Acer AL2023 (Dual)

Service Guide

Service guide files and updates are available on the CSD web: for more information,
Please refer to http://csd.acer.com.tw/

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Disclaimer

Conventions

The following conventions are used in this manual:

Screen messages	Denotes actual messages that appear on screen
Note	Gives bits and pieces of additional information related to the current topic.
Warning	Alerts you to any damage that might result from doing or not doing specific actions.
Caution	Gives precautionary measures to avoid possible hardware or software problems.
Important	Reminds you to do specific actions relevant to the accomplishment of procedures.

Preface

Before using this information and the product it supports, please read the following general information.

1.   This Service Guide provides you with all technical information relating to BASICCONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.

2.   Please not WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide, for ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

WARNING: (FOR FCC CERTIFIED MODELS)

NOTE: this equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, Which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

NOTICE:

1. The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
2. Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.
3. The manufacturer is not responsible for any radio or TV interference caused by unauthorized modification to this equipment. It is the responsibility of the user to correct such interference.

As an ENERGY STAR® Partner our company has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

WARNING:

To prevent fire or chock hazard, do not expose the monitor to rain or moisture. Dangerously high voltages are present inside the monitor. Do not open the cabinet. Refer servicing to qualified personnel only.

PRECAUTIONS

- Do not use the monitor near water, e.g. near a bathtub, washbowl, kitchen sink, laundry tub, Swimming pool or in a wet basement.

- Do not place the monitor on an unstable trolley, stand, or table. If the monitor falls, it can injure a person and cause serious damage to the appliance. Use only a trolley or stand recommended by the manufacture or sold with the monitor. If you mount the monitor on a wall or shelf, use a mounting kit approved by the manufacture and follow the kit instructions.

- Slots and openings in the back and bottom of the cabinet area provided for ventilation. To ensure reliable operation of the monitor and to protect it from overheating, be sure these openings are not blocked or covered. Do not place the monitor on a bed, sofa, rug or similar surface. Do not place the monitor near or over a radiator or heat register. Do not place the monitor in a bookcase or cabinet unless proper ventilation is provided.

- The monitor should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.

- The monitor is equipped with a three-pronged grounded plug, a plug with a third (grounding) pin. This plug will fit only into a grounded power outlet as a safety feature. If your outlet does not accommodate the three-wire plug, have an electrician install the correct outlet, or use an adapter to ground the appliance safely. Do not defeat the safety purpose of the grounded plug.

- Unplug the unit during a lightning storm or when it will not be used for long periods of time. This will protect the monitor from damage due to power surges.

- Do not overload power strips and extension cords. Overloading can result in fire or electric shock.

- Never push any object into the slot on the monitor cabinet. It could short circuit parts causing a fire or electric shock. Never spill liquids on the monitor.

- Do not attempt to service the monitor yourself; opening or removing covers can expose you to dangerous voltages and other hazards. Please refer all servicing to qualified service personnel.

- To ensure satisfactory operation, use the monitor only with UL listed computers which have appropriate configured receptacles marked between 100-240V AC, Min. 3.5A.

- The wall socket shall be installed near the equipment and shall be easily accessible.

- For use only with the attached power adapter (output 12V DC) which have UL,CSA listed license

SPECIAL NOTES ON LCD MONITORS

The following symptoms are normal with LCD monitor and do not indicate a problem.

NOTES

- Due to the nature of the fluorescent light, the screen may flicker during initial use. Turn off the Power Switch and then turn it on again to make sure the flicker disappears.
- You may find slightly uneven brightness in the screen depending on the desktop pattern you use.
- The LCD screen has effective pixels of 99.99% or more. It may include blemishes of 0.01% or less such as a missing pixel or a pixel lit all of the time.
- Due to the nature of the LCD screen, an afterimage of the previous screen may remain after switching the image, when the same image is displayed for hours. In this case, the screen is recovered slowly by changing the image or turning off the Power Switch for hours.

Table of contents

Chapter 1

Monitor Feature

	Driving system	TFT Color LCD
	Size	20"
	Pixel pitch	0.294 mm
	Viewable angle	Samsung: 89/89/89/89 degree(typ.)
		LG: 89/89/89/89 degree(typ.)
LCD Panel	Brightness	Samsung LTM201U1-L01: 300 cd/m^2(typ.)
		LG LM201U05-SLA1: 300 cd/m^2(typ.)
	Contrast Ratio	800:1 (Samsung LTM201U1-L01)
		800:1(LG LM201U05-SLA1)
	Response time	Samsung LTM201U1-L01 16ms, LG LM201U05-SLA1 16ms
	Video	R,G,B Analog,
Input	Separate Sync	H/V TTL
	H-Frequency	31-81KHZ
	V-Frequency	56-75HZ
Display Color		16.2 million Colors
Maximum Dot Clock ®		162MHz
Max Resolution		1600x1200@75HZ
Plug & Play		VESA DDC2B
	ON Mode	<60W
EPA ENERGY STAY	OFF Mode	<2W
Audio output		Rated Power 2.0W rms(Per channel)
Input Connector		D-Sub, DVI-D
Input Video Signal		Analog : 0.7Vp-p,75OHM
		Horizontal : 408mm
Screen Size (Active)		Vertical : 306mm
Power Source		90~264 Vac, 47~63HZ

Environmental Considerations		Operating Temp : 5 to 40 degree ; Storage Temp : -20 to 60 degree ; Operating Humidity : 10% to 85%
Weight (N.W.)		453.6(W)x427.6(H)x202.58mm(D)
Dimension		6.4kg

External Controls	Switch	* Power Switch * MENU / EXIT * < / Volume * > / Volume * AUTO / ENTER
		* Contrast/brightness * Focus * Clock * H.Position * W.Position * Language * OSD Color temperature * OSD Position & Timeout * Auto Config * Input * Information * Reset * Exit
Regulatory Compliance		cUL, FCC, TUV, CE, ISO13406-2

Timings

The product has 28 memory modes in total. 18 modes are preset and 10 modes are user definable.

MODE NO.	1	2	3	4
RESOLUTION	720 x 400	640 x 480	640x480	640 x 480
Dot clock(MHz)	28.321	25.175	30.24	31.5

f h	**31.469kHz**	**31.469kHz**	**35.0kHz**	**37.861kHz**
H-Total (us)	31.78(900dots)	31.778 (800 dots)	28.571(864 dots)	26.413 (832 dots)
H-Sync (us)	3.813(108dots)	3.813 (96 dots)	2.116 (64 dots)	1.270(40 dots)
H-B-P (us)	1.907(54dots)	1.907 (48 dots)	3.175 (96 dots)	4.064(128 dots)
H-Active (us)	25.42(720dots)	25.422 (640 dots)	21.164 (640 dots)	20.317(640 dots)
H-F-P (us)	0.636(18dots)	0.636 (16 dots)	2.116 (64 dots)	0.762(24 dots)
f v	**70Hz(70.087)**	**60Hz (59.940)**	**66.7 HZ (66.667)**	**72.809Hz**
V-Total (ms)	14.27(449 lines)	16.683 (525 lines)	15.000 (525 lines)	13.735(520 lines)
V-Sync (ms)	0.064(2 lines)	0.064 (2 lines)	0.086 (3 lines)	0.079(3 lines)
V-B-P (ms)	1.112(35 lines)	1.049 (33 lines)	1.114 (39 lines)	0.739(28 lines)
V-Active (ms)	12.71(400 lines)	15.253 (480 lines)	13.714 (480 lines)	12.678(480 lines)
V-F-P (ms)	0.384(12 lines)	0.317 (10 lines)	0.086 (3 lines)	0.237(9 lines)
SYNC. H/V POLARITY	-/+	- / -	+/+ Or -/-	-/-
SEP . SYNC	Y	Y	Y	Y
MODE NO.	**5**	**6**	**7**	**8**
RESOLUTION	**640 x 480**	**800 x 600**	**800 x 600**	**800 x 600**
Dot clock(MHz)	**31.5**	**36**	**40**	**49.5**
f h	**37.500kHz**	**35.16kHz**	**37.879kHz**	**46.875kHz**
H-Total (us)	26.667(840 dots)	28.44(1024 dots)	26.40 (1056 dots)	21.333 (1056dots)
H-Sync (us)	2.032 (64 dots)	2.00(72 dots)	3.200 (128 dots)	1.616 (80 dots)
H-B-P (us)	3.810 (120 dots)	3.56(128 dots)	2.200 (88 dots)	3.232 (160 dots)
H-Active (us)	20.317 (640dots)	22.22(800 dots)	20.00 (800 dots)	16.162 (800 dots)

|				
H-F-P (us)	0.508 (16 dots)	0.67(24 dots)	1.000 (40 dots)	0.323 (16 dots)
f v	**75Hz (75)**	**56.25**	**60Hz (60.316)**	**75Hz (75.000)**
V-Total (ms)	13.333 (500 lines)	17.78(625 lines)	16.58 (628 lines)	13.333 (625lines)
V-Sync (ms)	0.080 (3 lines)	0.06(2 lines)	0.106 (4 lines)	0.064 (3 lines)
V-B-P (ms)	0.427 (16 lines)	0.63(22 lines)	0.607 (23 lines)	0.448 (21 lines)
V-Active (ms)	12.80 (480 lines)	17.07(600 lines)	15.84 (600 lines)	12.80 (600lines)
V-F-P (ms)	0.027 (1 line)	0.03(1 line)	0.026 (1 line)	0.021 (1 line)
SYNC. H/V POLARITY	- / -	+/+	+ / +	+ / +
SEP . SYNC	Y	Y	Y	Y
MODE NO.	**9**	**10**	**11**	**12**
RESOLUTION	**800 x 600**	**832 x 624**	**1024 x 768**	**1024 x 768**
Dot clock(MHz)	**50**	**57.283**	**65**	**75**
f h	**48.077kHz**	**49.72kHz**	**48.363kHz**	**56.48kHz**
H-Total (us)	20.80 (1040dots)	20.11(1152 dots)	20.677(1344 dots)	17.71(1328 dots)
H-Sync (us)	2.400 (120 dots)	1.12(64 dots)	2.092(136 dots)	1.81(136 dots)
H-B-P (us)	1.280 (64 dots)	3.91(224 dots)	2.462(160 dots)	1.92(144 dots)
H-Active (us)	16.00 (800 dots)	14.52(832 dots)	15.754(1024 dots)	13.65(1024 dots)
H-F-P (us)	1.120 (56 dots)	0.56(32 dots)	0.369(24 dots)	0.32(24 dots)
f v	**72Hz (72.188)**	**74.55Hz**	**60.004Hz**	**70.07Hz**
V-Total (ms)	13.85 (666 lines)	13.41(667 lines)	16.666(806 lines)	14.27(806 lines)
V-Sync (ms)	0.125 (6 lines)	0.06(3 lines)	0.124(6 lines)	0.11(6 lines)
V-B-P (ms)	0.478 (23 lines)	0.78(39 lines)	0.600(29 lines)	0.51(29 lines)

V-Active (ms)	12.48 (600 lines)	12.55 (624 lines)	15.880(768 lines)	13.60(768 lines)
V-F-P (ms)	0.770 (37 lines)	0.02(1 line)	0.062(3 lines)	0.05(3 lines)
SYNC. H/V POLARITY	+ / +	+/+	-/-	-/-
SEP . SYNC	Y	Y	Y	Y

