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performed for continued protection of the customer and service technician.

High Voltage

This monitor is provided with a high voltage hold down circuit for clearly indicating that voltage has increased in excess of a predetermined value. Comply with all notes described in this Service Manual regarding this hold down circuit when servicing, so that this hold down circuit may function correctly.

Service Warning

With minimum Brightness and Contrast the operation high voltage in this display is lower than 28KV.

If any component having influence on the high voltage is replaced, confirm that the high voltage with minimum Brightness and Contrast is lower than 28KV. To measure high voltage use a high impedance high-voltage meter. (SENSITIVE RESEARCH Model: ESH or Equivalent) Connect (-) to chassis earth and (+) to the CRT anode button. (See the following connection diagram Fig. 1).

NOTE:

- 1) Turn power switch off without fail before making the connection to the Anode button.
- 2) Before turn power switch ON, confirm the AC line voltage, set the "Voltage Selector".

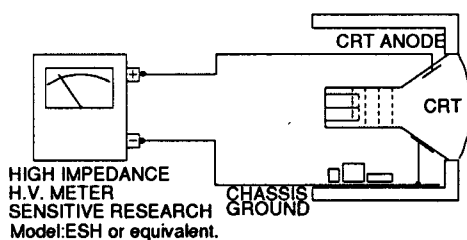


Fig. 1

X-radiation

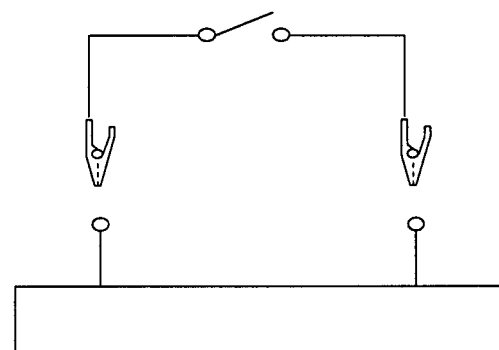
TUBE: The primary source of X-radiation in this monitor is the picture tube. The tube utilized in this chassis is specially constructed to limit X-radiation emissions. For continued X-radiation protection, the replacement tube must be the same type as the original, manufacturer

making test measurements in a monitor with a problem of excessive high voltage, avoid being unnecessarily close to the picture tube and the high voltage components. Do not operate the chassis longer than is necessary to locate the cause of excessive voltage.

CHECK OF HIGH VOLTAGE HOLD DOWN CIRCUIT

Checking of the high voltage hold down circuit operation.

1. Turn the switch of the unit ON.
2. Set Brightness, Contrast controls to max..
3. Short the two pins of P406 as shown in Fig. 2. The picture should disappear immediately.



P406

Main Board Assembly

Fig. 2

4. Turn the switch of the unit OFF.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the color

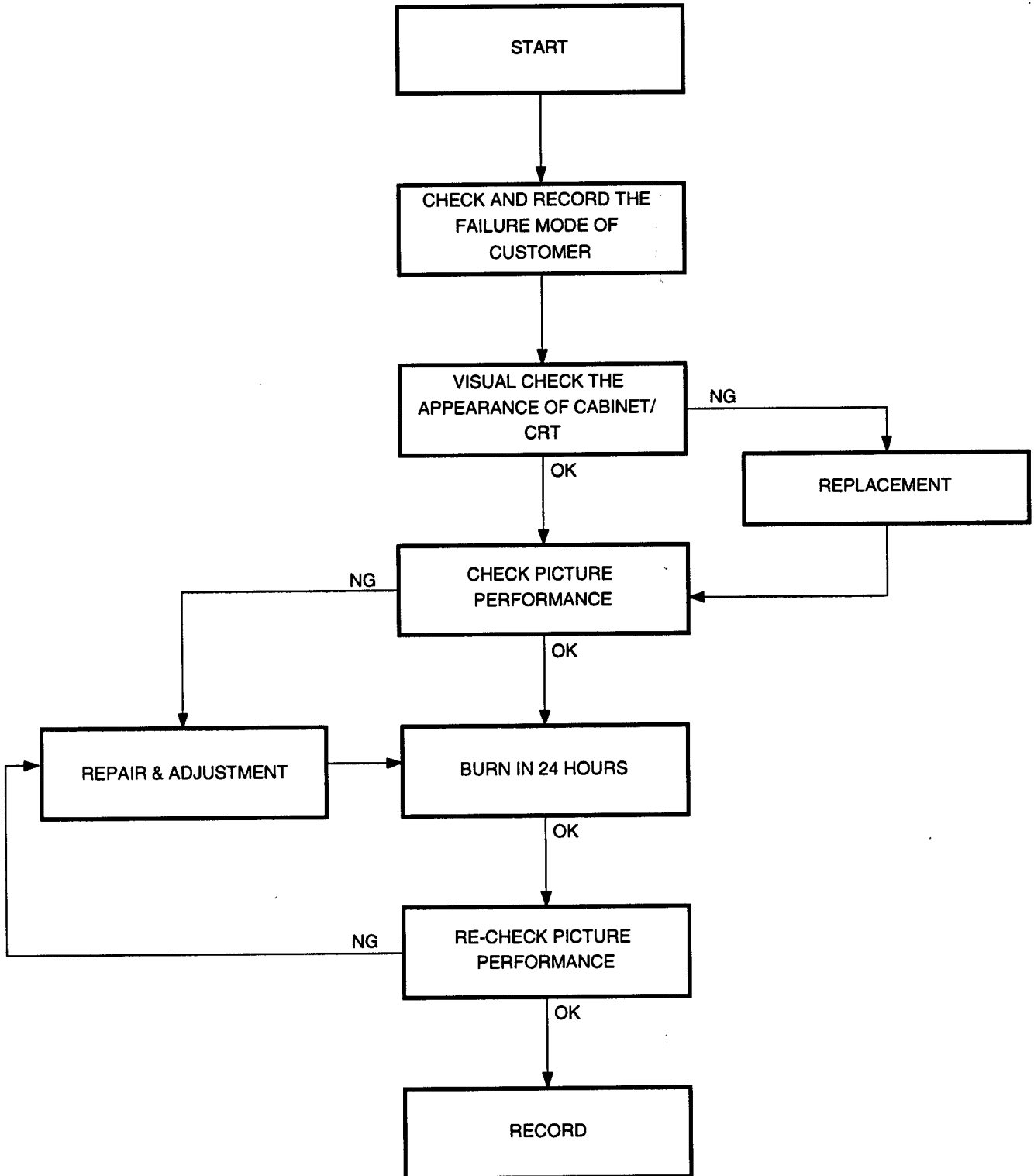
monitor units have special safety related characteristics.

These are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc.. Replacement parts which have these special safety characteristics are identified in this Service Manual.

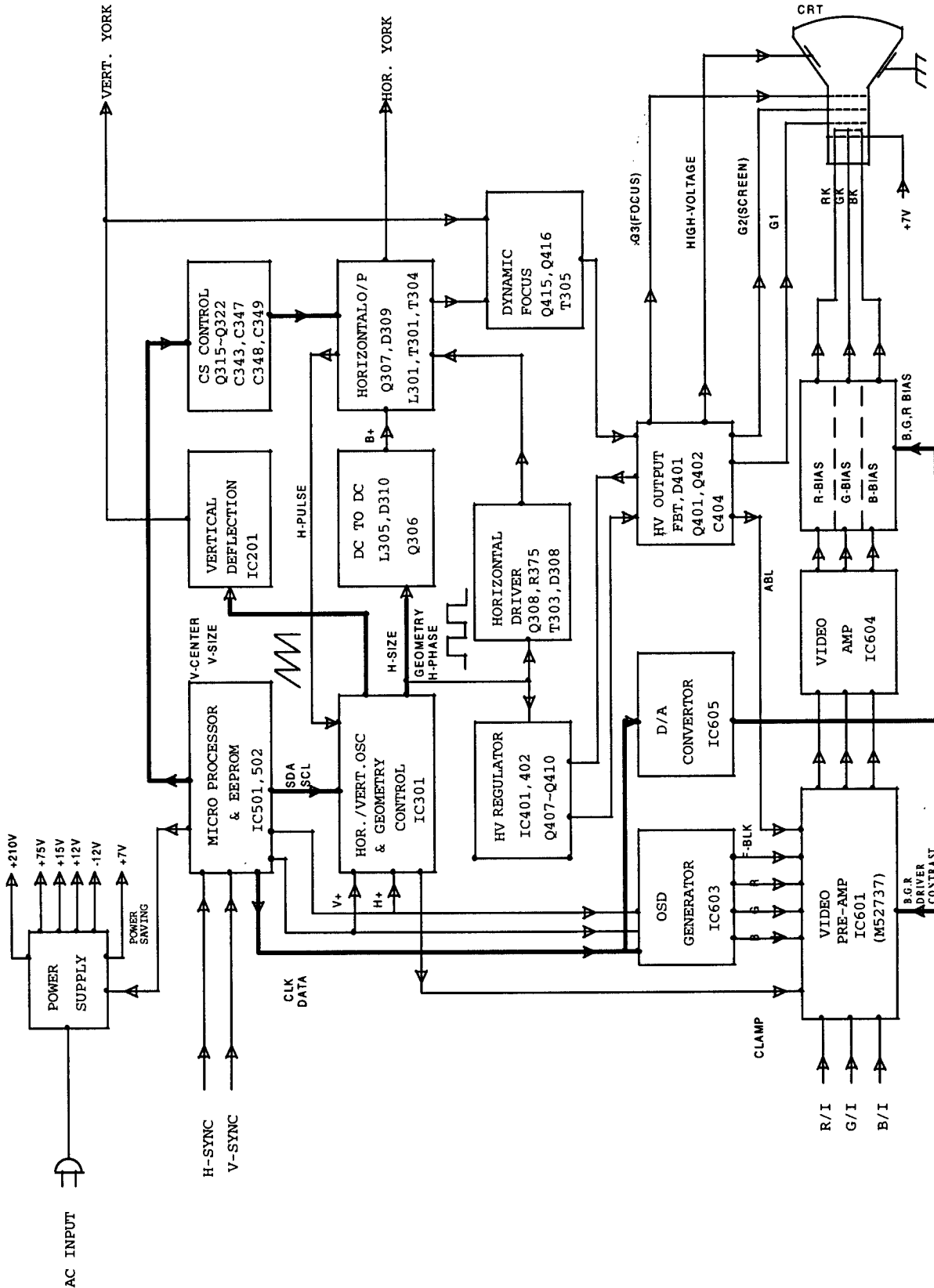
Electrical components having such features are identified by marking with "!" on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the manufacturer recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, X-radiation, or other hazards.

2.0 GENERAL MAINTENANCE PROCEDURE



3.0 FUNCTION BLOCK DIAGRAM



4.0 DESCRIPTION OF CIRCUIT

1. Power supply circuit

The power supply is a serial & universal AC input switching power supply. The start up circuit (Q101) will provide a DC voltage for PWM (Pulse Width Modulation) IC(IC101) when power on. While IC101 works normal, Q101 will be cut off by the DC voltage. The IC101 will Auto-detect output voltage of power supply from Pin2 and correct the duty cycle of Pin6 output pulse to compensate the variation of output voltage.

The output of IC101 Pin6 connected to power MOSEFET to drive the power transformer T101. When power MOSFET is on, the energy stored in the primary winding of T101. Once MOSEFET is off, the energy transfer to the secondary and charges the output capacitor to get the stable DC voltage.

2. Oscillation circuit

The functions H-size, H-phase, V-size, V-center, Side-pin, Parallel....are designed inside into IC301. The Pin2 is X-RAY protect input. When H.V output circuit is abnormal (H.V too high) the X-RAY protect circuit will shut off the horizontal output, H.V. also will be shut down. The Pin6 is B⁺ control driver output. The Pin8 is horizontal square wave output drives horizontal output. The Pin11 is parabolic output. The Pin12,13 are vertical output. The Pin14 & pin15 are V-SYNC & H-SYNC input. The Pin17 is vertical blanking output. The Pin23,24 for vertical oscillator. The Pin28,29 for horizontal oscillator. The Pin30 is soft start.

3. Vertical output circuit

The Pin12 & 13 of IC301 are vertical sync output connected to IC201 (Amplifier), Pin5 of IC201 is vertical amplifier output drives the vertical deflection directly.

4. Horizontal output circuit

The DC-DC is to generate a DC voltage (B⁺) for horizontal output circuit. The CPU(IC501) controls the H. size adjustment function of IC301 via the I²C Bus. The output of IC301 (Pin6) connected to gate of Q306 to make the Q306 switching. When Q306 is ON, the energy stored in T304 and the energy released when Q306 turned OFF. The B⁺ applied to Horizontal Yoke and supply the power for horizontal deflection. The more the B⁺, the bigger the horizontal size.

5. Micon circuit

The IC501(CPU) will detect polarity and frequency of input H.V. Sync.. The CPU will determine the mode of input timing (preset or users mode) and load mode data from IC502(EEPROM). The output of IC501 were connected to other function circuit (ie. H-size, H-phase, V-size, V-center.....). Also, the user can adjust picture from key board and the data will be saved into IC502 automatically. For the O.S.D. mode, when O.S.D. manual is active CPU will inform the O.S.D IC (IC603) to send O.S.D BLK signal to blank the video signal from VGA card, and the O.S.D. IC will send O.S.D. R.G.B. Video signal the show the O.S.D. manual on screen.

6. H.V. regulation circuit

The IC402 is a P.W.M IC, Pin7 is P.W.M output which connected to output transistor Q401 and Q402 via buffer driver Q407,Q409,Q410,Q408. The Q402 is H.V. output switching transistor, Q401 and D402 are damper device provide the path of damper current. IC401 is a feedback amplifier, the feedback voltage from FBT Pin11 connected to IC401 Pin5, and output is from pin1 which connected to IC402 for P.W.M the duty cycle control.

7. Video output circuit

Video circuit consists of video preamplifier IC601 and output cascode amplifier IC604. IC601 is a video processing IC equipped with three DC amplifiers to pre-amplify R.G.B. signals from 0.7V to 4.2V.

The R.G.B. GAIN & BIAS control signal are from IC501 via I²C-bus to DAC IC605. The output of IC605 are connected to GAIN and BIAS circuit of each R.G.B. signal's amplification and thus achieve a well balanceable white picture.

The O.S.D. R.G.B. (Pin5,10,15 of IC601) is the input of O.S.D. Video signal. The IC604 is R.G.B. drive to capable of driving CRT.

5.0 TIMING MODE (CTX presetting Timing)

MODEL	1769UA / 1795UA		1769UA / 1795UA		1769UA / 1795UA		1769UA / 1795UA		1769UA / 1795UA	
NAME	720X400-70		640X480-60		640X480-85		640X480-120		800X600-85	
PIXEL CLOCK	28.322 MHZ		25.175 MHZ		36.000 MHZ		54.890 MHZ		56.250 MHZ	
Fh	31.469 KHZ		31.469 KHZ		43.269 KHZ		63.530 KHZ		53.674 KHZ	
Fv	70.087 HZ		59.940 HZ		85.008 HZ		119.868 HZ		85.061 HZ	
INTERLACE MODE	NO		NO		NO		NO		NO	
VIDEO	ANALOG-COLOR		ANALOG COLOR		ANALOG COLOR		ANALOG COLOR		ANALOG COLOR	
XS SYNC ON GREEN	NO		NO		NO		NO		NO	
VIDEO LEVEL	700mv		700mv		700mv		700mv		700mv	
WHITE LEVEL	714mv		700mv		700mv		700mv		700mv	
BLANK LEVEL	0 IRE		0 IRE		0 IRE		0 IRE		0 IRE	
16 BIT HEX DATA	0000		0000		0000		0000		0000	
UNIT OF DATA	PIXEL	Us/ms	PIXEL	us/ms	PIXEL	us/ms	PIXEL	us/ms	PIXEL	us/ms
H TOTAL	900	31.778us	800	31.778us	832	23.111us	864	15.741us	1048	18.631us
H DISPLAY	720	25.422us	640	25.422us	640	17.778us	640	11.660us	800	14.222us
H B-PORCH	54	1.907 us	48	1.907 us	80	2.222 us	95	1.731 us	152	2.702 us
H-S-WIDTH	108	3.813 us	96	3.813 us	56	1.556 us	96	1.749 us	64	1.138 us
H BORDER	0	0.000 us	0	0.000 us	0	0.000 us	0	0.000 us	0	0.000 us
H SIZE	4.000mm		4.000mm		4.000mm		4.000mm		4.000mm	
V TOTAL	449	14.268ms	525	16.683ms	509	11.763ms	530	8.343ms	631	11.756ms
V DISPLAY	400	12.711ms	480	15.253ms	480	11.093ms	480	7.555ms	600	11.179ms
V B-PORCH	35	1.112 ms	33	1.049 ms	25	0.578 ms	36	0.567 ms	27	0.503 ms
V S WIDTH	2	0.064 ms	2	0.064 ms	3	0.069 ms	6	0.094 ms	3	0.056 ms
V BORDER	0	0.000 ms	0	0.000 ms	0	0.000 ms	0	0.000 ms	0	0.000 ms
V SIZE	3.000mm		3.000mm		3.000mm		3.000mm		3.000	
H S OUTPUT	ON(-)		ON(-)		ON(-)		ON(-)		ON(+)	

V S OUTPUT	ON(+)	ON(-)	ON(-)	ON(-)	ON(+)
X S OUTPUT	ON(-)	ON(-)	ON(-)	ON(-)	ON(+)
X S SELETE	H	H	H	H	H

MODEL	1769UA		1795UA		1769UA / 1795UA		1795UA		1769UA	
NAME	800X600-100		800X600-120		1024X768-85		1024X768-100		1280X1024-60	
PIXEL CLOCK	67.397 MHZ		81.000 MHZ		94.500 MHZ		110.000 MHZ		108 MHZ	
Fh	63.883 KHZ		75.985 KHZ		68.677 KHZ		80.468 KHZ		63.981 KHZ	
Fv	99.973 HZ		120.039 HZ		84.997 HZ		99.836 KHZ		60.020 HZ	
INTERLACE MODE	NO		NO		NO		NO		NO	
VIDEO	ANALOG COLOR		ANALOG COLOR		ANALOG-COLOR		ANALOG COLOR		ANALOG COLOR	
XS SYNC ON GREEN	NO		NO		NO		NO		NO	
VIDEO LEVEL	700mv		700mv		700mv		700mv		700mv	
WHITE LEVEL	700mv		700mv		700mv		700mv		700mv	
BLANK LEVEL	0 IRE		0 IRE		0 IRE		0 IRE		0 IRE	
16 BIT HEX DATA	0000		0000		0000		0000		0000	
UNIT OF DATA	PIXEL	Us/ms	PIXEL	us/ms	PIXEL	us/ms	PIXEL	us/ms	PIXEL	us/ms
H TOTAL	1055	15.654u s	1066	13.160u s	1376	14.561u s	1367	12.427u s	1688	15.630u s
H DISPLAY	800	11.870u s	796	9.827 us	1024	10.836u s	1024	9.309us	1280	11.852u s
H B-PORCH	135	2.003 us	158	1.951 us	208	2.201 us	214	1.945 us	248	2.296 us
H-S-WIDTH	80	1.187 us	87	1.074 us	96	1.016 us	118	1.073 us	112	1.037 us
H BORDER	0	0.000 us	0	0.000 us	0	0.000 us	0	0.000 us	0	0.000 us
H SIZE	4.000 mm		4.000 mm		4.000 mm		4.000 mm		4.000 mm	
V TOTAL	639	10.003m s	633	8.330 ms	808	11.765m s	806	10.016m s	1066	16.662m s
V DISPLAY	600	9.392 ms	600	7.896 ms	768	11.183m s	768	9.544 ms	1024	16.005m s
V B-PORCH	32	0.501 ms	29	0.382 ms	36	0.524 ms	34	0.423 ms	38	0.594 ms
V S WIDTH	4	0.063 ms	3	0.039 ms	3	0.044 ms	3	0.037 ms	3	0.047 ms

V BORDER	0	0.000 ms	0	0.000 ms	0	0.000 ms	0	0.000 ms	0	0.000 ms
V SIZE	3.000 mm		3.000 mm		3.000 mm		3.000 mm		3.000 mm	
H S OUTPUT	ON(+)		ON(-)		ON(+)		ON(-)		ON(+)	
V S OUTPUT	ON(+)		ON(-)		ON(+)		ON(-)		ON(+)	
X S OUTPUT	ON(+)		ON(-)		ON(+)		ON(-)		ON(+)	
X S SELETE	H		H		H		H		H	

MODEL	1795UA		1795UA		1769UA / 1795UA		1769UA / 1795UA	
NAME	1280X1024-75		1280X1024-85		MACII-832		1152X864-75	
PIXEL CLOCK	135.000 MHZ		157.500 MHZ		57.284 MHZ		108 MHZ	
Fh	79.976 KHZ		91.146 KHZ		49.726 KHZ		67.500 KHZ	
Fv	75.024 HZ		85.024 HZ		74.552 HZ		75.000 HZ	
INTERLACE MODE	NO		NO		NO		NO	
VIDEO	ANALOG-COLOR		ANALOG COLOR		ANALOG COLOR		ANALOG COLOR	
XS SYNC ON GREEN	NO		NO		NO		NO	
VIDEO LEVEL	700mv		700mv		700mv		700mv	
WHITE LEVEL	700mv		700mv		700mv		700mv	
BLANK LEVEL	0 IRE		0 IRE		0 IRE		0 IRE	
16 BIT HEX DATA	0000		0000		0000		0000	
UNIT OF DATA	PIXEL	us/ms	PIXEL	us/ms	PIXEL	us/ms	PIXEL	us/ms
H TOTAL	1688	12.504 us	1728	10.971 us	1152	20.110 us	1600	14.815 us
H DISPLAY	1280	9.481 us	1280	8.127 us	832	14.524 us	1152	10.667 us
H B-PORCH	248	1.837 us	224	1.442 us	224	3.910 us	256	2.370 us
H-S-WIDTH	144	1.067 us	64	1.016 us	64	1.117 us	128	1.185 us
H BORDER	0	0.000 us	0	0.000 us	0	0.000 us	0	0.000 us
H SIZE	4.000mm		4.000mm		4.000mm		4.000mm	
V TOTAL	1066	13.329 ms	1072	11.761 ms	667	13.413 ms	900	13.333 ms
V DISPLAY	1024	12.804 ms	1024	11.235 ms	624	12.549 ms	864	12.800 ms
V B-PORCH	38	0.475 ms	44	0.483 ms	39	0.784 ms	32	0.474 ms

V S WIDTH	3	0.038 ms	3	0.033 ms	3	0.060 ms	3	0.044 ms
V BORDER	0	0.000 ms	0	0.000 ms	0	0.000 ms	0	0.000 ms
V SIZE	3.000mm		3.000mm		3.000mm		3.000mm	
H S OUTPUT	ON(+)		ON(+)		Off-Low		ON(+)	
V S OUTPUT	ON(+)		ON(+)		Off-Low		ON(+)	
X S OUTPUT	ON(+)		ON(+)		ON(-)		ON(+)	

6.0 ADJUSTMENT

6.1 1769UA/1795UA ADJUSTMENT






REM:PRESET MODE DATA ADJUSTMENT:

A. Turn off it.

B. Press the ⊕ and ⊖ at same time which on the external control panel.

C. Turn on it.

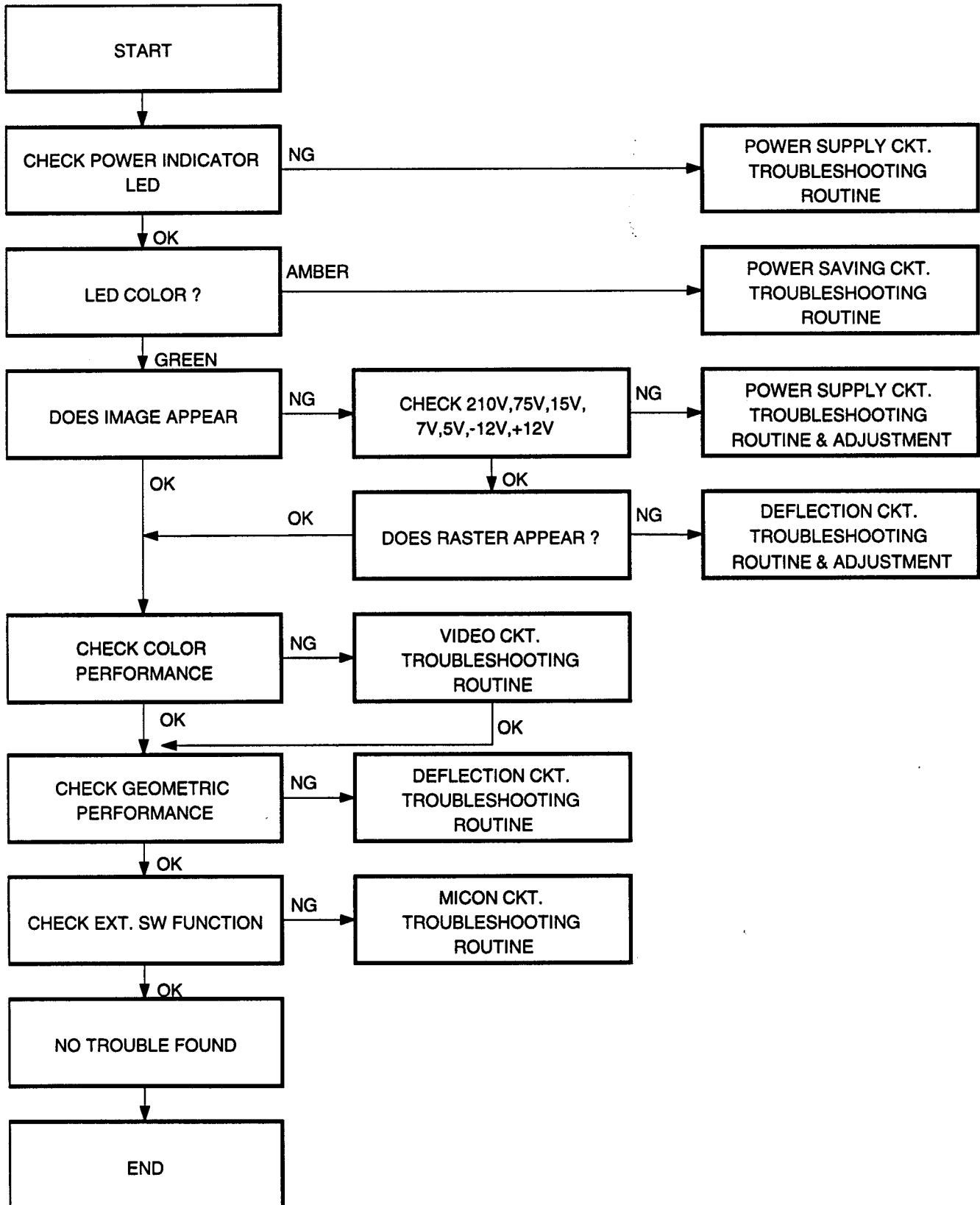
Remark: Before adjusting, monitor must warm up 20 minutes and CRT must be degaussed.

