

SAFETY PRECAUTIONS

SERVICE WARNING

Only qualified service technicians who are familiar with safety checks and guidelines should perform service work. Before replacing parts, disconnect power source to protect electrostatically sensitive parts. Do not attempt to modify any circuit unless so recommended by the manufacturer. When servicing the receiver, use an isolation transformer between the line cord and power receptacle.

SERVICING THE HIGH VOLTAGE AND CRT

Use EXTREME CAUTION when servicing the high voltage circuits. To discharge static high voltage, connect a 10K ohms resistor in series with a test lead between the receiver and CRT anode lead. DO NOT lift the CRT by the neck. Always wear shatterproof goggles when handling the CRT 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 CRT is the only potential source of X-rays. Keep an accurate high voltage meter available at all times. Check meter calibration periodically. Whenever servicing a receiver, check the high voltage at various brightness levels to be sure it is regulating properly. 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. When troubleshooting a receiver with excessive high voltage, avoid close contact with the CRT. DO NOT operate the receiver longer than necessary. To locate the cause of excessive high voltage, use a variable AC transformer to regulate voltage. In present receivers, 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.

TEST JIG HOOKUP				
Function	Chk-A-Color Adapter No.	PC Board Plug No.	Pin	Color
CRT	B239	J500	1, 2	Red
Yoke	D4137		3, 4	Blue
Yoke Setting	YP1	J550	1	Green
Comments	Focus Tap		2	Yellow

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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SAFETY CHECKS -- FIRE AND SHOCK HAZARD

Cold Leakage Checks for Receivers with Isolated Ground

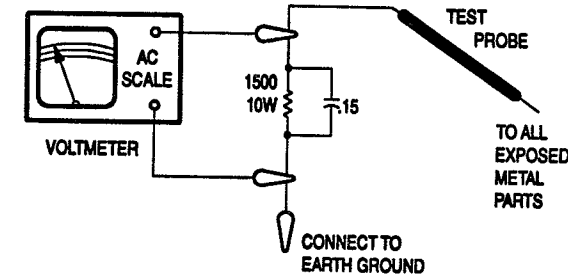
Unplug the AC cord, connect a jumper across the plug prongs, and turn the power switch on (if applicable). Use an ohmmeter to measure the resistance between the jumped AC plug and any exposed metal cabinet parts such as antenna screw heads, control shafts, or handle brackets. Exposed metal parts with a return path should measure between 1M ohms and 5.2M ohms. Parts without a return path must measure infinity.

Hot Leakage Current Check

Plug the AC cord directly into an AC outlet. DO NOT use an isolation transformer. Use a 1500 ohms, 10W resistor in parallel with a .15µF capacitor to connect between any exposed metal parts on the receiver and a good earth ground. (See figure below.) Use an AC voltmeter with at least 5000 ohms per volt sensitivity to measure the voltage across the resistor. Check all exposed metal parts and measure voltage at each point. Voltage measurements should not exceed .75VAC, 500µA. Any value exceeding this limit constitutes a potential shock hazard and must be corrected. If the 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 receiver to customer. Check repaired area for poorly soldered connections, and check entire circuit board for solder splashes. Check inner board wiring for pinched wires or wires contacting any high wattage resistors. 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.



PHOTOFACT.® Technical Service Data

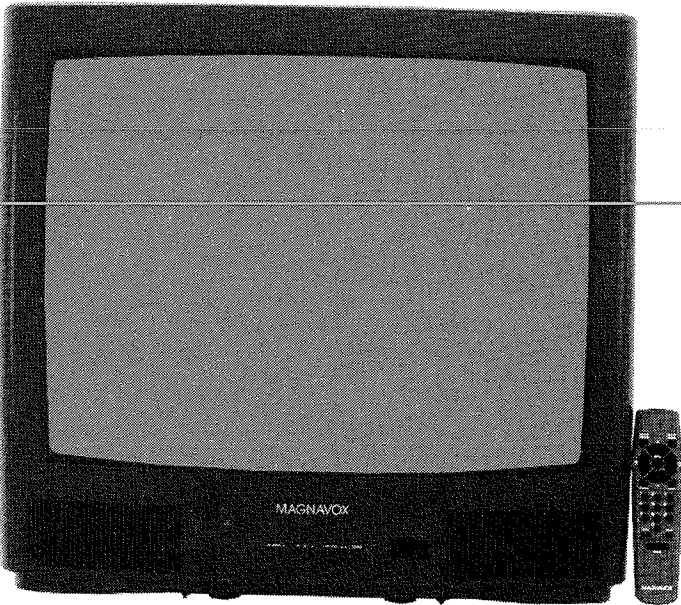
SET 3564

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MODEL TR2512C101 (CHASSIS 25P501-00AA)

MAGNAVOX

MAGNAVOX  
Model TR2512C101 (Chassis 25P501-00AA)



Complete coverage  
for servicing a television receiver...

- Schematics
- Component locations
- Parts list
- Troubleshooting guide

Coverage includes these additional models and chassis:

MODEL	CHASSIS
HD2516C101	25P501-00AA
25TR12C101	25P501-00AA

For Supplier Address,  
See PHOTOFACT Annual Index

  
**HOWARD W. SAMS & COMPANY**  
OCTOBER 1995 SET 3564



95PF02888

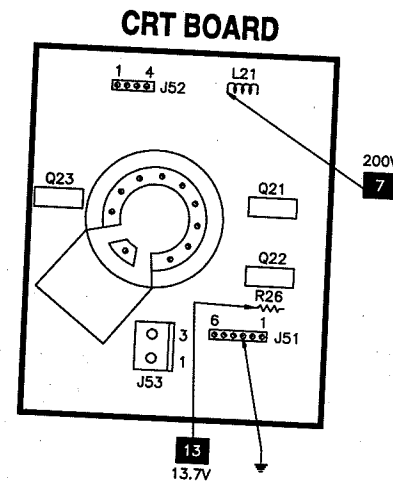
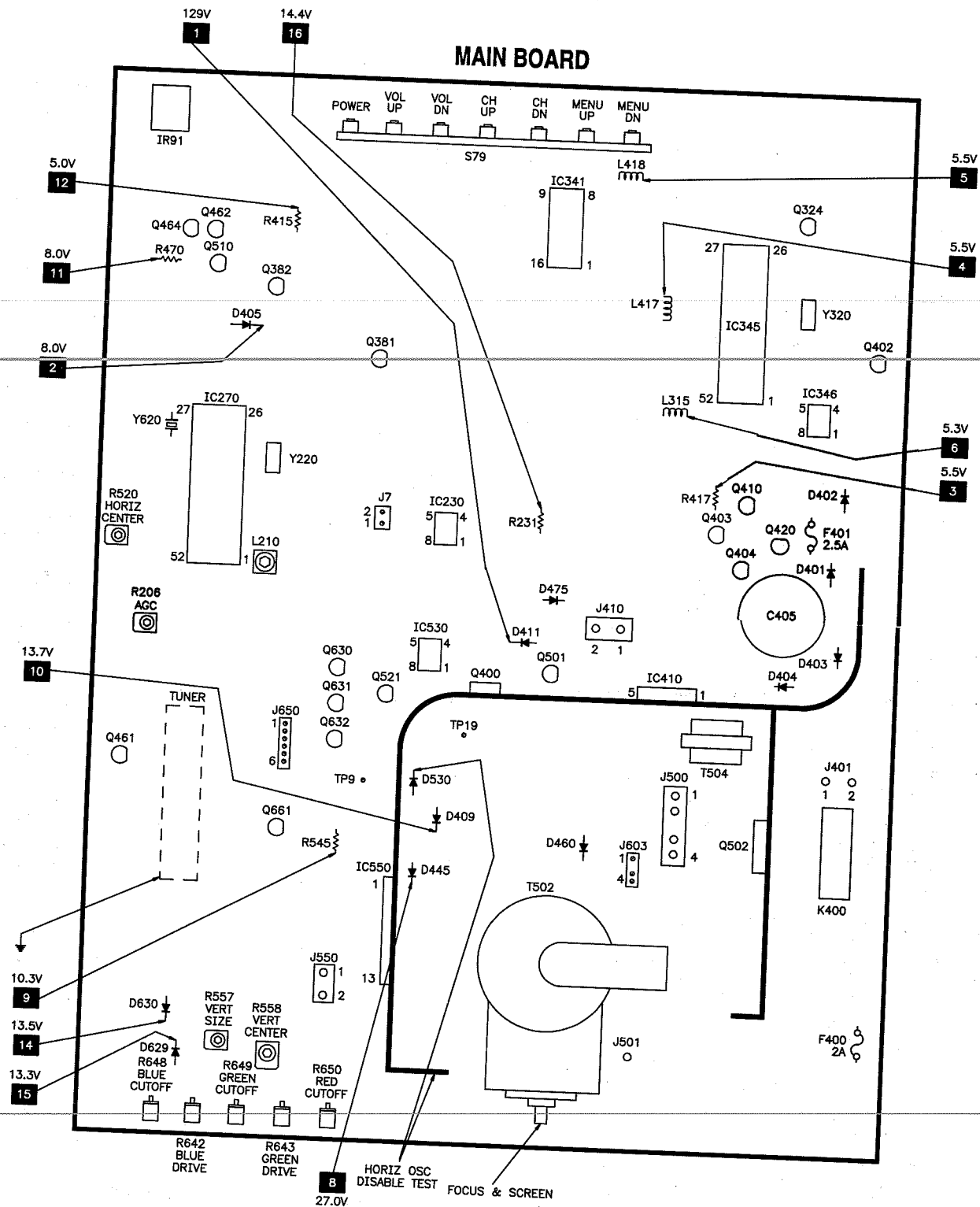


