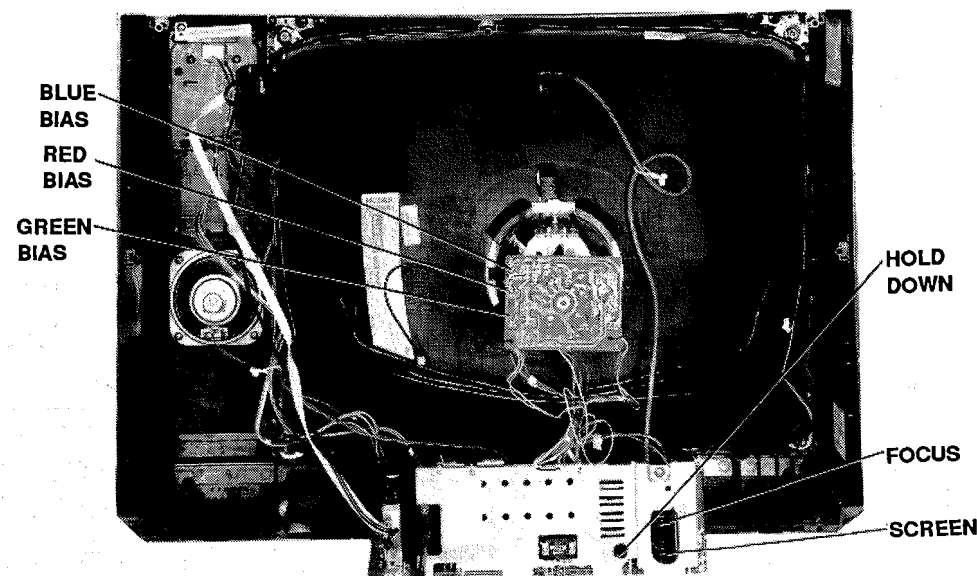


CABINET - REAR VIEW



TEST JIG HOOKUP				
Function	Chek-A-Color Adapter No.	PC Board Plug No.	Pin	Color
CRT	B239	DY P401	4	Red
Yoke	D482		3	Blue
Yoke Setting	YP1A		2	Yellow
Comments	Focus Tap		1	Black

The listing of any available replacement part herein in no case constitutes a recommendation, warranty, or guarantee by Howard W. Sams & Company as to the quality and suitability of such replacement part. The numbers of the listed parts have been compiled from information furnished to Howard W. Sams & Company by the manufacturers of the specific type of replacement part listed.

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3080

PHOTOFACT® Technical Service Data

SET 3080

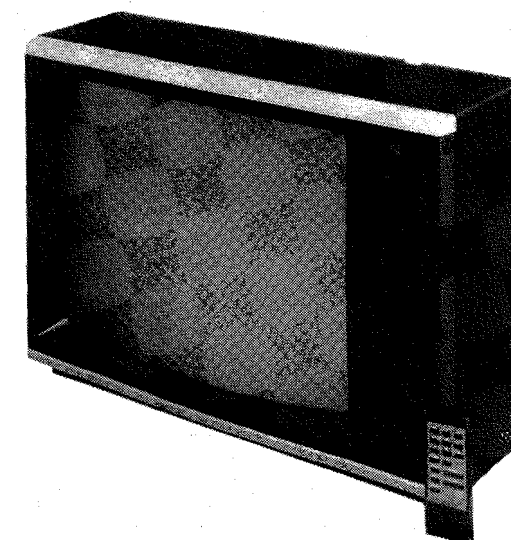
MODEL CMT-2542 (CHASSIS NA08X1)

GOLDSTAR

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GOLDSTAR Model CMT-2542 (Chassis NA08X1)



Complete coverage
for servicing a television receiver...

- Schematics
- Component locations
- Parts lists
- Troubleshooting guide



HOWARD W. SAMS & COMPANY

DECEMBER 1992 SET 3080

For Supplier Address,
See PHOTOFACT Annual Index

3080

POWER SUPPLY SCHEMATIC

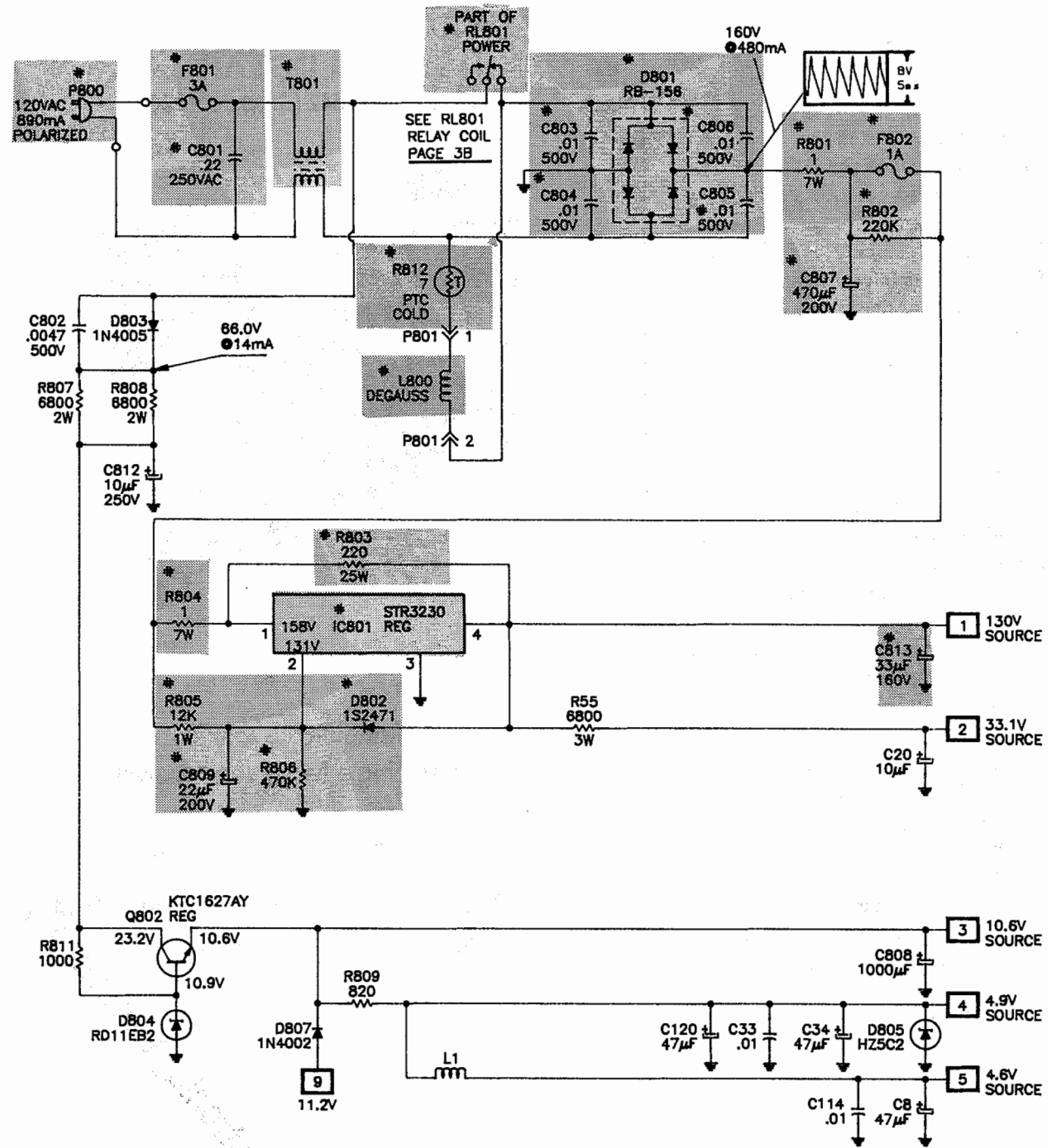


PHOTO CIRCUITRACE = 11
SCHEMATIC CIRCUITRACE = 11

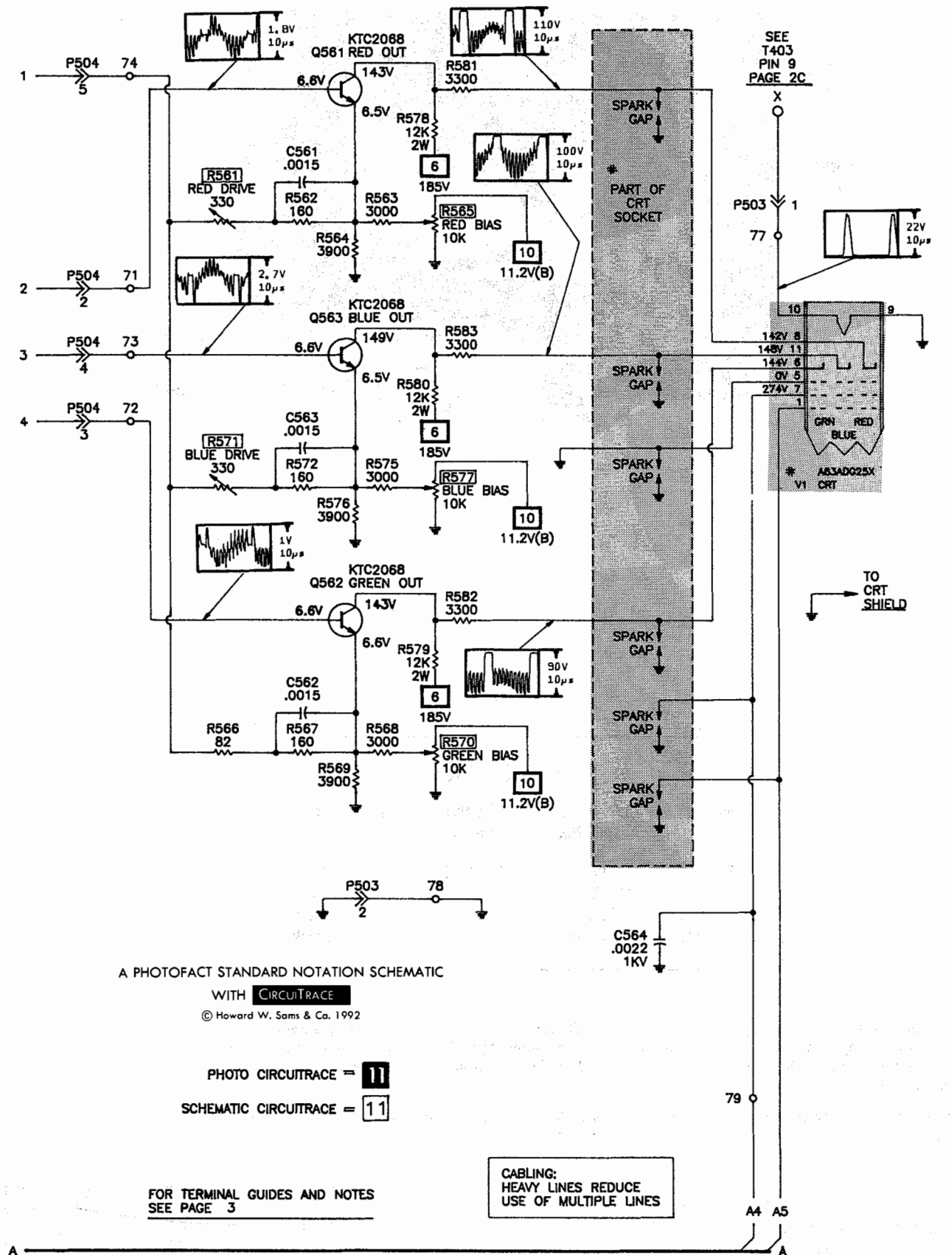
FOR TERMINAL GUIDES AND NOTES
SEE PAGE 3

A PHOTOFACT STANDARD NOTATION SCHEMATIC
WITH CIRCUITRACE
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G

CRT SCHEMATIC



A PHOTOFACT STANDARD NOTATION SCHEMATIC
WITH **CIRCUITRACE**
© Howard W. Sams & Co. 1992

PHOTO CIRCUITRACE = 11
SCHEMATIC CIRCUITRACE = 11

FOR TERMINAL GUIDES AND NOTES
SEE PAGE 3

**CABLING:
HEAVY LINES REDUCE
USE OF MULTIPLE LINES**

GOLDSTAR

MODEL CMT-2542 (CHASSIS NA08X1)

H

MISCELLANEOUS ADJUSTMENTS

PRETUNING

Timer
1. Momentarily depress the power button.
2. Press the sleep button on remote transmitter.Timer can be set for 90, 80, 70, 60, 50, 40, 30, 20, 10, or 5 minutes intervals by pressing the timer button.
NOTE: Unless otherwise indicated, all adjustments are performed with AFT/MFT switch (SW8) set to AFT.

B+ POWER SUPPLY CHECK

Connect a DC voltmeter to J118, negative lead to ground. Set brightness (VR2), and contrast (VR1) controls to minimum. With line voltage set at 120V AC, B+ should measure 130V DC +/- 1V DC.

HIGH VOLTAGE CHECK

NOTE: B+ voltage should be checked before checking the high voltage. Tune in a picture. Connect a high voltage probe to CRT anode. Set brightness (VR2), and contrast (VR1) controls to minimum. High voltage should read 26KV to 27.5KV, must not exceed 28.5KV.

RF AGC

Tune in a picture. Turn RF AGC control (VR151) counter clockwise until snow (noise) just appears in the picture, then clockwise to a point where snow disappears.

SUB-BRIGHTNESS LEVEL

Set brightness (VR2) to midrange, contrast (VR1), and color (VR3) controls to minimum. Adjust sub-brightness control (VR254) for just visible highlights.

GRAY SCALE

Tune in a picture. Set brightness (VR2),contrast (VR1), and color (VR3) controls to minimum. Set red drive (R561), and blue drive (R571) controls to midrange. Set blue bias (R577), green bias (R570), and red bias (R565) controls to minimum. Set service switch (SW201) to service position. Advance screen control until a horizontal line of one color is just visible. Adjust bias controls to produce a white line. Set service switch to normal position. Alternately adjust red, and blue drive controls to produce a normal black and white picture in highlight areas.

PURITY

Operate receiver for 20 minutes. Use a degaussing coil to demagnetize the CRT and mounting hardware. Turn green (R570) and blue (R577) bias controls to minimum.Turn red (R565) bias control

clockwise to produce a red raster. Loosen deflection yoke and move it back as far as possible. Loosen locking ring and move the purity tabs to center the vertical red band. Slowly slide the deflection yoke forward until a uniform red screen is obtained.

