL GUIDE
L23 TERMINAL GUIDE
L24 TERMINAL GUIDE
L1 TERMINAL GUIDE
L2 TERMINAL GUIDE
L3 TERMINAL GUIDE
L4 TERMINAL GUIDE
L5 TERMINAL GUIDE
L7 TERMINAL GUIDE
L38 TERMINAL GUIDE
X10 TERMINAL GUIDE
BROKEN LINE CIRCUITRY USED IN COMBINATION MODELS
TO AMPLIFIER
TO SPEAKERS
VOLUME
TONE
SERVICE NORMAL
VERT HOLD
VERT LINEARITY
VERT HEIGHT
VERT CENTERING
HORIZ HOLD
HORIZ WAVE FORM (SINE WAVE)
HORIZ PHASE DET
HORIZ CENTERING
SOUND REJECT
COMBINATION MODELS ONLY
SEE CONVERGENCE CIRCUIT
DEFLECTION YOKE
THERMISTOR
DO NOT MEASURE
1130V BOOST
VOLTAGE DEPENDENT RESISTOR
SW ON VOLUME CONTROL
1.75 AMP CIRCUIT BREAKER
PART #1A225-2
PART #1A225-1 DEGAUSSING COIL
AMPLIFIER AC RECEPTACLE (COMBINATION MODELS)
CHANNEL INDICATOR LAMP #1847
3 1/2" LENGTH OF FUSE WIRE
117VAC - 310 WATTS
B+ DISTRIBUTION
400V SOURCE ------ 1 ARROW CONNECTION
395V SOURCE ------ 11 ARROW CONNECTIONS
360V SOURCE ------ 2 ARROW CONNECTIONS
390V SOURCE ------ 4 ARROW CONNECTIONS
225V SOURCE ------ 12 ARROW CONNECTIONS
160V SOURCE ------ 2 ARROW CONNECTIONS
370V SOURCE ------ 2 ARROW CONNECTIONS
135V SOURCE ------ 7 ARROW CONNECTIONS
1130V BOOST SOURCE ------ 2 ARROW CONNECTIONS
TAKEN WITH VERT MULT-OUTPUT TUBE (V10) REMOVED — BRIGHTNESS SET AT MINIMUM.
UHF TUNER 7A34 SCHEMATIC PAGE 9
UHF TUNER 7A46 SCHEMATIC PAGE 9
VHF TUNER 7A38, 7A56 SCHEMATIC PAGE 10
VHF TUNER 7A19, 7A27 SCHEMATIC PAGE 16
ALTERNATE POWER SUPPLY, HORIZ. OUTPUT CIRCUITS SCHEMATIC PAGE 22
ALL WAVEFORMS, EXCEPT COLOR CIRCUITS, TAKEN WITH A BLACK AND WHITE TEST PATTERN. CONTROLS SET TO PRODUCE 100V PEAK TO PEAK AT PICTURE TUBE CATHODES. COLOR CIRCUIT WAVEFORMS TAKEN WITH A LOW CAPACITY PROBE AND A WIDE BAND OSCILLOSCOPE. CONTROLS WERE SET TO PRODUCE PROPER N.T.S.C. COLOR BAR PATTERN CONSISTING OF GREEN, YELLOW, RED, MAGENTA, WHITE, CYAN, AND BLUE BARS. PEAK TO PEAK VOLTAGES AND FREQUENCIES REMAIN THE SAME AS FOR KEYED RAINBOW GENERATOR MEASUREMENTS.
Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.
■ DENOTES WAVEFORMS TAKEN WITH A KEYED RAINBOW GENERATOR.
* Not used in some versions
⏚ Denotes ground.
⊖ See parts list
1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found on the unit.
6. Supply voltage maintained at rated value for voltage readings.
A PHOTOFACT STANDARD NOTATION SCHEMATIC with CIRCUITRACE
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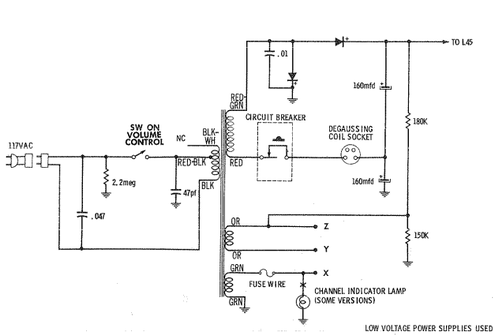
1ST VIDEO AMP V4A 6LF8
2ND VIDEO AMP V4B 6LF8
DELAY LINE M7
VIDEO OUTPUT V5 12BY7A
HORIZ BLANKING AMP V21B 6GU7
PICTURE TUBE BIAS
G-Y AMP V21A 6GU7
SERVICE NORMAL
GREEN DRIVE 6000Ω
BLUE DRIVE 6000Ω
GREEN BLUE RED
PICTURE TUBE V25 21FJP22A
DO NOT MEASURE
COLOR KILLER V17A 6GH8
COLOR KILLER DET V23A 6JU8
MATCHED PAIR
CHROMA BANDPASS AMP V17B 6GH8
Z DEMODULATOR V18 6GY6
B-Y AMP V20A 6GU7
GREEN SCREEN 1.5meg
BLUE SCREEN 1.5meg
RED SCREEN 1.5meg
SPARK GAP
1130V BOOST
BURST AMP V22 6EW6
CHROMA SYNC PHASE DET. V23B 6JU8
CHROMA REFERENCE OSC CONTROL
CHROMA REFERENCE OSC V24 6GH8
3.58MC CRYSTAL
X DEMODULATOR V19 6GY6
R-Y AMP V20B 6GU7
DEFLECTION YOKE
THERMISTOR
3.5Ω COLD
VERT = 23.5Ω (9, 9Ω EACH HALF)
HORIZ = 6.6Ω
HORIZ OUTPUT V12 6JE6
HV RECT V14 3A3
FOCUS RECT V15 2AV2
HV REGULATOR V16 6BK4
TO PICTURE TUBE HV ANODE (21-24KV)
NOTE: R135 & R136 ARE A MATCHED PAIR.
HIGH VOLTAGE ADJUST
DAMPER V13 6DW4
HORIZ LINEARITY (EFFICIENCY)
HORIZ CENTERING
FOCUS
1130V BOOST SOURCE
SEE VERT OUTPUT CIRCUIT
TIE POINT
L25 TERMINAL GUIDE
L26 TERMINAL GUIDE
L30 TERMINAL GUIDE
L31 TERMINAL GUIDE
L32 TERMINAL GUIDE
L33 TERMINAL GUIDE
L36 TERMINAL GUIDE
L37 TERMINAL GUIDE
L39 TERMINAL GUIDE
L40 TERMINAL GUIDE
L41 TERMINAL GUIDE
L42 TERMINAL GUIDE
L43 TERMINAL GUIDE
T4 TERMINAL GUIDE
NOTE: DEMODULATOR PLATE RESISTORS R180 & R187 ARE A MATCHED PAIR
R-G VERT LINES (TOP)
R-G VERT LINES (BOT)
R-G HORIZ LINES (TOP)
R-G HORIZ LINES (BOT)
R-G HORIZ LINES (RIGHT)
R-G HORIZ LINES (LEFT)
R-G VERT LINES (RIGHT)
R-G VERT LINES (LEFT)
BLUE HORIZ LINES (RIGHT)
BLUE HORIZ LINES (LEFT)
BLUE VERT LINES
GREEN VERT LINES
RED VERT LINES
RECT
MOUNTING LUG

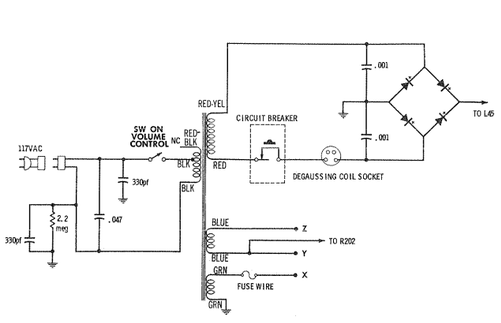
CURTIS MATHES CHASSIS
CMC20 Series, CMC21 Series

RESISTANCE MEASUREMENTS

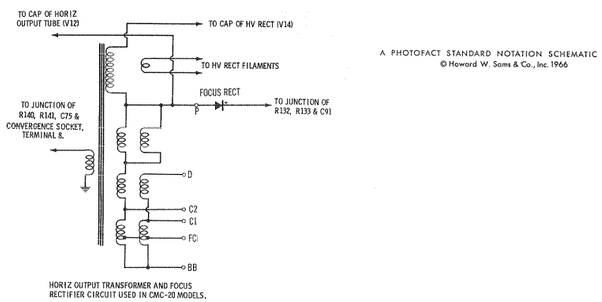
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12
V1	6JH6	230K	1547Ω	FIL	FIL	218Ω ▲	218Ω ▲	1500Ω					
V2	6GM6	80K †	INF	FIL	FIL	34000Ω †	34000Ω †	68Ω ▲					
V3	6JC6	180Ω	0Ω	180Ω	FIL	FIL	0Ω	3070Ω †	3070Ω †	0Ω †			
V4	6LF8	0Ω	19K	6000Ω † #	FIL	FIL	22Ω	150Ω ●	51K †	10K †			
V5	12BY7A	200Ω	600K	0Ω	FIL	FIL	FIL	60000Ω †	23K †	0Ω			
V6	6KA8	80K	3.8meg	3500Ω	FIL	FIL	50K	500K †	30K †	700K †			
V7	6EW6	5.5Ω	270Ω	FIL	FIL	13.8K †	13.8K †	0Ω					
V8	6HZ6	4.4Ω	270Ω	FIL	FIL	560K †	3600Ω †	470K					
V9	6AQ5A	250K	270Ω	FIL	FIL	4826Ω †	3816Ω †	250K					
V10	6GF7	0Ω	2.4meg	4000Ω	FIL	FIL	1370Ω †	NC	2.2meg †	340K			
V11	6FQ7	25K	650K	1000Ω	FIL	FIL	71K †	200K	49Ω	0Ω			
V12	6JE6	15K †	2meg	0Ω	FIL	FIL	2meg	15K †	1400Ω				TOP CAP 12.5Ω †
V13	6DW4	NC	25.2Ω †	NC	FIL	FIL	NC	25.2Ω †	NC	3.4meg			
V14	3A3	PINS 1 THRU 8 HAVE INFINITE RESISTANCE											TOP CAP 592.5Ω †
V15	2AV2	12.5Ω †	NC	NC	75meg	75meg	NC	NC	NC	NC			
V16	68K4	1000Ω †	FIL	NC	NC	1.5meg	NC	FIL	NC				TOP CAP INF
V17	6GH8A	390K	220K	48000Ω †	FIL	FIL	29000Ω †	390Ω	0Ω	10.5meg			
V18	6GY6	125Ω	100Ω	FIL	FIL	5300Ω †	3856Ω †	2Ω					
V19	6GY6	125Ω	150Ω	FIL	FIL	5300Ω †	3856Ω †	.4Ω					
V20	6GU7	27K †	1meg	270Ω	FIL	FIL	27K †	1meg	270Ω	0Ω			
V21	6GU7	47K †	230K	390Ω	FIL	FIL	27K †	1meg	270Ω	0Ω			
V22	6EW6	47K	39K	FIL	FIL	1000Ω †	1400Ω †	39K					
V23	6JU8	1meg ■	220Ω	1meg ■	FIL	FIL	0Ω	11.5meg	22K	11.5meg			
V24	6GH8A	20K	47K	48.5K †	FIL	FIL	82000Ω †	0Ω	680Ω	INF			
V25	21EJP22 21FBP22	FIL	140K †	3.7meg ♦	6200Ω †	3400Ω †	120K †	3.7meg ♦	NC	75meg	NC	3.7meg	135K †
							Pin 13 4400Ω †	Pin 14 FIL					
V201	6HQ5	3.8meg	0Ω	FIL	FIL	5600Ω	0Ω	0Ω					
V202	6GX7	0Ω	220K	0Ω	FIL	FIL	54000Ω †	26.5K †	91000Ω †	47K			
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

♦ THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
● READING DEPENDS ON POLARITY OF METER CONNECTIONS.
▲ MEASURED FROM PIN 2 OF V2.
† MEASURED FROM X3 AND X4.
♦ MEASURED FROM PIN 9 OF V13.
■ MEASURED FROM PIN 9 OF V24.
NC NO CONNECTION





