

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.

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.

TEST JIG HOOKUP				
Function	Chek-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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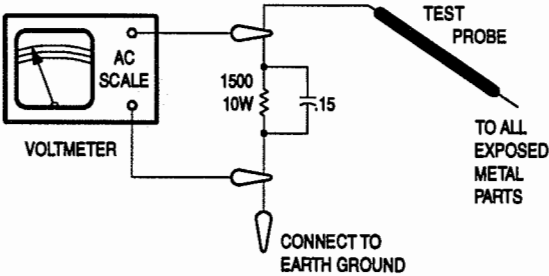
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SAFETY CHECKS – FIRE AND SHOCK HAZARD  
Cold Leakage Checks for Receivers with Isolated Ground

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.



HIGH VOLTAGE SHUTDOWN TEST

After servicing the high voltage circuits, test the shutdown circuit by momentarily placing a 2200 ohms resistor between the cathode of D530 and pin 3 of IC570. The receiver should go into shutdown losing sound and raster. To return receiver to normal operation, remove power for at least 5 seconds and then restore power.

SMPS SHUTDOWN TEST

The SMPS also has a high voltage shutdown circuit. To test this circuit, momentarily short pin 1 to pin 3 of IC403. The receiver should immediately go into shutdown. To reset, remove power for 5 seconds and then restore power.

PHOTOFACT® Technical Service Data

SET 3630

MODELS RS2556A401/A602 (CHASSIS 25Z105-00A)

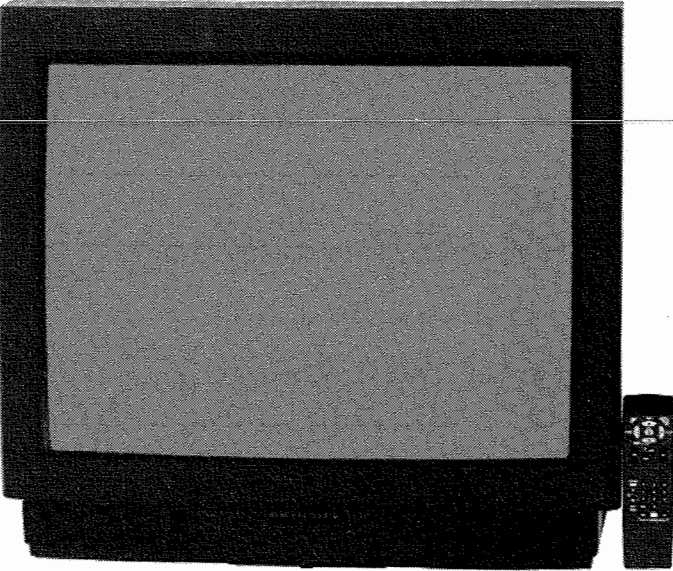
MAGNAVOX

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MAGNAVOX

Models RS2556A401/A602 (Chassis 25Z105-00AA)



Representative Model

Essential coverage  
for servicing a television receiver...

- Schematics
- Component locations
- Parts list



HOWARD W. SAMS & COMPANY

MARCH 1996 SET 3630

For Supplier Address,  
See PHOTOFACT Annual Index



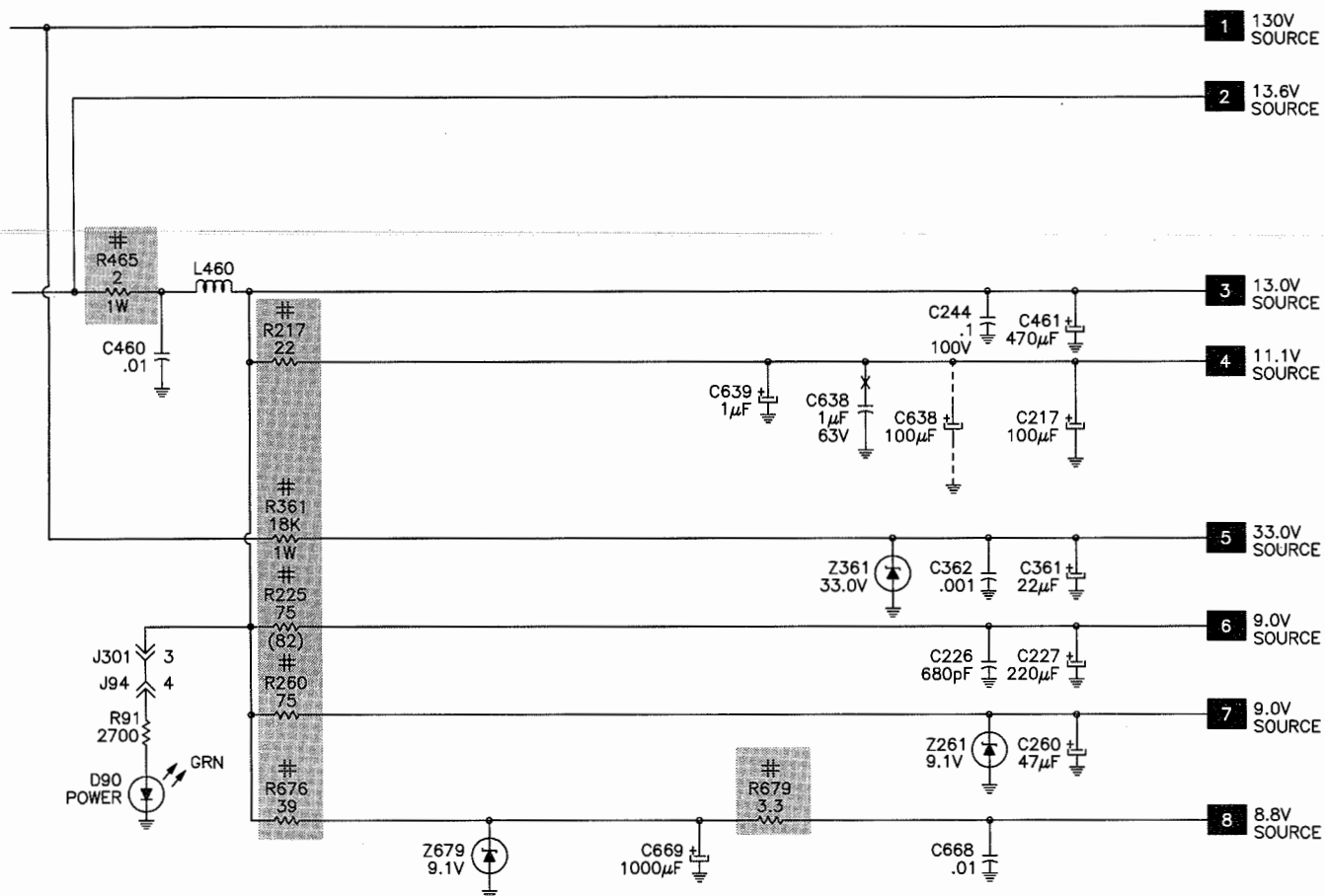
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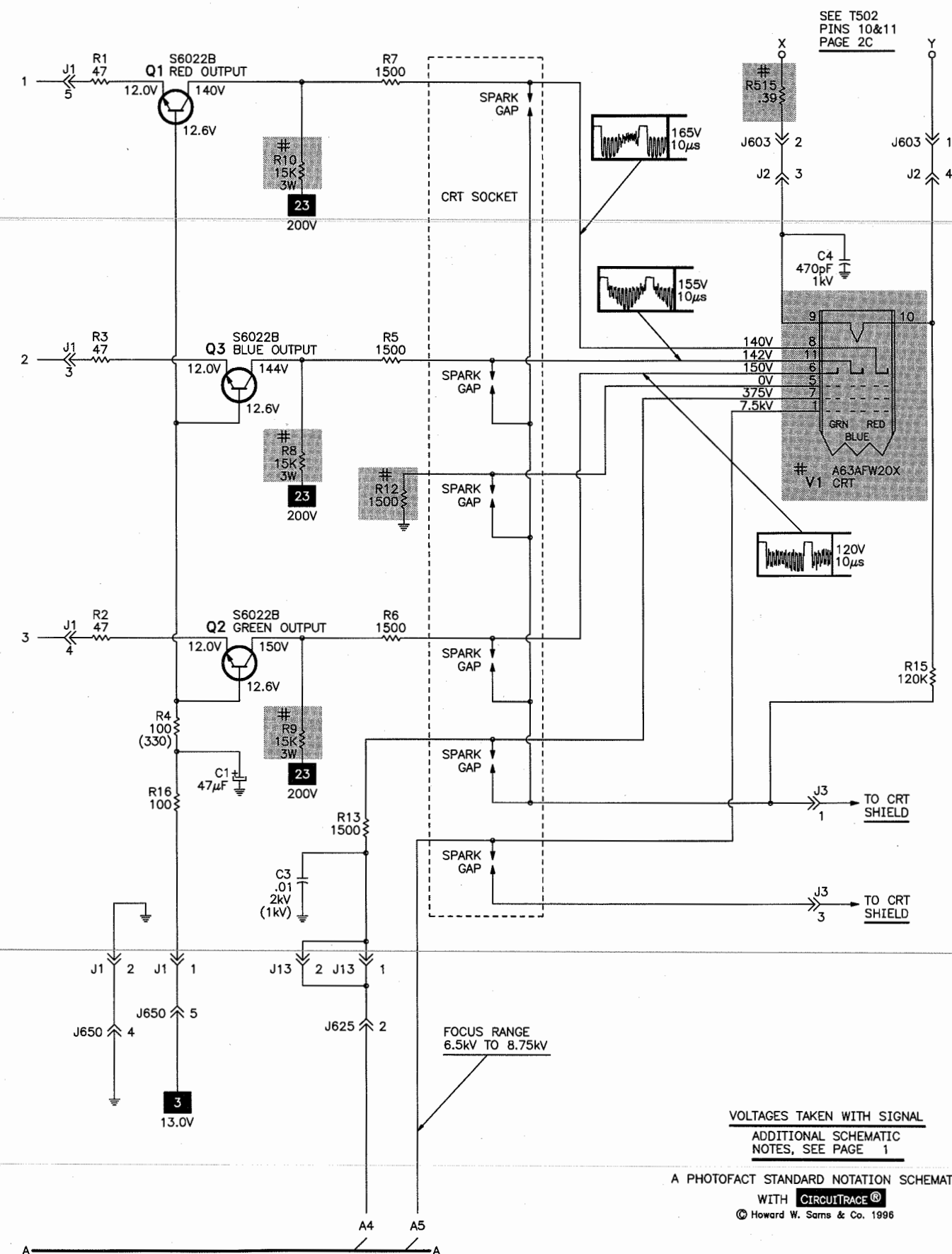
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## POWER SUPPLY SCHEMATIC continued



