

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 Howard W. Sams & Company as to the quality and suitability of such replacement part. The numbers of the listed parts have been compiled from information furnished to Howard W. Sams & Company by the manufacturers of the specific type of replacement part listed.

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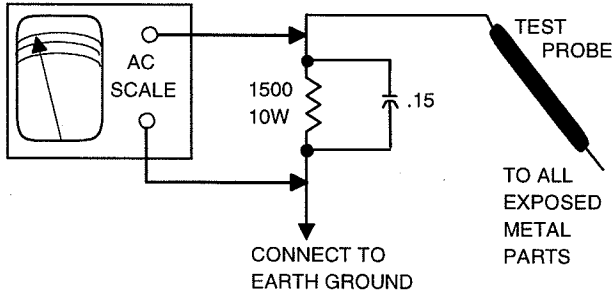
SAFETY CHECKS -- FIRE AND SHOCK HAZARD

Cold Leakage Checks for Receivers with Isolated Ground

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

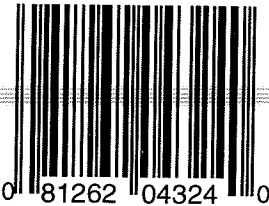
Hot Leakage Current Check

Plug the AC cord directly into an AC outlet. DO NOT use an isolation transformer. Use a 1500 ohms, 10W resistor in parallel with a .15µF capacitor to connect between any exposed metal parts on the receiver and a good earth ground. (See figure below.) Use an AC voltmeter with at least 5000 ohms per volt sensitivity to measure the voltage across the resistor. Check all exposed metal parts and measure voltage at each point. Voltage measurements should not exceed .75VAC, 500µA. Any value exceeding this limit constitutes a potential shock hazard and must be corrected. If the AC plug is not polarized, reverse the AC plug and repeat exposed metal part voltage measurement at each point.



HIGH VOLTAGE SHUTDOWN TEST

Apply 120VAC. Use remote transmitter to set customer controls for normal operation. Momentarily short test points XRP1 and XRP2. The set should lose raster and sound, and then restart. If set does not shut down, the shutdown circuit should be repaired.



00PF01574

PHOTOFACT® Technical Service Data

SET 4324

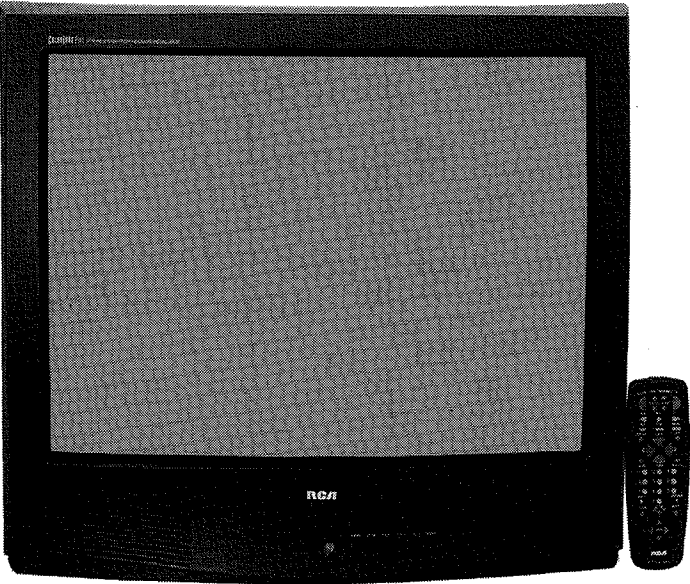
MODEL F27641BCYX1 (CHASSIS CTC187AB)

RCA

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RCA
Model F27641BCYX1 (Chassis CTC187AB)

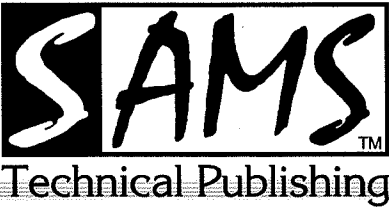


Essential coverage
for servicing a television receiver...

- Schematics
- Component locations
- Parts list

Coverage includes these additional models and chassis:

MODELS	CHASSIS
F27638BCFE1	CTC187AB
F27638BCJX1	CTC187AB



JULY 2000 SET 4324

TUNER CIRCUIT VOLTAGE CHART

Pin No.	VHF Low Band	VHF High Band	UHF Band	Pin No.	VHF Low Band	VHF High Band	UHF Band
U7301				U7401			
1	5.4V	5.4V	5.3V	1	1.7V	2.1V	1.7V
2	2.9V	3.0V	3.2V	2	2.1V	2.1V	2.1V
3	7.8V	7.7V	7.6V	3	2.1V	2.1V	2.1V
4	3.0V	3.0V	3.2V	4	4.8V	4.8V	4.8V
5	7.8V	7.7V	7.6V	5	4.7V	4.7V	4.7V
6	0V	0V	0V	6	0V	0V	0V
7	3.0V	3.0V	0V	7	1.3V	1.3V	1.3V
8	9.0V	9.0V	8.8V	8	11.5V	0V	0V
9	3.0V	3.0V	3.3V	9	7.4V	7.4V	0V
10	3.3V	3.2V	2.9V	10	4.8V	4.8V	4.8V
11	4.9V	5.1V	9.7V	11	2.3V	2.3V	2.3V
12	3.3V	3.2V	2.9V	12	2.3V	2.3V	2.3V
13	0V	0V	0V	13	0V	0V	0V
14	9.1V	9.0V	5.4V	14	.6V	.6V	.6V
15	3.4V	3.4V	2.9V				
16	3.4V	3.4V	2.9V				

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

Pin No.	VHF Low Band	VHF High Band	UHF Band	Pin No.	VHF Low Band	VHF High Band	UHF Band	Pin No.	VHF Low Band	VHF High Band	UHF Band
Q7101				Q7401				Q7403			
G1	0V	0V	4.8V	E	0V	0V	0V	E	0V	0V	0V
G2	5.0V	6.5V	7.2V	B	.6V	.6V	.6V	B	.7V	.7V	0V
D	.2V	.2V	11.3V	C	2.1V	3.8V	17.8V	C	.1V	.1V	11.3V
S	.2V	.2V	4.8V								
Q7102				Q7402				Q7404			
G1	4.6V	4.6V	4.6V	E	12.0V	12.0V	12.0V	E	12.0V	12.0V	12.0V
G2	5.3V	6.8V	7.2V	B	11.3V	10.5V	10.6V	B	11.0V	10.9V	10.6V
D	11.3V	11.2V	11.4V	C	-14.9V	11.1V	11.2V	C	.1V	.1V	11.3V
S	4.1V	4.2V	11.3V								
								Q7601			
								E	.1V	.1V	.1V
								B	.3V	.3V	.3V
								C	11.8V	11.8V	11.8V

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

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

MISCELLANEOUS ADJUSTMENTS

PRETUNING

NOTE: All procedures require an antenna connected and power applied to the receiver.

Auto Program

1. Press the program button to select autoprogram.
2. Press the + button. All available channels are scanned and stored in memory.
3. Press display to clear menu.

Channel Memory

1. Press the program button to select channel memory.
2. Select channel with number buttons or channel up and down buttons.
3. Press + button to add a channel or - button to erase a channel.
4. Repeat steps 2 and 3 to add or erase other channels.
5. When finished, press done button to save selections.

SERVICE MENU

The following adjustment and alignment procedures are accessed thru a service menu using buttons on the receiver. To access the service menu, turn the receiver on, press the menu button and hold it down while pressing the power button. While holding down the menu button, release the power button and press the volume + button. The screen will display a one line menu, on the left the parameter P 00, and on the right the value of that parameter V 00. Release buttons. Adjustments are made by selecting the proper parameter and changing the value of that parameter. To change the parameter number use channel up and down buttons. To adjust the current value of that parameter use volume + and - buttons. The three main groups of parameters are, the service adjustment parameters, the chassis alignment parameters, and the tuner alignment parameters. To access and change any of the adjustments, the proper parameter pass number and value must be entered. This information is listed at the beginning of each alignment. When these parameters are modified, the T-Chip and the corresponding EEPROM are updated. All service adjustments are bus controlled, except focus and screen. To exit the service menu return to P 00.

WARNING: When adjusting the horizontal frequency be careful not to exceed the value range, or the receiver will go into shutdown, and replacement of U3101 may be required. In case the receiver goes into shutdown, connect a capacitor across C4402 with the same value, redo horizontal frequency adjustment, then remove the capacitor. It may be necessary to readjust the horizontal frequency again.

SERVICE ADJUSTMENT PARAMETERS

Parameter No.	Parameter Name	Range	On-Set Value	Comment
00	Pass number for service adjustment parameters	Must set to 76	00	May not advance until value set.
01	Horizontal frequency (see warning)	00 - 63	16	Adjust for stable or slowly moving horizontal lines.
02	Horizontal phase	00 - 15	09	Adjust to center picture left to right.
03	EW DC (Width)	00 - 15	06	Not used in 27" models.
04	EW amplitude	00 - 07	04	Not used in 27" models.
05	Vertical DC	00 - 15	09	Adjust to center picture top to bottom.
06	Vertical size	00 - 31	11	Adjust to 1/4" overscan top and bottom of screen.
07	Red bias	00 - 127	73	Press menu button for setup line.
08	Green bias	00 - 127	46	Press menu button for setup line.
09	Blue bias	00 - 127	68	Press menu button for setup line.
10	Red drive	00 - 63	36	Press menu button for setup line.
11	Green drive	00 - 63	34	Press menu button for setup line.
12	Blue drive	00 - 63	31	Press menu button for setup line.

HIGH VOLTAGE CHECK

Tune in a picture. Set brightness, contrast, and color to minimum. Connect a high voltage probe to the CRT anode. High voltage should measure 25kV to 27kV.

COLOR TEMPERATURE

NOTE: See Service Adjustment Parameters to change drive and bias values.

Press menu button on the receiver for collapsed raster service line. Disconnect the antenna. Preset the red, green, and blue drive values to 32. Preset the red, green, and blue bias values to provide 120VDC at the collector of the respective output transistors. Adjust screen control for a service line that is just visible. Adjust red, green, and blue drives to obtain a white raster. Check the low light to high light gray scale tracking. Repeat the procedure, if necessary, to obtain the best performance.

