



PV500T (LPC15W13AA74)
PV500AT (LPC15W13AA75)
PV500BT (LPC15B13AA74)
PV500BAT (LPC15B13AA75)

SERVICE MANUAL



EDITION 1
May 2003

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2.2 Display Input

2.2.1. RGB Video

Analogue, 0.0 to 0.7 V peak to peak
 Separate RGB
 Input impedance 75 Ohm
 Positive polarity

2.2.2. Sync Signal

Separate horizontal & vertical sync (3.3V & 5V)
 Low level 0.8 V maximum
 High level 2.0 V minimum
 Input impedance 5K ohm
 Positive or negative polarity

2.2.3. Display Input Connection

- a. Detachable Mini D-sub 15 pin male in two ends signal cable.
- b. A female Mini D-sub 15 pin base .

Pin 1	Red	Pin 9	No Connection
Pin 2	Green	Pin 10	Ground
Pin 3	Blue	Pin 11	Ground
Pin 4	No Connection	Pin 12	SDA
Pin 5	Ground	Pin 13	H. Sync
Pin 6	R Return	Pin 14	V. Sync
Pin 7	G Return	Pin 15	SCL
Pin 8	B Return		

2.3 Audio Input (LPC15B13AA75 / LPC15W13AA75 only)

2.3.1. Audio Input Signal

Right & Left channels.
 Input level : 1Vrms(typical), 2Vrms(max)
 Input Impedance : 15 K ohm

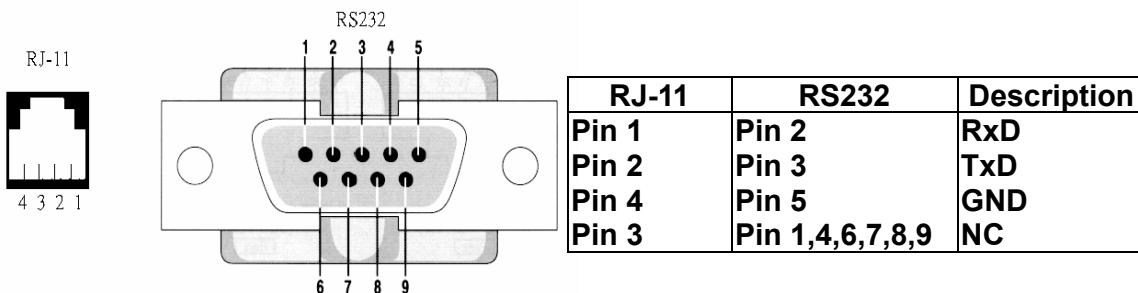
2.3.2. Audio Input Connection

- a. Detachable stereo head phone in two ends signal cable.
- b. A female stereo phone jack base.

2.4 Touch Signal

2.4.1. RS232 Connection

- a. Detachable male RJ-11 and female mini D-sub RS232 9 Pin signal cable.
- b. A standard female RJ-11 type base.



3. ELECTRICAL CHARACTERISTICS

3.1 Flat Panel

3.1.1. Type	15" diagonal, XGA resolution, color TFT-LCD
3.1.2. Pixel structure	R/G/B sub-pixels in vertical stripes 1024 x 768 array matrix
3.1.3. Gray scale	16 million colors.
3.1.4. Surface treatment	3H hard coating ,anti-static
3.1.5. Backlight	Integral CCFL , Type to support field replacement. Life time 25000 hours @ 25C, 50% of initial value.
3.1.6 DEFECTS	The LCD panel shall be inspected with all pixels set to white, black, red, green, and blue.
VISUAL INSPECTION	
Allowable Defects	No cosmetic defects are allowed except those specified below. The conditions of visual inspections are as follows: Viewing distance is to be approximately 35 cm. Ambient illumination is to be 300 to 500 lux. Defects not apparent within one minute shall be ignored.

Table 1 Defects Dots

Model		PV500T Series (0 Pixel Fault)
Pixel Faults Type		
Type1	Bright Pixels(Note1)	0
Type2	Dark Pixels(Note2)	0
Type3	Fault Pixels / Sub-Pixels(Note3)	0
Type4	Cluster of type1 or type 2 faults (Note4)	0
Type5	Cluster of type3 faults (Note4)	0
	Total Pixel Faults	0

Note 1 : Bright pixels in full black pattern.

Note 2 : Dark pixels in full white pattern

Note 3 : fault Pixel / Sub-Pixel : The pixel or sub-pixel is abnormal but not bright/dark pixel.

Note 4 : Fault Cluster : Two or more Pixels/Sub-pixels with faults within 5 * 5 block of pixels.

3.2 Modes and Timing Capability

The monitor shall support an internal scaler to enable the monitor to display lower resolution video modes. The scaler shall convert all lower resolution modes up to 1024x768. The monitor shall support all the modes listed in Table 2.

Table 2. Supported Timing VESA Standard Mode :

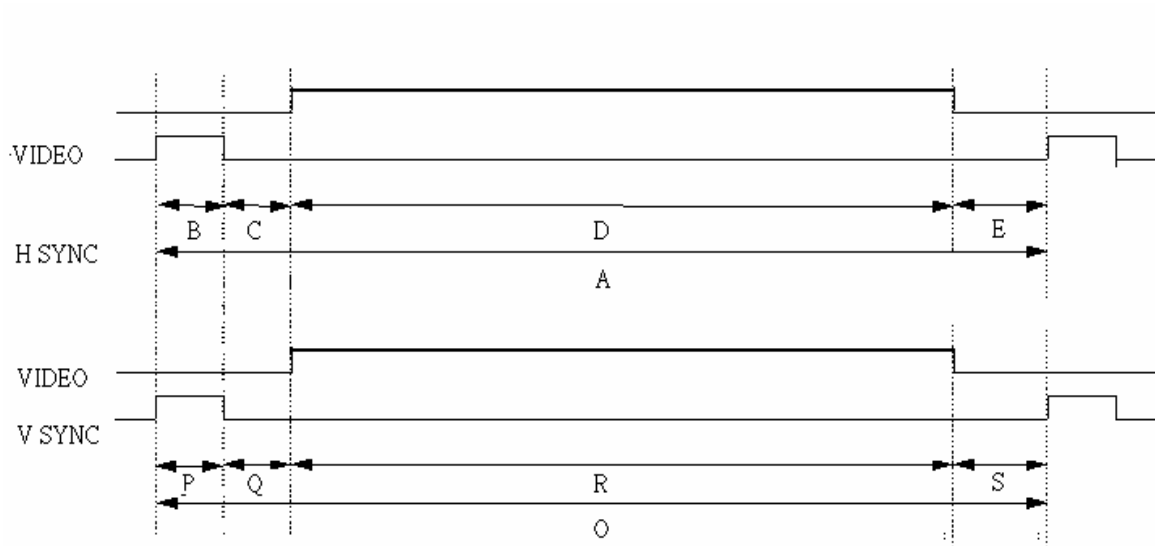
Display Format	IBM VGA		VESA	VESA	VESA	VESA	VESA
Horizontal Dots	720	640	640	640	800	800	800
Vertical lines	400	480	480	480	600	600	600
Horizontal Frequency	31.469		37.861	37.5	37.879	48.077	46.875
Vertical Frequency (Hz)	70	59.94	72.809	75	60.317	72.188	75.000
Pixel Rate (MHz)	28.322	25.175	31.5	31.5	40	50	49.5
H. Sync. Polarity	-	-	-	-	+	+	+
A μ S (Period)	31.778		26.413	26.667	26.4	20.8	21.333
B μ S (Pulse Width)	3.813		1.270	2.032	3.2	2.4	1.616
C μ S (Back Porch)	1.907		4.063	3.810	2.2	1.28	3.232
D μ S (Active Area)	25.422		20.317	20.317	20.0	16.0	16.162
E μ S (Front Porch)	0.636		0.763	0.508	1.00	1.12	0.323
V. Sync. Polarity	+	-	-	-	+	+	+
O ms (Period)	14.268	16.683	13.735	13.333	16.579	13.853	13.333
P ms (Pulse Width)	0.064	0.064	0.079	0.080	0.106	0.125	0.064
Q ms (Back Porch)	1.112	1.048	0.739	0.427	0.607	0.478	0.448
R ms (Active Area)	12.711	15.253	12.678	12.800	15.840	12.480	12.8
S ms (Front Porch)	0.381	0.318	0.237	0.027	0.026	0.770	0.021