ADJUSTMENT	LOCATION	SPECIFICATION/DESCRIPTION	TIMING & PATTERN
210V	VR101	D117"-="=210V±0.5V	VGA-480, X'HATCH
12V	VR102	J104=12V±0.2V	VGA-480, X'HATCH
H.V.	VR402	CRT ANODE=27.0KV±0.5KV(1795UA)	VGA-480, X'HATCH
		CRT ANODE=25.0KV±0.5KV(1769UA)	
FREQUENCY 31.5KHz	VR103	D112"+"-=31.5K±0.1KHz	VGA-480(31KHz), X'HATCH
V-LINE	OSD. MANUAL	$\frac{Y_{max}-Y_{min}}{Y_{max}+Y_{min}} \leq 7\%$	VGA-480, X'HATCH
V-SIZE	OSD. MANUAL	V-SIZE=225mm±5mm	All of PRESET modes, X'HATCH
H-CENTER	VR302	Set Raster at center.	VESA91K, X'HATCH (1795UA)
			VESA68K, X'HATCH (1769UA)
H-WIDTH	OSD. MANUAL	H-WIDTH=300±5mm	All of PRESET modes, X'HATCH
H-PHASE	OSD. MANUAL	$\frac{ R-L }{2} \leq 3mm$	All of PRESET modes, X'HATCH
V-CENTER	OSD. MANUAL	$\frac{ U-D }{2} \leq 3mm$	All of PRESET modes, X'HATCH
CORNER	OSD. CORNER MANUAL	≤ 0.5mm	All of PRESET modes, X'HATCH
	OSD. SIDE-PIN MANUAL	≤ 1.5mm	All of PRESET modes, X'HATCH
	OSD. BALANCE MANUAL	≤ 1.5mm	All of PRESET modes, X'HATCH
	OSD. MANUAL	≤ 3mm	All of PRESET modes, X'HATCH
	OSD. MANUAL	≤ 2mm	All of PRESET modes, X'HATCH
	OSD. MANUAL	≤ 2.5mm	All of PRESET modes, X'HATCH
H-CONVERGENCE	OSD. MANUAL	ZONE A ≤ 0.25mm ZONE B ≤ 0.35mm	VGA-480, X'HATCH (1795UA)
V-CONVERGENCE	OSD. MANUAL	ZONE A ≤ 0.25mm ZONE B ≤ 0.35mm	VGA-480, X'HATCH (1795UA)
SCREEN	FBT SCREEN VR	The "1" row of color bar pattern is visible when Brightness VR is click.	VGA-480 COLOR BAR
FOCUS	FBT FOCUS VR	Optimum point	VESA-68K, "m"

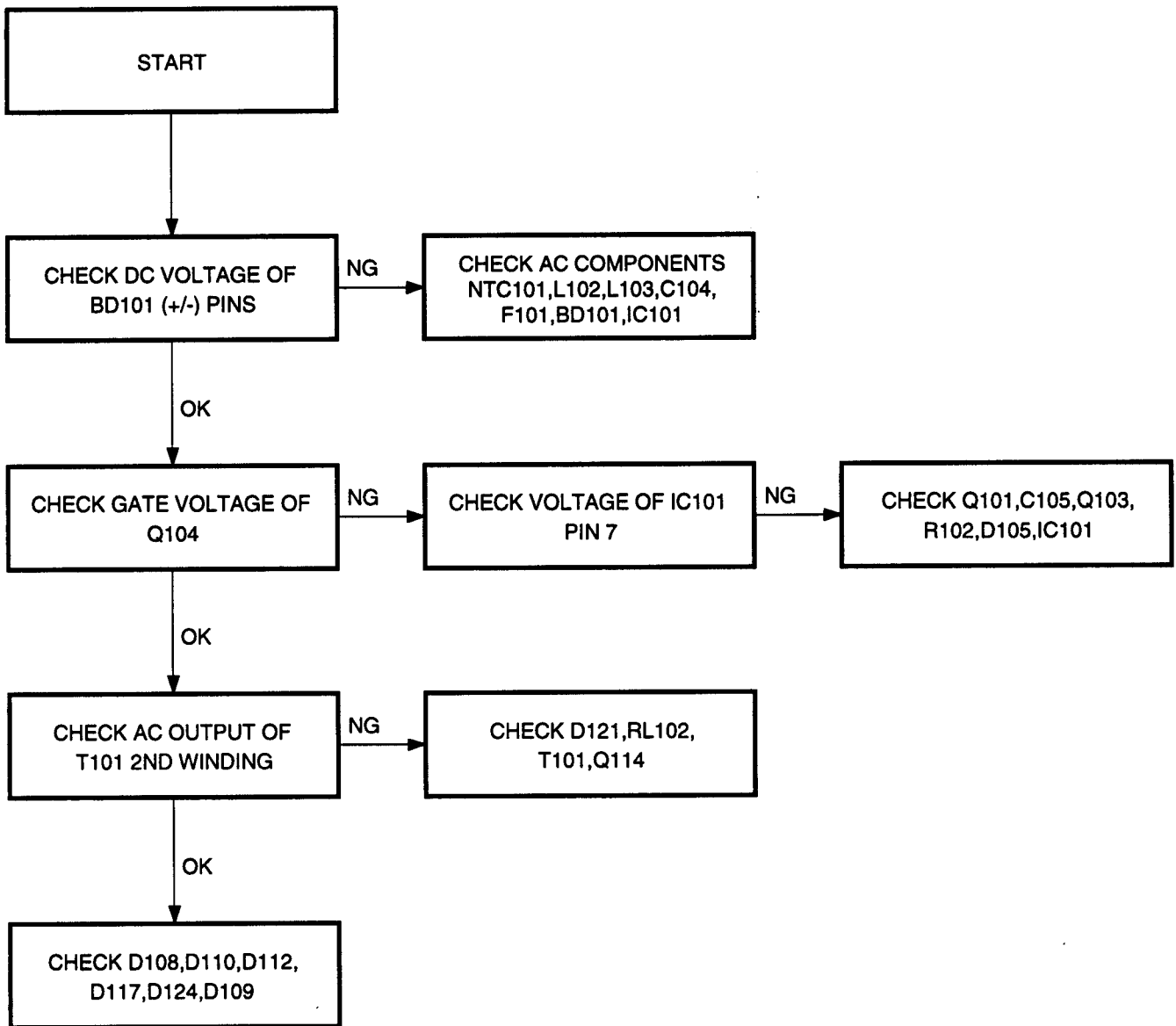
ADJUSTMENT	LOCATION	SPECIFICATION/DESCRIPTION	TIMING & PATTERN																																																																											
WHITE BALANCE PRE ADJ	OSD. CONTRAST	MAX	VGA-480, MOSAIC																																																																											
	OSD. BRIGHTNESS	CLICK POINT	DITTO																																																																											
	FBT SCREEN VR	RASTER $Y \leq 0.06FL$	DITTO																																																																											
	OSD. R.G.B BIAS	RASTER $X=281 \pm 20, Y=311 \pm 20$	DITTO																																																																											
	OSD. SUBCONT	MOSAIC= $40 \pm 5FL$	DITTO																																																																											
WHITE BALANCE ADJ	OSD. R.G.B GAIN	MODE1($9300^\circ K$): $X=281 \pm 20$ $Y=311 \pm 20$	VGA-480, FULL WHITE																																																																											
		MODE2($7500^\circ K$): $X=301 \pm 30$ $Y=310 \pm 30$																																																																												
		MODE3($6500^\circ K$): $X=313 \pm 30$ $Y=329 \pm 30$																																																																												
		MODE4($5000^\circ K$): $X=345 \pm 30$ $Y=351 \pm 30$																																																																												
	OSD. R.G.B BIAS	MODE1($9300^\circ K$): $X=281 \pm 10$ $Y=311 \pm 10$ When contrast is in 1~3FL.																																																																												
BRIGHTNESS SETTING	OSD. CONTRAST	MAX (DAC=100)	VGA-480, COLOR BAR																																																																											
	OSD. BRIGHTNESS	CLICK POINT (DAC=50)																																																																												
	FBT SCREEN VR	The "2" row of color bar pattern is just visible.																																																																												
	<p>Brightness</p> <table border="1"> <thead> <tr> <th rowspan="2">reduce ↓</th> <th colspan="2">R+B</th> <th>B+G</th> <th>R+G</th> <th rowspan="2"></th> </tr> <tr> <th>BRIGHT BLUE</th> <th>BRIGHT RED</th> <th>BRIGHT PRUPLE</th> <th>GREEN</th> <th>BLUE + GREEN</th> <th>RED + YELLOW</th> <th>WHITE</th> </tr> </thead> <tbody> <tr><td>15</td><td></td><td></td><td></td><td></td><td></td><td></td><td>7</td></tr> <tr><td>14</td><td></td><td></td><td></td><td></td><td></td><td></td><td>6</td></tr> <tr><td>13</td><td></td><td></td><td></td><td></td><td></td><td></td><td>5</td></tr> <tr><td>12</td><td></td><td></td><td></td><td></td><td></td><td></td><td>4</td></tr> <tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td>3</td></tr> <tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td>2 → Visible</td></tr> <tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td>1 → visible obscurely</td></tr> <tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td>0</td></tr> </tbody> </table>			reduce ↓	R+B		B+G	R+G		BRIGHT BLUE	BRIGHT RED	BRIGHT PRUPLE	GREEN	BLUE + GREEN	RED + YELLOW	WHITE	15							7	14							6	13							5	12							4	11							3	10							2 → Visible	9							1 → visible obscurely	8					
reduce ↓	R+B		B+G		R+G																																																																									
	BRIGHT BLUE	BRIGHT RED	BRIGHT PRUPLE	GREEN	BLUE + GREEN		RED + YELLOW	WHITE																																																																						
15							7																																																																							
14							6																																																																							
13							5																																																																							
12							4																																																																							
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10							2 → Visible																																																																							
9							1 → visible obscurely																																																																							
8							0																																																																							
CONVERGENCE	4 POLE OF PCM	Vertical RED and BLUE lines are converged by varying the angle between the two tabs.	VGA-480 , MAGERTA X'HATCH																																																																											
	4 POLE OF PCM	Horizontal RED and BLUE lines are converged by moving the two tabs at the same time.	VGA-480 , MAGENTA X'HATCH																																																																											
	6 POLE OF PCM	Vertical GREEN and MAGENTA lines are converged by varying the angle between the two tabs.	VGA-480 , X'HATCH																																																																											
	6 POLE OF PCM	Horizontal GREEN and MAGENTA lines are converged by moving the two tabs at the same time.	VGA-480 , X'HATCH																																																																											
	<p>DEFLECTION YOKE</p> <p>8-POLE CONVERGENCE MAGNETS</p> <p>6-POLE CONVERGENCE MAGNETS</p> <p>PURITY MAGNETS</p> <p>PCM: PURITY CONVERGENCE MAGNET</p>																																																																													

7.0 TROUBLESHOOTING

7.1 MAIN TROUBLESHOOTING ROUTINE



7.2 POWER SUPPLY CIRCUIT TROUBLESHOOTING ROUTINE



TEST CONDITIONS: TIMING : 640X480-60Hz (31K)
PATTERN: CROSS HATCH

Unit: Volt

IC	IC101 (3842)								IC103 (PS2561)			
AC IN	PIN 1	2	3	4	5	6	7	8	1	2	3	4
110V	2.97	2.49	0.11	1.97	GND	4.11	15.39	4.99	4.99	3.91	2.00	15.39
220V	2.64	2.49	0.05	1.96	GND	1.78	15.35	4.99	4.81	3.73	2.33	15.35

IC	IC102 (5002L)			IC104 (TL431)			IC501 (68P61A)	
STATUS	PIN O	G	I	A	K	R	22	23
NORMAL	5.00	GND	6.31	3.91	0	2.50	4.93	0.06
SUSPEND	5.00	GND	6.98	3.86	0	2.50	4.92	4.82
OFF	5.00	GND	6.80	3.53	0	2.50	0.07	4.83

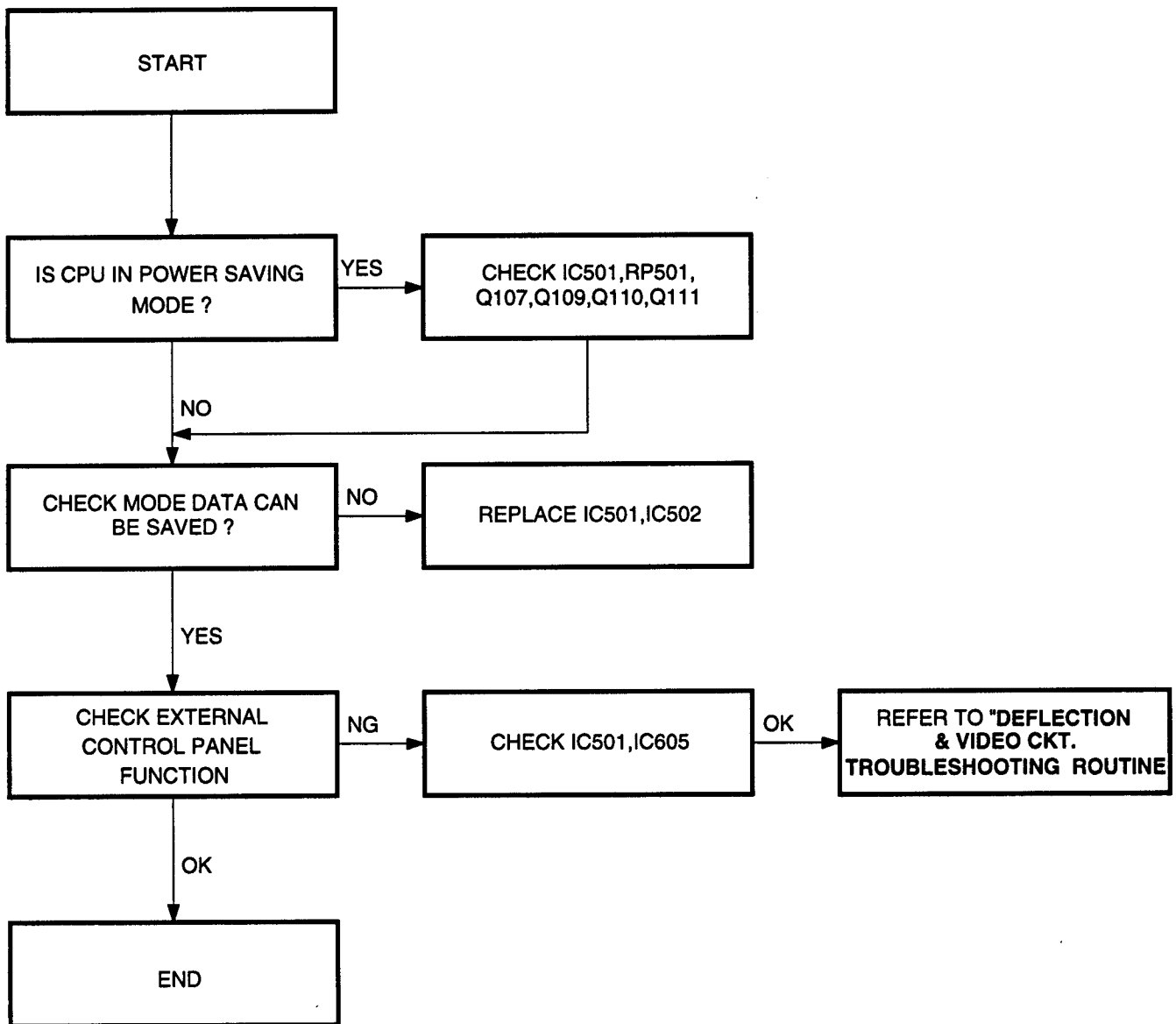
TR	Q101 (BT169)			Q103 (C945)			Q104 (10SM-6)		
AC IN	PIN K	G	A	E	C	B	S	D	G
110V	2.34	0	144.26	0	0	0.67	0.10	143.47	3.60
220V	1.78	0	293.59	0	0	0.66	0.05	294.57	1.32

TR	Q102 (C945)			Q105 (C945)		
STATUS	PIN E	C	B	E	C	B
NORMAL	GND	15.18	0.03	GND	0.03	0.68
DEGUASS	GND	0.11	0.79	GND	0.79	0.14

TR	Q107 (2SD882)			Q109 (C945)			Q110 (2SB562)		
STATUS	PIN E	C	B	E	C	B	E	C	B
NORMAL	12.03	15.34	12.67	6.19	12.67	6.78	6.57	6.42	5.73
SUSPEND	1.00	1.46	1.46	1.00	1.46	0.56	7.07	6.87	6.21
OFF	0.95	0.34	0.34	0.95	0.34	0.53	7.07	0	7.07

TR	Q111 (C945)			Q114 (C945)			Q116 (A733)			Q117 (C945)		
STATUS	PIN E	C	B	E	C	B	E	C	B	E	C	B
NORMAL	GND	0.16	0.72	GND	6.57	0.02	6.57	2.50	6.53	GND	6.53	0
SUSPEND	GND	0.18	0.72	GND	0.14	0.73	7.07	7.04	6.53	GND	0.01	0.63
OFF	GND	7.07	0.03	GND	0.14	0.75	7.07	7.05	6.36	GND	0.01	0.64

7.3 MICON CIRCUIT TROUBLESHOOTING ROUTINE



TEST CONDITIONS: AC LINE IN:110V/60Hz
 PATTERN: CROSS HATCH
 STATUS : NORMAL

Unit: Volt

IC		IC501 (UMC6861)									
MODE	PIN	1	2	3	4	5	6	7	8	9	10
640X480-60(31K)		1.53	1.61	1.61	4.97	4.99	GND	2.68	2.47	0.04	4.98
800X600-50(53K)		1.53	1.61	1.60	4.97	4.99	GND	2.68	2.47	0.04	4.99
1024X768-85(68K)		1.53	1.61	1.60	4.98	4.99	GND	2.68	2.47	0.04	4.99
1600X1200-75(95K)		1.53	1.61	1.60	4.98	4.99	GND	2.68	2.47	0.04	4.99

IC		IC501 (UMC6861)									
MODE	PIN	11	12	13	14	15	16	17	18	19	20
640X480-60(31K)		0.03	4.98	4.98	4.98	4.98	4.98	4.98	0.02	1.30	0.06
800X600-50(53K)		0.03	4.99	4.98	4.98	4.99	4.98	4.99	0.02	1.30	0.06
1024X768-85(68K)		0.03	4.98	4.99	4.99	4.99	4.98	4.99	0.02	1.30	0.06
1600X1200-75(95K)		0.03	4.99	4.99	4.99	4.99	4.98	4.99	0.02	1.30	0.06

IC		IC501 (UMC6861)									
MODE	PIN	21	22	23	24	25	26	27	28	29	30
640X480-60(31K)		4.98	4.93	0.06	0.06-4.99	4.99	3.42	2.44	1.42	0.18	4.99
800X600-50(53K)		4.98	4.93	0.06	0.06-4.99	4.99	3.42	2.43	2.27	1.36	4.99
1024X768-85(68K)		4.98	4.93	0.06	0.06-4.99	4.99	3.42	2.44	2.25	2.19	4.99
1600X1200-75(95K)		4.98	4.93	0.06	0.06-4.99	4.99	3.42	2.43	1.92	3.76	4.99

IC		IC501 (UMC6861)									
MODE	PIN	31	32	33	34	35	36	37	38	39	40
640X480-60(31K)		4.99	0.03	0.59	0.13	0.13	0.12	0.12	0.12	3.53	4.76
800X600-50(53K)		4.99	0.03	0.31	0.11	4.42	0.11	4.47	0.11	0.37	0.21
1024X768-85(68K)		4.99	0.02	0.35	4.45	4.43	4.38	0.10	0.10	0.40	0.21
1600X1200-75(95K)		4.99	0.02	0.69	4.45	4.43	4.39	4.47	0.10	0.68	0.25

IC		IC502 (AT24C04)							
MODE	PIN	1	2	3	4	5	6	7	8
640X480-60(31K)		4.99	GND	4.99	GND	0.04	4.98	GND	4.99
800X600-50(53K)		4.99	GND	4.99	GND	0.04	4.99	GND	4.99
1024X768-85(68K)		4.99	GND	4.99	GND	0.04	4.99	GND	4.99
1600X1200-75(95K)		4.99	GND	4.99	GND	0.04	4.99	GND	4.99

TR	Q501 (A733)			Q502 (C945)			Q504 (C945)			
MODE	PIN	E	C	B	E	C	B	E	C	B
640X480-60(31K)		4.99	4.97	4.25	4.76	4.99	0.59	0	0.05	0.73
800X600-50(53K)		4.99	4.97	4.26	0.21	4.99	0.31	0	0.05	0.73
1024X768-85(68K)		4.99	4.98	4.26	0.21	4.99	0.35	0	0.05	0.73
1600X1200-75(95K)		4.99	4.98	4.26	0.25	4.99	0.69	0	0.04	0.73

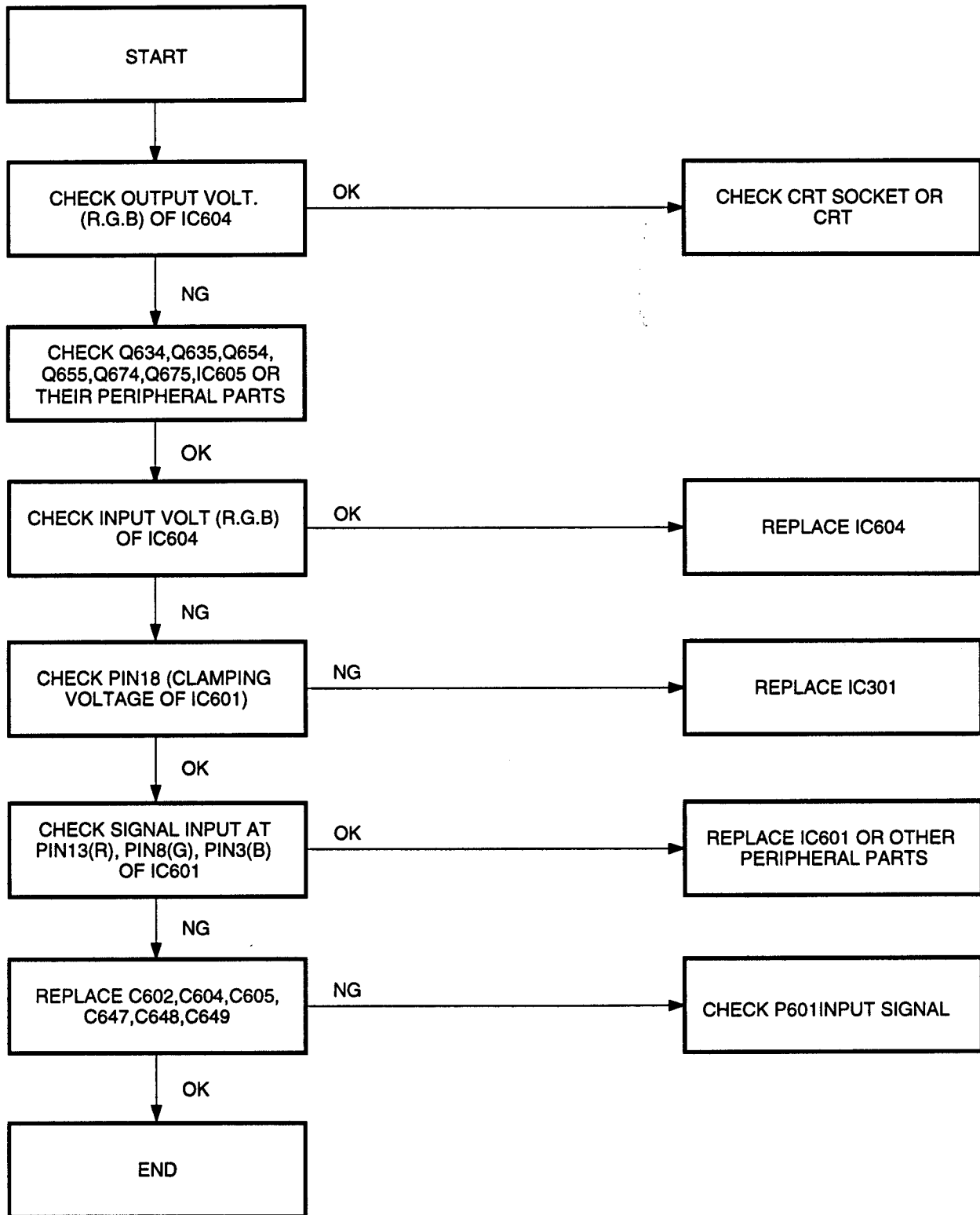
TR	Q505 (C945)			Q506 (JC337)			Q508 (C3400)			
MODE	PIN	E	C	B	E	C	B	E	C	B
640X480-60(31K)		0	0.73	0.01	6.15	15.56	5.56	0	0.71	0.02
800X600-50(53K)		0	0.73	0.01	6.18	15.61	5.58	0	0.71	0.02
1024X768-85(68K)		0	0.73	0.01	6.18	15.61	5.58	0	0.71	0.02
1600X1200-75(95K)		0	0.73	0.01	6.18	15.61	5.58	0	0.71	0.02