CHASSIS ALIGNMENT PARAMETERS

Parameter No.	Parameter Name	Range	On-Set Value	Comment
13	Pass number for chassis alignment parameters	Must set to 77	00	May not advance to higher parameter until value is set.
14	PLL tuning	00 - 63	35	Apply 4.0V to pin 14 of U1001. Short junction of R7130 and R2313 to ground. Connect 41.25MHz (300mV) marker to pin 1 of SF2301. Connect an oscilloscope to pin 55 of U1001. Adjust value for 2.2µs sinewave.
15	4.5MHz trap	00 - 07	03	Short junction of R7130 and R2313 to ground. Apply 45.75MHz (300mV) and 41.25MHz (100mV) to pin 1 of SF2301. Connect an oscilloscope to pin 63 of U1001, and adjust value for minimum 4.5MHz sinewave.
16	Video level	00 - 07	03	Tune in a color bar pattern, 100% modulation, super pulse display. Connect oscilloscope to pin 63 of U1001. Adjust value range to produce 2.0Vp-p waveform.
17	FM level	00 - 15	07	Connect signal generator to pin 55 of U1001, inject 4.5MHz carrier, 1kHz modulation, with 25kHz deviation. Apply 4.0V to pin 14 of U1001. Connect oscilloscope to pin 3 of U1001, and adjust value range for 1.2Vp-p of 1kHz component.
18	B+ trim	00 - 15	07	-
19	RF AGC (1)	00 - 31	21	Manually tune channel 6.
20	D-PIP chroma	00 - 127	00	Not used.
21	D-PIP tint	00 - 255	00	Not used.
22	D-PIP brightness	00 - 31	00	Not used.
23	D-PIP contrast	00 - 63	00	Not used.
24	Factory tint	00 - 63	28	-
25	Input level	00 - 15	08	Refer to Stereo Adjustments section.
26	Stereo VCO	00 - 63	24	Refer to Stereo Adjustments section.
27	SAP VCO	00 - 15	07	Set value to 06.
28	SAP low pass filter	00 - 63	20	Set value to 18.
29	SAP band pass filter	00 - 15	09	Set value to 08.
30	Wideband separation	00 - 63	33	Refer to Stereo Adjustments section.
31	Spectral separation	00 - 63	32	Refer to Stereo Adjustments section.

(1) RF AGC has been preset at time of manufacture for optimum operation over a wide range of RF signal input conditions. Readjustment should not be required unless the tuner has been repaired, U1001, U3101, or U3201 has been replaced, or unusual signal conditions exist. Use weakest local signal to adjust RF AGC parameter setting.

MISCELLANEOUS ADJUSTMENTS continued

ELECTRONIC TUNER ALIGNMENT PARAMETERS

Use tuner service modulator, RCA stock no. 215568, and a VCR for signal source. Monitor RF AGC at the positive end of C2306 or at pin 12 of U1001, and adjust for minimum voltage at each parameter. The entire Electronic Tuner Alignment procedure, once started, must be completed in its entirety. Electronic Tuner Alignment is performed with top and bottom tuner covers in place with bottom cover soldered.

Parameter No.	Parameter Name	Range	On-Set Value
32	Pass number for tuner alignment parameters	Must set to 78	00
100	Ch. 2 secondary	00-63	27
101	Ch. 2 primary	00-63	23
102	Ch. 2 single	00-63	10
103	Ch. 6 secondary	00-63	62
104	Ch. 6 primary	00-63	51
105	Ch. 6 single	00-63	52
106	Ch. 14 secondary	00-63	63
107	Ch. 14 primary	00-63	57
108	Ch. 14 single	00-63	30
109	Ch. 17 secondary	00-63	33
110	Ch. 17 primary	00-63	46
111	Ch. 17 single	00-63	22
112	Ch. 18 secondary	00-63	49
113	Ch. 18 primary	00-63	29
114	Ch. 18 single	00-63	40
115	Ch. 13 secondary	00-63	61
116	Ch. 13 primary	00-63	41
117	Ch. 13 single	00-63	49
118	Ch. 34 secondary	00-63	63
119	Ch. 34 primary	00-63	40
120	Ch. 34 single	00-63	52
121	Ch. 37 secondary	00-63	63
122	Ch. 37 primary	00-63	39
123	Ch. 37 single	00-63	50
124	Ch. 48 secondary	00-63	44
125	Ch. 48 primary	00-63	27
126	Ch. 48 single	00-63	32

Parameter No.	Parameter Name	Range	On-Set Value
127	Ch. 50 secondary	00-63	34
128	Ch. 50 primary	00-63	23
129	Ch. 50 single	00-63	22
130	Ch. 51 secondary	00-63	39
131	Ch. 51 primary	00-63	34
132	Ch. 51 single	00-63	36
133	Ch. 57 secondary	00-63	41
134	Ch. 57 primary	00-63	31
135	Ch. 57 single	00-63	31
136	Ch. 63 secondary	00-63	42
137	Ch. 63 primary	00-63	27
138	Ch. 63 single	00-63	27
139	Ch. 76 secondary	00-63	43
140	Ch. 76 primary	00-63	25
141	Ch. 76 single	00-63	20
142	Ch. 83 secondary	00-63	44
143	Ch. 83 primary	00-63	26
144	Ch. 83 single	00-63	22
145	Ch. 93 secondary	00-63	46
146	Ch. 93 primary	00-63	29
147	Ch. 93 single	00-63	25
148	Ch. 110 secondary	00-63	49
149	Ch. 110 primary	00-63	30
150	Ch. 110 single	00-63	24
151	Ch. 117 secondary	00-63	55
152	Ch. 117 primary	00-63	33
153	Ch. 117 single	00-63	24
154	Ch. 125 secondary	00-63	63
155	Ch. 125 primary	00-63	42
156	Ch. 125 single	00-63	19

MECHANICAL TUNER COIL ALIGNMENT

The tuner coil alignment is preset at the time of manufacture and should require no further adjustment. The following recommended procedure should be performed only in event a complete tuner alignment is necessary, which is unlikely. Use plastic or wooden tool to knife coils. This procedure is performed with top tuner cover removed and bottom tuner cover in place and soldered. Tuner service modulator RCA stock No. 215568 is used in this procedure.

1. Manually tune the receiver and the tuner service modulator to channel 125 (band 3) and enter parameter 154.
2. Connect digital volt meter to tuner side of R7525.
3. Check for voltage reading between 4.55V and 4.75V, if not expand or compress L7303 to set voltage within these limits.
4. Manually tune the receiver and the tuner service modulator to channel 50 (band 2) and enter parameter 127.
5. While digital volt meter is still connected to R7525, check for voltage reading between 4.8V and 5V, if not expand or compress L7304 to set voltage within these limits.
6. Manually tune the receiver and the tuner service modulator to channel 17 (band 1) and enter parameter 109.
7. While digital volt meter is still connected to R7525, check for voltage reading between 4.4V and 4.6V, if not expand or compress L7305 to set voltage within these limits.
8. Manually tune the receiver and the tuner service modulator to channel 125 (band 3) and enter parameter 154.

STEREO ADJUSTMENTS

NOTE: Adjustments were made using a MTS/stereo generator connected to the antenna terminal.

Input Level

Turn stereo expander off. Enter parameter 25. Set stereo generator output to pilot, 300Hz, and L + R. Connect an oscilloscope to connector JS6 (see pin 5 of U1001, page 3B). Adjust the parameter value for an output level of 2.2Vp-p. Do not measure noise. Connect a dual oscilloscope to connector JS6 (see pin 5 of U1001, page 3B) and connector JS5 (see pin 4 of U1001, page 3B). Confirm that outputs are within $\pm 25\text{mVp-p}$ of each other.

Stereo VCO

Enter parameter 26. Set stereo generator to pilot, 300 Hz and L+R. Connect a frequency counter to connector JS6 (see pin 5 of U1001, page 3B). Adjust the parameter value for frequency of $62936\text{Hz} \pm 200\text{Hz}$.

9. Connect digital volt meter to positive side of C7503 (RF AGC to tuner).
10. Set parameter value range to 31.
11. Expand or compress L7105 for minimum RF AGC voltage.
12. Enter parameter 155 and set parameter value range to 31.
13. Expand or compress L7104 for minimum RF AGC voltage.
14. Enter parameter 156 and set parameter value range to 31.
15. Expand or compress L7102 for minimum RF AGC voltage.
16. Manually tune the receiver and the tuner service modulator to channel 50 (band 2) and enter parameter 127.
17. Set parameter value range to 31.
18. Expand or compress L7113 for minimum RF AGC voltage.
19. Enter parameter 128 and set parameter value range to 31.
20. Expand or compress L7111 for minimum RF AGC voltage.
21. Enter parameter 129 and set parameter value range to 31.
22. Expand or compress L7107 for minimum RF AGC voltage.
23. Manually tune the receiver and the tuner service modulator to channel 17 (band 1) and enter parameter 109.
24. Set parameter value range to 31.
25. Expand or compress L7114 for minimum RF AGC voltage.
26. Enter parameter 110 and set parameter value range to 31.
27. Expand or compress L7112 for minimum RF AGC voltage.
28. Enter parameter 111 and set parameter value range to 31.
29. Expand or compress L7106 for minimum RF AGC voltage.
30. Perform the entire Electronic Tuner Alignment.

Wideband/Spectral Separation

Set volume to midrange. Set stereo generator to pilot, 300Hz and L. Connect oscilloscope to JS6 (see pin 5 of U1001, page 3B). Enter parameter 30. Adjust value to 20. Increase parameter value slowly for a minimum amplitude of waveform. Enter parameter 31. Change stereo generator to 3kHz. Set parameter value to 20. Increase parameter value slowly for a minimum amplitude of waveform.

NOTE: If stereo generator does not have 3kHz setting or if parameter 31 does not adjust the same as parameter 30, set parameter 31 to a value of 31 and confirm parameter 30 is adjusted for minimum amplitude at 3kHz or highest generator setting.