Display Format	VESA	VESA	VESA
Horizontal Dots	1024	1024	1024
Vertical lines	768	768	768
Horizontal Frequency (KHz)	48.363	56.746	60.023
Vertical Frequency (Hz)	60.004	70.069	75.029
Pixel Rate (MHz)	65.0	75	78.75
H. Sync. Polarity	-	-	+
A μ S (Period)	20.667	17.707	16.660
B μ S (Pulse Width)	2.092	1.813	1.219
C μ S (Back Porch)	2.462	1.920	2.235
D μ S (Active Area)	15.754	13.653	13.003
E μ S (Front Porch)	0.369	0.321	0.203
V. Sync. Polarity	-	-	+
O ms (Period)	16.666	14.272	13.238
P ms (Pulse Width)	0.124	0.106	0.050
Q ms (Back Porch)	0.6	0.513	0.466
R ms (Active Area)	15.88	13.599	12.795
S ms (Front Porch)	0.062	0.054	0.017

Support Mode :

1024 x 768 @ 72Hz
800 x 600 @ 70Hz
640 x 480 @ 70Hz
640 x 350 @ 70Hz

Fig. 1 Timing Chart



3.3 Plug & Play

VESA DDC 1/2B Standard

When the PC system reset or power off to on again, the DDC 1 of monitor may be disabled to read, because the video card pulse will disturb the E² PROM of DDC, so you should be power off then power on monitor again to read DDC1. DDC 2B data transmission only For I²C BUS Interface card.

3.4 Scanning characteristics

Horizontal frequency	30KHz to 60KHz
Refresh rate	60Hz to 75Hz

3.5 Audio Module(LPC15W13AA75 / LPC15B13AA75 only)

- 3.5.1 Input Level : 1Vrms(typical),2Vrms(max)
- 3.5.2 Output Power : 1W * 2 (10% THD,1KHz)
- 3.5.3 Total Harmonic Distortion (THD).....0.3%(0.5W*2, 1KHz)
- 3.5.4 Frequency Response : 330 ~ 20KHz

3.6 User Controls and Indicator



- 3.6.1 Power ON/OFF Switch The switch interrupt the DC supply to the monitor. It shall have no effect on the operation of AC/DC adapter.
- 3.6.2 LED Indicator The LED color shall indicate power status as shown in paragraph 3.7
- 3.6.3 OSD
- 3.6.3.1 Buttons ESC, ▾, ▴, ↵
- 3.6.3.2 OSD Menu Level See Table 3.
- 3.6.4 Hot Keys Function
- 3.6.4.1 Contrast () Press “▴” to pop up; then press “▴” or “▾” to adjust Contrast up or down.
- 3.6.4.2 Brightness () Press “▾” to pop up; then press “▴” or “▾” to adjust Brightness up or down.

Table 3

Level 1	Level 2	Level 3	Level 4
Contrast (icon)	Adjustment scale		
Brightness (icon)	Adjustment scale		
Auto Tune	Adjusting		
Color	9300		
	6500		
	User	Red (icon) Green (icon) Blue (icon)	Adjustment scale Adjustment scale Adjustment scale
Quality	Size Phase Focus Dither Text / Gfx	Adjustment scale Adjustment scale Adjustment scale Yes/No Available/No Effect	
Position	Image Pos.	H. Pos. V. Pos. Center	Adjustment scale Adjustment scale Adjusting
	OSD Pos.	H. Pos. V. Pos. Center	Adjustment scale Adjustment scale Adjusting
Language	English Germany French Spanish		

	Italian		
Recall	Yes/No		

3.6.5 Accessory OSD Indications

3.6.5.1 Signal out of range	An input signal which is outside the range defined in Section 3.4 shall cause the monitor to display a message Signal Out of Range .
3.6.5.2 No Signal Input	When the signal cable is not plugged into PC or when the horizontal or vertical sync are absent and when the monitor is turned on, the monitor shall continuously display a message, No Signal Input , till 1 minutes. And then the monitor shall go to power saving status.

3.6.6 Volume Control (LPC15W13AA75/LPC15B13AA75 only)



Roll the Volume VR counterclockwise to get louder sound.

Roll the Volume VR clockwise to get quieter sound.

3.7 Power Management

This monitor will meet the low power specification, including USA governmental requirements for Energy Star, the NUTEK standard which detected the Horizontal /Vertical. sync signal from host CPU.

A dual color (green/amber) LED is located on the front bezel to indicate the power management states.

DPMS		Power consumption	Power management	Picture Recovery time	LED Color
Sync	Video				
Active	Active	25W max (LPC15W13AA75/LPC15B13AA75) 23W max (LPC15W13AA74/LPC15B13AA74)	ON	-	Green
No Sync		≤ 4W (Typical)	Power saving	≤ 3 sec	Amber

3.8 Touch Panel Module

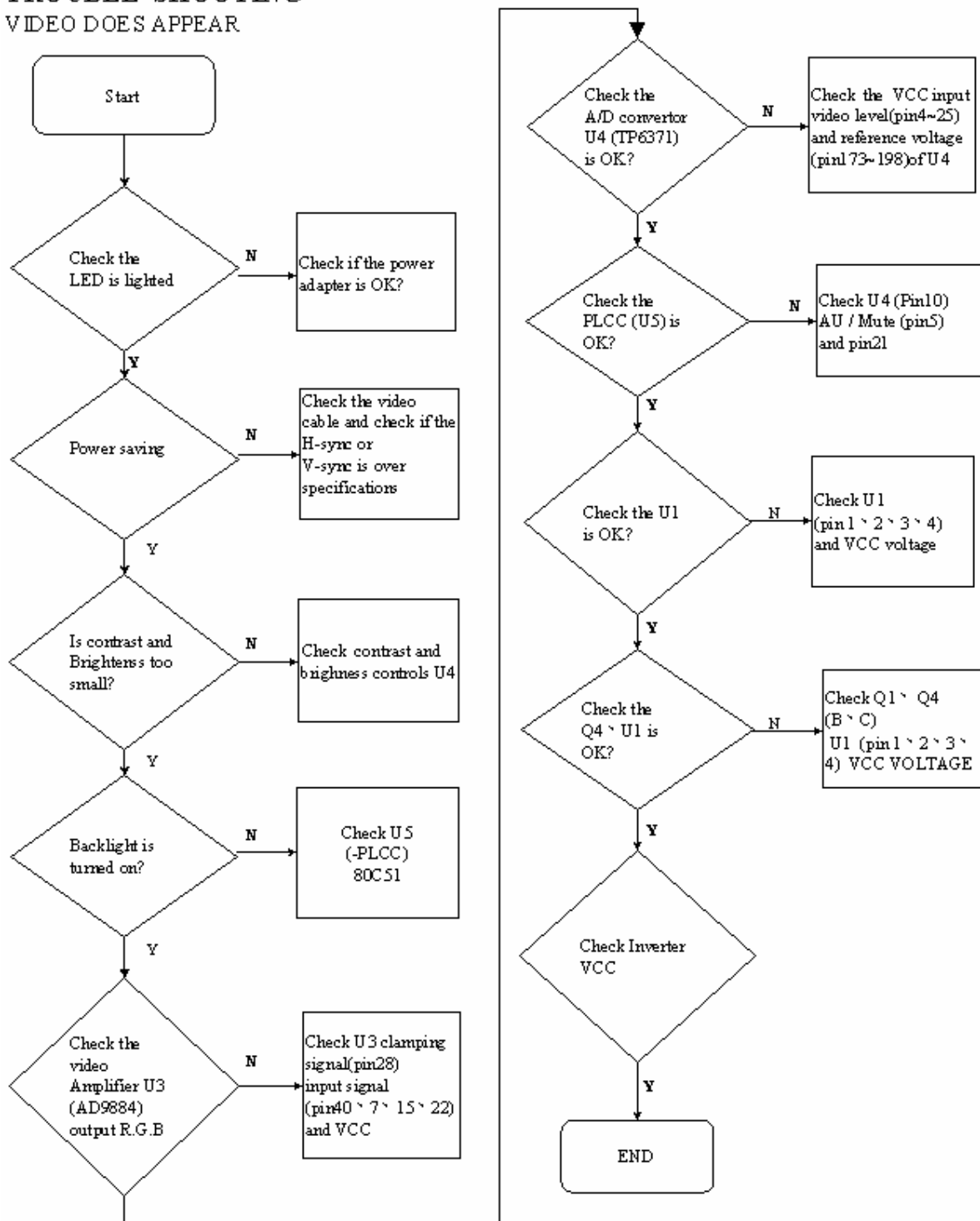
3.8.1 General	There are four major parts for touch panel system: Sensor glass, control board, driver and the touch output cable. The sensor glass install on front side of the LCD panel module and link with control Board to detect the touching position. The touching position signal through touch output cable connect with computer's RS232 interface and enable by touch panel driver .
3.8.2 Sensor	Type: 5-Wire Resistive Activation Force: 15gr ~ 40gr Linearity: Less than 1% Insulation resistance : More than 20MΩ at DC25V Contact bounce : Less than 10m sec (input by finger) Hitting Key Test: More than 35 million times Writing Test: More than 1 million times Total Light Transmission: >80% Supply Voltage: DC 5V Lead to lead resistance: 40Ω ~100Ω (between X-Y) 50Ω ~110Ω (between X-LX) 50Ω ~110Ω (between X-LY) 40Ω ~100Ω (between LX-LY)

