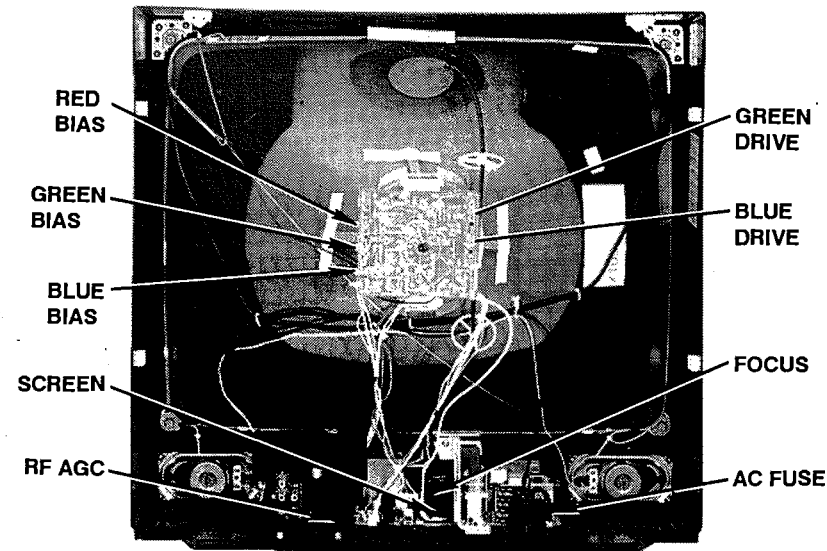


CABINET - REAR VIEW



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.	Equipment	Sencore No.
Oscilloscope	SC3100	Isolation Transformer	PR57
Generators		Capacitance Analyzer	LC101, LC102
RGB	CM2000	CRT Analyzer	CR70
Multiburst Signal	VG91	AC Leakage Tester	PR57
Color Bar	VG91	Inductance Analyzer	LC101, LC102
TV Stereo	VG91	Flyback Yoke Tester	TVA92
Digital VOM	SC3100	TV Stereo Power Monitor	SR68, PA81
Frequency Meter	SC3100	Field Strength Meter	SL750
Hi-Voltage Probe	HP200	Transistor Tester	TF46
Accessory Probes	TP212	Video Analyzer	VG91, TVA92

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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PHOTOFACT® Technical Service Data

SET 3252

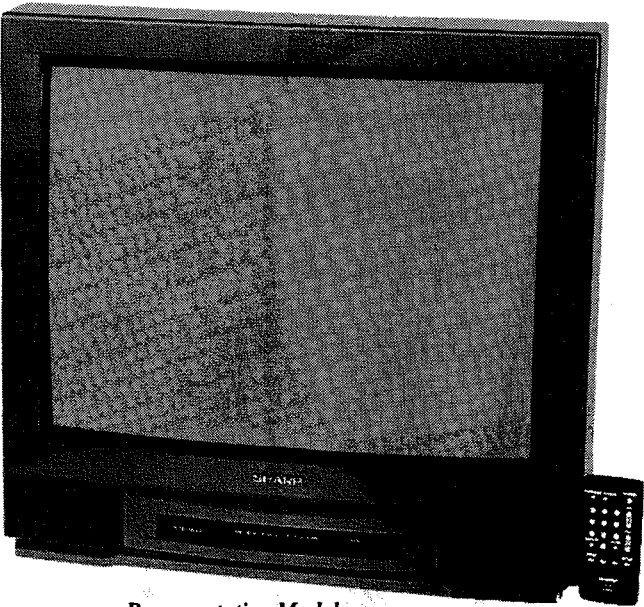
MODEL 27A-S100 (SERIAL NO. 632112 OR GREATER)

SHARP

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SHARP
Model 27A-S100 (Serial No. 632112 or Greater)



Representative Model

Complete coverage
for servicing a television receiver...

- Schematics
- Parts lists
- Component locations
- Troubleshooting guide

Coverage includes this additional model:

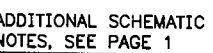
MODEL	SERIAL NO.
27A-S120	635112 or Greater



HOWARD W. SAMS & COMPANY

DECEMBER 1993 SET 3252

For Supplier Address,
See PHOTOFACT Annual Index



WITH **CIRCUITRACE™**

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MISCELLANEOUS ADJUSTMENTS

NOTE: All procedures require an antenna connected and power applied to the set. Select TV/CATV setting.

PRETUNING

Auto Memory

- 1. Press the setup key until search start is displayed on screen.
- 2. Press the + key to preset all active channels into memory.

Add/Delete Channels

- 1. Select the channel to be added or deleted.
- 2. Press the setup key until memory add and memory erase is displayed on screen.
- 3. Press the + key to add the selected channel.
- 4. Press the - key to delete the selected channel.
- 5. Repeat steps 1 through 4 to add or delete other channels.

Sleep Timer

- 1. Press the setup key until the sleep timer is displayed on screen.
- 2. Press the + or - key to select 30, 60, 90, or 120 minutes.

NOTE: All adjustments were performed with the digital picture controls set to "Reset" unless otherwise indicated. In case of power interruption or any abnormal operation of the on screen features, **Remove AC Power** then reset IC1001 by shorting TP1005 to ground.

HIGH VOLTAGE CHECK

Tune in a picture. Set brightness, color, and picture to minimum. Connect a high voltage probe to the CRT anode. High voltage should read between 28.5KV to 30.5KV. High voltage must never exceed 30.5KV.

RF AGC

Tune in a picture. Turn R201 clockwise until snow (noise) appears in picture, then counterclockwise until snow disappears. Check all channels for proper operation.

SUB BRIGHTNESS

Tune in a picture. Set color, picture, and brightness to minimum. Adjust R1144 to a point where highlights are just extinguished.

SUB PICTURE

Tune in a picture. Set color, picture, and brightness to minimum. Connect an oscilloscope to TP402, low side to ground. Adjust R1112 for a 1.5V p-p, signal portion of waveform.

DISPLAY POSITION

Press the display button. Adjust L1001 to place display two inches from the right side of the screen.

HORIZONTAL CENTERING

Tune in a crosshatch pattern. Set S621 for the best centering on screen.

DELAY LINE

DL4402 is Factory set, Do Not Adjust.

VERTICAL SIZE AND LINEARITY

Tune in a crosshatch pattern. Adjust R504 for approximately 3/16" overscan at top and bottom of screen. Adjust R508 for best linearity of vertical lines.

SCREEN

Set S851 to the center position. Adjust the screen control so that all retrace lines disappear. Return S851 to normal position.

SUB TINT AND SUB COLOR

Tune in a color bar pattern. Connect an oscilloscope to collector of Q851, low side to ground. Adjust R1131 to balance the 1st and 3rd bars of the waveform. Adjust R1116 for a 100V p-p, signal portion of the waveform.

COLOR PURITY

Operate the receiver for 15 minutes. Set picture and color to minimum. Set brightness for a visible raster. Use a degaussing coil to demagnetize the CRT and mounting brackets. Adjust R857 and R877 to obtain a green raster. Advance R867 if necessary. Loosen the deflection yoke clamp screw and slide the deflection yoke backward to obtain a vertical green band. Rotate and spread the purity magnet tabs until the green band is centered on the screen. Move the deflection yoke forward until a uniform green screen is obtained.

GRAY SCALE ADJUSTMENT

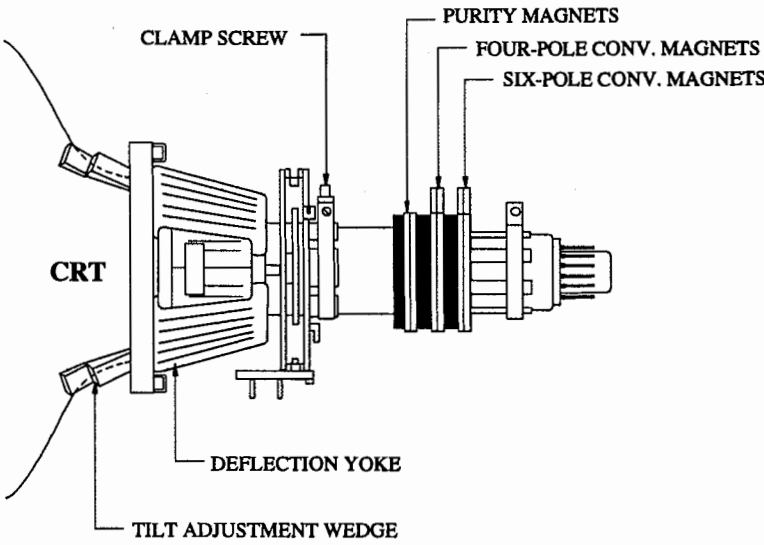
Tune in an active channel. Perform screen adjustment. Set color, brightness, picture, R857, R867, and R877 to minimum. Set R863 and R873 to midrange. Connect a 300 ohm resistor to pin 4 of IC501 and ground. If necessary, advance brightness to obtain a barely visible line. Note the color of the line and adjust the two remaining bias controls to obtain the best white balance. Remove the 300 ohm resistor. Set brightness and picture to maximum. Adjust the drive controls for best white in highlight areas. Check tracking at high and low brightness and touch up as necessary.

CONVERGENCE ADJUSTMENTS

Operate the receiver for 15 minutes. Connect a color bar generator to the antenna terminals and tune in a dot pattern. Adjust the 4-pole

magnet tabs to converge the red and blue dots at the center of the screen. Adjust the 6-pole magnet tabs to converge the red/blue dots over the green 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. 4-pole and 6-pole magnets interact; repeat adjustment until center convergence is correct. Tune in a crosshatch pattern and remove the rubber wedges between the deflection yoke and the CRT. Tilt the deflection yoke up or down to converge the vertical lines at top and bottom of screen and the horizontal lines at the right and left sides of the screen. Tilt the deflection yoke right or left to converge horizontal lines at top and bottom of screen and the vertical lines at the right and left sides of the screen. Repeat convergence procedure if necessary to obtain best overall convergence. Apply adhesive to wedges and carefully replace on CRT.

CRT NECK ASSEMBLY



STEREO ADJUSTMENTS

NOTE: All adjustments were performed with the controls set to normal listening levels. Set Generator for PILOT, 1kHz audio frequency, and L-R modulating signal, unless otherwise indicated.

MTS LEVEL

Connect an oscilloscope to TP301, low side to ground. Adjust R4302 for 1.0V p-p.

VCO

Set volume to an audible level. Connect scope to pin 4 of IC3001. Adjust R3005 for 800mV p-p.

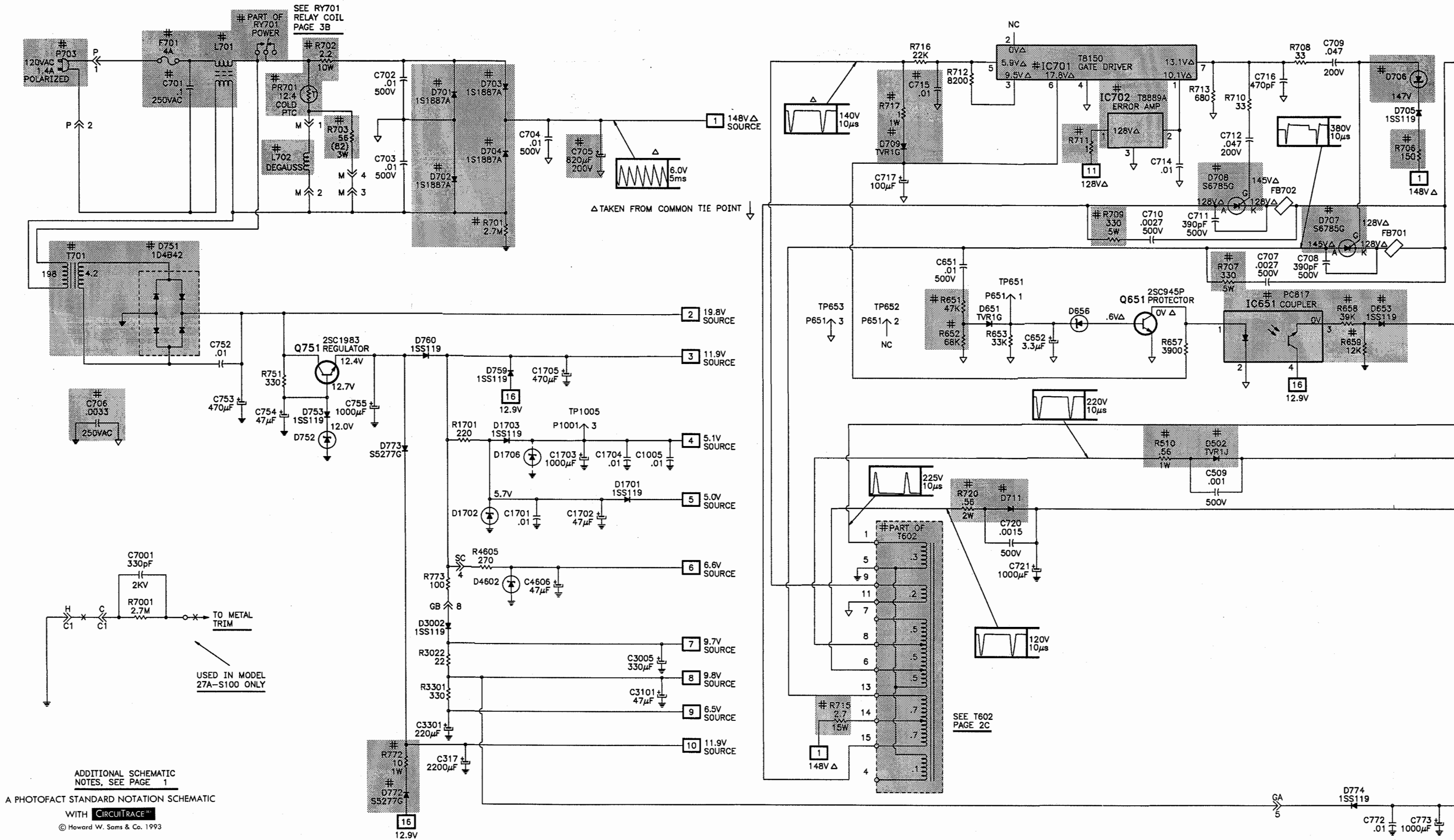
BALANCE

Use a dual trace oscilloscope. Connect channel 1 to plug GB pin 5, low side to ground. Connect channel 2 to plug GB pin 7, low side to ground. Adjust R3103 for equal amplitude of both signals.

