

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

Momentarily short BC14901 (see base of Q14901) 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.

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

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5436 West 78th Street
Indianapolis, IN 46268-4149

Printed in the United States of America 5 4 3 2 1

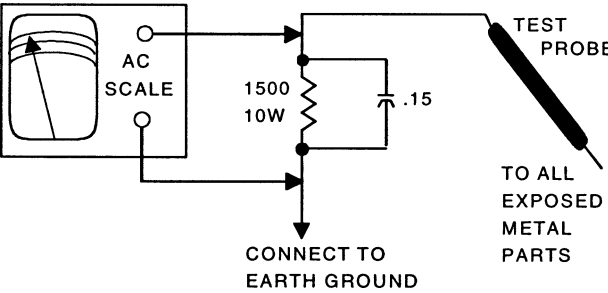
SAFETY CHECKS — FIRE AND SHOCK HAZARD

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.



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PHOTOFACT® Technical Service Data

SET 4689

MODEL PS27410YX1 (CHASSIS CTC203AX)

PROSCAN

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See PHOTOFACT Annual Index

PROSCAN
Model PS27410YX1 (Chassis CTC203AX)



Representative Model

Essential coverage
for servicing a television receiver...

- Schematics
- Component locations
- Parts list



FEBRUARY 2003 SET 4689

TUNER CIRCUIT VOLTAGE CHART

Pin No.	VHF Low Band	VHF High Band	UHF Band
U17301			
1	4.9V	4.8V	4.8V
2	3.1V	3.1V	3.1V
3	7.6V	7.6V	7.5V
4	3.1V	3.1V	3.1V
5	7.6V	7.6V	7.5V
6	0V	0V	0V
7	6.4V	6.3V	.2V
8	9.2V	9.2V	9.2V
9	3.4V	3.4V	3.4V
10	3.2V	3.2V	3.0V
11	7.2V	6.8V	9.2V
12	3.2V	3.2V	3.0V
13	0V	0V	0V
14	9.3V	9.2V	6.4V
15	3.5V	3.5V	3.2V
16	3.5V	3.5V	3.2V

Pin No.	VHF Low Band	VHF High Band	UHF Band
U17401			
1	1.8V	1.8V	1.9V
2	2.6V	2.6V	2.6V
3	0V	0V	2.6V
4	34.0V	34.0V	34.0V
5	2.3V	4.4V	4.8V
6	1.6V	4.8V	4.9V
7	1.8V	4.4V	4.8V
8	2.1V	5.1V	4.3V
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	1.2V	1.2V	1.2V
14	11.1V	11.1V	.3V
15	0V	0V	3.9V
16	3.9V	3.9V	3.9V
17	11.7V	.1V	11.7V
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 Bandnd	UHF
Q17101			
G1	0V	0V	1.8V
G2	5.1V	5.1V	5.1V
D	0V	0V	11.5V
S	0V	0V	0V

Q17102			
G1	1.8V	1.8V	0V
G2	5.3V	5.3V	5.3V
D	11.7V	11.6V	0V
S	0V	0V	0V

Q17402			
E	12.0V	12.0V	12.0V
B	11.7V	11.0V	11.7V
C	-11.3V	-11.6V	-11.1V

Q17403			
E	12.0V	12.0V	12.0V
B	.5V	.6V	11.4V
C	11.8V	11.6V	.1V

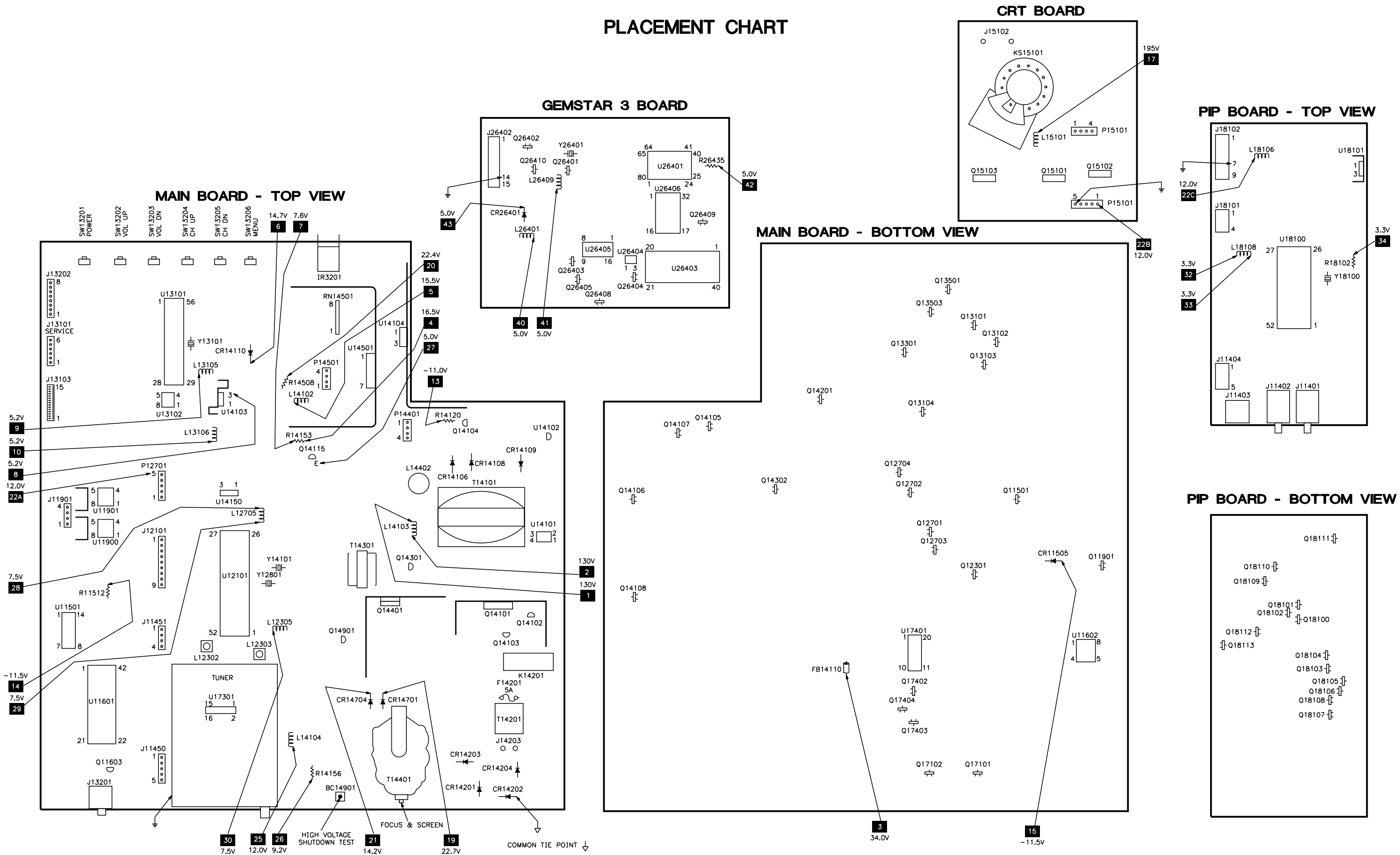
Q17404			
E	12.0V	12.0V	12.0V
B	11.8V	11.7V	11.0V
C	.5V	.6V	11.4V

NOTE: Voltages taken with signal.
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

PLACEMENT CHART



MISCELLANEOUS ADJUSTMENTS

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

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 27kV to 29kV.

SERVICE MENU

The following adjustment procedures are accessed thru a service menu. 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 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 + and - 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. Before making any changes to any of the values, record the On Set values.

SERVICE ADJUSTMENT PARAMETERS

Parameter No.	Parameter Name	On Set Value	Value Range	Comment
0	Pass number for service adjustment parameters.	Must set to 76	-	May not advance until value is set to 76.
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	7	0 - 15	Tune in a crosshatch pattern, adjust to center the pattern on the screen.
5	EW DC (Width)	21	0 - 31	Tune in a crosshatch pattern, adjust for slight horizontal over scan.
6	EW Amplitude	12	0 - 15	Set value to 12.
7	EW Tilt	6	0 - 15	Set value to 6.
8	Top Corner Pin Correction	5	0 - 7	Set value to 5.
9	Bottom Corner Pin Correction	5	0 - 7	Set value to 5.
10	Vertical DC	34	0 - 63	Tune in a crosshatch pattern, adjust to center vertically.
11	Vertical Size	83	0 - 127	Tune in a crosshatch pattern, adjust for slight vertical over scan.
12	Vertical Countdown Mode	0	0 - 3	Set value to 0. (0 = Standard, 1 = Non-Standard, 2 = 50Hz, 3 = 48Hz)
13	Red Bias	21	0 - 127	Press menu button on the TV set for setup line.
14	Green Bias	9	0 - 127	Press menu button on the TV set for setup line.
15	Blue Bias	5	0 - 127	Press menu button on the TV set for setup line.
16	Red Drive	40	0 - 63	-
17	Green Drive	37	0 - 63	-
18	Blue Drive	39	0 - 63	-
19	Gemstar Horizontal OSD Position	162	0 - 255	Set value to 162.
20	Gemstar Vertical OSD Position	68	0 - 255	Set value to 68.
21	Gemstar PIP Horizontal Position	40	0 - 255	Set value to 40.
22	Gemstar PIP Vertical Position	43	0 - 255	Set value to 43.
23	Gemstar PIP Window Vertical Size	3	0 - 13	Set value to 3.

COLOR TEMPERATURE

NOTE: See Service Adjustment Parameters to change drive and bias values. Press menu button for collapsed raster service line. Disconnect the antenna. Preset the red, green, and blue drive values to 32. 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.

