

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 ground 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 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.

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

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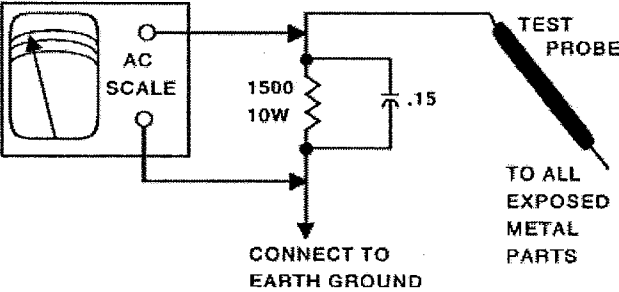
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SAFETY CHECKS — FIRE AND SHOCK HAZARD
Cold Leakage Checks for Receivers with Isolated Ground

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.

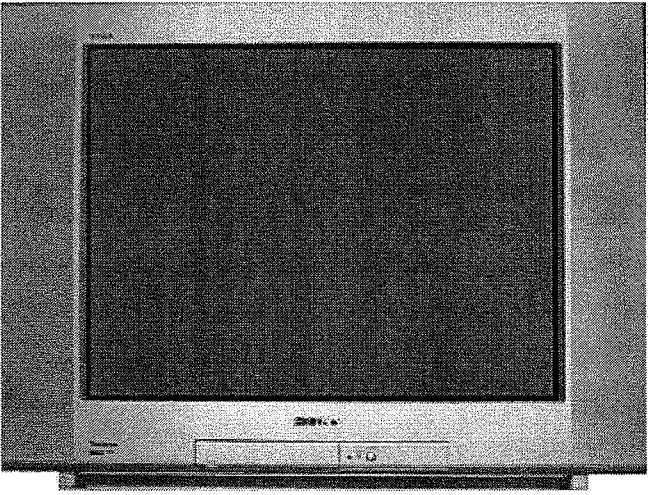
Hot Leakage Current Check

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
SILVER
SONY

Model KV-27FS320 (Chassis SCC-S59N-A, SCC-S61S-A)



Representative Model

Essential coverage
for servicing a television receiver...

- Schematics
- Component locations
- Parts list



SEPTEMBER 2005 SET 5056

For a Complete List of Manuals,
Visit www.samswebsite.com



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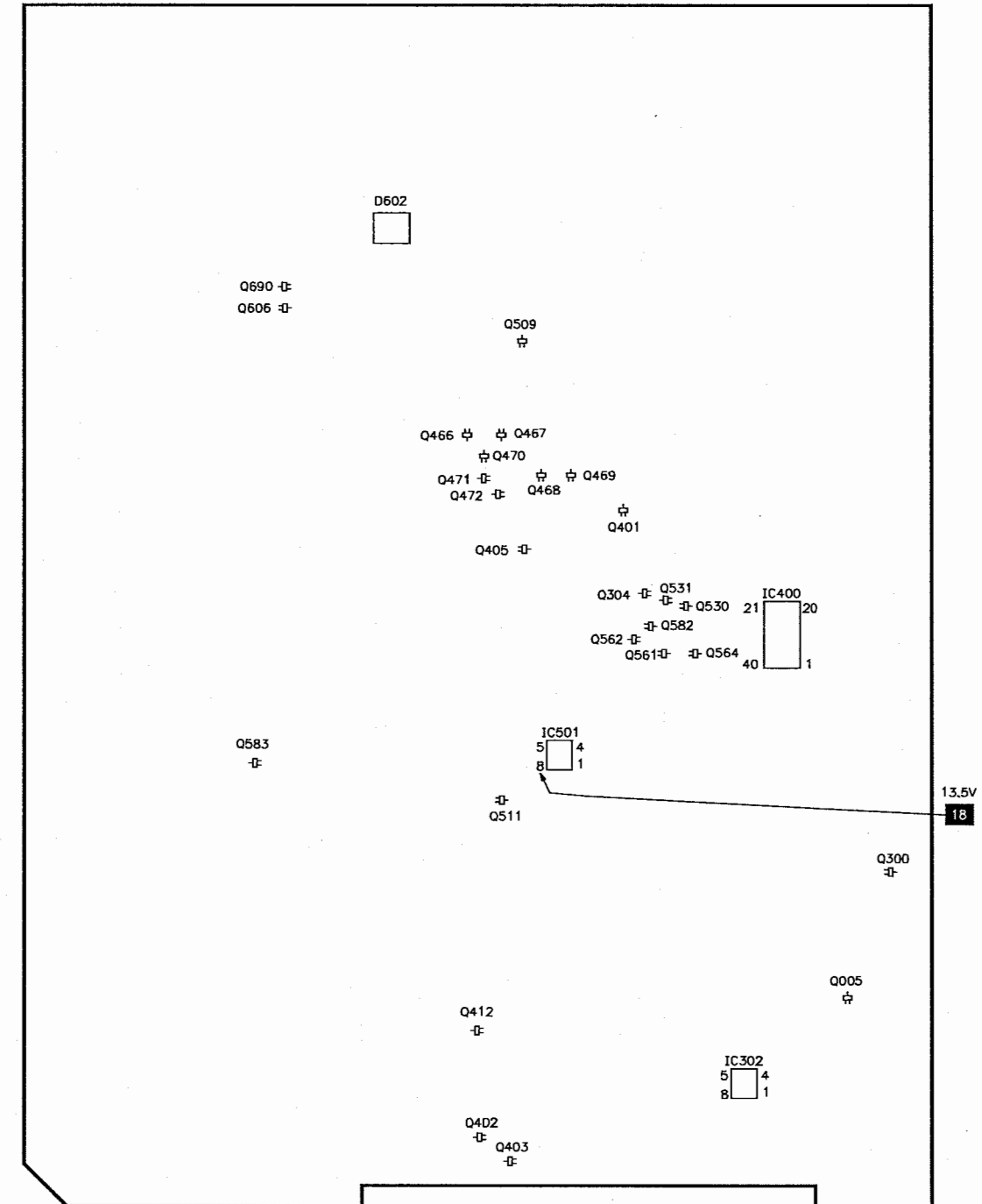
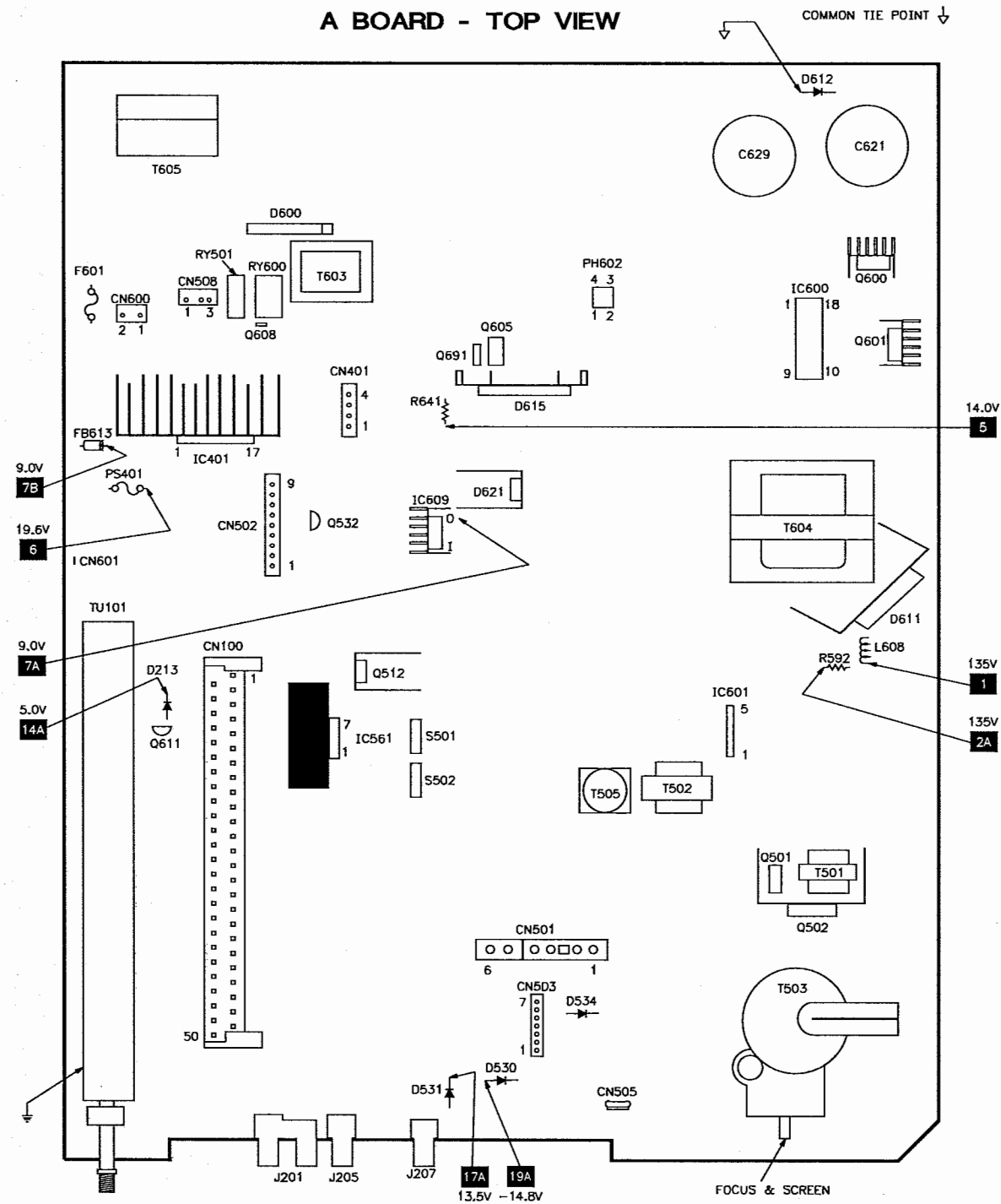
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MODEL KV-27FS320 (CHASSIS SCC-S59N-A, SCC-S61S-A)

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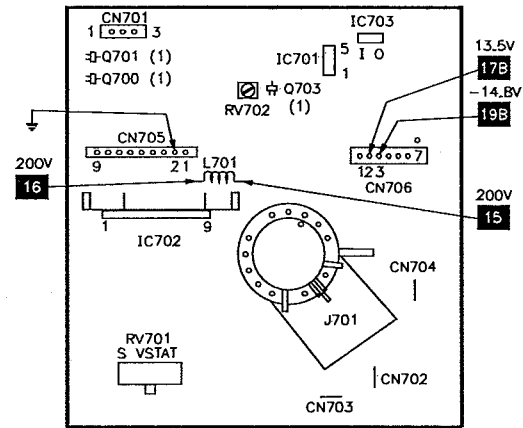
PLACEMENT CHART