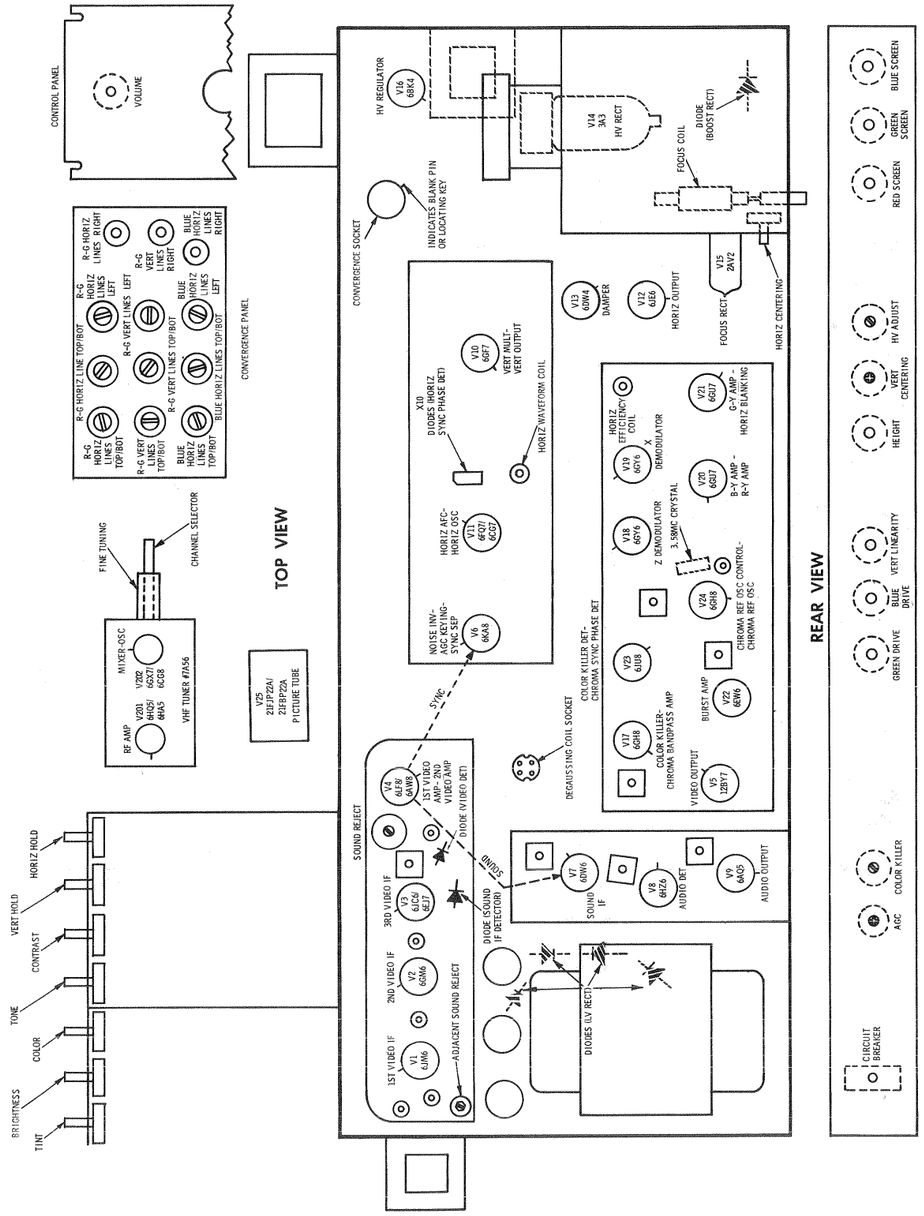
LOW VOLTAGE POWER SUPPLIES USED IN SOME CMC-20 MODELS.



HORIZ OUTPUT TRANSFORMER AND FOCUS RECTIFIER CIRCUIT USED IN CMC-20 MODELS.

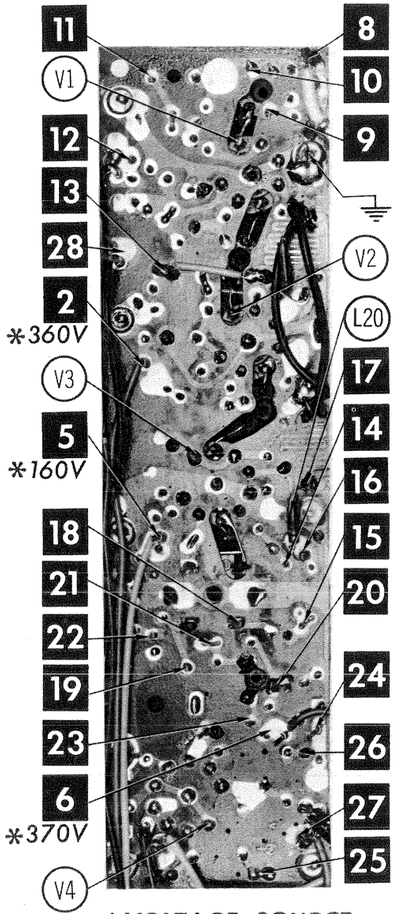
ALTERNATE POWER SUPPLY, HORIZ. OUTPUT CIRCUITS

TUBE PLACEMENT CHART

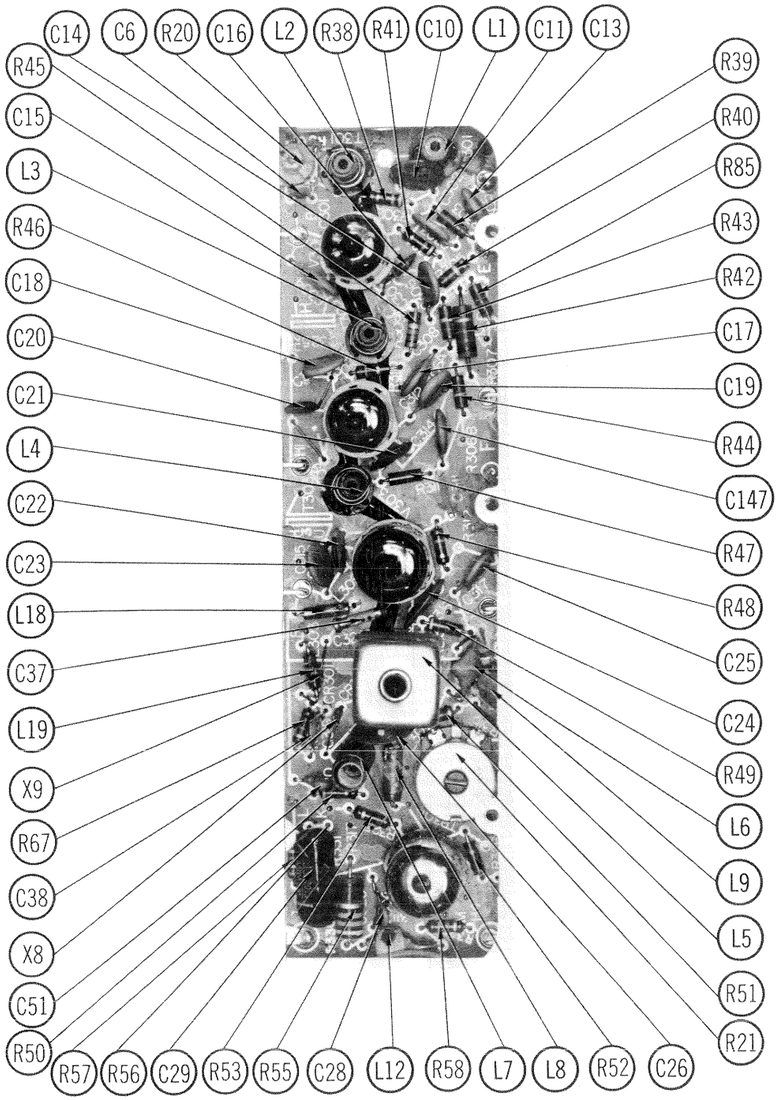


A Howard W. Sams CIRCUITRACE® Photo

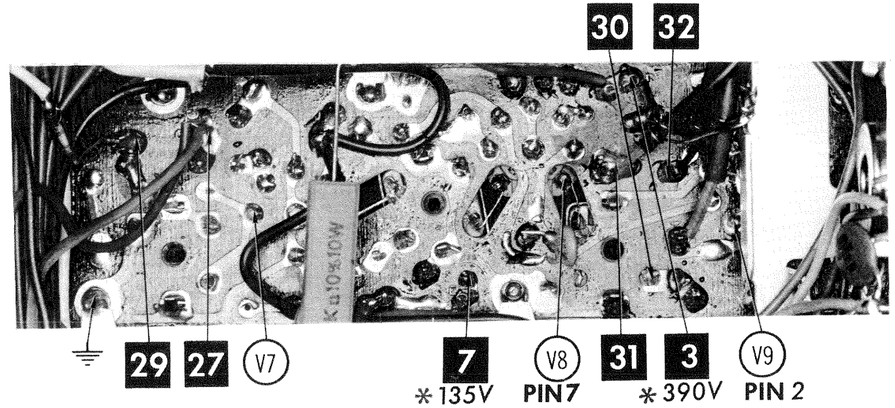
ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED



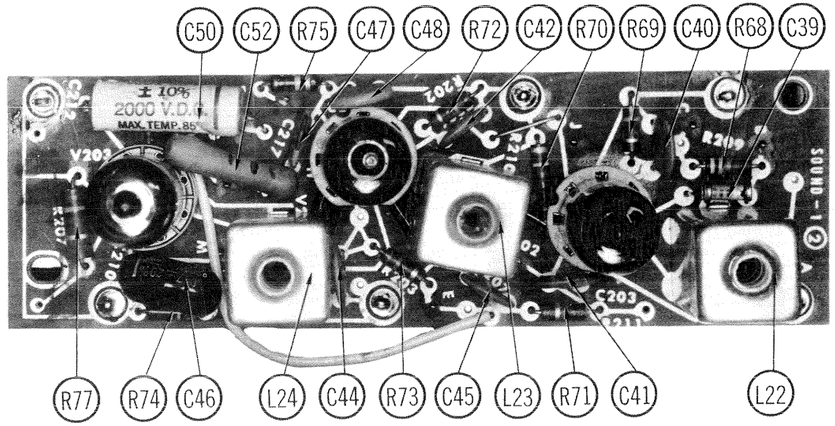
*VOLTAGE SOURCE



(VIDEO)



*VOLTAGE SOURCE



(AUDIO)

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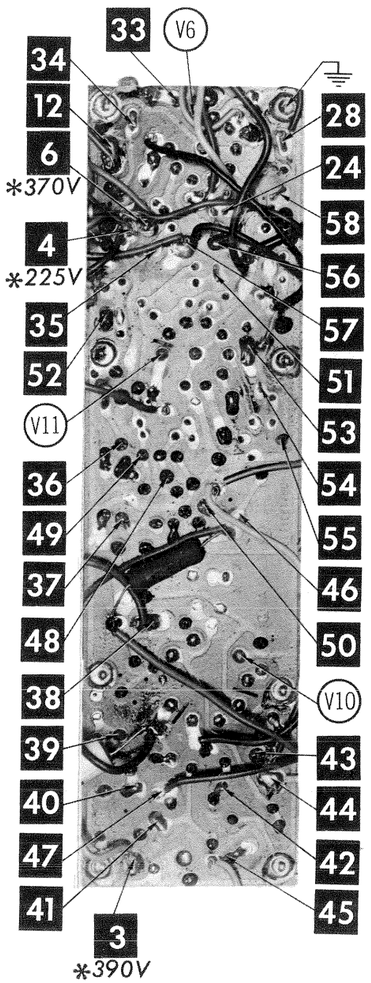
ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED

