

For Supplier Address See PHOTOFACT Index

COLOR TV

WARNING
 HI VOLTAGE
 MAY EXCEED
 SOME CRT
 OR TEST JIG
 X-RAY RATINGS

MODEL	CHASSIS	REMOTE
F3852L	17FC35	
F3855W	17FC45	
F3858W	17FC45	
F3860R/W	17FC45	
F4025W	19FC45	
F4028W	19FC45	
F4030W/X	19FC45	
F4033X	19FC45	
F4082X	19FC45	
F4084P	19FC45	
F4086M	19FC45	
F4088DE/P	19FC45	
SF1750R	17FC45	S-98339, S-94828
SF1960R	19FC45	S-94638, S-98663
SF1960R1	19FC45Z	S-94638, S-98663
SF1962X	19FC45	S-94638, S-98663
SF1964X	19FC45	S-94638, S-98663
SF1966P	19FC45	S-94638, S-98663
T2834W	17FC45	
T2840W	19FC45	



Model F4030W

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.

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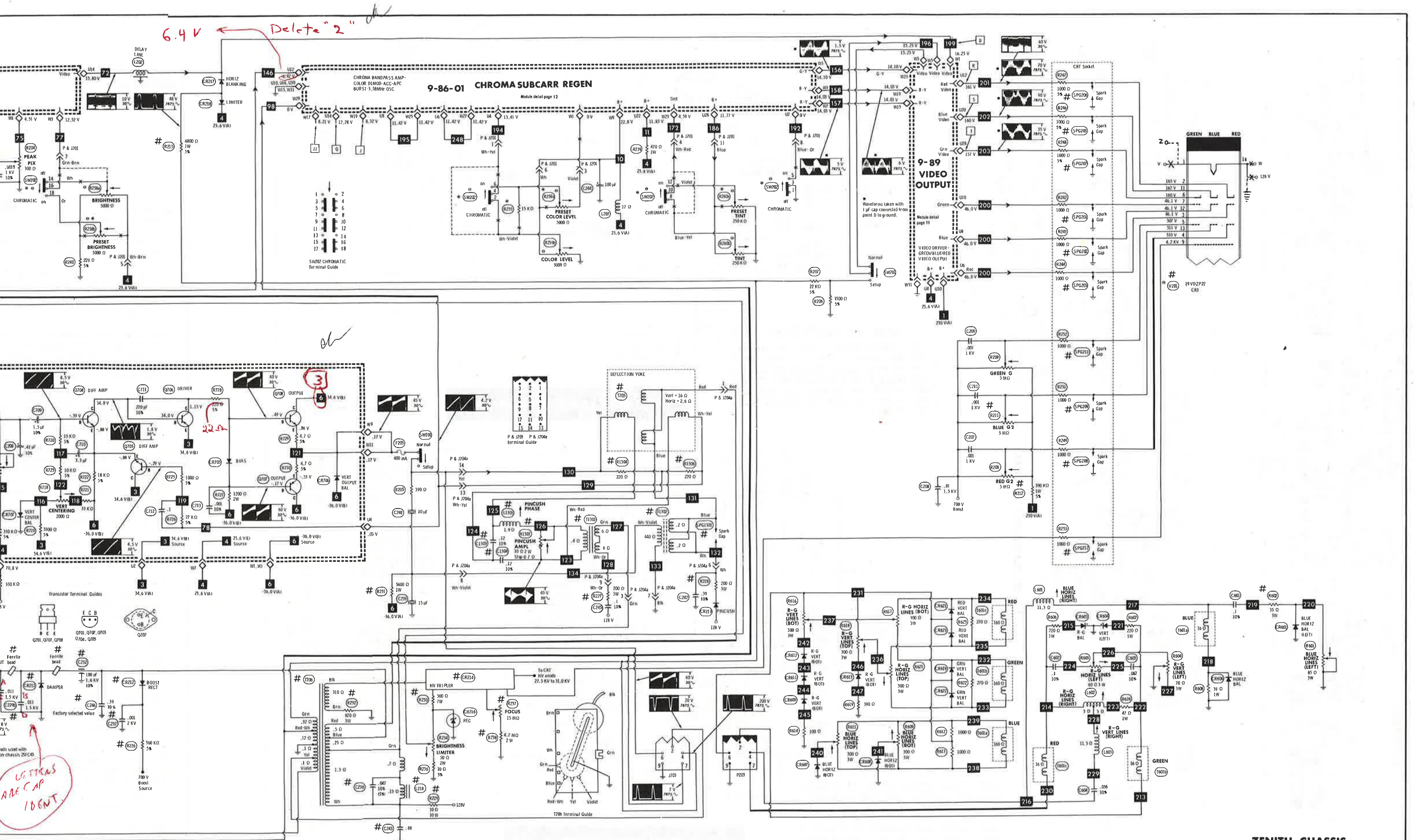
The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed. 4PD1186

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DATE 3-75

SET 1466 FOLDER 3





RESISTANCE MEASUREMENTS

ITEM	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8	PIN 9	PIN 10	PIN 11	PIN 12	PIN 13	PIN 14
V201 CRT	FIL	28 KΩ	80 KΩ	2.5 MΩ	2.5 MΩ	28 KΩ	80 KΩ	NC	80 MΩ	NC	28 KΩ	80 KΩ	2.5 MΩ	FIL
MEASUREMENTS BELOW TAKEN WITH METER HAVING .08V MAX BETWEEN PROBE TIPS														
IC401	470 KΩ	6500 Ω	5.5 MΩ	150 KΩ	1500 Ω	260 Ω	1100 Ω	1700 Ω	900 Ω	0 Ω	INF	4400 Ω	2300 Ω	6000 Ω
													PIN 15 4000 Ω	PIN 16 590 Ω
IC1001	35 KΩ	2500 Ω	8500 Ω	38 KΩ	0 Ω	1200 Ω	INF	INF	2000 Ω	2000 Ω	2000 Ω	260 Ω	7000 Ω	260 Ω
													PIN 15 25 KΩ	PIN 16 33 KΩ
IC1002	10 KΩ	800 Ω	800 Ω	3200 Ω	0 Ω	6500 Ω	650 Ω	1200 Ω	650 Ω	650 Ω	35 KΩ	35 KΩ	750 KΩ	750 KΩ
													PIN 15 33 KΩ	PIN 16 33 KΩ
IC1101	INF	INF	0 Ω	0 Ω	650 Ω	12 KΩ	8000 Ω	INF	5000 Ω	5000 Ω	INF	10 KΩ	5600 Ω	70K
IC1102	0 Ω	50 KΩ	0 Ω	0 Ω	0 Ω	INF	INF	INF	290 Ω	0 Ω	0 Ω	0 Ω	INF	0 Ω
ITEM	E	B	C		ITEM	E	B	C		ITEM	E	B	C	
Q101	1100Ω	40 KΩ	2400Ω		Q703	0Ω	15 KΩ	500 KΩ		Q901	82Ω	INF	7000Ω	
Q102	680Ω	1500Ω	2400Ω		Q704	20 KΩ	40 KΩ	40 KΩ		Q902	0Ω	290Ω	2200Ω	
Q103	100Ω	750Ω	630Ω		Q705	20 KΩ	30 KΩ	40 KΩ		Q903	18 MΩ	7000Ω	220Ω	
Q104	680Ω	1800Ω	1200Ω		Q706	40 KΩ	40 KΩ	4 MΩ		Q904	18 MΩ	2800Ω	900Ω	
Q105	470Ω	1800Ω	950Ω		Q707	26Ω	7000 Ω	6000Ω		Q905	220Ω	10 KΩ	INF	
Q106	1150Ω	4000Ω	1800Ω		Q708	26Ω	4 MΩ	40 KΩ		Q1204	INF	900Ω	0Ω	
Q201	220Ω	20 KΩ	50 KΩ		Q801	270Ω	220 KΩ	2.5 MΩ		Q1205	INF	3000Ω	28 KΩ	
Q202	0Ω	2Ω	17 KΩ		Q802	200Ω	6500Ω	800Ω		Q1206	INF	3000Ω	28 KΩ	
Q701	150 KΩ	170 KΩ	17 KΩ		Q803	15Ω	180Ω	17 KΩ		Q1207	INF	3000Ω	28 KΩ	
Q702	0Ω	15 KΩ	3000Ω		Q804	330Ω	0Ω	5800Ω						

▲ THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
● READING DEPENDS UPON POLARITY OF METER CONNECTIONS.

TROUBLESHOOTING CHECK CHART

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

PICTURE or SOUND

No pic, no sound, no raster: Circuit Breaker, Fuses, LV Rects

No pic, no sound, has raster: Video IFs, Tuner Mixer/Output
No pic, no sound, has snow: Tuner RF/Mixer/Output/Osc
No pic, has sound, no raster: CRT
No pic, has sound, has raster: Video Amps/Driver
Has pic, no sound: Sound IF/Det, Audio Det/Amp/Output
Overloaded picture: AGC, Video Det
Low or excessive brightness: Brightness Limiter

SWEEP

No raster, has sound: Horiz Osc/Driver/Output, Damper, HV Tripler, CRT
No vert deflection: Vert Osc/Switch/Diff Amp/Driver/Output
Poor vert lin or foldover: Vert Osc/Switch/Diff Amp/Driver/Output
Poor horiz lin or foldover: Horiz Output, Damper
Narrow picture: LV Rects, Horiz Osc/Driver/Output, Damper
Vert off frequency: Vert Osc
Horiz off frequency: Horiz Phase Det/AFC/Osc

SYNC

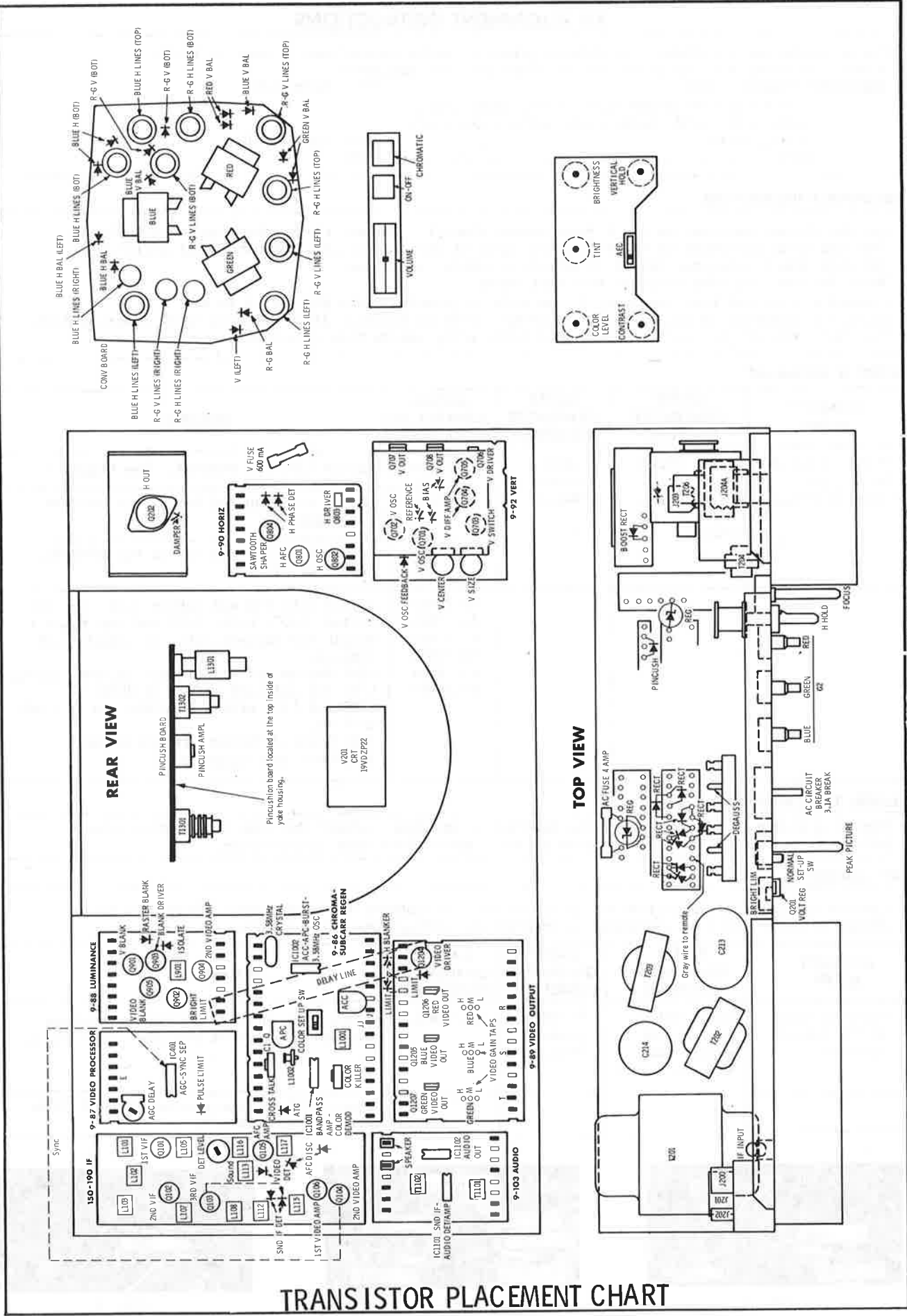
No vert sync: Vert Osc
No horiz sync: Horiz Phase Det/AFC/Osc
No vert/horiz sync: Sync Sep

RASTER

Yellow (no blue): Blue Video Output, CRT
Cyan (no red): Red Video Output, CRT
Magenta (no green): Green Video Output, CRT

COLOR (B/W operating normally)

No color: Chroma Bandpass Amp, Burst
Weak color: Chroma Bandpass Amp
No color sync: Burst, 3.58MHz Osc
No green: Color Demod, Green Video Output
No blue: Color Demod, Blue Video Output
No red: Color Demod, Red Video Output
Incorrect hue (tint): Burst, Color Demod



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17FC35, 17FC45, 19FC45, 19FC45Z

FOLDER 3

TV ALIGNMENT INSTRUCTIONS

Use an isolation transformer, or observe polarity, and maintain line voltage at 120VAC. Allow a 20-minute warm-up period for receiver and test equipment.

Suggested Alignment Tools: GC ELECTRONICS
VHF Tuner IF Output Coil, L101, L102, L103, L105, L107, L108, L112, L113, L115, L116, L117, T1101, T1102 9296, 9297, 9300 L901 9440

PRELIMINARY INSTRUCTIONS

Set the channel selector to the highest unused channel. Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection. Use only enough generator output to provide a usable indication. Note: Response may vary slightly from that shown. Connect a +7.2 volt bias supply to E, low side to ground. Place AFC switch to off. Connect a voltmeter to C1, low side to ground. With no signal, adjust Detector Level control, R125, for +8.5 volts DC \pm 0.2 volts. Disconnect meter after making this adjustment.

VIDEO IF ALIGNMENT

CONNECT SCOPE	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	REMARKS
Vertical input to C1, low side to ground.	Thru .001mfd to A on VHF tuner, low side to ground.	44MHz (10MHz Sweep)	39.75MHz	Adjust L102 for MINIMUM. See Figure 1.
			41.25MHz	Adjust L112 Top and Bottom for MINIMUM. See Figure 1.
			47.25MHz	Adjust L103 Top and Bottom for MINIMUM. See Figure 1.
"	"	"	39.75MHz 41.25MHz 42.17MHz 44.00MHz 45.75MHz 47.25MHz	Adjust L101 Top and Bottom, L105 Top and Bottom, L107, L108, L113 and VHF Tuner IF Output for maximum gain and symmetry of response. L101 Bottom and L113 affect 45.75MHz marker. L101 Top and L108 affect 44.00MHz. L105 and L107 affect 44.00MHz and 42.17MHz markers. VHF Tuner IF Output affects overall response. See Figure 2.

4.5MHz 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 L115 for MINIMUM beat interference.

AFC ALIGNMENT

Connect as explained in preliminary instructions. Disconnect AFC output lead (white/blue wire). Adjust detector level as explained in preliminary instructions, if necessary.

CONNECT SCOPE	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	REMARKS
Vertical input to AFC output terminal.	Thru .001 uF to A on VHF tuner, low side to ground.	44.00MHz (10MHz Sweep)	45.75MHz	Adjust L116 and L117 Bottom for maximum gain and symmetry of response. See Fig.3.
"	"	"	"	Adjust L117 Top for placement fo 45.75MHz marker. See Figure 3.

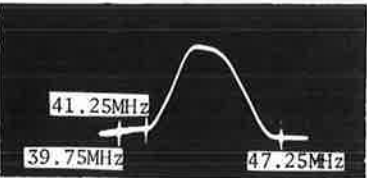


FIG. 1

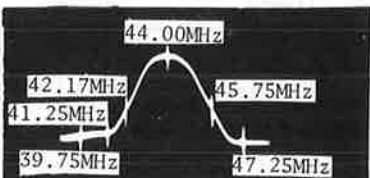


FIG. 2

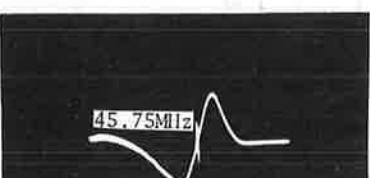


FIG. 3

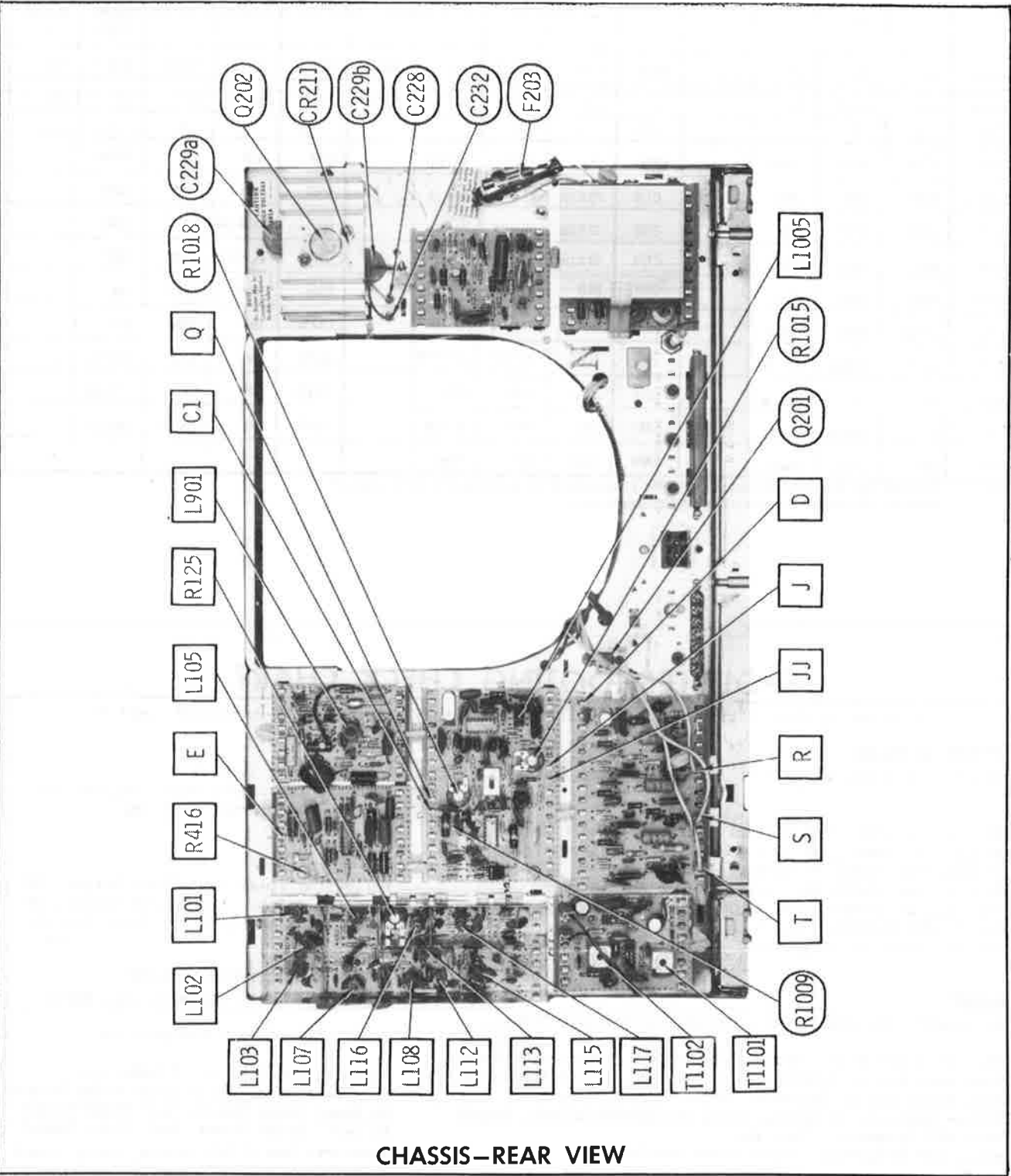
TV ALIGNMENT INSTRUCTIONS (Continued)

SOUND IF ALIGNMENT

Tune in a station and adjust T1101 (Black Dot) for maximum sound. Reduce signal strength at the antenna terminals until distortion appears. Continue to reduce the signal while aligning for undistorted output by adjusting T1102 (Green Dot).