A BOARD - BOTTOM VIEW

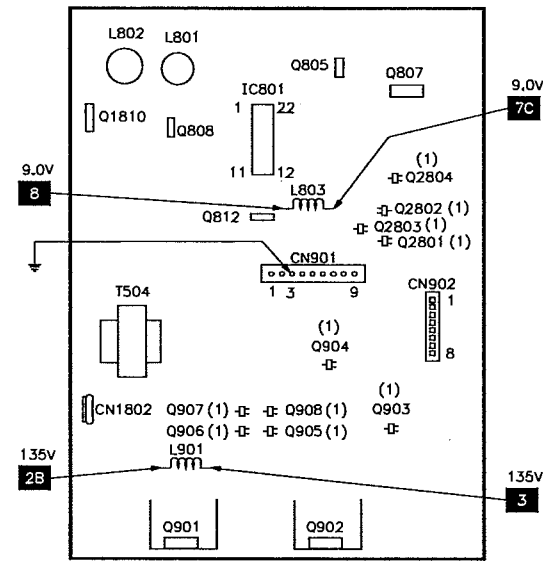


PLACEMENT CHART continued

C BOARD

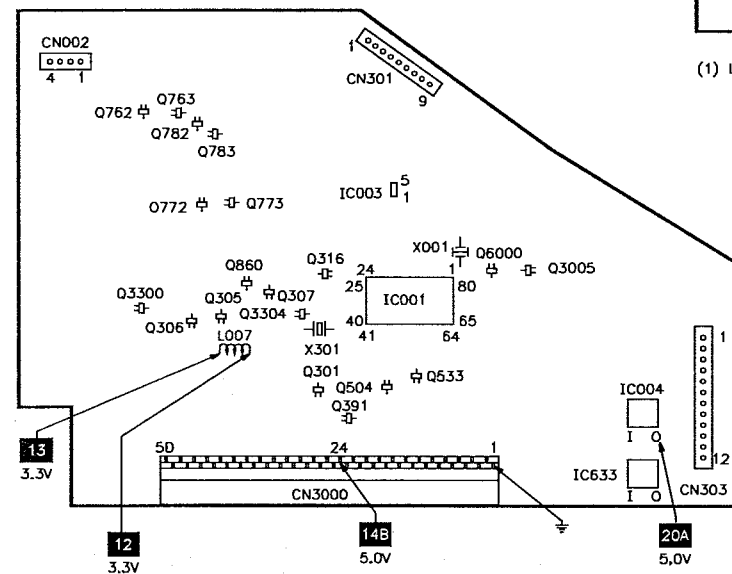


V BOARD

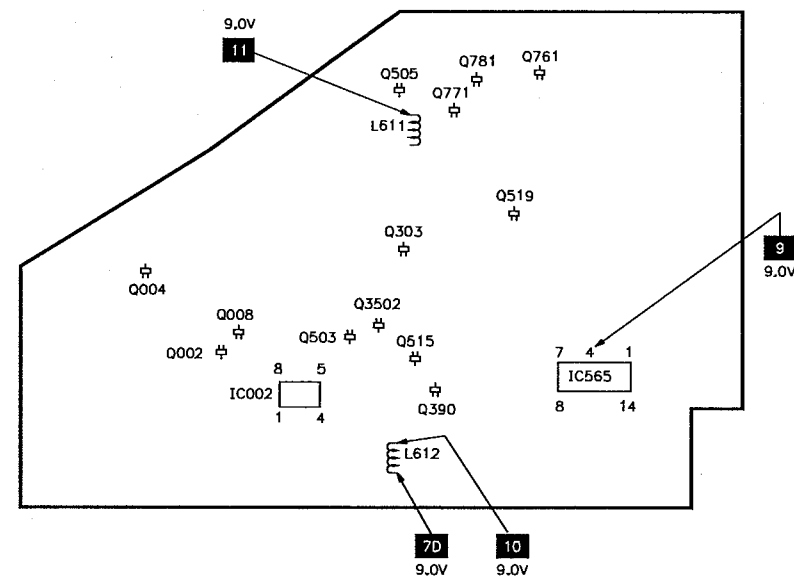


(1) LOCATED ON BOTTOM OF BOARD

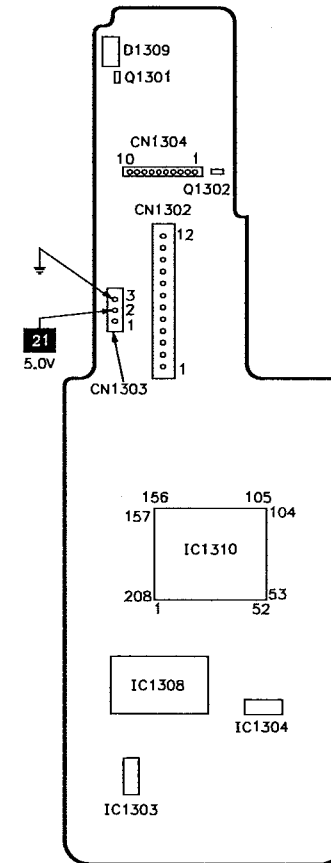
M BOARD - TOP VIEW



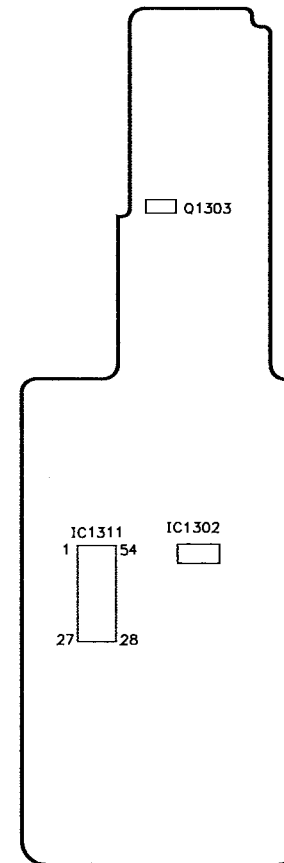
M BOARD - BOTTOM VIEW



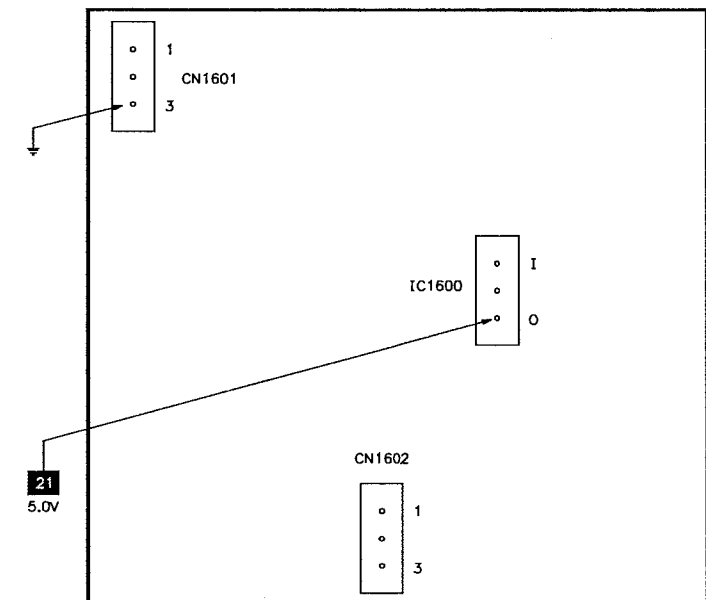
HM BOARD - TOP VIEW



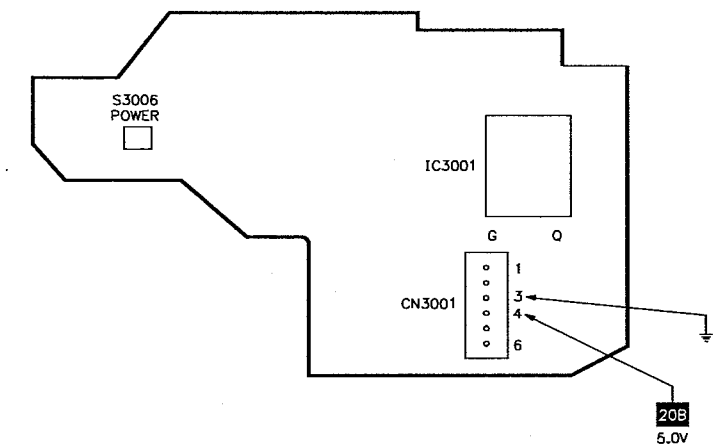
HM BOARD - BOTTOM VIEW



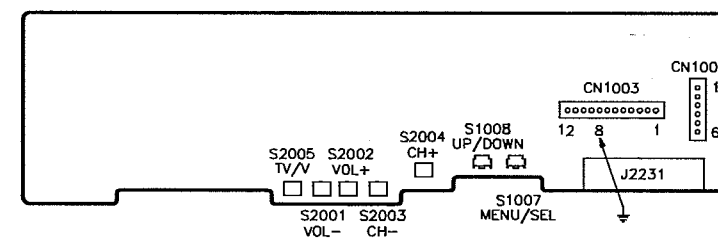
HN BOARD



HR BOARD

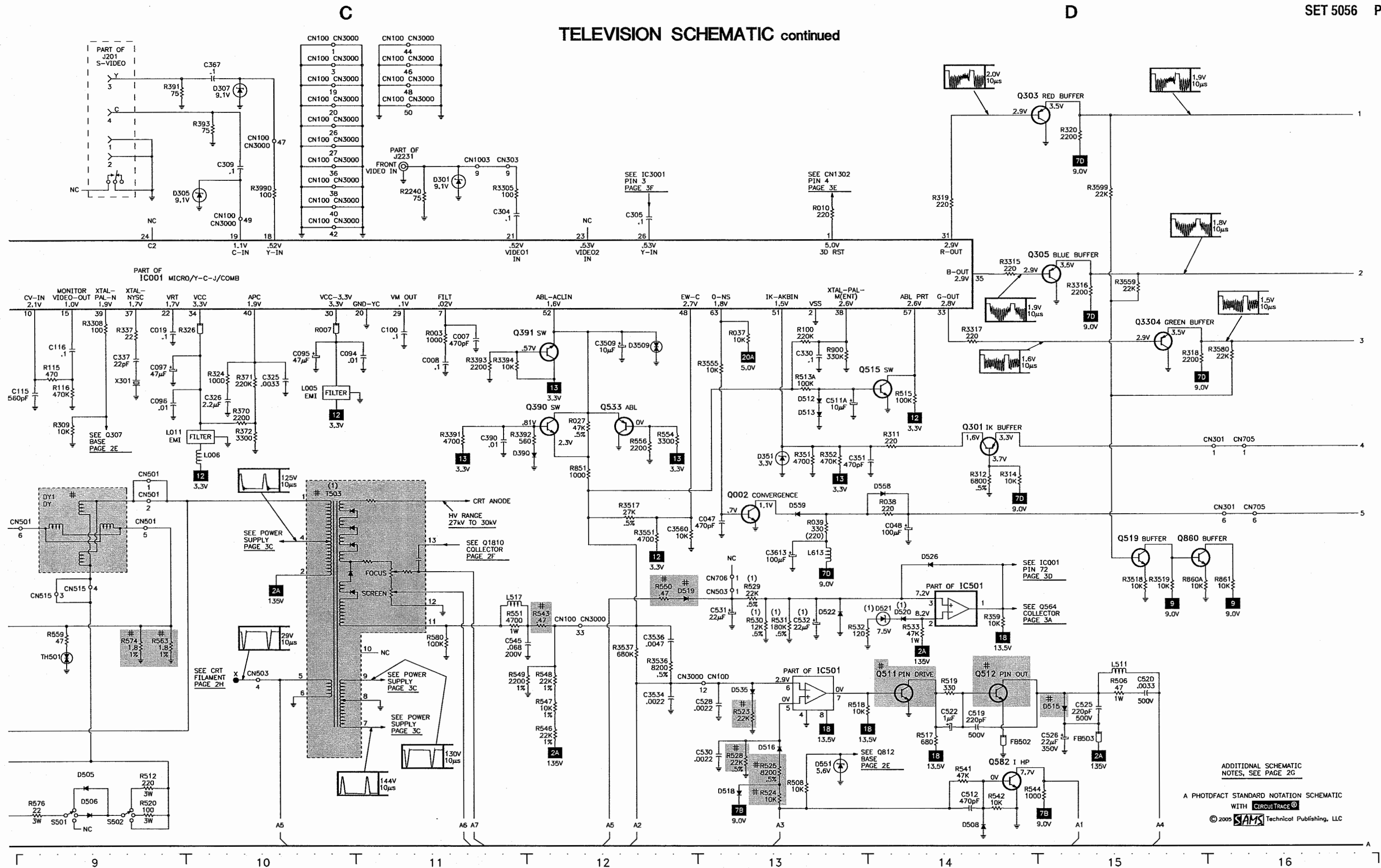


HU BOARD



SONY

MODEL KV-27FS320 (CHASSIS SCC-S59N-A, SCC-S61S-A)