CONVERGENCE

Operate receiver for 20 minutes. Connect a color bar generator to antenna terminals and tune in a dot pattern. Loosen locking ring. Adjust 4 pole magnets to converge the red and blue dots at the center of the screen.

NOTE: Rotate the two tabs of each set of magnets equally and opposite to converge vertically and rotate both tabs in the same direction to converge horizontally. Four and six pole magnets interact, repeat adjustment until center convergence is correct. Tighten locking ring.Tune in a crosshatch pattern. Remove rubber wedges between the deflection yoke and the CRT. Tilt deflection yoke up or down to converge the vertical lines at top and bottom of the screen and the horizontal lines at the right and left sides of the screen. Tilt deflection yoke right and left to converge the horizontal lines at top and bottom of the screen and the vertical lines at the left and right sides of the screen. Repeat convergence procedure if necessary to obtain the best overall convergence. Replace the rubber wedges, tighten yoke clampscrew.

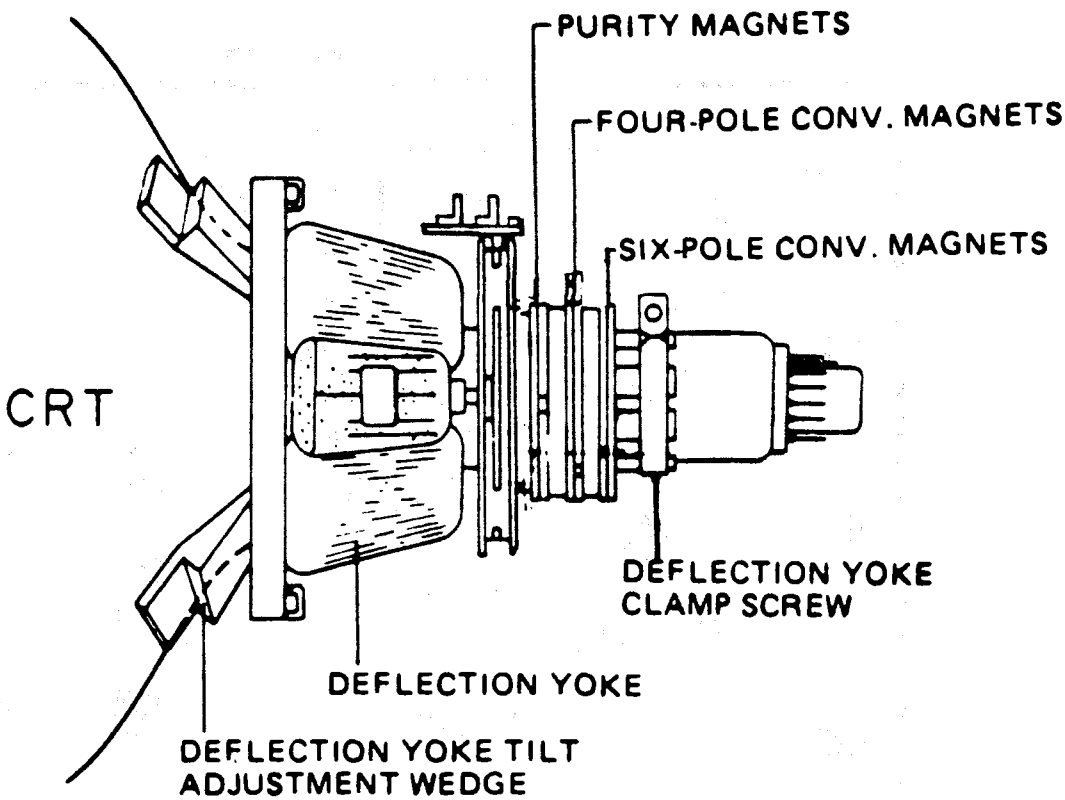
FAIL SAFE

Perform B+ Power Supply Check before adjustment of the hold down control. Tune in a color bar pattern.Set the brightness (VR2) and contrast (VR1) controls to maximum. Connect a DC voltmeter to TP41, negative lead to ground. If diode D473 is type RD 11E-B2 adjust hold down control (VR451) for 10.05V+/- .02VDC. If diode D473 is type HZ 11B-2L, adjust hold down control (VR451) for 9.95V +/- .02VDC. Connect a DC voltage power supply to TP41, inject 13.2V +/- .5V. The receiver must go into shutdown. Disconnect DC power supply, turn receiver Off for 30 seconds to reset hold down circuit.

COMB FILTER

Tune in a color bar pattern. Connect an oscilloscope to TP71 (base of Q754). Adjust comb null (L751) for minimum chroma component. Adjust comb amp control (VR751) for minimum chroma with equal balance of chroma components in waveform.

CRT NECK ASSEMBLY

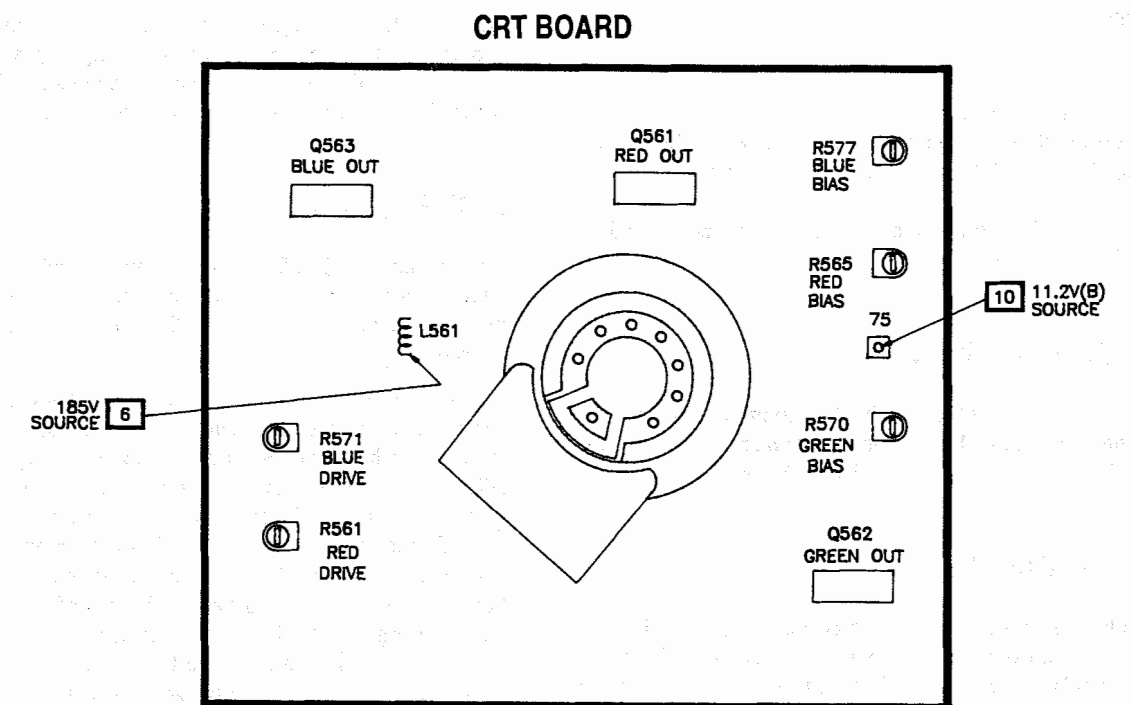
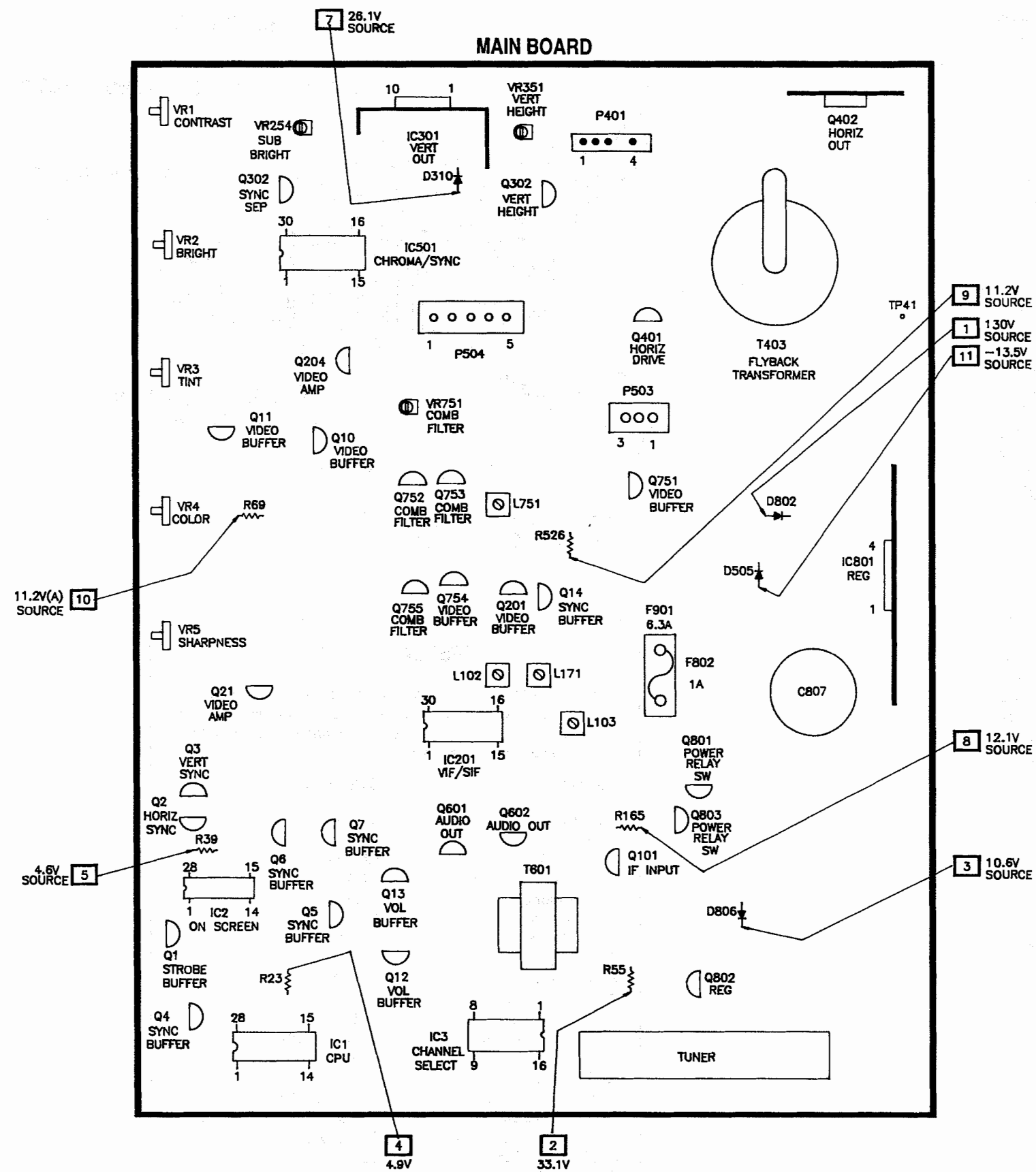


TEST EQUIPMENT

Test equipment listed by participating manufacturer illustrates typical or equivalent equipment used by Sams engineers to obtain measurements. This equipment is compatible with most types used by field service technicians.

Equipment	Sencore No.
Oscilloscope	SC3080
Generators	
RGB	CM2000
Multiburst Signal	VG91
Color Bar	VG91
TV Stereo	VG91
Digital VOM	SC3080
Frequency Meter	SC3080
Hi-Voltage Probe	HP200
Accessory Probes	TP212
Isolation Transformer	PR57
Capacitance Analyzer	LC101, LC102
CRT Analyzer	CR70
AC Leakage Tester	PR57
Inductance Analyzer	LC101, LC102
Flyback Yoke Tester	TVA92
TV Stereo Power Monitor	SR68, PA81
Field Strength Meter	SL750
Transistor Tester	TF46
Video Analyzer	VG91, TVA92

PLACEMENT CHART



SAFETY PRECAUTIONS

SERVICE WARNING

ONLY qualified service technicians who are familiar with safety checks and guidelines should perform service work. For continued SAFETY:

- 1. Before replacing parts, disconnect power source to protect electrostatically sensitive parts.
- 2. Do not attempt to modify any circuit unless so recommended by the manufacturer.
- 3. When servicing chassis, use an isolation transformer between the line cord and power receptacle.

SERVICING HIGH VOLTAGE AND PICTURE TUBE

Use EXTREME CAUTION when servicing the High Voltage circuits.

- 1. To discharge static High Voltage, connect a 10 kilohm resistor in series with a test lead between chassis and picture tube anode lead.
- 2. DO NOT lift picture tube by the neck.
- 3. ALWAYS wear shatterproof goggles when handling picture tube to protect eyes in case of implosion.

X-RAY RADIATION AND HIGH VOLTAGE LIMITS

Be aware of the instructions and procedures covering x-ray radiation. In solid-state receivers and monitors, the picture tube is the only potential source of x-rays.

- 1. Keep an accurate High Voltage meter available at all times. Check meter calibration periodically.
- 2. Whenever servicing a chassis, check High Voltage at various brightness levels to be sure it is regulating properly.
- 3. Keep High Voltage at rated value, NO HIGHER. Excessive High Voltage may cause x-ray radiation or failure of associated components. DO NOT depend on protection circuits to keep voltage at rated value.
- 4. When troubleshooting a set with excessive High Voltage, avoid close contact with picture tube. DO NOT operate set longer than necessary. To locate the cause of excessive High Voltage, use a variable AC transformer to regulate voltage.
- 5. In present chassis, many electrical and mechanical components have safety-related characteristics which are not detectable by visual inspection. Such components are identified by a # on both the schematic and the parts list. For SAFETY, use only equivalent replacement parts when replacing these components.

SAFETY CHECKS -- FIRE AND SHOCK HAZARD

Cold Leakage Checks for Sets with Isolated Ground

- 1. Unplug the AC cord, connect a jumper across the plug prongs, and turn the power switch ON.
- 2. Use an ohmmeter to measure the resistance between the jumpered AC plug and any exposed metal cabinet parts such as antenna screw heads, control shafts, or handle brackets. Exposed metal parts with a return path should measure between 200 kilohms and 5 megohms. Parts without a return path must register infinity.