PRINTED BOARDS



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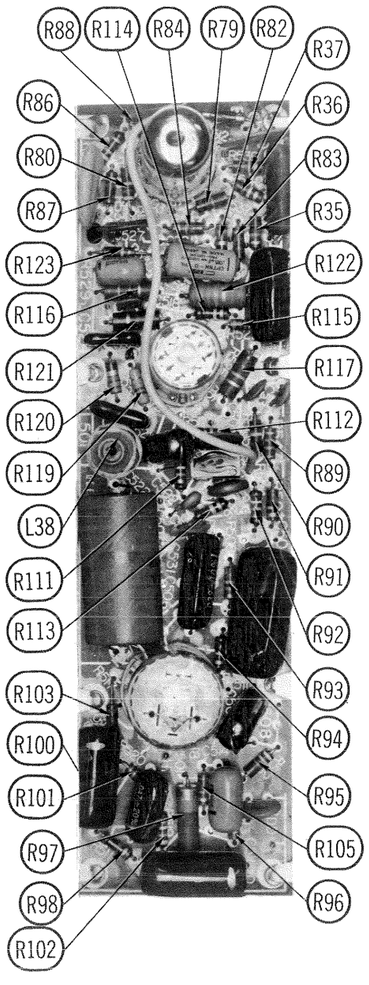
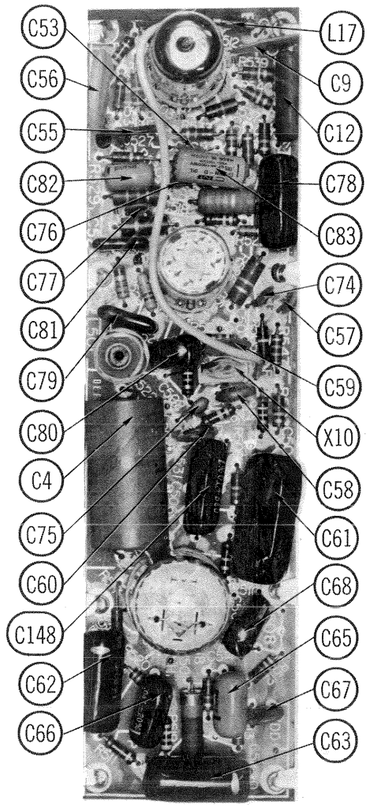
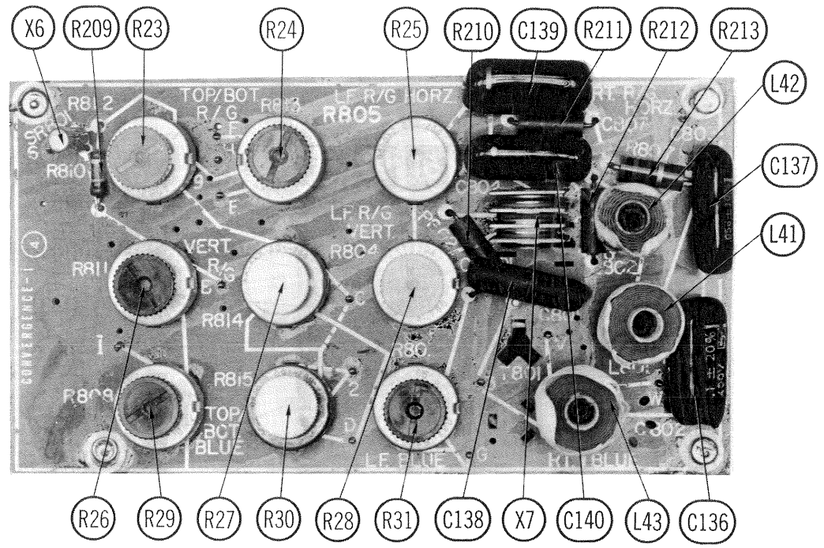
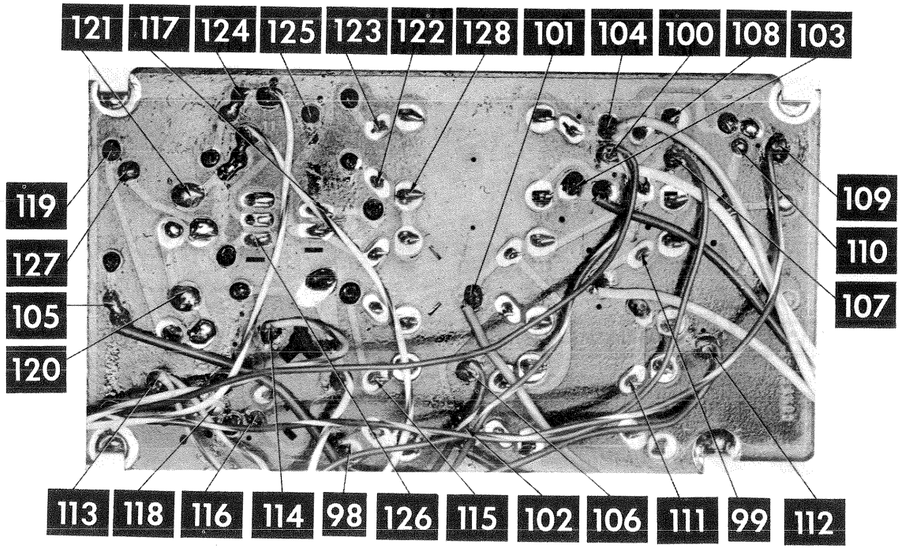




(SWEEP)





(CONVERGENCE)

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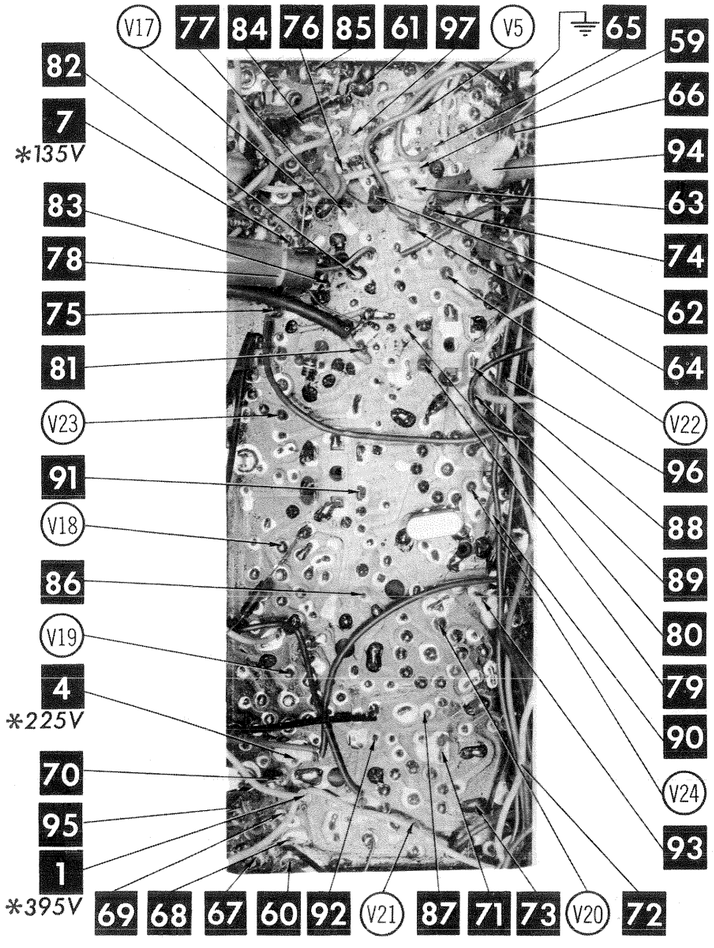
ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED

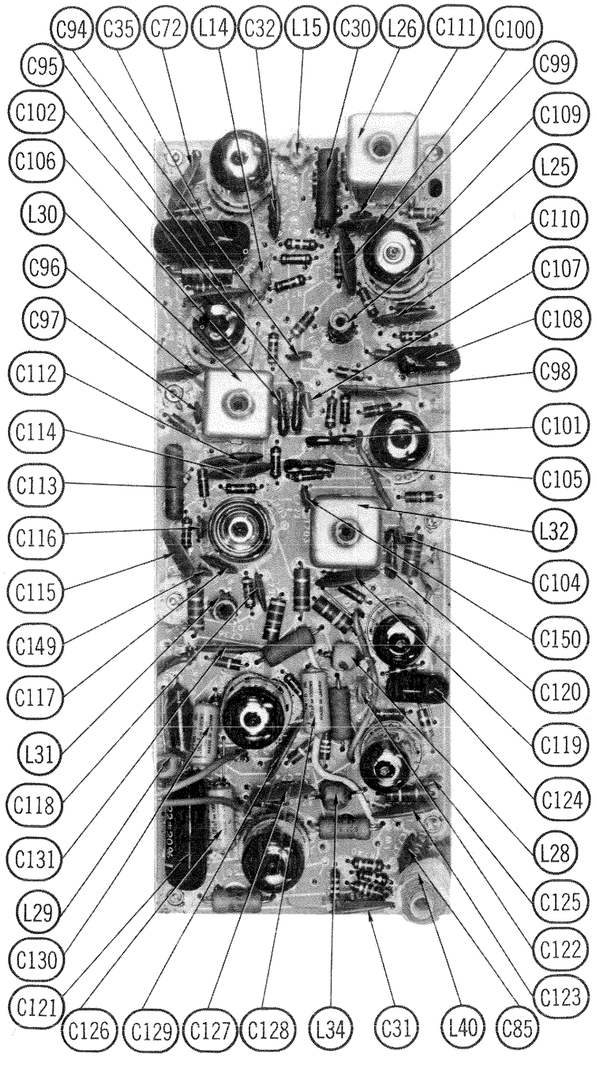
A Howard W. Sams CIRCUITRACE® Photo

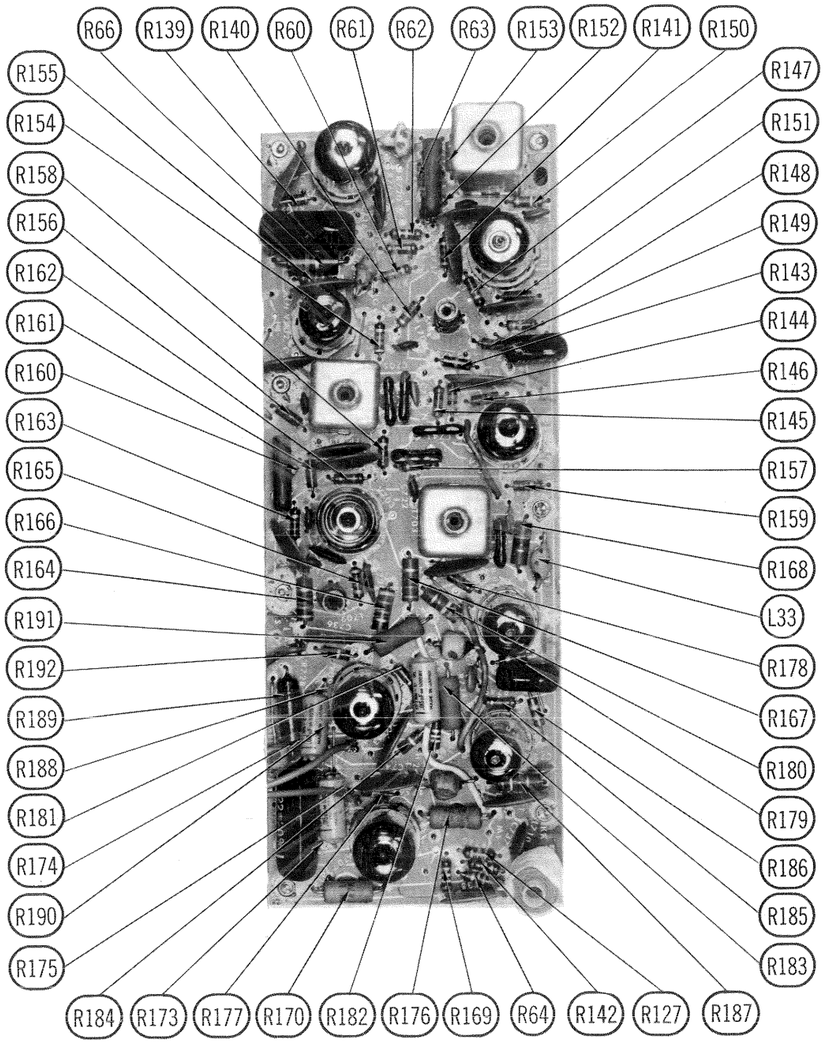
PRINTED BOARDS

FOLDER 2



*VOLTAGE SOURCE

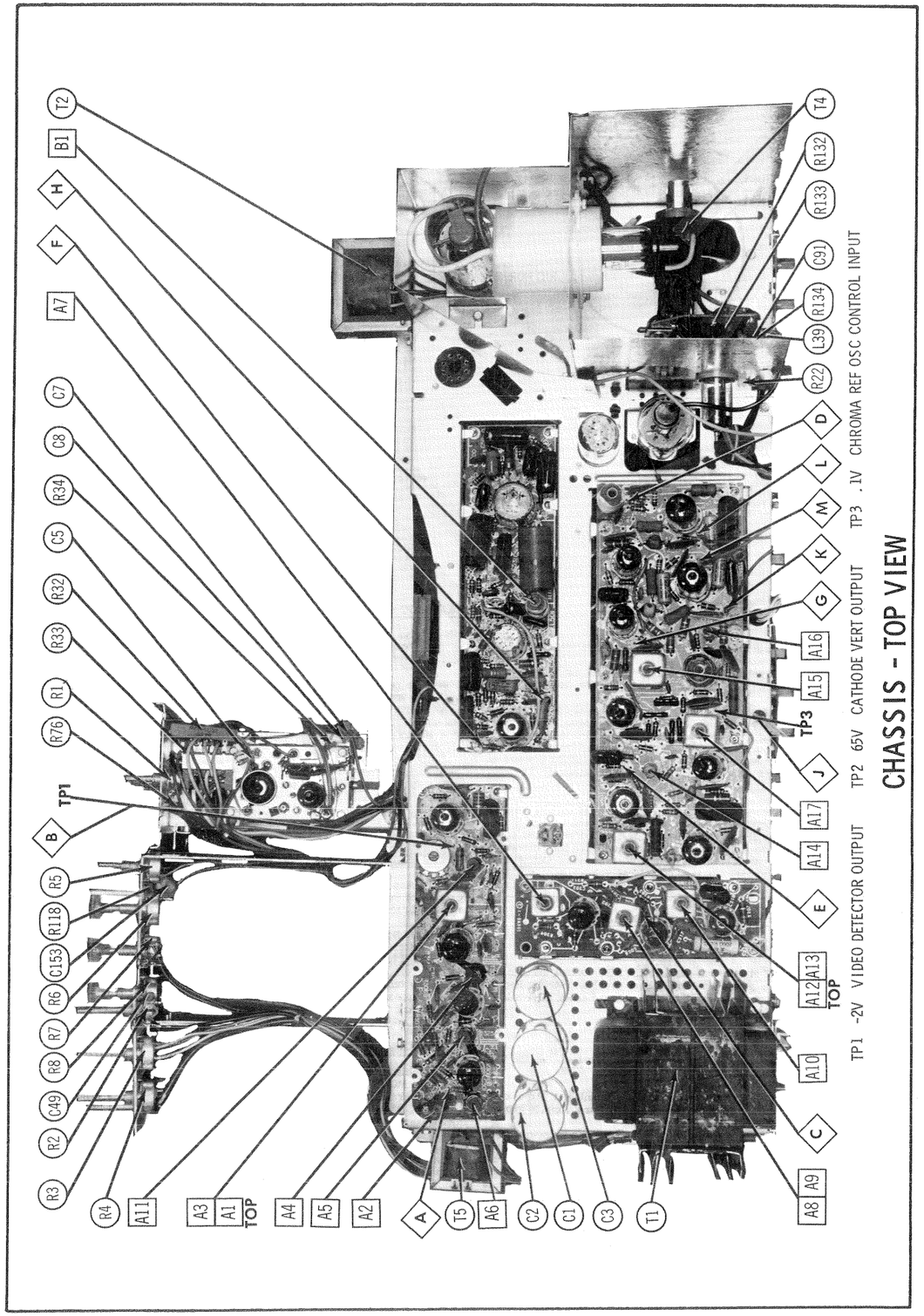




ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED

COLOR CIRCUIT PRINTED BOARD

A Howard W. Sams CIRCUITRACE Photo



CHASSIS - TOP VIEW

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 A14 ..... GENERAL CEMENT #8606, 8869, 9302 ... WALSCO #2511, 2543, 2588
Mixer Plate Coil .. GENERAL CEMENT #9296, 9300, 9302 ... WALSCO #2510, 2511, 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 Point Ⓓ on VHF Tuner. Low side to ground.		41.25MC 47.25MC	A1, R21 A2, R20	Adjust for MINIMUM. Keep cores of L5 (A1, Top) and L1 (A2) at coil end away from printed board.
2.	Connect DC probe of a VTVM thru a 47K resistor to point Ⓑ. Common to ground.	Connect high side to Point Ⓓ on VHF Tuner. Low side to ground.		43.8MC 42.5MC 45.75MC 44.0MC	A3, A4, A5, A6, Mixer Plate Coil	Adjust for maximum with core nearest printed board end of coil for A3, A4 and A5. Adjust A6 for maximum with core at top end of coil and Mixer Plate Coil with core at bottom of coil.
3.	Connect vertical input of a scope to point Ⓑ. Low side to ground.	Connect high side to Point Ⓓ on VHF Tuner. Low side to ground.	44MC (10MC Sweep)	41.25MC 42.17MC 42.75MC 44.0MC 45.0MC 45.75MC 47.25MC	A3, A4, A5, A6, and Mixer Plate Coil	Adjust for maximum gain and symmetry of response with markers as shown in Figure 1.

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 A11 for MINIMUM beat interference.

SOUND IF ALIGNMENT

Connect VTVM thru Audio Detector Probe (Fig. 2) to Point Ⓒ, pin 1 of Audio Detector. Tune in a TV station and adjust A7, A8, and A9 for maximum deflection. Remove VTVM. Reduce signal at antenna terminals until distortion occurs in sound. Adjust A10 clockwise from "fully out" position to second peak for maximum sound. Continue to reduce sign al strength and adjust A10 for MINIMUM distortion and maximum sound until no further improvement can be made.

CHROMA BANDPASS ALIGNMENT

The following alignment will require the use of an RF Modulator (RCA WG304A or equivalent). Connect a -15 volt supply to Point Ⓓ, off pin 9 of Color Killer. Connect a -2 volt supply to Point Ⓑ, off pin 2 of Bandpass Amp. Connect a -15 volts supply to Point Ⓕ, off pin 9 of AGC Keyer and Noise Inverter. Positive lead of all supplies to ground. Connect a clip lead from Point Ⓐ, off pin 1 of 1st Video IF, to ground. Turn Color Intensity control to maximum. Remove Horizontal Output tube and connect a 2000Ω, 100 watt resistor from "A" source to ground. Remove Horizontal Oscillator tube.

	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
4.	High side thru .1mfd to grid (pin 2) of Bandpass Amp. Low side to ground.	3.58MC (3-5MC Sweep)	3.08MC 4.08MC		Vert. Amp. thru Detector Probe (Fig.3) to Point Ⓖ, pin 1 of "X" and "Z" Demodulators.	A12, A13	Adjust for response curve similar to Fig. 4.
5.	High side of Sweep Gen. to Video Sweep Input of RF Demodulator. High side of signal gen. (set @ 45.75MC) to picture carrier input. Output of RF Modulator to Point Ⓓ (Mixer Grid Test Point) on VHF Tuner. Low side to ground.	3MC (6MC Sweep)	"		"	A14	Adjust for response curve similar to Fig. 5. If necessary, retouch A12 to flatten top of response.

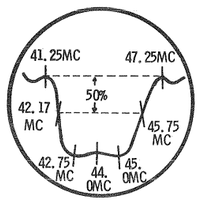


FIG. 1

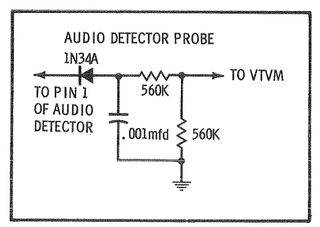


FIG. 2

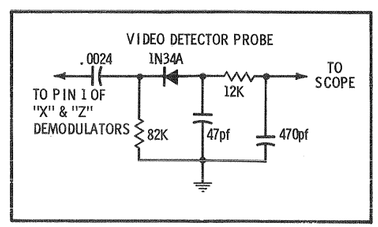


FIG. 3

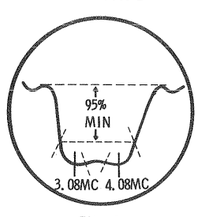


FIG. 4

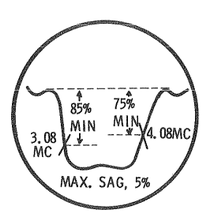


FIG. 5

MISCELLANEOUS ADJUSTMENTS

CONVERGENCE ADJUSTMENTS			
Step	Control	Use to Converge (or Straighten)	Remarks
1.			Perform center dot convergence using convergence magnets. If more range is needed, reverse magnet holder in clip. See Fig. A.
2. 3.	R-G Vertical Lines, Top R-G Vertical Lines, Bottom	Red and Green Vertical bars at top of screen. Red and Green Vertical bars at bottom of screen.	Touch up both controls for best convergence from top to bottom along vertical center line (Fig. B).
4. 5.	R-G Horizontal Lines, Top R-G Horizontal Lines, Bottom	Red and Green Horizontal bars at top of screen. Red and Green Horizontal bars at bottom of screen.	Touch up both controls for best convergence of horizontal bars along vertical center line (Fig. B).
6. 7.	Blue Horizontal Lines, Top Blue Horizontal Lines, Bottom	Blue Horizontal bars at top of screen. Blue Horizontal bars at bottom of screen.	Touch up both controls for best convergence of horizontal bars along vertical center line (Fig. C).
8.			Perform center dot static convergence (Fig. A).
9. 10.	Blue Horizontal Lines, Right Blue Horizontal Lines, Left	Blue Horizontal bars at right side of screen. Blue Horizontal bars at left side of screen.	Touch up both controls for best convergence along horizontal center line (Fig. D).
11.	R-G Vertical Lines, Right	Red and Green Vertical bars at right side of screen.	(Fig. E)
12.	R-G Horizontal Lines, Right	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	Red and Green Vertical bars at left side of screen.	(Fig. E)
14.	R-G Horizontal Lines, Left	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).

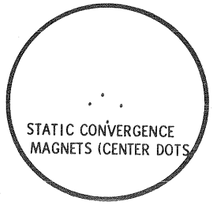


FIG. A

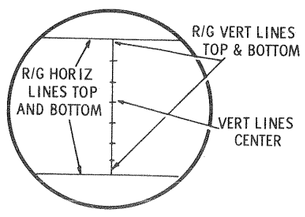


FIG. B
(RED & GREEN ONLY)

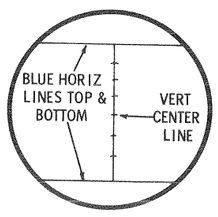


FIG. C
(BLUE BARS)

FIG. D AND FIG. E PAGE 17

MISCELLANEOUS ADJUSTMENTS (CONTINUED)

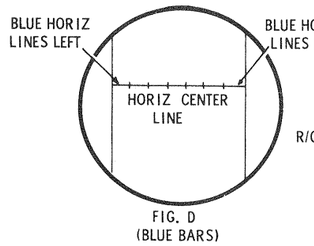


FIG. D
(BLUE BARS)

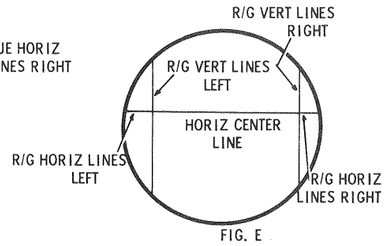


FIG. E

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Connect:
A 0-500 ma meter in series with cathode lead of Horizontal Output tube.
A .47 mfd capacitor across meter.
A VTVM thru a high voltage probe to picture tube HV anode connector.
A clip lead from Point (H), off pin 2 of Sync Separator to ground.

Tune in a TV station and set all controls for normal operation. Set Horizontal Hold control, R5, to the center of its range. Adjust Horizontal Oscillator (Sine Wave) coil slug, B1, until picture is in horizontal sync or floats slowly across screen. Remove clip lead from Point (H). Adjust Horizontal Linearity (Efficiency) coil for MINIMUM current in the Horizontal Output Tube cathode circuit, approximately 210 ma. Current should not exceed 220 ma.

With Brightness control set to MINIMUM, adjust HV Adjust control, R16, for 24KV at picture tube anode connector. Check voltage across R137, off pin 1 of HV Regulator. Voltage must not be below .85 volts. If below .85 volts, adjust Horizontal Linearity coil 1/2 turn clockwise while checking current in cathode circuit of Horizontal Output tube. Current should not exceed 220 ma. The ideal voltage across R137 is 1.0 to 1.4 volts. Remove meter from cathode circuit of Horizontal Output tube. Be sure to replace jumper when meter is removed.

Adjust Focus, Height and Vertical Linearity controls.

AGC ADJUSTMENT

Tune in a strong TV station and advance the AGC control until instability appears in the picture (pulling, jitter, overload, etc.). Reduce the control to the point just below the instability and check all available stations for proper AGC action.

COLOR AGC ALIGNMENT

Set the Color Killer control to fully counterclockwise. Set the Tint control to the center of its range.

Connect a color bar generator to the antenna terminals. Adjust receiver for normal color reception. Short pin 1 of Burst Amp. to ground.

Connect DC probe of VTVM thru 470K to pin 1 of Phase Detector, V23. Adjust A15 for maximum deflection on VTVM. If no reading is obtained oscillator is not operating. Adjust A16 to start oscillator, then adjust A15 for maximum. Remove the short from pin 1 of Burst Amp. Adjust A17 for maximum deflection on VTVM. Make sure the oscillator is running and locked in.

Short Point (J), off pin 9, Chroma Reference Oscillator control, to ground. Remove VTVM. Adjust A16 until color bars stand still or

COLOR AGC ALIGNMENT CONTINUED

drift slowly. Remove the short from Point (J) and check to see that the color bars will sync with a low level input signal. If necessary, retouch A16 for best hold.

Connect the vertical input of a scope to Point (K), off pin 1, R-Y Amp. Check for proper waveform with the color bar generator being used. See waveform on schematic for pattern obtained from a standard N.T.S.C. signal. Check the range of the Tint control. The bars should move 30° either side of proper signal. If necessary, retouch A17 for proper range of control.

Check for proper waveform at G-Y and B-Y outputs (points (L), off pin 6, G-Y Amp. and (M), off pin 6, B-Y Amp. Tune in a weak signal or reduce the signal at the antenna terminals to obtain a snowy picture. Adjust the Color Killer control to eliminate color in the snow. Check with a color signal to make sure the killer is not eliminating picture coloring.

PURITY ADJUSTMENTS

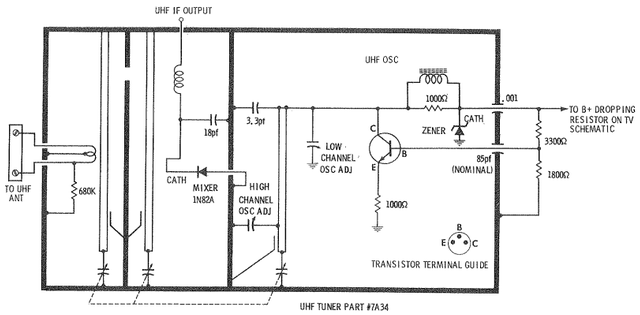
Perform step 1 of Convergence Adjustments. If the picture tube appears to be magnetized, use a degaussing coil to demagnetize tube and mounting brackets.

