



Acer X193W
Service Guide

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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	Remind 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 the BASIC CONFIGURATION 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 note 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 ENERGY STAR® Partner our company has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Warning:

To prevent fire or shock hazard, do not expose the monitor to rain or moisture. Dangerous 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 manufacturer or sold with the monitor. If you mount the monitor on a wall or shelf, use a mounting kit approved by the manufacturer and follow the kit instructions.
- Slots and openings in the back and bottom of the cabinet are 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. 5A.
- The wall socket shall be installed near the equipment and shall be easily accessible.

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 on 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 Features	7
	Introduction	7
	Electrical Requirements	8
	LCD Monitor General Specification	9
	LCD Panel Specification	10
	Support Timing	12
	Monitor Block Diagram	13
	Main Board Diagram	14
	Software Flow chart	15
	Main Board Layout	17
	Installation	18
	Attaching/Removing the base	19
Chapter 2	Operating Instructions	20
	External Controls	20
	Front Panel Controls	21
	eColor Management (OSD)	22
	How to Adjust a Setting	23
	LOGO	28
Chapter 3	Machine Disassembly	29
Chapter 4	Troubleshooting	35
Chapter 5	Connector Information	39
Chapter 6	FRU (Field Replacement Unit) List	41
	Exploded Diagram	42
Chapter 7	Schematic Diagram	45

Introduction**Scope**

This specification defines the requirements for the 17" MICROPROCESSOR based Multi-mode supported high resolution color LCD monitor. This monitor can be directly connected to general 15-pin D-sub VGA connector, also supports VESA DPMS power management and plug & play function. There is a build-in stereo audio amplifier with OSD control to drive a pair of speakers.

Description

The LCD monitor is designed with the latest LCD technology to provide a performance oriented product with no radiation. This will alleviate the growing health concerns. It is also a space saving design, allowing more desktop space, and comparing to the traditional CRT monitor, it consumes less power and gets less weight in addition MTBF target is 50k hours or more.

Chart of X193W

Panel	LTM190M2-L31
Signal Interface	D-Sub 15-pin / DVI 24-Pin
Sync Type	Separate / Compatible
Color Temp User Adjust	Support
DDC	DDC2B
Speaker	No
Headphone Jack	No
Microphone Jack	No
USB Hub	Not support
Tilt / Swivel	Yes / No

Electrical Requirements

Standard Test Conditions

All tests shall be performed under the following conditions, unless otherwise specified.

Ambient light	:	Dark room
Viewing distance	:	30-50 cm for LCD performance
Warm up time		
All specifications	:	> 30 minutes
Measuring equipment	:	Photo detector PR650 w/2°
		Measurement field
Control temperature		6500° K
User brightness control	:	The value under user mode
User contrast control	:	Set to factory preset value, which allows that the brightest two of 32 linear distributed gray-scales (0~700mv) can be distinguished.
User red/white balance,		
Green/white balance and		
Blue/white balance control	:	In the center (unless otherwise specified)
AC Supply voltage	:	230V± 5%, 50±3Hz
Ambient temperature	:	20+5°C
Display mode	:	1400 x 900 @60Hz, all white

Measurement systems

The units of measure stated in this document are listed below:

1 gamma = 1 nano tesla

1 tesla = 10,000 gauss

cm = in x 2.54

Lb = kg x 2.2

Degrees F = [°C x 1.8] + 32

Degrees C = [°F - 32]/1.8

$u' = 4x/(-2x + 12y + 3)$

$v' = 9y/(-2x + 12y + 3)$

$x = (27u'/4)/[(9u'/2) - 12v' + 9]$

$y = (3v')/[(9u'/2) - 12v' + 9]$

nits = cd/(m²) = Ft-L x 3.426

lux = foot-candle x 10.76

LCD Monitor General Specification

LCD Panel	Driving system	TFT Color LCD
	Active Display Area	408.24(H) × 255.15mm(V)
	Pixel pitch	0.2835 x 0.2835
	Contrast Ratio	1000 : 1
	Response time	5ms
Input	Separate Sync.	H/V TTL
	H-Frequency	30kHz – 80kHz
	V-Frequency	55-75Hz
Viewing angle	90° H and V	
Display Colors	16.7M (Hi-FRC)	
Max. Dot Clock	140MHz	
Display mode	1400 × 900 @60Hz	
EPA ENERGY STAR®	ON Mode	< 45W
	OFF Mode	< 1W
Contrast control	Set to factory preset value, which allows that the brightest two of 32 linear distributed gray-scales (0~ 700mv) can be distinguished.	
Power Source	90~240VAC,47~63Hz	
Environmental Considerations	Operating Temp: 0° to 40°C Storage Temp: -20° to 60°C Operating Humidity: 15% to 90% Storage Humidity: 15% to 90%	
Main Dimension(monitor)	359(W)×164 (H)×454(D) mm	
Leakage current	< 3.5MA	
Peak surge current	< 55 A peak at 240 VAC and cold starting	

LCD Panel Specification

General Specifications

Items	Specification	Unit
Pixel Pitch	0.2835(H) x 0.2835(W)	mm
Active Display Area	408.24(H) x 255.15(V)	mm
Surface Treatment	Haze 25% , Hard-coating (3H)	
Display Colors	16.7M (Hi-FRC)	colors
Number of Pixels	1440 x 900	pixel
Pixel Arrangement	RGB vertical stripe	
Display Mode	Normally White	
Luminance of White	300(Typ.)	cd/m ²

Absolute Maximum Ratings

Item	Symbol	Min.	Max.	Unit
Power Supply Voltage	V _{DD}	GND-0.5	6.5	V
Storage temperature	T _{STG}	-25	60	°C
Glass surface temperature (Operation)	T _{OPR}	0	50	°C
Shock (non - operating)	S _{nop}	-	50	G
Vibration (non - operating)	V _{nop}	-	1.5	Grms

Optical Specifications

Item		Symbol	Condition	Min.	Typ.	Max.	Unit
Contrast Ratio (Center of screen)		C/R		600	1000	-	
Response Time	Rising	Tr		-	1.3	4	msec
	Falling	Tf		-	3.7	6	msec
Luminance of White (Center of screen)		Y_L		250	300	-	cd/m ²
Color Chromaticity (CIE 1931)	Red	Rx	Normal $\theta_{L,R}=0$ $\theta_{U,D}=0$ Viewing Angle	0.610	0.640	0.670	
		Ry		0.300	0.329	0.360	
	Green	Gx		0.270	0.300	0.330	
		Gy		0.570	0.600	0.630	
	Blue	Bx		0.120	0.150	0.180	
		By		0.030	0.060	0.090	
	White	Wx		0.283	0.313	0.343	
		Wy		0.299	0.329	0.359	
Color Chromaticity (CIE 1976)	Red	Ru'		-	0.451	-	
		Rv'		-	0.523	-	
	Green	Gu'		-	0.125	-	
		Gv'		-	0.563	-	
	Blue	Bu'		-	0.175	-	
		Bv'		-	0.158	-	
	White	Wu'		-	0.198	-	
		Wv'		-	0.468	-	
C.G.L	White	$\Delta u'v'$	-	0.011	0.02		

Item		Symbol	Condition	Min.	Typ.	Max.	Unit
Color Gamut		-		-	72	-	%
Color Temperature		-		-	6500	-	K
Viewing Angle	Hor.	θ_L	CR \geq 10	70	80	-	Degrees
		θ_R		70	80	-	
	Ver.	θ_U		70	80	-	
		θ_D		70	80	-	
Brightness Uniformity (9 Points)		B_{uni}		-	-	25	%

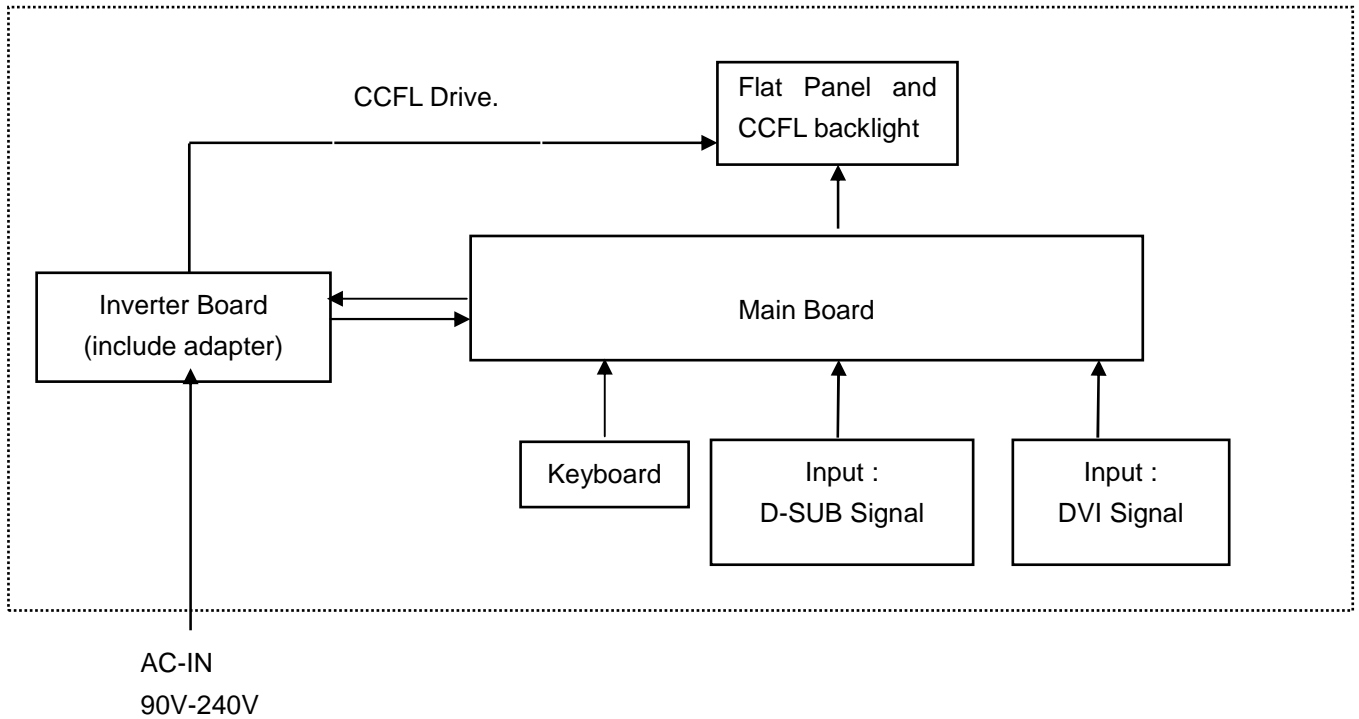
Support Timing

Mode	Resolution		
1	VGA	720 x 400	70 Hz
2	VGA	640 x 480	59.94 Hz
3	MAC	640 x 480	66.66 Hz
4	VESA	640 x 480	72 Hz
5	VESA	640 x 480	75 Hz
6		648 x 500	57.7 Hz
7	VESA	800 x 600	56.25 Hz
8	VESA	800 x 600	60 Hz
9	VESA	800 x 600	72 Hz
10	VESA	800 x 600	75 Hz
11	MAC	832 x 624	74.55 Hz
12	VESA	1024 x 768	60 Hz
13	VESA	1024 x 768	70 Hz
14	VESA	1024 x 768	75 Hz
15	VESA	1152 x 864	75 Hz
16	VESA	1280 x 1024	60 Hz
17	VESA	1280 x 1024	75 Hz
18	CVT	1440 x 900	60 Hz
19	CVT	1440 x 900	75 Hz

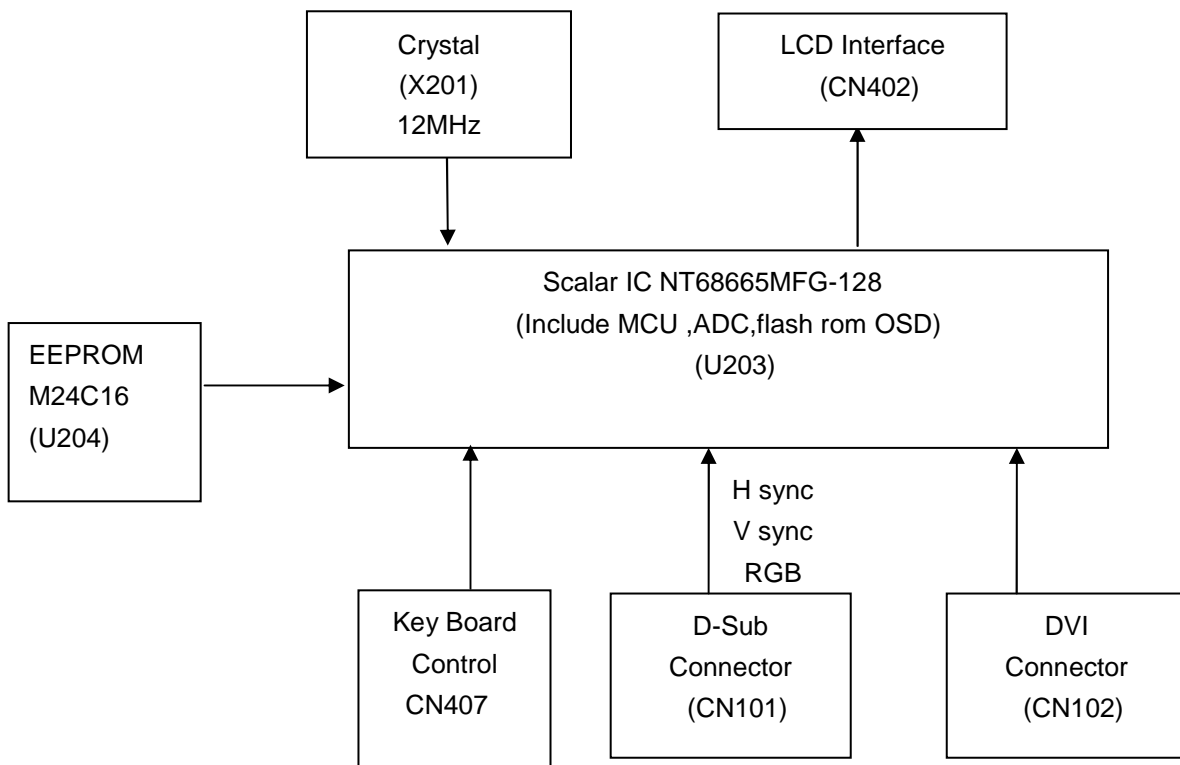
Monitor Block Diagram

The LCD MONITOR will contain a main board, a power board, and keypad board which house the flat panel control logic, brightness control logic and DDC.