## CRT SCHEMATIC



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**MODELS RS2556A401/A602 (CHASSIS 25Z105-00AA)**

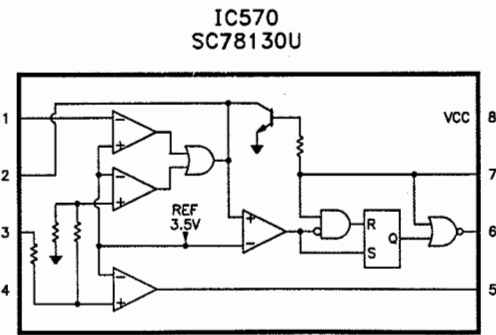
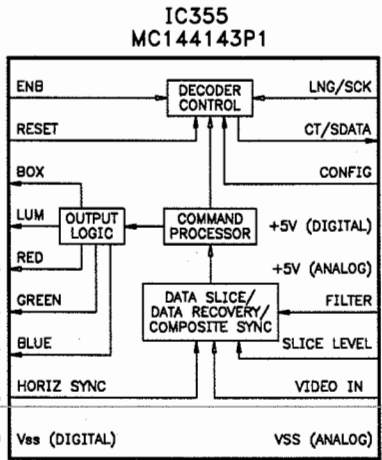
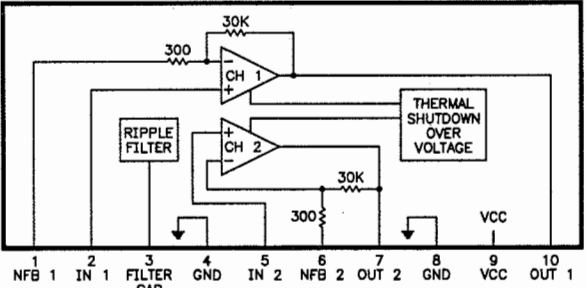
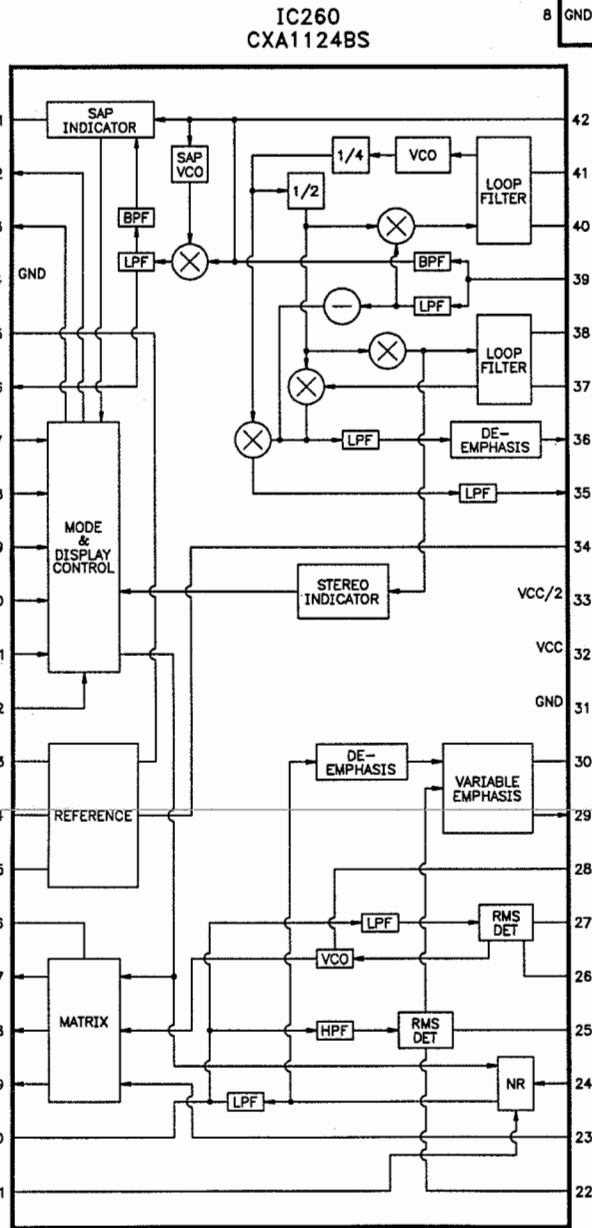
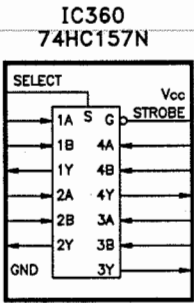
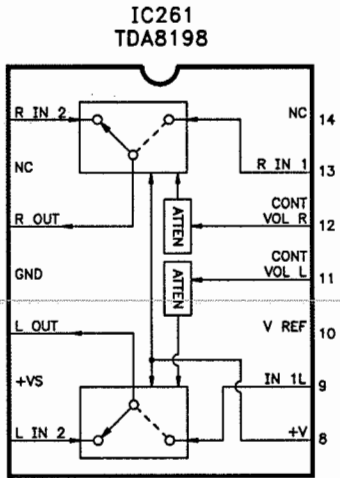
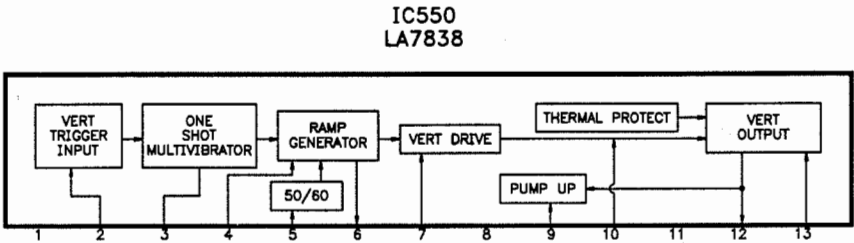
VOLTAGES TAKEN WITH SIGNAL