RCA

MODEL F27641BCYX1 (CHASSIS CTC187AB)

A-

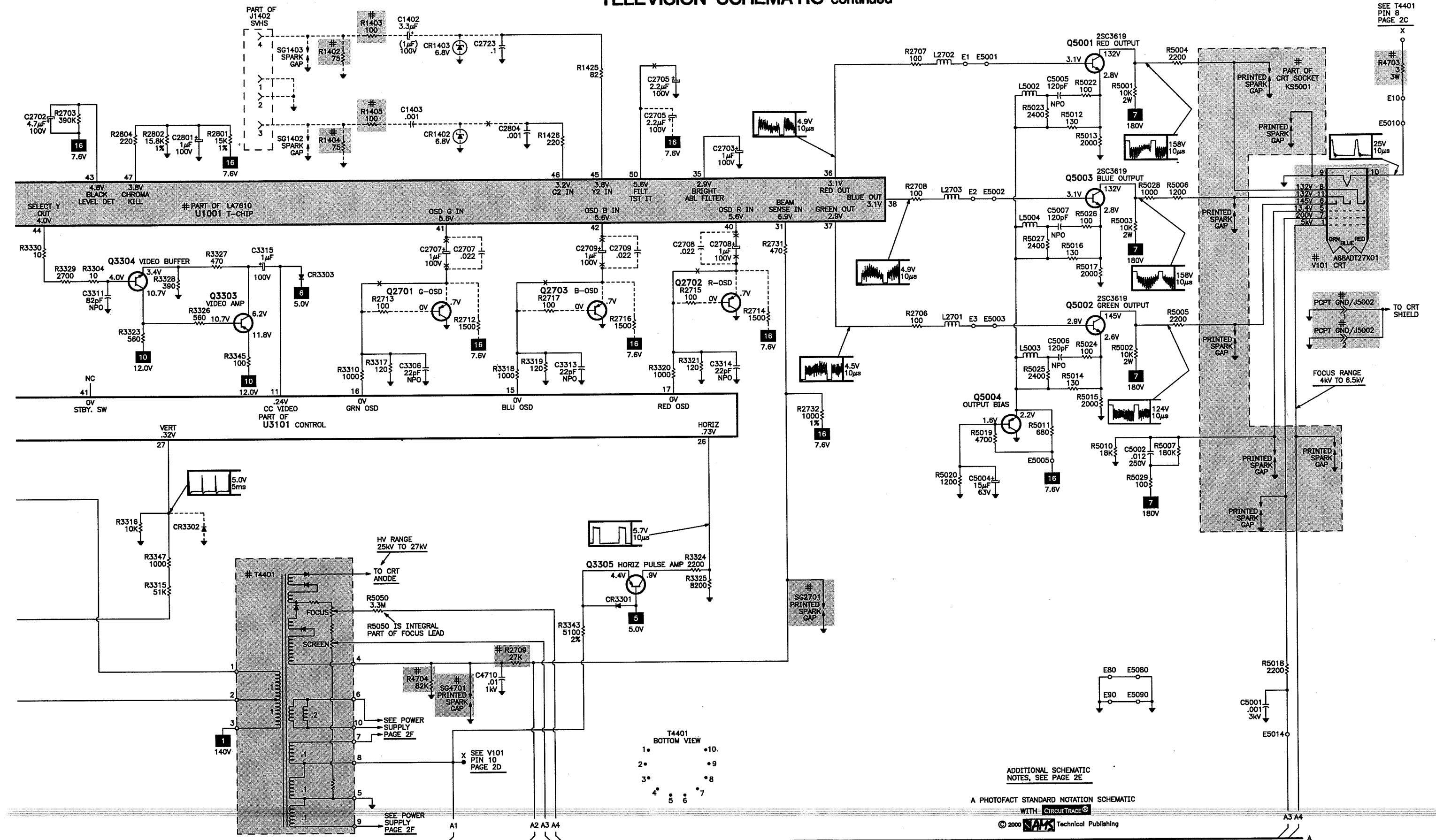


WITH **CIRCUITTRACE®**

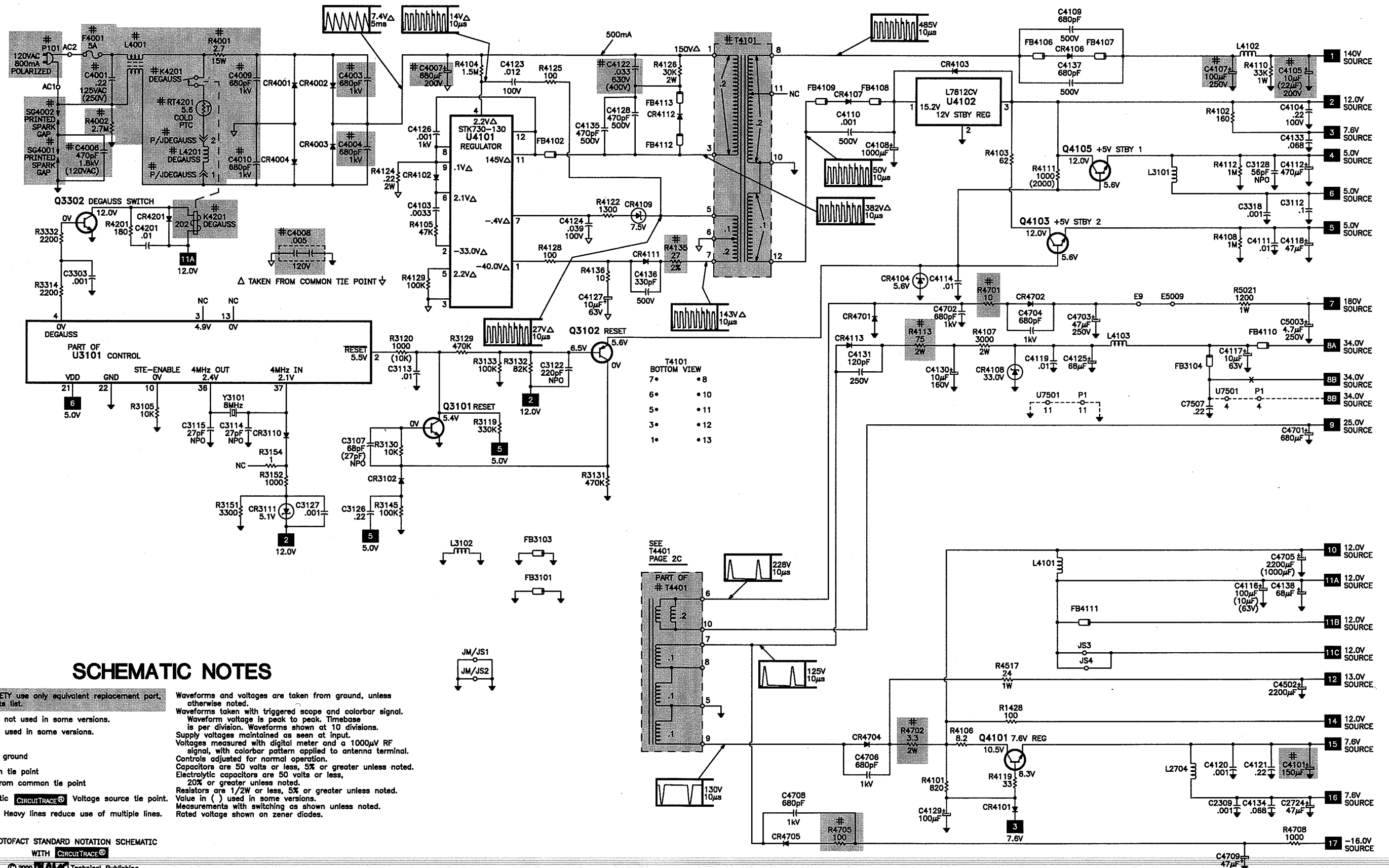
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ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 2E

ADDITIONAL SCHEMATIC
NOTES: SEE PAGE 25



POWER SUPPLY SCHEMATIC



SCHEMATIC NOTES

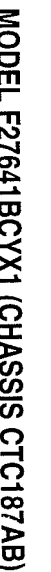
- # For SAFETY use only equivalent replacement part, see parts list.
- Circuitry not used in some versions.
- Circuitry used in some versions.
- Ground
- Chassis ground
- Common tie point
- Taken from common tie point
- 3 Schematic CIRCUITTRACE® Voltage source tie point.
- A Cabling: Heavy lines reduce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

Waveforms and voltages are taken from ground, unless otherwise noted.
 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.

A PHOTOFAC STANDARD NOTATION SCHEMATIC WITH CIRCUITTRACE®

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H



SEE U1001
PIN 3
PAGE 2A

SEE U3101
PIN 19
PAGE 2G

SEE U3101
PIN 20
PAGE 2G

R1628 100K
C1609 47μF
(4.7μF)
(100V)
C1603 4.7μF
(2%)
C1613 3.3μF
C1616 10μF
C1615 10μF
C1815 .1
R1601 43.2K
R1602 61.9K
R1607 3000
R1608 3300
R1608 3900
C1606 .47μF
C1605 .22
C1612 .047
C1611 .0027
C1607 1μF
R1603 2200
C1605 .22
C1620 .01
R1613 62K
C1622 22pF NPO
R1617 100
R1616 1000
(2%)
R1615 100
R1614 1000
(2%)
C1821 22pF NPO

NOISE TC 3.0V
SAP TC 4.5V
VETC 1.7V
VCA WGT 1.8V
VCA 1.2V
PLINT 5.8V
ITIME 1.3V
IREF 1.2V
VE WGT 3.9V
VE 4.0V
VCA WGT 3.8V
ST FIL 5.2V
SAO
DGND
VCC 9.1V

