

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.

HIGH VOLTAGE SHUTDOWN TEST

Apply 120VAC. Use the remote to set customer controls for normal operation. Momentarily short BC14901 (see Q14901 base) to ground. The receiver should lose raster and sound. If receiver does not lose raster and sound, the shutdown circuit should be repaired. To resume normal operation, remove AC power for approximately 30 seconds and then turn the receiver on.

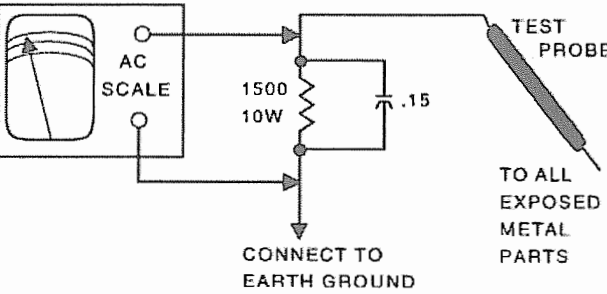
SAFETY CHECKS — FIRE AND SHOCK HAZARD

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.

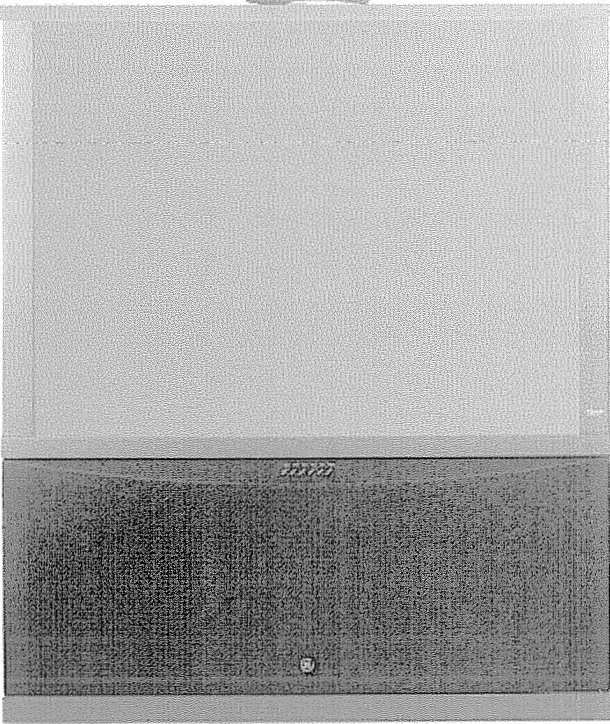


PHOTOFACT[®] Technical Service Data
GOLD

5210

GE

Model 52GW948YX2 (Chassis PTK195P2B_P2)



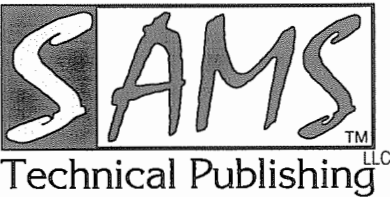
Representative Model

Essential coverage
for servicing a television receiver...

- Schematics
- Component locations
- Parts list

Coverage includes this additional model and chassis:

Model	Chassis
60GW948YX2	PTK195P2C_P2



DECEMBER 2006 SET 5210

SET 5210

MODEL 52GW948YX2 (CHASSIS PTK195P2B_P2)

GE

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TUNER INFORMATION

TUNER CIRCUIT VOLTAGE CHART

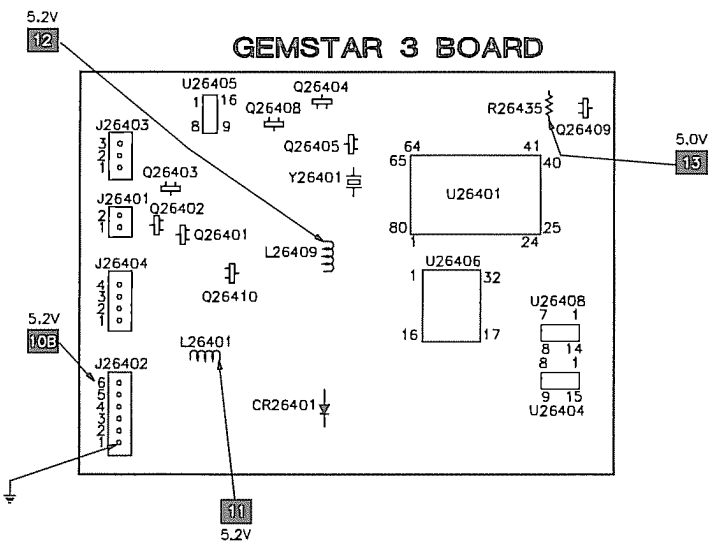
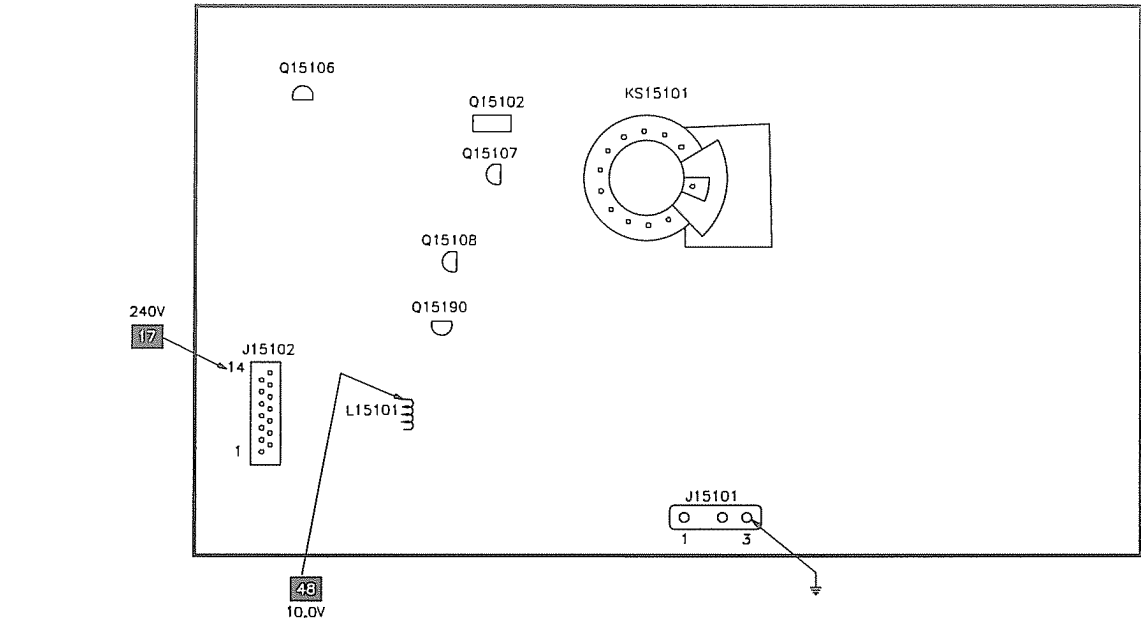
Pin No.	VHF Low Band	VHF High Band	UHF Band
U17501			
1	1.7V	1.7V	1.7V
2	2.6V	2.6V	2.6V
3	2.6V	2.6V	2.6V
4	34.0V	34.0V	34.0V
5	2.2V	4.3V	3.9V
6	1.2V	4.5V	5.1V
7	1.5V	4.3V	4.5V
8	1.9V	4.8V	4.9V
9	5.0V	5.0V	5.0V
10	1.5V	1.5V	1.5V
11	1.5V	1.5V	1.5V
12	0V	0V	0V
13	0V	0V	0V
14	11.7V	11.7V	.3V
15	.1V	.1V	4.8V
16	.1V	.1V	4.8V
17	11.7V	.2V	11.6V
18	4.9V	4.9V	4.9V
19	4.9V	4.9V	4.9V
20	0V	0V	0V

Pin No.	VHF Low Band	VHF High Band	UHF Band
U17701			
1	8.1V	8.1V	8.1V
2	8.1V	8.1V	8.1V
3	0V	0V	0V
4	4.1V	4.1V	3.6V
5	4.1V	4.1V	3.6V
6	3.7V	3.7V	4.0V
7	3.7V	3.7V	4.0V
8	12.0V	12.0V	12.0V
9	11.7V	11.7V	11.7V
10	11.7V	11.7V	11.7V
11	.1V	.1V	4.8V
12	2.8V	2.8V	2.8V
13	4.8V	4.8V	7.9V
14	4.8V	4.8V	7.9V
15	2.8V	2.8V	2.8V
16	2.8V	2.8V	2.8V
17	8.0V	8.0V	4.6V
18	8.0V	8.0V	4.6V
19	2.8V	2.8V	2.8V
20	0V	0V	0V

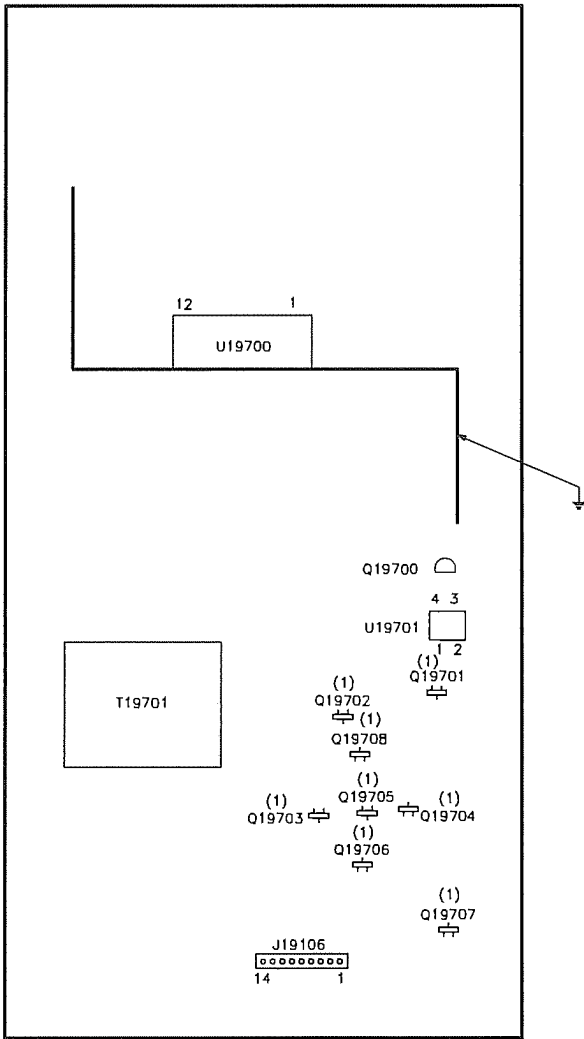
Pin No.	VHF Low Band	VHF High Band	UHF Band
Q17101			
G1	1.6V	1.6V	0V
G2	5.3V	5.3V	5.3V
D	15.0V	15.0V	0V
S	0V	0V	0V
Q17301			
G1	0V	0V	4.4V
G2	5.1V	5.1V	5.1V
D	0V	0V	11.5V
S	0V	0V	5.5V
Q17503			
E	12.0V	12.0V	12.0V
B	11.7V	11.0V	11.7V
C	-11.1V	11.6V	-
11.1V			
Q17504			
E	12.0V	12.0V	12.0V
B	11.7V	11.7V	11.0V
C	11.6V	11.6V	-4.0V
Q17505			
E	12.0V	12.0V	12.0V
B	11.6V	11.6V	-4.0V
C	.1V	.1V	11.6V
Q17601			
E	.6V	.6V	.6V
B	1.9V	1.9V	1.9V
C	5.2V	5.2V	5.2V

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

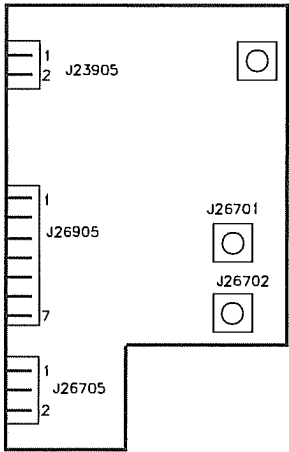
PLACEMENT CHART
CRT BOARD



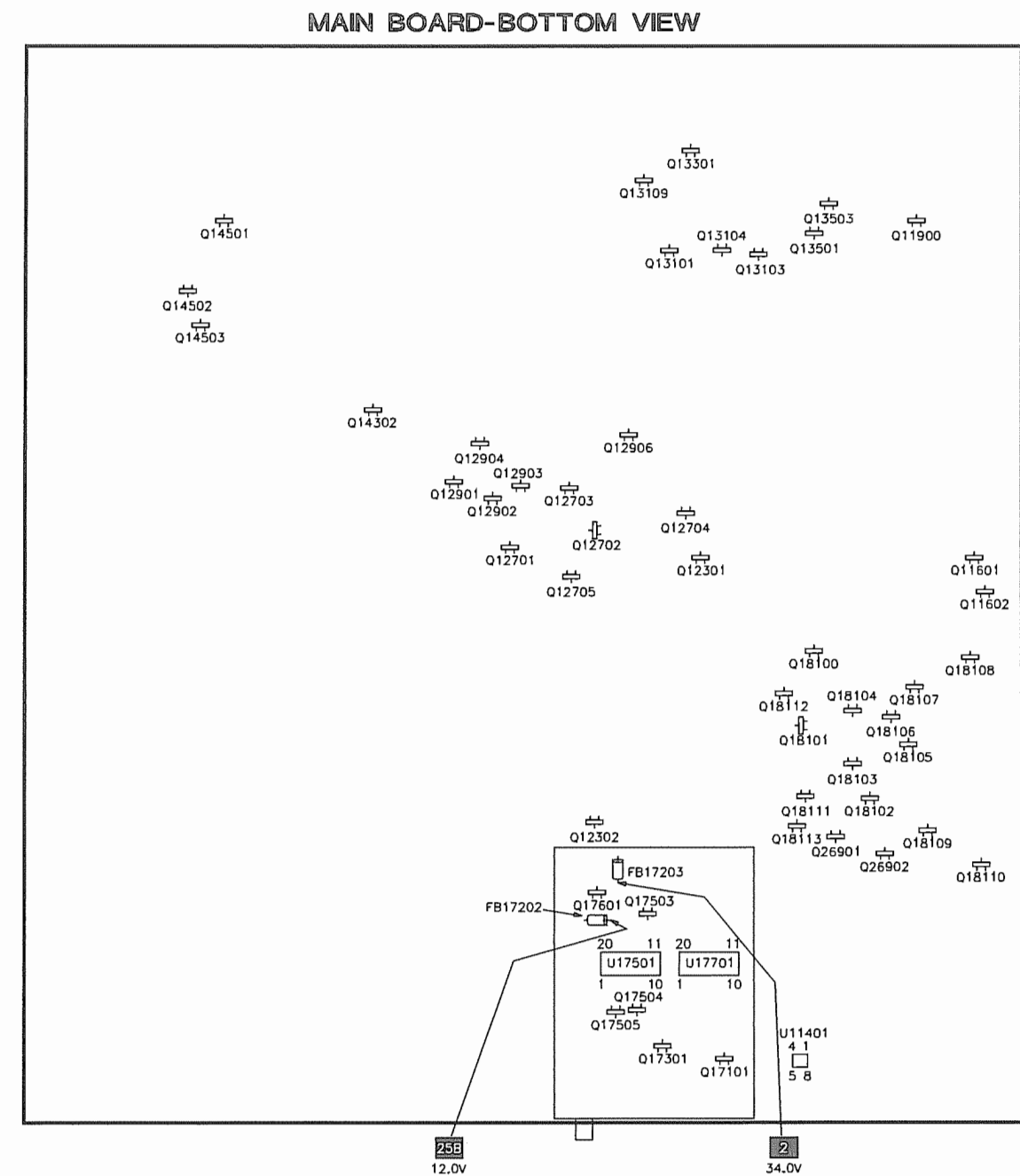
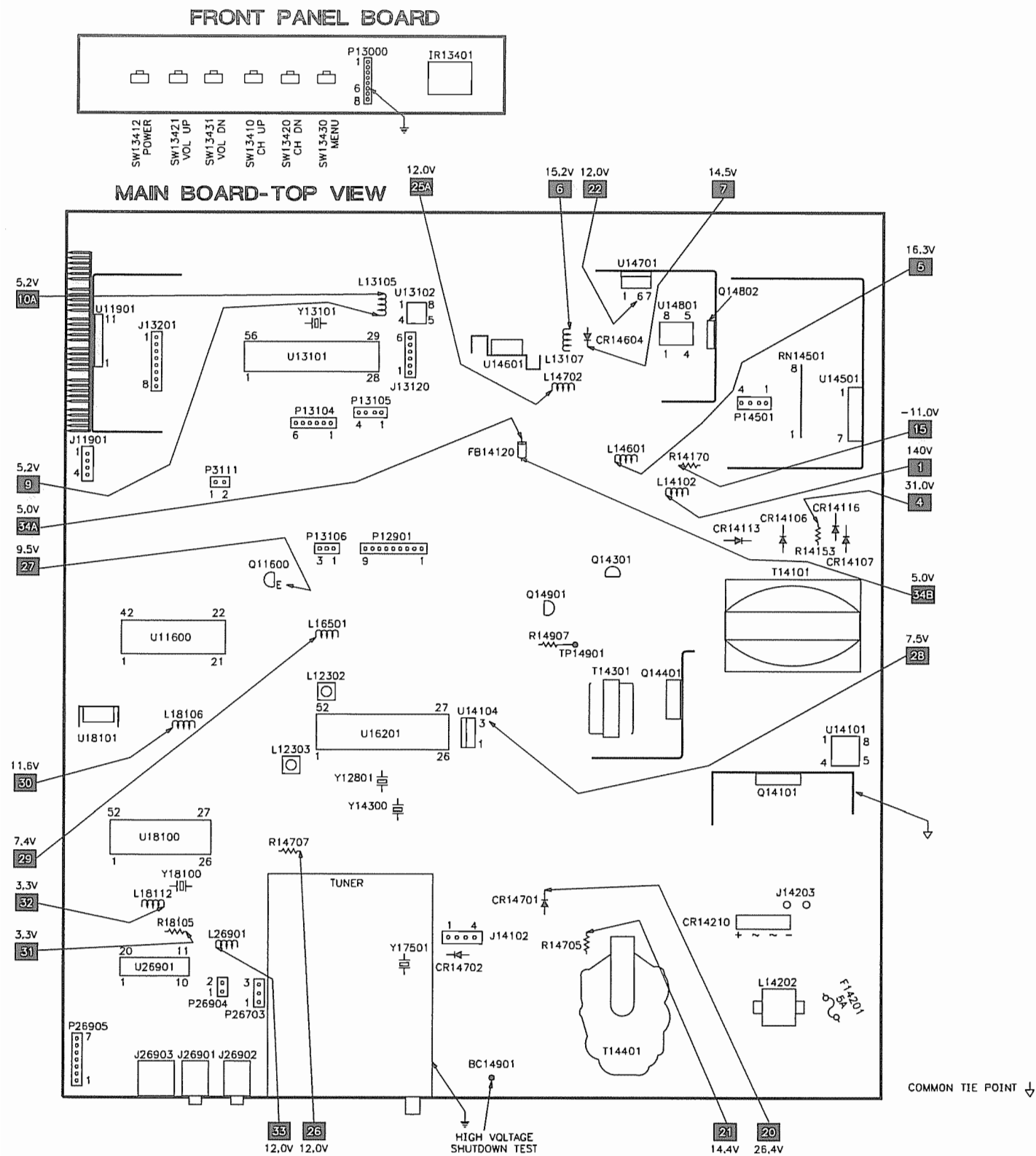
CONVERGENCE POWER SUPPLY BOARD