MODE NO.	13	14	15	16
RESOLUTION	1024 x 768	1280 x 1024	1280 x 1024	1152 x 864
Dot clock(MHz)	78.75	108	135	108
f h	60.02kHz	63.981kHz	79.976KHz	67.5 KHz
H-Total (us)	16.66(1312 dots)	15.630 (1688 dots)	12.504 (1688 dots)	14.815(1600 dots)
H-Sync (us)	1.22 (96 dots)	1.037 (112 dots)	1.067 (144 dots)	1.185(128 dots)
H-B-P (us)	2.23 (176 dots)	2.296 (248 dots)	1.837 (248 dots)	2.370(256 dots)
H-Active (us)	13.00 (1024 dots)	11.852 (1280 dots)	9.481 (1280dots)	10.667(1152 dots)
H-F-P (us)	0.20 (16 dots)	0.444 (48 dots)	0.119 (16 dots)	0.593(64 dots)
f v	75.03Hz	60.020Hz	75.025 Hz	75.06 Hz
V-Total (ms)	13.33 (800 lines)	16.661 (1066 lines)	13.329 (1066 lines)	13.333(900 lines)
V-Sync (ms)	0.05 (3 lines)	0.047 (3 lines)	0.038 (3 lines)	0.044(3 lines)
V-B-P (ms)	0.47 (28 lines)	0.594 (38 lines)	0.475 (38 lines)	0.474(32 lines)
V-Active (ms)	12.80 (768 lines)	16.005 (1024 lines)	12.804(1024 lines)	12.800(864 lines)
V-F-P (ms)	0.02 (1 lines)	0.016 (1 line)	0.013 (1 lines)	0.015(1 lines)
SYNC. H/V POLARITY	+/+	+/+	+/+	+/+
SEP . SYNC	Y	Y	Y	Y
MODE NO.	17	18		

RESOLUTION	1280 x 960	1600 x 1200
Dot clock(MHz)	108	162
f h	60.000 KHz	75.000 KHz
H-Total (us)	16.667 (1800dots)	13.333 (2160 dots)
H-Sync (us)	1.037 (112 dots)	1.185 (192 dots)
H-B-P (us)	2.889 (312 dots)	1.877 (304 dots)
H-Active (us)	11.852 (1280 dots)	9.877 (1600 dots)
H-F-P (us)	0.889 (96 dots)	0.395 (64 dots)
f v	60.00Hz	60.00 Hz
V-Total (ms)	16.667 (1000 lines)	16.667 (1250 lines)
V-Sync (ms)	0.050 (3 lines)	0.040 (3 lines)
V-B-P (ms)	0.600 (36 lines)	0.613 (46 lines)
V-Active (ms)	16.000 (960 lines)	16.000 (1200 lines)
V-F-P (ms)	0.017 (1 line)	0.013 (1 line)
SYNC. H/V	+ / +	+ / +
POLARITY		
SEP . SYNC	Y	Y

A ———— : H-Total   O   : V-Total

B   : H- Sync width   P   : V- Sync width

C   : H- Back porch   Q   :.V- Back porch

D   : H- Video width   R   : V- Video width

E   : H- Front porch   S   :.V- Front porch

Monitor Block Diagram
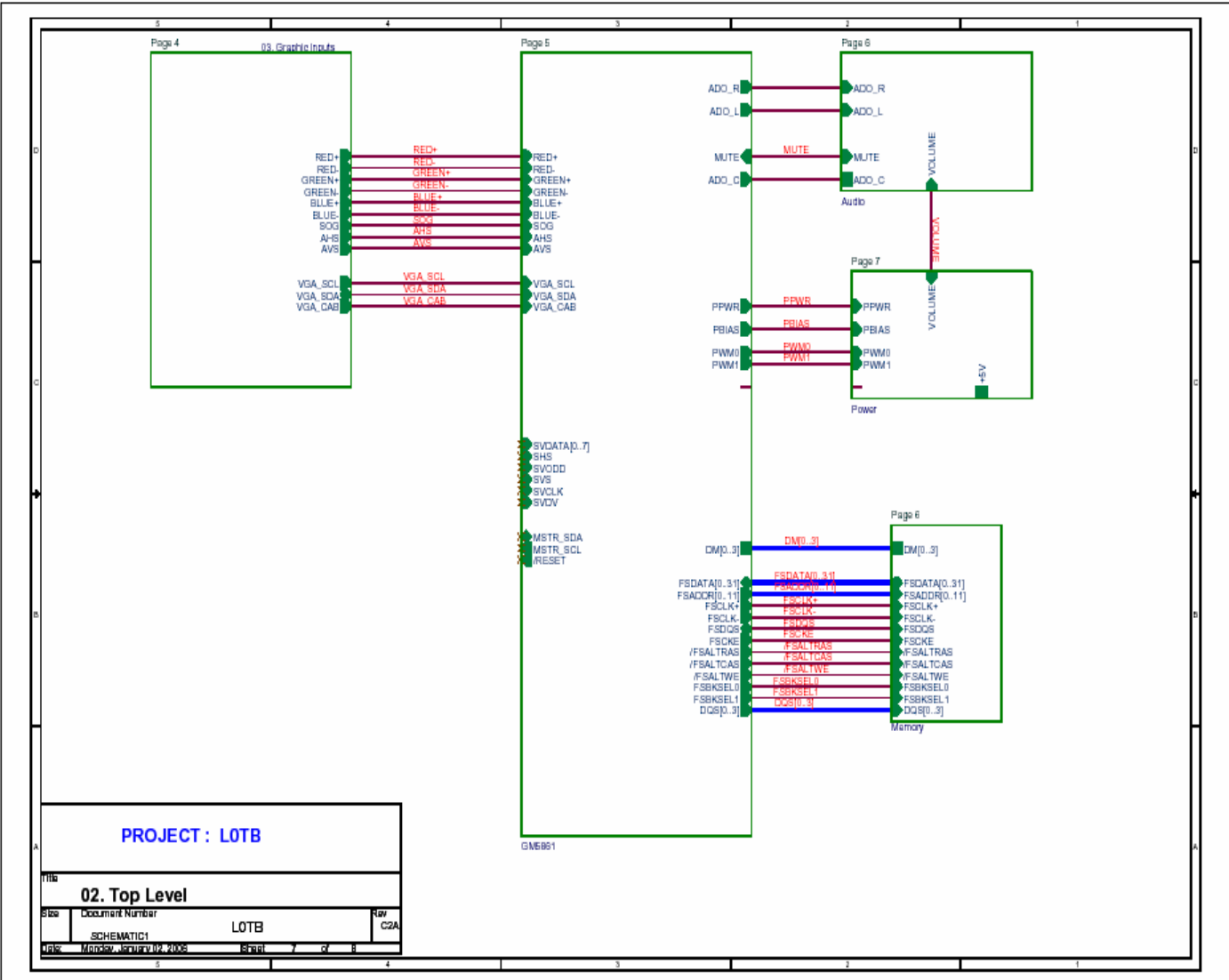
PCB CONDUCTOR VIEW
Main Board

DAL0TBMB031
REV:C

GP
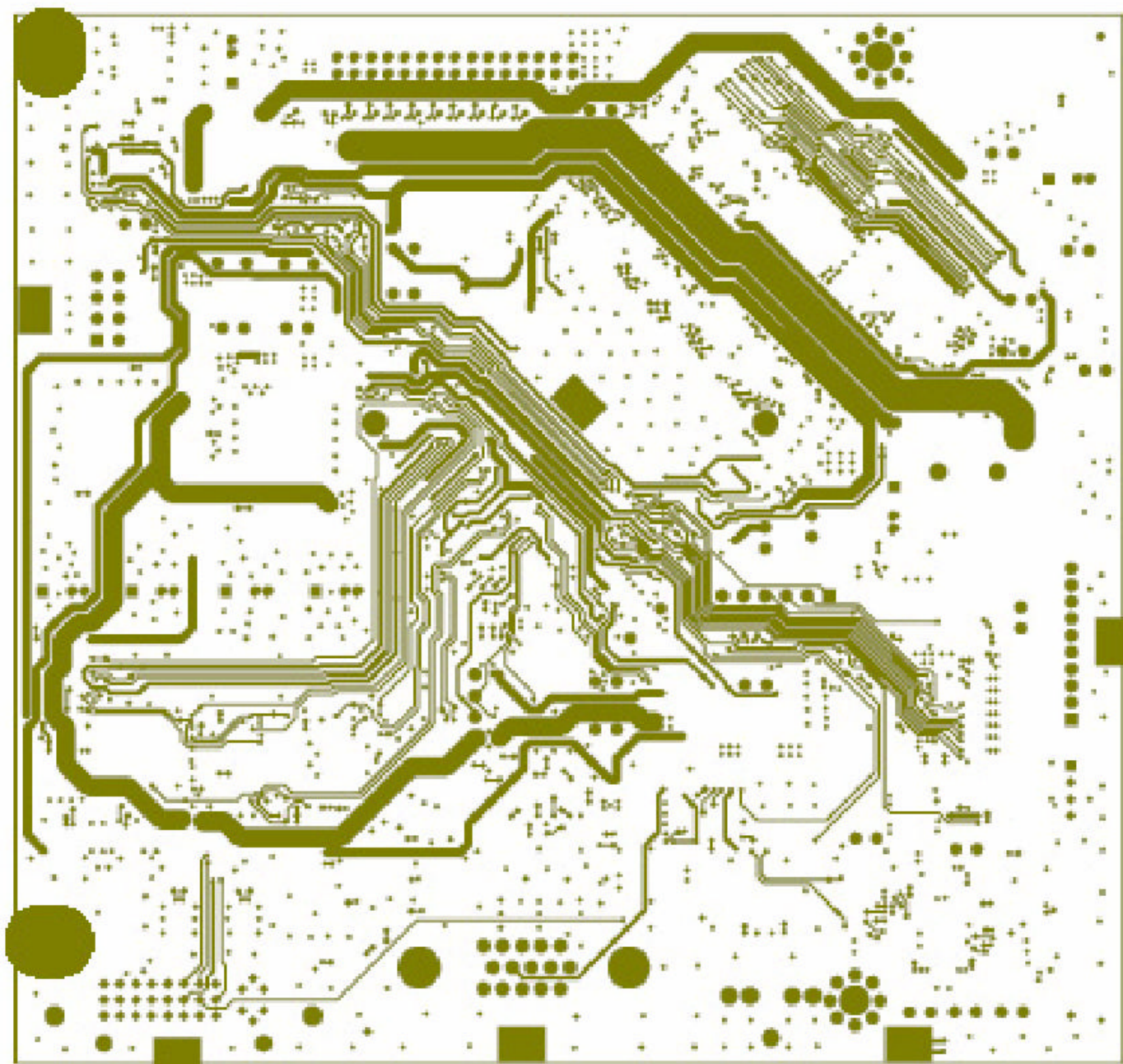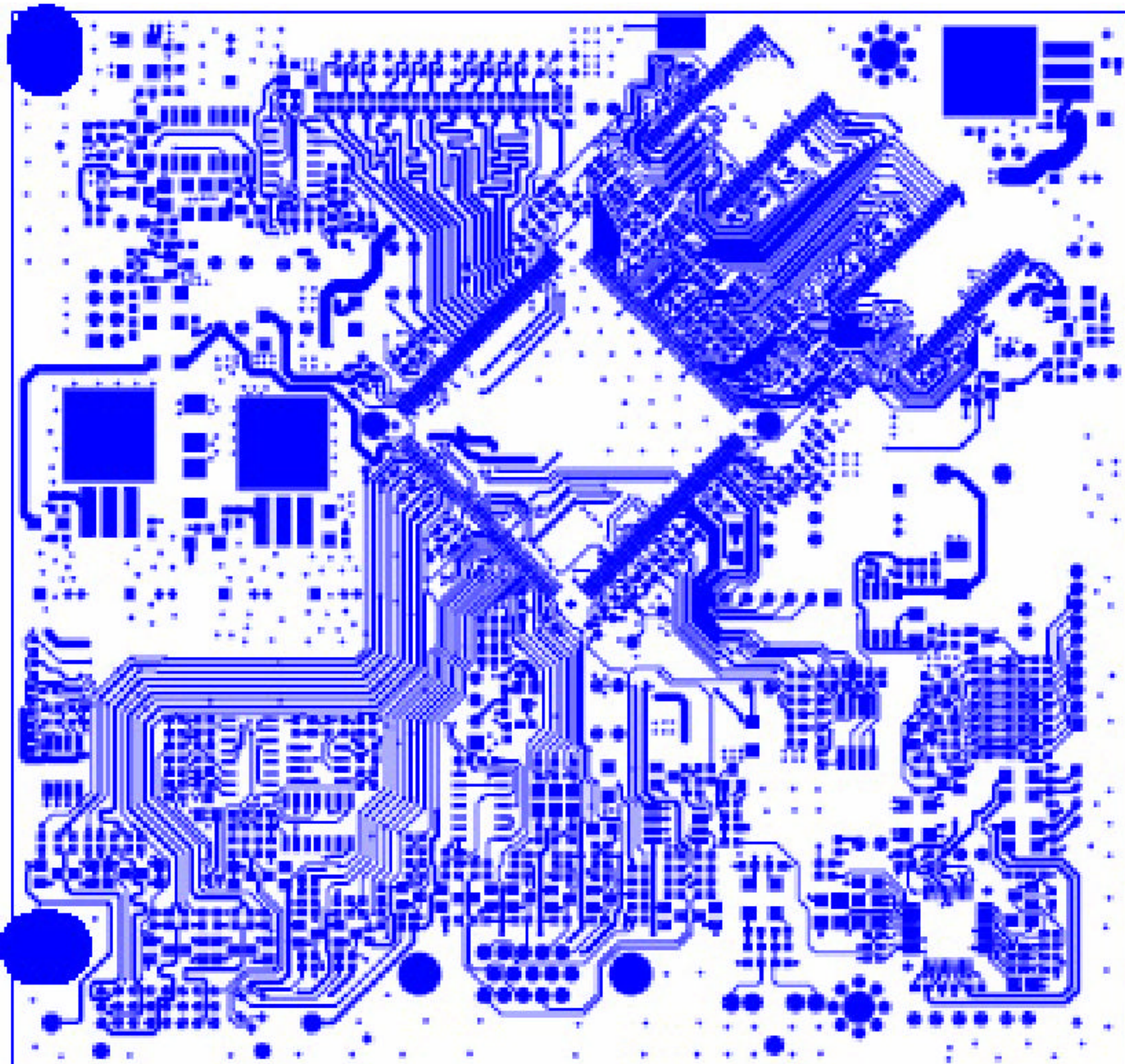
Button board
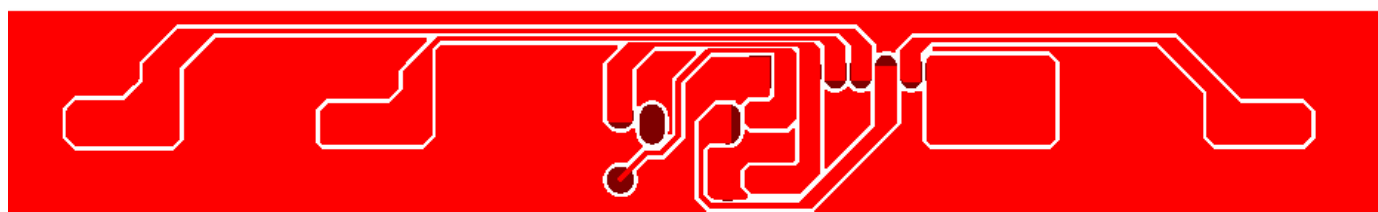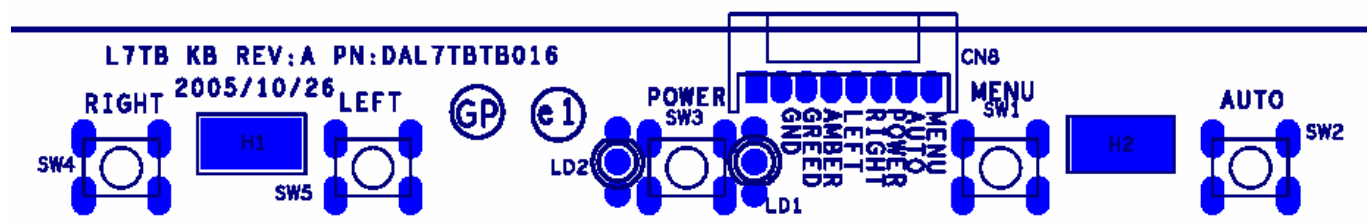
OPERATING INSTRUCTIONS