3.58MHz TRAP ALIGNMENT

Connect scope and signal generator across 3.58MHz Trap, L901. Set generator for 3.58MHz and adjust L901 for maximum indication on scope. This adjustment is made with the set turned off.



CHASSIS-REAR VIEW

MISCELLANEOUS ADJUSTMENTS

HIGH VOLTAGE ADJUSTMENT

This chassis uses a voltage regulating power transformer and therefore no high voltage adjustment is required. With all controls set for a normal picture, the high voltage should read 27.5KV to 31.0KV for 19 inch chassis. High voltage should read 25.0KV to 28.5KV for 17 inch chassis.

UHF/VHF TUNERS (VARACTOR TYPE)

Changing Channel Indicator Tabs

Carefully push downward on tab holder and remove tab holder. Carefully lift tab over lock pin and remove tab. Insert new tab from left to right. Note the difference between UHF and VHF tabs. The UHF tabs are longer and must cover metal strip on tab holder in order to tune for UHF stations. This is the only way to change from VHF to UHF stations. The tab holder must be re-installed in order to operate VHF stations.

SET UP OF TV CHANNELS (FINETUNING)

Place channel selector to desired position. Set AFC and Chromatic switches to the off position. Push channel selector knob cover downward to expose UHF/VHF fine tuning knob. Push and hold inward as you turn knob for best picture and sound. Repeat for any or all of 14 channel positions. Any combination of UHF/VHF channels can be set with the corresponding channel indicator tab. Reset AFC switch to the on position.

AGC ADJUSTMENTS

The AGC delay control is set at the factory and normally will not need adjustment. To adjust the AGC delay control, tune in the weakest TV station available, but one without snow in the picture. Turn the AGC delay control to the right until snow appears in the picture; then turn control back until the snow just disappears. Check this setting against other weak stations in the area.

VERTICAL SIZE AND CENTERING

Adjust vertical size and vertical centering while observing a test pattern. There is no vertical linearity control on this chassis.

BRIGHTNESS LIMITER ADJUSTMENT

Disconnect the IF cable from the VHF tuner to IF module (for a no-signal input condition). Then set brightness and contrast controls to maximum. Proper placement of the video gain taps are necessary. The green and red taps must be set at the high (H) and the blue tap at medium (M) position.

Connect a low range volt meter across the Output Resistor, R1255, of the green video output transistor. Adjust the brightness limiter control for .55 volts.

After this adjustment is made, return the gain taps to their previous position and re-connect the IF cable to the VHF tuner.

COLOR KILLER ADJUSTMENT

Tune in a weak signal or reduce the signal at the antenna terminals to obtain a snowy picture. Set contrast, color level and color killer to maximum clockwise rotation. Slowly turn color killer counterclockwise until colored snow just disappears.

CROSSTALK ADJUSTMENT

Connect a color bar generator to antenna terminals. Tune in a color bar pattern. Connect a 1 uF, 25-volt electrolytic capacitor from point D to ground, to remove the luminance signal. Adjust the Crosstalk control, R1009, for optimum sharpness and clarity of both leading and trailing edges (sides) of the color bars.

ACC CONTROL ADJUSTMENT

Slide color set-up switch to the align position. Connect a VTVM from point Q to ground. Short across points J and JJ and observe meter reading. Remove short from test points and adjust ACC control, R1015, for an identical reading.

APC CONTROL ADJUSTMENT

Slide color set-up switch to the align position. Adjust APC control, R1018, for MINIMUM movement of color bars through picture. Return color set-up switch to normal position. Check for proper waveform as shown on schematic at R-Y, G-Y, and B-Y outputs: points R, T and S.

Connect scope to point R. Set tint control to mid-range. Adjust Hue coil, L1005, to obtain 6th bar crossover, waveform as shown on schematic.

PURITY ADJUSTMENTS

If the picture tube appears to be magnetized, use a degaussing coil to demagnetize tube and mounting brackets.

Turn the blue and green G2 controls counterclockwise and turn the red screen fully clockwise. Loosen the locking wing nuts of the deflection yoke assembly and slide it back without disturbing the position of the other neck components. Adjust the tabs on the purity magnet until a red spot appears at the center of the tube. Slide the deflection yoke forward to obtain a uniform red over the entire picture-tube face.

GRAY SCALE ADJUSTMENTS

To adjust, use a black and white picture that displays an adequate range of light levels, light and gray objects, dark objects, etc. Set brightness and contrast for a normal picture.

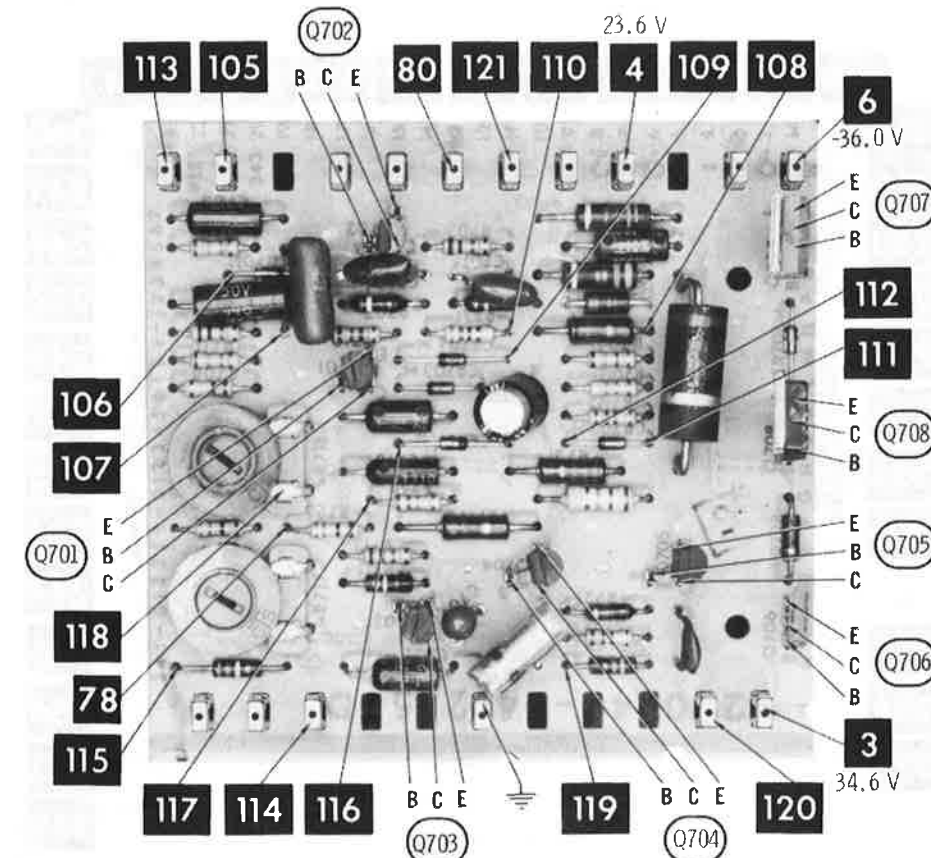
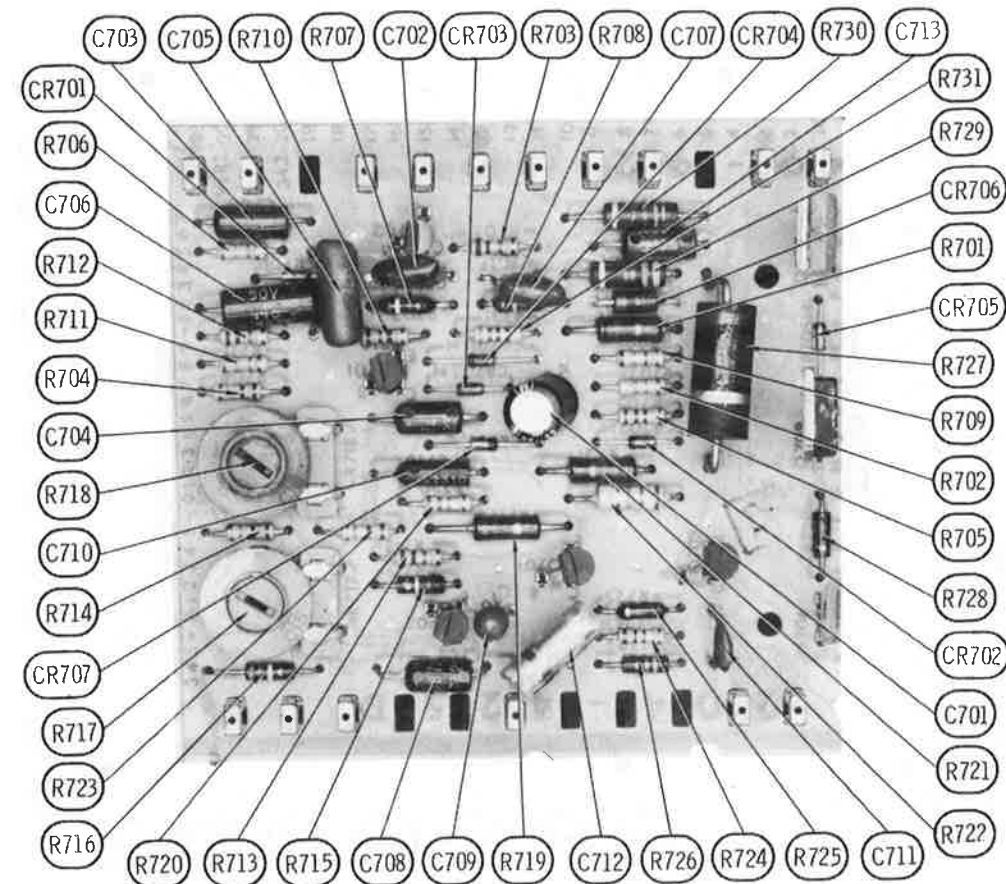
Place the normal set-up switch to set-up position. Place video output taps to high (H) position. Advance the screen controls (G2) one at a time, until each produces a barely visible line on the screen.

Return the normal-set-up switch to normal. If a slight color cast is present, relocate the appropriate video (chroma) gain taps to eliminate the color shading. Check overall black and white tracking by turning contrast and brightness controls through their entire range.

DYNAMIC PINCUSHION ADJUSTMENTS

Connect a crosshatch generator to the antenna terminals and adjust the set for a normal crosshatch pattern. Pincushion correction at the sides is fixed; no adjustment is provided. Top and bottom pincushion is factory adjusted and readjustment is seldom needed.

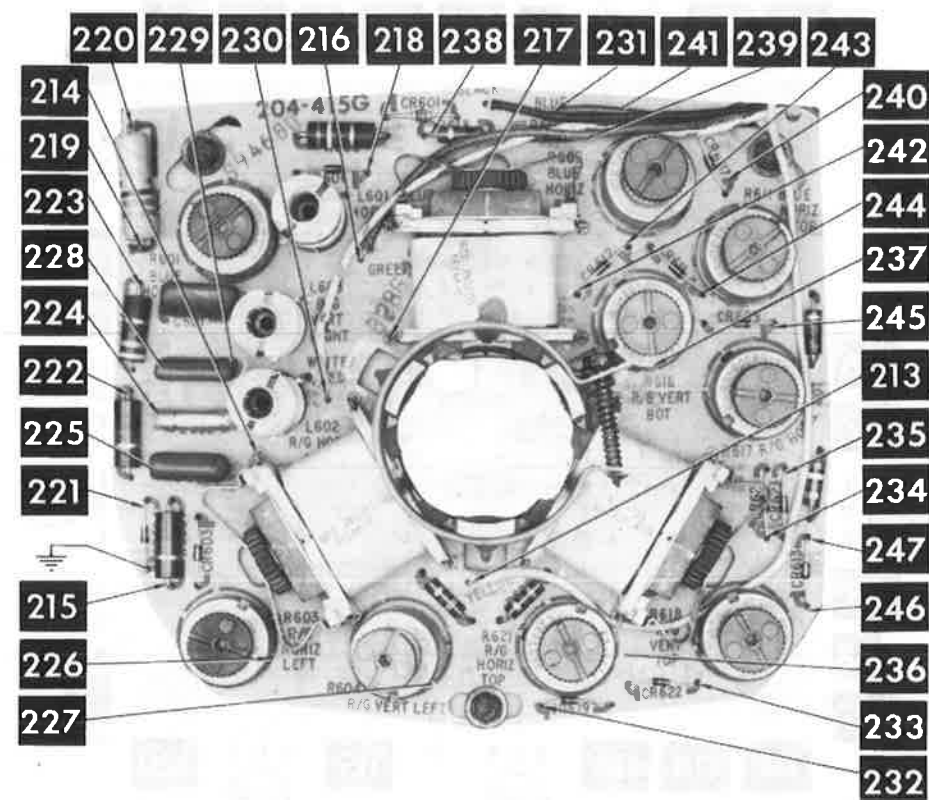
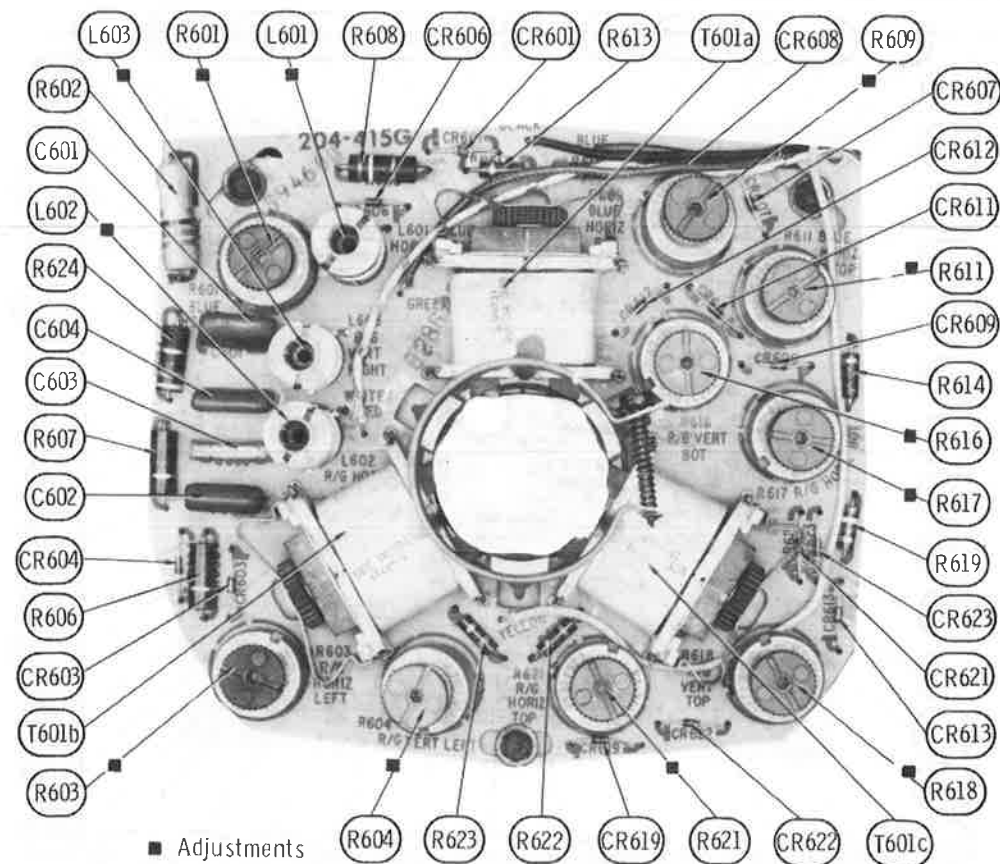
If necessary adjust the Pincushion Amplitude control, R1307, and Phase coil, L1301, until the top and bottom of the pattern is as straight as possible.



9-92 VERTICAL MODULE A Howard W. Sams CIRCUITRACE Photo

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17FC35, 17FC45, 19FC45, 19FC45Z

FOLDER 3



CONVERGENCE BOARD

CONVERGENCE ADJUSTMENTS

Miscellaneous Adjustments should be made before proceeding to Convergence Adjustments. See Page 32. Connect dot/crosshatch generator to antenna terminals. Use dot pattern for center dot convergence. Use crosshatch pattern for all other adjustments. View pattern as displayed on TV screen. NOTE: Maintain center convergence throughout setup procedure.

Perform center dot convergence using convergence magnets.

Adjust R616 and R618 to converge red and green vertical center line from top to bottom of screen.

Adjust R617 and R621 to converge red and green horizontal lines along vertical center line from top to bottom of screen.

