

***acer***



**eMachines E151H**  
**Service Guide**

## Service Guide Version and Revision

[illegible]

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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.      |

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## 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.

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**Introduction****Scope**

This specification defines the requirements for the 15" 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.

**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 E151H**

|                        |                       |
|------------------------|-----------------------|
| Panel                  | M150EW01 V000 SZ AUO  |
| Signal Interface       | D-Sub 15pin           |
| Sync Type              | Separate / Compatible |
| Color Temp User Adjust | Support               |
| DDC                    | DDC2B                 |
| Speaker                | Yes                   |
| Headphone Jack         | Yes                   |
| Microphone Jack        | No                    |
| USB Hub                | Not support           |
| Tilt / Swivel          | No / No               |

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## Electrical Requirements

### Standard Test Conditions

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

|                           |  |
|---------------------------|--|
| Ambient light             | Dark room (< 1 cd/m <sup>2</sup> )   |
| Viewing distance          | 40 cm for LCD performance, 20 cm for LCD failures  |
| Warm up time              | > 30 minutes   |
| Analog Input signal       | 700 mV <sub>ss</sub>   |
| 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. |
| Picture position and size | Factory preset value   |
| Viewing angle             | 90° H and 60°V   |
| AC Supply voltage         | 220V± 5%, 50±3Hz   |
| Ambient temperature       | 20±5°C   |
| Humidity                  | 50% ± 10%  |
| Display mode              | 1280 x720, all white   |
| e-color mode              | Set to "User" mode   |

### 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/(m<sup>2</sup>) = 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  | 332.16 (W) × 186.84H)            |
|                              | Pixel pitch  | 0.2595(H) x 0.2595(W)            |
|                              | Contrast Ratio(Dynamic)  | 3500 : 1                         |
|                              | Response time  | 8ms                              |
|                              | Luminance of White   | 200cd/m <sup>2</sup> @7.5mA(Typ) |
| Input                        | Separate Sync.   | H/V TTL                          |
|                              | H-Frequency  | 30kHz – 60kHz                    |
|                              | V-Frequency  | 55-75Hz                          |
| Viewing angle                | 90° H and 60°V   |                                  |
| Display Colors               | 16.7M  |                                  |
| Display mode                 | 1280 x 720 ,60HZ,all white   |                                  |
| EPA ENERGY STAR®             | ON Mode  | < 23W                            |
|                              | OFF Mode   | < 2W                             |
| 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                 | 100 V ~ 240 V, 50 ± 3Hz, 60 ± 3Hz  |                                  |
| Environmental Considerations | Operating Temp: 5° to 35°C<br>Storage Temp: -30° to 65°C<br>Operating Humidity: 0% to 90%<br>Storage Humidity: 0% to 90%               |                                  |
| Peak surge current           | < 55A peak at 240 VAC and cold starting  |                                  |
| Power line surge             | No advance effects (no loss of information or defect) with a maximum of 1 half-wave missing per second                                 |                                  |

## LCD Panel Specification

M150EW01 V0 is a Color Active Matrix Liquid Crystal Display composed of a TFT LCD panel, a driver circuit, and backlight system.

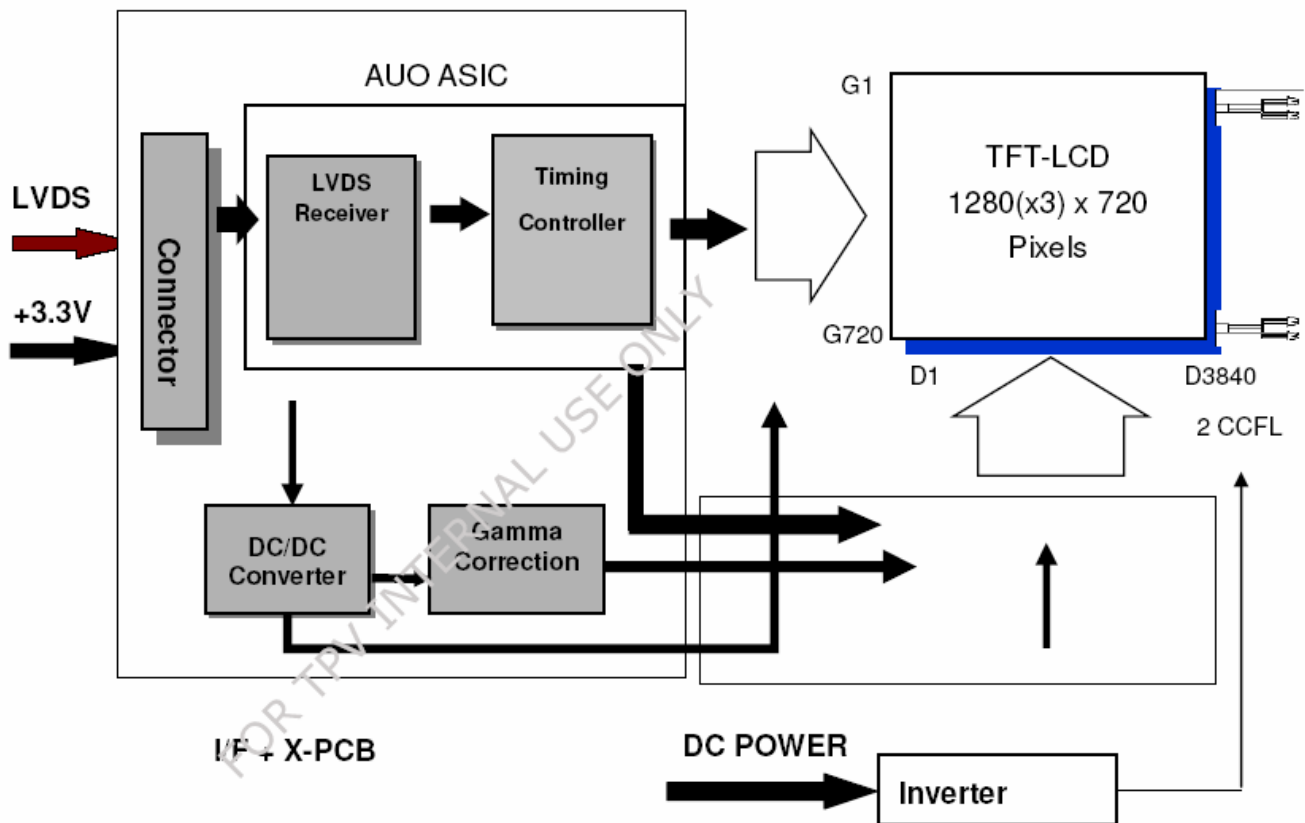
The screen format is intended to support the WXGA (1280(H) x 720(V)) screen and 16.7M colors. All input signals are LVDS interface compatible.

Inverter of backlight is not included.

### General Specifications

| Items                         | Unit                 | Specifications                                |
|-------------------------------|----------------------|---|
| Screen Diagonal               | [mm]                 | 15.0"W  |
| Active Area                   | [mm]                 | 332.16 (W) x 186.84 (H)                       |
| Pixels H x V                  |                      | 1280x3(RGB) x 720                             |
| Pixel Pitch                   | [mm]                 | 0.2595X0.2595                                 |
| Pixel Arrangement             |                      | R.G.B. Vertical Stripe                        |
| Display Mode                  |                      | Normally White                                |
| White Luminance (ICCFL=7.5mA) | [cd/m <sup>2</sup> ] | 200 cd/m <sup>2</sup> @ 7.5mA (Typ)           |
| Contrast Ratio                |                      | 400 (typ)                                     |
| Response Time                 | [msec]               | 8 (Typ, on/off)                               |
| Nominal Input Voltage VDD     | [Volt]               | +3.3 typ.                                     |
| Power Consumption             | [Watt]               | 12.6W(Typ)<br>(PDD=2.6W, PCFL=10W@Lamp=7.5mA) |
| Weight                        | [Grams]              | 1160(Typ)                                     |
| Physical Size(H x V x D)      | [mm]                 | 354.12(W) x 227.4(H) x 12.0(D)(Typ)           |
| Electrical Interface          |                      | one channel LVDS                              |
| Surface Treatment             |                      | Anti-Glare, Hardness 3H                       |
| Support Color                 |                      | 16.7M colors (RGB 6-bit + HiFRC)              |
| RoHS Compliance               |                      | RoHS Compliance                               |

## Function Block Diagram



## Electrical Characteristics

Input power specifications are as follows:

| Symble | Parameter               | Min | Typ | Max | Units  | Note                             |
|--------|-------------------------|-----|-----|-----|--------|----------------------------------|
| VDD    | Logic/LCD Drive Voltage | 3.0 | 3.3 | 3.6 | [Volt] | ±10%                             |
| IDD    | VDD Current             |     | 800 | 910 | [mA]   | Vin=3.3V, Black Pattern, at 60Hz |
| IRush  | Inrush Current          |     | 1.4 | 2   | [A]    | Note                             |
| PDD    | VDD Power               |     | 2.6 | 3   | [Watt] | Vin=3.3V, Black Pattern, at 60Hz |

Signal electrical characteristics are as follows:

| Symbol | Parameter                              | Min  | Typ | Max | Units | Condition                     |
|--------|--|------|-----|-----|-------|-------------------------------|
| VTH    | Differential Input High Threshold      | -    | -   | 100 | [mV]  | VICM = 1.2V <i>Note</i>       |
| VTL    | Differential Input Low Threshold       | -100 | -   | -   | [mV]  | VICM = 1.2V <i>Note</i>       |
| VID    | Input Differential Voltage             | 100  | 400 | 600 | [mV]  | <i>Note</i>                   |
| VICM   | Differential Input Common Mode Voltage | 1.0  | 1.2 | 1.5 | [V]   | VTH/VTL = ± 100mV <i>Note</i> |

Parameter guideline for CCFL Inverter is under stable conditions at 25°C (Room Temperature) :

| Symbol                      | Parameter                     | Min.  | Typ.            | Max.          | Unit       | Condition           |
|-----------------------------|-------------------------------|-------|-----------------|---------------|------------|---------------------|
| IRCFL                       | CCFL operation range          | 3.0   | 7.5             | 8.0           | [mA] rms   | (Ta=25°C) Note 4    |
| ICFL                        | CCFL Inrush current           | -     | -               | 20            | [mA]       |                     |
| FCFL                        | CCFL Frequency                | 40    | 50              | 80            | [KHz]      | (Ta=25°C) Note 1, 6 |
| ViCFL (0°C)<br>(reference)  | CCFL Ignition Voltage         | 1450  | -               | -             | [Volt] rms | (Ta=0°C) Note 3     |
| ViCFL (25°C)<br>(reference) | CCFL Ignition Voltage         | 1100  | -               | -             | [Volt] rms | (Ta=25°C) Note 3    |
| VCFL                        | CCFL Discharge Voltage        | -     | 620<br>(@7.5mA) | 710<br>(@3mA) | [Volt] rms | (Ta=25°C) Note 2    |
| CFL                         | CCFL Power consumption @7.5mA | -     | 10              | 11            | [Watt]     | (Ta=25°C) Note 2    |
| CCFL Life Time              | LTCFL                         | 40000 | 50000           |               | [Hour]     | Note 5              |