TR	Q509 (C3400)			Q510 (J327)			Q511 (C945)			
MODE	PIN	E	C	B	E	C	B	E	C	B
640X480-60(31K)		0	0.07	15.56	6.15	GND	5.56	0	0.09	0.71
800X600-50(53K)		0	0.07	15.61	6.18	GND	5.58	0	0.09	0.71
1024X768-85(68K)		0	0.07	15.61	6.18	GND	5.58	0	0.09	0.71
1600X1200-75(95K)		0	0.07	15.61	6.18	GND	5.58	0	0.09	0.71

TR	Q512 (C3400)			Q514 (C945)			Q515 (JC337)			Q516 (J327)			
MODE	PIN	E	C	B	E	C	B	E	C	B	E	C	B
640X480-60(31K)		0	4.98	0.08	0	5.54	0.44	6.43	15.56	6.55	6.43	GND	6.55
800X600-50(53K)		0	4.98	0.09	0	5.56	0.43	6.44	15.61	6.58	6.44	GND	6.58
1024X768-85(68K)		0	4.98	0.09	0	5.56	0.43	6.44	15.61	6.57	6.44	GND	6.57
1600X1200-75(95K)		0	4.99	0.09	0	5.56	0.43	6.43	15.61	6.58	6.43	GND	6.58

TR	Q517 (C945)			Q518 (JC337)			Q519 (J327)			Q520 (C945)			
MODE	PIN	E	C	B	E	C	B	E	C	B	E	C	B
640X480-60(31K)		0	6.41	0.42	6.34	15.56	5.75	6.34	GND	5.75	0	5.39	0.42
800X600-50(53K)		0	6.44	0.42	6.36	15.61	5.77	6.36	GND	5.77	0	5.41	0.42
1024X768-85(68K)		0	6.44	0.42	6.36	15.61	5.77	6.36	GND	5.77	0	5.41	0.42
1600X1200-75(95K)		0	6.45	0.42	6.36	15.61	5.76	6.36	GND	5.76	0	5.41	0.42

7.4 VIDEO CIRCUIT TROUBLESHOOTING ROUTINE



TEST CONDITIONS: AC LINE IN:110V/60Hz
 TIMING: 640X480-60Hz (31K)
 PATTERN: a. Cross-hatch b. Full white

Unit: Volt

IC	IC601 (M52737)									
MODE PIN	1	2	3	4	5	6	7	8	9	10
Cross-hatch	0	11.79	2.48	3.86	0	0	11.79	2.48	3.90	0
Full white	0	11.77	2.92	3.86	0	0	11.77	2.92	3.90	0

IC	IC601 (M52737)									
MODE PIN	11	12	13	14	15	16	17	18	19	20
Cross-hatch	0	11.79	2.48	3.81	0	0	3.19	0.67	2.49	0.25
Full white	0	11.76	2.92	3.81	0	0	2.91	0.67	2.48	0.25

IC	IC601 (M52737)									
MODE PIN	21	22	23	24	25	26	27	28	29	30
Cross-hatch	0	0	3.99	11.79	2.28	0	0	4.00	11.79	2.29
Full white	0	0	3.99	11.76	3.75	0	0	4.00	11.76	3.79

IC	IC601 (M52737)					
MODE PIN	31	32	33	34	35	36
Cross-hatch	0	0	4.00	11.78	2.28	2.43
Full white	0	0	4.00	11.76	3.75	2.42

IC	IC603 (M35045)									
MODE PIN	1	2	3	4	5	6	7	8	9	10
Cross-hatch	4.98	GND	4.98	4.98	4.99	4.99	GND	4.99	4.99	4.99
Full white	4.98	GND	4.98	4.98	4.99	4.99	GND	4.99	4.99	4.99

IC	IC603 (M35045)									
MODE PIN	11	12	13	14	15	16	17	18	19	20
Cross-hatch	GND	0	0	4.99	0	4.98	0	0.25	0.05	4.99
Full white	GND	0	0	4.99	0	4.98	0	0.25	0.05	4.98

IC	IC604 (LM2405T)										
MODE	PIN 1	2	3	4	5	6	7	8	9	10	11
Cross-hatch	58.74	GND	58.50	GND	58.29	75.11	GND	1.58	1.59	11.79	1.58
Full white	38.56	GND	37.86	GND	37.91	75.10	GND	2.94	2.98	11.76	2.94

IC	IC605 (M62393)									
MODE	PIN 1	2	3	4	5	6	7	8	9	10
Cross-hatch	4.99	4.99	4.99	3.89	3.93	3.83	1.23	0	4.99	0
Full white	4.99	4.99	4.99	3.89	3.92	3.83	1.23	0	4.99	0

IC	IC605 (M62393)										
MODE	PIN 11	12	13	14	15	16	17	18	19	20	
Cross-hatch	4.99	4.96	4.05	3.91	4.35	4.99	4.99	0	0	0	
Full white	4.99	4.95	4.05	3.91	4.35	4.99	4.99	0	0	0	

TR	Q601 (C945)			Q607 (A733)			Q620 (C945)		
MODE	PIN E	C	B	E	C	B	E	C	B
Cross-hatch	3.52	4.99	4.09	3.25	0	5.25	0.36	4.99	0.14
Full white	3.52	4.98	4.09	2.96	0	2.39	0.36	4.99	0.13

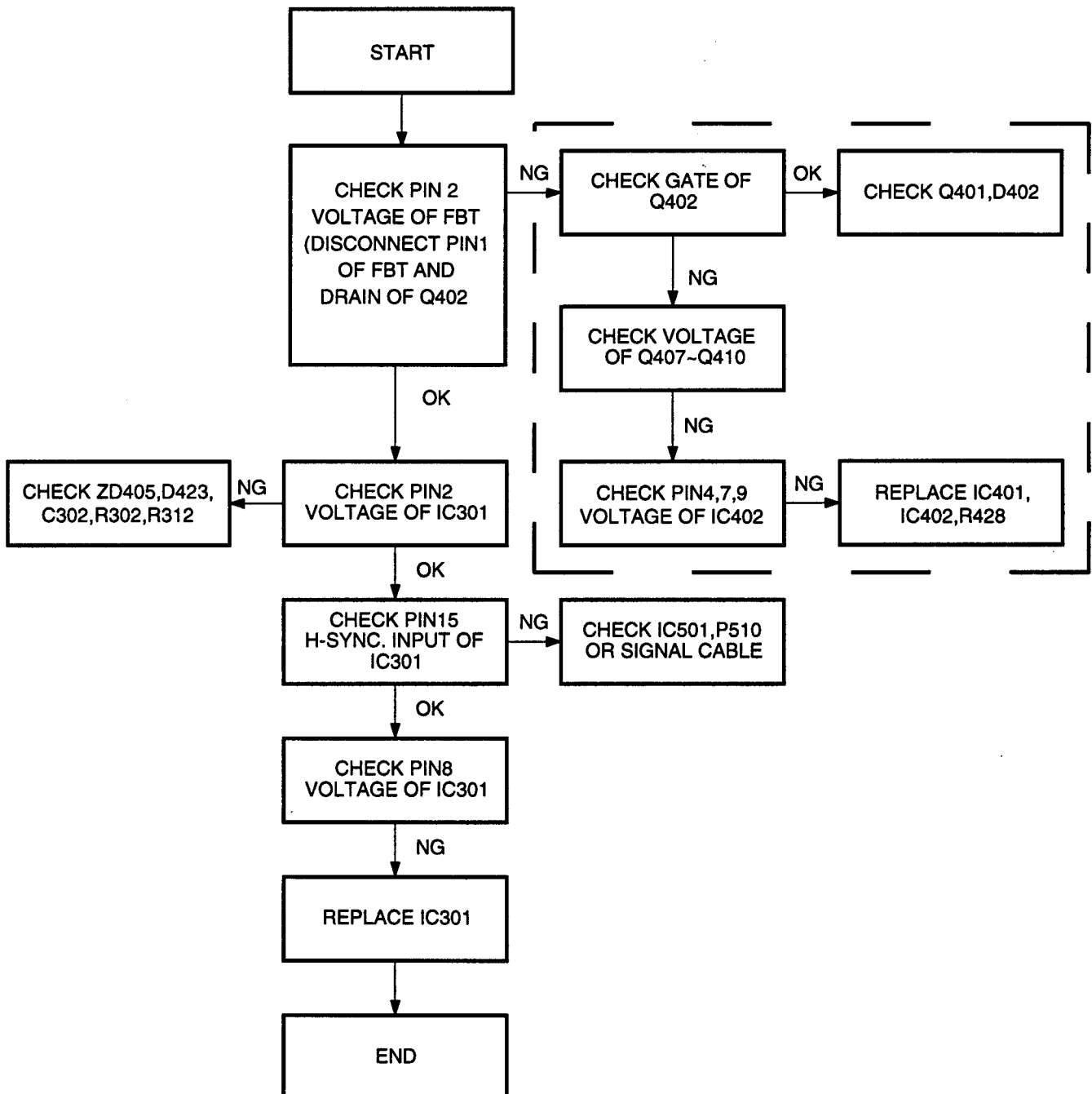
TR	Q634 (BF423)			Q635 (BF422)			Q654 (BF423)		
MODE	PIN E	C	B	E	C	B	E	C	B
Cross-hatch	68.42	0	69.18	4.38	65.91	4.99	69.18	0	69.92
Full white	68.28	0	69.20	4.38	65.94	4.99	69.04	0	69.95

TR	Q655 (BF422)			Q674 (BF423)			Q657 (BF422)		
MODE	PIN E	C	B	E	C	B	E	C	B
Cross-hatch	4.38	67.06	4.99	70.74	0	71.51	4.39	69.54	4.99
Full white	4.38	67.09	4.99	70.60	0	71.53	4.39	69.56	4.99

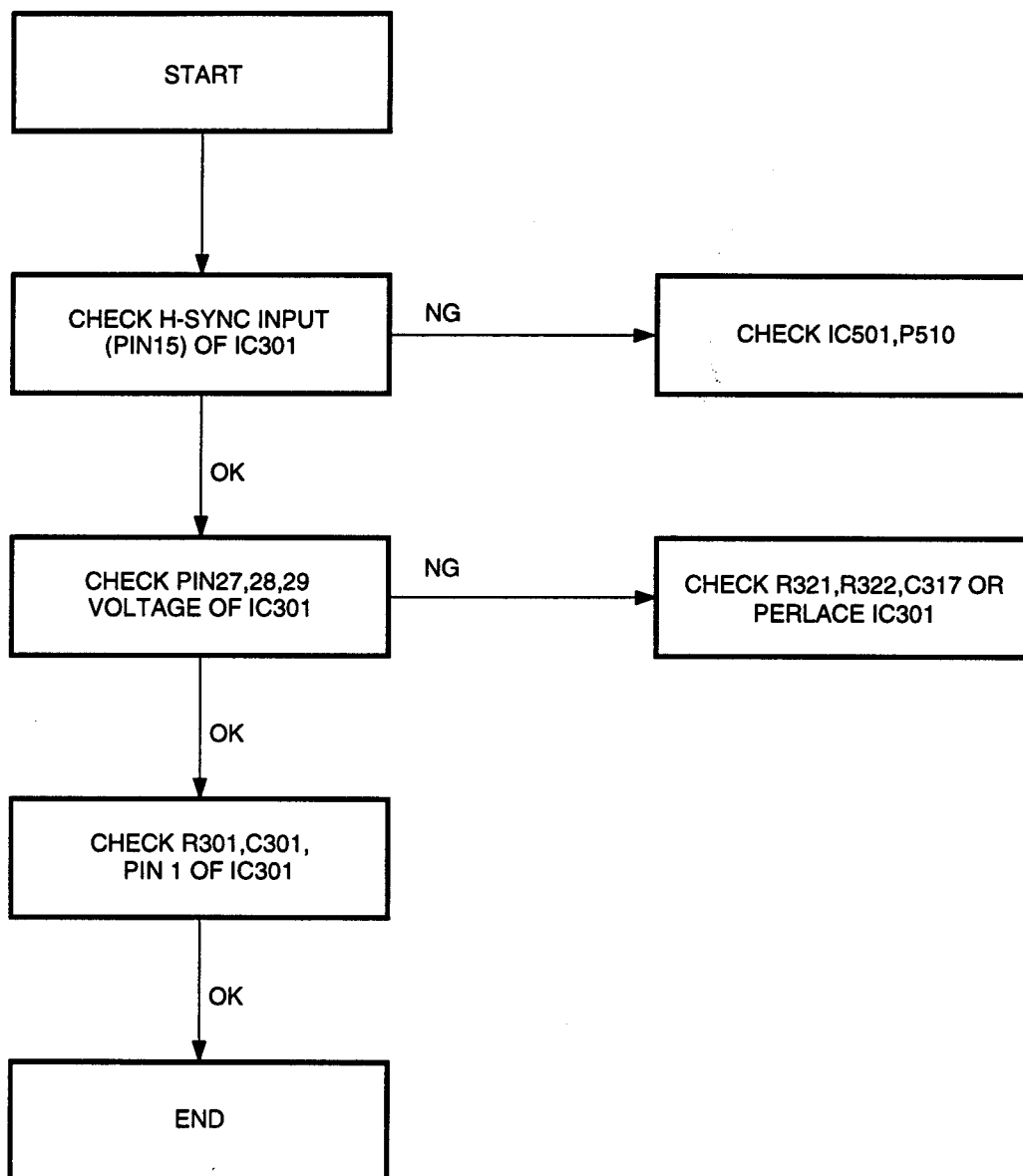
7.5 DEFLECTION CIRCUIT TROUBLESHOOTING ROUTINE

7.5.1 Horizontal Deflection Circuit

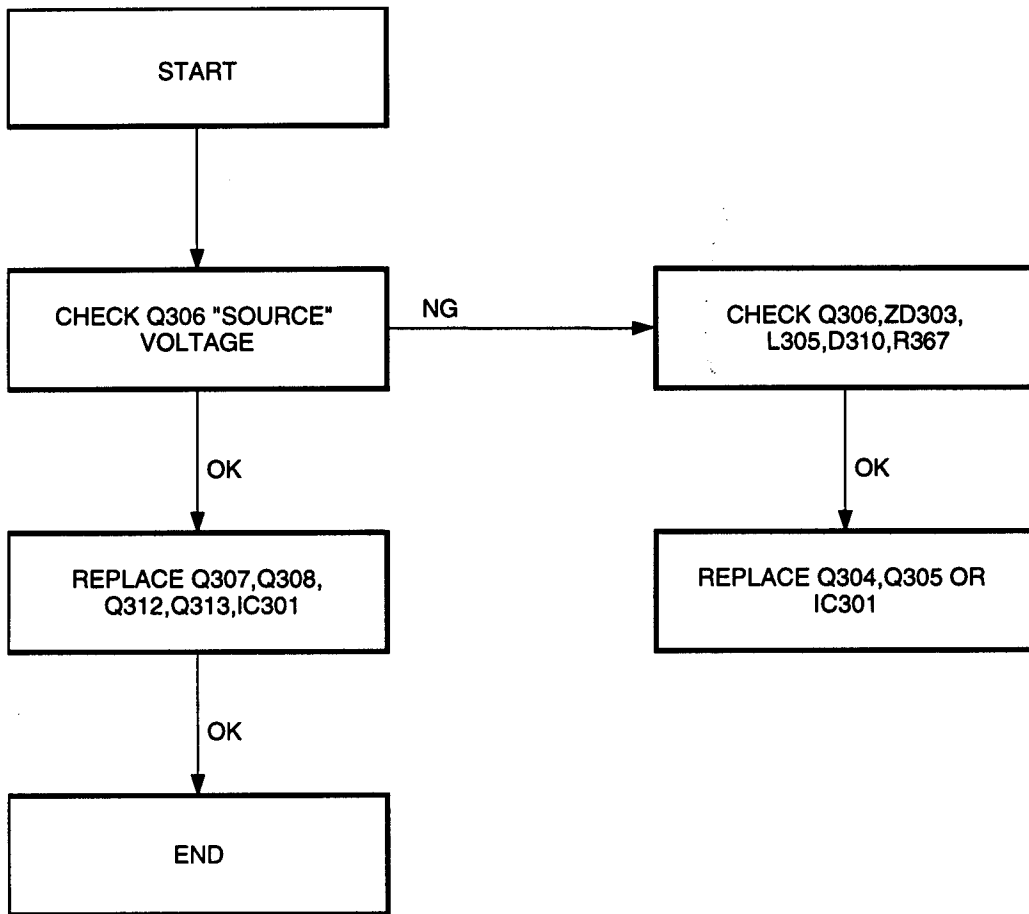
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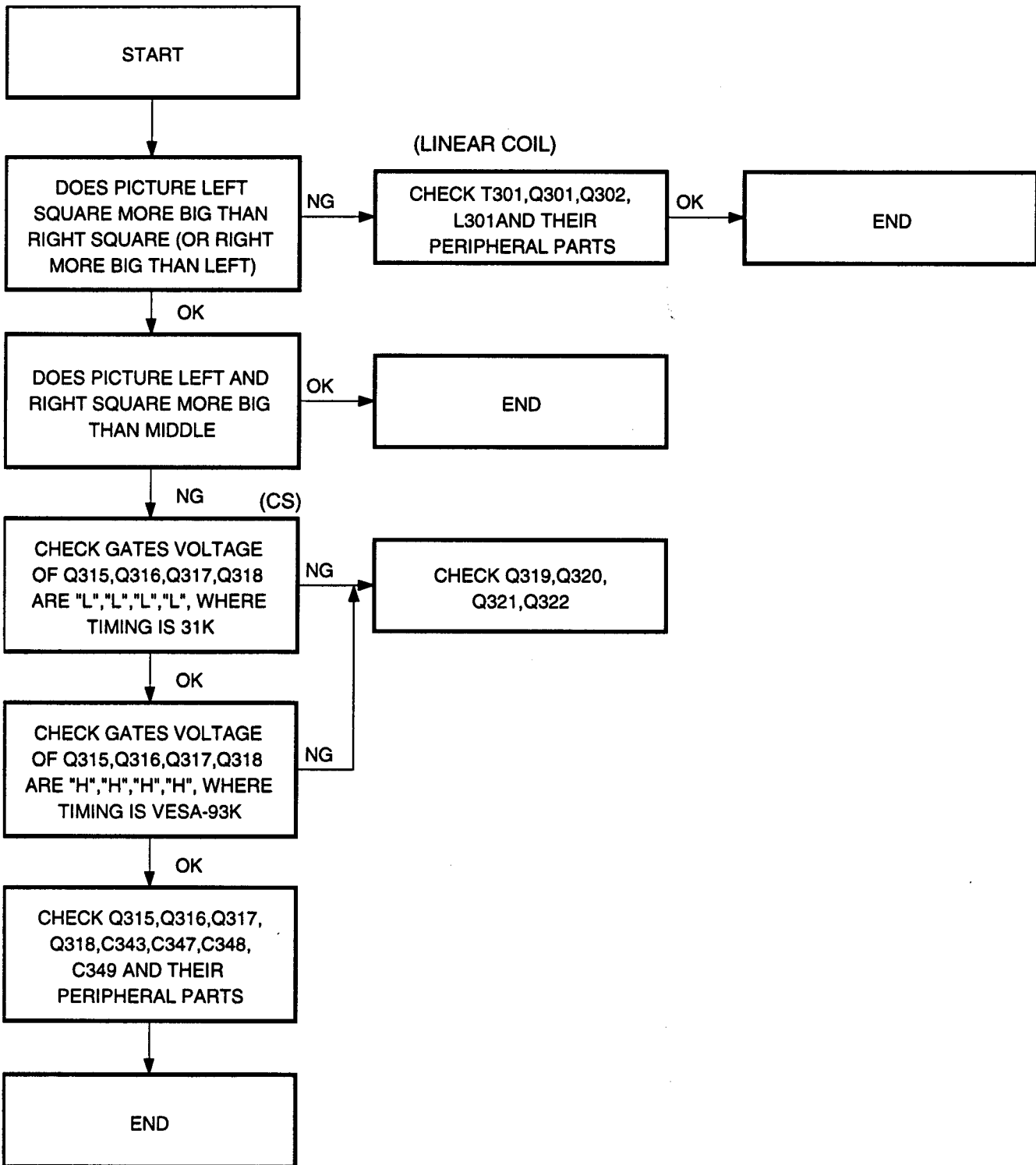
H-Asynchronous



No Horizontal Scan



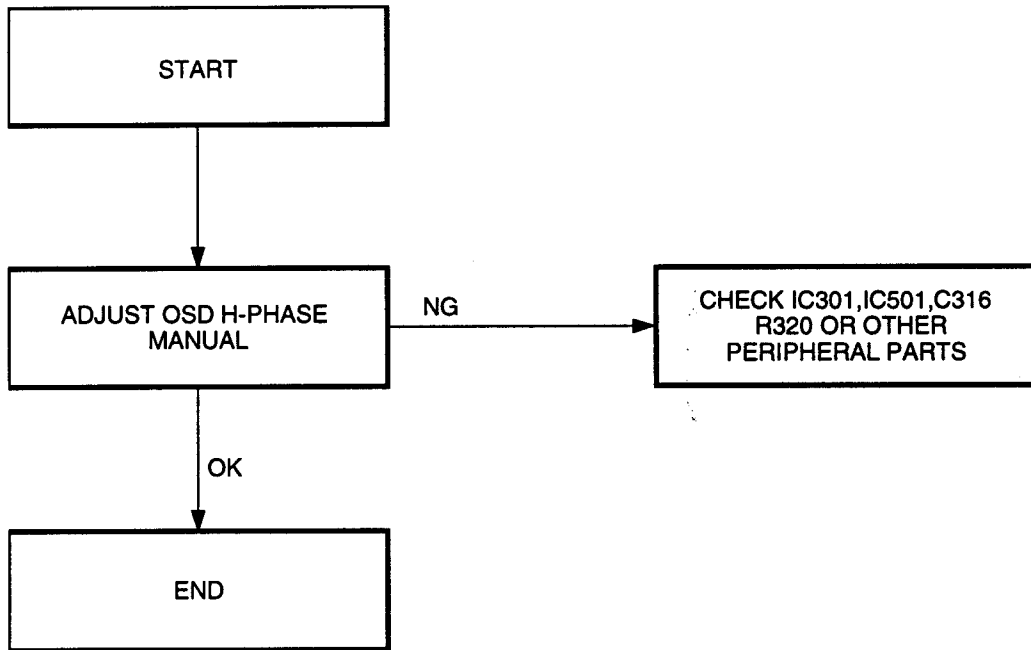
Linearity



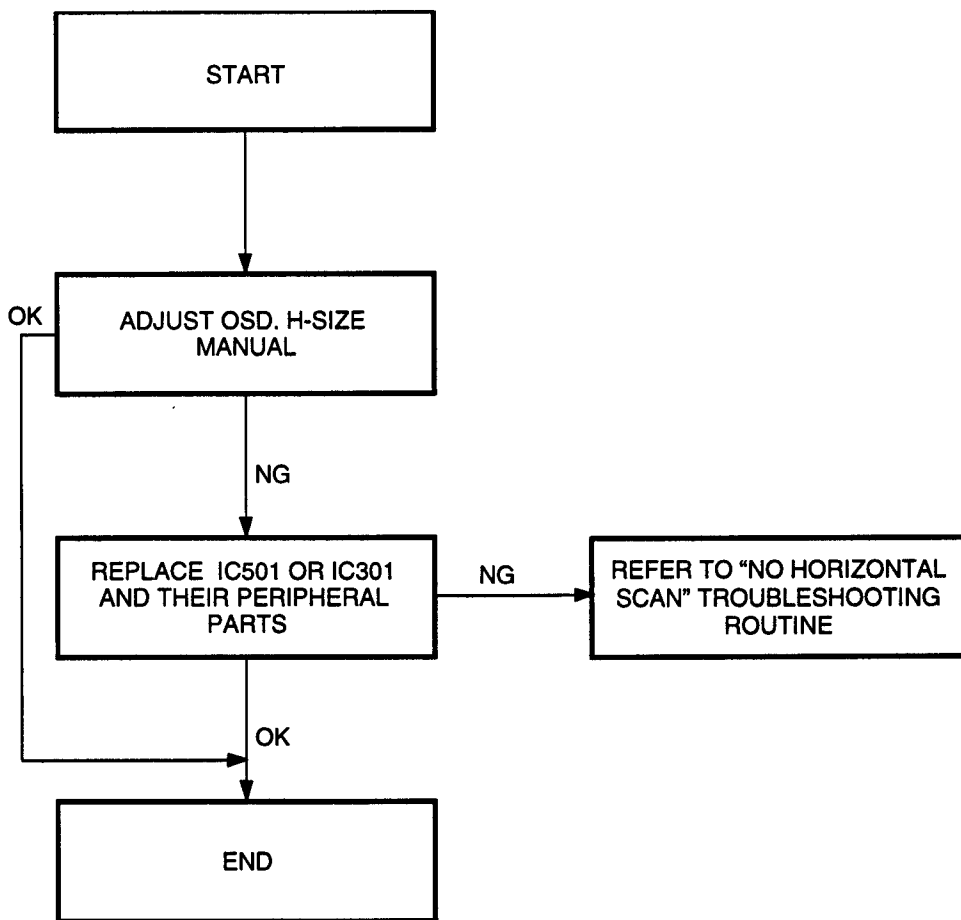
REMARK: 1. "L" means the voltage between gate and source is $<4V$ which can't turn on the MOSFET.

2. "H" means the voltage between gate and source is $\geq 4V$ which can turn on the MOSFET.