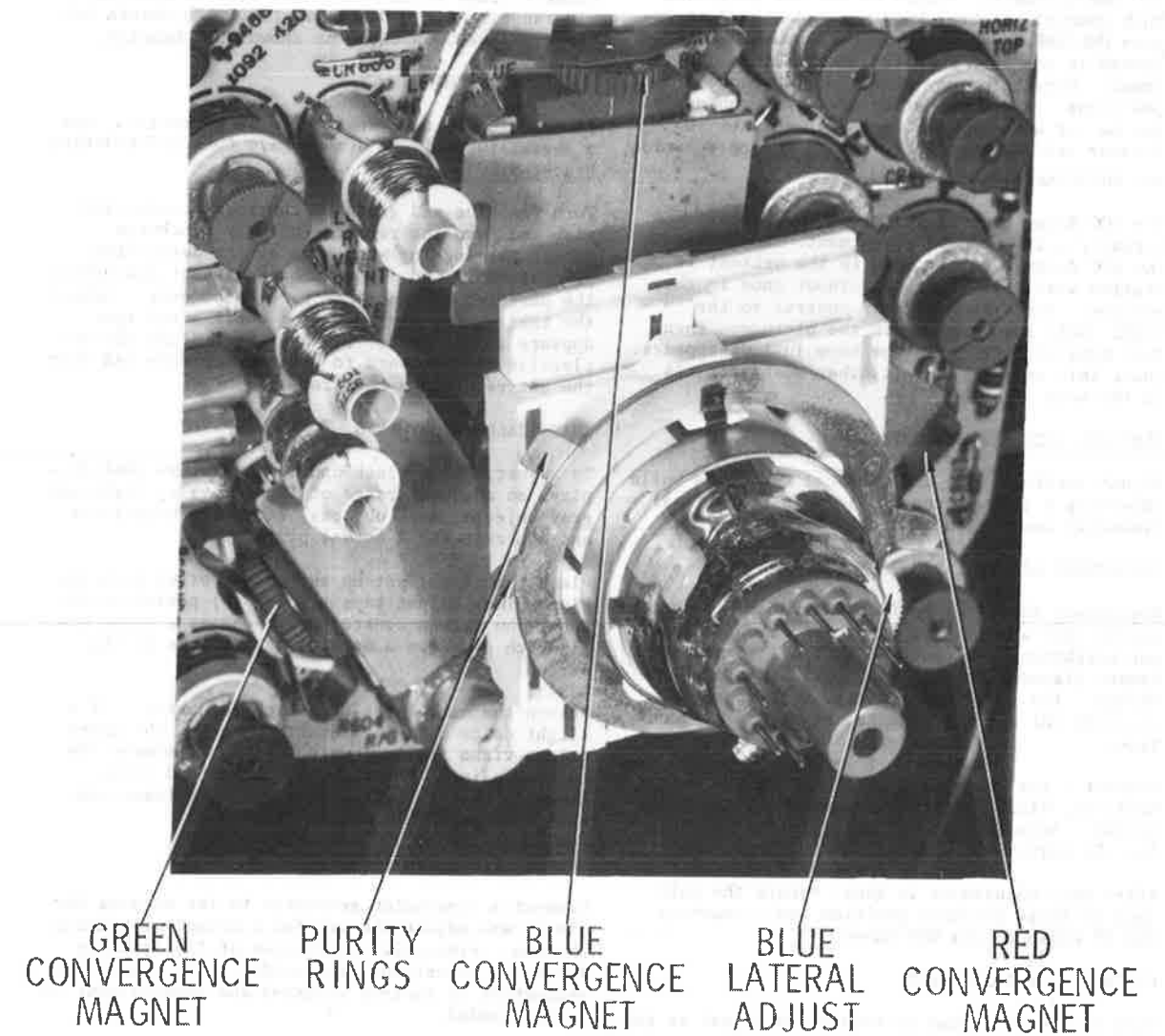
Adjust R603 and R604 to converge red and green vertical and horizontal lines, left side of screen.

Adjust L602 and L603 to converge red and green vertical and horizontal lines, right side of screen.

Adjust R609 and R611 to converge blue horizontal lines along vertical center line from top to bottom of screen.

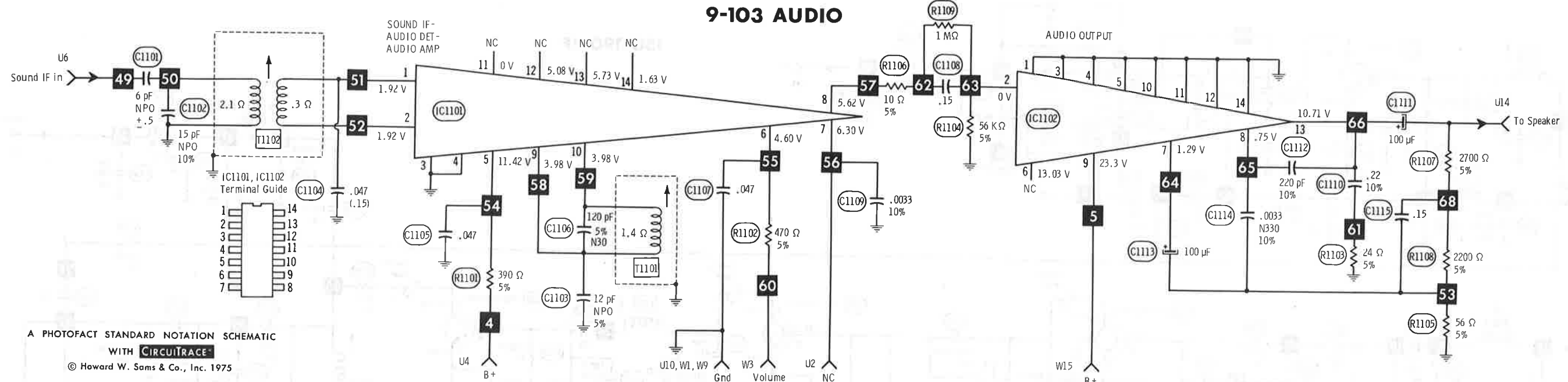
Adjust R601 and L601 to converge blue horizontal lines, left and right sides of screen.

Touch up appropriate controls if necessary.

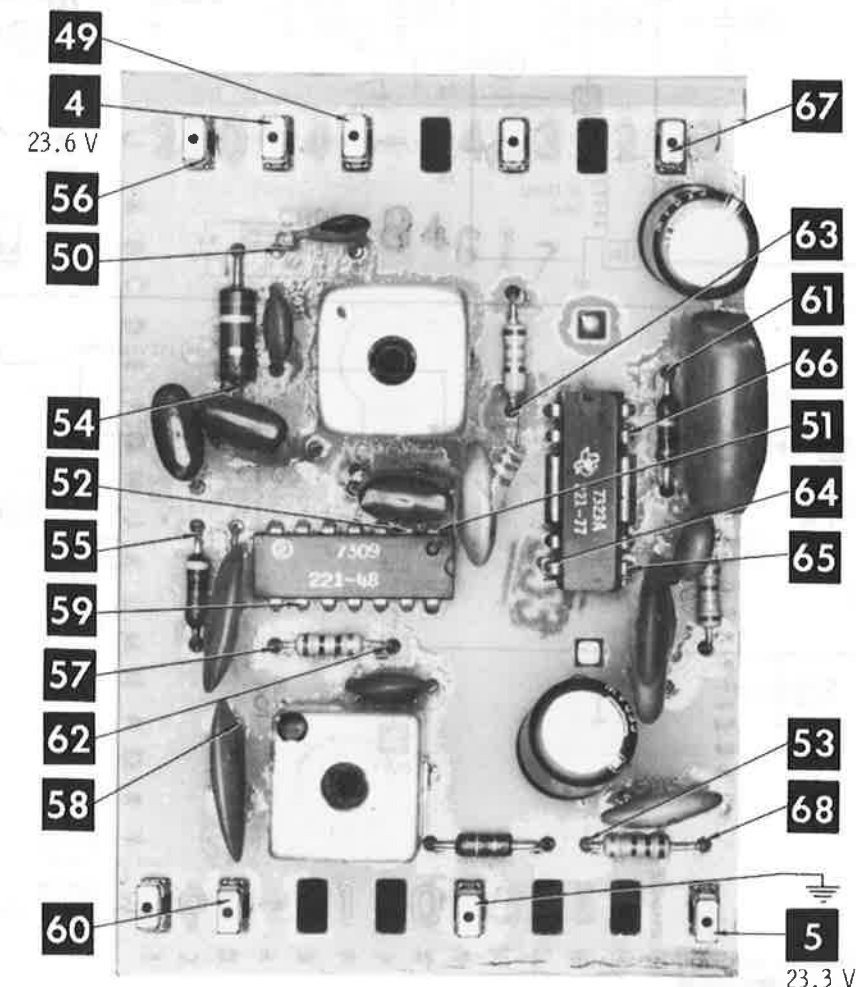
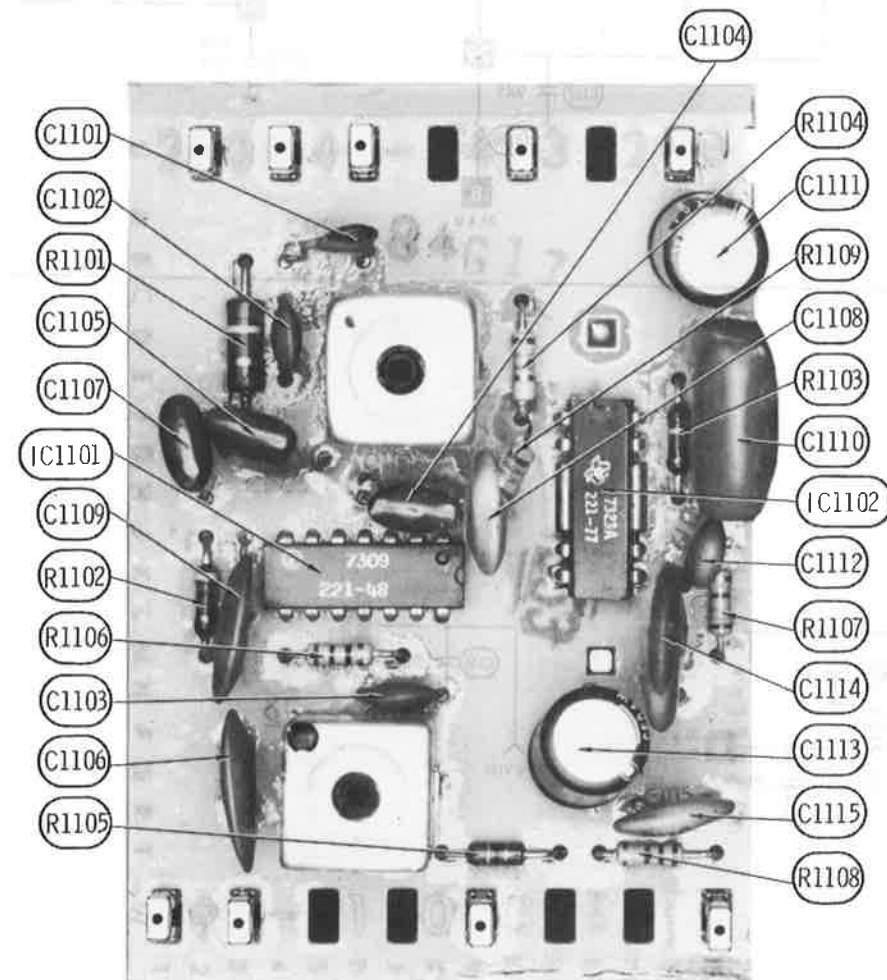


CRT NECK ASSEMBLY

9-103 AUDIO



A PHOTOFACT STANDARD NOTATION SCHEMATIC
WITH CIRCUITRACE
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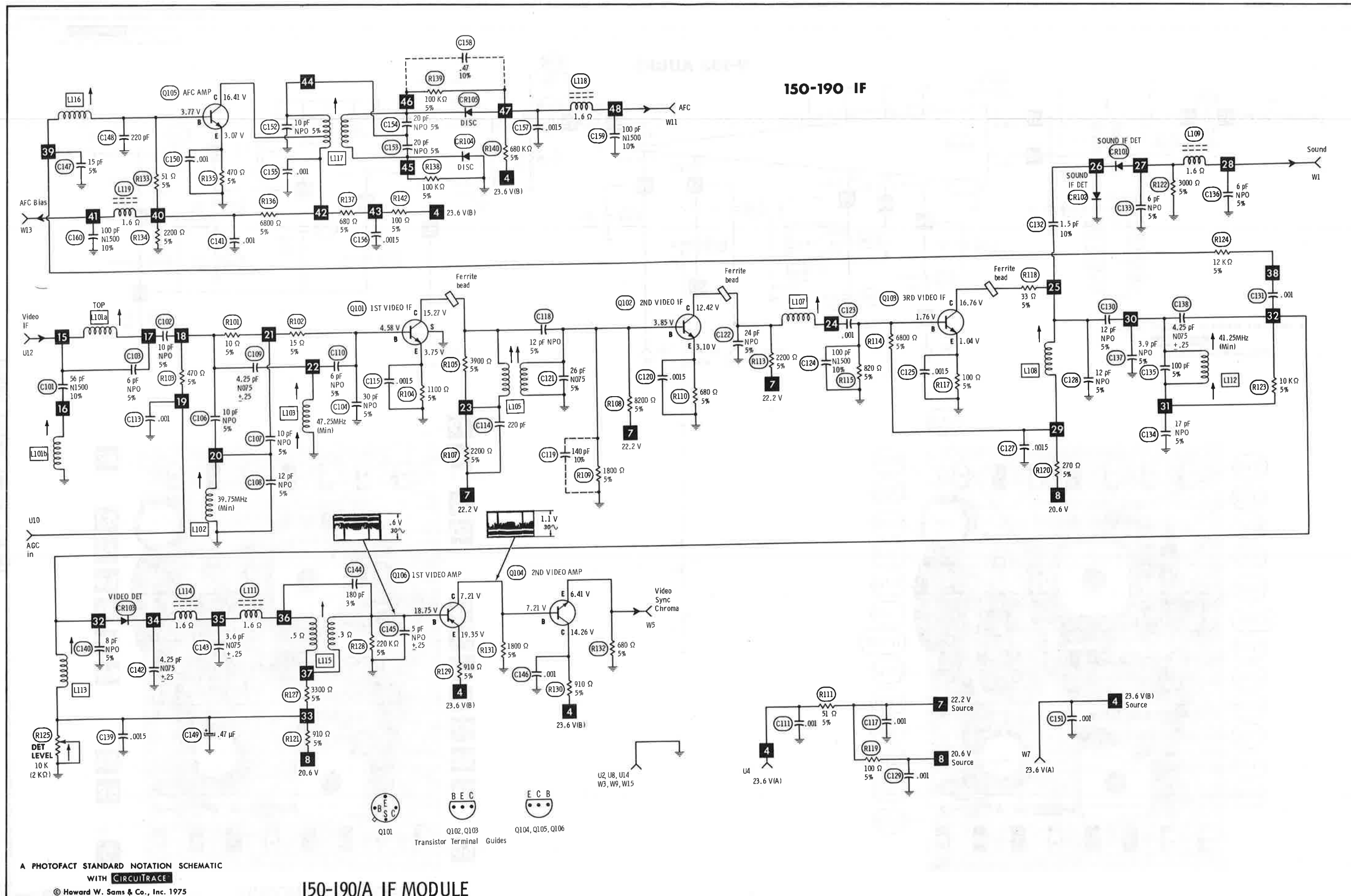


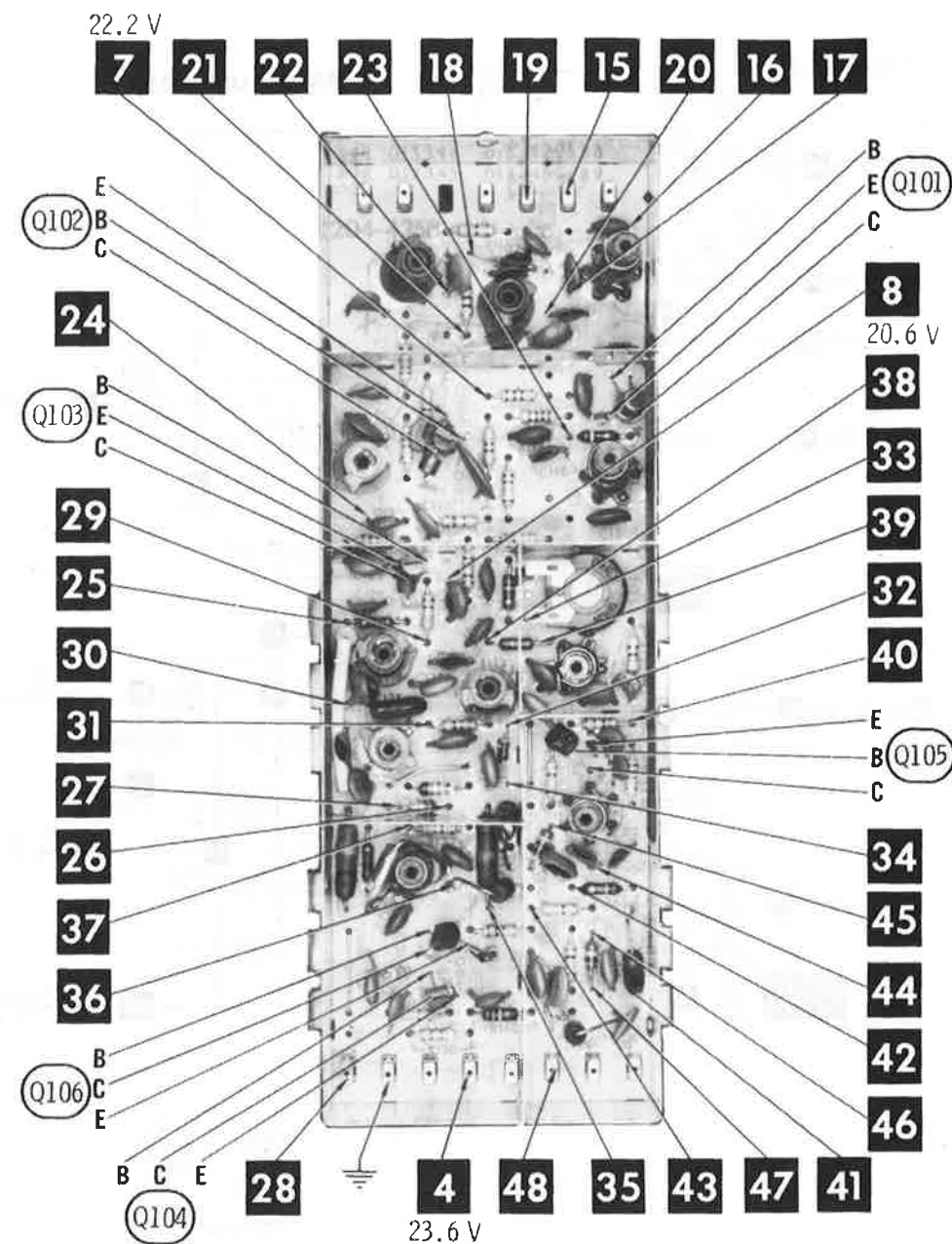
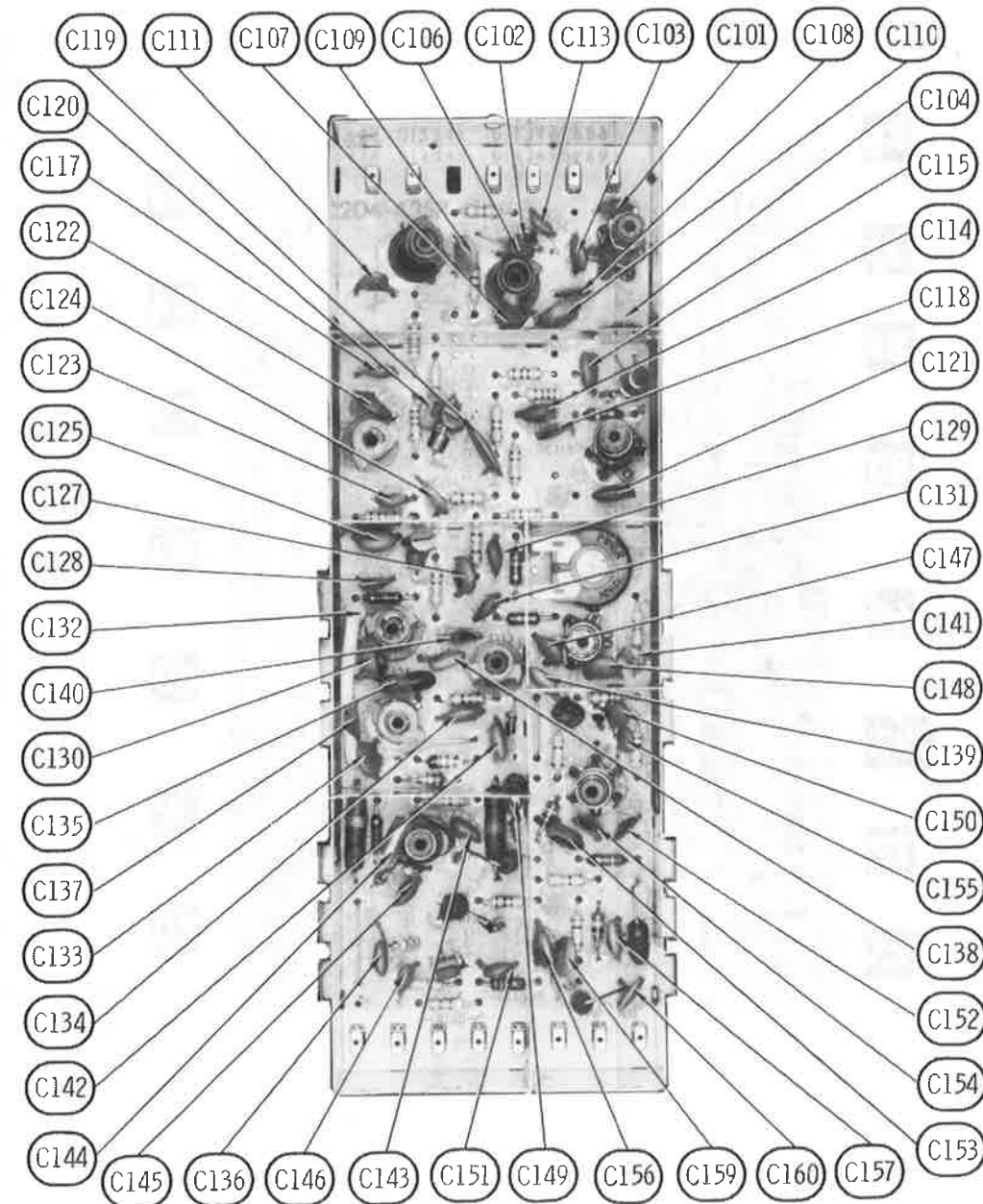
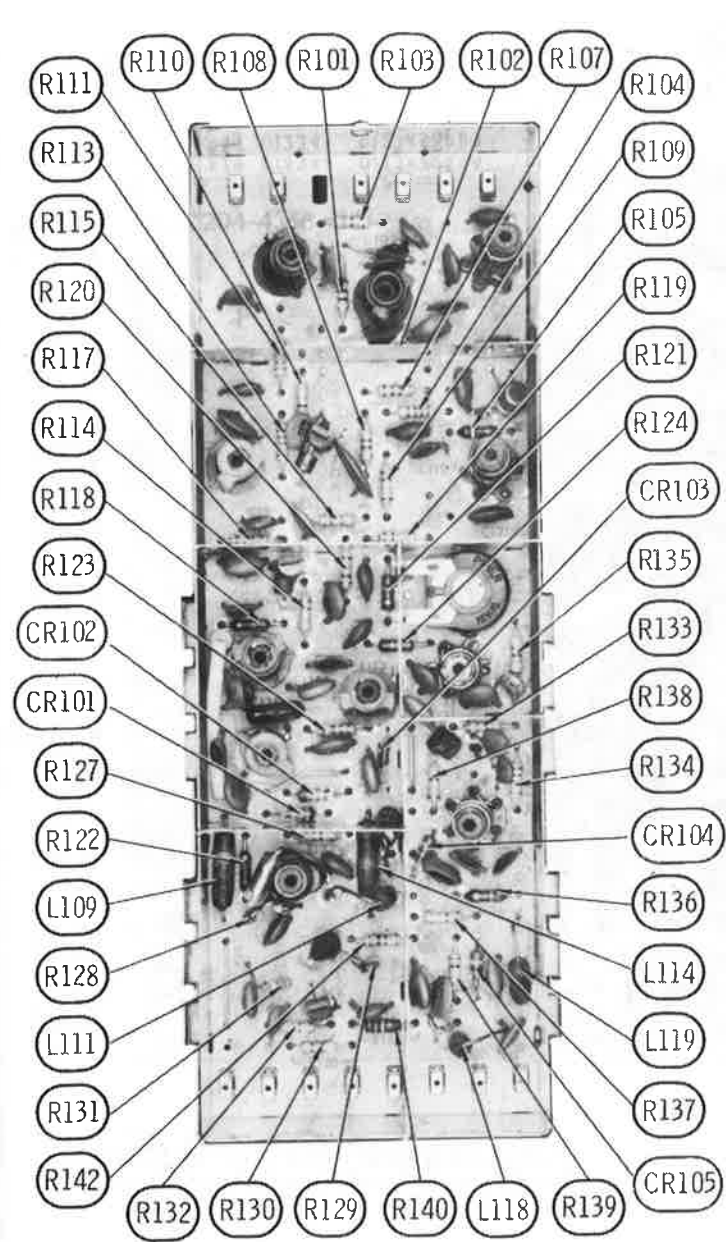
9-103 AUDIO MODULE