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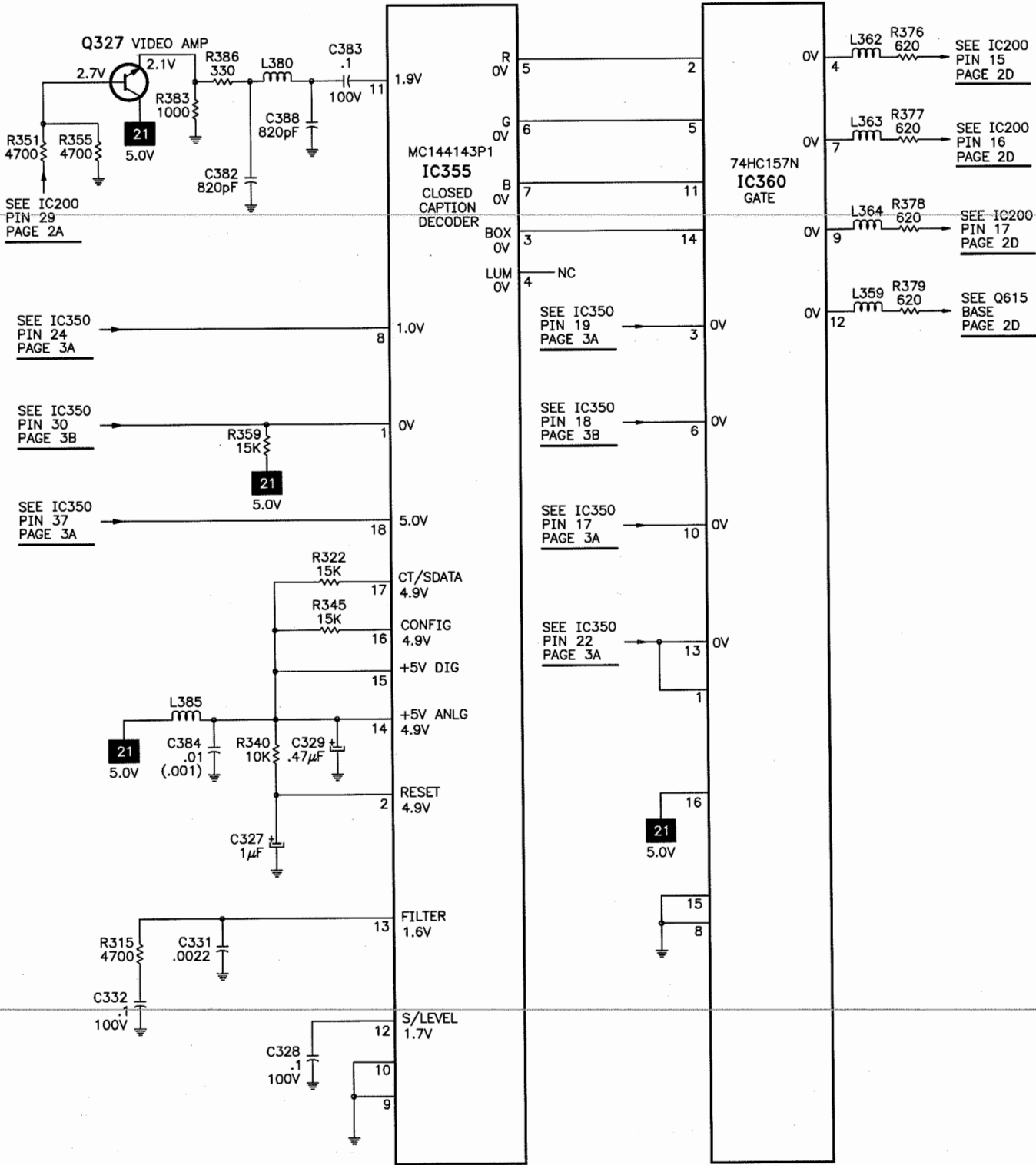
ADDITIONAL SCHEMATIC  
NOTES, SEE PAGE 1

A PHOTOFACT STANDARD NOTATION SCHEMATIC  
WITH CIRCUITRACE®  
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IC FUNCTIONS



