TIMING MODE (CTX presetting Timing)

NAME	720X400-70		640X480-60		640X480-85		MACII-832		800X600-85	
PIXEL CLOCK	28.322 MHZ		25.175 MHZ		36.000 MHZ		57.284 MHZ		56.250 MHZ	
Fh	31.469 KHZ		31.469 KHZ		43.269 KHZ		49.726 KHZ		53.674 KHZ	
Fv	70.087 HZ		59.941 HZ		85.008 HZ		74.552 HZ		85.062 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	900	31.777us	800	31.778us	832	23.111us	1152	20.110us	1048	18.631us
H DISPLAY	720	25.422us	640	25.422us	640	17.778us	832	14.524us	800	14.222us
H B-PORCH	54	1.907 us	48	1.907 us	80	2.222 us	224	3.910 us	152	2.702 us
H-S-WIDTH	108	3.813 us	96	3.813 us	56	1.556 us	64	1.117 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	667	13.413 ms	631	11.756ms
V DISPLAY	400	12.711ms	480	15.253ms	480	11.093ms	624	12.549ms	600	11.179ms
V B-PORCH	35	1.112 ms	33	1.049 ms	25	0.578 ms	39	0.784 ms	27	0.503 ms
V S WIDTH	2	0.064 ms	2	0.064 ms	3	0.069 ms	3	0.060 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		3.000mm	
H S OUTPUT	ON(-)		ON(-)		ON(-)		OFF-LOW		ON(+)	
V S OUTPUT	ON(+)		ON(-)		ON(-)		OFF-LOW		ON(+)	
X S OUTPUT	ON(-)		ON(-)		ON(-)		ON(-)		ON(+)	
X S SELECT	H		H		H		H		H	

NAME	1152X864-75		1024X768-75		1024X768-85		1024X768-100		1280X1024-75	
PIXEL CLOCK	108.000MHZ		78.751 MHZ		94.500 MHZ		110.000 MHZ		135.00 MHZ	
Fh	67.500KHZ		60.024 KHZ		68.677 KHZ		80.468 KHZ		79.976 KHZ	
Fv	75.00HZ		75.030 HZ		84.996 HZ		99.836 KHZ		75.024 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	1600	14.815us	1312	16.660us	1376	14.561us	1367	12.427us	1688	12.504us
H DISPLAY	1152	10.667us	1024	13.003us	1024	10.836us	1024	9.309us	1280	9.481us
H B-PORCH	256	2.370us	176	2.235 us	208	2.201 us	214	1.945 us	248	1.837 us
H-S-WIDTH	128	1.185us	96	1.219 us	96	1.016 us	118	1.073 us	144	1.067 us
H BORDER	0	0.000us	0	0.000 us	0	0.000 us	0	0.000 us	0	0.000 us
H SIZE	4.000mm		4.000 mm		4.000 mm		4.000 mm		4.000 mm	
V TOTAL	900	13.333ms	800	13.328ms	808	11.765ms	806	10.016ms	1066	13.329ms
V DISPLAY	864	12.800ms	768	12.795ms	768	11.183ms	768	9.544 ms	1024	12.804ms
V B-PORCH	32	0.474ms	28	0.466ms	36	0.524 ms	34	0.423 ms	38	0.475 ms
V S WIDTH	3	0.044ms	3	0.050 ms	3	0.044 ms	3	0.037 ms	3	0.038 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 SELECT	H+V		H		H		H		H	

NAME	1280X1024-85		1600X1200-75		1600X1200-85			
PIXEL CLOCK	157.500 MHZ		202.500MHZ		157.500MHZ			
Fh	91.146 KHZ		93.750KHZ		106.962KHZ			
Fv	85.24 HZ		75.00HZ		85.25HZ			
INTERLACE MODE	NO		NO		NO			
VIDEO	ANALOG-COLOR		ANALOG-COLOR		ANALOG-COLOR			
XS SYNC ON GREEN	NO		NO		NO			
VIDEO LEVEL	700mv		700mv		700mv			
WHITE LEVEL	700mv		700mv		700mv			
BLANK LEVEL	0 IRE		0 IRE		0 IRE			
16 BIT HEX DATA	0000		0000		0000			
UNIT OF DATA	PIXEL	us/ms	PIXEL	us/ms	PIXEL	us/ms		
H TOTAL	1728	10.971 us	2160	10.667 us	2176	9.349 us		
H DISPLAY	1280	8.127 us	1600	7.901 us	1600	6.874 us		
H B-PORCH	224	1.422 us	304	1.501 us	288	1.237 us		
H-S-WIDTH	160	1.016 us	192	0.948 us	224	0.962 us		
H BORDER	0	0.000 us	0	0.000 us	0	0.000 us		
H SIZE	4.000mm		4.000mm		4.000mm			
V TOTAL	1072	11.761 ms	1250	13.333 ms	1258	11.761 ms		
V DISPLAY	1024	11.235 ms	1200	12.800 ms	1200	11.219 ms		
V B-PORCH	44	0.483 ms	46	0.491 ms	54	0.505 ms		
V S WIDTH	3	0.033 ms	3	0.032 ms	3	0.028 ms		
V BORDER	0	0.000 ms	0	0.000 ms	0	0.000 ms		
V SIZE	3.000mm		3.000mm		3.000mm			
H S OUTPUT	ON(+)		ON(+)		ON(+)			
V S OUTPUT	ON(+)		ON(+)		ON(+)			
X S OUTPUT	ON(+)		ON(+)		ON(+)			
X S SELECT	H		H		H			

ADJUSTMENT

1910PF1 ADJUSTMENT

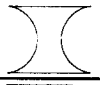
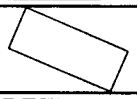
REM:PRESET MODE DATA ADJUSTMENT:

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.