SHARP

MODEL 27A-S100 (SERIAL NO. 632112 OR GREATER)

POWER SUPPLY SCHEMATIC



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.

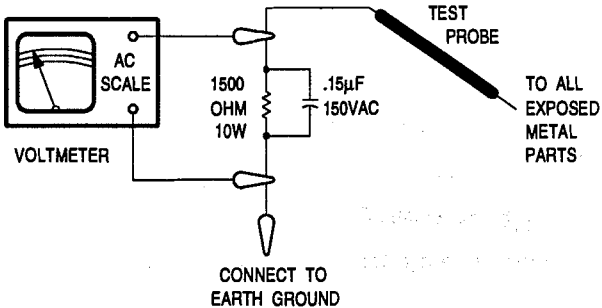
Hot Leakage Current Check

- 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.

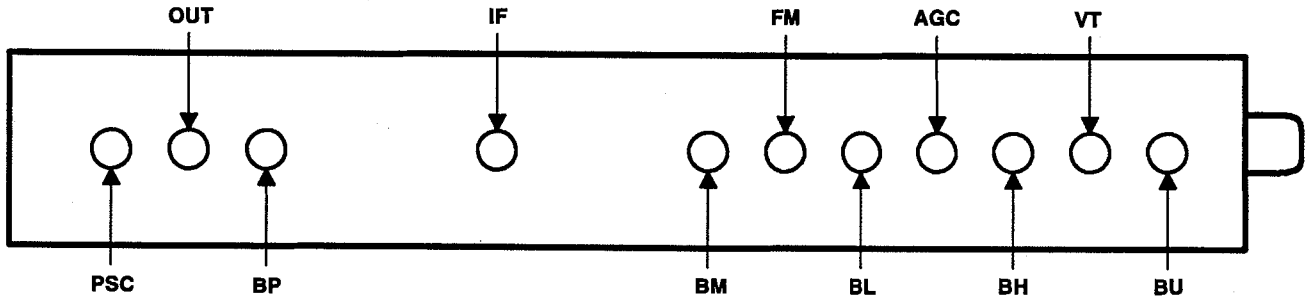
- 1. Check repaired area for poorly soldered or de-soldered connections, and check entire circuit board for solder splashes.
- 2. Check inner board wiring for pinched wires or wires contacting any high-wattage resistors.
- 3. Check that all control knobs, shields, covers, grounds and mounting hardware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



TUNER INFORMATION

TUNER VOLTAGE CHART							
Pin	VHF Low Band	VHF High Band	UHF Band	Pin	VHF Low Band	VHF High Band	UHF Band
PSC	.9V	.3V	.1V	AGC	6.0V	6.2V	6.5V
OUT	4.3V	4.3V	4.3V	BH	0V	12.0V	0V
BP	5.0V	5.0V	5.0V	VT	.7V	4.0V	5.0V
IF	0V	0V	0V	BU	0V	0V	11.7V
BM	12.1V	12.1V	12.1V	NOTE: VHF Low Band voltages taken on channel 2. VHF High Band voltages taken on channel 7. UHF Band voltages taken on channel 14.			
FM	2.8V	2.8V	0V				
BL	12.0V	4.0V	.1V				

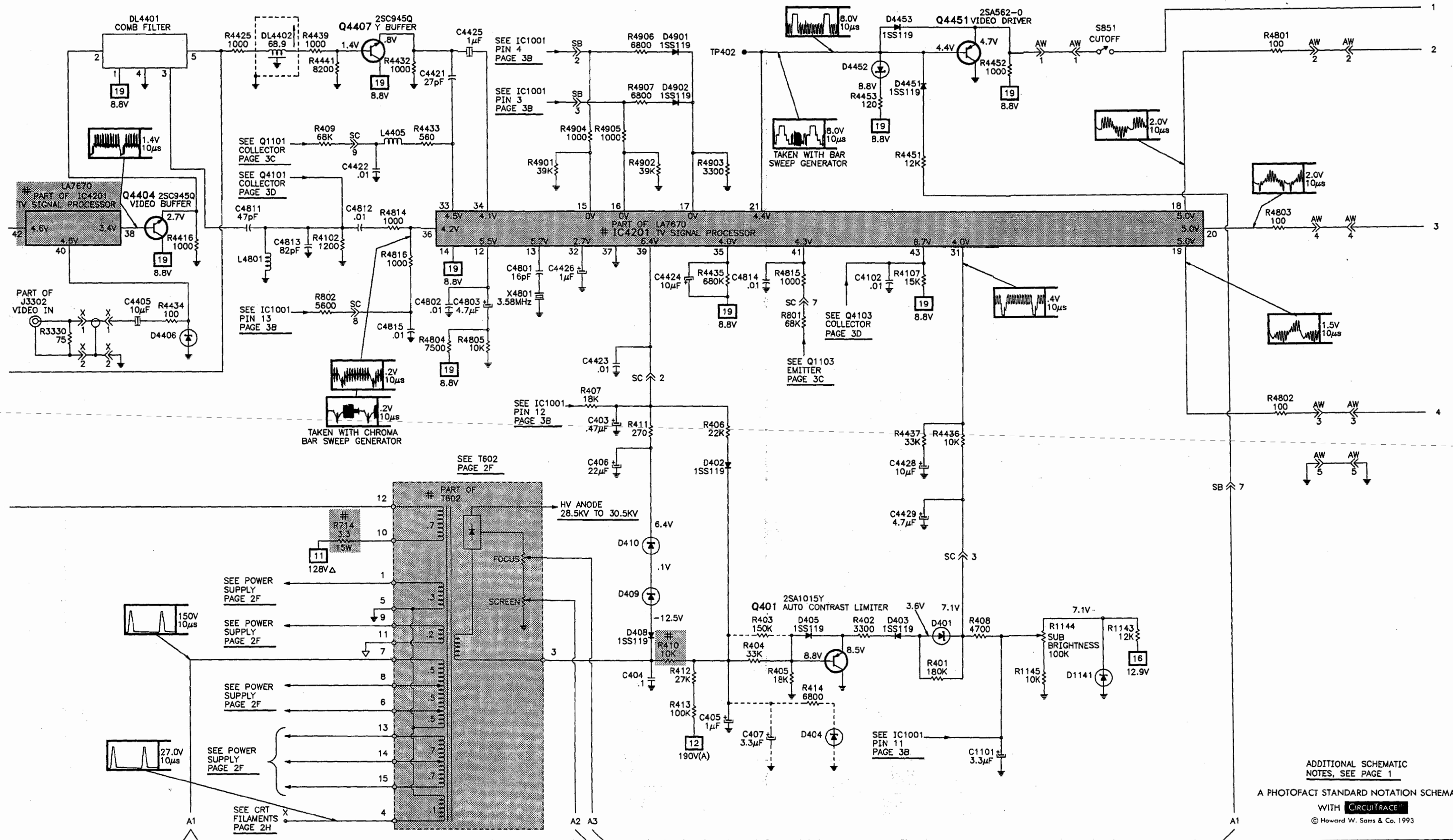
TUNER TERMINAL GUIDE



SCHEMATIC NOTES

- # For SAFETY use only equivalent replacement part, see parts list.
- ✕ Circuitry not used in some sets.
- Circuitry used in some versions.
- ⊥ Ground
- ≡ Chassis ground
- ▽ Common tie point
- △ Taken from common tie point
- 11 Schematic Circuittrace
- A Cabling: Heavy lines reduce use of mutiple lines.

Waveforms and voltages are taken from ground, unless noted otherwise.
Waveforms taken with triggered scope and keyed rainbow generator. Waveform voltage is peak to peak. Timebase is per division. Waveforms shown at 10 divisions.
Supply voltages maintained as seen at input.
Voltages measured with digital meter and no signal.
Controls adjusted for normal operation.
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.
Rated voltage shown on Zener Diodes.



ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 1

A PHOTOFACIT STANDARD NOTATION SCHEMATIC
WITH "CIRCUITACE"

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TROUBLESHOOTING

POWER SUPPLY

Check AC Fuse F701. If F701 is open:
 Check C701 thru C704, C705, C752, C753, D751, and D701 thru D704 for defects.

Apply 120VAC and check for 148V* at the cathode of D704. If missing:
 Check L701, R702 and RY701 for defects.

Check for standby voltage at cathode of D1703. If missing:
 Check D1702, D1703, D760, Q751, D752, D753, and D751.

Check for 128V* at the cathode of D707.
 If voltage is missing:
 Check D707 and IC701.

 If voltage is present:
 Refer to the "Horizontal " section of this Troubleshooting guide.

* Taken from common tie point.

AUDIO

Connect a stereo generator to antenna terminals and check for an MTS signal waveform at pin 1 of IC4201. If the waveform is missing:
 Refer to IF AGC section of this Troubleshooting guide.

Check for an MTS signal at pin 1 of IC3001. If the waveform is missing:
 Check Q4301 and Q3002.

Check for audio waveforms at pins 10 and 11 of IC3001. If the waveforms are missing:
 Check IC3001 and pins 5, 10, and 15 of IC1001.

Check for audio waveforms at pins 3 and 7 of IC3101. If the waveforms are missing:
 Check IC3101.

Check for audio waveforms at pin 5 of IC301 and pin 5 of IC302. If the waveforms are missing:
 Check IC301, IC302, Q301, and Q302.

VIDEO

Inject a video signal at pin 44 of IC4201 and check for video on the CRT. If video is present:
 Refer to the "IF AGC" section of this Troubleshooting guide.

Check for a video waveform at pin 42 of IC4201. If the waveform is missing:
 Check Q4401 thru Q4403.

Check for video at pin 21 of IC4201. If missing:

 Check Q4407, pins 21, 31 thru 36, and 38 thru 42 of IC4201, and Q4451.

Check for video at emitter of Q4451
 If missing:
 Check Q4451 and D4452.

 If present:
 Refer to Raster section of this Troubleshooting guide.

IF AGC

Inject an IF signal at the IF input and check for video on the CRT. If a picture is present on the CRT:
 Check the tuner, tuner AFT, and AGC circuits.

Check for a video waveform at pin 21 of IC4201. If the video waveform is present:
 Refer to the "Video" section of this Troubleshooting guide.

Apply AGC bias to TP201, while monitoring pin 21 of IC4201 with a scope.

 If a video waveform is now present:
 Check pins 2, 8, 9, 10, 50, 51, and 52 of IC4201.

 If a video waveform is still missing:
 Check pins 1 thru 11 of Q4201 , and pins 43 thru 52 of IC4201.

A defective AGC circuit can cause an overloaded picture, excessive snow or loss of audio and video. See the AGC Voltage Chart for AGC voltages with signal.

AGC VOLTAGE CHART

IC4201	Pin 2	6.8V
IC4201	Pin 49	2.3V

CHROMA

Check for a chroma waveform at pin 36 of IC4201. If the waveform is missing:
 Check DL4401 and refer to the "Video " section of this Troubleshooting guide.

Check for proper waveforms at pins 18,19, and 20 of IC4201. If the waveforms are missing:
 Check pins 12 thru 21 and 31 thru 41 of IC4201.

 Check the 3.58MHz oscillator at pins 12 and 13 of IC4201.

 Check the sub color control and pin 36 of IC4201.

If there is inadequate tint range, check the sub tint control and pin 41 of IC4201.

If the proper waveforms are present at pins 18,19, and 20, refer to the "Raster" section of this Troubleshooting guide.

HORIZONTAL

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

If the set is not in shutdown, inject a horizontal signal at the base of Q604.

 If horizontal sweep returns:
 Check pins 22 thru 27 of IC4201, Q601, and Q603.

 If horizontal sweep is still missing:
 Check Q604, T602, D502, D709, D710, and D711.

The high voltage rectifier is part of T602 and may be defective. Poor horizontal linearity or foldover problems any be caused by C606 thru C611, C613, C614, C615, L601, and L602.

HIGH VOLTAGE SHUTDOWN

The high voltage is monitored by D651 rectifying pulses from T602. Should the high voltage increase, the rectified voltage at the cathode of D651 will also increase and trigger the X-Ray protector circuit (Q651 and IC651) into applying a voltage to pin 24 of IC4201 causing the horizontal oscillator to change, and lowering the high voltage.

To troubleshoot, place a jumper between TP655 and ground. Use a variable AC transformer for AC power. Start at 90VAC and increase as necessary to isolate and correct the defect.

NOTE: Care should be taken in defeating the high voltage shutdown circuit, as this may cause excessive x-radiation and damage to the CRT, T602, and associated components.

Voltages Taken with TV in Shutdown

IC4201	Pin 24	.7V
SCR D707	Anode	161V
SCR D707	Cathode	84V
SCR D707	Gate	84V

HIGH VOLTAGE SHUTDOWN TEST

Temporarily short TP654 to TP655. If the set fails to lose horizontal sync, the x-ray protector circuit requires repair.

To return to normal operation, remove the AC power, wait 30 seconds, and restore power.

VERTICAL

Inject a vertical drive signal at pin 2 of IC501.

 If vertical deflection returns:
 Check pins 28 and 29 of IC4201.

 If vertical deflection does not return:
 Check IC501 and the DY601.

Vertical linearity or foldover problems may be caused by vertical feedback and bias circuits. Check C501, C503, C504, C507, C508, and C510.

RASTER

Check the CRT and CRT voltages.

If there is no Red:
 Check pin 18 of IC4201, Q852, and Q851.

If there is no Green:
 Check pin 19 of IC4201, Q854, and Q853.

If there is no Blue:
 Check pin 20 of IC4201, Q856, and Q855.

If the raster has a keystone shape, check DY601.

If the raster has height or width problems, refer to the "Vertical", "Horizontal", or "Power Supply" sections of this Troubleshooting guide.

SERVICE TIP

If the stereo indicator blinks on and off and the sound alternates from stereo to mono install a 680pF capacitor from pin 1 of IC4201 to ground.

