

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	CN501	1, 2	Blue
Yoke	D4137		3, 4	Red
Yoke Setting	YP2A		5	Yellow
Comments	Focus Tap		6	Green

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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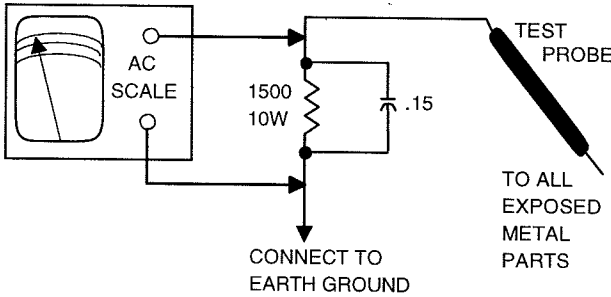
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SAFETY CHECKS -- FIRE AND SHOCK HAZARD  
Cold Leakage Checks for Receivers with Isolated Ground

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.



PHOTOFACT® Technical Service Data

SET 4277

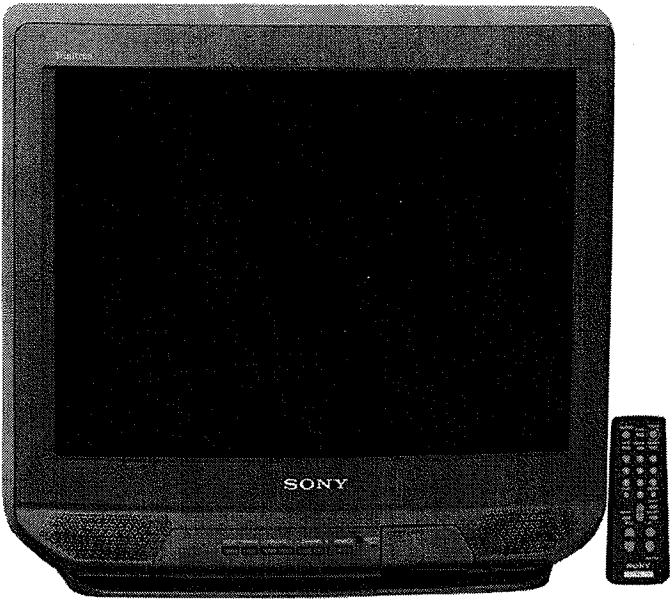
MODEL KV-21ME42 (CHASSIS SCC-S25B-A)

SONY

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SONY  
Model KV-21ME42 (Chassis SCC-S25B-A)



Essential coverage  
for servicing a television receiver...

- Schematics
- Component locations
- Parts list

Coverage includes these additional models and chassis:

MODEL	CHASSIS
KV-21ME42C	SCC-S25F-A



HOWARD W. SAMS & COMPANY

APRIL 2000 SET 4277

For Supplier Address,  
See PHOTOFACT Annual Index



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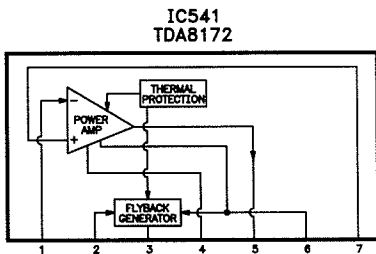
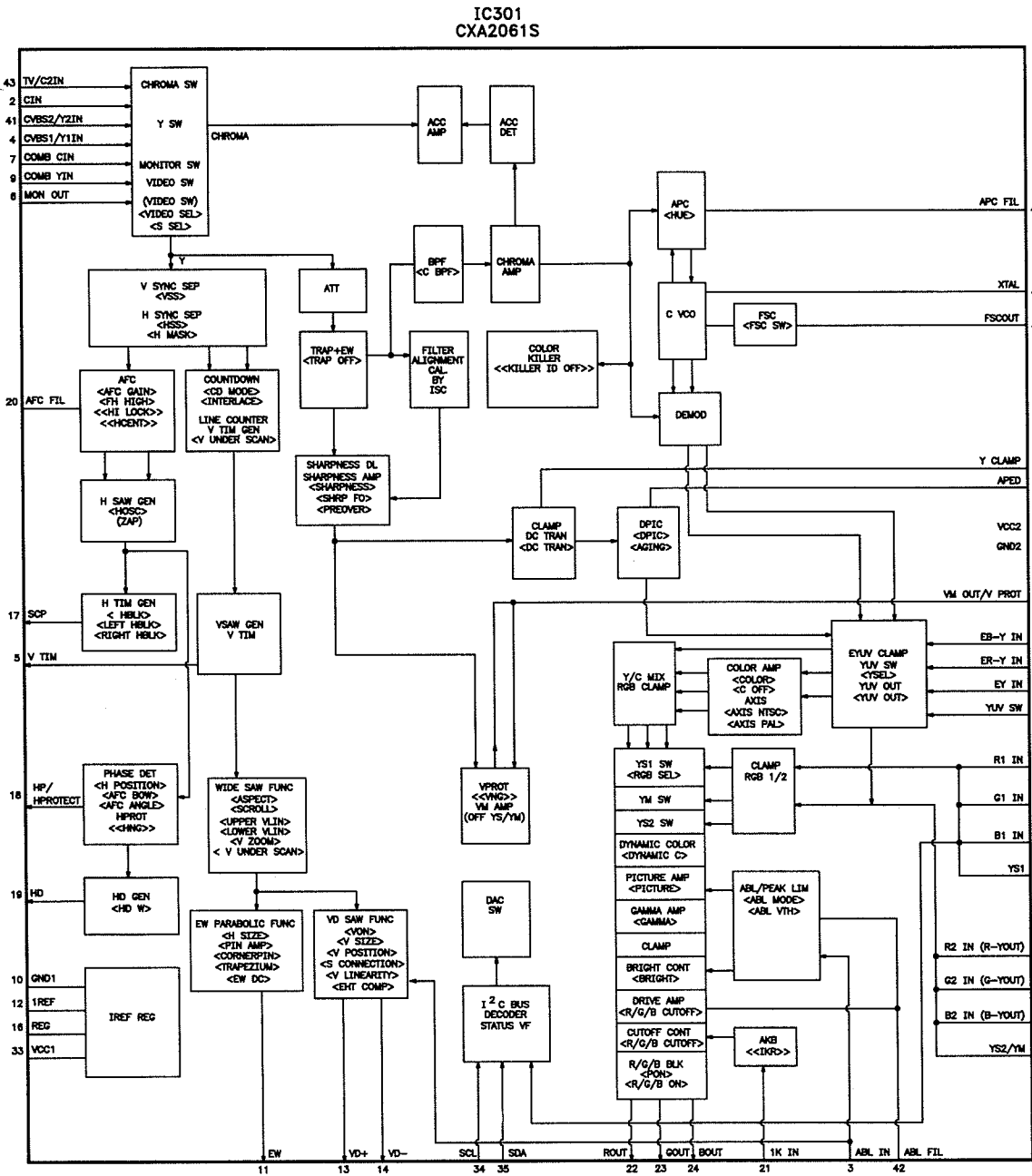


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4277

IC FUNCTIONS



SAFETY RELATED ADJUSTMENTS

R582 CONFIRMATION METHOD (HV HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components IC301, IC521, IC602, D572, D573, D574, DY, C511, C574, C575, R578, R582, R583, R584, R585, R586, R625, R626, R634, R635, and T504.

Check that voltage at the cathode of D574 is higher than 99.8V with brightness and picture at maximum before performing confirmation procedure.

1. Unplug receiver. Unsolder pin 11 of T504. Connect a current meter to pin 11 of T504 and the part of the circuit where pin 11 of T504 would normally connect. Reapply 120VAC  $\pm$ 2.0VAC (120-220VAC for model KV-21ME42C) and turn on the receiver.
2. Receive a white screen. Adjust picture and brightness so ABL current is 95 $\mu$ A +100 $\mu$ A -95 $\mu$ A. Confirm the voltage at the cathode of D653 is 117.8V  $\pm$ 3V.
3. Connect a voltmeter to the cathode of D574. Connect a DC power supply positive lead to the anode of a blocking diode 1SS119 and the cathode to the cathode of D574. Increase DC power supply voltage gradually until picture just blanks out.
4. Check voltage on voltmeter and immediately turn DC power supply off.
5. Voltage should be less than or equal to 127.3V.
6. Receive a dot pattern. Adjust picture and brightness to maximum. Repeat steps 3 and 4.
7. Voltage should be less than or equal to 127.3V.
8. If R582 Confirmation Method (HV Hold-down Confirmation) cannot be satisfied, readjustment should be performed by altering the resistance value of R582.

B+ VOLTAGE CONFIRMATION AND READJUSTMENT

The following adjustment should always be performed when replacing the following components IC001, IC602, R030, R626, R632, R633, R635, R636, R637, R638, and R639.

1. Supply 130VAC  $\pm$ 2.0VAC (120-220VAC for model KV-21ME42C) with variable AC transformer.
2. Receive a dot signal. Set picture and brightness to minimum.
3. Enter digital service adjustment mode (see Miscellaneous Adjustment), select PADJ, and adjust for value of 0.
4. Confirm the voltage at the cathode of D620 is less than 125V.
5. If step 4 cannot be satisfied, replace the components. Repeat above steps.
6. Adjust AC supply to 120VAC  $\pm$ 2.0VAC (120-220VAC for model KV-21ME42C).
7. Adjust data value of PADJ for 117.0V  $\pm$ 3V at the cathode of D620.
8. Write into memory by pressing the mute button then the enter button.