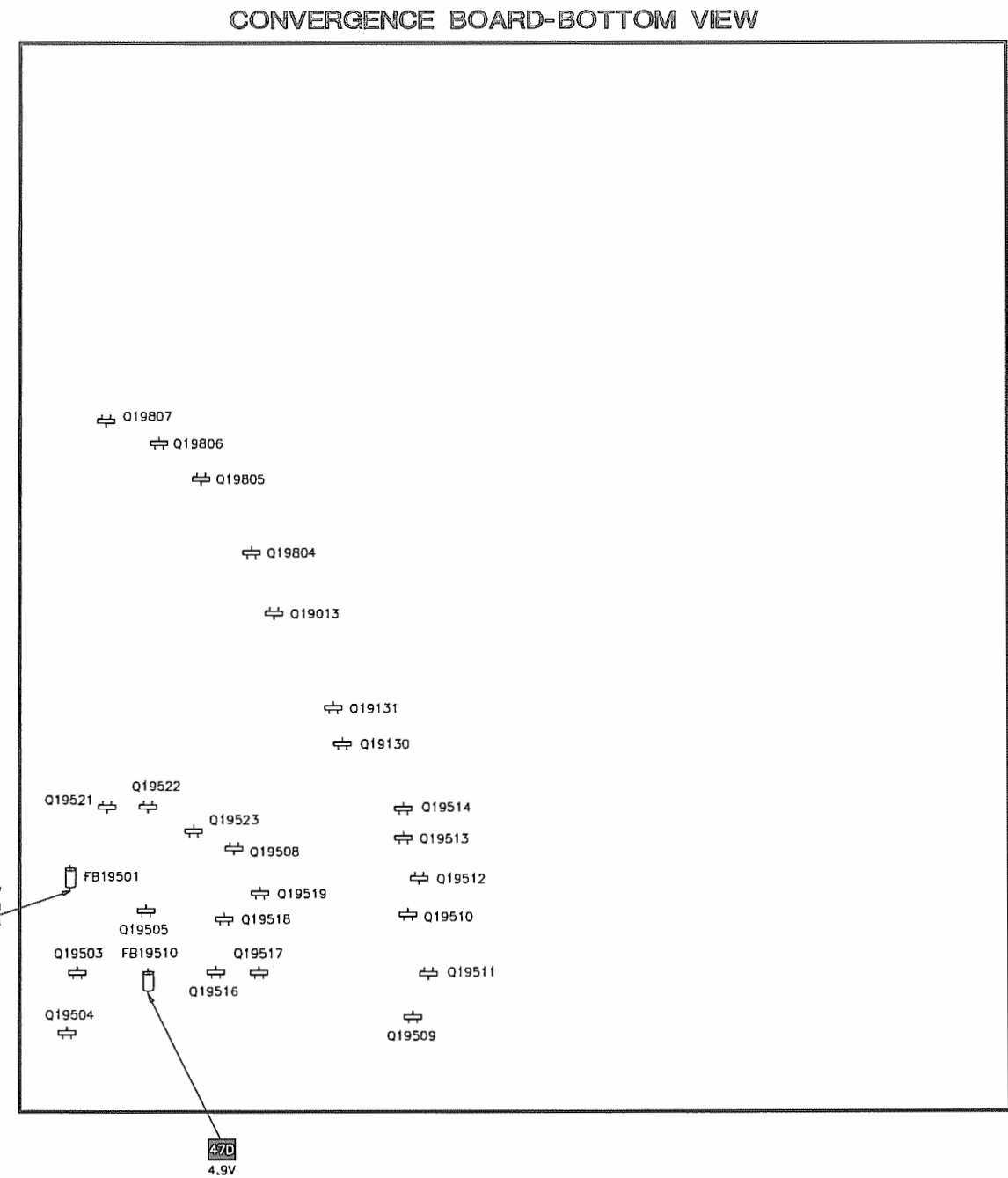
IN/OUT BOARD



PLACEMENT CHART continued



MODEL 52GW948YX2 (CHASSIS PTK195P2B_P2)

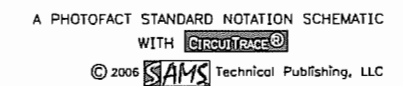




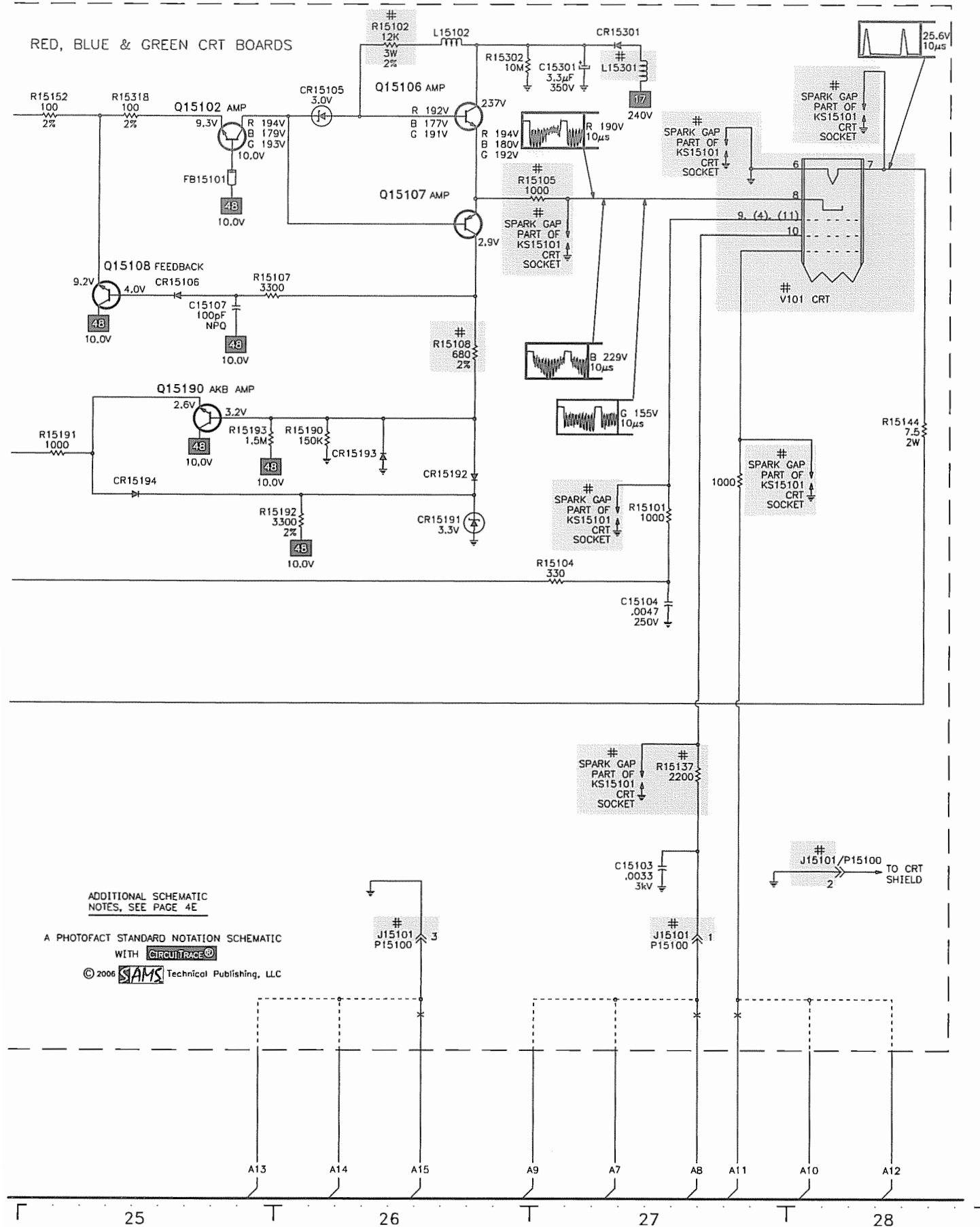
This schematic diagram illustrates the internal circuitry of a video receiver, organized into several functional blocks:

- Video Input Section:** Features a video input transformer (T19001) connected to a video amplifier (Q12701, Q12702, Q12703). The input signal is processed through various resistors (R12701, R12702, R12703, R12704, R12705, R12706, R12707, R12708, R12709, R12710, R12711, R12712, R12713, R12714, R12715, R12716, R12717, R12718, R12719, R12720, R12721, R12722, R12723, R12724, R12725, R12726, R12727, R12728, R12729, R12730, R12731, R12732, R12733, R12734, R12735, R12736, R12737, R12738, R12739, R12740, R12741, R12742, R12743, R12744, R12745, R12746, R12747, R12748, R12749, R12750, R12751, R12752, R12753, R12754, R12755, R12756, R12757, R12758, R12759, R12760, R12761, R12762, R12763, R12764, R12765, R12766, R12767, R12768, R12769, R12770, R12771, R12772, R12773, R12774, R12775, R12776, R12777, R12778, R12779, R12780, R12781, R12782, R12783, R12784, R12785, R12786, R12787, R12788, R12789, R12790, R12791, R12792, R12793, R12794, R12795, R12796, R12797, R12798, R12799, R12800, R12801, R12802, R12803, R12804, R12805, R12806, R12807, R12808, R12809, R12810, R12811, R12812, R12813, R12814, R12815, R12816, R12817, R12818, R12819, R12820, R12821, R12822, R12823, R12824, R12825, R12826, R12827, R12828, R12829, R12830, R12831, R12832, R12833, R12834, R12835, R12836, R12837, R12838, R12839, R12840, R12841, R12842, R12843, R12844, R12845, R12846, R12847, R12848, R12849, R12850, R12851, R12852, R12853, R12854, R12855, R12856, R12857, R12858, R12859, R12860, R12861, R12862, R12863, R12864, R12865, R12866, R12867, R12868, R12869, R12870, R12871, R12872, R12873, R12874, R12875, R12876, R12877, R12878, R12879, R12880, R12881, R12882, R12883, R12884, R12885, R12886, R12887, R12888, R12889, R12890, R12891, R12892, R12893, R12894, R12895, R12896, R12897, R12898, R12899, R12900, R12901, R12902, R12903, R12904, R12905, R12906, R12907, R12908, R12909, R12910, R12911, R12912, R12913, R12914, R12915, R12916, R12917, R12918, R12919, R12920, R12921, R12922, R12923, R12924, R12925, R12926, R12927, R12928, R12929, R12930, R12931, R12932, R12933, R12934, R12935, R12936, R12937, R12938, R12939, R12940, R12941, R12942, R12943, R12944, R12945, R12946, R12947, R12948, R12949, R12950, R12951, R12952, R12953, R12954, R12955, R12956, R12957, R12958, R12959, R12960, R12961, R12962, R12963, R12964, R12965, R12966, R12967, R12968, R12969, R12970, R12971, R12972, R12973, R12974, R12975, R12976, R12977, R12978, R12979, R12980, R12981, R12982, R12983, R12984, R12985, R12986, R12987, R12988, R12989, R12990, R12991, R12992, R12993, R12994, R12995, R12996, R12997, R12998, R12999, R13000, R13001, R13002, R13003, R13004, R13005, R13006, R13007, R13008, R13009, R13010, R13011, R13012, R13013, R13014, R13015, R13016, R13017, R13018, R13019, R13020, R13021, R13022, R13023, R13024, R13025, R13026, R13027, R13028, R13029, R13030, R13031, R13032, R13033, R13034, R13035, R13036, R13037, R13038, R13039, R13040, R13041, R13042, R13043, R13044, R13045, R13046, R13047, R13048, R13049, R13050, R13051, R13052, R13053, R13054, R13055, R13056, R13057, R13058, R13059, R13060, R13061, R13062, R13063, R13064, R13065, R13066, R13067, R13068, R13069, R13070, R13071, R13072, R13073, R13074, R13075, R13076, R13077, R13078, R13079, R13080, R13081, R13082, R13083, R13084, R13085, R13086, R13087, R13088, R13089, R13090, R13091, R13092, R13093, R13094, R13095, R13096, R13097, R13098, R13099, R13100, R13101, R13102, R13103, R13104, R13105, R13106, R13107, R13108, R13109, R13110, R13111, R13112, R13113, R13114, R13115, R13116, R13117, R13118, R13119, R13120, R13121, R13122, R13123, R13124, R13125, R13126, R13127, R13128, R13129, R13130, R13131, R13132, R13133, R13134, R13135, R13136, R13137, R13138, R13139, R13140, R13141, R13142, R13143, R13144, R13145, R13146, R13147, R13148, R13149, R13150, R13151, R13152, R13153, R13154, R13155, R13156, R13157, R13158, R13159, R13160, R13161, R13162, R13163, R13164, R13165, R13166, R13167, R13168, R13169, R13170, R13171, R13172, R13173, R13174, R13175, R13176, R13177, R13178, R13179, R13180, R13181, R13182, R13183, R13184, R13185, R13186, R13187, R13188, R13189, R13190, R13191, R13192, R13193, R13194, R13195, R13196, R13197, R13198, R13199, R13200, R13201, R13202, R13203, R13204, R13205, R13206, R13207, R13208, R13209, R13210, R13211, R13212, R13213, R13214, R13215, R13216, R13217, R13218, R13219, R13220, R13221, R13222, R13223, R13224, R13225, R13226, R13227, R13228, R13229, R13230, R13231, R13232, R13233, R13234, R13235, R13236, R13237, R13238, R13239, R13240, R13241, R13242, R13243, R13244, R13245, R13246, R13247, R13248, R13249, R13250, R13251, R13252, R13253, R13254, R13255, R13256, R13257, R13