TELEVISION SCHEMATIC continued

ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 2G

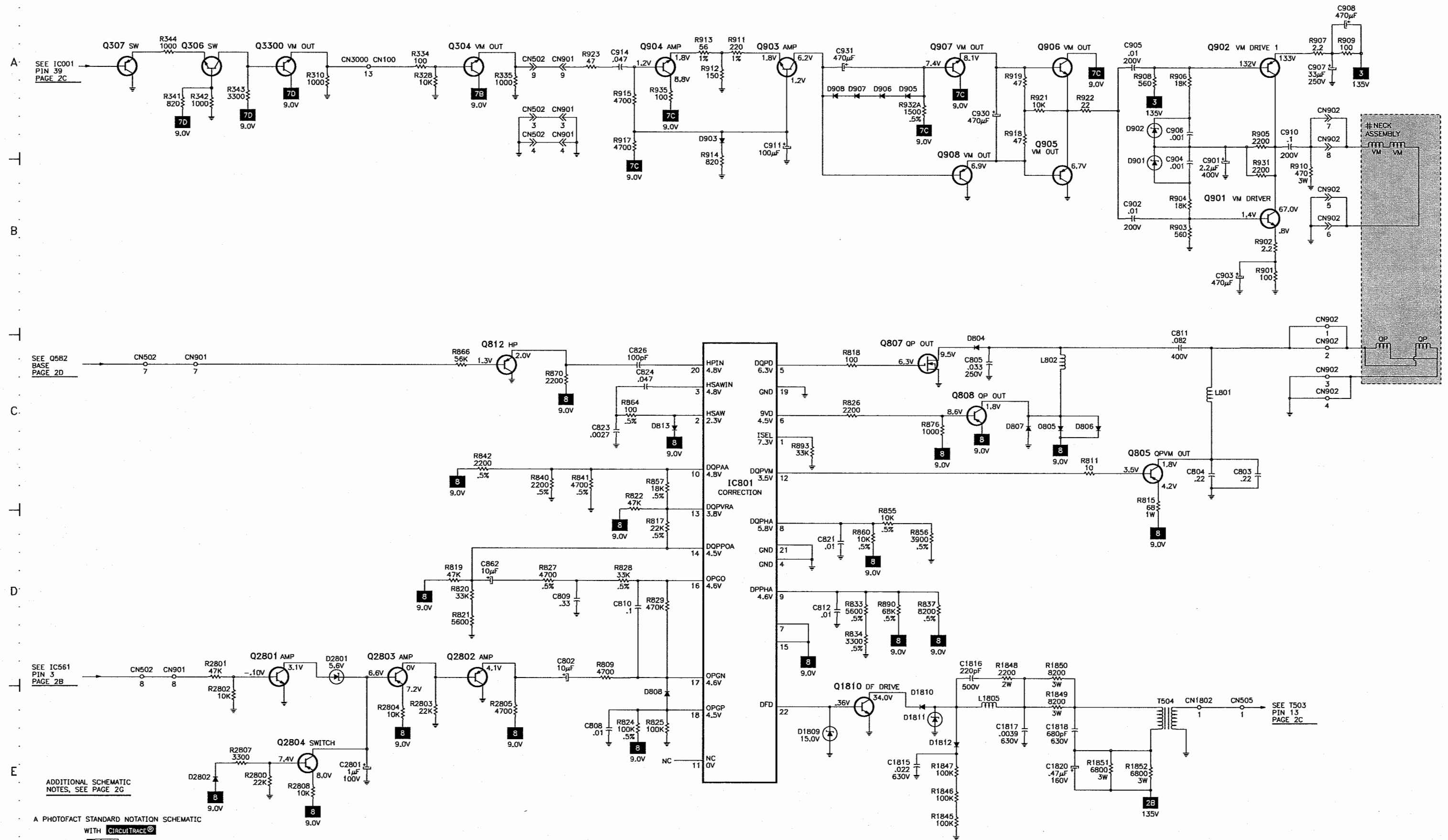
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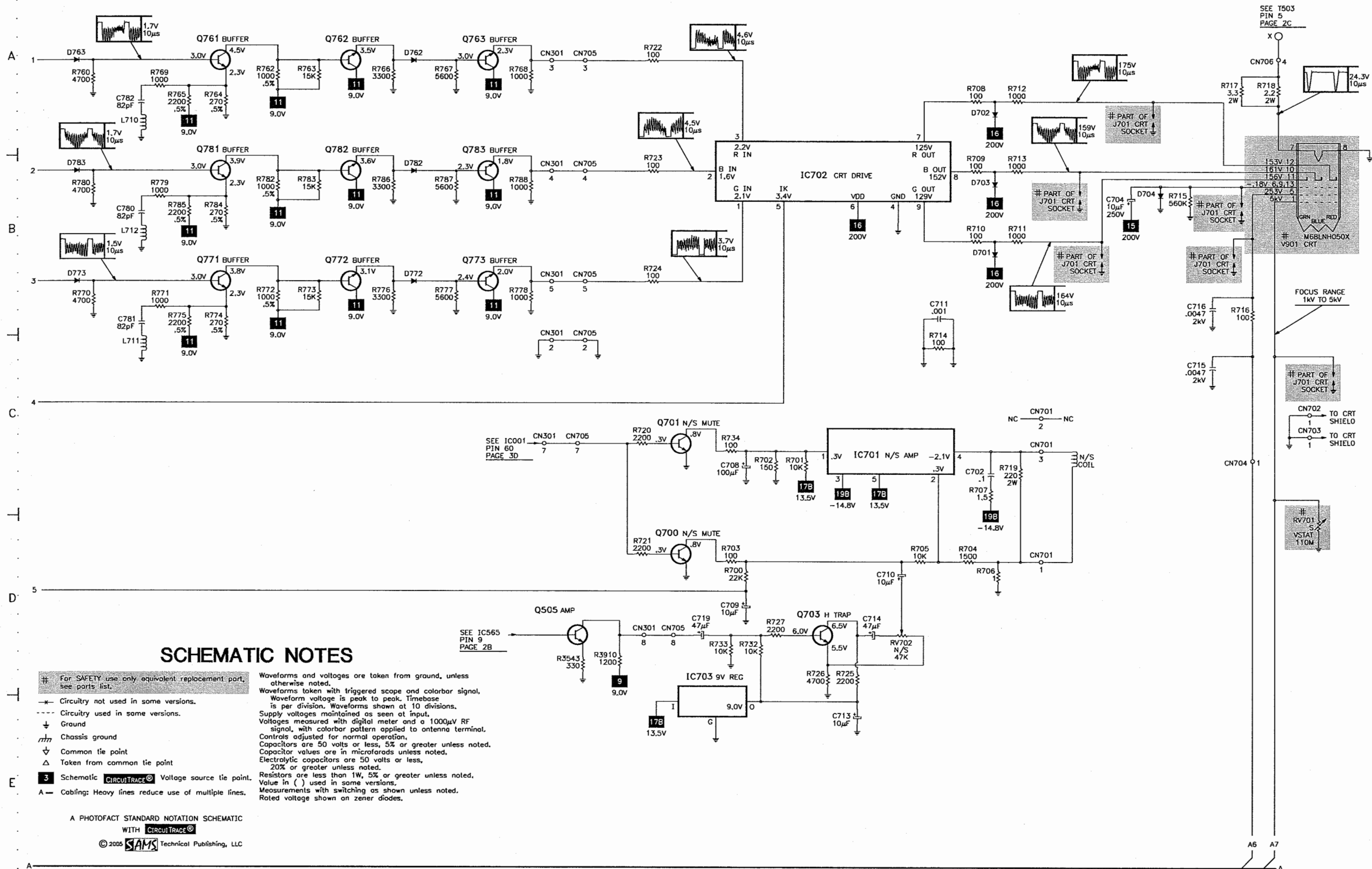
VM SCHEMATIC

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ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 2GA PHOTOFACIT STANDARD NOTATION SCHEMATIC
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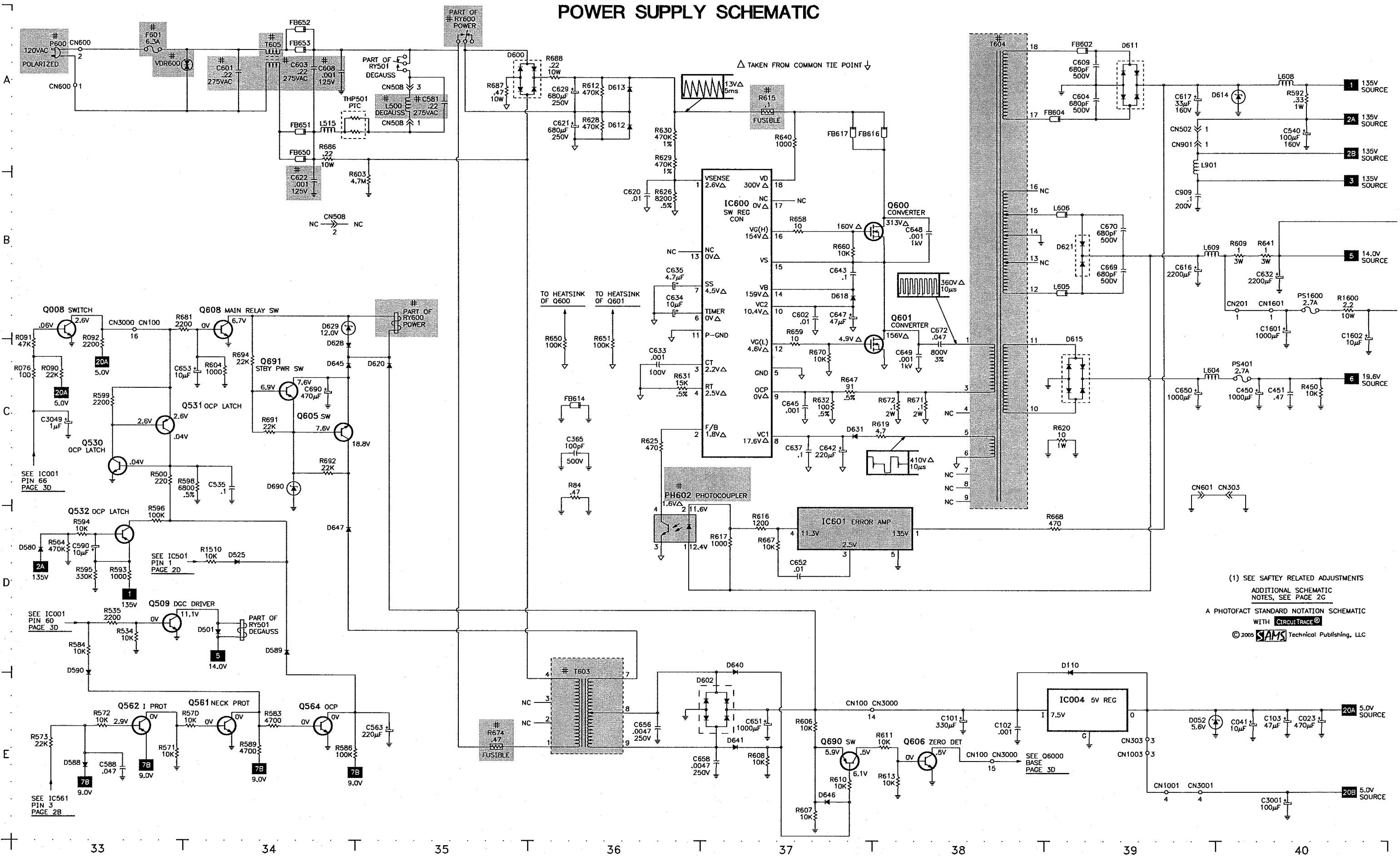
CRT SCHEMATIC



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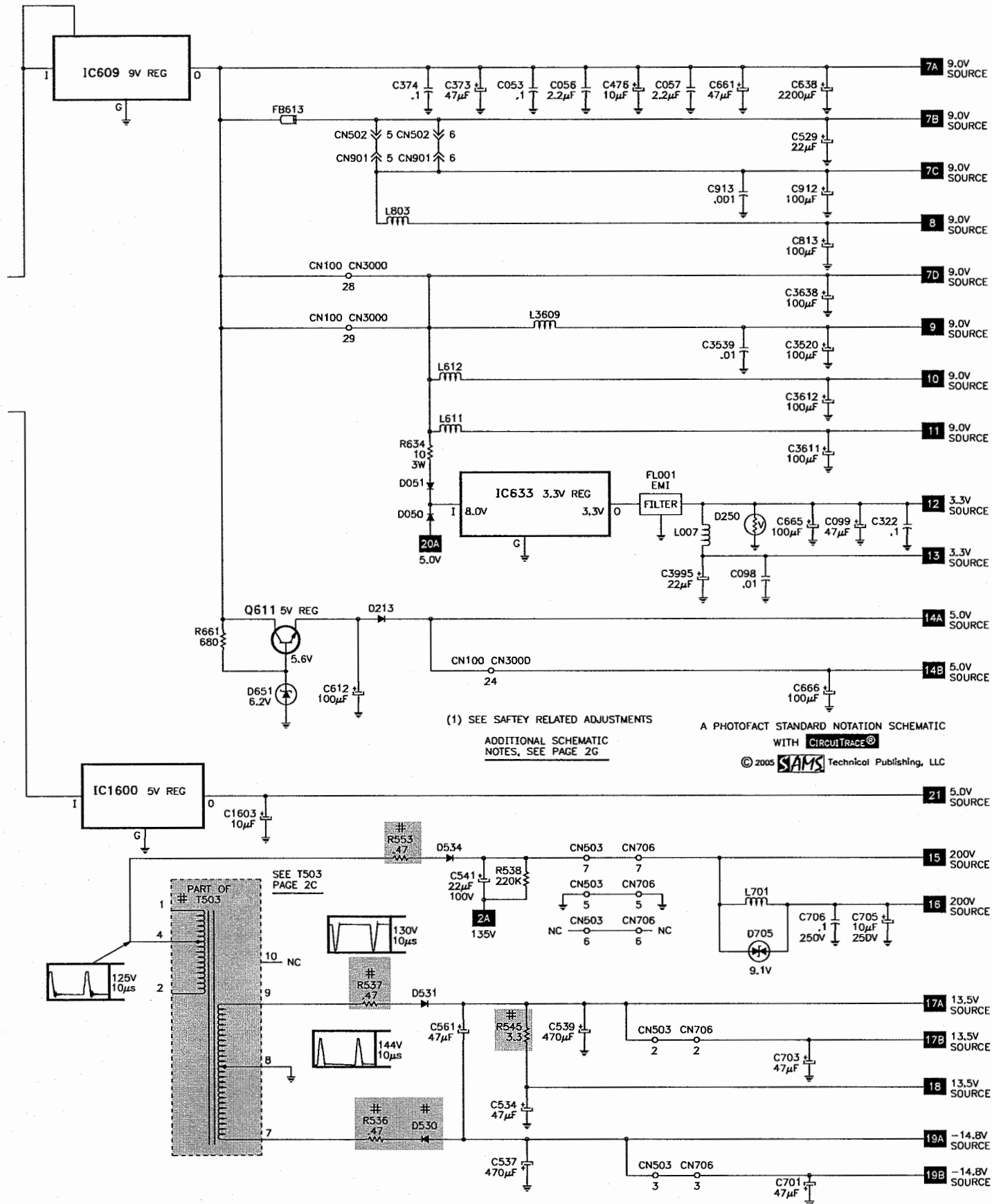
B