CLOSED CAPTION SCHEMATIC

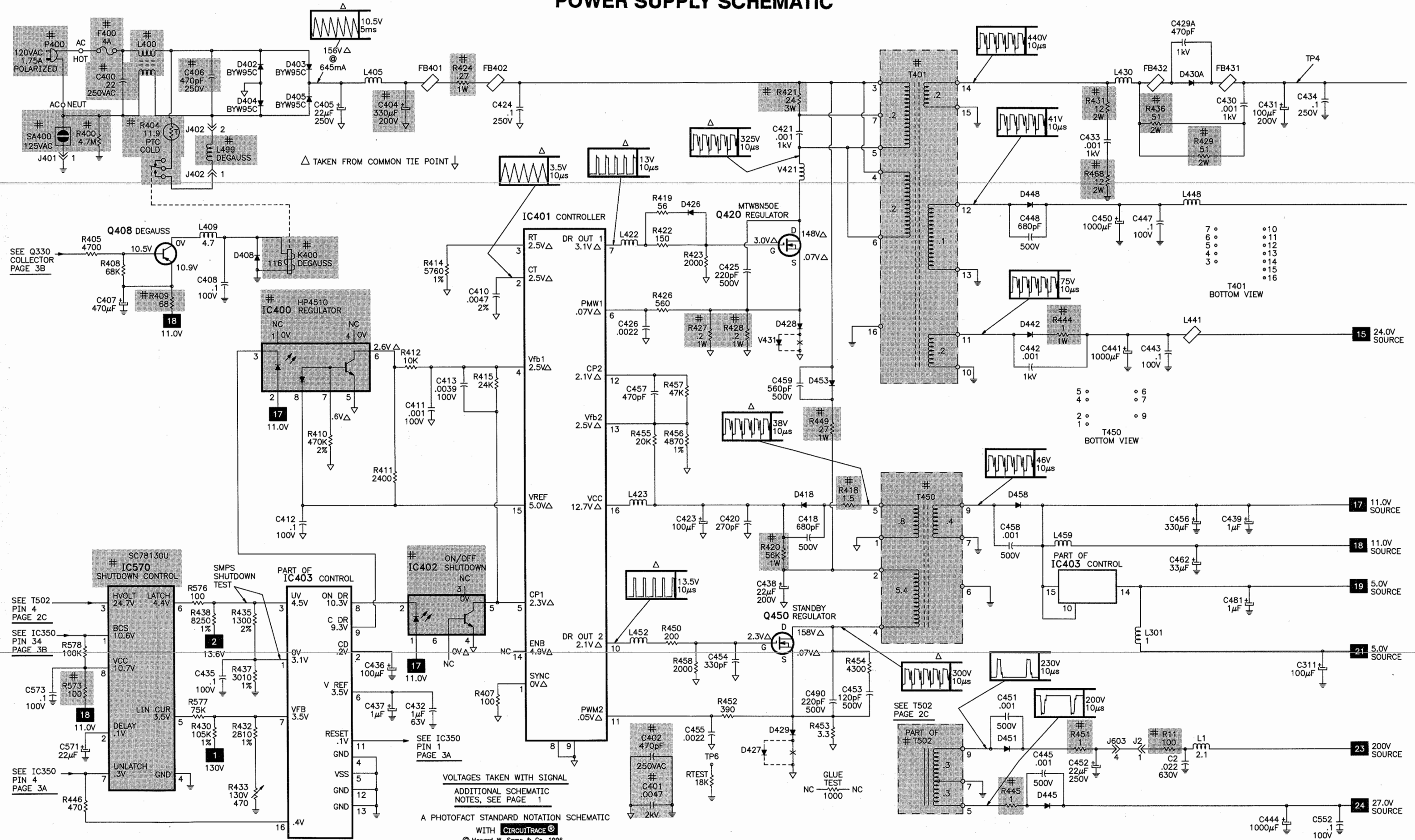


VOLTAGES TAKEN WITH SIGNAL  
ADDITIONAL SCHEMATIC  
NOTES, SEE PAGE 1  
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MAGNAVOX

MODEL S RS2556A401/A602 (CHASSIS 25Z105-00AA)

## POWER SUPPLY SCHEMATIC





MISCELLANEOUS ADJUSTMENTS

HORIZONTAL CENTERING

Tune in a crosshatch pattern. Adjust R514 to center the crosshatch pattern at the left and right sides of the screen.

RF AGC DELAY

Tune in a weak station. Turn R207 fully counterclockwise, then slowly turn clockwise to a point just past minimum snow.

130V B+

Turn receiver on. Connect voltmeter to TP4. Adjust R433 for 130V ±1.0V.

SUB BRIGHTNESS

Tune in an active station. Set color and picture settings to minimum. Set brightness to midrange level. Adjust R380 for just visible highlights.

WHITE BALANCE

Turn receiver off and disconnect vertical connector J550 on main board. Place a jumper between pins 1 and 4 of the J-TEST connector. Rotate R647, R648, R649, R651, R653, and R654 fully clockwise. Turn receiver on and adjust the screen control for a just visible line of a predominant color. Adjust the remaining two cutoff controls for a dim white line. Turn receiver off, remove jumper from J-TEST connector and reconnect vertical connector J550. Turn receiver on and tune in an active channel. Set color to minimum. Adjust drive controls for best black and white picture at high and low brightness levels.

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 R647 fully clockwise and R648 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 R648, R649, and R653 fully clockwise, and R651, R647, and R654 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.

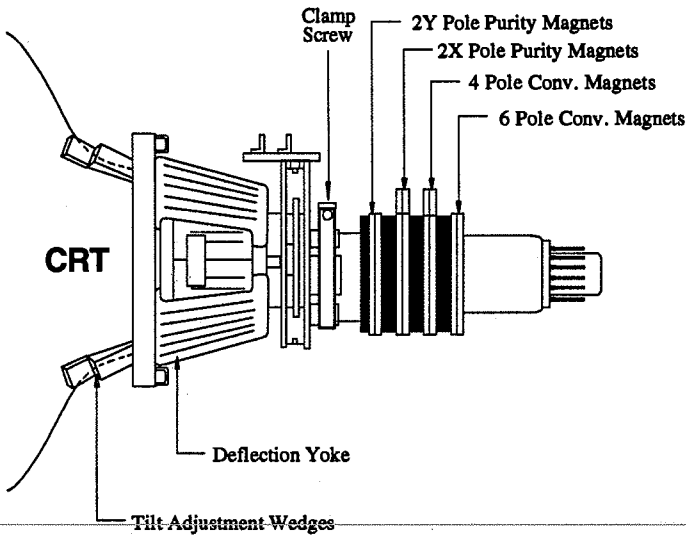
CONVERGENCE

Operate the receiver for fifteen minutes. Tune in a dot pattern. Adjust the four pole magnet tabs to converge the red and blue dots at the center of the screen. Adjust the six pole magnet tabs to converge the red/blue dots with the green dots at the center of the screen.

NOTE: Spread the two tabs for each set of magnets equally and opposite to converge vertically, and rotate both tabs in the same direction to converge horizontally. The four and six 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. Apply adhesive to wedges and replace between the deflection yoke and the CRT.

CRT NECK ASSEMBLY



STEREO ADJUSTMENTS

Adjustments were made with a MTS TV / stereo generator connected to the antenna terminal. Unless otherwise indicated adjustments are made with customer controls at normal settings.

AUDIO LEVEL

Select stereo mode on the receiver. Select pilot, 1kHz audio frequency, and L+R modulating signal. Connect an oscilloscope to pin 39 of IC260 and adjust R249 for .5Vp-p MTS signal.

PILOT NULL

Select stereo mode on the receiver. Select pilot on, SAP off. Turn R259 fully counterclockwise then slowly back until the stereo indicator LED lights.

SAP BANDPASS

Select SAP mode on the receiver. Select SAP, 1kHz audio frequency, and L-R modulating signal. Connect an oscilloscope to pin 26 of IC260. Turn R257 fully clockwise then slowly back until the waveform appears and mark this control setting. Turn R257 fully counterclockwise then slowly back until the waveform appears and mark this setting. Adjust R257 halfway between the two settings.

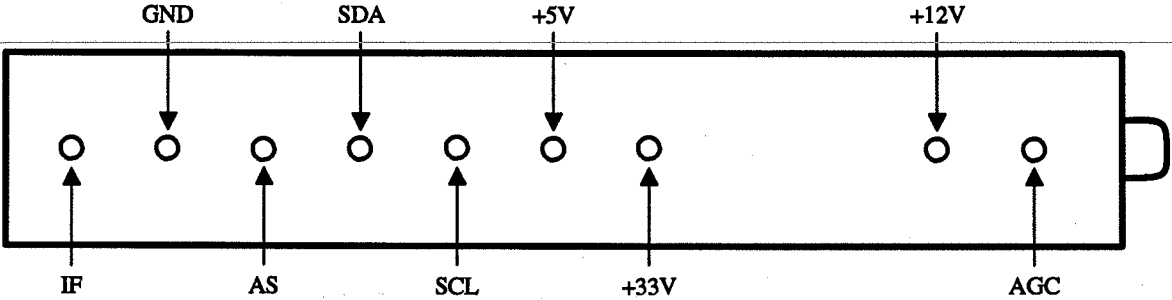
SEPARATION

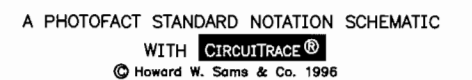
Select stereo mode on the receiver. Select pilot, 300Hz audio frequency, and left modulating signal. Connect an oscilloscope to pin 17 of IC260, adjust R258 for minimum amplitude of waveform. Set audio frequency to 8kHz, adjust R255 for minimum amplitude of waveform. Repeat until no further decrease in amplitude can be obtained.