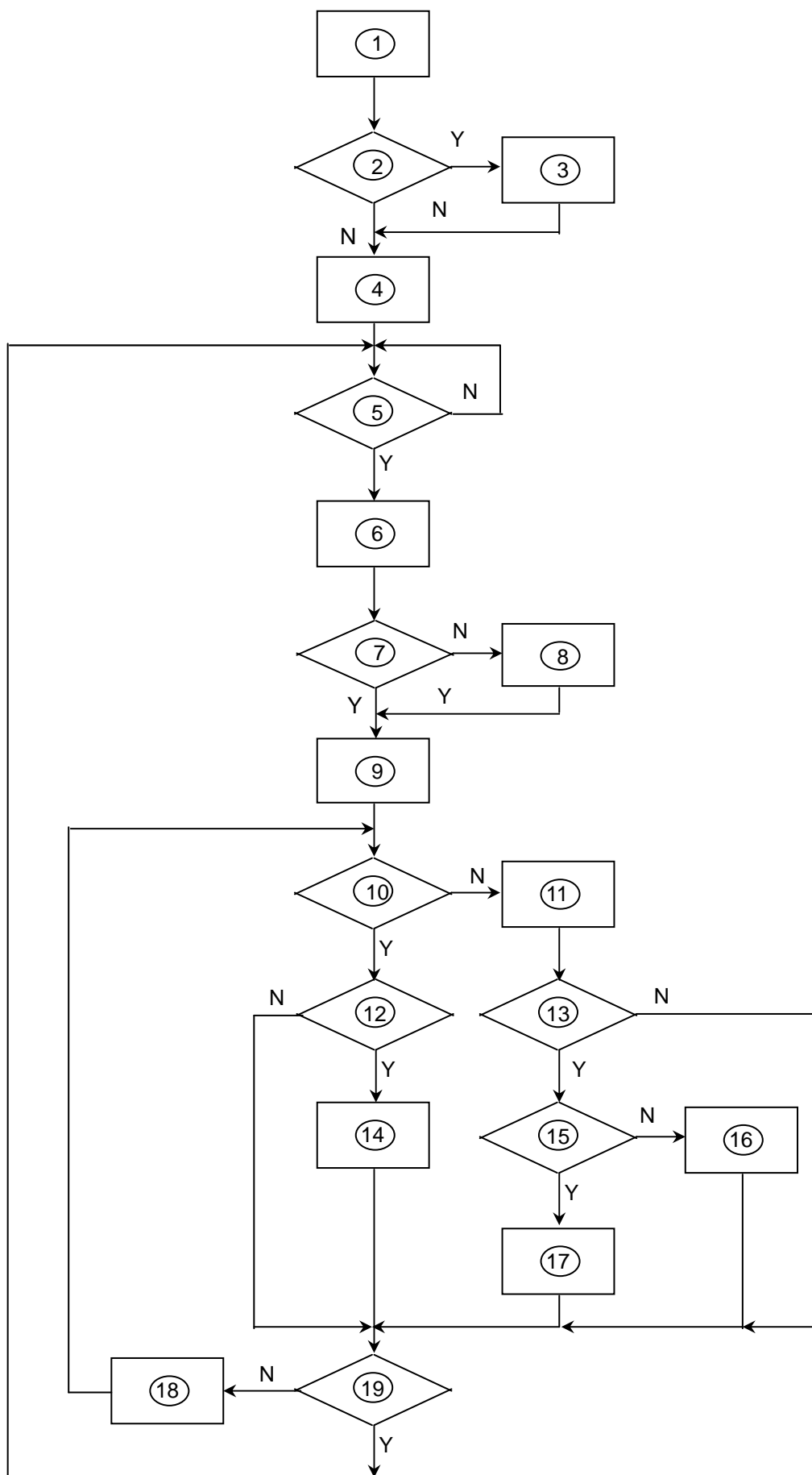
The power board will provide AC to DC Inverter voltage to drive the backlight of panel and the main board chips each voltage.



Main Board Diagram



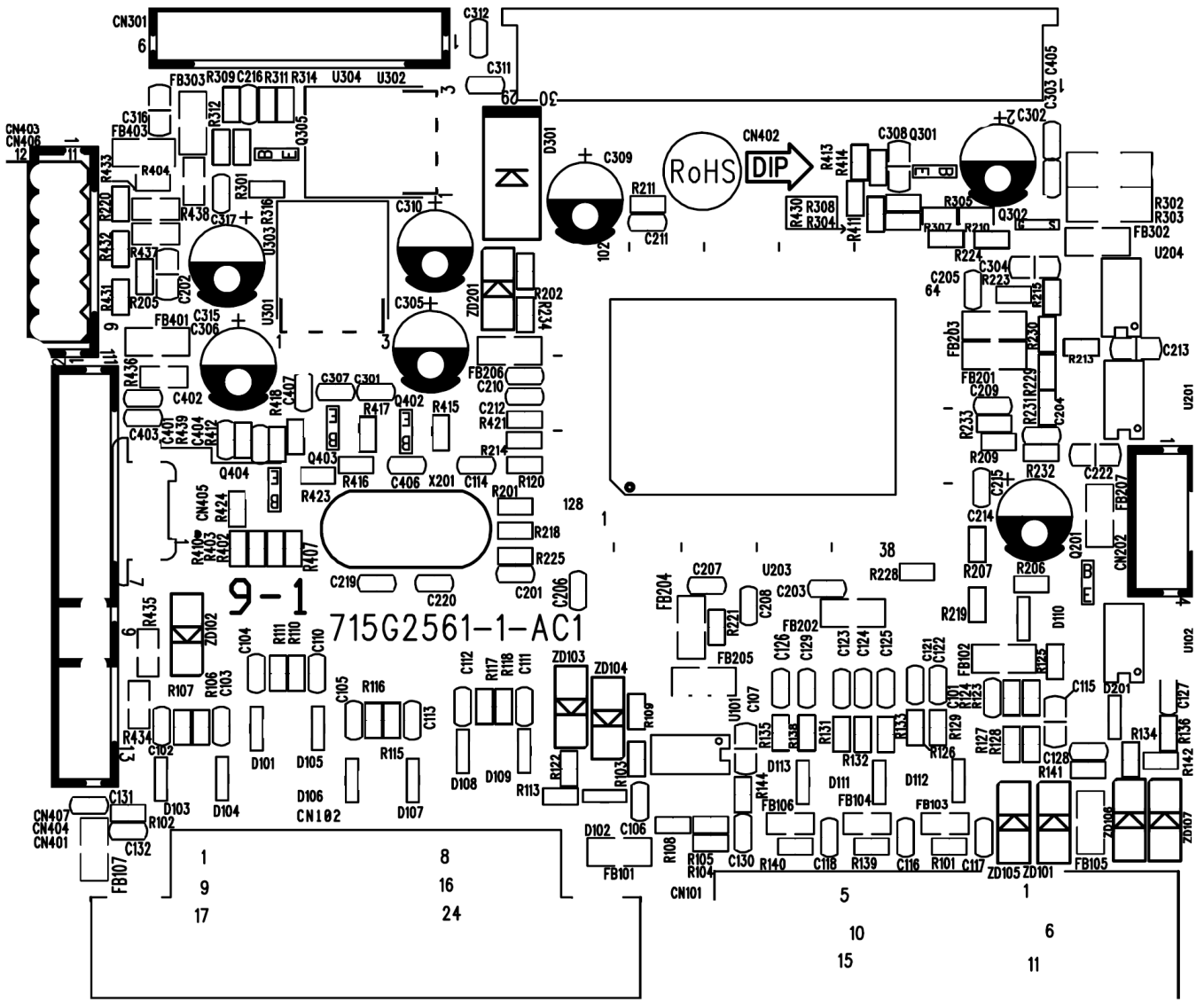
Software Flow Chart



Remark:

1) MCU initializes.
2) Is the EEPROM blank?
3) Program the EEPROM by default values.
4) Get the PWM value of brightness from EEPROM.
5) Is the power key pressed?
6) Clear all global flags.
7) Are the AUTO and SELECT keys pressed?
8) Enter factory mode.
9) Save the power key status into EEPROM. Turn on the LED and set it to green color. Scalar initializes.
10) In standby mode?
11) Update the lifetime of back light.
12) Check the analog port, are there any signals coming?
13) Does the scalar send out an interrupt request?
14) Wake up the scalar.
15) Are there any signals coming from analog port?
16) Display "No connection Check Signal Cable" message. And go into standby mode after the message disappears.
17) Program the scalar to be able to show the coming mode.
18) Process the OSD display.
19) Read the keyboard. Is the power key pressed?

Main Board Layout



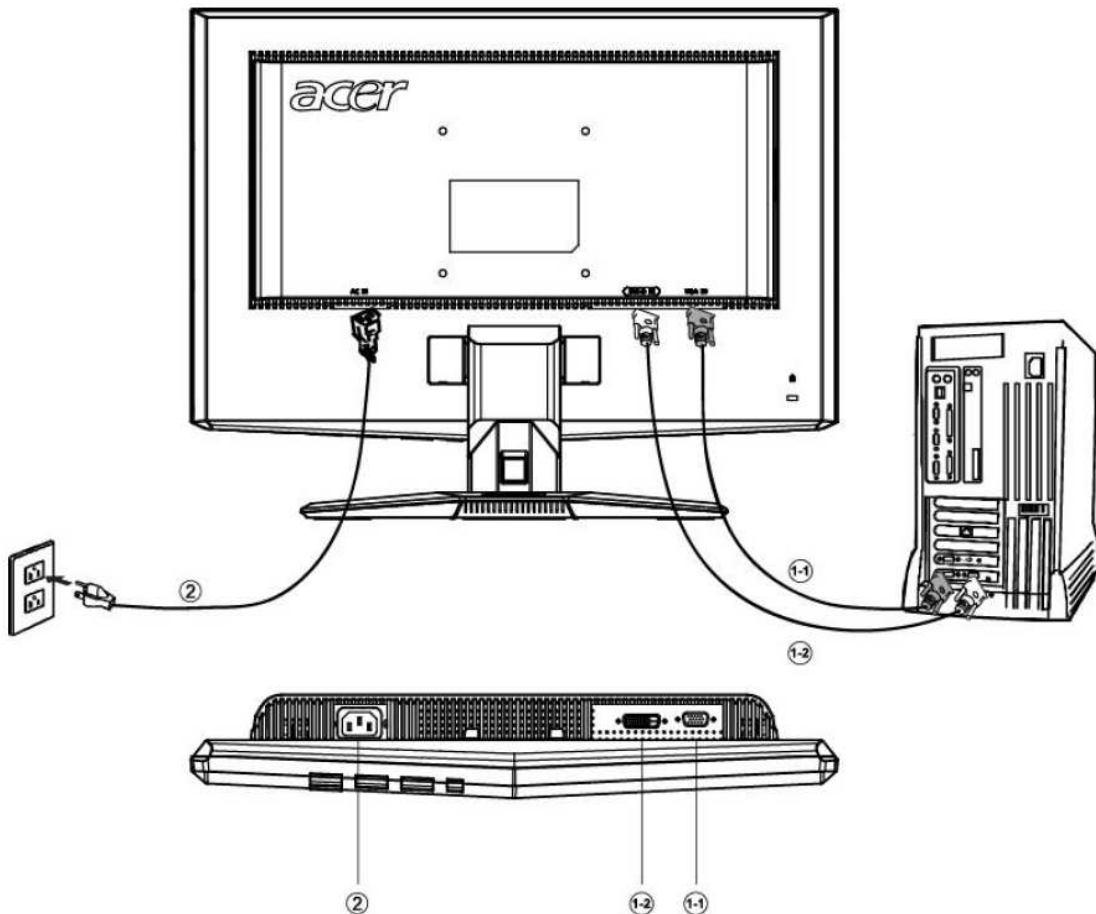
Symbol	Description	Symbol	Description
ZD201	093G 39G586	U304	056G 56327A
ZD103	093G 39S 24 T	CN301	033G3802 9
FB107	071G 56D121	CN101	088G 35315F H
FB206	071G 56D121 JA	CN402	033G801930F CH JS
U301	056G 563 52	CN102	088G 35424F N
U203	056G 562154	CN407	033G3802 6

Installation

To install the monitor to your host system, please follow the steps as given below:

Steps

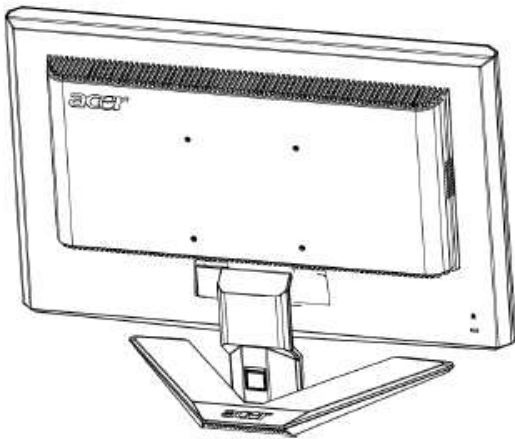
1. 1-1 Connect Video Cable
 - a. Make sure both the monitor and computer are powered-OFF.
 - b. Connect the VGA video cable to the computer.
- 1-2 Digital Cable (Only Dual-Input Model)
 - a. Make sure both the monitor and computer are powered-OFF.
 - b. Connect one end of the 24-pin DVI cable to the back of the monitor and connect the other end to the computer's port.
2. Connect power cord
Connect the power cord to the monitor, then to a properly grounded AC outlet.
3. Power-ON Monitor and Computer
Power-ON the monitor first, then power-ON the computer.
This sequence is very important.
4. If the monitor still does not function properly, please refer to the troubleshooting section to diagnose the problem.