POWER SUPPLY SCHEMATIC



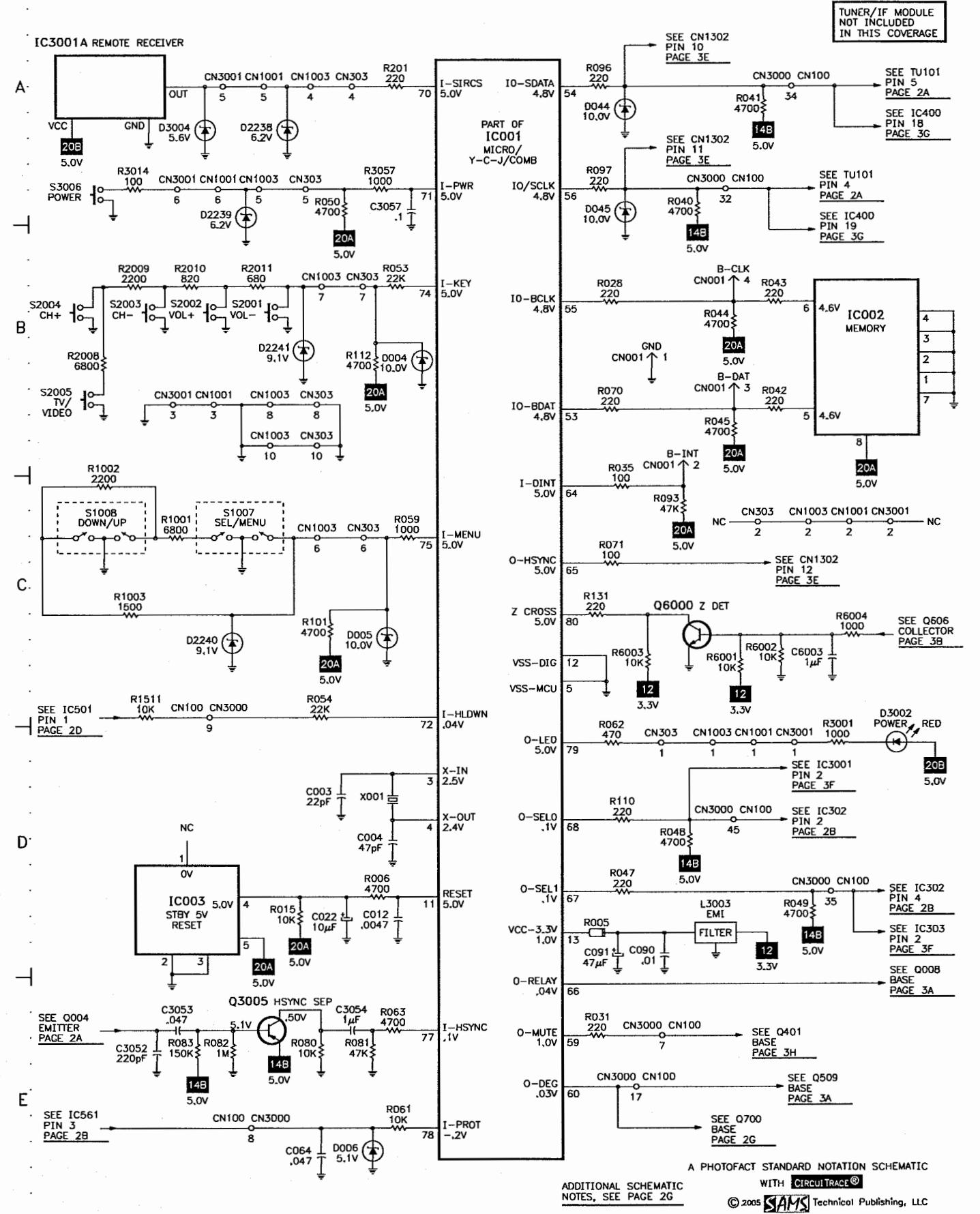
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POWER SUPPLY SCHEMATIC continued

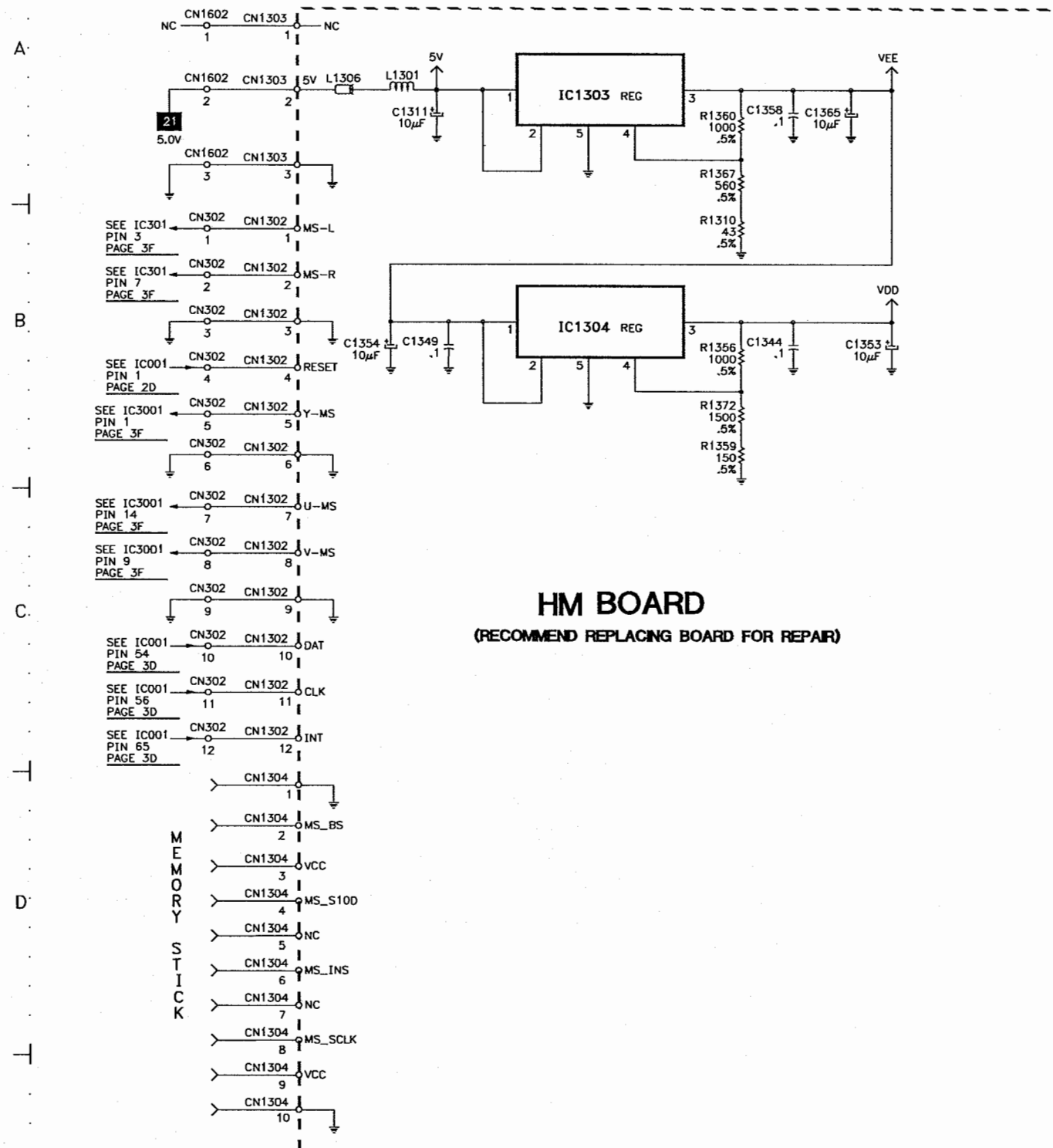


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SYSTEM CONTROL SCHEMATIC

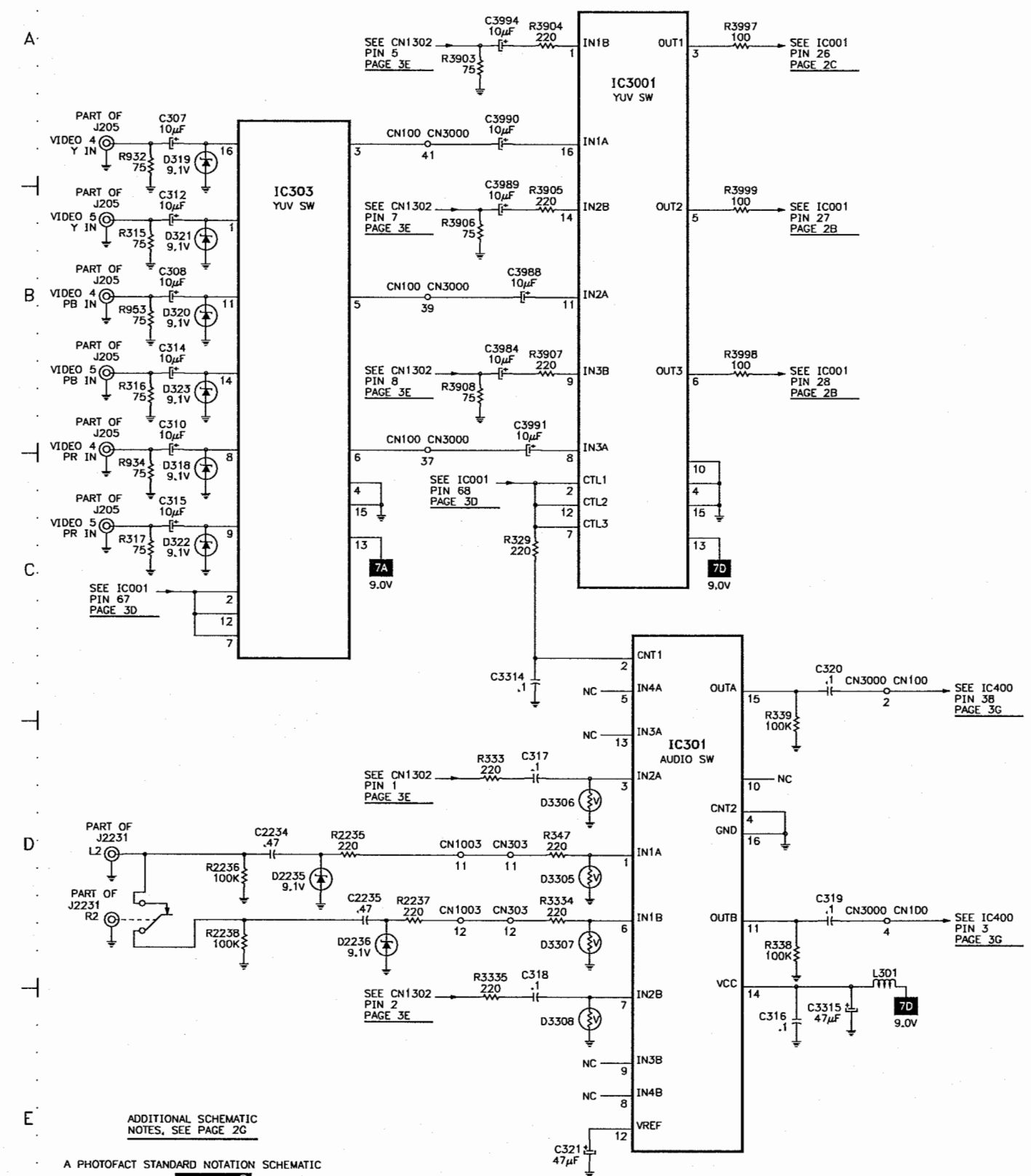


E HM BOARD

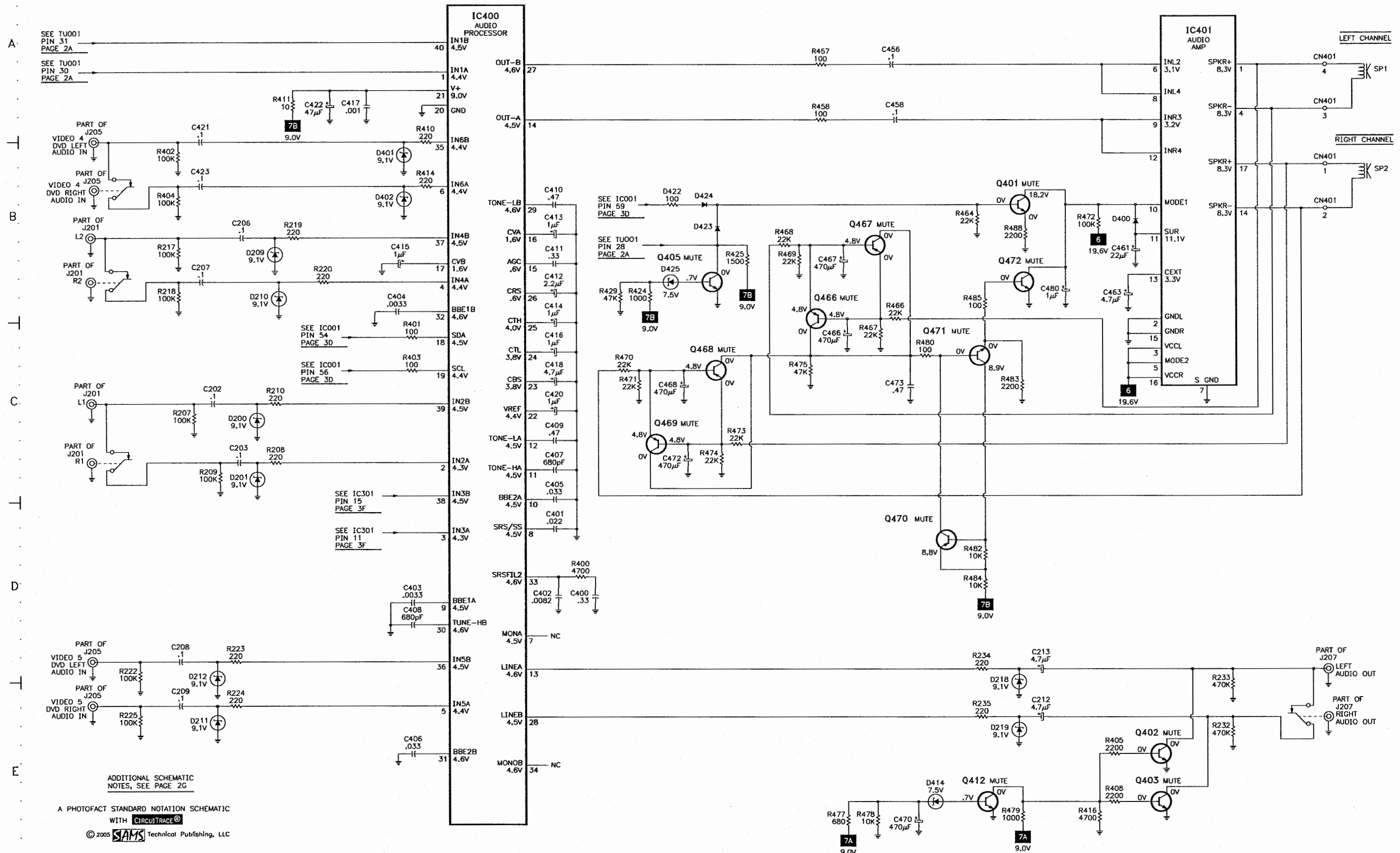


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F AUDIO/VIDEO SWITCHING SCHEMATIC



AUDIO SCHEMATIC



MISCELLANEOUS ADJUSTMENTS

B+ CHECK

Connect a digital DC voltmeter to the cathode of D611. Set brightness and picture to minimum. With AC line voltage set to 120VAC, B+ should read 134.6V ±1.0V.