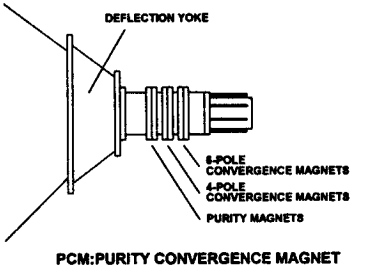
ADJUSTMENT	LOCATION	SPECIFICATION/DESCRIPTION	TIMING & PATTERN
210V	VR101	J77"-"=210V±0.2V	VGA-480, X'HATCH
12V	VR102	J127=12V±0.5V	VGA-480, X'HATCH
H.V.	VR402	CRT ANODE=27.0KV±0.2KV	VGA-480, X'HATCH
FREQUENCY 31.5KHz	VR103	D112"+"=31.5K±0.1KHz	VGA-480(31KHz), X'HATCH
V-LINE	OSD. MANUAL	$\frac{Ymax-Ymin}{Ymax+Ymin} \leq 5\%$	VGA-480, X'HATCH
V-SIZE	OSD. MANUAL	V-SIZE=260mm±5mm	All of PRESET modes, X'HATCH
H-CENTER	VR302	Set Raster at center.	1024X768 (80.4KHZ) X'HATCH
H-WIDTH	OSD. MANUAL	H-WIDTH=350±5mm	All of PRESET modes, X'HATCH
H-PHASE	OSD. MANUAL	$\frac{\lvert R-L \rvert}{2} \leq 3mm$	All of PRESET modes, X'HATCH
V-CENTER	OSD. MANUAL	$\frac{\lvert U-D \rvert}{2} \leq 3mm$	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	≤ 1.0mm	All of PRESET modes, X'HATCH
	OSD. MANUAL	≤ 2.5mm	All of PRESET modes, X'HATCH
	OSD. MANUAL	≤ 2.0mm	All of PRESET modes, X'HATCH
	OSD. MANUAL	≤ 2mm	All of PRESET modes, X'HATCH
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	1024X768 68.6KHZ "m"
WHITE BALANCE PRE ADJ	OSD. CONTRAST	MAX (DAC=100)	VGA-480, MOSAIC
	OSD. BRIGHTNESS	CLICK POINT (DAC=50)	DITTO
	FBT SCREEN VR	RASTER Y≤0.6FL	DITTO
	OSD. R.G.B BIAS	RASTER X=283±10, Y=297±10	DITTO
	OSD. SUBCONT	MOSAIC Y=35±5FL	DITTO
	VR 401	MOSAIC Y=30-32FL	DITTO

ADJUSTMENT	LOCATION	SPECIFICATION/DESCRIPTION	TIMING & PATTERN
WHITE BALANCE ADJ	OSD. R.G.B GAIN	MODE1(9300°K):X=283±10 Y=297±10	VGA-480, FULL WHITE
		MODE2(6500°K):X=313±10 Y=329±10	
		MODE3(5000°K):X=346±10 Y=359±10	
		MODE4(USER):X=283±10 Y=297±10	
	OSD. R.G.B BIAS	MODE1(9300°K):X=283±10 Y=297±10 When contrast is in 2~3FL.	
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.	

Brightness

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								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
	 PCM:PURITY CONVERGENCE MAGNET		

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

Unit: Volt

IC	IC101 (3842)								IC103 (PS2561)			
PIN / AC IN	1	2	3	4	5	6	7	8	1	2	3	4
110V	3.47	2.48	0.15	2.46	GND	5.64	15.59	4.96	5.53	4.47	1.45	15.59
220V	2.13	2.48	0.07	2.45	GND	2.38	15.50	4.96	5.33	4.28	1.78	15.50

IC	IC102 (PC29M05)			IC104 (TL431)			IC501 (68P61A)	
PIN / STATUS	O	G	I	A	K	R	21	22
NORMAL	5.09	GND	6.31	GND	4.28	2.49	5.00	5.00
SUSPEND	5.10	GND	6.62	GND	3.84	2.49	5.00	0
OFF	5.11	GND	6.55	GND	3.80	2.50	0	0

TR	Q101 (BT169D)			Q103 (C945)			Q104 (FS10SM-16A)		
PIN / AC IN	K	G	A	E	C	B	S	D	G
110V	2.85	0	130.74	GND	0	0.66	0.15	130.84	4.77
220V	2.90	0	299.55	GND	0	0.70	0.07	301.57	1.56

TR	Q102 (C945)			Q114 (C945)		
PIN / STATUS	E	C	B	E	C	B
NORMAL	GND	0.03	0.66	GND	15.49	0.03
DEGUASS	GND	0.78	0.01	GND	0.09	0.78

TR	Q105 (A733)			Q106 (C945)			Q107 (2SD882)		
PIN / STATUS	E	C	B	E	C	B	E	C	B
NORMAL	6.53	2.49	6.54	GND	6.52	0	12.06	15.17	12.73
SUSPEND	6.82	6.78	6.15	GND	6.42	0.64	0.70	0.01	0.01
OFF	6.83	6.78	6.15	GND	0.03	0.64	0.70	0.01	0.02

TR	Q108 (C945)			Q109 (C945)			Q110 (2SB772)		
PIN / STATUS	E	C	B	E	C	B	E	C	B
NORMAL	GND	6.53	0.02	6.14	12.73	6.77	6.44	6.32	5.65
SUSPEND	GND	0.20	0.74	0.44	0.02	0.25	6.68	6.55	5.88
OFF	GND	0.20	0.75	0.45	0.02	0.25	6.68	6.55	6.81

TR	Q111 (C945)			Q112 (C945)		
PIN / STATUS	E	C	B	E	C	B
NORMAL	GND	0.13	0.73	GND	0.02	0.68
SUSPEND	GND	0.14	0.74	GND	3.00	0
OFF	GND	6.81	0	GND	3.00	0

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

Unit: Volt

IC	IC501 (68P61A)									
PIN / MODE	1	2	3	4	5	6	7	8	9	10
640X480-60(31K)	1.85	1.06	1.85	5.07	5.08	GND	2.73	2.55	0.03	5.07
800X600-85(53K)	1.85	1.06	1.85	5.07	5.08	GND	2.73	2.55	0.03	5.07
1024X768-85(68K)	1.85	1.06	1.85	5.07	5.08	GND	2.73	2.55	0.03	5.07
1600X1200-85(106.9K)	1.85	1.06	1.85	5.07	5.08	GND	2.74	2.55	0.03	5.07