## Optical Specifications

The optical characteristics are measured under stable conditions at 25°C (Room Temperature) :

| Item  | Unit                 | Conditions         | Min.  | Typ.  | Max.  | Note |
|---|----------------------|--------------------|-------|-------|-------|------|
| Viewing Angle                               | [degree]             | Horizontal (Right) | 35    | 45    | -     | 1    |
|   |                      | CR = 10 (Left)     | 35    | 45    | -     |      |
|   |                      | Vertical (Up)      | 10    | 20    | -     |      |
|   |                      | CR = 10 (Down)     | 30    | 40    | -     |      |
|   |                      | Horizontal (Right) | 45    | 55    | -     |      |
|   |                      | CR = 5 (Left)      | 45    | 55    | -     |      |
| Luminance Uniformity                        | [%]                  | 9 Points           | 70%   | 80%   | -     | 2,3  |
|   |                      |                    |       |       |       |      |
| Response Time                               | [msec]               | Rising             | -     | 6     | 9     | 4,6  |
|   |                      | Falling            | -     | 2     | 4     |      |
|   |                      | Rising + Falling   | -     | 8     | 13    |      |
| Color / Chromaticity Coordinates (CIE 1931) |                      | Red x              | 0.559 | 0.589 | 0.619 | 4    |
|   |                      | Red y              | 0.307 | 0.337 | 0.367 |      |
|   |                      | Green x            | 0.282 | 0.312 | 0.342 |      |
|   |                      | Green y            | 0.522 | 0.552 | 0.582 |      |
|   |                      | Blue x             | 0.128 | 0.158 | 0.188 |      |
|   |                      | Blue y             | 0.115 | 0.145 | 0.175 |      |
|   |                      | White x            | 0.283 | 0.313 | 0.343 |      |
|   |                      | White y            | 0.299 | 0.329 | 0.359 |      |
| White Luminance ICCFL=7.5 mA                | [cd/m <sup>2</sup> ] |                    | 160   | 200   | -     | 4    |
| CR: Contrast Ratio                          |                      |                    | 240   | 400   | -     | 4    |
| Cross talk                                  | [%]                  |                    |       | 1.2   | 1.5   | 5    |
| Flicker                                     | [dB]                 |                    | -     |       | -20   | 7    |

Optical Equipment: BM-5A, BM-7, PR880, or equivalent

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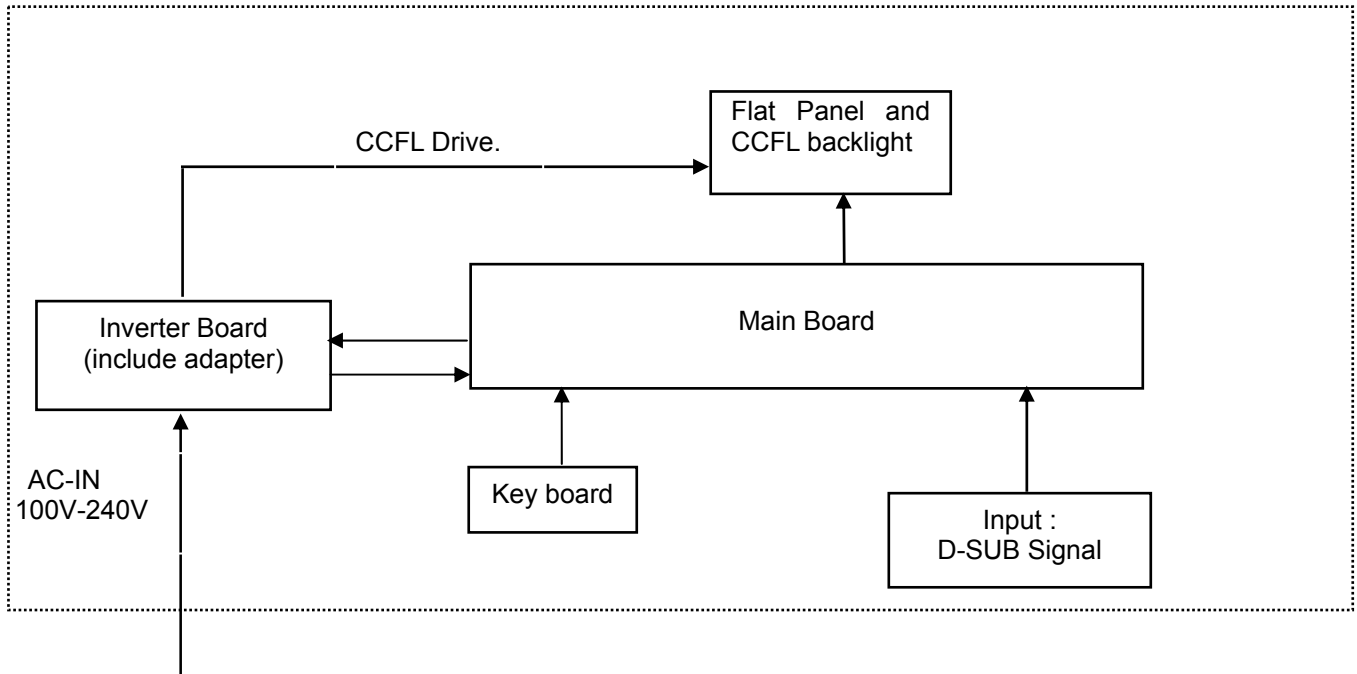
**Support Timing**

| <b>STAND</b> | <b>RESOLUTION</b> | <b>HORIZONTAL<br/>FREQUENCY(KHZ)</b> | <b>VERTICAL<br/>FREQUENCY(Hz)</b> |
|--------------|-------------------|--------------------------------------|-----------------------------------|
| VGA          | 640×480 @60Hz     | 31.469                               | 59.940                            |
| VGA          | 640×480 @72Hz     | 37.861                               | 72.809                            |
| VGA          | 640×480 @75Hz     | 37.500                               | 75.000                            |
| MAC          | 640×480 @67Hz     | 35.000                               | 66.667                            |
| VESA         | 720×400 @70Hz     | 31.469                               | 70.087                            |
| SVGA         | 800×600 @56Hz     | 35.156                               | 56.250                            |
| SVGA         | 800×600 @60Hz     | 37.879                               | 60.317                            |
| SVGA         | 800×600 @72Hz     | 48.077                               | 72.188                            |
| SVGA         | 800×600 @75Hz     | 46.875                               | 75.000                            |
| Mac          | 832×624 @75Hz     | 49.722                               | 74.550                            |
| XGA          | 1024×768 @60Hz    | 48.363                               | 60.004                            |
| XGA          | 1024×768 @70Hz    | 56.476                               | 70.069                            |
| XGA          | 1024×768 @75Hz    | 60.023                               | 75.029                            |
| VESA         | 1280×720 @60Hz    | 44.955                               | 59.940                            |

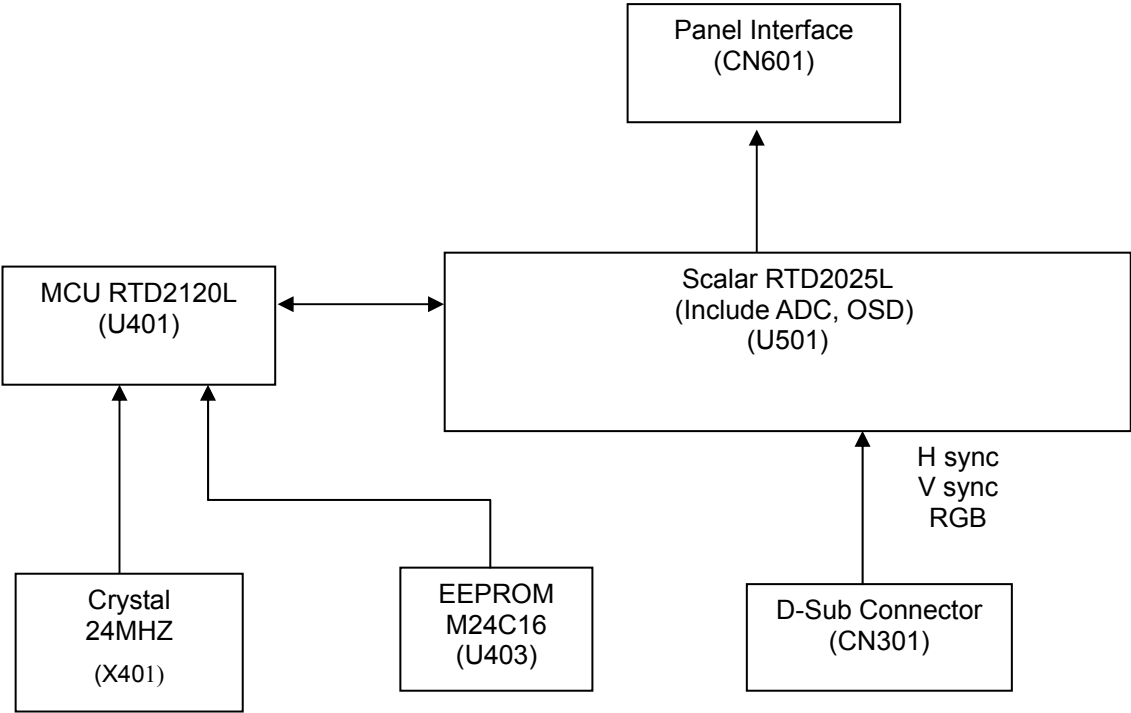
## Monitor Block Diagram

The LCD MONITOR will contain a main board, a power board and a key 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.

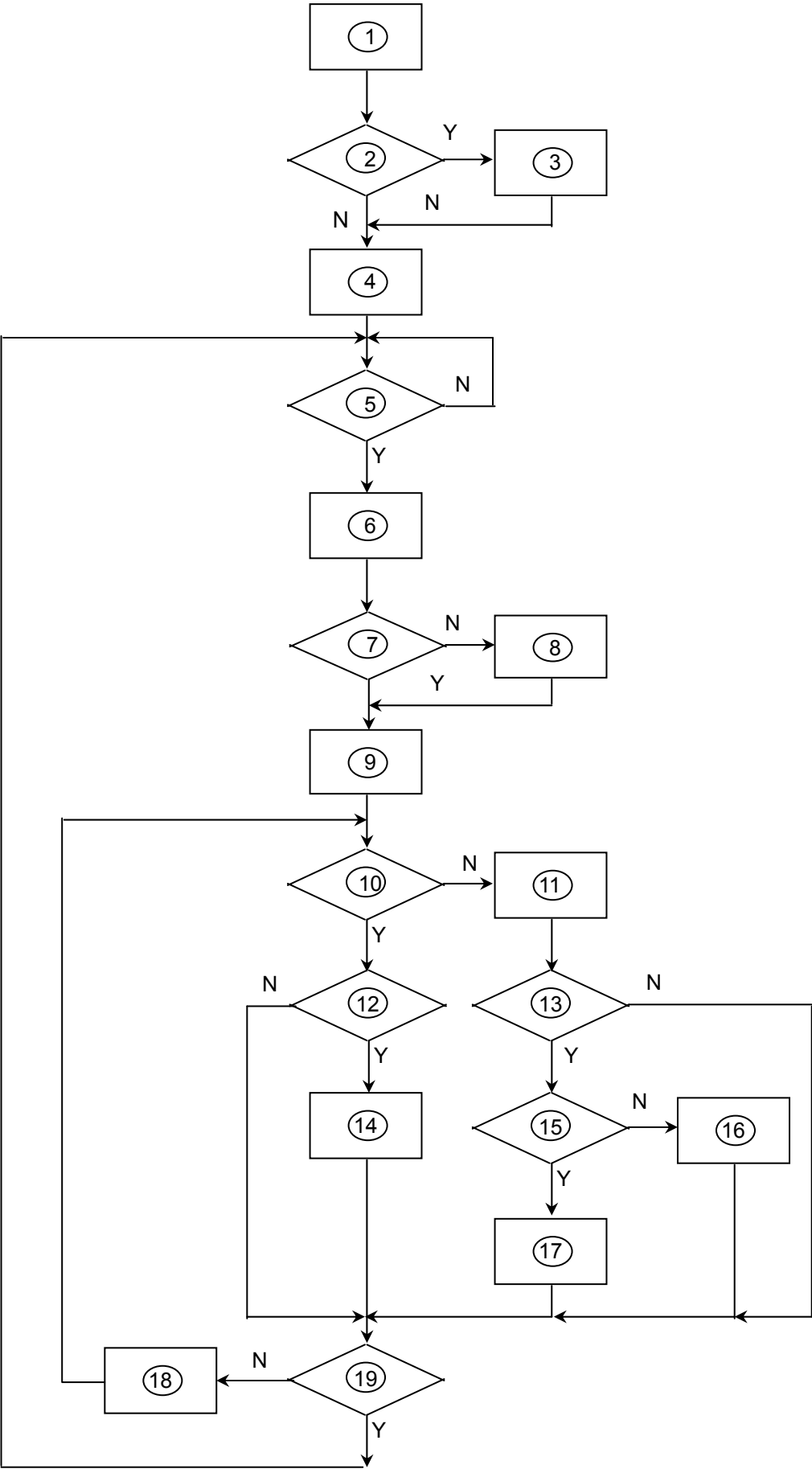


Main Board Diagram





Software Flow Chart



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**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.<br>Turn on the LED and set it to green color.<br>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?   |