HIGH VOLTAGE CHECK

Tune in a picture. Set brightness, picture, and screen control to minimum. Connect a high voltage probe to CRT anode. High voltage should measure 27kV to 30kV.

DIGITAL ADJUSTMENT PROCEDURES

Enter/Exit Service Adjustment Mode

Tune in a picture and turn receiver off. Press the display button, the 5 button, the volume + button, and the power button in sequence. Press each button within a second. Turn receiver off and then back on to exit Service Adjustment Mode.

Making Adjustments

Enter Service Adjustment Mode. Select an item to adjust by pressing the 1 and 4 buttons. Select a group device item adjustment by pressing the 2 and 5 buttons. Make changes on selected adjustment by pressing the 3 and 6 buttons. To recover the latest values press the 0 then enter buttons.

Saving Adjustments to Memory

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

Memory Write Confirmation

Disconnect AC plug from outlet. Plug receiver in and enter Service Adjustment Mode. Select adjustment and confirm that setting was saved to memory.

IF AGC

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

HORIZONTAL SIZE (HSIZ)

Tune in a crosshatch pattern. Enter the Service Adjustment Mode. Select DEF group, select HSIZ (1) and adjust for slight horizontal overscan. Save adjustment to memory.

HORIZONTAL FREQUENCY (FREE RUNNING)

Tune in TV mode (RF) with no signal applied and connect a frequency counter to the base of Q501. Check the horizontal frequency for a reading of 15735Hz ±200Hz.

HORIZONTAL POSITION (HPOS)

Perform Horizontal Frequency (Free Running) Adjustment. Tune in a crosshatch pattern. Enter the Service Adjustment Mode. Select DEF group, select HPOS (2) and adjust for best horizontal centering. Save adjustment to memory.

PINCUSHION (PAMP, UPIN, LPIN, VBOW, VANG)

Tune in a crosshatch pattern. Enter the Service Adjustment Mode. Select DEF group, select PAMP (10) and adjust for straight vertical lines at left and right of screen. Select UPIN (11) and adjust for straight vertical lines at top of screen. Select LPIN (12) and adjust for straight vertical lines at bottom of screen. Select VANG (8) and adjust so that vertical lines are perpendicular at corners. Select VBOW (7) and adjust so that vertical lines are parallel at both sides. Save adjustment to memory.

VERTICAL SIZE (VSIZ)

Tune in a crosshatch pattern. Enter the Service Adjustment Mode. Select DEF group, select VSIZ (3) and adjust for slight vertical overscan. Save adjustment to memory.

VERTICAL FREQUENCY (FREE RUNNING)

Select video1 input without signal, with standard setting conditions, connect a frequency counter to pin 6 of connector CN501 on A board. Check for a vertical frequency of 60Hz ±4Hz.

VERTICAL POSITION (VPOS)

Tune in a crosshatch pattern. Enter the Service Adjustment Mode. Select DEF group, select VPOS (4) and adjust to center picture vertically. Save adjustment to memory.

VERTICAL LINEARITY (VLIN)

Tune in a crosshatch pattern. Enter the Service Adjustment Mode. Select DEF group, select VLIN (5) and adjust for equal vertical spacing of pattern. Save adjustment to memory.

VERTICAL CORRECTION (SCOR)

Enter the Service Adjustment Mode. Select DEF group, select SCOR (6) and adjust for best picture. Save adjustment to memory.

OSD POSITION (DISP)

Tune in a color bar pattern. Enter the Service Adjustment Mode. Select MICRO group, select DISP (1) and adjust to center the OSD. Save adjustment to memory.

SUB BRIGHTNESS (SBRT)

Tune in a crosshatch pattern. Set picture to minimum and brightness to reset. Enter the Service Adjustment Mode. Select VP1 group, select SBRT (10) and adjust for visible highlights. Save adjustment to memory.

SUB CONTRAST

Connect an oscilloscope to pin 3 of IC702. Tune in a colorbar pattern. Set picture to maximum, color to minimum, and brightness to center. Enter the Service Adjustment Mode. Select VP1 group, select RON (11) and set to 1. Select GON (12) and BON (13) and set each to 0. Select RDRV (1) and adjust so that the signal portion of the waveform would measure 1.9Vp-p ±.1Vp-p. Set brightness to center. Select GON (12) and BON (13) and set each to 1. Save adjustment to memory.

SUB HUE (SHUE) AND SUB COLOR (SCOL)

Tune in a color-bar pattern at 75%. Enter the Service Adjustment Mode. Set picture to maximum and color to 50% connect an oscilloscope to pin 1 of IC702. Select VIP group, select SHUE (8) and SCOL (9) with the 1 and 4 buttons. While showing SHUE (8) item, adjust the waveform using the 3 and 6 buttons until the second and third bars are at the same level. While showing the SCOL (9) item, adjust the waveform using the 3 and 6 button until the first and forth bars show the same level. Save adjustment to memory.

SUB BALANCE (SBAL)

Input a stereo signal. Enter the Service Adjustment Mode. Select AUDIO group, select SBAL (1) and adjust for the best sound balance. Save adjustment to memory.

COLOR TEMPERATURE (RCUT, GCUT, BCUT, RDRV, GDRV, BDRV)

Tune in a crosshatch pattern. Adjust screen control so the retrace lines just disappear. Enter Service Adjustment Mode. Set picture and brightness to minimum. Select VP1 group, select SBRT (10) and adjust for minimum. Select RCUT (4), GCUT (5), BCUT (6) and adjust for best white balance. Set picture to maximum. Select RDRV (1), GDRV (2), BDRV (3) and adjust for best white balance. Save adjustment to memory. Perform Sub Brightness (SBRT) Adjustment.

CONVERGENCE

Adjust vertical static magnets to converge red, green, and blue in the center of the screen. Slide BMC magnets in and out to correct for insufficient horizontal static convergence and rotate the vertical static magnets to correct for insufficient vertical static convergence. Tune in a crosshatch pattern and loosen deflection yoke screw. 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, adjust TLV control, and converge 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. Adjust XCV core to balance X axis and adjust YCH control to balance Y axis. Repeat convergence procedure if necessary to obtain best overall convergence. Apply adhesive to wedges and carefully replace on CRT. Apply a permalloy magnet assembly, corresponding to the misconverged corner areas.

TEST EQUIPMENT

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

Equipment	Sencore No.
Oscilloscope	SC3100
Generators	
RGB	CM2125
Multiburst Signal	VG91
Color Bar	VG91
TV Stereo	VG91
Digital VOM	SC3100
Frequency Meter	SC3100
Hi-Voltage Probe	HP200
Accessory Probes	TP212
Isolation Transformer	PR570
Capacitance Analyzer	LC102
CRT Analyzer	CR7000
AC Leakage Tester	PR570
Inductance Analyzer	LC102
Flyback Yoke Tester	TVA92
Field Strength Meter	SL753
Transistor Tester	TF46
Horizontal Analyzer	HA-2500
Video Analyzer	VG91, TVA92

SERVICE MODE ADJUSTMENT CHART

NOTE: Before making any changes to the On-Set Value, make a record of the On-Set Values. After making any repair or changes to the On-Set Values, press the mute button and then the enter button on the remote to save the changes to memory.

No.	Display	Item	Initial Data	No.	Display	Item	Initial Data
	DEF			19	SHPF	SHARPNESS FOR (00:2-11:5CLK) (RF, YUV, AND MEM STICK SET TO 0, COMP V SET TO 1) -	-
1	HSIZ	HORIZONTAL SIZE (EW DC) (RF AND COMP V SET TO 45)	51	20	SHCL	SHARPNESS CORING LEVEL	1
2	HPOS	HORIZONTAL POSITION (RF AND COMP V SET TO 25)	25	21	SHMX	SHARPNESS LIMITER LEVEL	15
3	VSIZ	VERTICAL RAMP SIZE (RF AND COMP V SET TO 35)	37	22	AKBD	AKB SELF DIAGNOSTIC COUNTER	5
4	VPOS	VERTICAL POSITION (RAMP DC) (RF SET TO 32, COMP V SET TO 31)	30	23	AKBS	AKB SWITCH H/W AKB ON	1
5	VLIN	VERTICAL LINEARITY	32	24	REFP	AKB REFPLS TIMING	0
6	SCOR	S CORRECTION	56	25	YNRC	YNR LIMITER LEVEL	15
7	VBOW	VERTICAL BOW	39	26	BKON	BLACK STRETCH ON	1
8	VANG	VERTICAL ANGLE	22	27	BKRC	BLACK STRETCH DETECT TIME CONSTANT 1 (SAME AS OTHER REGISTER)	-
9	TRAP	EW TRAPEZIUM	24	28	BKDP	BLACK STRETCH START POINT (SAME AS OTHER REGISTER)	-
10	PAMP	PARABOLA EW PIN	33	29	BKSP	BLACK STRETCH POINT (SAME AS OTHER REGISTER)	-
11	UPIN	UPPER CORNER PIN DISTORTION	29		VP2		
12	LPIN	LOWER CORNER PIN DISTORTION	30	1	VMOF	VM GAIN OFF SETTING	2
13	TROT	TILT CORRECTION	128	2	VMLO	VM GAIN AT LOW SETTING	5
14	HBLK	HORIZONTAL BLANKING MODE SELECT	0	3	VMHI	VM GAIN AT HIGH SETTING	11
15	RBLK	HORIZONTAL BLANKING REAR TIMING (RF SET TO 24, COMP V SET TO 23)	21	4	VMDL	VM DELAY (RF AND COMP V SET TO 10, YUV AND MEM STICK SET TO 6)	-
16	LBLK	HORIZONTAL BLANKING FRONT TIMING (RF SET TO 52, COMP V SET TO 54)	53	5	VMPL	VM POLARITY	1
17	VBLK	VERTICAL BLANKING WIDTH	3	6	VMWD	VM WIDTH	0
18	HMSK	MACROVISION	0	7	VMCL	VM CORING LEVEL	0
19	HDW	HORIZONTAL DRIVE PULSE WIDTH (25U/19U)	1	8	VMMX	VM LIMITER LEVEL	15
20	AFC	HORIZONTAL AFC GAIN	0	9	CKLV	COLOR KILLER VTH	1
21	AFC1	HORIZONTAL CHARGE PUMP (AFC1 TIME CONSTANT) (RF SET TO 7)	0	10	CKON	FORCE KILLER	0
22	AFCW	AFC1 PULL IN WIDE	1	11	ALFA	ADAPTIVE DET SENSITIVITY	2
23	CDMD	VERTICAL DET WINDOW SWITCH TIMING	1	12	YCMD	YC SEPARATION FORCE SELECT	0
24	HSS	HORIZONTAL SYNC SLICE LEVEL	0	13	VACL	V APERTURE CORING LEVEL	0
25	VSS	VERTICAL SYNC SLICE LEVEL	3	14	VAGA	V APERTURE GAIN LEVEL	-
26	SLUD	AUTO SLICE LEVEL UP/DOWN	0	15	VAMX	V APERTURE LIMITER LEVEL	15
27	JPSW	JUMP SWITCH	0	16	GAMM	GAMMA	-
28	HOSC	HORIZONTAL VCO OSC FREQ	3	17	YDLY	Y DELAY TIME	3
29	EHT	ETH	4	18	CDLY	C DELAY	2
30	EHTG	EHT GAIN (EHT MODE)	1	19	YOFF	Y OUTPUT MUTE	0
	VP1			20	BGPP	BGP (FOR C DECODER) TIMING	11
1	RDRV	RED DRIVE	84	21	NRCH	NOISE DET VTH1	3
2	GDRV	GREEN DRIVE COLOR TEMP COOL AND NEUTRAL (YUV AND MEM STICK SET TO 66)	65	22	NRCL	NOISE DET VTH1	255
3	BDRV	BLUE DRIVE COLOR TEMP COOL AND NEUTRAL	76	23	NRVL	NOISE DET VTH1	255
4	RCUT	RED CUTOFF	100	24	NRVH	NOISE DET VTH1	255
5	GCUT	GREEN CUTOFF COLOR TEMP COOL AND NEUTRAL (YUV AND MEM STICK SET TO 73)	72	25	GDOF	G DRIVE COLOR TEMP WARM	18
6	BCUT	BLUE CUTOFF COLOR TEMP COOL AND NEUTRAL (YUV AND MEM STICK SET TO 59)	58	26	BDOF	B DRIVE COLOR TEMP WARM	31
7	SCON	SUB CONTRAST (MEM STICK SET TO 0)	11	27	GCOF	G CUTOFF COLOR TEMP WARM	2
8	SHUE	SUB HUE (RF SET TO 10, COMP V SET TO 8, YUV AND MEM STICK SET TO 7)	-	28	BCOF	B CUTOFF COLOR TEMP WARM	4
9	SCOL	SUB COLOR (RF SET TO 8, COMP V SET TO 9, YUV AND MEM STICK SET TO 26)	-	29	DCTV	DC TRANSFER VTH	3
10	SBRT	SUB BRIGHTNESS (YUV SET TO 22, MEM STICK SET TO 21)	17	30	DCTG	DC TRANSFER GAIN (SAME AS OTHER REGISTER)	-
11	RON	RED OUTPUT ON/OFF	1		16:9		
12	GON	GREEN OUTPUT ON/OFF	1	1	VSIZ	VERTICAL RAMP SIZE	40
13	BON	BLUE OUTPUT ON/OFF	1	2	VPOS	VERTICAL POSITION (RAMP DC)	34
14	BLLV	BLUE STRETCH COLOR TEMP COOL	1	3	VLIN	VERTICAL LINEARITY	26
15	MTRX	MATRIX RATIO SELECT	1	4	SCOR	S CORRECTION	28
16	AXIS	R - Y PHASE OFFSET	52	5	TRAP	EW TRAPEZIUM	23
17	SSHO	SUB SHARPNESS GAIN (OVER) RF/VIDEO (RF AND MEM STICK SET TO 3, COMP V AND YUV SET TO 5)	-	6	PAMP	EW PIN	15
18	SSHP	SHARPNESS GAIN (PRE) RF/VIDEO (RF SET TO 11, COMP V SET TO 15, YUV SET TO 16, MEM STICK SET TO 13)	-	7	UPIN	UPPER CORNER	31
				8	LPIN	LOWER CORNER	32
				9	ABLG	ABL GAIN	1
				10	SCON	SUB CONTRAST LEVEL	11
				11	VPW	JUMP PULSE WIDTH	1