3.8.3 Control Board-RS232	Power Requirement : 5V DC, the 5V is controlled by LCD Monitor on/off switch. Data Rate : 9600 Baud Data Input : RJ-11 PORT
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4. Trouble Shooting

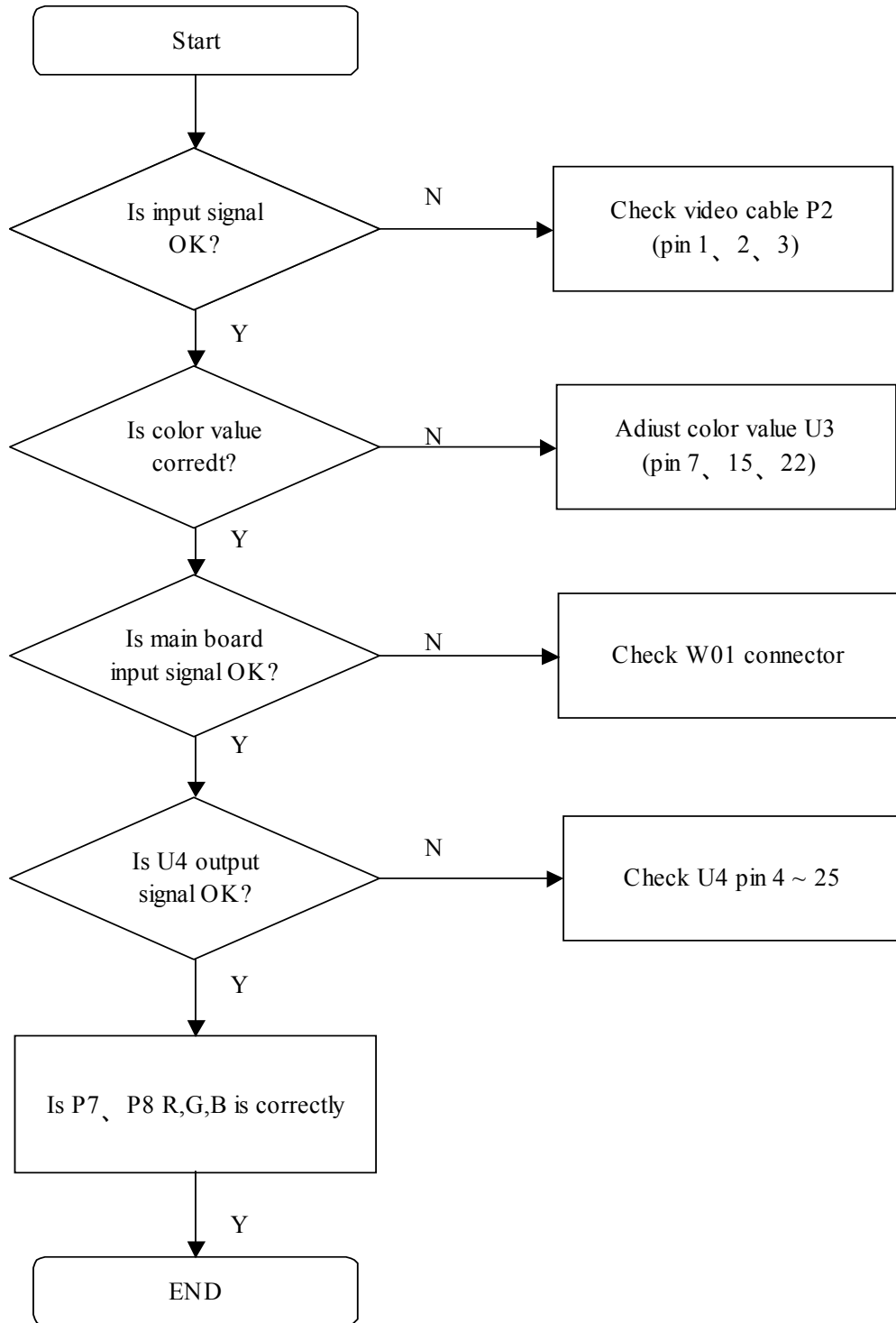
TROUBLE SHOOTING

VIDEO DOES APPEAR