COMP IN 4.0V
SCL 4.6V
SDA 4.7V

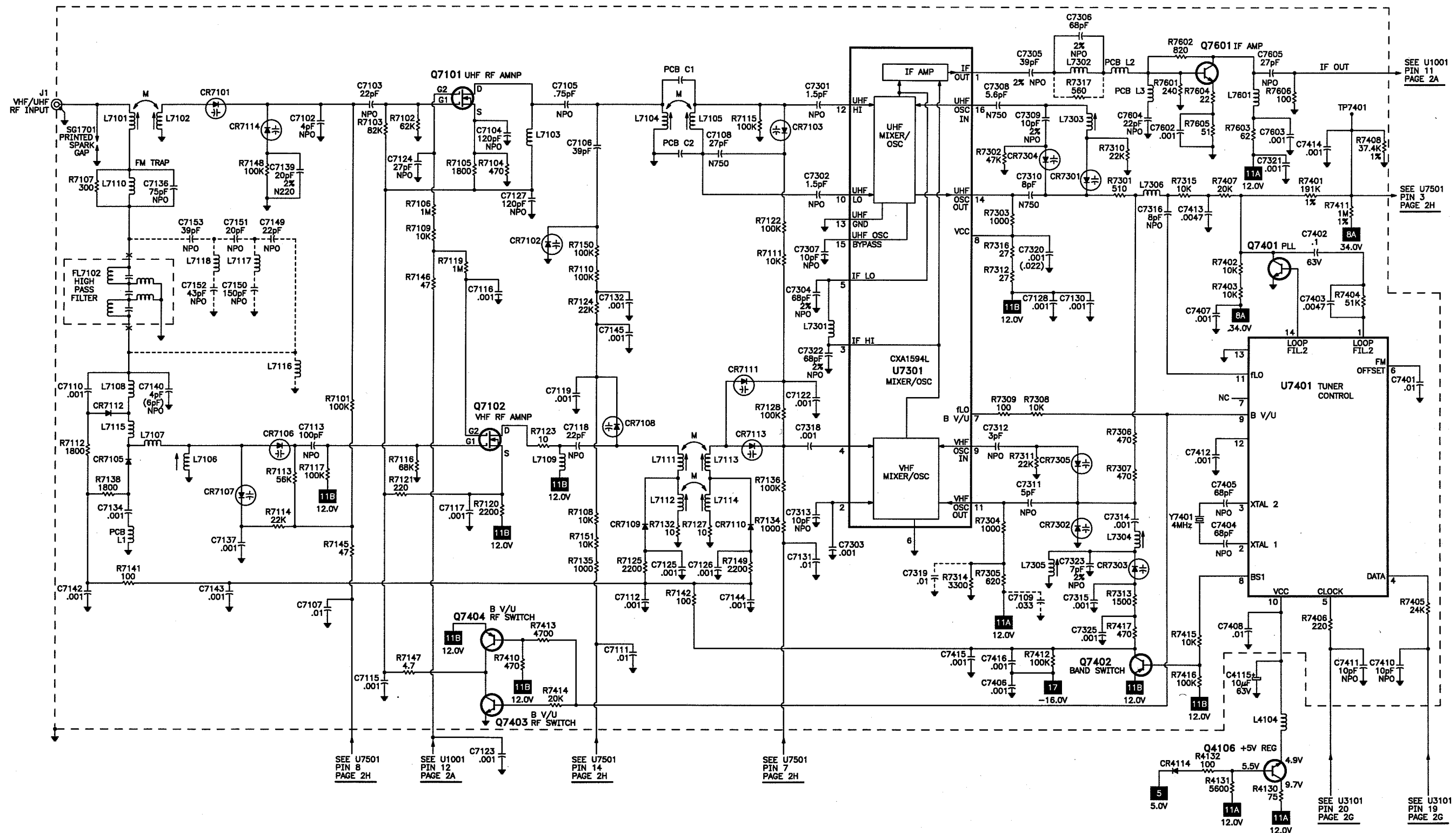
CXA1734S
U1600
STEREO
DECODER

L OUT 4.1V
VE OUT 4.0V
VCA IN 4.0V
R OUT 4.1V
MAIN OUT 4.1V
MAIN IN 4.0V
SUB OUT 4.0V
STIN 4.0V
SAP OUT 4.0V
SAP IN 4.0V
VCC 9.1V

Q1601 EXP STEREO SWITCH
C1624 .1
R1620 10K
(1%)
C1628 .01
(.0047)
100V
R1624 10K
(20K)
C1625 .1
63V
R1618 33K
C1623 .001
N750
R1619 1000
(2%)
JS12
C1601 4.7μF
R3122 1000
C3118 .001
R3121 10K
R3138 10K
C3117 .001
5.0V
R1910 10K
R1912 1M
R1911 10K
R1913 1M
C1913 .015
C1915 .0047
C1914 .0047
C1917 .01
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R1982 1000
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R1963 1000
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R1914 100K
R1915 2200
C1910 47μF
R1412 100
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C1410 100μF
R1418 100
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R1419 4700
R1423 470
R1424 4700
CR1404
R1429 470
11.4V
Q1405 OUTPUT VOLTAGE REG
C1412 470μF
R1421 2200
R1420 100K
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C1408 100μF
R1414 100K
C1407 100V
R1406 100
(150)
C1907 .1
63V
R1907 4.7
R1905 10K
R1906 100
(150)
C1906 220μF
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SP1902 32Z
C1904 220μF
C1903 22μF
R1903 10K
R1904 100
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R1909 4.7
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C1911 .1
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R1907

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TUNER SCHEMATIC



ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 2E

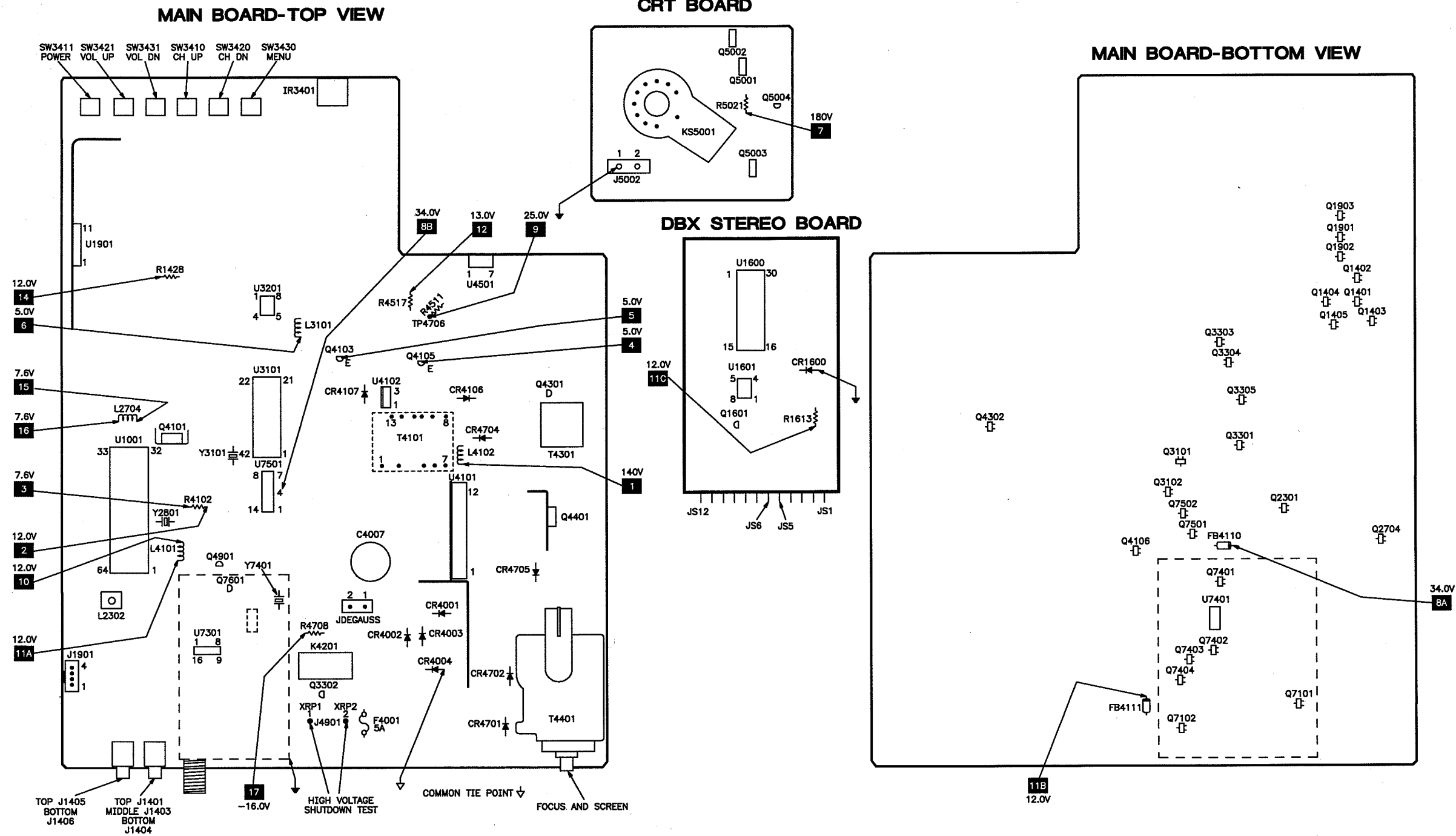
A PHOTOFACIT STANDARD NOTATION SCHEMATIC
WITH CIRCUITTRACE®

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SCHEMATIC COMPONENT LOCATION GUIDE

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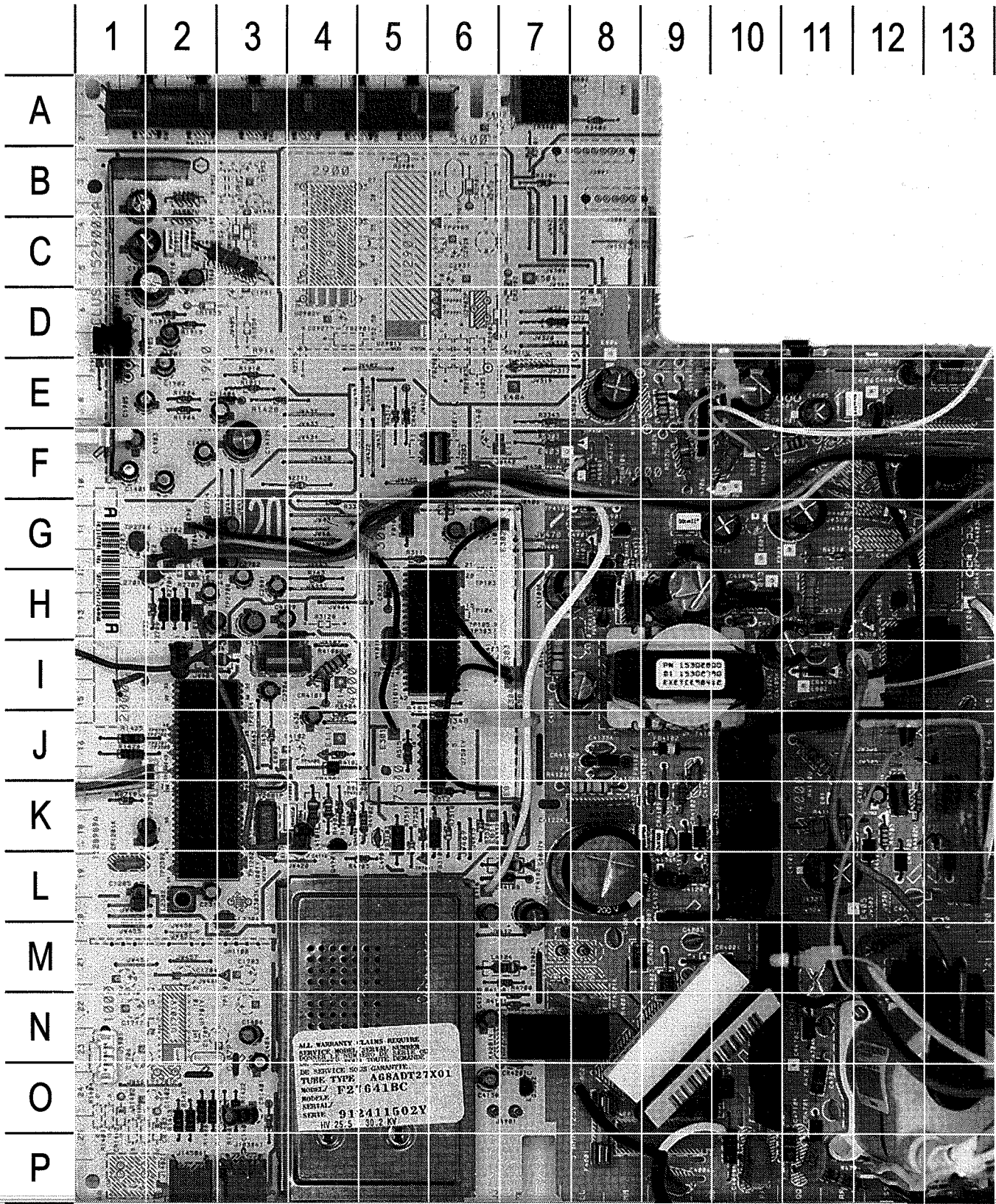
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RCA