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FOLDER 3

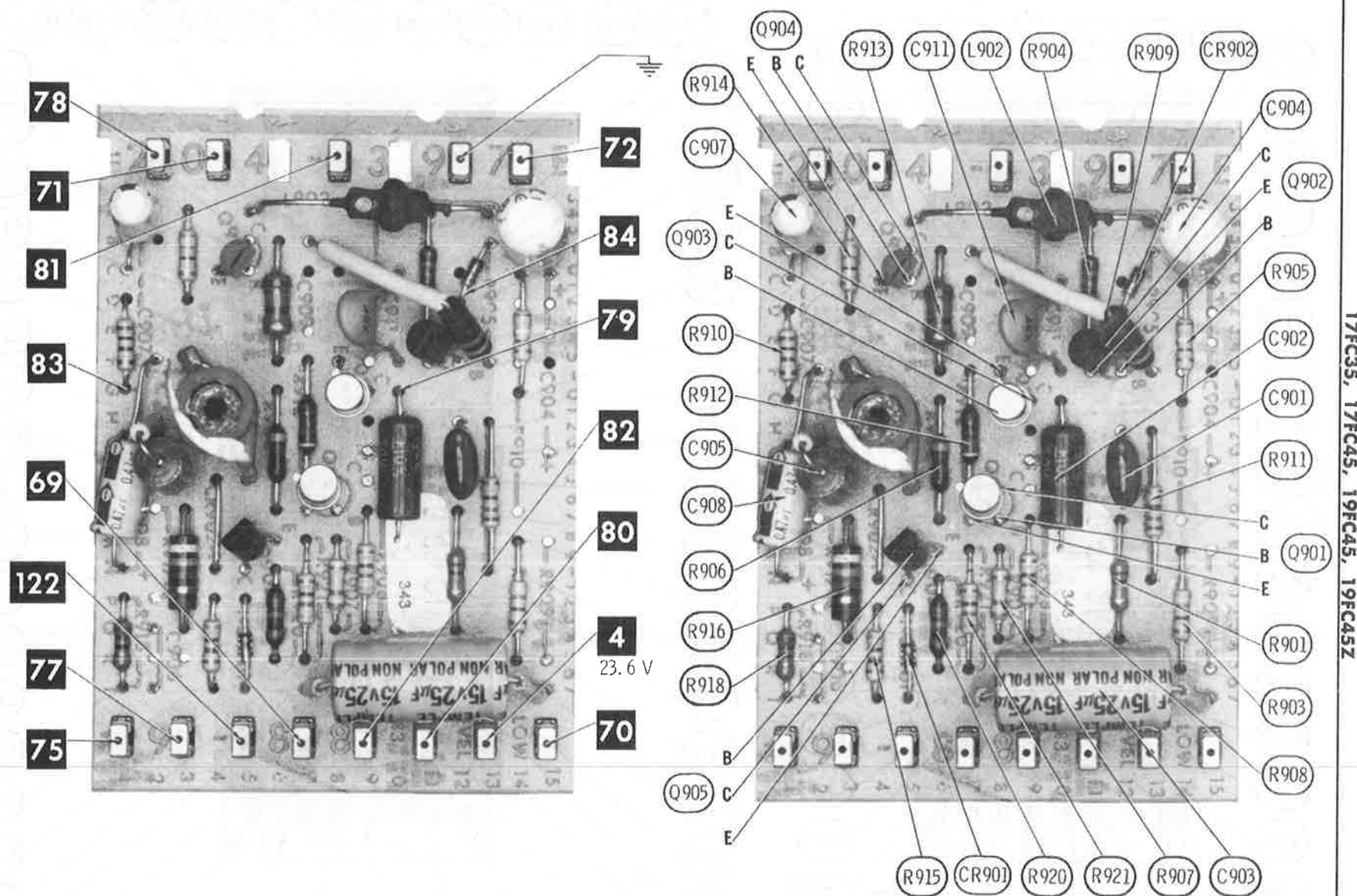
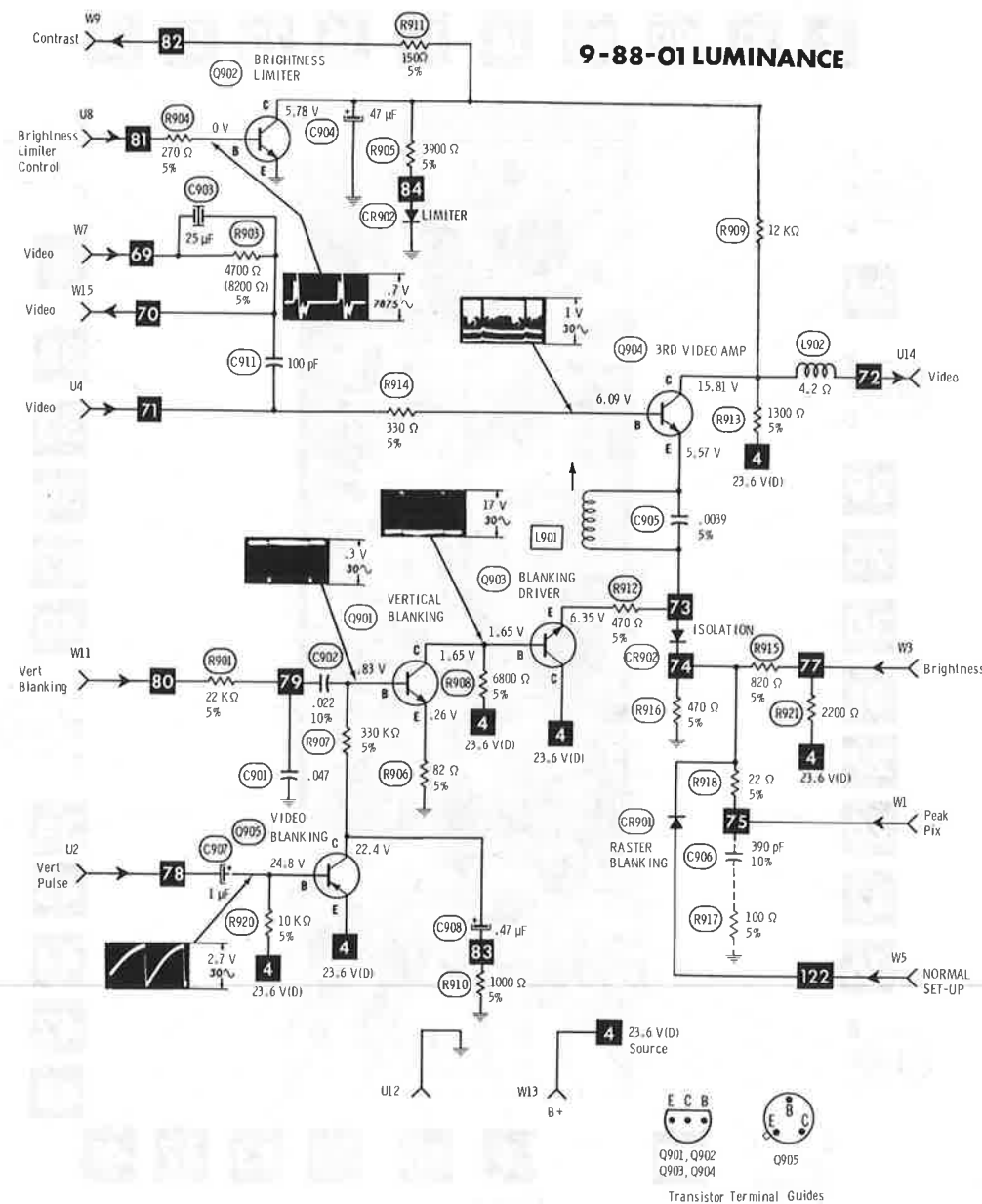