ANT/ CABLE ANT TO TUNER

SEE IC1001 PIN 8 PAGE 3B

TUNER NOT INCLUDED IN THIS COVERAGE

IC4201 2SC1906 IF PREAMP

IC4202 SAW FILTER

IC4203 IF PREAMP

IC4204 VIDEO AMP

IC4205 VIDEO BUFFER

IC4206 VIDEO BUFFER

IC4207 VIDEO BUFFER

IC4208 VIDEO BUFFER

IC4209 VIDEO BUFFER

IC4210 VIDEO BUFFER

IC4211 VIDEO BUFFER

IC4212 VIDEO BUFFER

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Q4203 IF PREAMP

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Q4300 VIDEO BUFFER

Q4301 2SC945Q MTS BUFFER

Q4302 2SC945Q MTS BUFFER

Q4303 2SC945Q MTS BUFFER

Q4304 2SC945Q MTS BUFFER

Q4305 2SC945Q MTS BUFFER

Q4306 2SC945Q MTS BUFFER

Q4307 2SC945Q MTS BUFFER

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Q4309 2SC945Q MTS BUFFER

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Q4311 2SC945Q MTS BUFFER

Q4312 2SC945Q MTS BUFFER

Q4313 2SC945Q MTS BUFFER

Q4314 2SC945Q MTS BUFFER

Q4315 2SC945Q MTS BUFFER

Q4316 2SC945Q MTS BUFFER

Q4317 2SC945Q MTS BUFFER

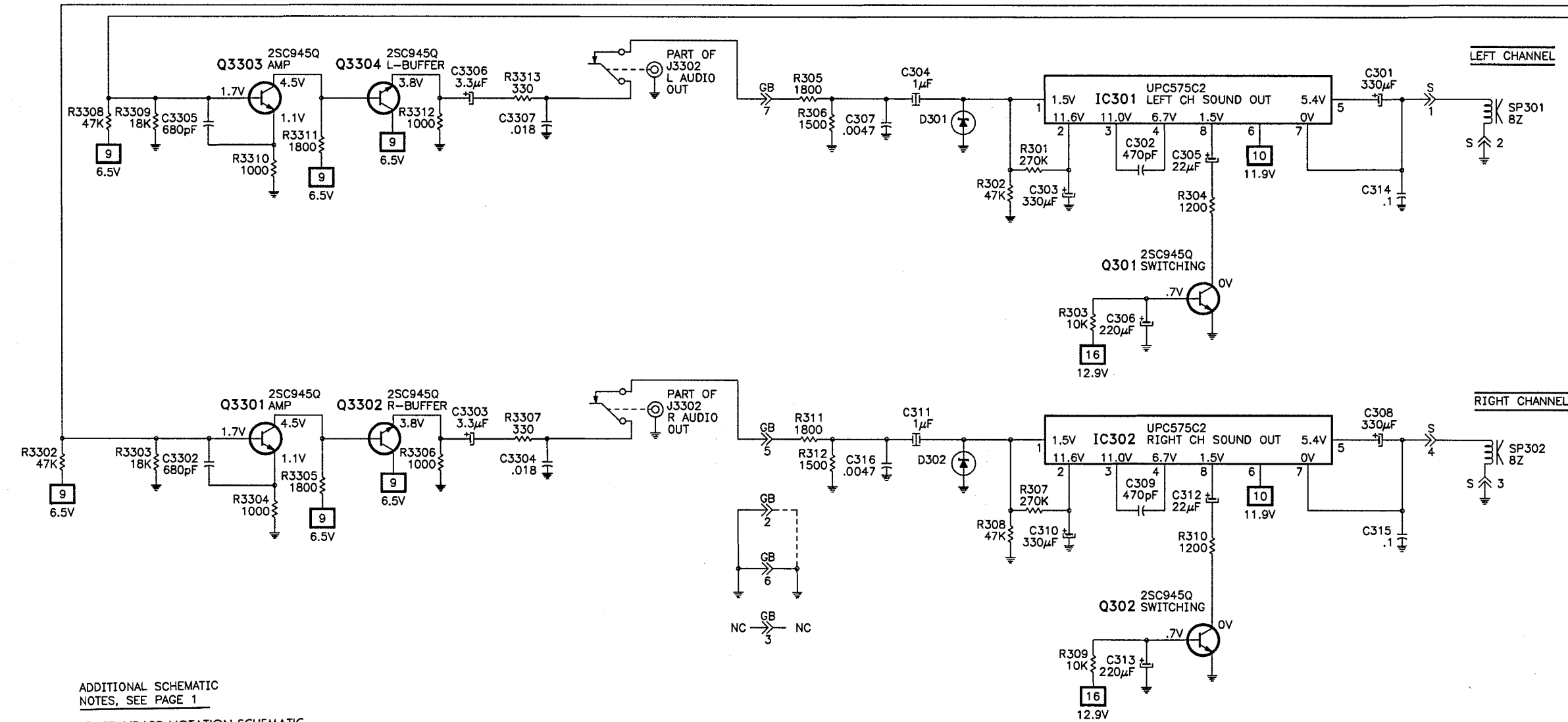
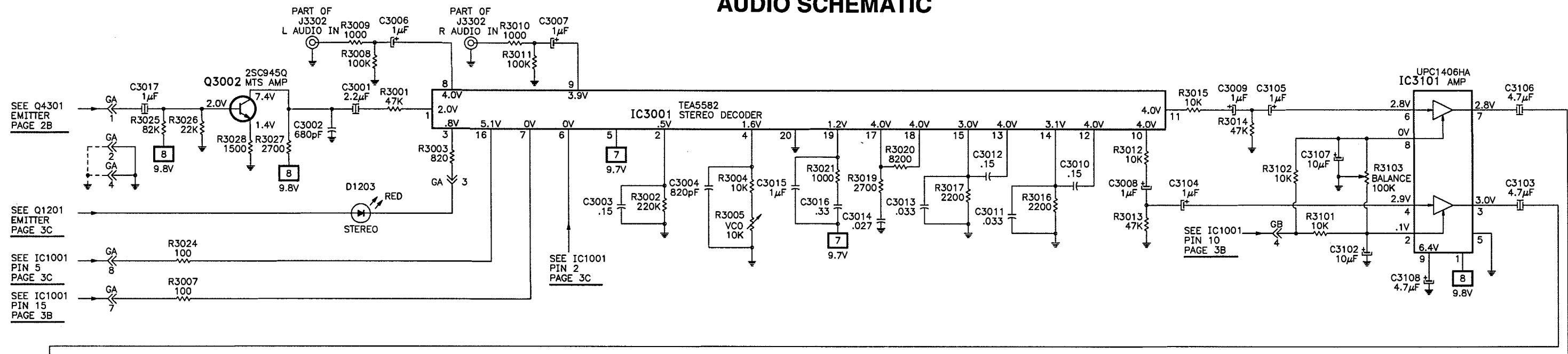
Q4318 2SC945Q MTS BUFFER

Q4319 2SC945Q MTS BUFFER

Q4320 2SC945Q MTS BUFFER

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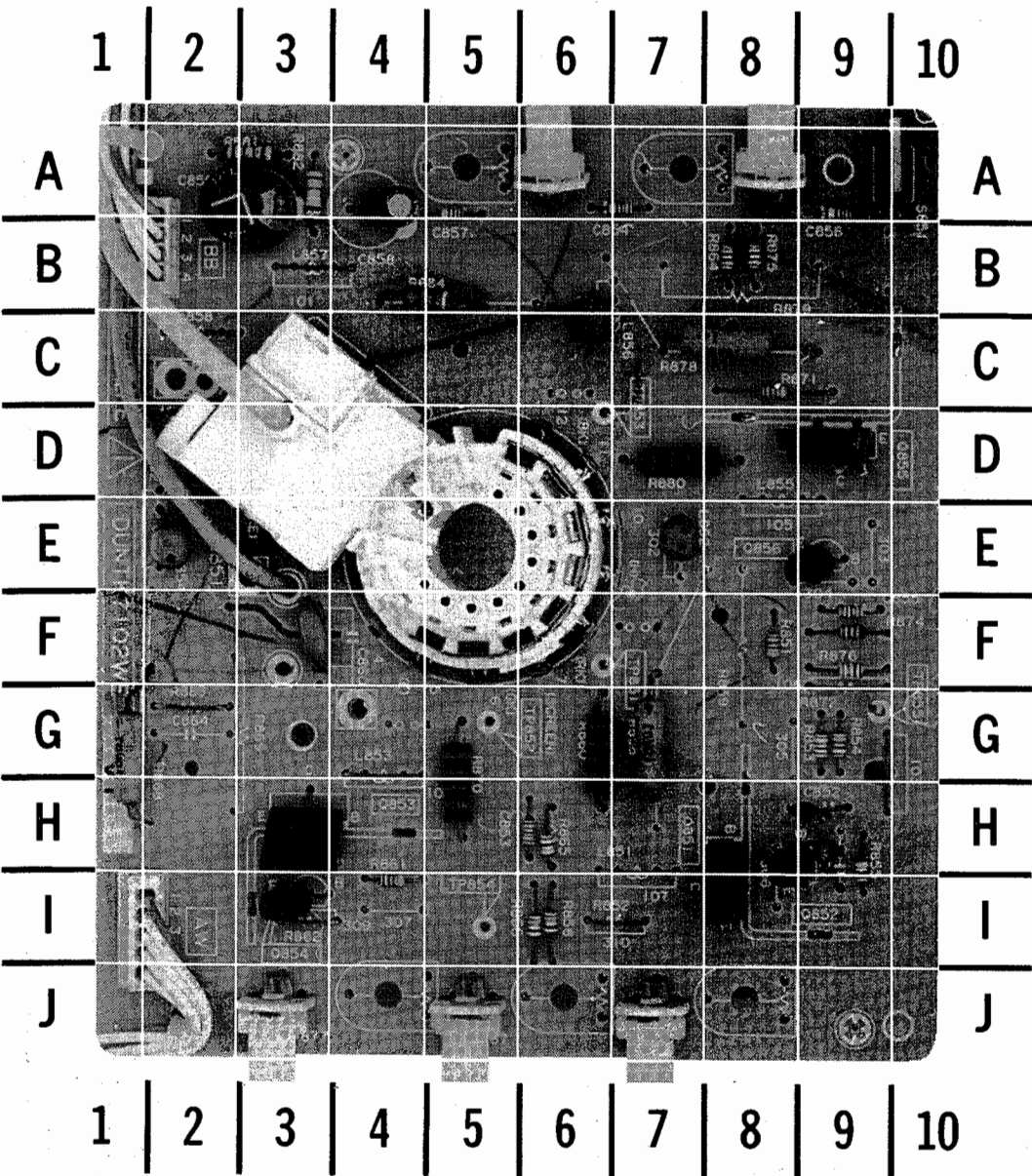
AUDIO SCHEMATIC



ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 1

A PHOTOFAC STANDARD NOTATION SCHEMATIC
WITH **CIRCUITRACE™**
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CRT BOARD

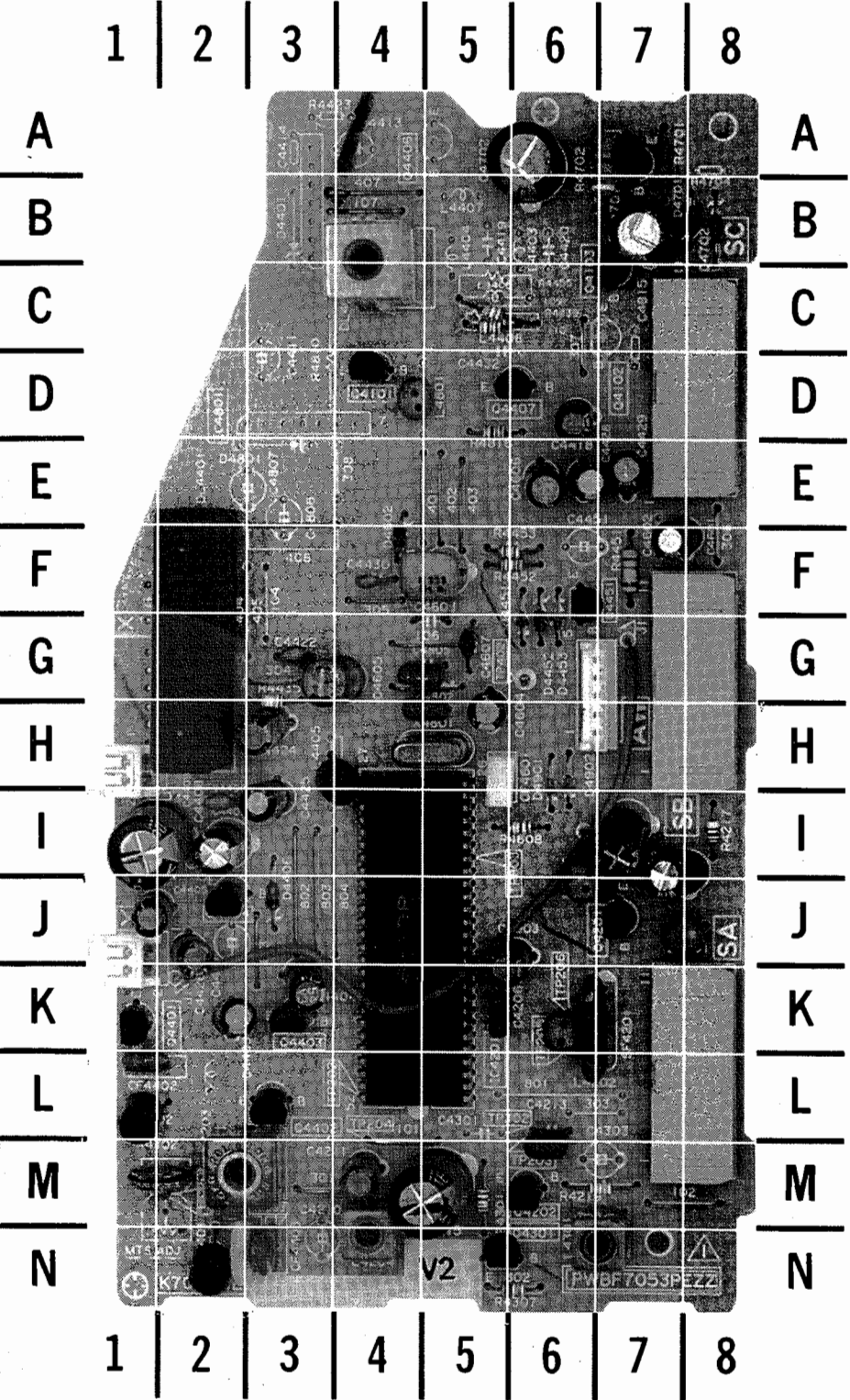


A HOWARD W. SAMS GridTrace™ PHOTO

CRT BOARD,
GRIDTRACE
LOCATION
GUIDE

AW	I-2
BB	A-2
C851	H-9
C852	H-9
C853	H-6
C854	A-7
C855	F-9
C856	A-9
C857	A-5
C858	A-4
C859	A-2
C860	F-3
K851	E-3
K852	C-2
L852	E-7
L854	E-2
L856	C-6
Q851	H-8
Q852	H-8
Q853	H-3
Q854	I-3
Q855	D-9
Q856	E-9
R851	F-8
R853	G-9
R854	G-9
R855	H-9
R856	I-6
R857	J-7
R858	G-7
R860	G-6
R861	I-4
R863	A-6
R864	B-8
R865	H-6
R866	I-6
R867	J-5
R868	G-1
R870	H-5
R871	C-8
R873	A-8
R874	F-9
R875	B-8
R876	F-9
R877	J-3
R878	C-8
R880	D-7
R881	A-3
R882	A-3
R884	B-5
S851	A-10
SC851	E-5