19

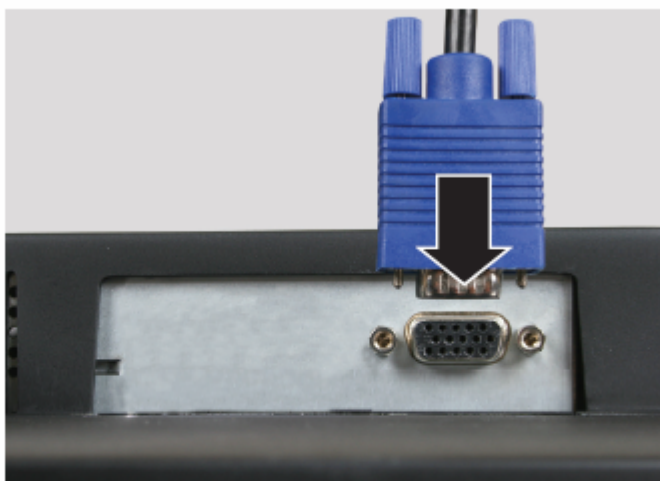
## Installation

To install the monitor on your host system, please follow the steps below:

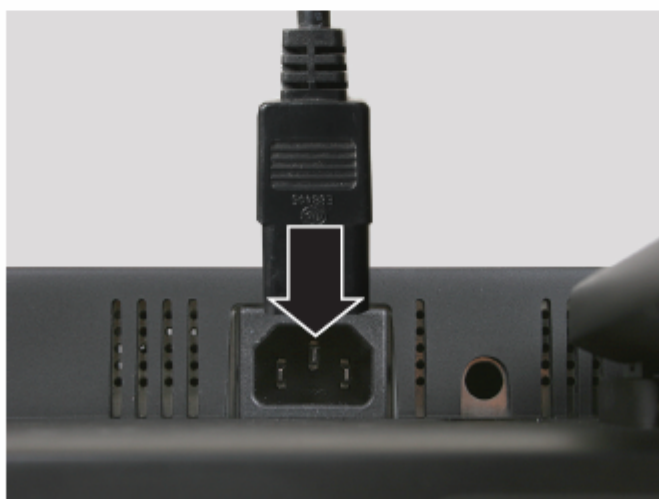
### Steps

► To connect video and power cables:

- 1 Position your computer and the monitor so you can reach the back of each, then connect the blue VGA video cable to the blue VGA video connector under the back of the monitor.



- 2 Make sure that your computer is turned off, then connect the other end of the video cable to the matching video port on the back of your computer.
- 3 Connect the power cord to the power connector under the back of the monitor.



- 4 If you want to have your computer's audio played through your monitor's speakers, connect the included audio cable to your computer's headphones or line out jack (usually color-coded green) and to your monitor's **AUDIO** jack.



- 5 Plug the power cord into a correctly grounded (three-prong) AC power outlet. We recommend using a surge protector to protect your monitor from voltage spikes.

## Connecting a security cable

You can secure your monitor to your computer desk (or to another heavy object) with a cable lock (such as a Kensington™ lock). To connect a cable lock, follow the cable lock's instructions to connect it to the lock slot on the back of your monitor (cable lock not included).



## Turning on the monitor

► **To turn on the monitor:**

- 1 Press the power button on the front of your monitor. The power LED on the power button turns blue. (The appearance of your monitor may vary from that shown.)



**Important**

Turn on your monitor before turning on your computer.

- 2 Turn on your computer.

After your computer is running, the power LED on the monitor's power button should be blue. Allow several seconds for the display image to appear. If the power LED is not on or is amber, or you do not see a display image, check the connections. For more troubleshooting information, see ["Troubleshooting" on page 10](#).

- 3 Adjust the tilt of the monitor for the best viewing angle. The monitor can adjust from 15° back to 5° forward.



**Important**

When adjusting the monitor settings, always press **Auto** before entering the on-screen display menu (OSD). This will automatically adjust the display image to the ideal settings for the current screen resolution.

- 4 After you see the Windows desktop, press the **Auto** button on the bottom of the monitor to automatically adjust your display image to the ideal settings.
- 5 Use the on-screen display (OSD) to adjust other monitor settings. For more information, see ["Adjusting monitor settings" on page 5](#).

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## Removing the Base

### Attaching the base

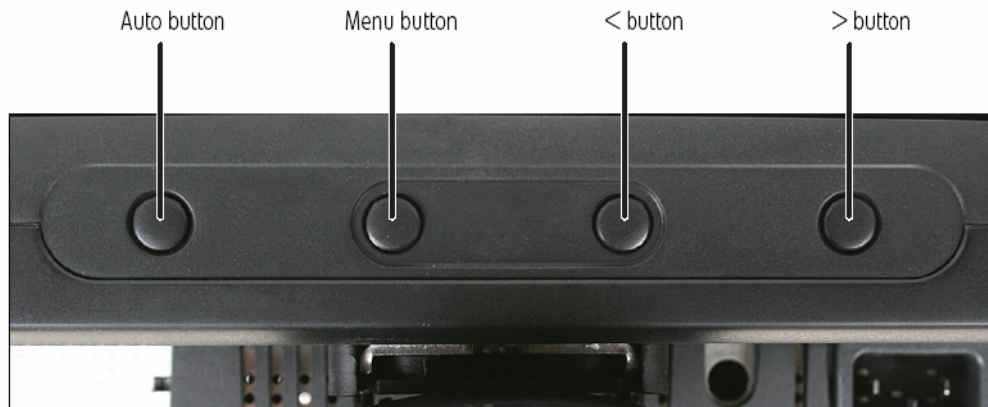
► **To attach the base:**

- Place the base on a table top, then press the base's release button while you slide the monitor neck down onto the base.



## External Controls

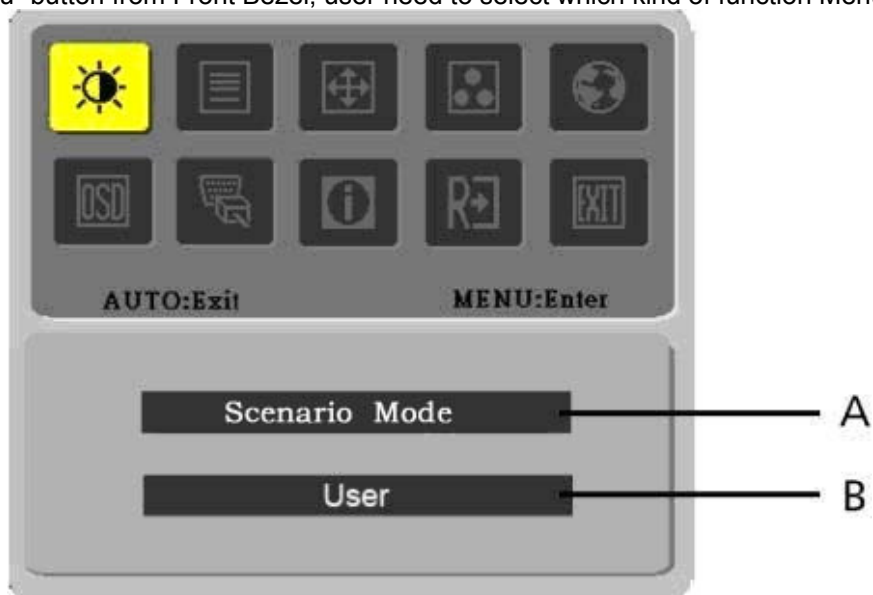
## Bottom view



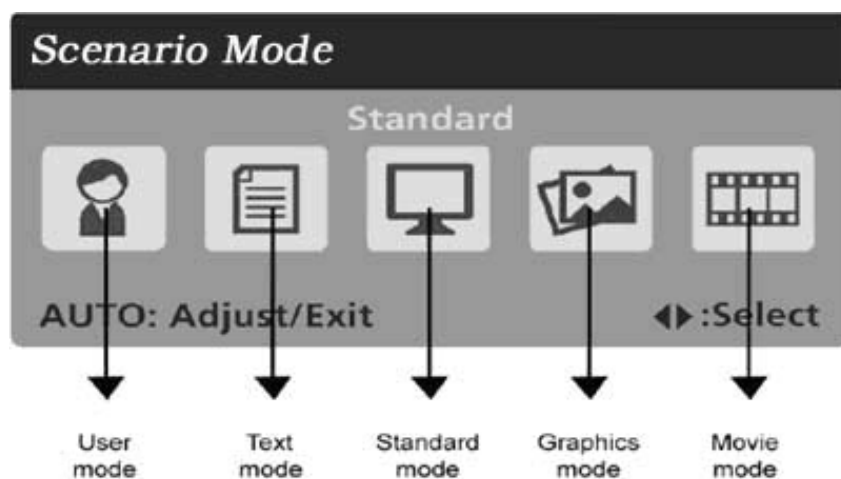
- **Auto** button  
Press to have the monitor self-adjust its image position, clock, and focus settings. While the Scenario Mode menu is open, press to exit the menu.
- **< and >** buttons  
Press to adjust volume.  
While the OSD is open, press to highlight and adjust settings.
- **Menu**  
Press once to open or close the OSD and select the highlighted menu or setting.

## OSD FOLLOW CHART

1. When press “Menu” button from Front Bezel, user need to select which kind of function Menu need to open



eMachine Scenario Mode: If select the “Scenario Mode” item, it will appear the eMachine Scenario Mode  
(NOTE: In MENU OSD the “Scenario Mode” item doesn’t have Multi-language selection, only English language)








USER: If select the “USER” item, it will appear the standard OSD



























## 2. Scenario Mode main menu, sub menu and description

| 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)     |

## 3. USER main menu, sub menu and description

| 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                          |
|   |   |               |   |
|  |  | Focus         | Adjust picture Focus<br>(available in analog mode only)                       |
|   |  | Clock         | Adjust picture Clock<br>(available in analog mode only)                       |

|   |   |             |  |
|---|---|-------------|--|
|    |  | H. Position | Adjust the horizontal position.<br>(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   | Рускнн      |  |

|   |   |                                    |   |
|---|---|------------------------------------|---|
|    |  | 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<br>(only Dual-Input Model) | Select input signal from digital(DVI)<br>(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 Warm |
|  | N/A   | Exit                               | Save user adjustment and OSD disappear.   |

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## 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 I<sup>2</sup>C 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.

### Enter into the factory mode:

Firstly, turn on the power, press the AUTO and "e" at one time, and then move the cursor to select F icon at the left top of the screen, release, press the menu again will activate the factory mode, the factory OSD will be at the left top of the screen.

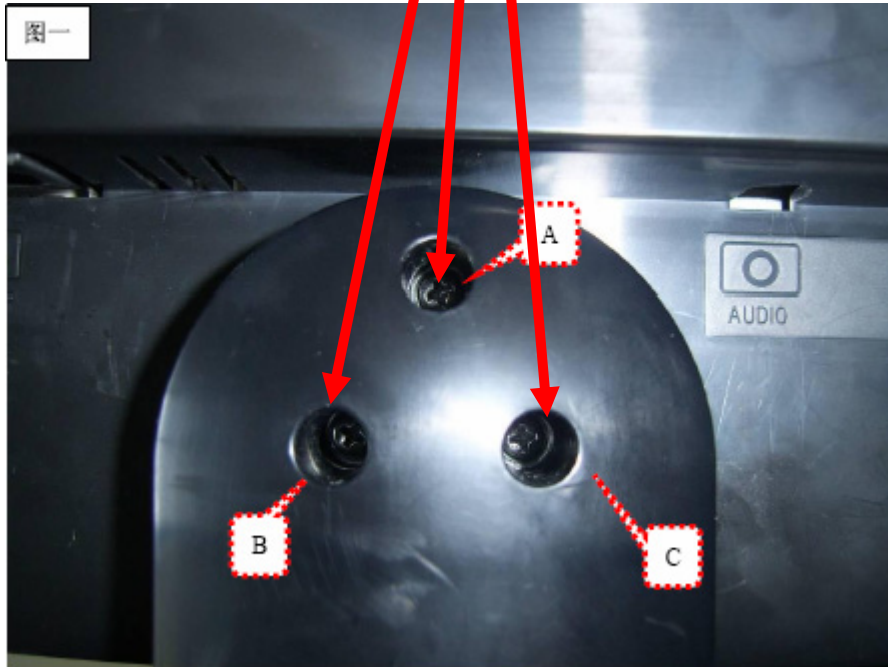
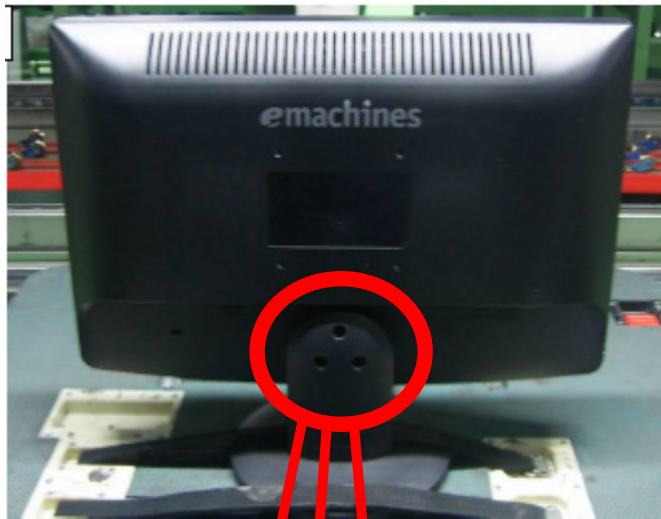
This chapter contains step-by-step procedures on how to disassemble the monitor for maintenance.