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150-190/A IF MODULE

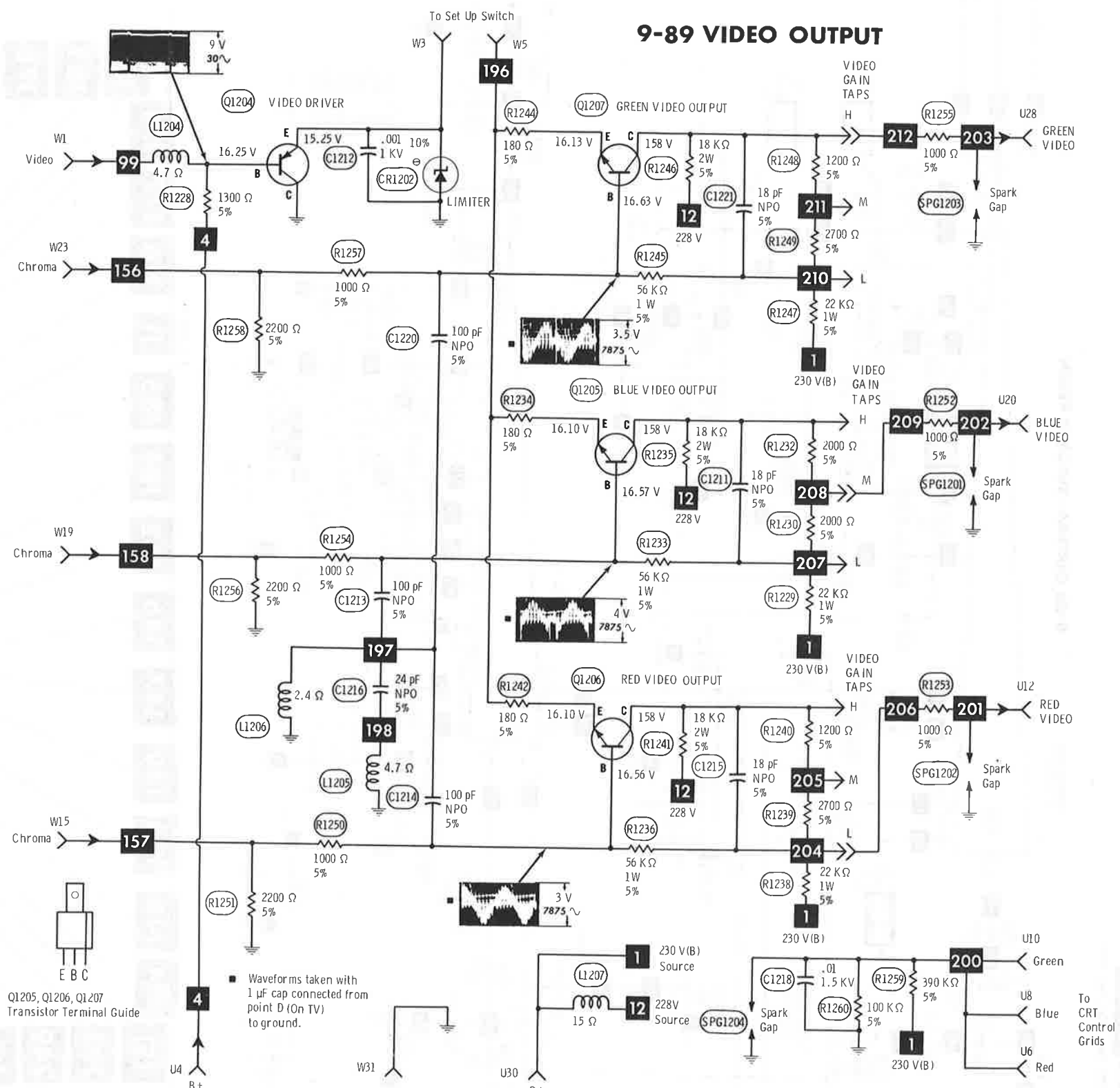
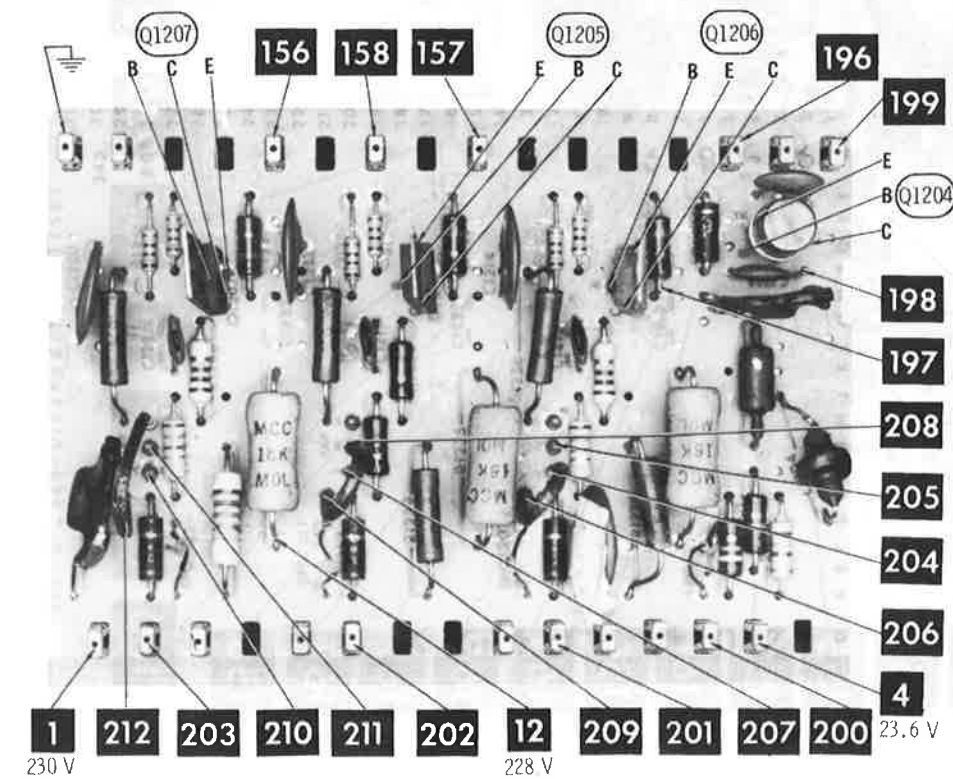
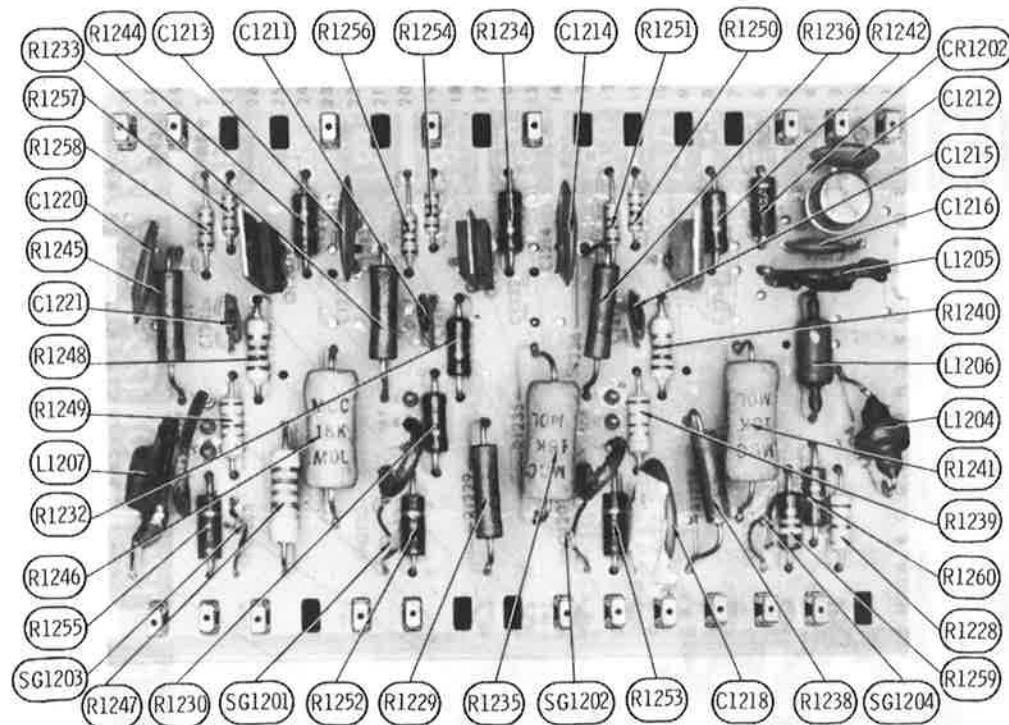
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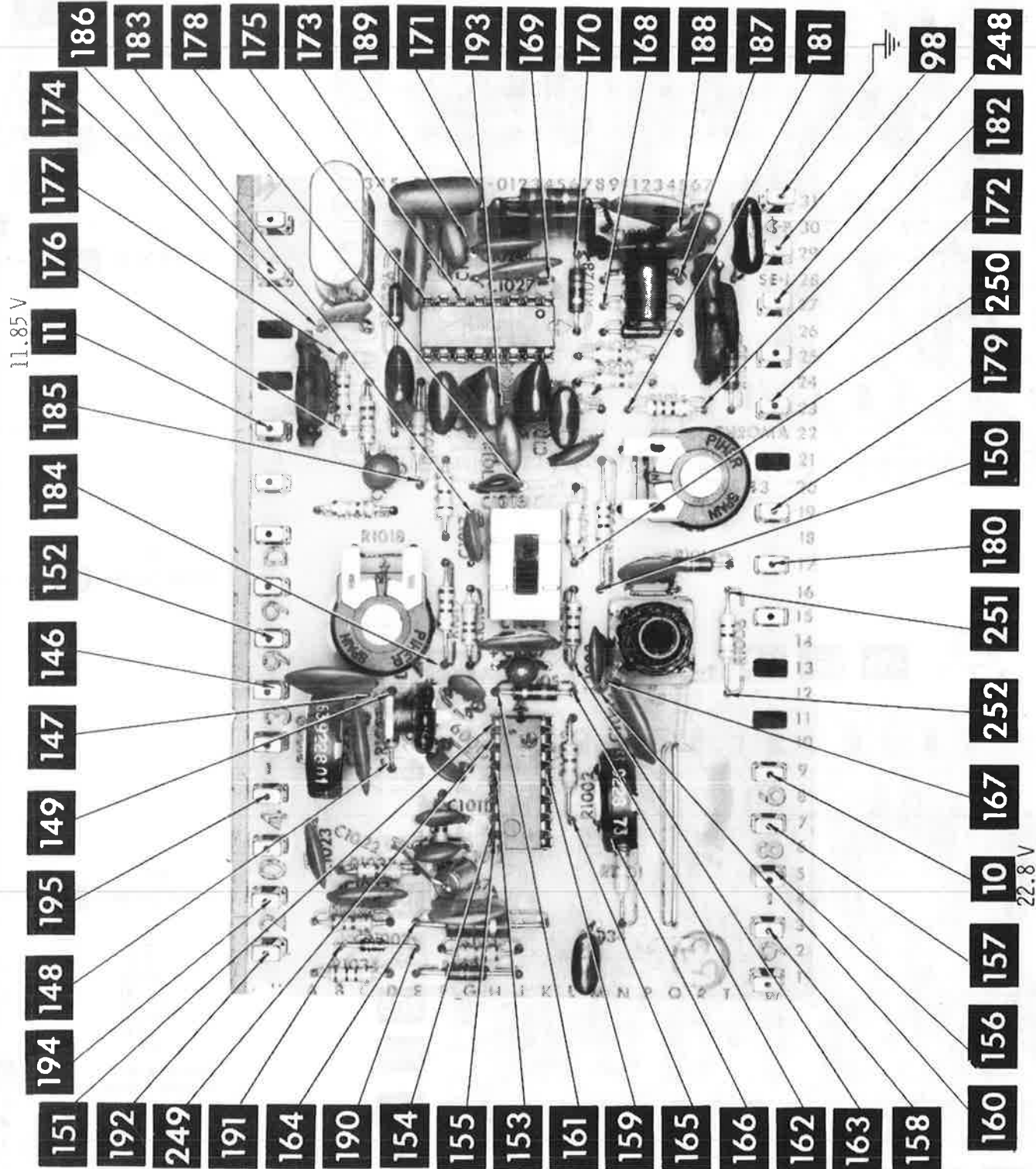
A PHOTOFAC STANDARD NOTATION SCHEMATIC
WITH CIRCUITRACE
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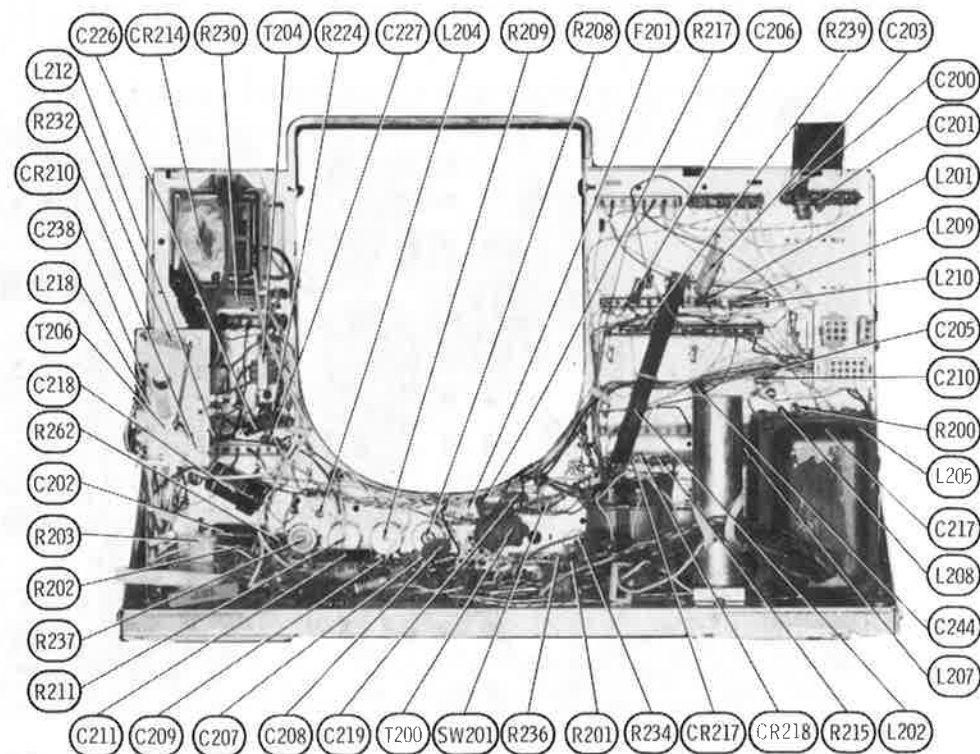
9-88-01 LUMINANCE MODULE

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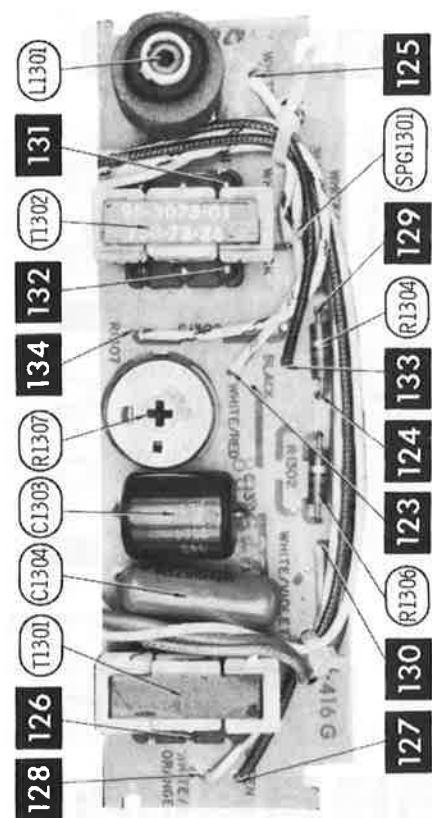


9-86-01 CHROMA SUBCARRIER REGENERATOR MODULE

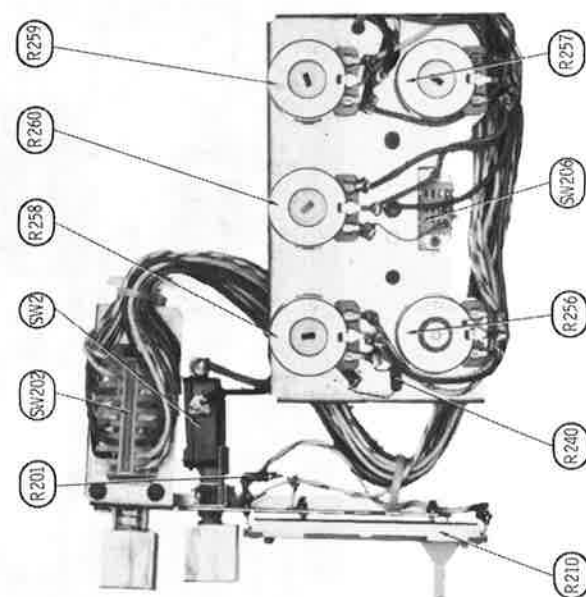
A Howard W. Sams **CIRCUITRACE** Photo



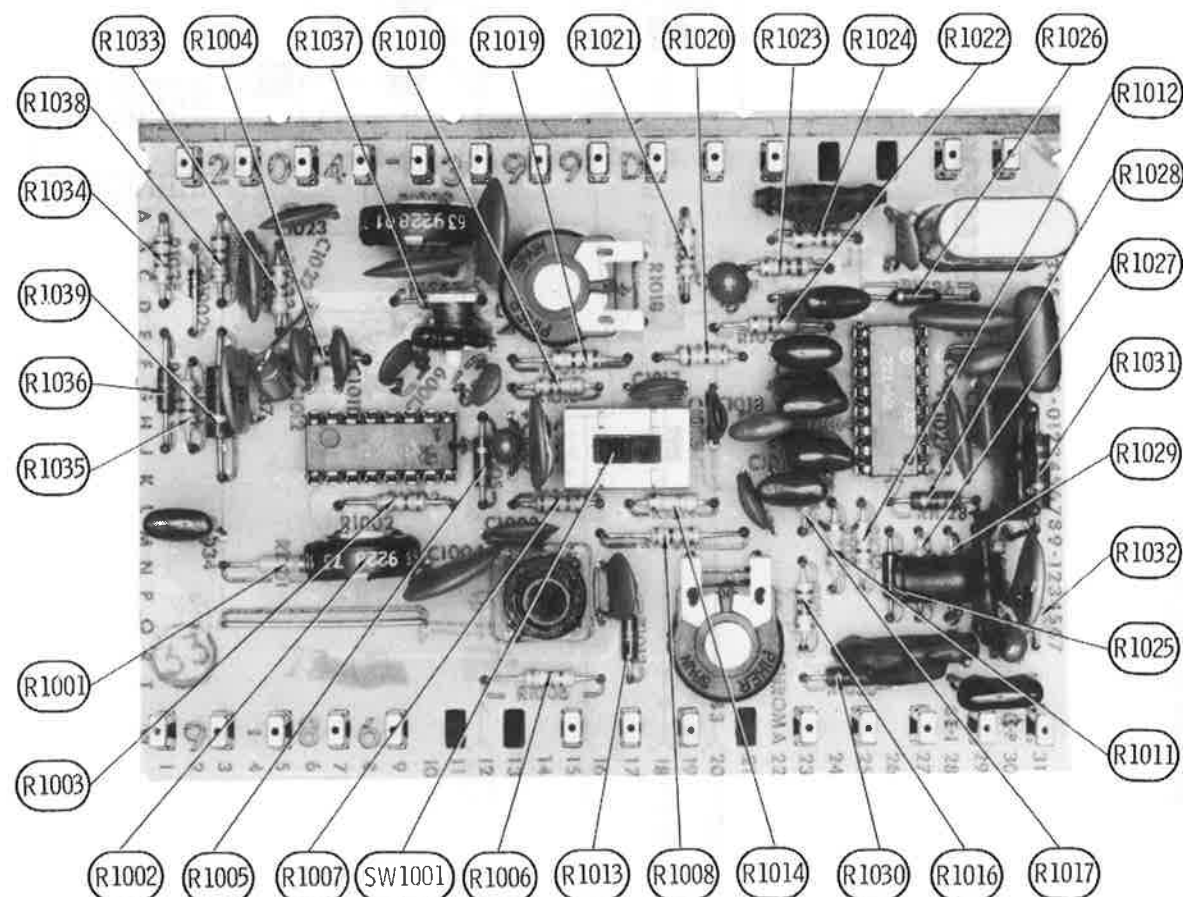
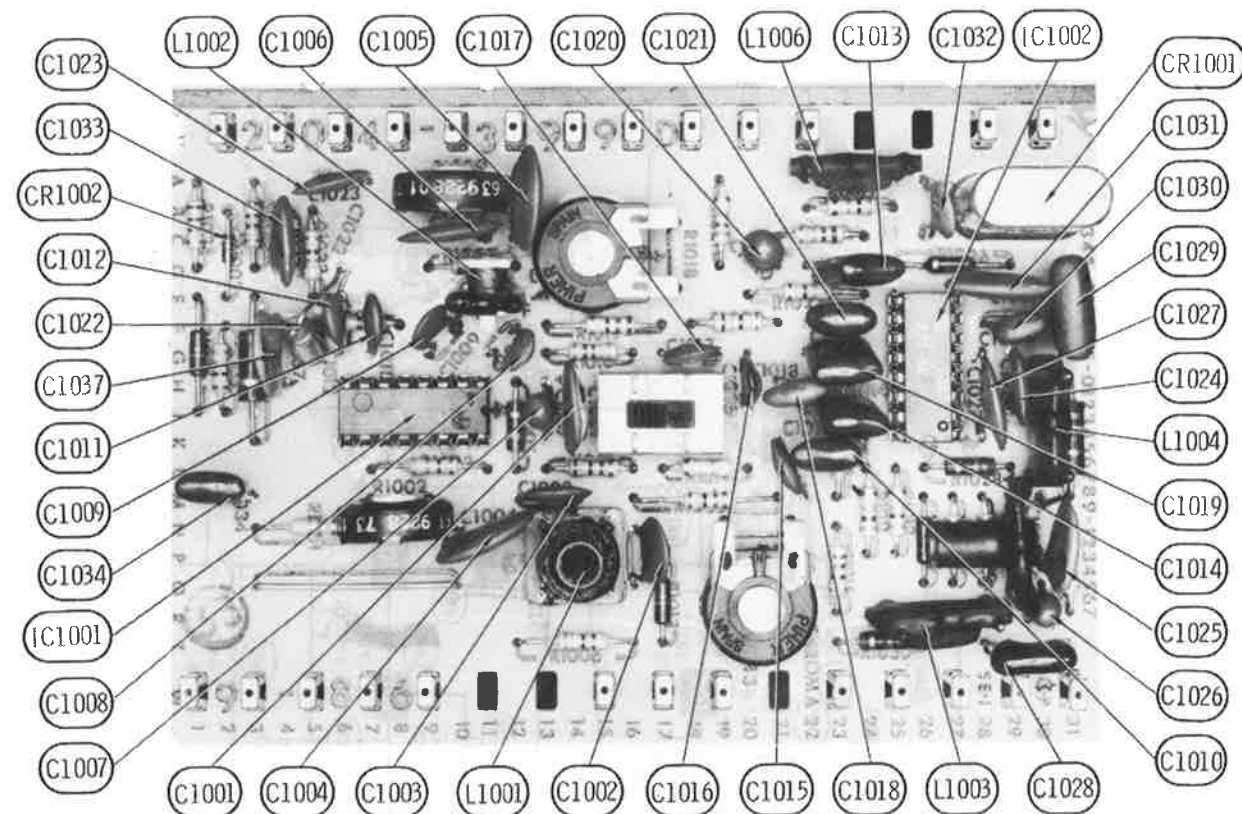
CHASSIS-FRONT VIEW



PINCUSHION BOARD



CONTROL PANEL

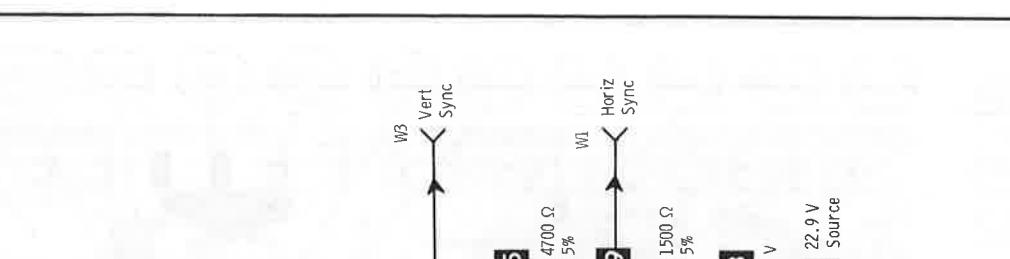


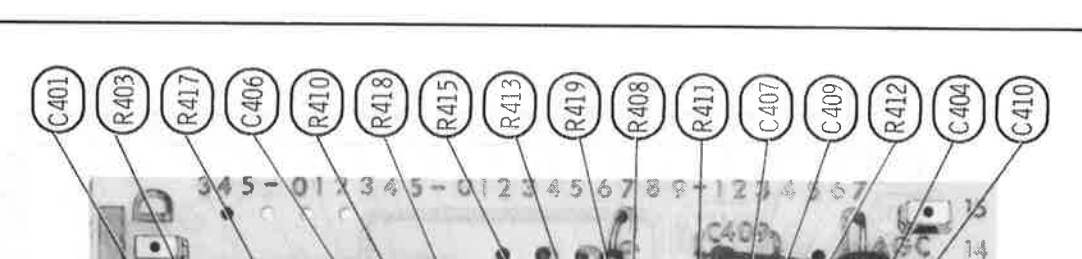
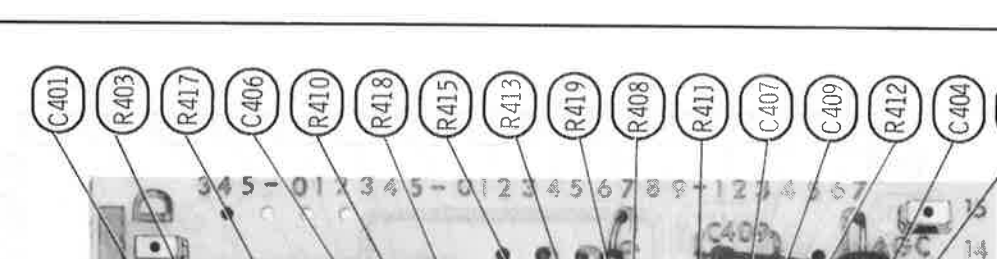
9-86-01 CHROMA SUBCARRIER REGENERATOR MODULE