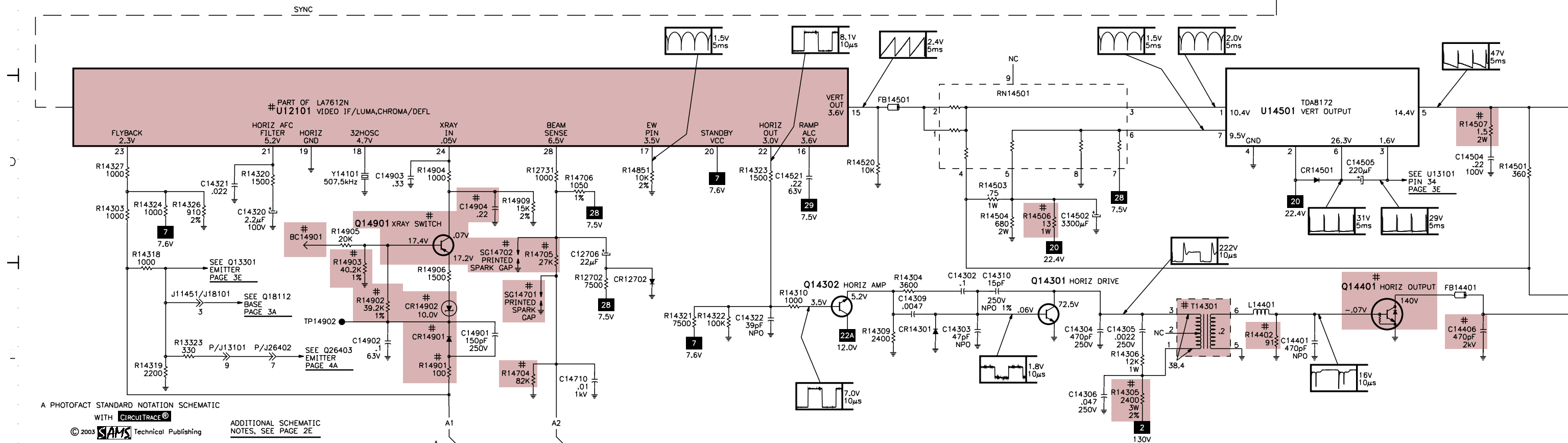
ERROR CODES CHART

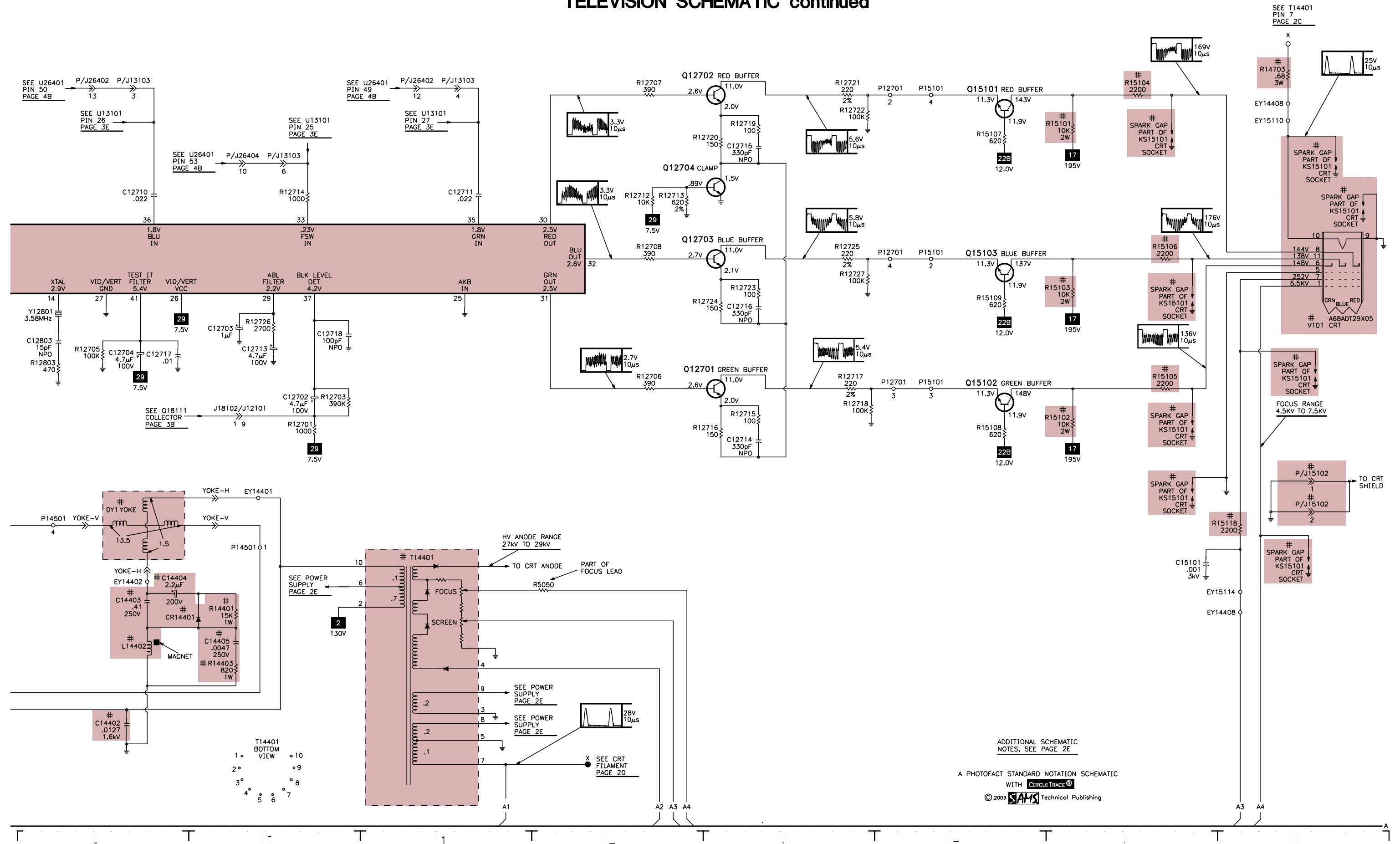
Error Code		Error Location	Condition Indicated
DEC	HEX		
0	00	No error code	-
1	01	16.0V fault	16.0V STBY source is failing.
3	03	12.0V run fault	12.0V source is failing.
4	04	T4 Chip	Run supply failed.
8	08	T4 Chip	X-ray protection caused high voltage shutdown.
9	09	T4 Chip (POR)	Power supply problem at (POR) power on reset.
10	0A	F2 PIP module error (POR)	Power supply problem at (POR) power on reset/PIP.
11	0B	Stereo decoder (POR)	Power supply problem at reset/Stereo decoder.
16	10	Run IIC Bus held low	Run IIC clock or data held low.
18	12	Standby IIC Bus held low	Standby IIC clock or data held low.
23	17	Gemstar 3 Board	Guide fatal error on set using Gemstar 3 Board.
24	18	Gemstar 3 Board	Task monitor error on set using Gemstar 3 Board.
25	19	Gemstar 3 Board	Watchdog error on set using Gemstar 3 Board.
26	1A	Gemstar 3 Board	Task monitor error on set using Gemstar 3 Board.
32	20	Gemstar 3 Board	CPU error on set using Gemstar 3 Board.
34	22	Gemstar Board	Gemstar fails to acknowledge.
44	2C	F2 PIP module error	F2PIP fails to acknowledge.
102	66	Octal DAC	Octal DAC fails to acknowledge.
128	80	Stereo decoder	Stereo decoder fails to acknowledge.
160	A0	Main or PIP tuner EEPROM	Main or PIP tuner EEPROM fails to acknowledge.
186	BA	T4 Chip	T4 Chip fails to acknowledge.
196	C4	Main tuner PLL/DAC	Main tuner PLL IC fails to acknowledge.
198	C6	Main tuner PLL/DAC	Main tuner DAC IC 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

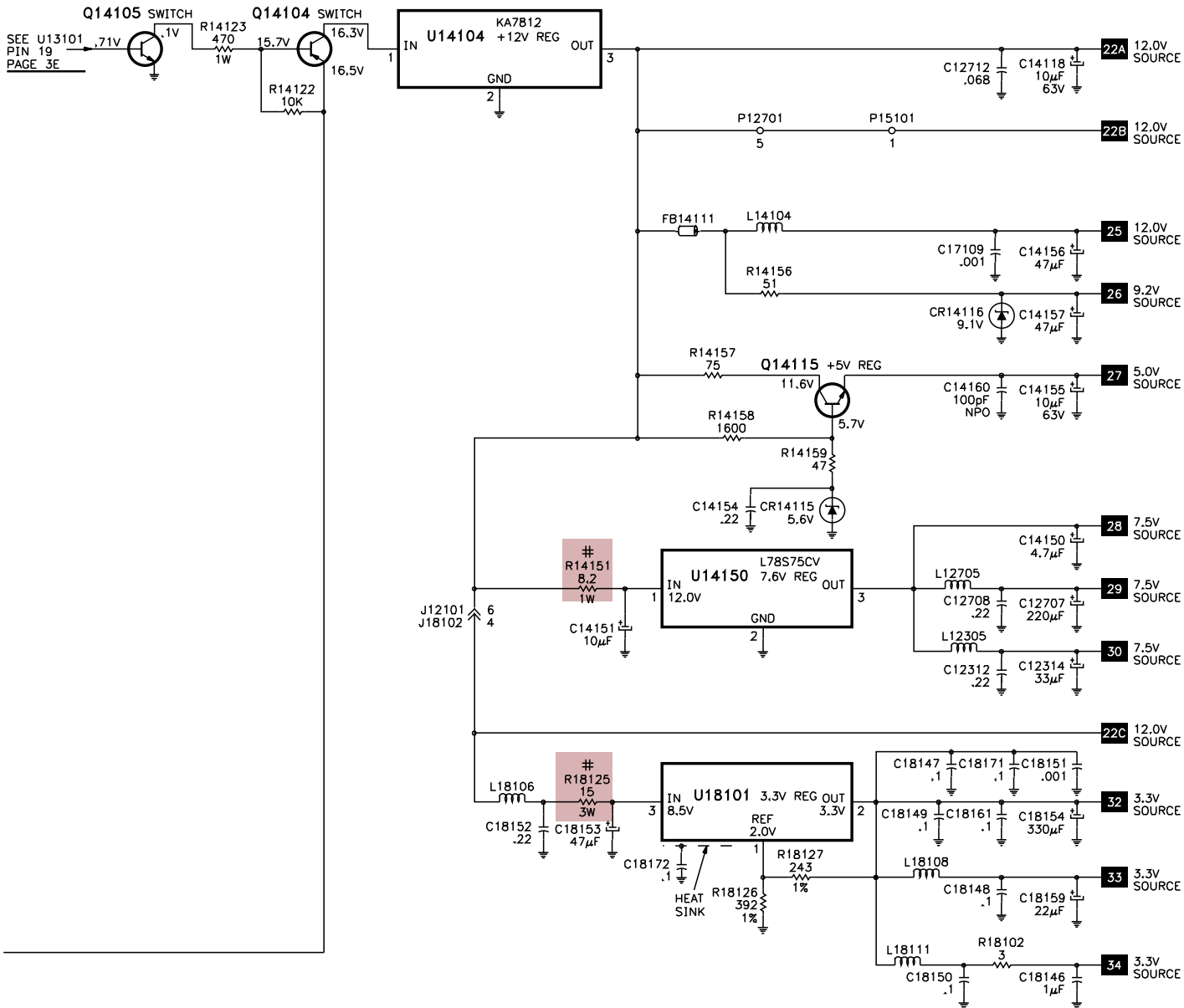
The schematic diagram illustrates the video IF section of a television receiver. It features two LA7612N integrated circuits, U1201 and U12101, which handle video IF/LUMA, CHROMA, and DEFL. A Q12301 buffer is used to drive the chroma input of U12101. The circuit includes various passive components such as resistors (R12301, R12302, R12303, R12304, R12305, R12306, R12307, R12308, R12309, R12310, R12311, R12312, R12313, R12314, R12315, R12316, R12317, R12318, R12319, R12320, R12321, R12322, R12323, R12324, R12325, R12326, R12327, R12328, R12329, R12330, R12331, R12332, R12333, R12334, R12335, R12336, R12337, R12338, R12339, R12340, R12341, R12342, R12343, R12344, R12345, R12346, R12347, R12348, R12349, R12350, R12351, R12352, R12353, R12354, R12355, R12356, R12357, R12358, R12359, R12360, R12361, R12362, R12363, R12364, R12365, R12366, R12367, R12368, R12369, R12370, R12371, R12372, R12373, R12374, R12375, R12376, R12377, R12378, R12379, R12380, R12381, R12382, R12383, R12384, R12385, R12386, R12387, R12388, R12389, R12390, R12391, R12392, R12393, R12394, R12395, R12396, R12397, R12398, R12399, R12400, R12401, R12402, R12403, R12404, R12405, R12406, R12407, R12408, R12409, R12410, R12411, R12412, R12413, R12414, R12415, R12416, R12417, R12418, R12419, R12420, R12421, R12422, R12423, R12424, R12425, R12426, R12427, R12428, R12429, R12430, R12431, R12432, R12433, R12434, R12435, R12436, R12437, R12438, R12439, R12440, R12441, R12442, R12443, R12444, R12445, R12446, R12447, R12448, R12449, R12450, R12451, R12452, R12453, R12454, R12455, R12456, R12457, R12458, R12459, R12460, R12461, R12462, R12463, R12464, R12465, R12466, R12467, R12468, R12469, R12470, R12471, R12472, R12473, R12474, R12475, R12476, R12477, R12478, R12479, R12480, R12481, R12482, R12483, R12484, R12485, R12486, R12487, R12488, R12489, R12490, R12491, R12492, R12493, R12494, R12495, R12496, R12497, R12498, R12499, R12500, R12501, R12502, R12503, R12504, R12505, R12506, R12507, R12508, R12509, R12510, R12511, R12512, R12513, R12514, R12515, R12516, R12517, R12518, R12519, R12520, R12521, R12522, R12523, R12524, R12525, R12526, R12527, R12528, R12529, R12530, R12531, R12532, R12533, R12534, R12535, R12536, R12537, R12538, R12539, R12540, R12541, R12542, R12543, R12544, R12545, R12546, R12547, R12548, R12549, R12550, R12551, R12552, R12553, R12554, R12555, R12556, R12557, R12558, R12559, R12560, R12561, R12562, R12563, R12564, R12565, R12566, R12567, R12568, R12569, R12570, R12571, R12572, R12573, R12574, R12575, R12576, R12577, R12578, R12579, R12580, R12581, R12582, R12583, R12584, R12585, R12586, R12587, R12588, R12589, R12590, R12591, R12592, R12593, R12594, R12595, R12596, R12597, R12598, R12599, R12600, R12601, R12602, R12603, R12604, R12605, R12606, R12607, R12608, R12609, R12610, R12611, R12612, R12613, R12614, R12615, R12616, R12617, R12618, R12619, R12620, R12621, R12622, R12623, R12624, R12625, R12626, R12627, R12628, R12629, R12630, R12631, R12632, R12633, R12634, R12635, R12636, R12637, R12638, R12639, R12640, R12641, R12642, R12643, R12644, R12645, R12646, R12647, R12648, R12649, R12650, R12651, R12652, R12653, R12654, R12655, R12656, R12657, R12658, R12659, R12660, R12661, R12662, R12663, R12664, R12665, R12666, R12667, R12668, R12669, R12670, R12671, R12672, R12673, R12674, R12675, R12676, R12677, R12678, R12679, R12680, R12681, R12682, R12683, R12684, R12685, R12686, R12687, R12688, R12689, R12690, R12691, R12692, R12693, R12694, R12695, R12696, R12697, R12698, R12699, R12700, 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, R128