SERVICE INFORMATION

SELF DIAGNOSTIC FUNCTION

This receiver contains a self diagnostic function that will display error codes when problems are detected in certain circuits. The standby indicator on the receiver front will flash to indicate an error has been detected. The way the indicator flashes can be used to determine the location of the error. The error code will be a series of flashes that repeat after 3 seconds. Any errors can also be displayed using the on screen function of the self diagnostics. The following list explains the error codes.

Error Codes		
Number Of Flashes	Description Of Code	Possible Malfunction
0	Power does not turn on.	Loss of AC supply or F601 open.
2	High voltage hold down is activated.	Q502 or IC1751 shorted.
4	No vertical deflection.	Failure of IC541 or loss of 13.0V supply to pin 2 of IC541.
5	White balance failure.	Failure of Q392 thru Q394 or IC301. Screen control out of adjustment.

ON SCREEN DISPLAY OF THE SELF DIAGNOSTIC FUNCTION

The on screen display of the self diagnostic function shows a list of the past failures detected. The 2, 4, and 5 rows correspond to the error code flashes described in the above chart. To enter the on screen display, tune in a picture, turn receiver off, and press display, 5, volume (-), and power without allowing time between buttons. The on screen display will be displayed as shown in following drawing. After errors have been corrected clear the on screen display information by pressing 8 and enter buttons. To exit the on screen display, press the power button.

On Screen Display of Self Diagnostic Function

SELF DIAGNOSTICS	
2:	0
3:	N/A
4:	0
5:	0
101:	N/A

## MISCELLANEOUS ADJUSTMENTS

### DIGITAL SERVICE ADJUSTMENT PROCEDURES

#### Entering / Exiting the Digital Service Adjustment Mode

1. Tune in a picture and turn receiver off.
2. Press the display button, the 5 button, the volume (+) button, and the power button in sequence. Press each button within a second.
3. The CRT will display the item being adjusted.
4. To exit service adjustment mode, turn receiver off and then on.

#### Making Adjustments

1. Enter the digital service adjustment mode.
2. Select adjustment by pressing the 1 or 4 button.
3. Make changes on selected adjustment by pressing the 3 or 6 button.

#### Saving Adjustments to Memory

1. Adjustments must be saved to memory.
2. To save adjustment, press the mute button and then the enter button.

#### Memory Write Confirmation

1. Disconnect AC plug from outlet.
2. Plug receiver in and enter the digital service adjustment mode.
3. Select adjustment and confirm that setting was saved to memory.

NOTE: Set all adjustments that are not listed in the following adjustment procedures to the nominal value as per Digital Service Adjustment Mode chart.

### RF AGC

Tune in a active channel. Adjust AGC control, on TU101, counterclockwise until snow appears and then clockwise until snow just disappears.

### HORIZONTAL FREQUENCY CHECK

Connect a frequency counter to the base of Q501. Tune in a colorbar pattern. Enter the digital service adjustment mode. Select AFC and set to 3. Horizontal will lose sync. Horizontal frequency should be 15735Hz ± 200Hz. Select AFC adjustment and set level to 0. Save adjustment to memory.

### HORIZONTAL CENTER (HPOS)

Perform horizontal frequency check. Tune in a crosshatch pattern. Enter the digital service adjustment mode. Select HPOS and adjust level for best horizontal centering. Save adjustment to memory.

### VERTICAL FREQUENCY CHECK

Select video 1 with no signal. Connect a frequency counter to pin 5 of IC541. Vertical frequency should be 60Hz ± 2Hz.

### VERTICAL POSITION (VPOS) AND VERTICAL SIZE (VSIZ)

Tune in a crosshatch pattern. Enter the digital service adjustment mode. Select VPOS and adjust level to center picture vertically. Select VSIZ and adjust level for slight vertical overscan. Save adjustments to memory.

### VERTICAL LINEARITY (VLIN) AND VERTICAL CORRECTION

Tune in a crosshatch pattern. Enter the digital service adjustment mode. Select VLIN and adjust level for equal vertical spacing of pattern at top and bottom of screen. Vertical correction will be adjusted automatically for equal vertical spacing of pattern at center of screen. Save adjustments to memory.

### DISPLAY POSITION (DISP)

Enter the digital service adjustment mode. Select DISP and adjust to center display. Save adjustment to memory.

### SUB BRIGHTNESS (SBRT)

Tune in a crosshatch pattern. Set picture and brightness to minimum. Enter the digital service adjustment mode. Select SBRT and adjust level for visible highlights. Save adjustment to memory.

### SUB CONTRAST

Connect an oscilloscope to pin 3 of CN752. Tune in a colorbar pattern. Set picture to maximum and color and brightness to minimum. Enter the digital service adjustment mode. Select RON and set level to 1. Select GON and set level to 0. Select BON and set level to 0. Select RDRV and adjust level so that signal portion of waveform is 1.5V± .05V p-p. Set GON and BON to 1. Save adjustment to memory.

### SUB HUE (SHUE), SUB COLOR (SCOL), AND SUB SHARPNESS (SSHP)

Tune in an active channel. Enter the digital service adjustment mode. Select and adjust SHUE and SCOL for proper flesh tones. Select SSHP and adjust for best sharpness. Save adjustments to memory.

### B+ ADJUST (PADJ)

Connect a digital voltmeter to the junction of L504 and R571. Enter the digital service adjustment mode. Select PADJ and adjust for 115V ± 2.0V. Save adjustment to memory.

### COLOR PURITY

Use a degaussing coil to demagnetize the CRT and mounting brackets. Tune in a green raster signal. Loosen deflection yoke clamp screw and slide deflection yoke backward to obtain a vertical green band. Adjust purity rings to center the vertical green band. Slide the deflection yoke forward until a uniform green screen is obtained. Tune in a blue and red raster signal and check blue and red purity. Tighten the deflection yoke clamp screw.

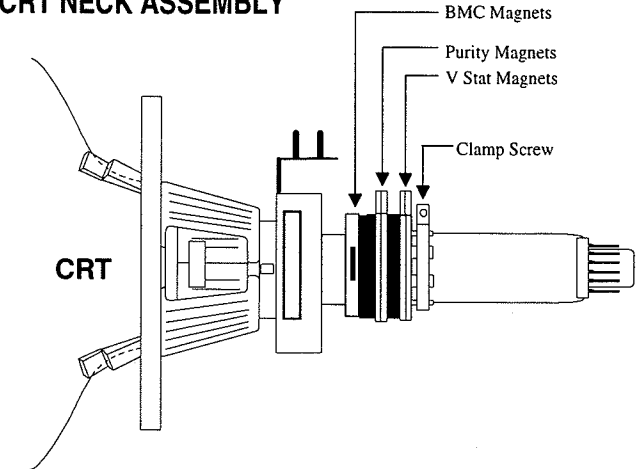
### COLOR TEMPERATURE (BCUT, GCUT, GDRV, BDRV)

Tune in a crosshatch pattern. Set picture and brightness to minimum. Adjust screen control for a visible pattern. Enter the digital service adjustment mode. Select GCUT and BCUT and adjust levels for best white balance. Save adjustment to memory. Set picture and brightness to maximum. Select GDRV and BDRV and adjust levels for best white balance. Save adjustments to memory.

### CONVERGENCE

Adjust focus and perform vertical position, size, and linearity adjustment. Set brightness to minimum. Tune in a dot pattern. Rotate vertical static magnets to converge red, green, and blue dots vertically at center of screen. If blue dots do not converge with green and red dots, slide BMC magnets in and out to correct for insufficient horizontal static convergence, rotate the BMC magnets to correct for insufficient vertical static convergence. Tune in a crosshatch pattern, loosen deflection yoke clamp screw, and remove rubber wedges between deflection yoke and CRT. Tilt 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 screen. Tilt deflection yoke right or left to converge vertical lines at the right and left sides of screen and horizontal lines at top and bottom of screen. Apply adhesive to wedges and carefully replace on CRT.