Out of phase

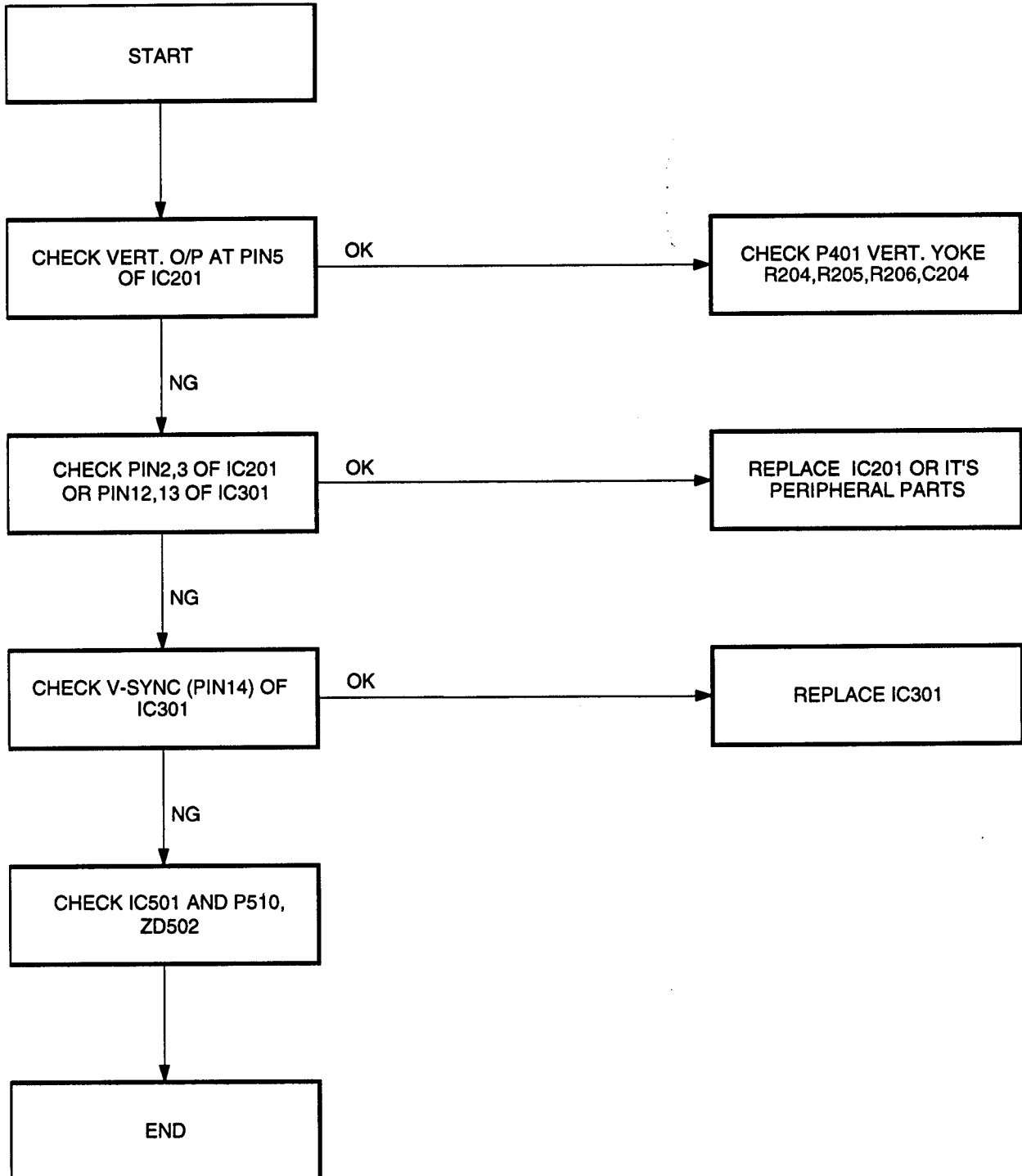


Width Abnormal

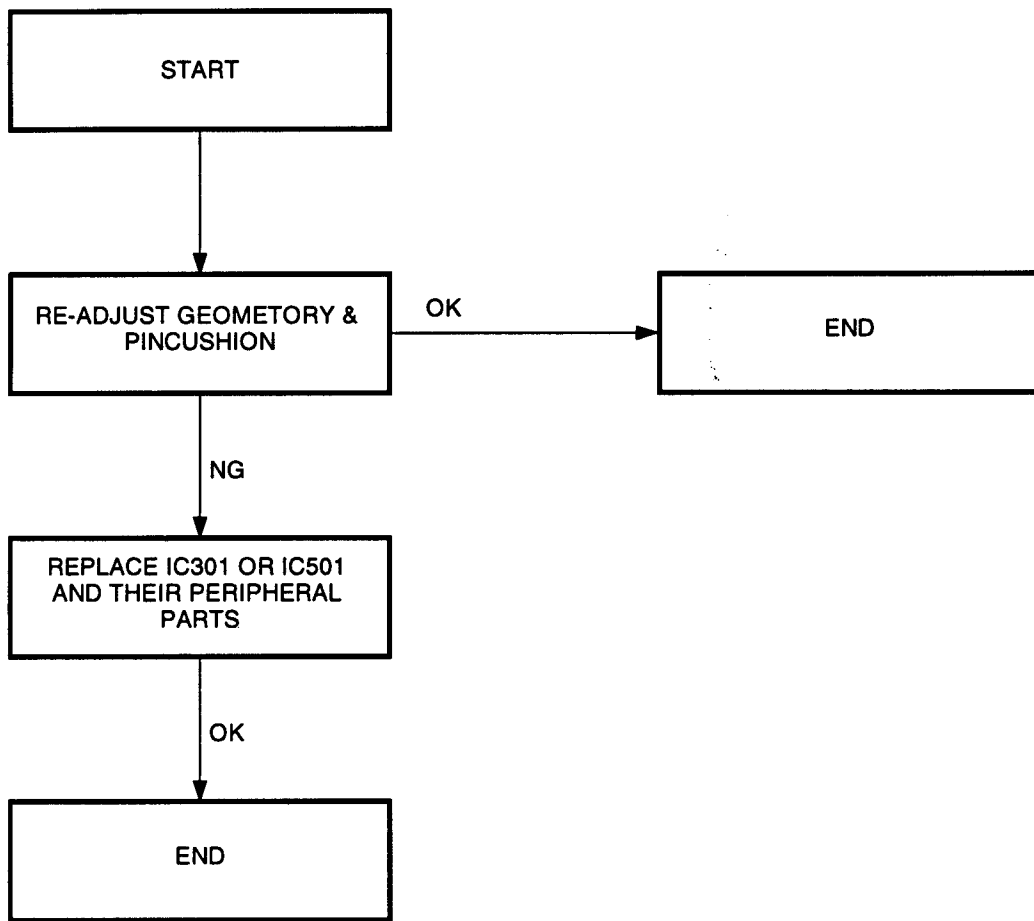


7.5.2 Vertical Deflection Circuit

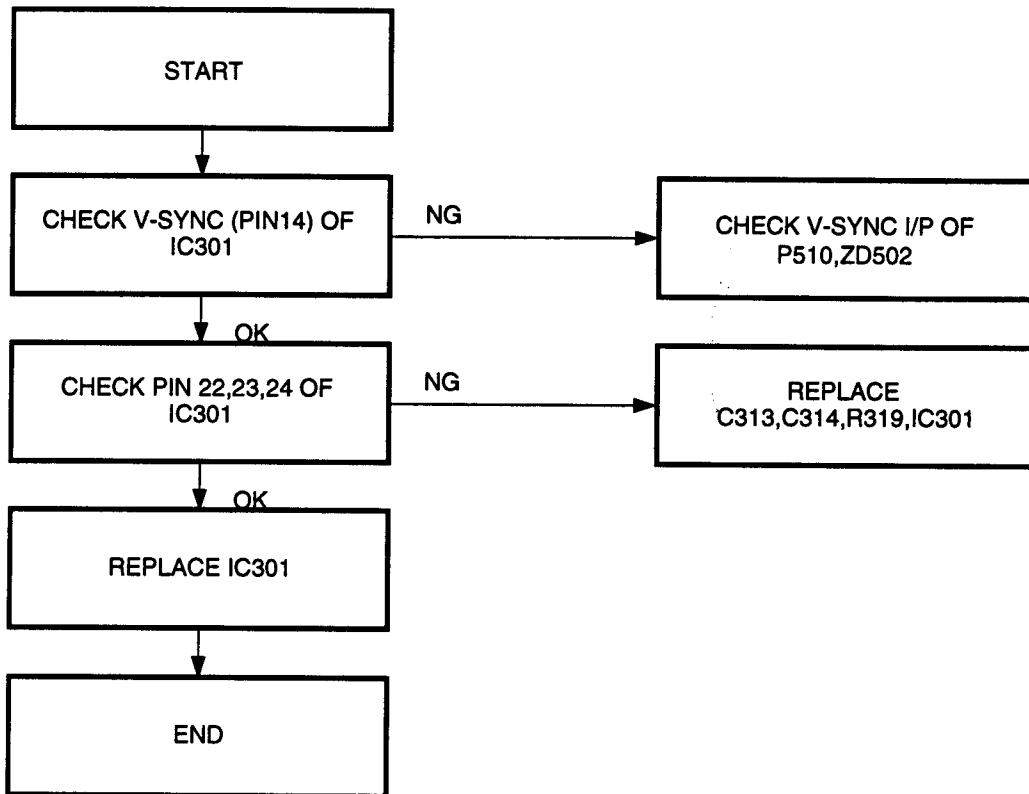
No vertical scan



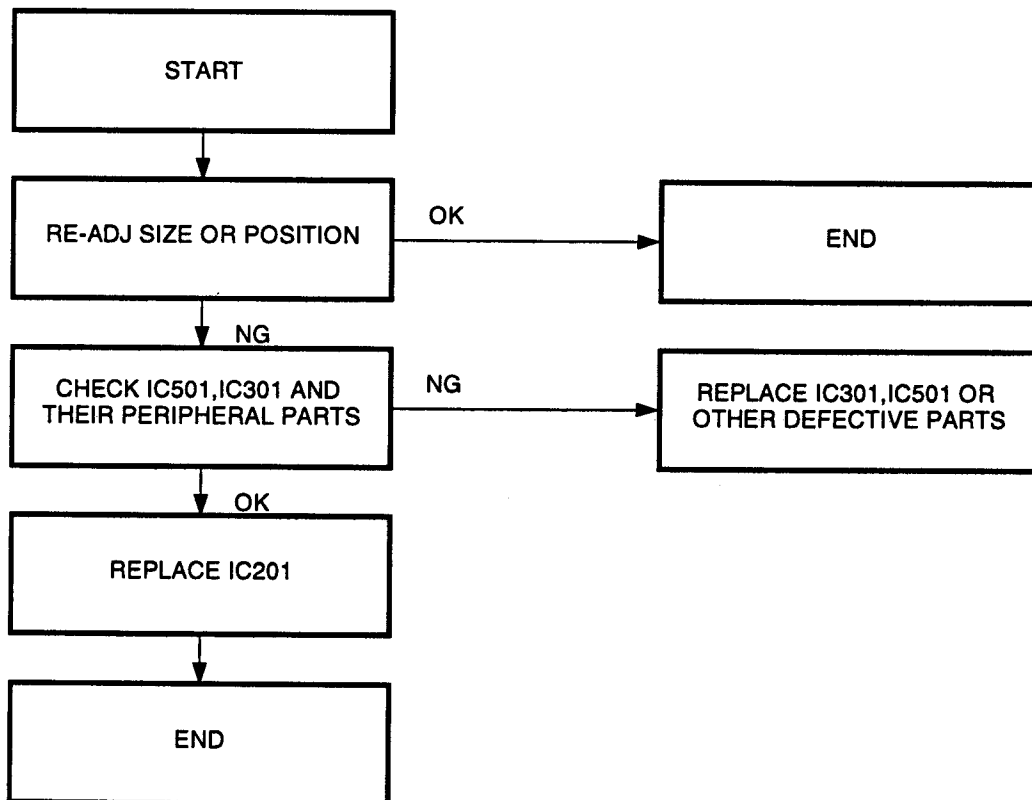
Picture distortion



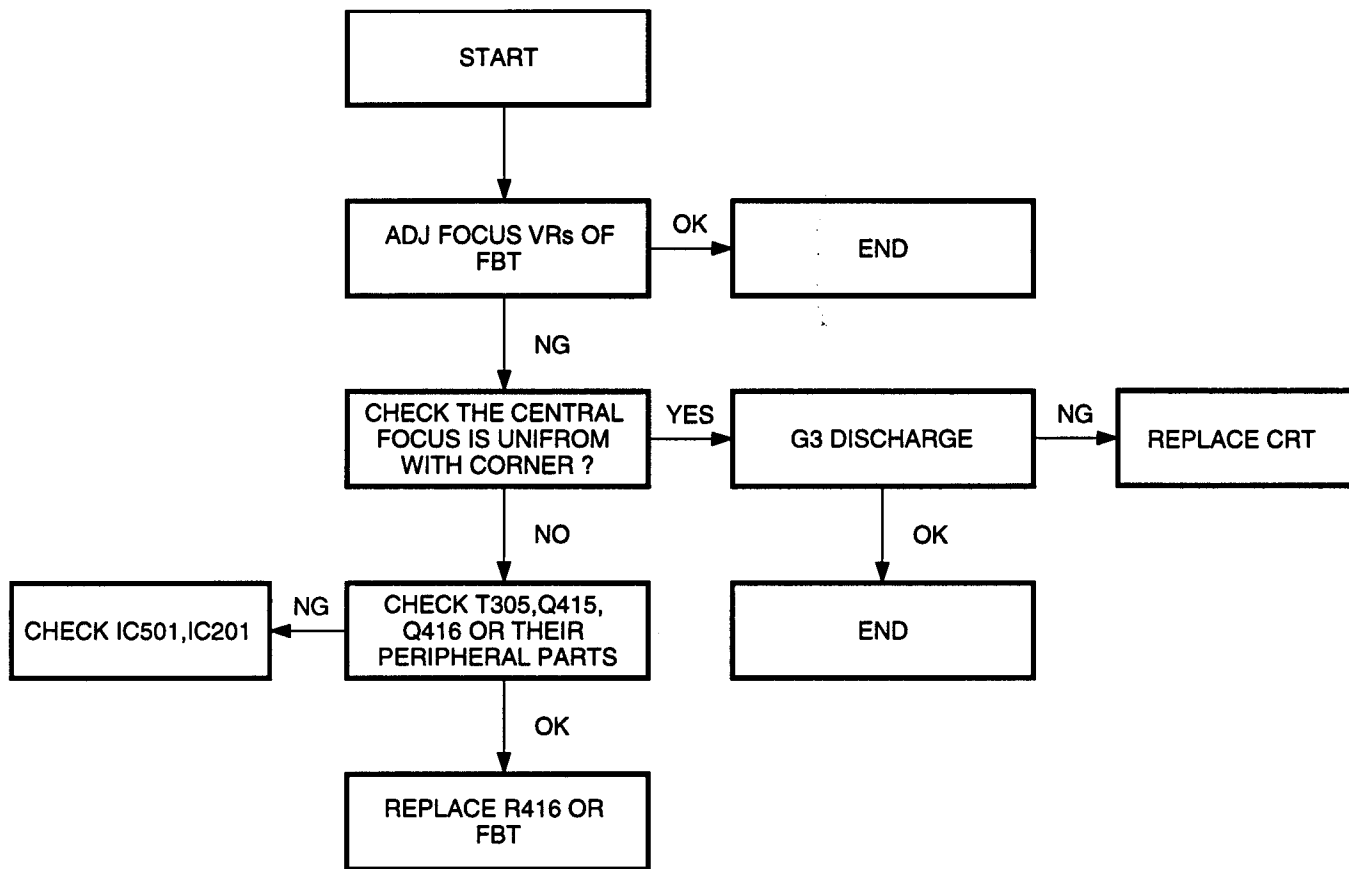
V-Asynchronous



Vertical position & Size



7.5.3 Others

Poor focus

TEST CONDITIONS: AC LINE IN:110V/60Hz
 PATTERN: CROSS HATCH
 STATUS : NORMAL

Unit: Volt

IC	IC201 (TDA4861)								
PIN	1	2	3	4	5	6	7	8	9
MODE									
640X480-60(31K)	12.51	0.76	0.76	12.17	0.22~033	-12.32	12.17	48.94	0.16
800X600-50(53K)	12.67	0.76	0.76	12.51	0.22~033	-12.49	12.50	48.38	0.21
1024X768-85(68K)	12.69	0.76	0.76	12.46	0.22~033	-12.52	12.52	48.27	0.22
1600X1200-75(95K)	12.67	0.76	0.76	12.47	0.11~0.36	-12.51	12.48	48.60	0.20

IC	IC301 (TDA4853)									
PIN	1	2	3	4	5	6	7	8	9	10
MODE										
640X480-60(31K)	-0.22	5.46	3.25	1.29	2.48	9.42	GND	5.52	1.32	11.37
800X600-50(53K)	-0.01	5.42	3.30	1.50	2.48	7.52	GND	5.71	1.31	11.35
1024X768-85(68K)	0.17	5.40	3.27	1.61	2.48	6.35	GND	5.84	1.31	11.33
1600X1200-75(95K)	0.45	5.40	3.24	1.82	2.48	4.28	GND	6.06	1.31	11.30

IC	IC301 (TDA4853)									
PIN	11	12	13	14	15	16	17	18	19	20
MODE										
640X480-60(31K)	2.87	0.79	0.79	0.03	0.59	0.68	0.12	4.99	4.99	4.12
800X600-50(53K)	2.75	0.79	0.79	0.03	0.31	0.75	0.14	4.99	4.99	4.12
1024X768-85(68K)	2.83	0.79	0.79	0.02	0.35	0.80	0.14	4.99	4.99	4.12
1600X1200-75(95K)	2.89	0.79	0.79	0.02	0.70	0.88	0.14	4.99	4.99	4.08

IC	IC301 (TDA4853)											
PIN	21	22	23	24	25	26	27	28	29	30	31	32
MODE												
640X480-60(31K)	5.01	3.30	3.06	2.68	GND	3.85	2.48	2.57	4.53	4.95	5.01	0
800X600-50(53K)	5.01	2.78	3.06	2.68	GND	3.22	1.88	2.57	4.55	5.17	5.01	0
1024X768-85(68K)	5.01	2.78	3.06	2.68	GND	2.79	1.45	2.57	4.57	5.33	5.01	0
1600X1200-75(95K)	5.01	2.93	3.06	2.68	GND	1.98	0.67	2.57	4.60	5.61	5.01	0

IC	IC401 (LM358)							
PIN	1	2	3	4	5	6	7	8
MODE								
640X480-60(31K)	6.88	5.97	5.97	GND	5.97	5.97	5.97	11.97
800X600-50(53K)	7.80	5.97	5.97	GND	5.97	5.97	5.97	11.97
1024X768-85(68K)	8.06	5.97	5.97	GND	5.97	5.97	5.97	11.97
1600X1200-75(95K)	8.33	5.97	5.97	GND	5.97	5.97	5.97	11.97

IC	IC402 (HEF4538))								
MODE	PIN	1	2	3	4	5	6	7	8
640X480-60(31K)		0	7.88	11.97	0.10	11.98	9.98	1.97	GND
800X600-50(53K)		0	8.21	11.97	0.59	11.97	8.50	3.42	GND
1024X768-85(68K)		0	8.36	11.97	0.92	11.97	7.50	4.40	GND
1600X1200-75(95K)		0	8.69	11.97	1.48	11.97	5.73	6.15	GND

IC	IC402 (HEF4538))								
MODE	PIN	9	10	11	12	13	14	15	16
640X480-60(31K)		10.74	1.20	11.68	0.11	11.98	10.98	GND	11.98
800X600-50(53K)		9.87	2.08	11.47	0.59	11.97	10.27	GND	11.97
1024X768-85(68K)		9.27	2.67	11.33	0.92	11.97	9.79	GND	11.97
1600X1200-75(95K)		8.23	3.70	11.07	1.48	11.97	8.95	GND	11.97

TR	Q301 (C945)			Q302 (JC337)			Q304 (C945)			
MODE	PIN	E	C	B	E	C	B	E	C	B
640X480-60(31K)		1.26	5.15	1.32	1.26	5.15	0.63	9.19	12.02	9.41
800X600-50(53K)		1.53	4.59	1.61	1.53	4.59	0.89	7.57	12.02	7.52
1024X768-85(68K)		1.71	4.20	1.81	1.71	4.20	1.07	6.58	12.02	6.34
1600X1200-75(95K)		2.50	3.50	2.18	2.50	3.50	1.38	4.81	12.02	4.27

TR	Q305 (A733)			Q306 (SFS9634)			Q307 (2SC5411)			
MODE	PIN	E	C	B	S	D	G	E	C	B
640X480-60(31K)		9.19	0	9.41	207.84	43.49	206.45	GND	40.34	-0.54
800X600-50(53K)		7.57	0	7.50	207.60	76.95	204.77	GND	71.72	-0.52
1024X768-85(68K)		6.58	0	6.33	207.54	93.67	203.82	GND	91.36	-0.52
1600X1200-75(95K)		4.81	0	4.25	207.53	134.55	202.25	GND	127.04	-0.53

TR	Q308 (BSN254)			Q311 (A733)			Q312 (A733)			
MODE	PIN	S	D	G	E	C	B	E	C	B
640X480-60(31K)		GND	52.09	4.61	6.46	1.29	5.86	5.57	0	5.52
800X600-50(53K)		GND	48.29	4.26	6.44	1.50	5.83	5.77	0	5.71
1024X768-85(68K)		GND	46.12	4.40	6.42	1.61	5.81	5.89	0	5.84
1600X1200-75(95K)		GND	43.45	4.61	6.39	1.82	5.78	6.09	0	6.05

TR	Q313 (C945)			Q315 (IRFS630A)			Q316 (IRFS630A)			
MODE	PIN	E	C	B	S	D	G	S	D	G
640X480-60(31K)		5.57	12.03	5.52	GND	0	12.01	GND	0	12.01
800X600-50(53K)		5.76	12.03	5.71	GND	23.72	0.03	GND	0.18	12.01
1024X768-85(68K)		5.89	12.02	5.84	GND	0.05	12.01	GND	37.54	0.03
1600X1200-75(95K)		6.09	12.02	6.05	GND	44.03	0.03	GND	44.12	0.03

TR	Q317 (IRFS640A)			Q318 (IRFS630A)			Q319 (2SC3400)			
MODE	PIN	S	D	G	S	D	G	E	C	B
640X480-60(31K)		GND	0	12.01	GND	0	12.01	GND	12.01	0.13
800X600-50(53K)		GND	24.13	0.03	GND	0	12.01	GND	12.01	0.11
1024X768-85(68K)		GND	37.53	0.03	GND	37.30	0.03	GND	0.03	4.45
1600X1200-75(95K)		GND	44.13	0.03	GND	43.80	0.03	GND	0.03	4.45

TR	Q320 (C3400)			Q321 (C3400)			Q322 (C3400)			
MODE	PIN	E	C	B	E	C	B	E	C	B
640X480-60(31K)		GND	12.01	0.13	GND	12.01	0.12	GND	12.01	0.12
800X600-50(53K)		GND	0.03	4.42	GND	12.01	0.11	GND	0.03	4.47
1024X768-85(68K)		GND	0.03	4.43	GND	0.03	4.38	GND	12.01	0.10
1600X1200-75(95K)		GND	0.03	4.45	GND	0.03	4.39	GND	0.03	4.47

TR	Q401 (FS3KM-18A)			Q402 (SFS9634)			Q407 (C945)			
MODE	PIN	S	D	G	S	D	G	E	C	B
640X480-60(31K)		GND	209.11	0.57	208.94	167.66	203.53	1.20	11.97	1.05
800X600-50(53K)		GND	208.97	1.04	208.92	137.95	204.42	2.10	11.97	1.85
1024X768-85(68K)		GND	208.90	1.37	208.91	117.38	205.28	2.73	11.97	2.39
1600X1200-75(95K)		GND	208.80	2.03	208.91	79.86	206.82	3.91	11.96	3.39

TR	Q408 (A733)			Q409 (C945)			Q410 (A733)			
MODE	PIN	E	C	B	E	C	B	E	C	B
640X480-60(31K)		1.20	0	1.05	3.55	11.97	3.63	3.55	0	3.63
800X600-50(53K)		2.10	0	1.85	5.20	11.97	5.75	5.20	0	5.75
1024X768-85(68K)		2.73	0	2.39	6.29	11.97	7.13	6.29	0	7.13
1600X1200-75(95K)		3.91	0	3.39	8.44	11.96	9.48	8.44	0	9.48

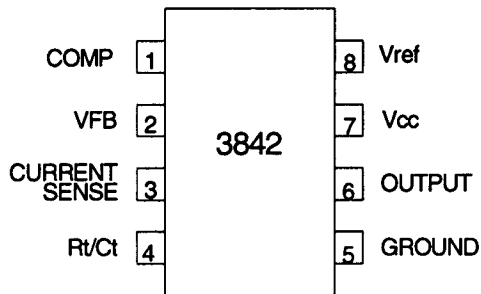
TR	Q411 (C945)			Q412 (BF423)			Q413 (C945)			
MODE	PIN	E	C	B	E	C	B	E	C	B
640X480-60(31K)		0	9.46	0.08	1.63	-33.66	1.02	0	1.61	0.03
800X600-50(53K)		0	9.39	0.09	1.62	-34.21	1.00	0	1.60	0.03
1024X768-85(68K)		0	9.39	0.09	1.62	-34.15	1.01	0	1.60	0.03
1600X1200-75(95K)		0	9.41	0.09	1.60	-33.97	0.99	0	1.58	0.03

TR	Q414 (C945)			Q415 (MPSA44)			Q416 (C945)			
MODE	PIN	E	C	B	E	B	C	E	C	B
640X480-60(31K)		0.03	1.61	0	1.18	1.73	118.56	0	0.45	0.48
800X600-50(53K)		0	1.60	0	1.18	1.74	118.46	0	0.13	0.49
1024X768-85(68K)		0	1.60	0	1.18	1.73	118.66	0	0.13	0.49
1600X1200-75(95K)		0	1.58	0	1.18	1.75	120.03	0	0.23	0.49

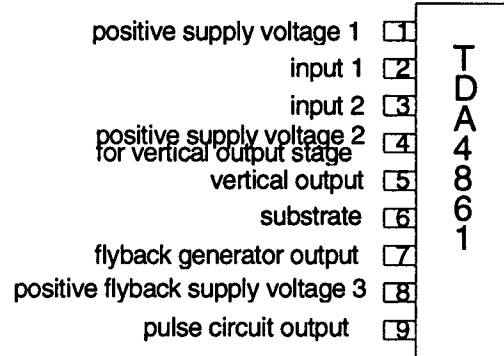
TR	Q417 (A733)			Q418 (C3400)			Q419 (A733)			
MODE	PIN	E	C	B	E	C	B	E	C	B
640X480-60(31K)		12.03	11.97	11.29	0	0.01	9.99	5.97	0	4.65
800X600-50(53K)		12.03	11.97	11.29	0	0.01	12.56	5.97	0	4.66
1024X768-85(68K)		12.03	11.97	11.29	0	0.01	13.50	5.97	0	4.67
1600X1200-75(95K)		12.03	11.97	11.29	0	0.01	14.24	5.97	0	4.69