Connect the Blue and Green grids of the picture tube through individual 100K resistors to ground. Loosen the deflection yoke and move it rearward until it is against the convergence yoke assembly.

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

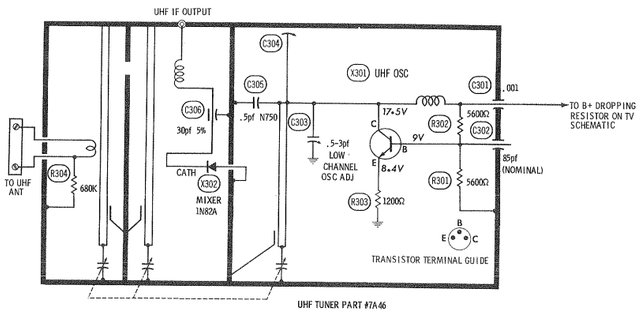
GRAY SCALE ADJUSTMENTS

Tune in a black and white picture or a color picture with the Color control set to MINIMUM. Turn the Red, Green, and Blue Screen controls fully counterclockwise. Move the Normal-Service switch to "Service" position. Set the Kine Bias switch to position nearest top of the chassis. Advance screen controls one at a time until each produces a barely visible line on the screen. If one or more controls fail to produce a line, switch the Kine Bias switch to mid or possibly lowest (position nearest bottom of chassis) position and repeat adjustment of screen controls. Return Normal-Service switch to "Normal" position. Adjust Blue and Green Drive controls to eliminate coloring in the dark and bright areas of the picture.

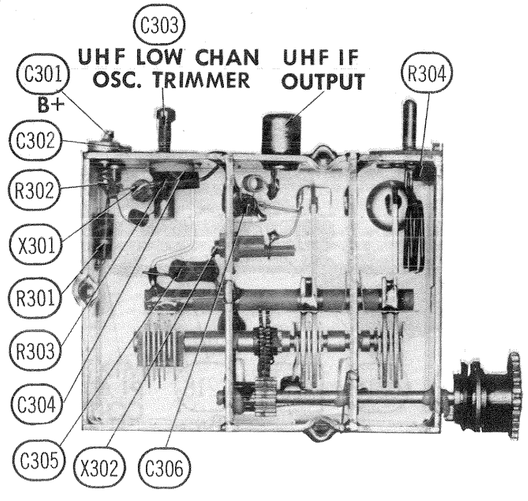


A PHOTOFACT STANDARD NOTATION SCHEMATIC

UHF TUNER 7A34

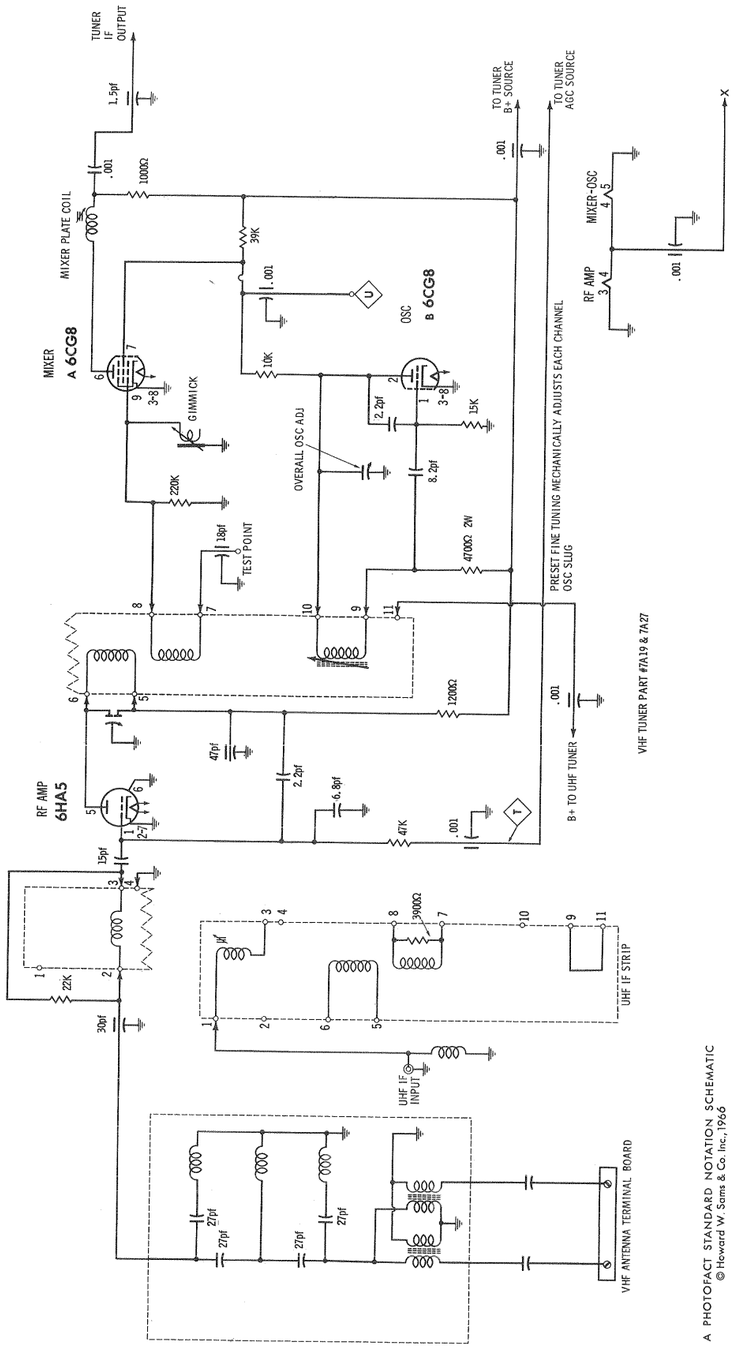


A PHOTOFACT STANDARD NOTATION SCHEMATIC

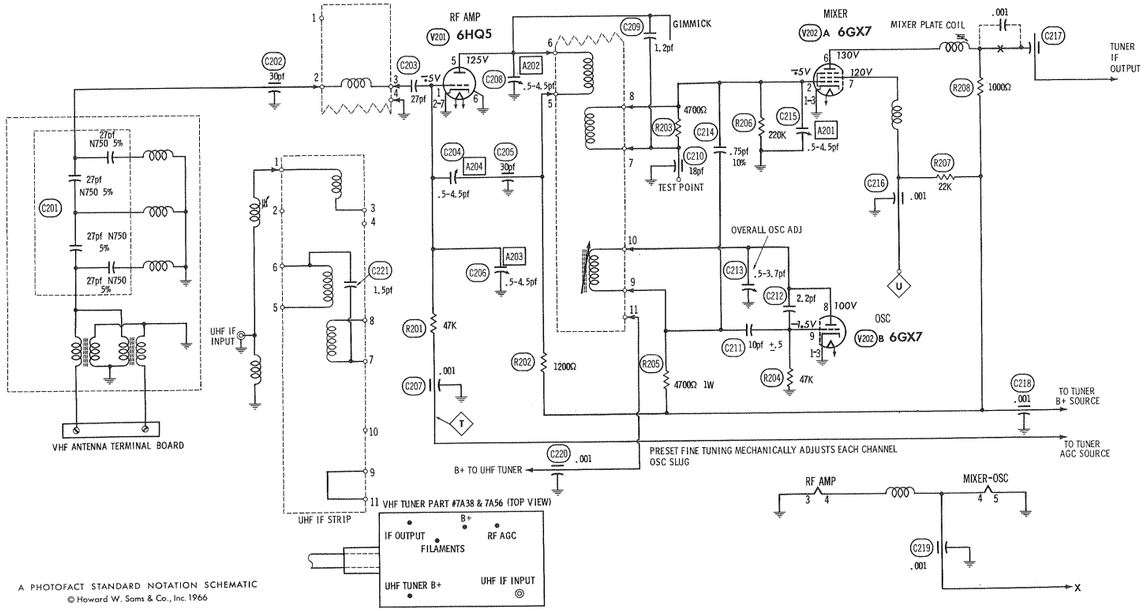


UHF TUNER 7A46

VHF TUNER 7A19, 7A27



A PHOTOFACT STANDARD NOTATION SCHEMATIC



VHF TUNER ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools: A201, A202, A203, A204 ... GENERAL CEMENT #8868, 8987, 9089 ... WALSCO #2531-X, 2541, 2587
TUNER 7A56

OSCILLATOR ADJUSTMENTS TUNER 7A38

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

OSCILLATOR ADJUSTMENTS TUNER 7A56

The oscillator for each channel is preset by means of the fine tuning control. Adjust fine tuning for best picture and sound on each channel. If any channel cannot be properly tuned in with the fine tuning, adjust overall oscillator adjustment and recheck all available channels.

RF AND MIXER ALIGNMENT

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

	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS TUNER 7A38	REMARKS TUNER 7A38
1.	Across antenna terminals with 120Ω in each lead.	213MC	211.25MC 215.75MC	13	Vert. Input to Point (U), low side to ground		Expand or compress appropriate coils for maximum gain and symmetry of response similar to Fig. 201 with markers as shown.	
2.	"	See Chart	See Chart	12 thru 2	Vert. Input to Point (U), low side to ground.		Check all channels and make compromise adjustments by expanding or compressing appropriate coils if necessary.	

	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS TUNER 7A56	REMARKS TUNER 7A56
1.	Across antenna terminals with 120Ω in each lead.	213MC	211.25MC 215.75MC	13	Vert. Input to Point (U), low side to ground	A201, A202, A203	Adjust for maximum gain and symmetry of response similar to Fig. 201 with markers as shown.	
2.	"	195MC	193.25MC 197.75MC	10	Across Video Det. load resistor.	A204	Increase bias to -15 volts and adjust for MINIMUM amplitude of response.	
3.	"	See Chart	See Chart	12 thru 2	Vert. Input to Point (U), low side to ground.		Decrease bias. Check response on all channels and make compromise adjustments of A201, A202, and A023 if necessary.	

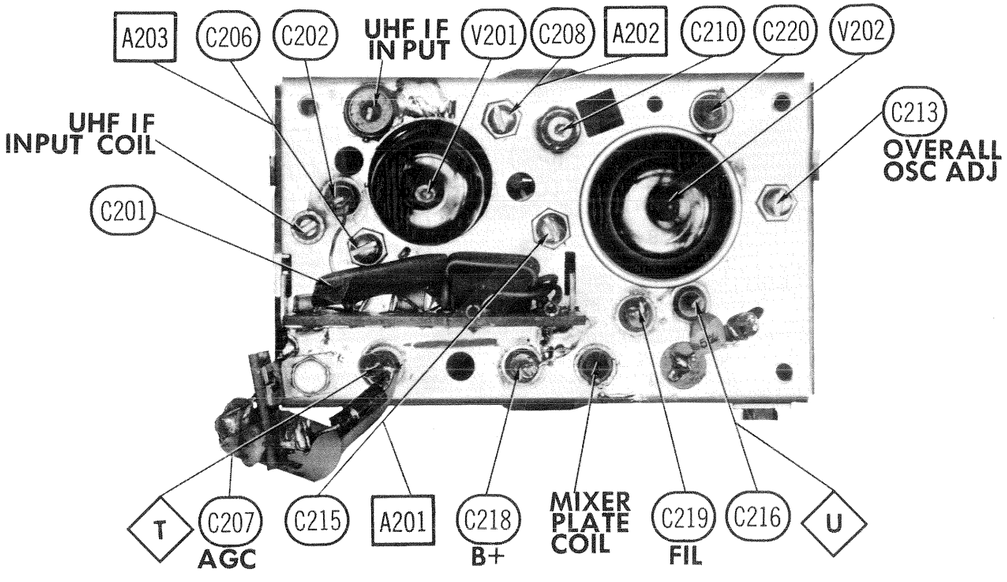
CHANNEL & FREQUENCY CHART

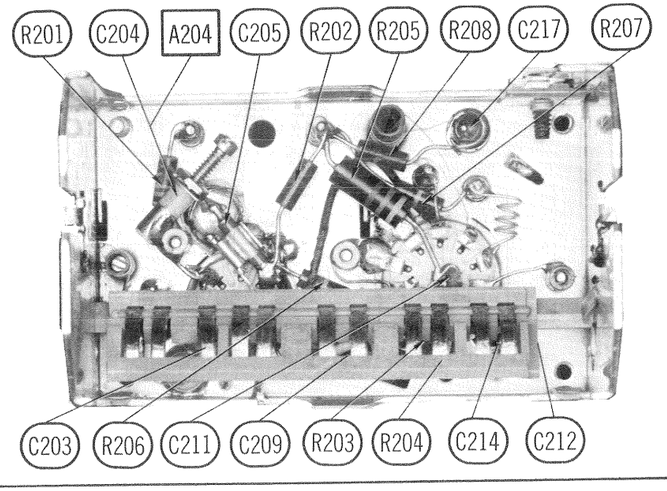
SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL
57MC	55.25MC 59.75MC	2	85MC	83.25MC 87.75MC	6	195MC	193.25MC 197.75MC	10
63MC	61.25MC 65.75MC	3	177MC	175.25MC 179.75MC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

FIG. 201

UHF TUNER ALIGNMENT INSTRUCTIONS

Tune to a UHF station and adjust UHF IF Input Coil for best picture and sound. Tune UHF Channel Selector to the lowest UHF channel operating in the area (low end of the dial). Adjust UHF Low Channel Oscillator Trimmer for best picture and sound.