### CRT NECK ASSEMBLY

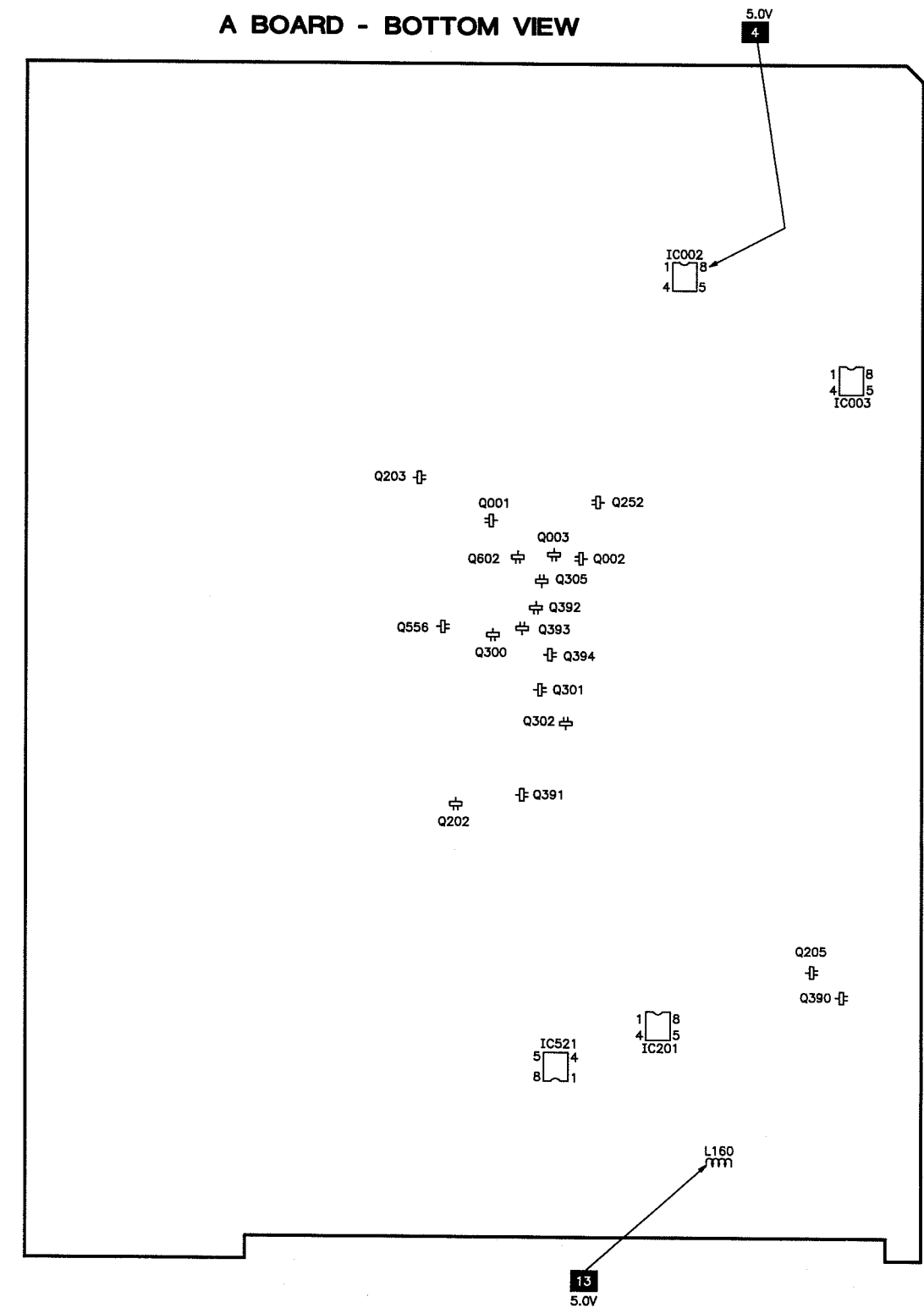
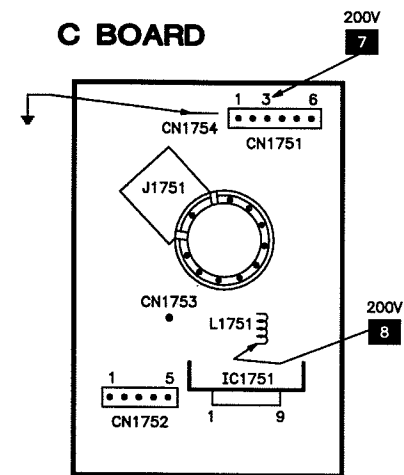
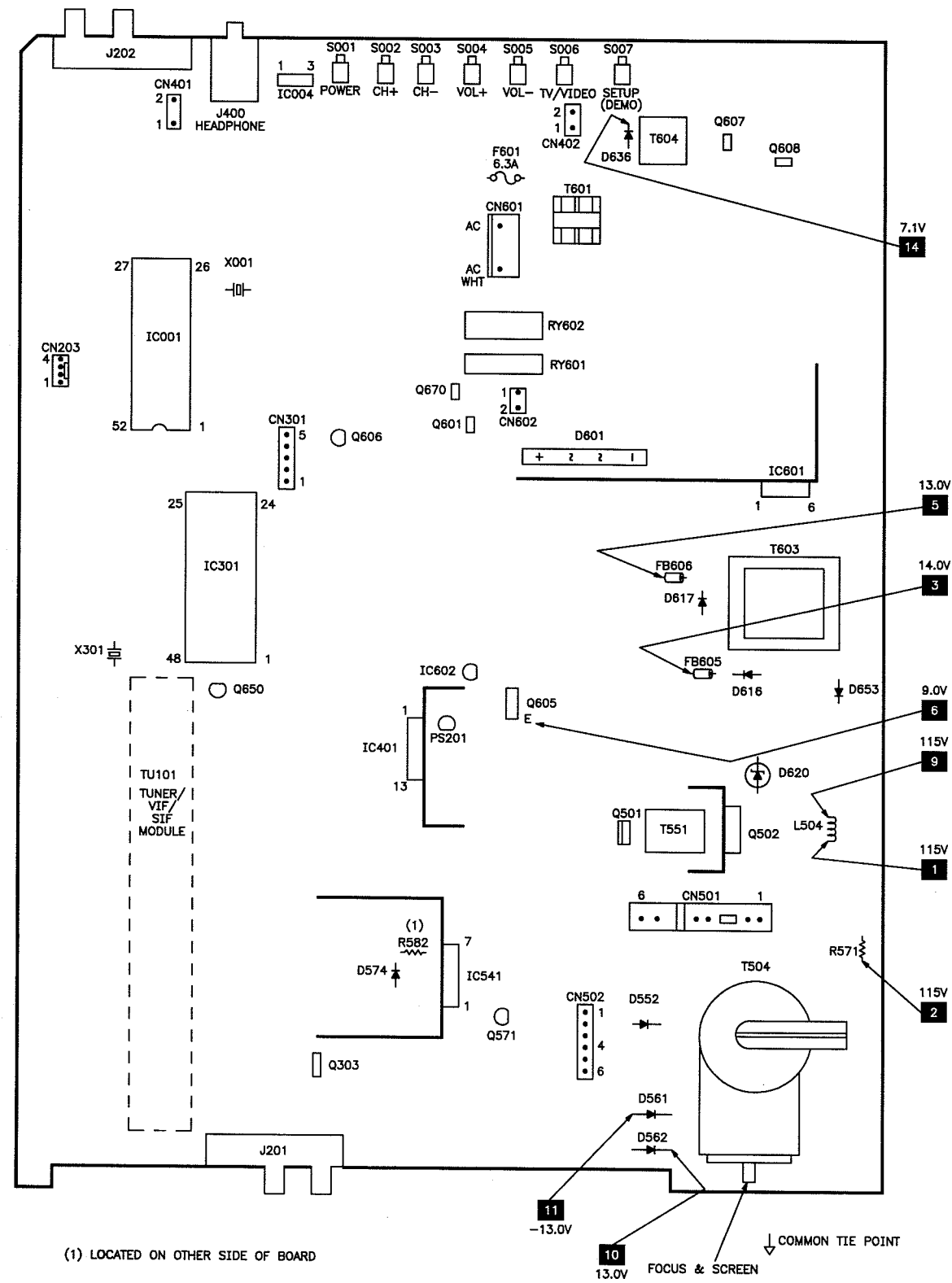


### DIGITAL SERVICE ADJUSTMENT MODE

No.	Display	Item	Data Range	Initial Value	On-Set Value	No.	Display	Item	Data Range	Initial Value	On-Set Value
1	HSIZ	Horiz Size	0 - 63	31	31	40	CTRP	Y Trap Filter	0, 1	0	0
2	HPOS	Horiz Center	0 - 63	31	23	41	COFF	Color	0, 1	0	0
3	VBOW	Vert Lin Bowing	0 - 15	7	7	42	KOFF	Color Killer	0, 1	0	0
4	VANG	Vert Lin Bowing Slant	0 - 15	7	7	43	SSHP	Sub Sharpness	0 - 15	8	9
5	TRAP	Horiz Trapezoid	0 - 15	7	15	44	SHPF	Sharpness Circuit F0	0, 1	0	1
6	PAMP	Horiz Pin Distortion	0 - 63	31	31	45	PREL	Pre/Overshoot Switching	0, 1	0	1
7	CPIN	Horiz Pin Distortion Top/Bot	0 - 63	31	31	46	Y-DC	DC Trans Ratio Switching	0, 1	0	1
8	VSIZ	Vert Size	0 - 63	31	44	47	GAMM	Gamma Correction Amount	0 - 3	0	0
9	VPOS	Vert Position	0 - 63	31	42	48	ABLM	ABL Mode Switching	0, 1	1	1
10	VLIN	Vert Linearity	0 - 15	7	7	49	VTH	ABL C D VTH Switching	0, 1	0	1
11	SCOR	Vert Amount	0 - 15	7	6	50	YDEL	Y Delay Time Control	0 - 15	7	7
12	VZOM	16:9 CRT Z Mode	0, 1	0	0	51	NCOL	No Color ID	0, 1	0	1
13	EHT	Vert Hi-Volt Correction	0 - 15	7	15	52	FSC	FSC Out	0, 1	0	0
14	ASP	Aspect Ratio Control	0 - 63	63	47	53	K-ID	Killer ID Control Switching	0, 1	0	0
15	SCRL	16:9 CRT Z Mode Scroll	0 - 63	31	31	54	HOSC	Horiz VCO Osc Freq	0 - 15	7	10
16	HBLK	RGB Out Width Control	0, 1	0	1	55	VSS	Vert Sync Slice Level	0, 1	0	0
17	LBLK	Left Screen HBLK Control	0 - 15	7	15	56	HSS	Horiz Sync Slice Level	0, 1	0	0
18	RBLK	Right Screen HBLK Control	0 - 15	7	3	57	HMSK	Horiz Sync Mark Width	0, 1	0	1
19	VUSN	V Saw Waveform Compress	0, 1	0	0	58	VTMS	Select Signal Vtim Pin	0 - 3	0	0
20	HDW	Horiz Drive Pulse Width	0, 1	0	1	59	CDMD	Vert Countdown	0 - 3	0	0
21	EWDC	EW/DC	0, 1	0	0	60	AFC	AFC Loop Gain	0 - 3	0	0
22	LVLN	Bottom Vert Linearity	0 - 15	0	0	61	FIFR	Field Freq	0 - 3	0	3
23	UVLN	Top Vert Linearity	0 - 15	0	0	62	SBAS	Sub Bass	0 - 15	7	7
24	RDRV	Red Drive	0 - 63	31	31	63	STRE	Sub Treble	0 - 15	7	10
25	GDRV	Green Drive	0 - 63	31	24	64	SBAL	Sub Balance	0 - 31	14	13
26	BDRV	Blue Drive	0 - 63	31	27	65	DISP	Display Position	0 - 127	0	7
27	RCUT	Red Cutoff	0 - 15	7	10	66	PADJ	B+ Adjust	0 - 63	3	48
28	GCUT	Green Cutoff	0 - 15	7	1	67	HCHM	-	0 - 255	69	69
29	BCUT	Blue Cutoff	0 - 15	7	3	68	HCLM	-	0 - 255	16	16
30	DCOL	Dynamic Color	0, 1	0	1	69	HCHS	-	0 - 255	69	69
31	SHUE	Sub Hue	0 - 31	14	15	70	HCLS	-	0 - 255	16	16
32	SCOL	Sub Color	0 - 31	14	16	71	ID0	Model Identification	0 - 255	17	17
33	SBRT	Sub Brightness	0 - 31	14	9	72	ID1	Model Identification	0 - 255	3	3
34	RON	Red Out	0, 1	0	1	73	ID2	Model Identification	0 - 255	0	0
35	GON	Green Out	0, 1	0	1	74	ID3	Model Identification	0 - 255	195	195
36	BON	Blue Out	0, 1	0	1	75	ID4	Model Identification	0 - 255	115	115
37	AXPL	Axis PAL	0, 1	0	0	76	ID5	Model Identification	0 - 255	1	1
38	AXNT	Axis NTSC	0, 1	0	0	77	ID6	Model Identification	0 - 255	0	0
39	CBPF	Chroma BPF	0, 1	0	1	78	ID7	Model Identification	0 - 255	0	0