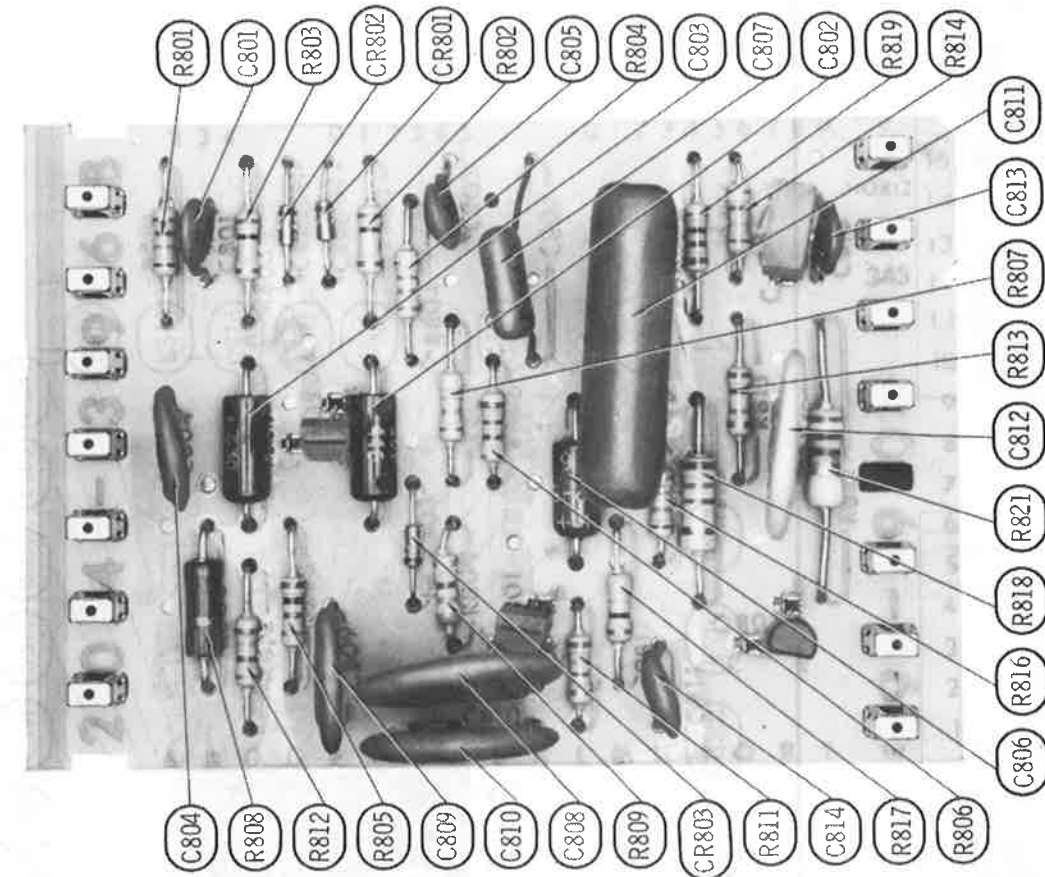
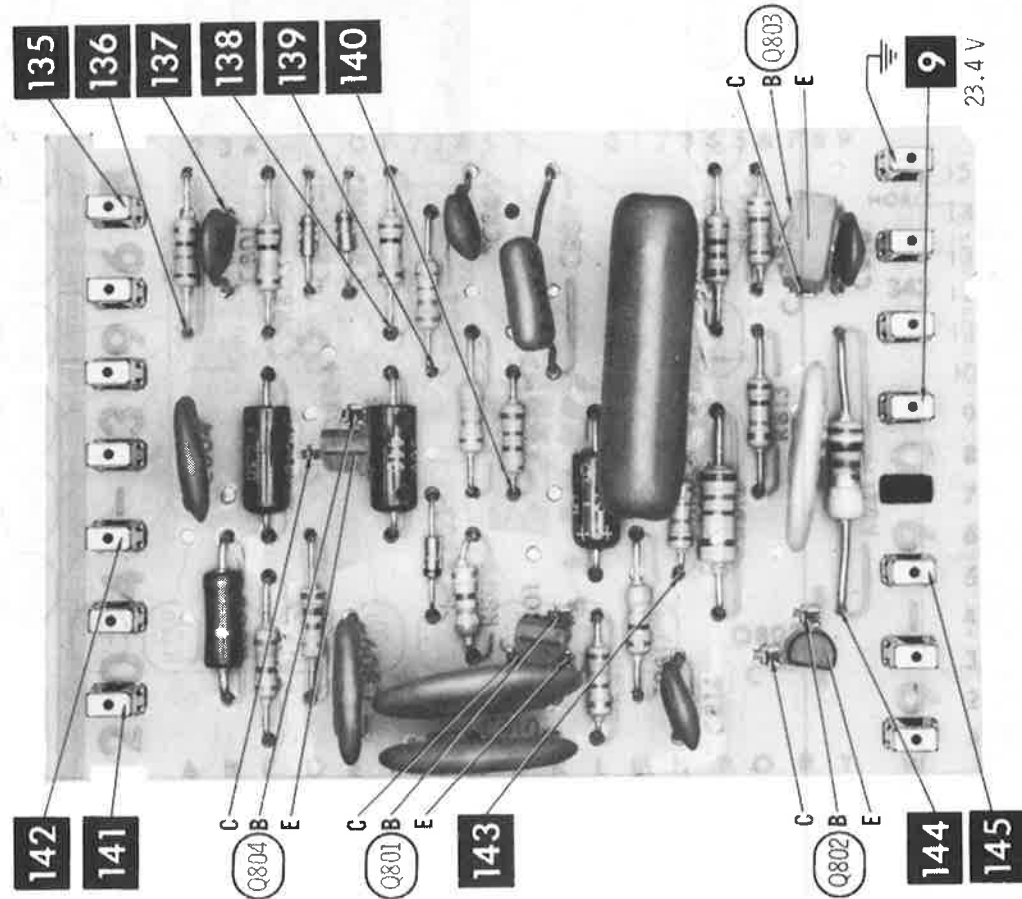
ZENITH CHASSIS
17FC35, 17FC45, 19FC45, 19FC45Z

FOLDER 3

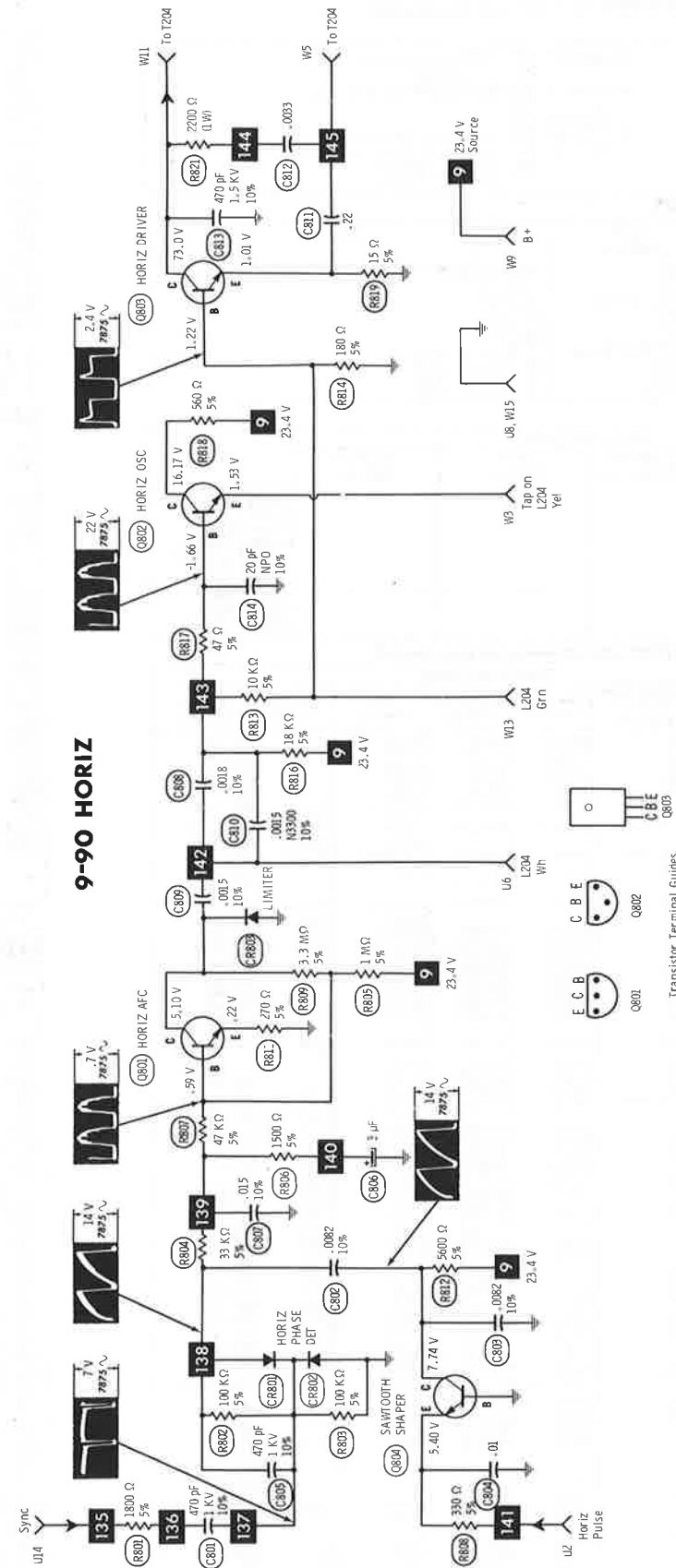
100







9-90 HORIZONTAL MODULE



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WITH CIRCUITRACE
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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. 8866 (40 KV)
Shielded Hook-up Wire	Use BELDEN No. 8401 or 8421 (Single-Conductor)
	8208 (Two-Conductor)
General-use Unshielded Hook-up Wire	Use BELDEN No. 8528 (Solid) Available in 12 Colors
	8522 (Stranded) Available in 12 Colors
300-Ohm Tuner Input Lead	Use BELDEN No. 8225
75-Ohm Tuner Input Lead	Use BELDEN No. 8241
300-Ohm Antenna Lead-in	Use BELDEN No. 8275 (Foam Core) or 8285 (Foam Jacketed)
Antenna Rotor Cable	Use BELDEN No. 8464 (Flat) or 8484 (Round) 4-Conductor
	8495 (Round) - 5 Conductor
	8488 (Round) - 8 Conductor

MODULES/PLUG-IN BOARDS

ITEM No.	PART NAME	MFR. PART No.	NOTES
	Module	9-86	Chroma Subcarrier Regenerator
	Module	9-87	Video Processor
	Module	9-88 or 9-88-01	Luminance
	Module	9-89 or 9-89-01	Video Out
	Module	9-90	Horizontal
	Module	9-92	Vertical
	Module	9-103 or 9-107	Audio
	Module	150-190A or 150-188	IF in Chassis 19FC45
	Module	150-115	IF in Chassis 17FC35
	Module	150-190	IF in Chassis 17FC45
	Module	150-401	IF in Chassis 19FC45Z

PICTURE TUBE

ITEM No.	MFR. PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	SYLVANIA PART No.	NOTES
V201	19V02P22				Used in Models: F4025W, F4026W, F4030W, F4033X, F4082X, F4084P, F4086W, F40880EP, SF1960R, SF1960R1, SF1962X, SF1964X, SF1966P, T2840W
	17VAKP22				Used in Models: F3852X, F3855W, F3858W, F3860R/W, SF1750R, T2834W

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE / MFR. No. / PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	MOTOROLA PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.
CR101	103-23	1N60	1N60	PTC206	HEP135	SK3088	ECG 109	
CR102	103-23	1N60	1N60	PTC206	HEP135	SK3088	ECG 109	
CR103	103-202	1N60	1N60	PTC206	HEP135	SK3088	ECG 109	
CR104	103-90	1N34AS	1N34A	PTC207	HEP134	SK3087	ECG 109	
CR105	103-90	1N34AS	1N34A	PTC207	HEP134	SK3087	ECG 109	
CR201	212-76 #	GE-504A	806 or 5A6D	PTC202	HEPR0054	SK3017A or SK3032	RT210 or RT214	ECG 116 or ECG 117
CR202	212-76 #	GE-504A	806 or 5A6D	PTC202	HEPR0054	SK3017A or SK3032	RT210 or RT214	ECG 116 or ECG 117
CR203	212-76 #	GE-504A	806 or 5A6D	PTC202	HEPR0054	SK3017A or SK3032	RT210 or RT214	ECG 116 or ECG 117
CR204	103-105 #	GE2D-24		ZB24	HEP20423			ECG 5081
CR205	212-76 #	GE-504A	806 or 5A6D	PTC202	HEPR0054	SK3017A or SK3032	RT210 or RT214	ECG 116 or ECG 117
CR206	103-254 #	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR207	103-254 #	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR208	103-254 #	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR209	103-254 #	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR210	103-142 #	GE-511	D172	PTC216	HEPR3012	SK3130	ECG 506	
CR211	103-193 #	GE-511	D172	PTC216	HEPR3012	SK3130	ECG 506	
CR212	103-193 #	GE-511	D172	PTC216	HEPR3012	SK3130	ECG 506	
CR213	103-196 #	GE-511	D172	PTC216	HEPR3012	SK3130	ECG 506	
CR214	212-141-02 #							
CR216	103-194	GE2D-7.5	Z-1207	PTC504	HEP20410	SK3039	RT239	ECG 138
CR217	103-142	GE-511	D172	PTC216	HEPR3012	SK3130	ECG 506	
CR218	103-142	GE-511	D172	PTC216	HEPR3012	SK3130	ECG 506	
CR401	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR601	212-76	GE-504A	806 or 5A6D	PTC202	HEPR0054	SK3017A or SK3032	RT210 or RT214	ECG 116 or ECG 117
CR603	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR604	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR605	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR607	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR608	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR609	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR611	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR612	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR613	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR619	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR621	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR622	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR623	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR701	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR702	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR703	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR704	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR705	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR706	103-254	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR707	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR801	103-142-01	GE-300 (7)	D200MP (6)	PTC215 (6)	HEPR0602 (7)	SK3100 (7)	RT218 (7)	ECG 178MP (6)
CR802	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR803	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR901	103-142-01	GE-511	D172	PTC216	HEPR3012	SK3130	ECG 506	
CR902	103-142 (1)	GE-511	D172	PTC216	HEPR3012	SK3130	ECG 506	
CR1002	103-142-01	GE-300	D200	PTC214	HEPR0602	SK3100	RT218	ECG 177
CR1204	103-144-01	24V Zener 2.5W						
IC401	221-45			PTC731				ECG 731
IC1001	221-69	GEIC-4	IC509	PTC715	HEPC6070P	SK3075	TVMC-8	ECG 714
IC1002	221-42	GEIC-2	IC507	PTC726	HEPC6063P	SK3072	TVMC-11	ECG 712
IC1101	221-48							ECG 732
IC1102	221-77							ECG 161
Q101	121-501	GE-39	TR-70	PTC126	HEP709	SK3018	RT113	ECG 161
Q102	121-503 (1)	GE-60	TR-71	PTC136	HEP729	SK3117	RT113	ECG 161
Q103	121-509	GE-20	TR-53	PTC136	HEP53	SK3039	RT113	ECG 161
Q104	121-507 (1)	GE-20	TR-53	PTC136	HEP53	SK3039	RT113	ECG 161
Q105	121-508 (1)	GE-20	TR-53	PTC136	HEP723	SK3018	RT113	ECG 233
Q106	121-524	GE-61	TR-21	PTC132	HEP723	SK3018	RT113	ECG 108
Q107	121-526 (1)	GE-61	TR-21	PTC132	HEP723	SK3018	RT112	ECG 161
Q108	121-895	GE-17	TR-51	PTC136	HEP719	SK3018	RT115	ECG 159
Q109	121-925	GE-20	TR-21	PTC136	HEP719	SK3018	RT115	ECG 152
Q110	121-986	GE-22	TR-30	PTC103	HEP715	SK3025	RT154	ECG 165
Q111	121-966	GE-57	TR-55	PTC110	HEP55003	SK3054		
Q202	121-831	GE-36	TR-67	PTC130	HEP740	SK3115		

SEMICONDUCTORS (Select replacement transistor for best results) (cont)

ITEM No.	TYPE / MFR. No. / PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	MOTOROLA PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.
Q701	121-973	GE-20	TR-24	PTC136	HEP735	SK3122	RT102	ECG 123A
Q702	121-975	GE-20	TR-24	PTC136	HEP729	SK3122	RT102	ECG 123A
Q703	121-972	GE-20	TR-24	PTC136	HEP735	SK3122	RT102	ECG 123A
Q704	121-972	GE-20	TR-24	PTC136	HEP735	SK3122	RT102	ECG 123A
Q705	121-972	GE-20	TR-24	PTC136	HEP735	SK3122	RT102	ECG 123A
Q706	121-980	GE-58	TR-73	PTC124	HEP244	SK3085	RT157	ECG 153 (9)
Q707	121-969	GE-69 (9)	TR-77 (9)	PTC111 (9)	HEP55006 (9)			
Q708	121-988 (1)	GE-66 (9)	TR-76 (9)	PTC110 (9)	HEP55000 (9)			ECG 152 (9)
Q801	121-931	GE-20	TR-21	PTC136	HEP728	SK3122	RT102	ECG 123A
Q802	121-888	GE-18	TR-53	PTC136	HEP729	SK3024	RT110	ECG 123A
Q803	121-755	GE-27	TR-78	PTC110	HEP244	SK3104	RT159	ECG 157
Q804	121-447	GE-20	TR-21	PTC136	HEP736	SK3124	RT114	ECG 123A
Q901	121-433	GE-20	TR-24	PTC136	HEP736	SK3122	RT102	ECG 123A
Q902	121-695	GE-20	TR-24	PTC136	HEP736	SK3122	RT114	ECG 123A
Q903	121-695	GE-20	TR-24	PTC136	HEP736	SK3122	RT114	ECG 123A
Q904	121-888	GE-18	TR-53	PTC136	HEP729	SK3024	RT110	ECG 123A
Q905	121-699	GE-21	TR-20	PTC103	HEP708	SK3114	RT115	ECG 159
Q1204	121-952	GE-22	TR-78	PTC103	HEP708	SK3114	RT101	ECG 159
Q1205	121-868	GE-27	TR-78	PTC117	HEP53021	SK3104	RT110	ECG 171
Q1206	121-868	GE-27	TR-78	PTC117	HEP53021	SK3104	RT110	ECG 171
Q1207	121-868	GE-27	TR-78	PTC117	HEP53021	SK3104	RT110	ECG 171

For SAFETY, replace only with equivalent part.

(1) Not used in some versions.

(6) Matched pair.

(7) Two required - select matched pair.