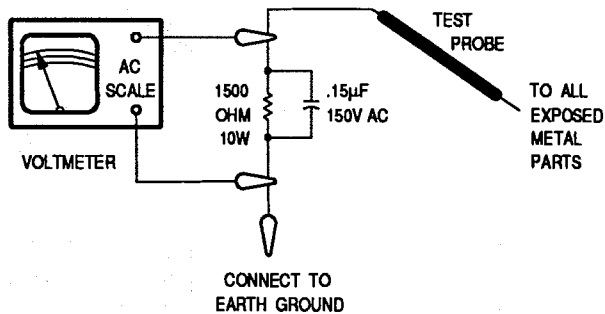
Hot Leakage Current Check

- 1. Plug the AC cord directly into AC outlet. DO NOT use an isolation transformer.
- 2. Use a 1500-ohm, 10-watt resistor in parallel with a .15-microfarad 150 Volts AC capacitor to connect between any exposed metal parts on the set and a good earth ground. (See figure below.)
- 3. Use an AC voltmeter with at least 1000 ohms-per-volt sensitivity to measure the voltage across the resistor. Check all exposed metal parts and measure voltage at each point.
- 4. Voltage readings should not exceed .75 volts RMS (5 milliamps AC). Any value exceeding this limit constitutes a potential shock hazard and must be corrected.
- 5. If AC plug is not polarized, reverse the AC plug and repeat exposed metal part voltage measurement at each point.

GENERAL GUIDELINES

Perform a final SAFETY CHECK before returning set to customer.

- 1. Check repaired area for poorly soldered or de-soldered connections, and check entire circuit board for solder splashes.
- 2. Check inner board wiring for pinched wires or wires contacting any high-wattage resistors.
- 3. Check that all control knobs, shields, covers, grounds and mounting hardware have been replaced. Be sure to replace all insulators and restore proper lead dress.



TROUBLESHOOTING

POWER SUPPLY

Check the AC fuse F801. If fuse is open:

Check voltages and components associated with diode D801 , capacitors C801,C803 thru C805, electrolytic C807, horizontal output transistor Q402, and power regulator IC 801 .

Apply 120VAC and check for 158V at the cathode of diode D801. If voltage is missing:

Check line filter T801, and power relay RL801.

If 158V is present at cathode of D801, check for 130V at J118.

Check voltages and components associated with R803, IC801, and Q402.

If B+ is present:

Refer to "Horizontal" section of this Troubleshooting guide.

HIGH VOLTAGE SHUTDOWN TEST

Apply 120VAC, turn the set on, and set all customer controls for normal operation. Apply 13.2V +/- .5V to cathode of zener diode D472 (TP41).

The set should lose raster and sound. If set does not lose raster and sound, the shutdown circuit should be repaired. To resume normal operation, remove AC power and wait 30 seconds, then turn the set on.

HIGH VOLTAGE SHUTDOWN

CAUTION: When defeating the high voltage shutdown circuit, do not exceed the maximum high voltage specified on the schematic, as this may cause excessive X-radiation and damage to the CRT and associated components. Monitor the high voltage while troubleshooting.

The high voltage is monitored by diode D471, rectifying pulses from the horizontal output transformer T403. Should the high voltage increase, the rectified voltage at the cathode of diode D471 will also increase and trigger zener diodes D472 and D473 to conduct and shutdown the set. To troubleshoot, remove D471 from the circuit. Use a variable transformer as source of AC power. Start at 90VAC and increase as necessary, after repair is accomplished reconnect D471 to the circuit.

Voltages taken with TV in shutdown

Item	Pin	Voltage
IC501	18	.48V
J118		0V
D472	K	11.2V

HORIZONTAL

To determine if the TV is in shutdown, refer to the "High Voltage Shutdown" section of this Troubleshooting guide.

If the TV is not in shutdown, inject a horizontal signal at the base of the horizontal output transistor Q402.

If horizontal deflection is now present:

Check the voltages, waveforms, and components associated with pins 17 thru 22 of the IC501, and the horizontal drive transistor Q401.

If there is no horizontal sweep:

Check the voltages, waveforms, and components associated with the horizontal drive transformer T401 and Q402.

Check voltages and components associated with diodes D311, D471, D501, and D502 for defects.

The high voltage rectifier is part of transformer T403 and if defective will affect the performance of the horizontal circuits.

Width or foldover problems may be caused by capacitors C413, C415, C416, C417, and C418 being defective.

SYNC

If vertical or horizontal sync is missing:

Check the voltages, waveforms, and components associated with IC501.

If vertical sync is missing:

Check the voltages, waveforms, and components associated with pins 23 thru 25 of IC501.

If horizontal sync is missing:

Check the voltages, waveforms, and components associated with pins 17, 19 thru 22 of IC501.

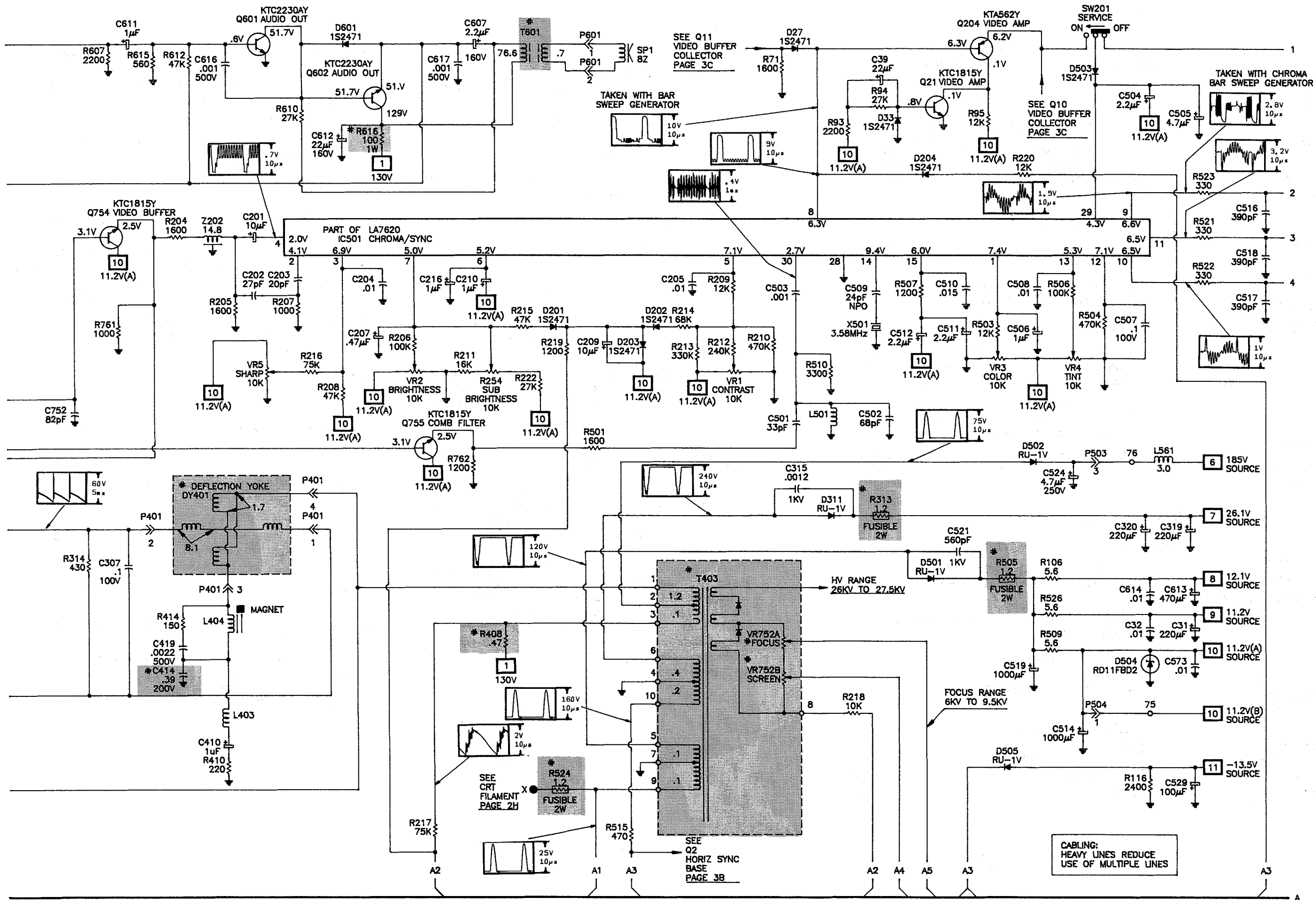
VIDEO

Inject a video signal at TP12 and check for video on the CRT. If video is now present:

Refer to the "IF-AGC" section of this Troubleshooting guide.

Check for a video waveform at pin 8 of IC501. If video is missing:

Check the voltages, waveforms, and components associated with IC501.

TELEVISION SCHEMATIC continued

TROUBLESHOOTING
continued

VERTICAL

Inject a vertical drive signal at pin 23 of IC501.

If vertical deflection is now present:

Check the voltages, waveforms, and components associated with pins 23, 24, and 25 of IC501.

If vertical deflection is still missing:

Check the voltages, waveforms, and components associated with IC301.

Vertical linearity or foldover problems may be caused by vertical feedback and bias circuits:

Check electrolytics C306, C309, C311, C313, and C320 for defects.

CHROMA

Check for a chroma waveform at pin 30 of IC501. If the waveform is missing:

Check the voltages, waveforms, and components associated with pin 30 of IC501.

Check for the proper waveforms at pins 1,9 thru 15, and 27 thru 30 of IC501.

Check the 3.58 MHz oscillator at pins 13 and 14 of IC501.

Check the voltages and components associated with color control and pin1 of IC501.

If there is inadequate tint range:

Check the voltages, waveforms, and components associated with tint control and pin13 of IC501.

If the proper waveforms are present at pins 9, 10, and 11 of IC501:

Refer to the "Raster" section of this Troubleshooting guide.

IF-AGC

Inject a video IF signal at the IF input and check for video on the CRT. If video is present on the CRT:

Check the tuner, tuner control, and tuner AFC circuits.

Check for a video waveform at TP12. If video is present:

Refer to the "Video" section of this Troubleshooting guide.

Apply AGC bias to pin 7 of IC201 .

If video is now present at TP12:

Check the voltages, waveforms, and components associated with pins 7, 13, and 14 of IC201.

If there is still no video at TP12:

Check the voltages, waveforms, and components associated with pins 6 thru 23 of IC201.

A defective AGC circuit can cause an overloaded picture, excessive snow, or loss of audio, and video.

AGC Voltages taken with signal

IC201	
Pin 7	6.5V
Pin 13	7.7V
Pin 14	6.5V

TUNER INFORMATION

TUNER VOLTAGE CHART			
Pin	VHF Low Band	VHF High Band	UHF Band
AGC	7.6V	7.6V	7.6V
BU	0V	0V	11.1V
BS1	-13.5V	11.1V	11.2V
BV	11.3V	11.3V	0V
BS2	-13.5V	-13.1V	-13.5V
BT	1.0V	13.1V	1.6V
BP	5.1V	5.1V	5.1V
BM	10.6V	10.6V	10.6V
Note: VHF Low Band voltages taken on channel 2. VHF High Band voltages taken on channel 7. UHF Band voltages taken on channel 14.			

RASTER

Check the CRT and CRT voltages.

If Red is missing:

Check the voltages and components associated with pin 9 of IC501 and transistor Q561.

If Green is missing:

Check the voltages and components associated with pin 10 of IC501 and transistor Q562.

If Blue is missing:

Check the voltages and components associated with pin 11 of IC501 and transistor Q563.

If the raster has a keystone shape:

Check the deflection yoke DY401.

If the raster has height or width problems:

Refer to the "Vertical," "Horizontal," and "Power Supply" sections of this Troubleshooting guide.

AUDIO

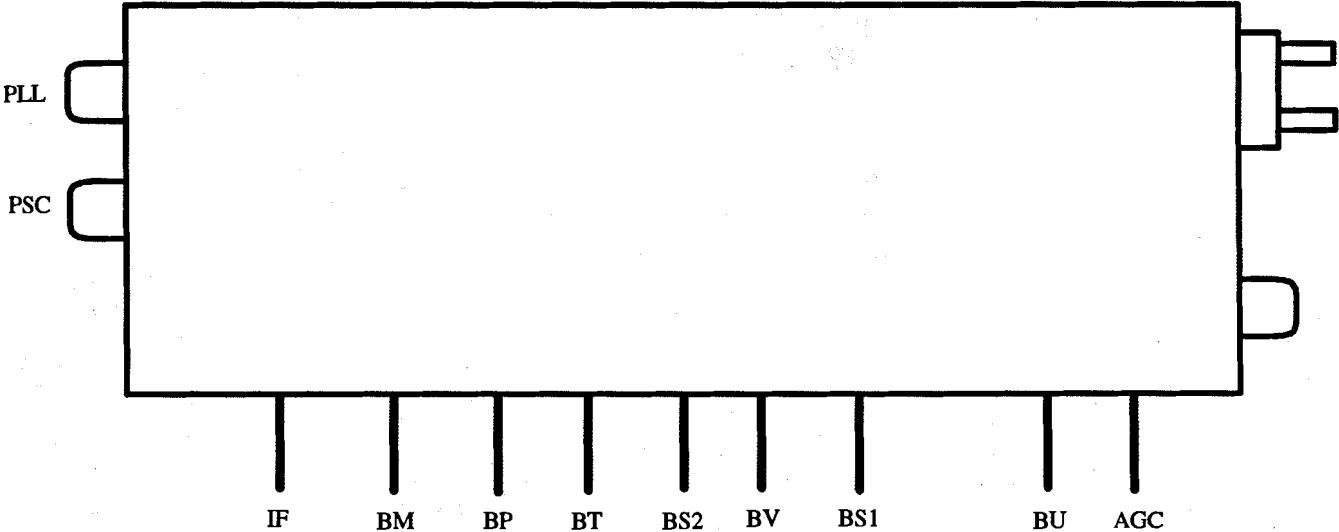
Select an active TV channel and check for an audio waveform at pin 5 of IC201. If audio waveform is missing:

Check the voltages, waveforms, and components associated with pins 1 thru 5 and 24 thru 30 of IC201.

If audio waveform is present check for audio signal at the speaker. If audio signal is missing,check the voltages, waveforms, and components associated with transistors Q601, and Q602 .

Check the voltage at pin 29 of IC201, it should measure 1.8V at mute and 6.9V at maximum volume.