SERVICE MODE ADJUSTMENT CHART continued

No.	Display	Item	Initial Data				No.	Display	Item	Initial Data	
	PALETTE		VIVID	STD	MOVIE	PRO					
1	VPIC	PICTURE	63	50	37	31	-	42	VSAG	V-SAG PREVENT ON	0
2	VBRI	BRIGHTNESS	31	31	28	31	-	43	AFC2	AFC2 GAIN CONTROL	0
3	VCOL	COLOR	32	31	31	31	-	44	VRFL	VRAMP FILTER SWITCHING OFF	0
4	VHUE	HUE	31	31	31	31	-	45	XPLU	ACP TIME CONSTANT	1
5	VSHA	SHARPNESS	35	37	34	31	-	46	CDM2	V_LOGIC SWITCH	1
6	VVM	VM	2	1	1	0	-	47	BGPC	BGP C	0
7	VTRI	COLOR TEMP	0	1	2	1	-	48	MHDL	BGP SEL	1
8	VAPA	APERTURE G	7	4	3	0	-	49	BFRE	FORCE V FREERUN	0
9	VGMA	GAMMA	3	2	2	0	-	50	HRPP	FRAMP RRAMP H OUT CONTROL RANGE	2
10	VDCT	DCT LEVEL	12	9	9	2	-	51	DSCK	DS DAC CLK SWITCH (EXCEPT YUV)	0
11	BKDP	BLACK STRETCH DEPTH	2	2	1	1	-	52	VBHK	V BLK HALF KILL ONLY WITH 16:9 OFF	0
12	BKRC	BLACK STRETCH TIME 1 AND 2	243	243	244	244	-	53	VPW	V PULSE WIDE	1
13	BKSP	BLACK STRETCH POINT	3	1	1	1	-	54	DTH	DITHER THRESHOLD LEVEL CONTROL AT IIC AUTOD=ON	1
14	CONO	CONTRAST OFFSET FOR RF	0	0	0	0	-	55	SLON	LPF SYNC ON	5
	ASIC							56	VSSW	SYNC SLICE LEVEL (V) WIDE WINDOW	0
1	YNRS	YNR ON					0	57	AF2S	AFC2 TIMING SWITCH	0
2	CLPS	CLAMP CONTROL SWITCH (CLAMP OFF 0, CLAMP AUTO 1, CLAMP ON 2)					1	58	VSL2	DIGITAL V_SYNC_LPF FALL	1
3	VMG2	MODULATOR FEEDBACK GAIN CONTROL					1	59	VSL1	DIGITAL V_SYNC_LPF RISE	0
4	CLPT	CLAMP AUTO ON KEEP TIMER COUNT (@100MS)					15	60	VSHE	V-SHRINK MODE FOR AV-NOSYNC	0
5	AASL	C DECODER TIME CONSTANT (32, 16, 8, 1H)					2	61	DSCS	CLOCK DIV SEL (YUV AND MEM STICK SET TO 0)	1
6	BASL	ACC TIME CONSTANT					0	62	14HI	4FSC (SKEW) CLK POLARITY	0
7	ACTH	ROM HYS					95	63	14HD	4FCCLK (SKEW) CLK DELAY ADJUST	1
8	AVAV	AVE SEL AV					3	64	DSI	8FSC CLK POLARITY	1
9	B2TH	B2COMP					0	65	DSD	8FCS CLK DELAY ADJUST	0
10	AMUT	RGB POWER ON MUTE					0	66	ADCD	ADC CLK DELAY ADJUST	1
11	PMUT	RGB MUTE (EXCEPT OSD)					1	67	WSTH	WEAK SIGNAL VTH	0
12	CORL	RED CUTOFF LOWER					0	68	WSVA	WEAK SIGNAL VIDEO ATT	0
13	CORH	RED CUTOFF UPPER					1	69	WSCA	WEAK SIGNAL CHROMA ATT	0
14	COGL	GREEN CUTOFF LOWER COLOR TEMP COOL AND NEUTRAL					0	70	VREF	AD REFERENCE SELECT (VZ)	0
15	COGH	GREEN CUTOFF UPPER COLOR TEMP COOL AND NEUTRAL					1	71	DCCK	AD REFERENCE SELECT (VZ) (YUV AND MEM STICK SET TO 12)	0
16	COBL	BLUE CUTOFF LOWER COLOR TEMP COOL AND NEUTRAL					0	72	HT	HALF TONE LEVEL	0
17	COBH	BLUE CUTOFF UPPER COLOR TEMP COOL AND NEUTRAL					1	73	OSLR	RED OSD LEVEL	27
18	ALSP	ACL SPEED					0	74	OSLG	GREEN OSD LEVEL	27
19	ALAS	ACL ATTACK SPEED					146	75	OSDC	OSD COMP	0
20	ABLG	ABL GAIN					4	76	OSLB	BLUE OSD LEVEL	27
21	AKBM	AKB MODE					0	77	HRIL	H/W AKB RED OUTPUT LOWER (WILL CHANGE WHEN TV IS TURNED ON)	-
22	AKBP	AKB PULSE HEIGHT					10	78	HRIH	H/W AKB RED OUTPUT UPPER (WILL CHANGE WHEN TV IS TURNED ON)	-
23	OSDL	OSD LIMIT SELECT					0	79	HGIL	H/W AKB GREEN OUTPUT LOWER (WILL CHANGE WHEN TV IS TURNED ON)	-
24	UVG	UV OFFSET CANCELLER ON					0	80	HGIH	H/W AKB GREEN OUTPUT UPPER (WILL CHANGE WHEN TV IS TURNED ON)	-
25	UOFS	U IN OFFSET					32	81	HBIL	H/W AKB BLUE OUTPUT LOWER (WILL CHANGE WHEN TV IS TURNED ON)	-
26	VOFS	V IN OFFSET (YUV AND MEM STICK SET TO 31)					32	82	HBIH	H/W AKB BLUE OUTPUT UPPER (WILL CHANGE WHEN TV IS TURNED ON)	-
27	AALG	ANALOG ACL GAIN CONTROL					0	83	HLM1	H/W AKB LIM1	4
28	AALS	ANALOG ACL ON/OFF CONTROL					1	84	HLM2	H/W AKB LIM2	12
29	UVDT	UVIN DITHER TEST					14	85	HLM3	H/W AKB LIM3	21
30	HFFR	AFC1 FORCE FREERUN					0	86	HAD1	H/W AKB SPEED1	2
31	HFUP	H FREERUNFREQUENCY UP (700HZ)					0	87	HAD2	H/W AKB SPEED2	6
32	JSWW	JUMP PULSE WIDTH					0	88	HAKE	H/W AKB MANUAL (MCU)/HARD	1
33	XF0A	VCXO FREERUN ADJUST					0	89	HASP	H/W AKB SPEED	3
34	BGST	BGP (FOR PLL) TIMING (YUV AND MEM STICK SET TO 6)					16	90	HERL	H/W AKB ERROR DET THRESH	10
35	XPHA	VCXO PHASE ADJUST					10	91	HLMC	H/W AKB ERROR DET TIME	15
36	HRMP	AFC2 TIME CONSTANT					3	92	HPWL	H/W AKB POWER ON THRESH	4
37	RPLU	REF PLL TIME CONSTANT					3	93	HPWC	H/W AKB POWER ON TIME	2
38	RPLB	REF PLL TIME CONSTANT					1	94	HFMT	POWER ON H/W AKB2 HOLD TIMER (@100MS)	20
39	XF0B	VCXO FO ADJUST					0	95	SPMT	AKB POWER ON MUTE EXIT TIMER (@100MS)	120
40	RPLS	REF VCO FB LOOP SELECT					0	96	GYG	G-Y GAIN	0
41	SSM	SYNC SEPA MASKING CONTROL					0	97	Y16M	YUV 16 M	1
								98	PCLP	PEDESTAL CLAMP	0

SERVICE MODE ADJUSTMENT CHART continued

No.	Display	Item	Initial Data
NR			
1	SCOL	SUB COLOR LEVEL	8
2	SHCL	SHARPNESS CORING LEVEL	15
3	SHMX	SHARPNESS LIMITER LEVEL	7
4	YNRC	YNR LIMITER LEVEL	7
5	VMHI	VM LEVEL AT HIGH SETTING	7
6	VMCL	VM CORING LEVEL	0
7	VMMX	VM LIMITER LEVEL	7
8	VAGA	V APERATURE LIMITER LEVEL	0
9	GAMM	GAMM (00:NO<->11:DEEP)	0
10	YNRS	YNR ON	1
11	WSTH	WEAK SIGNAL VTH	7
12	WSVA	WEAK SIGNAL VIDEO ATT	0
13	WSCA	WEAK SIGNAL CHROMA	5
AUDIO			
1	SBAL	SUB BALANCE	4
2	SBAS	SUB BASS	0
3	STRE	SUB TREBLE	0
4	SRL	SURROUND LEVEL	0
5	BBOL	SURROUND OFF - BBE LOW	3
6	BBOH	SURROUND OFF - BBE HIGH	3
7	BBSL	SIMULATED - BBE LOW	3
8	BBSH	SIMULATED - BBE HIGH	3
9	BBGL	WOW - GAME BBE LOW	5
10	BBGH	WOW - GAME BBE HIGH	5
11	BBTL	SRS BBE LOW	0
12	BBTH	SRS BBE HIGH	0
13	VFIX	AUDIO OUTPUT FIX DATA	240
14	AGCL	AGCL LEVEL (ACG LEVEL)	2
15	VCOF	RF OFFSET DATA	9
MICRO			
1	DISP	OSD HORIZONTAL OFFSET	93
2	CCHP	FOR TILT DATA CALCULATION	110
3	HLRW	LOW LIMIT OF H-PULSE COUNTING WINDOW RF	16
4	HRHG	HIGH LIMIT OF H-PULSE COUNTING WINDOW RF	64
5	HSDT	HSDTCT (H-PULSE DETECTION S-VIDEO)	8
6	STPI	CONTRAST INCREASE STARTING LEVEL	40
7	RAPI	CONTRAST INCREASE VSYNC COUNTER	10
8	ZCRD	ZERO CROSS RELAY DELAY	20
9	ABLT	ABL PROTECTION COUNTER	3
ID			
0	ID0	LANGUAGE RELATED	89
1	ID1	VIDEO RELATED	63
2	ID2	AUDIO RELATED	231
3	ID3	MISCELLANEOUS (CANADIAN SET TO 48)	32
4	ID4	MISCELLANEOUS	8
5	ID5	MISCELLANEOUS	0
6	ID6	MISCELLANEOUS	0
7	ID7	MISCELLANEOUS	4

SAFETY RELATED ADJUSTMENTS

R530 AND R531 CONFIRMATION METHOD
(HV HOLD-DOWN CONFIRMATION) AND
READJUSTMENTS

The following adjustments should always be performed when replacing the following components: D519, D520, D521, C531, C532, IC501, IC600, PH602, R529, R530, R531, R532, R533, R550, T503, and T504.

Hold-down Operation Confirmation

1. Apply 120VAC ±2.0VAC from a variable transformer. Turn the power on, receive a white signal, set picture and brightness settings to maximum.
2. Confirm that the voltage at cathode of D519 is more than 23.0V.
3. Disconnect power and remove solder from pin 11 of T503.
4. Connect a current meter between pin 11 of T503 and the printed circuit where pin 11 would be attached. Turn receiver on and tune in a dot signal. Set picture and brightness settings to minimum. The current meter should read 2175µA +100µA -325µA.
5. Confirm that the voltage at cathode of D611 is 134.6V ±1.0V.
6. Connect a digital voltmeter and a variable DC power supply to cathode of D519. Increase the voltage supplied to cathode of D566 gradually until the picture just blanks out, then turn off variable DC power supply immediately.
7. Check digital voltmeter for reading of less than or equal to 24.78V +0V -.1V.
8. Input a 100 IRE white signal. Adjust ABL current with picture and brightness to 2175µA +100µA -325µA.
9. Repeat steps 4 thru 7.