(9) Complementary pair.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA					
		MFG. PART No.	ARCO PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C149	.47 50V	22-7304	ME-J100	EA50-100	WBR100-50	TDC474M050EL MTA100G75	SD50-R479 TVA-1310
C203	100 50V	22-7143-08					
C213	3.5 440V NP	22-7126-01 #					
C214A	400 150V	22-7309 #					
B	400 150V						
C	500 35V						
C	80 250V						
C216	1000 50V	22-5362 #			BR1000-50	TC50100C	
C218	1000 50V	22-7259 #			BR1000-50	TC50100C	
C226	100 50V	22-7143-08 #			TC35010		
C227	50 10V	22-6283 #			NLW50-10	TT10X50A	
C239	15 25V NP	22-7227	CTA7350		BRNP20-30	TCN25168	TVAN-1204.3
C241	10 75V NP	22-6008	CTA7555		BRNP10-400	TCN511	TVAN-1333
C244	100 50V	22-7143-08	ME-J100	EA50-100	WBR100-50	MTA100G75	TVA-1310
C401	5 15V	22-5424	ME-1-E-005	EA15-5	WBR5-50	MTA5D50	TVA-1144
C405	1 25V NP	22-6693	CTA7425	EN50-105	BRNP1-50	TCN501A	TVA-1200
C407	1 25V	22-3615	ME-1-G-001	EA30-1	WBR1-50	MTA1D50	TVA-1200
C701	33 25V	22-7152-06	ME-4-G-035	EA30-25	WBR35-50	MTA30E35	TVA-1205.2
C704	.47 35V	22-6872 (1)				TDC474050EL	SD35-R479
C708	.47 35V	22-6872 (1)				TDC474050EL	SD35-R479
C709	1.5 50V	22-7232-01				TDC15M050FL	SD50-1R59
C710	3.3 25V	22-7142-02				TDC33M035FL	SD35-3R39
C713	3.3 25V	22-7293				TDC33M035FL	SD35-3R39
C903	25 15V NP	22-4937					TVAN-1205.1
C904	47 16V	22-7151-04	ME-3-E-050	EN15-256	BRNP20-30	MTA50E15	TVA-1150
C907	1 50V	22-7153	ME-1-J-001	EA15-50	WBR50-25	MTA1D50	TVA-1300
C1007	2.2 35V	22-4951		EA50-1	WBR1-50	TDC225M035FL	SD35-2R29
C1020	10 25V	22-4931				TDC106M025FL	SD25-109
C1111	100 25V	22-7152-08	RME-G-G-100	EP30-100	PC100-25	MTV1000B25	EV-1330
		22-4961 (2)					
C1113	100 25V	22-7152-08	RME-G-G-100	EP30-100	PC100-25	MTV1000B25	EV-1330
		22-4961 (2)					

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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

TRANSFORMER (Power)

Also see Page 19

ITEM No.	RATING			REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T201	120V AC @ 1.07A AC	510V AC CT @ .03A DC 260V AC CT @ .34A DC 70V AC CT @ .56A DC Tapped @ 6.3V AC @ .22A AC	120V AC	95-3172# (1) 95-3123# (2)				# For SAFETY, replace only with equivalent part. (1) Used in Chassis 17FC35. (2) Used in Chassis 19FC45Z.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	3" X 5" PM 16 ohms	49-1253-03	35A2T16	Used in Models: F4025W, F4028W, F4030W/X, SF1960R, SF1960R1, T2840W
	4" PM 16 ohms	49-1215-02		Used in Models: F3852L, F3855W, F3858W, F3860R/W, F4033X, F4082X, F4084P, F4086M, F4088DE/P, SF1750R, SF1962X, SF1964X, SF1966P, T2834W

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA					
		PART No.		BUSS PART No.		LITTELFUSE PART No.	
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER
F201	Circuit Breaker Hold 2.1 Amp Break 3.67 Amp 4 Amp 125V	85-976-02#				81502.7	FA3.5
F202	Quick Acting Pigtail .6 Amp 250V	136-29# (1)		GJ4			
F203	Quick Acting Pigtail .6 Amp 250V	136-87		GJ 6/10		318.600	

For SAFETY, replace only with equivalent part.
(1) Part Number 136-106 Used in 17FC35 & 19FC45Z Chassis.

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CR1001	VHF Antenna	1-127-01	(2 used) Used in Models: F3852L, F3855W, F3858W, F3860R/W, F4025W, F4028W, F4030Z/X, F4033X, SF1750R, SF1960R, SF1960R1, SF1962X, SF1966P, T2834W, T2840W
L202	VHF Tuner	175-1506	
L203	VHF Tuner	175-1508	
SP6201	VHF Tuner	175-2202-20	
SP6204	VHF Tuner	175-2202-40	
SP6205	VHF Tuner	175-2202-50	
SP6206	VHF Tuner	175-1950	
SP6209	VHF Tuner	175-1609	
SP6211	VHF Tuner	175-1608	
SP6212	VHF Tuner	S-90312	
SP61201	UHF Tuner	103-152	
SP61202	UHF Tuner	S-91401-01	
SP61203	UHF Tuner	#	
SP61204	UHF Tuner		
SP61301	Crystal	3.58MHz	
SW1	Delay Line		
SW2	Degaussing Coil		
SW201	Spark Gap	#	Part of CRT Socket
SW202	Spark Gap	#	Part of CRT Socket
SW203	Spark Gap	#	Part of CRT Socket
SW204	Spark Gap	#	Part of CRT Socket
SW205	Spark Gap	52-957	Part of CRT Socket
SW206	Spark Gap	52-957	Part of CRT Socket
SW207	Spark Gap	52-957	Part of CRT Socket
SW208	Spark Gap	52-957	Part of CRT Socket
SW209	Spark Gap	52-957	Part of CRT Socket
SW210	Spark Gap	52-957	Part of CRT Socket
SW211	Spark Gap	52-957	Part of CRT Socket
SW212	Spark Gap	52-957	Part of CRT Socket
SW213	Spark Gap	52-957	Part of CRT Socket
SW214	Spark Gap	52-957	Part of CRT Socket
SW215	Spark Gap	52-957	Part of CRT Socket
SW216	Spark Gap	52-957	Part of CRT Socket
SW217	Spark Gap	52-957	Part of CRT Socket
SW218	Spark Gap	52-957	Part of CRT Socket
SW219	Spark Gap	52-957	Part of CRT Socket
SW220	Spark Gap	52-957	Part of CRT Socket
SW221	Spark Gap	52-957	Part of CRT Socket
SW222	Spark Gap	52-957	Part of CRT Socket
SW223	Spark Gap	52-957	Part of CRT Socket
SW224	Spark Gap	52-957	Part of CRT Socket
SW225	Spark Gap	52-957	Part of CRT Socket
SW226	Spark Gap	52-957	Part of CRT Socket
SW227	Spark Gap	52-957	Part of CRT Socket
SW228	Spark Gap	52-957	Part of CRT Socket
SW229	Spark Gap	52-957	Part of CRT Socket
SW230	Spark Gap	52-957	Part of CRT Socket
SW231	Spark Gap	52-957	Part of CRT Socket
SW232	Spark Gap	52-957	Part of CRT Socket
SW233	Spark Gap	52-957	Part of CRT Socket
SW234	Spark Gap	52-957	Part of CRT Socket
SW235	Spark Gap	52-957	Part of CRT Socket
SW236	Spark Gap	52-957	Part of CRT Socket
SW237	Spark Gap	52-957	Part of CRT Socket
SW238	Spark Gap	52-957	Part of CRT Socket
SW239	Spark Gap	52-957	Part of CRT Socket
SW240	Spark Gap	52-957	Part of CRT Socket
SW241	Spark Gap	52-957	Part of CRT Socket
SW242	Spark Gap	52-957	Part of CRT Socket
SW243	Spark Gap	52-957	Part of CRT Socket
SW244	Spark Gap	52-957	Part of CRT Socket
SW245	Spark Gap	52-957	Part of CRT Socket
SW246	Spark Gap	52-957	Part of CRT Socket
SW247	Spark Gap	52-957	Part of CRT Socket
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SW250	Spark Gap	52-957	Part of CRT Socket
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SW252	Spark Gap	52-957	Part of CRT Socket
SW253	Spark Gap	52-957	Part of CRT Socket
SW254	Spark Gap	52-957	Part of CRT Socket
SW255	Spark Gap	52-957	Part of CRT Socket
SW256	Spark Gap	52-957	Part of CRT Socket
SW257	Spark Gap	52-957	Part of CRT Socket
SW258	Spark Gap	52-957	Part of CRT Socket
SW259	Spark Gap	52-957	Part of CRT Socket
SW260	Spark Gap	52-957	Part of CRT Socket
SW261	Spark Gap	52-957	Part of CRT Socket
SW262	Spark Gap	52-957	Part of CRT Socket
SW263	Spark Gap	52-957	Part of CRT Socket
SW264	Spark Gap	52-957	Part of CRT Socket
SW265	Spark Gap	52-957	Part of CRT Socket
SW266	Spark Gap	52-957	Part of CRT Socket
SW267	Spark Gap	52-957	Part of CRT Socket
SW268	Spark Gap	52-957	Part of CRT Socket
SW269	Spark Gap	52-957	Part of CRT Socket
SW270	Spark Gap	52-957	Part of CRT Socket
SW271	Spark Gap	52-957	Part of CRT Socket
SW272	Spark Gap	52-957	Part of CRT Socket
SW273	Spark Gap	52-957	Part of CRT Socket
SW274	Spark Gap	52-957	Part of CRT Socket
SW275	Spark Gap	52-957	Part of CRT Socket
SW276	Spark Gap	52-957	Part of CRT Socket
SW277	Spark Gap	52-957	Part of CRT Socket
SW278	Spark Gap	52-957	Part of CRT Socket
SW279	Spark Gap	52-957	Part of CRT Socket
SW280	Spark Gap	52-957	Part of CRT Socket
SW281	Spark Gap	52-957	Part of CRT Socket
SW282	Spark Gap	52-957	Part of CRT Socket
SW283	Spark Gap	52-957	Part of CRT Socket
SW284	Spark Gap	52-957	Part of CRT Socket
SW285	Spark Gap	52-957	Part of CRT Socket
SW286	Spark Gap	52-957	Part of CRT Socket
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SW445	Spark Gap	52-957	Part of CRT Socket
SW446	Spark Gap	52-957	Part of CRT Socket
SW447	Spark Gap	52-957	Part of CRT Socket</

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

CAPACITORS (cont)

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.
For SAFETY, replace only with equivalent part.

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- (3) For SAFETY, replace only with equivalent part.
- (4) For horizontal mounting, bend the two outside terminals to fit PC board. Use jumper to connect center terminal to PC board.
- (6) Alternate part, may be used in some versions.
- (10) Use original nylon tab mount.
- (18) Used in Model F3852L.
- (19) Used in Models F3855W, F4033X, F4082X, F4084P, F4086W, F4080DE/P, SF1962X, SF1964X, SF1966P, T2834W and T2840W.
- (20) Used in Model SF1750R.
- (21) Used in Models F4025W and T2840W.
- (22) Used in Models SF1960R and SF1960R1.
- (23) Used in Models F3852L, F3855W, F4025W, T2834W and T2840W.
- (24) Used in Models F3833X, F4082X, F4084P, F4086W, F4080DE, F4088P, SF1962X, SF1964X and SF1966P.
- (25) Used in Models F3858W, F3860R, F3860W and SF1750R.
- (26) Used in Models F3855W, T3834W.
- (27) Used in Model F4028W.

(#) For SAFETY, replace only with equivalent part.
(1) Used in Chassis 17FC35.

FOLDER 3

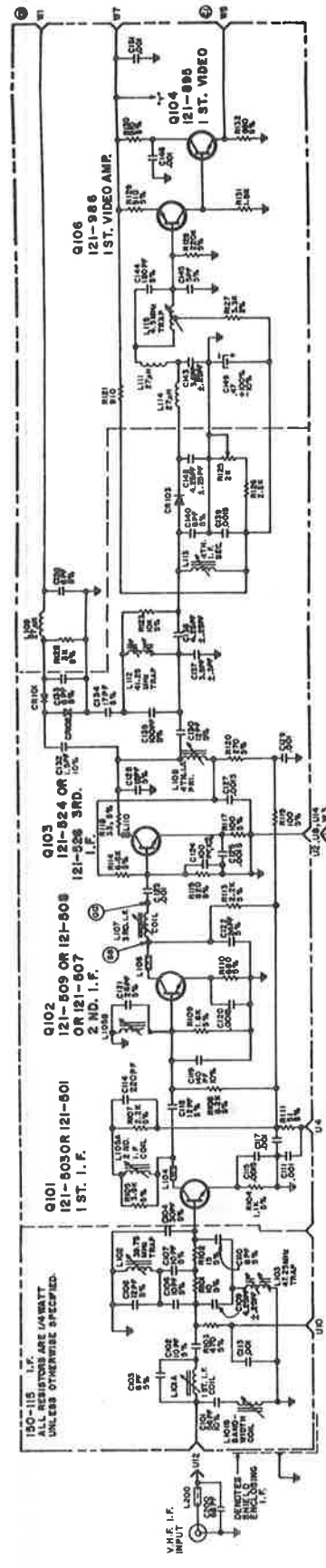
For SAFETY, replace only with equivalent part.

For SAFETY, replace only with equivalent part.

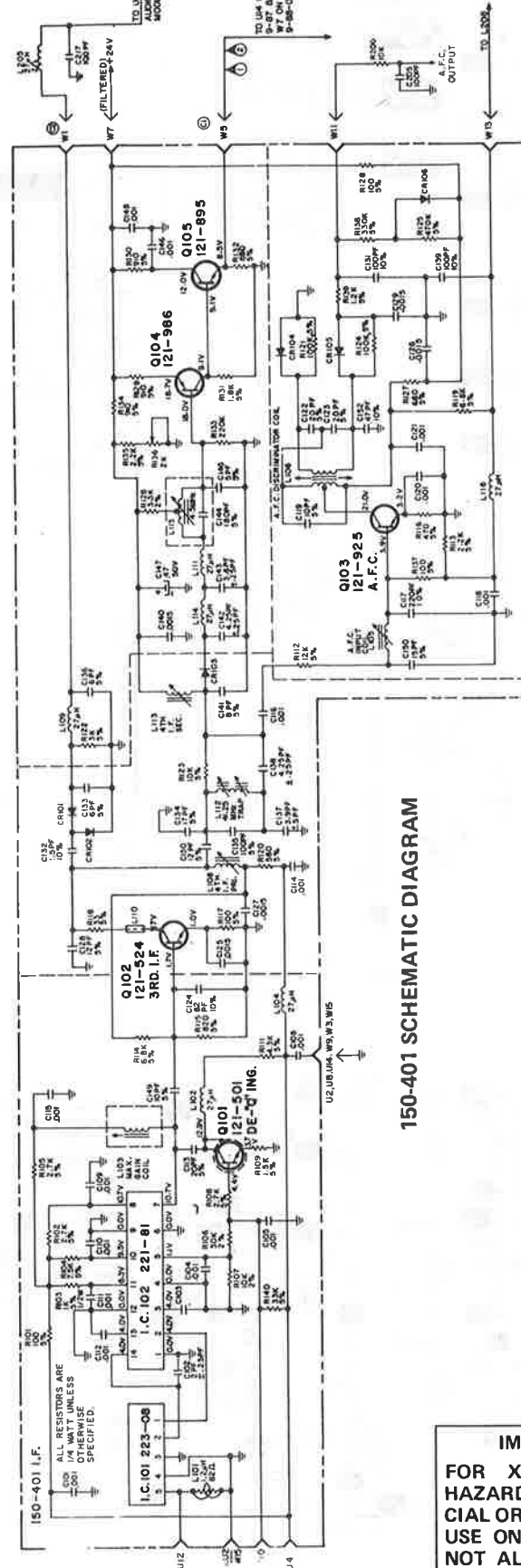
- (1) Install plastic sleeve on adjustment screw.
- (2) Part of Horiz Output #S-96473-02.
- (3) Part of Horiz Output #S-96471-04.
- (4) Used in Chassis 17FC35.
- (5) Used in Chassis 19FC45Z.
- (6) May not be used in some versions.
- (7) See Component Connection Data Sheet.

[illegible]

ITEM No.	RATING			REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	STANCOB PART No.	THORDARSON PART No.	TRIAD PART No.	
T201	120V AC @ 1A AC	346V AC CT @ .022A DC 206V AC CT @ .4A DC 56V AC CT @ .52A DC Tapped @ 4.8V AC @ .9A AC	120V AC	95-3153# (1)				# For SAFETY, replace only with equivalent part. (1) Used in Chassis 17FC45, 19FC45.



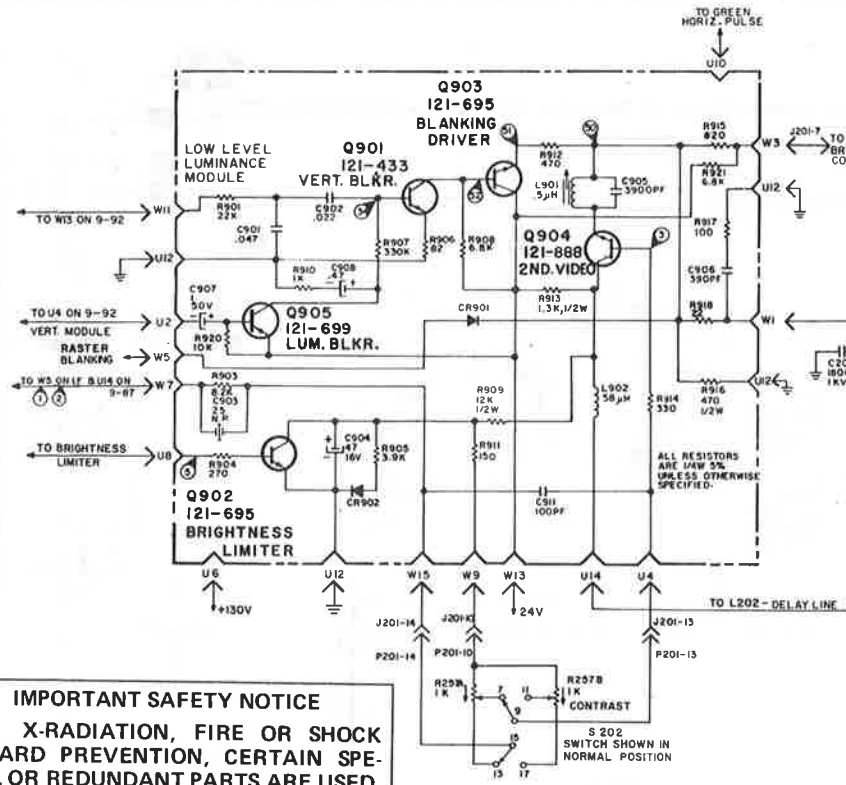
Courtesy of the Manufacturer



150-401 SCHEMATIC DIAGRAM

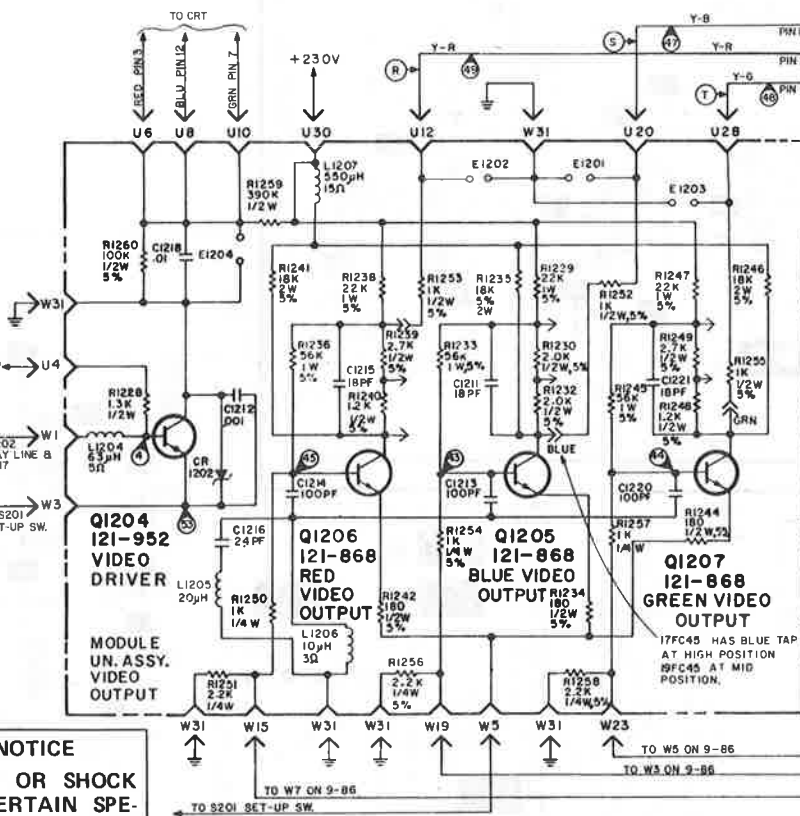
IMPORTANT SAFETY NOTICE
FOR X-RADIATION, FIRE OR SHOCK HAZARD PREVENTION, CERTAIN SPECIAL OR REDUNDANT PARTS ARE USED. USE ONLY EXACT REPLACEMENTS. DO NOT ALTER THE CIRCUIT OR DEFEAT THE FUSES. FAILURE TO COMPLY MAY BE UNLAWFUL.