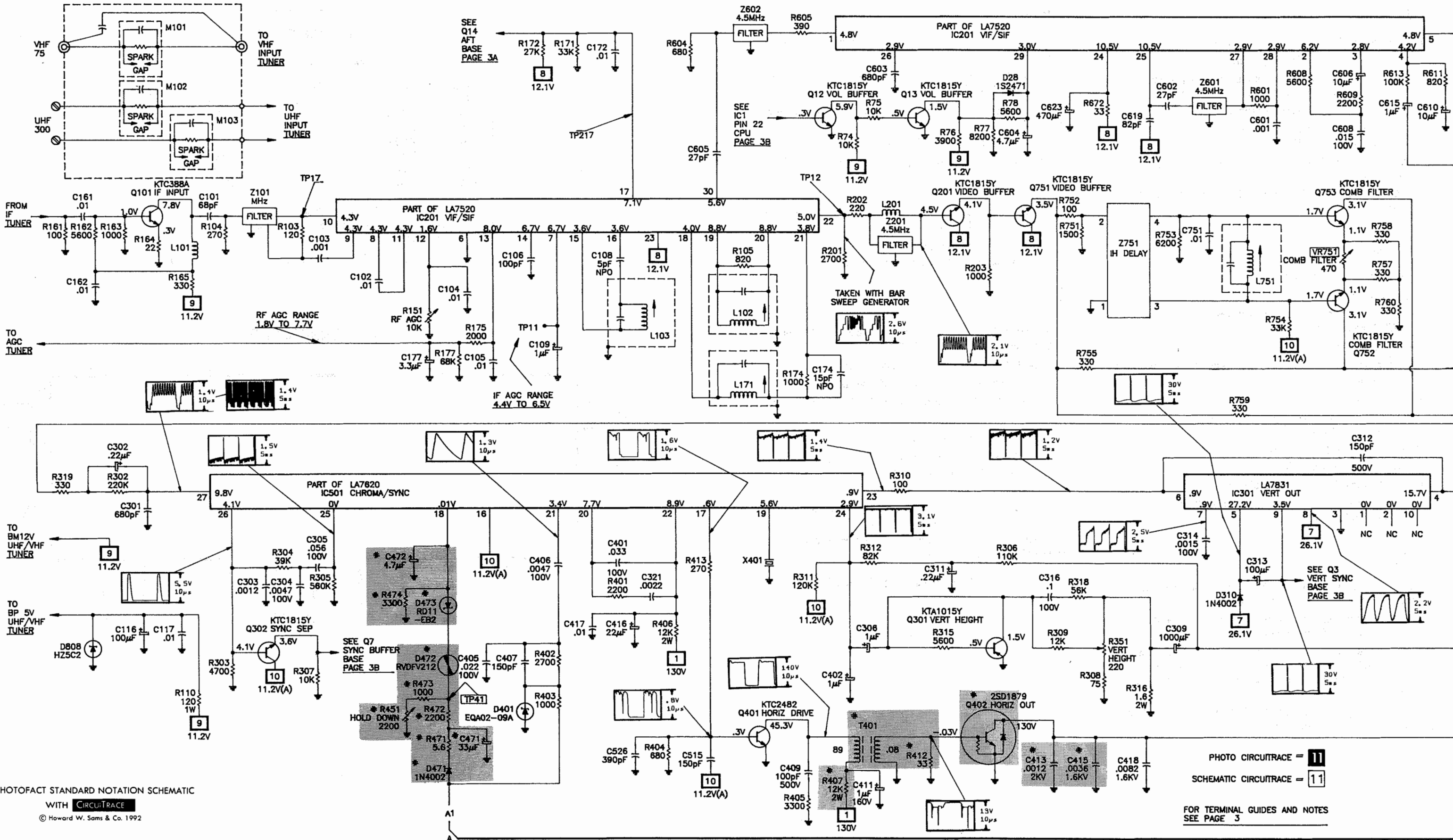
TUNER TERMINAL GUIDE



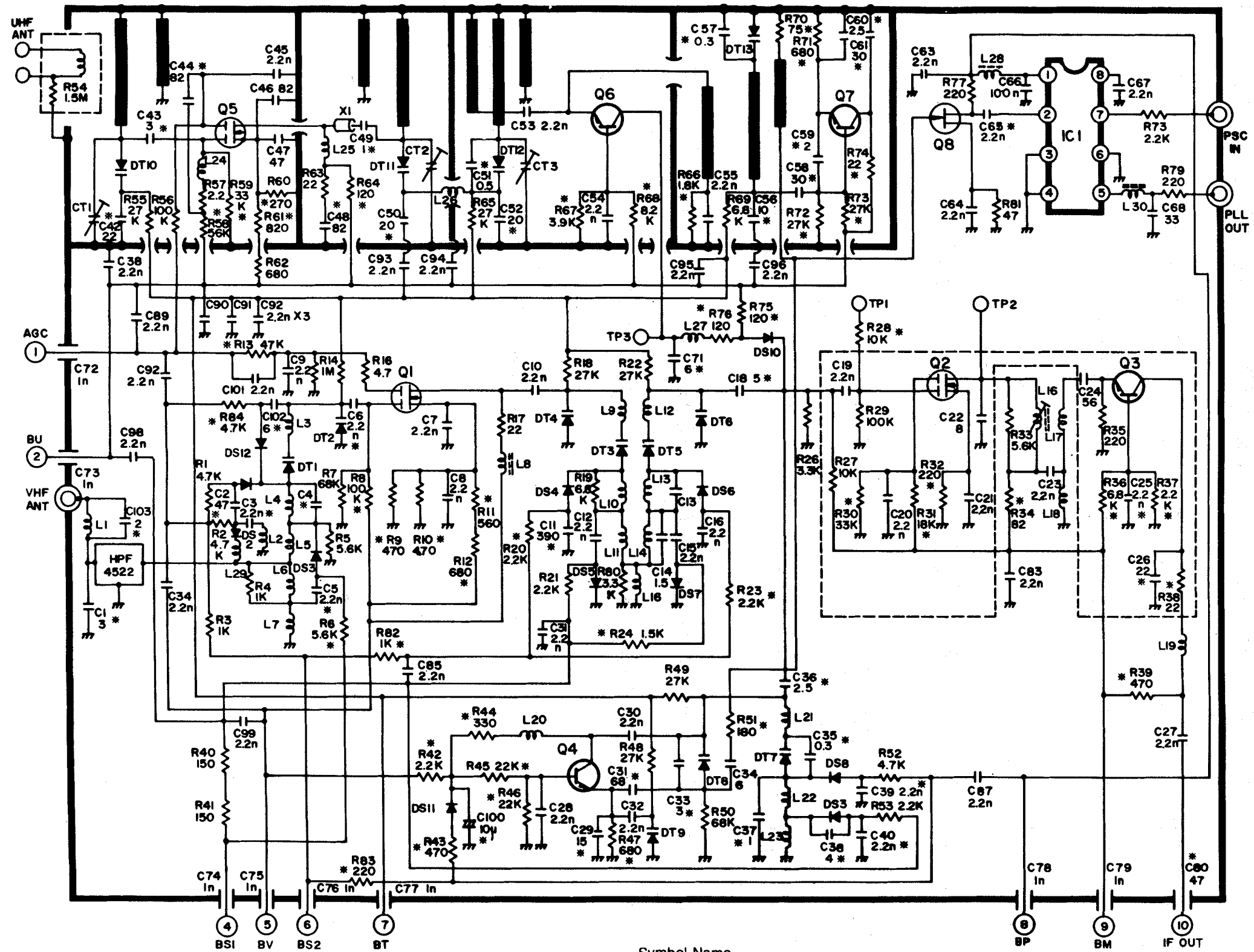
A

TELEVISION SCHEMATIC

B



UHF/VHF TUNER



Transistor Pin Connection

D	G2	3SK139,3SK132,3SK137, 3SK153,3SK131,3SK151, 3SK162,3SK144,3SK136, 3SK143,3SK146,3SK138, 3SK134,3SK141,3SK140
S	G1	

Symbol Name

Pin Jack	Feed Thru	Test Point	Ferrite Bead
----------	-----------	------------	--------------

BS1, BS2 Supply Voltage

	ch 2~6	ch A-3~13	ch J~EEE	UHF
BS1	-12V	+12V	+12V	+12V
BS2	-12V	-12V	+12V	-12V

2SC2404,2SC2757,2SC2733,
2SC2620,2SC2430,2SC2735,
2SC2223,2SC3125,2SC3123,
2SC3545,2SC3130,2SC2736,
2SC2759,2SC2734,2SC3077,
2SC3120,2SC2758,2SC2732

Sym	Date	Revision	Sign	Check
△				

Terminal Supply Voltage

Terminal No	Terminal Name	Supply Voltage
1	AGC	7.5 V Gmax
2	BU	12 V
3		
4	BS1	±12 V
5	BV	12V
6	BS2	±12 V
7	BF	0.4~29V
8	B2	5 V
9	BM	12V
10	IF OUT	

Symbol

Symbol	Symbol No	Semiconductor	
R1~R84		resistance (Ω)	
		except	
C1~C103		capacitance (PF)	
		except	
L1~L30			
DT1,3,5 7		MA329,TX287,1T33,1SV1615 1SV177,1SV167,MA335, 1SV201	
	DT2,4,6 8~13		1SV164,1SV165,MA334, 1SV153,1T32,1SV197
		DS1~12	
	Q1,Q2		
Q3			2SC2757,2SC2404,2SC2733, 2SC2620,2SC2480,2SC2735, 2SC2223,2SC3125,2SC3121, 2SC2756
	Q4,Q7		2SC3545,2SC3130,2SC2736, 2SC2759,2SC2734,2SC2733, 2SC2757,2SC2735,2SC3793
Q5			3SK143,3SK146,3SK138, 3SK134,3SK141,3SK140 HS52005
	Q6		2SC3077,2SC3120,2SC2758, 2SC2732,2SC3130
IC2orQ8 (Tror IC)			uPC1651G,2SK378,2SC2671 2SC3355,2SC3358
	IC1		M54470,M54477,uPB562 uPB568

Type No

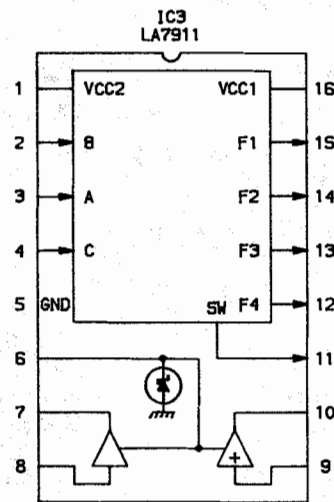
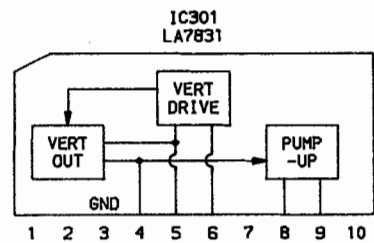
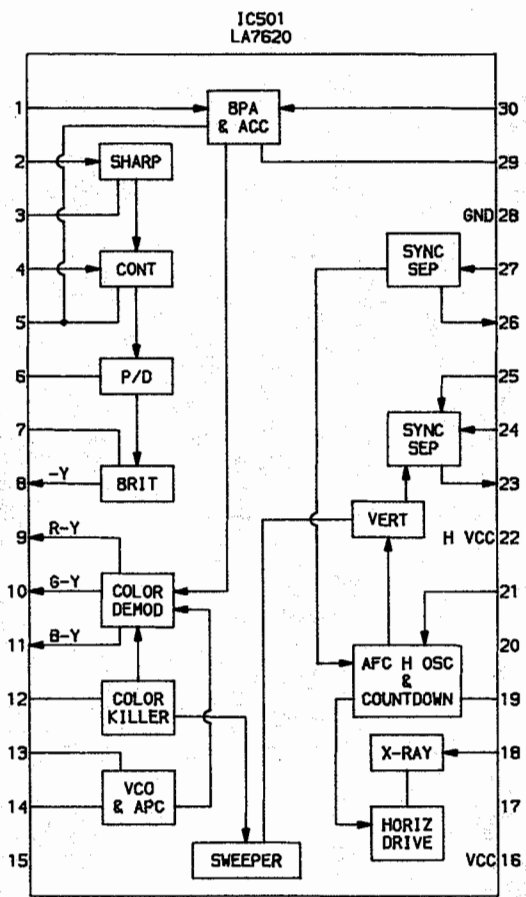
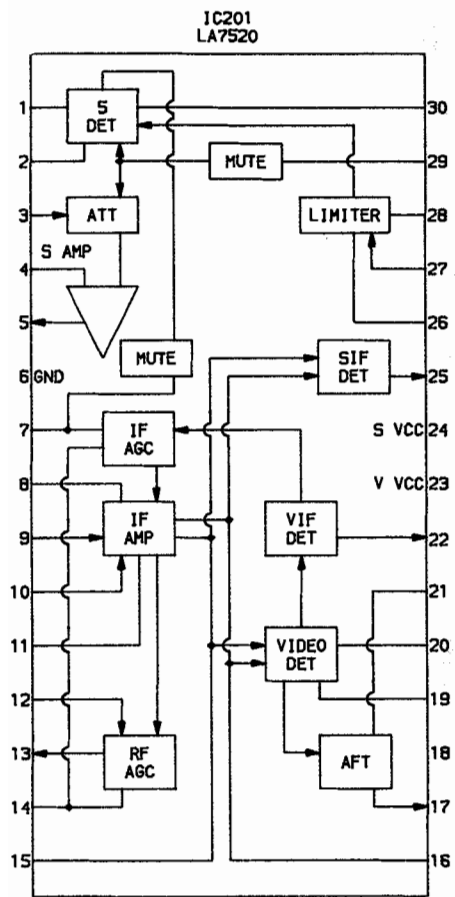
ENV-56487G2
ENV-56490G2