IC	IC501 (68P61A)									
PIN / MODE	11	12	13	14	15	16	17	18	19	20
640X480-60(31K)	5.07	5.08	5.08	5.08	5.08	-0.01	5.01	5.07	-0.01	0.62
800X600-85(53K)	5.07	5.08	5.08	5.08	5.08	-0.01	5.01	5.07	-0.01	0.61
1024X768-85(68K)	5.07	5.08	5.08	5.08	5.08	-0.01	5.02	5.07	-0.01	0.61
1600X1200-85(106.9K)	5.07	5.08	5.08	5.08	5.08	-0.01	5.02	5.07	-0.01	0.61

IC	IC501 (68P61A)									
PIN / MODE	21	22	23	24	25	26	27	28	29	30
640X480-60(31K)	5.02	5.04	-0.01	5.10	5.10	2.06	0.19	3.60	2.40	5.07
800X600-85(53K)	5.02	5.04	-0.01	5.10	5.10	3.15	1.12	3.60	2.40	5.08
1024X768-85(68K)	5.02	5.04	-0.01	5.10	5.10	3.15	1.85	3.59	2.40	5.08
1600X1200-85(106.9K)	5.02	5.04	-0.01	5.10	5.10	3.13	3.78	3.59	2.39	5.08

IC	IC501 (68P61A)									
PIN / MODE	31	32	33	34	35	36	37	38	39	40
640X480-60(31K)	5.08	0.02	0.60	0.12	0.12	0.11	0.11	0.11	2.82	3.54
800X600-85(53K)	5.08	0.02	0.30	0.11	0.11	4.45	0.10	4.45	0.35	0.37
1024X768-85(68K)	5.08	0.02	0.34	4.45	4.45	0.09	4.45	4.45	0.38	0.37
1600X1200-85(106.9K)	5.08	0.01	0.50	4.45	4.45	4.45	4.45	4.45	0.46	0.36

IC	IC502 (AT24C04)							
PIN / MODE	1	2	3	4	5	6	7	8
640X480-60(31K)	GND	GND	5.08	GND	0.03	5.07	GND	5.08
800X600-85(53K)	GND	GND	5.08	GND	0.03	5.07	GND	5.08
1024X768-85(68K)	GND	GND	5.08	GND	0.03	5.07	GND	5.08
1600X1200-85(106.9K)	GND	GND	5.08	GND	0.03	5.07	GND	5.08

TR	Q501 (A733)			Q502 (C945)			Q503 (C945)		
PIN / MODE	E	C	B	E	C	B	E	C	B
640X480-60(31K)	5.08	5.07	4.37	GND	0.07	0.76	GND	0.15	0.70
800X600-85(53K)	5.08	5.07	4.38	GND	0.07	0.76	GND	0.15	0.70
1024X768-85(68K)	5.08	5.07	4.38	GND	0.07	0.76	GND	0.15	0.70
1600X1200-85(106.9K)	5.08	5.07	4.38	GND	0.07	0.76	GND	0.15	0.70

TR	Q504 (A733)			Q505 (C945)			Q506 (JC337)		
PIN / MODE	E	C	B	E	C	B	E	C	B
640X480-60(31K)	11.97	GND	16.48	GND	4.98	0	6.98	12.00	7.62
800X600-85(53K)	11.99	GND	18.87	GND	4.95	0	6.99	12.00	7.63
1024X768-85(68K)	12.00	GND	19.46	GND	4.95	0	7.00	12.00	7.64
1600X1200-85(106.9K)	12.00	GND	20.66	GND	4.96	0	7.01	11.99	7.65

TR	Q507 (C945)			Q508 (A733)			Q510 (JC327)		
PIN / MODE	E	C	B	E	C	B	E	C	B
640X480-60(31K)	GND	0.76	-0.01	5.08	0.07	5.08	6.98	GND	7.02
800X600-85(53K)	GND	0.76	-0.01	5.08	0.13	5.07	6.99	GND	7.04
1024X768-85(68K)	GND	0.76	-0.01	5.08	0.16	5.07	7.00	GND	7.05
1600X1200-85(106.9K)	GND	0.76	-0.01	5.08	0.26	5.06	7.01	GND	7.06

TR	Q513 (C945)			Q514 (C945)		
PIN / MODE	E	C	B	E	C	B
640X480-60(31K)	3.48	5.08	0.60	0.42	7.02	1.03
800X600-85(53K)	0.37	5.08	0.30	0.41	7.04	1.03
1024X768-85(68K)	0.37	5.08	0.34	0.41	7.05	1.02
1600X1200-85(106.9K)	0.37	5.08	0.50	0.41	7.06	1.02

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

Unit: Volt

IC	IC601 (M52743)									
PIN / MODE	1	2	3	4	5	6	7	8	9	10
Cross-hatch	0.67	2.44	11.78	0.15	GND	2.43	2.83	11.78	0.15	GND
Full white	0.66	2.85	11.81	0.15	GND	2.85	3.22	11.81	0.15	GND

IC	IC601 (M52743)									
PIN / MODE	11	12	13	14	15	16	17	18	19	20
Cross-hatch	2.46	11.78	0.14	GND	3.15	0	5.06	0.33	0.08	5.08
Full white	2.88	11.81	0.14	GND	2.86	0	5.06	0.33	0.08	5.08

IC	IC601(M52743)									
PIN / MODE	21	22	23	24	25	26	27	28	29	30
Cross-hatch	0.03	GND	3.23	3.01	3.04	3.26	0.34	5.01	1.79	1.59
Full white	0.03	GND	3.22	3.01	3.05	3.28	0.34	5.01	3.69	1.59

IC	IC601 (M52743)					
PIN / MODE	31	32	33	34	35	36
Cross-hatch	4.50	1.77	GND	1.60	1.77	11.79
Full white	4.50	3.57	GND	1.43	3.52	11.81

IC	IC603 (M35045-080SP)									
PIN / MODE	1	2	3	4	5	6	7	8	9	10
Cross-hatch	5.06	GND	5.05	5.08	5.08	0.05	GND	5.06	5.06	0.04
Full white	5.06	GND	5.06	5.08	5.08	0.05	GND	5.06	5.06	0.04