SIGNAL BOARD - TOP VIEW



A HOWARD W. SAMS GridTrace™ PHOTO

SIGNAL BOARD - TOP VIEW,
GRIDTRACE LOCATION GUIDE

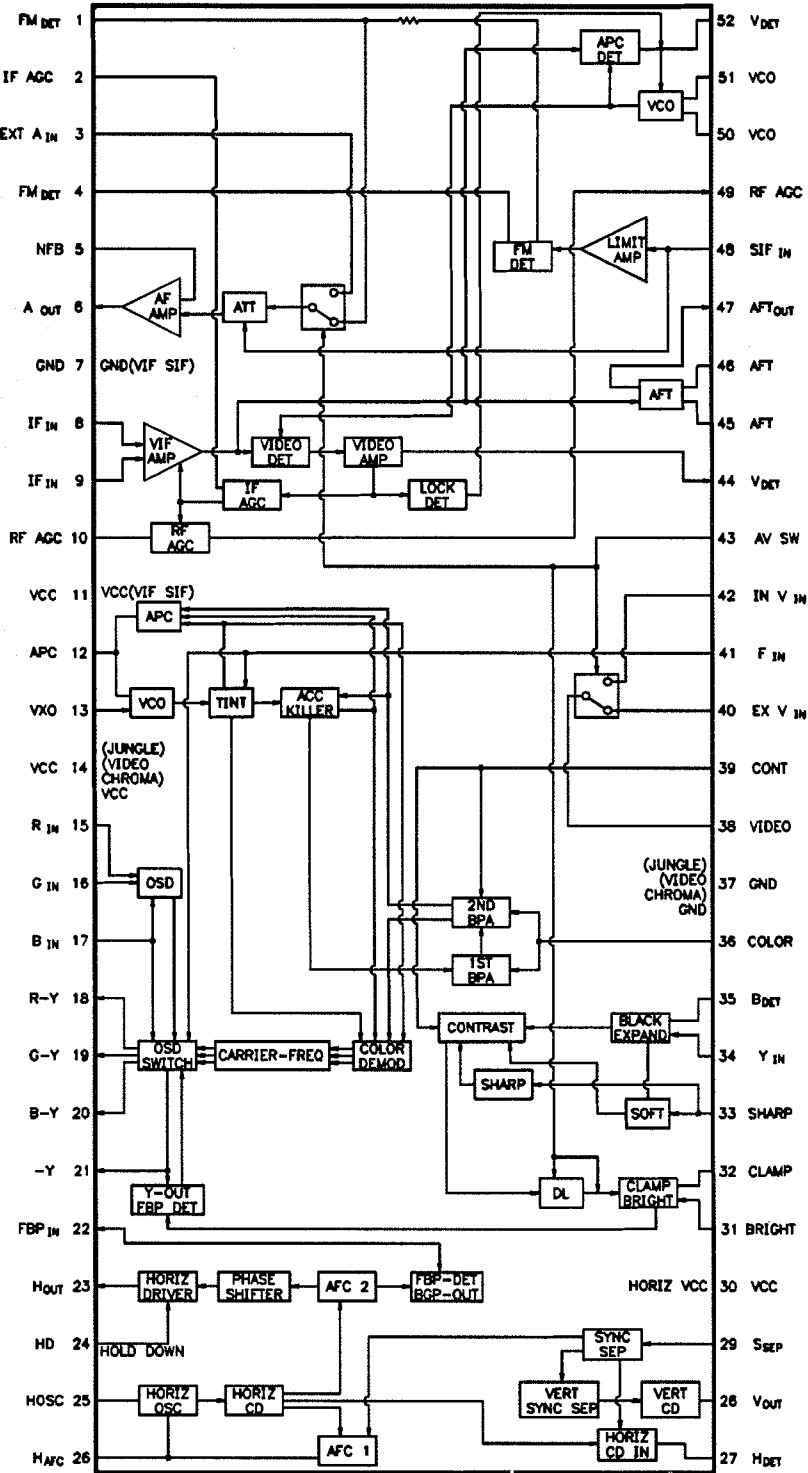
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C4206	K-5	L4401	N-2
C4211	M-4	L4402	L-1
C4212	I-7	L4405	H-4
C4213	M-6	L4801	D-4
C4215	M-5	Q4101	D-4
C4216	I-7	Q4103	C-7
C4403	K-2	Q4201	J-7
C4404	K-3	Q4202	M-6
C4405	J-1	Q4301	N-5
C4406	I-2	Q4401	K-1
C4407	I-2	Q4402	L-3
C4408	I-1	Q4403	K-3
C4418	D-6	Q4404	J-2
C4422	G-3	Q4407	D-6
C4424	H-3	Q4451	F-6
C4425	I-3	Q4701	A-7
C4426	J-2	R4217	I-8
C4428	E-6	R4219	M-7
C4429	E-7	R4301	M-5
C4430	F-4	R4302	M-2
C4601	F-7	R4307	N-6
C4603	F-5	R4435	H-3
C4604	H-5	R4439	C-5
C4605	G-3	R4441	C-5
C4606	E-6	R4451	F-7
C4607	G-5	R4452	F-6
C4701	B-7	R4453	F-6
C4702	A-6	R4608	I-6
C4802	H-5	R4701	A-7
C4803	J-6	R4702	A-7
C4805	G-5	R4816	D-5
CF4401	N-1	SA	M-7
CF4402	L-1	SB	H-7
CF4403	N-3	SC	E-7
CF4601	H-5	SF4201	K-6
D4406	J-3	TP301	M-2
D4451	G-6	TP402	G-6
D4452	G-6	X	H-1
D4453	G-6	X4801	H-5
D4601	G-5	Y	J-1
D4602	F-4		
D4701	B-8		
D4702	B-8		
D4901	H-6		
D4902	H-6		
DL4401	F-2		
DL4402	B-4		
IC4201	L-5		
L4201	J-8		
L4202	K-7		
L4203	M-2		
L4204	N-4		
L4205	J-6		

SHARP

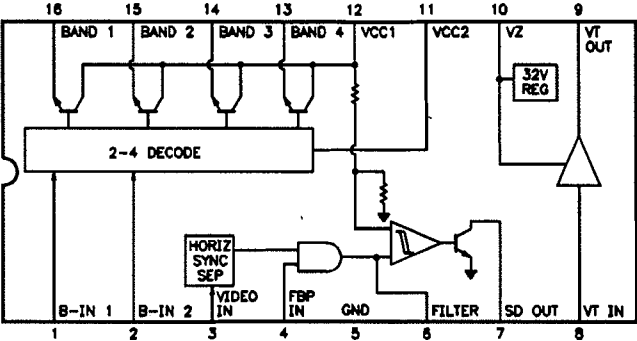
MODEL 27A-S100 (SERIAL NO. 632112 OR GREATER)

IC FUNCTIONS

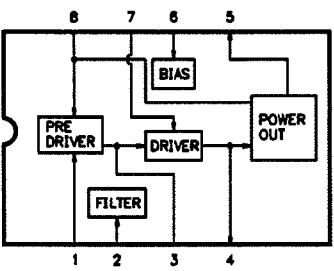
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LA7670



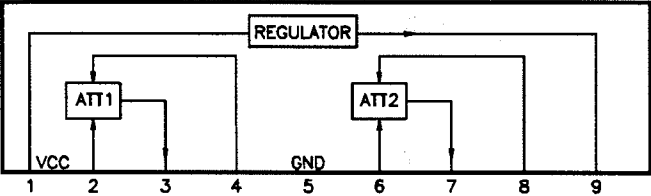
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UPC1486C



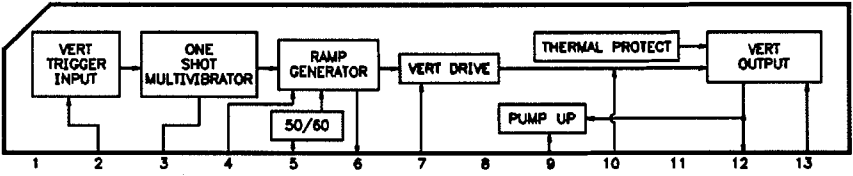
IC301, IC302
UPC575C2



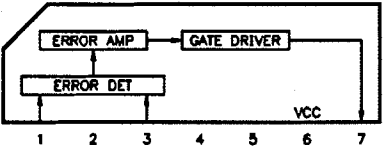
IC3001
TEA5582



IC501
LA7838



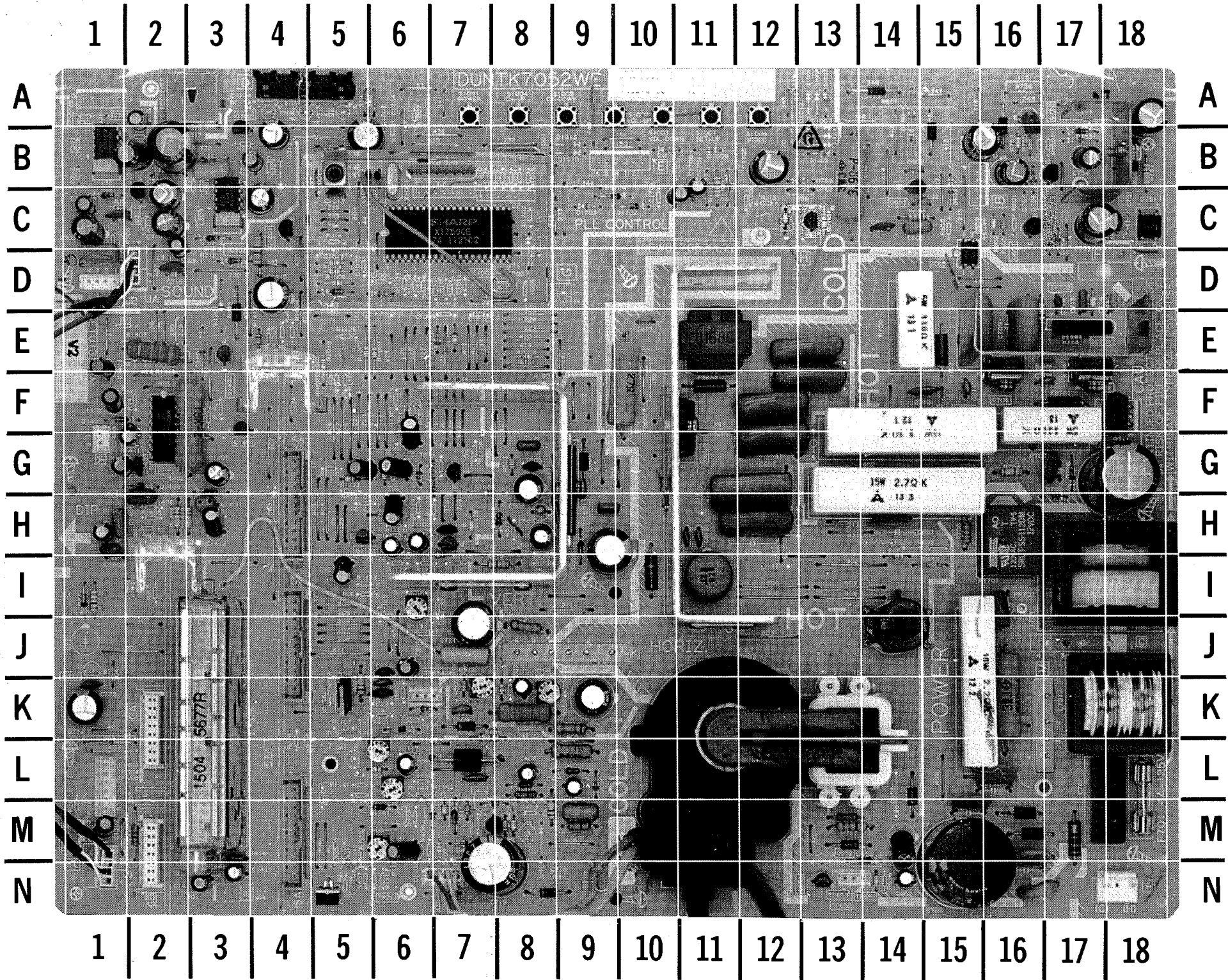
IC701
T8150



SHARP

MODEL 27A-S100 (SERIAL NO. 632112 OR GREATER)