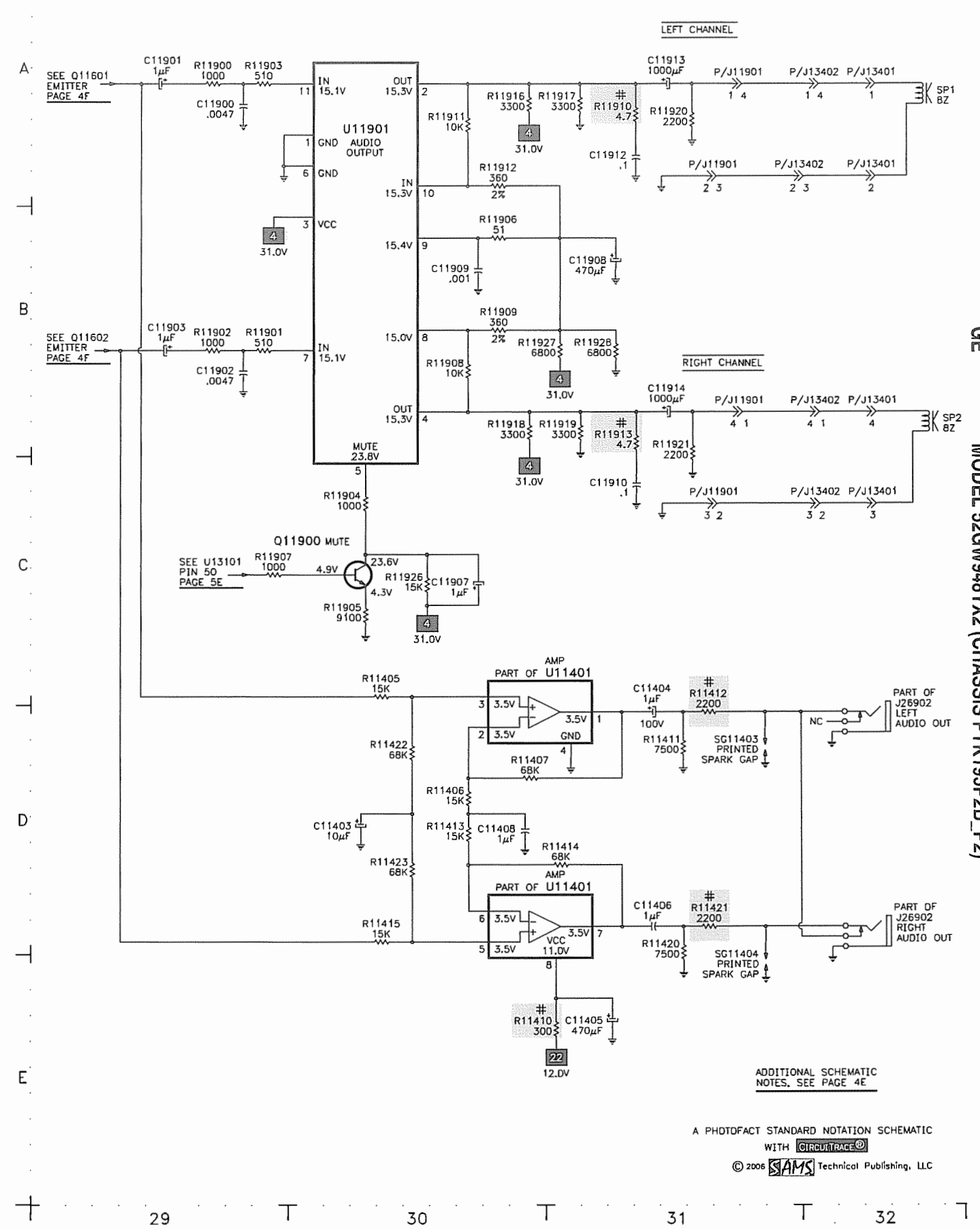
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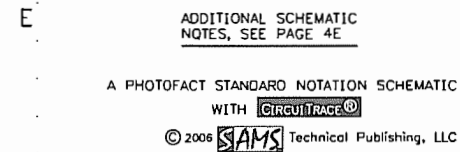
G CRT SCHEMATIC (Red, Green & Blue) continued



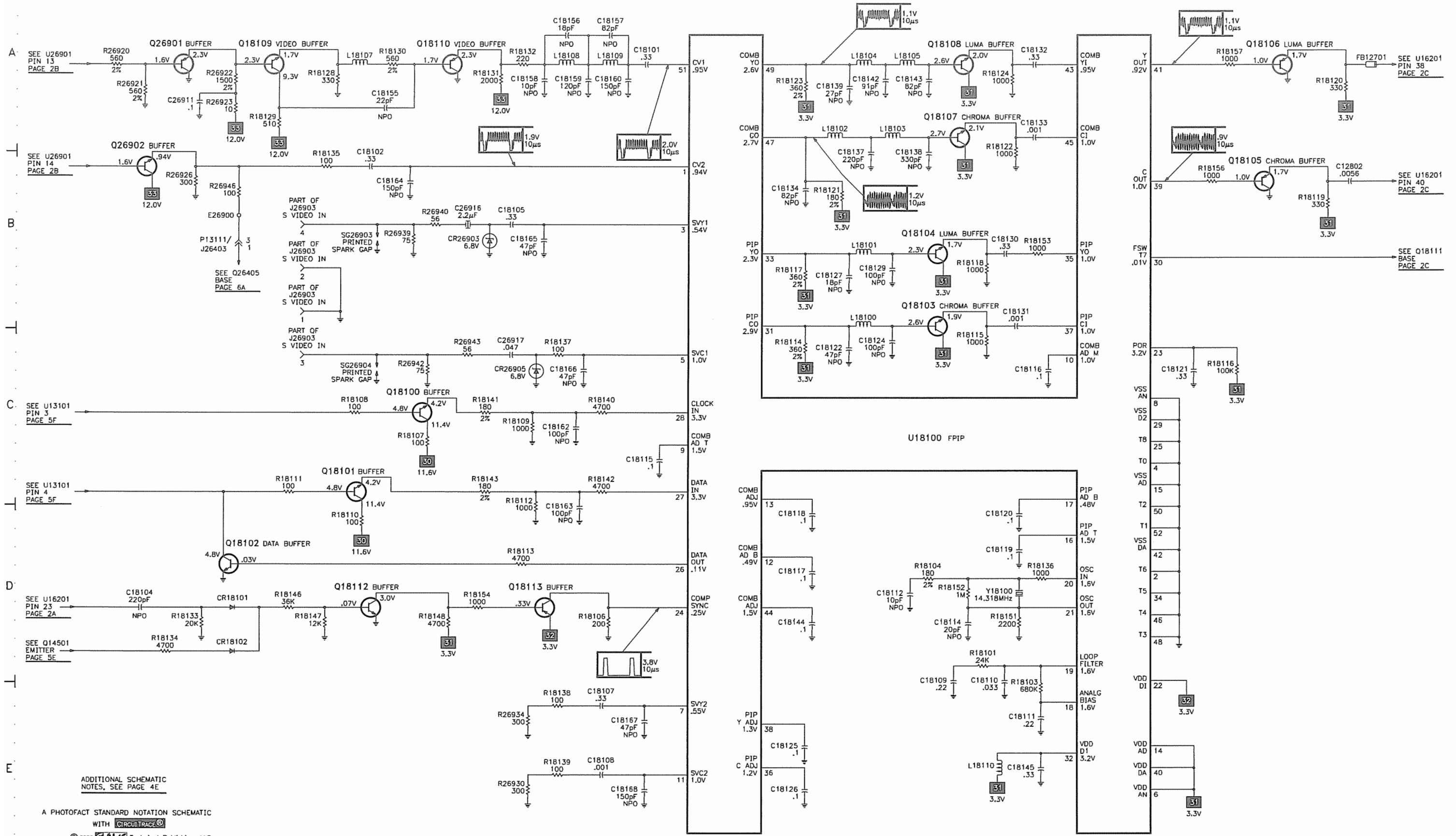
H AUDIO OUTPUT SCHEMATIC



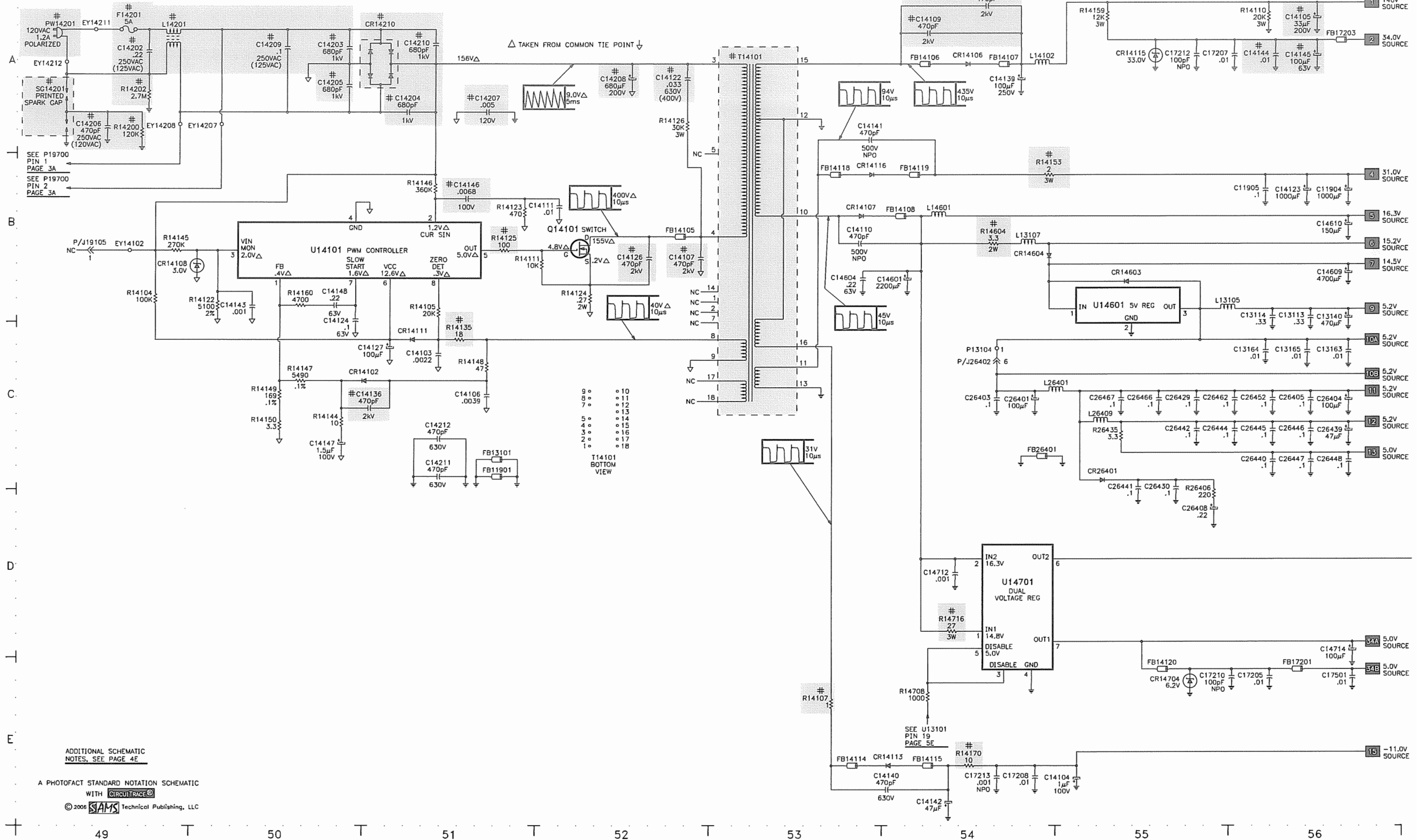
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PIP SCHEMATIC

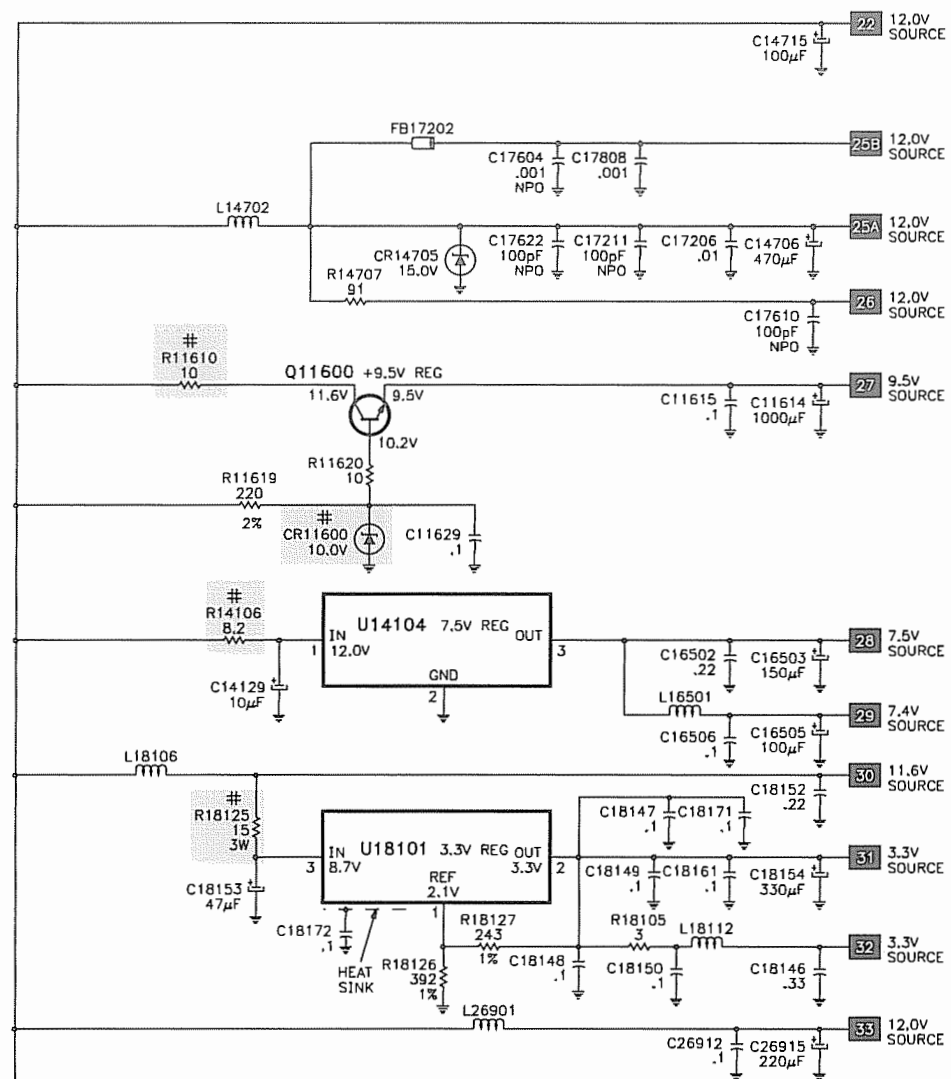


POWER SUPPLY SCHEMATIC

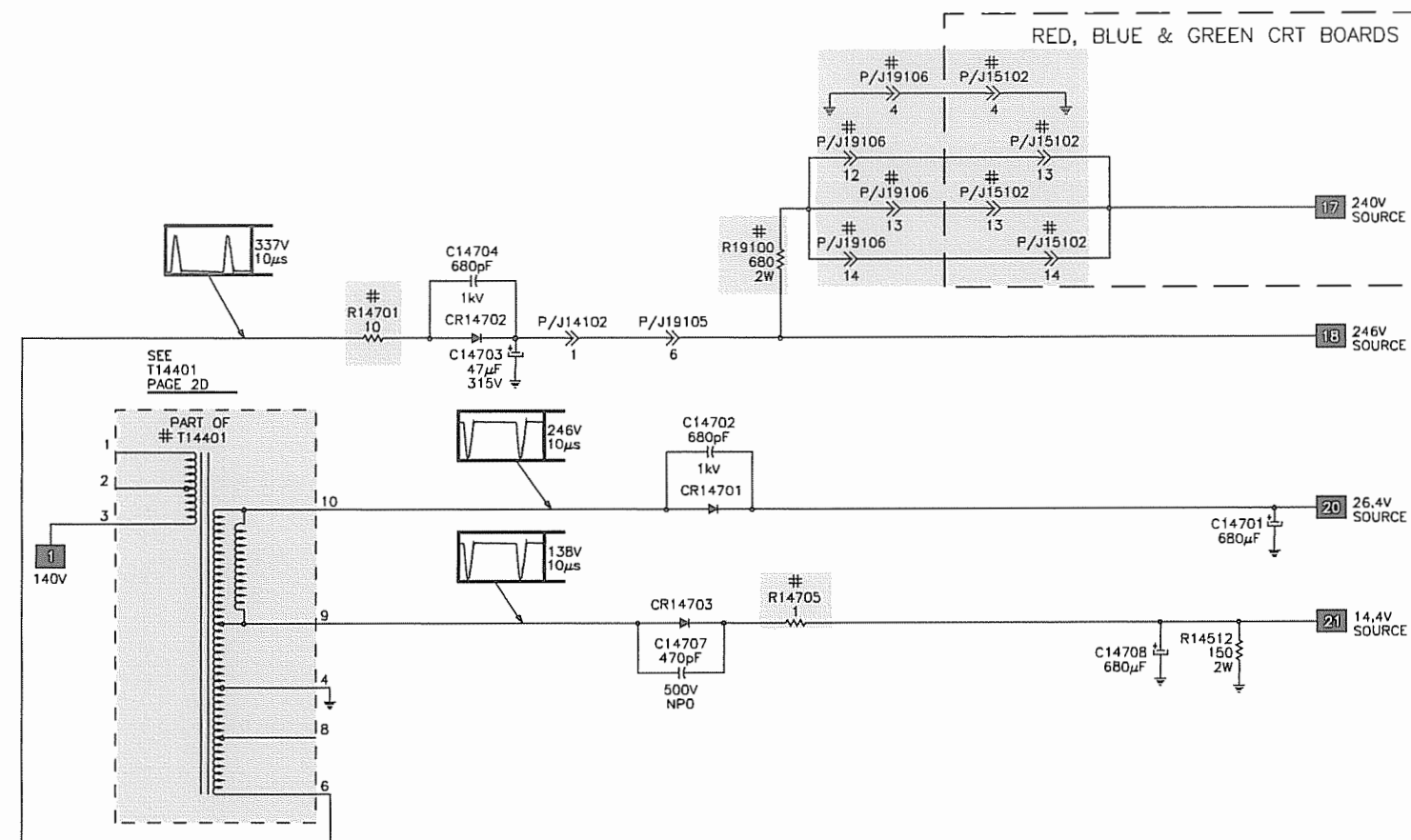


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POWER SUPPLY SCHEMATIC continued

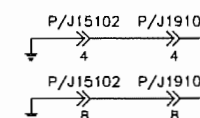
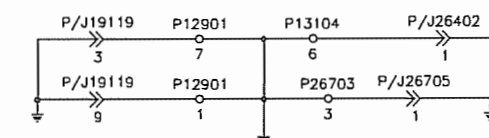


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GE

MODEL 52GW948YX2 (CHASSIS PTK195P2B_P2)

ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 4EA PHOTOFAC STANDARD NOTATION SCHEMATIC
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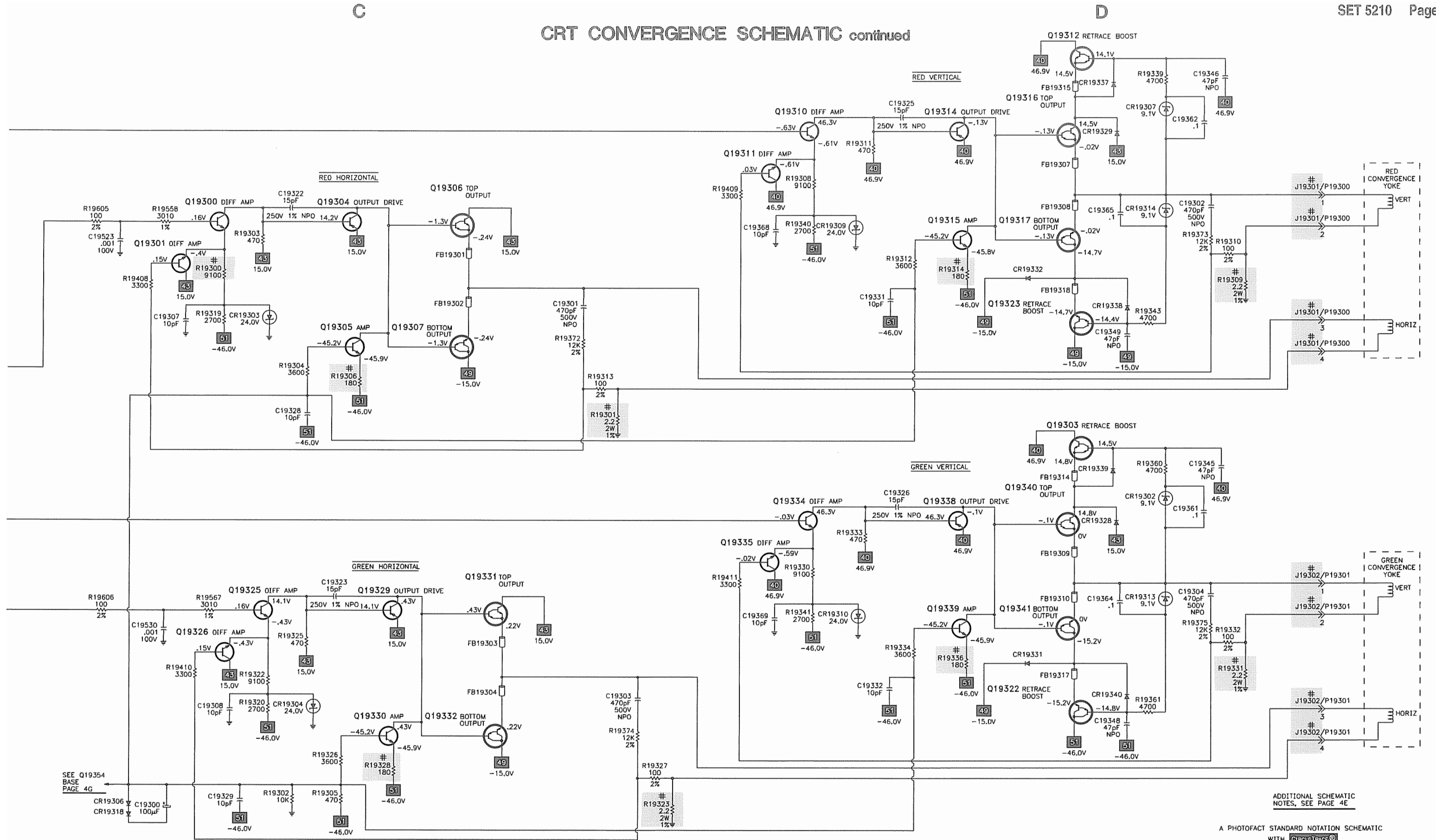
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A PHOTOFACT STANDARD NOTATION SCHEMATIC
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CRT CONVERGENCE SCHEMATIC continued







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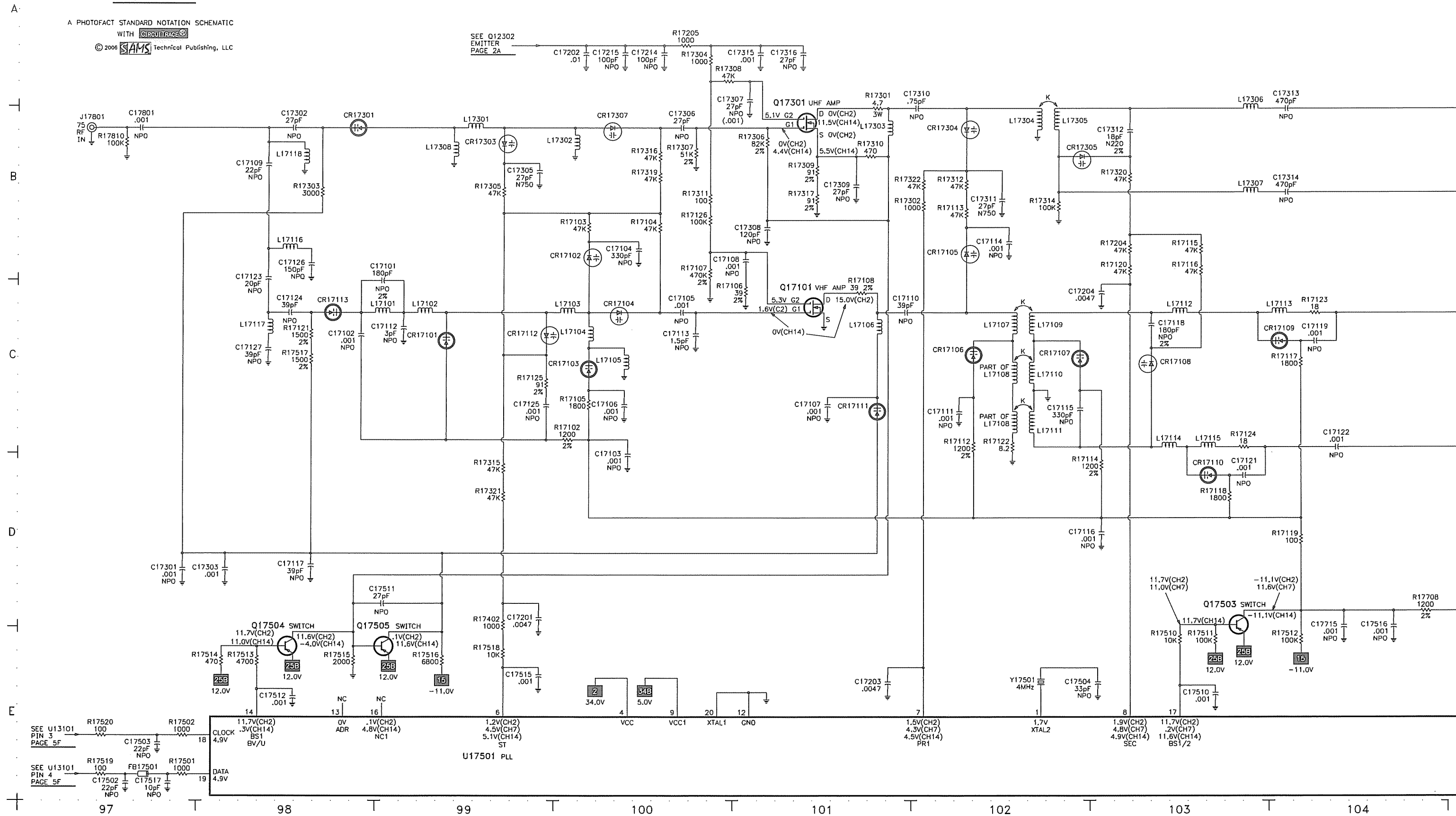
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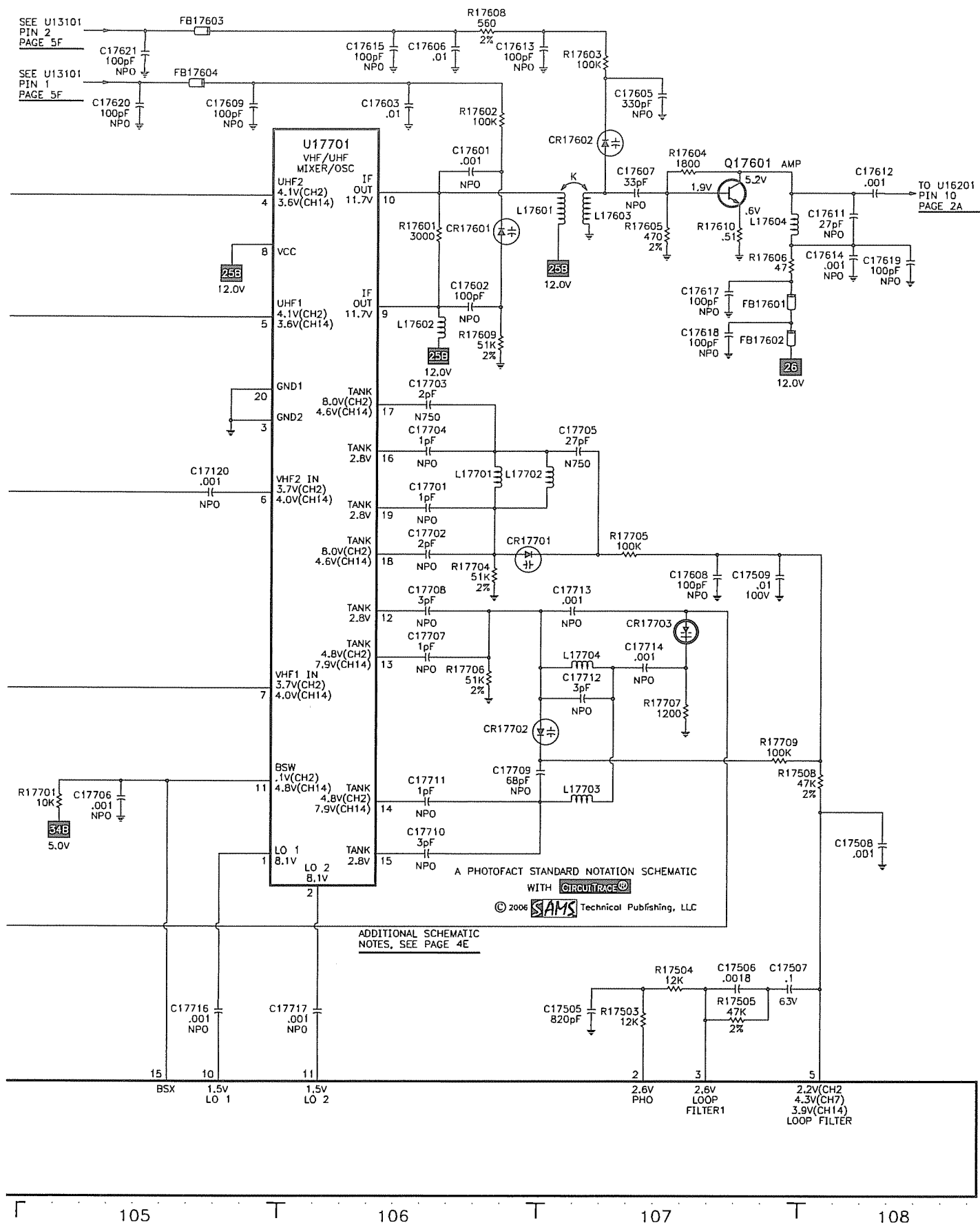
TUNER SCHEMATIC

B

ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 4EA PHOTOFAC STANDARD NOTATION SCHEMATIC
WITH CIRCUITAGE

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SEE Q12302
EMITTER
PAGE 2A



MISCELLANEOUS ADJUSTMENTS

SERVICE MENU

To access the service menu, turn the receiver on, press the menu button on the front panel, 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 P0, and on the right the value of that parameter V0. 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 up and down buttons. To access and change any of the adjustments, the proper parameter pass number must be entered. This information is listed at the beginning of the 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.

NOTE: In order to adjust the RF AGC, audio or video levels, tuner, PIP, or stereo circuits, the Chipper Check hardware and software must be used. This can be purchased from Thomson Electronics.

DIGITAL CONVERGENCE

Enter Service Mode. Using the remote control from a position that enables you to have clear details of the picture, press the volume up button to advance the Value Range to 80, then press channel up.

The incoming video signal will be blanked out and a crosshatch pattern with a small yellow centered cursor will be displayed. The volume and channel buttons will move the cursor up, down, left, and right in single steps. The four navigation move buttons on the remote will adjust the selected color at the cursor point. The green color will be stationery, the red and blue colors are to be adjusted to the green. To select between the red, or blue adjustment press the info or display button on the remote control. When info button is pressed the cursor color change from yellow to cyan indicating that the color to be adjusted is the blue instead of the red. Pressing the power button on the remote will end and save changes to the Digi Con EEPROM and the screen will return to normal signal reception.

NOTE: Before making any changes in the service adjustments its recommended to keep a record of the On Set Values.

SERVICE ADJUSTMENT PARAMETERS

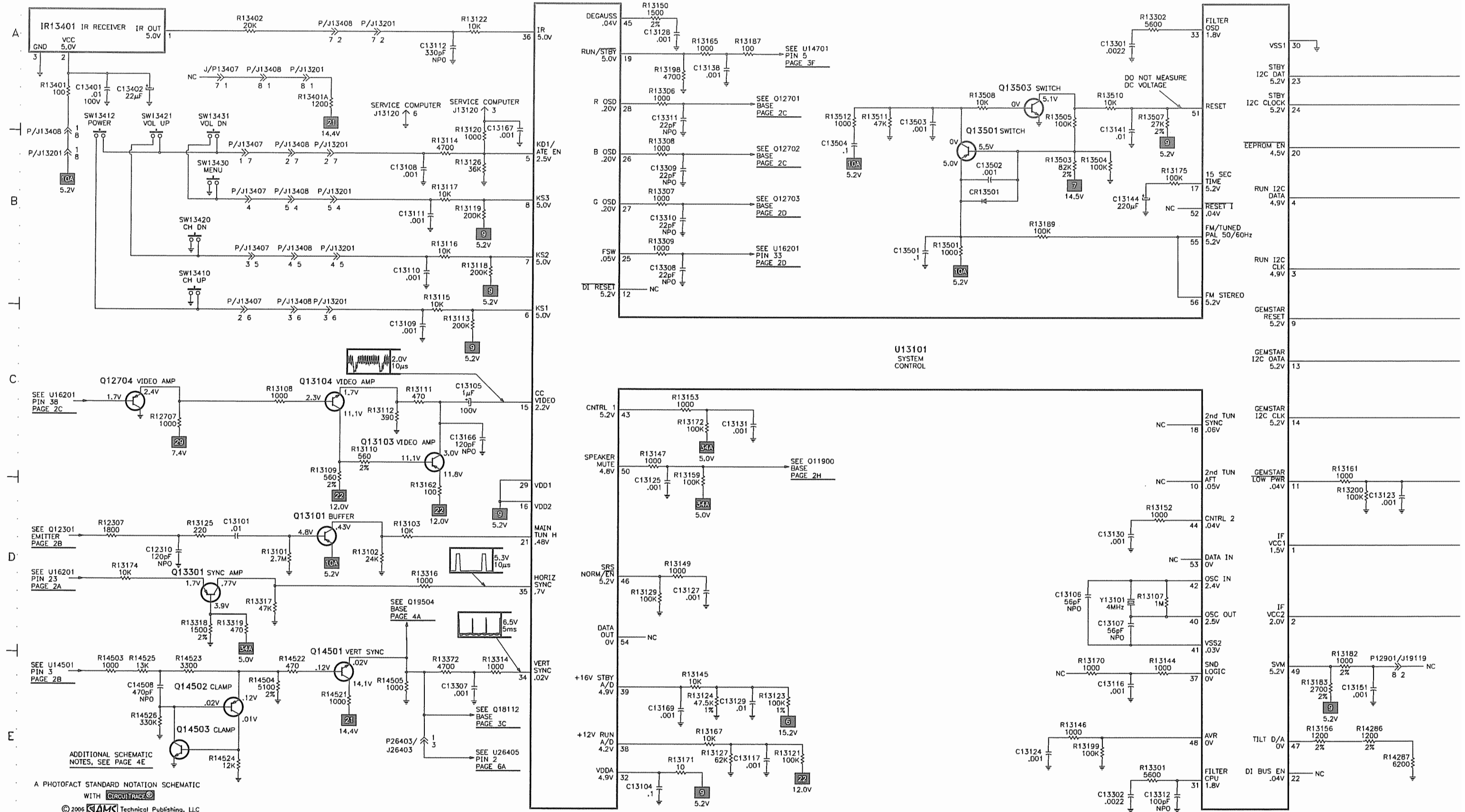
Parameter No.	Parameter Name	On Set Value	Value Range	Comment
0	Press channel up for service adjustment parameter to be adjusted.	Must be set to 76.	-	May not advance until value is set to 76. If value is set to 80 and channel up button is pressed a crosshatch pattern for Digital Convergence adjustment will be displayed.
1	Error Code 1	0	0 - 255	Displays the first error detected. Set to 0 before exiting. See Error Codes Chart.
2	Error Code 2	0	0 - 255	Displays the second error detected. Set to 0 before exiting. See Error Codes Chart.
3	Error Code 3	0	0 - 255	Displays the last error detected. Set to 0 before exiting. See Error Codes Chart.
4	Horizontal Phase	10	0 - 15	Chipper Check will be required to bring up the convergence pattern and video at the same time. Adjust to match the video vertical center line with the convergence pattern.
5	Horizontal Size EW DC	19	0 - 31	With the convergence off adjust for slight horizontal overscan.
6	Pincushion Amplitude	9	0 - 15	Adjust for straight sides on the left and the right side of the picture.
7	Pincushion Tilt	0	0 - 31	Adjust vertical height first. Adjust for straight lines on the left and right side of the pattern.
8	Top Corner Pin Correction	4	0 - 7	Adjust vertical height first. Adjust the curvature of the top left and right side of the pattern.
9	Bottom Corner Pin Correction	2	0 - 7	Adjust vertical height first. Adjust the curvature of bottom left and right side of the pattern.
10	Vertical Centering	29	0 - 63	Factory set to provide 0 yoke current at line 141 of the first field of video. Do Not Adjust. Use the vertical centering rings on CRT to adjust.
11	Vertical Size or Height	96	0 - 127	Chipper Check will be required to adjust the pattern for equal size of the squares at top and bottom with a slight vertical overscan.
12	Vertical Countdown Mode	0	0 - 3	Chipper Check will be required to adjust the pattern top and bottom for equal distances from center.
13	Red Bias	77	0 - 127	Press menu button on the TV set for setup line.
14	Green Bias	62	0 - 127	Press menu button on the TV set for setup line.
15	Blue Bias	77	0 - 127	Press menu button on the TV set for setup line.
16	Red Drive	46	0 - 63	Press menu button on the TV set for setup line.
17	Green Drive	37	0 - 63	Press menu button on the TV set for setup line.
18	Blue Drive	42	0 - 63	Press menu button on the TV set for setup line.
19	Horizontal Menu Position	23	0 - 255	Set value to 23..
20	Vertical Menu Position	33	0 - 255	Set value to 33.
21	PIP Horizontal Position	40	0 - 255	Set value to 40.
22	PIP Vertical Position	40	0 - 255	Set value to 40.
23	Menu Position	3	0 - 13	Set value to 3.