MODEL F27641BCYX1 (CHASSIS CTC187AB)

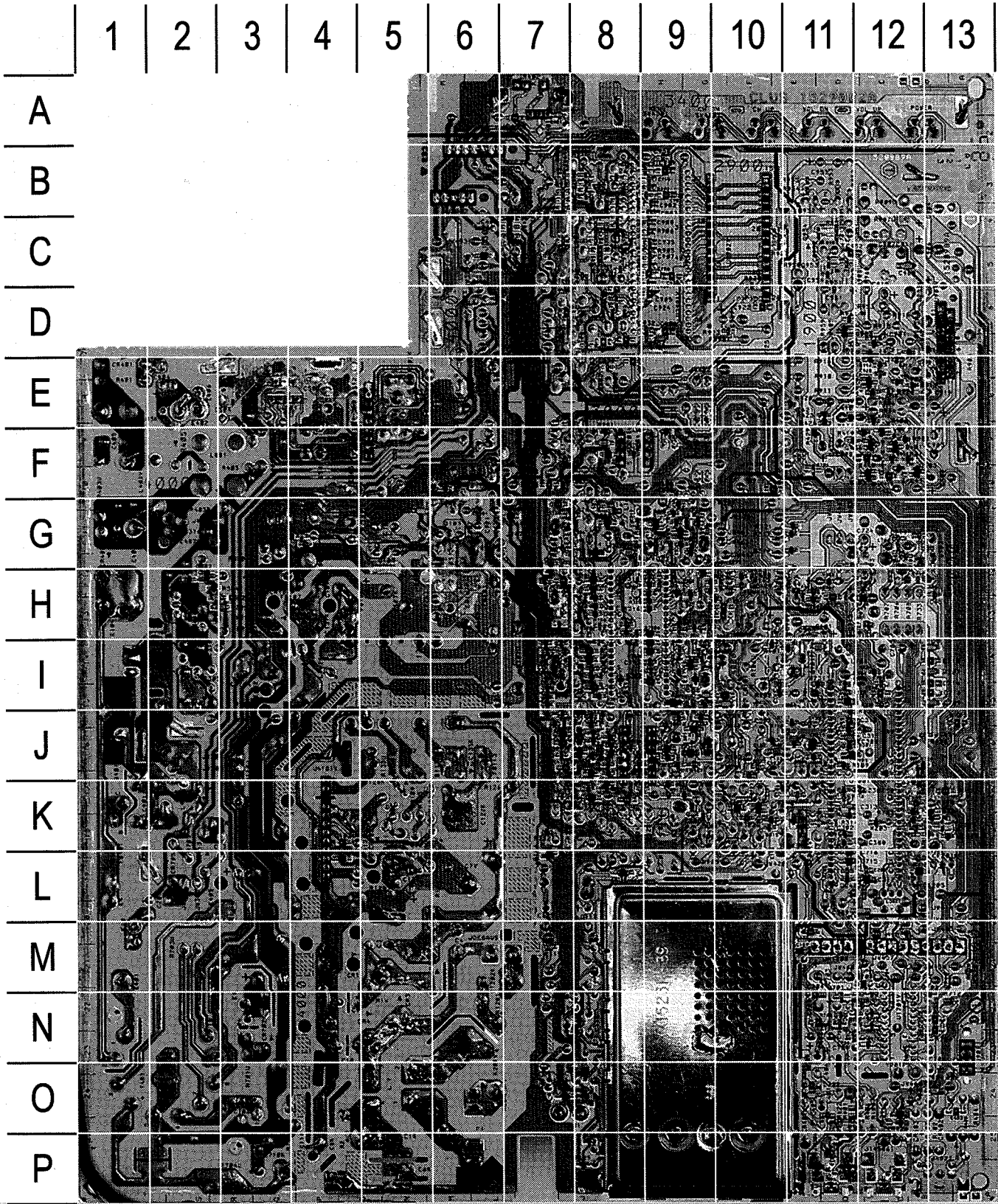
MAIN BOARD - TOP VIEW



MAIN BOARD - TOP VIEW, GRIDTRACE LOCATION GUIDE

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C1401	C2	C4135	H7	F4001	H2	R1911	C13	R4905	E6
C1402	B2	C4136	J6	FB3101	E11	R1914	B14	R4906	E7
C1404	C3	C4137	K9	FB3103	E6	R1915	B14	R4907	D6
C1406	C3	C4138	G2	FB3104	F6	R1916	C13	R7512	F7
C1408	B12	C4304	M9	FB4102	I7	R2706	B9	R7515	E7
C1409	A12	C4305	L8	FB4106	J10	R2707	B9	R7518	F6
C1410	C12	C4306	M8	FB4107	K10	R2708	B9	R7519	F6
C1411	B11	C4307	D8	FB4108	I10	R2709	K1	R7520	G6
C1412	C12	C4310	L9	FB4109	I9	R2711	D11	R7525	F6
C1901	B14	C4402	N10	FB4112	I7	R2718	A7	RN4501	J12
C1902	B13	C4403	M12	FB4401	N6	R2732	H14	RT4201	H4
C1903	A12	C4404	M13	FB4501	D7	R2733	B9	SF2301	C6
C1904	A15	C4405	N12	IR3401	G17	R3102	H16	SW3410	D17
C1905	A13	C4406	N8	IR3401	G17	R3143	D10	SW3411	A17
C1906	A15	C4502	H13	IR3401	G17	R3154	F8	SW3420	E17
C1907	B15	C4504	L12	IR3401	G17	R3203	F12	SW3421	B17
C1909	A14	C4505	L12	J1403	C1	R3311	F10	SW3430	F17
C1910	B14	C4506	K13	J1404	C1	R3315	G11	SW3431	C17
C1911	B15	C4701	L5	J1405	B1	R3332	G6	T4101	I8
C2306	D6	C4702	L2	J1406	B1	R3343	H12	T4301	M9
C2311	B5	C4703	K4	K4201	G3	R3348	F8	T4401	M2
C2702	C10	C4704	L3	K4201	G3	R3401	G16	U1001	C5
C2703	B9	C4705	K11	L2302	B5	R3402	H17	U1901	A13
C2704	B10	C4706	L9	L2304	C5	R4001	I3	U3101	F8
C2705	B10	C4708	M5	L2701	B10	R4002	J1	U3201	F12
C2705	B10	C4709	L7	L2702	B10	R4102	D7	U4101	K6
C2706	C8	C4710	L1	L2703	A10	R4103	I10	U4102	I9
C2707	A9	C4901	H11	L2704	B9	R4104	I5	U4501	K13
C2707	A9	C4902	H11	L3101	G11	R4105	J6	Y2801	C7
C2708	A9	C4905	E6	L3102	F11	R4106	D9	Y3101	E9
C2708	A9	CF1201	A6	L4001	J2	R4107	H9		
C2709	B8	CR1401	C2	L4101	D6	R4110	L7		
C2709	B8	CR1402	A2	L4102	K8	R4111	I10		
C2713	C9	CR1403	B2	L4103	G6	R4113	L6		
C2801	C10	CR1404	C13	L4104	G4	R4122	I7		
C3315	F10	CR2702	D9	L4401	M7	R4124	J6		
C4001	I1	CR3301	E10	L4402	M11	R4125	I7		
C4003	J4	CR4001	J4	Q3302	G2	R4126	H7		
C4004	I4	CR4002	I4	Q4101	C9	R4128	J5		
C4006	I1	CR4003	I4	Q4103	I11	R4130	G4		
C4007	H5	CR4004	J3	Q4105	J10	R4131	G3		
C4008	K1	CR4101	D8	Q4301	M10	R4135	J6		
C4009	J4	CR4102	J6	Q4401	N7	R4303	H12		
C4010	J3	CR4103	H10	Q4901	D6	R4305	L8		
C4101	C9	CR4104	I11	R1401	C2	R4306	M8		
C4104	J11	CR4106	K10	R1402	B2	R4310	L10		
C4105	K9	CR4107	I10	R1403	B2	R4312	E12		
C4107	J10	CR4108	G5	R1404	A2	R4401	N13		
C4108	H10	CR4109	I7	R1405	A2	R4402	M6		
C4109	K10	CR4111	J6	R1406	C2	R4403	N11		
C4110	H9	CR4112	H7	R1408	B2	R4501	J12		
C4112	J11	CR4113	M9	R1414	M2	R4502	I12		
C4115	G3	CR4114	G6	R1415	B2	R4507	K12		
C4116	D6	CR4201	G3	R1421	B2	R4511	J12		
C4117	G5	CR4302	E12	R1422	C2	R4517	J12		
C4118	I11	CR4401	N13	R1425	A7	R4519	J13		
C4122	H6	CR4501	K12	R1426	A7	R4523	C8		
C4123	I6	CR4701	L2	R1428	D13	R4701	L2		
C4124	I6	CR4702	L3	R1903	A13	R4702	L10		
C4125	G5	CR4704	L8	R1904	B12	R4704	L1		
C4126	J7	CR4705	M6	R1905	A13	R4705	M6		
C4127	I5	CR4901	H11	R1906	B13	R4708	G4		
C4128	H7	CR4902	E6	R1907	B15	R4901	H11		