The tool for disassembly is as follows:

Screwdriver, hexagonal screwdriver, Putty knife.

### Disassembly Procedure

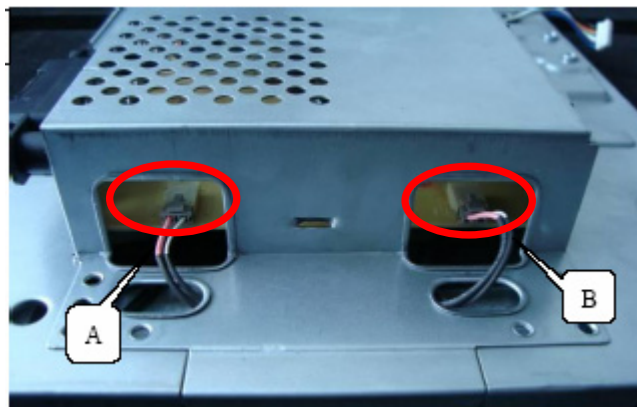
1. Remove the screws as following indicate to release base stand



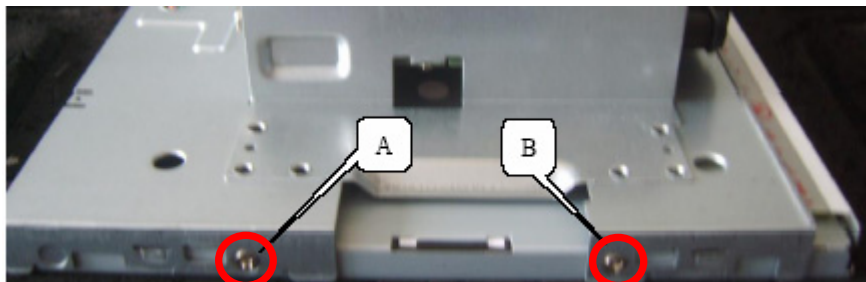
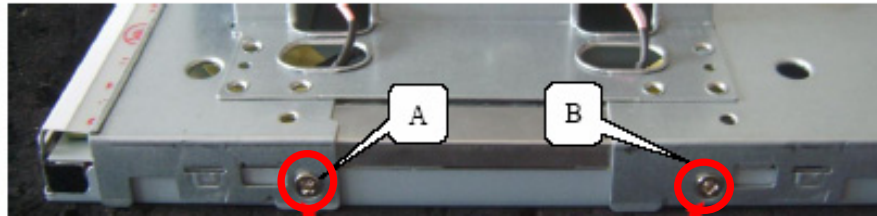
2. Remove the back cover and bezel.



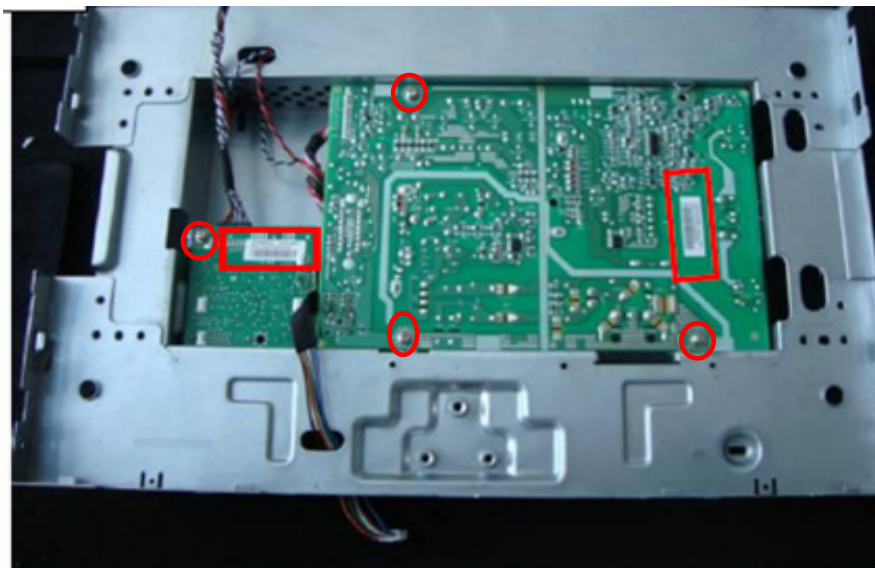
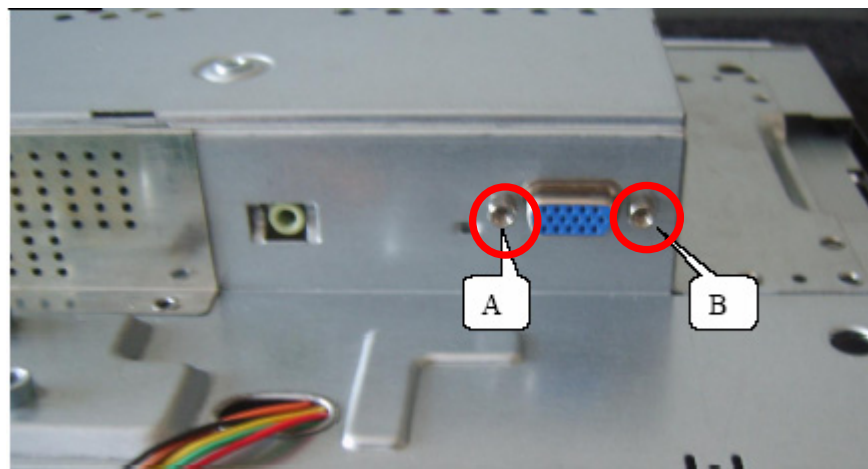
3. Remove the lamp connectors and remove the screws to remove the panel. Put attention to the LVDS cable.





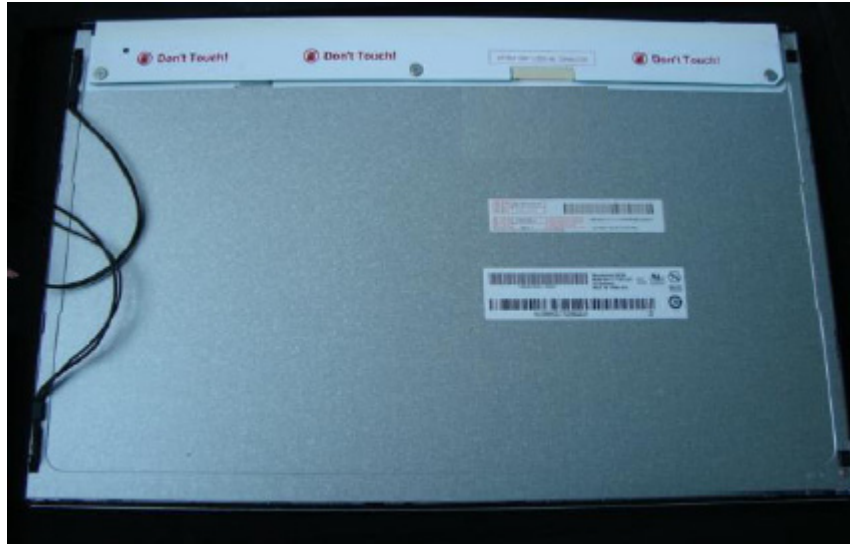


4. Remove the screws to remove the main board and power board.



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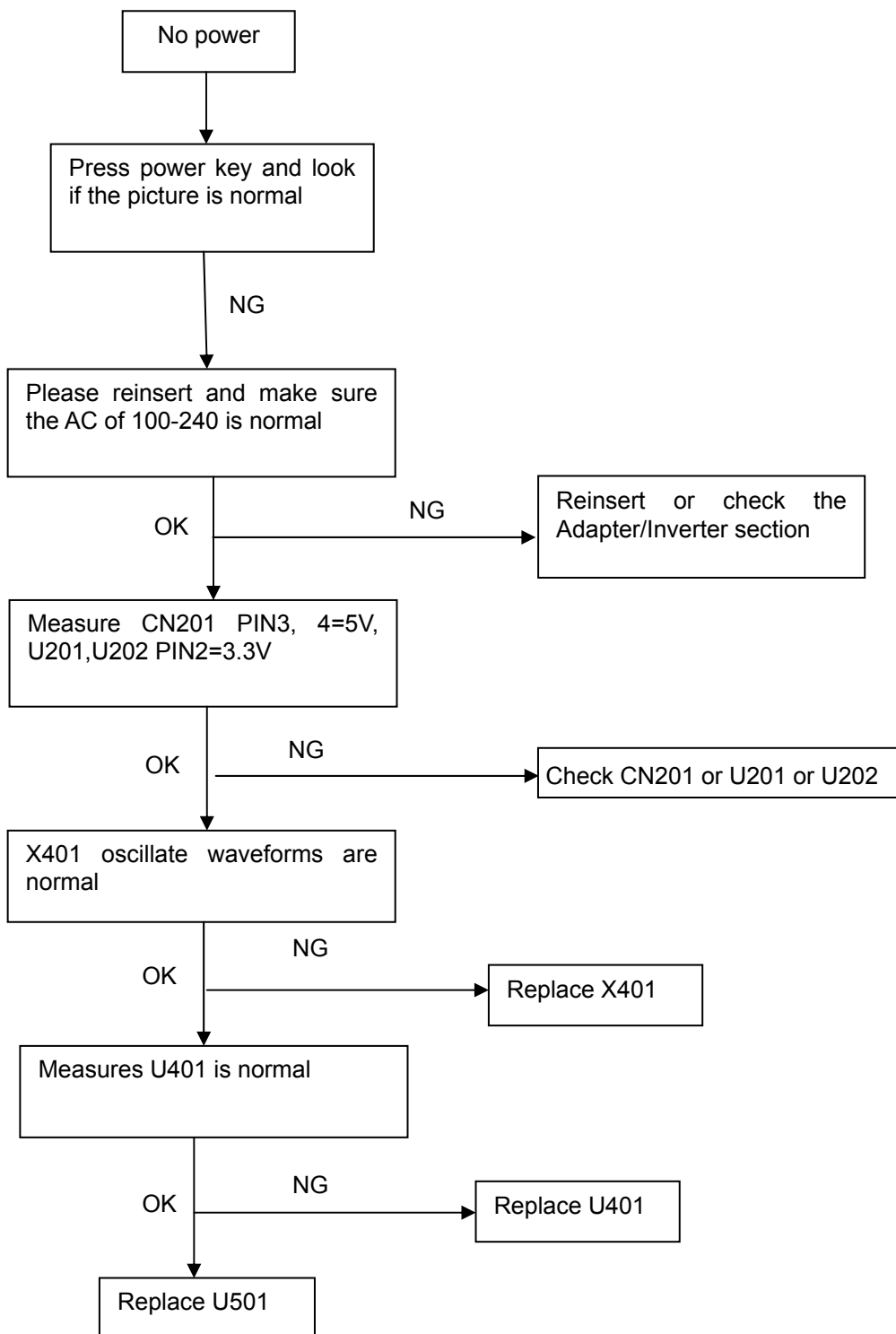
5. The panel