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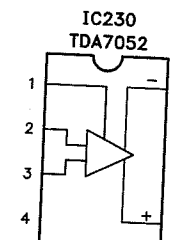
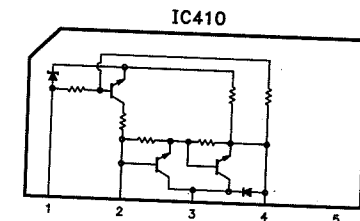
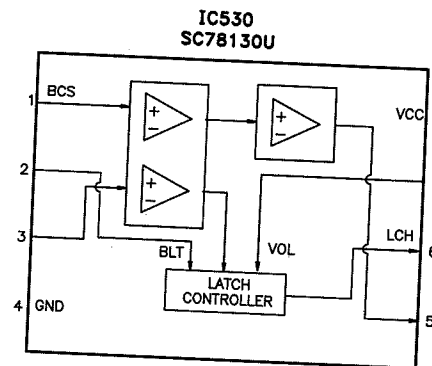
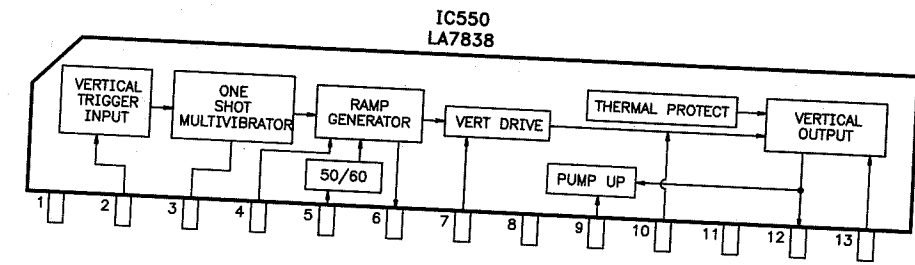
**MODEL TR2512C101 (CHASSIS 25P501-00AA)**



# PLACEMENT CHART



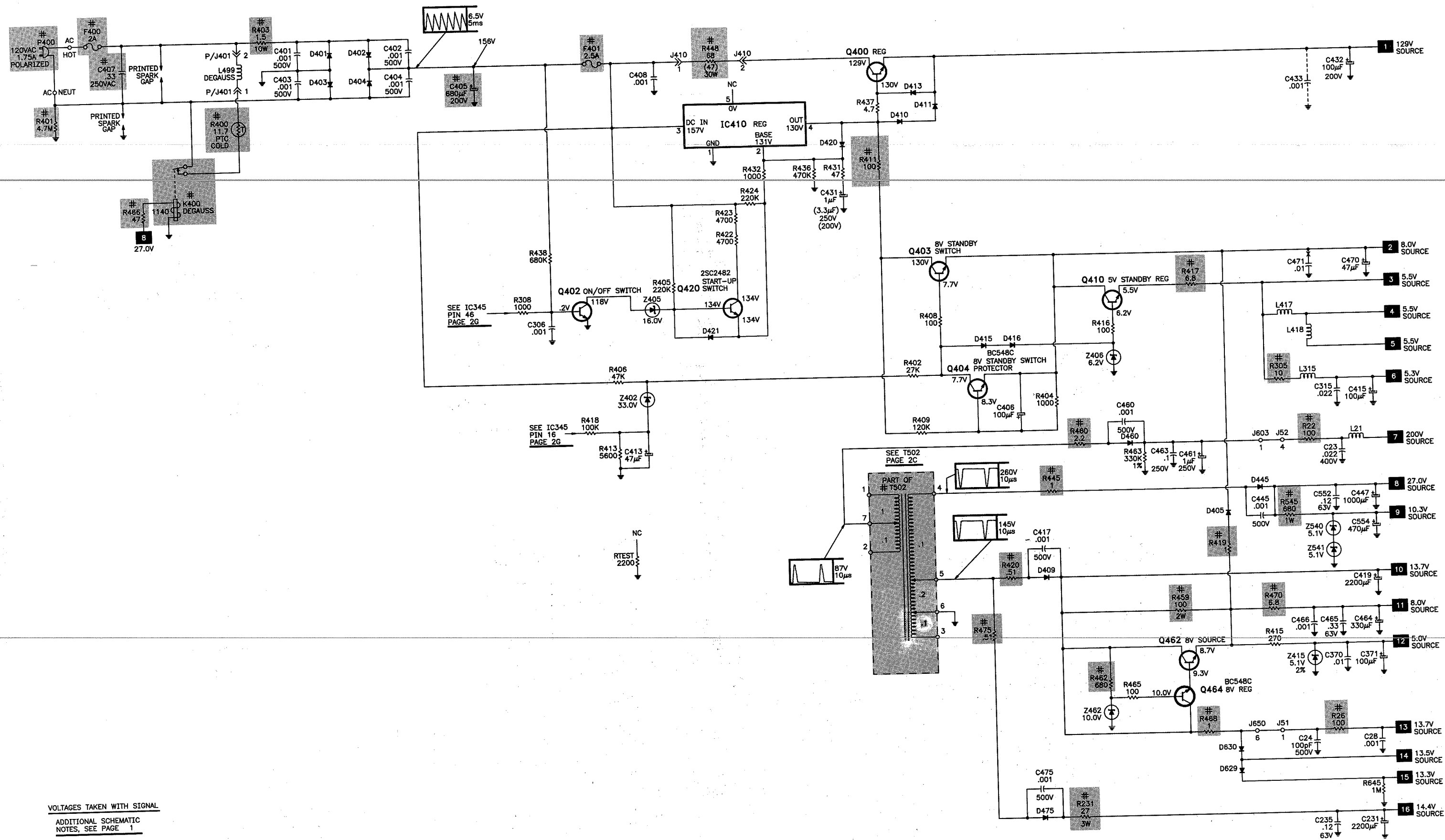
## IC FUNCTIONS



MAGNAVOX

MODEL TR2512C101 (CHASSIS 25P501-00AA)

