



WELLS-GARDNER®
ELECTRONICS CORPORATION

MODEL 14K3101

MODEL 19K3102



REPLACEMENT PARTS LIST

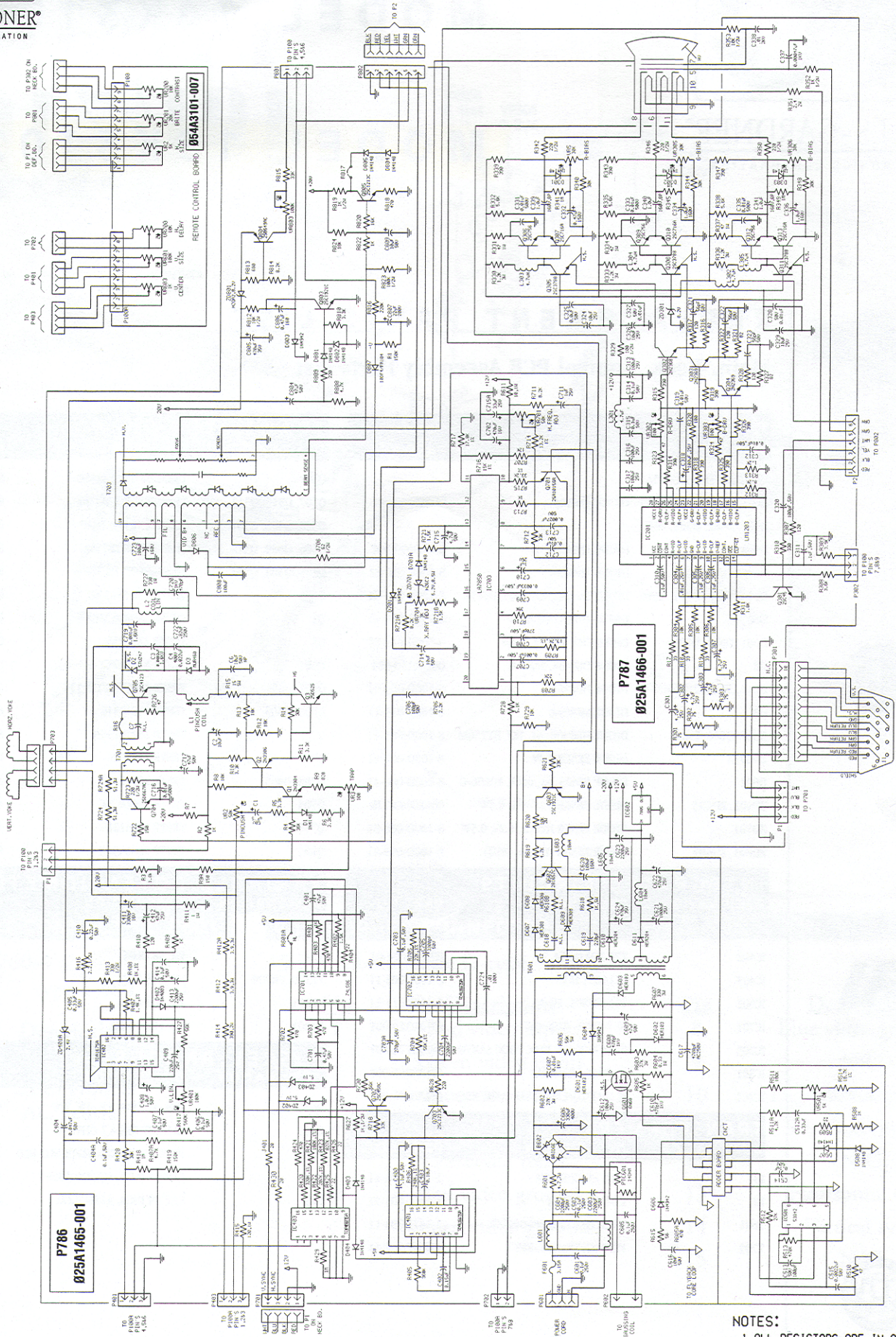
Main, Neck, Control PCB Assembly Parts List