Attaching/Removing the Base

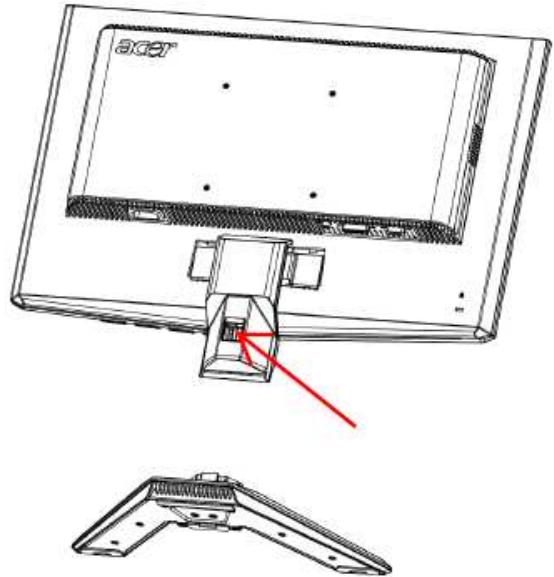
Install:

Align the release button on the bottom of the monitor with the corresponding slots on the bottom of the base.



Remove:

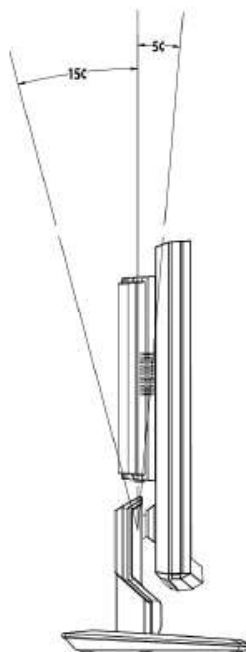
Depress the release button as indicated first before removing the base and follow the arrow direction to remove it.



SCREEN POSITION ADJUSTMENT

In order to optimize the best viewing position, you can adjust the tilt of the monitor by using both of your hands to hold the edges of the monitor as shown in the figure below.

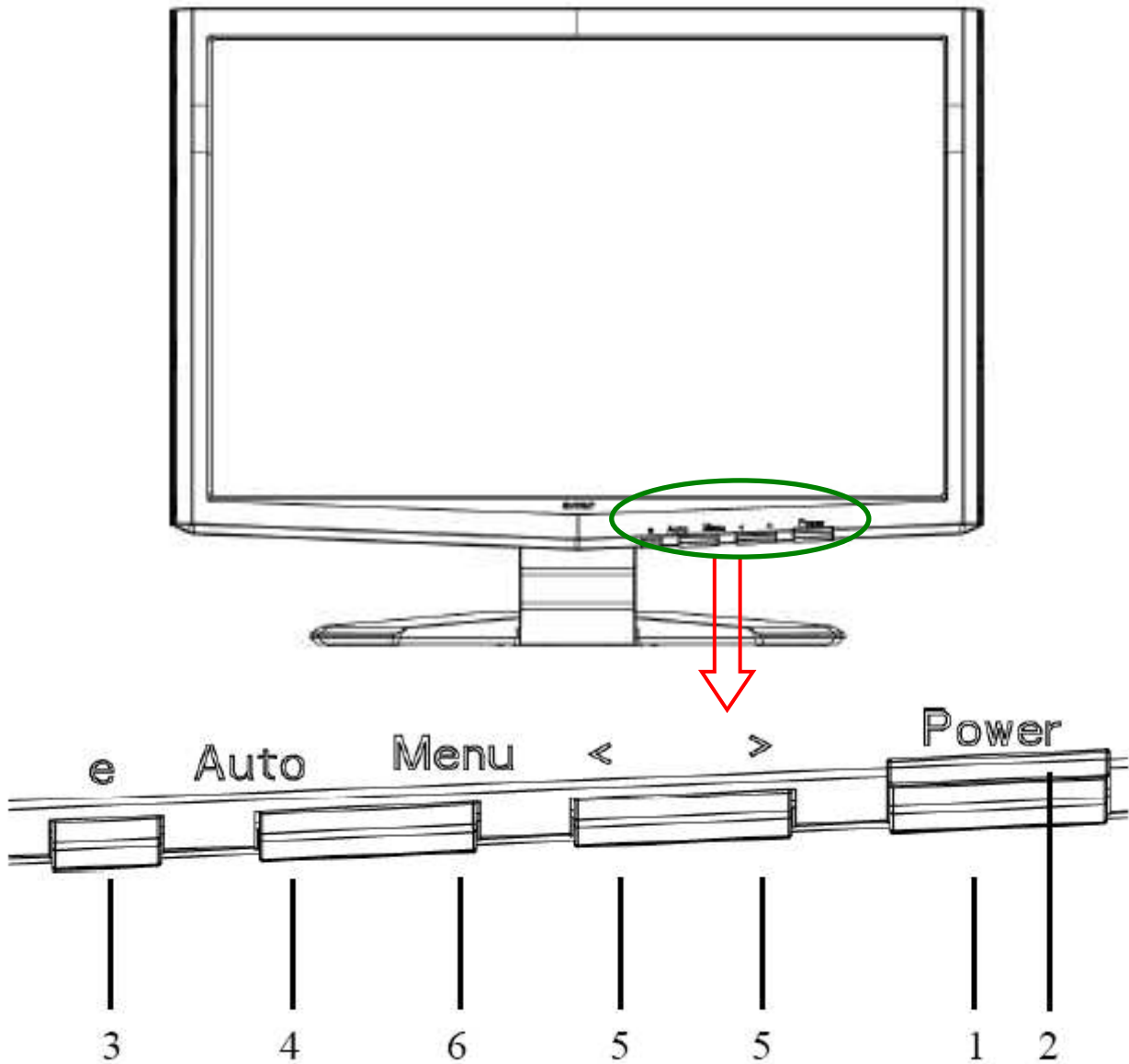
The monitor can be adjusted to 15 degrees up or 5 degrees down as indicated by arrow below.



Press the power button to turn the monitor on or off. The other control buttons are located at front panel of the monitor. By changing these settings, the picture can be adjusted to your personal preferences.

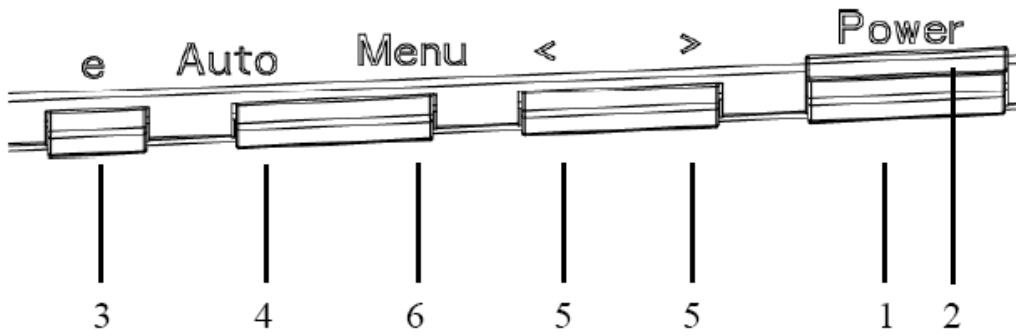
- The power cord should be connected.
- Connect the video cable from the monitor to the video card.
- Press the power button to turn on the monitor position. The power indicator will light up.

External Controls



Item	Description	Item	Description
1.	Power Switch	4.	Auto Adjust botton/Exit
2.	Power LED	5.	< / >
3.	Empowering / Exit	6.	MENU/ENTER

Front Panel Control



Front Panel Controls

1.Power Switch:

To turn ON or OFF the power.

2.Power LED:

Lights up to indicate the power is turned ON.

3.Empowering / Exit:

1) When OSD menu is in active status, this button will act as EXIT-KEY(EXIT OSD menu).

2) When OSD menu is in off status, press this button to select scenario mode.

4.Auto Adjust button / Exit:

1)When OSD menu is in active status, this button will act as EXIT-KEY (EXIT OSD menu).

2)When OSD menu is in off status, press this button for 2 seconds to activate the AutoAdjustment function.The Auto Adjustment function is used to set the HPos, VPos, Clock and Focus.

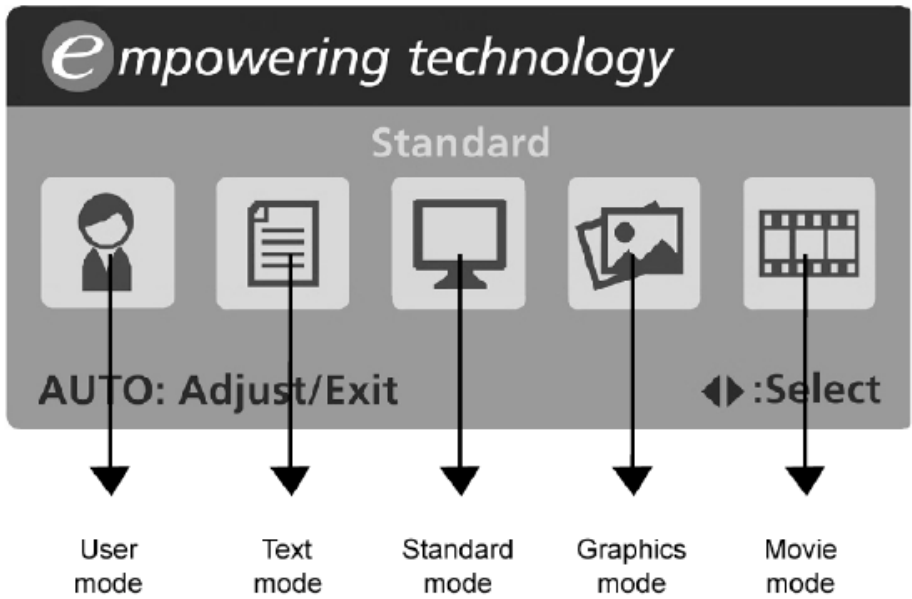
5.< / >

Press < or > to select the desired function.Press < or > to change the settings of the current function.

6.MENU / ENTER:


Activate OSD menu when OSD is OFF or activate/de-activate adjustment function when OSD is ON.

eColor Management (OSD)



- Operation instructions

Acer eColor Management

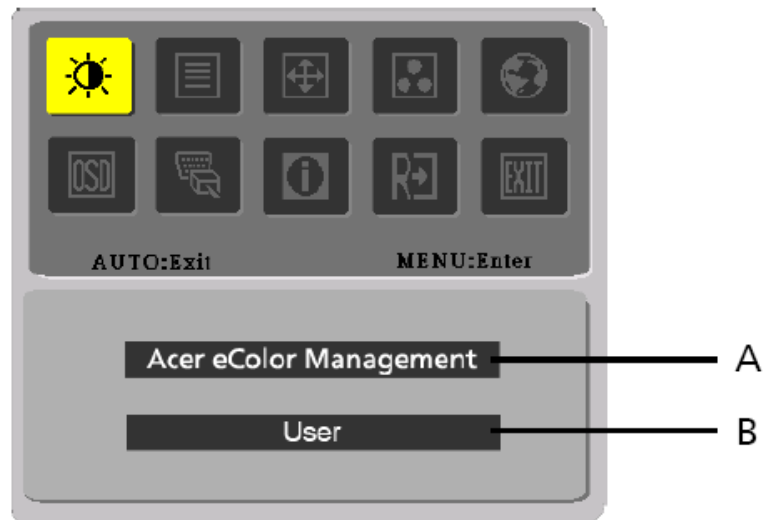
- Step 1: Press "  Key " to open the Acer eColor Management OSD and access the scenario modes
- Step 2: Press "<" or ">" to select the mode
- Step 3: Press " Auto Key " to confirm the mode and run Auto Adjust

- Features and Benefits

Mode	Features	Benefits
Standard	Default settings	Reflects native display capability
Text	Optimal balance of brightness and contrast prevents eyestrain	The most comfortable way to read onscreen text
Graphics	Enhances colors and emphasizes fine detail	Pictures and photographs appear in vibrant colors with sharp detail
Movie	Displays scenes in clearest detail	Presents great visuals, even in unsuitably-lit environments
User	User defined	Settings can be fine-tuned to suit any situation