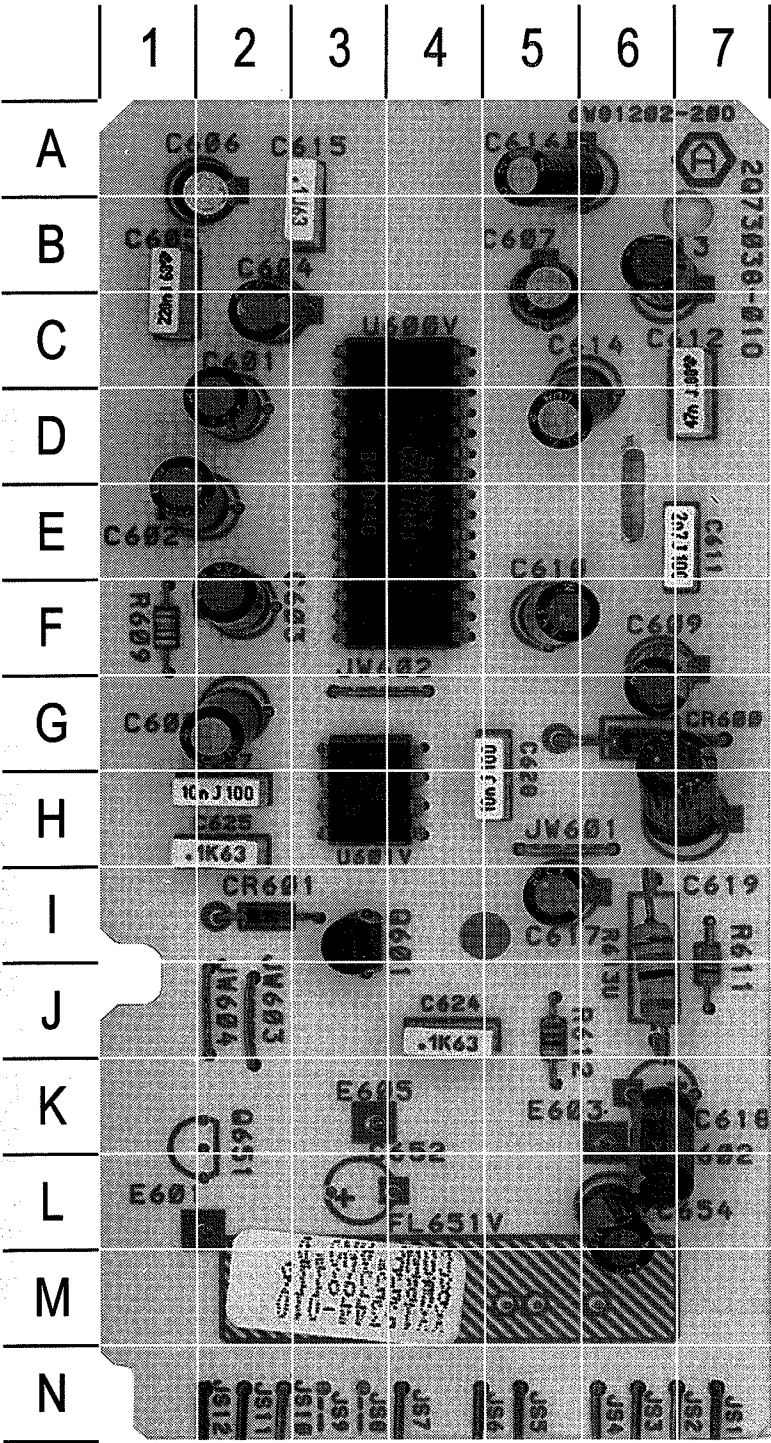
MAIN BOARD - BOTTOM VIEW



MAIN BOARD - BOTTOM VIEW, GRIDTRACE LOCATION GUIDE

C1403	N2	C4201	H2	R1427	L5	R3140	H10	R7505	I9
C1405	L2	C4302	C10	R1429	L12	R3145	H7	R7506	H9
C1715	L6	C4303	B9	R1901	M12	R3151	J7	R7507	I7
C1716	L6	C4308	L7	R1902	M12	R3152	J8	R7508	H7
C1908	M15	C4309	C10	R1912	M13	R3201	I12	R7509	I7
C1912	M13	C4311	L8	R1913	M13	R3202	I12	R7510	I7
C1913	M13	C4313	H12	R1917	D12	R3204	I12	R7511	I7
C1914	M13	C4401	B7	R1918	D12	R3301	H8	R7513	I7
C1915	M13	C4501	L9	R1919	E12	R3302	I8	R7514	J7
C1917	D12	C4503	L9	R1920	E12	R3303	J8	R7516	I8
C1918	D12	C4507	D13	R1962	M13	R3304	J11	R7517	I7
C1919	E13	C4903	L7	R1963	M13	R3305	I10	R7521	H7
C1920	E12	C4904	K6	R2301	K6	R3306	I10	R7522	I8
C2301	L6	C7501	I8	R2302	K6	R3310	H10	R7523	I7
C2302	L6	C7502	I7	R2312	L7	R3314	I8	R7524	I7
C2307	L7	C7503	J8	R2313	K6	R3316	I9		
C2308	L6	C7504	I6	R2314	L6	R3317	K11		
C2309	L5	C7505	J6	R2315	K6	R3318	H10		
C2312	M5	C7506	J7	R2316	L6	R3319	K10		
C2313	L6	C7507	H7	R2702	K8	R3320	I11		
C2718	J9	CR3102	H8	R2703	L10	R3321	K11		
C2723	O13	CR3110	J8	R2704	M6	R3322	J10		
C2724	C11	CR3111	J7	R2705	M6	R3323	J11		
C2803	K7	CR3303	H10	R2712	L10	R3324	J10		
C2804	O13	CR4115	L7	R2713	K10	R3325	I10		
C3101	H10	CR4303	L9	R2714	L11	R3326	J11		
C3102	H10	FB4110	I5	R2715	K11	R3327	I10		
C3103	H9	FB4111	H3	R2716	L10	R3328	I11		
C3104	H9	Q1401	M12	R2717	K10	R3329	D11		
C3106	H9	Q1402	M12	R2721	M5	R3330	M8		
C3107	H8	Q1403	M12	R2726	M8	R3331	J9		
C3109	H9	Q1404	M12	R2728	L10	R3333	H9		
C3110	J11	Q1405	M11	R2729	L10	R3344	I9		
C3111	J8	Q1901	M13	R2731	L8	R3345	J11		
C3112	I10	Q1902	M13	R2734	M7	R3347	J10		
C3113	H8	Q1903	M14	R2735	M7	R4101	K9		
C3114	I9	Q2301	K6	R2801	L10	R4108	G11		
C3115	I9	Q2701	L10	R2802	L10	R4109	L7		
C3117	J11	Q2702	L11	R2803	K7	R4112	F11		
C3118	I10	Q2703	L10	R2804	M7	R4119	K9		
C3122	H8	Q2704	M6	R3101	H9	R4127	K8		
C3125	J10	Q3101	H8	R3103	H9	R4129	E6		
C3126	H8	Q3102	H7	R3104	H9	R4132	H6		
C3127	J7	Q3301	J9	R3105	I9	R4133	L8		
C3128	H11	Q3303	I11	R3106	H8	R4134	K7		
C3201	I12	Q3304	J11	R3109	J10	R4136	E6		
C3301	J8	Q3305	J10	R3111	H10	R4201	H2		
C3303	H7	Q4106	H6	R3112	H10	R4301	L7		
C3306	H11	Q4302	B10	R3114	H10	R4302	K7		
C3307	J11	Q7501	I7	R3115	H10	R4304	C10		
C3310	I10	Q7502	H7	R3117	J8	R4307	K7		
C3311	I11	R1201	M6	R3118	H8	R4308	L8		
C3312	H9	R1203	M6	R3119	H8	R4309	B10		
C3313	H10	R1407	L2	R3120	H8	R4311	L8		
C3314	I11	R1409	L2	R3121	J10	R4314	I12		
C3316	I10	R1410	M12	R3122	J10	R4516	I8		
C3318	I10	R1411	M12	R3124	H8	R4520	K8		
C3401	H17	R1412	M12	R3125	H9	R4801	L7		
C4103	E6	R1413	M12	R3129	H8	R7129	H1		
C4111	F11	R1416	L12	R3130	H8	R7130	H1		
C4114	D11	R1417	L12	R3131	H8	R7131	H3		
C4119	H4	R1418	M12	R3132	H7	R7133	H3		
C4120	L8	R1419	L12	R3133	H7	R7501	I7		
C4121	L8	R1420	M2	R3134	H9	R7502	I7		
C4133	K7	R1423	L12	R3135	H10	R7503	I7		
C4134	M9	R1424	L12	R3138	J10	R7504	I9		

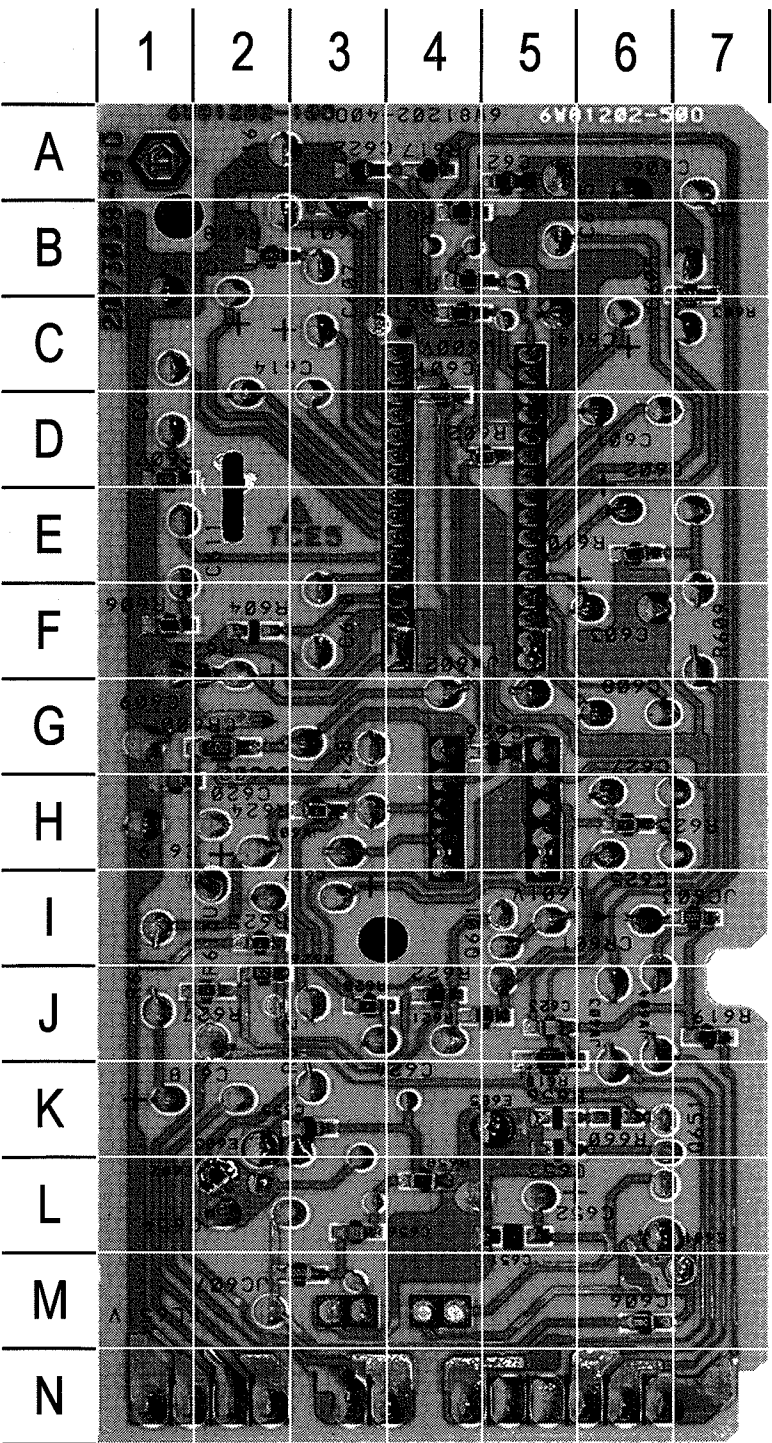
DBX STEREO BOARD - TOP VIEW



DBX STEREO BOARD - TOP
VIEW, GRIDTRACE
LOCATION GUIDE

C1601	F3	C1619	A7
C1602	F4	C1624	D10
C1603	F6	C1625	F8
C1604	F2	C1627	F8
C1605	G2	C1628	C7
C1606	F2	C2654	B12
C1607	B2	CR1600	B7
C1608	F7	CR1601	F9
C1609	A6	E2602	B12
C1610	B6	E2603	B11
C1611	A5	Q1601	E9
C1612	A3	R1609	G6
C1613	A3	R1611	A9
C1614	B3	R1612	C10
C1615	E1	R1613	B9
C1616	B2	U1600	E3
C1617	C9	U1601	E7
C1618	B10		