TUNER INFORMATION

TUNER VOLTAGE CHART							
Pin	VHF Low Band	VHF High Band	UHF Band	Pin	VHF Low Band	VHF High Band	UHF Band
AGC	5.1V	5.2V	5.5V	GND	0V	0V	0V
+12V	12.0V	12.0V	12.0V	IF	0V	0V	0V
+33V	.9V	1.5V	1.6V	NOTE: VHF Low Band voltages taken on channel 2. VHF High Band voltages taken on channel 7. UHF Band voltages taken on channel 14.			
+5V	5.0V	5.0V	5.0V				
SCL	5.0V	5.0V	5.0V				
SDA	5.0V	5.0V	5.0V				
AS	0V	0V	0V				

TUNER TERMINAL GUIDE





SERVICE INFORMATION

If replacement of IC351 is necessary, or a customer is dissatisfied with the initial factory default values, the following procedure is required to enter the field service test mode.

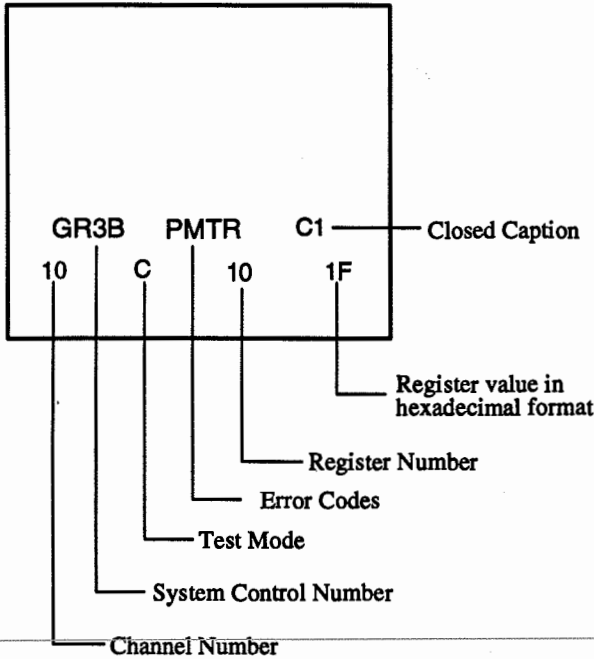
ENTERING FIELD SERVICE TEST MODE

Momentarily ground pin 2 of J300 through a 100 ohms resistor or press the 0, 6, 2, 5, 9, 6, and menu buttons on the remote transmitter. These entries must be made in sequence and before the display times out or the sequence will have to be repeated.

TEST MODE C

NOTE: A loss of power while in the field service test mode will cause the receiver to return to normal operations.

- 1. Test Mode C is used to set the receiver to its optimum settings.
- 2. Upon entry into the field service test mode the receiver will enter test mode C and display the following:



- 3. In this mode all normal on screen displays will be suppressed and replaced by this special test mode display.
- 4. The first line in the lower left hand corner (displayed in red) is the system control number GR3B.
- 5. To the right of the system control number, there may appear up to 4 letters or icons. These letters or icons are called error codes. Error codes will only be displayed if the function is not operating properly, or the receiver does not have that feature.
- 6. The following is a list of error codes:
  - P = PIP Module Failure
  - M = Memory Failure
  - T = Tuner Failure
  - R = Remote Locator Failure
- 7. By depressing any button except the status / exit button on the remote transmitter, the system information and the error code will be removed from the screen.
- 8. To restore the system information and error code display, depress the status / exit button on the remote transmitter.
- 9. Closed caption indicator is displayed only when the A/CH button is pressed. When entering the field service test mode the closed caption will not be displayed. Press A/CH button to sequence thru the three closed caption modes listed below.
  - No closed caption.
  - C1, closed caption on data channel 1.
  - C2, closed caption on data channel 2.

SPECIAL KEY DESIGNATION

Special keys have been designated to function within this test mode. These buttons and their functions are described below.

- 1. Channel up or channel down and the number buttons will allow access to a channel. The number buttons allow random access to any channel, while the channel up or channel down buttons scan the channels in the favorite station memory.
- 2. Display or menu buttons cause the test mode to change from A through D.
- 3. The cursor up and cursor down buttons will increase or decrease the register number from 10 to 23.
- 4. Plus and minus or cursor right and cursor left buttons change the register's value. The register values can be increased or decreased in one step increments from minimum to maximum. These values will be saved in memory when the field service test mode is exited.

MODIFYING TEST MODE

Upon entering the field service test mode the first register displayed is the brightness register, register 10.

Registers and their functions are as follows:

Register	Value	Function
10	1F	Brightness register
11	2F	Picture register
12	1F	Color register
13	1F	Tint register
14	1F	Sharpness register
15	(1)	Volume register
16	05	PIP X1 register
17	28	PIP X2 position
18	06	PIP Y1 position
19	2F	PIP Y2 position
20	08	PIP Read counter position
21	04	PIP Write counter position
22	0A	Horizontal Offset register
23	-	Exit field service test mode register

- (1) The system will initialize the volume at value 0. The volume will be activated by pressing the volume up button, either on the remote or the keyboard. This will not change the value set in register 15. Accessing register 15 will cause the volume to correspond to the value in register 15. Accessing any other register after register 15 will cause the volume to be initialized at value 1F.

NOTE: All registers can be altered even though they may not be a part of the feature package associated with the receiver being tested.

EXITING TEST MODE

To exit the field service test mode, choose register 23. The value of this register upon entry will be 0, increase its value to F, or turn the receiver off at the keyboard power button.

The system will then execute the following:

- 1. The setup values will be stored.
- 2. The favorite station maps will be overwritten. The stations which will be programmed into memory will be 2 through 14 and AUX/VCR.
- 3. The video and audio controls and the last channel are recalled from the memory.

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.