How to Adjust a Setting

1. Press the MENU-button to activate the OSD window.
 2. Press < or > to select the desired function.
 3. Press the MENU-button to select the function that you want to adjust.
 4. Press < or > to change the settings of the current function.
 5. To exit and save, select the exit function. If you want to adjust any other function, repeat steps 2-4.
- P/X Series OSD behave
When user press "MENU" button on front bezel



- A. Acer eColor Management
If selected to "Acer eColor Management" item, will appear the Acer eColor" OSD
- B. USER
If selected to "USER" item, will appear the Standard OSD



I. Only Analog Input Model








II. Only Dual Input Model








Adjusting the picture









The descriptions for function control LEDS









A. Acer eColor Management

Main Menu icon	Sub Menu icon	Sub Menu item	Description
	N/A	User mode	User defined. Settings can be fine-tuned to suit any situation
	N/A	Text mode	Optimal balance of brightness and contrast prevent eyestrain. The most comfortable way to read onscreen text
	N/A	Standard mode	Default Setting. Reflects native display capability
	N/A	Graphic mode	Enhances colors and emphasize fine detail
	N/A	Movie mode	Displays scenes in clearest detail. Pictures and photographs appear in vibrant colors with sharp detail)

B. USER

Main Menu icon	Sub Menu icon	Sub Menu item	Description
		Contrast	Adjust the contrast between the foreground and background of the screen image
		Brightness	Adjust the background brightness of the screen image
		ACM	ACM (Adaptive Contrast Management)A CM ON/OFF Switch, default "OFF"
		Focus	Adjust picture Focus (available in analog mode only)
		Clock	Adjust picture Clock (available in analog mode only)

Main Menu Icon	Sub Menu Icon	Sub Menu Item	Description
		H. Position	Adjust the horizontal position. (available in Analog mode only)
		V. Position	Adjust the vertical position. (available in Analog mode only)
	N/A	Warm	Set the color temperature to warm white.
	N/A	Cool	Set the color temperature to cool white.
		User /Red	Adjusts Red/Green/Blue intensity.
		User /Green	
		User /Blue	
	N/A	English	Multi-language selection.
	N/A	繁體中文	
	N/A	Deutsch	
	N/A	Francais	
	N/A	Espanol	
	N/A	Italiano	
	N/A	简体中文	
	N/A	日本語	
	N/A	Suomi	EMEA version OSD only
	N/A	Nederlands	
	N/A	Pyccknn	
	N/A		

Main Menu Icon	Sub Menu Icon	Sub Menu Item	Description
		H. Position	Adjust the horizontal position of the OSD.
		V. Position	Adjust the vertical position of the OSD.
		OSD Timeout	Adjust the OSD timeout.
	N/A	Analog	Select input signal from analog (D-Sub)
	N/A	Digital (only Dual-Input Model)	Select input signal from digital(DVI) (only Dual-Input Model)
	N/A	DDC/CI	Turn ON/OFF DDC/CI support
	N/A	Information	Show the resolution, H/V frequency and input port of current input timing.
	N/A	Reset	Clear each old status of Auto-configuration and set the color temperature to Cool.
	N/A	Exit	Save user adjustment and OSD disappear.

OSD Message

a. Outline



b. The Description For OSD Message

Item	Description
Auto Config Please Wait	When Analog signal input, if User Press Hot-Key "Auto", will show this message, and the monitor do the auto config function.
Input Not Supported	When the Hsync Frequency, Vsync Frequency or Resolution is out of the monitor support range, will show this message. This message will be flying.
Cable Not Connected	Analog-Only Model: When the video cable is not connected, will show this message. This message will be flying.
No Signal	Analog-Only Model: When the video cable is connected, but there is no active signal input, will show this message, then enter power saving.

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 DDC2B is a bi-directional data channel based on the I²C 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 signals 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. Pressing a key on the keyboard, or clicking the mouse restores the display.

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 volts 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, and 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 cord needs to use VDE 0602, 0625, 0821 approval power cord in European countries.

This chapter contains step-by-step procedures on how to disassemble the monitor for maintenance.