# POWER SUPPLY SCHEMATIC



VOLTAGES TAKEN WITH SIGNAL

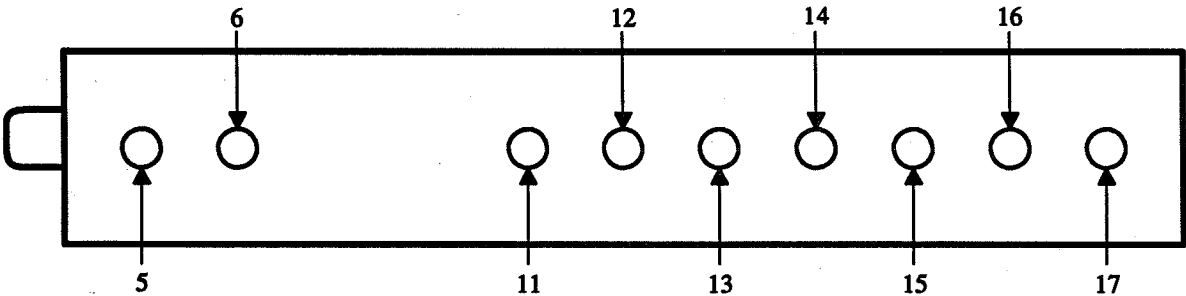
ADDITIONAL SCHEMATIC NOTES, SEE PAGE 1

TUNER INFORMATION

TUNER VOLTAGE CHART			
Pin	VHF Low Band	VHF High Band	UHF Band
5	4.9V	5.0V	4.7V
6	12.3V	12.3V	12.3V
11	1.0V	1.4V	1.9V
12	5.0V	5.0V	5.0V
13	5.5V	5.4V	5.4V
14	5.4V	5.4V	5.4V
15	0V	0V	0V
16	0V	0V	0V
17	0V	0V	0V

NOTE: Voltages taken with signal.  
VHF Low Band voltages taken on channel 2.  
VHF High Band voltages taken on channel 7.  
UHF Band voltages taken on channel 14.

TUNER TERMINAL GUIDE



SCHEMATIC NOTES

- # For SAFETY use only equivalent replacement part, see parts list.
- ✕ Circuitry not used in some versions.
- Circuitry used in some versions.
- ⊕ Ground
- ⏏ Chassis ground
- ▽ Common tie point
- △ Taken from common tie point
- 3 Schematic CIRCUITRACE®: Voltage source tie point.
- A— Cabling: Heavy lines reduce use of multiple lines.

Waveforms and voltages are taken from ground, unless noted otherwise.  
Waveforms taken with triggered scope and colorbar signal. 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 a 1000µV RF signal, with colorbar pattern, applied to antenna terminal.  
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.

TROUBLESHOOTING

POWER SUPPLY

Check F400. If F400 is open, check D401 thru D404, R401, R403, C401 thru C405, and C407. Check F401. If F401 is open, check IC410, Q400, and Q502. Apply 120VAC, and with receiver off, check for 8.0V at the emitter of Q403. If the voltage is missing, check Q403, Q404, and Z402. Check for 5.5V at the emitter of Q410. If voltage is missing, check Q410 and Z406. Check for 16.0V at pin 4 of IC410, turn the set on and check for 129V at the same pin. If voltage is missing, check Q402, Q420, and Z405. Check for 130V at the emitter of Q400. If voltage is missing, check Q400 and IC410. Check for 8.7V at the emitter of Q462. If voltage is missing, check Q462, Q464, D405, Z462, R419, and refer to the "Horizontal" section of this Troubleshooting guide.

HORIZONTAL OSCILLATOR DISABLE TEST

Connect a variable power supply to cathode of D530, low side to ground. Increase power supply voltage, the receiver should lose horizontal sync when voltage reaches 32.0V. If the receiver fails to lose horizontal sync, the horizontal oscillator disable circuit needs repaired.

HORIZONTAL OSCILLATOR DISABLE

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 for T502 is monitored and rectified by D530. Should the high voltage increase, the voltage level at pin 3 of IC530 will increase and pin 5 of IC530 will turn on Q521. This will decrease the voltage at pin 39 of IC270 to about 1.6V. The horizontal oscillator will change frequency and decrease the high voltage. To troubleshoot, remove R530 from the circuit and use a variable transformer for AC power. Start at 90.0VAC and increase as necessary to locate and repair the defect. Return R530 to the circuit.

HORIZONTAL

Determine if the horizontal oscillator is disabled by referring to the "Horizontal Oscillator Disable" section of this Troubleshooting guide. If the horizontal oscillator is not disabled, inject a horizontal signal at the base of Q502. If horizontal deflection is now present, check Q501, T504, and pins 36 thru 39 of IC270. If horizontal deflection is not present, check Q502, T502, and the components associated with D409, D445, D475, and D460 for defects. The high voltage rectifier is part of T502 and if defective will affect the operation of the horizontal circuits. Horizontal linearity or foldover may be caused by C505, C506, C507, C512, or L517 being defective.

VERTICAL

Check for a proper waveform at pin 44 of IC270. If the waveform is missing, check IC270. If the waveform is present, check IC550. Vertical linearity or height problems may be caused by vertical feedback and bias circuits, check C549, C550, C551, C553, C554, C556, C558, and C563.

IF AGC

Inject a video IF signal at pin 45 of IC270 and check for video on the CRT. If video is present, check the tuner, tuner control, and tuner AFC circuits. If video is missing apply AGC bias at pin 48 of IC270 and check for a video waveform at pin 8 of IC270. If the waveform is present, refer to the "Video" section of this Troubleshooting guide. If the waveform is missing, check AFC circuit and IC270.

VIDEO

Inject a video signal at pin 8 of IC270 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 16 of IC270. If the waveform is missing, check pins 10 and 14 of IC270 and Q381. Check for proper waveforms at pins 19, 20, and 21 of IC270. If the waveforms are present, refer to the "Raster" section of this Troubleshooting guide. If brightness is inadequate or cannot be controlled, check the voltages and components associated with pin 27 of IC270.

CHROMA

All chroma signals are processed internally in IC270, except the 3.58MHz oscillator and the color and tint levels. Check the 3.58MHz oscillator at pin 34 of IC270. Check the color and tint levels at pins 30 and 32 of IC270. These levels are controlled by IC345 with a voltage level.