**MODEL KV-21ME42 (CHASSIS SCC-S25B-A)**

### A BOARD - BOTTOM VIEW



A

# TELEVISION SCHEMATIC

B

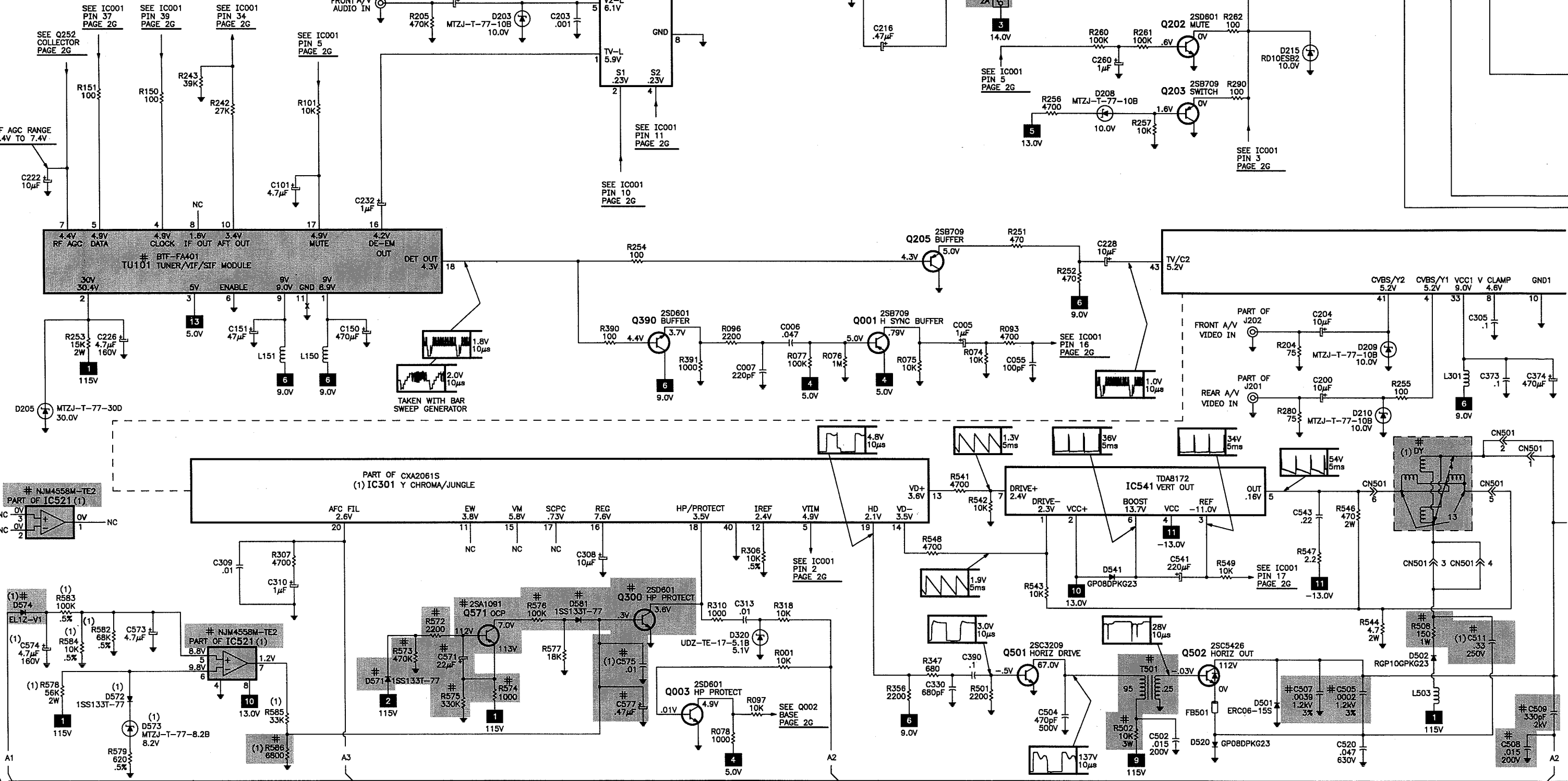
(1) SEE SAFETY RELATED ADJUSTMENTS.

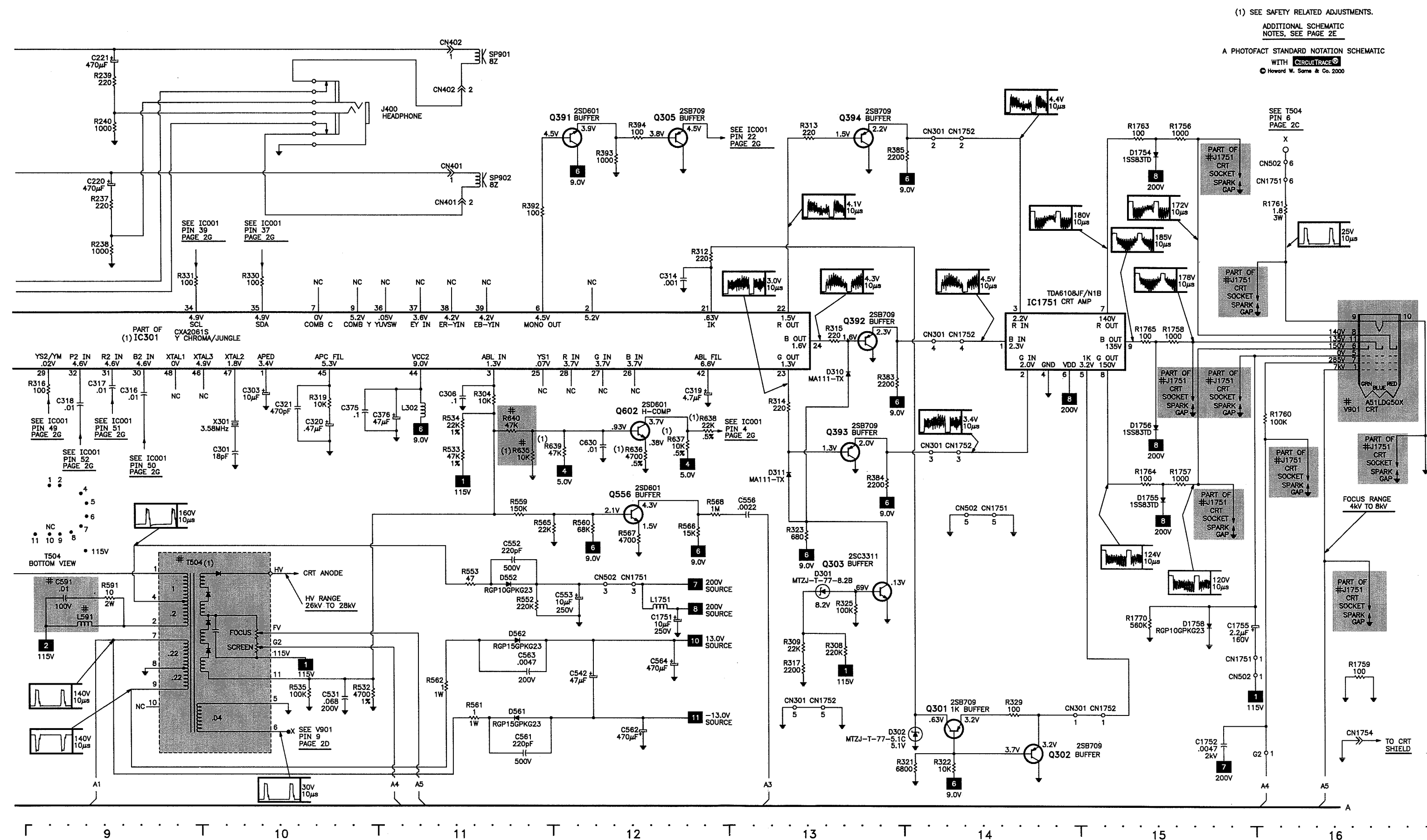
ADDITIONAL SCHEMATIC  
NOTES, SEE PAGE 2E