Front Panel Definition

This Section defines the front panel User Interface for Led Indictor and Key function.

Key Definition:

There are five keys defined in this system and described bellows.

External Controls

1	⏻	POWER	Power on/off Blue: power on Orange: in sleep mode
2	MENU	OSD Function	Press to view OSD. Press again to exit a selection in OSD.
3	<	UP/ PLUS	If OSD is active, press to select or adjust OSD options. If OSD is inactive, press once, then press the buttons marked ∧ or ∨ to adjust the volume.
4	>	DOWN / MINUS	If OSD is active, press to select or adjust OSD options. If OSD is inactive, press once, then press the buttons marked ∧ or ∨ to adjust the volume.
5	AUTO	AUTO	If OSD is active, press to enter a selection in OSD. If OSD is inactive, press and the monitor will automatically optimize the position, focus and clock of your display.

OSD Menu
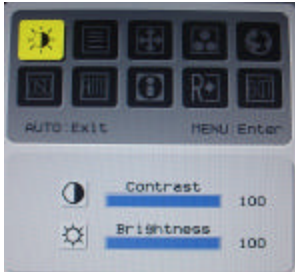
 Picture

Brightness:

This adjusts the brightness of the picture on the screen.

Contrast:

This adjusts dark and light shades of color relative to each other to achieve a comfortable contrast.

Color temp. :

There are three ways of adjusting color:

Warm (Reddish white)

Cool (Bluish white)

User : You can adjust the colors red, green and blue to the intensity you desire.

Focus:

This removes any horizontal distortion and makes the picture clear and sharp.

Clock:

If there are any vertical stripes seen on the background of the screen this renders them less noticeable by minimizing their size. It also changes the size of the horizontal screen.

H-Position:

This adjusts the horizontal screen position.

V-Position:

This adjusts the vertical screen position.
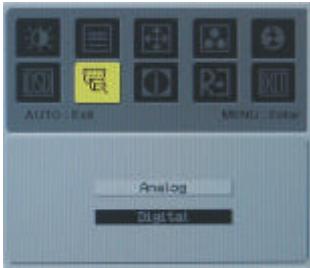
Option

Auto Config. :

System choose signal "Analog or Digital"

Reset:

Recall to default settings.
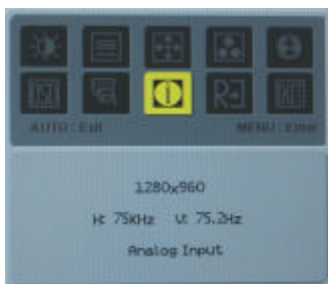
Information:

This shows brief information on the screen.

Setting

Language:

Select the OSD menu language from

English, French, German, Italian, Spanish, Simplified Chinese, Traditional Chinese, Japanese and Russian.

OSD H. Position

OSD V. Position

OSD Time-out

This changes the position of the OSD window on the screen and staying time.

LED Definition

The system equips one dual color (blue/amber) led to indict system status and defined as bellows :

LED Color	System Status
Green	System in normal operation mode
Amber	System in power-saving mode
Dark	System in power-off mode

LOGO :

When the monitor is power on, the LOGO will be showed in the center, and disappear slowly.

HOW TO OPTIMIZE THE DOS-MODE

Plug and play

Plug & play DDC2B feature

This monitor is equipped with VESA DDC2B capabilities according to the VESA DDC STANDARD. It allows the monitor to inform the host system of its identity and, depending on the level of DDC used, communicate additional information about its display capabilities. The communication channel is defined in two levels, DDC2B.

The DDC2B is a bi-directional data channel based on the I^2C protocol. The host can request EDID information over the DDC2B channel.

THIS MONITOR WILL APPEAR TO BE NON-FUNCTIONAL IF THERE IS NO VIDEO INPUT SIGNAL. IN ORDER FOR THIS MONITOR TO OPERATE PROPERLY, THERE MUST BE A VIDEO INPUT SIGNAL.

This monitor meets the Green monitor standards as set by the Video Electronics Standards Association(VESA) and/or the United States Environmental Protection Agency (EPA) and The Swedish Confederation Employees (NUTEK). This feature is designed to conserve electrical energy by reducing power consumption when there is no video-input signal present. When there is no video input signal this monitor, following a time-out period, will automatically switch to an OFF mode. This reduces the monitor's internal power supply consumption. After the video input signal is restored, full power is restored and the display is automatically redrawn. The appearance is similar to a "Screen Saver" feature except the display is completely off. The display is restored by pressing a key on the keyboard, or clicking the mouse.

USING THE RIGHT POWER CORD

The accessory power cord for the Northern American region is the wallet plug with NEMA 5-15 style and is UL listed and CSA labeled. The voltage rating for the power cord shall be 125 volt AC.
Supplied with units intended for connection to power outlet of personal computer: Please use a cord set consisting of a minimum No. 18 AWG, type SJT or SVT three conductors flexible cord. One end terminates with a grounding type attachment plug, rated 10A, 250V,CEE-22 male configuration. The other end terminates with a molded-on type connector body, rated 10A, 250V, having standard CEE-22 female configuration.
Please note that power supply card needs to use VDE 0602, 0625, 0821 approval power cord in European counties.

Machine assembly

This chapter contains step-by-step procedures on how to assemble the monitor for maintenance and trouble shooting

NOTE : 1. The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding to avoid mismatch when putting back the components.

    2. Note : The monitor surface is susceptible to scratching! Therefore, lay the monitor on a soft surface when mounting or removing the base.
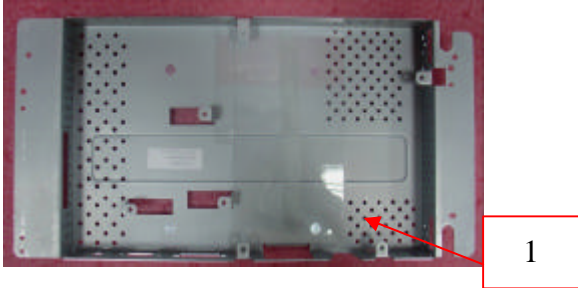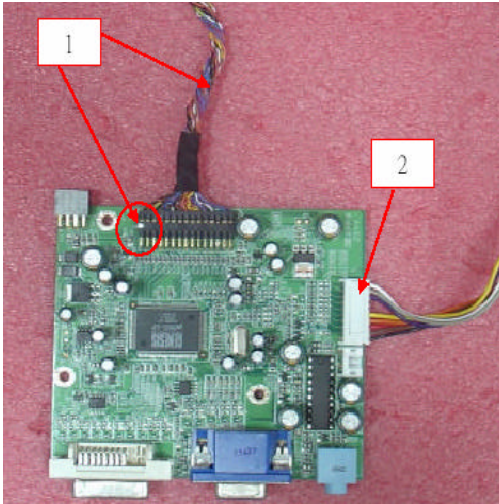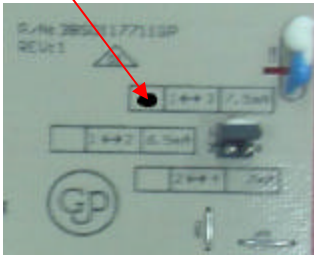
    3. Wear gloves.