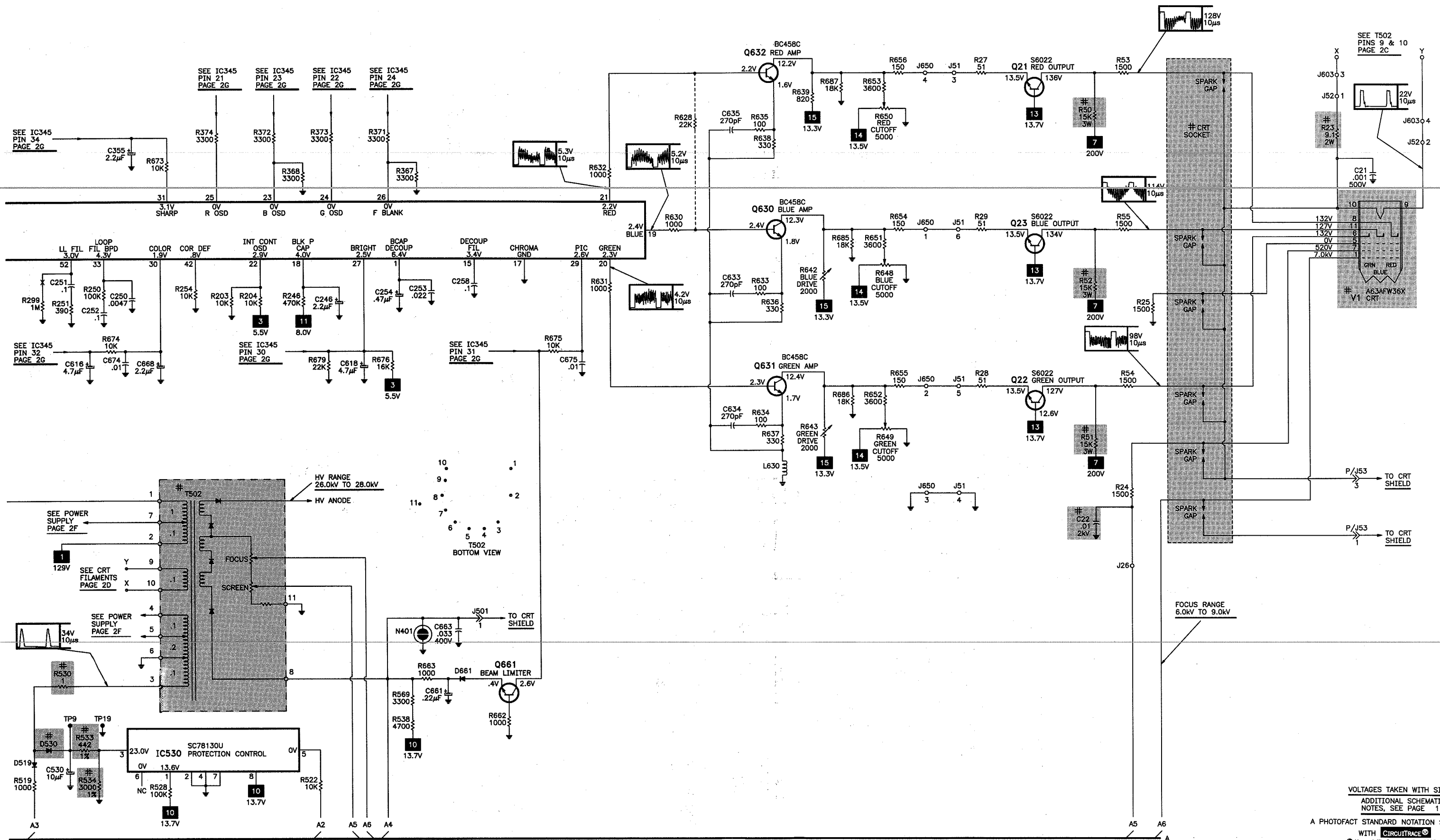
RASTER

Check the CRT and CRT voltages. If red is missing, check pin 21 of IC270, Q632, and Q21. If green is missing, check pin 20 of IC270, Q631, and Q22. If blue is missing, check pin 19 of IC270, Q630, and Q23. If the raster has a keystone shape, check the deflection yoke. If the raster has height or width problems, refer to the "Vertical," "Horizontal," or "Power Supply" sections of this Troubleshooting guide.

AUDIO

Select an active channel and check for an audio waveform at pin 50 of IC270. If the waveform is missing, check IC270. If waveform is present, check IC230. Check the voltage at pin 4 of IC270, it should measure .8V at mute and 4.0V at maximum volume.

TELEVISION SCHEMATIC continued



MISCELLANEOUS ADJUSTMENTS

RF AGC

Tune in a medium strength station. Rotate R206 clockwise until snow appears, then back to a point where snow just disappears.

HORIZONTAL CENTERING

Tune in an active station. Adjust R520 for best horizontal centering.

VERTICAL SIZE/CENTERING

Tune in an active station. Adjust R557 for a slight underscan at the top and bottom of the screen. Adjust R558 to center the picture. Adjust R557 for a slight overscan.

COLOR PURITY

Operate the receiver for 15 minutes. Use a degaussing coil to demagnetize the CRT and mounting hardware. Position the convergence/purity assembly with the 2Y pole rings over the gun element gap nearest the CRT bell gap (between G2 and G3). Turn R649 fully clockwise and R643 fully counterclockwise. Loosen the yoke and remove the yoke wedges. Slide the yoke against the bell of the CRT and tighten the clamp enough to hold the yoke in position. Tune in a single-cross pattern and adjust the 2Y pole rings for parallel red and blue lines, as centered and overlapped as possible. Tune in a white screen. Turn R650, R648, and R643 controls fully clockwise, and R649 and R642 controls fully counterclockwise. Spread the 2X pole rings for a centered green area. Move the yoke back for best green purity and tighten the yoke clamp just enough to hold the yoke in position. Perform convergence adjustment.

COLOR TEMPERATURE

Disconnect the antenna. Set the brightness, sharpness, tint, and picture to mid-range. Set the color, screen, R642, R643, R648, R649, and R650 controls to minimum. Disconnect the vertical yoke connector. Adjust the screen control to obtain a faintly visible line, then decrease until line just disappears. Set the drive and cutoff controls to maximum. Note the predominant color. Adjust the two remaining cutoff controls for best white balance of line. Reconnect the vertical yoke connector and set the color control to mid-range. Tune in a color picture and adjust the drive controls for best white balance at all brightness levels.

CONVERGENCE

Operate the receiver for fifteen minutes. Set R642, R643, R648, R649, and R650 to midrange. 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 with the green dots at the center of the screen. Spread 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. The 4 and 6 pole magnets interact, repeat adjustment until center convergence is correct. Tune in a crosshatch pattern. Remove the rubber wedges between the deflection yoke and the CRT. Tilt the deflection yoke up or down to converge the vertical lines at the top and bottom of the screen, and the horizontal lines at the right and left sides of the screen. Tilt the deflection yoke right or left to converge the horizontal lines at the top and bottom of the screen, and vertical lines at the right and left sides of the screen. Repeat convergence procedure as necessary to obtain best overall convergence. Perform Color Temperature Adjustment.

TEST MODE SERVICE INFORMATION

NOTE: To perform all test mode functions, a prior year 23 or 25 push-button "stick" transmitter, UR14, T251, or a NAP universal remote transmitter must be used.

To enter test mode, turn the receiver on, then enter 0, 6, 2, 5, 9, 6, and press menu button on the receiver, without allowing time out between key entries. The two line screen display indicates circuit and register information as follows.

Top left; 613151-1 indicates the software version of the microprocessor in use.

Top right; D indicates the failure of a functional part of the system. Error codes will be displayed only if the function is not operating properly or the receiver does not include a particular feature. A = tuner, B = memory, and D = automatic volume level.

Bottom left; channel number.

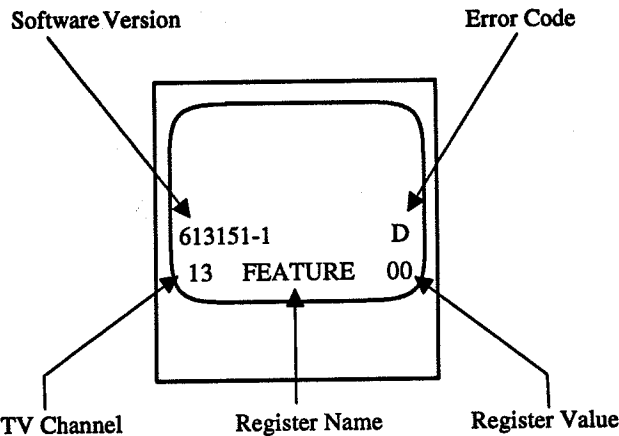
Bottom middle; name of current register.

Bottom right; register value in hexadecimal.

To access a register press menu button on remote transmitter until the desired register appears on screen. Change the value of a selected register by pressing the + or - keys. Depressing the "Status/Exit" key on the remote transmitter the runtimer will be displayed in hexadecimal format in the upper left hand corner of the screen. Store the register value by turning the receiver off with the power switch on the cabinet, not on the remote transmitter. To exit the service test mode press the power button on the receiver.