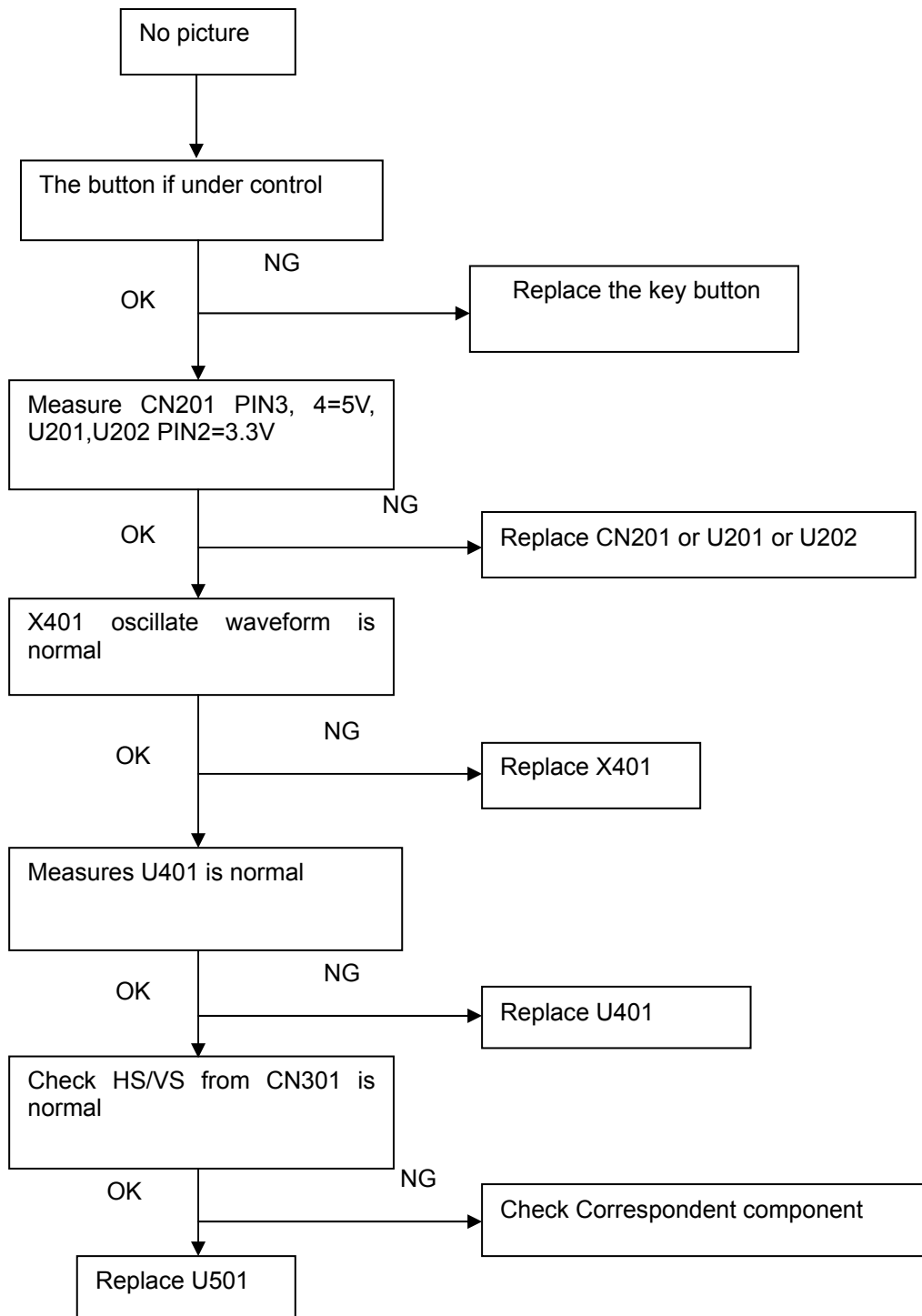


This chapter provides troubleshooting information for the E151H:

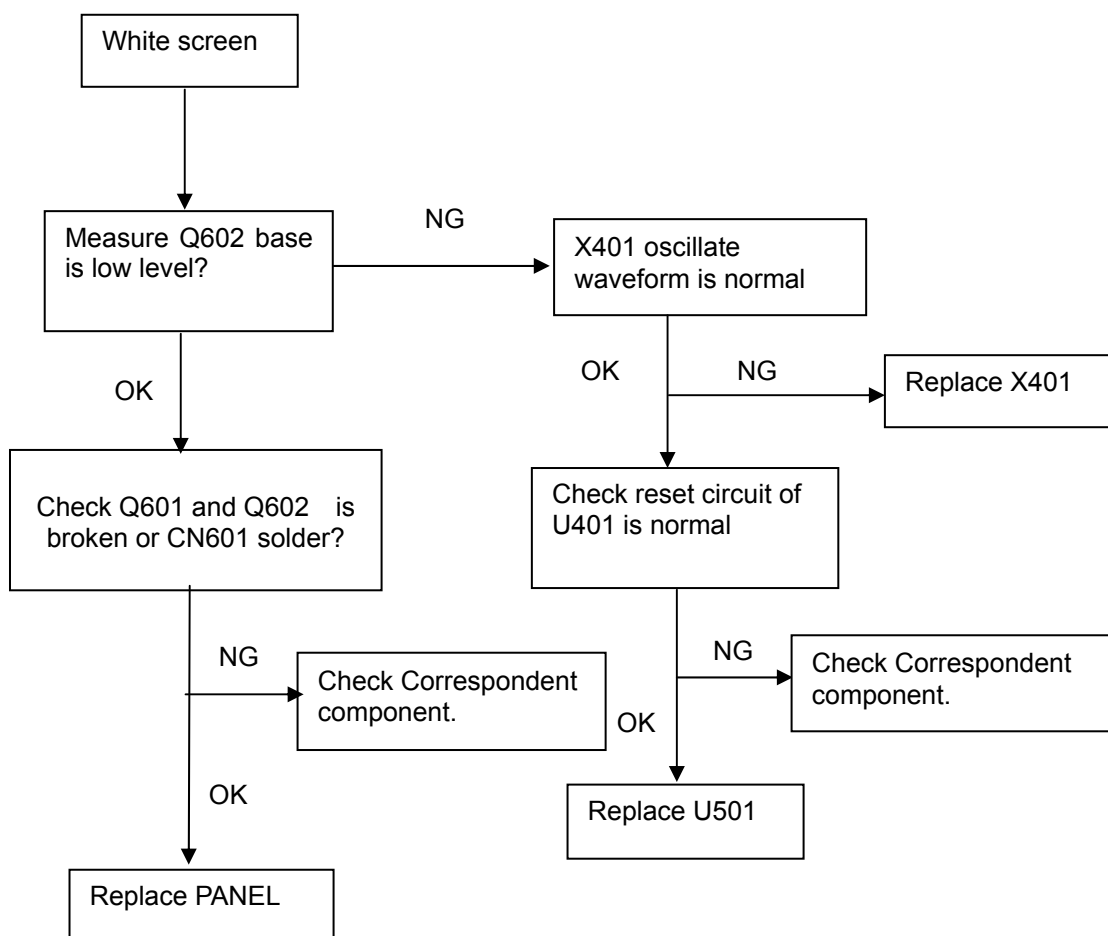
## 1. No Power



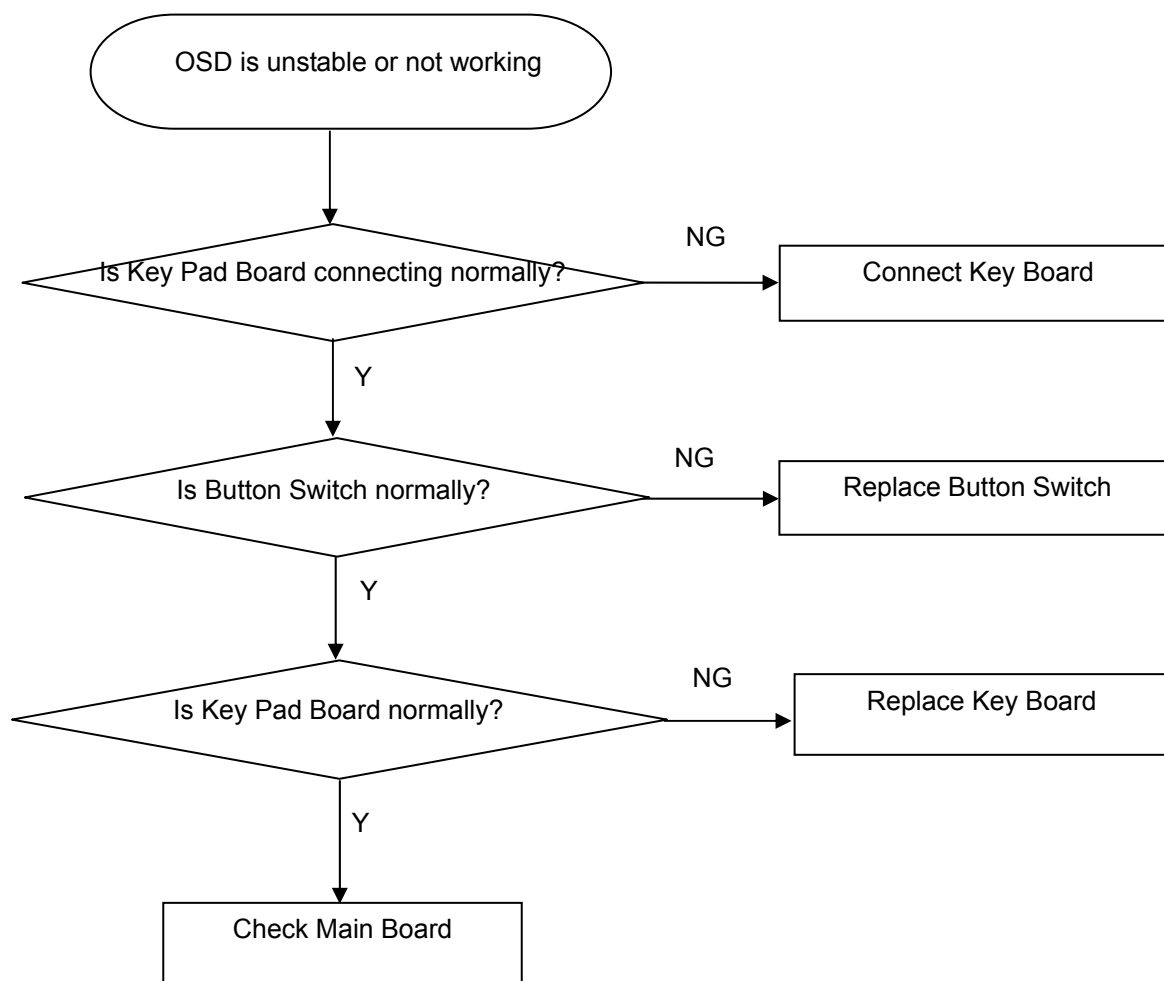
## 2. No Picture (LED is orange)