IC	IC603 (M35045-080SP)									
PIN / MODE	11	12	13	14	15	16	17	18	19	20
Cross-hatch	GND	0.04	0.06	5.06	0.06	5.06	0.06	0.34	4.99	5.06
Full white	GND	0.04	0.06	5.06	0.06	5.06	0.06	0.34	5.00	5.06

IC	IC604 (LM2435T)								
PIN / MODE	1	2	3	4	5	6	7	8	9
Cross-hatch	62.53	62.47	62.10	75.51	GND	1.26	1.24	11.14	1.25
Full white	38.56	37.82	36.01	75.51	GND	3.02	2.91	11.26	2.87

TR	Q601 (A733)			Q602 (C945)			Q603 (A733)		
PIN / MODE	E	C	B	E	C	B	E	C	B
Cross-hatch	3.71	3.67	3.00	3.30	0.33	0.04	3.32	3.30	2.72
Full white	3.71	3.67	3.00	3.30	0.33	0.04	3.32	3.30	2.71

TR	Q607 (A733)			Q620 (C945)			Q634 (BF423)		
PIN / MODE	E	C	B	E	C	B	E	C	B
Cross-hatch	3.22	GND	5.15	0.34	5.09	-0.18	59.54	GND	59.69
Full white	2.94	GND	2.33	0.34	5.09	-0.18	59.54	GND	59.89

TR	Q635 (BF422)			Q654 (BF423)			Q655 (BF422)		
PIN / MODE	E	C	B	E	C	B	E	C	B
Cross-hatch	4.49	57.39	5.09	59.90	GND	60.07	4.49	57.81	5.09
Full white	4.50	57.59	5.09	59.92	GND	60.24	4.49	58.02	5.09

TR	Q674 (BF423)			Q675 (BF422)		
PIN / MODE	E	C	B	E	C	B
Cross-hatch	60.97	GND	61.14	4.49	59.04	5.09
Full white	61.02	GND	61.33	4.50	59.24	5.09

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

Unit: Volt

IC	IC201 (TDA8172)						
PIN / MODE	1	2	3	4	5	6	7
640X480-60(31K)	0.72	14.60	-13.91	-14.32	0.37	14.16	0.72
800X600-85(53K)	0.72	14.67	-13.80	-14.34	0.29	14.33	0.72
1024X768-85(68K)	0.72	14.70	-13.82	-14.36	0.29	14.36	0.72
1600X1200-85(106.9K)	0.72	14.70	-13.83	-14.37	0.29	14.37	0.72

IC	IC301 (TDA4856)									
PIN / MODE	1	2	3	4	5	6	7	8	9	10
640X480-60(31K)	0.35	5.72	3.69	1.39	2.50	9.45	GND	5.53	1.06	11.28
800X600-85(53K)	0.50	5.75	3.70	1.65	2.50	7.64	GND	5.74	1.06	11.27
1024X768-85(68K)	0.61	5.77	3.67	1.81	2.50	6.49	GND	5.89	1.06	11.27
1600X1200-85(106.9K)	0.87	5.76	3.71	2.28	2.50	3.27	GND	6.22	1.06	11.26

IC	IC301 (TDA4856)									
PIN / MODE	11	12	13	14	15	16	17	18	19	20
640X480-60(31K)	2.38	0.75	0.75	0.02	0.60	0.67	0.22	5.08	5.08	4.09
800X600-85(53K)	2.36	0.75	0.75	0.02	0.30	0.75	0.23	5.08	5.08	4.10
1024X768-85(68K)	2.42	0.75	0.75	0.02	0.35	0.79	0.23	5.08	5.08	4.10
1600X1200-85(106.9K)	2.33	0.75	0.75	0.01	0.50	0.91	0.23	5.08	5.08	4.09

IC	IC301 (TDA4856)											
PIN / MODE	21	22	23	24	25	26	27	28	29	30	31	32
640X480-60(31K)	5.03	3.18	3.06	2.68	GND	3.85	2.49	2.56	4.54	4.93	5.02	6.05
800X600-85(53K)	5.03	2.70	3.06	2.67	GND	3.33	1.99	2.57	4.56	5.13	5.02	6.08
1024X768-85(68K)	5.03	2.70	3.06	2.67	GND	2.96	1.64	2.57	4.57	5.26	5.02	6.07
1600X1200-85(106.9K)	5.03	2.70	3.06	2.67	GND	1.97	0.69	2.58	4.61	5.64	5.02	6.07

IC	IC401 (LM358)							
PIN / MODE	1	2	3	4	5	6	7	8
640X480-60(31K)	6.95	5.98	5.98	GND	5.98	5.98	5.98	12.03
800X600-85(53K)	7.82	5.98	5.98	GND	5.98	5.98	5.98	12.03
1024X768-85(68K)	8.06	5.98	5.98	GND	5.98	5.98	5.98	12.03
1600X1200-85(106.9K)	8.37	5.98	5.98	GND	5.98	5.98	5.98	12.03

IC	IC402 (HEF4538)							
PIN / MODE	1	2	3	4	5	6	7	8
640X480-60(31K)	GND	7.87	12.03	0.66	12.03	10.19	1.82	GND
800X600-85(53K)	GND	8.05	12.03	1.03	12.03	9.26	2.73	GND
1024X768-85(68K)	GND	8.12	12.03	1.29	12.03	8.58	3.40	GND
1600X1200-85(106.9K)	GND	8.20	12.03	1.95	12.03	7.03	4.91	GND

IC	IC402 (HEF4538)							
PIN / MODE	9	10	11	12	13	14	15	16
640X480-60(31K)	10.97	1.06	11.72	0.66	12.03	11.20	GND	12.03
800X600-85(53K)	10.21	1.80	11.52	1.03	12.03	10.61	GND	12.03
1024X768-85(68K)	9.70	2.31	11.38	1.29	12.03	10.21	GND	12.03
1600X1200-85(106.9K)	8.39	3.60	11.04	1.95	12.03	9.18	GND	12.03