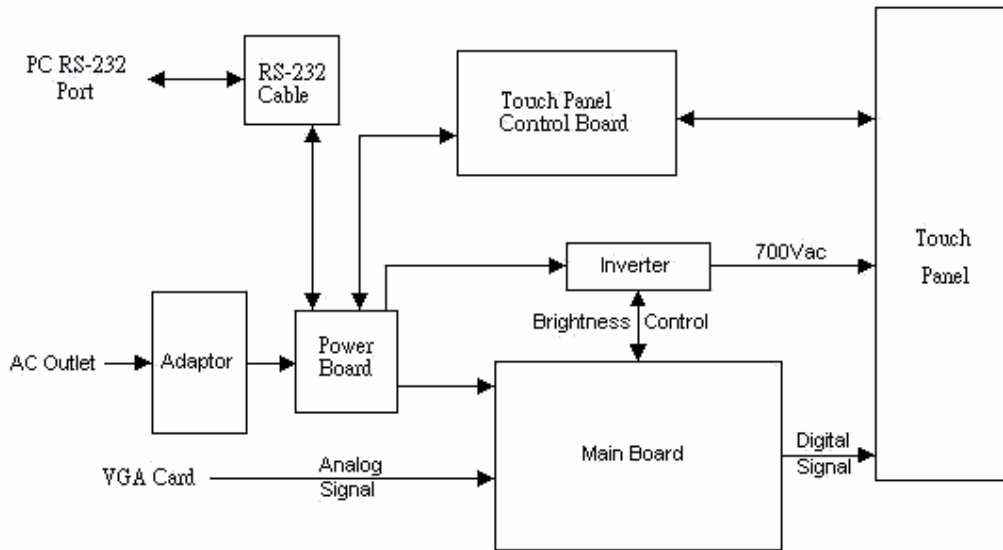


TROUBLE SHOOTING

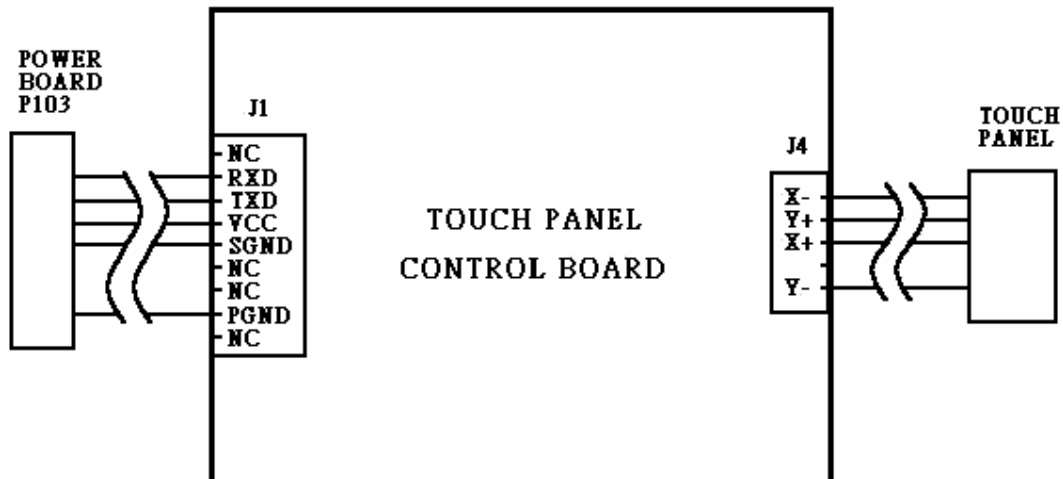
R.G.B Is Not Displayed Correctly



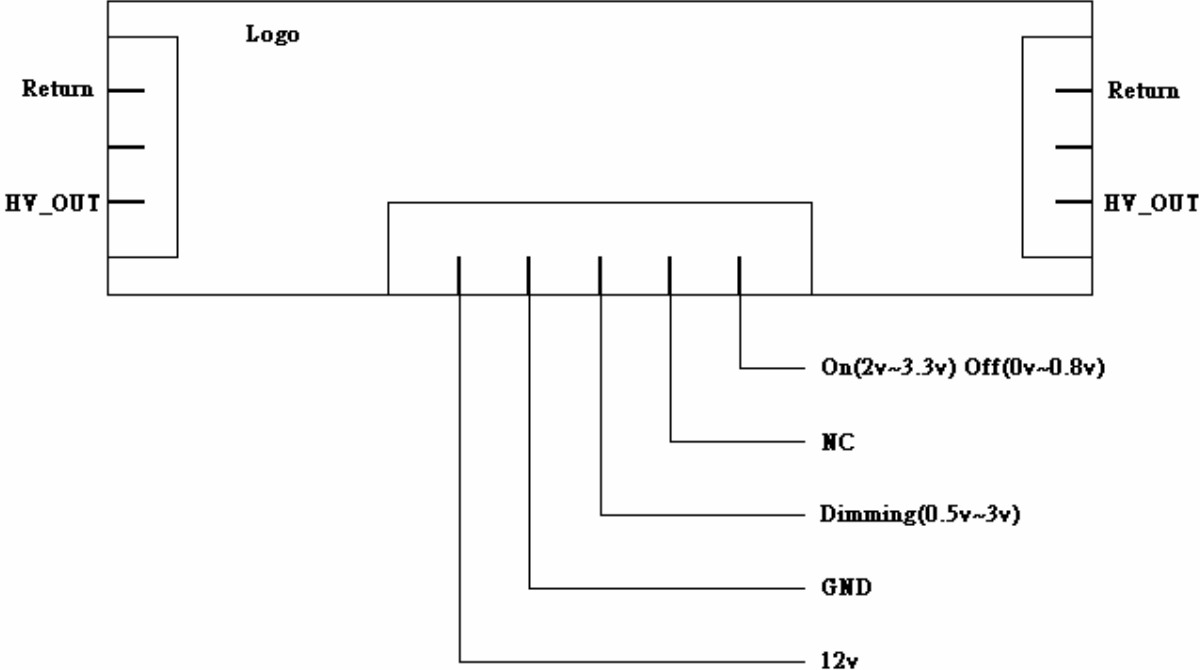
5.SYSTEM BLOCK DIAGRAM



6.Touch Panel Control Board I/O Connection

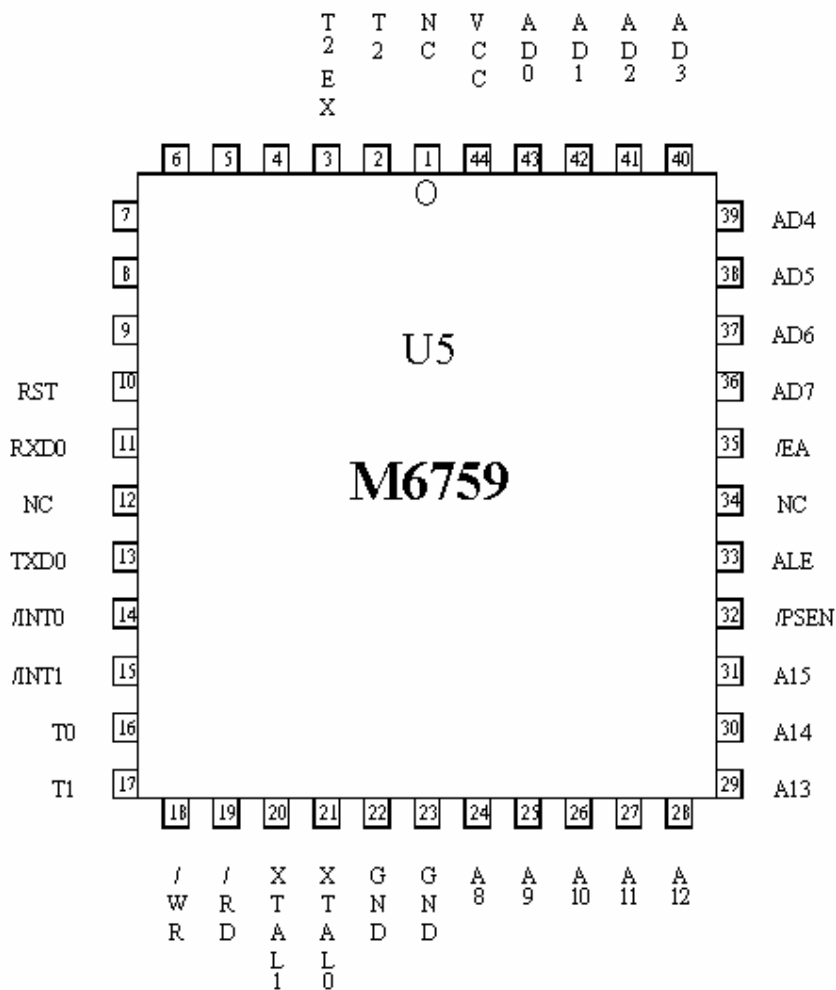
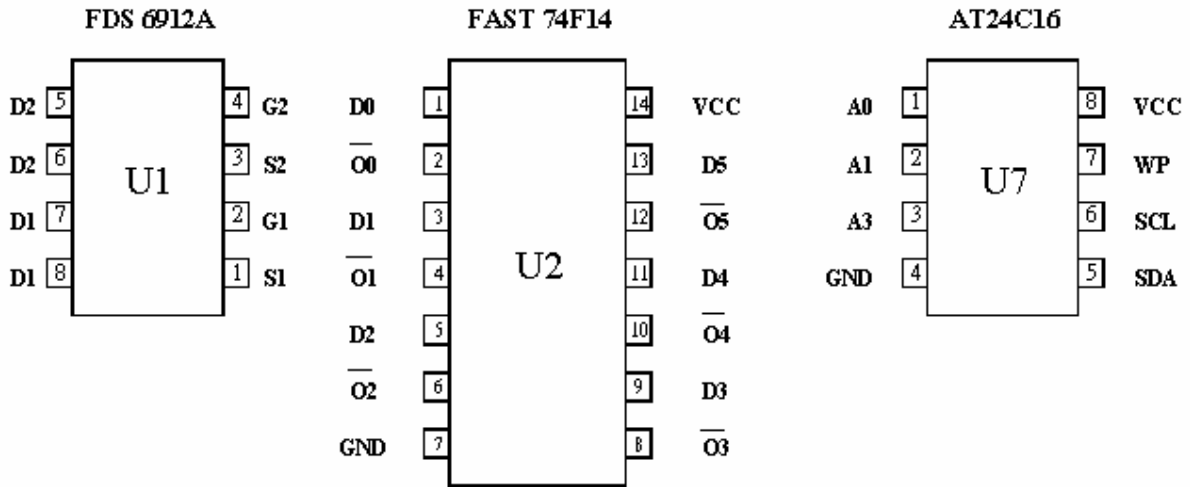