### 3. Panel Power Circuit

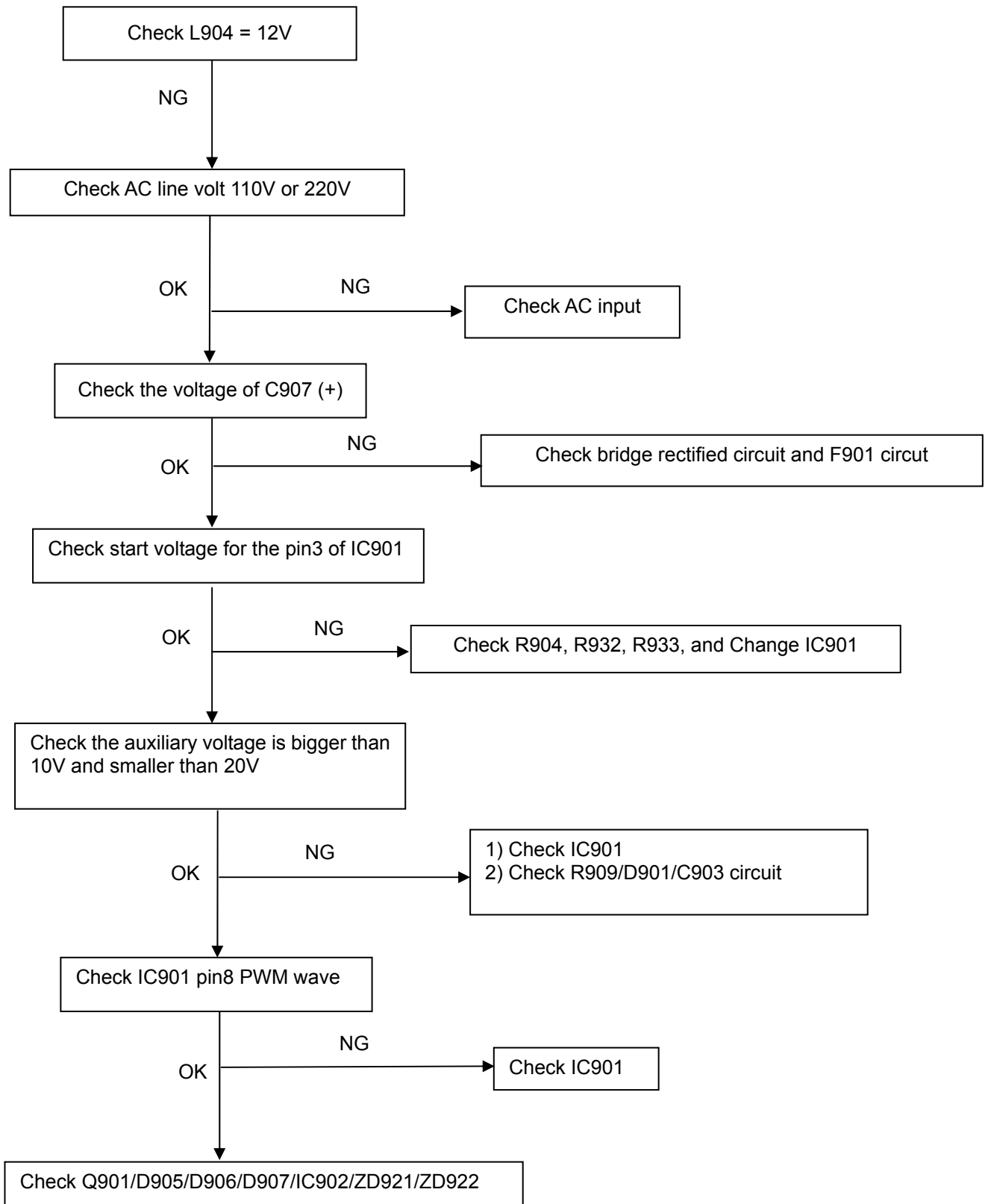


#### 4. Key Board

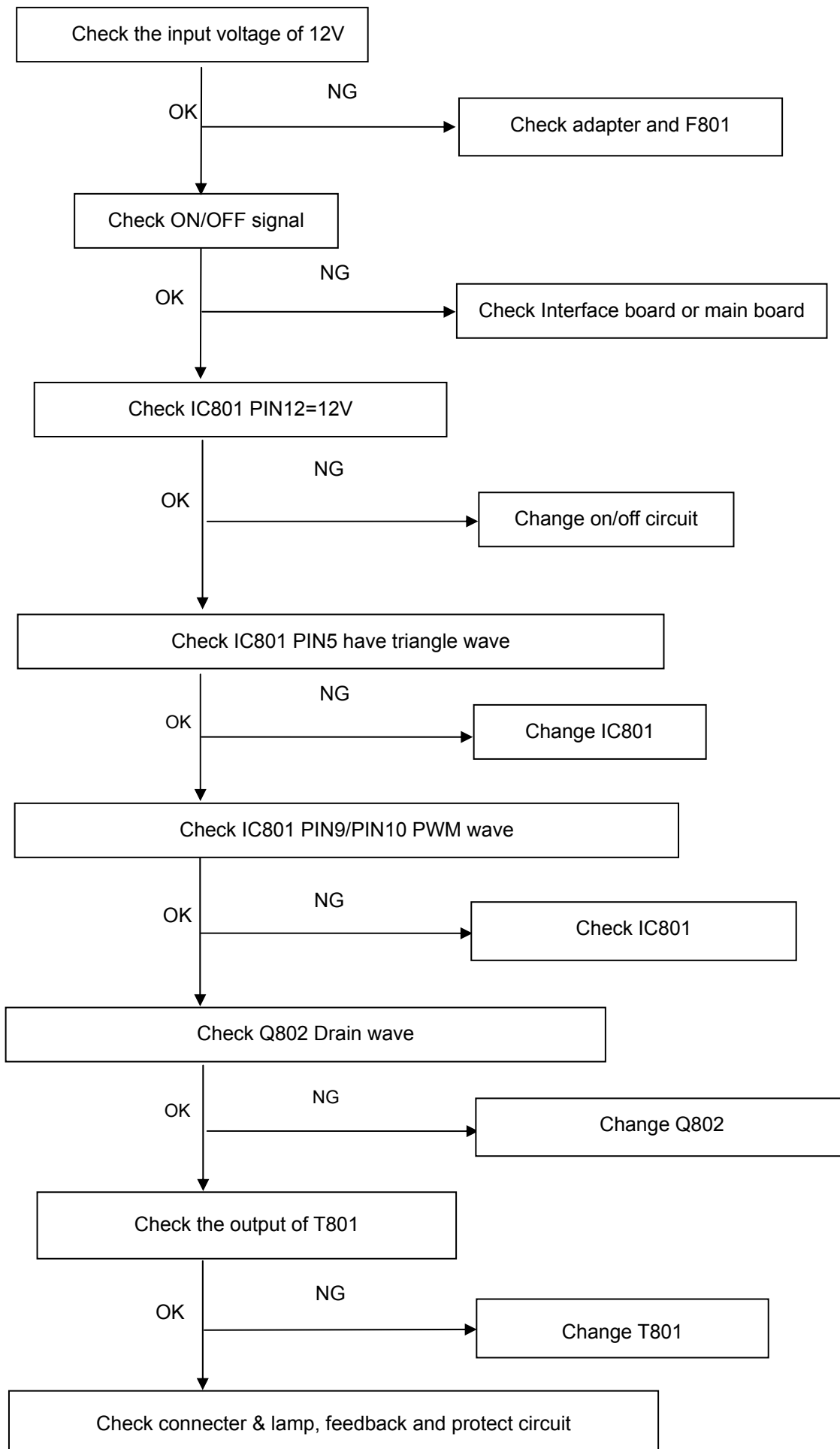


## 5. Power Board

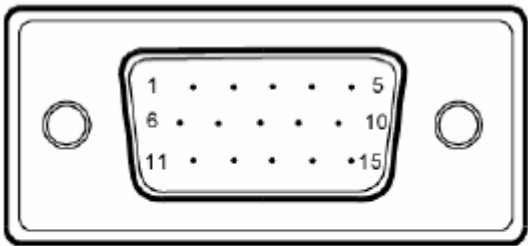
### 1) No power



## 2.) No Backlight



The following figure shows the connector locations on the monitor:



15-Pin Color Display Signal Cable

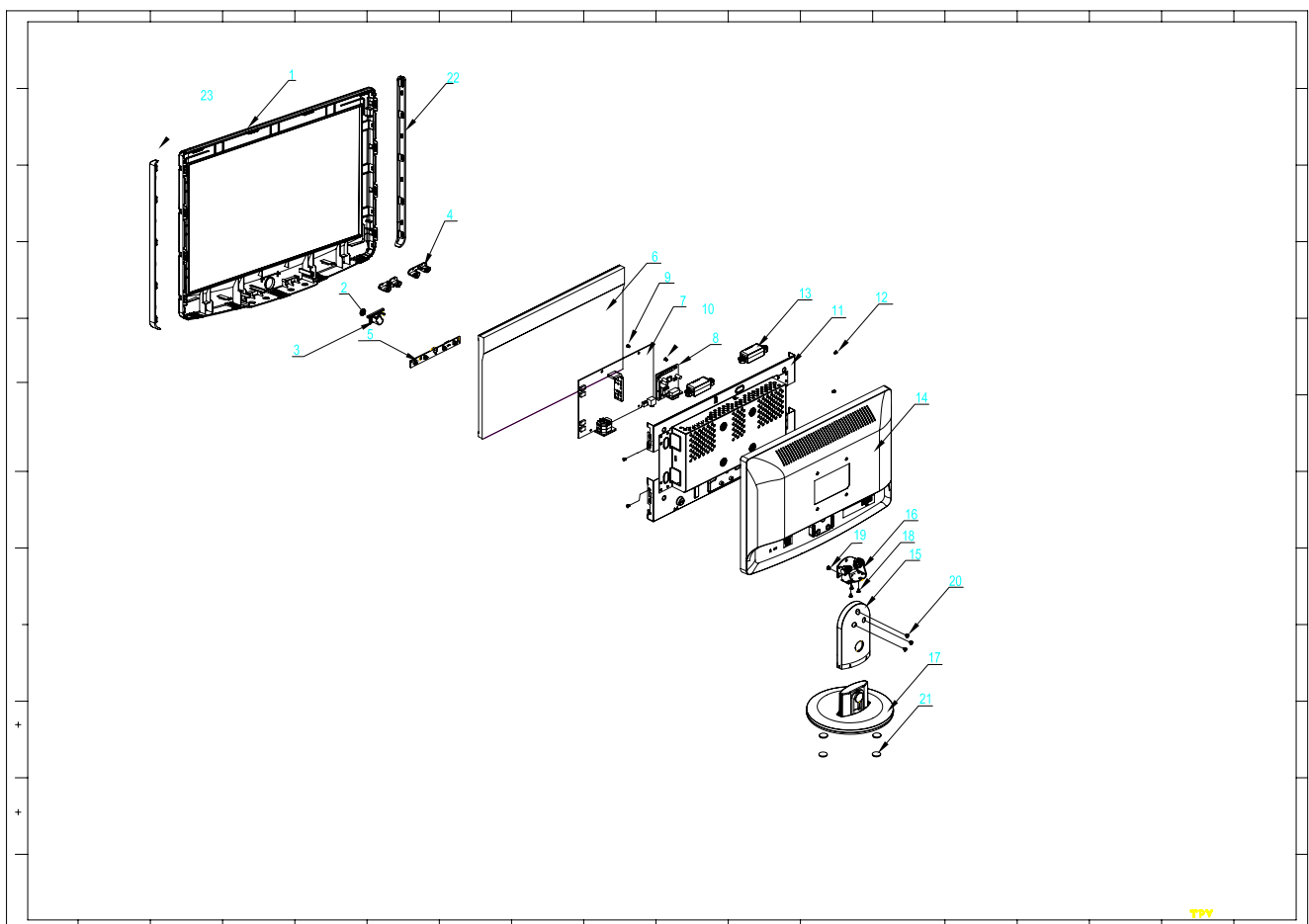
| PIN NO. | DESCRIPTION    | PIN NO. | DESCRIPTION      |
|---------|----------------|---------|------------------|
| 1.      | Red            | 9.      | +5V              |
| 2.      | Green          | 10.     | Logic Ground     |
| 3.      | Blue           | 11.     | Monitor Ground   |
| 4.      | 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       |         |                  |

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of E151H. 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: E151H)

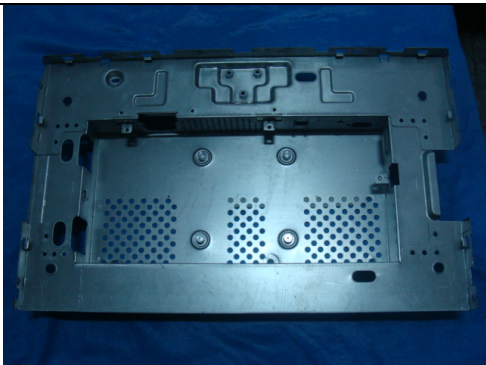





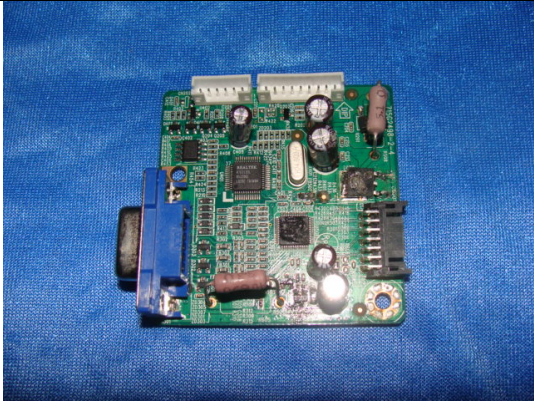
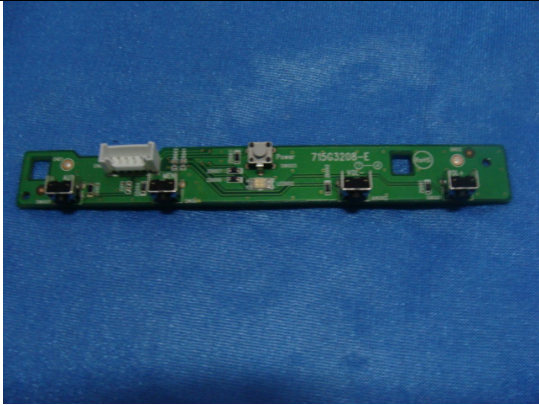



## Part List

Above picture show the description of the following component.