IC	IC01 (LM358)							
PIN / MODE	1	2	3	4	5	6	7	8
640X480-60(31K)	0	-0.01	-0.01	-14.33	GND	-0.01	-0.01	11.99
800X600-85(53K)	0	-0.01	-0.01	-14.33	GND	-0.01	-0.01	11.99
1024X768-85(68K)	0	-0.01	-0.01	-14.36	GND	-0.01	-0.01	11.99
1600X1200-85(106.9K)	0	-0.01	-0.01	-14.37	GND	-0.01	-0.01	11.99

IC	IC02 (HA17393)							
PIN / MODE	1	2	3	4	5	6	7	8
640X480-60(31K)	3.82	3.82	5.99	GND	5.99	3.92	3.91	11.99
800X600-85(53K)	3.82	3.81	5.99	GND	5.99	3.91	3.90	11.99
1024X768-85(68K)	3.82	3.81	5.99	GND	5.99	3.91	3.90	11.99
1600X1200-85(106.9K)	3.81	3.81	5.98	GND	5.98	3.91	3.89	11.98

IC	IC03 (AN5262N)						
PIN / MODE	1	2	3	4	5	6	7
640X480-60(31K)	5.38	GND	9.97	GND	1.79	11.99	5.17
800X600-85(53K)	5.38	GND	9.97	GND	1.79	11.99	5.17
1024X768-85(68K)	5.38	GND	9.97	GND	1.79	11.99	5.17
1600X1200-85(106.9K)	5.37	GND	9.97	GND	1.79	11.98	5.17

IC	IC04 (AN5262N)						
PIN / MODE	1	2	3	4	5	6	7
640X480-60(31K)	5.40	GND	10.19	GND	1.76	11.99	5.42
800X600-85(53K)	5.40	GND	10.19	GND	1.76	11.99	5.42
1024X768-85(68K)	5.40	GND	10.19	GND	1.76	11.98	5.42
1600X1200-85(106.9K)	5.40	GND	10.18	GND	1.76	11.98	5.42

IC	IC801 (M62393)									
PIN / MODE	1	2	3	4	5	6	7	8	9	10
640X480-60(31K)	5.08	5.07	0.03	1.29	2.86	2.60	GND	GND	5.08	GND
800X600-85(53K)	5.08	5.07	0.03	1.29	2.86	2.60	GND	GND	5.08	GND
1024X768-85(68K)	5.08	5.07	0.03	1.29	2.86	2.60	GND	GND	5.08	GND
1600X1200-85(106.9K)	5.08	5.07	0.03	1.29	2.87	2.60	GND	GND	5.08	GND

IC	IC801 (M62393)									
PIN / MODE	11	12	13	14	15	16	17	18	19	20
640X480-60(31K)	5.08	1.29	1.29	0.01	1.29	5.08	5.08	GND	GND	GND
800X600-85(53K)	5.08	1.29	1.29	0.01	1.29	5.08	5.08	GND	GND	GND
1024X768-85(68K)	5.08	1.29	1.29	0.01	1.29	5.08	5.08	GND	GND	GND
1600X1200-85(106.9K)	5.08	1.29	1.29	0.01	1.29	5.08	5.08	GND	GND	GND

TR	Q01 (C945)			Q02 (C945)			Q301 (C945)		
PIN / MODE	E	C	B	E	C	B	E	C	B
640X480-60(31K)	2.22	9.98	2.85	1.96	10.20	2.59	GND	3.69	-0.01
800X600-85(53K)	2.22	9.98	2.85	1.96	10.20	2.59	GND	3.70	-0.01
1024X768-85(68K)	2.22	9.97	2.85	1.96	10.19	2.59	GND	3.67	-0.01
1600X1200-85(106.9K)	2.22	9.96	2.85	1.96	10.18	2.59	GND	3.71	-0.01

TR	Q303 (C945)			Q304 (A733)			Q305 (JC733)		
PIN / MODE	E	C	B	E	C	B	E	C	B
640X480-60(31K)	4.13	15.52	4.11	4.13	GND	4.11	0.43	5.51	1.04
800X600-85(53K)	4.30	15.55	4.29	4.30	GND	4.29	0.85	4.58	1.48
1024X768-85(68K)	4.42	15.58	4.42	4.42	GND	4.42	1.18	3.85	1.83
1600X1200-85(106.9K)	4.68	15.56	4.71	4.68	GND	4.71	1.66	2.80	2.36

TR	Q306 (2SJ512)			Q307 (C945)			Q308 (A733)		
PIN / MODE	S	D	G	E	C	B	E	C	B
640X480-60(31K)	209.46	45.16	208.14	9.12	11.98	9.44	9.12	GND	9.44
800X600-85(53K)	209.36	78.61	206.64	7.49	11.98	7.63	7.49	GND	7.63
1024X768-85(68K)	209.28	99.90	205.70	6.45	11.98	6.47	6.45	GND	6.47
1600X1200-85(106.9K)	209.22	157.83	203.66	3.58	11.97	3.25	3.58	GND	3.25

TR	Q309 (BD830)			Q310 (C945)			Q311 (BD829)		
PIN / MODE	E	C	B	E	C	B	E	C	B
640X480-60(31K)	45.21	35.21	45.49	1.04	5.51	1.56	45.21	54.77	45.49
800X600-85(53K)	78.77	67.84	79.16	1.48	4.58	2.02	78.77	89.07	79.16
1024X768-85(68K)	100.07	89.02	100.49	1.83	3.85	2.38	100.07	110.43	100.49
1600X1200-85(106.9K)	157.98	146.47	158.52	2.36	2.80	2.92	157.98	168.74	158.52

TR	Q313 (BU2532)			Q314 (BSN254)			Q315 (FS12KM-5)		
PIN / MODE	E	C	B	S	D	G	S	D	G
640X480-60(31K)	GND	42.32	-0.45	GND	52.46	4.14	GND	0	15.44
800X600-85(53K)	GND	74.03	-0.43	GND	47.87	4.30	GND	0	15.48
1024X768-85(68K)	GND	94.41	-0.42	GND	45.16	4.42	GND	43.63	0.03
1600X1200-85(106.9K)	GND	150.32	-0.42	GND	39.80	4.69	GND	60.87	0.03