TELEVISION SCHEMATIC continued

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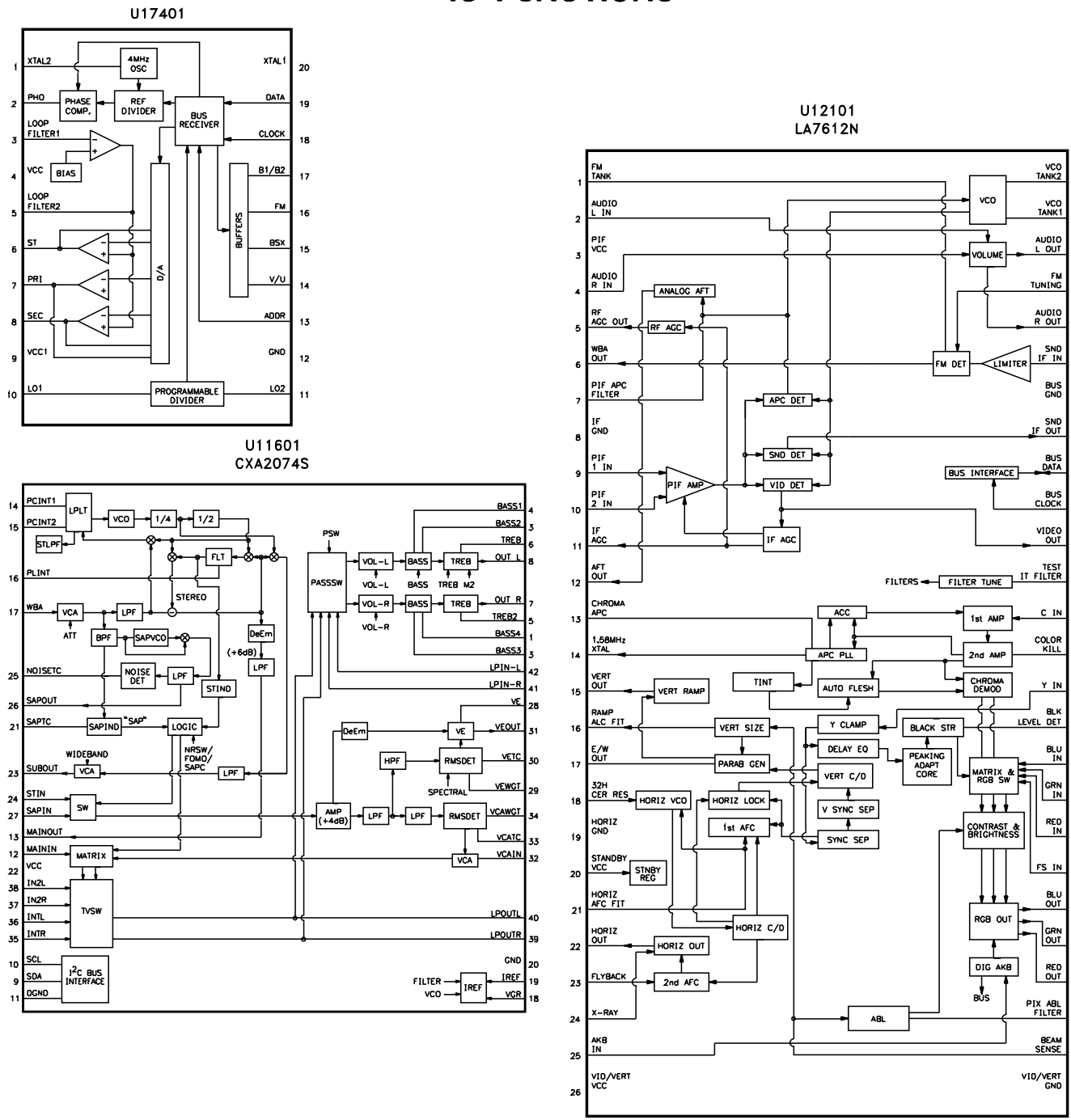
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POWER SUPPLY SCHEMATIC continued



ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 2E

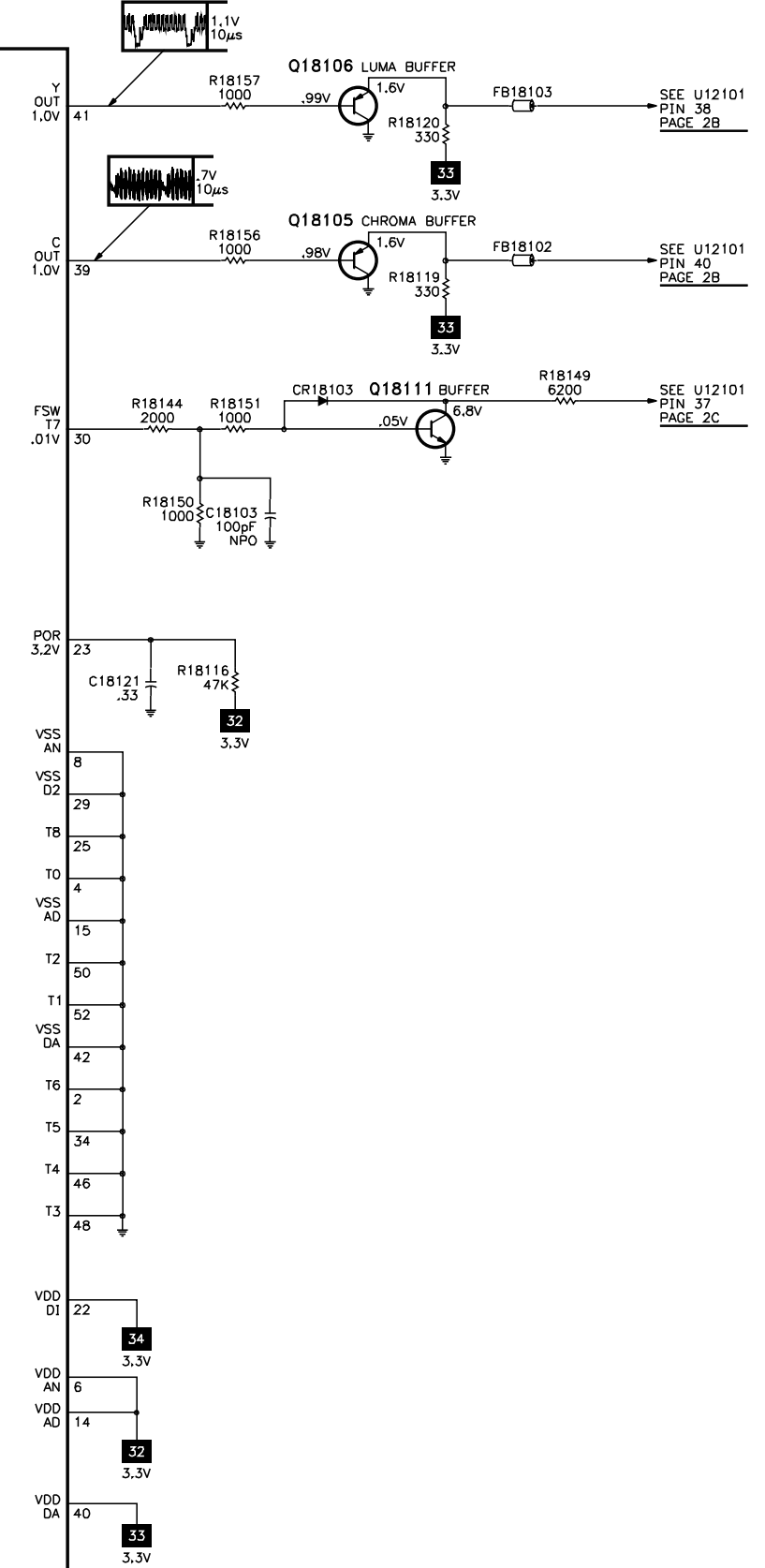
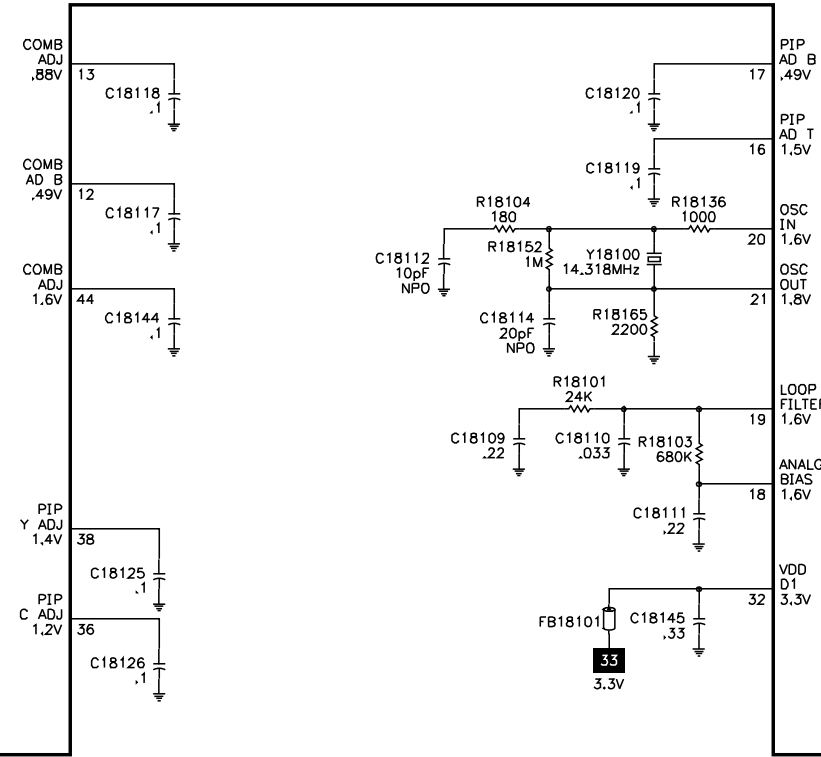
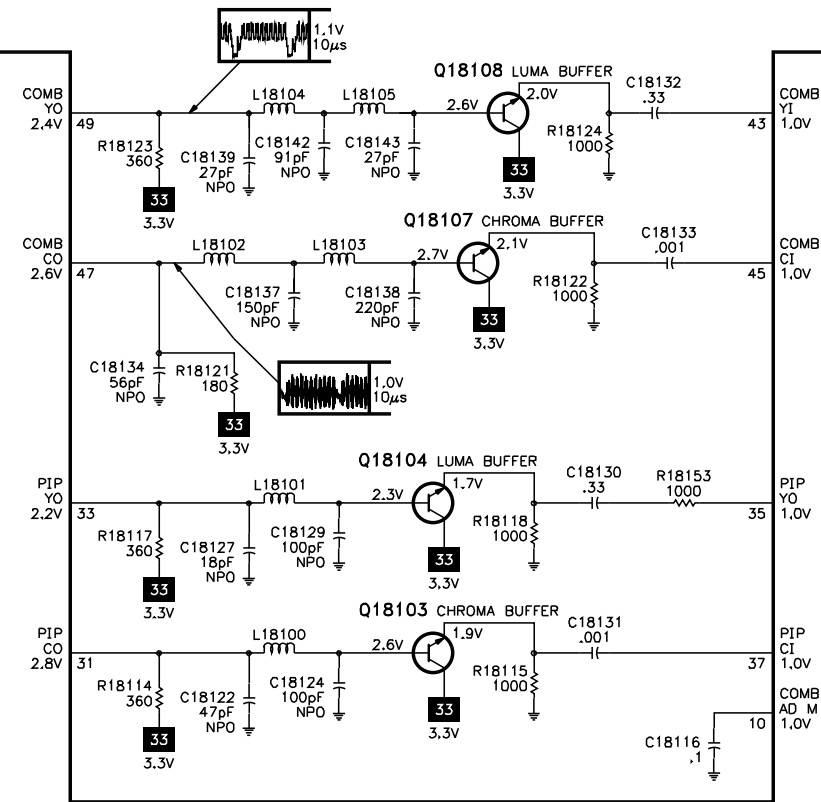
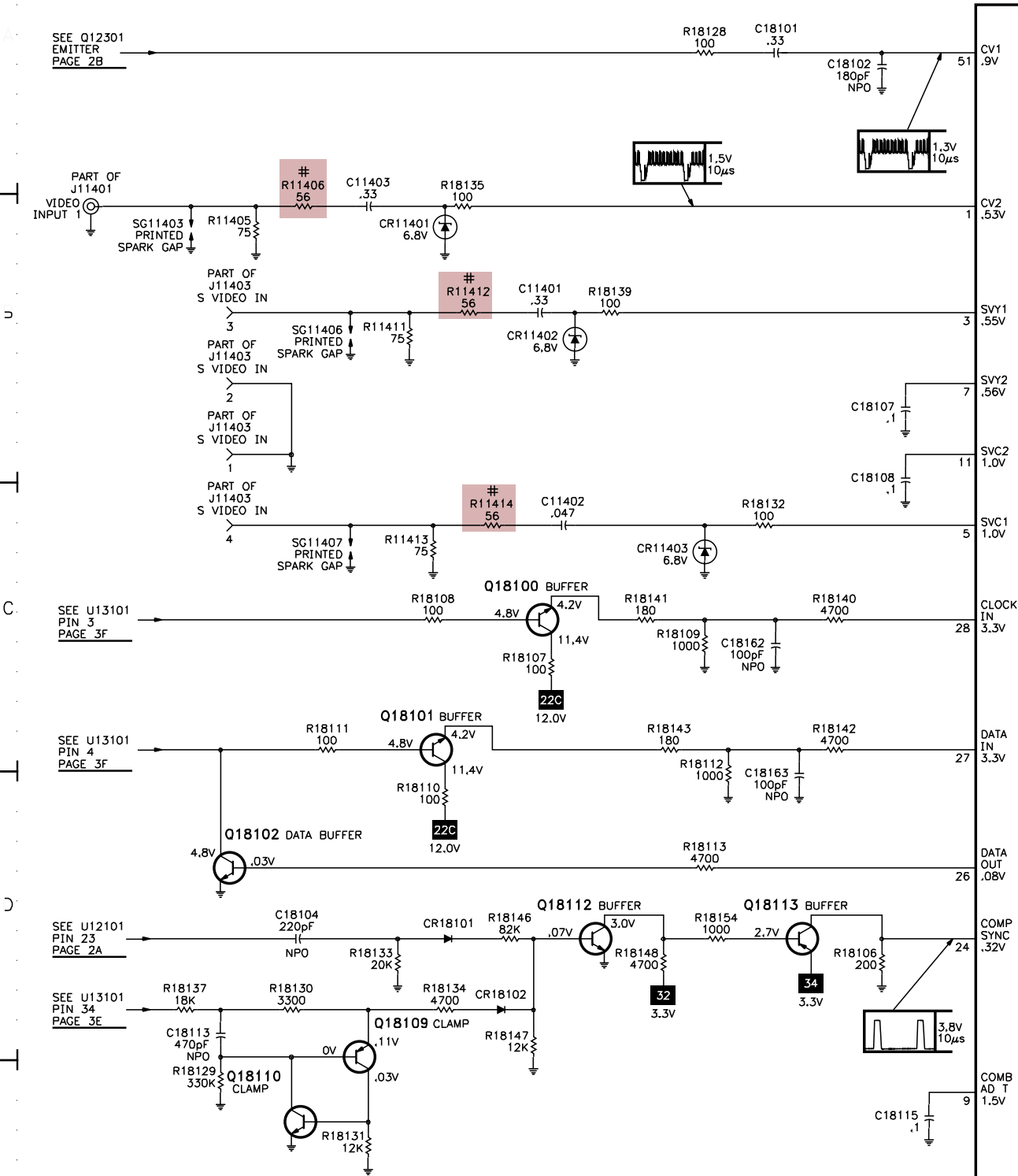
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IC FUNCTIONS