A PHOTOFACT STANDARD NOTATION SCHEMATIC

WITH **CIRCUITTRACE**  
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TUNER/VIF/SIF MODULE  
NOT INCLUDED IN THIS  
COVERAGE



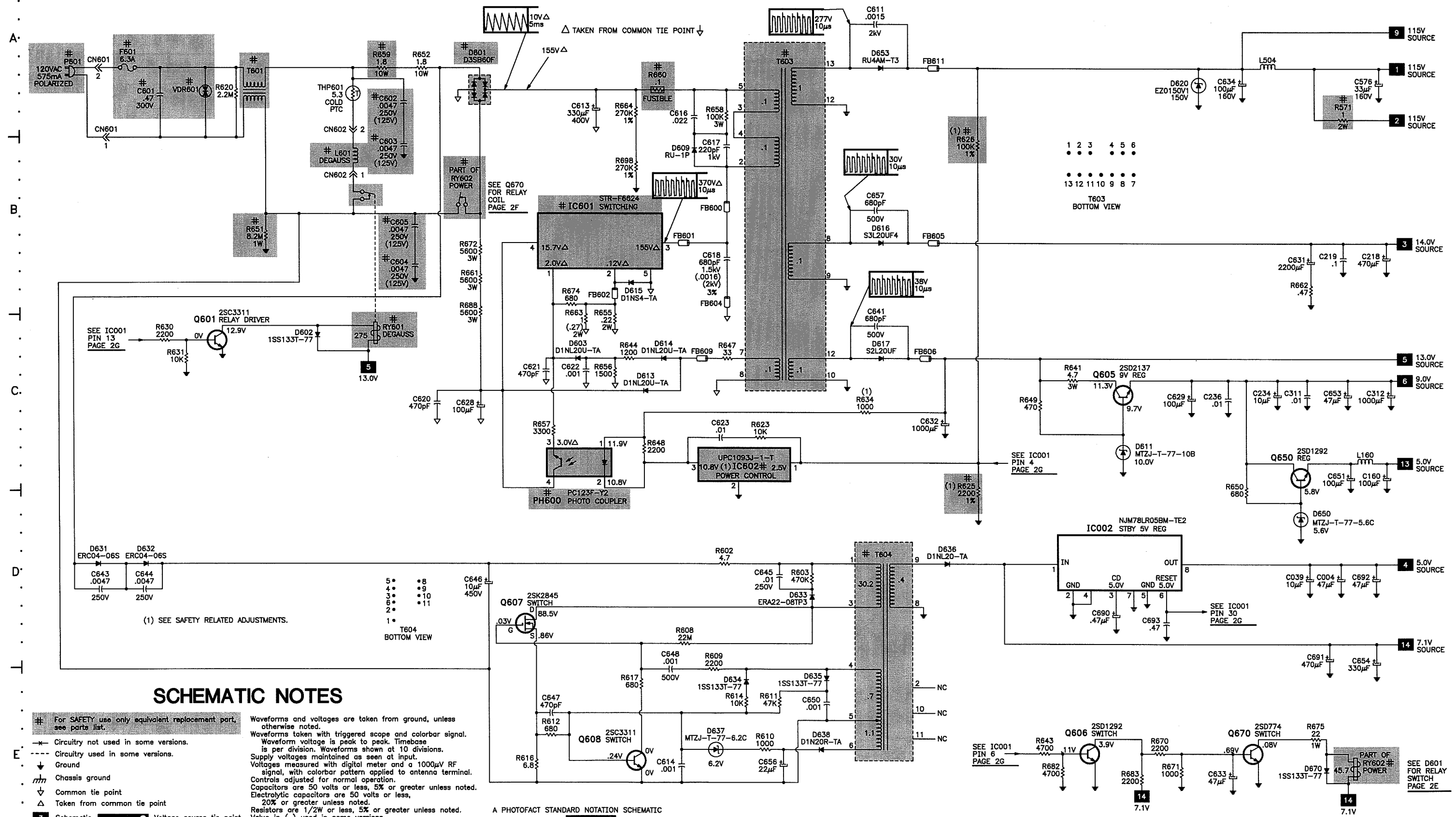




E

F

## POWER SUPPLY SCHEMATIC



**G**



B

C

D

E

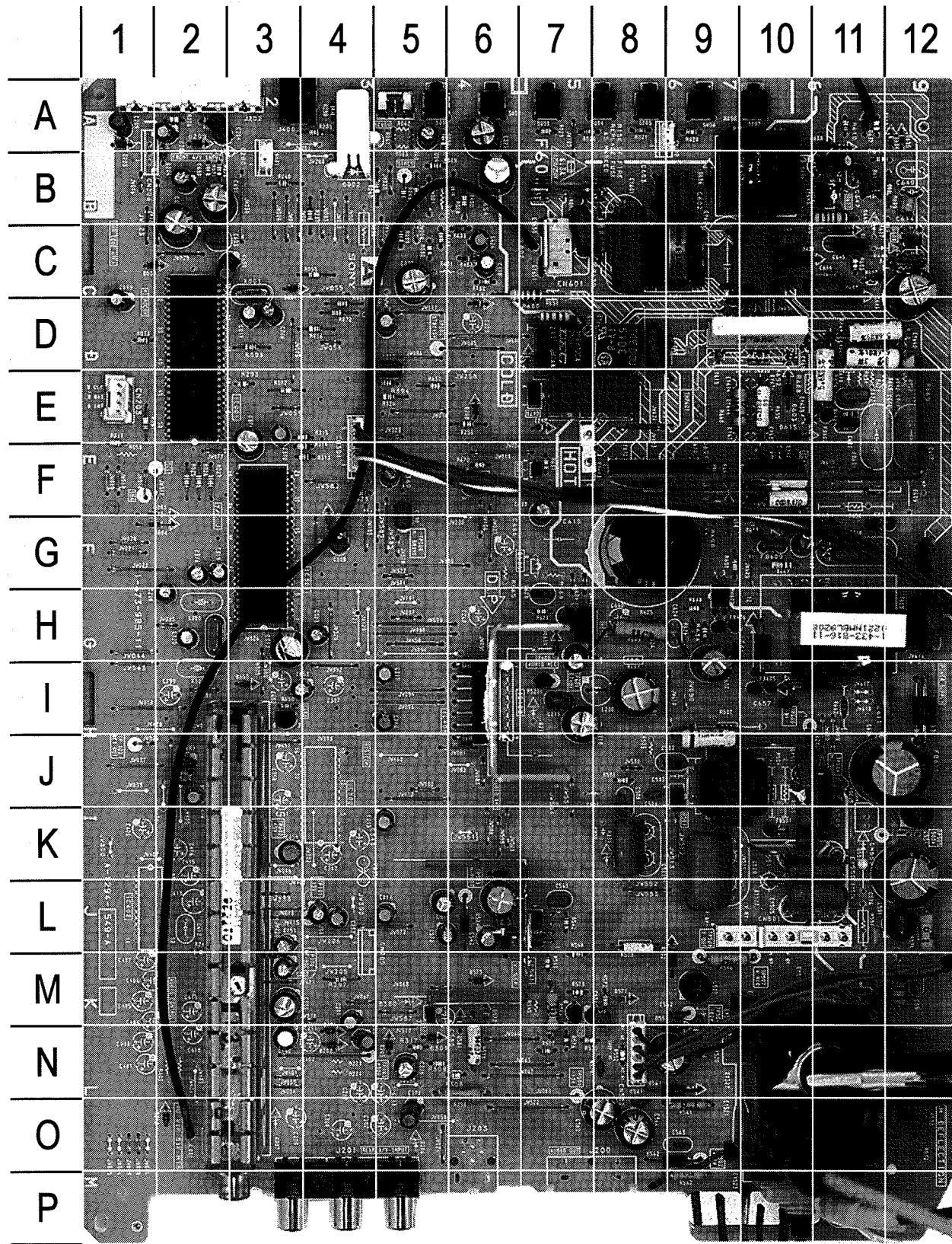
## SONY

**MODEL KV-21ME42 (CHASSIS SCC-S25B-A)**

**Page 2**



## A BOARD - TOP VIEW



A HOWARD W. SAMS GRIDTRACE™ PHOTO

## A BOARD - TOP VIEW, GRIDTRACE LOCATION GUIDE

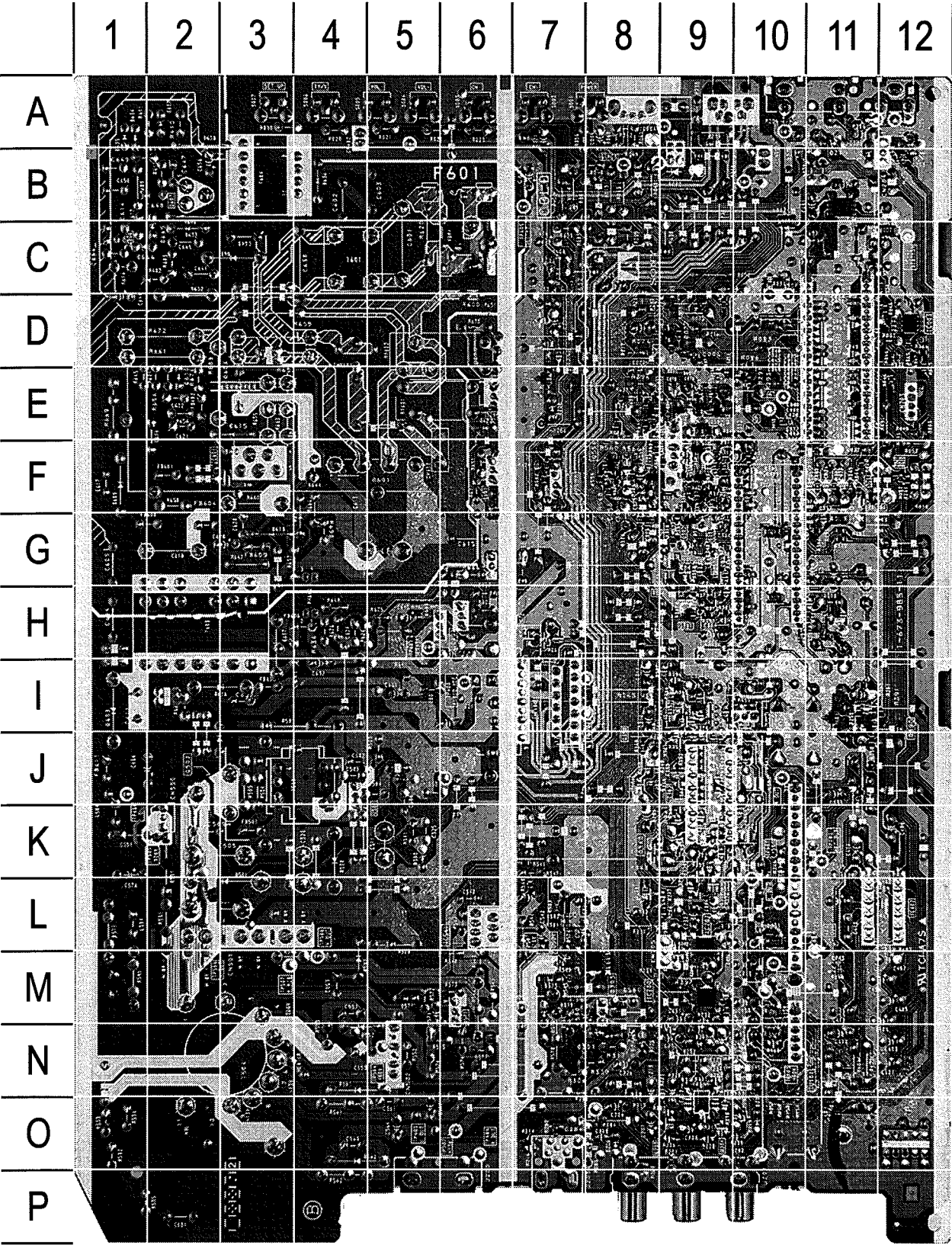
C004	A5	C541	L6	C653	I4	D611	H7	Q601	F7	R324	E5	R634	H9
C005	D5	C542	L6	C654	B6	D613	G10	Q605	I7	R394	E5	R641	H8
C017	D3	C543	L7	C656	B11	D614	F9	Q606	F6	R400	B6	R644	F9
C020	D5	C552	M9	C657	I10	D615	E10	Q607	B11	R432	C6	R647	G10
C038	B2	C553	N9	C690	C3	D616	I11	Q608	C12	R501	J8	R648	H9
C039	D1	C561	O8	C691	B2	D617	H10	Q650	I3	R502	J9	R649	H8
C046	D3	C562	O8	C692	B2	D620	J10	Q670	E7	R508	L8	R650	I3
C101	J2	C563	O9	C693	C2	D631	C10	R002	E3	R532	O12	R651	C7
C150	M3	C564	O8	CN203	E1	D632	C11	R009	D5	R533	O12	R652	D10
C151	L3	C571	M8	CN301	F4	D633	C11	R013	B5	R534	O12	R655	E10
C160	N3	C573	L5	CN401	B3	D634	A12	R016	D4	R535	P11	R656	E11
C200	O5	C574	L5	CN402	A9	D635	A12	R018	B6	R542	L7	R657	G9
C201	M4	C576	K12	CN501	L11	D636	B9	R019	B5	R543	M7	R658	E12
C204	A2	C577	F5	CN502	N8	D637	A11	R020	A9	R544	M7	R659	D10
C205	A1	C591	M12	CN601	C7	D638	A11	R021	A8	R546	M9	R660	F10
C215	K5	C601	C8	CN602	E7	D650	I3	R022	A7	R547	K6	R661	D11
C216	I5	C602	B9	D001	C3	D653	I12	R023	A7	R548	M7	R662	I11
C217	I5	C603	B9	D002	A4	D670	D7	R025	F2	R552	N8	R663	E10
C218	I7	C604	H12	D003	F2	F601	B7	R026	F2	R553	N9	R664	F9
C219	I7	C605	G12	D004	G2	FB501	K10	R027	F2	R561	O9	R670	F6
C220	C5	C611	I12	D038	C1	FB600	G11	R030	C5	R562	P9	R671	F7
C221	A6	C613	G8	D201	N4	FB601	F11	R033	D1	R571	L12	R672	D11
C222	M3	C614	C12	D203	A1	FB602	F11	R040	B5	R572	M8	R674	E11