Disassembly Procedure

1. Remove the cover hinge marked in red. (Fig 1)

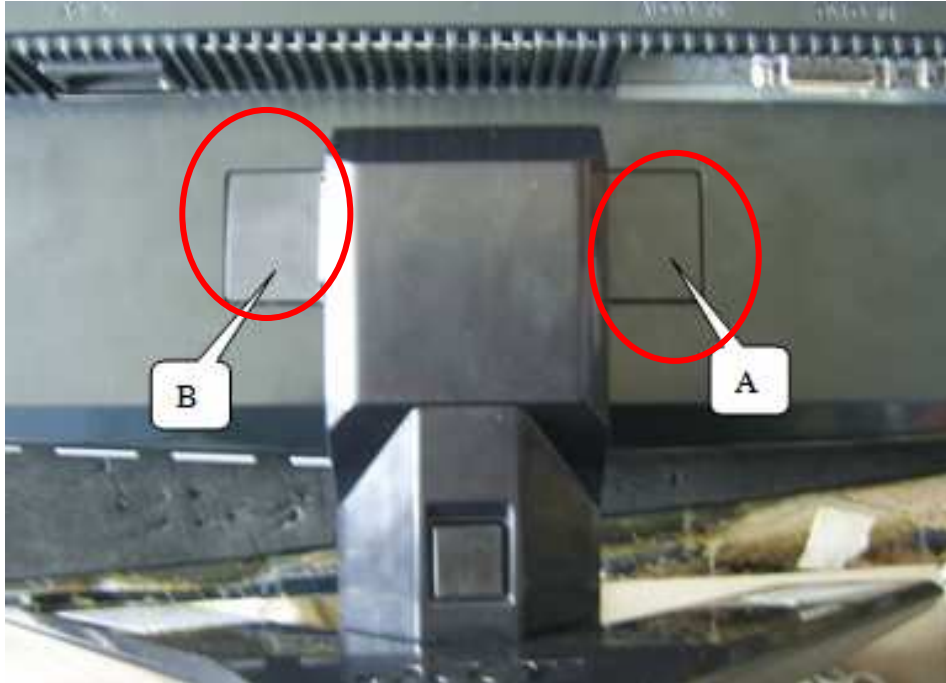


Fig 1

2. Remove the screws as following indicate to release base stand . (Fig 2)

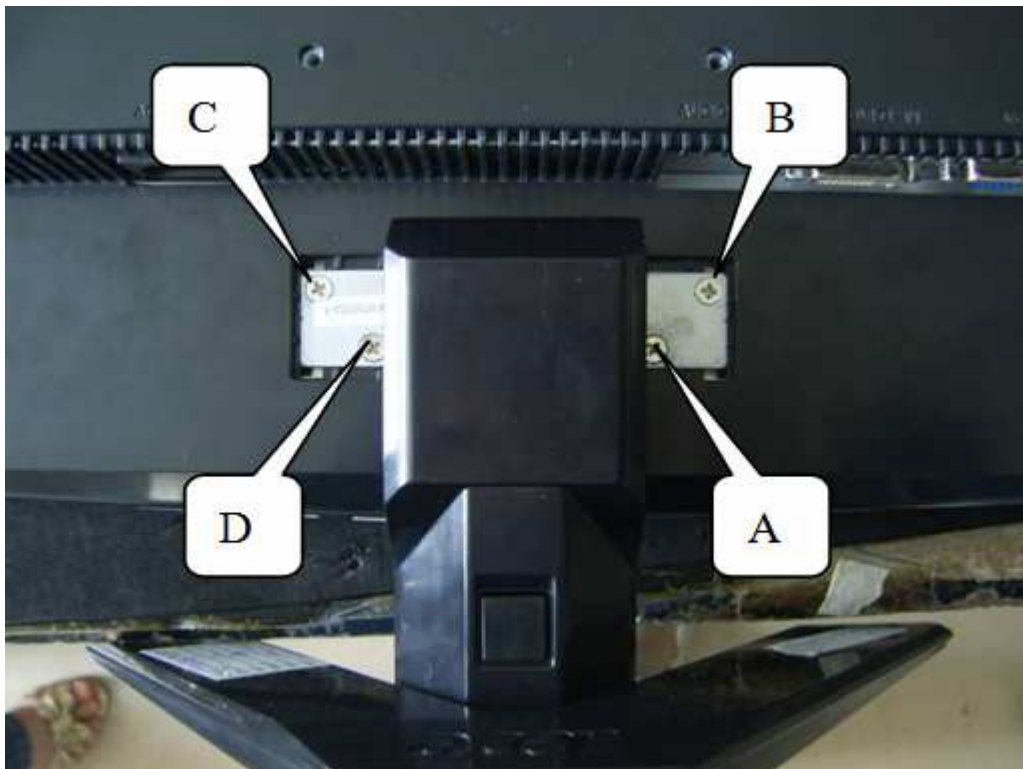


Fig 2

3. Remove the back cover and regard the hook. (Fig 3-4)



Fig 3



Fig 4

4. Remove the keyboard. (Fig 5)



Fig 5

5. Remove the bezel. (Fig 6)



Fig 6

6. Remove the screws to remove the panel. (Fig 7-9)



Fig 7



Fig 8



Fig 9

7. Remove the screw as following indicate to remove the main board, audio board and power board. (Fig 10-12)

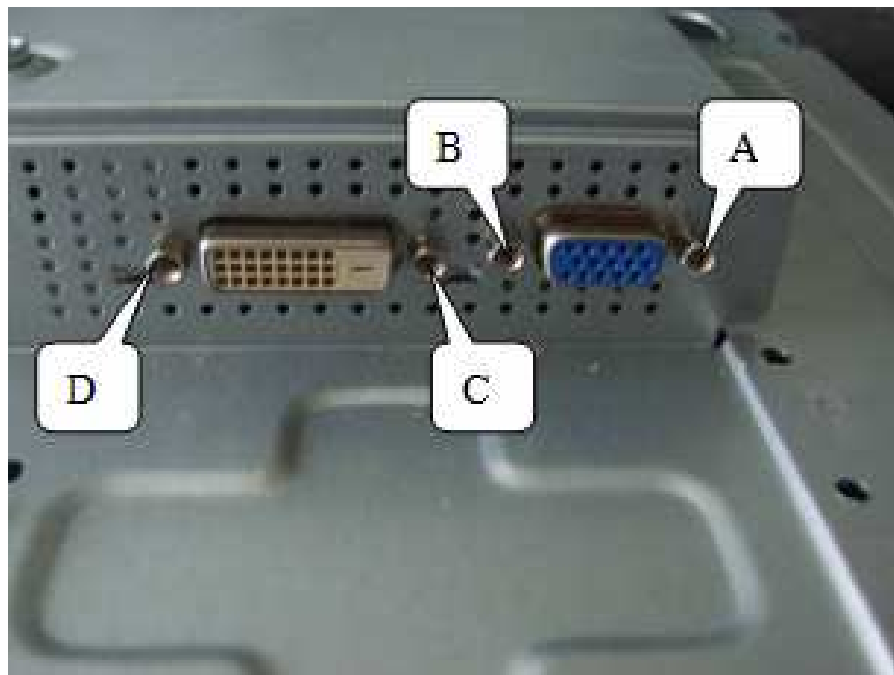


Fig 10

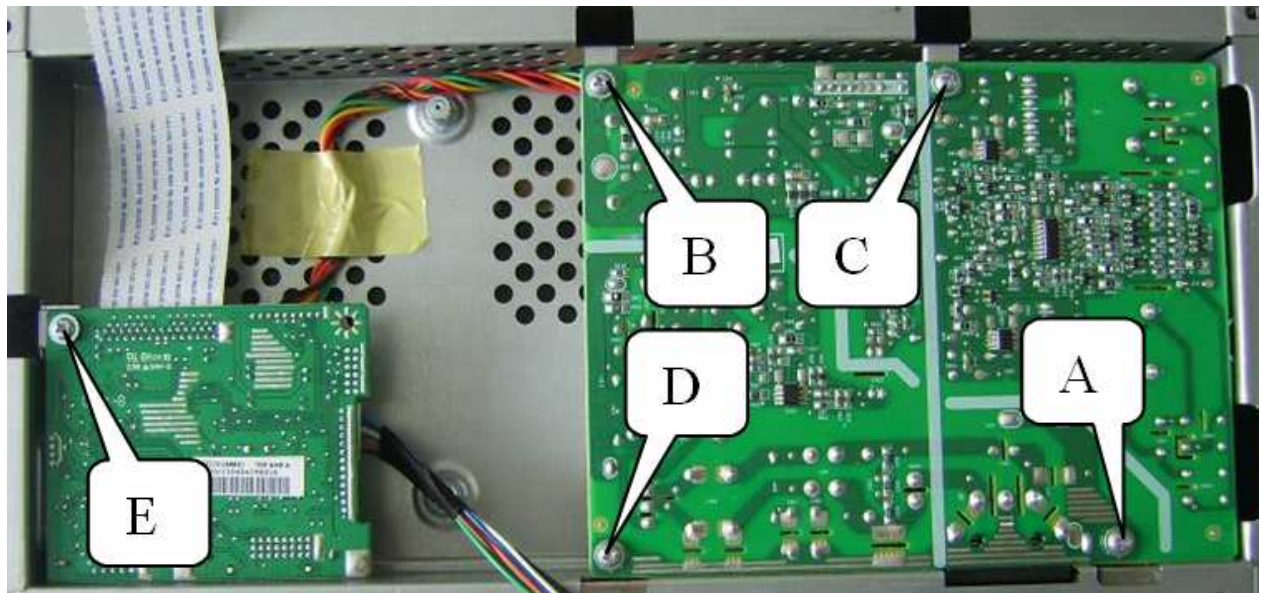


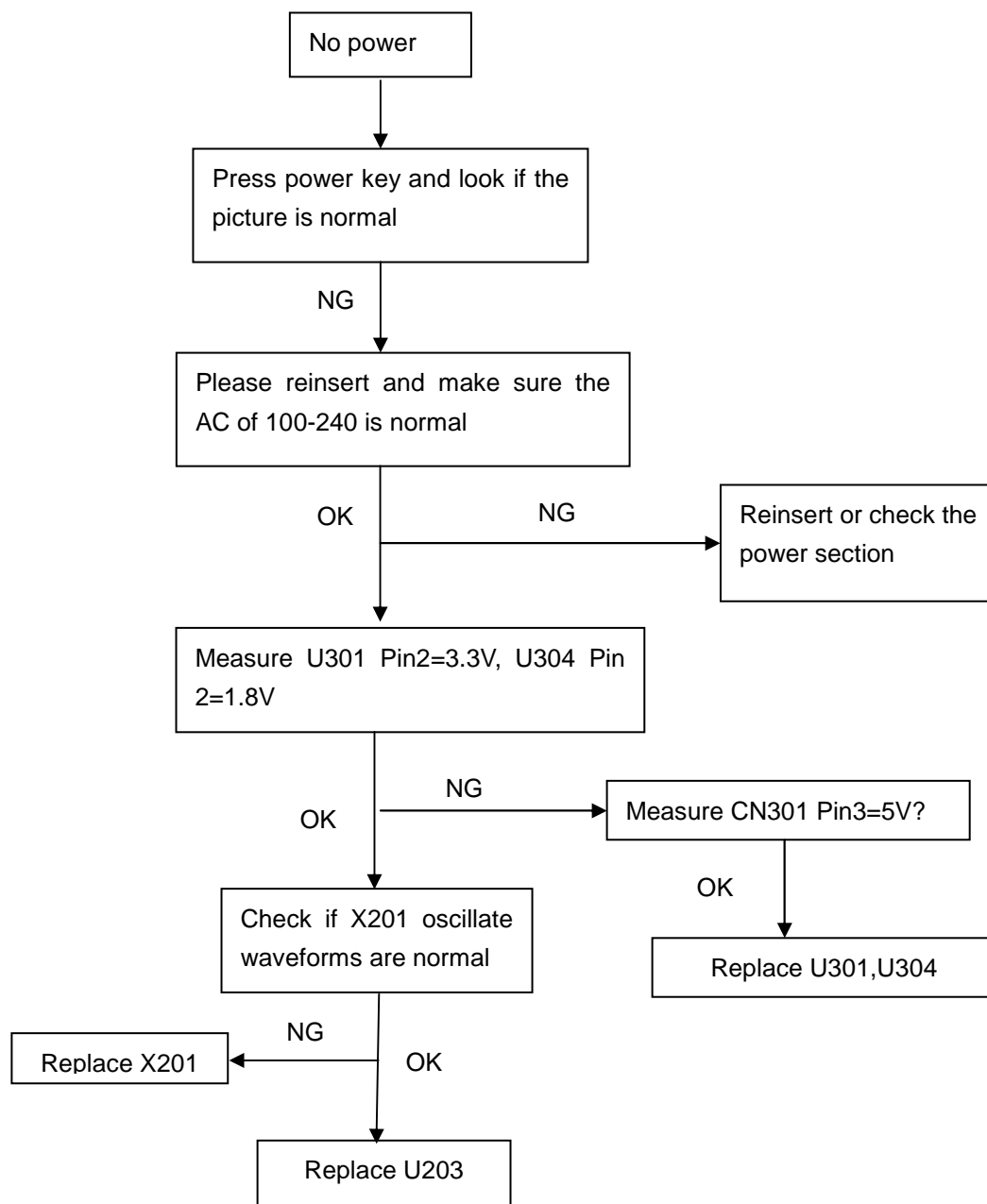
Fig 11



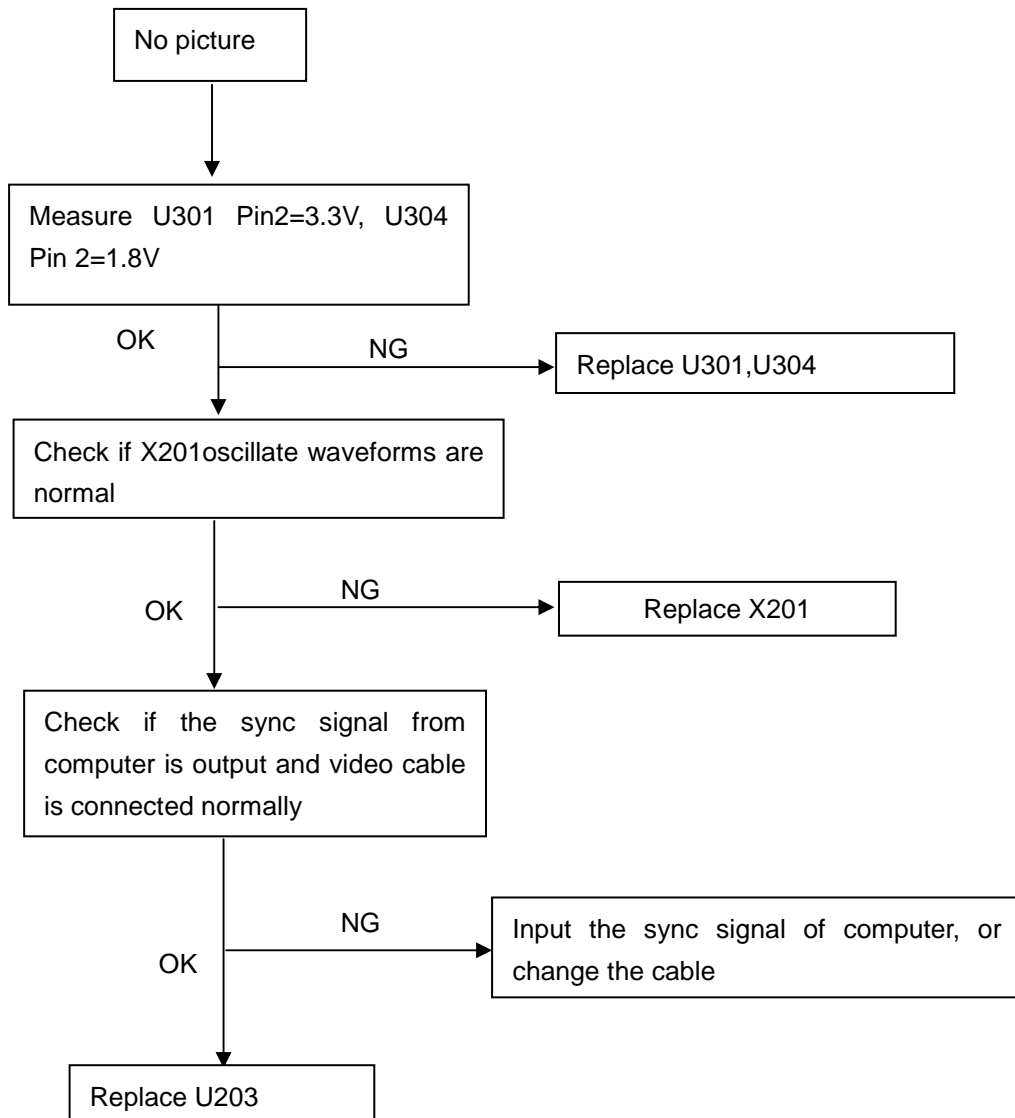
Fig 12

This chapter provides troubleshooting information for the X193W:

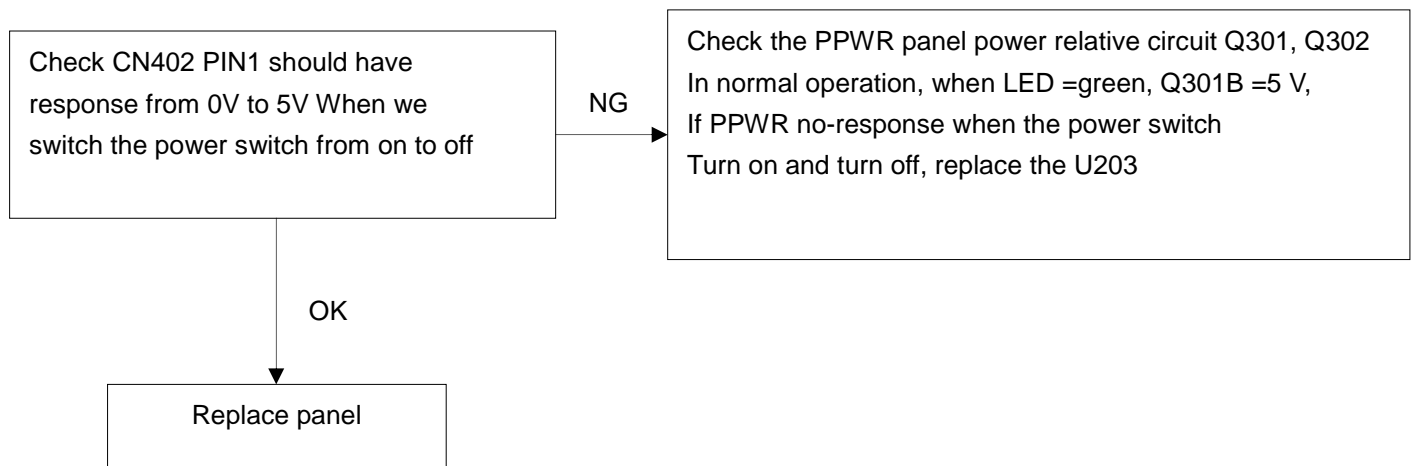
1. No Power



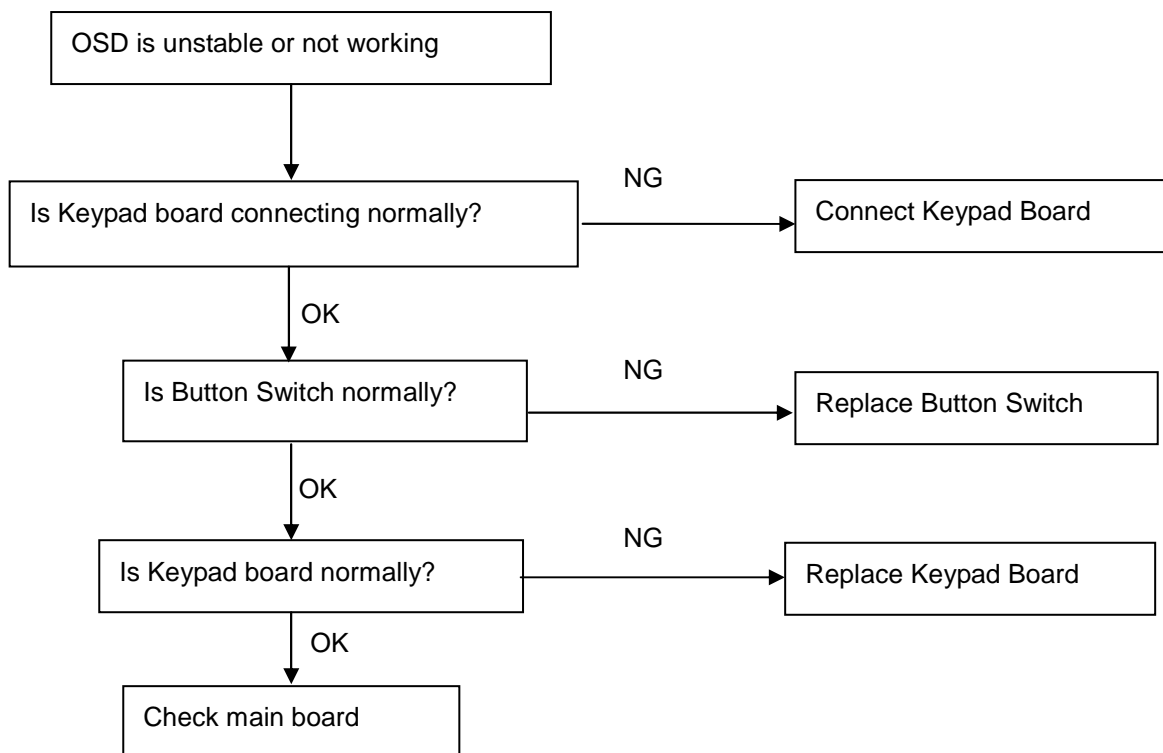
2. No Picture



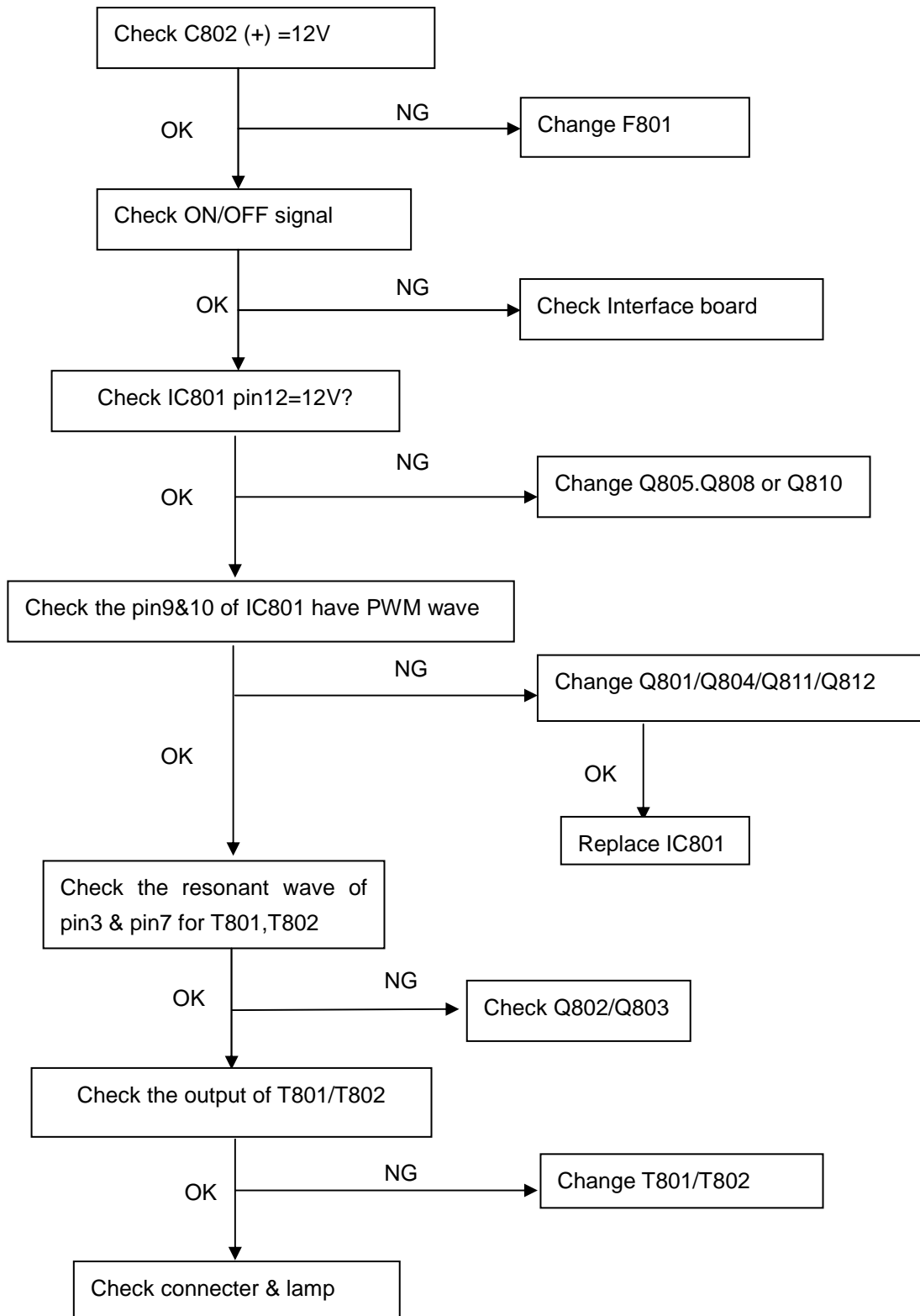
3. Panel Power Circuit



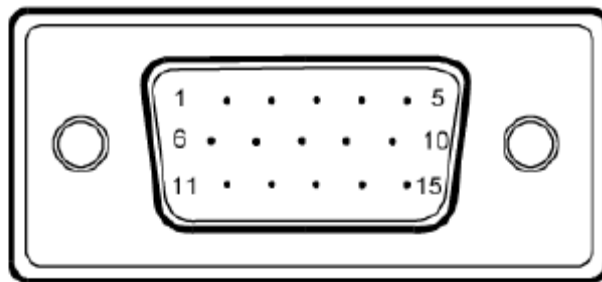
4. Keypad Board



5. No Backlight

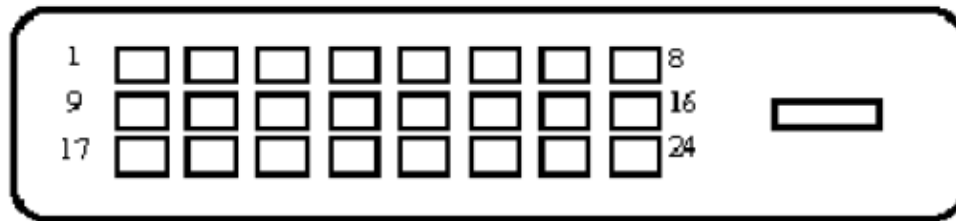


The following figure shows the connector locations on the monitor:



15-Pin Color Display Signal Cable

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1.	Red	9.	+5V
2.	Green	10.	Logic Ground
3.	Blue	11.	Monitor Ground
4.	Monitor Ground	12.	DDC-Serial Data
5.	DDC-return	13.	H-Sync
6.	R-Ground	14.	V-Sync
7.	G-Ground	15.	DDC-Serial Clock
8.	B-Ground		



24-Pin Color Display Signal Cable

PIN	Meaning	PIN	Meaning
1.	TMDS Data2-	13.	TMDS Data3+
2.	TMDS Data2+	14.	+5V Power
3.	TMDS Data 2/4 Shield	15.	GND(return for +5V hsync.vsync)
4.	TMDS Data4-	16.	Hot Plug Detect
5.	TMDS Data4+	17.	TMDS Data0-
6.	DDC Clock	18.	TMDS Data0+
7.	DDC Data	19.	TMDS Data 0/5 Shield
8.	Analogue Vertical Sync	20.	TMDS Data5-
9.	TMDS Data1-	21.	TMDS Data5+
10.	TMDS Data1+	22.	TMDS Clock Shield
11.	TMDS Data 1/3 Shield	23.	TMDS Clock+
12.	TMDS Data3-	24.	DDC TMDS Clock-

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of X193W. 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 SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code from 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 for 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 to dispose it properly, or follow the rules set by your regional Acer office on how to return it.

Exploded Diagram (Model: X193W)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

A2
 A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S

ACER X193W

L19WA-7acer2t




FIRST USED ON	
PART NO.:	
REVISION	
VERSION A	
A01	Jan-06-2007
A02	Jan-26-2007

NO	PART NAME	PART NO	QTY	NOTE
	新膜	Q52G6020-57	1	
	EPS	Q44G9086-1/2	1/1	
S7	SCREW M3X6	M1G1730-6-120	2	NO-AUDIO 机种没有
S6	SCREW M3X8	G1G130-8-120	7	
S5	SCREW M4X8	Q1G130-8-120	4	
S4	SCREW M4X8	M1G140-8-125	4	
S3	SCREW M4X10	Q1G140-10-120	6	
S2	SCREW M3X5	M1G130-5-120	4	
S1	SCREW M3X8	G1G130-8-120	4	
S0	SCREW M3X6	M1G1730-6-120	1	NO-DVI机种用
	SCREW M3X8	G1G130-8-120	1	DVI机种用
15	Stand Bracket	A15G0275-101	1	share with 17"
14	RUBBER FOOT 2	A12G0006-1	1	share with 17"
13	RUBBER FOOT 1	A12G0007-1	3	share with 17"
12	BAES BRACKET	A15G0265-101	1	share with 17"
11	HINGE	A37G0052-2	1	for 19w
10	HINGE COVER R	A33G0271-22-01A	1	share with 17"
	HINGE COVER L	A33G0271-12-01A	1	share with 17"
9	BASE BUTTON	A33G0266-11-01A	1	share with 17"
8	BASE	A34G0482-12-01A	1	share with 17"
7	STAND REAR	A34G0481-12-01A	1	share with 17"
6	STAND FRONT	A34G0480-12-01A	1	share with 17"
5	REAR COVER	A34G0489-11-01A	1	
4	MAIN FRAME	A15G0272-01	1	
3	KEY BUTTON	A33G0277-11-01A	1	
2	LED LENS	A33G0270-11-01A	1	share with 17"
1	BEZEL	A34G0488-11-01A	1	
NO	PART NAME	PART NO	QTY	NOTE
L19WA-7acer2t				

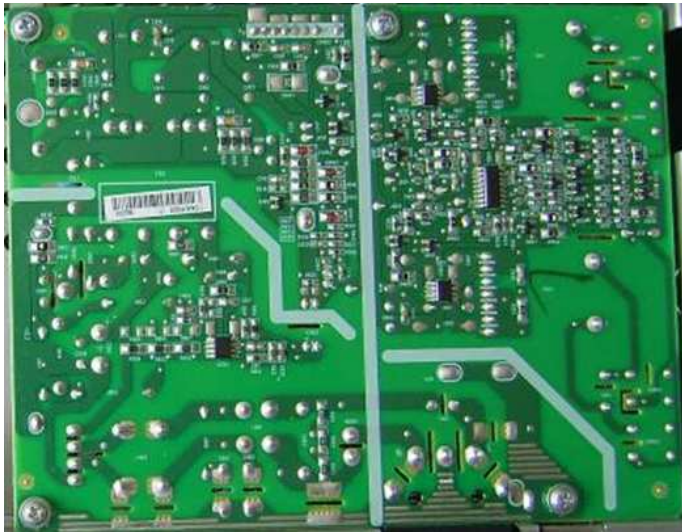
TOP VICTORY ELECTRONICS	DRAWN BY: Yz Zhang	FINISH:	COLOR:	UNIT:	SCALE:
	CHECKED BY:	MATERIAL:	WALL THICKNESS:	DATE:	VERSION: 1.02
TEL:86-591-5285555	APPROVED BY:	PART NAME: ACER X193W	PART NO.:		
FAX:86-591-5285447					

Part List

Above picture show the description of the following component.