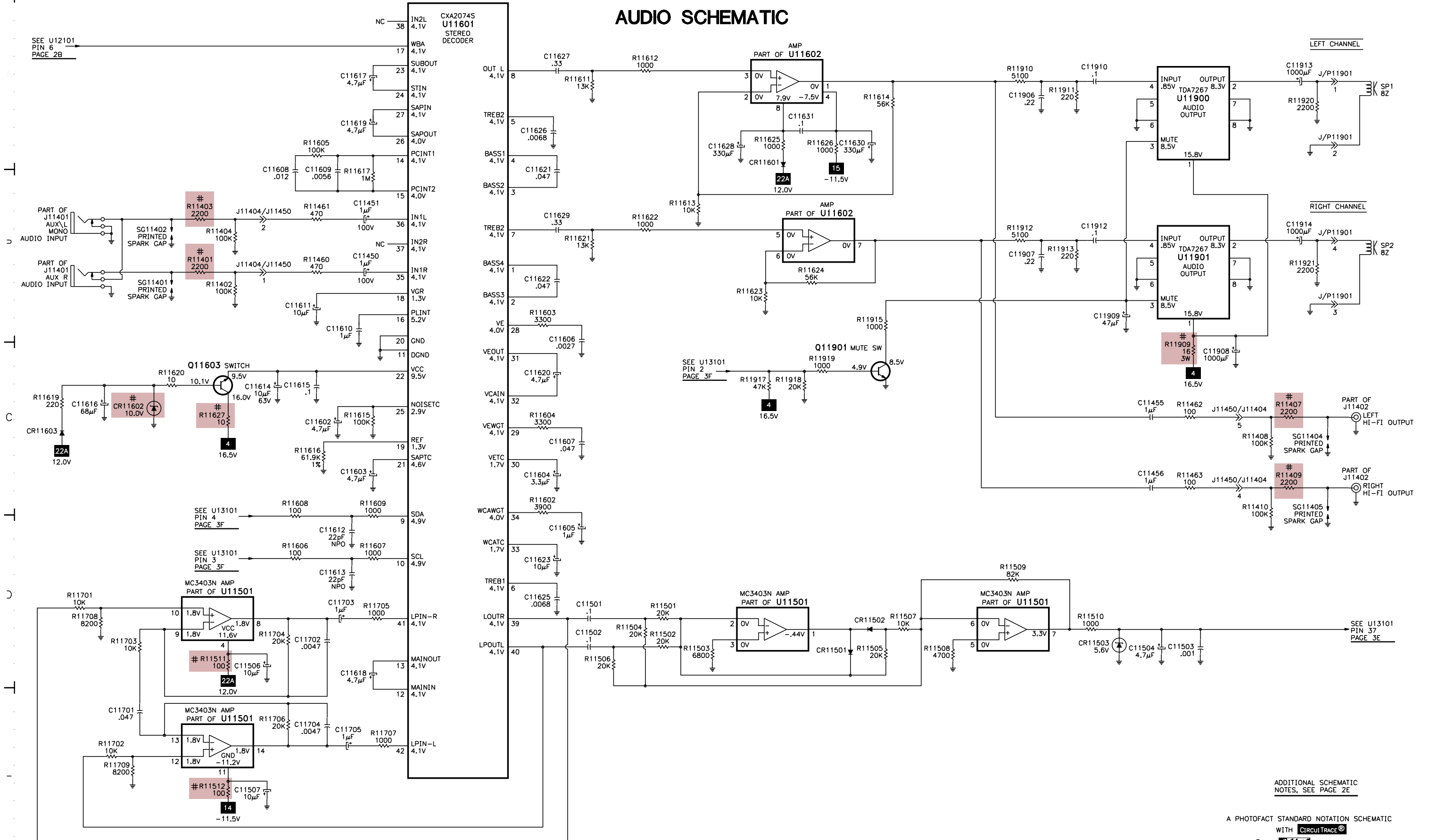
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PIP SCHEMATIC