Hold-down Readjustment

If step 4 of the Hold-down Operation Confirmation procedure cannot be satisfied, readjustment should be performed by altering the resistance values of R530 and R531.

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. No error occurs when the screen displays a 0. One flash is not used for self diagnostic purposes. The following list explains the error codes.

Number of Flashes	Description of Code	Possible Malfunction
0	Power does not turn on.	Loss of AC supply or F601 is open.
2	High voltage hold down is activated. (OCP) B+ is activated.	Q502 or IC702 shorted.
4	No vertical deflection.	Failure of IC561 or loss of 13.5V supply.
5	White balance failure.	Failure of IC001. Screen control needs adjustment.

DIAGNOSTIC FUNCTION ON SCREEN DISPLAY

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 shown as in the drawing below. After errors have been corrected clear the on screen display information by pressing 8 and enter. To exit the on screen display, press the power button. 0 indicates no fault has been detected. 1 indicates a fault has been detected.

Self Diagnostic On Screen Display

2:	+B OCP	0
3:	+B OVP	N/A
4:	VSTOP	0
5:	AKB	0
101:	WDT	N/A

SONY
MODEL KV-27FS320 (CHASSIS SCC-S59N-A, SCC-S61S-A)

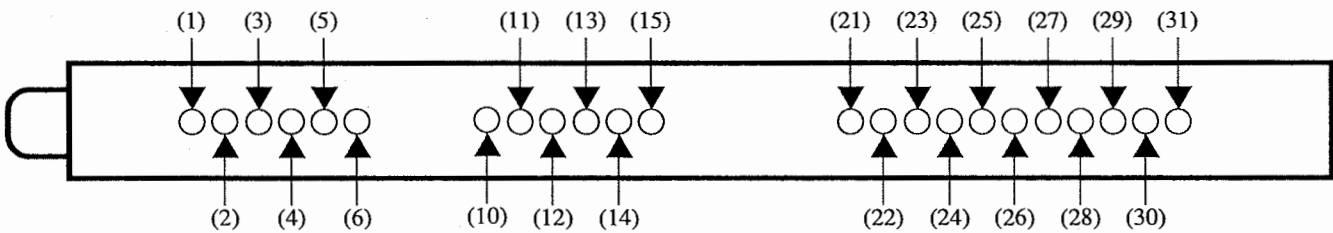
TUNER INFORMATION

TUNER/IF MODULE VOLTAGE CHART

Pin	Pin Name	Voltage	Pin	Pin Name	Voltage	Pin	Pin Name	Voltage
(1)	9V	8.7V	(12)	VIF	0V	(25)	MODE	.02V
(2)	30V	31.0V	(13)	9V	8.7V	(26)	F MONO	.02V
(3)	5V	5.0V	(14)	AFT OUT	6.9V	(27)	NC	0V
(4)	SCL	4.9V	(15)	GND	0V	(28)	MUTE	1.8V
(5)	SDA	4.9V	(21)	DET OUT2	5.2V	(29)	NC	0V
(6)	AS	0V	(22)	DET OUT1	5.2V	(30)	R OUT	4.1V
(10)	GND	0V	(23)	ST IND	.02V	(31)	L OUT	4.1V
(11)	RF AGC	7.2V	(24)	SAP IND	5.2V			

NOTE: Voltages do not change on different bands.

TUNER/IF MODULE TERMINAL GUIDE



Important Parts Information

- Parts not listed in the parts list are commonly available at your local electronics parts retailer.
- 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

Participating Vendors

Information on test equipment and replacement parts is listed in these pages for the following participating vendors.

- NTE Electronics, Inc. (NTE)
- Sencore, Inc.

PARTS LIST

Item No.	Type No.	Mfr. Part No.	NTE Part No.
D002	UDZSTE-175.6B	8-719-069-55	-
D004, 05	DTZ10B	8-719-977-28	-
D006	UDZSTE-175.1B	8-719-069-54	-
D009	MTZJ-30D	8-719-982-22	-
D044, 45	DTZ10B	8-719-977-28	-
D050	D1NS4	8-719-510-02	NTE585
D051	10ERB20-TB5	6-500-567-21	-
D052	UDZSTE-175.6B	8-719-069-55	-
D110	MA111-TX	8-719-404-50	-
D200, 01	UDZSTE-179.1B	8-719-069-60	-
D209, 10, 11	UDZSTE-179.1B	8-719-069-60	-
D212	UDZSTE-179.1B	8-719-069-60	-
D213	D1NS4	8-719-510-02	NTE585
D218, 19	MTZJ-T-77-9.1B	8-719-929-15	-
D301	RD9.1EW	8-719-108-12	NTE5018A
D305, 06, 07	PDZ9.1B-115	8-719-070-62	-
D308	DTZ10B	8-719-977-28	-
D318 Thru			
D323	UDZSTE-179.1B	8-719-069-60	-
D351	UDZSTE-173.3B	6-500-697-01	-
D390	MA111-TX	8-719-404-50	-
D400	MA111-TX	8-719-404-50	-
D401, 02	UDZSTE-179.1B	8-719-069-60	-
D405	MA111-TX	8-719-404-50	-
D414	MTZJ-7.5B	8-719-921-63	-
D423, 24	MA111-TX	8-719-404-50	-
D425	UDZ-TE-17-7.5B	8-719-056-84	-
D500	BY228/A52A/	8-719-081-00	-
D501	MA111-TX	8-719-404-50	-
# D503	BY228/A52A/	8-719-081-00	-
D504	FR305G-EB	6-500-485-01	-
D505	GP08D	8-719-908-03	NTE116
D506	GP08D	8-719-908-03	NTE116
D508, 09	MA111-TX	8-719-404-50	-
D512, 13	MA111-TX	8-719-404-50	-
# D515	PR1004GT	8-719-075-41	-
D516, 18	MA111-TX	8-719-404-50	-
# D519	EL1Z	8-719-302-43	NTE587
D520	MA111-TX	8-719-404-50	-
D521	MTZJ-7.5B	8-719-921-63	-
D522, 25, 26	MA111-TX	8-719-404-50	-
# D530	PG154R	6-500-531-01	NTE571
D531, 34	PG104R	8-719-074-25	NTE574
D535	MA111-TX	8-719-404-50	-
D551	UDZSTE-175.6B	8-719-069-55	-
D558, 59	MA111-TX	8-719-404-50	-
D561	1N4003GA	8-719-075-33	NTE116
D580	1SS133T-77	8-719-991-33	NTE519
D588, 89, 90	MA111-TX	8-719-404-50	-
D600	D4SB60L	8-719-510-53	NTE5319
D602	S1NB60-4062	8-719-064-12	-
D611	D4SBL20UF3	8-719-062-40	-
D612, 13	ERC04-06SE	8-719-068-00	-
D614	EZ0150AV1	8-719-057-52	-
D615	D4SBL20UF3	8-719-062-40	-
D618	UF4005PKG23	8-719-979-64	-

PARTS LIST continued

Item No.	Type No.	Mfr. Part No.	NTE Part No.
D620	MA111-TX	8-719-404-50	-
D621	MA6D50	6-500-181-01	-
D628	MA111-TX	8-719-404-50	-
D629	UDZS-TE17-12B	8-719-083-82	-
D631	10ERB20-TA1B2	6-500-567-01	-
D640, 41	MA111-TX	8-719-404-50	-
D645	10ERB20-TA1B2	6-500-567-01	-
D646	MA111-TX	8-719-404-50	-
D647	10ERB20-TA1B2	6-500-567-01	-
D651	RD6.2ESB2	8-719-109-93	NTE5013T1
D690	MTZJ-27	8-719-982-13	-
D701, 02, 03	1SS83	8-719-901-83	NTE177
D704	PG104R	8-719-074-25	NTE574
D705	RD9.1EW	8-719-108-12	NTE5018A
D762, 63	MA111-TX	8-719-404-50	-
D772, 73	MA111-TX	8-719-404-50	-
D782, 83	MA111-TX	8-719-404-50	-
D804	PG104R	8-719-074-25	NTE574
D805, 06	1SS133T-77	8-719-991-33	NTE519
D807	11EQS04	8-719-210-21	NTE585
D808, 13	1SS133T-77	8-719-991-33	NTE519
D901, 02	MTZJ-T-77-22	8-719-924-11	-
D903	1SS133T-77	8-719-991-33	NTE519
D905, 06, 07, 08	MA111-TX	8-719-404-50	-
D1809	RD15ESB2	8-719-110-41	NTE5024A
D1810, 11	ERA38-06	8-719-970-87	NTE575
D1812	1N4937/23	8-719-081-93	-
D2235, 36	RD9.1EW	8-719-108-12	NTE5018A
D2238, 39	RD6.2ESB2	8-719-109-93	NTE5013T1
D2240, 41	HZS9.1NB2	8-719-929-15	-
D2801	RD5.6ESB2	8-719-109-89	NTE5011A
D2802	1SS133T-77	8-719-991-33	NTE519
D3002	LNJ801LPDJA	8-719-057-09	-
D3004	PDZ5.6B-115	8-719-070-57	-
IC001	M65585pF-104FP	6-804-652-01	-
IC002	M24C16-WMN6T(B)	6-704-607-01	-
IC003	PST9143NL	8-759-352-91	-
IC004	L88M05T-FA-TL	8-759-533-85	-
IC301	NJM2750M-TE2	6-701-105-01	-
IC302	NJM2534M(TE2)	8-759-353-00	-
IC303	NJM2283M-TE1	8-759-443-11	-
IC400	NJW1134AGK1-TE2	6-703-190-01	-
IC401	TDA8947J	6-705-054-01	-
IC501	NJM2903M	8-759-700-07	NTE943SM
# IC561	TDA8172	8-759-980-58	NTE1788
IC565	NJM2902M	8-759-700-44	NTE987SM
IC600	MCZ3001DB	6-705-810-01	-
IC601	DM-58	8-749-012-13	-
IC609	PQ09RD21	8-759-653-07	-
IC633	NJM2391DL1-33(TE1)	8-759-641-26	-
IC701	BD7941AT-V5	6-705-638-01	-
IC702	TDA6108JF/N1B	8-759-562-43	-
IC703	NJM78M09FA	8-759-701-59	NTE1966
IC801	UPC5023CS-184	6-701-598-01	-
IC1302	CS4335-KSZR	6-704-819-01	-
IC1303, 04	PQ07VZ012ZP	9-749-015-18	-

Item No.	Type No.	Mfr. Part No.	NTE Part No.
IC1308	MBM29LV160BE90TNE1BA6LER	6-804-442-01	-
IC1310	ES6425FF	6-706-283-01	-
IC1311	IS42S16400B-7TL-TR	6-706-452-01	-
IC1600	BA05T	8-759-450-47	-
IC3001	NJM2283M-TE1	8-759-443-11	-
IC3001A	SBX3071-71	8-742-211-20	-
# PH602	ON3171-R	8-749-924-35	-
Q002, 04	2SD601A-Q	8-729-422-27	NTE2408
Q005, 08	2SD601A-Q	8-729-422-27	NTE2408
Q300, 01, 03	2SB709A-QRS-TX	8-729-424-02	NTE2409
Q304	2SD601A-Q	8-729-422-27	NTE2408
Q305	2SB709A-QRS-TX	8-729-424-02	NTE2409
Q306	2SD601A-Q	8-729-422-27	NTE2408
Q307	2SB709A-QRS-TX	8-729-424-02	NTE2409
Q316	2SD601A-Q	8-729-422-27	NTE2408
Q390, 91	2SD601A-Q	8-729-422-27	NTE2408
Q401, 02, 03	2SD601A-Q	8-729-422-27	NTE2408
Q405	2SC1623-L5L6	8-729-120-28	NTE2408
Q412	2SD601A-Q	8-729-422-27	NTE2408
Q466 Thru			
Q470	2SB709A-QRS-TX	8-729-424-02	NTE2409
Q471, 72	2SD601A-Q	8-729-422-27	NTE2408
Q501	2SC3209LK	8-729-140-50	NTE399
# Q502	2SD2645-YB	6-550-107-01	-
Q503, 04, 05, 09	2SD601A-Q	8-729-422-27	NTE2408
# Q511	2SD601A-Q	8-729-422-27	NTE2408
# Q512	2SC4159-E	8-729-809-29	NTE54
Q515, 19, 30	2SD601A-Q	8-729-422-27	NTE2408
Q531	2SB709A-QRS-TX	8-729-424-02	NTE2409
Q532	KTA1279	6-550-362-01	-
Q533	2SB709A-QRS-TX	8-729-424-02	NTE2409
Q561	2SD601A-Q	8-729-422-27	NTE2408
Q562	2SB709A-QRS-TX	8-729-424-02	NTE2409
Q564, 82	2SD601A-Q	8-729-422-27	NTE2408
Q583	2SB709A-QRS-TX	8-729-424-02	NTE2409
Q600, 01	IRFIB7N50A-LF31	8-729-052-32	-
Q605	2SD774-34	8-729-140-96	NTE382
Q606	2SD601A-Q	8-729-422-27	NTE2408
Q608	2SD2144S-UVM	8-729-922-37	-
Q611	KSC2383-O	6-550-409-01	-
Q690	2SB709A-QRS-TX	8-729-424-02	NTE2409
Q691	2SA933AS-QT	8-729-026-39	NTE290A
Q700, 01, 03	2SD601A-Q	8-729-422-27	NTE2408
Q761, 62, 63	2SD601A-Q	8-729-422-27	NTE2408
Q771, 72, 73	2SD601A-Q	8-729-422-27	NTE2408
Q781, 82, 83	2SD601A-Q	8-729-422-27	NTE2408
Q805	KTB764	6-550-106-01	-
Q807	IRF614	8-729-931-45	-
Q808	KTB764	6-550-106-01	-
Q812	2SA933AS-QT	8-729-026-39	NTE290A
Q860	2SD601A-Q	8-729-422-27	NTE2408
Q901	KTC4370A	8-729-053-87	-
Q902	KTA1659A	6-550-247-01	NTE398
Q903, 04	2SD601A-Q	8-729-422-27	NTE2408
Q905	2SB709A-QRS-TX	8-729-424-02	NTE2409
Q906, 07	2SC1623-L5L6	8-729-120-28	NTE2408