TR	Q316 (C945)			Q317 (YTAF640)			Q318 (IRF640)		
PIN / MODE	E	C	B	S	D	G	S	D	G
640X480-60(31K)	GND	15.33	0.21	GND	0	15.45	GND	0	15.45
800X600-85(53K)	GND	15.29	0.22	GND	28.01	0.03	GND	0	15.48
1024X768-85(68K)	GND	15.32	0.22	GND	0	15.50	GND	43.84	0.02
1600X1200-85(106.9K)	GND	15.32	0.22	GND	61.02	0.03	GND	61.10	0.02

TR	Q319 (C945)			Q320 (C945)			Q321 (C945)		
PIN / MODE	E	C	B	E	C	B	E	C	B
640X480-60(31K)	GND	15.45	0.12	GND	15.45	0.11	GND	15.45	0.11
800X600-85(53K)	GND	15.48	0.11	GND	0.03	0.65	GND	15.48	0.10
1024X768-85(68K)	GND	0.03	0.65	GND	15.50	0.09	GND	0.03	0.65
1600X1200-85(106.9K)	GND	0.03	0.65	GND	0.03	0.65	GND	0.03	0.65

TR	Q322 (C945)			Q323 (FS12KM-5)			Q335 (A733)		
PIN / MODE	E	C	B	S	D	G	E	C	B
640X480-60(31K)	GND	15.45	0.12	GND	0	15.45	6.95	GND	12.01
800X600-85(53K)	GND	15.48	0.11	GND	0	15.48	7.82	GND	12.01
1024X768-85(68K)	GND	0.03	0.65	GND	43.30	0.03	8.06	GND	12.01
1600X1200-85(106.9K)	GND	0.03	0.65	GND	60.47	0.03	8.37	GND	12.01

TR	Q340 (C945)			Q341 (C945)			Q343 (IRF640)		
PIN / MODE	E	C	B	E	C	B	S	D	G
640X480-60(31K)	GND	6.91	0.20	14.69	15.52	15.33	GND	0	15.44
800X600-85(53K)	GND	6.94	0.20	14.67	15.56	15.29	GND	28.08	0.03
1024X768-85(68K)	GND	6.95	0.20	14.70	15.58	15.32	GND	43.85	0.03
1600X1200-85(106.9K)	GND	6.94	0.20	14.72	15.58	15.33	GND	61.16	0.02

TR	Q344 (C945)			Q401 (BF483)			Q402 (BF483)		
PIN / MODE	E	C	B	E	C	B	E	C	B
640X480-60(31K)	GND	15.44	0.11	-148.88	-50.14	-148.92	0.47	171.32	1.00
800X600-85(53K)	GND	0.03	0.65	-148.29	-49.50	-148.95	0.47	170.30	1.00
1024X768-85(68K)	GND	0.03	0.65	-148.51	-49.52	-149.34	0.47	168.34	1.00
1600X1200-85(106.9K)	GND	0.03	0.65	-148.54	-49.59	-149.37	0.47	167.39	1.00

TR	Q403 (2SK1119)			Q404 (FS10SM-16A)			Q405 (BF488)		
PIN / MODE	S	D	G	S	D	G	E	C	B
640X480-60(31K)	GND	209.59	0.57	209.36	179.29	201.55	2.36	-50.19	1.79
800X600-85(53K)	GND	209.55	0.72	209.35	163.44	202.64	2.36	-49.63	1.79
1024X768-85(68K)	GND	209.50	0.87	209.34	153.17	203.41	2.37	-49.60	1.79
1600X1200-85(106.9K)	GND	209.40	1.23	209.34	127.83	205.33	2.36	-49.59	1.79

TR	Q406 (C945)			Q407 (C945)			Q408 (C945)		
PIN / MODE	E	C	B	E	C	B	E	C	B
640X480-60(31K)	1.79	12.02	2.35	1.01	12.03	1.04	GND	7.88	0.03
800X600-85(53K)	1.79	12.02	2.34	1.36	12.03	1.48	GND	8.06	0.03
1024X768-85(68K)	1.79	12.02	2.34	1.57	12.03	1.80	GND	8.12	0.03
1600X1200-85(106.9K)	1.79	12.01	2.33	2.12	13.03	2.52	GND	8.20	0.03

TR	Q409 (C945)			Q410 (A733)			Q411 (A733)		
PIN / MODE	E	C	B	E	C	B	E	C	B
640X480-60(31K)	3.01	12.03	3.05	3.01	GND	3.05	1.01	GND	1.04
800X600-85(53K)	4.31	12.03	4.78	4.31	GND	4.78	1.36	GND	1.48
1024X768-85(68K)	5.22	12.03	5.95	5.22	GND	5.95	1.57	GND	1.80
1600X1200-85(106.9K)	7.36	12.03	8.62	7.36	GND	8.62	2.12	GND	2.52

TR	Q414 (C945)			Q801 (JC337)			Q802 (JC327)		
PIN / MODE	E	C	B	E	C	B	E	C	B
640X480-60(31K)	GND	2.93	-0.01	6.32	12.00	6.65	6.32	GND	6.15
800X600-85(53K)	GND	3.21	-0.01	6.33	12.00	6.68	6.33	GND	6.17
1024X768-85(68K)	GND	2.77	-0.01	6.33	12.00	6.70	6.33	GND	6.19
1600X1200-85(106.9K)	GND	2.74	-0.01	6.32	11.99	6.71	6.32	GND	6.20

TR	Q803 (C945)			Q804 (JC337)			Q805 (JC327)		
PIN / MODE	E	C	B	E	C	B	E	C	B
640X480-60(31K)	0.52	6.15	1.14	6.34	12.00	6.85	6.33	GND	6.23
800X600-85(53K)	0.52	6.17	1.14	6.34	12.00	6.86	6.33	GND	6.25
1024X768-85(68K)	0.51	6.19	1.14	6.35	12.00	6.88	6.33	GND	6.27
1600X1200-85(106.9K)	0.51	6.20	1.14	6.35	11.99	6.89	6.32	GND	6.28