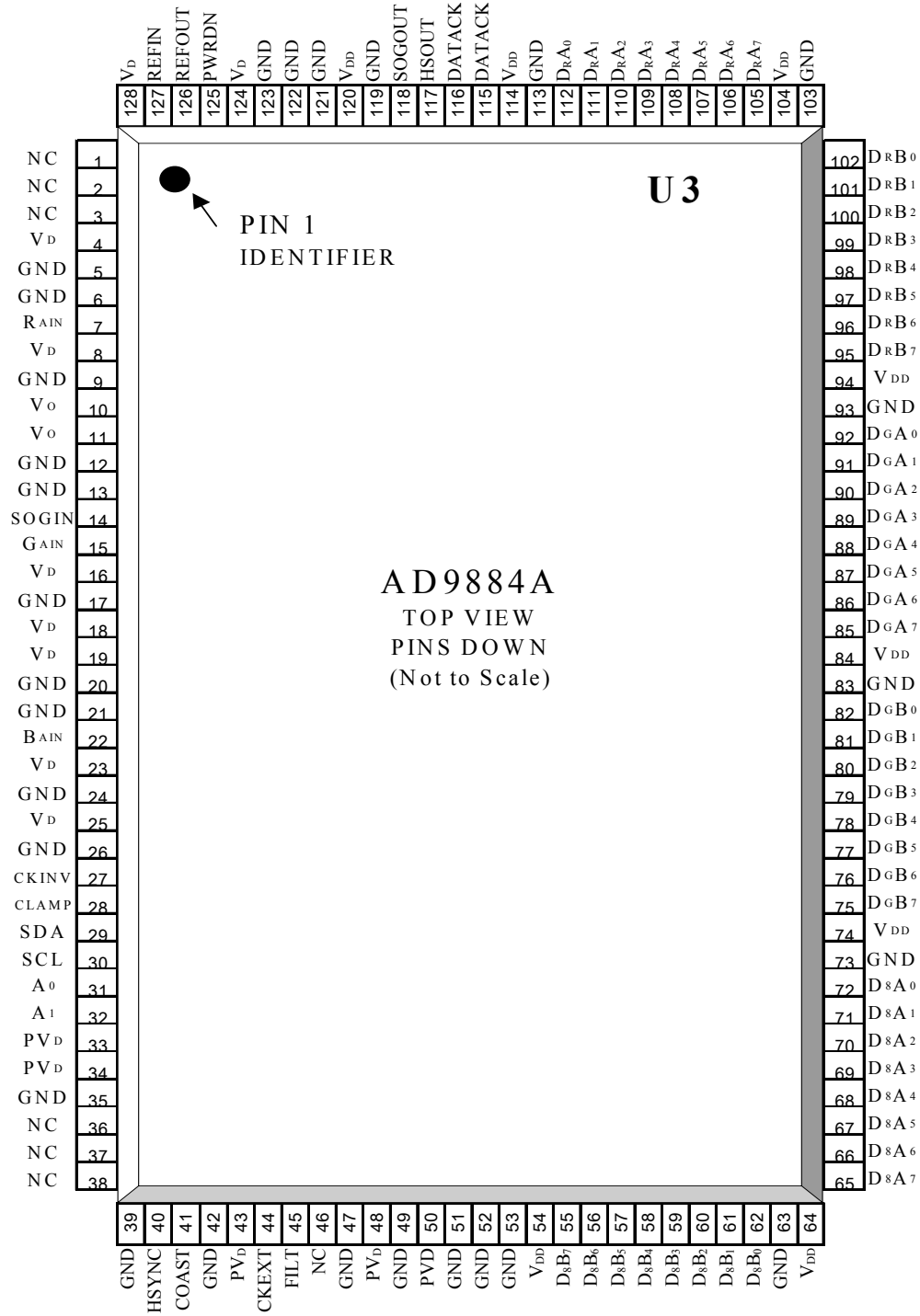
7. Inverter Board I/O Connection



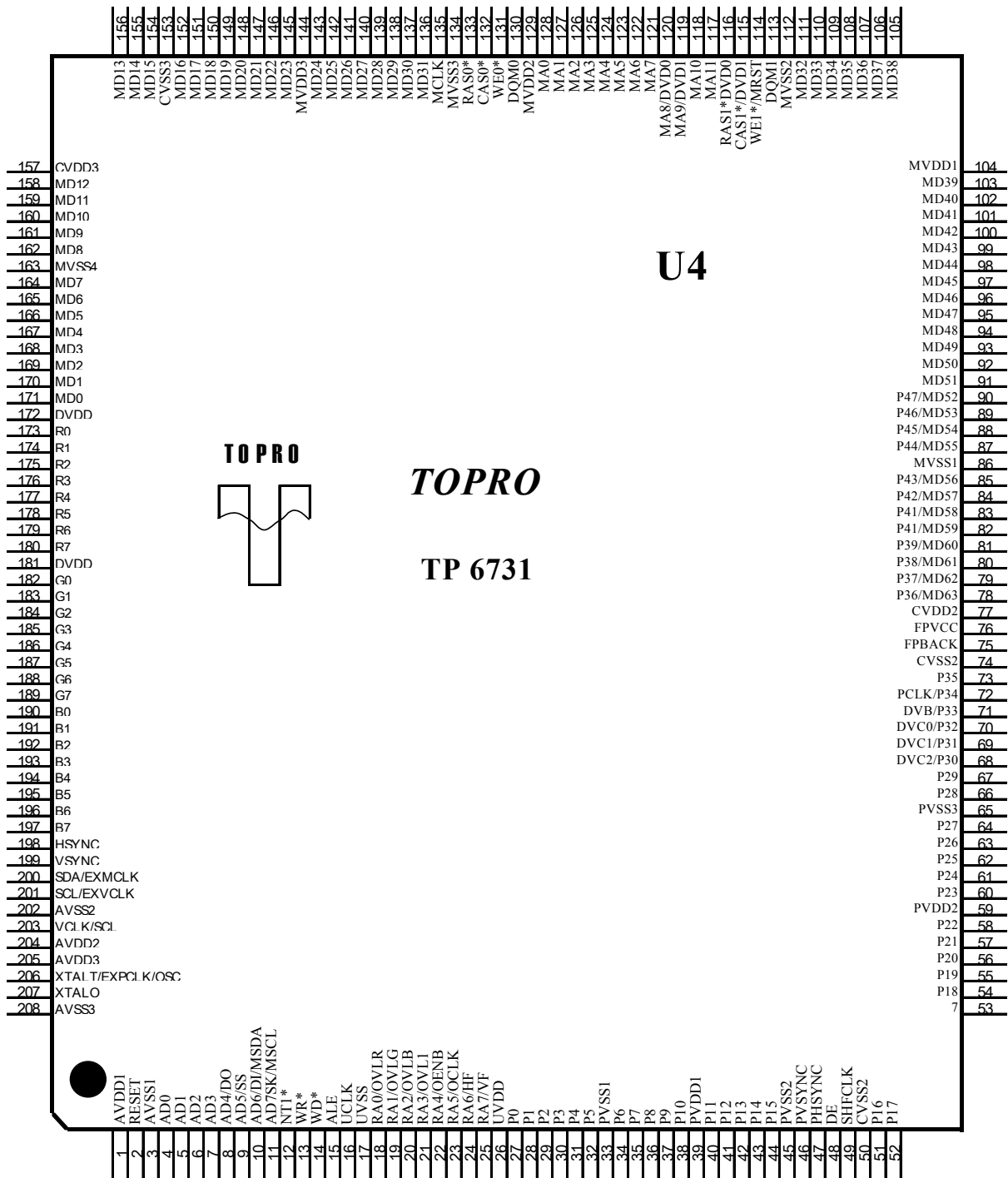
NOTE: MANUFACTURER'S NAME MUST BE ON THE PRINTED SIDE FOR THE INVERTER BOARD TO BE FACING UP.