C226	N5	C616	E11	D205	N5	FB604	G11	R043	B5	R573	M7	R675	D7
C228	H2	C617	F12	D208	E6	FB605	I10	R050	C4	R574	N8	R683	C5
C232	L4	C618	G11	D209	A2	FB606	H9	R056	A5	R575	N7	R688	E11
C234	L4	C620	G10	D210	O2	FB609	G10	R072	D5	R576	N7	RY601	E7
C260	H6	C621	E11	D301	N5	FB611	J12	R090	A10	R577	N7	RY602	D7
C303	H4	C622	E11	D302	G4	IC001	E2	R091	E1	R578	N6	S001	A5
C308	F5	C623	H7	D403	C6	IC004	A5	R093	D3	R591	M12	S002	A6
C310	E3	C626	C6	D434	D6	IC301	H3	R099	C5	R602	C11	S003	A7
C312	H3	C628	G10	D501	L11	IC401	I6	R205	A2	R603	C11	S004	A8
C319	G2	C629	I7	D502	M9	IC541	L7	R237	B4	R608	B11	S005	A8
C320	H2	C631	I8	D520	K9	IC601	F10	R238	A4	R609	B12	S006	A9
C374	F3	C632	I9	D541	L6	IC602	H7	R239	A4	R610	A11	S007	A10
C376	G2	C633	F7	D552	N9	J201	P4	R240	B3	R611	A11	T501	J9
C390	G5	C634	J12	D561	N9	J202	A2	R242	L2	R612	B11	T504	N11
C418	C6	C638	C10	D562	O9	J400	A3	R253	N6	R614	B11	T601	C9
C502	J9	C641	H9	D571	M8	L503	M9	R256	E6	R616	C12	T603	H11
C504	J8	C643	C10	D572	M6	L504	K12	R293	E3	R617	C12	T604	B10
C505	K11	C644	C11	D573	M6	L591	L12	R308	N6	R620	C8	THP601	D8
C507	L11	C645	C11	D574	L6	PH600	H9	R309	N5	R623	H7	TU101	O2
C508	J8	C646	C10	D581	N6	PS201	I7	R313	F4	R625	H8	VDR601	C7
C509	K11	C647	B11	D601	F8	Q303	M5	R314	F4	R626	H9	X001	C3
C511	K8	C648	B11	D602	E7	Q501	J9	R315	E4	R630	E5	X301	H2
C520	K9	C650	B12	D603	E10	Q502	J11	R317	N5	R631	F7		
C531	P11	C651	K3	D609	F12	Q571	M7	R323	F4	R633	C6		

## 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	PR570
Generators		Capacitance Analyzer	LC102
RGB	CM2125	CRT Analyzer	CR7000
Multiburst Signal	VG91	AC Leakage Tester	PR570
Color Bar	VG91	Inductance Analyzer	LC102
TV Stereo	VG91	Flyback Yoke Tester	TVA92
Digital VOM	SC3100	Field Strength Meter	SL753
Frequency Meter	SC3100	Transistor Tester	TF46
Hi-Voltage Probe	HP200	Horizontal Analyzer	HA-2500
Accessory Probes	TP212	Video Analyzer	VG91, TVA92