8.0 IC CONFIGURATION

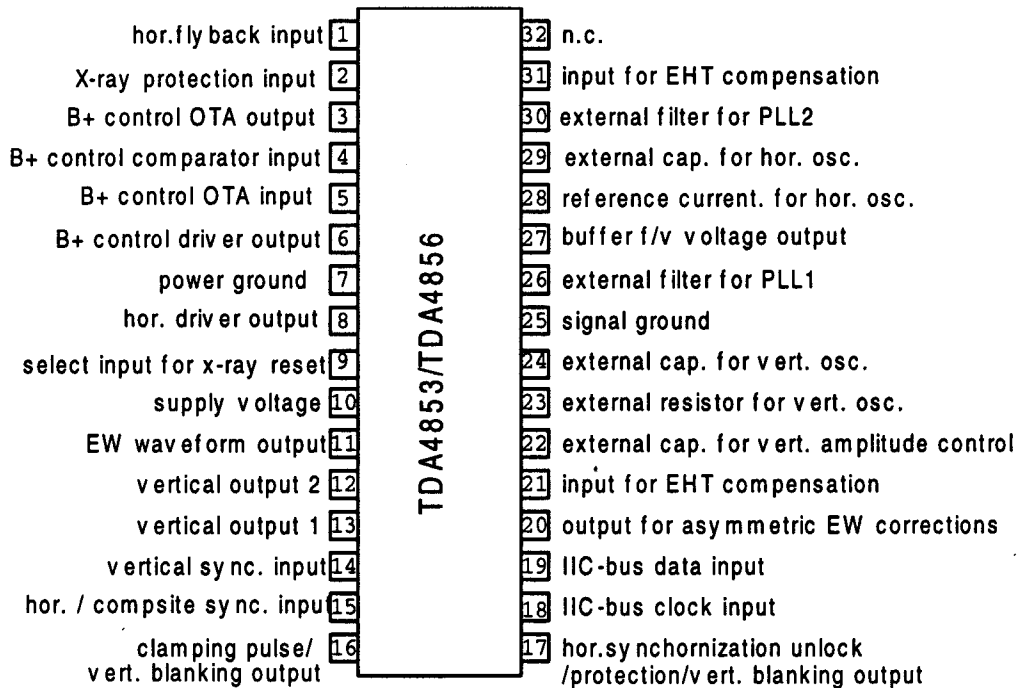
(1) 3842 (IC101)



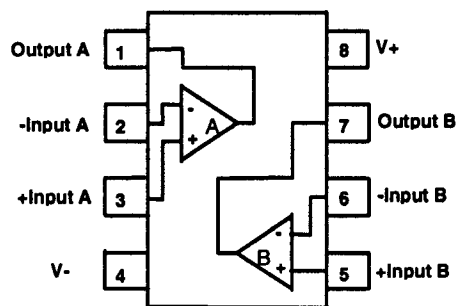
(2) TDA4861 (IC201)



(3) TDA4853/TDA4856 (IC301)



(4) LM358 (IC401)



9.0 PARTS LIST

1769UA/1795UA Parts List

Abbreviations :	Capacitors	EL: Electrolytic Aluminum, TA: Tantalum, CE: Ceramic
		PP: Polypropylene, PEI: Polyster (Inductive),
		PEN: Polyster (Non-Inductive) PPS: Serial Poly Propylene,
		MPE: Polyster Metalized, MPP: Polypropylene Metalized.
	Resistors	CF: Carbon Film, MF: Metal Film, VR: Variable Resistor.
		MOF: Metal Oxide Film, POT: Potentiometer
	Semiconductor	TR: Transistor, DI: Diode, ZD: Zener Diode, IC: IC.
Remark:	●: 1st priority , Recommended Q'ty = (Location Number x3)	
	⊙: 2nd priority, Recommended Q'ty = (Location Number x2)	
	N : New parts	
	! : Critical Components Affecting X-radiation	

Location	Part No.	Description	Remark	Location	Part No.	Description	Remark		
TRANSISTOR									
	Q101	14T92-011E	TR SCR BT169D		Q319	14C92-331C	TR NPN 2SC3400		
	Q102	14C92-111B	TR NPN 2SC945P/Q		Q320	14C92-331C	TR NPN 2SC3400		
⊙	Q103	14C92-111B	TR NPN 2SC945P/Q		Q321	14C92-331C	TR NPN 2SC3400		
⊙	Q104	14K3P-070SU	TR MOS FET FS10SM-16A	1795UA	Q322	14C92-331C	TR NPN 2SC3400		
⊙	Q104	14K22-280U	TR MOS FET FS7KM-16A	1769UA	⊙	Q401	14K22-260U	TR MOS FET FS3KM-18A	
	Q105	14C92-111B	TR NPN 2SC945P/Q		⊙N	Q402	14J22-040Y	TR MOS FET SFS9634	
	Q107	14D26-010B	TR NPN 2SD882P/Q			Q407	14C92-111B	TR NPN 2SC945P/Q	
	Q109	14C92-111B	TR NPN 2SC945P/Q		⊙	Q408	14A92-021B	TR PNP 2SA733P/Q	
	Q110	14B92-011P	TR PNP 2SB562			Q409	14C92-111B	TR NPN 2SC945P/Q	
	Q111	14C92-111B	TR NPN 2SC945P/Q			Q410	14A92-021B	TR PNP 2SA733P/Q	
	Q114	14C92-111B	TR NPN 2SC945P/Q			Q411	14C92-111B	TR NPN 2SC945P/Q	
	Q116	14A92-021B	TR PNP 2SA733P/Q			Q412	14A92-061E	TR PNP BF423	
	Q117	14C92-111B	TR NPN 2SC945P/Q			Q413	14C92-111B	TR NPN 2SC945P/Q	
	Q301	14C92-111B	TR NPN 2SC945P/Q			Q414	14C92-111B	TR NPN 2SC945P/Q	
	Q302	14C92-311E	TR NPN JC337-25		N	Q415	14C92-371N	TR NPN MPSA44	
	Q304	14C92-111B	TR NPN 2SC945P/Q			Q416	14C92-111B	TR NPN 2SC945P/Q	
⊙	Q305	14A92-021B	TR PNP 2SA733P/Q			Q417	14A92-021B	TR PNP 2SA733P/Q	
⊙N	Q306	14J22-040Y	TR MOS FET SFS9634			Q418	14C92-331C	TR NPN 2SC3400	
●N	Q307	14C3P-250A	TR NPN 2SC5411	1795UA	⊙	Q419	14A92-021B	TR PNP 2SA733P/Q	
●N	Q307	14C3P-240A	TR NPN 2SC5387 (AS)	1769UA		Q501	14A92-021B	TR PNP 2SA733P/Q	
	Q308	14K92-041E	TR MOS FET BSN254			⊙	Q502	14C92-111B	TR NPN 2SC945P/Q
	Q311	14A92-021B	TR PNP 2SA733P/Q			Q504	14C92-111B	TR NPN 2SC945P/Q	
	Q312	14A92-021B	TR PNP 2SA733P/Q			Q505	14C92-111B	TR NPN 2SC945P/Q	
	Q313	14C92-111B	TR NPN 2SC945P/Q			Q506	14C92-311E	TR NPN JC337-25	
	Q315	14K22-380Y	TR MOS FET IRFS630A	1795UA		Q508	14C92-331C	TR NPN 2SC3400	
⊙N	Q316	14K22-380Y	TR MOS FET IRFS630A			Q509	14C92-331C	TR NPN 2SC3400	
	Q317	14K22-390Y	TR MOS FET IRFS640A			Q510	14A92-151E	TR PNP JC327-25	
	Q317	14K22-380Y	TR MOS FET IRFS630A	1769UA		Q511	14C92-111B	TR NPN 2SC945P/Q	
⊙N	Q318	14K22-380Y	TR MOS FET IRFS630A			Q512	14C92-331C	TR NPN 2SC3400	
						Q514	14C92-111B	TR NPN 2SC945P/Q	
						Q515	14C92-311E	TR NPN JC337-25	

Location	Part No.	Description	Remark	Location	Part No.	Description	Remark
Q516	14A92-151E	TR PNP JC327-25	1795UA	⊙ D401	15S33T201F	DI MD SW 1A 200V (BYD33D)	
Q518	14C92-311E	TR NPN JC337-25	1795UA	⊙ D402	15S49B602F	DI HI SW 3A 1000V 75NS (HER308)	
Q519	14A92-151E	TR PNP JC327-25		D403	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
Q520	14C92-111B	TR NPN 2SC945P/Q	1795UA	D404	15S33T201F	DI MD SW 1A 200V (BYD33D)	
Q601	14C92-111B	TR NPN 2SC945P/Q		D405	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
Q607	14A92-021B	TR PNP 2SA733P/Q		D406	15S35T201F	DI MD SW 1A 400V (BYD33G)	
Q620	14C92-111B	TR NPN 2SC945P/Q		D407	15S35T201F	DI MD SW 1A 400V (BYD33G)	
Q634	14A92-061E	TR PNP BF423		D408	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
Q635	14C92-011E	TR NPN BF422		D409	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
Q654	14A92-061E	TR PNP BF423		D410	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
Q655	14C92-011E	TR NPN BF422		D411	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
Q674	14A92-061E	TR PNP BF423		D412	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
Q675	14C92-011E	TR NPN BF422		D413	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
DIODES				D414	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
D101	15S49T200F	DI HI SW 1A 1000V 75NS (BYV26E)		D415	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
⊙ D103	15S11M001F	DI SWITCH 0.5A 50V (1N4148)		D416	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
D104	15S11M001F	DI SWITCH 0.5A 50V (1N4148)		D417	15S33T201F	DI MD SW 1A 200V (BYD33D)	
⊙ D105	15S11M001F	DI SWITCH 0.5A 50V (1N4148)		D418	15S33T201F	DI MD SW 1A 200V (BYD33D)	
D106	15S43T401T	DI HI SW 2A 200V 50NS (HER203)		D421	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
● D108	15S49TK00F	DI HI SW 2.3A 1000V 75NS (BYM26E)		D422	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
D109	15S47TK00F	DI HI SW 2.3A 600V 30NS (BYM26C)		D423	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
D110	15S47TK00F	DI HI SW 2.3A 600V 30NS (BYM26C)		D501	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
⊙ D112	15S43T601T	DI HI SW 3A 200V 50NS (HER303)		D601	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
⊙ D113	15S33T201F	DI MD SW 1A 200V (BYD33D)		D602	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
D114	15B40T2012	DI SCHOTTKY HI SW 1A50V (1N5819)		D603	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
● D117	15S49TK00F	DI HI SW 2.3A 1000V 75NS (BYM26E)		D604	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
D119	15S11M001F	DI SWITCH 0.5A 50V (1N4148)		D605	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
D120	15S11M001F	DI SWITCH 0.5A 50V (1N4148)		D607	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
D121	15S11M001F	DI SWITCH 0.5A 50V (1N4148)		D608	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
D122	15S11M001F	DI SWITCH 0.5A 50V (1N4148)		D626	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
D123	15S11M001F	DI SWITCH 0.5A 50V (1N4148)		D631	15S43M001F	DI HI SW 0.5A 200V (BAV21)	
D125	15S11M001F	DI SWITCH 0.5A 50V (1N4148)		D632	15S43M001F	DI HI SW 0.5A 200V (BAV21)	
D126	15S11M001F	DI SWITCH 0.5A 50V (1N4148)		D633	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
D201	15S62M201F	DI RECTIFIER 1A 100V (1N4002)		D651	15S43M001F	DI HI SW 0.5A 200V (BAV21)	
D202	15S62M201F	DI RECTIFIER 1A 100V (1N4002)		D652	15S43M001F	DI HI SW 0.5A 200V (BAV21)	
D301	15S11M001F	DI SWITCH 0.5A 50V (1N4148)		D653	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
D302	15S11M001F	DI SWITCH 0.5A 50V (1N4148)		D671	15S43M001F	DI HI SW 0.5A 200V (BAV21)	
D303	15B40T2012	DI SCHOTTKY HI SW 1A50V (1N5819)		D672	15S43M001F	DI HI SW 0.5A 200V (BAV21)	
D304	15S11M001F	DI SWITCH 0.5A 50V (1N4148)		D673	15S11M001F	DI SWITCH 0.5A 50V (1N4148)	
⊙ D306	15S33T201F	DI MD SW 1A 200V (BYD33D)		⊙ ZD101	15Z33M1800H	ZD 18V 5% 0.5W	
D307	15S33T201F	DI MD SW 1A 200V (BYD33D)		N ZD102	15Z33M6290H	ZD 6.2V 5% 0.5W	
D308	15B40T2012	DI SCHOTTKY HI SW 1A50V (1N5819)		ZD103	15Z33M1600H	ZD 16-2V 5% 0.5W	
D309	15S3C-901F	DI MD SW 8A 1500V (DB84RC)	1795UA	ZD104	15Z33M5190H	ZD 5.1V 5% 0.5W	
D309	15S3C-702F	DI MD SW 5A 1500V (DD54RC)	1769UA				
⊙ D310	15S47T201F	DI HI SW 1A 600V 30NS (BYV26C)					
D312	15S11M001F	DI SWITCH 0.5A 50V (1N4148)					
				ZENER DIODE			

Location	Part No.	Description	Remark	Location	Part No.	Description	Remark
ZD108	15Z33M1200H	ZD 12V 5% 0.5W		R140	22215-153M	RES CF 15K 5% 1/8W	
ZD201	15Z33M2400H	ZD 24V 5% 0.5W		R141	22215-472M	RES CF 4K7 5% 1/8W	
ZD202	15Z33M2400H	ZD 24V 5% 0.5W		R142	22215-103M	RES CF 10K 5% 1/8W	
ZD302	15Z33M5690H	ZD 5.6V 5% 0.5W		R143	22245-4741	RES CF 470K 5% 1/2W	
ZD303	15Z33M1200H	ZD 12V 5% 0.5W		R144	22245-2231	RES CF 22K 5% 1/2W	
N ZD401	15Z33M5690H	ZD 5.6V 5% 0.5W		R145	23745-3931	RES MOF 39K 5% 1W	
ZD402	15Z33M1200H	ZD 12V 5% 0.5W		R147	22215-391M	RES CF 390R 5% 1/8W	
ZD404	15Z33M1200H	ZD 12V 5% 0.5W		R148	22225-472M	RES CF 4K7 5% 1/4W	
ZD405	15Z33M5190H	ZD 5.1V 5% 0.5W		R149	22225-333M	RES CF 33K 5% 1/4W	
ZD501	15Z33M3990H	ZD 3.9V 5% 0.5W		R150	22225-101M	RES CF 100R 5% 1/4W	
ZD502	15Z33M5190H	ZD 5.1V 5% 0.5W		R151	22215-104M	RES CF 100K 5% 1/8W	
RESISTORS				R152	22215-472M	RES CF 4K7 5% 1/8W	
R101	22245-4741	RES CF 470K 5% 1/2W		R153	22215-333M	RES CF 33K 5% 1/8W	
R102	23245-3034	RES MOF 30K 5% 1W		R154	23245-5084	RES MOF 0.5R 5% 1W	1795UA
R103	23765-303B	RES MOF 30K 5% 3W		R154	23755-1594	MOF 1R5 5% 2W	1769UA
R105	22245-1091	RES CF 1R 5% 1/2W		R201	22215-242M	RES CF 2K4 5% 1/8W	
R106	22225-152M	RES CF 1K5 5% 1/4W		R202	22225-242M	RES CF 2K4 5% 1/4W	
R109	22215-473M	RES CF 47K 5% 1/8W		R203	22225-101M	RES CF 100R 5% 1/4W	
R110	22215-471M	RES CF 470R 5% 1/8W		R204	22215-109M	RES CF 1R 5% 1/8W	
R111	22215-103M	RES CF 10K 5% 1/8W		R205	23245-2214	RES MOF 220R 5% 1W	
R113	23A11S055M	RES MF 988R 1% 1/8W		R206	23245-1094	RES MOF 1R 5% 1W	
R114	22215-123M	RES CF 12K 5% 1/8W		R207	23755-1004	RES MOF 10R 5% 2W	1795UA
R115	22215-103M	RES CF 10K 5% 1/8W		R207	23755-6894	MOF 6R8 5% 2W	1769UA
R116	23745-4791	RES MOF 4R7 5% 1W	1795UA	R210	22225-103M	RES CF 10K 5% 1/4W	
R116	22245-2291	CF 2R2 5% 1/2W	1769UA	R211	22225-101M	RES CF 100R 5% 1/4W	
R117	22215-472M	RES CF 4K7 5% 1/8W		R212	23755-2224	RES MOF 2K2 5% 2W	
R118	22215-222M	RES CF 2K2 5% 1/8W		R301	22215-432M	RES CF 4K3 5% 1/8W	
R119	22215-472M	RES CF 4K7 5% 1/8W		R302	22215-153M	RES CF 15K 5% 1/8W	
R120	22245-6831	RES CF 68K 5% 1/2W		R303	22215-103M	RES CF 10K 5% 1/8W	
R121	22215-271M	RES CF 270R 5% 1/8W		R304	22215-683M	RES CF 68K 5% 1/8W	
R122	22225-510M	RES CF 51R 5% 1/4W		R306	22215-102M	RES CF 1K 5% 1/8W	
R123	22215-101M	RES CF 100R 5% 1/8W		R308	22215-154M	RES CF 150K 5% 1/8W	
R124	23745-3931	RES MOF 39K 5% 1W	1795UA	R309	23A11-602M	RES MF 6K 1% 1/8W	1795UA
R124	23745-3631	MOF 36K 5% 1W	1769UA	R309	23A11S015M	MF 7K32 1% 1/8W	1769UA
R125	22215-471M	RES CF 470R 5% 1/8W		R310	22225-243M	RES CF 24K 5% 1/4W	
R126	23755-2284	RES MOF 0.22R 5% 2W		R311	22215-222M	RES CF 2K2 5% 1/8W	
R127	22215-472M	RES CF 4K7 5% 1/8W		R312	23A11S007M	RES MF 5K62 1% 1/8W	1795UA
R128	22215-100M	RES CF 10R 5% 1/8W		R312	23A11-472M	MF 4K7 1% 1/8W	1769UA
R129	22215-681M	RES CF 680R 5% 1/8W		R314	22225-223M	RES CF 22K 5% 1/4W	
R131	22215-242M	RES CF 2K4 5% 1/8W		R315	22225-101M	RES CF 100R 5% 1/4W	
R132	22215-272M	RES CF 2K7 5% 1/8W		R316	22225-101M	RES CF 100R 5% 1/4W	
R133	22215-102M	RES CF 1K 5% 1/8W		R317	22225-101M	RES CF 100R 5% 1/4W	
R134	22215-221M	RES CF 220R 5% 1/8W		R318	22225-101M	RES CF 100R 5% 1/4W	
R135	22215-103M	RES CF 10K 5% 1/8W		R319	23A11-223M	RES MF 22K 1% 1/8W	
R136	22225-103M	RES CF 10K 5% 1/4W		R320	22215-332M	RES CF 3K3 5% 1/8W	
R139	23A11-182M	RES MF 1K8 1% 1/8W		R321	23A11-751M	RES MF 750R 1% 1/8W	1795UA
				R321	23A11-102M	MF 1K 1% 1/8W	1769UA

Location	Part No.	Description	Remark	Location	Part No.	Description	Remark
R322	23A11-272M	RES MF 2K7 1% 1/8W		R409	22215-471M	RES CF 470R 5% 1/8W	
R323	22225-101M	RES CF 100R 5% 1/4W		R410	23A21S007M	RES MF 80K6 1% 1/4W	1795UA
R327	22215-273M	RES CF 27K 5% 1/8W		R410	23A21S036M	MF 88K7 1% 1/4W	1769UA
R341	22225-472M	RES CF 4K7 5% 1/4W		R411	22225-102M	RES CF 1K 5% 1/4W	
R342	22215-472M	RES CF 4K7 5% 1/8W		R412	22215-103M	RES CF 10K 5% 1/8W	
R343	22225-101M	RES CF 100R 5% 1/4W		R413	22215-103M	RES CF 10K 5% 1/8W	
R345	22215-472M	RES CF 4K7 5% 1/8W		R414	22215-154M	RES CF 150K 5% 1/8W	
R346	22215-472M	RES CF 4K7 5% 1/8W	1795UA	R415	22215-183M	RES CF 18K 5% 1/8W	
R347	22225-101M	RES CF 100R 5% 1/4W	1795UA	R416	22245-1021	RES CF 1K 5% 1/2W	
R348	22225-101M	RES CF 100R 5% 1/4W		R423	22225-103M	RES CF 10K 5% 1/4W	
R352	23255-2705	RES MOF 27R 5% 2W		R424	22225-223M	RES CF 22K 5% 1/4W	
R355	22245-2211	RES CF 220R 5% 1/2W		R425	22215-103M	RES CF 10K 5% 1/8W	
R356	22215-100M	RES CF 10R 5% 1/8W		R426	22215-332M	RES CF 3K3 5% 1/8W	
R357	22215-470M	RES CF 47R 5% 1/8W		R427	22215-562M	RES CF 5K6 5% 1/8W	
R358	23255-2715	RES MOF 270R 5% 2W	1795UA	R428	22225-624M	RES CF 620K 5% 1/4W	
R358	23255-3315	MOF 330R 5% 2W	1769UA	R429	22215-222M	RES CF 2K2 5% 1/8W	
R359	23255-3015	RES MOF 300R 5% 2W	1795UA	R430	22225-470M	RES CF 47R 5% 1/4W	
R359	23255-3315	MOF 330R 5% 2W	1769UA	R436	23A21-472M	RES MF 4K7 1% 1/4W	
R360	23245-1034	RES MOF 10K 5% 1W		R437	22215-103M	RES CF 10K 5% 1/8W	
R361	23745-1011	RES MOF 100R 5% 1W	1795UA	R438	22215-472M	RES CF 4K7 5% 1/8W	
R363	22245-3301	RES CF 33R 5% 1/2W		R439	22215-913M	RES CF 91K 5% 1/8W	1795UA
R364	22225-430M	RES CF 43R 5% 1/4W		R439	23A11S097M	MF 88K7 1% 1/8W	1769UA
R365	22225-430M	RES CF 43R 5% 1/4W		R440	22245-2741	RES CF 270K 5% 1/2W	
R366	23225-109M	RES MOF 1R 5% 1/4W		R441	23A11S065M	RES MF 15K4 1% 1/8W	1795UA
R367	23255-1005	RES MOF 10R 5% 2W		R441	23A11S060M	MF 14K3 1% 1/8W	1769UA
R368	22215-472M	RES CF 4K7 5% 1/8W		R442	22245-1841	RES CF 180K 5% 1/2W	1795UA
R369	22215-151M	RES CF 150R 5% 1/8W		R442	22245-2041	CF 200K 5% 1/2W	1769UA
R374	22245-1001	RES CF 10R 5% 1/2W		R443	23A11-303M	RES MF 30K 1% 1/8W	
R375	23765-1095	RES MOF 1R 5% 3W	1795UA	R444	22225-222M	RES CF 2K2 5% 1/4W	
R375	23765-1295	MOF 1R2 5% 3W	1769UA	R445	22215-223M	RES CF 22K 5% 1/8W	
R376	22215-103M	RES CF 10K 5% 1/8W		R446	22215-333M	RES CF 33K 5% 1/8W	
R377	22215-100M	RES CF 10R 5% 1/8W		R447	22225-101M	RES CF 100R 5% 1/4W	
R378	22215-472M	RES CF 4K7 5% 1/8W		R448	23A21-203M	RES MF 20K 1% 1/4W	
R379	22215-562M	RES CF 5K6 5% 1/8W		R449	22215-223M	RES CF 22K 5% 1/8W	
R381	22215-911M	RES CF 910R 5% 1/8W	1795UA	R450	22225-512M	RES CF 5K1 5% 1/4W	
R381	22215-122M	CF 1K2 5% 1/8W	1769UA	R451	22245-1041	RES CF 100K 5% 1/2W	
R382	22245-2201	RES CF 22R 5% 1/2W		R452	22245-1041	RES CF 100K 5% 1/2W	
R383	22245-2701	RES CF 27R 5% 1/2W		R453	22225-244M	RES CF 240K 5% 1/4W	
R384	22245-4701	RES CF 47R 5% 1/2W	1795UA	R454	22225-244M	RES CF 240K 5% 1/4W	
R401	22225-102M	RES CF 1K 5% 1/4W		R455	22215-362M	RES CF 3K6 5% 1/8W	
R402	22225-100M	RES CF 10R 5% 1/4W		R456	22225-681M	RES CF 680R 5% 1/4W	
R403	22215-100M	RES CF 10R 5% 1/8W		R457	22225-272M	RES CF 2K7 5% 1/4W	
R404	22225-101M	RES CF 100R 5% 1/4W		R458	22215-202M	RES CF 2K 5% 1/8W	
R405	23225-109M	RES MOF 1R 5% 1/4W		R459	22215-301M	RES CF 300R 5% 1/8W	
R406	22225-470M	RES CF 47R 5% 1/4W		R463	22215-102M	RES CF 1K 5% 1/8W	
R407	22225-472M	RES CF 4K7 5% 1/4W		R464	22215-103M	RES CF 10K 5% 1/8W	
R408	22225-912M	RES CF 9K1 5% 1/4W		R465	22225-103M	RES CF 10K 5% 1/4W	