8.Main B/D IC Pin Configuration





NC x NO CONNECT



9.Pin Assignment

TEST CONDITION: AC LINE IN: 110V/60Hz

PATTERN: FULL WHITE

Unit: Volt

IC	U1 (FDS 6912A)							
PIN	1	2	3	4	5	6	7	8
MODE								
640*480 31K/60Hz	5.19	12.01	5.19	12.01	5.19	5.19	5.19	5.19
800*600 48K/72Hz	5.19	12.01	5.19	12.01	5.19	5.19	5.19	5.19
1024*768 60K/75Hz	5.19	12.01	5.19	12.01	5.19	5.19	5.19	5.19

IC	U2 (FAST 74F14)						
PIN	1	2	3	4	5	6	7
MODE							
640*480 31K/60Hz	4.91	0.60	4.35	0.56	0.56	0.42	GND
800*600 48K/72Hz	0.11	3.99	0.66	3.45	3.45	3.42	GND
1024*768 60K/75Hz	0.06	4.02	0.47	3.62	3.62	0.56	GND

IC	U2 (FAST 7414)						
PIN	8	9	10	11	12	13	14
MODE							
640*480 31K/60Hz	4.05	0.00	4.05	0.00	3.96	0.16	5.20
800*600 48K/72Hz	4.05	0.00	4.05	0.00	0.17	4.00	5.20
1024*768 60K/75Hz	4.05	0.00	4.05	0.00	0.15	4.03	5.20

IC	U3 (AD9884A)									
PIN	1	2	3	4	5	6	7	8	9	10
MODE										
640*480 31K/60Hz	0.00	0.66	0.69	3.30	GND	GND	0.50	3.30	GND	3.30
800*600 48K/72Hz	0.00	0.67	0.68	3.30	GND	GND	0.47	3.30	GND	3.30
1024*768 60K/75Hz	0.00	0.68	0.69	3.30	GND	GND	0.51	3.30	GND	3.30

IC	U3 (AD9884A)									
PIN	11	12	13	14	15	16	17	18	19	20
MODE										
640*480 31K/60Hz	3.30	GND	GND	GND	0.48	3.30	GND	3.30	3.30	GND
800*600 48K/72Hz	3.30	GND	GND	GND	0.45	3.30	GND	3.30	3.30	GND
1024*768 60K/75Hz	3.30	GND	GND	GND	0.49	3.30	GND	3.30	3.30	GND

IC	U3 (AD9884A)									
PIN MODE	21	22	23	24	25	26	27	28	29	30
640*480 31K/60Hz	GND	0.52	3.30	GND	3.30	GND	0.00	0.00	3.96	3.97
800*600 48K/72Hz	GND	0.49	3.30	GND	3.30	GND	0.00	0.00	3.95	3.96
1024*768 60K/75Hz	GND	0.53	3.30	GND	3.30	GND	0.00	0.00	3.95	3.96

IC	U3 (AD9884A)									
PIN MODE	31	32	33	34	35	36	37	38	39	40
640*480 31K/60Hz	0.00	0.00	3.30	3.30	GND	0.00	0.00	0.00	GND	3.41
800*600 48K/72Hz	0.00	0.00	3.30	3.30	GND	0.00	0.00	0.00	GND	0.55
1024*768 60K/75Hz	0.00	0.00	3.30	3.30	GND	0.00	0.00	0.00	GND	0.41

IC	U3 (AD9884A)									
PIN MODE	41	42	43	44	45	46	47	48	49	50
640*480 31K/60Hz	0.00	GND	3.31	0.00	1.92	0.00	GND	3.31	GND	3.30
800*600 48K/72Hz	0.00	GND	3.31	0.00	1.63	0.00	GND	3.31	GND	3.30
1024*768 60K/75Hz	0.00	GND	3.31	0.00	1.29	0.00	GND	3.31	GND	3.30

IC	U3 (AD9884A)									
PIN MODE	51	52	53	54	55	56	57	58	59	60
640*480 31K/60Hz	GND	GND	GND	3.29	1.01	1.02	1.01	1.01	1.00	0.99
800*600 48K/72Hz	GND	GND	GND	3.29	1.01	1.01	1.01	1.01	0.99	0.99
1024*768 60K/75Hz	GND	GND	GND	3.29	1.01	1.01	1.01	1.01	0.99	0.99

IC	U3 (AD9884A)									
PIN MODE	61	62	63	64	65	66	67	68	69	70
640*480 31K/60Hz	0.99	0.98	GND	3.29	2.41	2.41	2.41	2.41	0.00	1.98
800*600 48K/72Hz	0.99	0.98	GND	3.29	2.29	2.29	2.29	2.29	0.00	2.31
1024*768 60K/75Hz	0.99	0.98	GND	3.29	2.47	2.47	2.48	2.46	0.00	2.43

IC	U3 (AD9884A)									
PIN MODE	71	72	73	74	75	76	77	78	79	80
640*480 31K/60Hz	1.04	1.07	GND	3.29	0.70	0.69	0.68	0.68	0.69	0.69
800*600 48K/72Hz	1.21	1.14	GND	3.29	0.69	0.68	0.68	0.68	0.68	0.70
1024*768 60K/75Hz	0.74	2.63	GND	3.29	0.69	0.68	0.68	0.69	0.68	0.70

IC	U3 (AD9884A)									
PIN	81	82	83	84	85	86	87	88	89	90
MODE										
640*480 31K/60Hz	0.70	0.68	GND	3.29	2.41	2.41	0.00	2.41	2.41	0.00
800*600 48K/72Hz	0.70	0.68	GND	3.29	2.29	2.26	0.00	2.28	2.29	0.00
1024*768 60K/75Hz	0.70	0.68	GND	3.29	2.47	2.47	0.00	2.47	2.46	0.00

IC	U3 (AD9884A)									
PIN	91	92	93	94	95	96	97	98	99	100
MODE										
640*480 31K/60Hz	2.33	0.13	GND	3.29	0.37	0.36	0.36	0.36	0.35	0.33
800*600 48K/72Hz	2.29	0.15	GND	3.29	0.37	0.37	0.36	0.36	0.36	0.33
1024*768 60K/75Hz	2.44	2.34	GND	3.29	0.37	0.36	0.36	0.36	0.36	0.34

IC	U3 (AD9884A)									
PIN	101	102	103	104	105	106	107	108	109	110
MODE										
640*480 31K/60Hz	0.33	0.32	GND	3.29	2.41	2.41	2.41	0.00	0.34	2.20
800*600 48K/72Hz	0.34	0.33	GND	3.29	2.29	2.29	2.29	0.00	0.00	2.35
1024*768 60K/75Hz	0.35	0.33	GND	3.29	2.48	2.47	2.47	0.00	2.44	0.21

IC	U3 (AD9884A)									
PIN	111	112	113	114	115	116	117	118	119	120
MODE										
640*480 31K/60Hz	2.95	2.33	GND	3.29	1.74	1.79	0.40	0.00	GND	3.29
800*600 48K/72Hz	2.55	2.02	GND	3.29	1.77	1.70	1.65	0.00	GND	3.29
1024*768 60K/75Hz	0.48	0.52	GND	3.29	1.75	1.72	0.25	0.00	GND	3.29

IC	U3 (AD9884A)									
PIN	121	122	123	124	125	126	127	128		
MODE										
640*480 31K/60Hz	GND	GND	GND	3.30	3.97	1.24	1.24	3.30		
800*600 48K/72Hz	GND	GND	GND	3.30	3.97	1.24	1.24	3.30		
1024*768 60K/75Hz	GND	GND	GND	3.30	3.97	1.24	1.24	3.30		

IC	U4 (TP 6731)									
PIN	1	2	3	4	5	6	7	8	9	10
MODE										
640*480 31K/60Hz	3.29	0.00	0.00	5.19	5.19	5.19	5.19	5.19	5.19	5.19
800*600 48K/72Hz	3.29	0.00	0.00	5.19	5.19	5.19	5.19	5.19	5.19	5.19
1024*768 60K/75Hz	3.29	0.00	0.00	5.19	5.19	5.19	5.19	5.19	5.19	5.19