MAIN BOARD - TOP VIEW

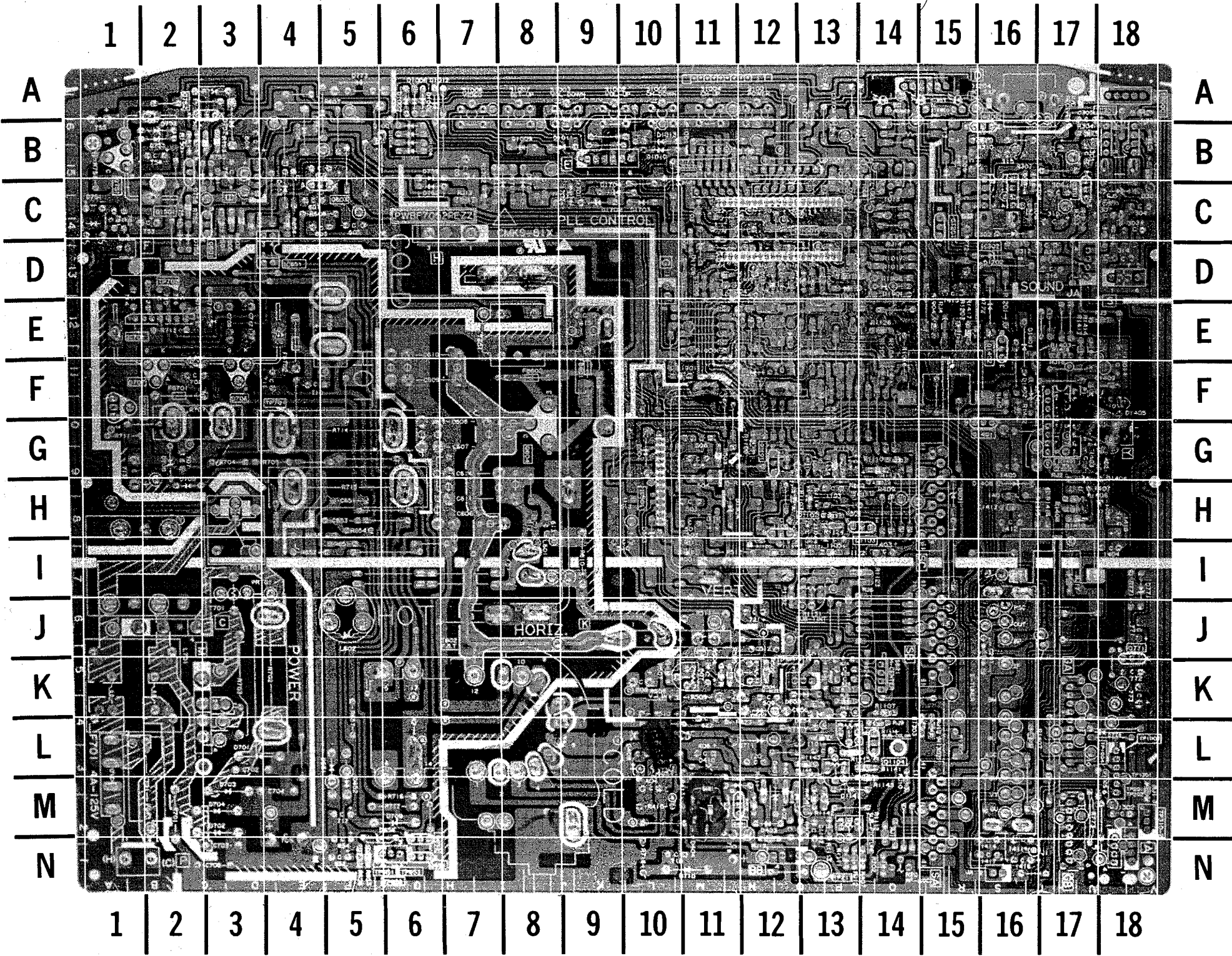


A HOWARD W. SAMS GRIDTRACE™ PHOTO

MAIN BOARD - TOP VIEW, GRIDTRACE LOCATION GUIDE

BB	N-6	C752	C-18	D754	C-17	Q751	B-18	R1008	E-8
C301	B-2	C753	C-17	D756	B-16	Q752	A-16	R1017	D-5
C303	C-1	C754	B-17	D757	B-16	Q753	C-13	R1018	E-5
C304	C-1	C755	A-18	D758	B-15	Q1101	G-7	R1019	D-5
C305	A-2	C756	B-16	D759	B-13	Q1102	H-7	R1112	M-6
C306	C-2	C772	K-1	D760	A-14	Q1103	H-5	R1115	L-6
C307	C-1	C773	K-1	D761	B-16	Q1201	C-4	R1116	L-6
C308	C-4	C1007	B-6	D771	I-1	Q1401	F-3	R1118	H-7
C310	C-2	C1008	B-6	D772	E-3	Q1402	E-3	R1119	H-7
C311	C-2	C1013	C-5	D773	A-14	Q1501	B-17	R1130	G-6
C312	B-4	C1101	L-6	D774	K-1	R/C REC	A-3	R1131	I-6
C313	B-4	C1102	M-6	D1001	D-6	R201	N-5	R1133	G-5
C314	D-1	C1103	I-6	D1003	A-13	R401	M-7	R1144	L-6
C315	B-3	C1104	H-6	D1005	B-13	R404	M-8	R1201	D-3
C316	D-2	C1105	H-6	D1009	B-11	R405	M-8	R1403	E-2
C317	B-2	C1106	G-6	D1010	B-9	R410	M-9	R1404	F-3
C403	I-5	C1107	G-5	D1011	B-10	R411	M-7	R1415	H-2
C404	M-9	C1108	H-7	D1013	B-9	R412	L-8	R1416	H-2
C405	L-9	C1301	G-6	D1141	M-6	R413	M-8	R1417	E-4
C406	L-8	C1302	M-1	D1142	G-6	R502	K-7	R1701	C-11
C501	H-8	C1401	E-1	D1201	E-7	R503	G-8	R1905	G-7
C503	H-8	C1402	G-1	D1202	D-3	R504	K-7	R1906	D-5
C504	G-8	C1403	G-2	D1203	A-4	R505	K-8	RY701	H-16
C505	G-8	C1404	H-1	D1401	E-3	R508	K-8	S	D-1
C506	G-8	C1405	G-3	D1402	F-3	R509	K-8	S621	K-5
C507	K-8	C1406	H-1	D1404	G-2	R510	K-9	S1001	A-7
C508	K-9	C1407	H-2	D1405	F-1	R511	J-8	S1002	A-10
C509	K-7	C1408	G-2	D1406	G-3	R512	I-8	S1003	A-10
C510	H-9	C1410	F-1	D1701	C-11	R602	C-16	S1004	A-8
C512	J-7	C1411	M-3	D1702	C-10	R605	C-16	S1005	A-9
C513	H-9	C1412	H-3	D1703	C-9	R606	C-14	S1006	A-12
C601	C-15	C1414	M-3	D1704	C-9	R608	B-13	S1007	A-11
C602	B-14	C1415	D-4	D1705	C-11	R609	F-10	SA	N-4
C603	C-14	C1416	N-3	D1901	D-5	R610	I-10	SB	K-4
C604	B-16	C1417	N-3	D1904	H-8	R623	K-7	SC	H-4
C605	C-14	C1418	H-1	F701	L-18	R624	K-5	T601	E-11
C606	H-12	C1702	C-11	FB602	F-11	R651	I-14	T602	K-11
C607	G-12	C1703	B-5	FB701	F-17	R652	I-15	T701	I-18
C608	F-12	C1705	B-12	FB702	E-15	R653	N-14	TP201	L-1
C609	F-13	C1706	B-11	GA	K-2	R657	K-14	TP202	M-1
C610	E-13	D301	C-1	GB	M-2	R701	M-17	TP651	N-14
C611	G-12	D302	C-3	H	C-12	R702	K-15	TP652	N-13
C612	H-11	D401	M-7	IC301	B-1	R703	K-16	TP653	N-13
C613	H-11	D402	M-6	IC302	B-3	R704	G-16	TP654	K-6
C615	E-10	D403	M-7	IC501	H-9	R705	G-15	TP655	K-6
C624	J-6	D405	M-8	IC651	D-15	R706	H-15	TP656	K-7
C625	K-6	D408	L-9	IC701	E-18	R707	F-17	TP1003	L-1
C626	K-6	D409	L-9	IC702	F-18	R708	E-16	TP1004	L-1
C651	H-14	D410	L-8	IC1001	D-6	R709	E-14	TP1005	L-1
C652	N-14	D501	G-9	IC1401	F-2	R710	E-16	TP1301	L-1
C655	J-6	D502	K-7	K	J-9	R711	G-18	TUNER	J-3
C701	L-18	D503	H-9	L601	I-11	R712	D-17	X1001	B-6
C702	L-16	D651	L-14	L602	J-14	R713	E-17	Y	G-1
C703	M-16	D653	C-15	L701	K-18	R714	F-14		
C704	M-15	D654	K-6	L1001	B-5	R715	G-14		
C705	N-15	D655	K-6	L1401	H-3	R716	M-13		
C706	N-16	D656	M-14	M	K-17	R717	M-13		
C707	G-17	D701	L-16	MP1001	B-8	R718	N-9		
C708	F-17	D702	M-16	MP1002	B-7	R720	L-9		
C709	E-16	D703	M-16	P	N-18	R751	B-18		
C710	F-15	D704	M-16	P651	N-14	R753	B-16		
C711	F-15	D705	H-17	P654	K-6	R755	B-16		
C712	E-16	D706	G-17	P1001	L-1	R757	C-13		
C713	G-18	D707	E-17	PR701	I-16	R758	C-12		
C714	D-18	D708	E-16	Q301	C-2	R759	C-13		
C715	D-17	D709	M-13	Q302	B-3	R771	I-1		
C716	D-17	D710	N-8	Q401	M-8	R772	C-4		
C717	M-14	D711	L-7	Q601	C-16	R773	M-2		
C719	N-7	D751	C-18	Q603	C-14	R1001	E-6		
C720	L-7	D752	B-17	Q604	G-11	R1002	E-5		
C721	J-7	D753	B-17	Q651	N-13	R1005	E-7		

MAIN BOARD - BOTTOM VIEW



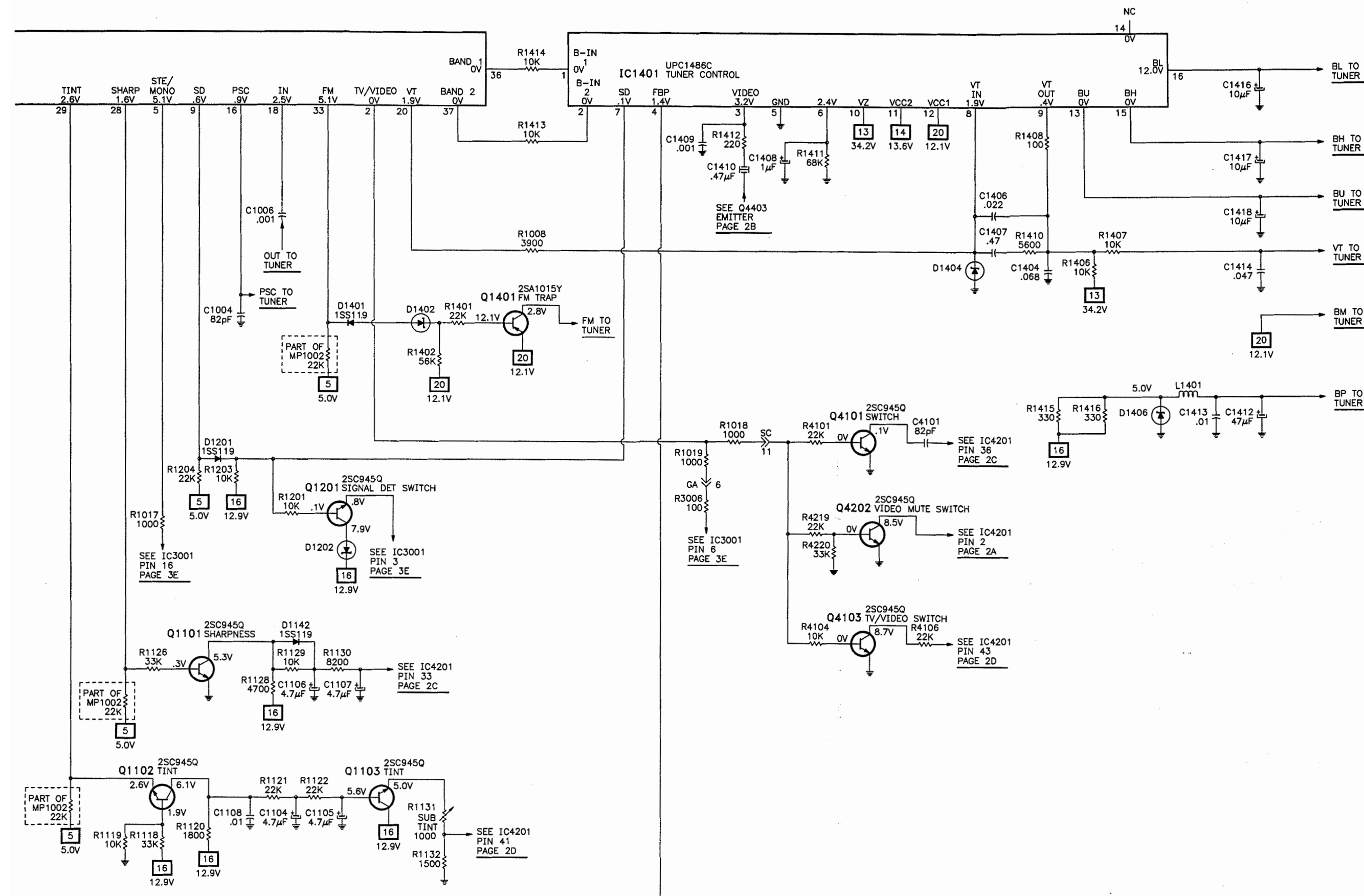
MAIN BOARD - BOTTOM VIEW,
GRIDTRACE LOCATION GUIDE

C201	J-16	R1007	A-13
C302	B-18	R1009	B-12
C309	C-16	R1010	B-12
C407	L-10	R1011	B-11
C502	I-11	R1012	B-11
C656	K-13	R1013	B-11
C1001	D-13	R1014	B-11
C1002	D-14	R1015	B-11
C1004	D-11	R1101	D-12
C1005	D-11	R1102	D-12
C1006	D-11	R1103	H-12
C1009	E-12	R1104	F-14
C1010	D-12	R1105	F-14
C1011	D-12	R1106	G-12
C1012	E-12	R1107	K-14
C1409	F-18	R1110	G-14
C1413	H-16	R1111	N-13
C1419	G-18	R1113	M-13
C1701	C-9	R1114	H-13
C1704	B-13	R1117	L-13
D404	M-11	R1120	I-12
L1402	G-18	R1121	I-13
R202	N-14	R1122	I-13
R301	B-18	R1126	E-14
R302	A-18	R1128	G-12
R303	C-17	R1129	G-13
R304	B-17	R1132	I-12
R305	C-18	R1143	L-13
R306	C-18	R1145	L-14
R307	C-16	R1203	E-15
R308	C-16	R1204	D-13
R309	B-15	R1301	F-13
R310	B-16	R1401	F-16
R311	D-17	R1402	F-16
R312	D-16	R1406	H-17
R402	M-12	R1407	L-16
R403	M-11	R1408	H-17
R406	M-13	R1410	H-17
R407	N-14	R1411	G-17
R408	M-13	R1412	F-17
R409	H-14	R1413	E-17
R414	M-11	R1414	E-17
R501	I-11	R1501	B-2
R506	K-11	R1502	B-2
R507	K-10	R1702	C-7
R513	H-11	R1703	C-11
R658	C-4	R1901	F-11
R659	C-3	R1904	E-15
R660	K-13		
R661	K-13		
R801	H-13		
R802	H-14		
R1004	D-13		
R1006	D-11		