Item	Picture	Description
1		Base
2		shield
4		Panel

5



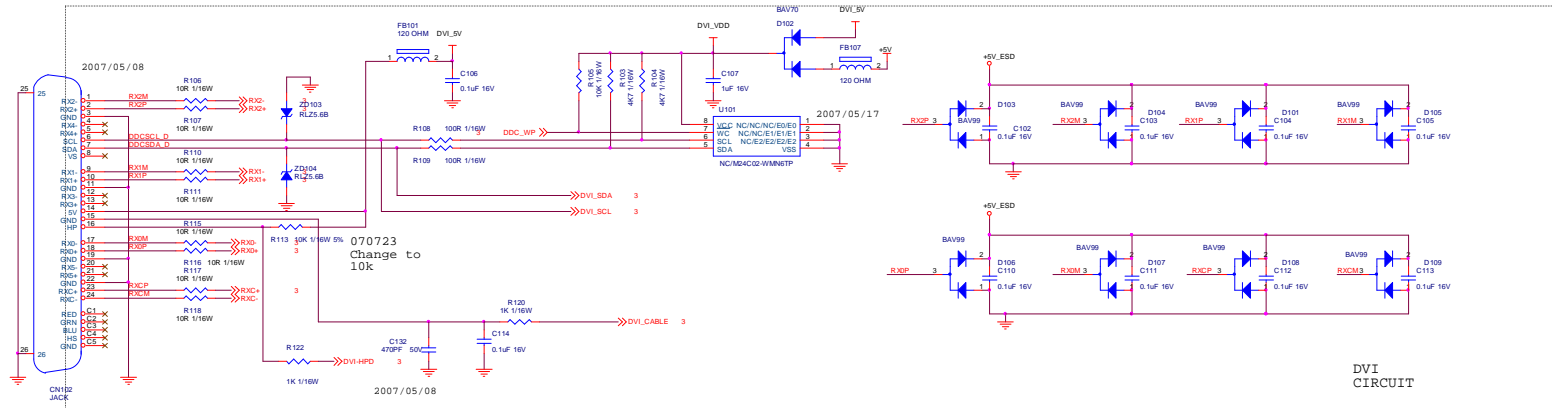
Power Board

6

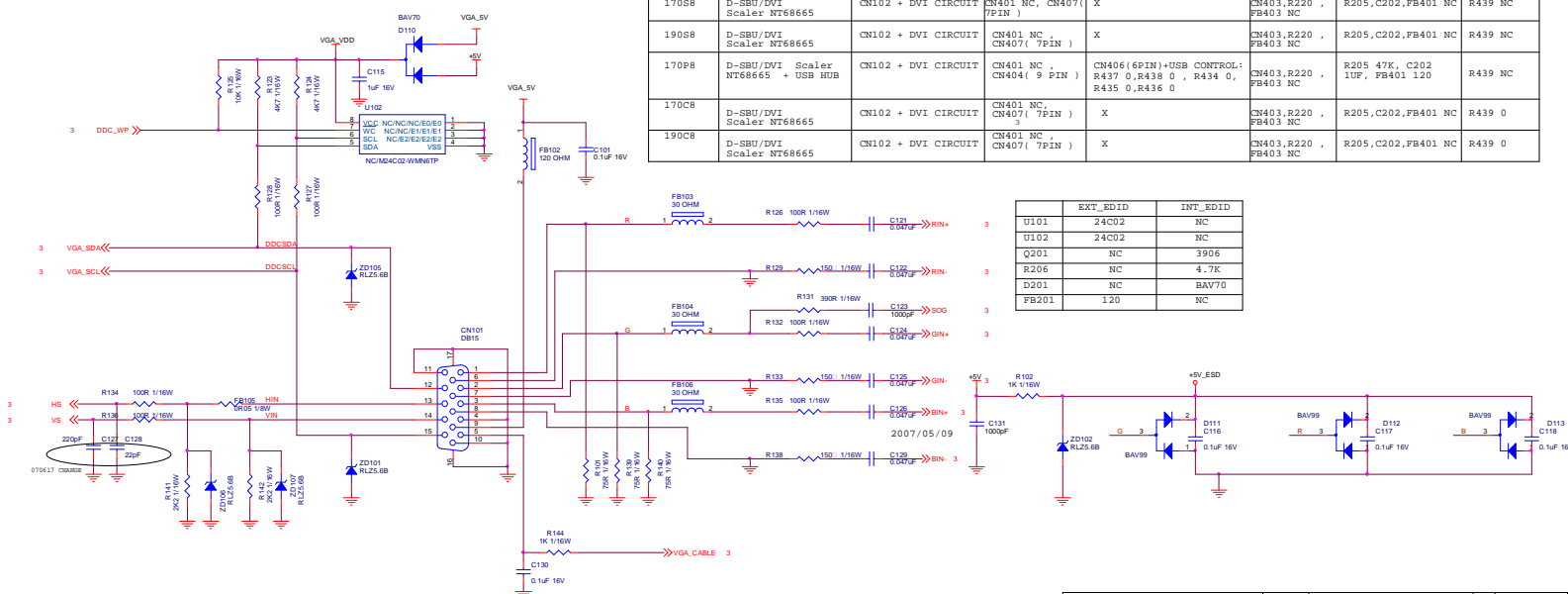


Main Board

Main Board



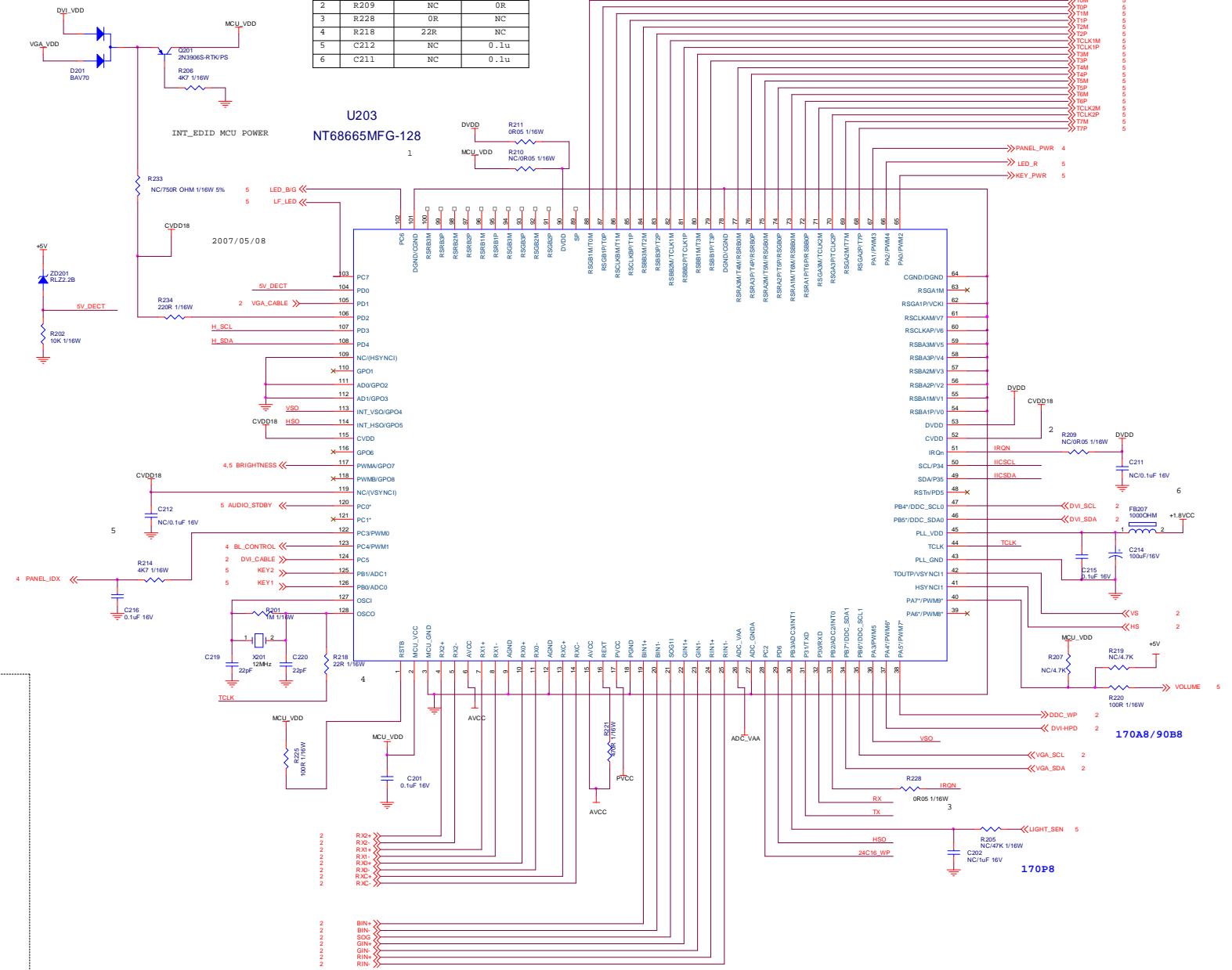
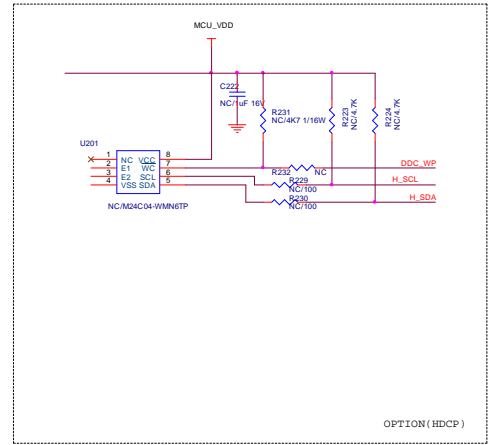
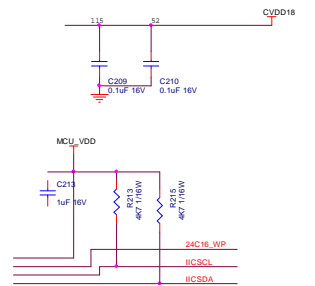
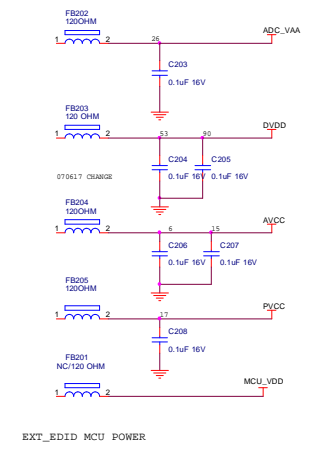
MODEL	FUNCTION	DVI CON.	KEY CON.	USB CON.	VOLUME CON.	LIGHT SENSOR CONT.	CN407 CON. GND
190B8	D-SBU Scaler NT68665 + AUDIO	CN102 + DVI CIRCUIT	CN401(13PIN)	X	CN403(2x6PIN , R202 100	R205,C202,FB401 NC	R439 NC
170A8	D-SBU Scaler NT68625 + AUDIO	CN102 NC	CN401(13PIN)	X	CN403(2x6PIN , R220 100	R205,C202,FB401 NC	R439 NC
170S8	D-SBU/DVI Scaler NT68665	CN102 + DVI CIRCUIT	CN401 NC , CN407(7PIN)	X	CN403 ,R220 , FB403 NC	R205,C202,FB401 NC	R439 NC
190S8	D-SBU/DVI Scaler NT68665	CN102 + DVI CIRCUIT	CN401 NC , CN407(7PIN)	X	CN403 ,R220 , FB403 NC	R205,C202,FB401 NC	R439 NC
170P8	D-SBU/DVI Scaler NT68665 + USB HUB	CN102 + DVI CIRCUIT	CN401 NC , CN404(9 PIN)	CN406(6PIN)+USB CONTROL: R437 0,R438 0 , R434 0, R435 0,R436 0	CN403 ,R220 , FB403 NC	R205 47K, C202 1UF, FB401 120	R439 NC
170C8	D-SBU/DVI Scaler NT68665	CN102 + DVI CIRCUIT	CN401 NC , CN407(7PIN)	X	CN403 ,R220 , FB403 NC	R205,C202,FB401 NC	R439 0
190C8	D-SBU/DVI Scaler NT68665	CN102 + DVI CIRCUIT	CN401 NC , CN407(7PIN)	X	CN403 ,R220 , FB403 NC	R205,C202,FB401 NC	R439 0



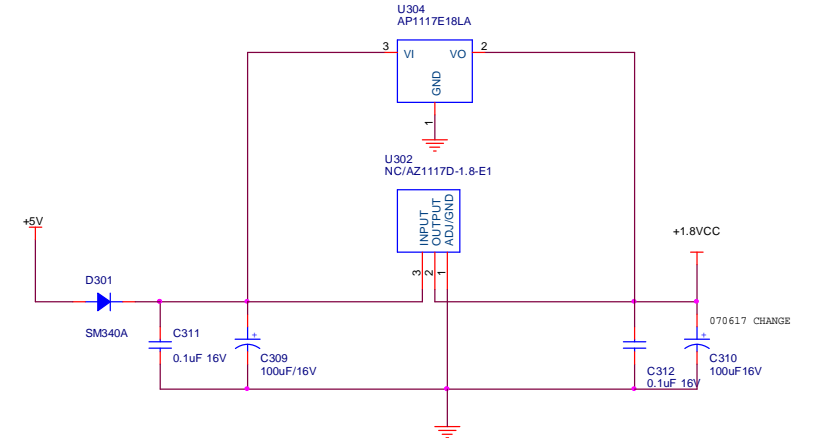
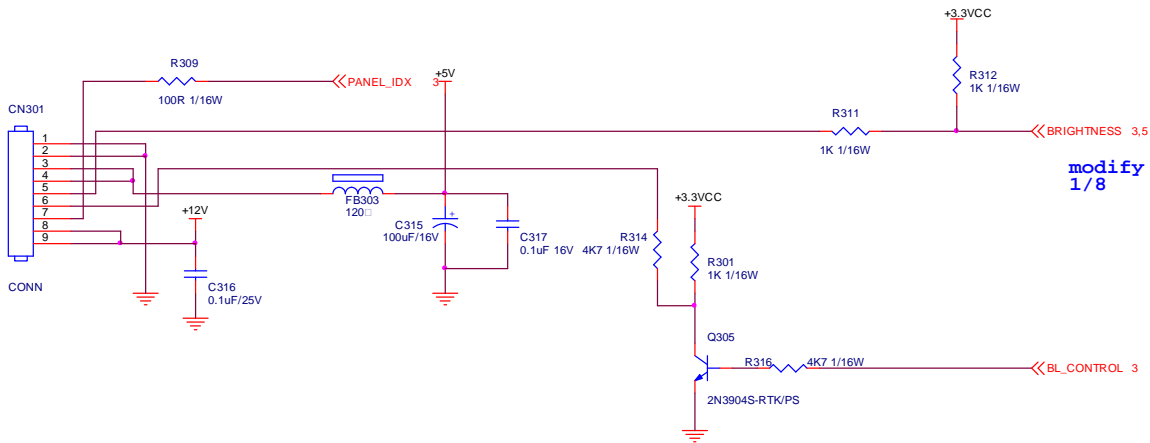
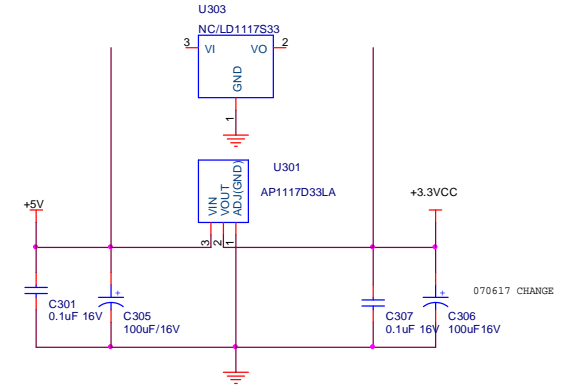
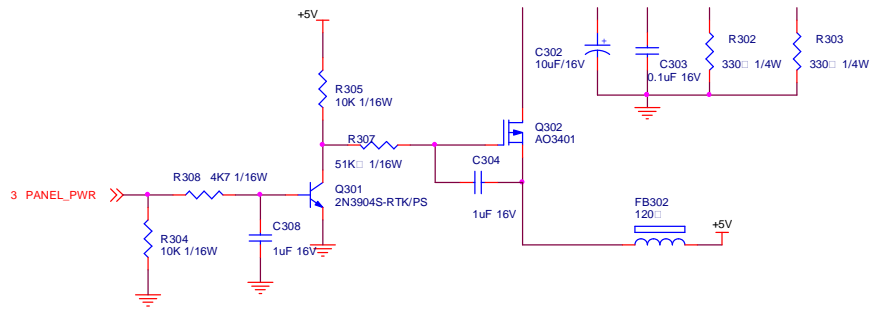
	EXT_RDID	INT_RDID
U101	24C02	NC
U102	24C02	NC
D201	NC	3906
R206	NC	4.7K
D201	NC	BAV70
FB201	120	NC

T.P.V (Top Victory Electronics Co., Ltd.)	CEM MODEL	YIB20V1P19W	Rev	C
出貨日期	G261-A-AC-1-070722	TPV MODEL	Rev	E
Key Component	02-D-SUB/DVI	PCB NAME	71502561-A-AC	Rev
Date	Sunday, July 22, 2007	Sheet	2 of 5	Rev