Location	Part No.	Description	Remark	Location	Part No.	Description	Remark
R466	22225-471M	RES CF 470R 5% 1/4W		R546	22215-472M	RES CF 4K7 5% 1/8W	1795UA
R467	22215-101M	RES CF 100R 5% 1/8W		R547	22225-750M	RES CF 75R 5% 1/4W	1795UA
R468	22215-562M	RES CF 5K6 5% 1/8W		R548	22225-271M	RES CF 270R 5% 1/4W	1795UA
R469	22215-103M	RES CF 10K 5% 1/8W		R555	22215-102M	RES CF 1K 5% 1/8W	
R470	22225-223M	RES CF 22K 5% 1/4W		R556	23A11S100M	RES MF 5K36 1% 1/8W	
R471	22215-471M	RES CF 470R 5% 1/8W		R601	23A11-750M	RES MF 75R 1% 1/8W	
R472	22215-103M	RES CF 10K 5% 1/8W		R602	23A11-750M	RES MF 75R 1% 1/8W	
R474	22215-560M	RES CF 56R 5% 1/8W		R603	23A11-750M	RES MF 75R 1% 1/8W	
R475	22215-683M	RES CF 68K 5% 1/8W		R604	22215-102M	RES CF 1K 5% 1/8W	
R476	22225-101M	RES CF 100R 5% 1/4W		R605	22245-1011	RES CF 100R 5% 1/2W	
R501	22215-272M	RES CF 2K7 5% 1/8W		R606	22215-220M	RES CF 22R 5% 1/8W	
R502	22215-471M	RES CF 470R 5% 1/8W		R607	22215-332M	RES CF 3K3 5% 1/8W	
R503	22215-102M	RES CF 1K 5% 1/8W		R608	22225-101M	RES CF 100R 5% 1/4W	
R504	22215-562M	RES CF 5K6 5% 1/8W		R612	22215-220M	RES CF 22R 5% 1/8W	
R505	22225-272M	RES CF 2K7 5% 1/4W		R613	22215-102M	RES CF 1K 5% 1/8W	
R506	22225-101M	CF 100R 5% 1/4W		R614	22215-220M	RES CF 22R 5% 1/8W	
R507	22215-222M	RES CF 2K2 5% 1/8W		R615	22215-623M	RES CF 62K 5% 1/8W	
R508	22225-561M	RES CF 560R 5% 1/4W		R616	22215-822M	RES CF 8K2 5% 1/8W	
R509	22215-472M	RES CF 4K7 5% 1/8W		R617	22215-332M	RES CF 3K3 5% 1/8W	
R510	23A11-452M	RES MF 4K5 1% 1/8W	1795UA	R619	23A11-363M	RES MF 36K 1% 1/8W	
R510	23A11-822M	MF 8K2 1% 1/8W	1769UA	R620	22245-3331	RES CF 33K 5% 1/2W	
R511	22215-472M	RES CF 4K7 5% 1/8W		R621	23A11-912M	RES MF 9K1 1% 1/8W	1795UA
R512	22215-822M	RES CF 8K2 5% 1/8W		R621	23A11-752M	MF 7K5 1% 1/8W	1769UA
R514	22215-102M	RES CF 1K 5% 1/8W		R622	22215-242M	RES CF 2K4 5% 1/8W	
R515	22215-103M	RES CF 10K 5% 1/8W		R623	22215-101M	RES CF 100R 5% 1/8W	
R516	22215-102M	RES CF 1K 5% 1/8W		R624	22215-101M	RES CF 100R 5% 1/8W	
R517	22215-102M	RES CF 1K 5% 1/8W		R625	22215-101M	RES CF 100R 5% 1/8W	
R518	22215-332M	RES CF 3K3 5% 1/8W		R626	22215-101M	RES CF 100R 5% 1/8W	
R519	22215-332M	RES CF 3K3 5% 1/8W		R627	22215-101M	RES CF 100R 5% 1/8W	
R520	22215-332M	RES CF 3K3 5% 1/8W		R629	22215-102M	RES CF 1K 5% 1/8W	
R521	22225-102M	CF 1K 5% 1/4W	1769UA	R630	22215-222M	RES CF 2K2 5% 1/8W	
R522	22225-102M	RES CF 1K 5% 1/4W		R631	22225-224M	RES CF 220K 5% 1/4W	
R524	22215-103M	RES CF 10K 5% 1/8W		R632	22225-183M	RES CF 18K 5% 1/4W	
R525	22225-221M	RES CF 220R 5% 1/4W		R633	22215-220M	RES CF 22R 5% 1/8W	
R526	22245-7511	RES CF 750R 5% 1/2W		R634	22225-151M	RES CF 150R 5% 1/4W	
R527	22215-432M	RES CF 4K3 5% 1/8W		R635	22215-271M	RES CF 270R 5% 1/8W	
R528	22215-222M	RES CF 2K2 5% 1/8W		R637	22245-7501	RES CF 75R 5% 1/2W	
R529	22215-472M	RES CF 4K7 5% 1/8W		R638	22215-103M	RES CF 10K 5% 1/8W	
R530	22215-223M	RES CF 22K 5% 1/8W		R639	22215-243M	RES CF 24K 5% 1/8W	
R531	22215-683M	RES CF 68K 5% 1/8W		R641	22215-271M	RES CF 270R 5% 1/8W	
R532	22215-332M	RES CF 3K3 5% 1/8W		R643	22215-332M	RES CF 3K3 5% 1/8W	
R536	22215-102M	RES CF 1K 5% 1/8W		R644	22215-102M	RES CF 1K 5% 1/8W	
R541	22215-303M	RES CF 30K 5% 1/8W	1795UA	R646	22215-102M	RES CF 1K 5% 1/8W	
R542	22215-822M	RES CF 8K2 5% 1/8W	1795UA	R647	22215-102M	RES CF 1K 5% 1/8W	
R543	22215-472M	RES CF 4K7 5% 1/8W	1795UA	R648	22215-101M	RES CF 100R 5% 1/8W	
R544	22215-303M	RES CF 30K 5% 1/8W	1795UA	R650	22215-271M	RES CF 270R 5% 1/8W	
R545	22215-183M	RES CF 18K 5% 1/8W	1795UA	R651	22225-224M	RES CF 220K 5% 1/4W	

Location	Part No.	Description	Remark	Location	Part No.	Description	Remark
R652	22225-183M	RES CF 18K 5% 1/4W		C103	42D77-2224	SAFETY 2200P 20% AC250V	
R653	22215-220M	RES CF 22R 5% 1/8W		C104	28CD7-2217	EL220U 20% 400V 105RA PCB	1795UA
R654	22225-151M	RES CF 150R 5% 1/4W		C104	28ED7-2216	EL 220U 20% 400V 85 RA PCB	1769UA
R655	23A11-512M	RES MF 5K1 1% 1/8W		C105	39487-103R	CE 0.01U 20% 500V	
R656	23A11-512M	RES MF 5K1 1% 1/8W		C106	34175-1034	MPE 0.01U 5% 630V	
R657	22245-7501	RES CF 75R 5% 1/2W		C108	28A47-4711	EL470U 20% 25V 105 RA SL P=5MM	
R658	22215-103M	RES CF 10K 5% 1/8W		C109	28H47-101R	EL100U 20% 25V 85 RA TP P=5MM	
R659	22215-243M	RES CF 24K 5% 1/8W		C111	28A47-151R	EL150U 20% 25V 105 RA TP P=5MM	
R660	22215-243M	RES CF 24K 5% 1/8W		C113	31115-223R	PEI 0.022U 5% 50V	
R663	22215-332M	RES CF 3K3 5% 1/8W		C114	39999-104R	CE 0.1U +80-20% 50V	
R665	22225-101M	RES CF 100R 5% 1/4W		C116	33122-332R	PPN 3300P 2% 100V	
R666	22215-472M	RES CF 4K7 5% 1/8W		C117	39146-561R	CE 560P 10% 50V	
R667	22225-471M	RES CF 470R 5% 1/4W		C118	31115-102R	PEI 1000P 5% 50V	
R668	22215-101M	RES CF 100R 5% 1/8W		C119	28HB7-1015	EL100U 20% 250V 85 RA	
R669	22215-471M	RES CF 470R 5% 1/8W		C120	39446-1038	CE 0.01U 10% 500V	
R670	22215-473M	RES CF 47K 5% 1/8W		C121	28A97-1011	EL100U 20% 100V 105RA	
R671	22225-224M	RES CF 220K 5% 1/4W		C122	39546-470R	CE 47P 10% 1KV Y5P	
R672	22225-183M	RES CF 18K 5% 1/4W		C123	28A47-4711	EL470U 20% 25V 105 RA	
R673	22215-220M	RES CF 22R 5% 1/8W		C125	28A37-1021	EL1000U 20% 16V 105RA	
R674	22225-151M	RES CF 150R 5% 1/4W		C126	39546-470R	CE 47P 10% 1KV Y5P	
R675	22215-102M	RES CF 1K 5% 1/8W		C128	28H27-1021	EL1000U 20% 10V 85 RA	
R676	22215-471M	RES CF 470R 5% 1/8W		C129	28H27-471R	EL470U 20% 10V 85 RA	
R677	22245-7501	RES CF 75R 5% 1/2W		C130	28H37-470R	EL47U 20% 16V 85 RA	
R678	22215-103M	RES CF 10K 5% 1/8W		C131	28H97-1011	EL100U 20% 100V 85 RA	
R679	22215-243M	RES CF 24K 5% 1/8W		C132	28H47-4711	EL470U 20% 25V 85 RA	
R680	22215-102M	RES CF 1K 5% 1/8W		C134	42D77-2224	SAFETY 2200P 20% AC250V	
R682	22215-102M	RES CF 1K 5% 1/8W		C135	39999-104R	CE 0.1U +80-20% 50V	
R683	22215-332M	RES CF 3K3 5% 1/8W		C136	28H37-101R	EL100U 20% 16V 85 RA TP P=5MM	
R686	22215-102M	RES CF 1K 5% 1/8W		C137	28HB7-4701	EL47U 20% 250V 85 RA SL P=5MM	
R687	23A11-753M	RES MF 75K 1% 1/8W		C138	28H47-4711	EL470U 20% 25V 85 RA SL P=5MM	
R689	22225-471M	RES CF 470R 5% 1/4W		C140	28H67-109R	EL1U 20% 50V 85 RA TP P=5MM	
R904	23A11S058M	RES MF 2K43 1% 1/8W		C142	28H37-331R	EL330U 20% 16V 85 RA TP P=5MM	
R905	23A11S058M	RES MF 2K43 1% 1/8W		C151	28H37-101R	EL100U 20% 16V 85 RA TP P=5MM	
R906	23A11S003M	RES MF 3K24 1% 1/8W		C152	28H67-100R	EL10U 20% 50V 85 RATP P=5MM	
R907	23A11S064M	RES MF 1K87 1% 1/8W		C153	28H37-101R	EL100U 20% 16V 85 RA TP P=5MM	
R908	23A11S064M	RES MF 1K87 1% 1/8W		C154	39187-103R	CE 0.01U 20% 50V	
R909	23A11S073M	RES MF 4K22 1% 1/8W		C201	39146-222R	CE 2200P 10% 50V	
R910	23A11S073M	RES MF 4K22 1% 1/8W		C202	39146-222R	CE 2200P 10% 50V	
VARIABLE RESISTOR				C203	28H47-4711	EL470U 20% 25V 85 RA SL P=5MM	
VR101	25B20-103B	RES POT 10KB 0.1W		C204	346B5-104R	MPE 0.1U 5% 63V	
VR102	25B20-102B	RES POT 1KB 0.1W		C205	28H97-100R	EL10U 20% 100V 85 RA TP P=5MM	
VR103	25B20-502B	RES POT 5KB 0.1W		C206	28H47-4711	EL470U 20% 25V 85 RA SL P=5MM	
VR302	25B43-101BH	RES POT 100R 0.5W		C210	31115-223R	PEI 0.022U 5% 50V	
VR401	25AA0-203B	RES POT 20KB 0.1W		C301	38115-100R	CE 10P 5% 50V NPO	
VR402	25AA0-203B	RES POT 20KB 0.1W		C302	39999-104R	CE 0.1U +80-20% 50V	
CAPACITOR				C303	32115-103R	PEN 0.01U 5% 50V	
C101	42A77-474F	SAFETY 0.47U 20% AC250V		C304	38115-101R	CE 100P 5% 50V NPO	
C102	42D77-2224	SAFETY 2200P 20% AC250V		C305	28H37-470R	EL47U 20% 16V 85 RATP P=5MM	
				C307	33122-222R	PPN 2200P 2% 100V	
				C308	28H37-1021	EL1000U 20% 16V 85 RA SL P=5MM	

Location	Part No.	Description	Remark	Location	Part No.	Description	Remark
C309	39999-104R	CE 0.1U +80-20% 50V		C407	28H67-100R	EL10U 20% 50V 85 RATP P=5MM	
C313	346B5-154R	MPE 0.15U 5% 63V		C408	31115-473R	PEI 0.047U 5% 50V	
C314	34115-104R	MPE 0.1U 5% 50V		C409	28H37-220R	EL22U 20% 16V 85 RATP P=5MM	
C315	28H67-109R	EL1U 20% 50V 85 RA TP P=5MM	1795UA	C410	38115-151R	CE 150P 5% 50V NPO	
C315	28H67-478R	EL 0.47U 20% 50V 85 RA TP P=5MM	1769UA	C412	38115-101R	CE 100P 5% 50V NPO	
C316	32115-822R	PEN 8200P 5% 50V		C413	28H37-470R	EL47U 20% 16V 85 RATP P=5MM	
C317	33122-103R	PPN 0.01U 2% 100V		C414	28HB7-4701	EL47U 20% 250V 85 RA SL P=5MM	
C318	31115-332R	PEI 3300P 5% 50V		C415	28H37-470R	EL47U 20% 16V 85 RATP P=5MM	
C322	38115-101R	CE 100P 5% 50V NPO		C418	38115-101R	CE 100P 5% 50V NPO	
C323	38115-101R	CE 100P 5% 50V NPO		C419	38115-101R	CE 100P 5% 50V NPO	
C327	31115-272R	PEI 2700P 5% 50V		C420	39999-104R	CE 0.1U +80-20% 50V	
C331	39999-104R	CE 0.1U +80-20% 50V		C422	39146-102R	CE 1000P 10% 50V	
C338	28H37-470R	EL47U 20% 16V 85 RATP P=5MM		C423	39999-104R	CE 0.1U +80-20% 50V	
C339	39446-102R	CE 1000P 10% 500V		C424	28H97-109R	EL1U 20% 100V 85 RATP P=5MM	
C342	31115-103R	PEI 0.01U 5% 50V		C425	31115-682R	PEI 6800P 5% 50V	1795UA
C343	35155-1046	MPP 0.1U 5% 400V	1795UA	C425	31115-822R	PEI 0.0082U 5% 50V	1769UA
C343	35155-2246	MPP 0.22U 5% 400V	1769UA	C428	28H27-101R	EL100U 20% 10V 85 RA TP P=5MM	
C344	31115-103R	PEI 0.01U 5% 50V		C429	28467-479R	EL4U7 20% 50V NP RATP P=5MM	
C345	31115-103R	PEI 0.01U 5% 50V		C430	28467-229R	EL2U2 20% 50V NP 85RA	
C346	31115-103R	PEI 0.01U 5% 50V	1795UA	C431	28437-100R	EL10U 20% 16V NP 85RA	
C347	35145-6847	MPP 0.68U 5% 250V	1795UA	C432	39146-102R	CE 1000P 10% 50V	
C347	35145-3347	MPP 0.33U 5% 250V	1769UA	C433	28H67-479R	EL4U7 20% 50V 85 RATP P=5MM	
C348	35155-2246	MPP 0.22U 5% 400V	1795UA	C434	28H67-220R	EL22U 20% 50V 85 RATP P=5MM	
C349	35145-1557	MPP 1U5 5% 250V	1795UA	C437	28H67-229R	EL2U2 20% 50V 85 RATP P=5MM	
C349	35145-1057	MPP 1U 5% 250V	1769UA	C439	31115-392R	PEI 3900P 5% 50V	
C351	31115-103R	PEI 0.01U 5% 50V		C442	31115-682R	PEI 6800P 5% 50V	
C352	28H97-479R	EL4U7 20% 100V 85 RA TP P=5MM		C443	39999-104R	CE 0.1U +80-20% 50V	
C353	39446-102R	CE 1000P 10% 500V		C501	39999-104R	CE 0.1U +80-20% 50V	
C354	31115-103R	PEI 0.01U 5% 50V		C502	28H37-470R	EL47U 20% 16V 85 RATP P=5MM	
! C355	375B5H4727M	PPS 4700P 5% 2KV		C503	39146-102R	CE 1000P 10% 50V	
C356	34145-4734	MPE 0.047U 5% 250V		C504	39146-102R	CE 1000P 10% 50V	
C357	28HB7-4701	EL47U 20% 250V 85 RA SL P=5MM		C505	38115-330R	CE 33P 5% 50V NPO	
C358	39487-103R	CE 0.01U 20% 500V		C506	38115-330R	CE 33P 5% 50V NPO	
C361	35155A3046	MPP 0.3U 5% 400V	1795UA	C507	39999-104R	CE 0.1U +80-20% 50V	
C361	35155A3646	MPP 0.36U 5% 400V	1769UA	C509	39999-104R	CE 0.1U +80-20% 50V	
C362	28HB7-109R	EL1U 20% 250V 85 RATP P=5MM	1795UA	C510	31115-103R	PEI 0.01U 5% 50V	
C362	28HB7-229R	EL 2U2 20% 250V 85 RA TP P=5MM	1769UA	C516	28H27-221R	EL220U 20% 10V 85 RA TP P=5MM	
C363	39546-121R	CE 120P 10% 1KV	1795UA	C517	28H67-479R	EL4U7 20% 50V 85 RATP P=5MM	
C363	39546-221R	CE 220P 10% 1KV	1769UA	C518	28H67-100R	EL10U 20% 50V 85 RATP P=5MM	
C364	39546-121R	CE 120P 10% 1KV	1795UA	C519	28H67-479R	EL4U7 20% 50V 85 RATP P=5MM	
C364	39546-221R	CE 220P 10% 1KV	1769UA	C521	28H37-101R	EL100U 20% 16V 85 RA TP P=5MM	
C365	39446-222R	CE 2200P 10% 500V		C522	39999-104R	CE 0.1U +80-20% 50V	
C366	28HB7-339R	EL3U3 20% 250V 85 RA TP P=5MM	1795UA	C523	28H37-470R	EL47U 20% 16V 85 RATP P=5MM	
C401	28H67-100R	EL10U 20% 50V 85 RATP P=5MM		C524	28H67-109R	EL1U 20% 50V 85 RA TP P=5MM	
C402	34145-4734	MPE 0.047U 5% 250V		C525	39999-104R	CE 0.1U +80-20% 50V	
C403	39487-103R	CE 0.01U 20% 500V		C526	28H67-479R	EL4U7 20% 50V 85 RATP P=5MM	
! C404	375A5H2726M	PPS 2700P 5% 1.6KV	1795UA	C527	39999-104R	CE 0.1U +80-20% 50V	
! C404	375A5H3926M	PPS 3900P 5% 1.6KV	1769UA	C530	39446-221R	CE 220P 10% 500V	
C405	28HB7-1001	EL10U 20% 250V 85 RA SL P=5MM		C532	28H67-109R	EL1U 20% 50V 85 RA TP P=5MM	1795UA
C406	28H67-100R	EL10U 20% 50V 85 RATP P=5MM		C533	28H67-100R	EL10U 20% 50V 85 RATP P=5MM	1795UA

Location	Part No.	Description	Remark	Location	Part No.	Description	Remark
C534	39446-221R	CE 220P 10% 500V	1795UA	C647	39999-104R	CE 0.1U +80-20% 50V	
C536	28H67-109R	EL1U 20% 50V 85 RA TP P=5MM	1795UA	C648	39999-104R	CE 0.1U +80-20% 50V	
C537	28H67-100R	EL10U 20% 50V 85 RATP P=5MM	1795UA	C649	39999-104R	CE 0.1U +80-20% 50V	
C538	39446-221R	CE 220P 10% 500V	1795UA	C650	28H97-109R	EL1U 20% 100V 85 RATP P=5MM	
C541	39999-104R	CE 0.1U +80-20% 50V	1795UA	C651	28H97-100R	EL10U 20% 100V 85 RA TP P=5MM	
C542	39999-104R	CE 0.1U +80-20% 50V	1795UA	C652	28H97-109R	EL1U 20% 100V 85 RATP P=5MM	
C602	28H67-100R	EL10U 20% 50V 85 RATP P=5MM		C653	39999-104R	CE 0.1U +80-20% 50V	
C603	28H37-101R	EL100U 20% 16V 85 RA TP P=5MM		C654	28H67-479R	EL4U7 20% 50V 85 RATP P=5MM	
C604	28H67-100R	EL10U 20% 50V 85 RATP P=5MM		C655	38196-680R	CE 68P 10% 50V	
C605	28H67-100R	EL10U 20% 50V 85 RATP P=5MM		C658	39146-471R	CE 470P 10% 50V	
C606	39999-104R	CE 0.1U +80-20% 50V		C659	39146-471R	CE 470P 10% 50V	
C607	39999-104R	CE 0.1U +80-20% 50V		C670	28H97-109R	EL1U 20% 100V 85 RATP P=5MM	
C608	39999-104R	CE 0.1U +80-20% 50V		C672	28H97-109R	EL1U 20% 100V 85 RATP P=5MM	
C609	39999-104R	CE 0.1U +80-20% 50V		C673	39999-104R	CE 0.1U +80-20% 50V	
C610	28H37-101R	EL100U 20% 16V 85 RA TP P=5MM		C680	39999-104R	CE 0.1U +80-20% 50V	
C611	28H37-101R	EL100U 20% 16V 85 RA TP P=5MM		C681	39999-104R	CE 0.1U +80-20% 50V	
C612	39999-104R	CE 0.1U +80-20% 50V		COILS			
C613	39999-104R	CE 0.1U +80-20% 50V		L101	45M1K-4704	COIL CHOKE 47U DR 8*10	
C614	39646-102B	CE 1000P 10% 2KV		L102	47E00-0240	XFMR EMI ET-24	
C615	28H37-101R	EL100U 20% 16V 85 RA TP P=5MM		L103	47E00-0240	XFMR EMI ET-24	
C616	28H97-220R	EL22U 20% 100V 85 RA TP P=5MM		L104	45M1K-8204	COIL CHOKE 82U DR 8*10	
C617	39446-561R	CE 560P 10% 500V		L106	45M1K-4704	COIL CHOKE 47U DR 8*10	
C618	28H27-101R	EL100U 20% 10V 85 RA TP P=5MM		L107	45M1K-4704	COIL CHOKE 47U DR 8*10	
C619	28H67-229R	EL2U2 20% 50V 85 RATP P=5MM		L108	45M1K-4704	COIL CHOKE 47U DR 8*10	
C620	39999-104R	CE 0.1U +80-20% 50V		L301	46L00-0571	COIL LINEAR 4.8uH	1795UA
C621	28H67-229R	EL2U2 20% 50V 85 RATP P=5MM		L301	46L00-0930L	COIL LINEAR 5.95uH	1769UA
C622	39999-104R	CE 0.1U +80-20% 50V		L302	46N00-0640	COIL LINE CHOKE 4mH	
C623	28H67-229R	EL2U2 20% 50V 85 RATP P=5MM		L303	46N00-0600	COIL LINE CHOKE 1.3mH	1795UA
C624	39999-104R	CE 0.1U +80-20% 50V		L304	46N00-0600	COIL LINE CHOKE 1.3mH	
C625	39999-104R	CE 0.1U +80-20% 50V		L305	46N00-0620L	COIL LINE CHOKE 2mH	
C626	39146-472R	CE 4700P 10% 50V		L401	45M1K-4704	COIL CHOKE 47U DR 8*10	
C627	28H67-109R	EL1U 20% 50V 85 RA TP P=5MM		L601	45B0K-101T	COIL PEAKING 100U	
C628	39999-104R	CE 0.1U +80-20% 50V		L602	45B0K-101T	COIL PEAKING 100U	
C629	28H27-101R	EL100U 20% 10V 85 RA TP P=5MM		L605	45B0K-101T	COIL PEAKING 100U	
C630	28H97-109R	EL1U 20% 100V 85 RA TP P=5MM		TRANSFORMER			
C631	39999-104R	CE 0.1U +80-20% 50V		N T101	47S00-1070L	XFMR SPS EE-42/15	1795UA
C632	28H97-109R	EL1U 20% 100V 85 RA TP P=5MM		T101	47S00-1060L	XFMR SPS ER-35	1769UA
C633	39999-104R	CE 0.1U +80-20% 50V		T301	47P10-0100	XFMR PINCUSHING EI-25	
C634	39999-104R	CE 0.1U +80-20% 50V		T303	47D10-0340L	XFMR DRIVE EI-22	
C635	39E56E103R	ML 0.01U 10% 100V		N T304	47G00-0020L	XFMR CENTER EI-25	1795UA
C636	38196-680R	CE 68P 10% 50V		N T304	47G00-0030L	XFMR CENTER EI-25	1769UA
C637	38196-680R	CE 68P 10% 50V		N T305	47J00-0100T	XFMR FOCUS EI-22	
C638	38196-680R	CE 68P 10% 50V		⊙NI T401	47F13-0910A	XFMR FBT W/FOCUS/SCREEN/CR BOLCK W/CORE	1795UA
C639	39E56E103R	ML 0.01U 10% 100V		NI T401	47F13-0860A	XFMR FBT W/FOCUS/SCREEN/CR BLOCK W/CORE	1769UA
C641	39999-104R	CE 0.1U +80-20% 50V					
C642	39999-104R	CE 0.1U +80-20% 50V					
C643	28H27-101R	EL100U 20% 10V 85 RA TP P=5MM					
C644	38196-680R	CE 68P 10% 50V					
C645	28H27-221R	EL220U 20% 10V 85 RA TP P=5MM					
C646	39999-104R	CE 0.1U +80-20% 50V					