DIODES			TRANSISTORS		
DESIGNATION	DESCRIPTION	PART NO.	DESIGNATION	DESCRIPTION	PART NO.
D1, D403, D404, D701A,			Q301	TRANSISTOR 2SC458C	8-100X-005-91
D801, D802, D804, D805	DIODE 1N4148	066X0099-001	Q307, Q310, Q313	TRANSISTOR 2SB716A	8-100X-008-91
D301, D302, D303, D507,			Q302, Q303, Q304	TRSTR 2N2369, MOT	086X0157-001
D508	DIODE 1N4148	066X0099-001	Q306, Q309, Q312	TRANSISTOR 2S756A	8-100X-014-91
D402	DIODE 1N4003	8-100D-010-81	Q305, Q308, Q311	TRANSISTOR 2SC3788	8-110X-013-11
D604, D606, D701, D803	DIODE 1N4942, 1A, 200V, BYT52	8-100D-011-81	Q1	TRSTR 2N3904 MOT	086X0113-501
D807	DIODE 10DF4, 1A, 400V	8-100D-015-41	Q2	TRSTR 2N3906 MOT	086X0114-501
D601, D602, D603	DIODE HER103, 1A, 200V	8-100D-012-81	Q3	TRSTR 2SD525R	086X0074-001
D2	DIODE DD54RC SANYO	066X0150-001	Q601	TRSTR N-MOSFET 6N60	086X0334-001
D610, D611, D806	DIODE HER204	8-100D-003-41	Q602	TRSTR 2SB857C/TIP 127	8-100X-011-11
D3	DIODE MUR460	8-100D-025-11	Q603, Q803	TRSTR 2SC1921C	8-100X-101-91
D607, D608, D609	DIODE HER308, 3A, 1KV, BYT56M	8-100D-004-41	Q701	TRSTR 2SA1015GR	8-100X-002-11
ZD401A	DIODE ZENER 2.4V	8-100D-002-81	Q702	TRSTR 2SC458C	8-100X-005-11
D602	DIODE RS405, 4A, 600V, KBL06-G	8-100D-006-41	Q703, Q805	TRSTR 2SC1213C	8-100X-004-11
ZD402, ZD403	DIODE ZENER 5.1V, 5%, 0.5W	066X0040-028	Q704	TRSTR 2SD667AC	8-100X-007-91
ZD701	DIODE ZENER HZ6C2, 6.2V, 0.5W	8-100D-008-81	Q705	TRSTR 2SC4123	8-100X-003-11
ZD801, ZD301	DIODE ZENER HZQA2, (8V2)	8-100D-009-81	Q804	TRSTR 2SB649AC	8-100X-006-11
INTEGRATED CIRCUITS			VARIABLE POTENTIOMETERS		
DESIGNATION	DESCRIPTION	PART NO.	DESIGNATION	DESCRIPTION	PART NO.
IC401, IC702	IC 74LS123 DUAL MONO	086X0338-001	VR603	VR, 1K OHM	1-121R-024-11
IC402	TTL TDA1675A	086X0360-001	VR2	VR, 5K OHM	1-212R-023-11
IC403	IC L4051 BCP	8-100S-002-11	VR200, VR700	VR, 10K OHM	1-221R-008-11
IC602	TTL IC7805, 5V, 1A	8-100S-011-11	VR201	VR, 20K OHM	1-221R-025-11
IC701	IC 74LS86, EXCL-OR	086X0313-001	VR601	VR, 100K OHM	1-221R-007-11
IC703	IC LA7850 H/V SYNC PROC SANYO	086X0274-001	MISCELLANEOUS		
IC501	IC PWM, UC3842AN	086X0257-001	DESIGNATION	DESCRIPTION	PART NO.
IC201	IC LM1203N, RGB, VID, AMP, NSC	086X0270-001	R604	RES .33 OHM 5%, 1W, WW	043X0477-008
TRANSFORMERS			R601	CEMENT RES 4.7 OHM 7W	1-218R-017-11
DESIGNATION	DESCRIPTION	PART NO.	F601	FUSE 3.15A 5X20 IEC/UL SLO-BLO	016X0211-009
L1	COIL PINCUSHION	1-459L-004-11	CRT	CRT 14 INCH, M34KXG30X55	088X0379-001
L2	COIL LINEARITY	1-459L-001-11	CRT	CRT 19 INCH, A48ACB24X	088X0290-506
T601	SWITCHING TRANSFORMER	1-441T-004-11			
T703	FLYBACK TRANSFORMER	1-439T-002-11			