COLOR TEMPERATURE

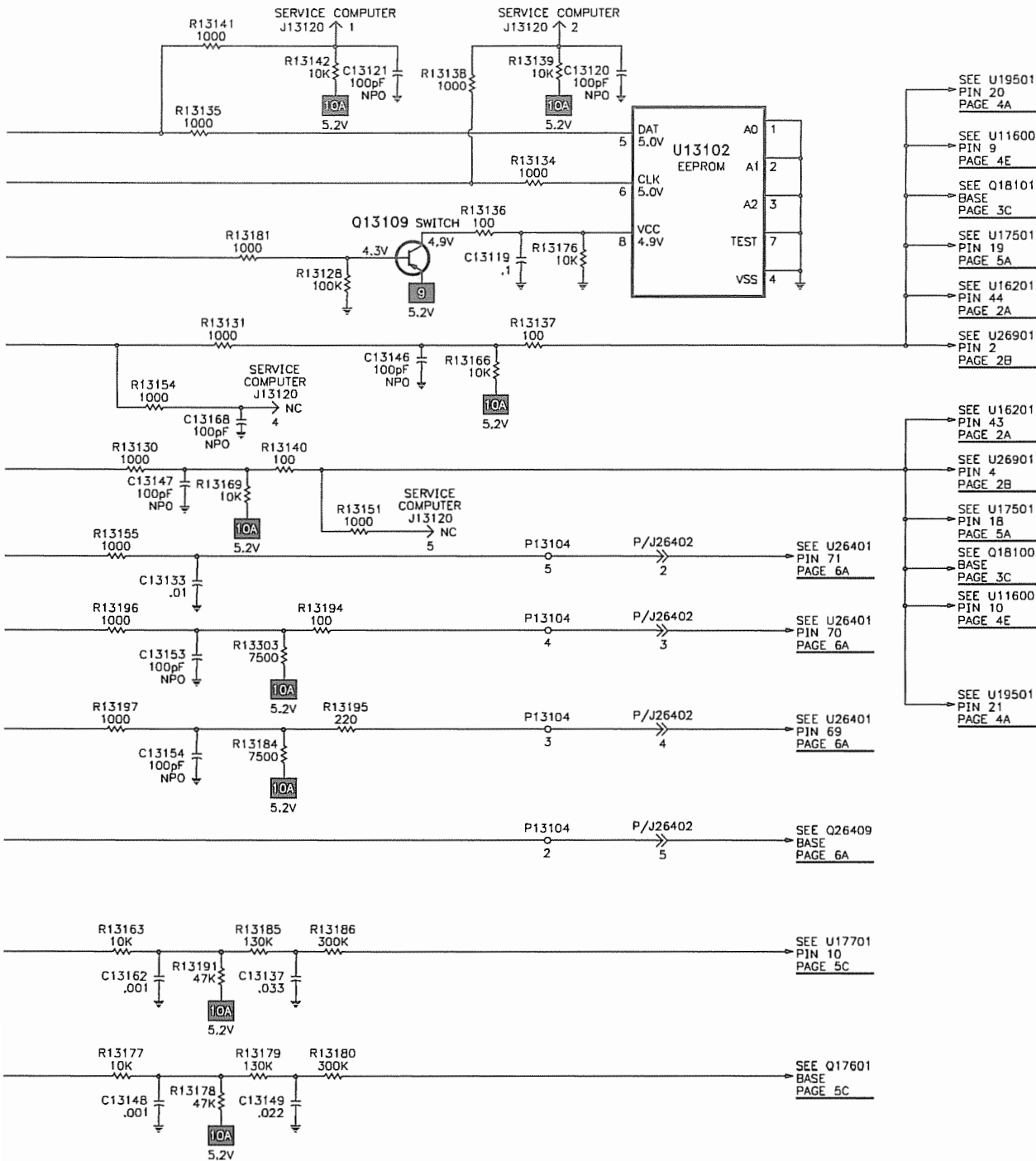
NOTE: See Service Adjustment Parameters to change drive and bias values. Bias controls affect the low brightness level portions of the picture. Drive controls affect the high brightness level portions of the picture.

Press menu button for collapsed raster service line. Disconnect the antenna. Preset the red, green, and blue drive values to 32. Adjust the screen control for each color 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.

SYSTEM CONTROL SCHEMATIC



G
SYSTEM CONTROL SCHEMATIC continued



ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 4E

A PHOTOFAC STANDARD NOTATION SCHEMATIC

WITH CIRCUITRACE

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ERROR CODES CHART

Error Code	Error Location	Condition Indicated
0	No error code	Power OK.
1	Detected by U13101.	16.0V source is failing.
2	Detected by U13101.	5.1V source is failing.
3	Detected by U13101.	12.0V source is failing.
8	U16201	X-ray protection caused by high voltage shutdown.
4	U16201	Run Supplies have fallen below standard levels.
6	U8100	PAL/PIP Matrix Switch failure.
8	U16201	X-Ray Protection detected T4.
9	U16201	Power supply problem at reset/ U16201.
10	PIP module error U8100.	Power supply problem at reset/ PIP, U8100.
11	Stereo decoder U1600.	Power supply problem at reset/Stereo decoder.
12	Detected by U13101.	A/V input to U13101 held low.
16	Detected by U13101.	U13101 run I2C clock or data held low at logic 0.
17	Detected by U13101.	U13101 standby bus I2C clock or data held low at logic 0.
18	Star Sight bus latched.	Star Sight bus I2C clock or data held low at logic 0.
34	Software Stack overflow U13101.	Starsight fails to acknowledge.
44	FPIP fault U8100.	PIP fails to acknowledge.
56	Digital convergence I2C bus.	Digital convergence module fails to acknowledge.
64	2nd tuner DAC bus fault U7902.	2nd tuner DAC fails to acknowledge.
128	Stereo Demodulator U1600.	Stereo Demodulator fails to acknowledge.
130	Audio compressor U1501.	Audio compressor fails to acknowledge.
134	Video matrix switch U6901.	Video matrix switch fails to acknowledge.
186	T4 Chip U16201.	U16201 fails to acknowledge.
196	Main tuner PLL U7501.	Main tuner PLL IC fails to acknowledge.
198	Main tuner DAC U7501.	Main tuner DAC IC fails to acknowledge.
220	Interface Bus fault.	Decoder Interface Micro fails to acknowledge.

ERROR CODES

If certain failures occur, the matching error codes will be stored in the EEPROM. These error codes will be displayed in parameters 1, 2, and 3. The first failure error code will be stored at parameter 1 and the second failure error code will be stored at parameter 2. Parameter 3 will be updated to display the most recent failure occurred in the chassis. If a failure of a bus IC occurred, the normal acknowledgment checking of that bus will be disabled in the Service Mode and the address of that IC which failed will be stored in one of the error code parameters. After every repair is done to the chassis it is recommended to check the error code parameters, and reset them back to value 0.



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

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.

SCHEMATIC COMPONENT LOCATION GUIDE

B FOCUS	E17	C12703	C14	C13501	B114	C14701	C64	C17301	D97	C18102	B42	C19207	D34	C19510	E66	C19713	B39	C26911	A41	CR17702	D107	FB14105	B52	J26901	B81	L19505	B71
B SCREEN	E17	C12706	E3	C13502	B114	C14702	B62	C17302	B98	C18103	C12	C19280	E39	C19511	E39	C19714	C35	C26912	D60	CR17703	C107	FB14106	A54	J26901	C5	L19506	C71
B YOKE	D9	C12707	B11	C13503	B114	C14703	B62	C17303	D98	C18104	D41	C19300	E73	C19512	E66	C19715	C34	C26915	D60	CR18101	D42	FB14107	A54	J26902	C6	L19507	D38
C11401	B84	C12708	A12	C13504	B113	C14704	B62	C17305	B99	C18105	B43	C19301	B76	C19513	E39	C19717	A37	C26916	B43	CR18102	D42	FB14108	B54	J26902	D32	L19508	E35
C11402	B84	C12709	A13	C14103	C51	C14706	A60	C17306	B100	C18107	E44	C19302	B79	C19514	E66	C19718	A37	C26917	C43	CR19003	E12	FB14114	E53	J26902	D32	L19509	E39
C11403	D30	C12710	A9	C14104	E55	C14707	C62	C17307	B101	C18108	E44	C19303	D76	C19515	D69	C19719	B37	C26918	C6	CR19005	C10	FB14115	E54	L12302	B3	L19510	B66
C11404	D31	C12711	C14	C14105	A56	C14708	C64	C17308	B101	C18109	E46	C19304	D79	C19516	D68	C19720	C37	C26920	B6	CR19010	E11	FB14118	B53	L12303	B4	L19511	B66
C11405	E31	C12713	C15	C14106	C51	C14710	E3	C17309	B101	C18110	E46	C19305	B92	C19517	B66	C19721	A33	C26922	B7	CR19011	E12	FB14119	B54	L12304	C2	L19700	B39
C11406	D31	C12802	B48	C14107	B52	C14712	D54	C17310	B101	C18111	E46	C19306	B95	C19519	E39	C19722	A34	C26923	B6	CR19100	D37	FB14120	E55	L13105	C55	L19701	A39
C11408	D30	C12803	B10	C14109	A54	C14714	D56	C17311	B102	C18112	D45	C19307	B73	C19520	E66	C19723	A33	C26924	B5	CR19130	D15	FB14402	E8	L13107	B54	L19702	A39
C11601	A5	C12901	A18	C14110	B53	C14715	A60	C17312	B103	C18114	D46	C19308	E74	C19521	A72	C19724	A34	CF12302	A3	CR19131	C16	FB14800	E9	L14102	A54	L19703	B39
C11602	C84	C12902	C18	C14111	B52	C14716	E8	C17313	B103	C18115	C44	C19309	B90	C19522	B72	C19725	B36	CF12303	B4	CR19132	C15	FB15101	A25	L14201	A49	L26401	C54
C11603	E85	C12903	B18	C14122	A52	C14800	E9	C17314	B103	C18116	C46	C19310	D39	C19523	B73	C19726	C37	CR11600	B59	CR19200	D34	FB17201	E56	L14401	E7	L26402	C122
C11604	E85	C12904	B15	C14123	B56	C14802	E21	C17315	A101	C18117	D45	C19311	D39	C19524	C68	C19727	C36	CR11601	B87	CR19301	A95	FB17202	A59	L14402	E9	L26403	C122
C11605	D84	C12905	B17	C14124	C50	C14803	E22	C17316	A101	C18118	D45	C19312	E37	C19525	A92	C19800	C20	CR12301	B5	CR19302	C79	FB17203	A56	L14601	B54	L26409	C55
C11606	D84	C12906	A9	C14126	B52	C14804	E22	C17501	E56	C18119	D46	C19313	E35	C19526	C69	C19801	C21	CR12702	E4	CR19303	B74	FB17501	E97	L14702	A58	L26901	D59
C11607	D84	C13101	D110	C14127	C51	C14805	E24	C17502	E97	C18120	D46	C19314	D39	C19527	A68	C19802	C22	CR12703	B13	CR19304	E74	FB17601	B107	L14801	E24	PW14201	A49
C11608	B83	C13104	E112	C14129	C58	C14901	E3	C17503	E97	C18121	C47	C19315	D39	C19528	A69	C26401	C54	CR12901	C15	CR19305	B90	FB17602	B107	L15101	E36	Q11600	B59
C11609	B84	C13105	C111	C14132	E4	C14902	E2	C17504	E102	C18122	C45	C19316	D39	C19529	B69	C26402	A127	CR12902	C15	CR19306	E73	FB17603	A105	L15102	A26	Q11601	A87
C11611	E85	C13106	D114	C14133	D4	C14903	D3	C17505	E107	C18124	C45	C19317	D39	C19530	D73	C26403	C54	CR13501	B114	CR19307	A79	FB17604	A105	L15301	A27	Q11602	B87
C11612	E84	C13107	D115	C14136	C50	C14904	D3	C17506	E107	C18125	E45	C19318	D38	C19531	B68	C26404	C56	CR14102	C50	CR19308	B95	FB19200	D33	L16501	C59	Q11900	C30
C11613	E84	C13108	B111	C14137	A54	C14907	E3	C17507	E107	C18126	E45	C19319	D39	C19532	B89	C26405	C56	CR14106	A54	CR19309	B77	FB19301	B75	L17101	C98	Q12301	B4
C11614	B60	C13109	C111	C14139	A54	C15102	E37	C17508	D108	C18127	B45	C19320	D38	C19533	E39	C26406	D122	CR14107	B53	CR19310	D77	FB19302	B75	L17102	C99	Q12302	C2
C11615	B60	C13110	B111	C14140	E53	C15103	D27	C17509	C107	C18129	B45	C19321	E36	C19535	E39	C26407	D122	CR14108	B50	CR19311	B93	FB19303	D75	L17103	C99	Q12701	A11
C11616	A85	C13111	B111	C14141	B53	C15104	C27	C17510	E103	C18130	B46	C19322	B74	C19537	D66	C26408	D55	CR14111	C51	CR19313	D79	FB19304	D75	L17104	C100	Q12702	A12
C11617	B85	C13112	A111	C14142	E54	C15107	B25	C17511	D98	C18131	C46	C19323	D74	C19538	D66	C26409	C122	CR14113	E53	CR19314	B79	FB19305	B91	L17105	C100	Q12703	A13
C11618	A85	C13113	C56	C14143	B50	C15301	A27	C17512	E98	C18132	A46	C19324	B90	C19541	E38	C26410	D123	CR14115	A55	CR19318	E73	FB19306	B91	L17106	C101	Q12704	C109
C11619	B85	C13114	C56	C14144	A56	C16502	C60	C17515	E99	C18133	B46	C19325	A77	C19542	D66	C26411	C122	CR14116	B53	CR19327	A95	FB19307	A79	L17107	C102	Q12705	C13
C11622	B85	C13116	E115	C14145	A56	C16503	C60	C17516	E104	C18134	B45	C19326	C77	C19543	C65	C26412	C123	CR14210	A51	CR19328	C79	FB19308	B79	L17108	C102	Q12901	A18
C11623	A5	C13117	E113	C14146	B51	C16505	C60	C17517	E97	C18137	B45	C19327	A93	C19544	D66	C26413	C122	CR14302	D2	CR19329	A79	FB19309	D79	L17108	C102	Q12902	B18
C11625	A84	C13119	B118	C14147	C50	C16506	C60	C17601	B106	C18138	B45	C19328	C74	C19545	A71	C26414	C123	CR14303	E5	CR19330	B94	FB19310	D79	L17109	C102	Q12903	B18
C11627	D85	C13120	A118	C14148	C50	C17101	C98	C17602	B106	C18139	A45	C19329	E74	C19546	A71	C26415	C122	CR14401	E9	CR19331	D78	FB19311	A94	L17110	C102	Q12904	B18
C11628	C85	C13121	A118	C14202	A49	C17102	C98	C17603	A106	C18142	A45	C19330	C90	C19547	B71	C26416	C123	CR14403	E9	CR19332	B78	FB19312	B94	L17111	C102	Q12906	B17
C11629	B59	C13123	D116	C14203	A50	C17103	D100	C17604	A59	C18143	A45	C19331	B77	C19548	C71	C26417	B122	CR14501	D7	CR19337	A79	FB19313	A94	L17112	C103	Q13101	D110
C11630	C85	C13124	E114	C14204	A51	C17104	B100	C17605	A107	C18144	D45	C19332	D77	C19549	B71	C26418	C123	CR14603	B55	CR19338	B79	FB19314	C79	L17113	C103	Q13103	C111
C11631	D85	C13125	D112	C14205	A50	C17105	C100	C17606	A106	C18145	E46	C19333	B93	C19550	C71	C26419	E124	CR14604	B54	CR19339	C79	FB19315	A79	L17114	D103	Q13104	C110
C11632	D85	C13127	D112	C14206	A49	C17106	C100	C17607	B107	C18146	C60	C19334	E37	C19557	A68	C26421	D122	CR14701	C62	CR19340	D79	FB19316	B94	L17115	D103	Q13109	B118
C11633	C84	C13128	A112	C14207	A51	C17107	C101	C17608	C107	C18147	C59	C19335	E36	C19558	B68	C26422	D122	CR14702	B62	CR19341	A95	FB19317	D79	L17116	B98	Q13301	D110
C11634	C84	C13129	E113	C14208	A52	C17108	B101	C17609	A105	C18148	C59	C19336	E36	C19559	B68	C26423	B121	CR14703	C62	CR19342	B95	FB19318	B79	L17117	C98	Q13501	B114
C11635	B86	C13130	D115	C14209	A50	C17109	B98	C17610	B60	C18149	C59	C19337	E37	C19560	A68	C26425	A121	CR14704	E55	CR19500	C65	FB19500	A66	L17118	B98	Q13503	B114
C11636	C86	C13131	C113	C14210	A51	C17110	C101	C17611	B108	C18150	C59	C19339	E36	C19561	C68	C26426	A122	CR14705	B59	CR19501	C66	FB19501	E39	L17301	B99	Q14101	B52
C11637	C84	C13133	C117	C14211	D51	C17111	C102	C17612	B108	C18152	C60	C19340	E36	C19562	C68	C26427	B125	CR14800	E9	CR19503	D66	FB19502	D67	L17302	B100	Q14301	E6
C11900	A29	C13137	D117	C14212	C51	C17112	C99	C17613	A107	C18153	C58	C19341	E36	C19563	C68	C26428	C125	CR14901	E3	CR19701	B35	FB19503	E66	L17303	B101	Q14302	E5
C11901	A29	C13138	A112	C14302	E5	C17113	C100	C17614	B108	C18154	C60	C19342	E37	C19566	E39	C26429	C55	CR14902	E3	CR19703	A37	FB19504	B66	L17304	B102	Q14401	E7
C11902	B29	C13140	C56	C14303	E5	C17114	B102	C17615	A106	C18155	A42	C19343	D39	C19567	D38	C26430	D55	CR15105	A26	CR19704	B36	FB19505	E66	L17305	B102	Q14501	E110
C11903	B29	C13141	B115	C14304	E6	C17115	C102	C17616	B1	C18156	A43	C19344	A95	C19568	E35	C26433	A124	CR15106	B25	CR19705	B37	FB19506	E66	L17306	B103	Q14502	E110
C11904	B56	C13144	B115	C14305	E6	C17116	D103	C17617	B107	C18157	A44	C19345	C79	C19569	A71	C26435	B124	CR15191	C26	CR19707	B38	FB19507	D66	L17307	B103	Q14503	E109
C11905	B56	C13146	B118	C14306	E6	C17117	D98	C17618	B107	C18158	A43	C19346	A79	C19570	B71	C26437	B124	CR15192	C26	CR19708	A38	FB19508	E66	L17308	B99	Q14802	E23
C11907	C30	C13147	B117	C14307	D1	C17118	C103	C17619	B108	C18159	A44	C19347	B95	C19571	C71	C26438	B124	CR15193	C26	CR19709	A38	FB19509	E39	L17601	B107	Q14901	D3
C11908	B31	C13148	D117	C14308	D1	C17119	C104	C17620	A105	C18160	A44	C19348	E79	C19572	C72	C26439	C56	CR15194	C25	CR19710	B38	FB19510	E39</				