PARTS LIST
continued

Item No.	Type No.	Mfr. Part No.	NTE Part No.
Q908	2SB709A-QRS-TX	8-729-424-02	NTE2409
Q1810	2SC3840(3)	8-729-043-95	-
Q2801	2SD601A-Q	8-729-422-27	NTE2408
Q2802, 03, 04	2SB709A-QRS-TX	8-729-424-02	NTE2409
Q3005	2SB709A-QRS-TX	8-729-424-02	NTE2409
Q3300	2SD601A-Q	8-729-422-27	NTE2408
Q3304	2SB709A-QRS-TX	8-729-424-02	NTE2409
Q3502	2SD601A-Q	8-729-422-27	NTE2408
Q6000	2SD601A-Q	8-729-422-27	NTE2408

Item No.	Function/Rating	Mfr. Part No.	Notes
# C507, 09	680pF 10% 2kV	1-162-116-00	-
# C511	.017 3% 1.2kV	1-136-086-00	-
# C513	.047 5% 630V	1-129-722-00	-
# C514	.68 5% 400V	1-109-844-11	-
# C516	.82 5% 250V	1-115-521-11	-
# C527	680pF 10% 2kV	1-162-116-00	-
# C553	.24 5% 250V	1-117-412-11	-
# C554	.0027 3% 1.2kV	1-117-629-11	-
# C581	.22 20% 275VAC	1-165-529-11	-
# C601, 03	.22 10% 275VAC	1-165-529-11	-
# C608, 22	.001 20% 125V	1-119-912-51	-
C648, 49	.001 10% 1kV	1-164-143-11	-
C672	.047 3% 800V	1-165-953-11	-
C715, 16	.0047 2kV	1-162-114-00	-
D250	Varistor	1-803-974-21	-
D304	Varistor	1-803-974-21	-
D3305 Thru			
D3509	Varistor	1-803-974-21	-
# DY1	Deflection Yoke	8-451-494-41	-
# F601	Fuse 1-576-193-11	6.3Amp, 125V	-
FB302	Ferrite Bead	1-469-549-21	-
FB501, 02, 03, 05	Ferrite Bead	1-412-911-11	-
FB602, 04	Ferrite Bead	1-412-911-11	-
FB613	Ferrite Bead	1-410-397-21	-
FB614, 16, 17	Ferrite Bead	1-412-911-11	-
FB650 Thru			
FB653	Ferrite Bead	1-412-911-11	-
FL001	Filter	1-234-126-21	EMI
J201	Jack 1-181-351-11	Assembly	
J205	Jack 1-818-012-11	Assembly	
J207	Jack 1-794-116-11	Assembly	
# J701	Socket	1-451-470-21	CRT
J2231	Jack 1-794-048-11	Assembly	
L002	Filter	1-234-126-21	EMI
L003	10μH	1-414-856-11	-
L004	100μH	1-414-857-11	-
L005	Filter	1-234-126-21	EMI
L006	100μH	1-414-273-11	-
L007	10μH	1-414-267-21	-
L009	100μH	1-414-857-11	-
L011	Filter	1-234-126-21	EMI
L301	10μH	1-469-555-21	-
# L500	Degaussing	1-419-156-21	-
L501	10μH	1-406-677-11	-
L502	2.2mH	1-412-552-11	-

Item No.	Function/Rating	Mfr. Part No.	Notes
L503	10μH	1-406-677-11	-
# L505	100μH	1-419-714-11	-
L511	8mH	1-409-955-31	-
L515	22μH	1-412-529-11	-
L517	2.2mH	1-412-552-11	-
L604	10μH	1-412-525-31	-
L605, 06	Ferrite Bead	1-412-911-11	-
L608, 09	22μH	1-412-529-11	-
L611, 12, 13	100μH	1-469-561-21	-
L701	100μH	1-410-482-31	-
L710, 11, 12	33μH	1-410-387-11	-
L801, 02	10mH	1-406-989-21	-
L803	22μH	1-412-529-11	-
L901	18μH	1-410-473-11	-
L1301	1μH 1-469-549-21	-	-
L1306	Ferrite Bead	-	-
L1805	10μH	1-406-677-11	-
L3003, 04	Filter	1-234-126-21	EMI
L3609	10μH	1-414-267-21	-
N/S	COIL	1-452-896-11	-
# NECK	Neck	8-453-011-41	Assembly
# P600	Line Cord	1-824-069-11	AC, Polarized
PS401	IC Link	1-576-337-21	2.7Amp, 50V
PS1600	IC Link	1-576-337-21	2.7Amp, 50V
R005, 07	Ferrite Bead	1-400-427-21	-
R027	47K .5% 1/10W	1-218-887-11	-
R085	15K 5% 3W	1-215-924-00	-
R302	470 .5% 1/10W	1-218-839-11	-
R303	560 .5% 1/10W	1-218-841-11	-
R312	6800 .5% 1/10W	1-218-867-11	-
R326	Ferrite Bead	1-400-427-21	-
R422	6800 .5% 1/10W	1-218-867-11	-
R504	1500 5% 3W	1-243-608-71	-
# R510	33 5% 3W	1-215-908-00	-
R512	220 5% 3W	1-243-535-71	-
R520	100 5% 3W	1-243-531-71	-
# R523	22K 5% 1/10W	1-216-837-11	-
# R524	10K 5% 1/10W	1-216-833-11	-
# R525	8200 .5% 1/10W	1-218-869-11	-
# R528	22K .5% 1/10W	1-218-879-11	-
R529	22K .5% 1/10W	1-218-879-11	-
R530	12K .5% 1/10W	1-218-873-11	-
R531	180K .5% 1/10W	1-218-901-11	-
# R536, 37	.47 5% 1/2W	1-260-288-11	-
# R543	.47 5% 1/4W	1-249-377-11	-
# R545	3.3 5% 1/4W	1-249-387-11	-
R546	22K 1% 1/4W	1-215-453-00	-
R547	10K 1% 1/4W	1-215-445-00	-
R547A	68K .5% 1/4W	1-218-891-11	-
R548	22K 1% 1/4W	1-215-453-00	-
R549	2200 1% 1/4W	1-215-429-00	-
# R550	.47 5% 1/4W	1-249-377-11	-
R552	1500 5% 3W	1-243-608-71	-
# R553	.47 5% 1/4W	1-249-377-11	-
R561	10K 1% 1/4W	1-215-445-00	-
# R563	1.8 1% 1/2W	1-214-798-21	-

PARTS LIST continued

Item No.	Function/Rating	Mfr. Part No.	Notes	Item No.	Function/Rating	Mfr. Part No.	Notes
R566	6800 .5% 1/10W	1-218-867-11	-	R1600	2.2 5% 10W	1-205-997-31	-
# R567	2.2 5% 1/4W	1-249-385-11	-	R1849, 50	8200 5% 3W	1-243-617-71	-
R568	6800 .5% 1/10W	1-218-867-11	-	R1851, 52	6800 5% 3W	1-215-922-11	-
R569	10K .5% 1/10W	1-218-871-11	-	R3517	27K .5% 1/10W	1-218-881-11	-
# R574	1.8 1% 1/2W	1-214-798-21	-	R3524	6800 .5% 1/10W	1-218-867-11	-
R576	22 5% 3W	1-243-523-71	-	R3530	5600 .5% 1/10W	1-218-865-11	-
R598	6800 .5% 1/10W	1-218-867-11	-	R3533	8200 .5% 1/10W	1-218-869-11	-
R609	1 5% 3W	1-216-389-11	-	R3534	15K .5% 1/10W	1-218-720-11	-
# R615	.1 10% 1/2W Fusible	1-202-933-61	-	R3535	5600 .5% 1/10W	1-218-865-11	-
R626	8200 .5% 1/10W	1-218-869-11	-	R3536	8200 .5% 1/10W	1-218-869-11	-
R629, 30	470K 1% 1/4W	1-245-478-21	-	# RV701	110M	1-241-656-11	S VSTAT
R631	15K .5% 1/10W	1-218-875-11	-	RV702	47K	1-238-019-11	N / S
R632	100 .5% 1/10W	1-218-823-11	-	RY501	Relay	1-755-198-11	Degaussing
R634	10 5% 3W	1-215-905-11	-	# RY600	Relay	1-755-395-11	Power
R641	1 5% 3W	1-216-389-11	-	S501	Switch	1-572-707-11	Horizontal Centering
R647	91 .5% 1/10W	1-211-992-11	-	S502	Switch	1-572-707-11	Horizontal Centering
# R674	.47 10% 1/2W Fusible	1-220-926-11	-	S1007	Switch	1-762-816-11	Select / Menu
R686	.22 5% 10W	1-240-303-31	-	S1008	Switch	1-762-816-11	Down / Up
R687	.47 5% 10W	1-220-797-11	-	S2001	Switch	1-692-431-21	Volume Down
R688	.22 5% 10W	1-240-303-31	-	S2002	Switch	1-692-431-21	Volume Up
R762	1000 .5% 1/10W	1-218-847-11	-	S2003	Switch	1-692-431-21	Channel Down
R764	270 .5% 1/10W	1-218-833-11	-	S2004	Switch	1-692-431-21	Channel Up
R765	2200 .5% 1/10W	1-218-855-11	-	S2005	Switch	1-692-431-21	TV / Video
R772	1000 .5% 1/10W	1-218-847-11	-	S3006	Switch	1-786-338-12	Power
R774	270 .5% 1/10W	1-218-833-11	-	SP1, 2	Speaker	1-825-513-11	6 X 12cm
R775	2200 .5% 1/10W	1-218-855-11	-	# T501	Horizontal Drive	1-433-836-11	-
R782	1000 .5% 1/10W	1-218-847-11	-	# T502	PMT	1-435-869-11	-
R784	270 .5% 1/10W	1-218-833-11	-	# T503 (1)	Horizontal Output	1-453-310-41	-
R785	2200 .5% 1/10W	1-218-855-11	-	T504	DFT 1-424-584-31	-	-
R817	22K .5% 1/10W	1-218-879-11	-	# T505	Horizontal Linearity	1-433-850-11	-
R824	100K .5% 1/10W	1-218-895-11	-	# T603	Standby	1-437-783-11	-
R827	4700 .5% 1/10W	1-218-863-11	-	# T604	Converter	1-437-606-12	-
R828	33K .5% 1/10W	1-218-883-11	-	# T605	Line Filter	1-443-402-11	-
R833	5600 .5% 1/10W	1-218-865-11	-	TH501	Thermistor	1-800-193-00	-
R834	3300 .5% 1/10W	1-218-859-11	-	THP501	PTC 1-804-970-11	-	-
R837	8200 .5% 1/10W	1-218-869-11	-	# TU001	Module	8-598-593-50	Tuner / IF, BTF-WA421
R840	2200 .5% 1/10W	1-218-855-11	-	# V901	CRT8-735-082-05	M68LNH050X	-
R841	4700 .5% 1/10W	1-218-863-11	-	# VDR600	Varistor	1-810-974-21	-
R842	2200 .5% 1/10W	1-218-855-11	-	VM	Coil -	-	-
R852	47K .5% 1/10W	1-218-887-11	-	X001	Crystal	1-795-006-21	-
R855	10K .5% 1/10W	1-218-871-11	-	X301	Crystal	1-781-377-21	-
R856	3900 .5% 1/10W	1-218-861-11	-		Magnet	4-083-414-01	Convergence Correction
R857	18K .5% 1/10W	1-218-877-11	-		PC Board	A-1057-457-A	A
R860	10K .5% 1/10W	1-218-871-11	-		PC Board	A-1057-459-A	C
R864	100 .5% 1/10W	1-218-823-11	-		PC Board	A-1415-873-A	HD
R890	68K .5% 1/10W	1-218-891-11	-		PC Board	A-1057-114-A	HM
R910	470 5% 3W	1-215-915-11	-		PC Board	A-1054-787-A	HN
R911	220 1% 1/4W	1-215-405-00	-		PC Board	A-1415-870-A	HR
R913	56 1% 1/4W	1-215-391-00	-		PC Board	A-1415-872-A	HU
R932A	1500 .5% 1/10W	1-218-851-11	-		PC Board	A-1057-456-A	M
R1310	43 .5% 1/10W	1-218-659-11	-		PC Board	A-1057-460-A	V
R1356	1000 .5% 1/10W	1-218-692-11	-		Transmitter	1-478-708-11	Remote, RM-Y196
R1359	150 .5% 1/10W	1-218-672-11	-		Wedges	4-053-005-01	Yoke Positioning (3 Used)
R1360	1000 .5% 1/10W	1-218-692-11	-				
R1367	560 .5% 1/10W	1-218-686-11	-				
R1372	1500 1% 1/10W	1-218-696-11	-				

For SAFETY use only equivalent replacement part.
(1) Screen and focus controls are part of T503.