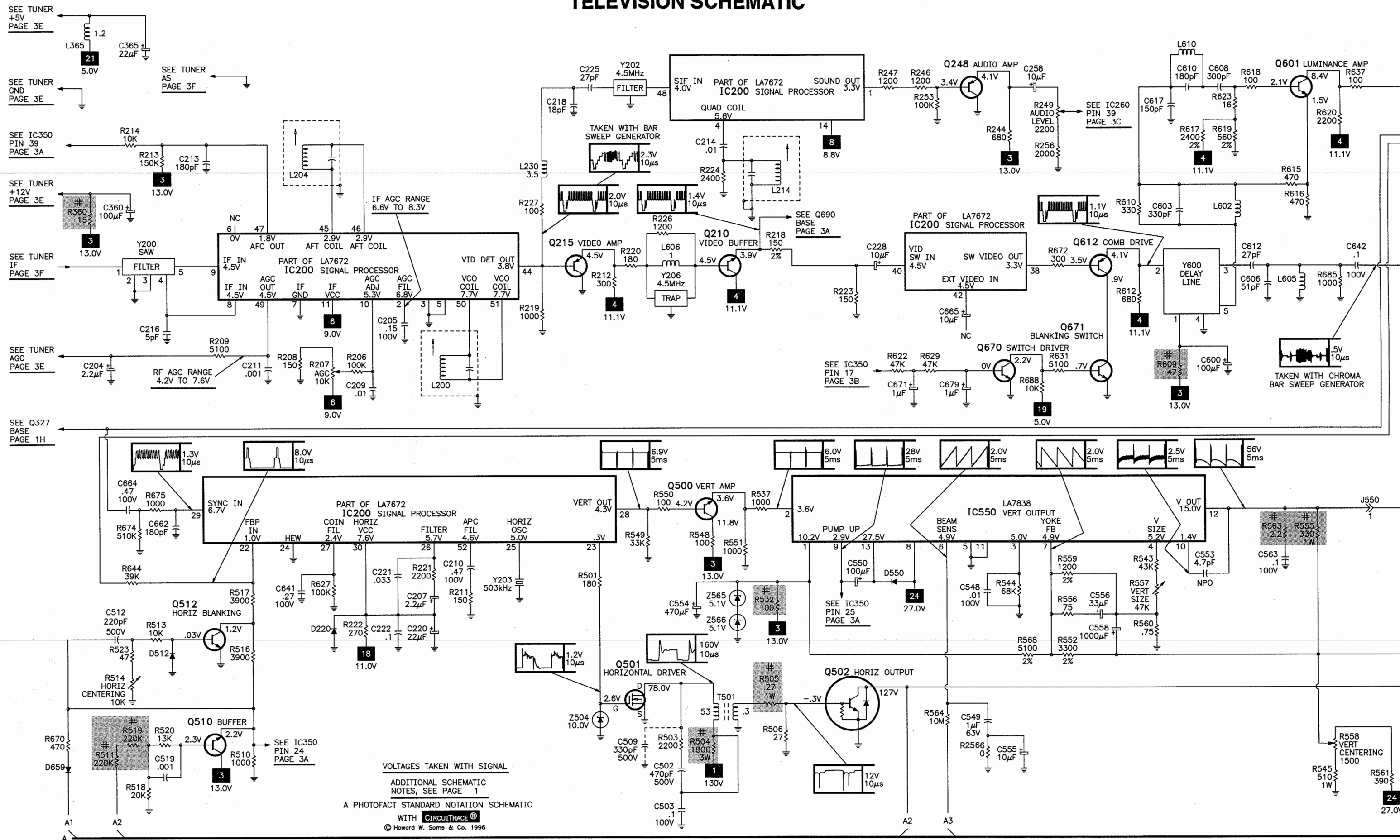
VOLTAGES TAKEN WITH SIGNAL

ADDITIONAL SCHEMATIC  
NOTES, SEE PAGE 1

A PHOTOFACIT STANDARD NOTATION SCHEMATIC

WITH **CIRCUITRACE®**

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FOR REFERENCE ONLY



PARTS LIST continued

MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
# F400	Fuse	4835 253 97095	4Amp, 125VAC, Slow Blow
IR90	Receiver	4835 218 27004	Remote
J4	Jack	4835 265 97023	Assembly
# K400	Relay	4835 280 47033	Degaussing
# K400 (1)	Relay	4835 277 27071	Degaussing
# P400	Line Cord	4835 321 17006	AC, Polarized (Model RS2556A401)
	Line Cord	4835 321 17079	AC, Polarized (Model RS2556A602)
S71	Switch	4835 277 27064	Speaker (Off/On)
# SA400	Surge Absorber	4835 116 67143	125VAC
SP1, 2	Speaker	4835 240 27017	2 1/4" X 5", 16 Ohms
SW71	Switch	4835 277 27066	Display
SW72	Switch	4835 277 27066	Status
SW73	Switch	4835 277 27066	Channel Down
SW74	Switch	4835 277 27066	Channel Up
SW75	Switch	4835 277 27066	Volume Down
SW76	Switch	4835 277 27066	Volume Up
SW77	Switch	4835 277 27066	Power
T300 (2)	Tuner	4835 210 47055	UHF/VHF
# V1	CRT	4835 131 27068	A63AFW20X
Y200	Filter	4835 153 97022	SAW
Y202	Filter	4835 157 57341	4.5MHz
Y203	Crystal	4835 153 97004	503kHz
Y206	Trap	4835 154 17001	4.5MHz
Y320	Crystal	4835 157 57822	4MHz
Y600	Delay Line	4835 152 87002	-
Y665	Crystal	4835 242 77179	3.58MHz
	Antenna Isolator	4835 219 47173	75 Ohms
	Magnet	4835 150 27004	Purity/Convergence
	PC Board (2)	4835 219 57434	Audio/Video Jack Panel (00AVJ143 A001)
	PC Board (2)	4835 219 57458	CRT (00APT118 A001)
	PC Board (2)	4835 219 57394	Keyboard (00ASW108 A001)
	PC Board (2)	4835 219 57393	IR Assembly (00ALR011)
	PC Board (2)	-	Main (00E1Z175)
	Socket	4835 265 97332	CRT
	Transmitter	4835 219 17472	Remote
	Transmitter	4835 219 17428	Remote (00H213AAAA01)
	Transmitter	4835 219 17477	Remote (00S143AAAA01)
	Transmitter	4835 219 17433	Remote (00M143AAAA01)
	Transmitter	4835 219 17426	Remote (00H203AAAA01)
	Transmitter	4835 219 17475	Remote (00Y143AAAA01)
	Wedge	4835 535 27002	Yoke Positioning (3 Used)
	Wedge	4835 535 27001	Yoke Positioning (3 Used)

# For SAFETY use only equivalent replacement part.  
(1) Late Production.  
(2) 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)
- Sencore, Inc.
- Thomson Consumer Electronics, Inc. (SK, TCE)

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

MAGNAVOX

MODELS RS2556A401/A602 (CHASSIS 25Z105-00A)

**MAGNAVOX**  
**MODELS RS2556A40T/A602 (CHASSIS 25Z105-00AA)**

A scatter plot showing the distribution of 20 labeled points (Q261, Q262, Q248, Q211, Q691, Q689, Q690, Q631, Q671, Q670, Q614, Q615, Q613, Q688, Q601, Q620, Q510, Q330, Q327, Q331) across a coordinate system. The points are represented by small vertical bars with labels above them. The plot is bounded by a thick black line on the left and bottom, and a thin black line on the top and right.