MAIN BOARD, GRIDTRACE LOCATION GUIDE

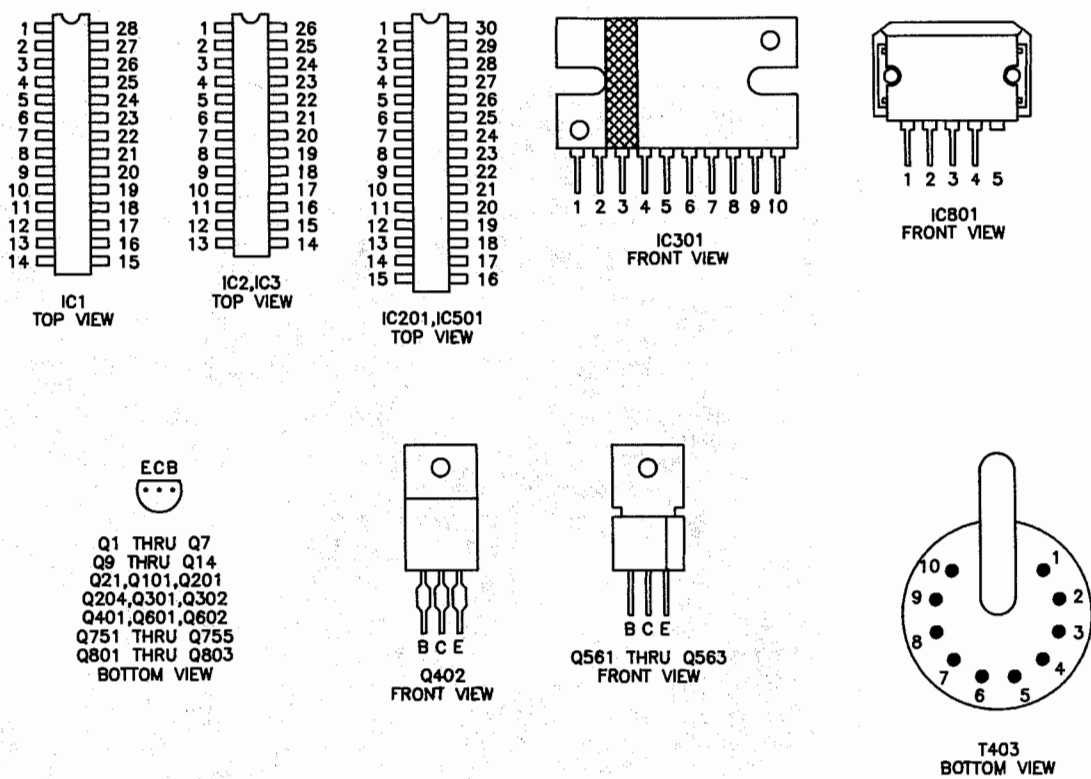
C4	F-5	C207	F-19	C526	I-23	D501	P-19	R7	E-2	R78	F-9	R308	J-24	R754	G-16
C5	F-6	C209	K-19	C601	G-13	D502	O-22	R8	F-2	R79	D-10	R309	K-24	R755	H-17
C6	E-6	C210	F-20	C602	H-14	D503	E-21	R9	F-2	R80	L-13	R310	J-24	R757	G-16
C7	D-7	C216	F-20	C603	H-13	D504	I-20	R10	C-3	R81	L-13	R311	G-24	R758	G-17
C8	E-7	C301	D-23	C604	F-8	D505	M-14	R11	C-3	R83	F-6	R312	J-23	R759	I-17
C9	D-6	C302	D-25	C605	G-13	D601	I-9	R13	C-3	R87	A-3	R313	O-18	R760	G-17
C10	D-7	C303	E-23	C606	G-11	D801	Q-10	R14	D-3	R93	D-13	R314	M-25	R761	G-17
C11	D-10	C304	E-25	C607	K-8	D802	P-14	R15	D-3	R94	D-12	R315	K-22	R762	G-15
C12	D-8	C305	F-24	C608	F-11	D803	Q-10	R16	D-3	R95	D-13	R316	K-24	R801	O-10
C13	D-8	C306	J-23	C610	F-9	D804	N-7	R21	C-5	R103	I-10	R318	K-22	R802	N-12
C14	E-8	C307	M-25	C611	G-10	D805	G-5	R23	D-5	R104	J-9	R319	C-20	R803	R-7
C16	E-10	C309	L-23	C612	J-4	D806	N-8	R24	D-5	R105	I-13	R401	F-23	R804	O-13
C17	D-10	C311	J-23	C613	H-15	D807	M-5	R25	D-5	R106	L-15	R402	J-21	R805	Q-14
C18	D-16	C312	I-25	C614	I-14	D808	O-4	R26	F-6	R110	M-4	R403	J-20	R806	O-13
C20	H-3	C313	H-25	C615	G-9	F801	Q-5	R27	C-5	R116	Q-2	R404	L-20	R807	N-7
C21	H-2	C314	H-25	C616	H-8	F802	M-12	R28	C-7	R117	D-17	R405	L-20	R808	O-7
C22	H-5	C315	P-20	C617	I-8	IC1	E-4	R29	H-4	R161	K-9	R406	M-16	R809	H-6
C23	H-2	C316	K-22	C619	I-13	IC2	C-8	R30	H-5	R162	K-9	R407	M-16	R811	N-6
C24	I-2	C319	M-18	C623	I-13	IC3	I-3	R31	F-7	R163	L-8	R408	N-16	R812	R-8
C26	P-3	C320	G-25	C751	K-16	IC201	I-12	R32	G-4	R164	K-7	R412	M-23	RC01	D-3
C27	Q-3	C321	F-24	C752	H-16	IC301	H-25	R33	C-4	R165	L-8	R413	G-23	RCD01	E-3
C28	L-14	C400*	J-21	C801	Q-6	IC501	F-22	R34	A-4	R171	K-13	R414	L-22	RL801	O-9
C29	F-5	C401	F-23	C802	O-7	IC801	S-12	R35	C-4	R172	K-13	R471	Q-17	SW201	I-19
C31	J-2	C402	F-24	C803	O-9	J118	P-15	R36	C-7	R174	J-13	R472	Q-17	T401	M-20
C32	J-2	C405	H-22	C804	R-8	L-1	B-6	R37	C-7	R175	L-12	R473	R-17	T403	P-23
C33	F-4	C406	G-22	C805	R-8	L-2	D-7	R38	C-9	R176	L-13	R474	H-22	T601	J-6
C34	F-3	C407	J-22	C806	P-9	L-4	C-7	R39	C-9	R177	L-12	R501	D-21	TP11	H-9
C35	E-5	C409	L-20	C807	Q-12	L101	K-9	R40	B-10	R201	K-14	R503	C-20	TP12	H-14
C38	C-9	C411	L-19	C808	I-4	L102	I-13	R41	C-10	R202	K-14	R504	H-21	TP17	I-9
C39	C-11	C413	S-25	C809	R-16	L103	K-12	R42	C-9	R203	K-15	R505	P-18	TP41	R-19
C40	E-6	C414	M-21	C812	O-4	L171	K-13	R43	D-9	R204	C-19	R506	B-20	TP71	H-15
C41	E-2	C415	N-22	C813	Q-15	L201	K-14	R44	D-9	R205	E-20	R507	I-20	TP217	K-12
C101	K-9	C416	H-23	D3	B-3	L404	L-22	R45	I-3	R206	B-24	R509	K-18	TUNER	N-2
C102	I-11	C417	G-23	D4	B-3	L501	C-22	R46	H-3	R207	E-20	R510	C-23	VR254	F-25
C103	I-11	C418	M-26	D5	B-3	L751	J-16	R47	H-3	R208	B-18	R515	R-17	VR351	K-25
C104	K-10	C419	L-21	D6	E-3	P1	D-1	R48	H-2	R209	D-21	R521	G-20	VR451	K-25
C105	K-11	C471	R-17	D7	F-2	P2	G-6	R49	G-2	R210	B-25	R522	G-20	VR751	J-16
C106	K-11	C472	I-21	D8	F-2	P401	M-24	R50	H-2	R211	F-25	R523	G-20	X2	E-5
C108	K-12	C501	C-22	D9	F-2	P503	M-17	R51	I-2	R212	B-23	R524	N-17	X401	G-23
C109	H-10	C502	C-23	D20	B-5	P504	G-20	R55	L-4	R213	C-25	R526	L-16	X501	I-21
C114	B-8	C503	E-22	D21	F-3	P801	Q-9	R56	E-9	R214	B-23	R601	H-13	Z101	I-10
C115	J-2	C504	D-23	D27	F-18	Q1	B-7	R57	E-9	R215	B-23	R604	G-13	Z201	K-15
C116	N-3	C505	E-23	D28	F-9	Q2	C-8	R58	E-7	R216	B-18	R605	G-12	Z202	D-19
C117	N-4	C506	D-22	D29	G-3	Q3	C-9	R60	D-10	R217	O-18	R607	G-10	Z601	G-14
C120	F-8	C507	H-21	D32	B-10	Q4	B-5	R61	E-9	R218	Q-19	R608	G-11	Z602	F-13
C161	L-8	C508	D-22	D33	D-11	Q5	E-8	R62	E-10	R219	O-17	R609	G-11	Z751	J-17
C162	L-9	C509	H-21	D201	B-22	Q6	E-9	R66	G-4	R220	K-18	R610	J-8		
C172	K-12	C510	I-21	D202	B-22	Q7	E-9	R67	D-16	R221	H-19	R611	F-10		
C174	J-14	C511	I-21	D203	J-19	Q9	D-19	R68	D-17	R222	F-25	R612	I-9		
C177	Q-4	C512	I-20	D204	I-19	Q10	E-17	R69	D-17	R223	K-18	R613	F-10		
C201	E-20	C514	H-23	D310	H-24	Q11	D-18	R71	D-18	R302	D-25	R615	G-9		
C202	E-20	C515	I-23	D311	P-19	Q12	G-7	R73	D-18	R303	E-23	R616	L-7		
C203	E-21	C516	H-19	D401	J-20	Q13	G-8	R74	G-7	R304	E-23	R672	I-14		
C204	D-21	C517	H-19	D471	P-17	Q14	L-14	R75	G-8	R305	F-24	R751	I-17		
C205	D-20	C518	H-19	D472	K-20	Q21	D-12	R76	G-8	R306	K-24	R752	I-18		
C206	R-21	C519	P-10	D473	J-22	R6	E-2	R77	G-8	R307	E-25	R753	K-16		

* Location on
bottom of board

IC FUNCTIONS



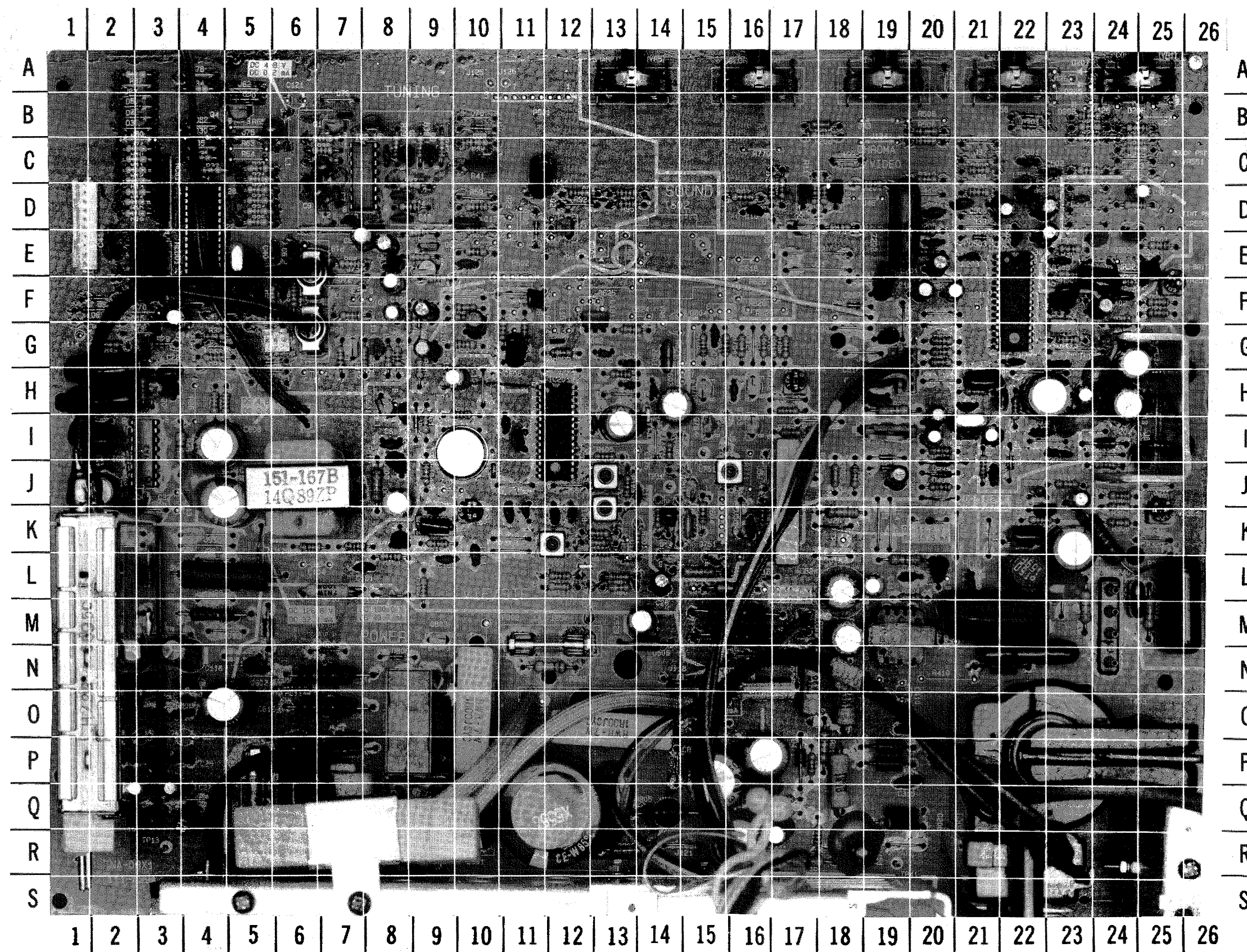
TERMINAL GUIDES AND NOTES



SCHEMATIC NOTES

- # For SAFETY use only equivalent replacement part, see parts list.
- Circuitry not used in some versions
- - - Circuitry used in some versions
- * Nominal value
- ⊥ Ground
- Chassis
- Common tie point
- Waveforms and voltages are taken from ground, unless noted otherwise.
- Waveforms: triggered scope, keyed rainbow generator. Item numbers in rectangles appear in the alignment/adjustment instructions.
- Supply voltage maintained as shown at input.
- Voltages measured with digital meter, no signal.
- Controls adjusted for normal operation.
- Terminal identification may not be found on unit.
- Capacitors are 50 volts or less.
- 5% or greater unless noted.
- Electrolytic capacitors are 50 volts or less.
- 20% or greater unless noted.
- Resistors are 1/2W or less.
- 5% or greater unless noted.
- Value in () used in some versions.
- Measurements with switching as shown, unless noted.