ADDITIONAL SCHEMATIC NOTES, SEE PAGE 2E

AUDIO SCHEMATIC

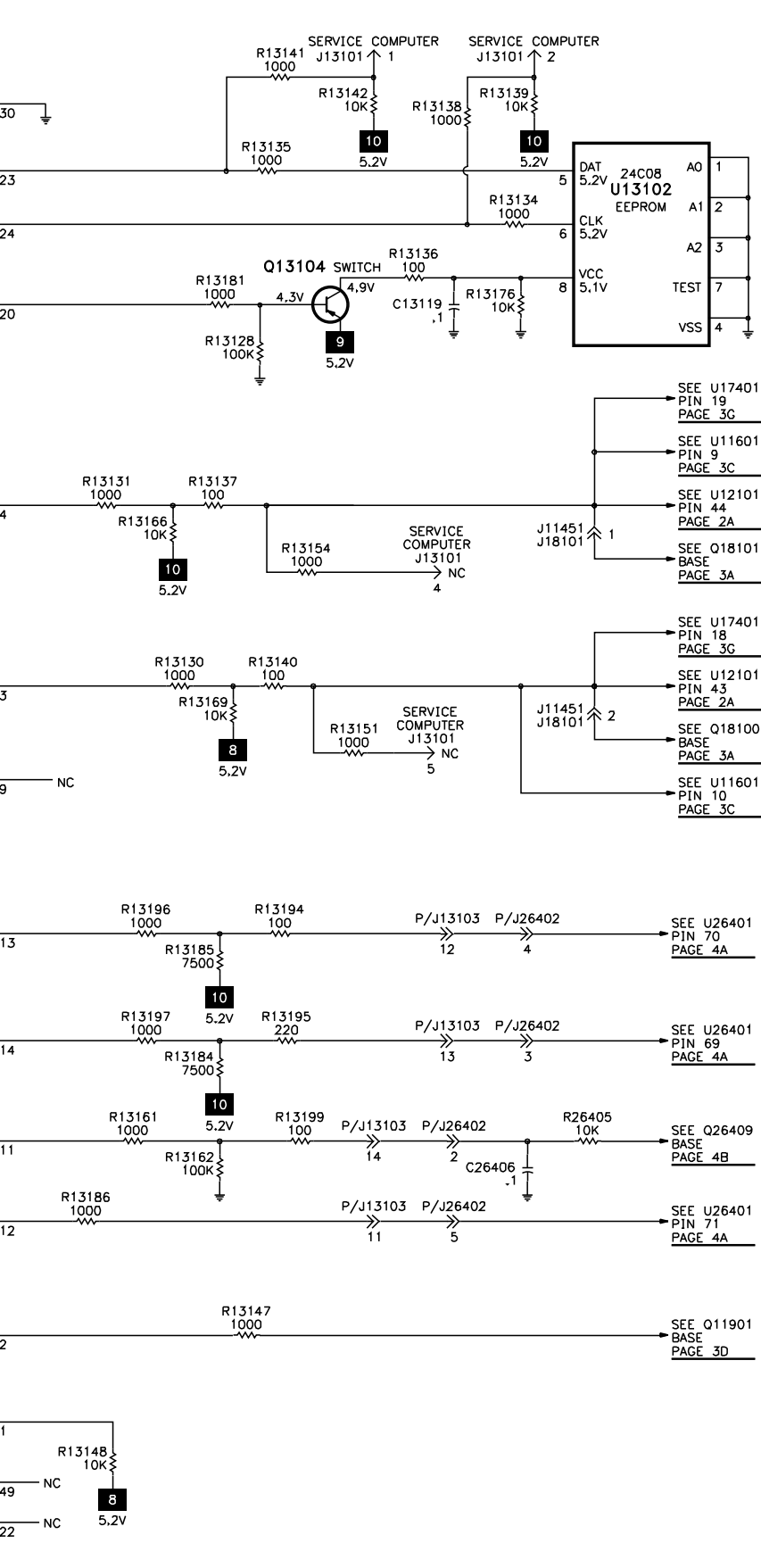
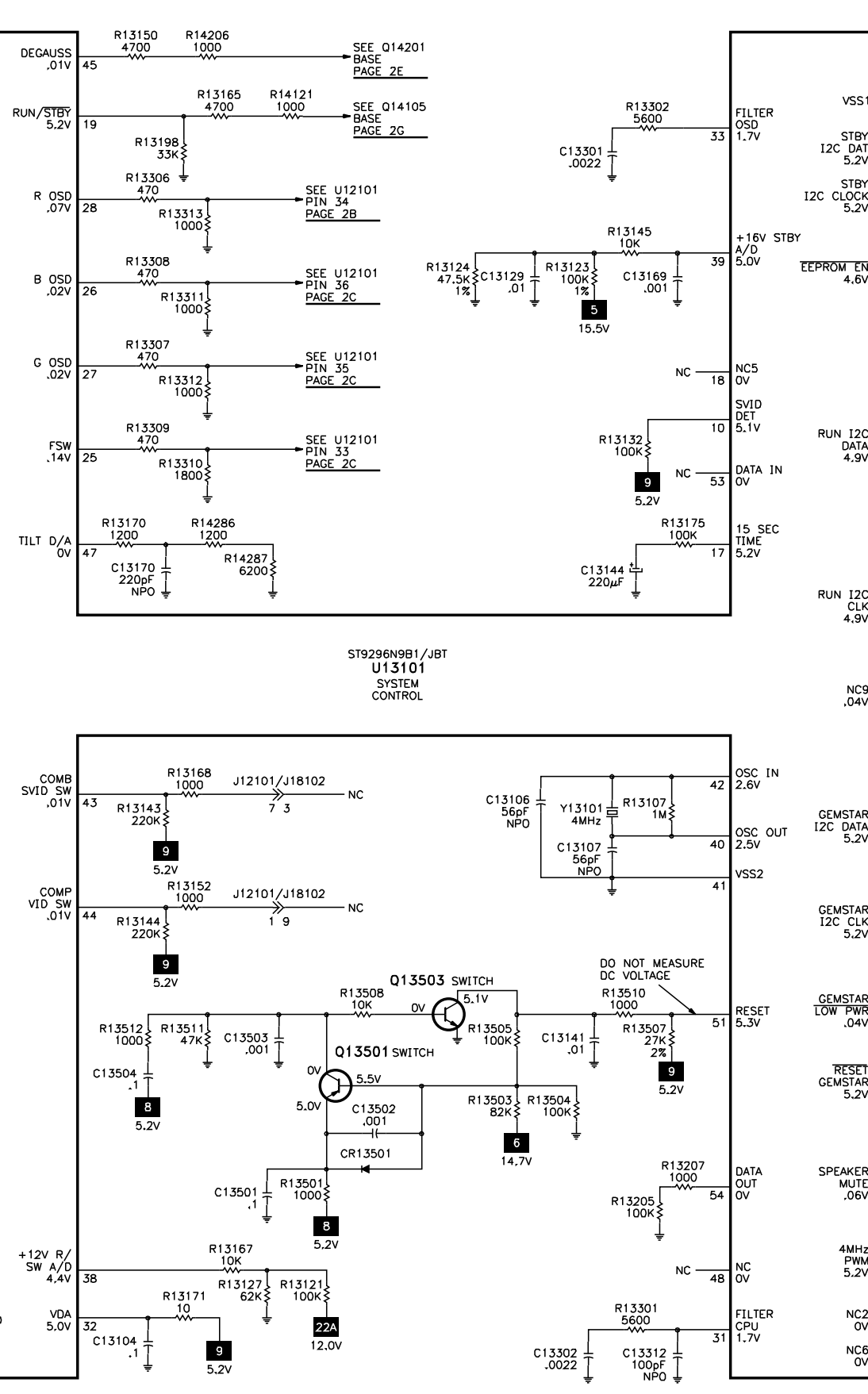
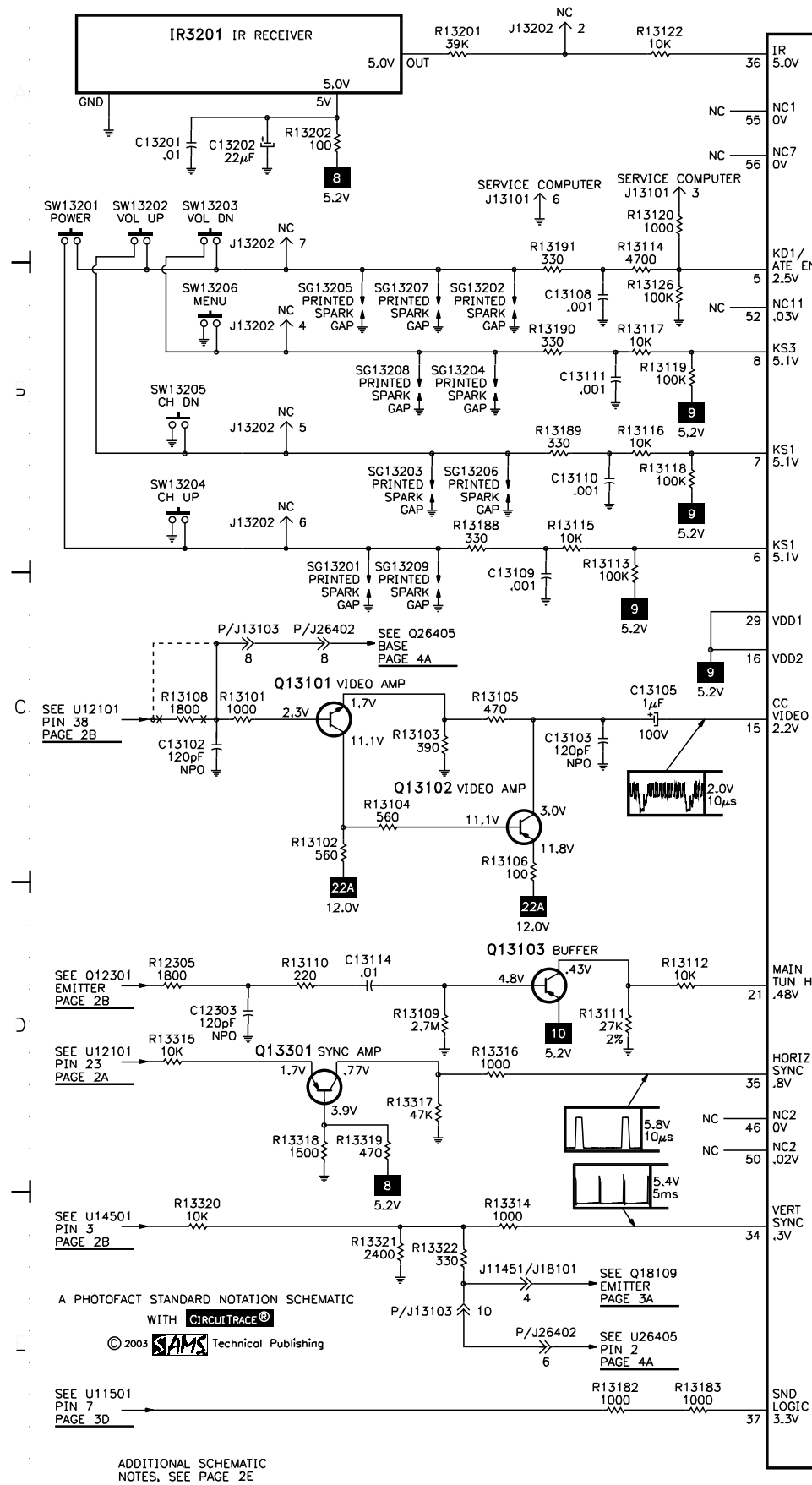


ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 2E

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SYSTEM CONTROL SCHEMATIC



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TUNER SCHEMATIC

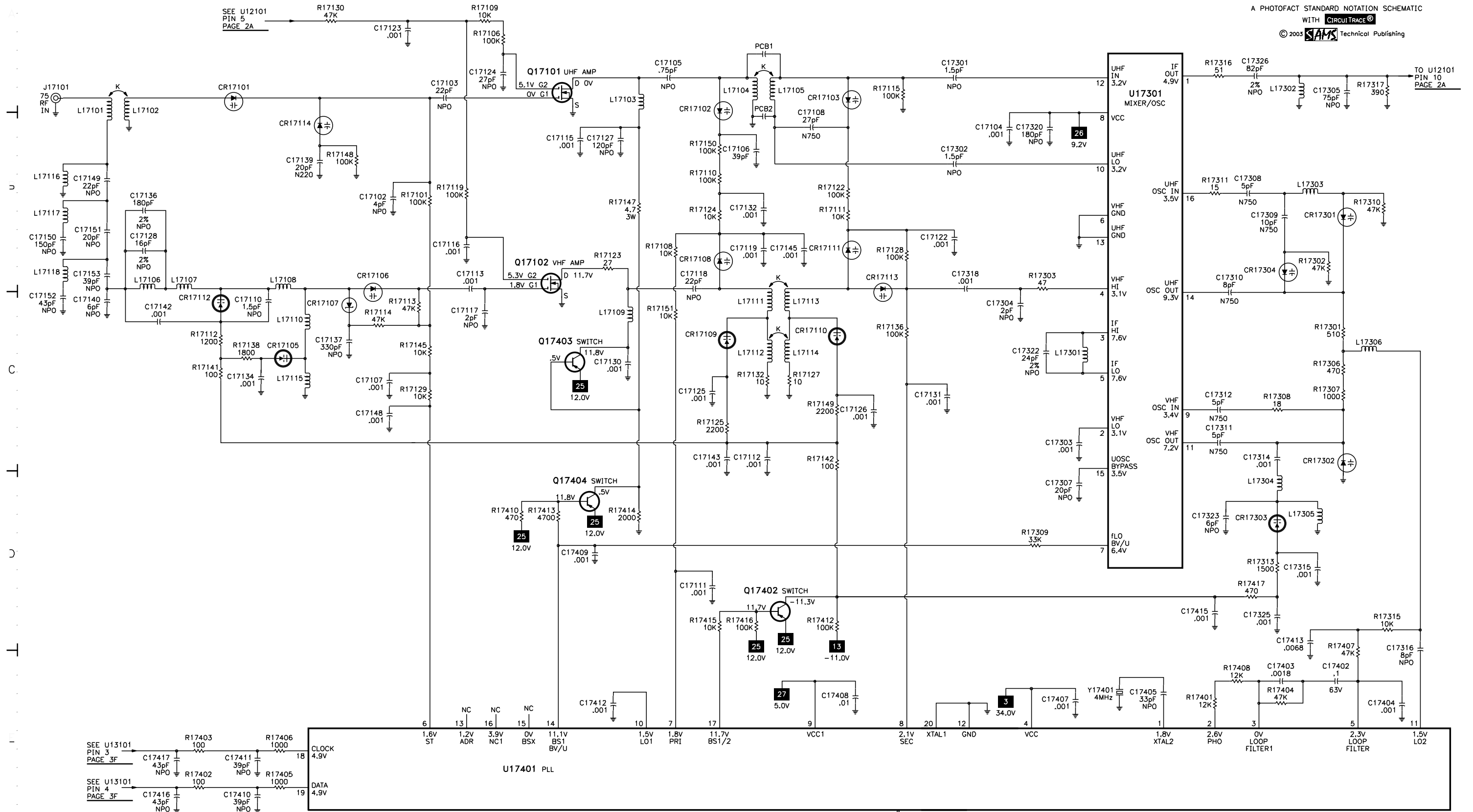
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ADDITIONAL SCHEMATIC
NOTES, SEE PAGE 2E

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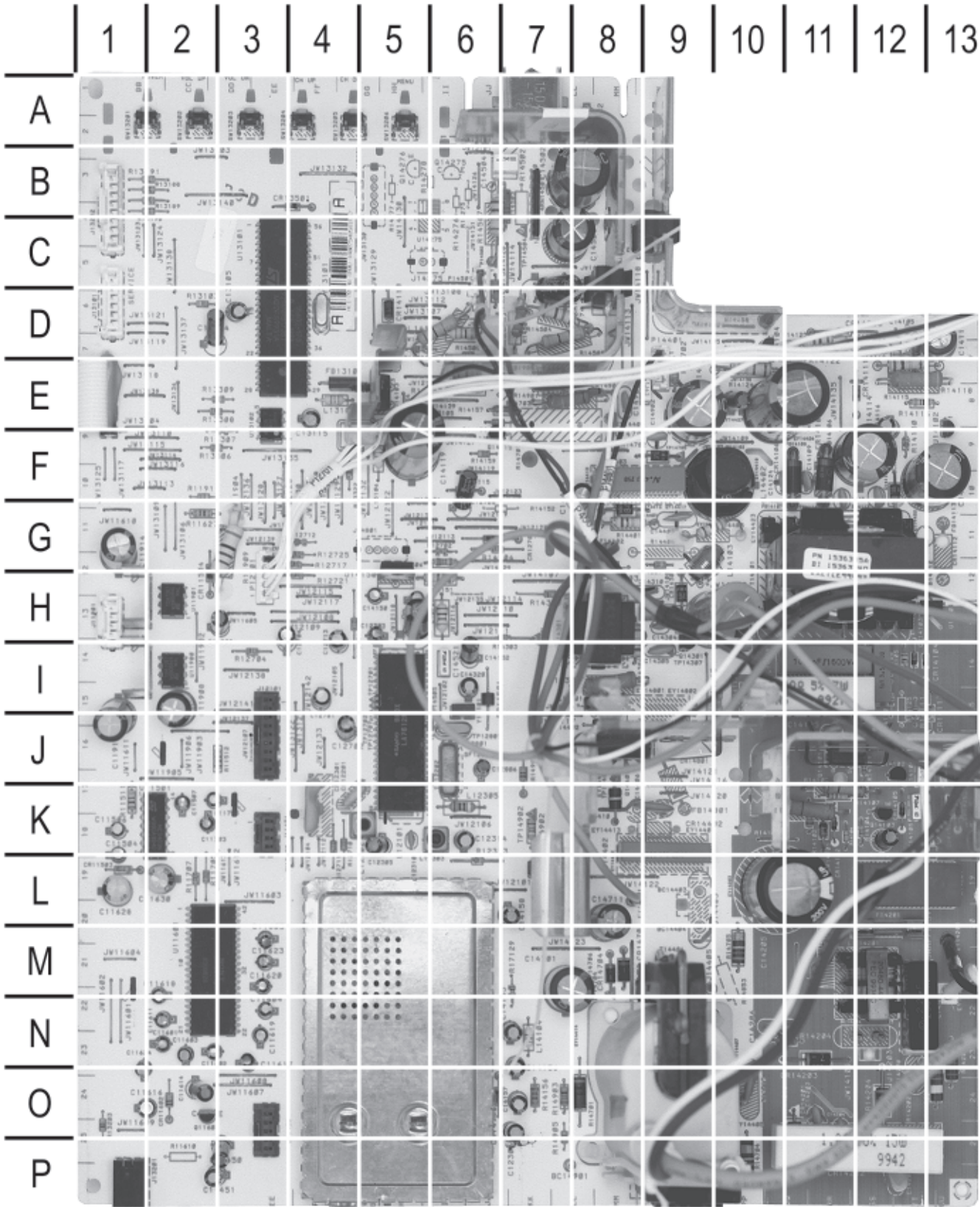
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SCHEMATIC COMPONENT LOCATION GUIDE