COILS (RF-IF) (cont)

ITEM No.	USE	REPLACEMENT DATA PART No.	MEISSNER Part No.	MERIT PART No.	MILLER PART No.	WORKMAN PART No.
L24	Quadrature	1A162	20-1050		7110-R	TA265
L25	Chroma Takeoff	1A159				
L26	Chroma Bandpass	1A155				
L27	RF Choke (5.6uh)	14A15	19-1008	BC-565	74F566AP	T820
L28	Peaking (620uh)	14A11	19-1035	TV-205	6146	T326
L29	Peaking (620uh)	14A11	19-1035	TV-205	6146	T326
L30	Burst Phase Detector	1A160				
L31	Chroma Ref. Osc. Control	1A154				
L32	Chroma Reference Osc.					
L33	RF Choke (10uh)	14A23	19-1005	BC-566	72F105AP	T860
L34	Peaking (620uh)	14A11	19-1035	TV-205	6146	T326
L35	RF Choke (5.6uh)		19-1008	BC-565	74F566AP	T820
L36	RF Choke (5.6uh)	14A15	19-1008	BC-565	74F566AP	T820
L37	Fil. Choke (5.6uh)	14A15	19-1008	BC-565	74F566AP	T820

① Wound on 15K Resistor.
② Wound on 2200Ω Resistor.

* Shunt with 15K Resistor.
♦ Shunt with 2200Ω Resistor.

COILS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA Curtis Mathes PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	THORDARSON MEISSNER PART No.	TRIAD PART No.	WORKMAN PART No.
L38A	Horiz. Oscillator &	1A152		6349				TB177
B	Waveform							
L39	Focus	1A133-1						
L40	Horiz. Linearity (Efficiency)	1A161-2						
L41	Dynamic Convergence (Right R/G Vert. lines) (4.1mh-8.4mh)			6347				T149
L42	Dynamic Convergence (Right R/G Horiz. lines) (1.2mh-4.6mh)			6348				
L43	Dyamic Convergence (Right Blue Horiz. lines) (Pri. 3.8mh-9.5mh) (Sec. .13mh-.17mh)							
L44	Convergence Yoke	16A8						
A	Blue Section							
B	Red Section							
C	Green Section							

FILTER CHOKE

ITEM No.	RATINGS CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	REPLACEMENT DATA Curtis Mathes PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	NOTES
L45	.405A DC	16Ω	.5HY	10A37	C-4133	C-2708	26C81	C-40X	

TRANSFORMER (POWER)

ITEM No.	RATING PRI.	SEC. 1	SEC. 2	SEC. 3	SEC. 4	REPLACEMENT DATA Curtis Mathes PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	NOTES
T1	117V AC @ 3AAC	325V AC Tap @ 100V AC @ .415A DC	6.3V AC @ 2AAC	6.3V AC @ 10.5A AC		12A68①					①Part Number 12A62, 12A64 or 12A67 may be used in some versions.

*TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA Curtis Mathes PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	NOTES
T2	Vert. Output	10A40	A-4140C	VO-700C	26S86	A-305X	① Remove two (2) 560Ω Resistors from Vertical Windings.
T3	Yoke (Horiz. 12.4mh) 70° (Vert. 40mh)	1A205 (01A205-000)	MDF-144C ①	DY-90AC ②	Y-107	YC-300-1①	② Remove two (2) 270Ω Resistors from Vertical Windings.
T4	Horiz. Output	1A206 (1A242)	HVO-234C	HO-601C		D-304	

*COMPONENT CONNECTION DATA

ORIGINAL → / REPLACEMENT ↓	HV TRANSFORMER Original Connections	VERTICAL OUTPUT Original Connections	YOKE Original Connections
	P D C_1 C_2 F_C B_B Pur	Blu Red Grn Grn Wh Tel Blk Red Blk Grn Grn Red Org Blk Wh Red Wh	1 3 4 5
MERIT	P D C_1 C_2 F_C B_B Viol.	EXACT REPLACEMENT	1 3 4 5
STANCOR	P D C_1 C_2 F_C B_B Violet	EXACT REPLACEMENT	1 3 4 5
THORDARSON		EXACT REPLACEMENT	1 3 4 5
TRIAD	P D C_1 C_2 F_C B_B Violet	EXACT REPLACEMENT	1 3 4 5

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	SEC.	REPLACEMENT DATA Curtis Mathes PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	NOTES
T5	33,320Ω	6-8Ω	10A21 (10A21-1)					

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA PART No. FUSE	HOLDER	LITTELFUSE PART No. FUSE	HOLDER	BUSS PART No. FUSE	HOLDER
F1	Circuit Breaker	1.75 Amp.	6A46-2		8151.75			
F2	Circuit Breaker 3 1/2" length of Fuse Wire.	3.1 Amp.	6A46①		815003			

① Use when Voltage Doubler Network is used.

MISCELLANEOUS

ITEM No.	PART NAME	Curtis Mathes PART No.	NOTES
M1	VHF Tuner	7A19, 7A27, 7A38 (7A56)	
M2	UHF Tuner	7A34 (07A046)	
M3	Crystal	9A1	3.58MC Oscillator
M4	Magnet		Blue Lateral
M5	Magnet		Purity Ring
M6	Magnet		Convergence (3 Required)
M7	Delay Line	1A167	
	Degaussing	1A225-2	
	Degaussing	1A225-1	
S1	Switch	6A45	Normal - Service
S2	Switch	6A48	Video Peaking
S3	Switch	6A48	Picture Tube Bias
	Printed Circuit Board	14B36	Video IF Assembly, Complete, less tubes.
	Printed Circuit Board	14B35	Sound Circuit, Complete, less tubes.
	Printed Circuit Board	14B37	Deflection Circuit, Complete, less tubes.
	Printed Circuit Board	14B38	Chroma Circuit, Complete, less tubes.
	Printed Circuit Board	14B47	Convergence Assembly.

UHF TUNER 7A46

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	NOTES
X301		UHF Oscillator		GE-11		

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS & DIODES GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RECTIFIERS MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.
X302		1N82A					

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	.001	(Nominal)						
C302	85							
C303	.5-3							
C304								
C305	.5 N750							
C306	30 5%							

VHF TUNER 7A56

TUBES

ITEM No.	♦ AMPEREX ♦ GENERAL ELECTRIC ♦ RCA ♦ SYLVANIA ♦ USE	TYPE	ITEM No.	USE	TYPE
V201	RF Amp.	6HQ5	V202	Mixer - Osc.	6GX7

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 N750 5%			TCN-27			CN7427	10TCU-Q27
B	27 N750 5%			TCN-27			CN7427	10TCU-Q27
C	27 N750 5%			TCN-27			CN7427	10TCU-Q27
D	27 N750 5%			TCN-27			CN7427	10TCU-Q27
C202	30							
C203	27		DI-27	DD-270		CCD-270	GP427	5GA-Q27
C204	.5-4.5							
C205	30							
C206	.5-4.5							
C207	.001		EF-001	MFT-1000		CCF-102	CT280A	
C208	.5-4.5							
C209	1.2		NPO-DI 1	TCZ-1			CNO510	10TCC-V12
C210	18							
C211	10 ±.5		DI-10	DD-100	CZ601CG100J	CCD-100	GP410	5GA-Q10
C212	2.2		NPO-DI 2.2	DTZ-2R2	CZ601CJ2R2D	CCTO-2R2	CNO522	10TCC-V22
C213	.5-3.7							
C214	.75pf 10%			TCZ-R68				
C215	.5-4.5							
C216	.001		EF-001	MFT-1000		CCF-102	CT280A	
C217								
C218	.001		EF-001	MFT-1000		CCF-102	CT280A	
C219	.001							
C220	.001		EF-001	MFT-1000		CCF-102	CT280A	
C221	1.5		NPO-DI 1.5	DTZ-1R5			CNO515	10TCC-V15

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.	8869 (17KV) or 8868 (25KV)
Shielded Hook-up Wire	Use BELDEN No.	8865 (Single Conductor) 8738 (Two Conductor)
General-use Unshielded Hook-up Wire	Use BELDEN No.	8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Power Cord (Interlock Type)	Use BELDEN No.	8874 (Rubber) or 8895 (Plastic)
300Ω Tuner Input Lead	Use BELDEN No.	8225
300Ω Antenna Lead-in	Use BELDEN No.	8275 (Foam Core) or 8285 (Foam Jacketed)
Antenna Rotor Cable	Use BELDEN No.	8464 (Flat) or 8484 (Round) - 4 Conductor 8485 (Round) - 5 Conductor 8488 (Round) - 8 Conductor

TUBES

ITEM No.	♦ AMPEREX ♦ GENERAL ELECTRIC ♦ RCA ♦ SYLVANIA ♦ USE	TYPE	ITEM No.	USE	TYPE
V201	RF Amp.	6HQ5 (6HA5) *	V13	Damper	6DW4
V202	Mixer - Osc.	6GX7 (6CG8) *	V14	HV Rectifier	3A3
V1	1st Video IF	6JM6	V15	Focus Rectifier	2AV2
V2	2nd Video IF	6GM6	V16	HV Regulator	6BK4
V3	3rd Video IF	6JC6 (6EJ7) ♦	V17	Color Killer - Chroma Bandpass Amp.	6GH8
V4	1st Video Amp. - 2nd Video Amp.	6LF8 (6AW8) ♦	V18	Z Demodulator	6GY6
V5	Video Output	12BY7	V19	X Demodulator	6GY6
V6	Noise Inverter - AGC Keying - Sync Sep.	6KA8	V20	B-Y Amp. — R-Y Amp.	6GU7
V7	Sound IF	6DW6	V21	G-Y Amp. — Horiz. Blanking	6GU7
V8	Audio Detector	6HZ6	V22	Burst Amp.	6EW6
V9	Audio Output	6AQ5	V23	Color Killer Detector - Chroma Sync Phase Det.	6JU8
V10	Vert. Mult. - Vert. Output	6GY7	V24	Chroma Ref. Osc. Control - Chroma Reference Osc.	6GH8
V11	Horiz. AFC - Horiz. Osc.	6FQ7/6CG7			
V12	Horiz. Output	6JE6			

* VHF Tuner 7A38 ♦ Alternate

PICTURE TUBE

ITEM No.	REPLACEMENT DATA Curtis Mathes PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SYLVANIA PART No.	NOTES
V25	21FJP22A 21FKP22A 21FBP22	21FJP22A ① 21FKP22A ① 21FBP22A ①	21FJP22A ① 21FBP22A ①	RE21FJP22 ② RE21FKP22A ② RE21FBP22A ②	① Aluminized ② Color Bright "85"

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS & DIODES GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RECTIFIERS MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.
X1	.415A	35860	GE-504A	5A6-D or 10DB6A ①	1N2071 or FW600 ①	SK-3016 or SK-3017	F-6 or 60C
X2	.415A	35860	GE-504A	5A6-D or 10DB6A ①	1N2071 or FW600 ①	SK-3016 or SK-3017	F-6 or 60C
X3	.415A	35860	GE-504A	5A6-D or 10DB6A ①	1N2071 or FW600 ①	SK-3016 or SK-3017	F-6 or 60C
X4	.415A	35860	GE-504A	5A6-D or 10DB6A ①	1N2071 or FW600 ①	SK-3016 or SK-3017	F-6 or 60C
X5		21A4	GECR-2	61-8968			S-879
X6	.006A		GE-505 or GE-504A	8D4 or 5A4-D	A50 or 1N536		40C or F-4
X7A	.050A		GECR-3 ② or GE-505	8D4 or 5A4-D	A50 or 1N536		40C or F-4
B	.023A		GECR-3 ② or GE-505	8D4 or 5A4-D	A50 or 1N536		40C or F-4
C	.030A		GECR-3 ② or GE-505	8D4 or 5A4-D	A50 or 1N536		40C or F-4
X8		1N60	1N60	1N60			
X9		1N60	1N60	1N60			
X10		21A2	GGC1	DD04			

① Use a single unit replacement for X1 thru X4. ② Use a single unit replacement for X7A, B and C.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	VOLT.	REPLACEMENT DATA Curtis Mathes PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	▫80	450	4A71 ①	AFHS4-88-10	DD0178.8	XC3-32	FP450.16	TVL-4754
B	■30	450			BR40-150	QT1-13		
C	40	150						
D	▲20	450						
C2A	▫80	450	4A59	AFH4-108-35	DD0825.5	XC3-32	FP427.67	TVL-4714.6
B	■50	450				QT1-15		
C	▲20	250						
D	50	50						
C3A	▲2	350	4A61	AFH2-88 ②	AA0510	XC1-8	PFP230.7	TVL-2738.5
B	▫80	450			BR2-450	QT1-1		
C4	50	150	4A30-19	PRS1480	BR50-150	QT1-17	TC49	TVA-1414

① Alternate Part #4A60 is used with Bridge circuit. ② Use MW-4 mounting wafer.