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MODEL 14K3101



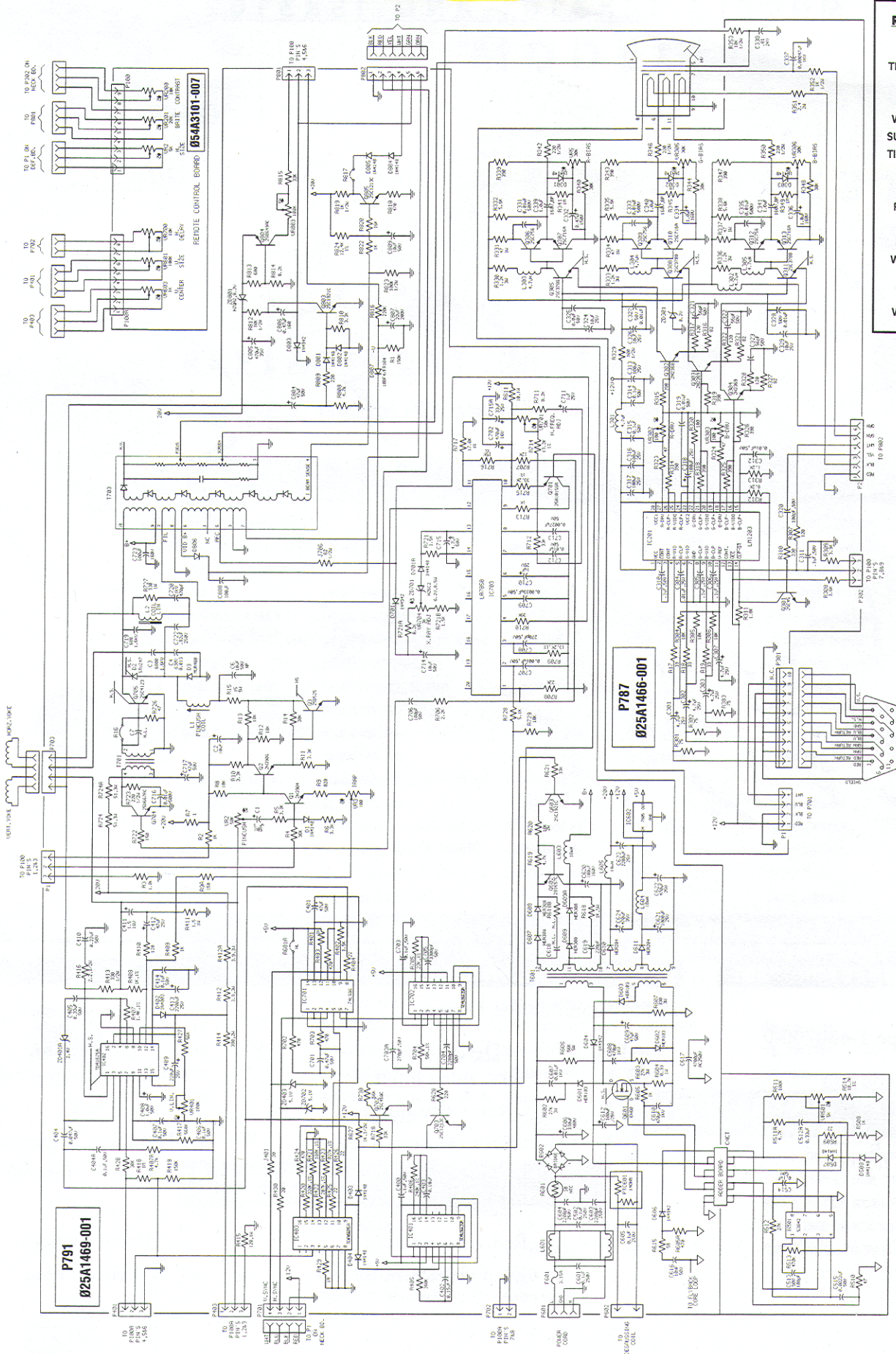
NOTES:

1. ALL RESISTORS ARE IN OHMS, 1/4W, 5% UNLESS OTHERWISE INDICATED.
2. CAPACITANCE VALUES LESS THAN 1 ARE IN MICROFARADS, ABOVE 1 IN PICOFARADS UNLESS OTHERWISE INDICATED.