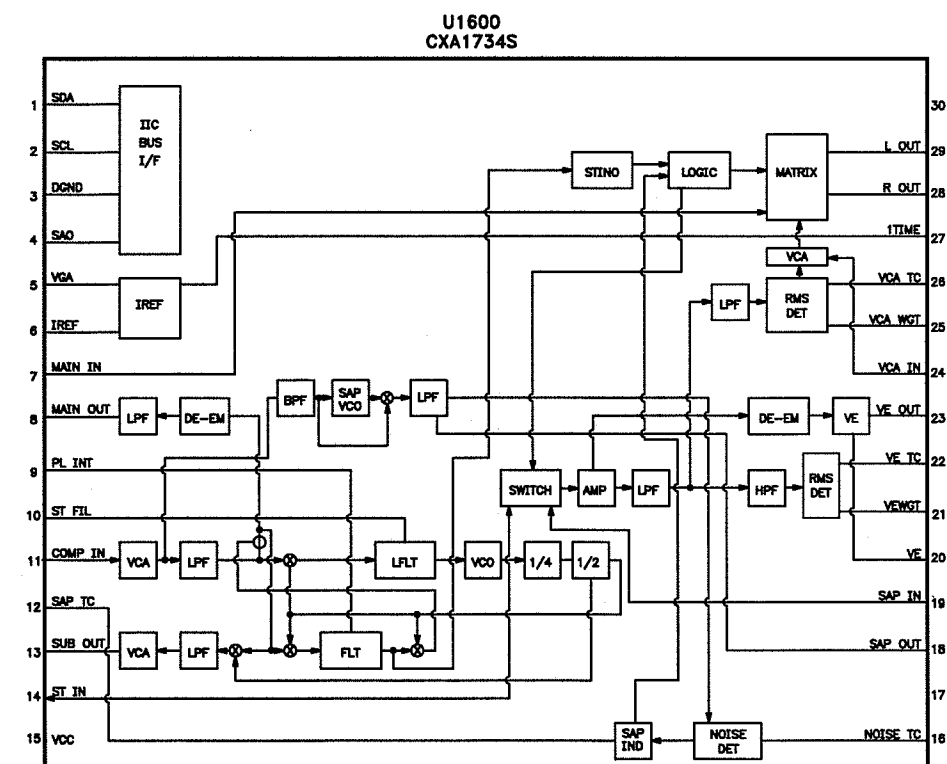
DBX STEREO BOARD - BOTTOM VIEW



DBX STEREO BOARD -
BOTTOM VIEW,
GRIDTRACE LOCATION
GUIDE

C1620	A7	R1615	D13
C1621	E14	R1616	D12
C1622	C14	R1617	D14
C1623	E5	R1618	E5
C1626	E8	R1619	G5
C2655	C4	R1620	C5
C2656	C3	R1621	E5
R1601	C13	R1622	E5
R1602	E11	R1623	F7
R1603	G12	R1624	C7
R1606	A9	R1625	B6
R1607	A11	R1626	B5
R1608	B13	R1627	B5
R1610	F10	R1628	B9
R1614	D13	R2658	D3

MODEL F27641BCYX1 (CHASSIS C1C78/AB)



PARTS LIST

SEMICONDUCTORS

(Select the replacement that gives the best results.)

Item No.	Type No.	Mfr. Part No.	ECG Part No.
CR1	-	227355	-
CR1401, 02, 03	-	220638	ECG5014A
CR1404	-	164717	ECG519
CR1600	-	225702	-
CR1601	-	164717	ECG519
CR2702	-	164717	ECG519
CR3102, 10	-	201133	ECG519
	-	232709	-
CR3111	-	218987	-
	-	239195	-
CR3301	-	164717	ECG519
CR3302	-	201133	ECG519
CR3303	-	232709	-
	-	223659	-
CR4001 Thru			
CR4004	-	147015	ECG125
CR4101	-	164874	ECG177
CR4102	-	176296	ECG552
CR4103	-	164717	ECG519
CR4104	-	215488	ECG136A
CR4106	-	164589	ECG580
CR4107	-	164590	ECG580
CR4108	-	217306	-
CR4109	-	215490	-
CR4111	-	176296	ECG552
CR4112	-	140971	ECG558
CR4113	-	176296	ECG552
CR4114	-	164874	ECG177
CR4115	-	215491	ECG177
CR4201	-	164717	ECG519
CR4302	-	164717	ECG519
CR4303	-	176296	ECG552
# CR4401	-	140971	ECG558
CR4501	-	155276	ECG116
CR4701	-	241304	-
CR4702	-	176296	ECG552
CR4704	-	207878	ECG519
	-	234048	-
CR4705	-	176296	ECG552
# CR4901	-	157301	ECG177
# CR4902	-	159429	ECG5019T1
CR7101	-	215492	-
CR7102 (1)	-	-	-
CR7103 (1)	-	-	-
CR7105	-	215493	-
CR7106	-	215494	-
CR7107 (2)	-	-	-
CR7108 (2)	-	-	-
CR7109, 10	-	215493	-
CR7111 (2)	-	-	-
CR7112	-	215493	-
CR7113 (2)	-	-	-
CR7114 (1)	-	-	-
CR7301 (1)	-	-	-

For SAFETY use only equivalent replacement part.
(1) Part of CR7101 diode kit.
(2) Part of CR7106 diode kit.

SEMICONDUCTORS continued

(Select the replacement that gives the best results.)

Item No.	Type No.	Mfr. Part No.	ECG Part No.
CR7302 (2)	-	-	-
CR7303	-	215493	-
CR7304 (1)	-	-	-
CR7305 (2)	-	-	-
Q1401, 02	-	215495	-
Q1403, 04	-	215496	-
Q1405	-	215495	-
Q1601	-	192849	-
Q1901, 02, 03	-	215495	-
Q2301	-	215495	-
Q2701 Thru			
Q2704	-	215496	-
Q3101	-	215495	-
Q3102	-	215496	-
Q3301	-	215496	-
Q3302	-	223704	-
	-	229220	-
Q3303	-	215496	-
Q3304	-	215495	-
Q3305	-	215496	-
Q4101	-	157627	ECG54
Q4103	-	223704	-
	-	229220	-
Q4105	-	146851	ECG287
	-	223704	-
Q4106	-	215495	-
Q4301	-	146851	ECG287
Q4302	-	215495	-
Q4401	2SD1878	191142	ECG2331
# Q4901	-	147665	ECG159
Q5001, 02, 03	2SC3619	215497	ECG2501
Q5004	-	143806	ECG159
	-	219025	ECG159
Q7101, 02	-	200566	-
Q7401	-	215495	-
Q7402	-	215496	-
Q7403	-	215495	-
Q7404	-	215496	-
Q7501, 02	-	215495	-
Q7601	-	146848	ECG229
U1	-	233858	-
U2	-	215534	-
# U1001	LA7610	215524	-
U1600	CXA1734S	225700	-
U1601	TL082CN	204292	-
U1901	TDA7263	215526	-
U3101	-	223909	-
U3201	-	223940	-
U4101	STK730-130	215530	ECG7125
U4102	L7812CV	162394	ECG966
U4501	TDA8172	215531	ECG1788
U7301	CXA1594L	215532	-
U7401	-	215533	-
U7501	-	215534	-

For SAFETY use only equivalent replacement part.
(1) Part of CR7101 diode kit.
(2) Part of CR7106 diode kit.

PARTS LIST continued

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.

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

CAPACITORS & ELECTROLYTICS

Item No.	Rating	Mfr. Part No.
C1601, 08	4.7µF 20% 35V NP	224269
C1610, 14	4.7µF 20% 35V NP	224269
C1621, 22	22pF 5% 50V NPO	194903
C1623	.001 5% 50V N750	200469
C2302	470pF 5% 50V NPO	214732
C2654	3.3µF 20% 50V NP	224270
C2656	120pF 5% 50V NPO	194902
C2718	220pF 5% 50V NPO	205551
C2803	16pF 2% 50V NPO	214736
C3101, 02	100pF 5% 50V NPO	193340
C3107	68pF 5% 50V NPO	193339
	27pF 5% 50V NPO	197604
C3110	100pF 5% 50V NPO	193340
C3114, 15	27pF 5% 50V NPO	197604
C3122	220pF 5% 50V NPO	178188
C3128	56pF 10% 50V NPO	222396
C3306	22pF 5% 50V NPO	194903
C3307	47pF 5% 50V NPO	210689
C3311	82pF 5% 50V NPO	192049
C3313, 14	22pF 5% 50V NPO	194903
C3316	200pF 5% 50V NPO	218986
# C4001	.22 125VAC	-
	.22 250V	214067
# C4003, 04	680pF 20% 1kV	190538
# C4006	470pF 1.8kV	-
	470pF 120VAC	250102
# C4007	680µF 20% 200V	190560
# C4008	.005 20% 120V	195697
# C4009, 10	680pF 20% 1kV	190538
# C4101	150µF 20% 16V	161027
# C4105	10µF 20% 200V	226507
	22µF +30% -10% 200V	225667
	10µF 20% 200V	214743
# C4107	100µF +30% -10% 250V	218374
# C4122	.033 5% 630V	-
	.033 5% 400V	214747
C4126	.001 10% 1kV	160461
C4303	470pF 5% 50V NPO	214732
C4310	15pF 1% 250V NPO	223899
C4311	47pF 5% 50V NPO	210689
C4313	220pF 5% 50V NPO	178188
C4401	470pF 5% 50V NPO	195918
# C4402	.0115 2% 1.6kV	223177
# C4403	.43 5% 250V	218369
# C4404	2.2µF 20% 200V	196050
# C4405	.0047 10% 250V	190534
# C4406	470pF 5% 2kV	227068
	470pF 5% 1.5kV N1500	143242
C4702, 04	680pF 20% 1kV	190538
C4706, 08	680pF 20% 1kV	190538
C4710	.01 20% 1kV	137583
# C4904	.22 +80% -20% 25V	214739
C5001	.001 10% 3kV	120696

For SAFETY use only equivalent replacement part.