A BOARD - BOTTOM VIEW



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C001	E11	C203	B12	L001	G11	R003	E12	R085	E8	R291	E10	R549	L7
C006	D9	C236	L9	L002	B11	R004	F11	R086	E8	R298	L9	R559	F8
C007	D9	C243	M11	L003	C11	R005	D9	R087	F11	R304	H9	R560	F8
C008	E11	C301	H11	L150	M10	R007	D9	R088	F11	R306	G10	R565	F8
C010	E11	C305	G10	L151	L10	R008	F11	R089	F11	R307	E9	R566	F8
C011	E11	C306	H10	L160	N10	R017	D8	R092	E9	R310	G8	R567	F8
C012	E11	C309	F9	L301	G10	R028	F11	R096	D10	R312	F9	R568	F8
C013	E11	C311	H9	L302	H10	R031	C10	R097	E9	R316	G11	R579	M7
C014	D11	C313	G8	Q001	D9	R032	D12	R101	J11	R318	G8	R582	L7
C019	D11	C314	F10	Q002	E9	R038	D10	R150	O10	R319	H11	R583	L7
C027	F11	C316	F11	Q003	E9	R044	E12	R151	O10	R321	F9	R584	L7
C028	E11	C317	G11	Q202	H7	R045	E12	R201	O9	R322	F9	R585	M7
C030	D11	C318	G11	Q203	E7	R046	E12	R204	A10	R325	N8	R586	F8
C034	D11	C321	H11	Q205	I11	R047	D12	R231	L8	R329	F9	R632	C7
C037	C11	C330	G9	Q252	E9	R048	D12	R235	K9	R330	G11	R635	E8
C047	D11	C373	G10	Q300	F8	R049	E12	R243	M11	R331	G11	R636	E9
C048	D11	C375	G10	Q301	F9	R054	C12	R251	I12	R347	G9	R637	E8
C050	E11	C556	F8	Q302	G9	R055	E10	R252	I11	R356	G9	R638	F7
C055	D11	C575	F8	Q305	E9	R057	O10	R254	J11	R383	F8	R639	E8
C060	E11	C630	E9	Q390	I11	R058	O10	R255	I11	R384	F8	R640	E8
C062	E11	D310	F9	Q391	H9	R065	D12	R257	E7	R385	F9	R643	F7
C065	D11	D311	F9	Q392	E9	R066	D12	R260	H7	R390	J11	R682	
C072	E11	D320	G8	Q393	F9	R074	D8	R261	H7	R391	I12		
C074	D11	IC002	B11	Q394	F9	R075	D9	R262	HY	R392	H9		
C077	E11	IC003	D12	Q556	F8	R076	D9	R269	J8	R393	G9		
C091	C10	IC201	L9	Q602	E8	R077	D9	R280	O7	R433	C7		
C092	C10	IC521	M8	R001	E9	R078	E9	R290	D7	R541	K7		

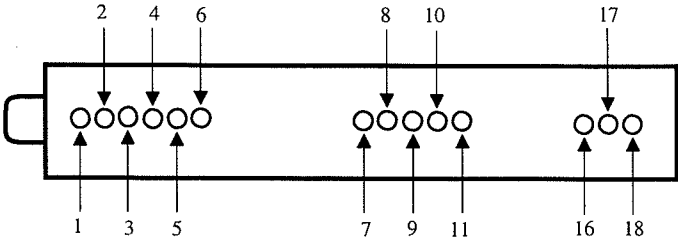
TUNER / VIF / SIF MODULE INFORMATION

TUNER / VIF / SIF MODULE VOLTAGE CHART

Pin	Pin Name	Voltage	Pin	Pin Name	Voltage	Pin	Pin Name	Voltage
1	9V	8.9V	6	ENABLE	0V	11	GND	0V
2	30V	30.4V	7	RF AGC	4.4V	16	DE-EM	4.2V
3	5V	5.0V	8	IF OUT	1.6V	17	MUTE	4.9V
4	CLOCK	4.9V	9	9V	9.0V	18	DET OUT	4.3V
5	DATA	4.9V	10	AFT OUT	3.4V			

NOTE: Voltages do not change on different bands.

TUNER / VIF / SIF MODULE TERMINAL CHART



A HOWARD W. SAMS    GridTrace™    PHOTO

SONY

MODEL KV-21ME42 (CHASSIS SCC-S25B-A)

PARTS LIST

SEMICONDUCTORS				
(Select the replacement that gives the best results.)				
Item No.	Type No.	Mfr. Part No.	ECG Part No.	NTE Part No.
D001	MTZJ-T-77-5.1C	-	-	-
D002	MTZJ-5.1C	8-719-921-44	-	-
D003, 04	-	1-810-039-21	-	-
D038	ISS133T-77	8-719-991-33	ECG519	NTE519
D201, 03	-	-	-	-
D205	MTZJ-T-77-10B	-	ECG5019A	NTE5019A
	RD10ESB2	8-719-110-17	ECG5019A	NTE5019A
D205	MTZJ-T-77-30D	-	-	-
	MTZJ-30D	8-719-982-22	-	-
D208, 09, 10	MTZJ-T-77-10B	-	ECG5019A	NTE5019A
	RD10ESB2	8-719-110-17	ECG5019A	NTE5019A
D215	RD10ESB2	8-719-110-17	ECG5019A	NTE5019A
D301	MTZJ-T-77-8.2B	-	-	-
	RD8.2EB2	8-719-110-08	ECG5016A	NTE5016A
D302	MTZJ-T-77-5.1C	-	-	-
	MTZJ-5.1C	8-719-921-44	-	-
D310, 11	MA111-TX	8-719-404-50	-	-
D320	UDZ-TE-17-5.1B	-	-	-
	DTZ5.1B	8-719-976-99	-	-
D403	ISS133T-77	8-719-991-33	ECG519	NTE519
D434	ISS133T-77	8-719-991-33	ECG519	NTE519
D501	ERC06-15S	8-719-945-80	ECG525	NTE525
D502	ELIZ	8-719-302-43	ECG587	NTE587
	RGP10GPKG23	-	ECG552	NTE552
D520	GP08DPKG23	-	ECG116	NTE156
	MDV04-600RL	8-719-067-63	-	-
D541	GP08DPKG23	-	ECG116	NTE156
	GP08D	8-719-908-03	ECG116	NTE156
D552	RGP10GPKG23	-	ECG552	NTE552
	ELIZ	8-719-302-43	ECG587	NTE587
D561, 62	RGP15GPKG23	-	ECG580	NTE580
	EGP20G	8-719-979-85	ECG576	NTE580
# D571	ISS133T-77	8-719-991-33	ECG519	NTE519
D572	ISS133T-77	8-719-991-33	ECG519	NTE519
D573	MTZJ-T-77-8.2B	-	-	-
	RD8.2ESB2	8-719-110-08	ECG5016A	-
# D574	ELIZ-V1	-	ECG587	NTE587
	ELIZ	8-719-302-43	ECG587	NTE587
# D581	ISS133T-77	8-719-991-33	ECG519	NTE519
# D601	D3SB60F	8-719-510-51	ECG5310	NTE5310
D602	ISS133T-77	8-719-991-33	ECG519	NTE519
D603	D1NL20U-TA	-	-	-
	D1NL20U	8-719-063-70	-	-
D609	RU-IP	8-719-311-31	ECG552	NTE552
D611	MTZJ-T-77-10B	-	ECG5019A	NTE5019A
	RD10ESB2	8-719-110-17	ECG5019A	NTE5019A
D613, 14	D1NL20U-TA	-	-	-
	D1NL20U	8-719-063-70	-	-
D615	D1NS4-TA	-	ECG585	NTE585
	D1NS4	8-719-510-02	ECG585	NTE585
D616	S3L20UF4	8-719-510-73	-	-
D617	S2L20UF	8-719-027-43	-	-
D620	EZ0150V1	8-719-057-52	-	-
D631, 32	ERC04-06S	-	-	-
	U05G	8-719-911-55	ECG5806	NTE5806
D633	ERA22-08TP3	-	-	-
	ERA22-08	8-719-948-45	ECG558	NTE125
D634, 35	ISS133T-77	8-719-991-33	ECG519	NTE519
D636	D1NL20-TA	-	-	-
	D1NL20U	8-719-063-70	-	-
D637	MTZJ-T-77-6.2C	-	ECG5013A	NTE5013A
	RD6.2ESB2	8-719-109-93	ECG5013T1	NTE5013A
D638	D1N20R-TA	-	-	-
	D1N20R	8-719-510-48	ECG116	NTE116
D650	MTZJ-T-77-5.6C	-	ECG5011A	NTE5011A
	RD5.6ESB2	8-719-109-89	ECG5011A	NTE5011A
D653	RU4AM-T3	8-719-312-10	ECG580	NTE580
D670	ISS133T-77	8-719-991-33	ECG519	NTE519
D1754, 55, 56	ISS83TD	-	ECG177	NTE177
	ISS83	8-719-901-83	ECG177	NTE177

# For SAFETY use only equivalent replacement part.

SEMICONDUCTORS continued				
(Select the replacement that gives the best results.)				
Item No.	Type No.	Mfr. Part No.	ECG Part No.	NTE Part No.
D1758	RGP10GPKG23	-	ECG552	NTE552
	ELIZ	8-719-302-43	ECG587	NTE587
IC001	M37273MF-252SP	8-759-576-00	-	-
IC002	NJM781LR05BM-TE2	8-759-575-47	-	-
IC003	MC24C04-MN6T	-	-	-
	M24C04-MN6T	8-759-527-75	-	-
IC201	NJM2521M-TE1	8-759-450-93	-	-
IC301	CXA2061S	8-752-083-09	-	-
IC401	TDA7057AQ/N2	8-759-490-17	-	-
# IC521	NJM4558M-TE2	8-759-100-96	ECG778SM	NTE778SM
IC541	TDA8172	8-759-980-58	ECG1788	NTE1788
# IC601	STR-F6654	8-749-013-75	-	-
# IC602	UPC1093J-1-T	8-759-198-31	-	-
IC1751	TDA6108JF/N1B	8-759-562-43	-	-
# PH600	PC123F-Y2	-	-	-
	PC123F2	8-749-010-64	-	-
Q001	2SB709A-QRS-TX	8-729-216-22	ECG2409	NTE2409
Q002, 03	2SD601A-QRS-TX	8-729-422-27	ECG2408	NTE2408
Q202	2SD601A-QRS-TX	8-729-422-27	ECG2408	NTE2408
Q203, 05	2SB709	-	ECG2409	NTE2409
	2SA1162-G	8-729-216-22	ECG2409	NTE2409
Q252	2SD601A-Q	8-729-422-27	ECG2408	NTE2408
# Q300	2SD601A-Q	8-729-422-27	ECG2408	NTE2408
Q301, 02	2SB709	-	ECG2409	NTE2409
	2SA1162-G	8-729-216-22	ECG2409	NTE2409
Q303	2SC3311	-	ECG2361	NTE2361
	2SC2785-HFE	8-729-119-78	ECG2361	NTE2361
Q305	2SB709	-	ECG2409	NTE2409
	2SA1162-G	8-729-216-22	ECG2409	NTE2409
Q390, 91	2SD601A-Q	8-729-422-27	ECG2408	NTE2408
Q392, 93, 94	2SB709	-	ECG2409	NTE2409
	2SA1162-G	8-729-216-22	ECG2409	NTE2409
Q501	2SC3209LK	8-729-140-50	ECG399	NTE399
Q502	2SC5426-01	8-729-043-43	-	-
Q556	2SD601A-Q	8-729-422-27	ECG2408	NTE2408
# Q571	2SA1091-O	8-729-200-17	ECG288	NTE288
Q601	2SC3311	-	ECG2361	NTE2361
	2SC2785-HFE	8-729-119-78	ECG2361	NTE2361
Q602	2SD601A-Q	8-729-422-27	ECG2408	NTE2408
Q605	2SD2137-OP	8-729-423-99	-	-
Q606	2SD1292	-	ECG31	NTE31
	2SD1312-K	8-729-111-55	ECG31	NTE31
Q607	2SK2845-LB102	8-729-044-30	-	-
Q608	2SC3311	-	ECG2361	NTE2361
	2SC2785-HFE	8-729-119-78	ECG2361	NTE2361
Q650	2SD1292	-	ECG31	NTE31
	2SD1312-K	8-729-111-55	ECG31	NTE31
Q670	2SD774-34	8-729-140-96	ECG382	NTE382