See table below for register information.

Register	Factory Value
FEATURE	00
BRIGHT	1F
PICTURE	1F
COLOR	1F
TINT	1F
SHARP	21
OSD	1A
VOL INC	04

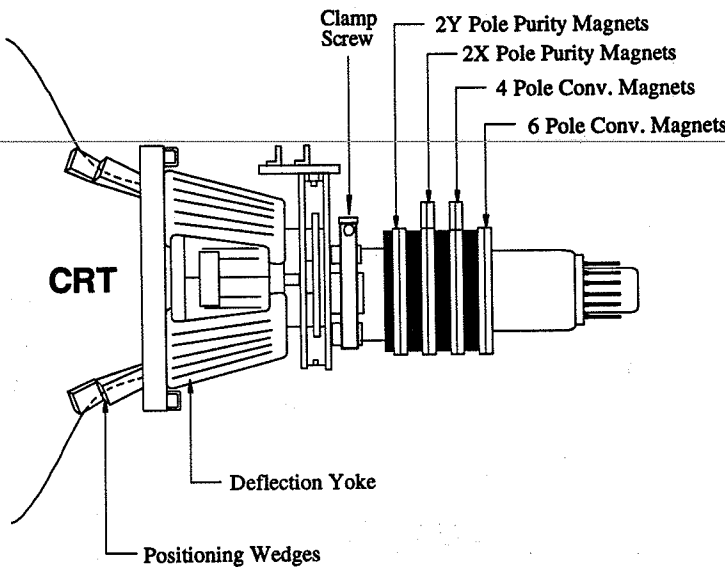


TEST EQUIPMENT

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

CRT NECK ASSEMBLY



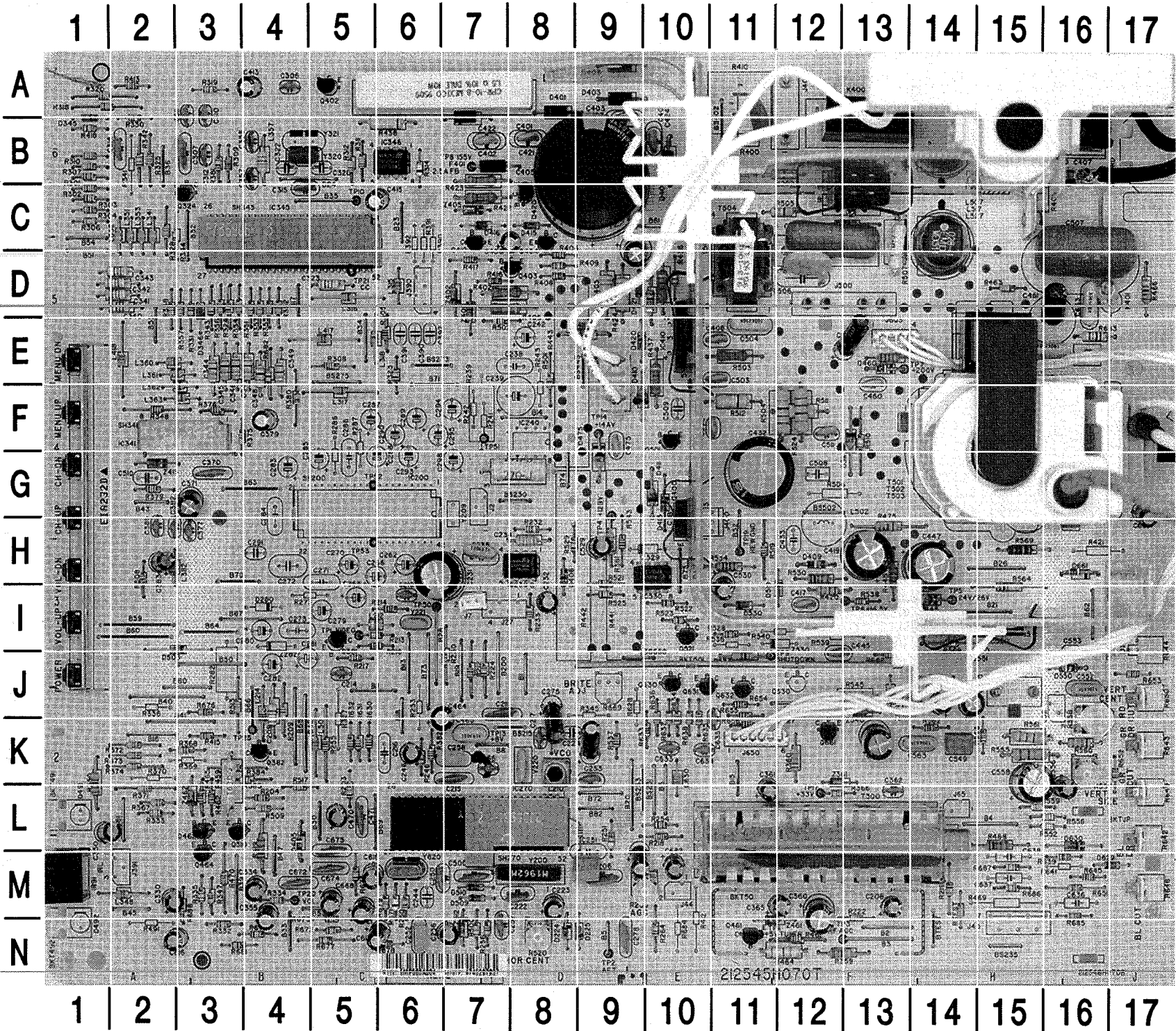
The schematic is divided into several functional sections:

- Signal Processor (IC270):** This section handles the incoming video signal. It includes a filter (Y200 SAW), various AGC (Automatic Gain Control) stages (R218, R219, R222, R224), and a video output stage (Q381 VIDEO BUFFER). Waveforms show the signal levels at different points, such as 2.2V and 1.0V.
- Audio Amplifier (IC230):** This section amplifies the audio signal. It includes a filter (Y220 4.5MHz), a decoupling network (R230, R233, R232, R234, C217, C222, C223, C232, C234), and an output stage (Q382 CC VIDEO BUFFER). Waveforms show the audio signal levels, such as 1.2V and 1.0V.
- Video Output (IC550):** This section drives the video output. It includes a filter (Y221 4.5MHz), a video output stage (Q381 VIDEO BUFFER), and a video output stage (Q502 HORIZ OUTPUT). Waveforms show the video signal levels, such as 2.2V and 1.0V.
- Horizontal Driver (Q501):** This section drives the horizontal deflection. It includes a filter (Y221 4.5MHz), a horizontal driver stage (Q501 HORIZ DRIVER), and a horizontal output stage (Q502 HORIZ OUTPUT). Waveforms show the horizontal signal levels, such as 1.9V and 1.7V.
- Vertical Driver (Q502):** This section drives the vertical deflection. It includes a filter (Y221 4.5MHz), a vertical driver stage (Q502 HORIZ OUTPUT), and a vertical output stage (Q502 HORIZ OUTPUT). Waveforms show the vertical signal levels, such as 1.5V and 1.2V.

The schematic also includes various test points (A1, A2, A3, A4) and waveforms for signal verification. The components are labeled with their respective values and part numbers. The schematic is a detailed representation of the internal circuitry of the video receiver.