C11401	B30	C12709	B8	C14158	B24	C17142	C53	C18142	A33	CR11504	E23	J11401	B29	Q14102	B19	R11602	D39	R12717	C13	R13175	C49	R14127	D21	R17119	B55	R18131	E30	R26462	B61
C11402	C30	C12710	B9	C14159	B23	C17143	C56	C18143	A33	CR11505	E24	J11401	B37	Q14103	C19	R11603	C39	R12718	C13	R13176	B51	R14128	D21	R17122	B57	R18132	C31	R26463	B61
C11403	B30	C12711	B11	C14160	B28	C17145	B57	C18144	D32	CR11601	B41	J11401	B37	Q14104	A25	R11604	C39	R12719	A13	R13181	B51	R14129	C20	R17123	B56	R18133	D30	R26464	B66
C11450	B38	C12712	A28	C14161	D24	C17148	C54	C18145	E34	CR11602	C37	J11402	C44	Q14105	A25	R11605	B38	R12720	A13	R13182	E46	R14130	D23	R17124	B56	R18134	D30	R26465	E65
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C11455	C43	C12714	C13	C14203	A19	C17150	B53	C18147	C27	CR12301	B5	J13201	B68	Q14107	D21	R11607	D38	R12722	A13	R13184	D51	R14153	B23	R17127	C57	R18136	D34	R26467	C67
C11456	C43	C12715	B13	C14204	A19	C17151	B53	C18148	D28	CR12702	E4	J17101	B53	Q14108	B19	R11608	D38	R12723	B13	R13185	D51	R14156	B27	R17128	B57	R18137	D29	R26468	C67
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C11502	D40	C12717	C9	C14206	A20	C17153	B53	C18150	D28	CR14101	B18	K14201	B17	Q14201	B17	R11611	A40	R12725	B13	R13188	C46	R14158	B27	R17130	A54	R18140	C31	R26470	C67
C11503	D43	C12718	C10	C14207	B18	C17301	A57	C18151	C28	CR14102	B19	L12302	B3	Q14301	E6	R11612	A40	R12726	C10	R13189	B46	R14159	B27	R17132	C57	R18141	C31	RN14501	D5
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C11506	D38	C12802	B7	C14302	E5	C17303	C58	C18153	C26	CR14104	C19	L12305	C27	Q14401	E7	R11614	A41	R12731	D3	R13191	B46	R14202	A18	R17138	C54	R18143	D31	SF12301	B1
C11507	E38	C12803	C9	C14303	E5	C17304	C58	C18154	C28	CR14105	D19	L12705	C27	Q14901	D3	R11615	C38	R12801	C7	R13194	D51	R14204	A20	R17141	C54	R18144	B35	SP1	A44
C11601	A5	C12805	B6	C14304	E6	C17305	A60	C18159	D28	CR14106	A22	L13105	C24	Q15101	A14	R11616	C38	R12802	C7	R13195	D51	R14205	A17	R17142	D57	R18146	D30	SP2	B44
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C11610	C38	C13108	B46	C14402	E9	C17316	E60	C26404	C24	CR14116	B28	L15101	D20	Q18101	D30	R11625	A41	R13103	C46	R13207	E49	R14310	E4	R17303	C58	R18156	B35	T14301	E7
C11611	B38	C13109	C46	C14403	D9	C17318	C58	C26405	C24	CR14117	C19	L17101	B53	Q18102	D29	R11626	A41	R13104	C46	R13301	E49	R14318	E1	R17306	C60	R18157	A35	T14401	D11
C11612	D38	C13110	B46	C14404	D9	C17320	B58	C26406	D51	CR14201	A19	L17102	B53	Q18103	C33	R11627	C38	R13105	C46	R13302	A49	R14319	E1	R17307	C60	R18165	D34	T14401	E18
C11613	D38	C13111	B46	C14405	D10	C17322	C58	C26407	D65	CR14202	A18	L17103	B56	Q18104	B33	R11701	D37	R13106	D46	R13306	A47	R14320	D2	R17308	C59	R26401	B67	U11501	D37
C11614	C38	C13113	C24	C14406	E8	C17323	D59	C26408	D23	CR14203	A19	L17104	A56	Q18105	B35	R11702	E37	R13107	C49	R13307	B47	R14321	E4	R17309	D58	R26402	B66	U11501	D41
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C11626	A39	C13202	A45	C14710	E3	C17411	E54	C26421	B63	CR17102	B56	L17116	B53	Q26404	B65	R11913	B42	R13119	B47	R13319	D46	R14506	D6	R17406	E54	R26414	D65	U13101	C48
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C11628	A41	C13302	E49	C14901	E3	C17413	D59	C26423	A62	CR17105	C54	L17118	B53	Q26408	A65	R11917	C41	R13121	E48	R13321	E46	R14508	E20	R17408	E59	R26416	B64	U14101	C19
C11629	B39	C13312	E49	C14902	E2	C17415	D59	C26425	A62	CR17106	C54	L17301	C58	Q26409	C65	R11918	C41	R13122	A46	R13322	E46	R14509	E21	R17410	D55	R26417	B63	U14102	D19
C11630	A41	C13501	E48	C14903	D3	C17416	E53	C26426	B65	CR17107	C54	L17302	A59	Q26410	C67	R11919	C41	R13123	B49	R13323	E1	R14520	D5	R17412	D57	R26418	B63	U14103	B23
C11631	A41	C13502	E48	C14904	D3	C17417	E53	C26427	E65	CR17108	B56	L17303	B59	R5050	D12	R11920	A44	R13124	B49	R13501	E48	R14701	D19	R17413	D55	R26419	B63	U14104	A26
C11701	E37	C13503	D48	C15101	D15	C18101	A31	C26428	D65	CR17109	C56	L17304	D59	R11401	B37	R11921	B44	R13126	B47	R13503	D49	R14702	D20	R17414	D56	R26420	B63	U14150	C27
C11702	D38	C13504	D47	C17102	B55	C18102	A31	C26429	C23	CR17110	C57	L17305	D59	R11402	B38	R12201	A3	R13127	E48	R13504	D49	R14703	A16	R17415	D56	R26421	B64	U14501	D7
C11703	D38	C14101	B19	C17103	B55	C18103	B35	C26430	D24	CR17111	B57	L17306	C60	R11403	B37	R12302	B2	R13128	B51	R13505	D49	R14704	E3	R17416	D56	R26422	B67	U17301	B59
C11704	E38	C14102	B20	C17104	B58	C18104	D29	C26433	C																				