SYSTEM CONTROL SCHEMATIC continued

C

D



TUNER NOT INCLUDED
IN THIS COVERAGE

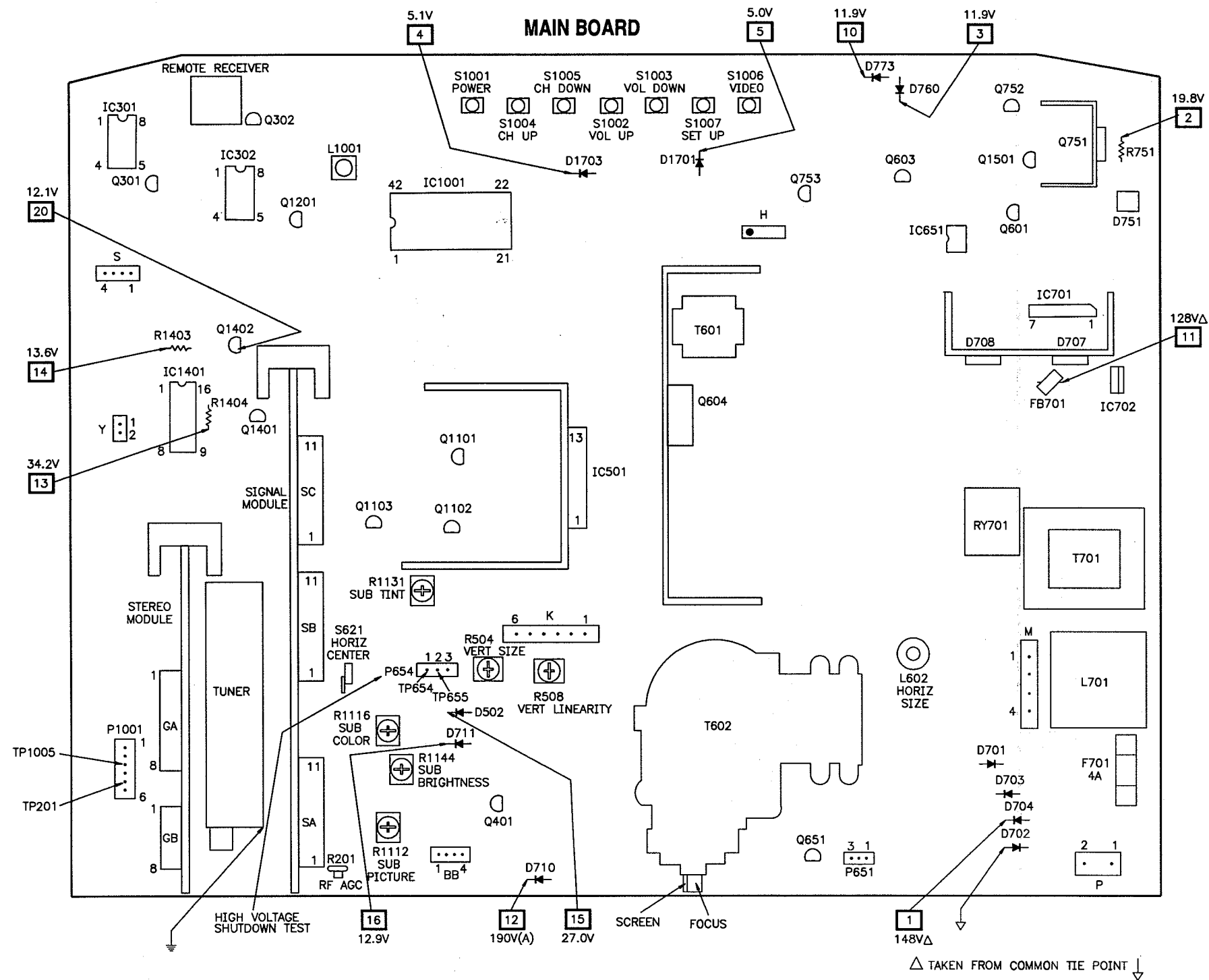
ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 1

A PHOTOFAC STANDARD NOTATION SCHEMATIC

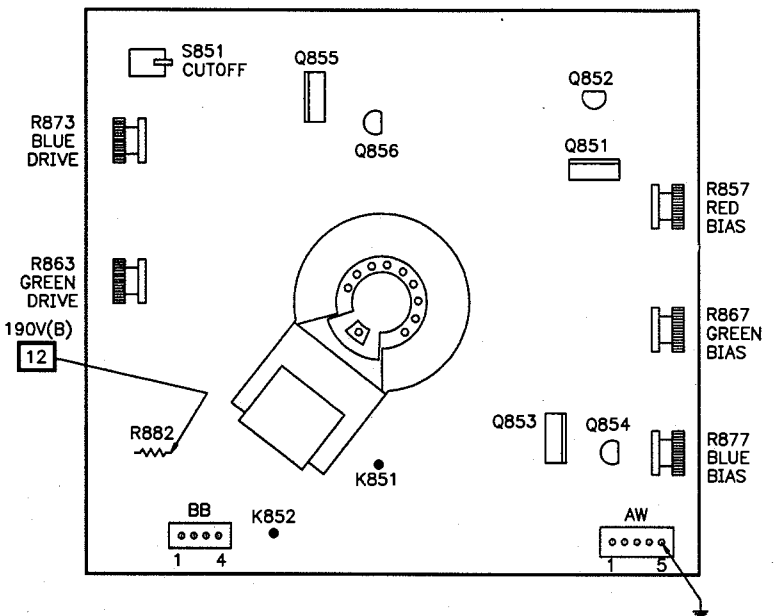
WITH CIRCUITTRACE

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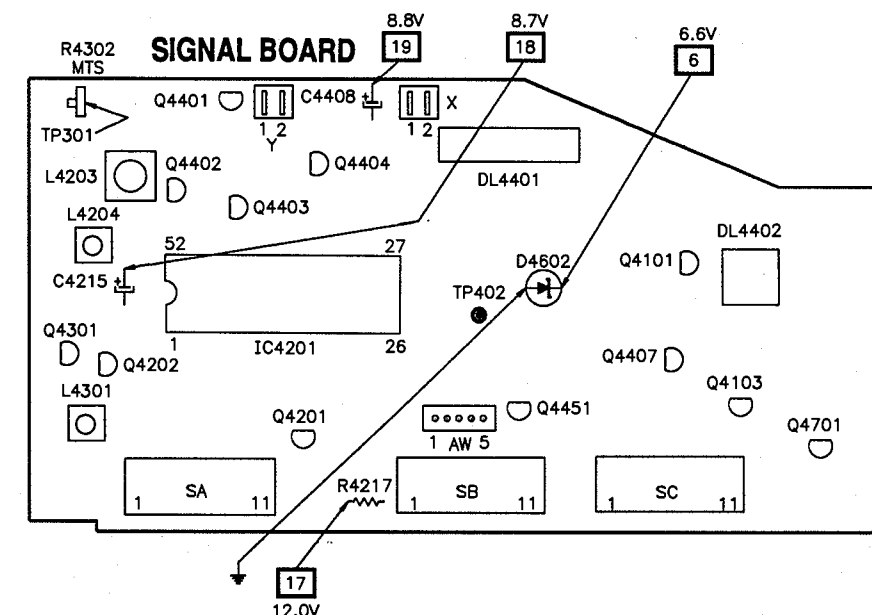
PLACEMENT CHART