Location	Part No.	Description	Remark	
ITEGRATED CIRCUITS				
●	IC101	17A06-150G	IC LINEAR 8P DEFLECTION3842	
N	IC102	17A07-171H	IC LINEAR VOTAGE REG. XC62AP5002LH 3P	
	IC103	17B21-090B	IC PHOTO OPTOCUPLER PS2561-M/TLP721F-GR	
	IC104	17A07-031H	IC LINEAR VOLTAGE REGULATOR 431 3P	
⊗N	IC201	17A06-330H	IC LINEAR 9P DEFLECTIONTDA4861	
●N	IC301	17A06-320H	IC LINEAR 32P DEFLECTION TDA4853	1795UA
●N	IC301	17A06-370H	IC LINEAR 32P DEFLECTION TDA4856	1769UA
	IC401	17A11-040H	IC LINEAR O/P AMP 358 8P	
N	IC402	16T16-020R	IC TTL HEF4538BP 16P	
N	IC501	16P40-028F	IC MICRO-PROCESSOR 40P 68P61A OTP 24K	
	IC502	16M08-009R	IC EEPROM AT24C04 (B)-10PC (BLANK) 8P	
	IC601	17A04-160V	IC LINEAR 36P VIDEO M52737SP	
	IC603	16N20-004U	IC CONTROLLER 20P M35045-080SP	
	IC604	17A04-150K	IC LINEAR 11P VIDEO LM2405T	1795UA
	IC604	17A04-190H	IC LINEAR 11P VIDEO LM2407T	1769UA
	IC605	17A23-005V	IC LINEAR 20P DIGITAL/ ANALOG M62393	
MISCELLANEOUS				
		11S31-091A	PCB MAIN-S 360*247*1.6MM 1795UA	
		11S33-051A	PCB CRT-S 120*150*1.6MM1795UA	
		11S39-047A	PCB LED-S 42*34.5*1.6MM1795UA	
		11S3D-042A	PCB DISPLAY-S 150*20*1.6MM 1769UA	
BD101		15D68-F000	DIODE BRIDGE 4A 800V (KBL406G/PBL406)	
RP504		16K04-002Z	IC RES ARRAY 3K3*3 5% 1/8W (COMMON P1)	
RP503		16K06-001Z	IC RES ARRAY 3K3*5 5% 1/8W (COMMON P1)	
RP501		16K07-004Z	IC RES ARRAY 10K*6 5% 1/8W (COMMON P1)	
RP502		16K11-002Z	IC RES ARRAY 3K3*10 5% 1/8W (COMMON P1)	
L001		19D0B-0021	DIODE LED BICOLOR WHITE-TRANSPA. P=2.0	
!		20H17-28CA	CRT C-.26 NG M41LKN15X (17FRF-B5)	1769UA
!		20H17-28CD	CRT C-.26 NG M41LKN15X/70X (17FRF-C5)	1795UA
PTC101		26A00-0120	PTCR 3R5 +30 -20% 3P	
NTC101		26B00-0061	NTCR 5R 15% 5A P=7.5MM (SCK-055)	
SG601		42S00-0060	SPARK GAP 500V	
SG603		42S00-0201	SPARK GAP DSP-201M 200V20%	
SG670		42S00-0201	SPARK GAP DSP-201M 200V20%	
SG630		42S00-0201	SPARK GAP DSP-201M 200V20%	
FD631		45B0K-228M	COIL PEAKING 0.22U	
FD671		45B0K-228M	COIL PEAKING 0.22U	
FD651		45B0K-228M	COIL PEAKING 0.22U	
		46G00-0360	COIL DEGAUSSING (100T)	
FD101		46R00-0010	CORE RF BEAD RHW 3.5*6*1.0 TP	
FD102		46R00-0010	CORE RF BEAD RHW 3.5*6*1.0 TP	
FD303		46R00-0010	CORE RF BEAD RHW 3.5*6*1.0 TP	
FD601		46R00-0010	CORE RF BEAD RHW 3.5*6*1.0 TP	
FD602		46R00-0010	CORE RF BEAD RHW 3.5*6*1.0 TP	
FD612		46R00-0010	CORE RF BEAD RHW 3.5*6*1.0 TP	


Location	Part No.	Description	Remark
FD613	46R00-0010	CORE RF BEAD RHW 3.5*6*1.0 TP	
Q104-DRAIN	46R00-0230	CORE RF BRH 4*4*2	
D108	46R00-0230	CORE RF BRH 4*4*2	1795UA
D117	46R00-0230	CORE RF BRH 4*4*2	1795UA
L606	46R00-0410	CORE RF W5 RH 3.5*4.5*1.0 TP	
FD103	46R00-0410	CORE RF W5 RH 3.5*4.5*1.0 TP	
FD104	46R00-0410	CORE RF W5 RH 3.5*4.5*1.0 TP	
F101	49FB2-0A0A	FUSE SLOW 3.15A 250V (NORDIC)	
SW001	52P11-0050	SWITCH PRESS W/O LOCK H=9.5MM	
SW903	52P11-0050	SWITCH PRESS W/O LOCK H=9.5MM	
SW904	52P11-0050	SWITCH PRESS W/O LOCK H=9.5MM	
SW905	52P11-0050	SWITCH PRESS W/O LOCK H=9.5MM	
SW906	52P11-0050	SWITCH PRESS W/O LOCK H=9.5MM	
SW907	52P11-0050	SWITCH PRESS W/O LOCK H=9.5MM	
SW909	52P11-0050	SWITCH PRESS W/O LOCK H=9.5MM	
SW910	52P11-0050	SWITCH PRESS W/O LOCK H=9.5MM	
SW911	52P11-0050	SWITCH PRESS W/O LOCK H=9.5MM	
SW912	52P11-0050	SWITCH PRESS W/O LOCK H=9.5MM	
RL101	53R001-009S	RELAY COIL DC12V 5A/250V(2-A) SMALL TYPE	
RL102	53R001-010	RELAY COIL DC5V 40NA/1A(2-C)	
	54B11-8252	WIRE BRAID 82CM	
	54B12-0806	WIRE BRAID 8CM	
	54C23B1150	WIRE TERMINAL 1015#18 11L GREEN	
A	54M23B4860	WIRE LEAD 1015#18 48L BLUE	
	56C63-1802	POWER CORD USA 3P U/C/F1M8-B 125V10A	
X501	60R01-0010M	RESONATOR 8MHZ	
P602	64B01-3000	HEADER 2.5 S1*10P A/W	
P402	64B20-0010	HEADER 2.54 S1*2P L=6MM	
P504	64B31-3000	HEADER 2.5 S1*3P A/W	1769UA
P102	64B32-0031	HEADER 5.08 L1*3P S/W -2ND	
P101	64B37-4001	HEADER 3.96 L1*3P S/W -2ND	
P505	64B41-3000	HEADER 2.5 S1*4P A/W	
P401	64B43-0010	HEADER 10/8 L1*4P L=10MM	1769UA
P506	64B51-3000	HEADER 2.5 S1*5P A/W	
P603	64B81-3000	HEADER 2.5 S1*8P A/W	
P601	64BA1-3000	HEADER 2.5 S1*11P A/W	
	64C30-0150	SOCKET CRT COLOR-H	
IC502	64D11-0010	SOCKET IC SIP .3IN 2.54 DOUBLE LP 8P	
IC501	64DB3-0010	SOCKET IC SIP .6IN 2.54DOUBLE LP 40P	
	64P60-0010	SOCKET POWER (UNIVERSAL)	
	65S10-2030	CABLE SIGNAL 15D-11H 203CM BLACK W/C	
M/B P510-C/B P602	65W01334D1	CONN H/T WIRE 1007#24 10P 2.5 34L-T	
	65W37409B0	CONN H/T WIRE 1015#18 3P-1 3.96 9L-T W/C	
P901	65W41318D0	CONN H/T WIRE 1007#26 4P 2.5 18L-T	
P001	65W51318D0	CONN H/T WIRE 1007#26 5P 2.5 18L-T	
P401B	65W67429D0	CONN H/T WIRE 1015#22 6P-1 3.96 29L	1795UA
M/B P104-C/B P603	65W81327D0	CONN H/T WIRE 1007#24 8P 2.5 27L-T	
P507 TO CRT/DY	65W81340B0	CONN H/H 1007#24 8P-2 2.5/2.0 40L-T W/C	1795UA

1769UA/1792UA ADJUSTMENT

REM:PRESET MODE DATA ADJUSTMENT:

- A. Turn off it.
- B. Press the ⊕ and ⊖ at same time which on the external control panel.
- C. Turn on it.

Remark: Before adjusting, monitor must warm up 10 minutes and CRT must be degaussed.

ADJUSTMENT	LOCATION	SPECIFICATION/DESCRIPTION	TIMING & PATTERN																																																																																							
215V	VR101	J34=215V ± 0.5V	31.5KHz																																																																																							
12V	VR102	J109=12V ± 0.2V	"																																																																																							
H.V.	VR403	CRT ANODE=27KV ± 0.5KV	"																																																																																							
H-HOLD	VR302	Picture stand or flow slowly when TP3 shorted to GND.	"																																																																																							
FOCUS	1.FOCUS VR1 & VR2 ON FBT 2.VR801	OPTIMUM	68KHz "m" pattern																																																																																							
V-SIZE	1.EXT SW	Just over scan when OSD. V-SIZE SW. is MAX.	All of PRESET modes X'HATCH																																																																																							
	2.EXT SW	V-SIZE=225mm ± 5mm																																																																																								
H-PHASE	EXT SW	$\frac{ R-L }{2} \leq 3\text{mm}$	All of PRESET modes , X'HATCH																																																																																							
V-CENTER	EXT SW	$\frac{ U-D }{2} \leq 3\text{mm}$	All of PRESET modes , X'HATCH																																																																																							
H-WIDTH	VR301	Just over scan when OSD. H-WIDTH SW. is Max.	MAC II -832																																																																																							
	EXT SW	H-WIDTH=310 ± 5mm	All of PRESET modes , X'HATCH																																																																																							
PCC 	EXT SW	Let right side be straight	68KHz ,X'HATCH																																																																																							
CORNER	VR303	Let right side be straight	64KHz ,X'HATCH																																																																																							
HOLD DOWN TEST	P406	P406 short should be hold down	31.5KHz FULL WHITE																																																																																							
WHITE BALANCE ADJ.	OSD. R.G.B. GAIN	MODE 1(9300°K):x=281 ± 30, y=311 ± 30 MODE 2(7500°K):x=301 ± 40, y=310 ± 40 MODE 3(6500°K):x=313 ± 40, y=329 ± 40 MODE 4(5000°K):x=345 ± 40, y=351 ± 40	VGA-480,FULL WHITE																																																																																							
	OSD. R.G.B. BIAS	x=281 ± 10,y=311 ± 10 When CONTRAST VR. Is in 2-3FL.	VGA-480,FULL WHITE																																																																																							
BRIGHTNESS SETTING	OSD. BRIGHTNESS	DAC=50	Ditto																																																																																							
	OSD. CONTRAST	MAX. (DAC=100)	Ditto																																																																																							
	OSD. G2 MANUAL	The "2" row of color bar pattern is just visible.																																																																																								
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td> <td style="width: 10%;">Brightness</td> <td style="width: 10%;"></td> <td style="width: 10%; text-align: center;">R+B</td> <td style="width: 10%; text-align: center;">B+G</td> <td style="width: 10%; text-align: center;">R+G</td> <td style="width: 10%;"></td> </tr> <tr> <td style="text-align: right; vertical-align: middle;">reduce ↓</td> <td style="text-align: center;">15</td> <td style="text-align: center;">BRIGHT BLUE</td> <td style="text-align: center;">BRIGHT RED</td> <td style="text-align: center;">BRIGHT PRUPLE</td> <td style="text-align: center;">GREEN</td> <td style="text-align: center;">BLUE + GREEN</td> <td style="text-align: center;">RED + YELLOW</td> <td style="text-align: center;">WHITE</td> <td style="text-align: center;">7</td> </tr> <tr> <td></td> <td style="text-align: center;">14</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">6</td> </tr> <tr> <td></td> <td style="text-align: center;">13</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">5</td> </tr> <tr> <td></td> <td style="text-align: center;">12</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">4</td> </tr> <tr> <td></td> <td style="text-align: center;">11</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">3</td> </tr> <tr> <td></td> <td style="text-align: center;">10</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">2 → visible</td> </tr> <tr> <td></td> <td style="text-align: center;">9</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">1 → visible obscurely</td> </tr> <tr> <td></td> <td style="text-align: center;">8</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">0</td> </tr> </table>					Brightness		R+B	B+G	R+G		reduce ↓	15	BRIGHT BLUE	BRIGHT RED	BRIGHT PRUPLE	GREEN	BLUE + GREEN	RED + YELLOW	WHITE	7		14								6		13								5		12								4		11								3		10								2 → visible		9								1 → visible obscurely		8								0
	Brightness		R+B	B+G	R+G																																																																																					
reduce ↓	15	BRIGHT BLUE	BRIGHT RED	BRIGHT PRUPLE	GREEN	BLUE + GREEN	RED + YELLOW	WHITE	7																																																																																	
	14								6																																																																																	
	13								5																																																																																	
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	11								3																																																																																	
	10								2 → visible																																																																																	
	9								1 → visible obscurely																																																																																	
	8								0																																																																																	

1769UA/1792UA ADJUSTMENT

ADJUSTMENT	LOCATION	SPECIFICATION/DESCRIPTION	TIMING & PATTERN
CONVERGENCE ADJ.	Adjustment location (B)		53KHz, X'HATCH
	Adjustment location (C)		53KHz, X'HATCH
	Adjustment location (D)		53KHz, X'HATCH
	Adjustment location (E)		53KHz, X'HATCH
	Adjustment location (F)		53KHz, X'HATCH
	Adjustment location (G)		53KHz, X'HATCH
	Adjustment location (H)		53KHz, X'HATCH
	<div style="text-align: center;"> <p>Neck Assy</p> </div> <div style="text-align: center;"> <p>TOP VIEW</p> </div>		

MODEL : 1769UA/1792UA						MAIN BOARD	
						REV : A	
ITEM	PRIORITY	NEW PARTS	PART NO	DESCRIPTION	LOCATION	UNIT PRICE	REMARK
1	●		17A06-150G	3842	IC101		
2		√	17A07-171H	5002L	IC102		
3			17B21-090B	PS2561	IC103		
4			17A07-031D	TL431	IC104		
5		√	17A06-290C	LA7840	IC201		
6	●	√	17A06-280B	UPC1883	IC301		
7			17A11-040H	LM358	IC302		
8	●		17A06-190G	3843	IC303		
9			17A11-030H	2903D	IC304		
10		√	16P40-028F	68P61	IC501		
11			16M08-009R	AT24LC04	IC502		
12			16T14-023L	74LS74	IC503		
13		√	17A01-060H	BA7657S	IC702		1792UA only
14	◎		14T92-011E	BT169D	Q101		
15		√	14K3P-070SU	FS10SM-16A	Q104		
16		√	14D26-010B	2SD882P/Q	Q107		
17			14B92-011P	2SB562	Q110		
18		√	14J22-010C	2SJ306	Q306		
19	●		14C3P-230C	2SC4924	Q313		1769UA only
20	●		14C3P-160C	2SC3996	Q313		1792UA only
21			14K92-041E	BSN254	Q314		
22	●		14K22-110W	IRF630	Q315		
23	●		14K22-180Y	IRF640	Q317, Q318, Q322		
24			14B20-010E	BD830	Q324		
25			14D20-010E	BD829	Q325		
26	●		14A92-111B	2S945P/Q	Q332		
27	●		14A92-021B	2SA733P/Q	Q333		

※ Remark: ● : 1st priority , Recommended Q'ty=(Location Number) x3
 ◎ : 2nd priority , Recommended Q'ty=(Location Number) x2

MODEL : 1769UA/1792UA						MAIN BOARD	
						REV : A	
ITEM	PRIORITY	NEW PARTS	PART NO	DESCRIPTION	LOCATION	UNIT PRICE	REMARK
28	●		14K22-210A	K1377	Q338		
29	◎		14C92-201E	BF483	Q401		
30			14A92-141E	BF488	Q402		
31		√	14C3P-220C	2SC5296	Q403		
32		√	14C92-311E	JC337-25	Q404		
33		√	14C26-230E	BUX87P	Q417		
34			14A92-071B	2SA952	Q510		
35	●		47F13-0660S	FBT			1769UA only
36	●		47F13-0700S	FBT			1792UA only
37			47S00-0830T	XFMR	T101		
38			47P10-0100	XFMR	T301		
39			47F15-0040	XFMR	T302		
40			47D10-0340L	XFMR	T303		
41			47D10-0290	XFMR	T402		
42	◎		15S11M001F	1N4148	D105		
43	◎		15S43J601T	HER303	D106		
44	●		15S49TK00F	BYM26E	D108,D117		
45	●		15S47TK00F	BYM26C	D109,D110		
46	◎		15B6J-6010	SR360	D112		
47	◎		15S33T201F	BYD337	D306,D307		
48			15B40T2011	1N5819	D406		
49			15D68-F000	PBL406	BD101		
50	◎		15Z33M1800P	ZENER 18V	ZD101		
51			15Z33M1200P	ZENER DIODE 12V	ZD303		
52			28CD7-2217	220 μ /400V	C104		
53	◎		23225-688M	0.68 Ω 1/4W	R425		
54	●		23225-109M	1 Ω 1/4W	R453		

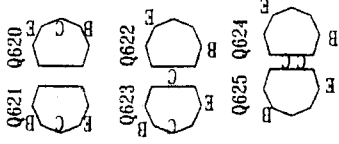
※ Remark: ● : 1st priority , Recommended Q'ty=(Location Number) x3
 ◎ : 2nd priority , Recommended Q'ty=(Location Number) x2

1792UA CRT/B

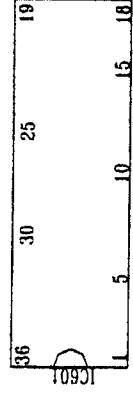
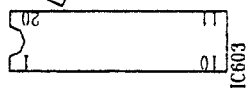
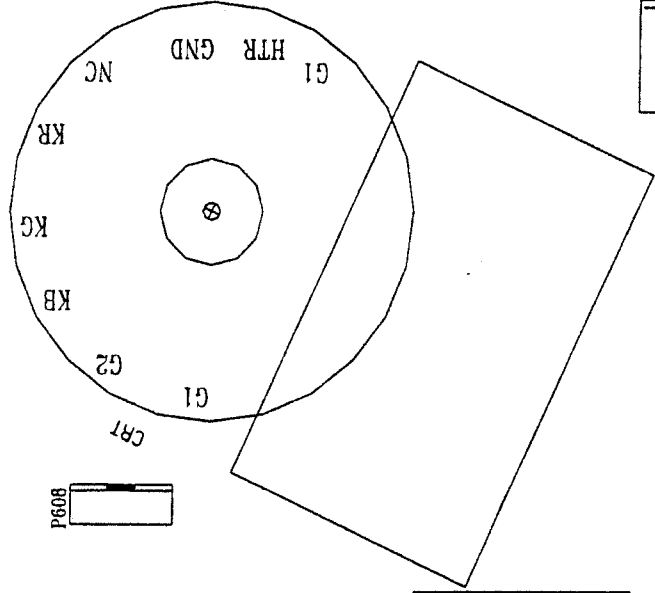
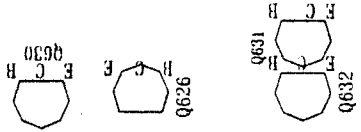
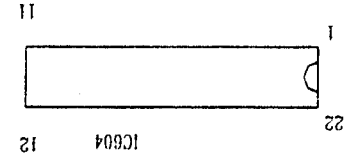
11S33-029A

REV.A 06-03-97

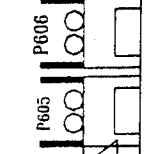
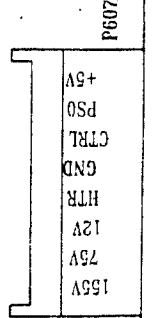
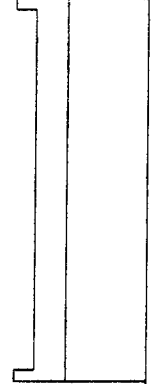
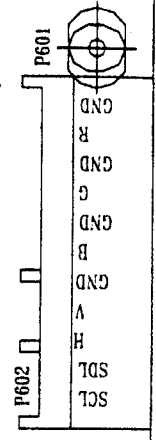
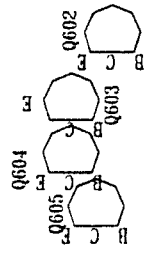
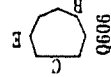
CRTX



22



IC601

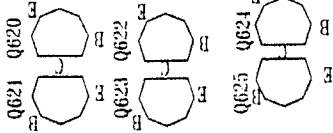


1769UA CRT/B

11S33-034A

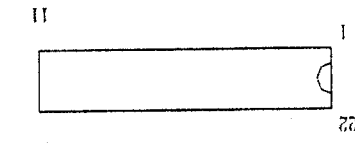
REV.A

06-03-97

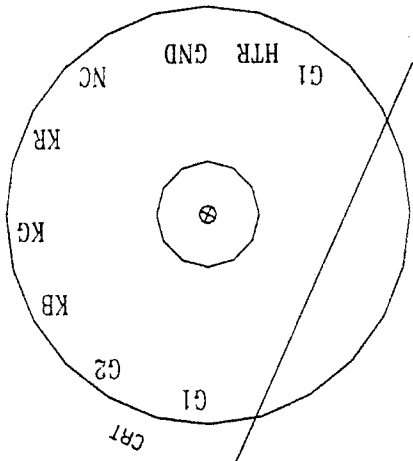
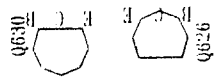


G2

7691ACAJ.PCB



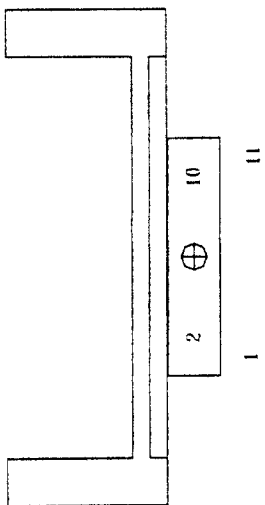
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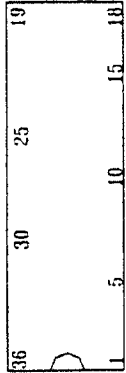
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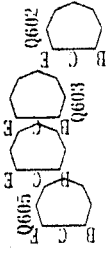
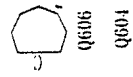
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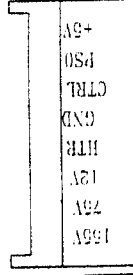
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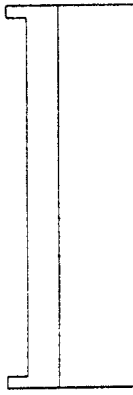
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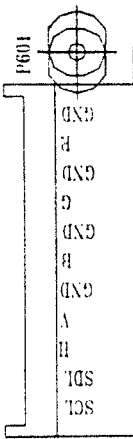
IC602



P607

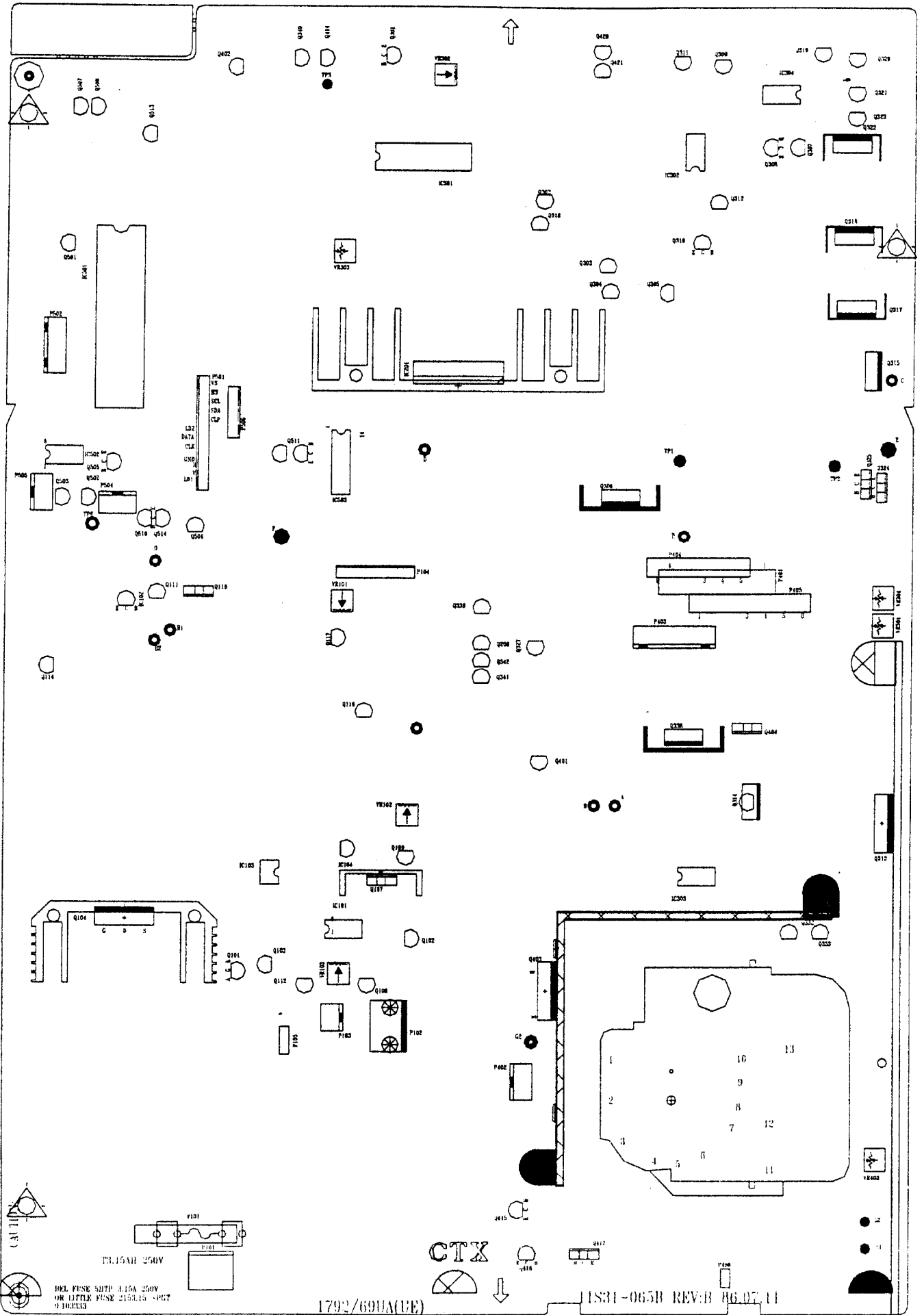


P609



P601

CTX



191 FUSE SUPP 4.15A 250V
 OR OFFICE FUSE 2153.15 -907
 9100113

1792/690A(UE)