TR	Q806 (C945)		
PIN / MODE	E	C	B
640X480-60(31K)	0.51	6.23	1.13
800X600-85(53K)	0.51	6.25	1.13
1024X768-85(68K)	0.51	6.27	1.13
1600X1200-85(106.9K)	0.51	6.28	1.13

RECOMMENDED SPARE PARTS LIST

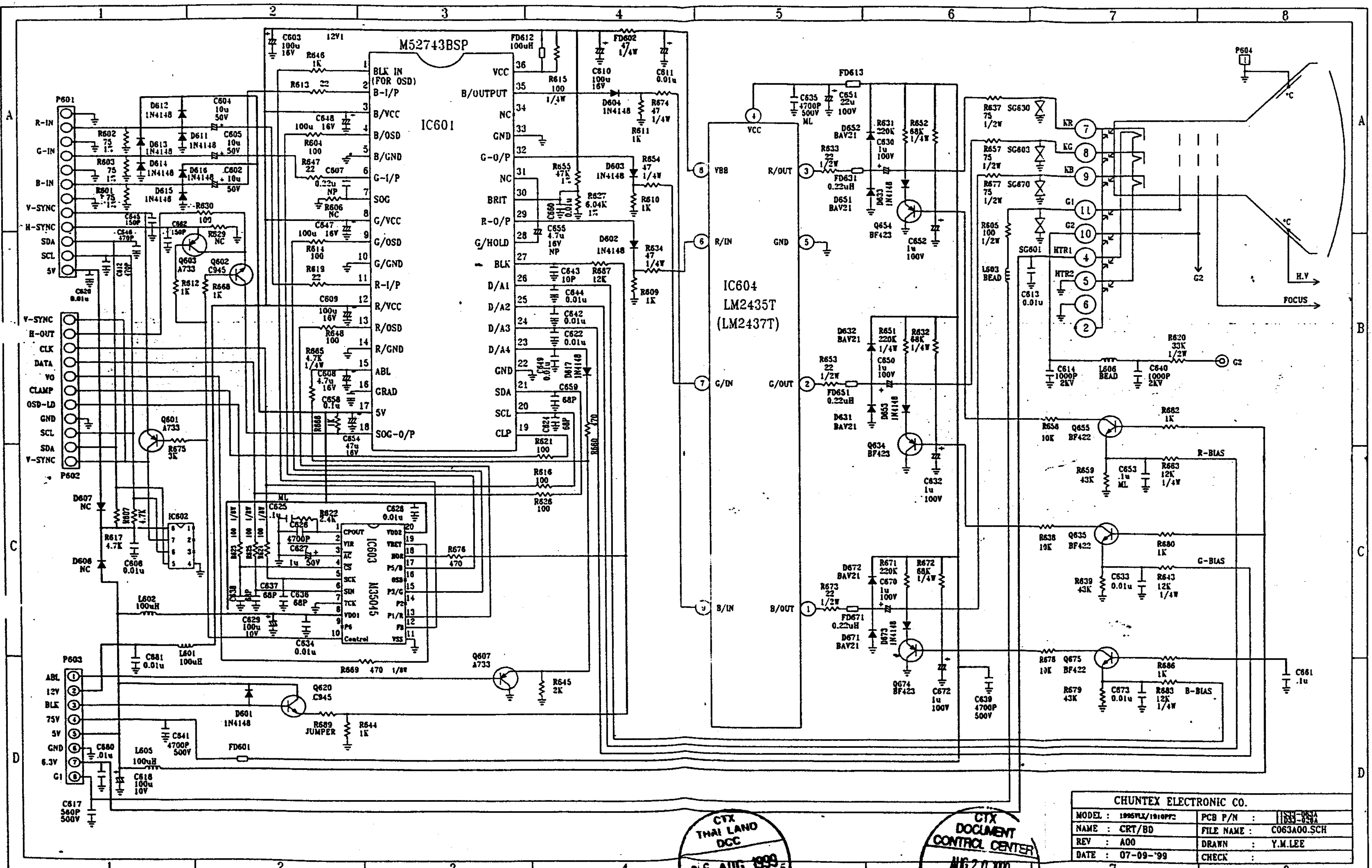
MODEL : 1910PF1						MAIN BOARD REV: 1	
ITEM	PRIORITY	NEW PARTS	PART NO	DESCRIPTION	LOCATION	UNIT PRICE	REMARK
1			17A11-040H	358	IC01		
2			17A11-030H	HA17393/2903	IC02		
3			17A12-060H	AN5262	IC03,IC04		
4	⊙		17A06-150G	3842	IC101		
5			17A07-210B	UPC29M05HB	IC102		
6			17B21-090B	PS2561-M	IC103		
7	⊙		17A06-260H	TDA8172	IC201		
8	⊙		17A06-370H	TDA4856	IC301		
9			17A11-040H	358	IC401		
10	⊙		16T16-020R	HEF4538BP	IC402		
11			16P40-028F	68P61AOTP	IC501		
12			16M08-009R	AT24C04	IC502		
13			17A23-005V	M62393	IC801		
14	●		14T92-011E	BT169D	Q101		
15	●		14K3P-070SU	FS10SM-16A	Q104		
16			14C92-111E	2SC945	Q303		
17			14A92-021B	2SA733	Q304		
18	●		14J22-060A	2SJ512	Q306		
19	●		14C3P-320E	BU2532AL	Q313		
20			14K92-041E	N254	Q314		
21	⊙		14K22-300U	FS12KM-5	Q315,Q323		
22	⊙		14K22-340A	YTAF640	Q317,Q318,Q343		
23	●		14K22-360A	2SK1119	Q403		