    Front View :   **(unit : mm)**

    Real View :

    Top View :

    Side View :   **(unit : mm)**

Assembly process

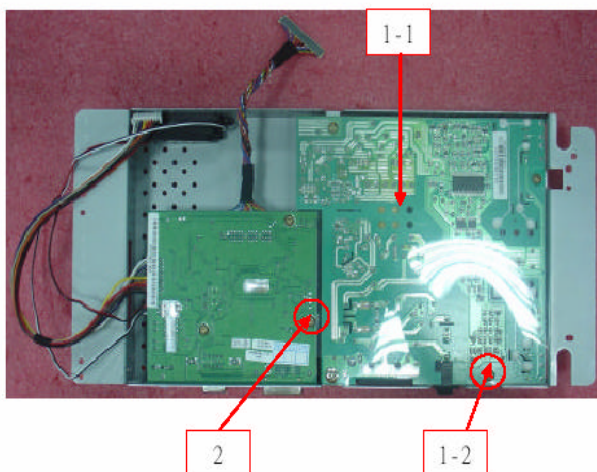| Picture	Description
	1. [GET PCB SHIELD AND PUT IT IN THE MIDDLE OF CONVEYER]
	1. [GET M/B AND LCD CABLE,THEN INSERT LCD CABLE IN M/B CONNECTOR] 2. [GET BUTTON CABLE,THEN INSERT IT INTO M/B CONNECTOR]
 Jumper value set as 7.5mA	1. GET POWER/B AND INSERT JUMPER IN THE APPOINTED PLACE OF JP10 AT 2. GET AGGLUTINANT TO CONNECT THE JUMPER AND POWER/B 3. MARK DOT IN THE PANE MARK OF POWER/B AS PICTURE SHOWS
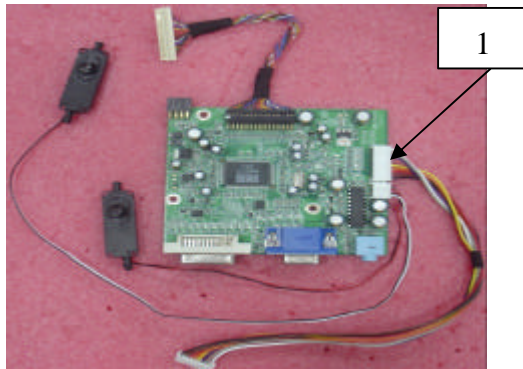
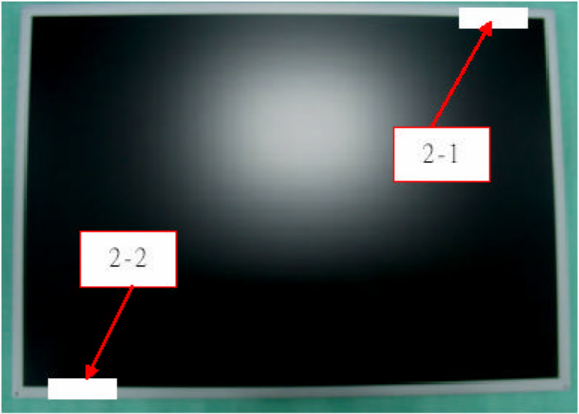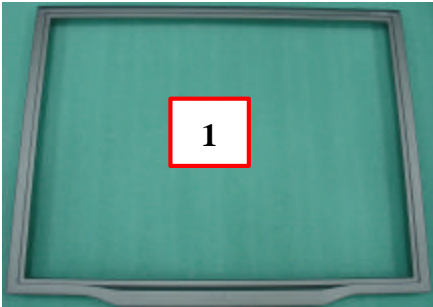|	
1 **2**	1. INSERT SPEAKER CABLE IN M/B CONNECTOR 2. GET M/B AND ASSEMBLE IT WITH POWER/B,THEN ASSEMBLE THEM IN PCB SHIELD
	1. FASTEN 1*PCS SCREW(M 4*8-B) IN P/B 2. FASTEN 2*PCS SCREW(M 3*6-T) IN P/B 3. FASTEN 2*PCS SCREW(M 3*6-T) IN M/B
	1. FETCH POWER/B MYLAR PUT IT ON SHIELD AND FASTEN 1*PCS SCREW(M 3*6-T 2. FASTEN 1*PCS SCREW(M 3*6-T) IN M/B 3. GET THE SHIELD AT FRONTAGE OF THE CONVEYER
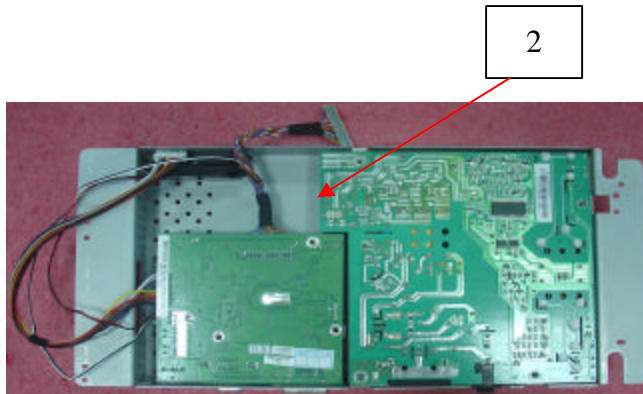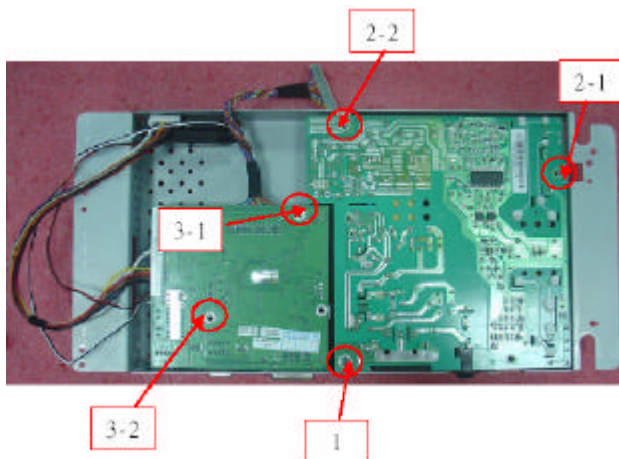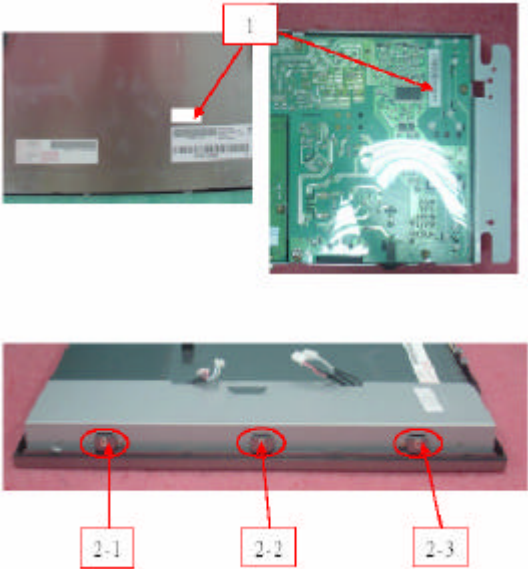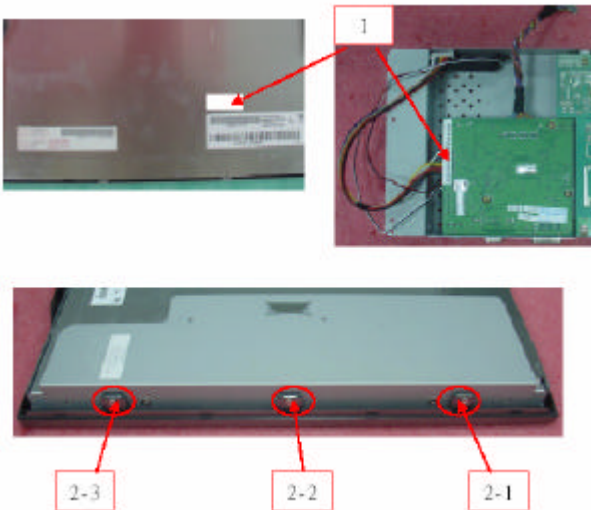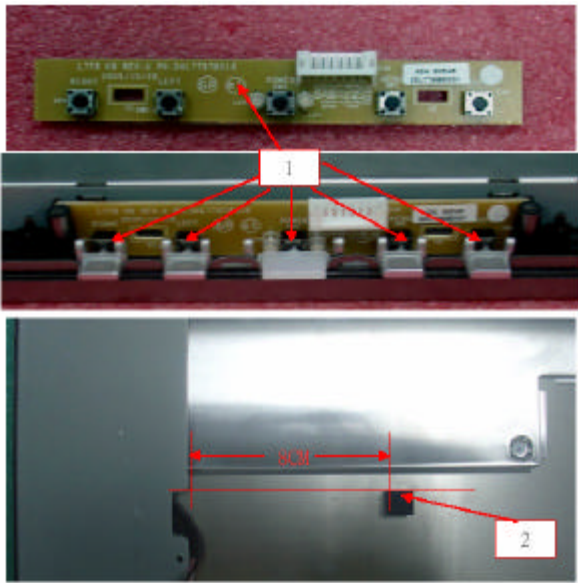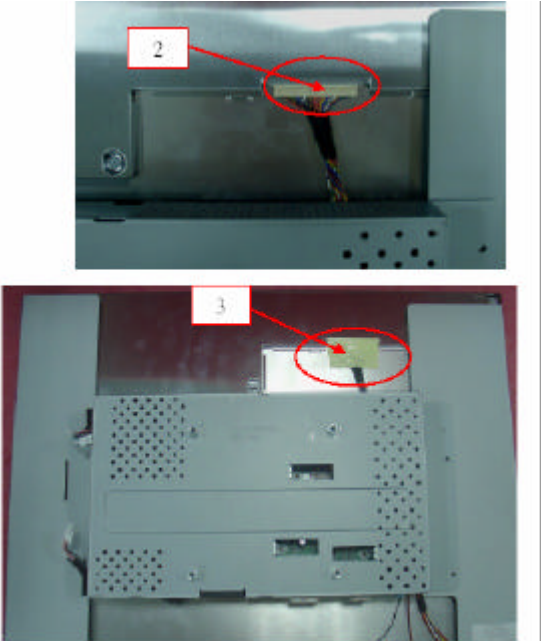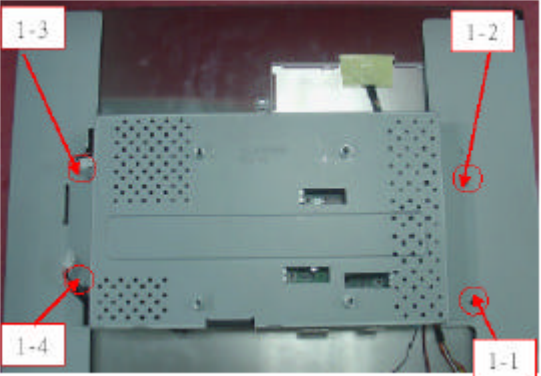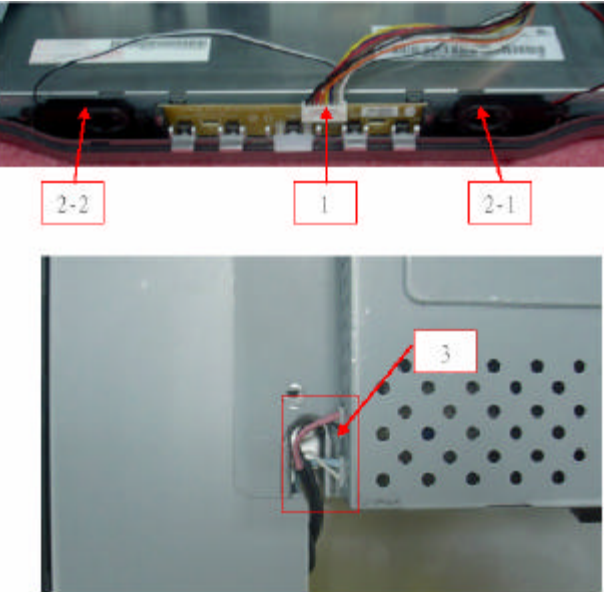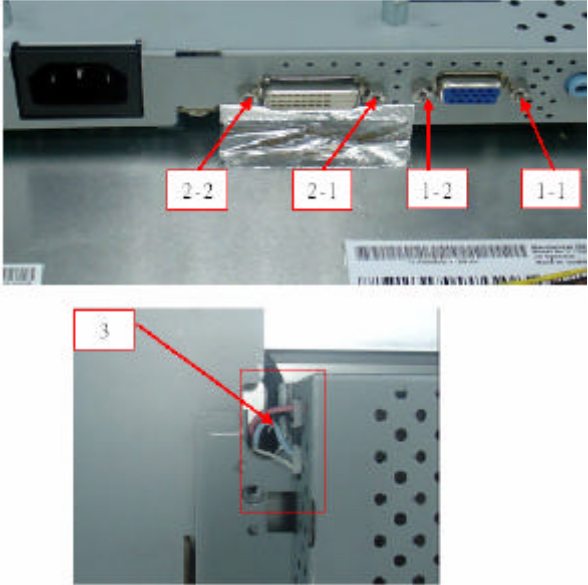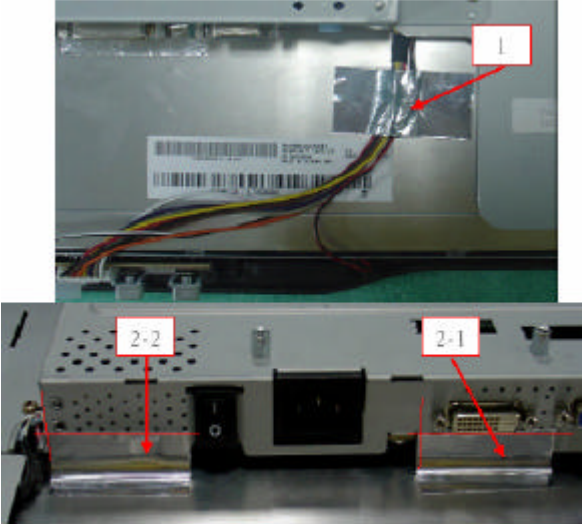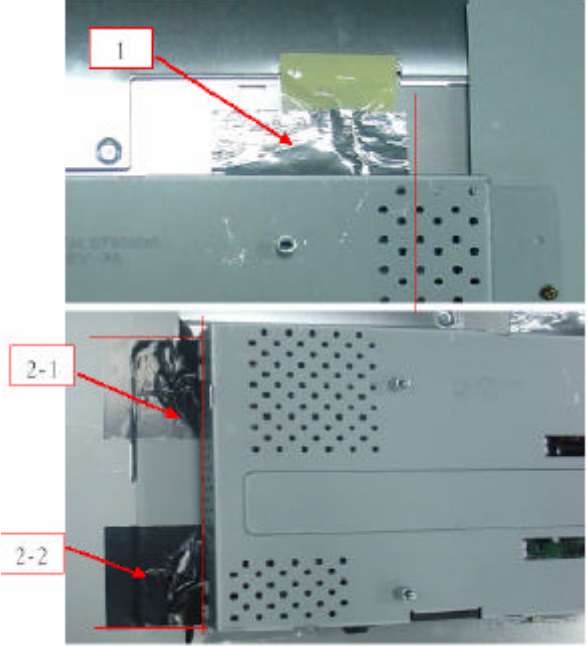
	1. GET THE SHIELD AT FRONTAGE OF THE CONVEYER 2. GET PANEL AND PUT IT ON THE CONVEYER, THEN TEAR OFF THE INCOMING TAPE
  	1. UNCOVER PANEL PROTECTIVE FILM AND INSPECT IF PANEL IS DIRTY OR SCRATCHED 2. PASTE TYPE ON THE PROTECTIVE FILM TO FASTEN IT 3. TURN LCD,TEAR OFF INCOMING TYPE