IC	U4 (TP 6731)									
PIN	11	12	13	14	15	16	17	18	19	20
MODE										
640*480 31K/60Hz	5.19	5.19	5.19	5.19	1.72	1.72	0.00	5.18	5.18	5.18
800*600 48K/72Hz	5.19	5.19	5.19	5.19	1.72	1.72	0.00	5.18	5.18	5.18
1024*768 60K/75Hz	5.19	5.19	5.19	5.19	1.72	1.72	0.00	5.18	5.18	5.18

IC	U4 (TP 6731)									
PIN	21	22	23	24	25	26	27	28	29	30
MODE										
640*480 31K/60Hz	5.18	5.18	5.19	5.19	5.19	5.19	0.91	0.17	1.92	0.59
800*600 48K/72Hz	5.18	5.18	5.19	5.19	5.19	5.19	0.91	0.03	1.78	0.04
1024*768 60K/75Hz	5.18	5.18	5.19	5.19	5.19	5.19	0.09	1.37	1.42	1.73

IC	U4 (TP 6731)									
PIN	31	32	33	34	35	36	37	38	39	40
MODE										
640*480 31K/60Hz	3.27	3.28	0.00	2.34	2.34	0.85	0.02	2.33	3.29	0.02
800*600 48K/72Hz	3.27	2.25	0.00	2.25	3.28	1.02	0.02	2.14	3.29	0.02
1024*768 60K/75Hz	3.27	3.28	0.00	3.28	3.28	0.27	1.26	1.67	3.29	1.13

IC	U4 (TP 6731)									
PIN	41	42	43	44	45	46	47	48	49	50
MODE										
640*480 31K/60Hz	2.33	2.34	2.34	2.34	0.00	0.05	0.42	2.34	1.20	0.00
800*600 48K/72Hz	2.24	2.25	2.24	2.25	0.00	0.04	0.35	2.26	1.39	0.00
1024*768 60K/75Hz	3.25	3.28	3.29	3.28	0.00	0.04	0.34	2.41	1.33	0.00

IC	U4 (TP 6731)									
PIN	51	52	53	54	55	56	57	58	59	60
MODE										
640*480 31K/60Hz	0.47	0.22	3.29	1.57	0.05	0.91	3.28	2.34	3.29	2.33
800*600 48K/72Hz	0.47	0.13	3.29	1.64	0.65	0.00	2.26	2.24	3.29	3.28
1024*768 60K/75Hz	0.02	0.13	3.29	1.64	0.12	0.00	3.28	3.28	3.29	3.28

IC	U4 (TP 6731)									
PIN	61	62	63	64	65	66	67	68	69	70
MODE										
640*480 31K/60Hz	0.81	0.26	2.13	0.01	0.00	0.01	2.34	2.34	2.34	0.86
800*600 48K/72Hz	1.09	0.12	1.84	0.09	0.00	0.01	2.25	2.23	2.25	0.25
1024*768 60K/75Hz	0.39	0.82	1.49	1.03	0.00	0.05	3.23	3.28	3.28	0.36

IC	U4 (TP 6731)									
PIN	71	72	73	74	75	76	77	78	79	80
MODE										
640*480 31K/60Hz	0.28	0.44	2.84	0.00	3.28	0.01	3.29	0.94	3.28	2.34
800*600 48K/72Hz	0.14	0.32	2.47	0.00	3.28	0.00	3.29	0.00	2.25	2.25
1024*768 60K/75Hz	1.01	1.34	3.27	0.00	3.28	0.00	3.29	0.00	3.28	3.28

IC	U4 (TP 6731)									
PIN	81	82	83	84	85	86	87	88	89	90
MODE										
640*480 31K/60Hz	2.35	0.96	0.16	0.42	2.12	0.00	0.01	2.34	2.35	2.347
800*600 48K/72Hz	3.28	0.96	0.13	0.31	1.57	0.00	0.01	2.25	2.26	2.26
1024*768 60K/75Hz	3.28	0.71	0.78	0.95	3.23	0.00	0.01	3.27	3.28	3.28

IC	U4 (TP 6731)									
PIN	91	92	93	94	95	96	97	98	99	100
MODE										
640*480 31K/60Hz	1.65	1.65	1.65	1.65	1.65	1.66	1.66	1.66	1.66	1.66
800*600 48K/72Hz	1.64	1.65	1.65	1.65	1.65	1.65	1.65	1.66	1.66	1.66
1024*768 60K/75Hz	1.66	1.65	1.65	1.65	1.65	1.65	1.65	1.66	1.66	1.66

IC	U4 (TP 6731)									
PIN	101	102	103	104	105	106	107	108	109	110
MODE										
640*480 31K/60Hz	1.66	1.67	1.66	3.29	0.29	0.58	0.81	0.84	0.86	0.77
800*600 48K/72Hz	1.66	1.67	1.67	3.29	0.29	0.55	0.81	0.77	0.83	0.75
1024*768 60K/75Hz	1.66	1.67	1.66	3.29	0.34	0.64	0.96	0.95	0.97	0.87

IC	U4 (TP 6731)									
PIN	111	112	113	114	115	116	117	118	119	120
MODE										
640*480 31K/60Hz	0.79	0.00	0.00	0.00	0.36	0.36	0.02	0.00	0.00	0.00
800*600 48K/72Hz	0.81	0.00	0.00	0.00	0.36	0.36	0.08	0.00	0.00	0.00
1024*768 60K/75Hz	0.88	0.00	0.00	0.00	0.36	0.36	0.11	0.00	0.00	0.00

IC	U4 (TP 6731)									
PIN	121	122	123	124	125	126	127	128	129	130
MODE										
640*480 31K/60Hz	0.69	0.74	0.76	0.74	0.86	0.75	0.75	0.83	3.29	0.00
800*600 48K/72Hz	0.61	0.63	0.77	0.79	0.76	0.77	0.75	0.85	3.29	0.00
1024*768 60K/75Hz	0.22	0.71	0.79	1.14	0.86	0.83	0.75	0.93	3.29	0.00

IC	U4 (TP 6731)									
PIN	131	132	133	134	135	136	137	138	139	140
MODE										
640*480 31K/60Hz	2.37	2.41	3.29	0.00	1.82	3.26	3.26	0.48	3.26	3.26
800*600 48K/72Hz	2.52	2.52	3.29	0.00	1.87	3.26	3.26	0.48	3.26	3.26
1024*768 60K/75Hz	2.33	2.26	3.29	0.00	1.84	3.26	3.26	0.48	3.26	3.26

IC	U4 (TP 6731)									
PIN	141	142	143	144	145	146	147	148	149	150
MODE										
640*480 31K/60Hz	3.26	3.26	3.27	3.29	3.27	3.27	3.27	3.27	3.26	3.26
800*600 48K/72Hz	3.26	3.26	3.27	3.29	3.27	3.27	3.27	3.26	3.26	3.26
1024*768 60K/75Hz	3.26	3.26	3.27	3.29	3.27	3.27	3.27	3.26	3.26	3.26

IC	U4 (TP 6731)									
PIN	151	152	153	154	155	156	157	158	159	160
MODE										
640*480 31K/60Hz	3.26	3.26	0.00	3.26	3.25	3.25	3.29	3.28	3.28	3.28
800*600 48K/72Hz	3.26	3.26	0.00	3.26	3.25	3.25	3.29	3.28	3.28	3.28
1024*768 60K/75Hz	3.26	3.26	0.00	3.26	3.25	3.25	3.29	3.28	3.28	3.28

IC	U4 (TP 6731)									
PIN	161	162	163	164	165	166	167	168	169	170
MODE										
640*480 31K/60Hz	3.28	0.50	0.00	0.48	3.28	3.28	3.28	0.47	0.48	3.28
800*600 48K/72Hz	3.28	0.50	0.00	0.48	3.28	3.28	3.28	0.47	0.48	3.28
1024*768 60K/75Hz	3.28	0.50	0.00	0.48	3.28	3.28	3.28	0.47	0.48	3.28