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BC14901	P8	C12709*	J5	C14155	N7	CR14113*	P3	Q14105*	D11	R12201*	K4	R13123*	D4	R13320	D5	R14503	B7
C11450	P3	C12710*	J5	C14156	N7	CR14114*	P3	Q14106*	E13	R12302*	K6	R13124*	C5	R13321*	E5	R14504	D7
C11451	P3	C12711*	J4	C14157	O7	CR14115	F6	Q14107*	E12	R12303*	J5	R13126*	C3	R13322	F4	R14506	D7
C11455*	O3	C12712*	H3	C14158	L7	CR14116	O7	Q14108*	J12	R12304*	J4	R13127*	C4	R13323*	E1	R14507	C7
C11456*	O3	C12713	I4	C14159*	M7	CR14117	J13	Q14115	E7	R12305*	K4	R13128*	F4	R13501*	C4	R14508	D6
C11501*	K3	C12714*	H4	C14160*	M7	CR14201	P11	Q14201*	D8	R12306*	K6	R13130*	C3	R13503*	B4	R14509	D8
C11502*	K3	C12715*	H4	C14161*	L6	CR14202	P11	Q14301	H9	R12307*	K5	R13131*	C3	R13504*	C4	R14520*	J5
C11503*	L1	C12716*	I4	C14201	N13	CR14203	N11	Q14302*	G9	R12308*	L5	R13132*	D4	R13505*	C4	R14701	O8
C11504	L1	C12717*	J5	C14203	O11	CR14204	O12	Q14401	J9	R12309*	K6	R13134*	E4	R13507*	C4	R14702	E9
C11506	K1	C12718*	J5	C14204	O12	CR14205	D12	Q14901	L7	R12310*	K4	R13135*	E4	R13508*	C4	R14703	E8
C11507	K2	C12801*	J5	C14205	L11	CR14301	H9	R11460*	N3	R12311*	K4	R13136*	F3	R13510*	C4	R14704	P10
C11601	N2	C12802*	J5	C14206	N11	CR14401	G8	R11461*	O3	R12313	L6	R13137*	B2	R13511*	C4	R14705	M10
C11602	N2	C12803*	J6	C14207	P12	CR14501	C8	R11462*	P3	R12314*	K5	R13138*	E3	R13512*	D4	R14706	G6
C11603	N2	C12805*	J5	C14208	O13	CR14701	M8	R11463*	P3	R12315*	K5	R13139*	E3	R14101	K11	R14801*	J5
C11604	N3	C12806	J6	C14302*	H9	CR14702	F9	R11501*	K3	R12316*	K5	R13140*	B2	R14102	K11	R14901	E7
C11605	M3	C12807*	J5	C14303*	H9	CR14704	M8	R11502*	L3	R12317*	K4	R13141*	E3	R14103	K11	R14902	K7
C11606*	N3	C13102*	D2	C14304	H9	CR14901	E8	R11503*	K2	R12318*	K4	R13142*	E3	R14104	K12	R14903	O8
C11607*	M3	C13103*	D2	C14305	I9	CR14902	J7	R11504*	K3	R12701*	J4	R13143*	D4	R14105	I12	R14904	G7
C11608*	N2	C13104*	E4	C14306	H9	F14201	M12	R11505*	K1	R12702*	G6	R13144*	D4	R14106	K12	R14905	P8
C11609*	N2	C13105	D3	C14309*	H9	FB13101	E4	R11506*	L3	R12703*	J4	R13145*	D4	R14107	K12	R14906*	K7
C11610*	N2	C13106*	D4	C14310	H9	FB14106	F11	R11507*	K1	R12704	I3	R13147*	B3	R14108	K12	R14909*	L7
C11611	N2	C13107*	D4	C14320	I6	FB14107	F11	R11508*	K2	R12705*	J5	R13148*	C3	R14109	J12	R17402*	L5
C11612*	N2	C13108*	C2	C14321*	I5	FB14108	F11	R11509*	L1	R12706*	I5	R13150*	D4	R14110	I12	R17403*	L5
C11613*	M2	C13109*	C2	C14322*	I6	FB14109	I12	R11510*	L1	R12707*	I5	R13151*	B2	R14111	I13	RN14501	C7
C11614	O2	C13110*	C2	C14401*	J8	FB14110*	M7	R11511	K1	R12708*	I5	R13152*	C4	R14112*	H12	RT14201	M11
C11615*	N3	C13111*	C2	C14402	L9	FB14111	N7	R11512	J3	R12710	K4	R13154*	B2	R14113	F12	SG12301	J6
C11616	O1	C13113*	E4	C14403	F9	FB14114	F11	R11513*	H3	R12711	K4	R13161*	C3	R14114*	F13	SG14201	N13
C11617	O3	C13114*	E2	C14404	F8	FB14401	K8	R11514*	G3	R12712	G4	R13162*	C2	R14115	E13	SG14701*	P9
C11618	N2	C13115	E4	C14405	G9	FB14501	I6	R11601*	N2	R12713*	G4	R13165*	D3	R14116	E13	SG14702*	K8
C11619	N3	C13119*	F3	C14406	K9	IR3201	A7	R11602*	M3	R12714*	I4	R13166*	C3	R14117	I11	SW13201	A1
C11620	M3	C13129*	C5	C14502	B8	J11450	O3	R11603*	N3	R12715*	H4	R13167*	D4	R14118	E13	SW13202	A2
C11621*	M2	C13141*	C4	C14504	B7	J11451	K3	R11604*	N3	R12716*	H4	R13168*	D4	R14119	D13	SW13203	A3
C11622*	M2	C13144	D2	C14505	C7	J11901	H1	R11605*	N2	R12717	G4	R13169*	C3	R14120	D10	SW13204	A4
C11623	M3	C13163*	F5	C14506	C8	J12101	I3	R11606*	M2	R12718*	H3	R13170*	C4	R14121*	D11	SW13205	A5
C11624	O1	C13165*	D2	C14507*	C8	J13101	D1	R11607*	M2	R12719*	H5	R13171*	F4	R14122	D11	SW13206	A5
C11625*	M2	C13169*	D4	C14521	I6	J13103	E1	R11608*	M2	R12720*	H5	R13175*	D3	R14123	D11	T14101	G12
C11626*	M2	C13170*	B4	C14701	M8	J13201	P1	R11609*	M2	R12721	H4	R13176*	F4	R14124	E10	T14201	M12
C11627*	M2	C13201*	A8	C14702*	M8	J13202	C1	R11611*	M2	R12722*	H3	R13181*	D3	R14126*	F13	T14301	H8
C11628	L1	C13202	A8	C14703	E10	J14203	N12	R11612*	M2	R12723*	I4	R13182*	D5	R14127*	E11	T14401	O9
C11629*	M2	C13301*	E4	C14704	F9	K14201	L13	R11613*	M1	R12724*	I4	R13183*	D5	R14128*	E10	U11501	K2
C11630	L2	C13302*	E4	C14706*	M8	L12302	K5	R11614*	M2	R12725	G4	R13184*	D3	R14129*	H13	U11601	L2
C11631*	L1	C13312*	E4	C14710	O10	L12303	K6	R11615*	N3	R12726	I5	R13185*	D3	R14130	F12	U11602*	M2
C11701*	K3	C13501*	B4	C14711	L8	L12305	K6	R11616*	N2	R12727*	H3	R13186*	D3	R14151	H6	U11900	I2
C11702*	K2	C13502*	B4	C14901	E8	L12705	H6	R11617*	N2	R12731	H5	R13188	B2	R14153	E6	U11901	H2
C11703	K2	C13503*	C4	C14902	E9	L13105	E4	R11618*	O2	R12801*	J5	R13189	B2	R14156	O7	U12101	K5
C11704*	K3	C13504*	C4	C14903*	I5	L13106	F5	R11619*	N2	R12802*	J5	R13190	B2	R14157	E7	U13101	C3
C11705	K2	C14101	K12	C14904*	K7	L14102	D6	R11620*	N2	R12803*	J6	R13191	B2	R14158	E7	U13102	E3
C11906*	I2	C14102	I11	C17109*	N6	L14103	G10	R11621*	M2	R12804*	J4	R13194*	D1	R14159	F6	U14101	H13
C11907*	H2	C14103*	K12	C17416*	L5	L14104	N7	R11622*	M2	R12805*	J5	R13195*	D1	R14201	N13	U14102	F13
C11908	I2	C14104	J13	C17417*	L5	L14105	D12	R11623*	M1	R12806*	J6	R13196*	D3	R14202	P12	U14103	E5
C11909	H3	C14105	K13	CF12201	K5	L14401	I8	R11624*	M1	R12807*	K6	R13197*	D3	R14204	N11	U14104	C9
C11910*	I2	C14106*	H12	CF12301	K4	L14402	F10	R11625*	M1	R12808*	J6	R13198*	D4	R14205	O13	U14150	H5
C11912*	H2	C14107*	F13	CR11501*	K2	P12701	H3	R11626*	L2	R13101*	D2	R13199*	D1	R14206*	D8	U14501	C8
C11913	J1	C14108	I12	CR11502*	K1	P14401	D9	R11627	G2	R13102*	D2	R13201	A6	R14286*	C5	Y12801	J6
C11914	G1	C14109	F11	CR11503	L1	P14501	C6	R11701*	K2	R13103	D2	R13202*	A6	R14287*	C5	Y13101	D4
C12301*	J6	C14110	E11	CR11504	H2	Q11501*	H3	R11702*	L2	R13104*	D2	R13203	O1	R14303	H7	Y14101	I6
C12302*	J5	C14111	D13	CR11505*	J3	Q11603	O2	R11703*	K2	R13105*	D3	R13205*	B4	R14304*	H9		
C12303*	J4	C14112	D12	CR11601*	M1	Q11901*	J1	R11704*	K2	R13106*	D2	R13207*	C4	R14305	I8		
C12304*	K6	C14113	F11	CR11602	O2	Q12301*	K4	R11705	L2	R13107*	D4	R13301*	E4	R14306	H9		
C12305	K5	C14114	F12	CR11603*	N2	Q12701*	H4	R11706*	K2	R13108*	E2	R13302*	E4	R14309	G9		
C12306	P7	C14115	F12	CR12301*	K5	Q12702*	G4	R11707	L2	R13109*	E2	R13306	F3	R14310	H7		
C12307*	K5	C14116	E12	CR12702	G7	Q12703*	I4	R11708*	K2	R13110*	E2	R13307	E3	R14318	D7		
C12308*	K5	C14118	E10	CR13501	B4	Q12704*	G5	R11709*	K2	R13111*	E2	R13308	E3	R14319	D6		
C12310	K5	C14119	F5	CR14101	K11	Q13101*	D3	R11909	G2	R13112*	E3	R13309	E3	R14320*	I6		
C12312*	K5	C14121	F13	CR14102	K11	Q13102*	D3	R11910*	I2	R13113*	C3	R13310*	F2	R14321*	I6		
C12313*	J5	C14122	H10	CR14103	I13	Q13103*	E3	R11911*	I2	R13114*	C3	R13311*	F2	R14322*	I6		
C12314	K6	C14123*	E11	CR14104	I13	Q13104*	F4	R11912*	H2	R13115*	C3	R13312*	F2	R14323*	I6		
C12701	I4	C14124	F11	CR14105	K12	Q13301*	D4	R11913*	H2	R13116*	C3	R13313*	E2	R14324*	I6		
C12702	J4	C14125	J11	CR14106	F11	Q13501*	C4	R11915*	K1	R13117*	C3	R13314*	E5	R14326*	I6		
C12703	H5	C14150	H5	CR14107	D13	Q13503*	C4	R11917	F2	R13118*	C3	R13315*	D5	R14327*	I6		
C12704	I4	C14151	H5	CR14108	F11	Q14101	J12	R11918*	J1	R13119*	C4	R13316*	D4	R14401	G8		
C12706	F6	C14152	I6	CR14109	F12	Q14102	J12	R11919*	J1	R13120*	C3	R13317*	E5	R14402	J8		
C12707	H5	C14153*	I5	CR14110	D5	Q14103	K12	R11920*	I1	R13121*	D5	R13318*	D5	R14403	G10		
C12708*	J5	C14154*	G6	CR14111	E12	Q14104	D10	R11921*	H1	R13122*	D4	R13319*	D5	R14501	C7		

* Located on
bottom of
board.

PARTS LIST

Item No.	Type No.	Mfr. Part No.	NTE Part No.
CR11401, 02, 03	-	220638	NTE5014A
CR11501, 02	-	232709	-
CR11503	-	215488	NTE136A
CR11504	-	226463	-
CR11505	-	232709	-
CR11601	-	232709	-
# CR11602	-	159429	NTE5019T1
CR11603	-	232709	-
CR12301	-	227051	-
CR12702	-	198589	NTE519
CR13501	-	164874	NTE177
CR14101	-	232221	-
CR14102	-	198589	NTE519
CR14103, 04	-	139706	NTE177
CR14105	-	198589	NTE519
CR14106	-	243636	-
CR14107	-	217306	-
CR14108	-	243636	-
CR14109	-	176296	NTE552
CR14110	-	155276	NTE116
CR14111	-	198589	NTE519
CR14113, 14	-	232709	-
CR14115	-	215488	NTE136A
CR14116	-	227362	-
# CR14117	-	244224	-
CR14201 Thru			
CR14204	-	147015	NTE125
CR14205	-	198589	NTE519
CR14301	-	176296	NTE552
# CR14401	-	140971	NTE558
CR14501	-	155276	NTE116
CR14701	-	241304	-
CR14702	-	176296	NTE552
CR14704	-	207878	NTE519
# CR14901	-	157301	NTE177
# CR14902	-	159429	NTE5019T1
CR17101, 02, 03	-	215492	-
CR17105	-	215493	-
CR17106	-	233085	-
CR17107, 08	-	215494	-
CR17109, 10	-	215493	-
CR1711	-	215494	-
CR1712	-	215493	-
CR17113	-	233085	-
CR17114	-	215492	-
CR17301	-	215492	-
CR17302	-	215494	-
CR17303	-	215493	-
CR17304	-	215492	-
CR18101, 02, 03	-	232709	-
CR26401	-	223651	-
CR26402	-	232709	-
Q11501	-	215495	-
Q11603	-	177788	NTE31
Q11901	-	215495	-
Q12301	-	215496	-
Q12701, 02, 03	-	215495	-
Q12704	-	215496	-

Item No.	Type No.	Mfr. Part No.	NTE Part No.
Q13101	-	215495	-
Q13102, 03, 04	-	215496	-
Q13301	-	215496	-
Q13501	-	215496	-
Q13503	-	215495	-
# Q14101	-	244223	-
# Q14102	-	147665	NTE159
Q14103	-	232218	-
Q14104	-	243955	-
Q14105, 06, 07	-	215495	-
# Q14108	-	215496	-
Q14115	-	229220	-
Q14201	-	219412	-
Q14301	-	146851	NTE287
Q14302	-	215495	-
# Q14401	-	242224	-
# Q14901	-	147665	NTE159
Q15101, 02, 03	-	215497	NTE2501
Q17101, 02	-	226973	-
Q17402	-	215496	-
Q17403	-	231534	-
Q17404	-	215496	-
Q18100, 01	-	215495	-
Q18102	-	219412	-
Q18103, 04	-	215495	-
Q18105, 06	-	215496	-
Q18107, 08	-	215495	-
Q18109	-	215496	-
Q18110, 11, 12	-	215495	-
Q18113	-	215496	-
Q26401	-	215496	-
Q26402	-	215495	-
Q26403, 04, 05, 08	-	215496	-
Q26409	-	215495	-
Q26410	-	215496	-
U11501	MC3403N	241785	NTE987
U11601	CXA2074S	237930	-
U11602	-	237474	-
U11900, 01	TDA7267	244225	-
# U12101	LA7612N	241266	-
	LA7612A	252842	-
U13101	ST9296N9B1/JBT	244226	-
U13102	24C08	244878	-
# U14101	-	223653	-
U14102	-	231525	-
U14103	L7852CV	241752	-
U14104	KA7812	162394	NTE966
U14150	L78S75CV	231526	-
U14501	TDA8172	215531	NTE1788
U17301	-	231528	-
U17401	-	231529	-
U18100	M65668SP	248620	-
U18101	-	214704	NTE956
U26401	GS301A	241781	-
U26403	KM416C2560J-L6	241783	-
U26404	-	237669	-
U26405	HC123A	239151	-
U26406	-	244258	-