	1. FETCH TRAVEL CARD, TEAR OFF 1*PCS S/N FROM TRAVEL CARD AND PASTE IT ON THE PANEL BACK,THEN SCAN S/N AND PANEL CODE 2. GET LEFT BKT AND LOCK 2*PCS SCREW(M3*5-I) TO FASTEN IT AND PANEL
	1. GET RIGHT BKT AND LOCK 2*PCS SCREW(M3*5-I) TO FASTEN IT AND PANEL 2. TURN LCD AND TEAR OFF PROTECTIVE FILM
	1. GET BEZEL AND CHECK ITS APPEARANCE 2. ASSEMBLE BEZEL ON PANEL,THEN PASTE TYPE TO FASTEN PROTECTIVE FILM ON THE BEZEL 3. TURN LCD

	1. SCAN S/N AND POWER CODE 2. FASTEN BKT AND BEZEL IN THE RIGHT SIDE WITH SCREW 3*PCS
	1. SCAN S/N AND M/B CODE 2. FASTEN BKT AND BEZEL IN THE LEFT SIDE WITH SCREW 3*PCS 3. TURN LCD
	1. FETCH BUTTON/B AND INSERT IT INTO BEZEL 2. STICK 1*PCS RUBBER AT THE APPOINTED PLACE

	1. GET SHIELD ON THE BKT R/L 2. INSERT LCD CABLE INTO PANEL CONNECTOR 3. STICK 1*PCS YELLOW TAPE TO FASTEN LCD CABLE 4. TRIM WIRES AND ASSEMBLE SHIELDING IN RIGHT POSITION
	1. LOCK 4*PCS SCREW(M3*6-T) TO FASTEN PCB SHIELD
	1. INSERT BUTTON CABLE INTO BUTTON 2. PUT THE SPEAKER AT THE APPOINTED PLACE 3. INSERT NETHER CCFT CABLE IN INVERTER CABLE

	1. FASTEN 2*PCS IO-NUT IN THE VGA JOINT

2. FASTEN 2*PCS IO-NUT IN THE M/B JOINT

3. INSERT CCFT CABLE IN POWER/B |
| | 1. STICK AL FOIL AT THE APPOINTED PLACE TO FASTEN THE CABLE

2. STICK 2*PCS AL FOIL AT THE APPOINTED PLACE |
| | 1. STICK 1*PCS AL FOIL AT THE APPOINTED PLACE

2. STICK 2*PCS AL FOIL AT CCFT |

	1. CHECK THE Q'TY AND LOCATION OF AL FOIL
	1. GET LCD COVER AND INSPECT ITS APPEARANCE 2. ASSEMBLE LCD COVER TO BEZEL 3. STICK 1*PCS TAPE AT THE APPOINTED PLACE
	1. FETCH TRAVEL CARD, TEAR OFF 1*PCS APPOINTED S/N FROM TRAVEL CARD AND PASTE IT ON THE COVER 2. LOCK 2*PCS SCREW (F3*8-B) TO FASTEN BEZEL AND LCD COVER 3. GET STAND NECK AND INSPECT IF IT IS DIRTY AND SCRATCHED,THEN PUT IT IN THE CONVEYER

1. AT FIRST CHECK IF 2*PCS SCREW IN THE   COVER IS LOST

2. LOCK 4*PCS SCREW (M4*10-B) TO FASTEN STAND NECK

1. INSERT VGA CABLE INTO VGA CONNECTOR AND INSERT POWER CORD INTO POWER CONNECTOR

2. GET BASE FIXTRUE AND ASSEMBLE IT TO STAND NECK.

1. INSERT DVI CABLE INTO DVI CONNECTOR AND INSERT POWER CORD INTO POWER CONNECTOR

2. STAND UP THE MONITOR AND STICK TRAVALCARD AT LEFT DOWNSIDE OF MONITOR

Trouble Shooting

1. No Power

```
                          ┌─────────────────────┐
                          │     No Power         │
                          └─────────────────────┘
                                    │
                                    ▼
  ┌──────────────┐   NO      ╱─────────────────╲
  │  Change      │◄──────────  Check CN7
  │  Power Board │           ╲ +12V and +5V    ╱
  └──────────────┘             ╲─────────────╱
         │                            │ Yes
         ▼ No                         ▼
  ┌──────────────┐           ╱─────────────────╲
  │ Check Short Of│            Check U13=1.8V
  │ Main Board   │           ╲  U12=3.3V       ╱
  └──────────────┘             ╲─────────────╱
                        NO             │ Yes
  ┌──────────────┐◄─────────           ▼
  │  Change      │           ╱─────────────────╲
  │  U13,U12     │                 Check
  └──────────────┘           ╲  X1=14.318MHz   ╱
                        NO     ╲─────────────╱
  ┌──────────────┐◄─────────         │ Yes
  │ Change X1 or │                   ▼
  │ U4           │           ╱─────────────────╲
  └──────────────┘             Check U8 Pin
                        NO     ╲ 1,2,5,6 Clock  ╱
  ┌──────────────┐◄─────────    ╲─────────────╱
  │ Change U7 or │                   │ Yes
  └──────────────┘                   ▼
         │ Change U7        ╱─────────────────╲   NO   ┌────────────┐
         ▼             Yes      Check Key       ──────►│ Change Key │
  ┌──────────────┐◄─────────    ╲  Board       ╱       │ Board      │
  │ RUN Software │              ╲─────────────╱        └────────────┘
  │ ISP          │
  └──────────────┘
```

2. Missing Color

```
                        ┌─────────────────────┐
                        │    Missing Color    │
                        └─────────────────────┘
                                  │
                                  ▼
┌──────────┐   NO        ◇ Check VGA or ◇
│ Change   │◄────────────  Check VGA or
│ Cable    │             DVI Cable
└──────────┘                      │
                                 Yes
                                  │
                                  ▼
                            ◇ Check        ◇
                             R4,R8,R10
┌──────────────┐  NO
│ Change       │◄─────
│ R4,R8,R10,U  │
│ 7            │              Yes
└──────────────┘               │
                               ▼
┌──────────────┐  NO      ◇ Check CN5    ◇
│ Change U7    │◄──────────  LVDS Signal
│ or CN5 Cable │
│ or Panel     │              Yes
└──────────────┘               │
                               ▼
┌──────────────┐  NO    ◇ Check OSD ◇  Yes   ┌──────────┐
│ Adjustment   │◄─────── R/G/B Gain  ───────►│ Change   │
│ R/G/B Color  │                             │ Panel    │
└──────────────┘                             └──────────┘
```

3. Always show "NO SIGNEL"

```
                        ┌─────────────────────┐
                        │    "NO SIGNEL"      │
                        └─────────────────────┘
                                   │
                                   ▼
  ┌──────────┐    NO          ◇─────────────◇
  │ Change   │ ◄───────────   Check VGA or
  │ Cable    │                DVI Cable
  └──────────┘                ◇─────────────◇
                                   │ Yes
                   ┌───────────────┴───────────────┐
                   ▼                                ▼
        ◇──────────────◇                  ◇──────────────────◇
        VGA Check          Yes            DVI Check U7
        R4,R8,R10,R20,  ──────►  ┌──────────┐  Pin
        R21                      │ Change U7│◄── 109,110,112,113,
        ◇──────────────◇         └──────────┘  117, 118,120,121
               │ NO                  Yes        ◇──────────────────◇
               ▼                                        │ NO
     ┌──────────────┐                                   ▼
     │ Change VGA   │                        ┌──────────────┐
     │ Cable or R4, │                        │ Change DVI   │
     │ R8,R10,R20,  │                        │ Cable or U7  │
     │ R21 or U7    │                        └──────────────┘
     └──────────────┘
```