Label	Approx. X	Approx. Y
Q261	900	250
Q262	780	200
Q248	900	450
Q211	780	450
Q691	720	350
Q689	670	450
Q690	720	500
Q631	600	600
Q671	530	650
Q670	610	780
Q614	680	880
Q615	500	380
Q613	530	420
Q688	400	460
Q601	460	700
Q620	530	800
Q510	330	700
Q330	380	50
Q327	380	100
Q331	440	70

PARTS LIST continued

CAPACITORS & ELECTROLYTICS

Item No.	Rating	Mfr. Part No.
C3	.01 20% 2kV	-
	.01 20% 1kV	4835 122 57002
C4	470pF 1kV	4835 122 47459
# C283	.1 100V	4835 122 87061
# C400	.22 250VAC	4835 122 97047
# C401	.0047 2kV	4835 122 97023
# C402	470pF 20% 250VAC	4835 122 97071
# C404	330µF 20% 200V	4835 124 47297
# C406	470pF 20% 250V	4835 122 97022
C410	.0047 2% 50V	4835 121 47087
C421	.001 10% 1kV	4835 122 47373
C429A	470pF 1kV	4835 122 47459
C430, 33, 42	.001 10% 1kV	4835 122 47373
# C505	820pF 10% 2kV N3300	4835 122 57004
# C530	22µF 50V	4835 124 47503
C553	4.7pF 10% NPO	4835 122 47452

# For SAFETY use only equivalent replacement part.



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B. Buchanan, T. Clensy,  
G. Farrell, B. Fink,  
M. Herkless, J. Kocha,  
F. Malek, B. Medaris, R. Raus,  
B. Skinner, D. Sullivan*

COILS & TRANSFORMERS

Item No.	Function/Rating	Mfr. Part No.
# DY1	Yoke Horiz 1.3mH Vert 15.5mH	4835 150 17099
FB401, 02	Ferrite Bead	4835 526 17002
FB431, 32	Ferrite Bead	4835 526 17002
L1	47µH	4835 157 57763
L200	VCO 45.75MHz	4835 157 57485
L204	AFT	4835 157 57594
L214	Quadrature 4.5MHz	4835 157 57113
L230	3.3µH	4835 157 57119
L301	27µH	4835 157 57154
L312	12µH	4835 157 57048
L313, 14	3.9µH	4835 157 67007
L359	2.7µH	4835 157 67006
L362, 63, 64	2.7µH	4835 157 67006
L365	12µH	4835 157 57048
L380	100µH	4835 157 57141
L385	4.76µH	4835 157 67011
# L400	Line Filter	4835 152 17001
L405	1.8µH	4835 152 27029
L409	100µH	4835 157 57047
L422	2.2µH	4835 157 57752
L423	.68µH	4835 157 57751
L430	.7µH	4835 152 27036
L441	Ferrite Bead	4835 526 17009
L448	10µH	4835 152 27002
L452	2.2µH	4835 157 57752
L459	10µH	4835 157 57093
L460	42µH	4835 157 57063
# L499	Degaussing	4835 157 97063
L502	42µH	4835 157 57673
L503	Horizontal Linearity	4835 157 57078
	Horizontal Linearity	4835 157 57002
L602	10µH	4835 150 57039
L605	15µH	4835 150 57756
L606	4.76µH	4835 157 67011
L610	10µH	4835 150 57039
L620	2.7µH	4835 157 57098
L625	10µH	4835 150 57004
L636, 37, 38	1.2µH	4835 157 67003
# T401	Switch Mode Power	4835 148 87286
# T450	Switch Mode Standby	4835 148 87251
T501	Horizontal Driver	4835 142 47018
# T502 (1)	Horizontal Output	4835 140 67101
V421	.6µH	4835 152 27036

# For SAFETY use only equivalent replacement part.

(1) Focus and screen controls are part of T502.



# SYSTEM CONTROL SCHEMATIC

**VOLTAGES TAKEN WITH SIGNAL**

**ADDITIONAL SCHEMATIC NOTES, SEE PAGE 1**

A PHOTOFAC STANDARD NOTATION SCHEMATIC  
WITH CIRCUITTRACE®  
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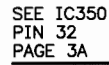
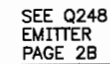
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# PARTS LIST continued

CONTROLS & RESISTORS			
Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
# R8, 9, 10	15K 5% 3W	4835 116 67018	3W315
# R11	100 5% 1/4W	4835 116 67089	HW110
# R12	1500 20% 1/2W	4835 110 47034	HW215
R207	10K AGC	4835 100 17036	-
# R217	22 5% 1/8W	4835 111 37077	-
R218	150 2% 1/4W	4835 111 37058	QW115
# R225	75 5% 1/2W	-	HW075
	82 5% 1/2W	4835 116 67093	HW082
R249	2200 Audio Level	4835 100 17037	-
R255	4700 3kHz	4835 100 17041	-
R257	22K SAP Bandpass	4835 100 17038	-
R258	10K 300Hz	4835 100 17036	-
R259	47K Pilot Null	4835 100 17042	-
# R260	75 5% 1/2W	4835 116 57371	HW075
R269	43K 2% 1/4W	4835 111 37328	-
# R283	2.2 5% 1/4W	4835 116 57469	QW2D2
# R287	10 5% 1/3W	4822 111 30508	-
# R293	2.2 5% 1/4W	4835 116 57469	QW2D2
# R299	1 5% 1W	4835 116 57117	1W1D0
# R303	4.7 5% 1/4W	4835 111 37106	-
# R309	10 5% 1/4W	4835 116 57362	QW010
# R360	15 5% 1/4W	4835 116 57403	QW015
# R361	18K 5% 1W	4835 116 57036	1W318
R380	2200 Sub Brightness	4835 100 17037	-
# R400	4.7M 5% 1/2W	4835 116 57009	HW547
# R404	11.9 Cold PTC	4835 116 47001	-
# R409	68 5% 1/3W	4835 116 57292	-
R410	470K 2% 1/4W	-	-
	470K 5% 1/4W	4835 111 37349	-
R414	5760 1% 1/8W	4835 116 57033	-
# R418	1.5 5% 1/4W	4835 116 57466	QW1D5
# R420	56K 5% 1W	4835 116 57039	1W356
# R421	24 5% 3W	4835 116 57043	3W024
# R424	.27 5% 1W	4835 116 57056	1WD27
# R427, 28	.2 5% 1W	4835 116 57054	-
# R429	51 5% 2W	4835 110 57258	2W051
R430	105K 1% 1/2W	4835 116 57287	-
# R431	12 5% 2W	4835 116 57075	2W012
R432	2810 1%	4835 111 27024	-
R433	470 130V	4835 100 17039	-
R435	1300 2% 1/4W	4835 111 37302	-
# R436	51 5% 2W	4835 110 57258	2W051
R437	3010 1% 1/8W	4835 116 57029	-
R438	8250 1% 1/8W	4835 110 67189	-
# R444	1 5% 1W	4835 116 67094	1W1D0
# R445	1 5% 1/3W	4835 116 57109	-
# R449	27 5% 1W	4835 116 57204	1W027
# R451	1 5% 1/3W	4822 111 30483	-
R456	4870 1% 1/8W	4835 116 57446	-
# R465	2 5% 1W	4835 116 67145	1W2D0
# R468	12 5% 2W	4835 116 57075	2W012
# For SAFETY use only equivalent replacement part.			

CONTROLS & RESISTORS continued			
Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
# R504	1800 5% 3W	4835 116 67099	3W218
# R505	.27 5% 1W	4835 116 57056	1WD27
R507	33 5% 3W	4835 116 67102	3W033
# R508	680 5% 1/4W	4835 116 57381	QW168
# R511	220K 5% 1/2W	4835 116 57018	HW422
R514	10K Horizontal Centering	4835 100 17029	-
# R515	.39 1/2W	4835 116 57175	-
# R519	220K 5% 1/2W	4835 116 57018	HW422
# R530	1 5% 1/3W	4822 111 30483	-
# R532	100 5% 1/4W	4835 116 67089	QW110
R552	3300 2% 1/4W	4835 111 37327	QW233
# R555	330 5% 1W	4835 116 57382	1W133
R557	47K Vertical Size	4835 100 17023	-
R558	1500 Vertical Centering	4835 100 17049	-
R559	1200 2% 1/4W	4835 111 37299	QW212
# R563	2.2 5% 1/4W	4835 116 57469	QW2D2
R568	5100 2% 1/4W	4835 111 37412	QW251
# R573	100 5% 1/4W	4835 116 57318	QW110
# R574	2000 2% 1/4W	4835 111 37348	-
# R579	10K 2% 1/8W	4835 111 37409	-
# R580	1500 2% 1/4W	4835 111 37395	-
R606	392 1% 1/8W	4835 116 57383	-
R607	1150 1% 1/8W	4835 111 37352	-
# R609	47 5% 1/4W	4835 111 37107	-
R617	2400 2% 1/4W	4835 111 37326	QW224
R619	560 2% 1/4W	4835 111 37351	QW156
R624	150 2% 1/4W	4835 111 37058	-
R647	4700 Green Cutoff	4835 100 17022	-
R648	2200 Green Drive	4835 100 17021	-
R649	4700 Red Cutoff	4835 100 17022	-
R651	2200 Red Drive	4835 100 17021	-
R653	4700 Blue Cutoff	4835 100 17022	-
R654	2200 Blue Drive	4835 100 17021	-
# R676	39 5% 1/2W	4835 116 57459	HW039
# R679	3.3 5% 1/4W	4835 111 37398	-
RA302, 04	20K 5% X 4 Network	4835 111 97037	-
# For SAFETY use only equivalent replacement part.			