# For SAFETY use only equivalent replacement part.

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)
- Sencore, Inc.
- Terrell & Nobis (TNI Electronics)

PARTS LIST continued

CAPACITORS & ELECTROLYTICS

Item No.	Rating	Mfr. Part No.
# C505	.0002 3% 1.2kV	1-117-626-11
# C507	.0039 3% 1.2kV	1-117-633-11
# C508	.015 20% 200V	1-106-371-00
# C509	330pF 10% 2kV	1-162-115-00
# C511	.33 5% 250V	1-117-665-11
# C571	22µF 20% 50V	1-126-965-11
# C575	.01 10% 50V	1-163-021-91
# C577	.47µF 20% 50V	1-126-959-11
# C591	.01 10% 100V	1-137-150-11
# C601	.47 20% 300V	1-136-311-61
# C602 Thru		
# C605	.0047 20% 250V	-
	.0047 20% 125V	1-113-941-11
C611	.0015 10% 2kV	1-125-772-91
C617	220pF 5% 1kV	1-107-824-11
C618	680pF 1.5kV	-
	.0016 3% 2kV	1-136-619-11
C1752	.0047 2kV	1-162-114-00
# For SAFETY use only equivalent replacement part.		

COILS & TRANSFORMERS

Item No.	Function/Rating	Mfr. Part No.
# DY	Yoke Horiz 2.43mH Vert 24mH	8-451-440-21
FB501	Ferrite Bead	1-410-396-41
FB600, 01, 02	Ferrite Bead	1-410-397-21
FB604, 05, 06	Ferrite Bead	1-410-397-21
FB609	Ferrite Bead	1-412-911-11
FB611	Ferrite Bead	1-410-397-21
L001	10µH	1-414-267-11
L002, 03	100µH	1-414-273-11
L150	100µH	1-414-273-11
L151, 60	10µH	1-414-267-11
L301	47µH	1-414-271-11
L302	10µH	1-414-267-11
L503	3.3µH	1-412-553-11
L504	47µH	1-412-533-21
# L591	33µH	1-412-531-31
# L601	Degaussing	1-416-951-11
L1751	68µH	1-408-613-31
# T501	Horizontal Drive	1-437-210-11
# T504 (1)	Horizontal Output	1-453-283-21
# T601	Line Filter	1-423-895-11
# T603	Converter PIT	1-433-817-11
# T604	Converter	1-431-852-11

# For SAFETY use only equivalent replacement part.  
(1) Focus and screen controls are part of T504.

CONTROLS & RESISTORS

Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
R235	3300 .5% 1/10W	1-208-794-11	-
R269	330 .5% 1/10W	1-208-794-11	-
R306	10K .5% 1/10W	1-216-675-11	-
# R502	10K 5% 3W Nonflammable	1-215-923-00	3W310
# R508	150 5% 1W Nonflammable	1-215-864-00	1W115
R532	4700 1% 1/4W	1-215-437-00	-
R533	47K 1% 1/4W	1-215-461-00	-
R534	22K 1% 1/4W	1-215-453-00	-
# R571	1 5% 2W Nonflammable	1-216-369-00	2W1D0
# R572	2200 5% 1/4W	1-249-421-11	QW222
# R573	470K 5% 1/4W	1-247-895-91	QW447
# R574	1000 5% 1/4W Nonflammable	1-249-417-11	QW210
# R575	330K 5% 1/4W	1-247-891-00	QW433
# R576	100K 5% 1/4W	1-249-441-11	QW410
R579	620 .5% 1/10W	1-208-777-11	-
R582	68K .5% 1/10W	1-208-826-11	-
R583	100K .5% 1/10W	1-208-830-11	-
R584	10K .5% 1/10W	1-208-806-11	-
# R586	6800 5% 1/10W	1-216-069-00	-
# R625	2200 1% 1/4W	1-215-429-00	-
# R626	100K 1% 1/4W	1-215-469-00	-
R633	33K 1% 1/4W	1-215-457-00	-
# R635	10K 5% 1/10W	1-216-073-00	-
R636	4700 .5% 1/10W	1-208-798-11	-
R637	10K .5% 1/10W	1-208-806-11	-
R638	22K .5% 1/10W	1-208-814-91	-
# R640	47K 5% 1/10W	1-216-089-91	-
R641	4.7 5% 3W Nonflammable	1-216-397-11	3W4D7
# R651	8.2M 5% 1W	1-247-289-00	HW582
R652	1.8 5% 10W Wirewound	1-202-961-11	10W1D8
R658	100K 5% 3W Nonflammable	1-215-929-11	3W410
# R659	1.8 5% 10W Wirewound	1-202-961-11	10W1D8
# R660	.1 10% 1/2W Fusible Nonflammable	1-202-933-61	-
R661	5600 5% 3W	1-216-485-11	3W256
R664	270K 1% 1/4W	1-215-479-00	-
R672	5600 5% 3W Nonflammable	1-216-485-11	3W256
R688	5600 5% 3W Nonflammable	1-216-485-11	3W256
R698	270K 1% 1/4W	1-215-479-00	-
R1761	1.8 5% 3W Nonflammable	1-216-392-11	3W1D8
THP601	5.3 Cold PTC	1-803-540-11	-
# VDR601	Varistor, ERZV10D271	1-803-585-11	-

# For SAFETY use only equivalent replacement part.

MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
# F601	Fuse	1-532-506-51	6.3Amp, 250V, Slow Blow
IC004	Receiver	8-742-014-11	Remote, SBX1981-51
J201	Jack	1-580-441-71	Assembly
J202	Jack	1-580-441-41	Assembly
J400	Jack	1-568-267-21	Headphone
# J1751	Socket	1-251-688-11	CRT
# P601 (1)	Line Cord	1-751-057-11	AC, Polarized
# P601 (2)	Line Cord	1-769-796-71	AC, Polarized
# PS201	Fuse Link	1-532-984-11	2A, 90V
# RY601	Relay	1-755-018-11	Degaussing
# RY602	Relay	1-755-266-11	Power
S001	Switch	1-692-431-21	Power
S002	Switch	1-692-431-21	Channel +
S003	Switch	1-692-431-21	Channel -
S004	Switch	1-692-431-21	Volume +
S005	Switch	1-692-431-21	Volume -
S006	Switch	1-692-431-21	TV/Video
S007	Switch	1-692-431-21	Setup (Demo)
SP901, 02	Speaker	1-505-831-11	2" X 3 1/2", 8 Ohms
# TU101 (3)	Module	8-598-430-00	Tuner/VIF/SIF, UHF/VHF, BTF-FA401 A51LDG50X
# V901 (1)	CRT	8-738-768-05	-
# V901 (2)	CRT	8-738-781-05	-
X001	Crystal	1-767-487-11	8MHz
X301	Crystal	1-567-505-11	3.58MHz
	Adapter	1-417-182-11	Antenna 75 To 300 Ohms
	Antenna	1-501-730-41	Telescopic
	Fuse Holder	1-533-223-11	For F601 (2 Used)
	Magnet	1-452-277-00	BMC
	Magnet	4-051-735-22	Convergence Correction
	Magnet	1-452-032-00	Disc
	PC Board	A-1298-882-A	A
	PC Board	A-1331-917-A	C
	Transmitter	1-475-757-11	Remote, RM-Y156
	Wedge	4-053-005-01	Yoke Positioning (3 Used)

# For SAFETY use only equivalent replacement part.  
(1) Used in model KV-21ME42.  
(2) Used in model KV-21ME42C.  
(3) Contact TNI Electronics for replacement; order by part number on tuner.

CABINET PARTS

Item	Mfr. Part No.
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Models KV-21ME42 and KV-21ME42C

Emblem, SONY (1)	4-046-161-01
Emblem Adhesive Strip (1)	4-031-698-01
Button Assembly (1)	4-062-603-01
Cabinet Back	4-062-602-23
Biznet Assembly	X-1036-731-1
Door (1)	4-062-604-11
LED Guide (1)	4-062-607-01

Remote Transmitter

Battery Cover	9-939-830-11
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(1) Part of biznet assembly.

SONY

MODEL KV-21ME42 (CHASSIS SCC-S25B-A)