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MAIN BOARD



A HOWARD W. SAMS GRIDTRACE™ PHOTO

MAIN BOARD, GRIDTRACE LOCATION GUIDE

C206	M-9	C406	C-8	D410	F-9	Q382	K-4	R335	M-3	R464	N-12	R650	J-17
C208	M-13	C407	B-16	D411	G-10	Q400	G-10	R342	B-2	R465	L-3	R651	M-16
C209	J-4	C408	E-11	D413	G-10	Q402	A-5	R343	D-3	R466	D-17	R652	K-17
C210	I-6	C413	A-4	D415	C-8	Q403	D-8	R344	C-3	R468	L-15	R653	J-17
C211	J-7	C415	C-5	D416	C-7	Q404	C-8	R347	M-3	R470	M-3	R654	J-11
C214	J-5	C417	I-12	D420	E-9	Q410	C-7	R348	F-2	R475	H-13	R655	J-11
C215	K-7	C419	H-13	D421	D-9	Q420	C-8	R349	K-8	R500	N-7	R656	K-11
C217	K-8	C431	D-9	D445	I-14	Q461	N-11	R350	L-1	R501	F-8	R662	J-13
C222	M-8	C432	G-11	D460	E-13	Q462	L-3	R351	D-4	R502	E-7	R663	E-16
C223	M-8	C445	I-13	D475	G-9	Q501	F-10	R352	D-4	R503	E-11	R672	N-5
C231	H-6	C447	H-14	D508	I-3	Q502	C-13	R353	D-4	R504	F-12	R673	M-5
C232	I-8	C460	E-13	D509	M-7	Q510	L-3	R354	D-3	R505	C-12	R674	N-4
C234	H-8	C461	D-16	D510	M-7	Q521	I-10	R355	D-4	R507	C-13	R675	M-5
C235	H-7	C463	E-16	D511	F-13	Q630	J-10	R356	D-3	R508	H-2	R676	J-3
C246	K-6	C464	J-7	D519	I-12	Q631	J-10	R357	D-3	R509	L-4	R677	N-5
C250	M-6	C465	K-7	D530	I-11	Q632	J-11	R358	D-2	R510	F-13	R678	N-6
C251	M-9	C466	K-7	D550	J-16	Q661	K-12	R359	N-12	R511	F-12	R679	M-6
C252	N-6	C470	L-5	D629	M-17	R203	L-5	R360	K-12	R512	F-11	R681	N-3
C253	K-9	C471	L-5	D630	L-16	R204	L-4	R361	H-9	R513	J-3	R682	E-4
C254	K-9	C475	F-9	D661	H-16	R206	M-9	R366	L-12	R515	C-13	R685	M-16
C255	M-9	C500	M-7	F400	A-16	R209	J-4	R367	L-2	R517	L-4	R686	M-15
C256	N-7	C502	F-11	F401	B-7	R212	J-7	R368	K-3	R519	H-11	R687	M-15
C257	N-7	C503	E-11	IC230	H-8	R213	I-5	R371	L-2	R520	N-8	R688	M-3
C258	K-7	C504	E-11	IC270	L-8	R214	I-6	R372	K-2	R521	H-9	RTEST	M-14
C275	J-8	C505	C-12	IC341	F-3	R216	I-5	R373	K-2	R522	I-10	S79	E-1
C278	N-9	C506	D-12	IC345	C-5	R217	J-5	R374	K-2	R523	I-10	T504	C-11
C306	A-4	C507	C-16	IC346	B-6	R218	L-10	R375	F-4	R524	F-12	TP19	H-11
C307	B-3	C511	F-12	IC410	D-10	R219	M-14	R376	F-3	R525	I-9	Y200	M-8
C310	A-3	C512	E-13	IC530	H-10	R222	M-13	R379	G-2	R528	I-11	Y220	K-8
C311	A-3	C529	H-9	IC550	I-14	R224	J-7	R380	F-4	R529	H-8	Y221	I-6
C312	B-3	C530	I-11	IR91	M-1	R230	J-7	R381	B-3	R530	H-12	Y320	B-4
C314	B-2	C548	J-14	J7	I-7	R231	G-8	R382	K-6	R533	J-11	Y620	M-6
C315	C-4	C549	K-14	J401	B-12	R232	H-8	R383	K-3	R534	H-11	Z361	K-12
C323	D-5	C550	J-14	J410	E-9	R233	I-8	R384	K-3	R537	K-9	Z402	D-7
C330	M-2	C551	J-14	J500	D-12	R246	K-6	R400	A-11	R538	I-13	Z405	C-7
C334	M-4	C552	J-16	J501	E-16	R250	M-6	R401	C-16	R543	H-9	Z406	D-7
C340	D-2	C553	J-16	J550	J-15	R251	L-9	R402	D-7	R544	J-14	Z415	G-2
C341	D-2	C554	K-13	J603	E-13	R254	L-10	R403	A-6	R545	J-13	Z461	N-11
C342	D-2	C556	L-16	J650	K-11	R255	K-5	R404	D-8	R552	L-16	Z462	L-3
C343	D-2	C558	K-15	K400	A-13	R256	N-7	R405	D-9	R555	K-15	Z512	N-7
C344	E-3	C563	K-14	L210	K-8	R264	N-10	R406	D-7	R556	L-16	Z540	J-13
C345	E-3	C616	N-2	L212	I-5	R299	L-9	R408	D-8	R557	K-16	Z541	J-13
C346	E-3	C617	N-5	L214	J-4	R301	B-1	R409	D-8	R558	K-16		
C347	E-4	C618	M-5	L315	D-6	R302	C-1	R411	E-9	R559	L-15		
C348	E-4	C621	M-5	L316	D-5	R303	C-1	R413	A-2	R560	K-16		
C349	E-4	C633	K-10	L317	F-5	R304	C-1	R415	K-3	R561	K-15		
C350	L-1	C634	K-10	L318	E-5	R305	E-6	R416	D-7	R562	K-14		
C355	N-4	C635	K-11	L341	C-2	R306	C-1	R417	D-7	R563	K-15		
C357	B-4	C661	H-17	L348	M-2	R307	B-1	R418	B-1	R564	I-15		
C358	B-4	C663	D-16	L351	C-2	R308	E-5	R419	L-4	R568	I-14		
C360	M-12	C668	M-5	L352	C-2	R309	B-3	R420	I-12	R569	H-15		
C361	L-11	C672	M-4	L353	C-2	R310	B-1	R422	C-7	R630	K-5		
C362	L-13	C674	M-5	L357	B-4	R311	B-5	R423	B-7	R631	K-5		
C365	M-12	C675	L-5	L360	E-3	R312	B-5	R424	D-9	R632	K-5		
C370	G-3	C682	M-10	L361	E-3	R318	A-1	R431	D-10	R633	K-10		
C371	G-3	D224	N-8	L362	F-3	R319	A-3	R432	D-10	R634	K-10		
C377	H-3	D225	N-9	L363	F-3	R320	A-1	R436	C-10	R635	K-11		
C379	F-4	D345	B-1	L382	H-2	R323	E-6	R437	E-10	R636	K-10		
C382	H-2	D346	D-3	L417	E-5	R324	D-3	R438	B-6	R637	K-10		
C383	H-2	D401	A-8	L418	E-2	R325	B-2	R445	H-13	R638	K-10		
C385	H-2	D402	A-7	L501	K-5	R328	C-2	R448	A-15	R639	M-16		
C401	B-8	D403	A-9	L517	C-14	R330	B-2	R459	K-3	R642	L-17		
C402	B-7	D404	B-10	L630	K-10	R331	D-3	R460	E-13	R643	K-17		
C403	B-9	D405	L-4	N401	D-17	R332	N-3	R461	N-12	R645	M-16		
C404	B-10	D406	H-8	Q324	C-3	R333	L-2	R462	L-3	R648	M-17		
C405	B-9	D409	H-12	Q381	I-5	R334	M-4	R463	D-15	R649	L-17		

MAGNAVOX

MODEL TR2512C101 (CHASSIS 25P501-00AA)