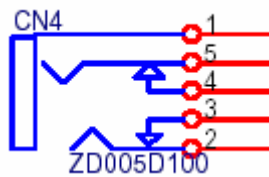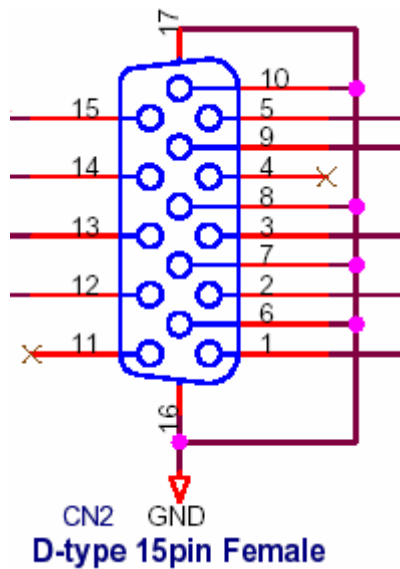**Connector Information**

Phonejack stereo

PIN1.   AC power cord   : CEE22 typed connector

PIN2.   Audio cable

PIN3.   Audio   : Line-in receptacle


The PIN assignment of the 15 pin mini D-SUB connector / cable is as follows:

PI	MNEM	SIGNAL
1	RV	Red Video
2	GV	Green Video
3	BV	Blue Video
4	NC	None
5	GND	Ground(DDC return)
6	RG	Red GND
7	GG	Green GND
8	BG	Blue GND
9	+5V	+ 5V (for DDC)
10	SG	Sync GND
11	NC	None
12	SDA	DDC Data
13	HS	Horizontal Sync
14	VS	Vertical Sync
15	SCL	DDC Clock

The PIN assignment of the 24 pin DVI D connector / cable is as follows:
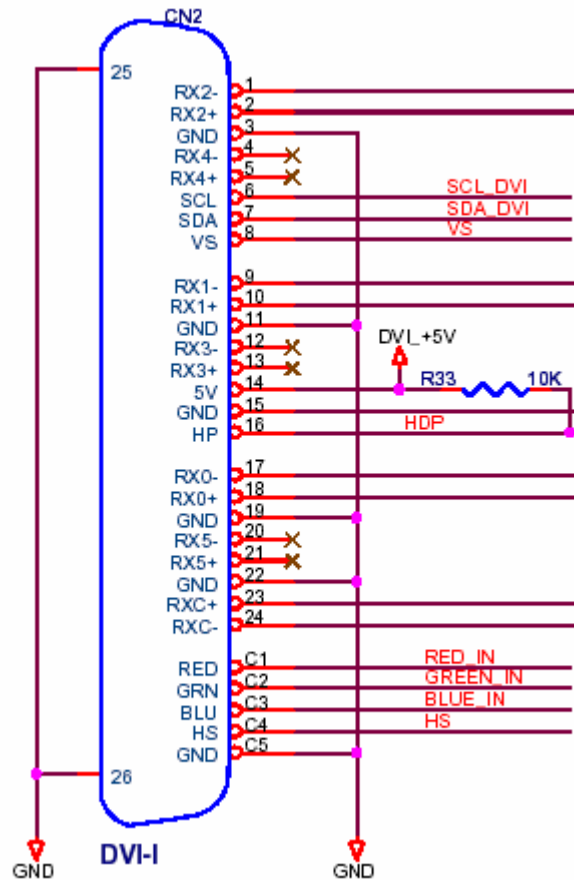
PIN	Signal	PIN	Signal
1	TMDS data2-	13	NC
2	TMDS data2+	14	+5V
3	TMDS data2 shield	15	Ground (return for +5 V and H/V sync)
4	NC	16	Hot plug detect
5	NC	17	TMDS data0-
6	DDC clock	18	TMDS data0+
7	DDC data	19	TMDS data0 shield
8	Not connected	20	NC
9	TMDS data1-	21	NC
10	TMDS data1+	22	TMDS clock shield
11	TMDS data1 shield	23	TMDS clock+
12	NC	24	TMDS clock-

FRU (Field Replaceable Unit) list

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of AL1511. Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

NOTE : Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel(http://aicsl.acer.com.tw/spl/). For whatever reasons a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED CERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the local FRU list provided by your regional Acer office to order FRU parts repair and service of customer machines.

NOTE: To scrap or to return the defective parts, you should follow the local government ordinance or regulations on how best to dispose it, or follow the rules set by your regional Acer office on how to return it.

Part list

Above picture show the description of the following component.

Item	Picture	Description	Part No.
1		Back Cover	60.L67VE.001
2		Stand	60.L67VE.003
3		Bezel	60.L67VE.007
4		Base	60.L67VE.004
5		Screw	MM40080BBW1

CATEGORY	PARTNAME	DESCRIPTION	ACER PART NO.
BOARD	BUTTON BAORD	L7TB BUTTON/B ASSY GP	55.L66VE.001
BOARD	INVERTER BOARD	ADP/INV,FSP070-2PI01 90~264V GP	55.L67VE.001
BOARD	MAINBOARD ASSY - GM5861 GP	L0TB M/B ASSY, GP	55.L67VE.002
LCD	LCD 20.1 SAMSUNG LTM201U1-L01	LCD 20.1 LTM201U1-L01 FOR ACER CON	LK.20106.001
CABLE	CABLE ASSY MB-VGA	CABLE ASSY MB-VGA 2.5M (15/15P)L0TB GP	50.L66VE.003
CABLE	CABLE AUDIO	CABLE AUDIO(ST,2.5M)BLACK L0T GP	50.L66VE.001
CABLE	CABLE ASSY MB-DVI	CABLE ASSY MB-DVI 2.5M(24P)L0TB GP	50.L66VE.002
CABLE	CABLE MB-LCD	CABLE MB-LCD(30P,100MM,SAM)LAVP GP	50.L67VE.001
CABLE	CABLE MB-BUTTON	CABLE MB-BUTTON(10P/8P,290MM)L0TB GP	50.L67VE.002
CABLE	POWER CODE UK 3PIN BLACK	POWER CORD SP-60+IS-14H05VV-F 3P 1.8M UK	27.L13VE.001
CABLE	POWER CODE US 3PIN BLACK	POWER CORD 3P 1.8M(USA)V04VS35001218000	27.L13VE.002
CABLE	POWER CODE PRC 3 PIN BLACK	POWER CORD 3P 1.8M(CHN)Y546B300012180QD	27.L13VE.003
CABLE	POWER CODE JAPAN 2PIN BLACK	POWER CORD 3P 1.8M(JPN)VC4CB30301219201	27.L13VE.004
CABLE	POWER CODE SWISS 3PIN BLACK	POWER CORD 3P 1.8M(SWIS)V745B300012180QD	27.L13VE.005
CABLE	POWER CODE AUSTRALIA 3PIN BLACK	POWER CORD 3P 1.8M(AUST)V54AB300012180QD	27.L13VE.006
CABLE	POWER CORD CONTINENTAL 3 PIN BLACK	POWER CORD SP-023+IS-14H05VV-F3P 1.8M EU	27.L13VE.007
CASE/COVER/BRACKET ASSEMBLY	LCD COVER ASSY GP	L0TB-A1 LCD COVER ASSY GP	60.L67VE.001
CASE/COVER/BRACKET ASSEMBLY	LCD BEZEL ASSY W/O GLASS GP -TITANIUM	L0TB-A1 LCD BEZEL ASSY(TITANIUM)GP, W/O GLASS	60.L67VE.002
CASE/COVER/BRACKET ASSEMBLY	STAND ASSY GP - FIXED W/O GLASS	L0TB-A1 STAND ASSY GP, FIXED, W/O GLASS	60.L67VE.003
CASE/COVER/BRACKET ASSEMBLY	BASE SUB ASSY GP - FIXED	L0TB-A1 BASE SUB ASSY GP, FIXED	60.L67VE.004
CASE/COVER/BRACKET ASSEMBLY	STAND ASSY GP - LIFT W/GLASS	L0TB-H1 STAND ASSY(GLASS) GP	60.L67VE.005
CASE/COVER/BRACKET ASSEMBLY	BASE SUB ASSY GP- LIFT	L0TB-H1 BASE SUB ASSY GP, LIFT	60.L67VE.006
CASE/COVER/BRACKET ASSEMBLY	LCD BEZEL ASSY W/GLASS GP - TITANIUM	L0TB LCD BEZEL ASSY(TITANIUM)GP, WITH GLASS	60.L67VE.007
CASE/COVER/BRACKET ASSEMBLY	HINGE COVER - LIFT	HINGE COVER ADJUST L0TB(EAL0TB05,R3A)GP	42.L67VE.001
CASE/COVER/BRACKET ASSEMBLY	PCB SHIELDING ASSY GP	L0TB-A1 PCB SHIELDING ASSY GP	33.L67VE.001
CASE/COVER/BRACKET ASSEMBLY	LCD BRACKET - LEFT	LCD BKT LEFT L0TB(FAL0TB01,REV3A)GP	33.L67VE.002
CASE/COVER/BRACKET ASSEMBLY	LCD BRACKET - RIGHT	LCD BKT RIGHT L0TB(FAL0TB02,REV3A)GP	33.L67VE.003
SPEAKER	SPEAKER SET	SPEAK ASSY L0T FG-QT390D 2W*2	23.L06VE.001