MAIN BOARD

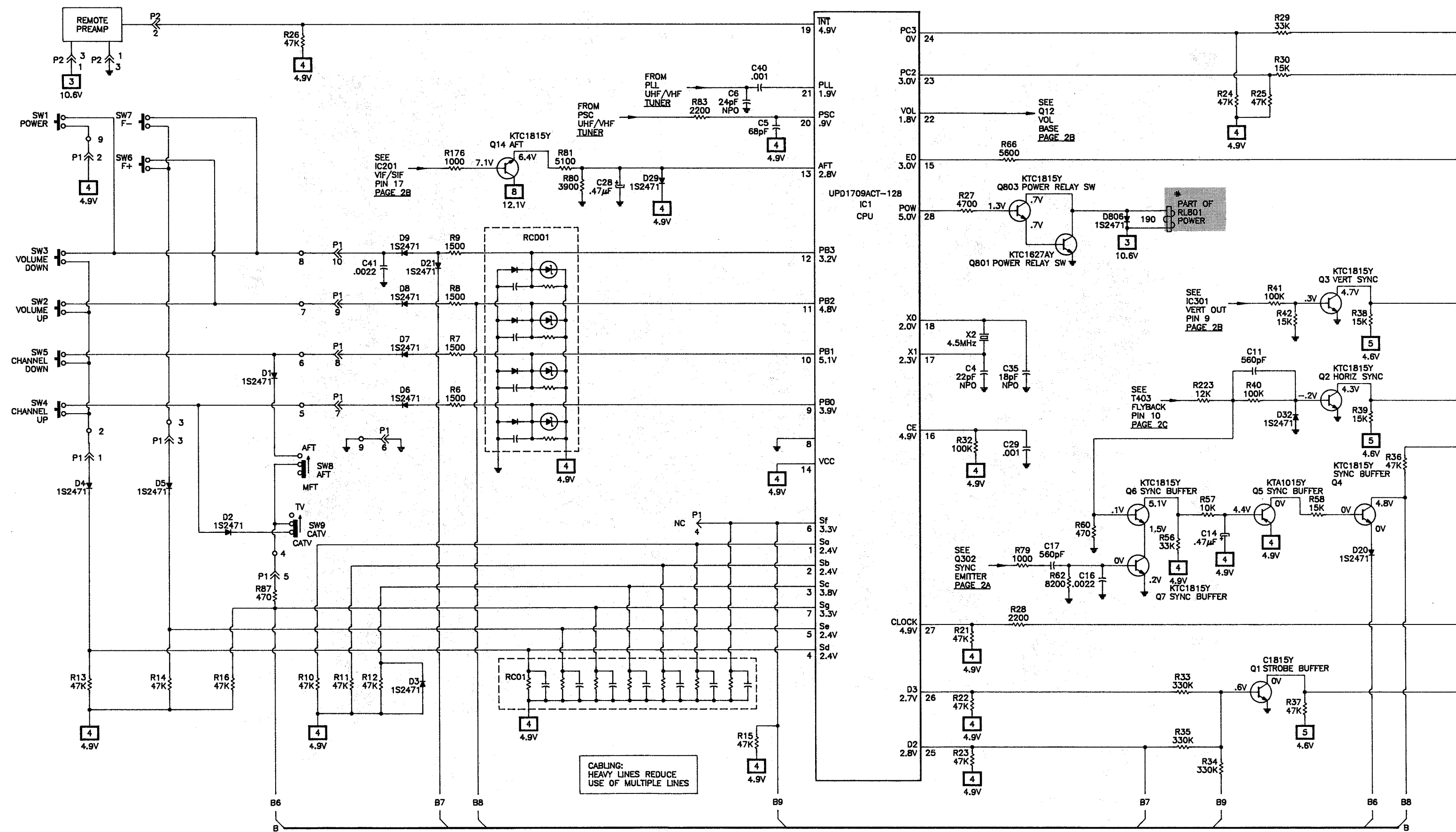


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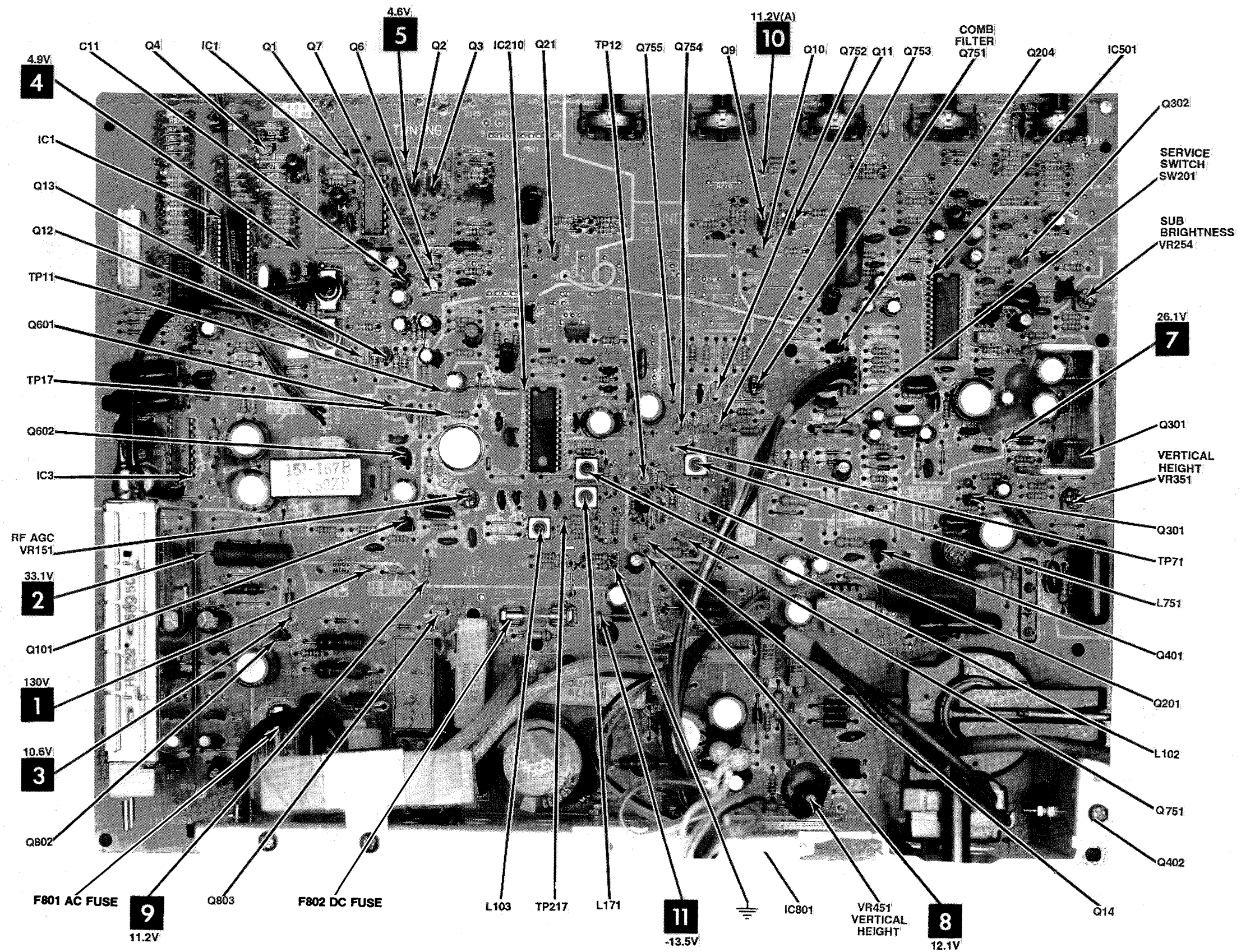
A

CPU SCHEMATIC

B

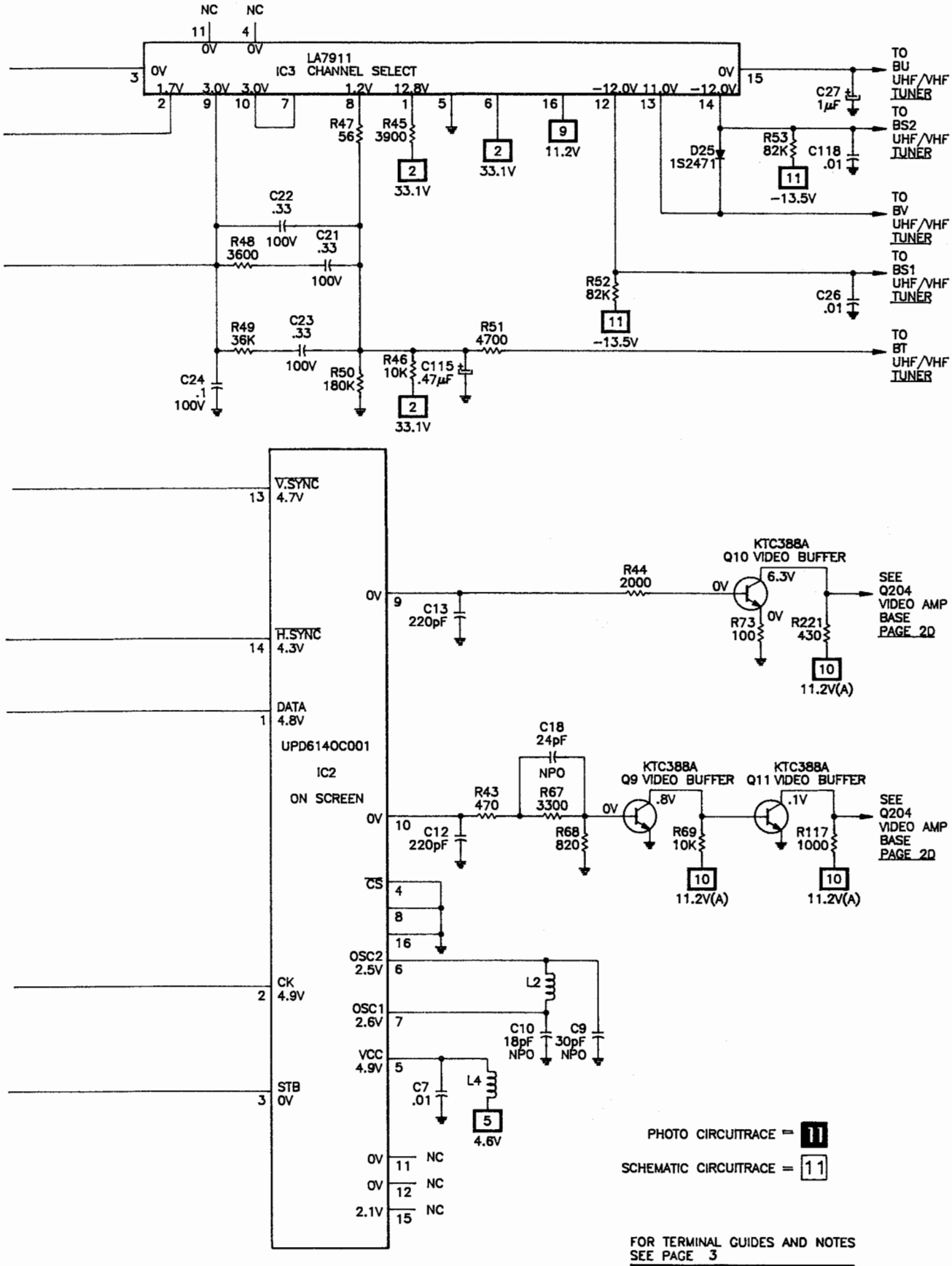


MAIN BOARD

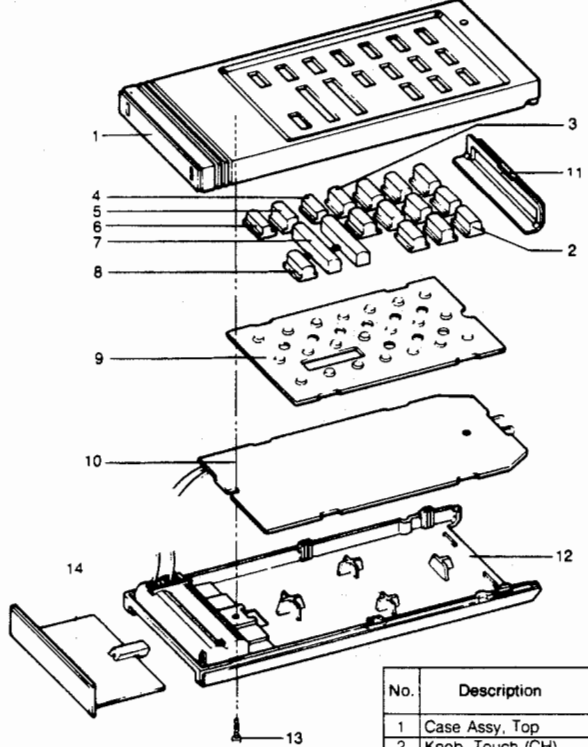
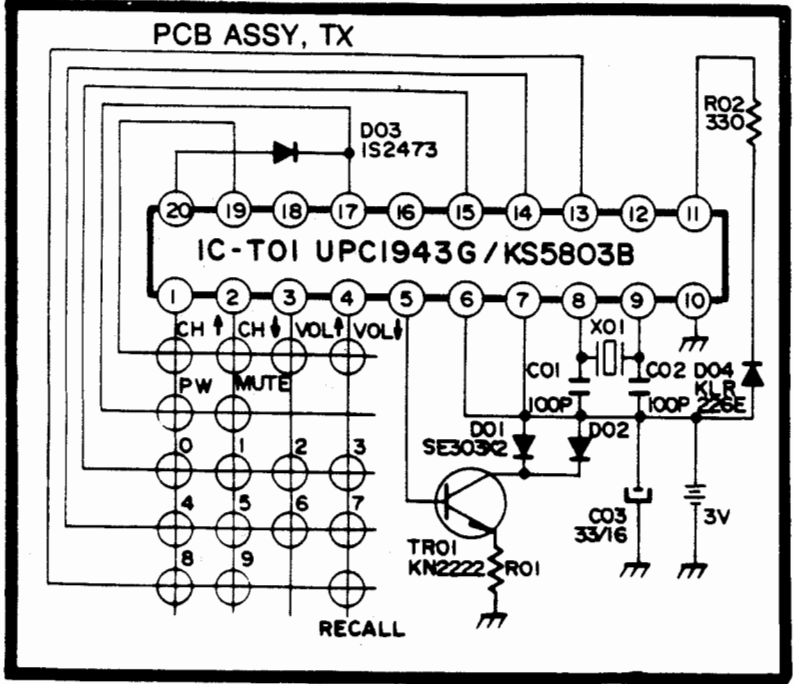