PARTS LIST continued

CAPACITORS & ELECTROLYTICS

Item No.	Rating	Mfr. Part No.
# C22	.01 20% 2kV	4835 122 57002
C357	39pF 5% 50V NPO	4835 122 47021
C358	27pF 5% 50V NPO	4835 122 47018
# C405	680µF 200V	4835 124 47064
# C407	.33 250VAC	4835 121 47463
# C505	.0091 5% 1.5kV	4835 121 47197
# C506	680pF 10% 2kV	4835 122 47037
C511	39pF 5% 1kV	4835 122 47224
# C529	10µF 50V	4835 124 47499
C553	4.7pF 10% NPO	4835 122 47452

# For SAFETY use only equivalent replacement part.

CABINET PARTS

Item No.	Mfr. Part No.
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Model HD2516C101

Button Assembly	4835 410 97024
Cabinet Front	4835 430 57171
Cabinet Rear	4835 410 37238
remote Battery Door	4835 432 37085

Model TR2512C101

Button Assembly	4835 410 97024
Cabinet Front	4835 430 57171
Cabinet Rear	4835 432 97587
Lens, IR	4835 450 67202
Remote Battery Door	4835 432 37085

Model 25TR12C101

Button Assembly	4835 410 97024
Cabinet Front	4835 430 57161
Cabinet Rear	4835 432 97587
Lens, IR	4835 450 67202
Remote Battery Door	4835 432 37085

COILS & TRANSFORMERS

Item No.	Function/Rating	Mfr. Part No.
# DY1	Yoke	4835 150 17116
	Horiz 1.35mH Vert 18.3mH	
L21	100µH	4835 157 57141
L210	VCO	4835 150 57067
L212	4.76µH	4835 157 67011
L214	10µH	4835 150 57006
L315	2.7µH	4835 157 67006
L316, 17, 18	1.80µH	4835 157 67033
L341	3.9µH	4835 157 67007
L348	2.7µH	4835 157 67006
L351, 52, 53	3.9µH	4835 157 67007
L357	8.2µH	4835 150 57068
L360 Thru		
L363	1.80µH	4835 157 67033
L382	22µH	4835 150 57007
L417, 18	2.7µH	4835 157 67006
L499	Degaussing	4835 157 97079
L501	2.7µH	4835 157 67006
# L517	Horizontal Linearity	4835 150 57002
L630	2.2µH	4835 157 67005
# T502(1)	Horizontal Output	4835 140 67126
T504	Horizontal Drive	4835 142 47021

# For SAFETY use only equivalent replacement part.  
(1) Focus and screen controls are part of T502.

MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
# F400	Fuse	4835 253 97122	2Amp, 125V, Slow Blowing
# F401	Fuse	4835 253 97031	2.5Amp
IR91	Receiver	4835 219 47281	Remote
# K400	Relay	4835 277 27073	Degaussing
N401	Neon Lamp	4835 134 27001	-
# P400	Line Cord	4835 321 17026	AC, Polarized
	Line Cord	4835 321 17098	AC, Polarized, Model HD2515C101
S79	Switch	4835 276 57004	Assembly
SP1	Speaker	4835 240 37002	3", 16 Ohms
# V1	CRT	4835 131 27127	A63AFW36X
Y200	Filter	4835 153 97022	SAW
Y220	Filter	4835 157 57341	4.5MHz
Y221	Trap	4835 154 17001	4.5MHz
Y320	Resonator	4835 157 57938	12MHz
Y620	Crystal	4835 242 77215	3.58 MHz
#	Antenna Isolator	4835 219 47173	-
	Magnet	4835 150 27008	Purity/Convergence
	PC Board (1)	00APT144	CRT
	PC Board (1)	00EMP560	Main
#	Socket	4835 265 97332	CRT
	Transmitter	4835 219 17582	Remote
	Tuner (1)	4835 210 47055	UHF/VHF (UV936E)
	Wedge	4835 535 27006	Yoke Positioning (3 Used)

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



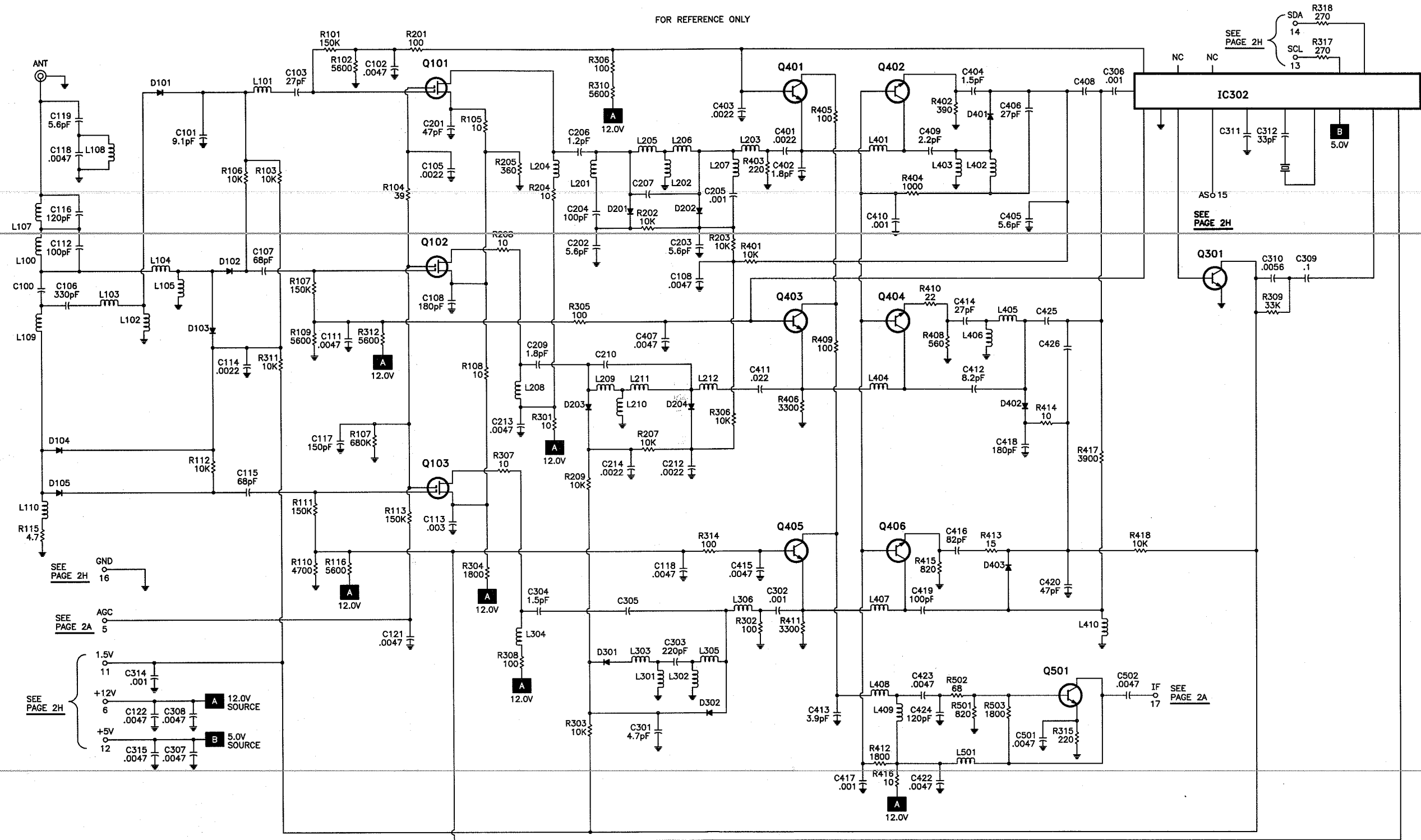
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MAGNAVOX

MODEL TR2512C101 (CHASSIS 25P501-00AA)