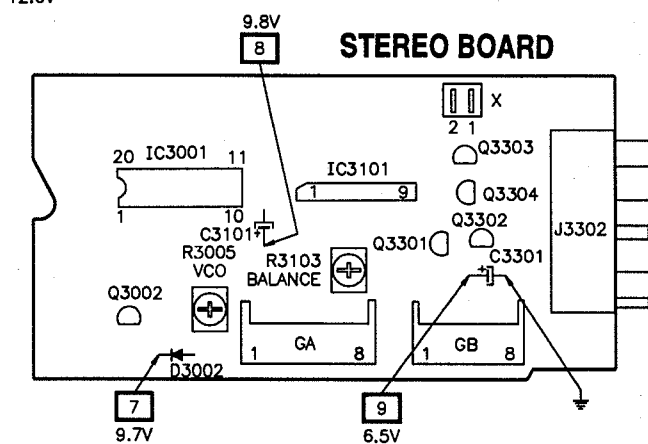
CRT BOARD



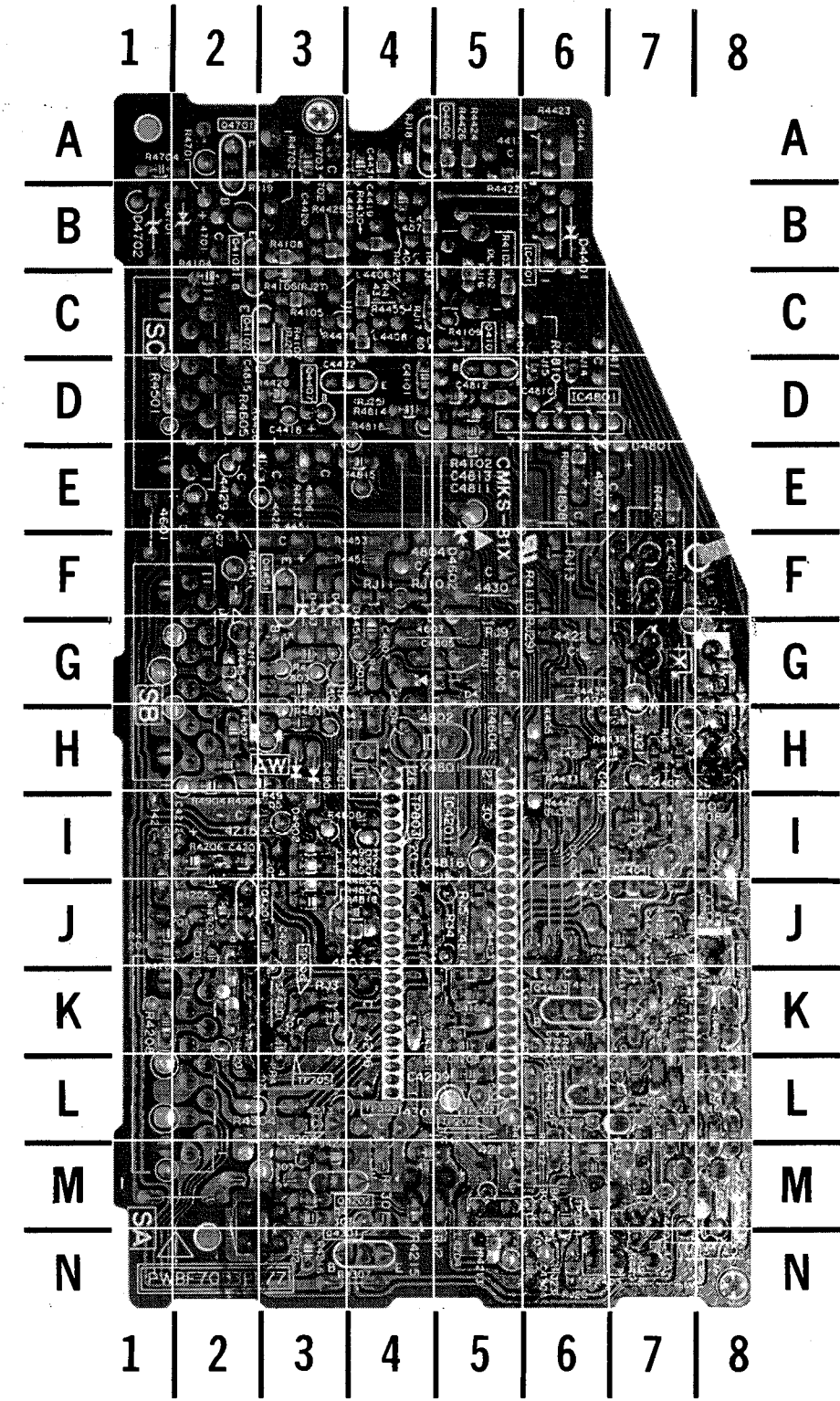
SIGNAL BOARD



STEREO BOARD



SIGNAL BOARD - BOTTOM VIEW

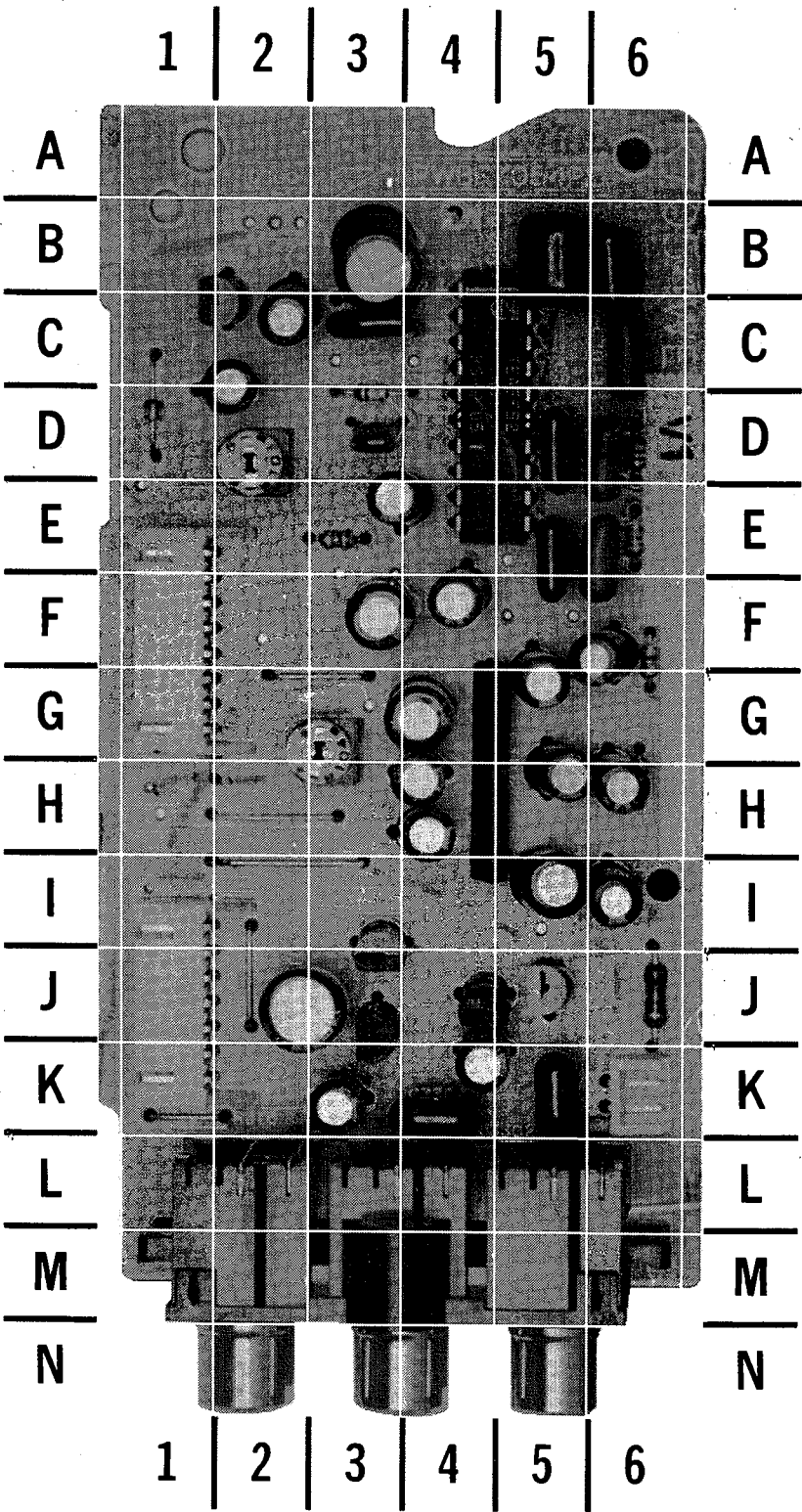


SIGNAL BOARD - BOTTOM VIEW,
GRIDTRACE LOCATION GUIDE

C4101	D-4	R4407	K-7
C4102	K-5	R4408	L-7
C4201	J-2	R4409	K-7
C4202	J-3	R4410	K-7
C4203	I-2	R4411	K-7
C4204	I-1	R4412	L-6
C4205	K-3	R4413	L-6
C4207	M-6	R4414	J-7
C4208	K-5	R4416	I-7
C4209	L-5	R4425	B-4
C4214	K-5	R4427	A-4
C4302	M-3	R4428	D-3
C4304	N-6	R4432	H-7
C4401	L-7	R4433	H-6
C4402	L-7	R4434	J-7
C4409	I-8	R4436	E-3
C4421	H-6	R4437	E-3
C4423	J-5	R4501	D-1
C4602	F-2	R4601	G-4
C4801	J-4	R4603	G-4
C4811	E-5	R4604	H-5
C4812	D-5	R4605	D-2
C4813	D-5	R4703	A-3
C4814	K-5	R4704	A-1
C4815	C-2	R4801	H-3
C4816	I-5	R4802	G-3
R4101	C-5	R4803	G-3
R4102	D-5	R4804	J-4
R4104	C-2	R4805	J-3
R4106	C-3	R4814	D-4
R4107	C-3	R4815	E-4
R4202	J-1	R4901	J-3
R4203	J-2	R4902	I-3
R4204	J-1	R4903	I-3
R4205	J-2	R4904	H-2
R4206	I-2	R4905	H-3
R4207	K-3	R4906	H-2
R4208	K-1	R4907	H-2
R4209	M-6		
R4212	M-6		
R4214	M-4		
R4215	M-4		
R4216	N-3		
R4218	L-6		
R4220	M-3		
R4303	M-3		
R4306	M-6		
R4401	N-7		
R4402	L-8		
R4403	L-7		
R4404	L-8		
R4405	K-7		
R4406	K-7		

A HOWARD W. SAMS GRIDTRACE™ PHOTO

STEREO BOARD - TOP VIEW



STEREO BOARD - TOP
VIEW,
GRIDTRACE
LOCATION
GUIDE

C3001	C-2
C3003	C-3
C3004	D-3
C3005	B-3
C3006	E-3
C3007	F-4
C3008	G-5
C3009	F-6
C3010	E-5
C3011	E-6
C3012	D-5
C3013	D-6
C3014	C-6
C3015	B-5
C3016	B-6
C3017	D-2
C3101	F-3
C3102	H-5
C3103	G-4
C3104	H-6
C3105	I-6
C3106	I-5
C3107	H-4
C3108	H-4
C3301	J-2
C3303	K-3
C3304	K-4
C3306	K-4
C3307	K-5
D3002	D-1
GA	E-1
GB	I-1
IC3001	B-4
IC3101	G-4
J3302	M-5
Q3002	C-2
Q3301	I-4
Q3302	K-3
Q3303	J-5
Q3304	J-5
R3002	C-3
R3004	D-3
R3005	D-2
R3009	E-3
R3013	H-6
R3014	F-6
R3016	E-6
R3017	D-6
R3103	G-3
R3330	J-6
X	K-6

A HOWARD W. SAMS GRIDTRACE™ PHOTO

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.
D1401	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
	1N4148	RH-DX0045GEZZ	NTE519	ECG519	SK3100
D1402	-	RH-EX0154CEZZ	NTE5015A	ECG5015A	-
D1404	-	RH-EX0161CEZZ	NTE5015A	ECG5015A	SK7A5
D1405	-	RH-EX0193CEZZ	NTE5020A	ECG5020A	SK11A
D1406	-	RH-EX0131CEZZ	NTE5010A	ECG5010A	SK5A1
D1701	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
	1N4148	RH-DX0045GEZZ	NTE519	ECG519	SK3100
D1702	-	RH-EX0103CEZZ	NTE5011A	ECG5011A	SK5A6
D1703	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
	1N4148	RH-DX0045GEZZ	NTE519	ECG519	SK3100
D1704	-	RH-EX0103CEZZ	NTE5011A	ECG5011A	SK5A6
D1705	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
	1N4148	RH-DX0045GEZZ	NTE519	ECG519	SK3100
D1901	-	RH-EX0131CEZZ	NTE5010A	ECG5010A	SK5A1
D1904	-	RH-EX0048CEZZ	NTE5013A	ECG5013A	SK6A2
D3002	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
D4406	-	RH-EX0041TAZZ	NTE5014A	ECG5014A	SK6A8
D4451	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
D4452	-	RH-EX0161CEZZ	NTE5015A	ECG5015A	SK7A5
D4453	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
D4601	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
D4602	-	RH-EX0116GEZZ	NTE5014A	ECG5014A	SK6A8
D4701, 02	-	RH-EX0131CEZZ	NTE5010A	ECG5010A	SK5A1
D4901, 02	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
IC301, 02	UPC575C2	RH- iX0054CEZZ	NTE1140	ECG1140	SK3473
# IC501	LA7838	VH iLA7838//-1	NTE7039	ECG7039	-
# IC651	PC817	RH-FX0007CEZZ	NTE3098	ECG3098	SK9763
# IC701	T8150	RH- iX0758CEZZ	-	-	-
# IC702	T8889A	VH iT8889A//-1	-	-	-
IC1001	M50442-674SP	RH- iX1750CEZZ	-	-	-
IC1401	UPC1486C	VH iUPC1486C-1	NTE15042	ECG7019	SK10488
IC3001	TEA5582	VH iTEA5582/-1	-	-	-
IC3101	UPC1406HA	VH iUPC1406HA1	NTE1792	ECG1792	SK9877
# IC4201	LA7670	RH- iX1705CEZZ	NTE7054	ECG7054	-
Q301, 02	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A
Q401	2SA1015(Y)	VS2SA1015Y/1E	NTE290A	ECG290A	SK9132
Q601	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A
Q603	2SC2655(Y)	VS2SC2655Y/-1	NTE293	ECG293	SK3849
# Q604	2SD2125	VS2SD2125//1E	NTE2331	ECG2331	SK10088
Q651	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A
Q751	2SC1983	VS2SC1983//-2	NTE56	ECG56	SK3929
Q752	2SA1013	VS2SA1013//1E	NTE32	ECG32	SK3867A
Q753	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
Q851	2SC4544	VS2SC4544LB2E	-	-	-
Q852	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
Q853	2SC4544	VS2SC4544LB2E	-	-	-
Q854	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
Q855	2SC4544	VS2SC4544LB2E	-	-	-

For SAFETY use only equivalent replacement part.

SEMICONDUCTORS continued

(Select replacement for best results.)

Item No.	Type No.	Mfr. Part No.	NTE Part No.	ECG Part No.	TCE Part No.
Q856	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
Q1101, 02, 03	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A
Q1201	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A
Q1401	2SA1015(Y)	VS2SA1015Y/1E	NTE290A	ECG290A	SK9132
Q1402	2SC2236(Y)	VS2SC2236Y/-1	NTE382	ECG382	SK3849
Q1501	2SC945A(P)	VS2SC945AP/-1	NTE85	ECG85	SK3124A
	2SC1815(GR)	VS2SC1815GW-1	NTE85	ECG85	SK3124A
Q3002	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A
Q3301 Thru					
Q3304	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A
Q4101, 03	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A
Q4201	2SC1906	VS2SC1906//1E	NTE107	ECG107	SK3293
Q4202	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A
Q4301	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A
Q4401 Thru					
Q4404	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A
Q4407	2SC945A(Q)	VS2SC945AQ/-1	NTE85	ECG85	SK3124A
	2SC1815(Y)	VS2SC1815YW-1	NTE85	ECG85	SK3124A
Q4451	2SA562T(O)	VS2SA562TO/-1	NTE290A	ECG290A	SK3114A
	2SA854(Q)	VS2SA854-Q/1E	NTE290A	ECG290A	SK3841
Q4701	2SC2236(Y)	VS2SC2236Y/-1	NTE382	ECG382	SK3849

CAPACITORS & ELECTROLYTICS

Item No.	Rating	Mfr. Part No.
C304	1µF 50V NP	VCE9AA1HW105M
C311	1µF 50V NP	VCE9AA1HW105M
C503	1µF 16V Tantalum	VCSATA1CE105K
C505	10pF NPO	-
# C606	.0033 5% 1.6KV	VCFFPC3CA332J
# C607	.0033 5% 1.6KV	VCFFPC3CA332J
# C608	.0033 5% 1.6KV	VCFFPC3CA332J
# C609	.0033 5% 1.6KV	VCFFPC3CA332J
# C610	.0033 5% 1.6KV	VCFFPC3CA332J
# C615	220pF 10% 500V	VCKYPA2HB221K
# C701	.1 250VAC	RC-QZ026DCEZZ
# C705	820µF 200V	RC-EZ0334CEZZ
# C706	.0033 250VAC	RC-KZ0030CEZZ
# C713	220µF 160V	RC-EZ0069CEZZ
# C715	.01 10% 50V	VCQYSH1HM103K
# C719	47µF 250V	VCEAAA2EW476M
C860	.01 1.4KV	RC-KZ0016CEZZ
C1007	22pF NPO	-
C1008	22pF NPO	-
C1013	68pF NPO	-
C1302	3.3µF 50V NP	VCE9AA1HW335M
C1410	.47µF 50V NP	VCE9AA1HW474M
C3001	2.2µF 50V NP	VCE9AA1HW225M
C3017	1µF 50V NP	VCE9AA1HW105M
C3103	4.7µF 50V NP	VCE9AA1HW475M
C3106	4.7µF 50V NP	VCE9AA1HW475M
C4405	10µF 16V NP	VCE9AA1CW106M
C4425	1µF 50V NP	VCE9AA1HW105M
C7001	330pF 2KV	RC-KZ0036CEZZ

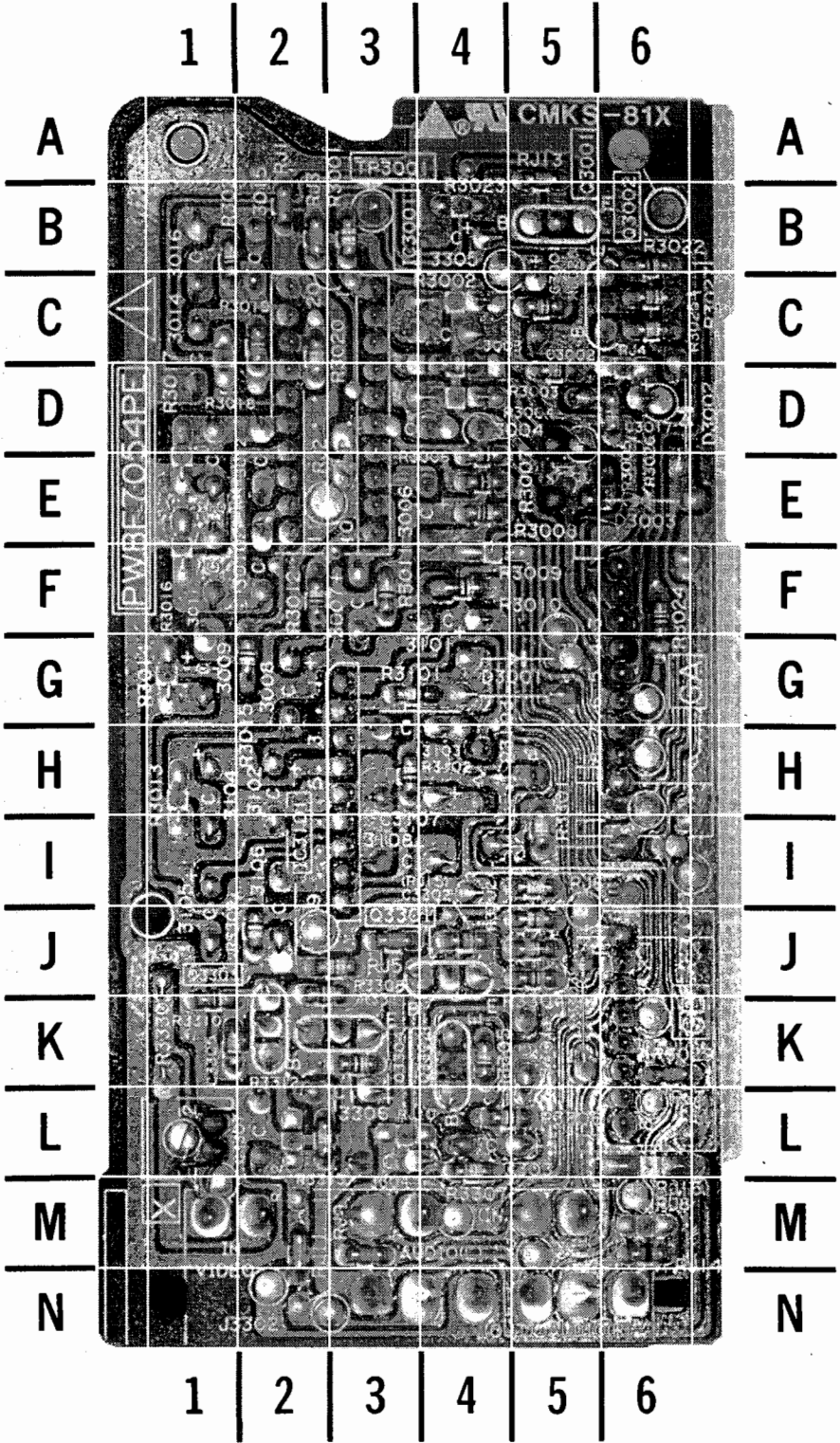
For SAFETY use only equivalent replacement part.