## D



WITH **CIRCUITRACE®**  
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PARTS LIST

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.
D90	-	4835 130 37516	-	-	-
D91	-	4835 130 37541	-	-	-
D214, 15	-	4835 130 37048	NTE519	ECG519	SK3100
D220	-	4835 130 37066	-	-	-
D304, 05, 06	-	4835 130 37066	-	-	-
D361	-	4835 130 37679	-	-	-
D402 Thru					
D405	BYW95C	4835 130 37059	NTE580	ECG580	SK5036
D408	-	4835 130 37052	NTE580	ECG580	SK5036
D418	-	4835 130 37058	NTE587	ECG587	SK9937
D426	-	4835 130 37066	-	-	-
D427	-	-	-	-	-
D428	-	4835 130 37052	NTE580	ECG580	SK5036
D429	-	4835 130 37058	NTE587	ECG587	SK9937
D430A	-	4835 130 37491	NTE598	ECG598	SK9859
D442	-	4835 130 37059	NTE580	ECG580	SK5036
D445	-	4835 130 37052	NTE580	ECG580	SK5036
D448	-	4835 130 37059	NTE580	ECG580	SK5036
D451	-	4835 130 37052	NTE580	ECG580	SK5036
D453	-	4835 130 37182	NTE125	ECG125	SK3081
D458	-	4835 130 37058	NTE587	ECG587	SK9937
D509	-	4835 130 37094	NTE580	ECG580	SK5036
D512	-	4835 130 37048	NTE519	ECG519	SK3100
D530	-	4835 130 37058	NTE587	ECG587	SK9937
D550	-	4835 130 37094	NTE580	ECG580	SK5036
D613, 14, 15	-	4835 130 37066	-	-	-
D650	-	4835 130 37058	NTE587	ECG587	SK9937
D659	-	4835 130 37048	NTE519	ECG519	SK3100
D661	-	4835 130 37053	NTE552	ECG552	SK9000
IC200	LA7672	4835 209 88005	-	-	-
IC260	CXA1124BS	4835 209 88002	-	-	-
IC261	TDA8198	4835 209 87982	-	-	-
IC262	LA4270	4835 209 87085	NTE1798	ECG1798	SK9745
IC350	SC88639B	4835 209 88109	-	-	-
IC351	CAT24C01A	4835 209 88108	-	-	-
IC355	MC144143P1	4835 209 88025	-	-	-
IC360	74HC157N	4835 209 87904	-	-	-
# IC400	HP4510	4835 130 97006	NTE3092	ECG3092	SK9770
IC401	-	4835 209 87834	NTE1765	ECG1765	-
# IC402	-	4835 130 37057	-	-	-
IC403	-	4835 209 88114	-	-	-
IC550	LA7838	4835 209 88003	NTE7039	ECG7039	-
# IC570	SC78130U	4835 209 87838	-	-	-
Q1, 2, 3	S6022B	4835 130 47796	-	-	-
Q210	-	4835 130 47055	NTE123AP*	ECG123AP*	SK3854*
Q215	-	4835 130 47049	NTE159	ECG159	SK3466
Q248	-	4835 130 47112	NTE2407	ECG2407	SK10098
Q260, 61, 62	-	4835 130 47086	NTE2406	ECG2406	SK10097
Q327	-	4835 130 47086	NTE2406	ECG2406	SK10097
# For SAFETY use only equivalent replacement part.					
* Lead configuration may vary from original.					

SEMICONDUCTORS continued					
(Select the replacement that gives the best results.)					
Item No.	Type No.	Mfr. Part No.	NTE Part No.	ECG Part No.	TCE Part No.
Q328	-	4835 130 47126	NTE159*	ECG159*	SK3466*
Q330, 31	-	4835 130 47086	NTE2406	ECG2406	SK10097
Q408	-	4835 130 47049	NTE159	ECG159	SK3466
Q420	MTW8N50E	4835 130 47896	NTE2393%	ECG2393%	-
Q450	-	4835 130 47063	-	-	-
Q500	-	4835 130 47055	NTE123AP*	ECG123AP*	SK3854*
Q501	-	4835 130 47931	-	-	-
Q502	-	4835 130 47897	NTE2353	ECG2353*	-
Q510	-	4835 130 47086	NTE2406	ECG2406	SK10097
Q512	-	4835 130 47055	NTE123AP*	ECG123AP*	SK3854*
Q601	-	4835 130 47086	NTE2406	ECG2406	SK10097
Q612	-	4835 130 47049	NTE159	ECG159	SK3466
Q613	-	4835 130 47086	NTE2406	ECG2406	SK10097
Q614	-	4835 130 47112	NTE2407	ECG2407	SK10098
Q615	-	4835 130 47086	NTE2406	ECG2406	SK10097
Q620	-	4835 130 47112	NTE2407	ECG2407	SK10098
Q631	-	4835 130 47086	NTE2406	ECG2406	SK10097
Q650, 51, 52	-	4835 130 47055	NTE123AP*	ECG123AP*	SK3854*
Q660	-	4835 130 47049	NTE159	ECG159	SK3466
Q661	-	4835 130 47051	NTE123AP	ECG123AP	SK3854
Q670, 71	-	4835 130 47086	NTE2406	ECG2406	SK10097
Q688	-	4835 130 47112	NTE2407	ECG2407	SK10098
Q689	-	4835 130 47086	NTE2406	ECG2406	SK10097
Q690	-	4835 130 47112	NTE2407	ECG2407	SK10098
Q691	-	4835 130 47086	NTE2406	ECG2406	SK10097
V431	-	4835 130 37179	-	-	-
Z261	-	4835 130 37562	NTE139A	ECG139A	SK9V1
Z361	-	4835 130 37046	NTE5036A	ECG5036A	SK33A
Z504	-	4835 130 37672	-	-	-
Z565, 66	-	4835 130 37715	-	-	-
Z679	-	4835 130 37562	NTE139A	ECG139A	SK9V1
* Lead configuration may vary from original.					
% Use Insulating hardware supplied with replacement.					

CABINET PARTS	
Item	Mfr. Part No.
Model RS2556A401	
Cabinet Front	4835 430 57132
Cabinet Rear	4835 432 97342
Pushbutton Assembly	4835 219 47254
Model RS2556A602	
Cabinet Front	4835 430 57134
Cabinet Rear	4835 432 97407
Pushbutton Assembly	4835 219 47254