NOTE: ARROWS ON IC'S INDICATE PIN 1 UNLESS NOTED

C
ON SCREEN SCHEMATIC



D
REMOTE CONTROL TRANSMITTER SCHEMATIC

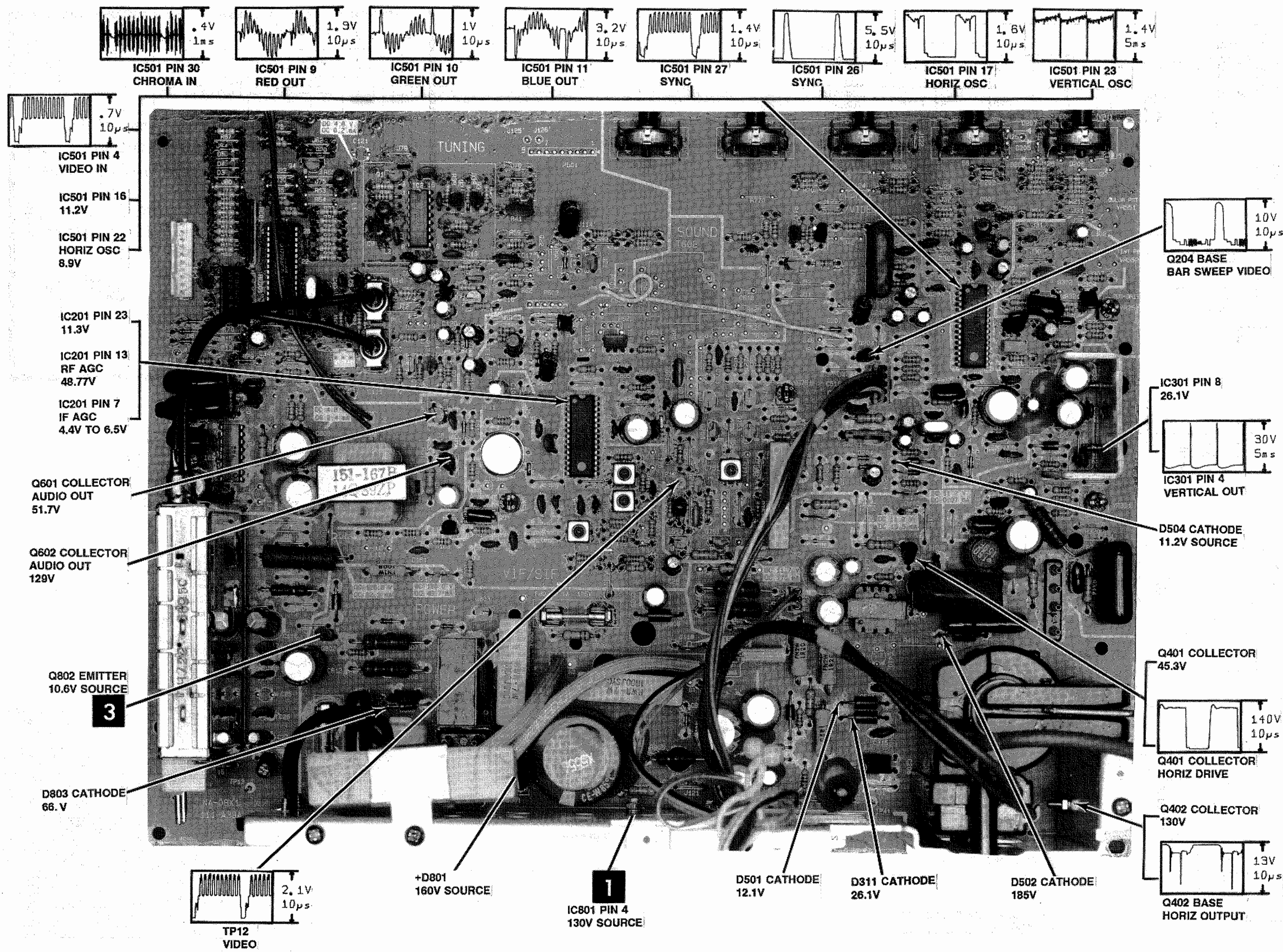


Repair Guidance Code
① field repair, do not replace
② Throw away, do not repair

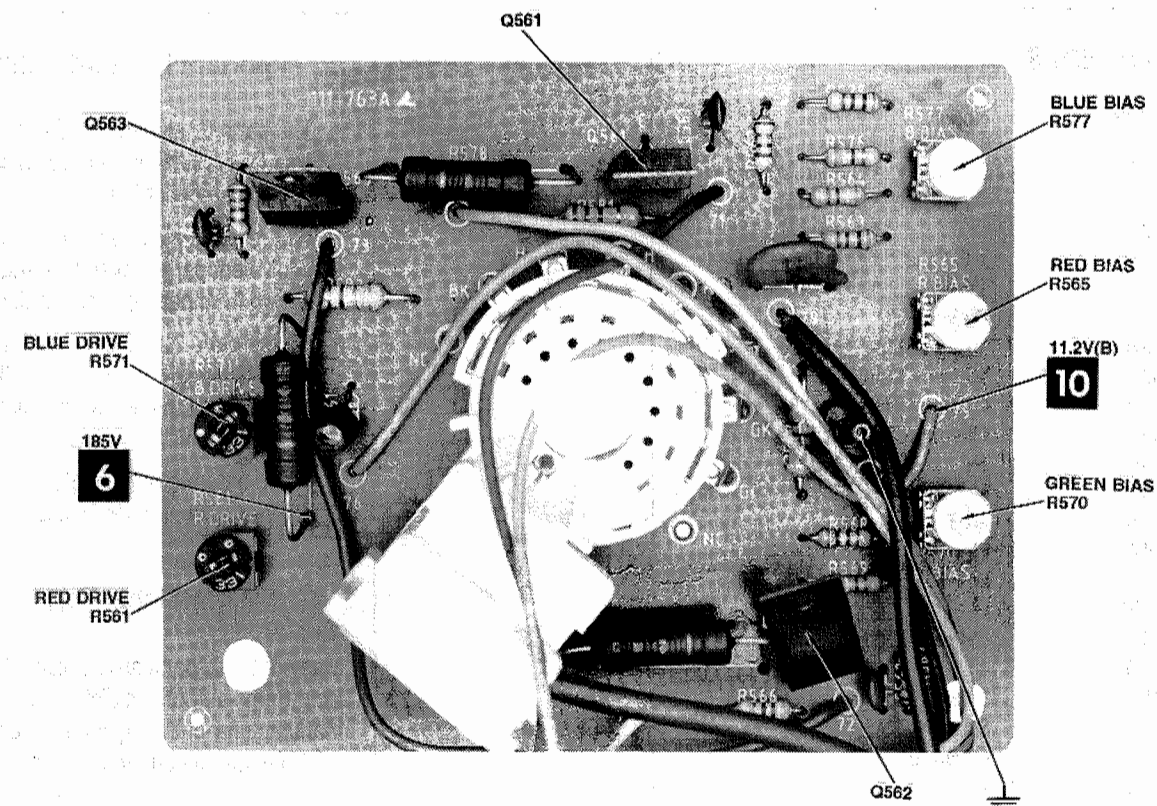
No.	Description	JCPenney Part No.	Supplier Part No.	QTY	Remarks
1	Case Assy, Top	302-309T	440-585B	1	
2	Knob, Touch (CH)	1319-4527	440-585B	10	
3	Knob, Touch (Recall)	1319-4527	440-585B	1	
4	Knob, Touch (Q. View)	1319-4527	440-585B	1	
5	Knob, Touch (Mute)	1319-4527	440-585B	1	
6	Knob, Touch (Sleep)	1319-4527	440-585B	1	
7	Knob, Seesaw	1319-4519	440-584B	2	
8	Knob, Touch (Power)	1319-4527	440-585B	1	
9	Pad, Silicon Rubber	1280-0124	407-541A	1	③
10	PCB Assy, T-14	110-B29C	1	②	
11	Filter	1280-0132	166-127A	1	
12	Case, Bottom	1330-6824	302-310C	1	
13	Screw	1280-0132	03220103	1	
14	Cover Assy, Battery Transmitter	1330-6840	303-836D	1	
			105-050C	1	①

Courtesy of Manufacturer

MAIN BOARD



CRT BOARD



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PARTS LIST

SEMICONDUCTORS

(Select replacement for best results.)

Item No.	Type No.	Mfr. Part No.	NTE Part No.	ECG Part No.	TCE Part No.
D1 - D9	1S2471	06200167	NTE519	ECG519	SK3100
D20, 21	1S2471	06200167	NTE519	ECG519	SK3100
D25	1S2471	06200167	NTE519	ECG519	SK3100
D27 - D29	1S2471	06200167	NTE519	ECG519	SK3100
D32, 33	1S2471	06200167	NTE519	ECG519	SK3100
D201 - D204	1S2471	06200167	NTE519	ECG519	SK3100
D310	1N4002	06220069	NTE116	ECG116	SK3311
D311	RU-1V	06200189	NTE552	ECG552	SK9000
D401	EQA02-09A	06220120	NTE5018A	ECG5018A	SK9A1
# D471	1N4002	06220069	NTE116	ECG116	SK3311
# D472	RVDFV-212	164-003A	NTE605A	ECG605A	SK3864
# D473	RD11EB2	06200177	NTE5020A	ECG5020A	SK11A
D501, 02	RU-1V	06200189	NTE552	ECG552	SK9000
D503	1S2471	06200167	NTE519	ECG519	SK3100
D504	RD11FBD2	06200194	NTE5074A	ECG5074A	SK11V
D505	RU-1V	06200189	NTE552	ECG552	SK9000
D601	1S2471	06200167	NTE519	ECG519	SK3100
# D801	RB-156	162-045A	NTE5306	ECG5306	SK3677
# D802	1S2471	06200167	NTE519	ECG519	SK3100
D803	1N4005	06200124	NTE116	ECG116	SK3313
D804	RD11EB2	06200177	NTE5020A	ECG5020A	SK11A
D805	HZ5C2	06220132	NTE5010A	ECG5010A	SK5A1
D806	1S2471	06200167	NTE519	ECG519	SK3100
D807	1N4002	06220069	NTE116	ECG116	SK3311
D808	HZ5C2	06220132	NTE5010A	ECG5010A	SK5A1
IC1	UPD1709ACT-128	06300634	-	-	-
	UPD1709CT-118	-	-	-	-
IC2	UPD6140C001	-	-	-	-
	UPD6140C-001	06300253	-	-	-
IC3	LA7911	06300332	-	-	-
IC201	LA7520	06300357	NTE1728	ECG1728	SK9748
IC301	LA7831	06300491	NTE1797	ECG1797	SK9753
IC501	LA7620	06300359	NTE1845	ECG1845	SK10082
# IC801	STR3230	06300688	NTE1742	ECG1742	SK9995
Q1 - Q7	KTC1815Y	-	NTE85	ECG85	SK3124A
	KTC1815-Y	06120240	NTE85	ECG85	SK9229
Q9 - Q11	KTC388A	06120025	NTE85	ECG85	SK3132
Q12 - Q14	KTC1815Y	-	NTE85	ECG85	SK3124A
	KTC1815-Y	06120240	NTE85	ECG85	SK9229
Q21	KTC1815Y	-	NTE85	ECG85	SK3124A
	KTC1815-Y	06120240	NTE85	ECG85	SK9229
Q101	KTC388A	06120025	NTE85	ECG85	SK3132
Q201	KTC1815Y	-	NTE85	ECG85	SK3124A
	KTC1815-Y	06120240	NTE85	ECG85	SK9229
Q204	KTA562Y	-	NTE290A	ECG290A	SK3114A
	KTA562TM-Y	06100095	NTE290A	ECG290A	SK3114A
Q301	KTA1015Y	-	NTE290A	ECG290A	SK9132
	KTA1015-Y	06120253	NTE290A	ECG290A	SK9132

For SAFETY use only equivalent replacement part.

GOLDSTAR

MODEL CMT-2542 (CHASSIS NA08X1)

PARTS LIST continued

RESISTORS

Item No.	Rating	Mfr. Part No.	NTE Replacement
R55	6800 5% 3W Metal Film	01341117	3W268
R217	75K 2% 1/2W Carbon Film	01153142	HW375
# R313	1.2 5% 2W Fusible	180-140P	F2W1D2
# R407	12K 5% 2W Metal Film	01335123	2W312
# R408	.47 5% 1/2W Metal Film	01516017	HWD47
# R412	33 5% 1/2W Carbon Film	01154061	HW033
# R471	5.6 5% 1/8W Carbon Film	01157043	EW5D6
# R472	2200 5% 1/8W Carbon Film	01157105	EW222
# R473	1000 5% 1/8W Carbon Film	01157097	EW210
# R474	3300 5% 1/8W Carbon Film	01157109	EW233
# R505	1.2 5% 2W Fusible	180-140P	F2W1D2
# R524	1.2 5% 2W Fusible	180-140P	F2W1D2
# R616	100 5% 1W Fusible	180-140V	F1W110
# R801	1 5% 7W Wire Wound	180-344A	-
# R802	220K 5% 1/2W Carbon Film	01154153	HW422
# R803	220 5% 25W Wire Wound	180-100D	25W122
# R804	1 5% 7W Wire Wound	180-344A	-
# R805	12K 5% 1W Metal Film	01332123	1W312
# R806	470K 5% 1/2W Carbon Film	01154161	HW447
# R812	7 Cold PTC	163-007A	-

For SAFETY use only equivalent replacement part.



Created with pride by the
employees of Howard W. Sams
& Company.

B. Bryant, G. Farrell, B. Fink,
M. Herkless, J. Kocha,
F. Malek, B. Medaris, B. Skinner,
J. Watson

MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
# F801	Fuse	131-033T	3 A 125V AC Fast Acting
# F802	Fuse	131-033C	1 A 125V Fast Acting
# L800	Degaussing	150-243G	-
# P800	Cord	174-074D	AC Line
# RL801	Relay	141-005B	-
SW1	Switch	140-183A	Power
SW2	Switch	140-183A	Volume Up
SW3	Switch	140-183A	Volume Down
SW4	Switch	140-183A	Channel Up
SW5	Switch	140-183A	Channel Down
SW6	Switch	140-055B	F+
SW7	Switch	140-055B	F-
SW8	Switch	140-114A	AFT
SW9	Switch	140-114A	CATV
SW201	Switch	140-111A	Service
# V1	CRT	A63ADG25X	-
X2	Oscillator	156-005A	Crystal 4.5MHz
X401	Filter	166-015G	-
X501	Oscillator	156-001C	3.58MHz
Z101	Filter	166-046A	SAW
Z201	Filter	166-031A	Ceramic
Z202	Delay line	150-245E	-
Z601	Filter	166-003A	-
Z602	Filter	166-016B	-
Z751	Delay Line	175-005B	-
	Board	110-F45A(1)	Control
	Board	110-310D(1)	CRT
	Board	110-E05A(1)	Main
	Remote Transmitter	105-031H	-
#	Socket	381-094B	CRT
	U/V Tuner	113-175A	-

For SAFETY use only equivalent replacement part.
(1) Contact PTS Electronics Corporation for replacement; order by manufacturer's part number.