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STEREO BOARD - BOTTOM VIEW



STEREO BOARD - BOTTOM VIEW, GRIDTRACE LOCATION GUIDE

C3002	D-5
C3302	J-4
C3305	K-1
R3001	B-3
R3003	D-4
R3006	E-4
R3007	E-4
R3008	E-4
R3010	F-4
R3011	F-3
R3012	F-2
R3015	G-2
R3019	C-2
R3020	C-2
R3021	B-1
R3022	B-6
R3024	F-6
R3025	C-6
R3026	D-6
R3027	C-6
R3028	C-5
R3101	G-3
R3102	H-3
R3301	I-5
R3302	J-5
R3303	J-5
R3304	J-5
R3305	K-4
R3306	L-5
R3307	L-4
R3308	J-3
R3309	J-2
R3310	K-1
R3311	J-2
R3312	K-3
R3313	L-2

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)
- Sencore, Inc.
- Thomson Consumer Electronics, Inc. (SK, TCE)

PARTS LIST

SEMICONDUCTORS

(Select replacement for best results.)

Item No.	Type No.	Mfr. Part No.	NTE Part No.	ECG Part No.	TCE Part No.
D301, 02	-	RH-EX0200CEZZ	NTE5021A	ECG5021A	SK12A
	-	RH-EX0047CEZZ	NTE5021T1	ECG5021T1	SK9971
D401	-	RH-EX0145CEZZ	-	-	-
D402, 03	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
	1N4148	RH-DX0045GEZZ	NTE519	ECG519	SK3100
D404	-	RH-EX0103CEZZ	NTE5011A	ECG5011A	SK5A6
D405, 08	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
	1N4148	RH-DX0045GEZZ	NTE519	ECG519	SK3100
D409, 10	-	RH-EX0217CEZZ	NTE5023A	ECG5023A	SK14A
D501	S5277G	RH-DX0110CEZZ	NTE116	ECG116	SK3312
# D502	TVR1J	RH-DX0105TAZZ	NTE552	ECG552	SK9000
D503	-	RH-EX0021TAZZ	NTE5020A	ECG5020A	SK11A
D651	TVR1J	RH-DX0126CEZZ	NTE552	ECG552	SK9000
# D653, 55	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
	1N4148	RH-DX0045GEZZ	NTE519	ECG519	SK3100
# D654	-	RH-EX0413GEZZ	-	-	-
D656	-	RH-EX0131CEZZ	NTE5010A	ECG5010A	SK5A1
# D701 Thru					
# D704	1S1887A	RH-DX0154CEZZ	NTE552	ECG552	SK9000
D705	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
	1N4148	RH-DX0045GEZZ	NTE519	ECG519	SK3100
# D706	-	RH-EX0084CEZZ	NTE5093A	ECG5093A	SK75V
# D707, 08	S6785G	VHSS6785GLBIE	-	-	-
# D709, 10	TVR1G	RH-DX0126CEZZ	NTE552	ECG552	SK9000
# D711	-	RH-DX0229CEZZ	NTE506	ECG506	SK3925
# D751	1D4B42	RH-DX0200CEZZ	NTE5332	ECG5332	SK9232
D752	-	RH-EX0002AEZZ	NTE5021T1	ECG5021T1	-
D753, 54, 56	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
	1N4148	RH-DX0045GEZZ	NTE519	ECG519	SK3100
D757, 58	S5277G	RH-DX0110CEZZ	NTE116	ECG116	SK3312
D759 Thru					
D761	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
	1N4148	RH-DX0045GEZZ	NTE519	ECG519	SK3100
D771	-	RH-EX0021TAZZ	NTE5020A	ECG5020A	SK11A
# D772	S5277G	RH-DX0110CEZZ	NTE116	ECG116	SK3312
D773	S5277G	RH-DX0110CEZZ	NTE116	ECG116	SK3312
D774	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
	1N4148	RH-DX0045GEZZ	NTE519	ECG519	SK3100
D1001, 03, 05	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
	1N4148	RH-DX0045GEZZ	NTE519	ECG519	SK3100
D1009 Thru					
D1011	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
	1N4148	RH-DX0045GEZZ	NTE519	ECG519	SK3100
D1013	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
	1N4148	RH-DX0045GEZZ	NTE519	ECG519	SK3100
D1141	-	RH-EX0088CEZZ	NTE5014A	ECG5014A	SK6A8
D1142	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
	1N4148	RH-DX0045GEZZ	NTE519	ECG519	SK3100
D1201	1SS119	VHD1SS119//-1	NTE519	ECG519	SK3100
	1N4148	RH-DX0045GEZZ	NTE519	ECG519	SK3100
D1202	-	RH-EX0048CEZZ	NTE5013A	ECG5013A	SK6A2
D1203	-	RH-PX0265CEZZ	-	-	-

For SAFETY use only equivalent replacement part.

SHARP

MODEL 27A-S100 (SERIAL NO. 632112 OR GREATER)

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PARTS LIST continued

CONTROLS & RESISTORS

Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
MP1001	22K x 4 Network	RMPTC0010GEZZ	-
MP1002	22K x 7 Network	RMPTC0059CEZZ	-
# PR701	12.4 Cold PTC	RMPTP0026CEZZ	-
R201	10K RF AGC	RVR-B5328CEZZ	-
# R410	10K 1/2W 5%	VRS-SV2HC103J	HW310
R504	47K Vertical Size	RVR-M4484GEZZ	-
R508	4700 Vertical Linearity	RVR-M4478GEZZ	-
# R510	.56 1W 5%	VRN-VV3ABR56J	1WD56
# R608	3.9 3W 5%	VRN-RV3LB3R9J	3W3D9
# R609	.27 3W 5%	VRN-RV3LBR27J	-
# R651	47K 1/8W 5%	VRD-RA2BE473J	EW347
# R652	68K 1/8W 5%	VRD-RA2BE683J	EW368
# R658	39K 1/8W 5% SMT	VRD-MN2BE393J	-
# R659	12K 1/8W 5% SMT	VRD-MN2BE123J	-
# R660	10K 1/8W 5% SMT	VRD-MN2BE103J	-
# R661	4700 1/8W 5% SMT	VRD-MN2BE472J	-
# R701	2.7M 1/2W 10%	VRC-UA2HG275K	HW527
# R702	2.2 10W 10% Wirewound	VRW-KQ4AC2R2K	10W2D2
# R703	56 3W 5%	VRS-SV3LB560J	3W056
	82 3W 5%	VRS-SV3LB820J	3W082
# R706	150 1/2W 5%	VRS-SV2HC151J	HW115
# R707	330 5W 10% Wirewound	VRW-KQ3HC331K	5W133
# R709	330 5W 10% Wirewound	VRW-KQ3HC331K	5W133
# R711	1 1/4W 5%	VRN-GA2EB1R0J	QW1D0
# R714	3.3 15W 10% Wirewound	VRW-KQ41C3R3K	-
# R715	2.7 15W 10% Wirewound	VRW-KQ41C2R7K	-
# R717	1 1W 5%	VRN-VV3AB1R0J	1W1D0
# R718	10 1/2W 5%	VRS-SV2HC100J	HW010
# R720	.56 2W 5%	VRN-VV3DBR56J	2WD56
# R772	10 1W 5%	VRS-VV3AB100J	1W010
R857	10K Red Bias	RVR-B5198CEZZ	-
# R858	10K 2W 5%	VRS-SV3DB103J	2W310
R863	200 Green Drive	RVR-B5464CEZZ	-
R867	10K Green Bias	RVR-B5198CEZZ	-
# R868	10K 2W 5%	VRS-SV3DB103J	2W310
R873	200 Blue Drive	RVR-B5464CEZZ	-
R877	10K Blue Bias	RVR-B5198CEZZ	-
# R878	10K 2W 5%	VRS-SV3DB103J	2W310
# R884	3.9 1W 5%	VRN-VV3AB3R9J	1W3D9
R1112	100K Sub Picture	RVR-M4486GEZZ	-
R1116	220K Sub Color	RVR-M4488GEZZ	-
R1131	1000 Sub Tint	RVR-M4474GEZZ	-
R1144	100K Sub Brightness	RVR-M4486GEZZ	-
# R1403	33K 2W 5%	VRS-SV3DB333J	2W333
# R1404	18K 3W 5%	VRS-SV3DB183J	3W318
R3005	10K VCO	RVR-M4480GEZZ	-
R3103	100K Balance	RVR-M4486GEZZ	-
R4302	2200 MTS	RVR-M4476GEZZ	-
# R4702	47 1W 5%	VRS-VV3AB470J	1W047
# For SAFETY use only equivalent replacement part.			

COILS & TRANSFORMERS

Item No.	Function/Rating	Mfr. Part No.
# DY601	Deflection Yoke	RCiLH0051MEZZ
FB602	Ferrite Bead	RBLN-0037CEZZ
FB701	Ferrite Bead	RBLN-0037CEZZ
FB702	Ferrite Bead	RBLN-0037CEZZ
L601	Horizontal Linearity	RCiLZ0621CEZZ
L602	Horizontal Size	RCiLZ0620CEZZ
# L701	Line Filter	RCiLF0090CEZZ
# L702	Degaussing Coil	RCiLG0018MEZZ
L852	120µH	VP-MK121K0000
L854	120µH	VP-MK121K0000
L856	120µH	VP-MK121K0000
L1001	Display Position	RCiLB0039CEZZ
L1401	10µH	VP-MK100K0000
L1402	4.7µH	VP-MK4R7K0000
L4201	1.8µH	VP-MK1R8K0000
L4202	1.5µH	VP-MK1R5K0000
L4203	AFT Detector	RCiLi0547CEZZ
L4204	PIF Detector	RCiLi0546CEZZ
L4205	.56µH	VP-MKR56M0000
L4301	Sound Detector	RCiLi0374CEZZ
L4401	15µH	VP-OF150K0000
L4402	10µH	VP-OF100K0000
L4405	68µH	VP-OF680K0000
L4801	10µH	VP-MK100K0000
# T601	Horizontal Driver	RTRNZ0168CEZZ
# T602	Horizontal Output (1)	RTRNF0055PEZZ
# T701	Power	RTRNP0416CEZZ
# For SAFETY use only equivalent replacement part.		
(1) Focus and screen controls are part of T602.		

CABINET PARTS

Item	Part No.
Button (7 used)	JBTN-1018MEKA
Cabinet Front Complete (1)	CCABA1115MES0
Cabinet Front Complete (2)	CCABA1116MES0
Cabinet Rear	GCABB1073MEKA
(1) Model 27A-S100.	
(2) Model 27A-S120.	

MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
CF4401	Filter	RFiLC0029TAZZ	Ceramic, 4.5MHz
CF4402	Filter	RFiLC0013CEZZ	Ceramic, 4.5MHz
CF4403	Filter	RFiL0174CEZZ	4.5MHz
CF4601	Filter	RFiLA00059CEZZ	Ceramic, 503kHz
DL4401	Delay Line	RCiLZ0742CEZZ	-
DL4402	Delay Line	RCiLZ0750CEZZ	-
# F701	Fuse	QFS-B4023CEZZ	4A @ 125V
J3302	Jack	QTANJ0517CEZZ	Audio In/Out, Video In
# P703	Line Cord	QACCD3024CESA	AC, Polarized
# RY701	Relay	RRLYU0022CEZZ	Power
S621	Switch	QSW-B0015CEZZ	Horizontal Center
S851	Switch	QSW-B0015CEZZ	Cutoff
S1001	Switch	QSW-K0068CEZZ or	Power
		QSW-K0090CEZZ	
S1002	Switch	QSW-K0068CEZZ or	Volume Up
		QSW-K0090CEZZ	
S1003	Switch	QSW-K0068CEZZ or	Volume Down
		QSW-K0090CEZZ	
S1004	Switch	QSW-K0068CEZZ or	Channel Up
		QSW-K0090CEZZ	
S1005	Switch	QSW-K0068CEZZ or	Channel Down
		QSW-K0090CEZZ	
S1006	Switch	QSW-K0068CEZZ or	Video
		QSW-K0090CEZZ	
S1007	Switch	QSW-K0068CEZZ or	Set Up
		QSW-K0090CEZZ	
SF4201	Filter	RFiLC0236CEZZ	SAW
SP301, 02	Speaker	VSP1205PB038A	2" x 5", 8 Ohms
# V101	CRT	VB68AEC01X/*S	VB68AEC01X
X1001	Crystal	RCRSB0004PEZZ	4MHz
X4801	Crystal	RCRSB0001PEZZ	3.58MHz
	CRT Socket	QSOCV0916CEZZ	-
	Fuse Holder	QFSDH1002CEZZ or	(2 used)
		QFSDH1009CEZZ	
	Magnet	PMAGF3001MEZZ	Purity/Static, Assembly
	PC Board (1)	DUNTK7102WEV1 or	CRT
		DUNTK7102WEK1	
	PC Board (1)	DUNTK7052WEV2 or	Main, Model 27A-S100
		DUNTK7052WEK2	
	PC Board (1)	DUNTK7052WEV3 or	Main, Model 27A-S120
		DUNTK7052WEK3	
	PC Board (1)	DUNTK7053WEV2 or	Signal
		DUNTK7053WEK2	
	PC Board (1)	DUNTK7054WEV1 or	Stereo
		DUNTK7054WEK1	
	PC Board (1)	DUNTK7295WEV1 or	Sub Unit, Model 27A-S100
		QCNW-1225PEZZ R	
	Remote Receiver	RRMCU0195CEZZ	-
	Remote Transmitter	RRMCG0797CESA	-
	Terminal Board	QTANN0108CEZZ	Antenna
#	Tuner (1)	VTUENV56877G2	UHF/VHF
	Wedge	PSPAG0012MEZZ	Yoke Positioning (3 used)
# For SAFETY use only equivalent replacement part.			
(1) Contact PTS Electronics Corpation for replacement; order by manufacturer's part number.			