SCHEMATIC DIAGRAM   **Main Board Circuit**

Alternate make:
K4S161622D-TC/L55, 163MHz, Samsung
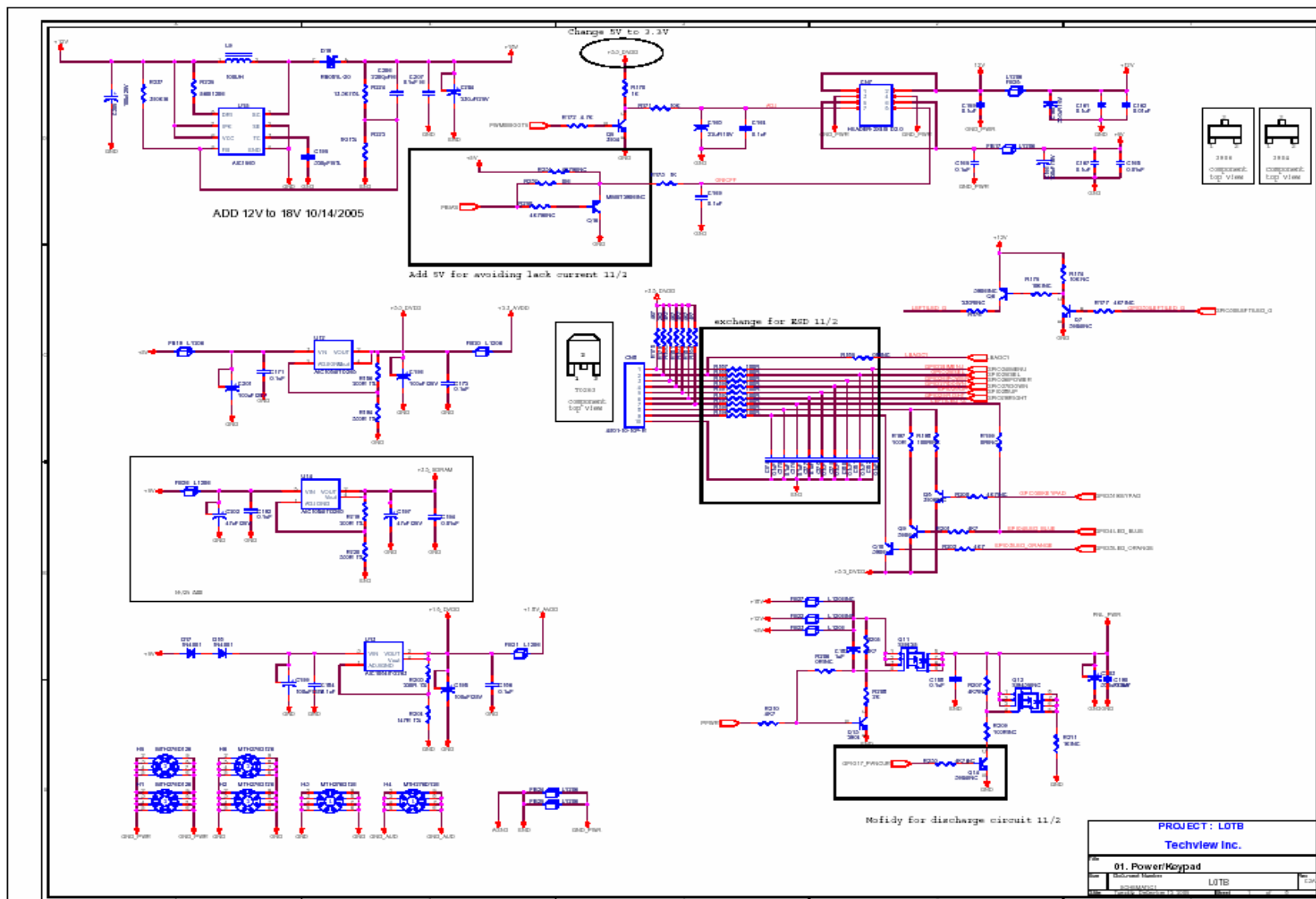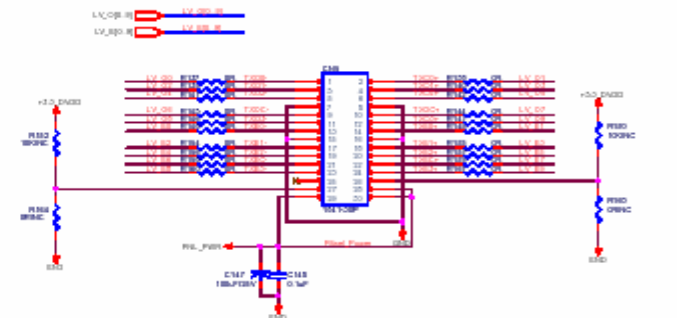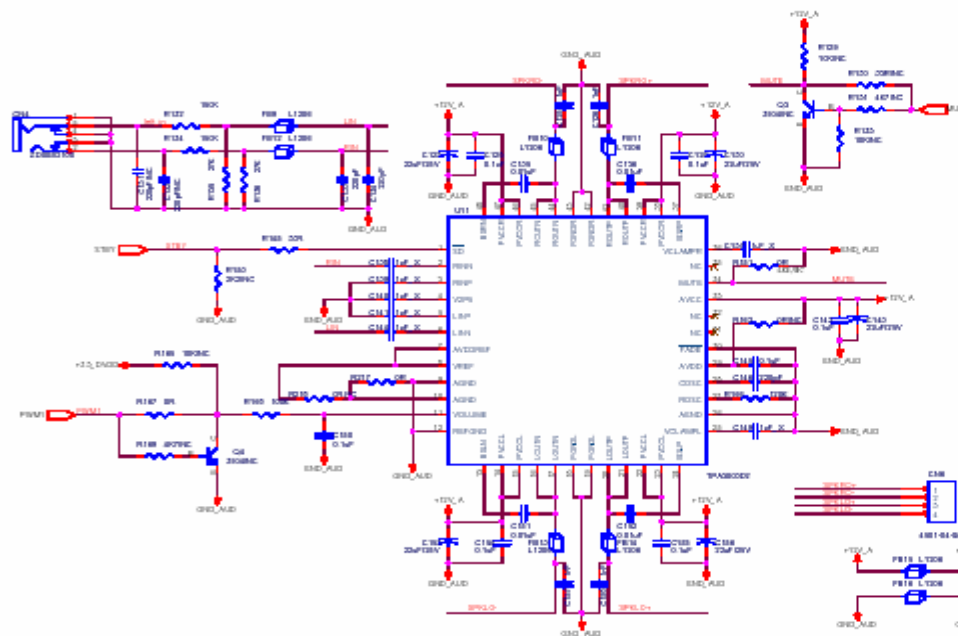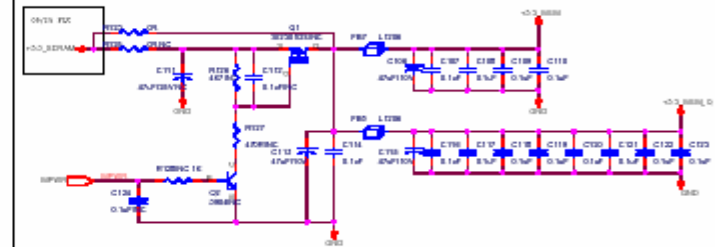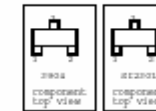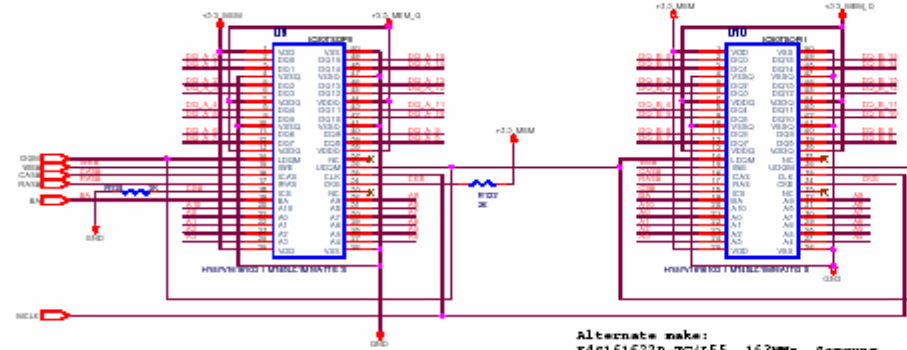
PROJECT : LOTB

Techview Inc.

02. SDRAM/AMP/OUTPUT

LOTB

SW1 TOUCH SWITCH 4P — MENU

SW2 TOUCH SWITCH 4P — AUTO

SW3 TOUCH SWITCH 4P — POWER

SW4 TOUCH SWITCH 4P — RIGHT

SW5 TOUCH SWITCH 4P — LEFT

CN8
JST 8Pin PH2.0mm H

MENU_O
SEL_O
PWR_O
RIGHT_O
LEFT_O
AMBER_O
GREEN_O

LD1 LED Dual
LD2 LED Dual

PROJECT NAME:

L7TB / L9TB /L0TB / WDTB

Title
Key Board

Size
A

Document Number
L7TB / L9TB / L0TB / WDTB Key Board

Rev
A2A

Date: Monday, October 31, 2005   Sheet   2   of   8
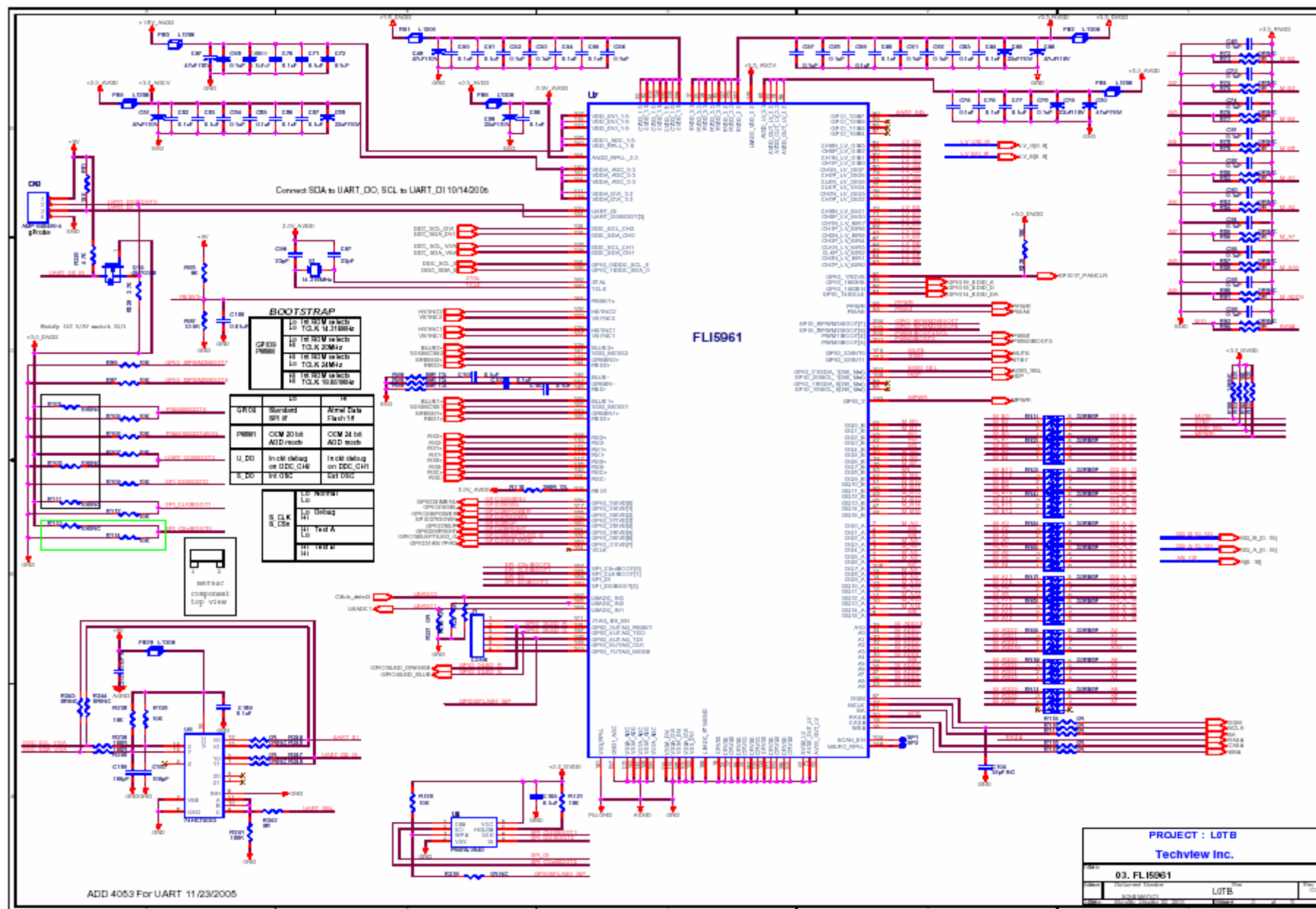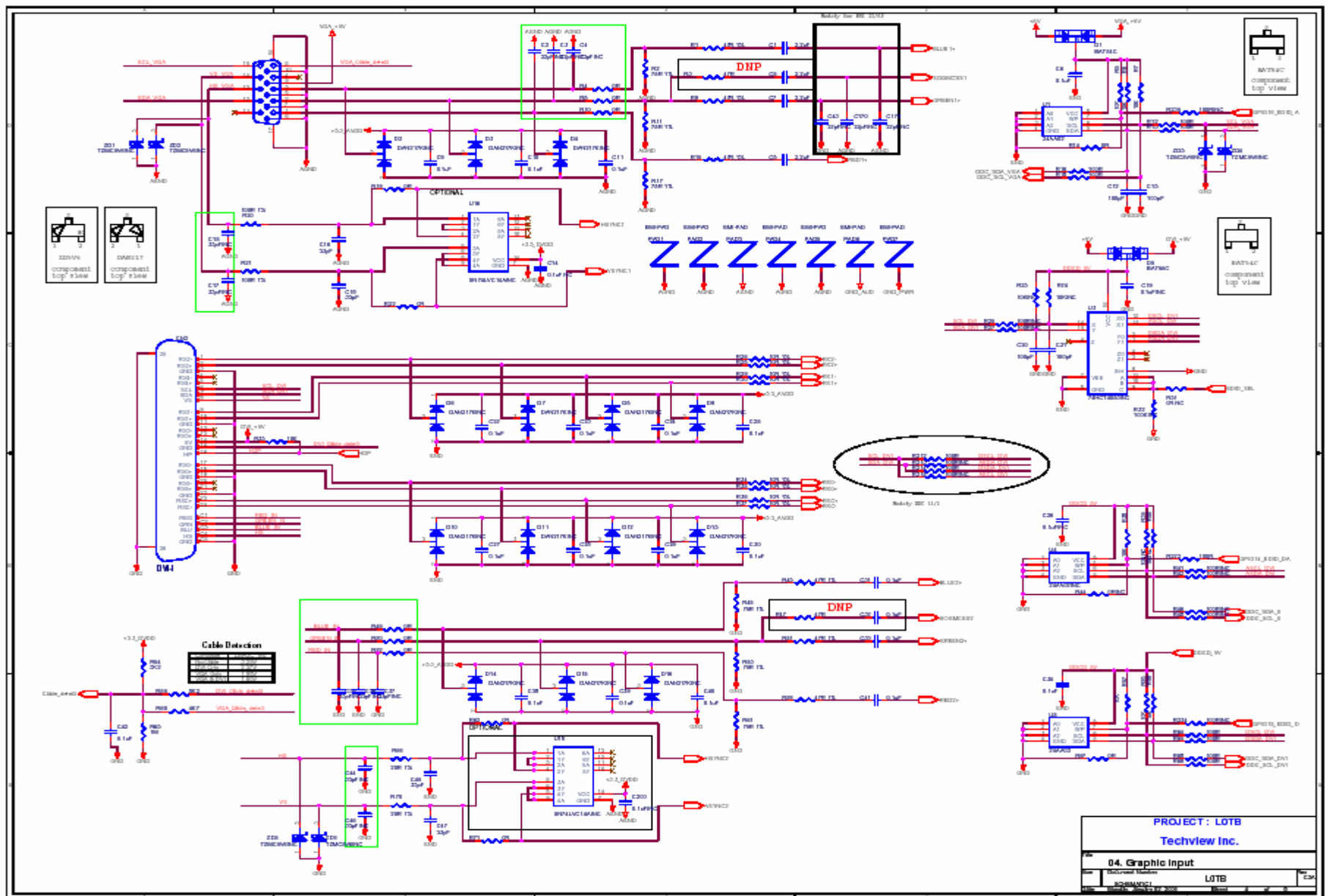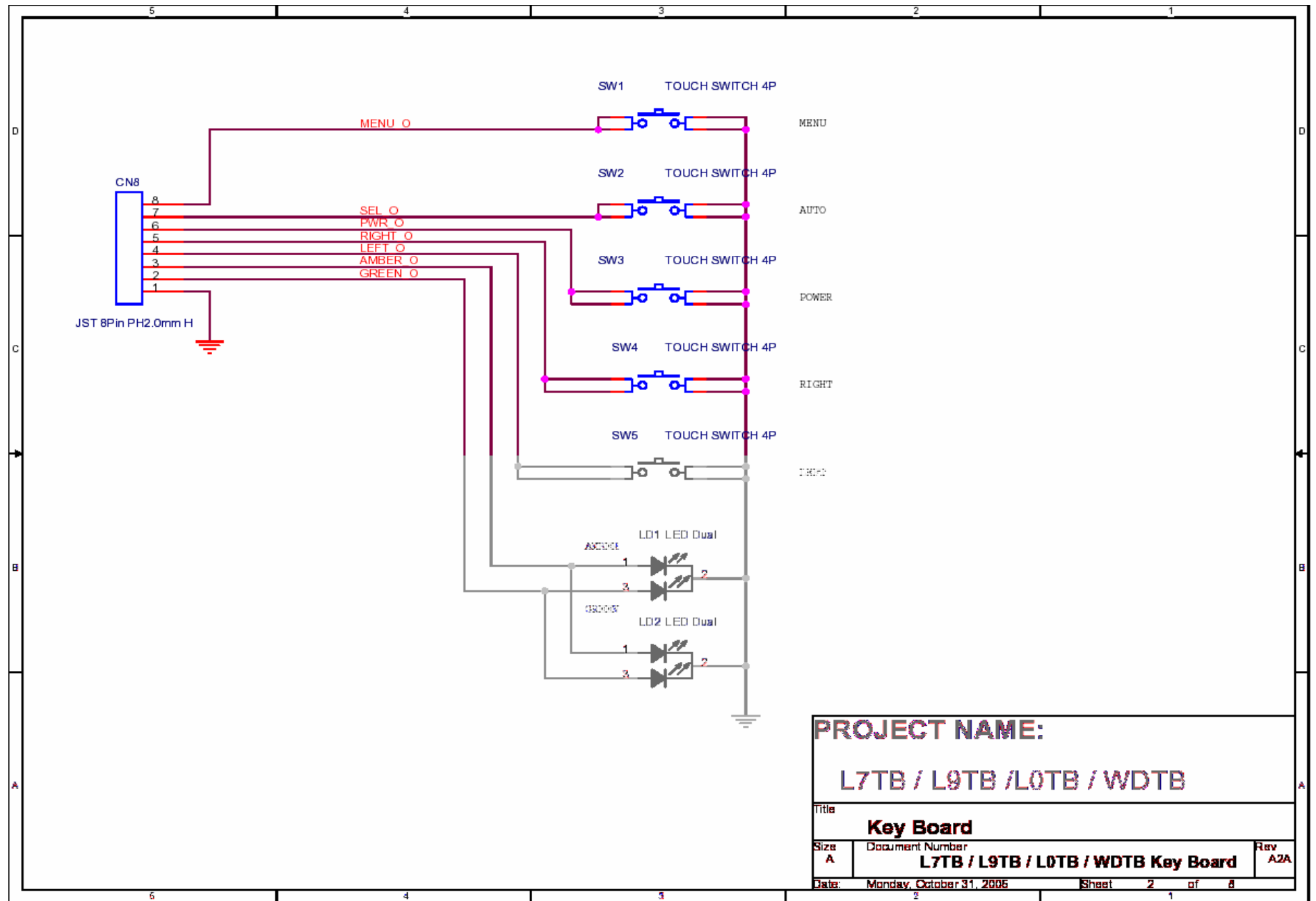
Power Board Current set Information

Panel P/N	Description	Current Type Value
AA0201U1008 (Samsung)	20" LTM201U1-L01	7.5mA
AA201U04101 (LG)	20" LM201U04-SL02	7mA

P/B P/N	Description
AS05B630401	ADP/INV,FSP070-2PI01 90~264V GP
AS05B530008	ADP/INV EADP-59AF B, 90~264V REV1A GP

FSP Power module AS05B630401 ADP/INV,FSP070-2PI01 90~264V GP
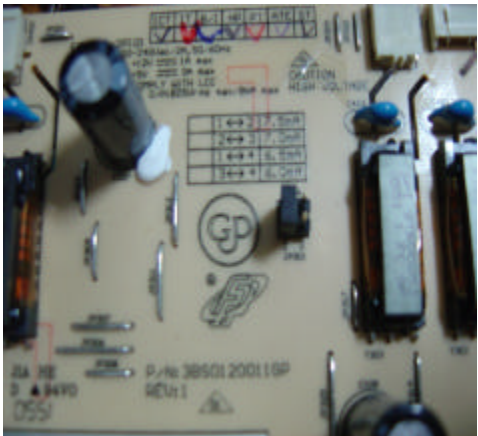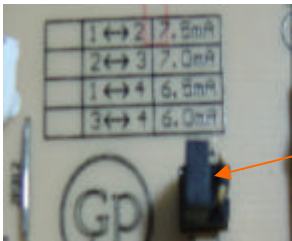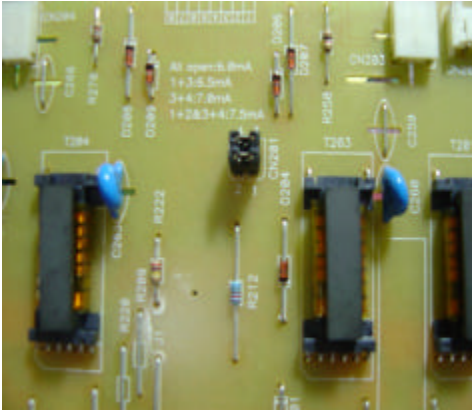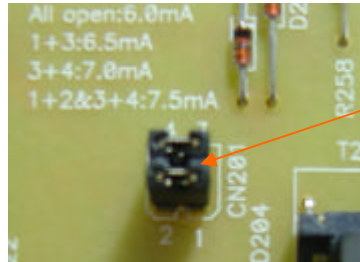

1

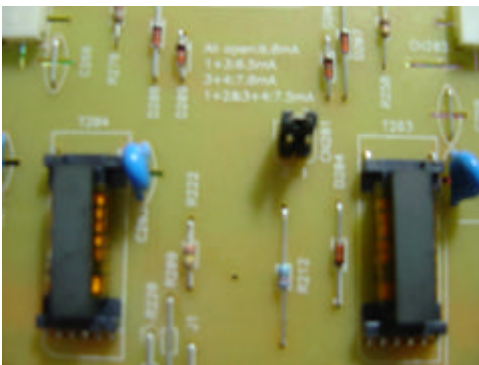When the lamp current value is 7.5mA, the jumper should be done as the picture left shows

2
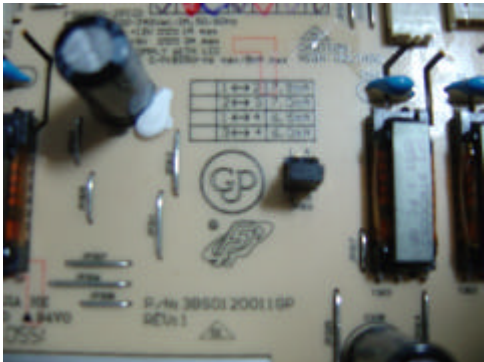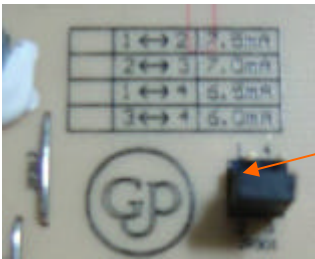
When the lamp current value is 7mA, the jumper should be done as the picture left shows

Delta Power module AS05B530008 ADP/INV EADP-59AF B, 90~264V REV1A GP

| 1 |

When the lamp current value is 7.5mA, the jumper should be done as the picture left shows
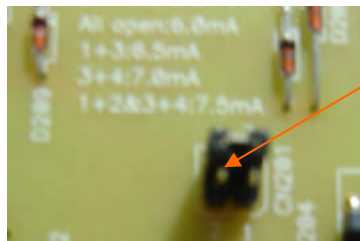

| 2 |

When the lamp current value is 7mA, the jumper should be done as the picture left shows