SCHEMATIC COMPONENT LOCATION GUIDE continued

Q18112	D42	Q19702	C34	R11900	A29	R12906	A18	R13162	D111	R14125	B51	R14809	D4	R17503	E107	R18141	C43	R19330	D77	R19537	C68	R19703	A35	R26434	C124	SW13430	B110
Q18113	D43	Q19703	C35	R11901	B29	R12907	B18	R13163	D117	R14126	A52	R14810	E23	R17504	E107	R18142	D44	R19331	D80	R19538	C66	R19704	C34	R26435	C55	SW13431	B110
Q19001	C11	Q19704	C36	R11902	B29	R12908	C18	R13165	A112	R14135	C51	R14811	E21	R17505	E107	R18143	D43	R19332	D79	R19539	A68	R19705	C34	R26436	B124	T14101	A53
Q19003	E13	Q19705	C35	R11903	A29	R12909	C18	R13166	B118	R14144	C50	R14901	E3	R17508	D108	R18144	C11	R19333	D77	R19540	D68	R19706	C34	R26437	B124	T14301	E7
Q19004	E13	Q19706	C36	R11904	C30	R12910	B18	R13167	E112	R14145	B49	R14904	D3	R17510	E103	R18145	C12	R19334	D78	R19541	D68	R19707	B34	R26438	A124	T14401	B61
Q19013	E12	Q19707	C37	R11905	C30	R12911	B18	R13169	B117	R14146	B51	R14905	D3	R17511	E103	R18146	D42	R19335	B95	R19543	D68	R19708	C36	R26439	A124	T14401	D14
Q19130	C15	Q19708	C35	R11906	B30	R12912	B18	R13170	E114	R14147	C50	R14907	E2	R17512	E104	R18147	D42	R19336	D78	R19544	D69	R19709	C36	R26440	B124	T19001	C9
Q19131	D16	Q19802	C21	R11907	C29	R12913	B17	R13171	E112	R14148	C51	R14908	E2	R17513	E98	R18148	D43	R19339	A79	R19545	A68	R19710	B35	R26441	A124	T19701	A38
Q19300	B74	Q19803	C22	R11908	B30	R12914	B18	R13172	C112	R14149	C50	R14909	E3	R17514	E98	R18151	D46	R19340	B77	R19546	A69	R19711	B35	R26442	A124	U11401	D30
Q19301	B73	Q19804	B22	R11909	B30	R12916	C15	R13174	D109	R14150	C50	R14910	D2	R17515	E98	R18152	D46	R19341	D77	R19547	B70	R19712	A36	R26443	B124	U11401	D30
Q19302	A94	Q19805	A23	R11910	A31	R12917	B17	R13175	B115	R14153	B54	R15101	C27	R17516	E99	R18153	B46	R19342	B93	R19548	C69	R19713	B36	R26444	B123	U11600	A84
Q19303	C79	Q19806	B22	R11911	A30	R12918	B17	R13176	B118	R14159	A55	R15102	A26	R17517	C98	R18154	D43	R19343	B79	R19549	B69	R19714	B36	R26445	B123	U11600	A86
Q19304	B74	Q19807	B23	R11912	B30	R12919	B17	R13177	D117	R14160	C50	R15104	C27	R17518	E99	R18156	B47	R19344	B90	R19550	C70	R19715	B35	R26446	B123	U11901	A30
Q19305	C74	Q26401	B126	R11913	C31	R12920	C18	R13178	D117	R14170	E54	R15105	B26	R17519	E97	R18157	A47	R19345	C92	R19551	D69	R19716	B35	R26447	B123	U13101	C113
Q19306	B75	Q26402	A126	R11916	A30	R12921	B18	R13179	D117	R14200	A49	R15107	B25	R17520	E97	R19001	C11	R19347	B90	R19552	D68	R19717	A37	R26448	E124	U13102	A119
Q19307	C75	Q26403	D122	R11917	A31	R12922	A18	R13180	D117	R14202	A49	R15108	B26	R17601	B106	R19004	C10	R19348	C90	R19553	B90	R19718	B37	R26452	A122	U14101	B50
Q19310	A77	Q26404	A122	R11918	B30	R12923	A19	R13181	B117	R14286	E116	R15137	D27	R17602	A106	R19006	C11	R19350	C91	R19554	A69	R19719	C37	R26453	A121	U14104	C59
Q19311	B77	Q26405	A121	R11919	B31	R12924	C19	R13182	E116	R14287	E116	R15144	B28	R17603	A107	R19007	D10	R19352	B93	R19555	A92	R19720	C35	R26454	E122	U14501	D7
Q19312	A79	Q26408	A122	R11920	A31	R12925	B19	R13183	E116	R14301	D4	R15152	A25	R17604	B107	R19008	E11	R19353	B95	R19556	B70	R19721	C37	R26461	D123	U14601	C55
Q19314	A78	Q26409	D122	R11921	C31	R13101	D110	R13184	C117	R14302	E5	R15190	C26	R17605	B107	R19009	D12	R19355	A93	R19557	C66	R19722	A35	R26462	E122	U14701	D54
Q19315	B78	Q26410	A124	R11926	C30	R13102	D111	R13185	D117	R14303	E2	R15191	C25	R17606	B107	R19010	D12	R19356	B93	R19558	B73	R19723	C37	R26463	E122	U14801	E21
Q19316	A78	Q26901	A41	R11927	B31	R13103	D111	R13186	D117	R14304	E5	R15192	C26	R17608	A106	R19011	D39	R19358	B94	R19559	C70	R19725	C35	R26464	B126	U14801	E22
Q19317	B78	Q26902	B41	R11928	B31	R13105	B2	R13187	A112	R14305	E6	R15193	C25	R17609	B106	R19012	D10	R19360	C79	R19560	B72	R19726	C35	R26465	B124	U16201	A4
Q19320	B94	R	D15	R12201	A15	R13106	B2	R13189	B114	R14306	E6	R15302	A26	R17610	B107	R19013	D10	R19361	E79	R19561	C69	R19727	C36	R26466	A124	U16201	B10
Q19322	E79	R FOCUS	D18	R12202	A4	R13107	D115	R13190	B13	R14307	D1	R15318	A25	R17611	B1	R19014	E12	R19362	A95	R19562	A72	R19728	C34	R26467	B124	U16201	B2
Q19323	B79	R SCREEN	E18	R12203	A4	R13108	C110	R13191	D117	R14308	E4	R17102	D99	R17701	D105	R19015	E12	R19363	B95	R19563	A66	R19805	C21	R26468	A124	U16201	D2
Q19325	D74	R YOKE	D13	R12205	A15	R13109	D110	R13194	C117	R14309	E5	R17103	B100	R17704	C106	R19016	D11	R19372	B76	R19564	D69	R19806	C21	R26469	A124	U17501	E99
Q19326	D74	R11401	B83	R12208	A14	R13110	C110	R13195	C118	R14310	E4	R17104	B100	R17705	C107	R19018	E10	R19373	B79	R19566	A66	R19807	C21	R26470	A124	U17701	A106
Q19329	D75	R11402	B84	R12209	B14	R13111	C111	R13196	C117	R14311	D4	R17105	C100	R17706	C106	R19019	E10	R19374	E76	R19567	D74	R19808	C21	R26472	B126	U18100	C46
Q19330	E75	R11403	B83	R12210	B14	R13112	C111	R13197	C117	R14312	D1	R17106	C101	R17707	D107	R19020	E11	R19375	D79	R19570	C66	R19809	C22	R26705	C81	U18101	C59
Q19331	D75	R11404	B84	R12302	B3	R13113	C111	R13198	A112	R14313	E1	R17107	C100	R17708	D104	R19022	C9	R19376	C92	R19574	B69	R19810	D22	R26707	C81	U19001	D10
Q19332	E75	R11405	D30	R12303	A5	R13114	B111	R13199	E115	R14314	D1	R17108	C101	R17709	D107	R19023	C10	R19377	B95	R19576	D66	R19811	C23	R26901	B6	U19001	D11
Q19334	C77	R11406	D30	R12304	B4	R13115	C111	R13200	D116	R14320	D1	R17112	D102	R17810	B97	R19024	C10	R19408	B73	R19577	D70	R19821	B21	R26902	B6	U19500	A66
Q19335	D77	R11407	D30	R12305	B1	R13116	B111	R13301	E115	R14401	E9	R17113	B102	R18101	D46	R19025	C10	R19409	B77	R19578	A70	R19822	B22	R26903	A6	U19501	A67
Q19338	C78	R11410	E31	R12306	B4	R13117	B111	R13302	A115	R14402	E7	R17114	D103	R18103	E46	R19050	E12	R19410	D74	R19579	A71	R19823	B22	R26904	B6	U19502	E38
Q19339	D78	R11411	D31	R12307	D109	R13118	B111	R13303	C117	R14403	E10	R17115	B103	R18104	D45	R19051	E12	R19411	D77	R19580	B70	R19824	A23	R26906	B5	U19503	A68
Q19340	D78	R11412	D31	R12308	B5	R13119	B111	R13306	A112	R14501	D8	R17116	C103	R18105	C59	R19057	E12	R19412	B90	R19581	B71	R19825	A22	R26907	C6	U19503	C69
Q19341	D78	R11413	D30	R12309	B4	R13120	B111	R13307	B112	R14503	E109	R17117	C104	R18106	D44	R19100	B63	R19413	B92	R19582	C70	R19826	B23	R26908	C6	U19503	C70
Q19349	B90	R11414	D30	R12310	A3	R13121	E113	R13308	B112	R14504	E110	R17118	D103	R18107	C43	R19130	C14	R19500	A19	R19583	C71	R19827	B22	R26909	B6	U19503	C70
Q19350	B90	R11415	E30	R12311	B2	R13122	A111	R13309	B112	R14505	E111	R17119	D104	R18108	C42	R19131	D15	R19501	B20	R19584	C71	R19828	B23	R26910	C7	U19504	B69
Q19353	B91	R11420	E31	R12312	B1	R13123	E113	R13311	A11	R14507	D8	R17120	C103	R18109	C43	R19132	C15	R19502	B19	R19585	C71	R19829	B23	R26911	C7	U19504	B70
Q19354	C91	R11421	D31	R12313	C2	R13124	E112	R13312	A13	R14508	D6	R17121	C98	R18110	D42	R19135	D15	R19503	E70	R19586	B70	R23901	A127	R26912	B7	U19504	D69
Q19355	B91	R11422	D30	R12314	B4	R13125	D109	R13313	B11	R14509	D6	R17122	D102	R18111	D42	R19136	D15	R19504	E71	R19587	B71	R26401	A126	R26920	A41	U19700	B36
Q19356	C91	R11423	D30	R12315	C2	R13126	B111	R13314	E111	R14510	D5	R17123	C104	R18112	D43	R19139	C16	R19505	E71	R19588	C70	R26402	B126	R26921	A41	U19701	B33
Q19359	A93	R11601	A5	R12316	C3	R13127	E112	R13316	D111	R14511	D7	R17124	D103	R18113	D43	R19153	C65	R19506	B66	R19589	D71	R26403	A126	R26922	A42	U26401	C124
Q19360	B93	R11602	D84	R12317	C1	R13128	B118	R13317	D110	R14512	C64	R17125	C99	R18114	C45	R19154	D37	R19507	B66	R19592	D69	R26404	A125	R26923	A42	U26404	B127
Q19363	A94	R11603	D84	R12701	B13	R13129	D112	R13318	D110	R14517	D6	R17126	B100	R18115	C46	R19155	D37	R19508	B65	R19593	D69	R26405	D122	R26924	B8	U26405	E122
Q19364	B94	R11604	D84	R12702	E3	R13130	B117	R13319	D110	R14518	D6	R17204	B103	R18116	C47	R19190	C17	R19509	E68	R19594	A69	R26406	D55	R26925	C8	U26406	D127
Q19365	A94	R11605	B83	R12703	C13	R13131	B117	R13372	E111	R14519	D5	R17205	A100	R18117	B45	R19300	B74	R19510	E68	R19595	C70	R26407	C122	R26926	B41	U26408	B126
Q19366	B94	R11606	E83	R12704	A12	R13134	A118	R13401	A109	R14520	D5	R17301	B101	R18118	B46	R19301	C76	R19511	B65	R19596	B70	R26408	B121	R26928	B7	U26408	B126
Q19500																											