Important Parts Information

- The parts listed here are those not usually available from a well-stocked supply cabinet or bin.
- Where items may be replaced with equivalent parts, several alternates are shown from participating vendors.
- On the parts lists, safety items are marked with a # to remind you that only exact replacements are recommended for these items.
- When ordering parts, state the model number, part number, and description.

Obtaining Parts

Many of these parts are available from your local Sams authorized distributor or the manufacturer of the equipment. Call Sams for the name of your nearest distributor:

800-428-7267

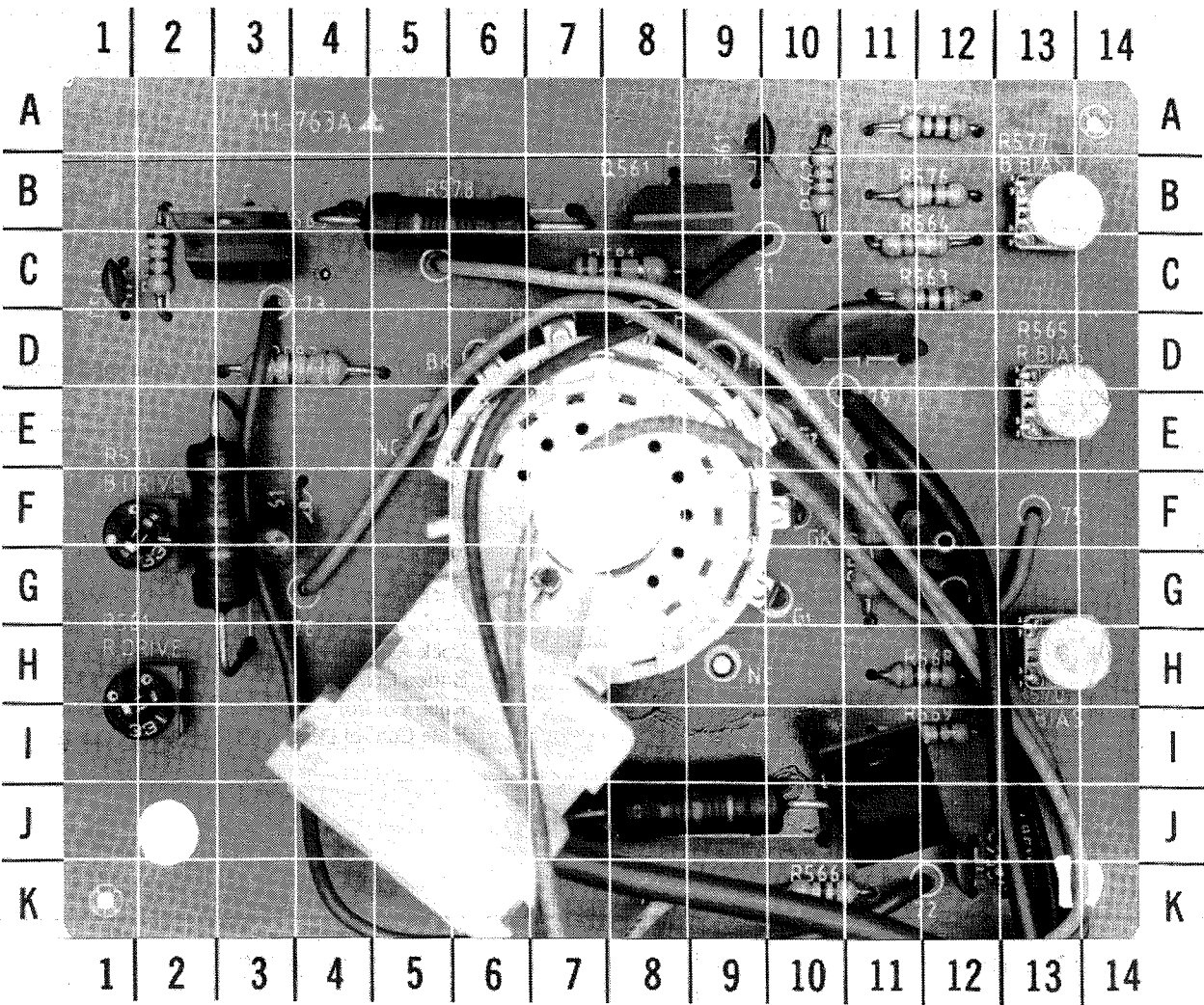
Or consult the Sams *Annual Index* for the address of the original equipment manufacturer.

Participating Vendors

Information on test equipment and replacement parts is listed in these pages for the following participating vendors. Consult the Sams *Annual Index* for their current address.

- Custom Components Corporation (Chek-A-Color)
- NTE Electronics, Inc. (NTE)
- Philips ECG Company (ECG)
- PTS Electronics Corporation (PTS)
- Quam-Nichols Co. (Quam)
- Sencore, Inc.
- Thomson Consumer Electronics, Inc. (SK, TCE)

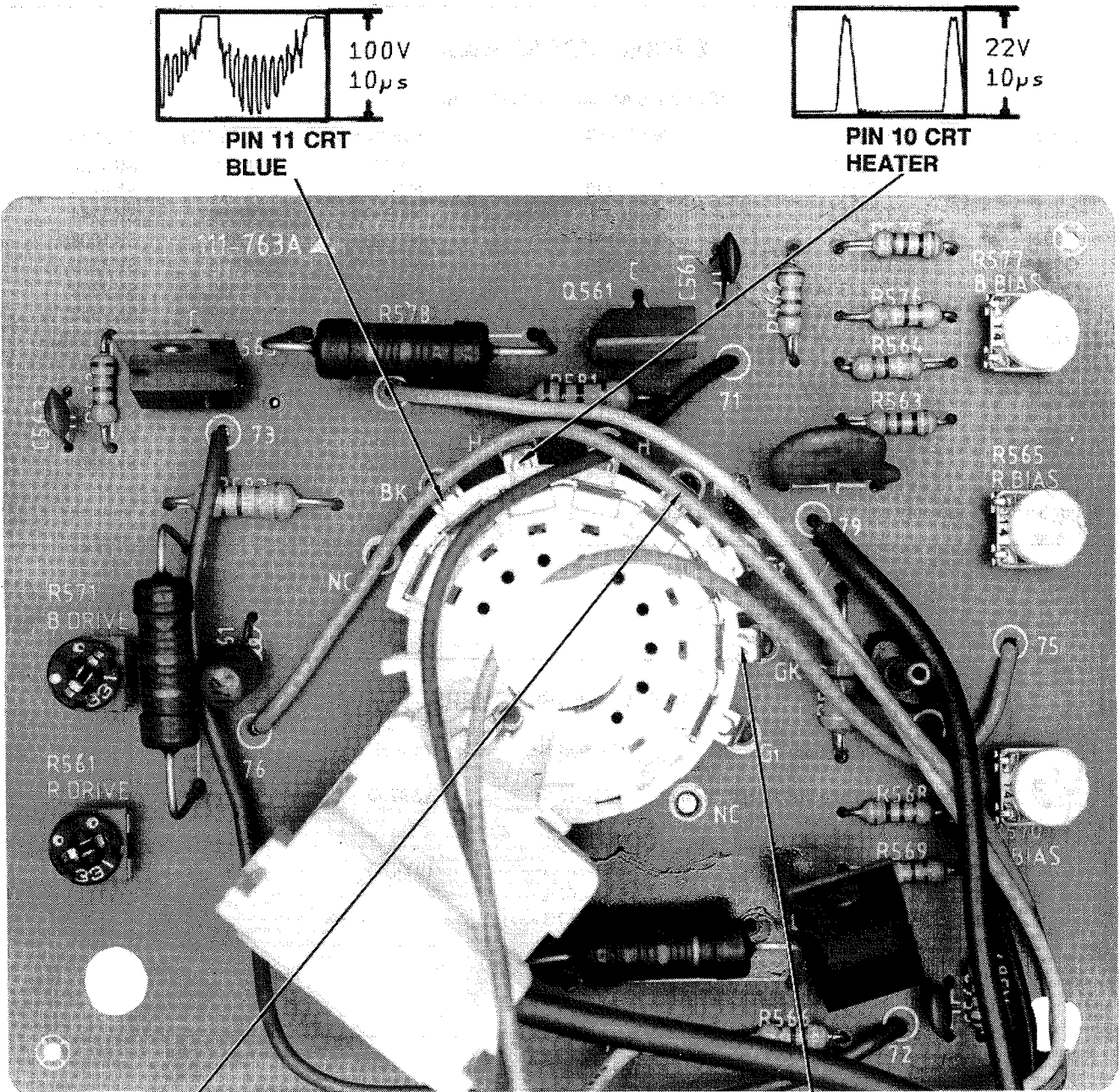
CRT BOARD



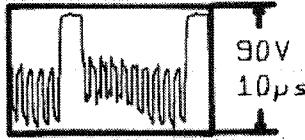
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CRT BOARD , GRIDTRACE LOCATION GUIDE									
C561	A-10	Q562	J-11	R565	E-13	R571	F-2	R579	J-9
C562	J-13	Q563	C-3	R566	K-10	R572	C-2	R580	F-2
C563	C-1	R561	H-1	R567	J-13	R575	A-12	R581	C-8
C564	D-11	R562	B-10	R568	H-12	R576	B-12	R582	F-11
L561	F-3	R563	C-12	R569	I-12	R577	B-13	R584	D-4
Q561	B-9	R564	C-12	R570	H-13	R578	B-6		

CRT BOARD



PIN 8 CRT RED



PIN 6 CRT BLUE

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PARTS LIST continued

SEMICONDUCTORS continued

(Select replacement for best results.)

Item No.	Type No.	Mfr. Part No.	NTE Part No.	ECG Part No.	TCE Part No.
Q302	KTC1815Y	-	NTE85	ECG85	SK3124A
	KTC1815-Y	06120240	NTE85	ECG85	SK9229
Q401	KTC2482	06120236	NTE399	ECG399	SK3244
# Q402	2SD1879	06100131	NTE2331	ECG2331	SK10088
Q561 - Q563	KTC2068	06120220	NTE376	ECG376	SK3219
Q601, 02	KTC2230AY	-	NTE399	ECG399	SK9352
	KTC2230A	06120225	NTE399	ECG399	SK9352
Q751 - Q755	KTC1815Y	-	NTE85	ECG85	SK3124A
	KTC1815-Y	06120240	NTE85	ECG85	SK9229
Q801, 02	KTC1627AY	-	NTE382	ECG382	SK9137
	KTC1627-Y	06120212	NTE382	ECG382	SK9137
Q803	KTC1815Y	-	NTE85	ECG85	SK3124A
	KTC1815-Y	06120240	NTE85	ECG85	SK9229

For SAFETY use only equivalent replacement part.

CAPACITORS

Item	Rating	Mfr. Part No.
C4	22 NPO 50V 5%	08300720
C6	24 NPO 50V 5%	08300721
C9	30 NPO 50V 5%	08300723
C10	18 NPO 50V 5%	08300718
C18	24 NPO 50V5%	08300721
C35	18 NPO 50V 5%	08300718
C108	5 NPO 50V .5pf	08300707
C174	15 NPO 50V 5%	08300717
# C413	.0012 2KV 10%	02211561
# C414	.39 200V	181-128C
# C415	.0036 1.6KV 5%	181-083M
C509	24 NPO 50V5%	08300721
C564	.0022 1KV 10%	02201364
# C801	.22 250V	181-354B
# C803	.01 500V 10%	02201072
# C804	.01 500V 10%	02201072
# C805	.01 500V 10%	02201072
# C806	.01 500V 10%	02201072

For SAFETY use only equivalent replacement part.

ELECTROLYTIC CAPACITORS

Item	Rating	Mfr. Part No.
C306	1 25V	181-032Q
# C471	33 25V	08110416
# C472	4.7 50V	08110511
# C807	470 200V	181-075E
# C809	22 200V 10%	181-081F
# C813	33 160V	181-102F

For SAFETY use only equivalent replacement part.

CABINET PARTS

Item	Part No.
Back Cover	303-980A
Cabinet Assembly	300-557D
Lock Assembly Door	470-861A
Button Control	441-086A
Knob Control	440-357A
Plate Control Deco	407-A22A

COILS & TRANSFORMERS

Item No.	Function	Mfr. Part No.	On-Unit No.
# DY401	Yoke 90° Horiz 1.44mh Vert 16.2mh	153-016A	YS9260
L404	Linearity Coil	150-159F	
# T401	Horiz Drive	151-101B	19Y4BY
# T403	Flyback	154-162A	-
# T601	Audio Output	151-167B	-
# T801	Line Filter	150-151A	-

For SAFETY use only equivalent replacement part.

COILS (RF-IF)

Item No.	Rating	Mfr. Part No.
L1	5.6uH	04011035
L2	56uH	04011059
L4	1uH	04011017
L101	RF Choke .70uH	150-167E
L102	Det	150-327J
L103	Det	150-327J
L171	AFT	150-327K
L201	10uH	04011041
L561	270uH	04030075

CONTROLS

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

Item No.	Function	Resistance	Mfr. Part No.
R151	RF AGC	10K	180-425H
R254	Sub Bright	10K	180-425H
R351	Vert Height	220	180-425A
# R451	Hold Down	2200	180-425E
R561	Red Drive	330	180-021M
R565	Red Bias	10K	180-021H
R570	Green Bias	10K	180-021H
R571	Blue Drive	330	180-021M
R577	Blue Bias	10K	180-021H
VR1	Contrast	10K	180-135D
VR2	Brightness	10K	180-135D
VR3	Color	10K	180-135D
VR4	Tint	10K	180-135D
VR5	Sharpness	10K	180-135D
VR751	1H Delay	470	180-425C
# VR752A	Focus	-	(1)
# VR752B	Screen	-	(1)

For Safety use only Equivalent Replacement Parts.

(1) Focus and Screen Controls are part of Horizontal Output Transformer T403.

SPEAKER

Item No.	Description	Mfr. Part No.	Quam Part No.
SP1	4" Square PM 8 Ohm	120-170B	4A1Z8