CTX

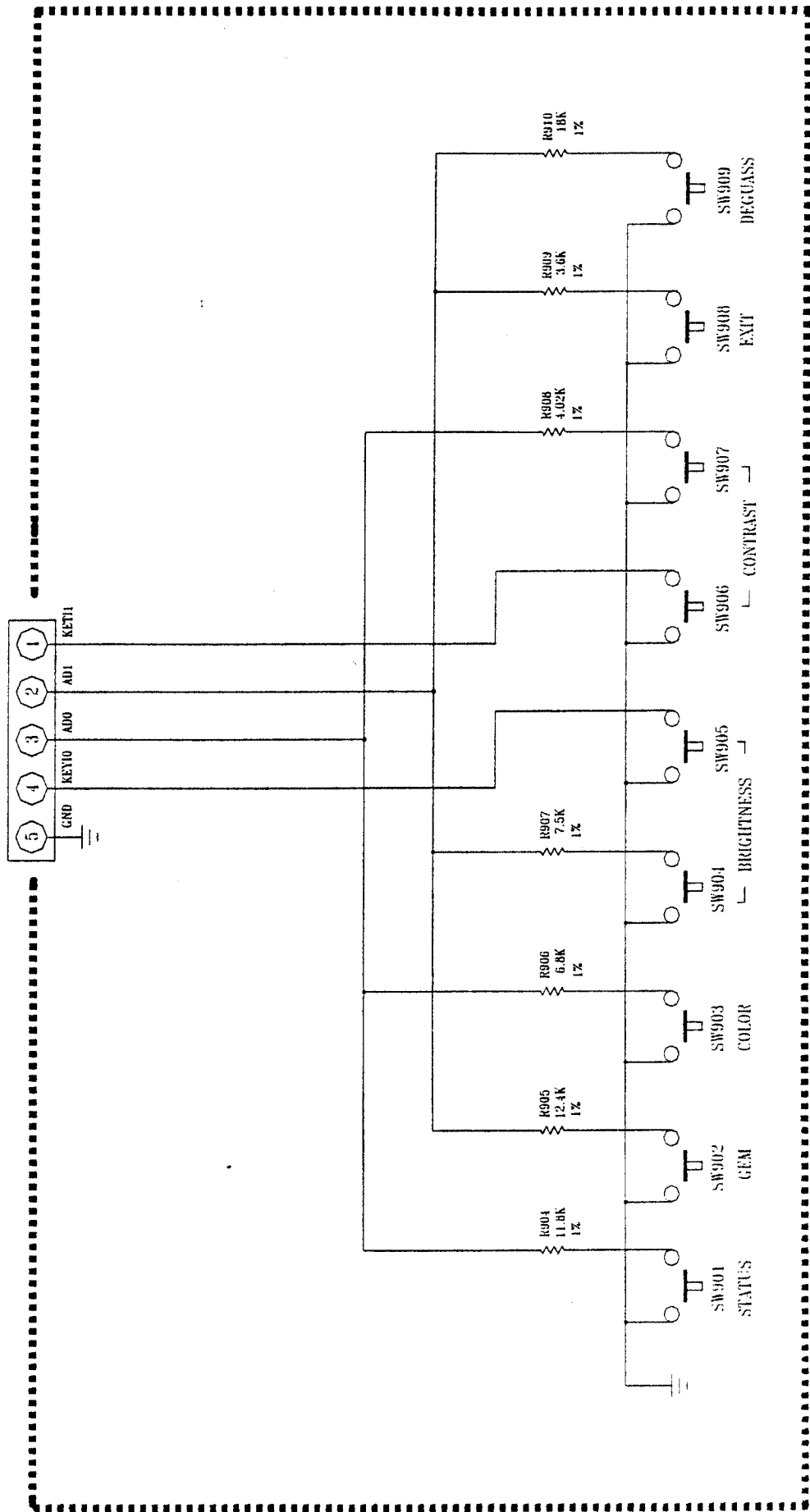
1S31-065B REV:B 06.07.11

CTX 1769UA EXPLODED VIEW PARTS LIST

NO.	PARTS NO.	DESCRIPTION	QTY
1	0820017000	FRONT CABINET	1
2	0800014000	REAR CABINET	1
3	7110032000	FUNCTION KEY	1
4	6724430080	TP SCREW (φ3x8)	7
5	7900022000	BUSHING POWER	1
6	7110031000	POWER KNOB	1
7	0850005300	POWER LENS	1
8	7410005400	CRT RUBBER SPACE	1
9	7620050400	BRACKET CRT (R)	1
10	7620051400	BRACKET CRT (L)	1
11	7620042100	BOTTOM BRACKET	1
12	0810015300	SWIVEL DISK	1
13	0810014300	SWIVEL BOWL	1
14	0830006300	BASE TOP	1
15	0813490300	SWIVEL RING	1
16	0830007300	BASE BOTTOM	1
17	7500053200	SHIELD TOP (AL)	1
18	7502141600	SHIELD BOTTOM	1
19	7620046100	BACK BRACKET	1
20	7510051200	HEAT SINK	1
21	7620045200	USB BRACKET	1
22	6722240120	TP SCREW (φ4x12)	5
23	6724130803	SCREW TAPPING T3x8	2
24	7486236320	RUBBER FOOT	4
25	6776050220	SCREW TAPPING (φ5x20)	1
26	7900029200	SPACER SUPPORT CBS-10	2
27	7425910120	CUSHION PLATE	1
28	6724430060	TP SCREW (φ3x6)	2
29	7904451000	SLEEVING INSULATING	1
30	7410031000	S.R.	1

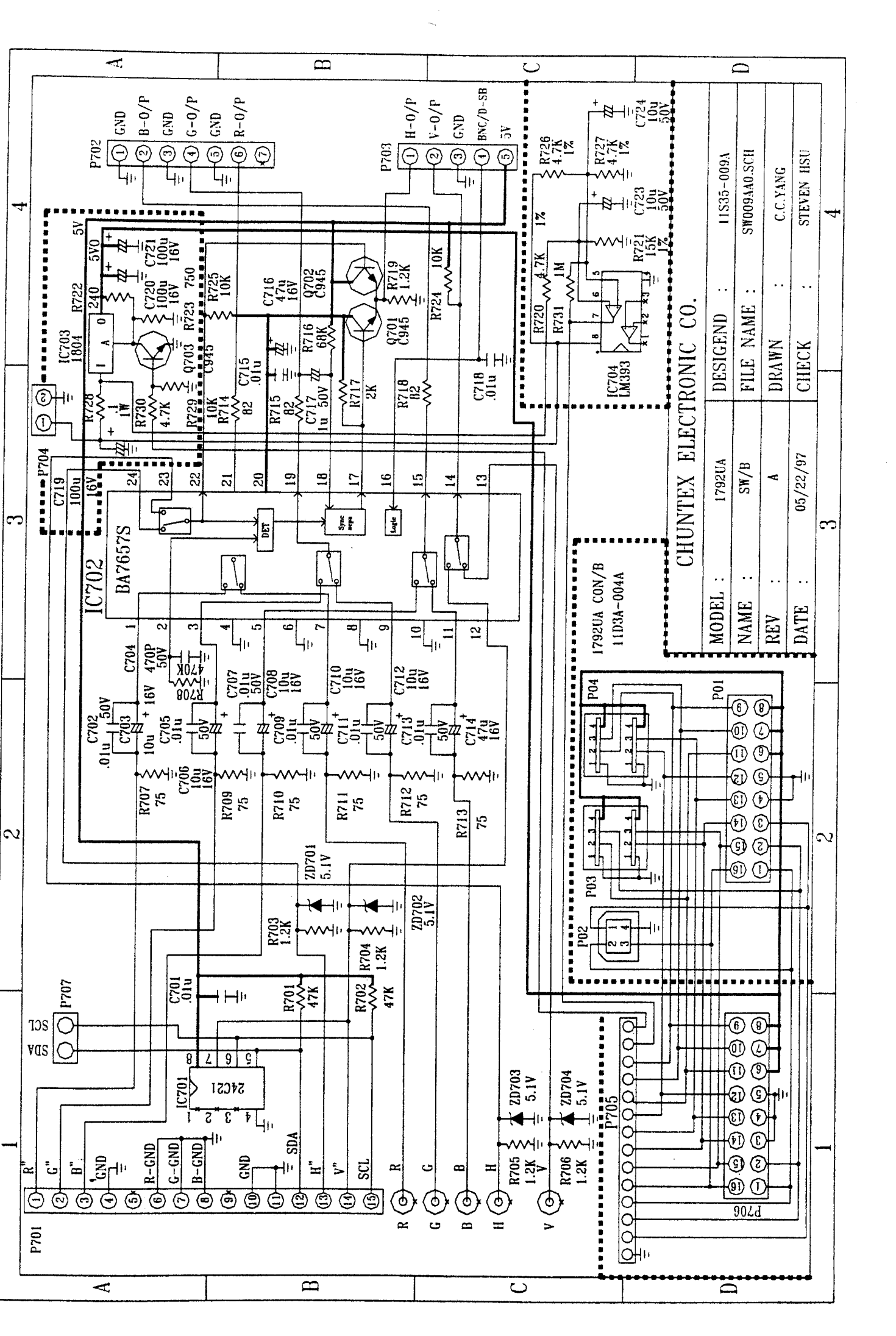
NO.	PARTS NO.	DESCRIPTION	QTY
31	6724A30080	SCREW TAP TITE (M3x8)	1
32	6724A30100	TP SCREW (φ3x10)	11
33	7635988440	CABLE CLAMP	1
34	6720430100	SCREW MACHINE (M3x10)	6
35	6720540081	SCREW MACHINE (M4x8)	6
36	6776040160	TP SCREW (φ4x16)	4
37	7460001400	CRT WASHER	4
38	6770050210	CRT SCREW (φ5x21)	4
39	6740030240	NUT M3	7
40	7510026200	HEAT SINK FBT	1
41	7510024200	HEAT SINK	1
42	7510029200	HEAT SINK	1
43	7410029100	S.R.	1
44	7516893200	HEAT SINK	1
45	7414567000	S.R.	1
46	7516673650	HEAT SINK	5
47	6724426060	TP SCREW (φ2.6x6)	5
48	7516045230	HEAT SINK	1
49	7414452000	INSULATOR SHEET	1
50	7513507510	HEAT SINK(50x14x25)	1
51	7900031200	SPACER SUPPORT LCBS-6	4
52	7635988440	CABLE CLAMP	1
53	7900032200	SPACER SUPPORT MC-10	1
54		OVERLAY	1
55	6724130120	SCREW SPECIAL	1
56	6724030080	TP SCREW (T3x8)	1
56	6720430080	SCREW MACHINE (M3x8)	1

P901



CHUNTEX ELECTRONIC CO.

MODEL :	17690A/17920A	FILE NAME :	D033M1SCH
NAME :	KEYBOARD	DRAWN :	SC-LIN
REV :	T1	CHECK :	
DATE :	05-23-86	REMARK :	



CHUNTEX ELECTRONIC CO.

MODEL :	1792UA	DESIGNID :	11S35-009A
NAME :	SW/B	FILE NAME :	SW009AA0.SCH
REV :	A	DRAWN :	C.C.YANG
DATE :	05/22/97	CHECK :	STEVEN HSU

4

3

2

1

4

3

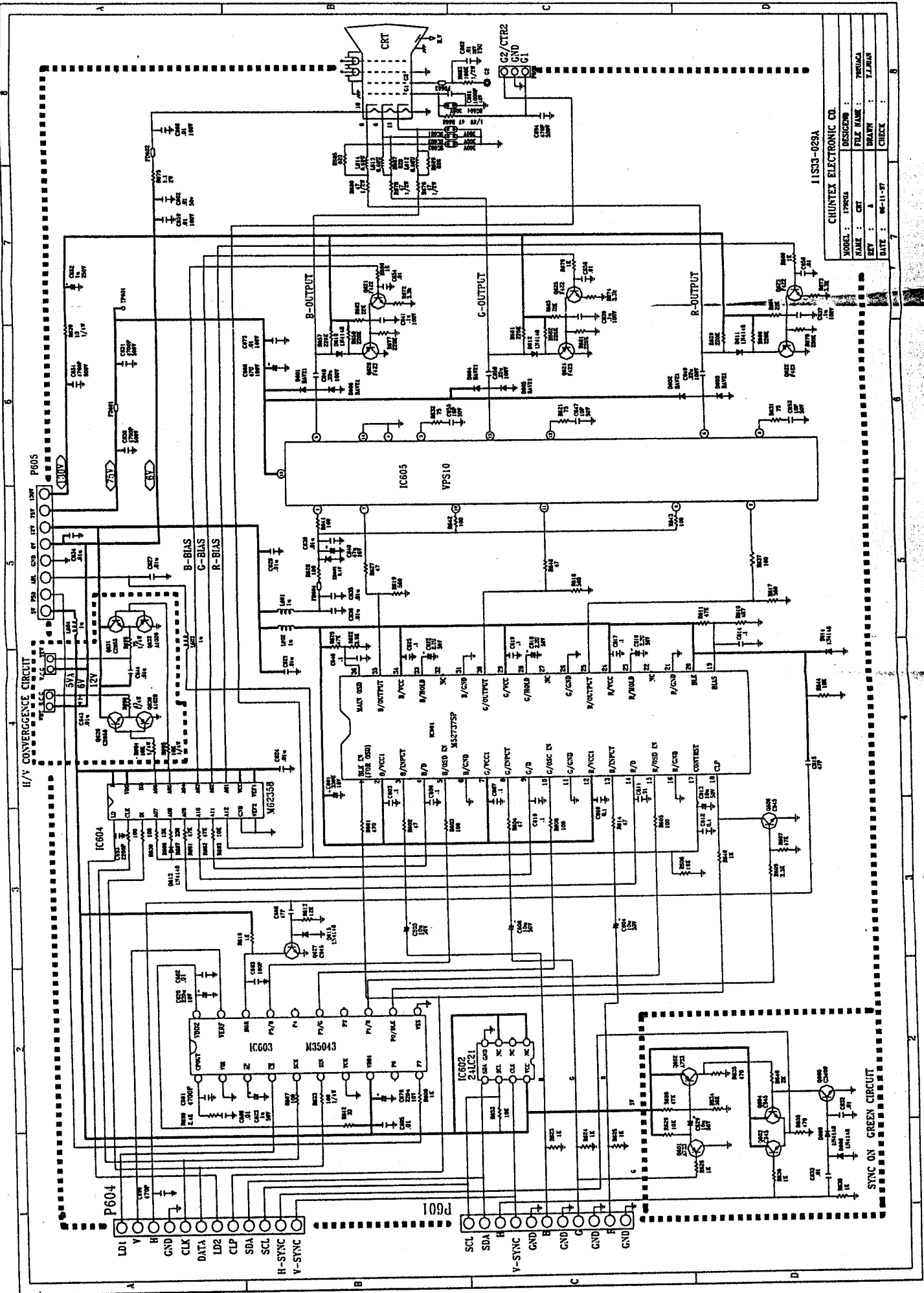
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1

CTX 1792UA EXPLODED VIEW PARTS LIST NON U.S.B.

NO.	PARTS NO.	DESCRIPTION	QTY
1	0820017000	FRONT CABINET	1
2	0800012000	REAR CABINET	1
3	7110032000	FUNCTION KEY	1
4	6724430080	TP SCREW (ø3x8)	7
5	7900022000	BUSHING POWER	1
6	7110031000	POWER KNOB	1
7	0850005300	POWER LENS	1
8	7410005400	CRI RUBBER SPACE	1
9	7620050400	BRACKET CRT (R)	1
10	7620051400	BRACKET CRT (L)	1
11	7620042100	BOTTOM BRACKET	1
12	0810015300	SWIVEL DISK	1
13	0810014300	SWIVEL BOWL	1
14	0830006300	BASE TOP	1
15	0813490300	SWIVEL RING	1
16	0830007300	BASE BOTTOM	1
17	7500053200	SHIELD TOP (AL)	1
18	7502141600	SHIELD BOTTOM	1
19	7620041100	BACK BRACKET	1
20	7620043200	BNC BRACKET	1
21	6720A30123	SCREW MACHINE M3x12(W/WSR)	3
22	6722240120	TP SCREW (ø4x12)	3
23	6724130803	SCREW TAPPING T3x8	2
24	7486236320	RUBBER FOOT	4
25	6776050220	SCREW TAPPING (ø5x20)	1
26	7900029200	SPACER SUPPORT CBS-10	2
27	7420003100	CUSHION PLATE	1
28	6724430060	TP SCREW (ø3x6)	4
29	6724A30080	SCREW TAP TILE(M3x8)	2
30	74B0001000	DECORATION PLATE	1

NO.	PARTS NO.	DESCRIPTION	QTY
31	6720D40081	SCREW MACHINE M4x8	1
32	6724A30100	TP SCREW (ø3x10)	12
33	7415711000	S.R. (25x30)	1
34	6720430100	SCREW MACHINE (M3x10)	4
35	6720540081	SCREW MACHINE (M4x8)	6
36	6776040160	TP SCREW (ø4x16)	4
37	7460001400	CRT WASHER	4
38	6770050210	CRT SCREW (ø5x21)	4
39	6740030240	NUT M3	8
40	7513478201	HEAT SINK FBT	1
41	7510024200	HEAT SINK	1
42	7510029200	HEAT SINK	1
43	7410029100	S.R.	1
44	7516893200	HEAT SINK	1
45	7414567000	S.R.	1
46	7516673650	HEAT SINK	5
47	6724426060	TP SCREW (ø2.6x6)	5
48	7516673650	HEAT SINK	1
49	6720430080	SCREW MACHINE	1
50	7510041200	HEAT SINK(50x14x25)	1
51	6724030080	TP SCREW (T3x8)	1
52	7510035200	HEAT SINK	1
53	7900032200	SPACER SUPPORT MG-10	1
54	7140235600	OVERLAY	1
55	7906427200	TIE MOUNT FW-3S	2
56			
57			

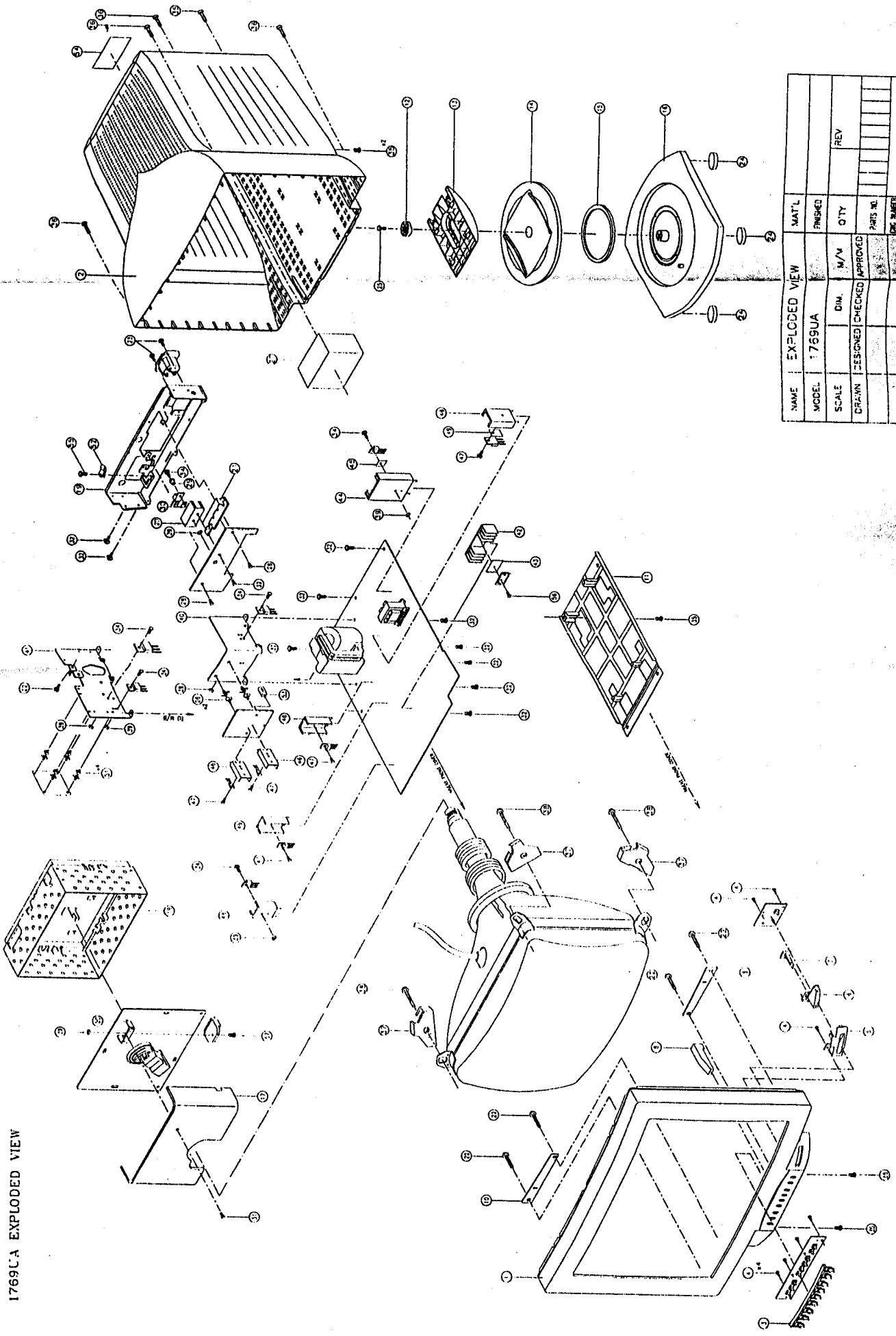


11S33-029A

MODEL :	17902A	DESIGNER :	
NAME :	CRT	FILE NAME :	7902A.C
REV :	A	ISSUED :	7/1997
DATE :	06-11-97	CHECK :	

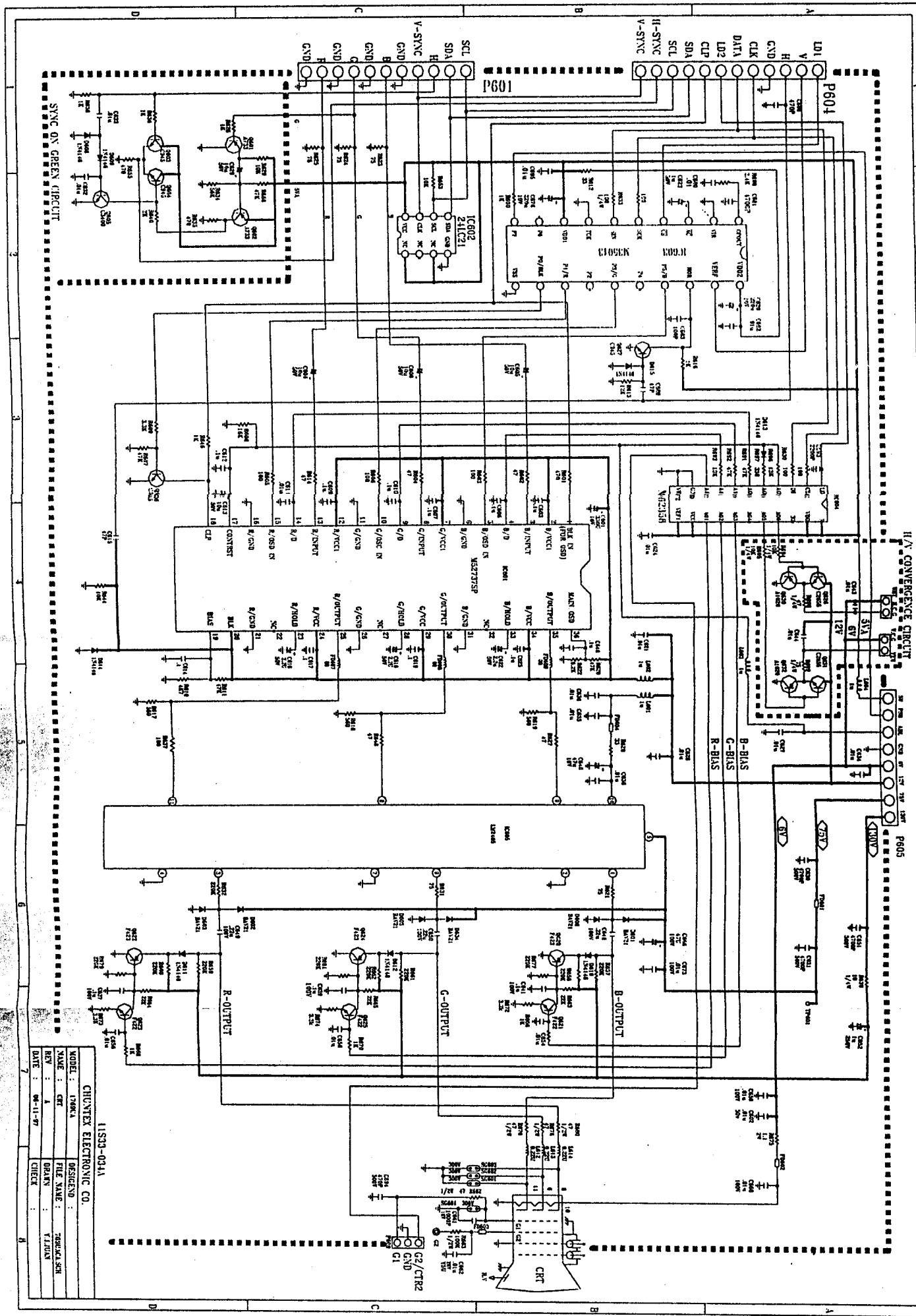
CHUNTEX ELECTRONIC CO.

1769U-A EXPLODED VIEW



NAME	EXPLODED VIEW	MAT'L	FINISHED	REV
MODEL	1769U-A			
SCALE		DIM.	M/M	QTY
DRAWN	DESIGNED	CHECKED	APPROVED	
				PARTS NO.
				QTY. NUMBER

CHUNTEX ELECTRONIC CO., LTD.



11533-031A

MODEL :	1768A	DESIGNED :	THOMAS SR
NAME :	CR1	FILE NAME :	17103
REV :	A	DRAWN :	
DATE :	06-11-97	CHECK :	

CHUNTEX ELECTRONIC CO.