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Item No.	Type No.	Mfr. Part No.	NTE Part No.	Item No.	Type No.	Mfr. Part No.	NTE Part No.	Item No.	Type No.	Mfr. Part No.	NTE Part No.
# CR11600	-	159429	NTE5019T1	CR19303, 04, 05	-	226466	-	Q18107, 08, 09	-	216434	NTE2408
CR11601	1N4148	198589	NTE519	CR19306	-	232709	-	Q18110, 11	-	215496	-
CR12301	-	227051	-	CR19307, 08	-	227362	-	Q18112	-	216434	NTE2408
CR12702	TEA6415C	235447	-	CR19309, 10, 11	-	226466	-	Q18113	-	215496	-
CR12703	-	232709	-	CR19313, 14	-	227362	-	Q19001	-	230049	-
CR12901	-	232709	-	CR19318	-	232709	-	Q19003, 04	BC546B	239193	NTE123AP
CR12902	-	164874	NTE177	CR19327 Thru	-	-	-	Q19013, 30	-	216434	NTE2408
CR13501	-	164874	NTE177	CR19332	-	227066	-	Q19131	-	215496	-
CR14102	-	176296	NTE552	CR19337 Thru	-	-	-	Q19300, 01	-	239193	NTE123AP
CR14106	-	243636	-	CR19342	-	232709	-	Q19302, 03	-	217309	NTE261
CR14107	-	223339	-	CR19500	-	239195	-	Q19304	BF421	227406	NTE288
CR14108	-	238099	-	CR19501	-	237472	-	Q19305	BF420	226453	NTE399
CR14111	-	232709	-	CR19503	-	232709	-	Q19306	-	217309	NTE261
CR14113	-	176296	NTE552	CR19701	-	239132	-	Q19307	TIP127	242712	NTE262
CR14115	-	217306	-	CR19703	-	140971	NTE558	Q19310, 11	-	239193	NTE123AP
CR14116	-	223339	-	CR19704, 05	-	176296	NTE552	Q19312	TIP122	217309	NTE261
# CR14210	RS606	214649	NTE5331	CR19707, 08	-	176296	NTE552	Q19314	BF421	227406	NTE288
CR14302	1N4148	198589	NTE519	CR19709, 10	-	164590	NTE580	Q19315	-	226453	NTE399
CR14303	-	176296	NTE552	CR19711	-	232545	-	Q19316	TIP122	217309	NTE261
CR14401	-	140971	NTE558	CR19712	-	235831	-	Q19317, 20	TIP127	242712	NTE262
CR14403	-	227291	-	CR19714	-	226456	-	Q19322, 23	TIP127	242712	NTE262
CR14501	-	155276	NTE116	CR19715	-	239133	-	Q19325, 26	BC546B	239193	NTE123AP
CR14603	-	139706	NTE177	CR19716	-	226783	-	Q19329	BF421	227406	NTE288
CR14604	-	155276	NTE116	CR19717 Thru	-	-	-	Q19330	BF420	226453	NTE399
CR14701	-	241304	-	CR19720	-	147015	NTE125	Q19331	TIP122	217309	NTE261
CR14702	-	243636	-	CR19800, 04	-	232709	-	Q19332	TIP127	242712	NTE262
CR14703	-	207878	NTE519	CR26401	-	223651	-	Q19334, 35	BC546B	239193	NTE123AP
CR14704	-	237472	-	CR26402	-	232709	-	Q19338	BF421	227406	NTE288
CR14705	-	237473	-	CR26901, 02, 03	-	220638	NTE5014A	Q19339	BF420	226453	NTE399
CR14800	-	243636	-	CR26905	-	250663	-	Q19340	TIP122	217309	NTE261
# CR14901	-	157301	NTE177	Q11600	-	177788	NTE31	Q19341	TIP127	242712	NTE262
# CR14902	-	159429	NTE5019T1	Q11601, 02	-	216434	NTE2408	Q19349, 50	BC546B	239193	NTE123AP
CR15105	-	237471	-	Q11900	-	216434	NTE2408	Q19353	BF421	227406	NTE288
CR15106	-	232709	-	Q12301	-	215496	-	Q19354	BF420	226453	NTE399
CR15191	-	242705	-	Q12302	-	219412	-	Q19355	TIP122	217309	NTE261
CR15192	1N4148	198589	NTE519	Q12701 Thru	-	-	-	Q19356	TIP127	242712	NTE262
CR15193	-	232709	-	Q12705	-	215496	-	Q19359, 60	BC546B	239193	NTE123AP
CR15194	1N4148	198589	NTE519	Q12901, 02, 03	-	216434	NTE2408	Q19363	BF421	227406	NTE288
CR15301	-	207878	NTE519	Q12904, 06	-	215496	-	Q19364	BF420	226453	NTE399
CR17101	-	215493	-	Q13101, 03	-	215496	-	Q19365	TIP122	217309	NTE261
CR17102	-	215494	-	Q13104	-	216434	NTE2408	Q19366	TIP127	242712	NTE262
CR17103	-	215493	-	Q13109	-	215496	-	Q19500, 01, 02	BC547C	239194	NTE123AP
CR17104	-	233085	-	Q13301	-	215496	-	Q19503	-	215496	-
CR17105	-	215494	-	Q13501	-	215496	-	Q19504, 05	-	229032	-
CR17106, 07	-	215493	-	Q13503	-	216434	NTE2408	Q19508	-	215496	-
CR17108	-	215494	-	Q14101	IRF740	237469	NTE2397	Q19509 Thru	-	-	-
CR17109, 10, 11	-	215493	-	Q14301	-	146851	NTE287	Q19514	-	229032	-
CR17112	-	227082	-	Q14302	-	216434	NTE2408	Q19516	-	229032	-
CR17113	-	215493	-	Q14401	-	237470	-	Q19517, 18	-	215496	-
CR17301	-	215493	-	Q14501	-	216434	NTE2408	Q19519	-	229032	-
CR17303, 04, 05	-	215492	-	Q14502	-	215496	-	Q19521, 22, 23	-	214644	-
CR17307	-	227082	-	Q14503	-	216434	NTE2408	Q19700	-	229220	-
CR17601, 02	-	227051	-	Q14802	-	217309	NTE261	Q19701, 02, 03	-	215496	-
CR17701	-	215492	-	# Q14901	-	147665	NTE159	Q19704	-	216434	NTE2408
CR17702	-	215494	-	Q15102	2SC4544	208434	NTE376%	Q19705	-	215496	-
CR17703	-	215493	-	Q15106	BF420	226453	NTE399	Q19706, 07, 08	-	216434	NTE2408
CR18101, 02	-	232709	-	Q15107	BF421	227406	NTE288	Q19802	BF420	226453	NTE399
CR19003	-	232709	-	Q15108, 90	BC547C	239194	NTE123AP	Q19803	BF421	227406	NTE288
# CR19005	-	214652	-	Q17101	-	226973	-	Q19804	-	216434	NTE2408
CR19010	-	232709	-	Q17301	-	227008	-	Q19805, 06, 07	-	215496	-
CR19011	-	239133	-	Q17503, 04	-	215496	-	Q26401	-	215496	-
CR19100	-	226456	-	Q17505	-	231534	-	Q26402	-	216434	NTE2408
CR19130	-	232709	-	Q17601	-	226981	-	Q26403, 04, 05, 08	-	215496	-
CR19131	-	227935	-	Q18100, 01	-	216434	NTE2408	Q26409	-	216434	NTE2408
CR19132	-	232709	-	Q18102	-	219412	-	Q26410	-	215496	-
CR19200	-	227066	-	Q18103, 04	-	216434	NTE2408	Q26901	-	215496	-
CR19301, 02	-	227362	-	Q18105, 06	-	215496	-	Q26902	-	216434	NTE2408

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Item No.	Type No.	Mfr. Part No.	NTE Part No.
U11401	-	237474	-
U11600	CXA2074S	237930	-
U11901	TDA7499	235446	-
U13101	ST9296N9B1/JBE	251579	-
U13102	ST24C08	246446	-
U14101	TDA4605	237476	-
U14104	L78S75CV	231526	-
U14501	TDA8177	215531	-
U14601	L7852CV	241752	-
U14701	TDA8132	236646	-
# U14801	LM358WH	223682	-
# U16201	LA7612N	241266	-
U17501	-	231529	-
U17701	-	227007	-
U18100	M65616SP-A	248620	-
U18101	LM317T	214704	NTE956
U19001	LM358WN	223682	-
U19500	24WC16P	239198	-
U19501	STV2040T1	239199	-
U19502	-	237478	NTE960
U19503, 04	TL084CN	239200	NTE859
U19700	-	215530	NTE7125
# U19701	-	223653	-
U26401	-	241781	-
U26404	-	246624	-
U26405	HC123A	239151	-
U26406	-	246625	-
U26408	-	246626	-
U26901	TEA6415C	235447	-

Item No.	Function/Rating	Mfr. Part No.	Notes
C11612, 13	22pF 5% 50V NPO	194903	-
C12310	120pF 5% 50V NPO	194902	-
C12701	120pF 5% 50V NPO	194902	-
C12803	13pF 5% 50V NPO	236629	-
C12901, 02, 03	220pF 5% 50V NPO	205551	-
C12906	82pF 5% 50V NPO	192049	-
C13106, 07	56pF 5% 50V NPO	214741	-
C13112	330pF 5% 50V NPO	205227	-
C13120, 21	100pF 5% 50V NPO	193340	-
C13146, 47	100pF 5% 50V NPO	193340	-
C13153, 54	100pF 5% 50V NPO	193340	-
C13166	120pF 5% 50V NPO	174414	-
C13168	100pF 5% 50V NPO	193340	-
C13308 Thru			
C13311	22pF 5% 50V NPO	194903	-
C13312	100pF 5% 50V NPO	193340	-
# C14105	33μF 5% 200V	217299	-
# C14107, 09	470pF 5% 2kV	227068	-
C14110	470pF 10% 500V NPO	227050	-
# C14122	.033 630V	-	-
	.033 5% 400V	214747	-
# C14126, 36, 37	470pF 5% 2kV	227068	-
# C14144	.01 10% 50V	240934	-
# C14145	100μF 20% 63V	237425	-
# C14146	.0068 10% 100V	232362	-
# C14202	.22 250VAC	-	-
	.22 20% 125VAC	231451	-
# C14203, 04, 05	680pF 10% 1kV	190538	-
# C14206	470pF 250VAC	-	-
	470pF 10% 250VAC	250102	-
# C14207	.005 20% 120V	195697	-
# C14208	680μF 20% 200V	190560	-
# C14209	.1 20% 125VAC	229322	-
# C14210	680pF 10% 1kV	190538	-
C14303	470pF 5% 50V NPO	214732	-
C14310	15pF 1% 250V NPO	223899	-

Item No.	Function/Rating	Mfr. Part No.	Notes
C14311	47pF 5% 50V NPO	210689	-
C14313, 14	100pF 5% 50V NPO	193340	-
C14401	470pF 5% 50V NPO	214732	-
# C14402	.0146 1.6kV	239109	-
# C14403	.94 5% 250V	231174	-
# C14404	2.2μF 20% 200V	238291	-
# C14405	.0047 10% 250V	142765	-
# C14502	3300μF 20% 25V	227913	-
C14508	470pF 5% 50V NPO	214732	-
C14702, 04	680pF 10% 1kV	190538	-
C14707	470pF 10% 500V NPO	227050	-
C14710	.01 20% 1kV	137583	-
# C14716	470pF 5% 2kV	227068	-
# C14800	.056 5% 600V	230982	-
C14805	6.8μF 20% 50V NP	238292	-
C15103	.0033 10% 3kV	226300	-
C15107	100pF 5% 50V NPO	143871	-
C17101	180pF 2% 50V NPO	241265	-
C17102, 03	.001 10% 50V NPO	239174	-
C17104	330pF 5% 50V NPO	205227	-
C17105, 07, 08	.001 10% 50V NPO	239174	-
C17109	22pF 5% 50V NPO	194903	-
C17110	39pF 5% 50V NPO	181090	-
C17111	.001 10% 50V NPO	239174	-
C17112	3pF ±.1pF 50V NPO	227088	-
C17113	1.5pF ±.1pF 50V NPO	223146	-
C17114	.001 10% 50V NPO	239174	-
C17115	330pF 5% 50V NPO	205227	-
C17116	.001 10% 50V NPO	239174	-
C17117	39pF 5% 50V NPO	202905	-
C17118	180pF 2% 50V NPO	241265	-
C17119 Thru			
C17122	.001 10% 50V NPO	239174	-
C17123	20pF 5% 50V NPO	220150	-
C17124	39pF 5% 50V NPO	202905	-
C17125	.001 10% 50V NPO	239174	-
C17126	150pF 5% 50V NPO	214032	-
C17127	39pF 5% 50V NPO	202905	-
C17210, 11, 12	100pF 5% 50V NPO	193340	-
C17213	.001 10% 50V NPO	239174	-
C17214, 15	100pF 5% 50V NPO	193340	-
C17301	.001 10% 50V NPO	239174	-
C17302	27pF 5% 50V NPO	197604	-
C17305	27pF 5% 50V N750	214760	-
C17306	27pF 5% 50V NPO	197604	-
C17307	27pF NPO	-	-
	.001 10% 50V NPO	239174	-
C17308	120pF 5% 50V NPO	194902	-
C17309	27pF 5% 50V NPO	197604	-
C17310	.75pF ±.1pF 50V NPO	227269	-
C17311	27pF 5% 50V N750	214760	-
C17312	18pF 2% 50V N220	227077	-
C17313, 14	470pF 5% 50V NPO	214732	-
C17316	27pF 5% 50V NPO	197604	-
C17502, 03	22pF 5% 50V NPO	194903	-
C17504	33pF 5% 50V NPO	194911	-
C17511	27pF 5% 50V NPO	197604	-
C17516	.001 10% 50V NPO	239174	-
C17517	10pF 5% 50V NPO	200537	-
C17601	.001 10% 50V NPO	239174	-
C17602	100pF 5% 50V NPO	193340	-
C17604	.001 10% 50V NPO	239174	-
C17605	330pF 5% 50V NPO	205227	-
C17607	33pF 5% 50V NPO	194911	-
C17608, 09, 10	100pF 5% 50V NPO	193340	-
C17611	27pF 5% 50V NPO	197604	-
C17613	100pF 5% 50V NPO	193340	-
C17614	.001 10% 50V NPO	239174	-

Item No.	Function/Rating	Mfr. Part No.	Notes
C17615	100pF 5% 50V NPO	193340	-
C17616	22pF 5% 50V NPO	194903	-
C17617 Thru			
C17622	100pF 5% 50V NPO	193340	-
C17701	1pF ±.1pF 50V NPO	227084	-
C17702	2pF ±.1pF 50V NPO	227074	-
C17703	2pF ±.1pF 50V N750	226965	-
C17704	1pF ±.1pF 50V NPO	227084	-
C17705	27pF 5% 50V N750	214760	-
C17706	.001 10% 50V NPO	239174	-
C17707	1pF ±.1pF 50V NPO	227084	-
C17708	3pF ±.1pF 50V NPO	227088	-
C17709	68pF 10% 50V NPO	193339	-
C17710	3pF ±.1pF 50V NPO	227088	-
C17711	1pF ±.1pF 50V NPO	227084	-
C17712	3pF ±.1pF 50V NPO	227088	-
C17713 Thru			
C17717	.001 10% 50V NPO	239174	-
C17801	.001 10% 50V NPO	239174	-
C18103	100pF 5% 50V NPO	193340	-
C18104	220pF 5% 50V NPO	205551	-
C18112	10pF 5% 50V NPO	200537	-
C18114	20pF 5% 50V NPO	220150	-
C18122	47pF 5% 50V NPO	210689	-
C18124	100pF 5% 50V NPO	193340	-
C18127	18pF 5% 50V NPO	200539	-
C18129	100pF 5% 50V NPO	193340	-
C18134	82pF 5% 50V NPO	192049	-
C18137	220pF 5% 50V NPO	205551	-
C18138	330pF 5% 50V NPO	205227	-
C18139	27pF 5% 50V NPO	197604	-
C18142	91pF 5% 50V NPO	192057	-
C18143	82pF 5% 50V NPO	192049	-
C18155	22pF 5% 50V NPO	194903	-
C18156	18pF 5% 50V NPO	214028	-
C18157	82pF 5% 50V NPO	192049	-
C18158	10pF 5% 50V NPO	200537	-
C18159	120pF 5% 50V NPO	194902	-
C18160	150pF 5% 50V NPO	214032	-
C18162, 63	100pF 5% 50V NPO	193340	-
C18164	150pF 5% 50V NPO	214032	-
C18165, 66, 67	47pF 5% 50V NPO	210689	-
C18168	150pF 5% 50V NPO	214032	-
# C19001	.0033 1.6kV	210773	-
# C19010	.001 10% 1kV	242710	-
# C19017	.01 20% 2kV	252696	-
C19301 Thru			
C19306	470pF 10% 500V NPO	227050	-
C19322 Thru			
C19327	15pF 1% 250V NPO	223899	-
C19344 Thru			
C19349	47pF 5% 50V NPO	210689	-
C19503	22pF 5% 50V NPO	194903	-
C19504	.001 5% 50V NPO	239174	-
C19507	22pF 5% 50V NPO	194903	-
C19509	220pF 5% 50V NPO	205551	-
C19524	330pF 5% 50V NPO	205227	-
C19526 Thru			
C19529	330pF 5% 50V NPO	205227	-
C19531	330pF 5% 50V NPO	205227	-
C19543	.001 5% 50V NPO	239174	-
C19545 Thru			
C19550	750pF 5% 50V NPO	225545	-
C19557 Thru			
C19563	.001 5% 50V NPO	239174	-
C19567, 68	.001 5% 50V NPO	239174	-
C19569 Thru			
C19574	820pF 5% 50V NPO	239176	-