MODEL 19K3102

RESTRICTED CONFIDENTIAL DOCUMENT

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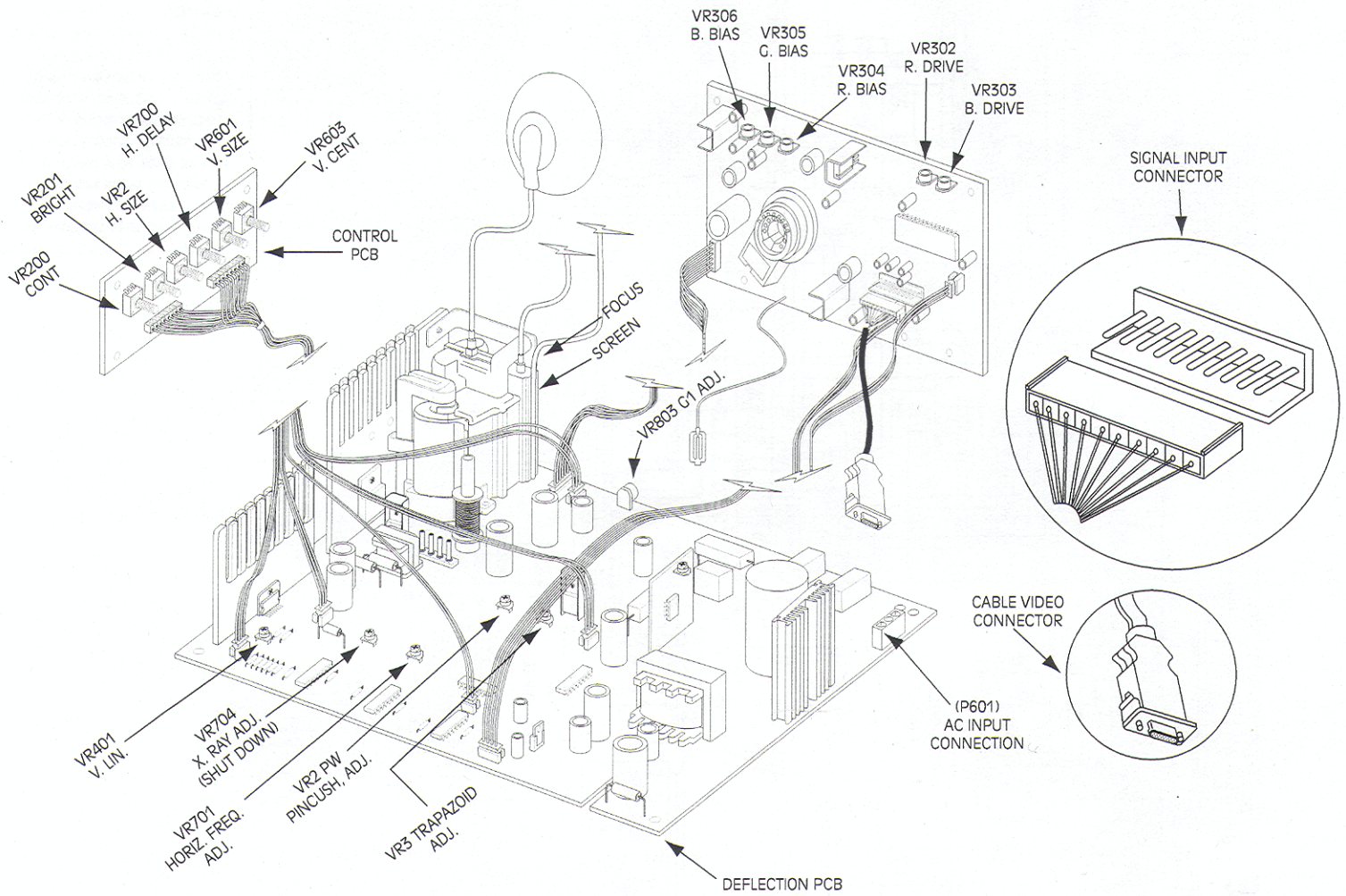
CAUTION SAFETY CRITICAL COMPONENT.
 ★ X-RAY RADIATION RELATED COMPONENT.
 REPLACE ONLY WITH SAME TYPE PARTS AS SHOWN IN PARTS LIST.