IC	U4 (TP 6731)									
PIN	171	172	173	174	175	176	177	178	179	180
MODE										
640*480 31K/60Hz	3.28	0.00	2.32	3.10	2.47	0.03	0.00	2.41	2.41	2.41
800*600 48K/72Hz	3.28	0.00	1.53	2.67	2.35	0.00	0.00	2.29	2.26	2.29
1024*768 60K/75Hz	3.28	0.00	0.53	0.66	0.28	2.41	0.00	2.46	2.48	2.47

IC	U4 (TP 6731)									
PIN	181	182	183	184	185	186	187	188	189	190
MODE										
640*480 31K/60Hz	3.29	0.06	2.40	0.00	2.41	2.41	0.00	2.41	2.41	1.10
800*600 48K/72Hz	3.29	0.36	2.28	0.00	2.29	2.29	0.00	2.29	2.29	1.21
1024*768 60K/75Hz	3.29	2.25	2.27	0.31	2.46	2.48	0.00	2.48	2.47	2.57

IC	U4 (TP 6731)									
PIN	191	192	193	194	195	196	197	198	199	200
MODE										
640*480 31K/60Hz	1.16	1.59	0.00	2.41	2.41	2.41	2.41	3.39	3.90	2.40
800*600 48K/72Hz	1.14	1.72	0.00	2.29	2.29	2.29	2.29	0.55	0.17	2.65
1024*768 60K/75Hz	0.77	2.49	0.00	2.46	2.47	2.47	2.48	0.40	0.15	1.60

IC	U4 (TP 6731)									
PIN	201	202	203	204	205	206	207	208		
MODE										
640*480 31K/60Hz	1.73	0.00	5.09	3.29	3.29	1.45	1.51	0.00		
800*600 48K/72Hz	1.68	0.00	5.02	3.29	3.29	1.45	1.51	0.00		
1024*768 60K/75Hz	1.72	0.00	5.10	3.29	3.29	1.46	1.51	0.00		

IC	U5 (M6759)										
PIN	1	2	3	4	5	6	7	8	9	10	11
MODE											
640*480 31K/60Hz	0.00	4.15	4.15	3.99	5.19	5.19	5.19	5.19	5.19	0.00	5.19
800*600 48K/72Hz	0.00	4.15	4.15	3.99	5.19	5.19	5.19	5.19	5.19	0.00	5.19
1024*768 60K/75Hz	0.00	4.15	4.15	3.99	5.19	5.19	5.19	5.19	5.19	0.00	5.19

IC	U5 (M6759)										
PIN	12	13	14	15	16	17	18	19	20	21	22
MODE											
640*480 31K/60Hz	0.00	5.19	5.19	5.19	0.04	5.19	5.19	5.19	2.74	1.74	0.00
800*600 48K/72Hz	0.00	5.19	5.19	5.19	0.04	5.19	5.19	5.19	2.74	1.74	0.00
1024*768 60K/75Hz	0.00	5.19	5.19	5.19	0.04	5.19	5.19	5.19	2.74	1.74	0.00

IC	U5 (M6759)										
PIN	23	24	25	26	27	28	29	30	31	32	33
MODE											
640*480 31K/60Hz	0.00	5.19	5.19	5.19	5.19	5.19	5.19	5.19	5.19	5.19	1.72
800*600 48K/72Hz	0.00	5.19	5.19	5.19	5.19	5.19	5.19	5.19	5.19	5.19	1.72
1024*768 60K/75Hz	0.00	5.19	5.19	5.19	5.19	5.19	5.19	5.19	5.19	5.19	1.72

IC	U5 (M6759)										
PIN	34	35	36	37	38	39	40	41	42	43	44
MODE											
640*480 31K/60Hz	0.00	5.19	5.19	5.19	5.19	5.19	5.19	5.19	5.19	5.19	5.19
800*600 48K/72Hz	0.00	5.19	5.19	5.19	5.19	5.19	5.19	5.19	5.19	5.19	5.19
1024*768 60K/75Hz	0.00	5.19	5.19	5.19	5.19	5.19	5.19	5.19	5.19	5.19	5.19

IC	U7 (AC24C16)							
PIN	1	2	3	4	5	6	7	8
MODE								
640*480 31K	0.00	0.00	0.00	GND	5.19	5.19	0.00	5.19
800*600 48K	0.00	0.00	0.00	GND	5.19	5.19	0.00	5.19
1024*768 60K	0.00	0.00	0.00	GND	5.19	5.19	0.00	5.19

POWER/BOARD

TEST CONDITION : AC LINE IN: 110V/60Hz
 PATTERN: FULL WHITE

Unit: Volt

IC	U101							
PIN	1	2	3	4	5	6	7	8
MODE								
640*480 31K	7.76	12.06	0.96	1.00	0.18	1.40	0.97	0.00
800*600 48K	7.74	12.05	0.96	1.00	0.18	1.41	0.97	0.00
1024*768 60K	7.73	12.05	0.96	1.00	0.18	1.41	0.97	0.00

TR	Q101			Q102			Q103		
PIN	G	D	S	E	C	B	E	C	B
MODE									
640*480 31K	7.78	5.62	12.05	7.77	12.05	7.83	7.78	0.00	7.84
800*600 48K	7.75	5.62	12.05	7.75	12.05	7.82	7.78	0.00	7.82
1024*768 60K	7.75	5.62	12.05	7.75	12.05	7.82	7.76	0.00	7.82

TR	Q104		
PIN	E	B	C
MODE			
640*480 31K	0.02	0.18	0.00
800*600 48	0.02	0.18	0.00
1024*768 60K	0.02	0.18	0.00

10.RECOMMENDED SPARE PARTS LIST (PV500T)

ITEM	PART NUMBER	DESCRIPTION
1	AC1500-B04	MAIN PCBA
2	DC1510-T02	POWER PCBA
3	EC1720-A02	INTERFACE A/V PCBA
4	GC1510-A02	DISPLAY PCBA
5	10C15-0D1A	LCD TOUCH PANEL
6	47100-0030S	INVERTER
7	0800049002	CABINET BACK
8	0820102000	CABINET FRONT
9	7110144100	FUNCTION KEY
10	7500145005	SHIELD COVER
11	7620175200	BRACKET FIXING PLATE
12	SSBASE-502	SUB ASSY BASE(FOR PV500T)
13	SZADPT-028	SUB-Z ASSY ADAPTER
14	0400725300	CARTON 483*257*532
15	0430040300	CUSHION (R)
16	0430041300	CUSHION (L)
17	0430042300	CUSHION (T/B)
18	0430044300	CUSHION (BASE)
19	0430045300	PANEL PROTECTION
20	0430046300	CUSHION
21	65R00-1500Z	CABLE RS232
22	65S10-1504	CABLE SIGNAL

11.RECOMMENDED SPARE PARTS LIST(PV500BT/BAT)

ITEM	PART NUMBER	DESCRIPTION
1	AC1500-B04	MAIN PCBA
2	DC1510-T02	POWER PCBA
3	EC1720-A02	INTERFACE A/V PCBA
4	GC1510-A02	DISPLAY PCBA
5	10C15-0D1A	LCD TOUCH PANEL
6	47100-0030S	INVERTER
7	0800049003	CABINET BACK(BLACK)
8	0820102001	CABINET FRONT(BLACK)
9	7111144100	FUNCTION KEY(BLACK)
10	7500145005	SHIELD COVER
11	7620175200	BRACKET FIXING PLATE
12	SSBASE-417	SUB ASSY BASE(FOR PV500BT/BAT)
13	SZADPT-028	SUB-Z ASSY ADAPTER
14	0400725300	CARTON 483*257*532
15	0430040300	CUSHION (R)
16	0430041300	CUSHION (L)
17	0430042300	CUSHION (T/B)
18	0430044300	CUSHION (BASE)
19	0430045300	PANEL PROTECTION
20	0430046300	CUSHION
21	65R00-1500Z	CABLE RS232
22	65S10-1504	CABLE SIGNAL
23	AS00AV-008	SMART MEDIUM SYSTEM (FOR PV500BAT SPAEAKER)