TUNER SCHEMATIC



ADDITIONAL SCHEMATIC  
NOTES, SEE PAGE 1

A PHOTOFACIT STANDARD NOTATION SCHEMATIC  
WITH CIRCUITTRACE®  
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## PARTS LIST

## 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)

## SEMICONDUCTORS

**(Select the replacement that gives the best results.)**

Item No.	Type No.	Mfr. Part No.	NTE Part No.	ECG Part No.	TCE Part No.
D224, 25	-	4835 130 37048	NTE519	ECG519	SK3100
D345, 46	-	4835 130 37048	NTE519	ECG519	SK3100
D401 Thru					
D404	-	4835 130 37829	-	-	-
D405	-	4835 130 37094	NTE580	ECG580	SK5036
D406	-	4835 130 37048	NTE519	ECG519	SK3100
D409	-	4835 130 37094	NTE580	ECG580	SK5036
D410, 11	-	4822 130 41275	NTE125	ECG125	SK3081
D413, 15, 16	-	4835 130 37048	NTE519	ECG519	SK3100
D420	-	4835 130 37048	NTE519	ECG519	SK3100
D421	-	4835 130 37048	NTE519	ECG519	SK3100
D445	-	4835 130 37052	NTE580	ECG580	SK5036
D460	-	4835 130 37094	NTE580	ECG580	SK5036
D475	-	4835 130 37052	NTE580	ECG580	SK5036
D508, 09, 10	-	4835 130 37048	NTE519	ECG519	SK3100
D511	-	4835 130 37052	NTE580	ECG580	SK5036
D519	-	4835 130 37048	NTE519	ECG519	SK3100
D530	-	4835 130 37048	NTE519	ECG519	SK3100
D550	-	4835 130 37094	NTE580	ECG580	SK5036
D629	-	4835 130 37048	NTE519	ECG519	SK3100
D630	-	4835 130 37058	NTE587	ECG587	SK9937
D661	-	4835 130 37094	NTE580	ECG580	SK5036
IC230	TDA7052	4835 209 47005	NTE7051	ECG7051	-
IC270	-	4835 209 88378	-	-	-
IC341	LC7456A	4835 209 88189	-	-	-
IC345	-	4835 205 88384	-	-	-
IC346	-	4835 209 88108	-	-	-
IC410	-	4835 209 47056	NTE1777	ECG1777	SK9870
IC530	SC78130U	4835 209 87838	-	-	-
IC550	LA7838	4835 209 88003	NTE7039	ECG7039	-
Q21, 22, 23	S6022	4835 130 47796	-	-	-
Q324, 81	BC548C	4835 130 47064	NTE123AP*	ECG123AP*	SK3854*
Q382	-	4835 130 47058	NTE48	ECG48	SK4906
Q400	-	4835 130 47072	NTE198	ECG198	-
Q402	-	4835 130 47059	NTE399	ECG399	SK9352
Q403	-	4835 130 47892	-	-	-
Q404	BC548C	4835 130 47064	NTE123AP*	ECG123AP*	SK3854*
Q410	-	4835 130 47051	NTE123AP	ECG123AP	SK3854
Q420	-	4835 130 47059	NTE399	ECG399	SK9352
Q461	-	4835 130 47051	NTE123AP	ECG123AP	SK3854
Q462	-	4835 130 47892	-	-	-
Q464	BC548C	4835 130 47064	NTE123AP*	ECG123AP*	SK3854*
Q501	-	4835 130 47892	-	-	-
Q502	-	4835 130 47897	NTE2353	ECG2353*	-
Q510, 21	BC548C	4835 130 47064	NTE123AP*	ECG123AP*	SK3854*
Q630, 31, 32	BC548C	4835 130 47064	NTE123AP*	ECG123AP*	SK3854*
Q661	-	4835 130 47051	NTE123AP	ECG123AP	SK3854
Z361	-	4835 130 37502	NTE147A	ECG147A	-
Z402	-	4835 130 37003	-	-	-
Z405	-	4835 130 37501	NTE5075A	ECG5075A	-
Z406	-	4835 130 37121	NTE5013T1	ECG5013T1	SK9969
Z415	-	4835 130 37119	-	-	-
Z461	-	4835 130 37068	NTE5011T1	ECG5011T1	SK9968
Z462	-	4835 130 37203	NTE5019T1	ECG5019T1	-
Z512	-	4835 130 37016	-	-	-
Z540, 41	-	4835 130 37119	-	-	-

**# For SAFETY use only equivalent replacement part.**  
**\* Lead configuration may vary from original.**

## CONTROLS & RESISTORS

Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
# R22	100 5% 1/2W	4835 116 67089	HW110
# R23	9.1 5% 2W	4835 116 67188	2W9D1
# R26	100 5% 1/3W	4835 116 87002	-
# R50, 51, 52	15K 5% 3W	4835 116 67018	3W315
R206	50K AGC	4835 100 17066	-
# R231	27 5% 3W	4835 116 67159	3W027
# R305	10 5% 1/4W	4835 116 57362	QW010
R309	10K 1% 1/8W	4835 116 57481	-
# R350	47 5% 1/3W	4835 116 57069	-
# R359	33 5% 1/3W	4835 116 57159	-
# R400	11.7 PTC Cold	4835 116 47001	-
# R401	4.7M 5% 1/2W	4835 116 57009	HW547
# R403	1.5 10% 10W Wirewound	4835 112 37024	10W1D5
# R411	100 5% 1/3W	4835 116 87002	-
# R417	6.8 5% 1/4W	4835 116 57559	QW6D8
# R419	1 5% 1/3W	4822 111 30483	-
# R420	.51 5% 1/2W	4835 116 67001	HWD51
# R445	1 5% 1/3W	4822 111 30483	-
# R448	68 5% 30W	-	-
	47 5% 30W	4835 112 37021	-
# R459	100 5% 2W	4835 116 57132	2W110
# R460	2.2 5% 1/4W	4835 116 30492	QW2D2
# R462	680 5% 1/4W	4835 116 57477	QW168
R463	330K 1% 1/8W	4835 116 57558	-
# R464	68 5% 1W	4835 116 57279	1W068
# R466	47 5% 1/3W	4835 116 57069	-
# R468	1 5% 1/3W	4822 111 30483	-
# R470	6.8 5% 1/4W	4835 116 57559	QW6D8
# R475	.51 5% 1/2W	4835 116 67001	HWD51
# R504	3600 5% 2W	4835 116 57155	2W236
# R507	1000 5% 2W	4835 116 57057	2W210
# R515	20 5% 1/3W	4835 116 57065	-
R520	50K Horizontal Centering	4835 100 17066	-
# R524	3600 5% 2W	4835 116 57155	2W236
# R529	10K 5% 1/4W	4835 116 57321	QW310
# R530	1 5% 1/3W	4822 111 30483	-
# R533	442 1% 1/4W	4835 116 57601	-
# R534	3000 1% 1/4W	4835 116 57553	-
# R545	680 5% 1W	4835 116 67144	1W168
R552	5100 2% 1/8W	4835 110 67225	EW251
# R555	330 5% 1W	4835 116 57382	1W133
R556	47 2% 1/8W	4835 116 57602	EW047
R557	1M Vertical Size	4835 100 17065	-
R558	6800 Vertical Centering	4835 100 17067	-
R559	1000 2% 1/8W	4835 110 67216	EW210
R568	1800 2% 1/8W	4835 110 67227	EW218
R642	2000 Blue Drive	4835 100 17073	-
R643	2000 Green Drive	4835 100 17073	-
R648	5000 Blue Cutoff	4835 100 17074	-
R649	5000 Green Cutoff	4835 100 17074	-
R650	5000 Red Cutoff	4835 100 17074	-

**# For SAFETY use only equivalent replacement part.**