PARTS LIST continued

Item No.	Function/Rating	Mfr. Part No.	Notes
C11612, 13	22pF 5% 50V NPO	194903	-
C12303	120pF 5% 50V NPO	194902	-
C12714, 15, 16	330pF 5% 50V NPO	205227	-
C12718	100pF 5% 50V NPO	193340	-
C12803	15pF 5% 50V NPO	200538	-
C12805	120pF 5% 50V NPO	194902	-
C13102, 03	120pF 5% 50V NPO	194902	-
C13106, 07	56pF 5% 50V NPO	214741	-
C13170	220pF 5% 50V NPO	205551	-
C13312	100pF 5% 50V NPO	193340	-
# C14102	.0168 1.6kV	237355	-
# C14108	.0011 1.6kV	244208	-
# C14111	100µF 20% 63V	237425	-
# C14112	.01 10% 50V	240934	-
C14113, 15	680pF 20% 1kV	190538	-
C14159, 60	100pF 5% 50V NPO	193340	-
C14161	100pF 5% 50V NPO	174412	-
# C14201	.22 20% 250VAC	-	-
	.22 20% 125VAC	231451	-
# C14203, 04	680pF 20% 1kV	190538	-
# C14205	680µF 20% 200V	190560	-
# C14207	.005 20% 120V	195697	-
# C14208	470pF 250VAC	250102	-
C14303	47pF 5% 50V NPO	214732	-
C14310	15pF 1% NPO 250V	223899	-
C14322	39pF 5% 50V NPO	202905	-
C14401	470pF 5% 50V NPO	195918	-
# C14402	.0127 1.6kV	246497	-
# C14403	.41 5% 250V	214752	-
# C14404	2.2µF 200V	247673	-
# C14405	.0047 10% 250V	142765	-
# C14406	470pF 5% 2kV	227068	-
C14702	470pF 10% 500V NPO	227050	-
C14704	680pF 20% 1kV	190538	-
C14706	470pF 10% 500V NPO	227050	-
C14710	.01 20% 1kV	137583	-
# C14904	.22 +80% -20% 25V	217298	-
C15101	.001 10% 3kV	120696	-
C17102	4pF ±.25pF 50V NPO	244210	-
C17103	22pF 5% 50V NPO	194903	-
C17105	.75pF ±.25pF 50V NPO	214758	-
C17108	27pF 5% 50V N750	214760	-
C17110	1.5pF NPO	223146	-
C17117	2pF ±.25pF 50V NPO	194905	-
C17118	22pF 5% 50V NPO	194903	-
C17124	27pF 5% 50V NPO	197604	-
C17127	120pF 5% 50V NPO	194902	-
C17128	16pF 2% 50V NPO	214736	-
C17136	180pF 2% 50V NPO	241265	-
C17137	330pF 5% 50V NPO	205227	-
C17139	20pF 5% N220 50V	244211	-
C17140	6pF NPO	227250	-
C17149	22pF 5% 50V NPO	194903	-
C17150	150pF 5% 50V NPO	214032	-
C17151	20pF 5% 50V NPO	220150	-
C17152	43pF 5% 50V NPO	214029	-
C17153	39pF 5% 50V NPO	202905	-
C17301, 02	1.5pF NPO	223146	-

Item No.	Function/Rating	Mfr. Part No.	Notes
C17304	2pF ±.25pF 50V NPO	194905	-
C17305	75pF 5% 50V NPO	192061	-
C17307	20pF 5% 50V NPO	220150	-
C17308	5pF N750	231457	-
C17309	10pF N750	244212	-
C17310	8pF ±.5pF 50V N750	214766	-
C17311, 12	5pF N750	231457	-
C17316	8pF ±.5pF 50V NPO	194909	-
C17320	180pF NPO	241265	-
C17322	24pF 2% 50V NPO	231459	-
C17323	6pF NPO	227250	-
C17326	82pF 2% 50V NPO	231460	-
C17405	33pF 5% 50V NPO	194911	-
C17410, 11	39pF 5% 50V NPO	202905	-
C17416, 17	43pF 5% 50V NPO	214029	-
C18102	180pF 5% 50V NPO	211039	-
C18103	100pF 5% 50V NPO	193340	-
C18104	220pF 5% 50V NPO	205551	-
C18112	10pF 5% 50V NPO	200537	-
C18113	470pF 5% 50V NPO	214732	-
C18114	20pF 5% 50V NPO	220150	-
C18122	47pF 5% 50V NPO	210689	-
C18124	100pF 5% 50V NPO	174412	-
C18127	18pF 5% 50V NPO	214028	-
C18129	100pF 5% 50V NPO	193340	-
C18134	56pF NPO	214741	-
C18137	150pF NPO	214032	-
C18138	220pF NPO	205551	-
C18139	27pF 5% 50V NPO	197604	-
C18142	91pF 5% 50V NPO	192057	-
C18143	27pF 5% 50V NPO	197604	-
C18162, 63	100pF 5% 50V NPO	193340	-
C26402	220pF 5% 50V NPO	205551	-
C26413 Thru			
C26416	56pF 2% 50V NPO	239136	-
C26417, 18	68pF 2% 50V NPO	214762	-
C26421	100pF 5% 50V NPO	193340	-
C26423, 33	33pF 2% 50V NPO	239138	-
C26435, 37	33pF 2% 50V NPO	239138	-
C26438	22pF 2% 50V NPO	223698	-
C26453	100pF 2% 50V NPO	227089	-
C26460	330pF 2% 50V NPO	241779	-
C26461	220pF 2% 50V NPO	205551	-
CF12201	Filter	195702	4.5MHz
CF12301	Trap	238296	4.5MHz
# DY1 (1)	Yoke	-	Horiz 1.3mH, Vert 10mH
# F14201	Fuse	175425	5A, 125V, Fast Acting
FB13101	Ferrite Bead	226467	-
FB14106, 07, 08	Ferrite Bead	237504	-
FB14109	Ferrite Bead	226467	-
FB14110, 11	Ferrite Bead	215546	-
FB14114	Ferrite Bead	237504	-
FB14401	Ferrite Bead	161237	-
FB14501	Ferrite Bead	215547	-
FB18101, 02, 03	Ferrite Bead	239201	-
FB26401, 02	Ferrite Bead	226467	-
IR13201	Receiver	244227	IR
J11401	Jack	226298	Assembly

PARTS LIST continued

Item No.	Function/Rating	Mfr. Part No.	Notes	Item No.	Function/Rating	Mfr. Part No.	Notes
J11402	Jack	243199	Assembly	# R11511, 12	100 5% 1/4W	198667	-
J11403	Socket	195705	S Video Input	R11616	61.9K 1%	225705	-
J13201	Jack	214609	Gemstar IR Blaster	# R11627	10	241259	-
J17101	Jack	215453	RF Input	# R11909	16 3W	244213	-
# K14201	Relay	190490	Degaussing	R12201	680 2% 1/10W	195939	-
# KS15101	Socket	233120	CRT	R12302, 03	120K 2% 1/10W	207834	-
L12302	VCO	215502	-	R12317	620 2% 1/8W	181493	-
L12303	FM Detect	233056	-	R12318	750 2% 1/10W	202914	-
L12305	10μH	175409	-	R12713	620 2% 1/10W	205339	-
L12705	10μH	175409	-	R12717, 21, 25	220 2% 1/4W	175324	-
L13105, 06	4.7μH	237451	-	R12801	15K 2% 1/10W	205354	-
L14102	27μH	190017	-	R12802	120K 2% 1/1W	207834	-
L14103	22μH	215504	-	R12804	13K 2% 1/8W	178285	-
L14104, 05	47μH	244222	-	R12805	750 2% 1/10W	202914	-
L14200	Degaussing	218764	-	R13111	27K 2% 1/10W	205245	-
L14401	6.8μH	191141	-	R13123	100K 1% 1/10W	215221	-
# L14402	56μH	192844	-	R13124	47.5K 1% 1/10W	237430	-
L15101	100μH	160186	-	R13507	27K 2% 1/0W	205245	-
L17101	-	215507	-	# R14101	47K 5% 3W	232213	-
L17102	-	236641	-	# R14102	6800	179248	-
L17103	-	223929	-	# R14105	68 5% 1/4W	175039	-
L17104, 05	-	223917	-	# R14106	2000 5% 1/4W	175321	-
L17106	-	237456	-	# R14107	43	244214	-
L17107	-	233057	-	# R14108	.1 3W	244215	-
L17108	-	233074	-	# R14109	750 5% 1/4W	179317	-
L17109	3.9μH	200559	-	R14112	680 2% 1/10W	195939	-
L17110	-	233075	-	R14114	270K 2% 1/10W	205375	-
L17111	-	233076	-	R14115	143K .1%	244216	-
L17112	-	231441	-	R14116	2800 .1% 1/4W	244217	-
L17113	-	233077	-	# R14117	160 5% 7W Wirewound	227958	-
L17114	-	231441	-	R14118	47K 5% 3W	232213	-
L17115	-	233078	-	# R14124	3.3 5% 2W Nonflammable	223680	-
L17116	-	237461	-	R14126	37.4K 1%	215215	-
L17117	-	237460	-	# R14151	8.2 1W	235378	-
L17118	-	237461	-	# R14201	2.7M 20% 1/2W	217662	-
L17301	-	231443	-	# R14202	1.8 10% 15W Wirewound	200444	-
L17302	-	231444	-	# R14205	120K 20% 1/2W	238903	-
L17303	-	233079	-	# R14305	2400 2% 3W	235380	-
L17304	-	233080	-	R14326	910 2% 1/10W	197627	-
L17305	-	236643	-	# R14401	15K 5% 1W	190557	-
L17306	-	231448	-	# R14402	91 5% 2W	227249	-
L18100	15μH	197613	-	# R14403	820 5% 1W	175349	-
L18101	18μH	195711	-	# R14506	13 1W	231508	-
L18102	8.2μH	149170	-	# R14507	1.5 5% 2W	237441	-
L18103	12μH	210687	-	# R14508	1 5% 2W Wirewound	215577	-
L18104	10μH	160518	-	# R14701	10 20% 1/2W	241261	-
L18105	27μH	197615	-	# R14703	.68 5% 3W Wirewound	244221	-
L18106	27μH	190017	-	# R14704	82K 10% 1/2W	239116	-
L18108	4.7μH	237451	-	# R14705	27K 10% 1/2W	238958	-
L18111	18μH	244254	-	R14706	1050 1% 1/4W	231511	-
L26401	2.2μH	197616	-	# R14901	100 5% 1/4W	198667	-
L26402, 03	2.2μH	239143	-	# R14902	39.2K 1% 1/4W	190469	-
L26409	2.2μH	197616	-	# R14903	40.2K 1% 1/4W	219026	-
# P14201	Line Cord	241251	AC, Polarized	R14909	15K 2% 1/10W	205354	-
# R11401, 03	2200 20% 1/4W	237429	-	# R15101, 02, 03	10K 5% 2W Nonflammable	176656	-
# R11406	56 20% 1/4W	237448	-	# R15104, 05, 06	2200	247669	-
# R11407, 09	2200 20% 1/4W	237429	-	# R15118	2200	247669	-
# R11412, 14	56 20% 1/4W	237448	-	R17147	4.7 5% 3W Wirewound	205411	-

PARTS LIST continued

Item No.	Function/Rating	Mfr. Part No.	Notes
# R18125	15 5% 3W Wirewound	237447	-
R18126	392 1%	234552	-
R18127	243 1% 1/10W	214132	-
R26462	357K 1% 10W Wirewound	241780	-
RN14501	Network	215499	-
# RT14201	8 Cold PTC	207768	-
SF12301	Filter	217318	SAW
SP1, 2	Speaker	243873	60mm X 125mm, 8 Ohms
SW13201	Switch	215500	Power
SW13202	Switch	215500	Volume Up
SW13203	Switch	215500	Volume Down
SW13204	Switch	215500	Channel Up
SW13205	Switch	215500	Channel Down
SW13206	Switch	215500	Menu
# T14101	SMT	244228	-
# T14201	Line Filter	190507	-
# T14301	Horizontal Drive	215541	-
# T14401 (2)	Horizontal Output	244229	-
# V101	CRT	HA68ADT295	A68ADT29X05
Y12801	Crystal	161235	3.58MHz
Y13101	Crystal	230708	4MHz
Y14101	Resonator	227064	507.5kHz
Y17401	Crystal	230708	4MHz
Y18100	Crystal	197652	14.318MHz
Y26401	Crystal	241784	4.03MHz
	Fuse Holder	176642	For F14201 (2 Used)
	PC Board	244468	CRT
	PC Board	243998	F2PIP
	PC Board	244160	Gemstar 3
	Transmitter	240895	Remote, CRK76TBL1

For SAFETY use only equivalent replacement part.

(1) Bonded part of CRT.

(2) Screen and focus controls are part of T14401.

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.

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