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PARTS LIST continued

Item No.	Function/Rating	Mfr. Part No.	Notes	Item No.	Function/Rating	Mfr. Part No.	Notes	Item No.	Function/Rating	Mfr. Part No.	Notes
C19575, 77	.001 5% 50V NPO	239174	-	# L14201	Line Choke	190507	-	R11602	3900 2% 1/10W	197907	-
C19581, 82	22pF 5% 50V NPO	194903	-	L14401	4μH	215505	-	# R11610	10 5% 1/4W Nonflammable	241259	-
C19715	220pF 5% 50V NPO	205551	-	# L14402	Horizontal Linearity	239117	-	R11616	61.9K 1% 1/10W	225705	-
# C19718	.033 5% 400V	214747	-	L14601	10μH	175409	-	R11619	220 2% 1/4W	175324	-
# C19721 Thru				L14702	47μH	190729	-	R11625, 27	2200 2% 1/10W	244903	-
# C19724	680pF 20% 1kV	190538	-	L14801	320μH	236582	-	R11909	360 2% 1/8W	202014	-
# C19725	680pF 5% 2kV	227069	-	# L15101	150μH	189987	-	# R11910	4.7 5% 1/4W	200197	-
C26402	220pF 5% 50V NPO	205551	-	L15102	150μH	189987	-	R11912	360 2% 1/8W	202014	-
C26413 Thru				# L15301	150μH	189987	-	# R11913	4.7 5% 1/4W	200197	-
C26416	56pF 10% 50V NPO	214038	-	L16501	220μH	195707	-	R12208	27K 2% 1/10W	205245	-
C26417, 18	68pF 5% 50V NPO	193339	-	L17101	-	237456	-	R12209	30K 2% 1/10W	200176	-
C26421	100pF 5% 50V NPO	193340	-	L17102	-	227003	-	R12302	620 2% 1/8W	181493	-
C26423	360pF 2% 50V NPO	246622	-	L17103	-	227005	-	R12304	3900 2% 1/10W	197907	-
C26433, 35, 37	33pF 2% 50V NPO	239138	-	L17104	-	226992	-	R12311, 12	120K 2% 1/10W	207834	-
C26438	22pF 2% 50V NPO	223698	-	L17105	-	227006	-	R12314	750 2% 1/10W	202914	-
C26453	100pF 2% 50V NPO	227089	-	L17106	3.9μH	200559	-	R12317	2200 2% 1/10W	244903	-
C26460	330pF 2% 50V NPO	241779	-	L17107	-	226987	-	R12704, 05, 06	1500 2% 1/10W	197628	-
C26461	220pF 5% 50V NPO	205551	-	L17108	-	237457	-	# R12709	27K 10% 1/2W	238958	-
C26901, 02	10pF 5% 50V NPO	200537	-	L17109	-	226993	-	R12726	2700 2% 1/10W	197905	-
C26916	2.2μF 20% 50V NP	190527	-	L17110	-	226994	-	R12730	1240 1% 1/4W	196030	-
CF12302	Filter	195702	4.5MHz	L17111	-	226998	-	R12905	39 2% 1/10W	205322	-
CF12303	Trap	238296	4.5MHz	L17112	-	237458	-	R12906	240 2% 1/10W	197624	-
# F14201	Fuse	175425	5Amp, 125V	L17113	-	227000	-	R12908	180 2% 1/10W	194918	-
FB11901	Ferrite Bead	161237	-	L17114	-	237459	-	R12909	39 2% 1/10W	205322	-
FB12701	Ferrite Bead	161237	-	L17115	-	227000	-	R12911	270 2% 1/10W	197623	-
FB12901	Ferrite Bead	223785	-	L17116	-	237460	-	R12912	39 2% 1/10W	205322	-
FB13101	Ferrite Bead	226467	-	L17117, 18	-	237461	-	R12914	820 2% 1/10W	192088	-
FB14105	Ferrite Bead	223785	-	L17301	-	237462	-	R12917	300 2% 1/8W	181055	-
FB14106, 07, 08	Ferrite Bead	237504	-	L17302	-	226988	-	R12918	5100 2% 1/10W	205345	-
FB14114, 15	Ferrite Bead	237504	-	L17303	-	227005	-	R12919	2200 2% 1/10W	244903	-
FB14118, 19	Ferrite Bead	237504	-	L17304	-	237464	-	R12920	3900 2% 1/10W	197907	-
FB14120	Ferrite Bead	226467	-	L17305	-	237465	-	R12921	22K 2% 1/10W	205357	-
FB14402	Ferrite Bead	229324	-	L17306	-	226990	-	R13109, 10	560 2% 1/10W	205338	-
FB14800	Ferrite Bead	232765	-	L17307	-	226991	-	R13123	100K 1% 1/10W	215221	-
FB15101	Ferrite Bead	161237	-	L17308	-	237466	-	R13124	47.5K 1% 1/10W	237430	-
FB17201	Ferrite Bead	215546	-	L17601, 02	-	226999	-	R13150	1500 2% 1/10W	197628	-
FB17202	Ferrite Bead	240150	-	L17603	-	237467	-	R13156	1200 2% 1/10W	194920	-
FB17203	Ferrite Bead	215546	-	L17604	-	237468	-	R13182	1000 2% 1/10W	197638	-
FB17501	Ferrite Bead	240150	-	L17701, 02	-	226986	-	R13183	2700 2% 1/10W	197905	-
FB17601, 02	Ferrite Bead	240150	-	L17703	-	226989	-	R13318	1500 2% 1/8W	181482	-
FB17603, 04	Ferrite Bead	223785	-	L17704	-	226996	-	R13503	82K 2% 1/10W	197906	-
FB19200	Ferrite Bead	226467	-	L18100	15μH	197613	-	R13507	27K 2% 1/10W	205245	-
FB19301 Thru				L18101	18μH	195711	-	# R14106	8.2 5% 1/2W	120595	-
FB19318	Ferrite Bead	237504	-	L18102	5.6μH	227886	-	# R14107	1 5% 1/4W Nonflammable	241262	-
FB19500 Thru				L18103	8.2μH	149170	-	R14110	20K 5% 3W	237431	-
FB19508	Ferrite Bead	239201	-	L18104	10μH	160518	-	R14122	5100 2% 1/10W	205345	-
FB19509	Ferrite Bead	161237	-	L18105	12μH	210687	-	# R14125	100 5% 1/4W	198667	-
FB19510	Ferrite Bead	239201	-	L18106	27μH	190017	-	R14126	30K 5% 3W	238295	-
FB19511	Ferrite Bead	237504	-	L18107	15μH	197613	-	# R14135	18 5% 1/2W	241320	-
FB19701 Thru				L18108	5.6μH	227886	-	R14147	5490 .1% 1/4W	237434	-
FB19711	Ferrite Bead	161237	-	L18109	4.7μH	197614	-	R14149	169 .1% 1/4W	241751	-
FB26401	Ferrite Bead	226467	-	L18110	10μH	207880	-	# R14153	2 5% 3W	237436	-
IR13401	Receiver	245282	IR, TFMT1560	L18112	10μH	235445	-	R14159	12K 5% 3W	227393	-
J17801	Jack	215543	75 RF Input	L19501 Thru				# R14170	10 5% 1/4W Nonflammable	241259	-
J23904	Socket	227334	Gemstar IR Output	L19506	560μH	239192	-	# R14200	120K 20% 1/2W	238903	-
J26701	Jack	227816	Audio Input 2 Left/Mono	L19507 Thru				# R14202	2.7M 10% 1/2W	217662	-
J26702	Jack	227817	Audio Input 2 Right	L19511	10μH	175409	-	R14286	1200 2% 1/10W	194920	-
J26901	Jack	239389	Assembly	L19700 Thru				# R14305	3600 2% 3W	181235	-
J26902	Jack	239389	Assembly	L19703	22μH	215504	-	R14307	1500 2% 1/10W	197628	-
J26903	Socket	195705	SVHS	L26401	2.2μH	197616	-	# R14401	4700 5% 1W	242617	-
# KS15101	Socket	251137	CRT	L26402, 03	2.2μH	239143	-	# R14403	820 5% 1W	175349	-
L12302	VCO	215502	-	L26409	2.2μH	197616	-	R14504	5100 2% 1/10W	205345	-
L12303	FM	233056	-	L26901	100μH	160186	-	# R14507	1.5 5% 2W	237441	-
L12304	10μH	160518	-	# PW14201	Line Cord	241251	AC, Polarized	R14510	510 2% 1/4W	175307	-
L13105	4.7μH	237451	-	# R11401, 03	2200 5% 1/4W	175042	-	# R14511	1 5% 2W	145384	-
L13107	27μH	190017	-	# R11410	300 5% 1/4W	241257	-	# R14517	15 5% 1W	191517	-
L14102	22μH	215504	-	# R11412, 21	2200 20% 1/4W	237429	-	# R14518	220 5% 2W	175310	-

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Item No.	Function/Rating	Mfr. Part No.	Notes	Item No.	Function/Rating	Mfr. Part No.	Notes	Item No.	Function/Rating	Mfr. Part No.	Notes	
# R14604	3.3 5% 2W Nonflammable	223680	-	# R19154	47	-	-	R19821, 22, 23	20K 2% 1/8W	205292	-	
# R14701	10 20% 1/2W	241261	-		100 5% 1/4W Nonflammable	198667	-	R19825, 27, 29	5100 2% 1/8W	240939	-	
# R14703	.56 5% 2W	239115	-	R19155	10 2% 1/4W Nonflammable	242025	-	R23901	51 5% 10W	241774	-	
# R14704	82K 10% 1/2W	239116	-	# R19300	9100 5% 1/4W	176888	-	R26462	357K 1% 1/10W	241780	-	
# R14705	1 5% 1/4W Nonflammable	241262	-	# R19301	2.2 1% 2W	239183	-	# R26705, 07	2200 5% 1/2W	246613	-	
# R14716	27 5% 3W	237443	-	# R19306	180 5% 1/4W Nonflammable	242627	-	R26920, 21	560 2% 1/8W	182822	-	
# R14802	100 5% 1/4W Nonflammable	198667	-	# R19309	2.2 1% 2W	239183	-	R26922	1500 2% 1/8W	181482	-	
R14803	28K 1% 1/4W	195731	-		R19310, 13	100 2% 1/4W	175325	R26924	560 2% 1/8W	182822	-	
R14806	40.2K 1% 1/4W	219026	-	# R19314	180 5% 1/4W Nonflammable	242627	-	R26925	560 2% 1/10W	205338	-	
# R14808	1000 5% 1/4W	237444	-	# R19323	2.2 1% 2W	239183	-	R26928	560 2% 1/8W	182822	-	
# R14810	1 5% 1W Nonflammable	233165	-		R19324, 27	100 5% 1/4W	175325	R26929	560 2% 1/10W	205338	-	
# R14901	100 5% 1/4W Nonflammable	198667	-	# R19328	180 5% 1/4W Nonflammable	242627	-	R26932	560 2% 1/8W	182822	-	
# R14907	27.4K 1% 1/4W	151883	-	# R19331	2.2 1% 2W	239183	-	R26933	560 2% 1/10W	205338	-	
# R14908	39.2K 1% 1/4W	190469	-		R19332, 35	100 2% 1/4W	175325	RN14501	Resistor Network	215499	-	
R14909	5100 2% 1/4W	175417	-	# R19336	180 5% 1/4W Nonflammable	242627	-	SF12301	Filter	217318	SAW	
# R15102	12K 2% 3W	242703	-	# R19345	2.2 1% 2W	239183	-	SP1, 2	Speaker	241056	5" X 7", 8 Ohms, 10W	
# R15105	1000 5% 1/2W	243994	-	# R19350	180 5% 1/4W Nonflammable	242627	-	SW13410 (1)	Switch	207842	Channel Up	
# R15108	680 2% 1/4W	242615	-	# R19353	2.2 1% 2W	239183	-	SW13410 (2)	Switch	245531	Channel Up	
# R15137	2200 5% 1/2W	247669	-	# R19358	180 5% 1/4W Nonflammable	242627	-	SW13412 (1)	Switch	207842	Power	
R15152	100 2% 1/4W	175325	-		R19372 Thru			SW13412 (2)	Switch	245531	Power	
R15192	3300 2% 1/4W	175352	-		R19377	12K 2% 1/4W	175041	-	SW13420 (1)	Switch	207842	Channel Down
R15318	100 2% 1/4W	242623	-		R19508 Thru			SW13420 (2)	Switch	245531	Channel Down	
R17102	1200 2% 1/10W	194920	-	R19511	1000 2% 1/10W	197638	-	SW13421 (1)	Switch	207842	Volume Up	
R17106	39 2% 1/10W	205322	-	R19514	1000 2% 1/10W	197638	-	SW13421 (2)	Switch	245531	Volume Up	
R17107	470K 2% 1/10W	205381	-	R19515	7500 2% 1/4W	175761	-	SW13430 (1)	Switch	207842	Menu	
R17108	39 2% 1/10W	205322	-	R19519	12K 2% 1/4W	175041	-	SW13430 (2)	Switch	245531	Menu	
R17112, 14	1200 2% 1/10W	194920	-	R19524	1000 2% 1/8W	190462	-	SW13431 (1)	Switch	207842	Volume Down	
R17121	1500 2% 1/10W	197628	-	R19528	1000 2% 1/10W	197638	-	SW13431 (2)	Switch	245531	Volume Down	
R17125	91 2% 1/10W	205330	-	R19529	12K 2% 1/10W	205352	-	# T14101	Power	241754	-	
R17301	4.7 5% 3W	205411	-	# R19530	24 5% 3W	239185	-	# T14301	Horizontal Drive	215541	-	
R17306	82K 2% 1/10W	197906	-	R19532	91K 2% 1/8W	205296	-	# T14401	Horizontal Output	250694	-	
R17307	51K 2% 1/10W	205365	-	R19533	110K 2% 1/8W	239187	-	# T19001	Dynamic Focus	210878	-	
R17309, 17	91 2% 1/10W	205330	-		R19534 Thru			# T19701	Power	242708	-	
R17505, 08	47K 2% 1/10W	205364	-	R19537	562 1% 1/4W	239186	-	# V101 (1)	CRT	240795	Blue	
R17517	1500 2% 1/8W	181482	-	R19538	1000 2% 1/10W	197638	-		CRT	240621	Green	
R17605	470 2% 1/10W	194926	-	R19539	324 1% 1/4W	239188	-		CRT	240794	Red	
R17608	560 2% 1/10W	205338	-	R19540	2670 1% 1/4W	242711	-	# V101 (2)	CRT	240887	Blue	
R17609	51K 2% 1/10W	205365	-	R19543	1600 2% 1/8W	182824	-		CRT	240621	Green	
R17704, 06	51K 2% 1/10W	205365	-		R19545 Thru				CRT	240886	Red	
R17708	1200 2% 1/10W	194920	-	R19550	768 1% 1/4W	239189	-	Y12801	Crystal	161235	3.58MHz	
R18104	180 2% 1/10W	194918	-	R19551	6800 2% 1/8W	233656	-	Y13101	Crystal	230708	4MHz	
R18114, 17	360 2% 1/10W	205337	-	R19553, 55, 58	3010 1% 1/4W	239190	-	Y14300	Resonator	227064	507.5kHz	
R18121	180 2% 1/10W	194918	-	R19560, 62, 67	3010 1% 1/4W	239190	-	Y17501	Crystal	230708	4MHz	
R18123	360 2% 1/10W	205337	-	R19578, 80, 82	1070 1% 1/4W	239191	-	Y18100	Crystal	197652	14.318MHz	
# R18125	15 5% 3W	237447	-	R19584, 86, 88	1070 1% 1/4W	239191	-	Y26401	Crystal	241784	4.03MHz	
R18126	392 1% 1/8W	234552	-	R19592	3000 2% 1/8W	190464	-	#	Focus/Screen	240623	-	
R18127	243 1% 1/10W	214132	-	# R19593	15K 5% 1/4W	242628	-		PC Board	252699	CRT	
R18130	560 2% 1/10W	205338	-	# R19594 Thru					PC Board	252324	Convergence	
R18141, 43	180 2% 1/10W	194918	-	# R19597	220 5% 1/2W Nonflammable	242625	-		PC Board	250587	Convergence Power Supply	
# R19001	33K 5% 1W	176654	-		R19599	1000 2% 1/8W	190462	-	PC Board	239125	Front Panel	
# R19004	470 5% 1/4W	210230	-		R19603 Thru				PC Board	252760	Gemstar 3	
R19006	1000 2% 1/4W	175055	-	R19608	100 2% 1/4W	175325	-	#	PC Board	252691	In/Out	
R19007	2000 1% 1/4W	239177	-	R19633	1000 2% 1/8W	190462	-		PC Board	239128	Preamp	
# R19011	51 5% 1/2W	239178	-	R19634, 35, 36	1000 2% 1/10W	197638	-		Screen (1)	240793	-	
R19012	2000 1% 1/4W	239177	-	R19637, 38	768 1% 1/4W	239189	-		Screen (2)	212133	-	
R19013	82.5K 1% 1/4W	239179	-	# R19702	100K 5% 1/4W	175044	-		Splitter	250671	High Voltage	
R19014	18K 2% 1/8W	174366	-	# R19703	750K 5% 1/4W	193334	-		Transmitter	247620	Remote, CRK7	
R19015	5600 2% 1/8W	190465	-	# R19704	1200 5% 1/4W	175308	-		Yoke	240618	Blue	
R19016	43K 2% 1/4W	239180	-	# R19705	10K 5% 1/8W	206261	-		Yoke	240618	Green	
R19018	82.5K 1% 1/4W	239179	-	# R19706	1.2 5% 2W	250661	-		Yoke	240618	Red	
# R19019	.1 5% 2W	239181	-	# R19710	47 5% 2W	176806	-	# For SAFETY use only equivalent replacement part.				
# R19020	220 5% 1/2W Nonflammable	242625	-		R19719	1000 2% 1/8W	190462	% Lead configuration may vary from original.				
# R19022	30 10% 3W	226455	-	R19725, 26	1000 2% 1/8W	190462	-	(1) Used in model 52GW948YX2				
R19057	2000 2% 1/8W	189995	-	R19805	3000 2% 1/8W	190464	-	(2) Used in model 60GW948YX2.				
# R19100	680 5% 2W	239158	-	R19806, 07	20K 2% 1/8W	205292	-					
R19132, 36	1000 2% 1/8W	190462	-	R19810	3000 2% 1/8W	190464	-					
R19139	20K 2% 1/8W	205292	-	R19811	100 2% 1/4W	175325	-					