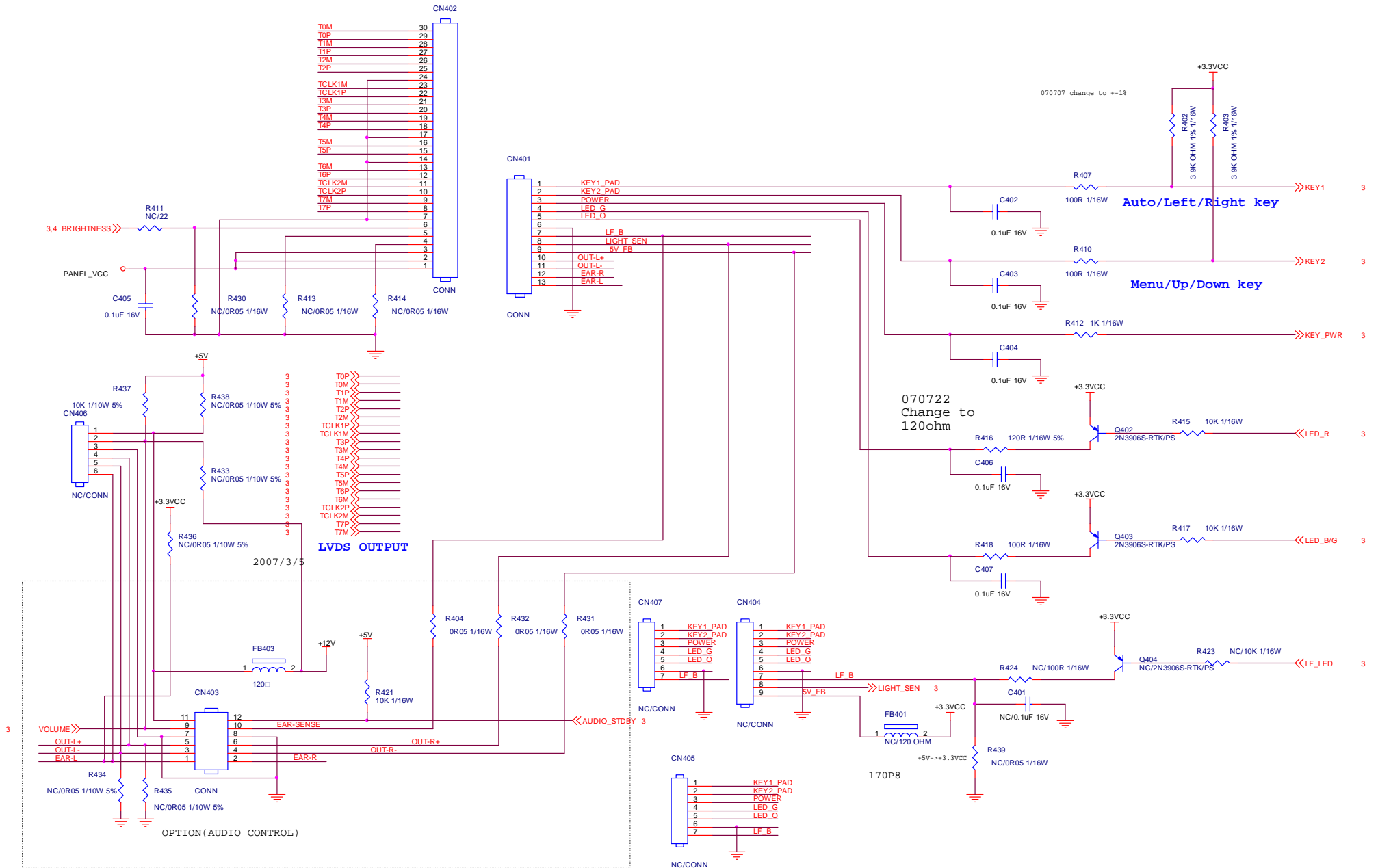
NO.	PARTS	NONE OD	OD
1	U203	NT68665	NT68670
2	R209	NC	0R
3	R228	0R	NC
4	R218	22R	NC
5	C212	NC	0.1u
6	C211	NC	0.1u



TP V (Top Victory Electronics Co., Ltd.)	OEM MODEL	X193W/P193W	Size	A2	
出貨編號	G2561-A-AC-X1-070722	TPV MODEL	ACER	Rev	E
Key Component	03.MCU+SCALER NT68665	PCB NAME	715G2561-A-AC	料號	<轉>
Date	Sunday, July 22, 2007	Sheet	3 of 5		

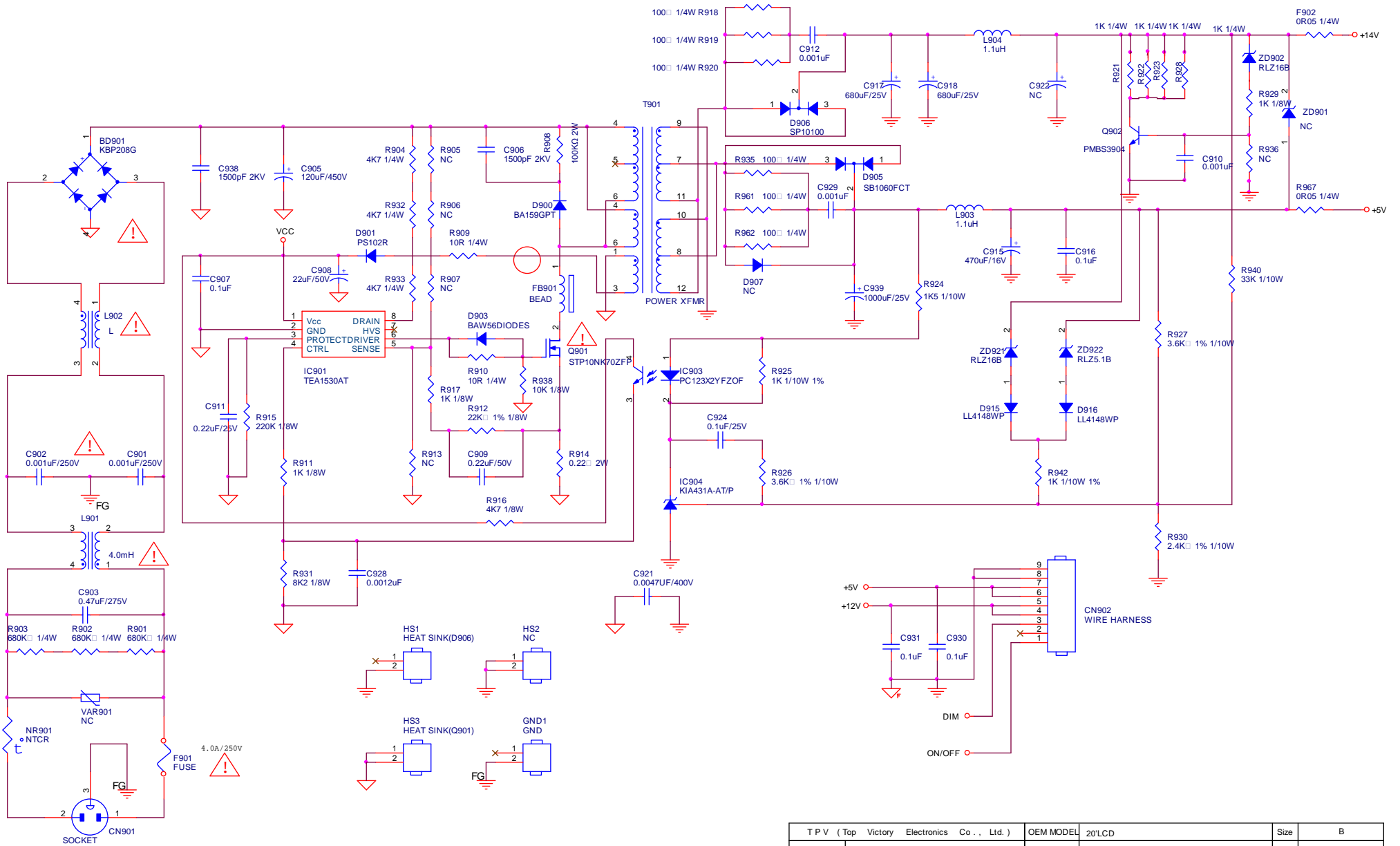


T P V (Top Victory Electronics Co., Ltd.)	OEM MODEL	X193W/P193W	Size	A3
話 隔 瓜 繪 版	G2561-A-AC-X1-070722	TPV MODEL	ACER	Rev
Key Component	04.DC-DC	PCB NAME	715G2561-A-AC	称 號
Date	Sunday, July 22, 2007	Sheet	4 of 5	<称 號>

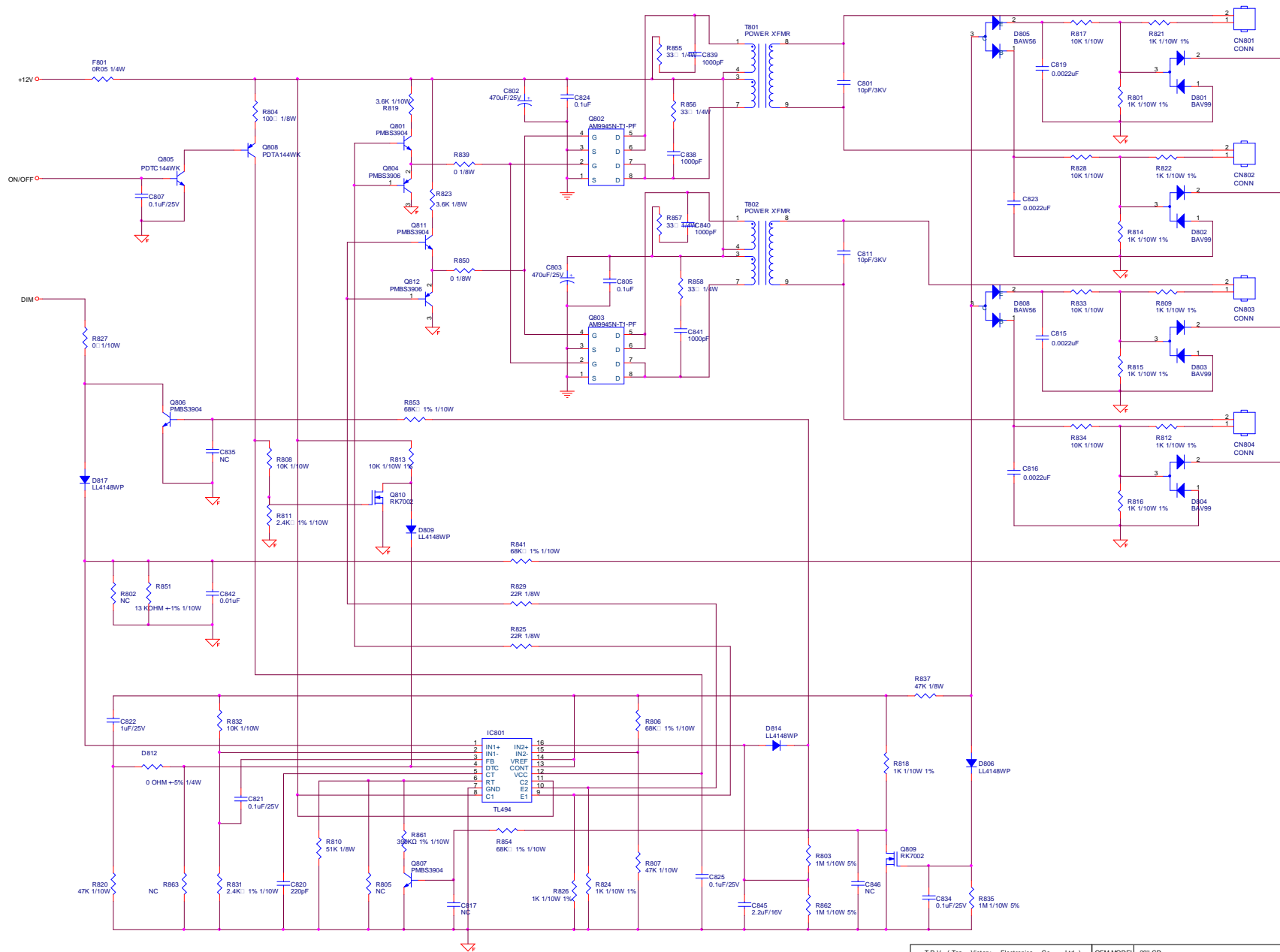


TPV (Top Victory Electronics Co., Ltd.)	OEM MODEL	X193W/P193W	Size	A3
屏隔瓜網膜	G2561-A-AC-X-1-070722	TPV MODEL	ACER	Rev
Key Component	05.CONNECTOR	PCB NAME	715G2561-A-AC	修驗
Date	Sunday, July 22, 2007	Sheet	5 of 5	<修驗>

Power board



T P V (Top Victory Electronics Co . , Ltd .)	OEM MODEL	20'LCD	Size	B
屏 瓜 網 板	G2538-3-X-X-8-070720	TPV MODEL	PWPCA42AA1	Rev
Key Component	02.POWER	PCB NAME	715G2538_3	稱 號
Date	Thursday, July 19, 2007	Sheet	2 of 3	<稱 號>



T P V (Top Victory Electronics Co., Ltd.)	OEM MODEL	20/LCD	Size	Custom
訂 購 成 績 數	G2538-3-X-X-8-07020	TPV MODEL	PWPCA42A1	Rrv
Key Component	03.INVERTER	PCB NAME	715G2538_3	特 殊
Date	Thursday, July 19, 2007	Sheet	3 of 3	<特 殊>