PARTS LIST AND DESCRIPTION (CONTINUED)

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.
C5	11 5%		NPO-DI 10	DTZ-10	CZ601CG100J	CCTO-100	CNO410	10TCC-Q10
C6	7.5 N470 10%					*		10TCT-V82
C7	.033		DBE6D33		DMF6D33	6DP-1-332	PVC6233	6PS-D33
C8	.001		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C9	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C10	150 NPO 5%		NPO-DI 150	DTZ-150		CCTO-151	CNO315	10TCC-T15
C11	.0012	(.001) †	DI-1200	DD-122G	JBS601YP122K	CCD-122	GP212	5GA-D12
C12	.1 200V		P488N-1	DF-104	PM4P1	4DP-3-104	GEM401	4TM-P10
C13	.0012	(.001) †	DI-1200	DD-122G	JBS601YP122K	CCD-122	GP212	5GA-D12
C14	.0012	(.001) †	DI-1200	DD-122G	JBS601YP122K	CCD-122	GP212	5GA-D12
C15	.0012	(.001) †	DI-1200	DD-122G	JBS601YP122K	CCD-122	GP212	5GA-D12
C16	680 10%		DI-680	DD-681	JBY601YP681K	CCD-681	JF368	10TS-T68
C17	.0012	(.001) †	DI-1200	DD-122G	JBS601YP122K	CCD-122	GP212	5GA-D12
C18	.0012	(.001) †	DI-1200	DD-122G	JBS601YP122K	CCD-122	GP212	5GA-D12
C19	.0012	(.001) †	DI-1200	DD-122G	JBS601YP122K	CCD-122	GP212	5GA-D12
C20	.001 1KV		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C21	220 N750 10%		N750-DI 220	DTN-220	CY601UJ221K	CCTN-221	CN7322	10TCU-T22
C22	.0022 10%		DI-2200	CF-222	JBX601YP222K	CCD-222	JF222	10TS-D22
C23	.0012	(.001) †	DI-1200	DD-122G	JBS601YP122K	CCD-122	GP212	5GA-D12
C24	560 N1500 5%					*	2HV356	
C25	.0012	(.001) †	DI-1200	DD-122G	JBS601YP122K		GP212	5GA-D12
C26	100 NPO 10%		NPO-DI 100	DTZ-100	CV601CG101K	CCTO-101	CNO310	10TCC-T10
C27	.001		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C28	3.3 NPO ±.25		NPO-DI 3.0	DTZ-3R3		CCTO-3R3	CNO533	10TCC-V30
C29	.1 400V		P488N-1	DF-104	PM4P1	4DP-3-104	GEM401	4TM-P10
C30	.1 200V		P488N-1	DF-104	PM4P1	4DP-3-104	GEM401	4TM-P10
C31	.01		BPD-01	DD-102	BYV102ZU103M	CCD-103	B110	5HK-S10
C32	470 N1500 10%					*	2HV347	
C33	330 N1500 10%					*	2HV333	
C34	.0022 1KV		BPD-0022	DD-222	BYY601ZU222P	CCD-222	B222	5HK-D22
C35	.22 200V		DBE2P22		DMF2P22	2DP-4-224	PVC2022	2PS-P22
C36	.001		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C37	1.5 N3300 ±.25							
C38	9 NPO 1KV 5%							
C39	5 N1500					*	*	10TCP-Q33
C40	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C41	750 N2200 5%						*	
C42	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C43	47 N750 10%		N750-DI 47	DTN-47	CY601UJ470K	CCTN-470	CN7447	10TCU-Q47
C44	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C45	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C46	.047 200V		P288N-047	DD-503	PM2S47	4DP-3-473	PVC2147	2TM-S47
C47	.0068		DI-6800	DD-682	BYX601ZU682P	CCD-682	GP268	30GA-D68
C48	470 1.4KV	(560pf) †		CI-471				
C49	.005 10%	(.0047) †	BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C50	.001 2KV 10%					*		
C51	91 NPO 1KV	(10pf) †	NPO-DI 100	TCZ-91	CV601CG101K	CCTO-101	CNO310	10TCC-T10
C52	.001		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C53	.001		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C54	250 2KV N1500 10%	(220pf) †				*	3HV327	
C55	.0033 N1500 1KV		BPD-0033	DD-332	BYS601ZU332P	CCD-332	B233	5HK-D33
C56	390 3KV 10%					*	*	
C57	.001		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C58	47 N2200 10%						*	
C59	68 NPO 5%		NPO-DI 68	DTZ-68	CX601CG680K	CCTO-680	CNO468	10TCC-Q68
C60	.0015		BPD-0015	DD-152		CCD-152	B215	5HK-D15
C61	.47 200V		DBE2P47		DMF2P47	2DP-5-474	PVC2047	2PS-P47
C62	.1 600V		P688N-1	DF-104	PM6P1	6DP-4-104	GEM601	6TM-P10
C63	.1 600V		P688N-1	DF-104	PM6P1	6DP-4-104	GEM601	6TM-P10
C64	.001 2KV 10%					*		
C65	.0062 1KV		P1088N-01		DPMS16S1	16DP-3-103	GEM1611	
C66	.047 200V		P288N-047	DD-503	PM2S47	4DP-3-473	PVC2147	2TM-S47
C67	680 10%		BPD-00068	DD-681	BYZ601ZU681P	CCD-681	B368	5GA-T68
C68	.01 400V	(.0068) †	DBE4S1		DMF4S1	4DP-1-103	PVC411	4PS-S10
C69	100 3KV N750 10%					*	3DY310	
C70	560 2.5KV N1500 10%					*	3HV356	
C71	560 2.5KV N1500 10%					*	3HV356	
C72	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C73	180 10%		DI-180	DD-181	JBZ601YP181K	CCD-181	GP318	5GA-T18
C74	820 10%		DI-820	DD-821	BYZ601ZU821P	CCD-821	B382	5GA-T82
C75	15 N1500 5%	(27pf) †		TCL-15		*	*	
C76	820 10%		DI-820	DD-821	BYZ601ZU821P	CCD-681	GP368	5GA-T68
C77	.001		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C78	.15 200V		OBE2P15		DMF2P15	20P-3-154	PUV2015	2PS-P15
C79	560 1KV 5%	(390pf) †	ADM-19-561	CPR-560J	CD19F561J500	DM-16-561	SX356	MS-356
C80	.01 400V		DBE4S1	CPR-10000J	DMF4S1	4DP-2-203	PVC411	4PS-S10
C81	680 5%		ADM-20-681	CPR-680J	CD19F681J500	DM-16-681	SX368	MS-368
C82	.0015 600V 10%		DBE6D15	CPR-1500J	DMF6D15	6DP-1-152	PVC6215	6PS-D15
C83	.015 1KV	(.01) †	P1088N-015		DPMS16S15	16DP-4-153	GEM16115	
C84	.1 600V		P688N-1	DF-104	PM6P1	6DP-4-104	GEM601	6TM-P10
C85	220 N750 10%	(150pf) †	N750-DI 220	DTN-220	CY601UJ221K	CCTN-221	CN7322	10TCU-T22
C86	75 N1500 5KV					*	6DY482	
C87	.01 1KV		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C88	.01 1.4KV		DAC-27	C1-103	ACT142ZU103P		UAC110	125L-S10
C89	.1 600V		P688N-1	DF-104	PM6P1	6DP-4-104	GEM601	6TM-P10
C90	22 N750		N750-DI 22	DTN-22	CZ601UJ220K	CCTN-220	CN7422	10TCU-Q22
C91	130 N2200 6KV						*	
C92	.068 600V 10%		DBE6S68		DMF6S68	6DP-4-683	PVC6168	6PS-S68
C93	.082 600V 10%		DBE6S82		DMF6S82	6DP-4-823		
C94	120 N1500 10%					*	2HV312	6PS-S82
C95	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C96	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C97	.001		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C98	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C99	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C100	470 N1500 10%					*	2HV347	
C101	330 5%		ADM-15-331	CPR-330J	CD15F331J500	DM-15-331	SX333	MS-333
C102	330 5%		ADM-15-331	CPR-330J	CD15F331J500	DM-15-331	SX333	MS-333
C103	1.3		NPO-DI 1.5	DTZ-1R5			CNO515	10TCC-V12
C104	6.8 NPO 5%		NPO-DI 6.8	DTZ-6R8	CZ601CH6R8D	CCTO-6R8	CNO568	10TCC-V68
C105	330 5%		ADM-15-331	CPR-330J	CD15F331J500	DM-15-331	SX333	MS-333
C106	330 5%		ADM-15-331	CPR-330J	CD15F331J500	DM-15-331	SX333	MS-333
C107	130 N1500 5%					*	*	
C108	.047 200V		DBE2S47		DMF2S47		PVC2147	2PS-S47
C109	820 10%		DI-820	DD-821	BYZ601ZU821P	CCD-821	B382	5GA-T82
C110	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C111	.001		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C112	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10

CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA: AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C113	.1 200V		P288N-1	DF-104	PM2P1	2DP-3-104	PVC201	2TM-P10
C114	.01	(680pf) †	BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C115	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C116	4.7 NPO ±.25		NPO-DI 5.0	DTZ-4R7	CZ601CH5R0D	CCTO-050	CNO547	10TCC-V50
C117	220 N750 10%		N750-DI 220	DTN-220	CV601UJ221K	CCTN-221	CN7322	10TCU-T22
C118	82			DTZ-82		CCTO-820	CNO482	10TCC-Q82
C119	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C120	150 5%		ADM-15-151	CPR-150J	CD15F151J500	DM-15-151	SX315	MS-315
C121	.22 400V		DBE4P22		DMF4P22	4DP-5-224		4PS-P22
C122	30 N470 10%	(33pf, N150) †				*	*	10TCT-Q30
C123	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C124	.047 200V		P288N-047	DD-503	PM2S47	4DP-3-473	PVC2147	2TM-S47
C125	33 N150					*	*	10TCP-Q33
C126	.015 1KV		BE10S18		DPMS16S15	16DP-4-153	GEM10115	MB-S15
C127	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C128	.015 1KV		BE10S18		DPMS16S15	16DP-4-153	GEM10115	MB-S15
C129	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C130	.015 1KV		BE10S18		DPMS16S15	16DP-4-153	GEM10115	MB-S15
C131	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C132	.001		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C133	.001		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C134	.001		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C135	.01 1.4KV		DAC-27	DD16-103	ACT142ZU103P	16DP-3-103	UAC110	125L-S10
C136	.1 400V		P488N-1	DF-104	PM4P1	4DP-3-104	GEM401	4TM-P10
C137	.056 400V 10%				PKM4S56	4DP-3-563	PVC4056	4PS-S56
C138	.1 200V		P288N-1	DF-104	PM2P1	2DP-3-104	PVC201	2TM-P10
C139	.12 200V 10%		P288N-1	DF-104	PM2P1	2DP-3-104	PVC201	2TM-P10
C140	.082 200V 10%		DBE6S82		DPMS6S82	6DP-4-823		6PS-S82
C141	.047 600V		P688N-1	DF-104	PM6P1	6DP-4-104	GEM601	6TM-P10
C142	330 1.4KV		HVD-15	DD30-331	HVY162XP391M			30GA-T33
C143	.001 1KV	(.01) †	BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C144	.001 1KV	(.01) †	BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C145	.001		BPD-001	DD-102	HVX162XP102M			5HK-D10
C146	330 1.4KV		HVD-15	DD30-331	HVY162XP391M			30GA-T33
C147	.0012	(.001) †	DI-1000	DD-102	JBS601YP102K	CCD-102	JF210	10TS-D10
C148	.039 600V		DBE6S39		DPMS6S39	6DP-3-393	PVC6139	6PS-S39
C149	10 NPO		NPO-DI 10	DTZ-10	CZ601CG100J	CCTO-100	CNO410	10TCC-Q10
C150	10		NPO-DI 10	DTZ-10	CZ601CG100J	CCTO-100	CNO410	10TCC-Q10
C151	.047 600V		BE6S47		PM6S47	6DP-3-473	PVC6147	6TM-S47
C152	10 N470	(7pf, ±.5) †				*	*	10TCT-T10
C153	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50