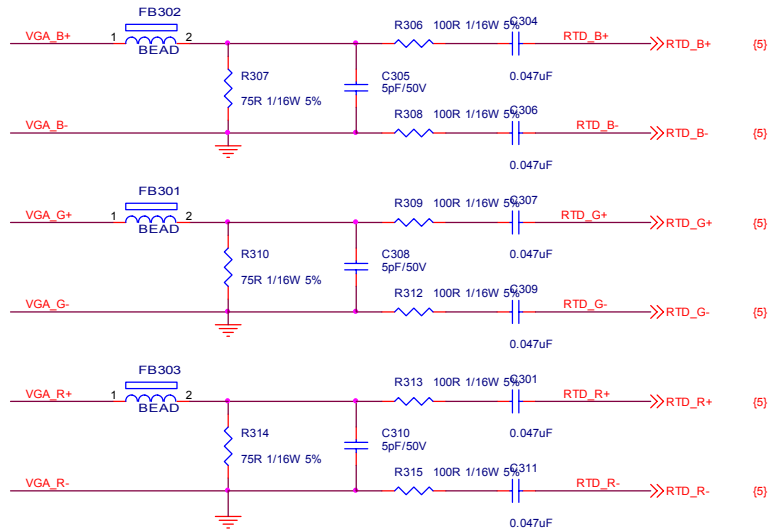
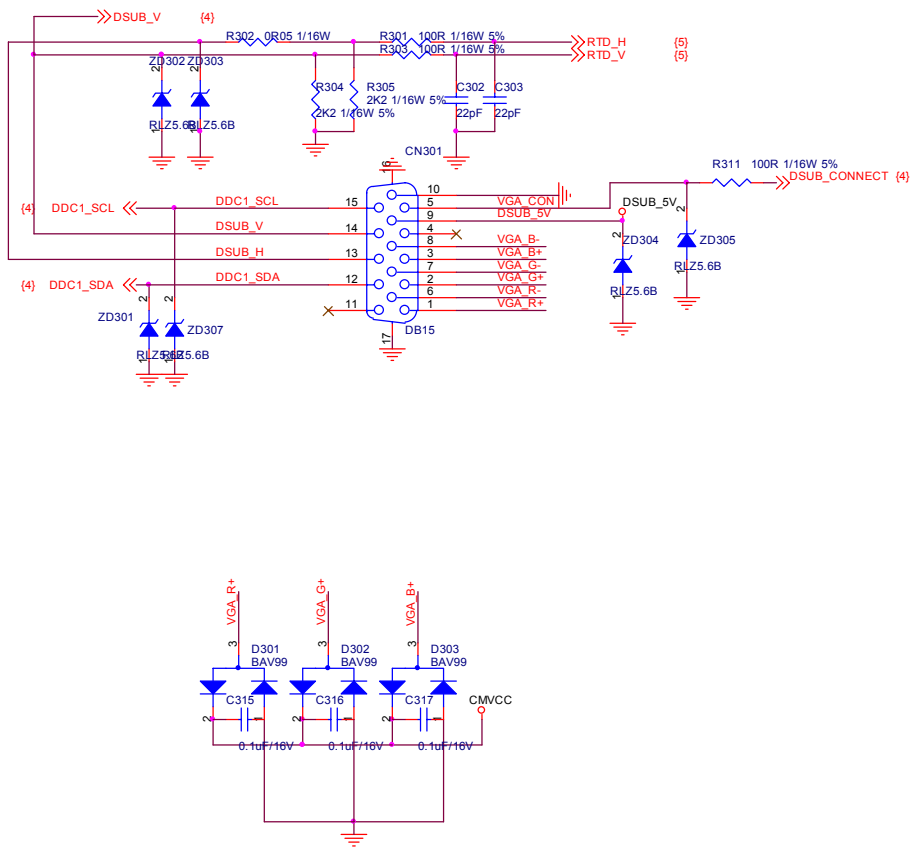
| Item | Description            | Item | Description             |
|------|------------------------|------|-------------------------|
| 1    | BEZEL L15WA-8GEM-1     | 13   | SPEAKER                 |
| 2    | POWER LOGO             | 14   | REAR COVER L15WA        |
| 3    | POWER-LENS             | 15   | STAND                   |
| 4    | FUNCTION-BUTTON-R      | 16   | HINGE ASS'Y             |
| 5    | KEY BOARD              | 17   | BASE                    |
| 6    | PANEL                  | 18   | SCREW                   |
| 7    | POWER BOARD            | 19   | SCREW                   |
| 8    | MAIN BOARD-CBPCRRDGKQ1 | 20   | SCREW ( 0M1G1740 10120) |
| 9    | SCREW                  | 21   | FOOT                    |
| 10   | SCREW                  | 22   | COVER FRONT L           |
| 11   | MAIN FRAME E151HQ      | 23   | COVER FRONT R           |
| 12   | SCREW                  |      |                         |

| Picture   | Description | Part No.           |
|---|-------------|--------------------|
|  | Main Frame  | Q15G0280201        |
|  | Bezel       | Q34G0501AEMA1B0130 |

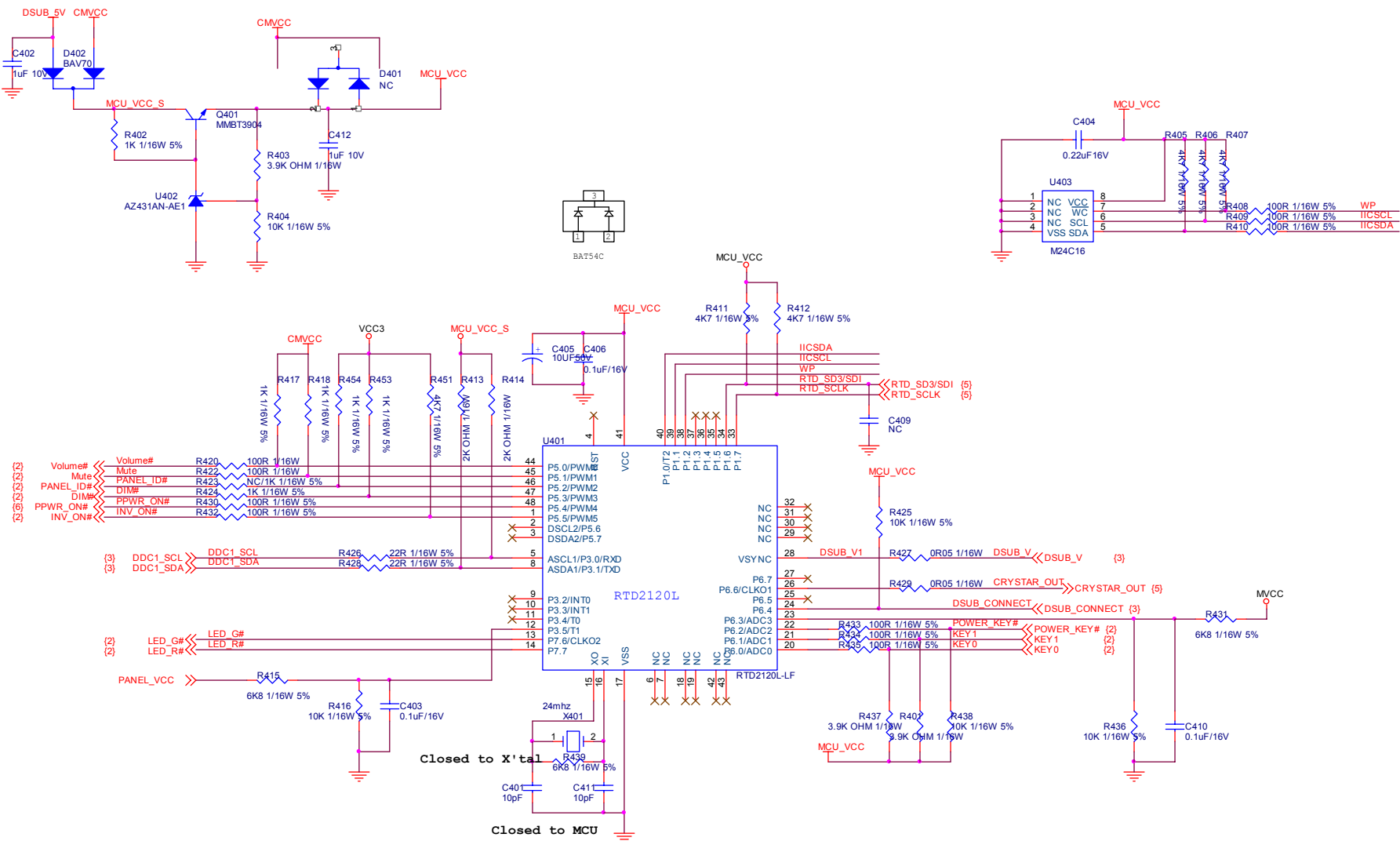
|   |             |                |
|---|-------------|----------------|
|    | Panel       | 750GLU50W0112N |
|    | Power Board | PWPC7521MAD1   |
|  | Main Board  | 756GQ8CB GR001 |
|  | Key Board   | KEPC8QE2       |

|  |             |                    |
|--|-------------|--------------------|
|   | Base        | Q34G0473AEM 1B0133 |
|   | Stand       | A34G0875AEM 1B0100 |
|  | HINGE ASS'Y | A37G0089 2         |

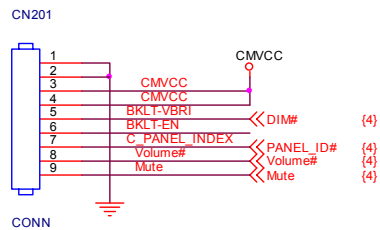
Main Board



|   |                                |           |                |     |
|---|--------------------------------|-----------|----------------|-----|
| T P V ( Top Victory Electronics Co., Ltd. ) | OEM MODEL                      | E151H     | Size           | B   |
| 話 隔 瓜 網 廠                                   | G2498-2D-4-X4-080903           | TPV MODEL | T5RARDN8X/GKNN | Rev |
| Key Component                               | 3.INPUT                        | PCB NAME  | 715G2498-2D-4  | Rev |
| Date  | Wednesday , September 03, 2008 | Sheet     | 3 of 6         | Rev |