MODEL : 1910PF1						MAIN BOARD REV: 1	
ITEM	PRIORITY	NEW PARTS	PART NO	DESCRIPTION	LOCATION	UNIT PRICE	REMARK
24	⊙		14J22-040Y	SFS9634	Q404		
25			15D68-F000	KBL406G	BD101		
26			15S49T200F	BYV26E	D101		
27			15S49TK00F	BYM26E	D108,D110,D117		
28			15S43T601T	HER303	D112		
29			15S47TK00F	BYM26C	D123,D124		
30			15S3C-901F	DD84RC	D316		
31	●		15S49T602F	HER307	D403		
32			15S11M001F	1N4148	D406,D421		
33			15Z33M3990P	3.9V 5% 0.5W	ZD03,ZD04		
34	●		15Z33M1800P	18V 5% 0.5W	ZD101,ZD103		
35			15Z33M1200H	12V 5% 0.5W	ZD108,ZD406		
36	●		49FB2-402A	FUSE 4A 250V	F101		
37	●		23755-2284	RESMOF0.22R5%2W	R126		
38	⊙		23765-3395	RES MOF 3R3 5%3W	R326		
39	⊙		23755-3394	RES MOF 3R3 5%2W	R342		
40	⊙		17F15-0030	XFMR FBT DUMMY	T302		
41			47S00-1070L	XFMR SPSE-42/15	T101		
42	●		47F13-1010B	XFMR FBT	T400		

MODEL : 1910PF1						CRT BOARD REV: A	
ITEM	PRIORITY	NEW PARTS	PART NO	DESCRIPTION	LOCATION	UNIT PRICE	REMARK
1	⊙		17A04-230V	M52743BSP	IC601		
2	⊙		16N20-004U	M35045-080SP	IC603		
3	●		17A04-260H	LM2435T	IC604		
4	⊙		14A92-061E	BF423	Q634,Q654,Q674		
5	⊙		14C92-011E	BF422	Q635,Q655,Q675		

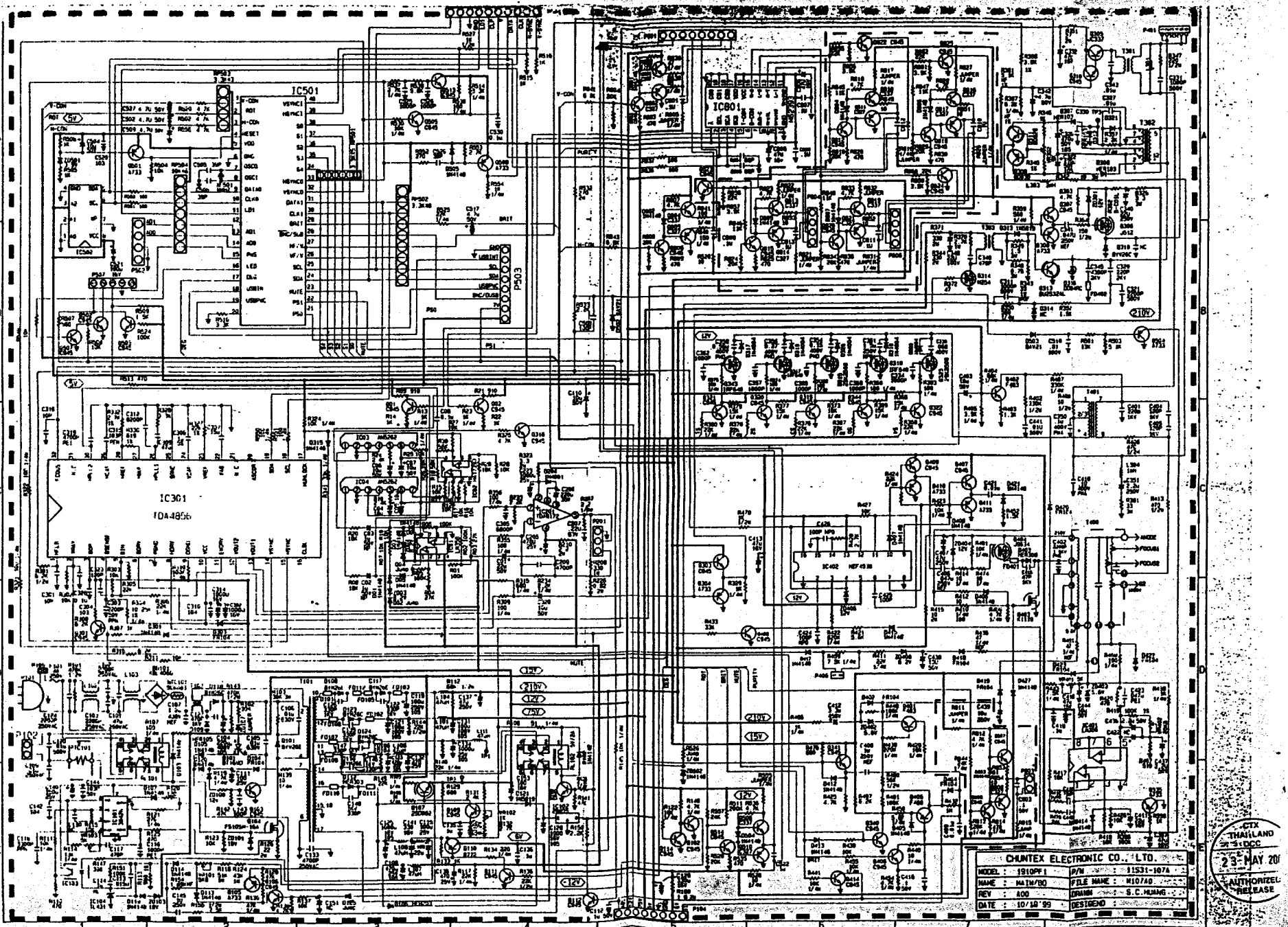
Remark: ●:1st priority , Recommended Q'ty=(Location Number) x3

⊙:2nd prioity , Recommended Q'ty=(Location Number) x2



CHUNTEX ELECTRONIC CO.			
MODEL :	1995VLX/1910PF2	PCB P/N :	
NAME :	CRT/BD	FILE NAME :	C063A00.SCH
REV :	A00	DRAWN :	Y.M.LEE
DATE :	07-09-'99	CHECK :	

-9925
-9323
0.233333


IC501
IC801
IC301
TDA4856
P503
CHUNTEX ELECTRONIC CO., LTD.
MODEL : 1910PF1
P/N : 11531-107A
NAME : MAIN/BD
FILE NAME : M10740
REV : A00
DRAWN : S.C.HUANG
DATE : 10/18/99
DESIGNED :
CTX THAILAND
23-MAY 20
AUTHORIZED RELEASE
十信電子股份有限公司
89.5.11