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

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA: Curtis Mathes PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume/Switch	1meg 150K Tap	2A104 ③				
R2	Color	500Ω	02A094-005 (02A094C-005)	F1-500,SFS212	A47-500-S, RS-3/16 or (NP-500-S, SE-F-400)	B11-103,SK9 or (BU2, CF4, SS4, DC1) *	UA52L,SD3500 or (RU52L,SL35, IS1625) or (U2,DS37)
	Color	500Ω	2A44-31 ④ (2A44-31N)	F1-500,SNF108	A47-500-S, RS-3/16, TT-2 or (NP-500-S, SE-F-400, TT-2)	B11-103, TM10 or (BU11, CF4, SS16, DC1) *	RU52L,SL37, SD1187 or (UA52L, SD1187 or (TA52L,DS37)
R3	Brightness	250K	02A094-007 (02A094C-007)	F1-250K, SFS212	A47-250K-S, RS-3/16 or (NP-250K-S, SE-F-400)	B11-130,SK9 or (BU2,CF15, SS4, DC1) *	UA254L,SD3500 or (RU254L,SL35, IS1625) or (U46,DS37)
	Brightness	250K	2A44-21 ④ (2A44-21C)	F1-250K, SNF108	A47-250K-S, RS-3/16, TT-2 or (NP-250K-S, SE-F-400, TT-2)	B11-130, TM10 or (BU11,CF15, SS16, DC1) *	RU254L,SL37, SD1187 or (UA254L,SD1187) or (TA254L,DS37)
R4	Tint	1200Ω	02A094-006 (02A094C-006)	F5-1500, SFS212	NP-1200-V, SE-F-400	B17-208,SK9 or (BU2,CF53,SS4, DC1) *	UA152R,SD3500 or (RU122R,SL35, IS1625) or (U5,DS37)
	Tint	1200Ω	2A44-32 ④	F5-1500, SNF108	NP-1200-V, SE-F-400, TT-2	B17-208, TM10 or (BU11,CF53, SS16, DC1) *	RU122R,SL37, SD1187 or (UA152R,SD1187) or (U5,DS37)
R5	Horiz. Hold	35K	02A094-001 (02A094-001C)	F1-50K, SFS212	A47-40K-S, RS-3/16 or (NP-40K-S, SE-F-400)	B11-122,SK9 or (BU1,CF12,SS4, DC1) *	UA54L,SD3500 or (RU54L,SL35, IS1312) or (U35,DS37)
	Horiz. Hold	35K	2A44-19 ④ (2A44-19C)	F1-50K, SNF108	A47-40K-S, RS-3/16, TT-2 or (NP-40K-S, SE-F-400, TT-2)	B11-122, TM10 or (BU11,CF12, SS16, DC1) *	RU54L,SL37, SD1187 or (UA54L,SD1187) or (TA54L,DS37)
R6	Vert. Hold	750K	02A094-002 (02A094-002C)	F1-750K, SFS212	A47-750K-S, RS-3/16 or (NP-750K-S, SE-F-400)	B11-136,SK9 or (BU1,CF64,SS4, DC1) *	RU754L,SL35, IS1312 or (UA16L, SD3500) or (U54,DS37)
	Vert. Hold	750K	2A44-17 ④ (2A44-17C)	F1-750K, SNF108	A47-750K-S, RS-3/16, TT-2 or (NP-750K-S, SE-F-400, TT-2)	B11-136, TM10 or (BU11,CF64, SS16, DC1) *	RU754L,SL37, SD1187 or (UA16L, SD1187) or (TA16L,DS37)
R7	Contrast	350Ω	02A094-003 (02A094-003C) (2A94-3)	F1-500, SFS212	A47-500-S, RS-3/16 or (NP-350-S, SE-F-400)	B11-103,SK9 or (BU1,CF4,SS4, DC1) *	UA52L,SD3500 or (RU52L,SL35, IS1312) or (U2,DS37)
	Contrast	350Ω 265Ω Tap ▲ Not used	2A44-30 ④	F51-750, SNF108	NPF1-750, SE-F-400, TT-2	B17-103X, TM10 or (BU11,CF48T, SS16, DC1) *	RU751T42,SL37, SD1187
R8	Tone	2.5meg	02A094-004 (02A094C-004) (2A94-4)	F1-2.5meg, SFS212	A47-2.5meg-S, RS-3/16 or (NP-2.5meg-S, SE-F-400)	B11-239,SK9 or (BU1,CF20, SS4,DC1) *	UA255L,SD3500 or (RU255L,SL35, IS1312) or (U255,DS37)
R9	AGC	6000Ω, 2W	08A052-008 (8A52-8)	V-5000 or (WN-502)	U39-5000 or (NPW-5000, UP-C-400, TT-2)	P115R502A or (W11-214,SK5) or (BU1,WF8, SS6) *	MR5000T or (VW5K) or (C6MP)
R10	Color Killer	1meg	02A044-008 (2A44-8)	TT-69 or (F1-1meg, SNK010)	B47-1meg-S or (NP-1meg-S, UP-C-400, TT-2)	B11-137, TM4 or (BU11,CF17, SS6) *	PTA1254L or (RU16L,SL37, SN281) or (UA16L,SN281)

CONTROLS (cont)

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA: PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R11	Green Drive	6000Ω	02A044-024 (2A44-24C) (2A44-24)	F1-7500, SNK104,AK-38	A47-7500-S, RN-3, TT-2	B11-115, TM4 or (BU11,CF8, SS6) *	HVC63L
R12	Blue Drive	6000Ω	02A044-028 (2A44-28C) (2A44-28)	F1-7500, SNK104,AK-38	A47-7500-S, RN-3, TT-2	B11-115, TM4 or (BU11,CF8, SS6) *	HVC63L
R13	Vert. Linearity	3.4meg	02A044-025 (A02A044-025N) (2A44-25)	F1-3meg, SNK014,AK-38		HLC-3	HVC355L
R14	Vert. Height	100K	02A044-011 (0A044-011N) (2A44-11)	TT-40 or (F1-100K, SNK010)	B47-100K-S or (NP-100K-S, UP-C-400, TT-2)	B11-128, TM4 or (BU11,CF13, SS6) *	PTA15L or (RU15L,SL37, SN1000) or (UA15L,SN1000)
R15	Vert. Centering	10Ω, 2W	8A52-7	V-10 ① or (WN-100)	U39-10 ① or (NPW-10, UP-C-400, TT-2)	P115R100A or (W11-010,SK5) or (BU1,WF16, SS6) *	MR10T or (C10P) or (VW10)
R16	High Voltage Adjust	500K	02A044-009 (02A044-009N) (2A44-9)	TT-59 or (F1-500K, SNK010)	B47-500K-S	B11-133, TM4 or (BU11,CF16, SS6) *	PTA55L or (RU55L,SL37, SN281) or (UA55L,SN281)
R17	Red Screen	1.5meg	02A044-023 (2A44-23C) (2A44-23)	F1-1.5meg, SNK104,AK-38		B11-138, TM4 or (BU11,CF18, SS6) *	HVC155L
R18	Green Screen	1.5meg	02A044-027 (2A44-27C) (2A44-27)	F1-1.5meg, SNK104,AK-38		B11-138, TM4 or (BU11,CF18, SS6) *	HVC155L
R19	Blue Screen	1.5meg	02A044-026 (2A44-26C) (2A44-26)	F1-1.5meg SNK104,AK-38		B11-138, TM4 or (BU11,CF18, SS6) *	HVC155L
R20	Adjacent Sound Reject	10K	02A078-002 (2A78-2)				
R21	Sound Reject	750Ω	02A044-029 (2A44-29L) (2A44-29)	F1-750, SNK010,AK-40	B47-750-S ②	B11-105, TM9 or (CF5, SS6, DC2) *	TRS751L
R22	Horiz. Centering	10Ω, 2W	1470827-1			BU11,WF16, SS6 *	MR10T, MRST250
R23	R/G Horiz. Lines (Bottom)	150Ω, 2W	08A052-006	V-150	U39-150	110C150	MRC150P
R24	R/G Horiz. Lines (Top)	30Ω, 2W	08A052-005	V-30	U39-50	110C30	MRC30P
R25	R/G Horiz. Lines (Left Side)	60Ω, 2W	08A052-003	V-60	U39-75	110C60	MRC60P
R26	R/G Vert. Lines (Bottom)	120Ω, 2W	08A052-004	V-120	U39-125	110C120	MRC120P
R27	R/G Vert. Lines (Top)	60Ω, 2W	08A052-003	V-60	U39-75	110C60	MRC60P
R28	R/G Vert. Lines (Left Side)	60Ω, 2W	08A052-003	V-60	U39-75	110C60	MRC60P
R29	Blue Horiz. Lines (Bottom)	30Ω, 2W	08A052-005	V-30	U39-50	110C30	MRC30P
R30	Blue Horiz. Lines (Top)	60Ω, 2W	08A052-003	V-60	U39-75	110C60	MRC60P
R31	Blue Horiz. Lines (Left Side)	120Ω, 2W	08A052-004	V-120	U39-125	110C120	MRC120P

① Insulate control from chassis and solder original center terminal lead to metal case of control.
② Cut off shaft and bend terminals back to facilitate wiring.
③ Part #2A105 (Volume/Push/Push Switch) may be used in some versions.
Part #02A108-000 (2A108) (Volume/Push/Pull Switch), may be used in some versions.
④ Alternate Part, may be used in some versions.

* "SNAPTROL"

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA: IRC PART No.	WORKMAN PART No.	Curtis Mathes PART No.
R32	3300Ω 10W	PW10-3300	10W-SQ-3300	
R54	10K 10W	PW10-10K	10W-SQ-10K	8A88
R59	6800Ω 3W		3G-6.8K	8A75
R78	4300Ω 5W	PW5-4500	5G-4.3K	8A72
R98	V.D.R. †			8A113
R104	5600Ω 3W	PW5-6000	3G-5.6K	8A91
R106	1000Ω 3W	PW5-1000	3G-1K	8A79
R110	Thermistor 3.5Ω Cold		FR-3.5	
R128	2200Ω 3W	PW5-2250	3G-2.2K	8A92
R131	15K 7W (13K 7W)	PW10-15K PW10-12.5K	10W-SQ-15K 10W-SQ-12.5K	8A39

ITEM No.	RATING	REPLACEMENT DATA: IRC PART No.	WORKMAN PART No.	Curtis Mathes PART No.
R133	66meg 6KV	MV-66 M	66 M	6000V
R171	39K 3W		3G-39K	8A94
R189	270Ω 3W	PW5-250	3G-270	8A97
R193	2700Ω 3W	PW5-2500	3G-2.7K	8A77
R195	5600Ω 4W	PW5-6000	4G-5.6K	8A82
R197	39K 4W		4G-39K	8A90
R203	3300Ω 3W	PW5-3300	3G-3.3K	8A71
R205	1400Ω,18W	2C-1500	20W-SQ-1.5K	8A87
R206	1200Ω 7W	PW10-1200	7G-1.2K	8A74
R208	1200Ω 4W	PW5-1200	4G-1.2K	8A73

† Voltage Dependent Resistor

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA: Curtis Mathes PART No.	MEISSNER Part No.	MERIT PART No.	MILLER PART No.	WORKMAN PART No.
L1	47.25MC Trap	1A154-3				
L2	1st Video IF	1A154-1			7514-E	
L3	2nd Video IF	1A154-5			7511-W	
L4	3rd Video IF	1A154-4			7526	
L5	4th Video IF/ 41.25MC Trap	1A157			6037	
L6	RF Choke (12uh)	14A12	19-2016	BC-566	72F125AP	TA343
L7	4.5MC Trap	1A158			7142	TA264
L8	Peaking (36uh)	14A26	19-3036	TV-180	6176	T301
L9	Peaking (620uh)	14A24	19-3660	BC-679	6146	T356
L10	RF Choke (5.6uh)	14A15	19-1008	BC-565	74F566AP	T820
L11	Peaking (390uh)	14A16	19-2028	TV-201	72F394AP	TA338
L12	Peaking (680uh)	14A21 ①	19-3660 *	TV-206 *	72F684AP *	T327 *
L13	Peaking (72uh)	14A14	19-3075	TV-186	6172	T303
L14	Peaking (62uh)	14A22	19-3060	BC-666	6110	T338
L15	Peaking (120uh)	14A19 ②	19-3125 ♦	TV-195 ♦	6153 ♦	TA344
L16	Video Peaking	1A135				
L17	RF Choke (5.6uh)	14A15	19-1008	BC-565	74F566AP	T820
L18	RF Choke (12uh)	14A18	19-2017	BC-566	72F125AP	TA820
L19	RF Choke (1.8uh)	14A17	19-1001	BC-562	74F186AP	TA819
L20	RF Choke (5.6uh)	14A15	19-1008	BC-565	74F566AP	T820
L21	RF Choke (5.6uh)	14A15	19-1008	BC-565	74F566AP	T820
L22	1st Sound IF	1A163	20-1052		7143	TF299
L23	2nd Sound IF	1A156			7141	

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