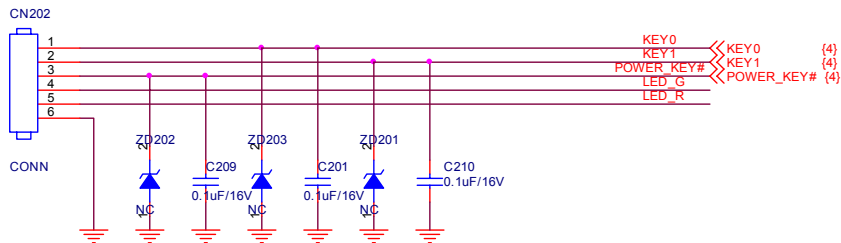
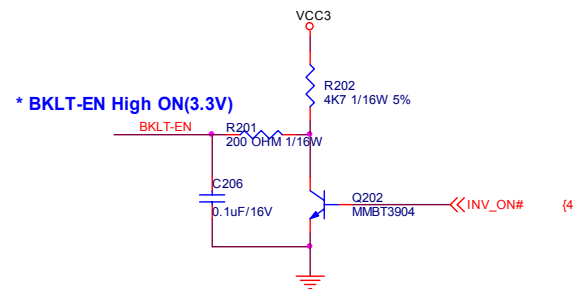
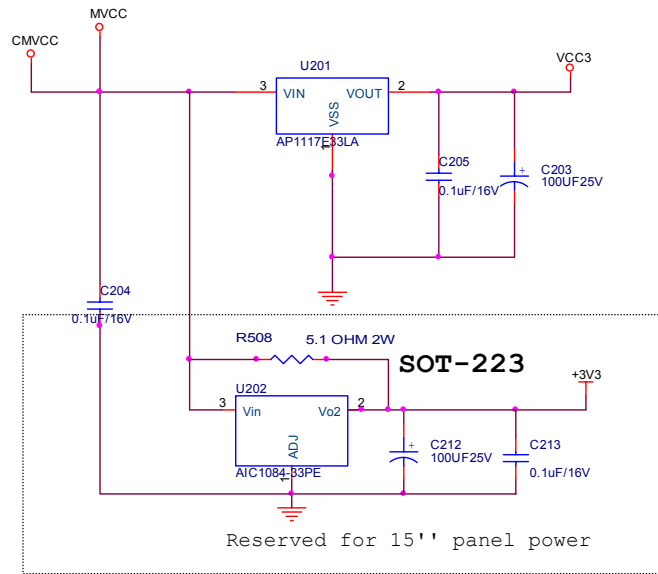


|   |                               |           |                |     |
|---|-------------------------------|-----------|----------------|-----|
| TPV (Top Victory Electronics Co., Ltd.) | OEM MODEL                     | E151H     | Size           | B   |
| 話 隔 瓜 網 膜                               | G2498-2D-4-X-4-080903         | TPV MODEL | T5RARDN8XJGKNN | Rev |
| Key Component                           | 4.MCU/RTD2120                 | PCB NAME  | 715G2498-2D-4  | Rev |
| Date                                    | Wednesday, September 03, 2008 | Sheet     | 4 of 6         | Rev |

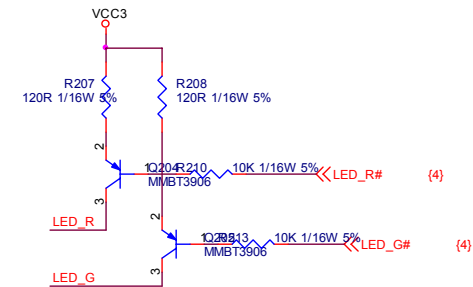


Panel ID(3.3V PWM)

Back light  
Dimming(3.3V PWM)



Near to Connect



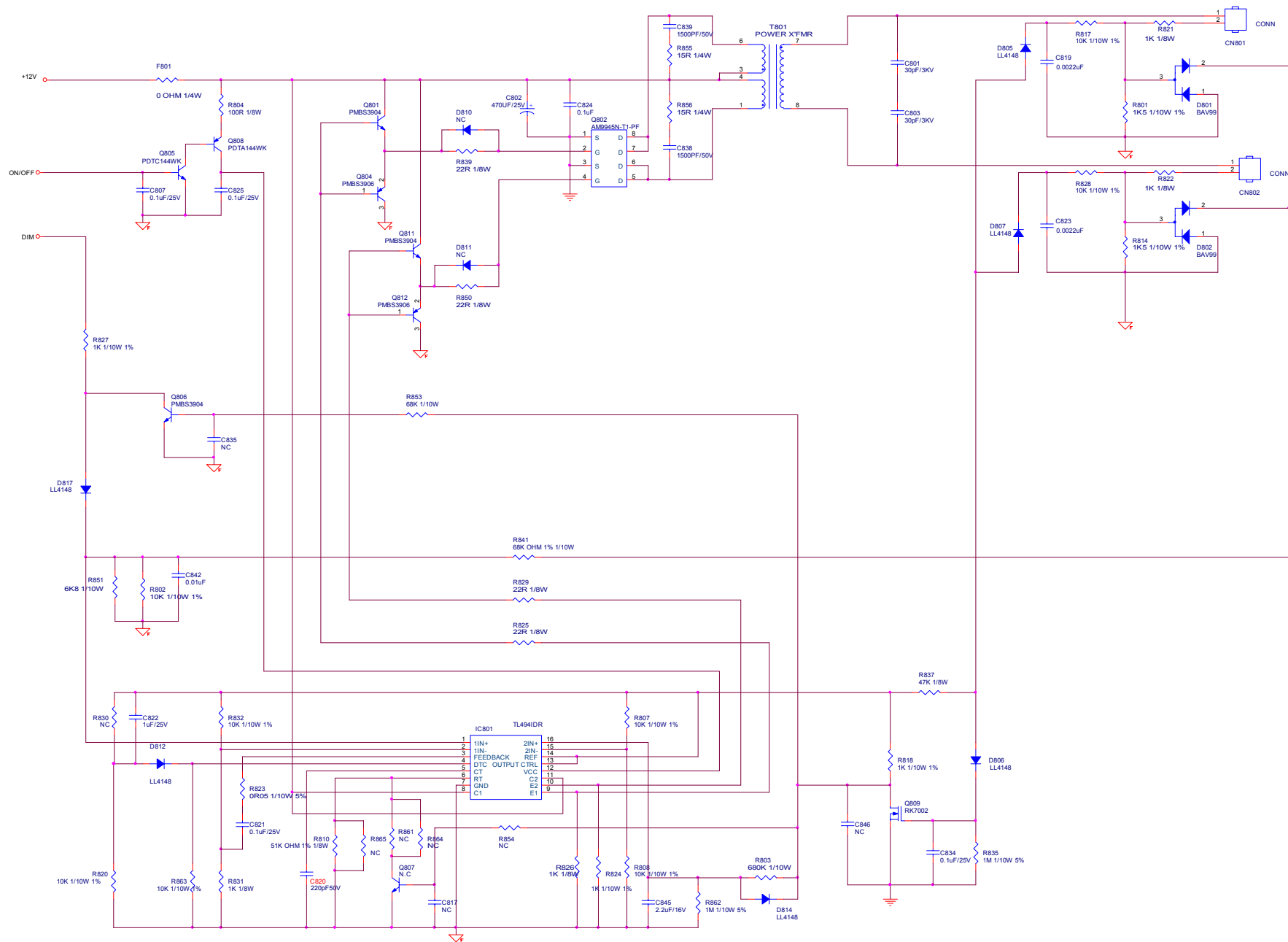
|   |                               |           |                |     |
|---|-------------------------------|-----------|----------------|-----|
| TPV (Top Victory Electronics Co., Ltd.) | OEM MODEL                     | E151H     | Size           | B   |
| 规格书编号                                   | G2498-2D-4-X-4-080903         | TPV MODEL | T5RARDN8XJGKNN | Rev |
| Key Component                           | 2.POWER                       | PCB NAME  | 715G2498-2D-4  | 1.1 |
| Date                                    | Wednesday, September 03, 2008 | Sheet     | 2 of 6         | 称参  |

TPV

AOC Q系列15.6W

| TPV (Top Victory Electronics Co., Ltd.) |                            | OEM MODEL | AOC Q系列15.6W | Size | Custom    |
|---|----------------------------|-----------|--------------|------|-----------|
| Key Component                           | 2.POWER                    | TPV MODEL | PWPC7521MAD1 | Rev  | 1         |
| Date                                    | Monday, September 08, 2008 | Sheet     | 2 of 4       | 称参   | ODM MODEL |

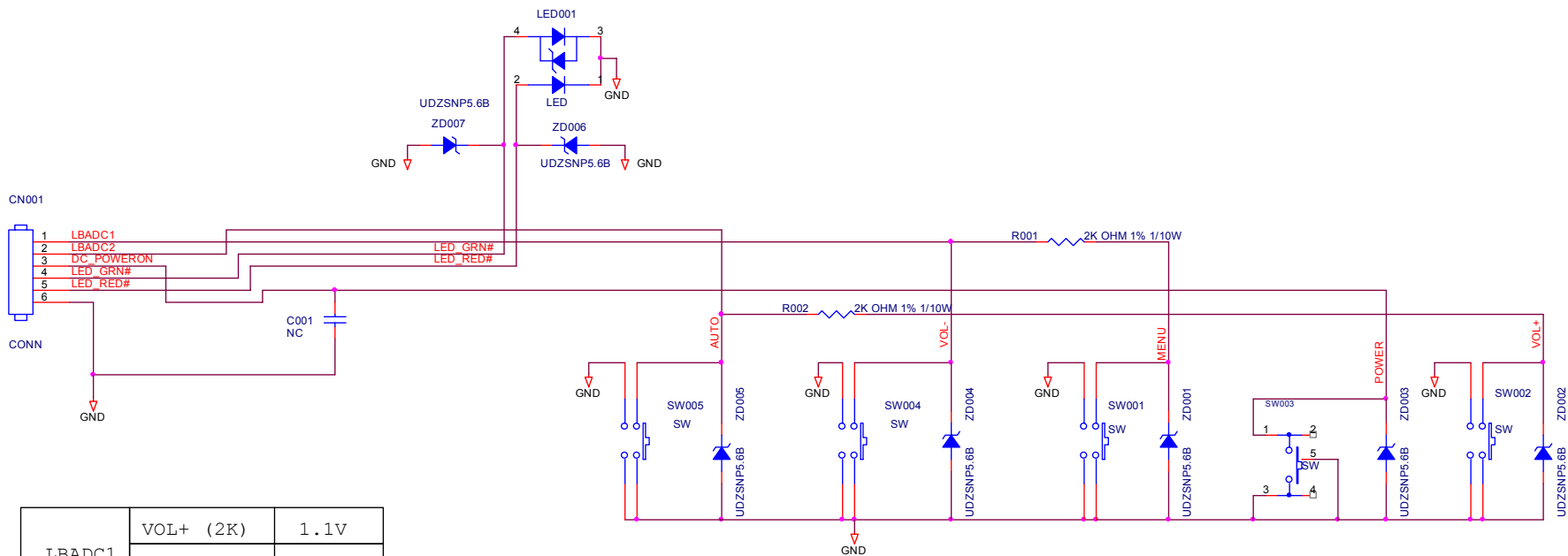




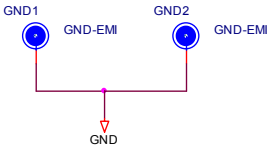
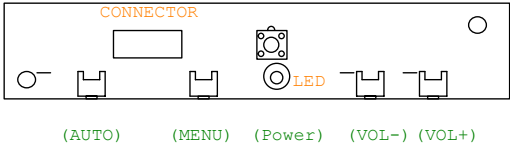
|   |                          |              |              |           |
|---|--------------------------|--------------|--------------|-----------|
| TPV (Top Victory Electronics Co., Ltd.) | OEM MODEL                | AOC Q系列15.6W | Size         | Custom    |
| 插板式前板                                   | G2852-1-X-X-2-080122     | TPV MODEL    | PWPC7521MAD1 | Rev       |
| Key Component                           | 3.INVERTER               | PCB NAME     | 715G2852-1   | ODM MODEL |
| Date                                    | Monday, January 21, 2008 | Sheet        | 3 of 4       |           |



Key board



|        |            |      |
|--------|------------|------|
| LBADC1 | VOL+ (2K)  | 1.1V |
|        | MENU (GND) | 0 V  |
| LBADC2 | VOL- (2K)  | 1.1V |
|        | AUTO (GND) | 0 V  |



|   |                         |           |            |       |
|---|-------------------------|-----------|------------|-------|
| TPV (Top Victory Electronics Co., Ltd.) | OEM MODEL               | e-Machine | Size       | B     |
| 絲隔瓜銅版                                   | G3208-B-X-X-1-080816    | TPV MODEL | ACER       | Rev   |
| Key Component                           | 02 Key Board            | PCB NAME  | 715G3208-E | 称 爹   |
| Date                                    | Monday, August 18, 2008 | Sheet     | 1 of 2     | <称 爹> |