CAPACITORS & ELECTROLYTICS continued

Item No.	Rating	Mfr. Part No.
C5005, 06, 07	120pF 5% 50V NPO	174414
C7102	4pF +0pF -.25pF 50V NPO	214757
C7103	22pF 5% 50V NPO	194903
C7104	120pF 5% 50V NPO	194902
C7105	.75pF ±.25pF 50V NPO	214758
C7108	27pF 5% 50V N750	214760
C7113	100pF 5% 50V NPO	193340
C7118	22pF 5% 50V NPO	194903
C7124	27pF 5% 50V NPO	197604
C7127	120pF 5% 50V NPO	194902
C7136	75pF 5% 50V NPO	192061
C7139	20pF 2% 50V N220	214761
C7140	4pF ±.5pF 50V NPO	194901
	6pF ±.25pF 50V NPO	227250
C7149	22pF 5% 50V NPO	194903
C7150	150pF 5% 50V NPO	214032
C7151	20pF 5% 50V NPO	220150
C7152	43pF 5% 50V NPO	214029
C7153	39pF 5% 50V NPO	202905
C7301, 02	1.5pF ±.1pF 50V NPO	223146
C7304	68pF 2% 50V NPO	214762
C7305	39pF 2% 50V NPO	215556
C7306	68pF 2% 50V NPO	214762
C7307	10pF 5% 50V NPO	200537
C7308	5.6pF ±.25pF 50V N750	214764
C7309	10pF 2% 50V NPO	214765
C7310	8pF ±.5pF 50V N750	214766
C7311	5pF ±.5pF 50V NPO	193917
C7312	3pF ±.5pF 50V NPO	214767
C7313	10pF 5% 50V NPO	200537
C7316	8pF ±.5pF 50V NPO	194909
C7322	68pF 2% 50V NPO	214762
C7323	7pF 2% 50V NPO	214768
C7404, 05	68pF 5% 50V NPO	193339
C7410, 11	10pF 5% 50V NPO	200537
C7604	22pF 5% 50V NPO	194903
C7605	27pF 5% 50V NPO	197604

For SAFETY use only equivalent replacement part.

RCA

MODEL F27641BCYX1 (CHASSIS CTC187AB)

PARTS LIST continued

CONTROLS & RESISTORS		
Item No.	Function/Rating	Mfr. Part No.
R1, 2	100K 1% 1/4W	233856
R3	10K 1% 1/4W	241787
R4	26.1K 1% 1/4W	223944
R5	10K 1% 1/4W	241787
R6	26.1K 1% 1/4W	223944
R7	10K 1% 1/4W	241787
R8	26.1K 1% 1/4W	223944
# R1401, 02	75 5% 1/4W	175756
# R1403	100 5% 1/4W	149602
# R1404	75 5% 1/4W	175756
# R1405	100 5% 1/4W	149602
# R1406, 08, 15	2200 5% 1/4W	241050
	2200 20% 1/4W	237429
# R1421	2200 5% 1/4W	241050
	2200 20% 1/4W	237429
# R1422	22 5% 1/4W	242911
	22 10% 1/4W	238678
R1601	43.7K 1% 1/10W	225704
R1602	61.9K 1% 1/10W	225705
# R1613	62 5% 1/2W	242066
R1614, 16, 19	1000 5% 1/10W	192100
	1000 2% 1/10W	197638
R1620	10K 5% 1/10W	195937
	10K 1% 1/10W	215217
R1623, 24	10K 1% 1/10W	215217
	10K 5% 1/10W	195937
	20K 5% 1/10W	197470
R1625	10K 5% 1/10W	195937
	10K 1% 1/10W	215217
# R1907	4.7 5% 1/4W	200197
# R1908	18 5% 3W	181234
# R1909	4.7 5% 1/4W	200197
R2658	1000 2% 1/10W	197638
R2704, 05	1000 2% 1/10W	197638
# R2709	27K 5% 1/2W	206037
	27K 10% 1/2W	238958
R2728	470K 2% 1/10W	205381
R2729	240K 2% 1/8W	215687
R2732	1000 1% 1/4W	179753
R2801	15K 1% 1/10W	215198
R2802	15.8K 1% 1/10W	215199
R3343	5100 2% 1/4W	175417
# R4001	2.7 10% 15W Wirewound	190487
# R4002	2.7M 10% 1/2W	217662
# R4113	75 5% 2W Wirewound	205066
# R4135	27 2% 1/2W	242063
R4303	5100 2% 1/4W	175417
R4305	6200 5% 3W	179252
# R4401	15K 5% 1W	190557
# R4403	820 5% 1W Nonflammable	175349
# R4507	1.5 5% 1W	178619
# R4511	1 10% 2W Wirewound	215577
# R4701	10 10% 1/2W	241261
# For SAFETY use only equivalent replacement part.		

CONTROLS & RESISTORS continued		
Item No.	Function/Rating	Mfr. Part No.
# R4702	3.3 5% 2W Wirewound	217315
# R4703	3 5% 3W Wirewound	215212
# R4704	82K 10% 1/2W	239116
# R4705	100 5% 1/4W	198667
# R4901	100 5% 1/4W	198667
# R4902	28K 1% 1/4W	195731
# R4903	39.2K 1% 1/4W	190469
# R4904	10K 5% 1/4W	175317
# R4905	5100 2% 1/4W	175417
R7401	191K 1% 1/10W	215214
R7408	37.4K 1% 1/10W	215215
R7411	1M 1% 1/10W	215216
R7501, 02, 03	10K 1% 1/10W	215217
	100K 1% 1/10W	215221
R7504, 05, 06	26.1K 1% 1/8W	215218
R7507	14.3K 1% 1/10W	215219
R7508	453 1% 1/8W	215220
R7509	15.8K 1% 1/10W	215199
R7510	100K 1% 1/10W	215221
R7512	15.8K 1% 1/4W	181121
R7513	100K 1% 1/10W	215221
R7515	15.8K 1% 1/4W	181121
R7516	100K 1% 1/10W	215221
RN4501	Resistor Network	215499
# RT4201	5.6 PTC Cold	207768
# For SAFETY use only equivalent replacement part.		

CABINET PARTS	
Item	Mfr. Part No.
Model F27641BCYX1	
Button Cap	238305
Mask and Back Assembly	MK2196
Window IR	234026
Jack Panel Overlay	223922
Models F27638BCFE1, F27638BCJX1	
Button Cap	239222
Mask and Back Assembly	MK1914
Window IR	218815
Remote Transmitter	
Battery Door	224263

PARTS LIST continued

COILS & TRANSFORMERS

Item No.	Function/Rating	Mfr. Part No.
FB3101, 03, 04	Ferrite Bead	153328
FB4102	Ferrite Bead	161237
FB4106, 07	Ferrite Bead	154322
FB4108, 09	Ferrite Bead	154042
FB4110, 11	Ferrite Bead	215546
FB4112, 13	Ferrite Bead	154042
FB4401	Ferrite Bead	161237
FB4501	Ferrite Bead	215547
FL7102	High Pass Filter	181470
L2302	VCO	215502
L2304	2.2μH	197616
L2701, 02, 03	2.2μH	197616
L2704	10μH	175409
L3101	10μH	161243
L3102	100μH	160186
# L4000 (1)	Yoke Horiz 1.3mH Vert 18.4mH	-
# L4001	Line Choke	190507
L4101	10μH	175409
L4102	22μH	215504
L4103, 04	10μH	175409
# L4201	Degaussing	218764
L4401	4μH	215505
# L4402	Horizontal Linearity	192844
L5002, 03, 04	56μH	196107
L7101	-	215507
L7102	-	236641
L7103	-	223929
L7104, 05	-	223917
L7106	-	215509
L7107	-	215510
L7108	-	215511
L7109	3.9μH	200559
L7110	-	223288
L7111	-	215512
L7112	-	231441
L7113	-	215514
L7114	-	231441
L7115	-	215515
L7116	-	243162
L7117	-	237460
L7118	-	237461
L7301	-	223928
L7302	-	231444
L7303	-	215510
L7304	-	223920
L7305	-	231447
L7306	-	231448
L7601	-	195708
# T4101	SMT	221948
# T4301	Horizontal Driver	215541
# T4401 (2)	Horizontal Output	215539

For SAFETY use only equivalent replacement part.
(1) Bonded part of CRT.
(2) Screen and focus controls are part of T4401.

MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
CF1201	Filter	195702	4.5MHz
# F4001	Fuse	175425	5Amp, 125V, Fast Acting
IR3401	Receiver	229218	Remote, GP1U78QC
J1401, 03, 04	Jack	239389	Assembly
J1402	Jack	-	SVHS
J1405, 06	Jack	215545	Assembly
# K4201	Relay	190490	Degaussing
# KS5001	Socket	189986	CRT
# P101	Line Cord	215576	AC, Polarized
# P HORIZ	Connector	242206	Yoke, Horizontal
# P VERT	Connector	242205	Yoke, Vertical
SF2301	Filter	217318	SAW
SP1901, 02	Speaker	225844	2 1/4" X 5", 32 Ohms, 1.5W
SW3410	Switch	215500	Channel Up
SW3411	Switch	215500	Power
SW3420	Switch	215500	Channel Down
SW3421	Switch	215500	Volume Up
SW3430	Switch	215500	Menu
SW3431	Switch	215500	Volume Down
# V101	CRT	HA68ADT271	A68ADT27X01
Y2801	Crystal	161235	3.58MHz
Y3101	Crystal	217322	8MHz
Y7401	Crystal	230708	4MHz
	Fuse Clip	176642	For F4001
	PC Board	221945	CRT
	PC Board	223910	DBX Stereo
	Transmitter	241036	Remote, CRK74BA3

For SAFETY use only equivalent replacement part.