WELLS-GARDNER
ELECTRONICS CORPORATION

MODELS 14K3101 AND 19K3102



AC INPUT CONNECTOR: P601

AMP 350760-4
Mating AMP type 1-480700-0

Pin	Description
1	AC hot
2	Earth ground
3	AC neutral

CABLE VIDEO CONNECTOR

15 Pin Subminiature D-type

Pin	Description	Pin	Description
1	Red video input	8	Blue video ground
2	Green video input	9	N/C
3	Blue video input	10	Digital/sync ground
4	N/C	11	Reserved (mode)
5	Reserved (test)	12	N/C
6	Red video ground	13	Horizontal sync
7	Green video ground	14	Vertical sync
		15	N/C

U3000 TROUBLESHOOTING GUIDE

SYMPTOM	CAUSE	COMMENTS
NO PICTURE/VIDEO	Q102, T701, R802, ZD500, C723, Q501, T700, R626, CRT	
JITTER/SHAKEY VIDEO	C115, Q205, Q101, J703, VR701	VR701 DIRTY OR BAD CONTACT
DARK/DIM VIDEO	Q604, IC U301, CRT	
WHITE SCREEN	IC U201, CRT	
FUZZY PICTURE	C115, T701	
NO POWER/DEAD	Q101, Q108, Q102, Q701, Q700, C106, IC U101, D106, U600	
BRIGHTNESS	Q200, D206, C310, Q102, IC U200, VR200, CRT	
CONTRAST	Q201, D207, C225, U200, VR202, VR201, CRT	
VERTICAL DEFLECTION	Q602, Q603, Q600, R628, ICU600	
HORIZ SYNC	Q803, Q103, IC U700, Q101, VR700, Q102	
COLOR PROBLEMS	R203, IC U200, CRT	
NO RED PICTURE RED	Q500, Q501, R506, IC U200, CRT Q500, Q501, IC U200, CRT	BLUE & GREEN MAY BE MISSING
NO BLUE PICTURE BLUE	Q504, Q505, R526, IC U200, CRT Q504, Q505, IC U200, CRT	RED & GREEN MAY BE MISSING
NO GREEN PICTURE GREEN	Q502, Q503, R516, IC U200, CRT Q502, Q503, IC U200, CRT	RED & BLUE MAY BE MISSING
WIDTH PROBLEM	L1, C36, C37, T1	
PIN CUSHION	VR703, L701, Q703	

NOTE: ITEMS IN THE "CAUSE" COLUMN ARE LISTED FROM MOST COMMON TO LEAST COMMON COMPONENTS

The voltages below are for reference only and may vary with input signal and control adjustments

U3000 Voltage Reference Chart

(This chart should only be used as a guide. Your readings may be different)

PART LOCATION	EMITTER	BASE	COLLECTOR	PART LOCATION	EMITTER	BASE	COLLECTOR
Q200	2.4	1.69	**	Q603	2.1	2.7	12.16
Q201	2.39	1.69	0	Q604	-0.23	-0.82	-91.25
Q202	2.4	1.68	0	Q605	6.27	7.12	23.36
Q203	0	-1.22	2.2	Q700	23.32	23.3	1.63
Q204	0	-0.07	2.21	Q701	**	**	**
Q205	0.01	-0.08	4.24	Q702	0	0.32	4.66
Q301	0	0.8	0.03	Q703	0.91	1.54	13.63
Q302	0	**	8.63	Q704	14.27	13.62	0.6
Q303	0	0	2.72	Q705	0	0.6	4.44
Q600	1.19	0.71	23.28	Q706	11.69	8.57	6.02
Q601	11.88	11.88	23.25	Q800	0	-1	-1.4
Q602	11.88	0	11.89	Q801	-0.77	-1.41	-0.85

LOCATION	ANODE	CATHODE	LOCATION	ANODE	CATHODE
D200	0.2	12.01	D605	0.68	0
D201	0	0.21	D702	23.39	23.37
D202	0.13	12.01	D704	8.06	104.02
D203	0	0.13	D705	0	8.07
D204	0.16	12.01	D706	**	
D205	0	0.16	D707	**	
D206	2.34	1.68	D708	23.39	23.38
D207	2.34	1.68	D710	0	19.03
D208	2.33	1.68	D800	-103.3	**
D209	1.79	2.21	D801	0	-0.14
D210	1.78	2.22	D802	-0.01	4.56
D211	1.78	2.22	ZD301	0	5.08
D301	3.7	5.09	ZD600	1.35	2.68
D302	0	3.7	ZD700	0	11.65
D305	2.95	5.09	ZD701	0	3.42
D306	0	2.95	ZD702	-0.2	7.15
D602	1.31	23.2			
D603	23.21	23.22			
D604	1.36	0.68			