IMPORTANT SAFETY NOTICE
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9-88 LOW LEVEL LUMINANCE

Courtesy of the Manufacturer



9-89-01 VIDEO OUTPUT

ITEM NUMBER	PART NUMBER	DESCRIPTION	ITEM LOCATION
C901	22-4447-01	.047 µF MYLAR CAPACITOR ±20%	100 V H12 - K12
C902	22-1159-20	.022 µF MYLAR CAPACITOR ±10%	50 V G10 - M10
C903	22-4931	25 µF NON POLARIZED ELECTROLYTIC CAPACITOR +100 -10%	15 V T2 - T15
C904	22-1151-01	4 µF ELECTROLYTIC CAPACITOR +100-10% 18 V	A15 - C15 OR B15 - J15
C905	22-5144	3300 µF DISC CAPACITOR ±5%	50 V W2 - W3
C906	22-3117	390 µF DISC CAPACITOR ±10%	500 V Q2 - T2
C907	22-1153	1 µF ELECTROLYTIC CAPACITOR +100-10% 50 V	A1 - C1 OR B1 - F1
C908	22-1271	.47 µF ELECTROLYTIC CAPACITOR +100-10% 50 V	G1 (OR K1) - N1
C909	22-		C7 - F7
C910	22-		A9 - F9
C911	22-		C10 - F10
R901	83-9922-04	22K OHM FILM RESISTOR ±5%	1/4 W L12 - Q12
R902	83-9922	15K OHM FILM RESISTOR ±5%	1/4 W M14 - Q14
R903	83-9921-58	270 OHM FILM RESISTOR ±5%	1/4 W A11 - E11
R904	83-9921-84	3.3K OHM FILM RESISTOR ±5%	1/4 W B13 - F13
R905	83-9921-40	82 OHM FILM RESISTOR ±5%	1/4 W G8 - L8
R906	83-9922-32	330K OHM FILM RESISTOR ±5%	1/4 W M8 - Q8
R907	83-9921-92	6.8K OHM FILM RESISTOR ±5%	1/4 W L9 - Q9
R908	83-9922-06	27K OHM FILM RESISTOR ±5%	1/4 W M15 - R15
R909	83-9922	15K OHM FILM RESISTOR ±5%	1/4 W G14 - L14
R910	83-9921-40	82 OHM FILM RESISTOR ±5%	1/4 W H13 - H13
R911	83-9921-64	470 OHM FILM RESISTOR ±5%	1/4 W F7 - A7
R912	83-9946-75	1.3K OHM FILM RESISTOR ±5%	1/2 W B6 - F6
R913	83-9921-50	330 OHM FILM RESISTOR ±5%	1/4 W A3 - Q3
R914	83-9921-70	820 OHM FILM RESISTOR ±5%	1/4 W P4 - L4
R915	83-9946-75	1.3K OHM FILM RESISTOR ±5%	1/2 W L3 - Q3
R916	83-9921-48	100 OHM FILM RESISTOR ±5%	1/4 W L2 - P2
R917	83-9921-32	22 OHM FILM RESISTOR ±5%	1/4 W P1 - T1
R918	83-9921-96	10K OHM FILM RESISTOR ±5%	1/4 W M6 - R6
R919	83-7189	2.2K OHM CARBON RESISTOR ±10%	1/2 W M7 - A7
CR901	103-142-01	DIODE LOW VOLTAGE GENERAL SILICON	P5 - T5
CR902	103-142-01	DIODE LOW VOLTAGE GENERAL SILICON	K4 - N4
Q901	121-433	TRANSISTOR - VERTICAL BLANKER COLLECTOR	K8
		EMITTER	L8
Q902	121-695	TRANSISTOR - BRIGHTNESS LIMITER COLLECTOR	L7
		EMITTER	F12
Q903	121-695	TRANSISTOR - BLANKING DRIVER COLLECTOR	F11
		EMITTER	G9
Q904	121-745	TRANSISTOR - 2ND VIDEO COLLECTOR	F8
		EMITTER	B5
Q905	121-699	TRANSISTOR - LUMINANCE BLANKER COLLECTOR	C4
		EMITTER	M5
L901	20-1838	TRAP COIL .5 µH	F3 - A5
L902	20-2062	PEAKING COIL 58 µH	A5 - A13

CABINET-REAR VIEW

CHASSIS REMOVAL MODEL F3852L

Disconnect antenna leads. Remove holding cabinet back and remove b.

Remove top two screws holding cha two side support brackets and two holding vertical chassis. Chassis tilted to a 45° angle for service components.

Remove all knobs from front of set escutcheon on lower right front c by careful lifting up at bottom. Remove two screws holding control place control panel inside cabinet.

Disconnect CRT socket, HV anode l convergence plugs, tuner and contr cable, speaker leads, antenna lead coil and ground straps.

Lay set face down on a soft protective surface. Remove five screws holding chassis. Remove four screws holding assembly and three screws holding assembly. Lift tuner and control from cabinet.

CHASSIS REMOVAL MODEL F4030W

Remove all knobs and lay set face soft protective surface.

CRT IMPLOSION PROTECTION AND CLEANING
Implosion protection is an integral picture tube, cleaning accomplished by removal.

FUSE DEVICES

A circuit breaker is used for AC (See photo, Cabinet-Rear View.)

A .6-amp fuse is used for vertical protection. (See photo, Cabinet-Rear View.)

A 4-amp fuse is used for CRT filament. (See Transistor Placement Chart.)

LAMP ACCESSIBILITY

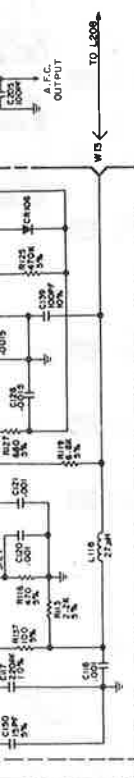
On Model F4030W the VHF pilot lamp is removed by removing channel tab indicator front of the set.

VHF TUNER (VARACTOR TYPE)

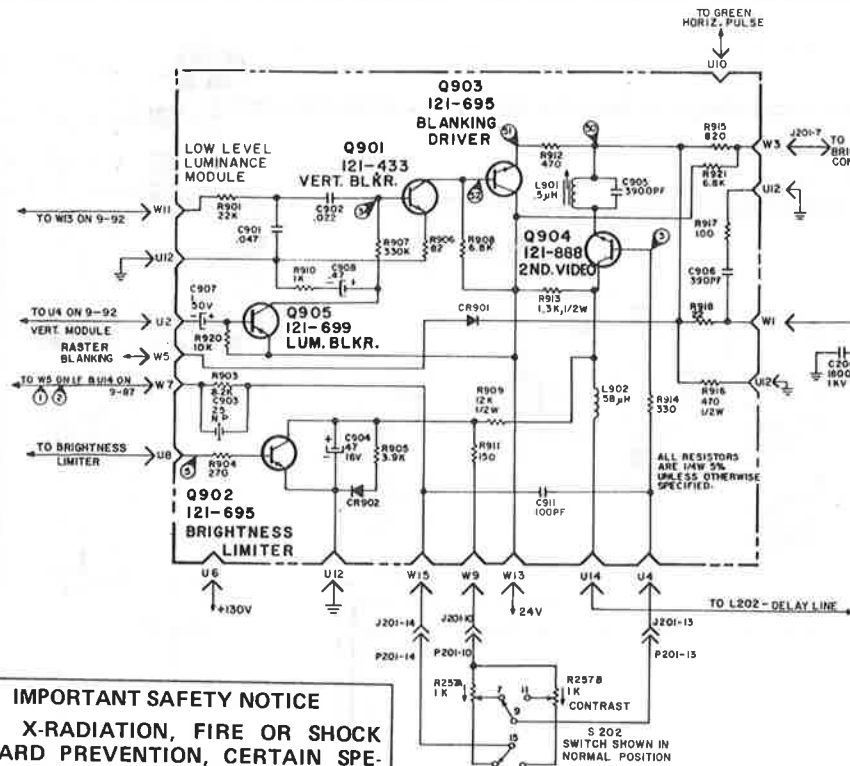
See Miscellaneous Adjustment.

VHF TUNER

The fine tuning mechanically engaged slug for adjustment (one slug for

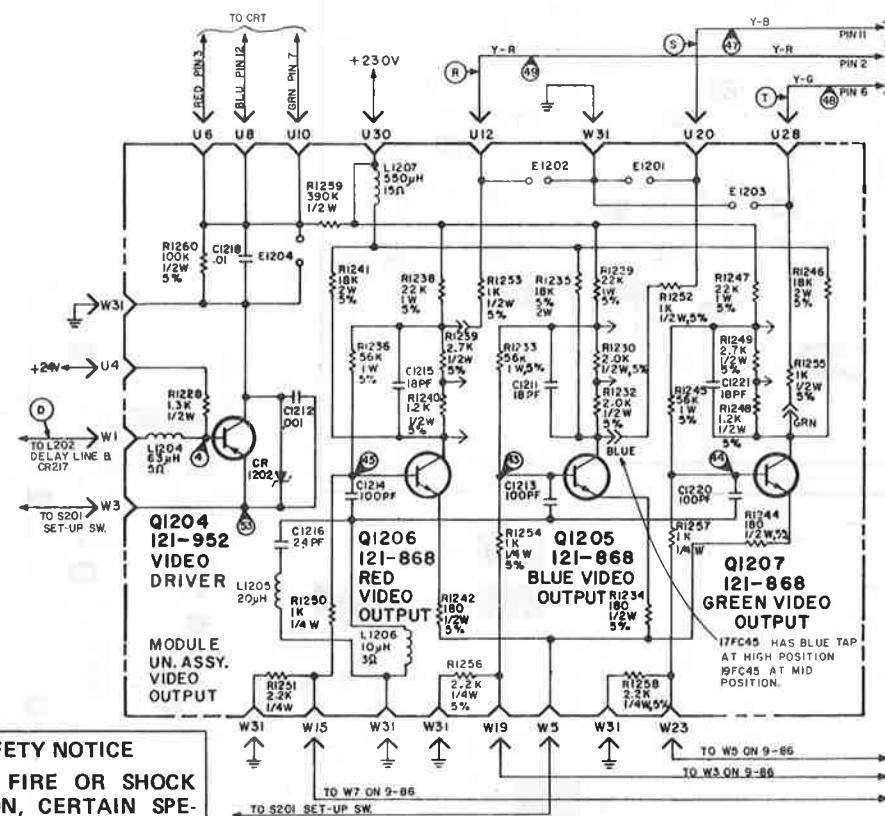


IMPORTANT SAFETY NOTICE
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9-88 LOW LEVEL LUMINANCE

Courtesy of the Manufacturer

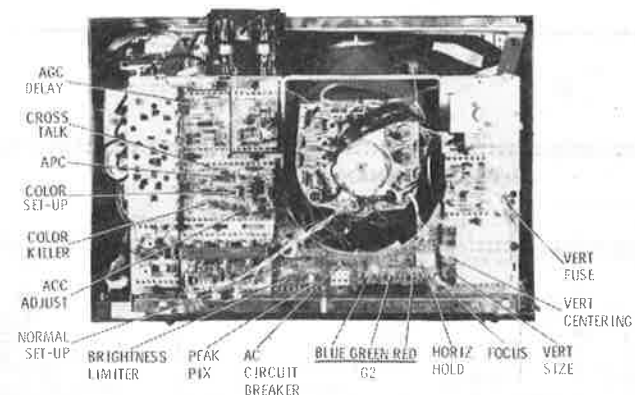


9-89-01 VIDEO OUTPUT

IMPORTANT SAFETY NOTICE
FOR X-RADIATION, FIRE OR SHOCK HAZARD PREVENTION, CERTAIN SPECIAL OR REDUNDANT PARTS ARE USED. USE ONLY EXACT REPLACEMENTS. DO NOT ALTER THE CIRCUIT OR DEFEAT THE FUSES. FAILURE TO COMPLY MAY BE UNLAWFUL.

ITEM NUMBER	PART NUMBER	DESCRIPTION	ITEM LOCATION
C901	22-6447-01	.047 µF MYLAR CAPACITOR ±20%	100 V
C902	22-7159-20	.022 µF MYLAR CAPACITOR ±10%	50 V
C903	22-4931	25 µF NON POLARIZED ELECTROLYTIC CAPACITOR +100 -10%	15 V
C904	22-7151-07	47 µF ELECTROLYTIC CAPACITOR +100-10%	18 V
C905	22-6244	3300 µF DISC CAPACITOR ±5%	50 V
C906	22-3177	390 µF DISC CAPACITOR ±10%	500 V
C907	22-7153	1 µF ELECTROLYTIC CAPACITOR +100-10%	50 V
C908	22-7271	.47 µF ELECTROLYTIC CAPACITOR +100-10%	50 V
C909	22-		
C910	22-		
C911	22-		
R901	63-9922-84	22K OHM FILM RESISTOR ±5%	1/4 W
R902	63-9922	15K OHM FILM RESISTOR ±5%	1/4 W
R903	63-9921-58	270 OHM FILM RESISTOR ±5%	1/4 W
R904	63-9921-84	3.3K OHM FILM RESISTOR ±5%	1/4 W
R905	63-9921-48	82 OHM FILM RESISTOR ±5%	1/4 W
R906	63-9922-32	300K OHM FILM RESISTOR ±5%	1/4 W
R907	63-9921-92	6.8K OHM FILM RESISTOR ±5%	1/4 W
R908	63-9922-08	27K OHM FILM RESISTOR ±5%	1/4 W
R909	63-9922	15K OHM FILM RESISTOR ±5%	1/4 W
R910	63-9921-48	82 OHM FILM RESISTOR ±5%	1/4 W
R911	63-9921-84	470 OHM FILM RESISTOR ±5%	1/4 W
R912	63-9921-64	470 OHM FILM RESISTOR ±5%	1/4 W
R913	63-9946-75	1.3K OHM FILM RESISTOR ±5%	1/2 W
R914	63-9921-60	330 OHM FILM RESISTOR ±5%	1/4 W
R915	63-9921-70	820 OHM FILM RESISTOR ±5%	1/4 W
R916	63-9946-64	470 OHM FILM RESISTOR ±5%	1/2 W
R917	63-9921-48	100 OHM FILM RESISTOR ±5%	1/4 W
R918	63-9921-32	22 OHM FILM RESISTOR ±5%	1/4 W
R919	63-9921-98	10K OHM FILM RESISTOR ±5%	1/4 W
R921	63-7798	2.2K OHM CARBON RESISTOR ±10%	1/2 W
L901	103-142-01	DIODE 10N VOLTAGE GENERAL SILICON	P5 - T5
L902	103-142-01	DIODE 10N VOLTAGE GENERAL SILICON	K4 - N4
Q901	121-433	TRANSISTOR - VERTICAL BLANKER	COLLECTOR L8 BASE L7 EMITTER L7
Q902	121-695	TRANSISTOR - BRIGHTNESS LIMITER	COLLECTOR F12 BASE F11 EMITTER F11
Q903	121-695	TRANSISTOR - BLANKING DRIVER	COLLECTOR G9 BASE G8 EMITTER G8
Q904	121-745	TRANSISTOR - 2ND VIDEO	COLLECTOR B5 BASE C5 EMITTER C4
Q905	121-699	TRANSISTOR - LUMINANCE BLANKER	COLLECTOR W5 BASE W5 EMITTER W6
L901	20-1038	TRAP COIL .5 µH	F3 - K5
L902	20-2062	PEAKING COIL 58 µH	K5 - A13

CABINET-REAR VIEW



DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL MODEL F3852L

Disconnect antenna leads. Remove four screws holding cabinet back and remove back.

Remove top two screws holding chassis, loosen two side support brackets and two hinge screws holding vertical chassis. Chassis may be tilted to a 45° angle for servicing of most components.

Remove all knobs from front of set. Remove escutcheon on lower right front corner of set by careful lifting up at bottom of escutcheon. Remove two screws holding control panel and place control panel inside cabinet.

Disconnect CRT socket, HV anode lead, yoke and convergence plugs, tuner and control plugs, IF cable, speaker leads, antenna leads, degaussing coil and ground straps.

Remove five screws holding cabinet back. Remove back.

Remove top two screws holding chassis, loosen side support bracket and two hinge screws holding vertical chassis. Chassis may be tilted back to a 45° angle for servicing of most components.

Disconnect HV anode lead, CRT socket, yoke and convergence plugs, speaker leads, ground straps, Tuner IF cable, antenna leads, degaussing coil and tuner and control plugs.

Remove four screws holding chassis and remove chassis. Remove two screws holding top control assembly, four screws holding tuner assembly and two screws holding lower control assembly. Lift tuner and control assemblies from cabinet.

PICTURE TUBE REMOVAL MODELS F3852L and F4030W

Follow "Chassis Removal" procedure. Remove blue lateral magnet assembly and yoke assembly from picture tube neck. Remove four screws holding degaussing coil and shield. Remove coil and shield. Remove one screw holding antenna and remove. Remove six screws holding framework holding picture tube. Lift picture tube and framework from cabinet. Do not lift picture tube by the neck. Remove four screws holding framework to picture tube, lift framework from picture tube.

CHASSIS REMOVAL MODEL F4030W

Remove all knobs and lay set face down on a soft protective surface.

SERVICING IN THE FIELD

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

FUSE DEVICES
A circuit breaker is used for AC Line protection. (See photo, Cabinet-Rear View.)

A .6-amp fuse is used for vertical sweep circuit protection. (See photo, Cabinet-Rear View.)

A 4-amp fuse is used for CRT filament protection. (See Transistor Placement Chart.)

LAMP ACCESSIBILITY
On Model F4030W the VHF pilot lamp is accessible by removing channel tab indicator holder on the front of the set.

VHF TUNER (VARACTOR TYPE)
See Miscellaneous Adjustment.

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

UHF TUNER (VARACTOR TYPE)
See Miscellaneous Adjustment.

UHF TUNER

The UHF tuner employs a detent mechanism for channel selection. Fine tuning is adjusted by rotating the fine tuning knob.

HORIZONTAL OSCILLATOR
Adjustment of the horizontal hold is accomplished by the proper setting of the Horizontal Hold Coil. (See photo, Cabinet-Rear View.)

FOCUS
The focus may be varied by a focus control. (See photo, Cabinet-Rear View.)

AGC 12
The AGC may be varied by an AGC Delay control. (See Transistor Placement Chart.)

CENTERING
Vertical centering is accomplished by proper adjustment of the vertical centering control (See photo, Cabinet-Rear View.)